



***Dasqua***<sup>®</sup>

E-mail: [service@dasquertools.com](mailto:service@dasquertools.com)

Headquarters Italy : Dasqua S.R.L.  
Via Codognino No. 4, 26854 Cornegliano Laudense ( LO ),Italy

America Branch: Dasqua USA CORP.  
14758 Yorba Court,Chino,CA 91710 USA

China Branch : Dasqua Technology Ltd.  
No.99,West Section of Hupan Road,Chengdu,Sichuan Pilot Free Trade Zone,China



***Dasqua***<sup>®</sup>

**2025-2026**

# Forza Blu!

The color of the year 2020 is classic blue. According to pantone institute, it is the color of traditional blue Jeans, fresh blueberries and the timeless consistency and reassurance presented by DASQUA.

Long ago in the early 1980s, when Dasqua embarked on supplying machinist calipers in Nord Italy, most of us looked at present as the future. But today we are here! The blue Dasqua are now deemed to be the symbol of reliability in our field. Combining both the tradition and spirit, with headquarters in Lodi, Italy, and two additional fulfillment facility strategically located in Los Angeles (for Pan-America), and Shanghai (For Asia area), Dasqua is currently serving customers in more than 50 countries globally.

The past decades have witnessed a significant change at Dasqua. And the results were driven by an array of tiny improvements. In 2008, we launched the first rechargeable digital caliper in the World, granted global patent. Last year, we changed to a latest carbide material for micrometer anvils. This new carbide replaces the traditional YG6 carbide which would naturally wear off, so now we have long-lasting accuracy assured. We also started making precision ground STAINLESS STEEL threading rod this year to instead the alloy steel or carbon steel rods used for transmission of measurement. This change is a substantive innovation for movement in worksites where water or oil is a problem. These small improvements are sending ripples across the ocean of our industry. And now we are working on a wireless data transmission system covering major measuring tools, optimizing manufacturing and QC management.

Above all, no matter it is a marble-material plate sourced from China or a 100% European made 0.001mm resolution dial test indicator, we deliver you with pride and confidence----when it comes to precision measurement, Dasqua makes the difference in the lineup. Our statement of core value as well as our long cultivated common culture at Dasqua is: Honest; Reliability; Responsibility. -----H.R.R

Facing with the keen competition and continuing requirement of customers, we quite understand that even we have gained all these achievement, the decline is always in the offing. We can never stop our step.

If you have any suggestions, or comments, please feel free to advise us. We value that as the most pivotal impulse for our pace forward. We, at Dasqua, will keep striving to ensure our blue products are the best for you as before, and always into the future!

Yours truly  
The Dasqua team

## ABOUT US



### MANUFACTURING

We are now still keeping exact procedure combined with state-of-the-art machinery for our precision machining process while improving product by using latest material and applying new engineering procedure.



### TRACEABLE QC SYSTEM

Every piece of Dasqua measuring tools is tested for approval by international in-door CNAS-qualified Labs, which are equipped with inspection system and devices from ZEISS, HAIMER, and MARPOS. Calibration certificate attached with product is traceable with respective DIN and ANSI standards. Strict visual inspection is applied to avoid any slight scratch even on non-measuring surface.



### FAST DELIVERY

We owned fast delivery from-stock (Europe, America, Asia) And we also have set the target of 90% fulfillment rate in our distributions by the end of 2020, covering 800+ most popular used sizes/specifications in stock to meet the daily requirement of customers globally.

### WARRANTY AND SERVICE/TRAINING COURSE

Warranty is an indication of manufacturers confidence for the product they supplied. All Dasqua measuring tools are guaranteed for TWO years (Starting from invoice date) on accuracy and workmanship. We provide all spare parts and training courses for our national agents and distributors worldwide. All final customers can obtain technical support from local distributor or online ([www.Dasquataools.com](http://www.Dasquataools.com)).



2 YEARS WARRANTY

# GLOBAL DISTRIBUTION NETWORK

OVER 85% FULLFILLMENT  
FROM STOCK





# DASQUA MANUFACTURING



• Warehouse and logistic center



• Laboratory with CNAS certification



• Office center



• Workshop

# DASQUA QUALITY ASSURANCE

Dasqua, with its excellent quality assurance, provides high-quality products to customers. Dasqua is one of the few comprehensive group enterprises in the industry that integrates R&D, production, inspection, and after-sales service for more than 50 countries worldwide. Dasqua has established an advanced precision testing laboratory and obtained the Laboratory Accreditation Certificate from ilac-MRA and CNAS, with a globally traceable number CNAS L17704.

## PROFESSIONAL TEAM AND EQUIPMENT:

Dasqua has a professional inspection team of 40 people, equipped with a series of automated inspection equipment from Germany, Italy, the Netherlands, Switzerland, and other countries, including:

- Laser Length Measuring Machine
- Precision Co-ordinate Measuring Machine
- Automatic Photo Dial Calibrator
- Thread Master Scanner
- Gauge Block and Ring Gauge Calibrator

These devices are widely used in the inspection and measurement of Dasqua products, ensuring the credibility and traceability of Dasqua products.





# CONTENTS

## A CALIPERS

|       |                                     |       |                              |       |                      |
|-------|-------------------------------------|-------|------------------------------|-------|----------------------|
| 02-06 | VERNIER CALIPER                     | 06-10 | HEAVY DUTY VERNIER CALIPER   | 11-15 | DIAL CALIPER         |
| 16-24 | DIGITAL CALIPER                     | 25-28 | HEAVY DUTY DIGITAL CALIPER   | 29-33 | DEPTH CALIPER        |
| 34-35 | DEPTH CALIPER FOR SPECIAL MEASURING | 36-42 | CALIPER FOR GROOVE MEASURING | 42-44 | CALIPER FOR SCRIBING |
| 45-60 | CALIPER FOR SPECIAL MEASURING       | 61-63 | CALIPER RELATED PRODUCTS     | 63-66 | SCALES               |

## B MICROMETERS

|       |                                  |       |                                       |       |                                        |
|-------|----------------------------------|-------|---------------------------------------|-------|----------------------------------------|
| 02-04 | MICROMETER (SIZE UP TO 150MM)    | 05-06 | MICROMETER (SIZE UP TO 300MM)         | 07-09 | MICROMETER (SIZE UP TO 3000MM)         |
| 09-10 | MICROMETER SET                   | 11-17 | DIGITAL MICROMETER (SIZE UP TO 150MM) | 17-18 | DIGITAL MICROMETER (SIZE UP TO 1000MM) |
| 18-19 | MICROMETER FOR SPECIAL MEASURING | 19-21 | DEPTH MICROMETER                      | 21-22 | INSIDE MICROMETER                      |
| 23-25 | TUBULAR INSIDE MICROMETER        | 26-33 | 3 POINTS INSIDE MICROMETER            | 34-37 | SNAP GAUGE                             |
| 37-59 | MICROMETER FOR SPECIAL MEASURING | 60-62 | MICROMETER HEAD                       | 63-64 | MICROMETER RELATED PRODUCTS            |

## C INDICATORS

02-06 DIAL INDICATOR (SIZE OF 1/3/5MM)



07-10 DIAL INDICATOR (SIZE OF 10MM)



10 DIAL INDICATOR (SIZE OF 20/25/30/50/80/100MM)



11-12 INCH SIZE DIAL INDICATOR



12-19 DIGITAL INDICATOR



20-22 INDICATOR FOR SPECIAL MEASURING



23-26 INDICATOR RELATED PRODUCTS



27-37 DIAL TEST INDICATOR



38 DIAL TEST INDICATOR RELATED PRODUCTS



39-42 DIAL BORE GAUGE



44-46 DIAL BORE GAUGE RELATED PRODUCTS



47-54 DIAL THICKNESS GAUGE RELATED PRODUCTS



54-61 DIAL CALIPER GAUGE RELATED PRODUCTS



61 DIAL DEPTH GAUGE RELATED PRODUCTS



62 OTHER DIAL INDICATOR RELATED PRODUCTS



## D MAGNETIC BASES

02-07 MAGNETIC BASE



13-15 COMPARATOR STAND



08-12 MAGNETIC BASE RELATED PRODUCTS



## E HEIGHT GAUGES

02-08 HEIGHT GAUGE



## F ANGLE MEASURING

### 02-23 ANGEL MEASURING



## H SETTING UP TOOLS

### 02-10 MACHINE SETTING UP



### 21-28 V-BLOCKS AND BENCH CENTER



## G LEVELS

### 02-14 LEVEL MEASURING



### 11-20 SETTING UP TOOLS



### 29-32 GRANITE PLATE



## THREADING AND GAUGE BLOCKS

### 02-10 THREAD GAUGE



### 11-12 PLAIN GAUGE



### 13-19 GAUGE BLOCKS



### 20-21 COUPLING HOLDER FOR GAUGE BLOCK



### 22 OTHER GAUGE BLOCK



### 23 PIN GAUGE



### 24 PIN GAUGE RELATED PRODUCTS



## J GAUGING TOOLS

### 02-06 COMPARATIVE GAUGES



### 07-18 COMPARATIVE GAUGES



### 19-28 COMPARATIVE GAUGES FOR WELDING





# K MEASURING TOOLS KIT

## 02-13 MEASURING TOOLS KIT



# L PORTABLE TESTING INSTRUMENTS

## 02-08 HARDNESS TESTING INSTRUMENTS



## 08-10 FORCE TESTING INSTRUMENTS



## 11-12 TORQUE FORCE TESTING INSTRUMENTS



## 13-15 PRECISION SCALES



## 15-16 THICKNESS MEASURING INSTRUMENTS



## 17-20 OPTICAL MEASURING INSTRUMENTS



## 21-23 ROUGHNESS MEASURING DEVICES



## 24 AIR BORE GAUGE



## 24-25 OTHER MEASURING INSTRUMENTS



## 26-28 AUTO DIAGNOSIS INSTRUMENTS



## 28-35 AUTO DIAGNOSIS & CONSTRUCTION MEASURING TOOLS



## 35-37 CONSTRUCTION MEASURING TOOLS



## 37-41 OTHER INSTRUMENTS



# M BENCH TYPE TESTING MACHINE

## 02-12 BENCH TYPE HARDNESS TESTING MACHINE



## 13-20 BENCH TYPE OPTICAL MEASURING MACHINE



## 21-23 OTHER BENCH TYPE MEASURING MACHINE



**Dasqua Blu**

The products with this mark are premium quality,  
otherwise the products are standard quality.

**Dasqua Blu**  
MADE IN USA

The products with this mark are premium quality,  
and its originally from USA

**Dasqua Blu**  
MADE IN GERMANY

The products with this mark are premium quality,  
and its originally from Germany

| CODE        | PAGE | CODE      | PAGE | CODE        | PAGE | CODE      | PAGE |
|-------------|------|-----------|------|-------------|------|-----------|------|
| <b>10</b>   |      | 1012-3010 | F 09 | 1030-2130   | L 38 | 1051-0025 | J 02 |
| 1005-0005   | J 14 | 1012-3015 | F 09 | 1030-3030   | L 28 | 1051-0105 | J 05 |
| 1005-0010   | J 14 | 1012-3016 | F 09 | 1030-3105   | L 14 | 1051-0110 | J 05 |
| 1005-0015   | J 11 | 1012-4005 | F 08 | 1030-3110   | L 14 | 1051-0115 | J 05 |
| 1005-0020   | J 16 | 1012-4005 | F 08 | 1030-3115   | L 14 | 1051-0120 | J 05 |
| 1005-0025   | J 20 | 1012-4010 | F 08 | 1030-5905   | L 19 | 1051-0305 | J 05 |
| 1005-0030   | J 20 | 1012-4015 | F 08 | 1030-5910   | L 19 | 1051-0310 | J 05 |
| 1005-0035   | J 20 | 1012-4020 | F 08 | 1030-6205   | L 15 | 1051-0315 | J 05 |
| 1005-0040   | J 15 | 1012-4025 | F 08 | 1030-6210   | L 15 | 1051-0320 | J 05 |
| 1005-0055   | J 21 | 1021-2005 | F 11 | 1030-6215   | L 15 | 1051-0505 | J 05 |
| 1005-0060   | J 21 | 1022-0200 | F 12 | 1031-2010   | F 10 | 1051-0510 | J 05 |
| 1005-0065   | J 21 | 1022-0300 | F 12 | 1032-0005   | L 36 | 1051-0520 | J 05 |
| 1005-0070   | J 22 | 1022-1005 | F 10 | 1032-0010   | L 37 | 1051-1010 | J 05 |
| 1011-1005   | F 07 | 1022-1010 | F 10 | 1032-0015   | L 27 | 1051-1015 | J 05 |
| 1012-0030   | F 06 | 1022-1015 | F 10 | 1032-0025   | L 37 | 1051-1020 | J 05 |
| 1012-0055   | F 03 | 1022-2200 | F 13 | 1032-0030   | L 36 | 1051-1025 | J 05 |
| 1012-0060   | F 03 | 1022-4125 | F 12 | 1032-0060   | L 41 | 1051-2005 | J 02 |
| 1012-0065   | F 11 | 1022-4200 | F 12 | 1032-0070   | L 28 | 1051-2010 | J 02 |
| 1012-0070   | F 11 | 1022-4250 | F 12 | 1032-0115   | L 27 | 1051-3005 | J 02 |
| 1012-0085   | F 11 | 1022-4300 | F 12 | 1032-0120   | L 27 | 1051-3010 | J 02 |
| 1012-0090   | F 03 | 1022-4305 | F 12 | 1032-0125   | L 27 | 1051-3015 | J 02 |
| 1012-0100   | F 06 | 1030-2001 | L 31 | 1032-0170   | L 41 | 1051-3020 | A 57 |
| 1012-0105   | F 07 | 1030-2002 | L 34 | 1032-0190   | J 06 | 1051-4010 | J 05 |
| 1012-1005   | F 07 | 1030-2003 | L 31 | 1032-0195   | J 06 | 1051-4015 | J 05 |
| 1012-1010   | F 07 | 1030-2005 | L 17 | 1032-0200   | J 06 | 1051-4020 | J 05 |
| 1012-1020   | F 07 | 1030-2010 | L 13 | 1032-0205   | L 39 | 1051-4025 | J 05 |
| 1012-1030   | F 07 | 1030-2015 | L 13 | 1032-0210   | L 05 | 1051-5005 | J 05 |
| 1012-1035   | F 07 | 1030-2017 | L 13 | 1032-0225   | L 39 | 1051-5010 | J 05 |
| 1012-1040   | F 07 | 1030-2019 | L 13 | 1032-0235   | L 40 | 1051-5015 | J 05 |
| 1012-1045   | F 05 | 1030-2020 | L 14 | 1032-0240   | L 40 | 1051-5020 | J 05 |
| 1012-1050   | F 05 | 1030-2025 | L 14 | 1041-0005-A | J 13 | 1051-5025 | J 05 |
| 1012-1055   | F 05 | 1030-2030 | L 14 | 1041-0006   | J 15 | 1051-6005 | J 05 |
| 1012-1060   | F 05 | 1030-2035 | L 29 | 1041-0007-A | J 14 | 1051-6010 | J 05 |
| 1012-1065   | F 07 | 1030-2040 | L 29 | 1041-0009   | J 18 | 1051-6015 | J 05 |
| 1012-1070   | F 05 | 1030-2045 | L 29 | 1041-0015   | J 22 | 1051-6020 | J 05 |
| 1012-1075   | F 05 | 1030-2051 | L 26 | 1041-0020   | J 13 | 1051-6025 | J 05 |
| 1012-1080   | F 03 | 1030-2056 | L 26 | 1041-0025   | J 13 | 1051-6030 | J 05 |
| 1012-1085   | F 03 | 1030-2061 | L 35 | 1041-0030   | J 15 | 1051-6035 | J 05 |
| 1012-1090   | F 03 | 1030-2065 | L 27 | 1041-0105   | J 10 | 1051-6040 | J 05 |
| 1012-2005   | F 08 | 1030-2070 | L 28 | 1041-2205-A | J 14 | 1051-7005 | J 05 |
| 1012-2010   | F 02 | 1030-2075 | L 37 | 1041-2210   | J 14 | 1051-7010 | J 05 |
| 1012-2010-A | F 02 | 1030-2095 | L 34 | 1041-2215   | J 14 | 1051-7015 | J 05 |
| 1012-2011   | F 05 | 1030-2100 | L 35 | 1051-0005   | J 02 | 1051-7020 | J 05 |
| 1012-2015   | F 02 | 1030-2115 | L 33 | 1051-0008   | J 02 | 1051-7025 | J 05 |
| 1012-2020   | F 02 | 1030-2120 | L 32 | 1051-0015   | J 02 | 1051-7030 | J 05 |
| 1012-3005   | F 09 | 1030-2125 | L 30 | 1051-0020   | J 02 | 1051-7035 | J 05 |

| CODE      | PAGE | CODE      | PAGE | CODE      | PAGE | CODE      | PAGE |
|-----------|------|-----------|------|-----------|------|-----------|------|
| 1110-7040 | J 05 | 1300-5015 | A 06 | 1110-3114 | A 04 | 1310-0010 | A 07 |
| 1051-8005 | J 04 | 1300-5020 | A 06 | 1110-3115 | A 04 | 1310-0011 | A 07 |
| 1061-0026 | L 05 | 1300-5025 | A 06 | 1110-3120 | A 04 | 1310-0012 | A 07 |
| <b>11</b> |      | 1300-5030 | A 06 | 1110-3130 | A 04 | 1310-0015 | A 07 |
| 1305-0000 | A 10 | 1305-0001 | A 10 | 1120-3113 | A 03 | 1310-0016 | A 07 |
| 1305-0002 | A 10 | 1305-0002 | A 10 | 1120-3114 | A 03 | 1310-0017 | A 07 |
| 1305-0003 | A 10 | 1305-0003 | A 10 | 1120-3115 | A 02 | 1310-0020 | A 07 |
| 1305-0004 | A 10 | 1305-0004 | A 10 | 1120-3120 | A 02 | 1310-0021 | A 07 |
| 1305-0009 | A 10 | 1305-0009 | A 10 | 1120-3130 | A 03 | 1310-0025 | A 07 |
| 1305-0010 | A 10 | 1305-0011 | A 10 | 1120-3140 | A 03 | 1310-0026 | A 07 |
| 1305-0015 | A 10 | 1305-0015 | A 10 | 1120-3145 | A 03 | 1310-0028 | A 07 |
| 1305-0016 | A 10 | 1305-0016 | A 10 | 1122-9001 | H 08 | 1310-0030 | A 07 |
| 1305-0020 | A 10 | 1305-0020 | A 10 | 1122-9002 | H 08 | 1310-0031 | A 07 |
| 1305-0025 | A 10 | 1305-0025 | A 10 | 1122-9003 | H 08 | 1310-0035 | A 07 |
| 1305-0030 | A 10 | 1305-0030 | A 10 | <b>12</b> |      | 1310-0040 | A 07 |
| 1305-0040 | A 10 | 1305-0040 | A 10 | 1210-3105 | A 04 | 1310-0041 | A 07 |
| 1305-0045 | A 10 | 1305-0045 | A 10 | 1210-3110 | A 04 | 1310-0042 | A 07 |
| 1305-0050 | A 10 | 1305-0050 | A 10 | 1210-3115 | A 04 | 1310-0044 | A 07 |
| 1305-0055 | A 10 | 1305-0055 | A 10 | 1220-3105 | A 05 | 1310-0045 | A 07 |
| 1305-0060 | A 10 | 1305-0060 | A 10 | 1220-3110 | A 05 | 1310-0050 | A 07 |
| 1305-0065 | A 10 | 1305-0065 | A 10 | 1220-3115 | A 05 | 1310-0055 | A 07 |
| 1305-0070 | A 10 | 1305-0070 | A 10 | <b>13</b> |      | 1310-0060 | A 07 |
| 1305-0080 | A 10 | 1305-0080 | A 10 | 1300-0001 | A 08 | 1310-0065 | A 07 |
| 1305-0085 | A 10 | 1305-0085 | A 10 | 1300-0002 | A 08 | 1310-0070 | A 07 |
| 1305-0090 | A 10 | 1305-0090 | A 10 | 1300-0003 | A 08 | 1310-0075 | A 07 |
| 1305-0105 | A 10 | 1305-0105 | A 10 | 1300-0004 | A 08 | 1310-0080 | A 07 |
| 1305-0110 | A 10 | 1305-0110 | A 10 | 1300-0005 | A 09 | 1310-0085 | A 07 |
| 1305-0115 | A 10 | 1305-0115 | A 10 | 1300-0006 | A 09 | 1310-0090 | A 07 |
| 1305-0120 | A 10 | 1305-0120 | A 10 | 1300-0010 | A 09 | 1310-0095 | A 07 |
| 1305-0125 | A 10 | 1305-0125 | A 10 | 1300-0011 | A 09 | 1310-0100 | A 07 |
| 1305-0130 | A 10 | 1305-0130 | A 10 | 1300-0015 | A 09 | 1310-0105 | A 07 |
| 1305-0135 | A 10 | 1305-0135 | A 10 | 1300-0016 | A 09 | 1310-0110 | A 07 |
| 1305-0140 | A 10 | 1305-0140 | A 10 | 1300-0020 | A 09 | 1310-0115 | A 07 |
| 1305-0145 | A 10 | 1305-0145 | A 10 | 1300-0025 | A 09 | 1310-0120 | A 07 |
| 1305-0150 | A 10 | 1305-0150 | A 10 | 1300-0030 | A 09 | 1310-0125 | A 07 |
| 1305-0155 | A 10 | 1305-0155 | A 10 | 1300-0035 | A 09 | 1310-0130 | A 07 |
| 1305-0160 | A 10 | 1305-0160 | A 10 | 1300-0040 | A 09 | 1310-0135 | A 07 |
| 1310-0004 | A 07 | 1310-0004 | A 07 | 1300-0045 | A 09 | 1310-0140 | A 07 |
| 1310-0005 | A 07 | 1310-0005 | A 07 | 1300-0050 | A 09 | 1310-0145 | A 07 |
| 1310-0006 | A 07 | 1310-0006 | A 07 | 1300-0055 | A 09 | 1310-0150 | A 07 |
| 1310-0007 | A 07 | 1310-0007 | A 07 | 1300-0060 | A 09 | 1310-0155 | A 07 |
| 1310-0008 | A 07 | 1310-0008 | A 07 | 1300-0065 | A 09 | 1310-0160 | A 07 |
| 1310-0009 | A 07 | 1310-0009 | A 07 | 1300-0070 | A 09 | 1310-0165 | A 07 |

| CODE      | PAGE | CODE      | PAGE | CODE        | PAGE | CODE        | PAGE |
|-----------|------|-----------|------|-------------|------|-------------|------|
| 1310-0010 | A 07 | 1310-0195 | A 07 | 1320-0040   | A 09 | 1332-4110-A | A 12 |
| 1310-0011 | A 07 | 1310-0200 | A 07 | 1320-0041   | A 09 | 1332-4115   | A 12 |
| 1310-0012 | A 07 | 1315-0000 | A 08 | 1320-0042   | A 09 | 1332-4115-A | A 12 |
| 1310-0015 | A 07 | 1315-0009 | A 08 | 1320-0043   | A 09 | 1332-4120   | A 12 |
| 1310-0016 | A 07 | 1315-0010 | A 08 | 1320-0044   | A 09 | 1332-4120-A | A 12 |
| 1310-0017 | A 07 | 1315-0011 | A 08 | 1320-0050   | A 09 | 1342-4110   | A 15 |
| 1310-0020 | A 07 | 1315-0015 | A 08 | 1320-0055   | A 09 | 1342-4115   | A 15 |
| 1310-0021 | A 07 | 1315-0016 | A 08 | 1320-0060   | A 09 | 1342-4120   | A 15 |
| 1310-0025 | A 07 | 1315-0020 | A 08 | 1320-0065   | A 09 | 1490-7005   | A 04 |
| 1310-0026 | A 07 | 1315-0025 | A 08 | 1320-0070   | A 09 | 1490-7010   | A 04 |
| 1310-0028 | A 07 | 1315-0030 | A 08 | 1320-0085   | A 09 | 1490-7015   | A 04 |
| 1310-0030 | A 07 | 1315-0035 | A 08 | 1320-0090   | A 09 | <b>15</b>   |      |
| 1310-0031 | A 07 | 1315-0040 | A 08 | 1320-0095   | A 09 | 1500-0005   | J 10 |
| 1310-0035 | A 07 | 1315-0045 | A 08 | 1320-0100   | A 09 | 1500-0052   | J 10 |
| 1310-0040 | A 07 | 1315-0050 | A 08 | 1320-0105   | A 09 | 1500-1052   | J 10 |
| 1310-0041 | A 07 | 1315-0055 | A 08 | 1320-0110   | A 09 | 1501-1020   | G 11 |
| 1310-0042 | A 07 | 1315-0060 | A 08 | 1320-0115   | A 09 | 1501-1024   | J 10 |
| 1310-0043 | A 07 | 1315-0065 | A 08 | 1320-0120   | A 09 | 1502-2030   | J 10 |
| 1310-0044 | A 07 | 1315-0070 | A 08 | 1320-0125   | A 09 | 1503-3030   | J 10 |
| 1310-0050 | A 07 | 1315-0080 | A 08 | 1320-0130   | A 09 | 1550-2004   | A 04 |
| 1310-0055 | A 07 | 1315-0085 | A 08 | 1320-0135   | A 09 | 1550-2005   | A 04 |
| 1310-0060 | A 07 | 1315-0090 | A 08 | 1320-0140   | A 09 | 1550-2010   | A 04 |
| 1310-0065 | A 07 | 1315-0095 | A 08 | 1320-0145   | A 09 | 1550-2015   | A 04 |
| 1310-0070 | A 07 | 1315-0105 | A 08 | 1320-0155   | A 09 | 1560-7005   | A 05 |
| 1310-0085 | A 07 | 1315-0110 | A 08 | 1320-0160   | A 09 | 1560-7010   | A 05 |
| 1310-0090 | A 07 | 1315-0115 | A 08 | 1320-0165   | A 09 | 1620-0100   | J 11 |
| 1310-0095 | A 07 | 1315-0120 | A 08 | 1320-0170   | A 09 | 1620-0101   | J 11 |
| 1310-0100 | A 07 | 1315-0125 | A 08 | 1320-0175   | A 09 | 1640-1005   | A 06 |
| 1310-0105 | A 07 | 1315-0130 | A 08 | 1320-0180   | A 09 | 1640-1010   | A 06 |
| 1310-0110 | A 07 | 1315-0135 | A 08 | 1320-0185   | A 09 | 1640-1015   | A 06 |
| 1310-0115 | A 07 | 1315-0140 | A 08 | 1320-0190   | A 09 | <b>16</b>   |      |
| 1310-0120 | A 07 | 1315-0145 | A 08 | 1320-0195   | A 09 | 1620-0100   | J 11 |
| 1310-0125 | A 07 | 1315-0150 | A 08 | 1320-0200   | A 09 | 1620-0101   | J 11 |
| 1310-0126 | A 07 | 1315-0155 | A 08 | 1331-2110   | A 12 | 1640-1005   | A 06 |
| 1310-0130 | A 07 | 1315-0160 | A 08 | 1331-2110-A | A 12 | 1640-1010   | A 06 |
| 1310-0135 | A 07 | 1320-0004 | A 09 | 1331-2115   | A 12 | 1640-1015   | A 06 |
| 1310-0140 | A 07 | 1320-0005 | J 15 | 1331-2115-A | A 12 | 1640-1020   | A 06 |
| 1310-0145 | A 07 | 1320-0007 | A 09 | 1331-2120   | A 12 | 1640-1025   | A 06 |
| 1310-0150 | A 07 | 1320-0008 | A 09 | 1331-2120-A | A 12 | 1640-1030   | A    |

| CODE      | PAGE | CODE        | PAGE    | CODE        | PAGE |
|-----------|------|-------------|---------|-------------|------|
| 1803-4128 | J 08 | 1804-1510   | K 14    | 1805-2000   | M 20 |
| 1803-4129 | J 08 | 1804-1520   | K 14    | 1805-2010   | M 20 |
| 1803-4130 | J 08 | 1804-1605   | H 18    | 1805-3000   | M 22 |
| 1803-4131 | J 08 | 1804-1610   | H 18    | 1805-3005   | M 22 |
| 1803-4132 | J 08 | 1804-1615   | H 18    | 1805-3010   | M 22 |
| 1804-1007 | L 04 | 1804-2005   | L 15    | 1805-3015   | M 22 |
| 1804-1008 | L 04 | 1804-2010   | L 16    | 1805-3020   | M 22 |
| 1804-1009 | L 04 | 1804-2011   | L 16    | 1805-3025   | M 22 |
| 1804-1010 | C 61 | 1804-2015   | L 16    | 1805-3030   | M 22 |
| 1804-1015 | C 61 | 1804-2020   | L 16    | 1805-4000   | M 23 |
| 1804-1020 | C 61 | 1804-2405   | L 03    | 1805-4005   | M 23 |
| 1804-1025 | C 61 | 1804-2410   | L 03    | 1805-4010   | M 23 |
| 1804-1030 | A 59 | 1804-2415   | L 03    | 1805-4015   | M 23 |
| 1804-1035 | L 03 | 1804-3610   | M 05    | 1805-4035   | M 23 |
| 1804-1045 | L 03 | 1804-3611-A | M 06    | 1805-4040   | M 23 |
| 1804-1056 | L 41 | 1804-4612   | L 06    | 1807-1000   | M 07 |
| 1804-1057 | L 41 | 1804-4613   | L 06    | 1807-1005   | M 07 |
| 1804-1061 | L 05 | 1804-4614   | L 06    | 1807-1010   | M 07 |
| 1804-1065 | A 20 | 1804-4615   | L 07    | 1807-1020   | M 03 |
| 1804-1070 | A 20 | 1804-4616   | L 07    | 1807-2000   | M 09 |
| 1804-1075 | A 20 | 1804-4617   | L 06    | 1807-2005   | M 09 |
| 1804-1085 | L 05 | 1804-4624   | L 06    | 1807-3000   | M 12 |
| 1804-1090 | L 02 | 1804-4626   | L 06    | 1813-0100   | J 09 |
| 1804-1095 | L 02 | 1804-4627   | L 06    | 1813-0150   | J 09 |
| 1804-1100 | L 02 | 1804-4628   | L 06    | 1813-0200   | J 09 |
| 1804-1105 | L 09 | 1804-5005   | L 08    | 1813-0300   | J 09 |
| 1804-1115 | L 09 | 1804-6302   | L 21    | 1813-0500   | J 09 |
| 1804-1120 | L 10 | 1804-6310   | L 23    | 1813-1000   | J 09 |
| 1804-1125 | L 10 | 1804-6320   | L 23    | 1813-1100   | J 09 |
| 1804-1130 | L 08 | 1804-7005   | M 18    | 1817-0100   | J 09 |
| 1804-1131 | L 08 | 1804-7007   | M 13    | 1820-0100   | J 09 |
| 1804-1132 | L 08 | 1804-7008   | M 13    | 1820-0150   | J 09 |
| 1804-1133 | L 08 | 1804-7009   | M 13    | 1820-0200   | J 09 |
| 1804-1134 | L 08 | 1804-7013   | L 18    | 1820-0300   | J 09 |
| 1804-1135 | L 09 | 1804-7015   | L 17    | 1820-0500   | J 09 |
| 1804-1136 | L 08 | 1804-7019   | M 16-17 | 1825-0175   | J 09 |
| 1804-1140 | L 09 | 1804-7020   | M 16-17 | 1828-0100   | J 09 |
| 1804-1145 | L 09 | 1804-7021   | M 16-17 | 1832-0100   | J 09 |
| 1804-1150 | L 09 | 1804-7022   | M 16-17 |             |      |
| 1804-1155 | L 09 | 1804-7023   | M 16-17 |             |      |
| 1804-1160 | L 09 | 1804-7025   | M 15    |             |      |
| 1804-1165 | L 10 | 1804-7030   | M 14    | 2000-0005-A | A 18 |
| 1804-1170 | L 10 | 1804-7035   | M 14    | 2000-1005   | A 24 |
| 1804-1175 | L 10 | 1804-7205   | M 19    | 2000-1010   | A 24 |
| 1804-1405 | J 17 | 1805-0020   | M 22    | 2000-1015   | A 24 |
| 1804-1406 | L 17 | 1805-1000   | M 21    | 2000-1605   | A 21 |
| 1804-1500 | K 14 | 1805-1005   | M 21    | 2000-1610   | A 21 |

## 20

|             |      |
|-------------|------|
| 2000-1615   | A 21 |
| 2000-2005   | A 20 |
| 2000-2010   | A 20 |
| 2000-2015   | A 20 |
| 2001-1005   | A 32 |
| 2001-1010   | A 32 |
| 2001-1015   | A 32 |
| 2001-2005   | A 30 |
| 2001-2010   | A 30 |
| 2001-2015   | A 30 |
| 2001-2020   | A 30 |
| 2001-3105   | A 33 |
| 2001-3110   | A 33 |
| 2001-3115   | A 33 |
| 2001-3305   | A 34 |
| 2001-3310   | A 34 |
| 2001-3315   | A 34 |
| 2001-3320   | A 34 |
| 2001-3325   | A 34 |
| 2001-5005   | A 32 |
| 2001-5010   | A 32 |
| 2001-5015   | A 32 |
| 2001-6005   | A 33 |
| 2001-6010   | A 33 |
| 2001-6015   | A 33 |
| 2001-7005   | A 31 |
| 2001-7010   | A 31 |
| 2001-7015   | A 31 |
| 2013-0005   | A 56 |
| 2015-1005-A | A 16 |
| 2015-1010-A | A 16 |
| 2015-1015-A | A 16 |
| 2015-2405   | A 24 |
| 2015-2410   | A 24 |
| 2015-2415   | A 24 |
| 2015-3005   | A 17 |
| 2015-3010   | A 17 |
| 2015-3015   | A 17 |
| 2015-4205   | A 17 |
| 2020-1005-A | A 24 |
| 2020-1010-A | A 24 |
| 2020-1015-A | A 24 |
| 2025-1005-A | A 24 |
| 2025-1010-A | A 24 |
| 2025-1015-A | A 24 |
| 2030-0005   | A 21 |
| 2030-0010   | A 21 |

|           |      |
|-----------|------|
| 2030-0015 | A 21 |
| 2035-0004 | A 23 |
| 2035-0005 | A 23 |
| 2035-0006 | A 23 |
| 2040-1005 | A 24 |
| 2040-1010 | A 24 |
| 2040-1015 | A 24 |
| 2050-0004 | A 22 |
| 2050-0005 | A 22 |
| 2060-1105 | A 47 |
| 2060-1110 | A 47 |
| 2060-1115 | A 47 |
| 2065-1105 | A 41 |
| 2065-1110 | A 41 |
| 2065-1115 | A 41 |
| 2065-1135 | A 42 |
| 2065-1140 | A 42 |
| 2065-1145 | A 42 |
| 2070-1105 | A 38 |
| 2070-1110 | A 38 |
| 2070-1115 | A 38 |
| 2075-1105 | A 51 |
| 2075-1110 | A 51 |
| 2080-1105 | A 39 |
| 2080-1110 | A 39 |
| 2080-1115 | A 39 |
| 2080-2005 | A 36 |
| 2090-0010 | A 50 |

## 21

|           |      |
|-----------|------|
| 2100-1215 | A 41 |
| 2100-1220 | A 41 |
| 2100-1230 | A 41 |
| 2100-1315 | A 47 |
| 2100-1320 | A 47 |
| 2100-1330 | A 47 |
| 2100-1615 | A 49 |
| 2100-1620 | A 49 |
| 2100-1630 | A 49 |
| 2101-1005 | A 37 |
| 2101-1010 | A 37 |
| 2101-1015 | A 37 |
| 2101-1315 | A 47 |
| 2101-1320 | A 47 |
| 2101-1330 | A 47 |
| 2115-2305 | A 23 |
| 2115-2310 | A 23 |
| 2115-2315 | A 23 |
| 2130-1005 | A 45 |
| 2130-1010 | A 45 |
| 2140-8101 | A 57 |
| 2140-8105 | C 51 |
| 2140-8106 | C 53 |
| 2140-8110 | C 52 |
| 2140-8115 | C 47 |
| 2140-8120 | C 53 |

## 22

|           |      |
|-----------|------|
| 2210-8203 | K 03 |
| 2210-8204 | K 04 |
| 2210-8205 | K 12 |
| 2210-8206 | K 03 |
| 2210-8210 | K 09 |
| 2210-8215 | K 12 |
| 2210-8220 | K 09 |
| 2210-8225 | K 10 |
| 2210-8230 | K 11 |
| 2210-8235 | K 11 |
| 2210-8240 | K 11 |
| 2210-8245 | K 11 |
| 2210-8250 | K 10 |
| 2210-8255 | K 02 |
| 2210-8275 | K 02 |
| 2210-8280 | K 02 |
| 2210-8285 | K 02 |
| 2210-8295 | K 02 |

|             |      |
|-------------|------|
| 2210-8315   | K 05 |
| 2210-8320   | K 05 |
| 2210-8325   | K 05 |
| 2210-8330   | K 05 |
| 2210-8335   | K 05 |
| 2210-8340   | K 05 |
| 2220-3570   | A 27 |
| 2220-3575   | A 27 |
| 2220-3580   | A 27 |
| 2220-8103   | A 59 |
| 2220-8105   | A 59 |
| 2220-8110   | A 25 |
| 2220-8113   | A 25 |
| 2220-8115   | A 25 |
| 2220-8116   | A 25 |
| 2220-8117   | A 27 |
| 2220-8119   | A 25 |
| 2220-8120   | A 27 |
| 2220-8125   | A 27 |
| 2220-8130   | A 27 |
| 2220-8135   | A 27 |
| 2220-8145   | A 27 |
| 2220-8150   | A 27 |
| 2220-8155   | A 27 |
| 2220-8160   | A 27 |
| 2220-8165   | A 25 |
| 2220-8170   | A 27 |
| 2220-8175   | A 27 |
| 2220-8180   | A 27 |
| 2220-8185   | A 27 |
| 2220-8195   | A 27 |
| 2220-8205   | A 27 |
| 2220-8210   | A 27 |
| 2220-8215   | A 27 |
| 2220-8220   | A 27 |
| 2220-8225   | A 27 |
| 2220-8230   | A 27 |
| 2220-8235   | A 27 |
| 2220-8240   | A 27 |
| 2230-8105-A | A 30 |
| 2230-8125-A | A 30 |
| 2240-0006   | A 58 |
| 2240-0025   | A 37 |
| 2240-0036   | A 37 |
| 2240-0027   | A 37 |

|             |      |
|-------------|------|
| 2240-0030   | A 35 |
| 2240-0035   | A 35 |
| 2240-0036   | A 35 |
| 2240-1005   | A 53 |
| 2240-1010   | A 53 |
| 2240-1015   | A 53 |
| 2240-1020   | A 53 |
| 2240-1025   | A 53 |
| 2240-1210   | A 60 |
| 2240-1215   | A 60 |
| 2240-1220   | A 61 |
| 2240-2005   | A 54 |
| 2240-2010   | A 54 |
| 2240-2015   | A 54 |
| 2240-2020   | A 54 |
| 2240-2025   | A 54 |
| 2240-2030   | A 54 |
| 2240-2035   | A 54 |
| 2240-2040   | A 54 |
| 2240-2045   | A 54 |
| 2240-4005   | A 52 |
| 2240-4010   | A 52 |
| 2240-5005   | A 55 |
| 2240-5010   | A 55 |
| 2240-6105   | A 51 |
| 2250-2105-A | A 31 |
| 2250-2110-A | A 31 |
| 2250-2115-A | A 31 |

## 23

|           |      |
|-----------|------|
| 2320-1105 | A 27 |
| 2320-1106 | A 27 |
| 2320-1110 | A 27 |
| 2320-1115 | A 27 |
| 2320-1120 | A 27 |

## 24

|           |      |
|-----------|------|
| 2401-1005 | A 29 |
| 2401-1010 | A 29 |
| 2401-1015 | A 29 |
| 2401-2105 | A 29 |
| 2401-2110 | A 29 |
| 2401-2115 | A 29 |
| 2406-1005 | A 22 |
| 2406-1010 | A 22 |

|           |      |
|-----------|------|
| 2406-1015 | A 22 |
| 2460-3105 | A 31 |
| 2460-3110 | A 31 |
| 2460-3115 | A 31 |

## 25

|           |      |
|-----------|------|
| 2510-3115 | A 27 |
| 2570-5105 | A 38 |
| 2570-5110 | A 38 |
| 2570-5115 | A 38 |
| 2580-5105 | A 39 |
| 2580-5110 | A 39 |
| 2580-5115 | A 39 |

## 26

|           |      |
|-----------|------|
| 2605-0015 | K 13 |
| 2605-0040 | A 36 |
| 2605-0045 | A 36 |
| 2605-0050 | A 36 |
| 2605-0225 | A 43 |
| 2605-0230 | A 43 |
| 2605-0240 | A 43 |
| 2605-1005 | F 21 |
| 2605-1010 | F 21 |
| 2605-1015 | F 21 |
| 2605-1020 | F 21 |
| 2605-1025 | F 21 |
| 2605-1030 | F 21 |
| 2615-0005 | A 52 |
| 2615-0010 | A 53 |
| 2615-0011 | A 53 |
| 2615-0015 | A 48 |
| 2615-1025 | A 40 |

## 27

|             |      |
|-------------|------|
| 2710-1104-A | A 28 |
| 2710-1105-A | A 26 |
| 2710-1105-A | A 28 |
| 2710-1108-A | A 28 |
| 2710-1110   | A 26 |
| 2710-1113   | A 26 |
| 2710-1115   | A 26 |
| 2710-1116   | A 26 |
| 2710-1130-A | A 28 |

|           |      |
|-----------|------|
| 2730-0020 | A 35 |
| 2730-0025 | A 35 |
| 2730-0030 | A 35 |
| 2730-0050 | A 35 |
| 2730-0055 | A 35 |
| 2730-0060 | A 35 |
| 2730-0065 | A 35 |
| 2730-1005 | A 34 |
| 2730-1010 | A 34 |
| 2730-1015 | A 34 |
| 2730-3105 | A 46 |
| 2730-3110 | A 46 |
| 2730-3115 | A 46 |
| 2730-4065 | A 46 |
| 2730-4070 | A 46 |
| 2730-4075 | A 46 |
| 2730-4080 | A 46 |
| 2730-4085 | A 46 |
| 2730-4090 | A 46 |

## 28

|             |      |
|-------------|------|
| 2805-0005-A | A 42 |
| 2805-0010-A | A 42 |
| 2805-0015-A | A 42 |
| 2805-0025   | A 42 |
| 2805-0035   | A 44 |
| 2805-0040   | A 44 |
| 2805-0045   | A 44 |
| 2805-0050   | A 44 |
| 2805-1105   | A 43 |
| 2805-1110   | A 43 |
| 2805-1115   | A 43 |
| 2805-1120   | A 43 |
| 2810-0003   | A 26 |
| 2810-0004   | A 26 |
| 2810-0005   | A 26 |
| 2810-0010   | A 26 |
| 2810-0015   | A 26 |

## 30

|           |      |
|-----------|------|
| 3000-0300 | E 02 |
| 3000-0600 | E 02 |
| 3001-0105 | E 04 |
| 3001-0120 | E 04 |
| 3001-0125 | E 04 |

| CODE        | PAGE |
|-------------|------|
| 3001-1002   | A 62 |
| 3001-1909-A | A 29 |
| 3001-1915-A | A 29 |
| 3001-3005   | A 34 |
| 3001-3010   | A 34 |
| 3001-3015   | A 34 |
| 3001-3020   | A 34 |
| 3001-3025   | A 34 |
| 3001-4105   | E 04 |
| 3001-4120   | E 04 |
| 3001-4125   | E 04 |
| 3001-4130   | E 04 |
| 3002-1901   | A 15 |
| 3002-1902   | A 15 |
| 3002-1903   | A 15 |
| 3003-1901-A | A 29 |
| 3003-1903-A | A 29 |
| 3003-1905-A | A 29 |
| 3003-1909-A | A 29 |
| 3003-2903-A | A 29 |
| 3003-2905-A | A 29 |
| 3004-0005   | A 19 |
| 3004-0010   | A 19 |
| 3004-0015   | A 19 |
| 3004-1010   | A 19 |
| 3004-2005   | A 19 |
| 3004-2010   | A 19 |
| 3026-0002   | L 19 |
| 3026-0005   | L 19 |
| 3026-0013   | L 19 |
| 31          |      |
| 3110-4105   | E 04 |
| 3110-4105-A | E 04 |
| 3110-4120   | E 04 |
| 3110-4120-A | E 04 |
| 3110-4125   | E 04 |
| 3110-4125-A | E 04 |
| 3110-6120-A | E 04 |
| 3110-6125-A | E 04 |
| 3130-4005   | E 05 |
| 3130-4125   | E 05 |
| 3130-4125   | E 05 |
| 3130-8105   | E 07 |



## CODE INDEX

| CODE      | PAGE | CODE      | PAGE | CODE        | PAGE | CODE        | PAGE | CODE        | PAGE | CODE      | PAGE |
|-----------|------|-----------|------|-------------|------|-------------|------|-------------|------|-----------|------|
| 4005-0025 | B 57 | 4005-4012 | B 64 | 4107-3010   | B 52 | 4111-8620   | B 38 | 4112-4445   | B 05 | 4146-1010 | B 34 |
| 4005-0030 | B 57 | 4005-4013 | B 64 | 4107-3015   | B 52 | 4111-8625   | B 38 | 4112-4450   | B 05 | 4146-1015 | B 34 |
| 4005-0035 | B 09 | 4005-4014 | B 64 | 4107-3020   | B 52 | 4111-8630   | B 38 | 4112-4455   | B 05 | 4146-1020 | B 34 |
| 4005-0040 | B 09 | 4005-4015 | B 64 | 4111-5205   | B 03 | 4111-8635   | B 38 | 4112-4460   | B 05 | 4146-5005 | B 35 |
| 4005-0045 | B 09 | 4005-4016 | B 64 | 4111-5210   | B 03 | 4111-8640   | B 38 | 4112-5102-A | B 38 | 4146-5010 | B 35 |
| 4005-0050 | B 09 | 4005-4017 | B 64 | 4111-5215   | B 03 | 4111-8645   | B 38 | 4112-5103   | B 18 | 4146-5015 | B 35 |
| 4005-0055 | B 09 | 4005-4018 | B 64 | 4111-5220   | B 03 | 4111-8650   | B 38 | 4112-5104-A | B 38 | 4146-5020 | B 35 |
| 4005-0090 | B 22 | 4005-4019 | B 64 | 4111-6405   | B 04 | 4111-8655   | B 38 | 4112-5105-A | B 02 | 4146-5025 | B 35 |
| 4005-0095 | B 22 | 4005-4020 | B 64 | 4111-6410   | B 04 | 4111-9105-A | B 03 | 4112-5106-A | B 38 | 4146-5030 | B 35 |
| 4005-0100 | B 22 | 4005-4021 | B 64 | 4111-6415   | B 04 | 4111-9110-A | B 03 | 4112-5108-A | B 38 | 4146-5035 | B 35 |
| 4005-0105 | B 22 | 4005-4022 | B 64 | 4111-6420   | B 04 | 4111-9115-A | B 03 | 4112-5110-A | B 02 | 4146-5040 | B 35 |
| 4005-0110 | B 28 | 4005-4023 | B 64 | 4111-6425   | B 04 | 4111-9120-A | B 03 | 4112-5111-A | B 38 | 4146-5045 | B 35 |
| 4005-0115 | B 28 | 4005-4024 | B 64 | 4111-6430   | B 04 | 4111-9125-A | B 03 | 4112-5112-A | B 38 | 4146-5050 | B 35 |
| 4005-0120 | B 28 | 4005-4025 | B 64 | 4111-8006   | B 09 | 4111-9130-A | B 03 | 4112-5115-A | B 02 | 4146-5055 | B 35 |
| 4005-0125 | B 28 | 4005-4026 | B 64 | 4111-8008   | B 09 | 4111-9135   | B 06 | 4112-5120-A | B 02 | 4146-5060 | B 35 |
| 4005-0130 | B 28 | 4005-4027 | B 64 | 4111-8010   | B 09 | 4111-9140   | B 06 | 4112-5125-A | B 02 | 4146-5065 | B 35 |
| 4005-0135 | B 41 | 4005-4028 | B 64 | 4111-8102   | B 38 | 4111-9145   | B 06 | 4112-5130-A | B 02 | 4146-5070 | B 35 |
| 4005-0140 | B 41 | 4005-4029 | B 64 | 4111-8103   | B 18 | 4111-9150   | B 06 | 4112-5135   | B 05 | 4146-5075 | B 35 |
| 4005-0145 | B 41 | 4005-4030 | B 64 | 4111-8104   | B 38 | 4111-9155   | B 06 | 4112-5140   | B 05 | 4146-5080 | B 35 |
| 4005-0150 | B 41 | 4005-4031 | B 64 | 4111-8105-A | B 02 | 4111-9160   | B 06 | 4112-5145   | B 05 | 4146-5105 | B 34 |
| 4005-0155 | B 55 | 4005-4032 | B 64 | 4111-8106   | B 38 | 4112-0006   | B 09 | 4112-5150   | B 05 | 4146-5110 | B 34 |
| 4005-0160 | B 58 | 4005-4033 | B 64 | 4111-8108   | B 38 | 4112-0010   | B 09 | 4112-5155   | B 05 | 4146-5115 | B 34 |
| 4005-0165 | B 58 | 4005-4034 | B 64 | 4111-8110-A | B 02 | 4112-0105-A | B 03 | 4112-5160   | B 05 | 4146-5120 | B 34 |
| 4005-0170 | B 58 | 4005-4035 | B 64 | 4111-8115-A | B 02 | 4112-0110-A | B 03 | 4112-7435   | B 05 | 4147-2405 | B 37 |
| 4005-0175 | B 14 | 4005-4036 | B 64 | 4111-8120-A | B 02 | 4112-0115-A | B 03 | 4112-7440   | B 05 | 4147-2410 | B 37 |
| 4005-0177 | B 14 | 4005-4037 | B 64 | 4111-8125-A | B 02 | 4112-0120-A | B 03 | 4112-7445   | B 05 | 4147-2415 | B 37 |
| 4005-0178 | B 14 | 4005-4038 | B 64 | 4111-8130-A | B 02 | 4112-0125-A | B 03 | 4112-7450   | B 05 | 4147-2420 | B 37 |
| 4005-0179 | B 14 | 4005-4039 | B 64 | 4111-8203   | B 09 | 4112-0130-A | B 03 | 4112-7455   | B 05 | 4147-2425 | B 37 |
| 4005-0205 | B 18 | 4042-0435 | B 06 | 4111-8205   | B 10 | 4112-0203   | B 09 | 4112-7460   | B 05 | 4147-2430 | B 37 |
| 4005-0210 | B 18 | 4042-0440 | B 06 | 4111-8206   | B 09 | 4112-0205   | B 10 | 4112-8135   | B 05 | 4147-2435 | B 37 |
| 4005-0215 | B 18 | 4042-0445 | B 06 | 4111-8206-A | B 10 | 4112-0206   | B 09 | 4112-8140   | B 05 | 4147-2440 | B 37 |
| 4005-0220 | B 18 | 4042-0450 | B 06 | 4111-8210   | B 09 | 4112-0208   | B 09 | 4112-8145   | B 05 | 4147-2445 | B 37 |
| 4005-0245 | B 17 | 4042-0455 | B 06 | 4111-8210-A | B 10 | 4112-0210   | B 09 | 4112-8150   | B 05 | 4147-2450 | B 37 |
| 4005-0250 | B 17 | 4042-0460 | B 06 | 4111-8213   | B 09 | 4112-0213   | B 09 | 4112-8155   | B 05 | 4147-2455 | B 37 |
| 4005-0255 | B 17 |           |      | 4111-8215   | B 09 | 4112-0215   | B 09 | 4112-8160   | B 05 | 4147-2460 | B 37 |
| 4005-0260 | B 17 |           |      | 4111-8215-A | B 10 | 4112-0216   | B 09 | 4112-8405   | B 04 | 4147-2465 | B 37 |
| 4005-4001 | B 64 |           |      | 4111-8220   | B 09 | 4112-0218   | B 09 | 4112-8410   | B 04 | 4147-3005 | A 58 |
| 4005-4002 | B 64 | 4105-0005 | B 15 | 4111-8220-A | B 10 | 4112-0240   | B 10 | 4112-8415   | B 04 | 4147-3305 | B 37 |
| 4005-4003 | B 64 | 4105-0010 | B 15 | 4111-8240   | B 10 | 4112-0245   | B 10 | 4112-8420   | B 04 | 4147-3310 | B 37 |
| 4005-4004 | B 64 | 4105-0015 | B 15 | 4111-8245   | B 10 | 4112-1135   | B 06 | 4112-8425   | B 04 | 4147-3315 | B 37 |
| 4005-4005 | B 64 | 4105-0020 | B 15 | 4111-8408   | B 09 | 4112-1140   | B 06 | 4112-8430   | B 04 | 4147-3320 | B 37 |
| 4005-4006 | B 64 | 4107-1005 | B 52 | 4111-8435   | B 06 | 4112-1145   | B 06 | 4117-0005   | B 53 | 4147-3325 | B 37 |
| 4005-4007 | B 64 | 4107-1010 | B 52 | 4111-8440   | B 06 | 4112-1150   | B 06 | 4117-0010   | B 53 | 4147-3330 | B 37 |
| 4005-4008 | B 64 | 4107-1015 | B 52 | 4111-8445   | B 06 | 4112-1155   | B 06 | 4117-0015   | B 53 | 4147-3335 | B 37 |
| 4005-4009 | B 64 | 4107-1020 | B 52 | 4111-8450   | B 06 | 4112-1160   | B 06 | 4117-0020   | B 53 | 4147-3340 | B 37 |
| 4005-4010 | B 64 | 4107-1025 | B 52 | 4111-8455   | B 06 | 4112-4435   | B 05 | 4146-1005   | B 34 | 4147-3345 | B 37 |
| 4005-4011 | B 64 | 4107-3005 | B 52 | 4111-8460   | B 06 | 4112-4440   | B 05 | 4146-1005   | B 34 | 4147-3350 | B 37 |

## CODE INDEX

| CODE      | PAGE | CODE        | PAGE | CODE      | PAGE | CODE      | PAGE | CODE        | PAGE | CODE           | PAGE |
|-----------|------|-------------|------|-----------|------|-----------|------|-------------|------|----------------|------|
| 4147-3355 | B 37 | 4205-0010   | B 16 | 4311-8109 | B 23 | 4352-0010 | B 25 | 4400-0005   | B 41 | 4411-5101-H-RG | B 32 |
| 4147-3360 | B 37 | 4205-0015   | B 16 | 4311-8111 | B 23 | 4352-0015 | B 25 | 4400-0010   | B 41 | 4411-5102-H    | B 27 |
| 4147-3365 | B 37 | 4205-0020   | B 16 | 4311-8113 | B 23 | 4352-0020 | B 25 | 4400-0015   | B 41 | 4411-5102-H-RG | B 32 |
| 4147-4005 | B 36 | 4210-2103   | B 37 | 4311-8118 | B 23 | 4352-0025 | B 25 | 4400-0020   | B 41 | 4411-5103-H    | B 27 |
| 4147-4010 | B 36 | 4210-2106   | B 37 | 4311-8119 | B 23 | 4352-0030 | B 25 | 4400-0025   | B 36 | 4411-5103-H-RG | B 32 |
| 4147-4015 | B 36 | 4210-2135-A | B 11 | 4311-8220 | B 23 | 4352-0035 | B 25 | 4403-0010   | B 36 | 4411-5104-H    | B 27 |
| 4147-4020 | B 36 | 4210-2140-A | B 11 | 4311-8225 | B 23 | 4352-0040 | B 25 | 4403-0015   | B 36 | 4411-5104-H-RG | B 32 |
| 4147-4025 | B 36 | 4210-2145-A | B 11 | 4311-8230 | B 23 | 4352-2301 | B 25 | 4403-0020   | B 36 | 4411-5105-H    | B 27 |
| 4147-4030 | B 36 | 4210-2150-A | B 11 | 4311-8235 | B 23 | 4352-2302 | B 25 | 4403-0025   | B 36 | 4411-5105-H-RG | B 32 |
| 4147-4035 | B 36 | 4210-2155-A | B 11 | 4311-8305 | B 24 | 4352-2303 | B 25 | 4403-0030   | B 36 | 4411-5106-H    | B 27 |
| 4147-4040 | B 36 | 4210-2160-A | B 11 | 4311-8310 | B 24 | 4352-2304 | B 25 | 4403-0035   | B 36 | 4411-5106-H-RG | B 32 |
| 4147-4045 | B 36 | 4220-2103   | B 48 | 4311-8315 | B 24 | 4352-2305 | B 25 | 4403-0040   | B 36 | 4411-5107-H    | B 27 |
| 4147-4050 | B 36 | 4220-2104   | B 38 | 4311-8320 | B 24 | 4352-2306 | B 25 | 4410-1105   | B 13 | 4411-5107-H-RG | B 32 |
| 4147-4055 | B 36 | 4220-2105   | B 15 | 4311-8325 | B 24 | 4352-2307 | B 25 | 4410-1105-A | B 12 | 4411-5108-H    | B 27 |
| 4147-4060 | B 36 | 4220-2106   | B 48 | 4311-8330 | B 24 | 4352-2308 | B 25 | 4410-1110   | B 13 | 4411-5108-H-RG | B 32 |
| 4150-1005 | B 19 | 4220-2108   | B 38 | 4312-5103 | B 23 | 4352-2309 | B 25 | 4410-1110-A | B 12 | 4411-5109-H    | B 27 |
| 4150-1010 | B 19 | 4220-2109   | B 48 | 4312-5106 | B 23 | 4352-2310 | B 25 | 4410-1115   | B 13 | 4411-5109-H-RG | B 32 |
| 4150-1015 | B 19 | 4220-2110   | B 15 | 4312-5109 | B 23 | 4352-2311 | B 25 | 4410-1115-A | B 12 | 4411-5110-H    | B 27 |
| 4150-1020 | B 19 | 4220-2112   | B 38 | 4312-5112 | B 23 | 4352-2312 | B 25 | 4410-1120   | B 13 | 4411-5110-H-RG | B 32 |
| 4150-1025 | B 19 | 4220-2115   | B 15 | 4312-5113 | B 23 | 4352-2313 | B 25 | 4410-1120-A | B 12 | 4411-5111-H    | B 27 |
| 4150-1030 | B 19 | 4220-2120   | B 15 | 4312-5117 | B 23 | 4352-2314 | B 25 | 4410-1125   | B 13 | 4411-5111-H-RG | B 32 |
| 4150-1035 | B 19 | 4230-2005-A | B 11 | 4320-2005 | B 39 | 4352-2315 | B 25 | 4410-1130   | B 13 | 4411-5112-H    | B 27 |
| 4150-1040 | B 19 | 4230-2010-A | B 11 | 4320-2010 | B 39 | 4352-2316 | B 25 | 4410-2105-A | B 13 | 4411-5112-H-RG | B 32 |
| 4150-1045 | B 19 | 4230-2015-A | B 11 | 4320-2015 | B 39 | 4352-2317 | B 25 | 4410-2110-A | B 13 | 4411-5113-H    | B 27 |
| 4150-1050 | B 19 | 4230-2020-A | B 11 | 4320-2020 | B 39 | 4352-2318 | B 25 | 4410-2115-A | B 13 | 4411-5113-H-RG | B 32 |
| 4150-1055 | B 19 | 4230-2025-A | B 11 | 4321-0001 | B 53 | 4352-2319 | B 25 | 4410-2120-A | B 13 | 4411-5114-H    | B 27 |
| 4150-1060 | B 19 | 4230-2030-A | B 11 | 4321-0002 | B 53 | 4352-2320 | B 25 | 4410-2405   | B 13 | 4411-5115-H    | B 27 |
| 4150-2005 | B 19 | 4230-3105   | B 14 | 4321-0003 | B 53 | 4352-2321 | B 25 | 4410-2405-A | B 12 | 4411-5116-H    | B 27 |
| 4150-2010 | B 19 | 4230-3110   | B 14 | 4321-0004 | B 53 | 4352-2322 | B 25 | 4410-2410   | B 13 | 4411-5117-H    | B 27 |
| 4150-2015 | B 19 | 4230-3115   | B 14 | 4321-0005 | B 53 | 4352-2323 | B 25 | 4410-2410-A | B 12 | 4411-5118-H    | B 27 |
| 4150-2020 | B 19 | 4230-3120   | B 14 | 4321-0006 | B 53 | 4352-2324 | B 25 | 4410-2415   | B 13 | 4411-5119-H    | B 27 |
| 4150-2025 | B 19 | 4230-3125   | B 14 | 4321-0007 | B 53 | 4352-2325 | B 25 | 4410-2415-A | B 12 | 4411-5120-H    | B 27 |
| 4150-2030 | B 19 | 4230-3130   | B 14 | 4321-0008 | B 53 | 4352-2326 | B 25 | 4410-2420   | B 13 | 4411-5121-H    | B 27 |
| 4150-2035 | B 19 | 4231-0205   | B 17 | 4321-0009 | B 53 | 4352-2327 | B 25 | 4410-2420-A | B 12 | 4411-5122-H    | B 27 |
| 4150-2040 | B 19 | 4231-0210   | B 17 | 4330-1005 | B 42 | 4352-2328 | B 25 | 4410-2425   | B 13 | 4411-5123-H    | B 27 |
| 4150-2045 | B 19 | 4231-0215   | B 17 | 4330-1010 | B 42 | 4352-2329 | B 25 | 4410-2430   | B 13 | 4411-9205-H    | B 27 |
| 4150-2050 | B 19 | 4231-0220   | B 17 | 4330-1015 | B 42 | 4352-2330 | B 25 | 4411-0000   | B 32 | 4412-0205-H    | B 27 |
| 4150-2055 | B 19 | 4231-1205   | B 17 | 4330-1020 | B 42 | 4352-2331 | B 25 | 4411-0005   | B 32 | 4412-0207-H    | B 27 |
| 4150-2060 | B 19 | 4231-1210   | B 17 | 4331-0105 | B 15 | 4352-2332 | B 25 | 4411-0010   | B 32 | 4412-0208-H    | B 27 |
| 4167-1005 | B 53 | 4231-1215   | B 17 | 4331-0110 | B 15 | 4352-2333 | B 25 | 4411-0015   | B 32 | 4412-0210-H    | B 27 |
| 4167-1010 | B 53 | 4231-1220   | B 17 | 4331-0115 | B 15 | 4352-2334 | B 25 | 4411-0020   | B 32 | 4440-1005      | B 40 |
| 4167-1015 | B 53 |             |      | 4331-0120 | B 15 | 4352-2335 | B 25 | 4411-0025   | B 32 | 4440-1010      | B 40 |
| 4167-1020 | B 53 |             |      | 4341-0005 | B 24 | 4352-2336 | B 25 | 4411-3210-H | B 27 | 4440-1015      | B 40 |
|           |      |             |      | 4341-0010 | B 24 | 4352-2337 | B 25 | 4411-3215-H | B 27 | 4440-1020      | B 40 |
|           |      |             |      | 4411-0015 | B 24 | 4352-2338 | B 25 | 4411-3220-H | B 27 | 4470-0005      | B 56 |
|           |      |             |      | 4411-0020 | B 24 |           |      | 4411-3225-H | B 27 | 4470-0010      | B 56 |
|           |      |             |      | 4352-0005 | B 25 |           |      | 4411-5101-H | B 27 | 4470-0015      | B 56 |

42

43

44





## CODE INDEX

| CODE      | PAGE | CODE      | PAGE | CODE      | PAGE | CODE        | PAGE | CODE      | PAGE | CODE      | PAGE |
|-----------|------|-----------|------|-----------|------|-------------|------|-----------|------|-----------|------|
| 4470-0020 | B 56 | 4511-5108 | B 29 | 4560-0004 | B 49 | 4570-4030   | B 47 | 4600-0018 | B 33 | 4612-5135 | B 19 |
| 4470-0025 | B 56 | 4511-5109 | B 29 | 4560-0005 | B 49 | 4570-5005   | B 48 | 4600-0019 | B 33 | 4620-5105 | B 46 |
| 4470-0030 | B 56 | 4511-5110 | B 29 | 4560-0006 | B 49 | 4570-5010   | B 48 | 4600-0020 | B 33 | 4620-5110 | B 46 |
| 4470-0035 | B 56 | 4511-5111 | B 29 | 4560-0007 | B 49 | 4570-5015   | B 48 | 4600-0021 | B 33 | 4620-5115 | B 46 |
| 4470-0040 | B 56 | 4511-5112 | B 29 | 4560-0008 | B 49 | 4570-5020   | B 48 | 4600-0022 | B 33 | 4620-5120 | B 46 |
| 4470-0045 | B 56 | 4511-5113 | B 29 | 4560-0009 | B 49 | 4570-6005   | B 47 | 4600-0023 | B 33 | 4620-5405 | B 45 |
| 4470-0050 | B 56 | 4511-5114 | B 29 | 4560-0010 | B 49 | 4570-6010   | B 47 | 4610-1005 | B 44 | 4620-5410 | B 45 |
| 4470-0055 | B 56 | 4511-5115 | B 29 | 4560-0011 | B 49 | 4570-6015   | B 47 | 4610-1010 | B 44 | 4620-5415 | B 45 |
| 4470-0060 | B 56 | 4511-5116 | B 29 | 4560-4005 | B 52 | 4570-6020   | B 47 | 4610-1015 | B 44 | 4620-5420 | B 45 |
| 4470-0065 | B 56 | 4511-5117 | B 29 | 4560-4010 | B 52 | 4570-6025   | B 47 | 4610-1020 | B 44 | 4631-0005 | B 58 |
| 4470-0070 | B 56 | 4511-5118 | B 29 | 4560-4015 | B 52 | 4570-6030   | B 47 | 4610-1105 | B 45 | 4631-0015 | B 59 |
| 4471-0005 | B 55 | 4511-5119 | B 29 | 4560-4020 | B 52 | 4570-6035   | B 47 | 4610-1110 | B 45 | 4631-0020 | B 59 |
| 4471-0010 | B 55 | 4511-5120 | B 29 | 4560-4025 | B 52 | 4570-6040   | B 47 | 4610-1115 | B 45 |           |      |
| 4471-0015 | B 55 | 4511-5121 | B 29 | 4560-4030 | B 52 | 4570-6045   | B 47 | 4610-1120 | B 45 |           |      |
| 4471-0020 | B 55 | 4511-5122 | B 29 | 4560-4035 | B 52 | 4570-6050   | B 47 | 4610-1405 | B 44 |           |      |
| 4471-0025 | B 55 | 4511-5123 | B 29 | 4560-4040 | B 52 | 4570-6055   | B 47 | 4610-1410 | B 44 | <b>47</b> |      |
| 4471-0030 | B 55 | 4511-9205 | B 29 | 4561-1005 | B 51 | 4571-2005   | B 47 | 4610-1415 | B 44 | 4700-1001 | B 26 |
| 4471-0035 | B 55 | 4511-9210 | B 29 | 4561-1010 | B 51 | 4571-2010   | B 47 | 4610-1420 | B 44 | 4700-1002 | B 26 |
| 4471-0040 | B 55 | 4511-9215 | B 29 | 4561-1015 | B 51 | 4571-2015   | B 47 | 4610-2005 | B 44 | 4700-1003 | B 26 |
| 4471-0045 | B 55 | 4511-9220 | B 29 | 4561-1020 | B 51 | 4571-2020   | B 47 | 4610-2010 | B 44 | 4700-1004 | B 26 |
| 4471-0050 | B 55 | 4520-1005 | B 50 | 4561-2001 | B 54 | 4571-2025   | B 47 | 4610-2015 | B 44 | 4700-1005 | B 26 |
| 4471-0055 | B 55 | 4520-1010 | B 50 | 4561-2002 | B 54 | 4571-2030   | B 47 | 4610-2020 | B 44 | 4700-1006 | B 26 |
| 4471-0060 | B 55 | 4520-2005 | B 43 | 4561-2003 | B 54 | 4571-2035   | B 47 | 4610-2305 | B 44 | 4700-1007 | B 26 |
| 4471-0065 | B 55 | 4520-2010 | B 43 | 4561-2004 | B 54 | 4571-2040   | B 47 | 4610-2310 | B 44 | 4700-1008 | B 26 |
| 4471-0070 | B 55 | 4520-2015 | B 43 | 4561-2005 | B 54 | 4571-2045   | B 47 | 4610-2315 | B 44 | 4700-1009 | B 26 |
|           |      | 4520-2020 | B 43 | 4561-2006 | B 54 | 4571-2050   | B 47 | 4610-2320 | B 44 | 4700-1010 | B 26 |
|           |      | 4520-6335 | B 43 | 4561-3501 | B 54 | 4571-2055   | B 47 | 4610-2505 | B 44 | 4700-1011 | B 26 |
|           |      | 4520-6340 | B 43 | 4561-3502 | B 54 |             |      | 4610-2510 | B 44 | 4700-1012 | B 26 |
|           |      | 4520-6345 | B 43 | 4561-3503 | B 54 | <b>46</b>   |      | 4610-2515 | B 44 | 4700-1013 | B 26 |
|           |      | 4520-6350 | B 43 | 4561-3504 | B 54 | 4600-0001-A | B 33 | 4610-2520 | B 44 | 4700-2005 | B 26 |
|           |      | 4520-6405 | B 43 | 4561-3505 | B 54 | 4600-0002-A | B 33 | 4610-3105 | B 15 | 4700-2010 | B 26 |
|           |      | 4520-6410 | B 43 | 4561-3506 | B 54 | 4600-0003-A | B 33 | 4610-3110 | B 15 | 4700-2015 | B 26 |
|           |      | 4520-6415 | B 43 | 4561-3507 | B 54 | 4600-0004-A | B 33 | 4610-3115 | B 15 | 4700-2020 | B 26 |
|           |      | 4520-6420 | B 43 | 4561-3508 | B 54 | 4600-0005-A | B 33 | 4610-3120 | B 15 | 4706-0001 | B 18 |
|           |      | 4521-0005 | B 50 | 4561-3509 | B 54 | 4600-0006-A | B 33 | 4611-8106 | B 19 | 4706-0002 | B 18 |
|           |      | 4521-0010 | B 50 | 4570-0005 | B 49 | 4600-0007-A | B 33 | 4611-8110 | B 19 | 4706-0003 | B 18 |
|           |      | 4521-0015 | B 50 | 4570-0010 | B 49 | 4600-0008-A | B 33 | 4611-8115 | B 19 | 4706-0004 | B 18 |
|           |      | 4521-0020 | B 50 | 4550-1005 | B 49 | 4600-0009-A | B 33 | 4611-8120 | B 19 | 4706-0005 | B 18 |
|           |      | 4550-1010 | B 49 | 4570-0020 | B 49 | 4600-0010-A | B 33 | 4611-8125 | B 19 | 4706-0006 | B 18 |
|           |      | 4550-1015 | B 49 | 4570-0025 | B 49 | 4600-0011-A | B 33 | 4611-8129 | B 19 | 4706-0007 | B 18 |
|           |      | 4550-1020 | B 49 | 4570-0030 | B 49 | 4600-0012-A | B 33 | 4611-8130 | B 19 | 4706-0008 | B 18 |
|           |      | 4550-1025 | B 49 | 4570-4005 | B 47 | 4600-0013-A | B 33 | 4612-5106 | B 19 | 4706-0009 | B 18 |
|           |      | 4550-1030 | B 49 | 4570-4010 | B 47 | 4600-0014   | B 33 | 4612-5110 | B 19 | 4706-0010 | B 18 |
|           |      | 4560-0001 | B 49 | 4570-4015 | B 47 | 4600-0015   | B 33 | 4612-5115 | B 19 | 4706-0011 | B 18 |
|           |      | 4560-0002 | B 49 | 4570-4020 | B 47 | 4600-0016   | B 33 | 4612-5120 | B 19 | 4706-0012 | B 18 |
|           |      | 4560-0003 | B 49 | 4570-4025 | B 47 | 4600-0017   | B 33 | 4612-5125 | B 19 | 4710-1005 | B 39 |
|           |      |           |      |           |      |             |      | 4612-5130 | B 19 | 4710-1010 | B 39 |
|           |      |           |      |           |      |             |      |           |      | 4710-1015 | B 39 |

## CODE INDEX

| CODE        | PAGE | CODE        | PAGE | CODE        | PAGE | CODE        | PAGE | CODE        | PAGE | CODE         | PAGE |
|-------------|------|-------------|------|-------------|------|-------------|------|-------------|------|--------------|------|
| 4710-1020   | B 39 | 4711-7303-A | B 31 | 4711-8309   | B 30 | 4801-0004   | B 08 | 4833-7315-A | B 60 | 4911-8145    | B 22 |
| 4710-1205   | B 30 | 4711-7304   | B 30 | 4711-8310   | B 30 | 4801-0005   | B 08 | 4833-7320-A | B 60 | 4911-8150    | B 22 |
| 4710-2005   | B 39 | 4711-7304-A | B 31 | 4718-0005   | B 59 | 4801-0006   | B 08 | 4833-8105   | B 60 | 4911-8155    | B 22 |
| 4710-2010   | B 39 | 4711-7305   | B 30 | 4718-0010   | B 59 | 4801-0007   | B 08 | 4833-8110   | B 60 | 4911-8160    | B 22 |
| 4710-2015   | B 39 | 4711-7305-A | B 31 | 4718-0015   | B 59 | 4801-0008   | B 08 | 4833-8115-A | B 60 | 4911-8165    | B 22 |
| 4710-2020   | B 39 | 4711-7306   | B 30 | 4718-0020   | B 59 | 4801-0009   | B 08 | 4833-8120-A | B 60 | 4912-5105    | B 21 |
| 4710-2205   | B 20 | 4711-7306-A | B 31 | 4718-0025   | B 59 | 4801-0010   | B 08 | 4833-8125   | B 61 | 4912-5110    | B 21 |
| 4710-2305   | B 39 | 4711-7307   | B 30 | 4718-0030   | B 59 | 4801-0011   | B 08 | 4833-8130   | B 61 | 4912-5115    | B 21 |
| 4710-2310   | B 39 | 4711-7307-A | B 31 | 4718-0035   | B 59 | 4801-0012   | B 08 | 4861-0005   | B 59 | 4912-5120    | B 21 |
| 4710-2315   | B 39 | 4711-7308   | B 30 | 4720-2005   | B 40 | 4801-0013   | B 08 | 4861-0010   | B 59 | 4912-5125    | B 21 |
| 4711-1105   | B 30 | 4711-7308-A | B 31 | 4720-2010   | B 40 | 4801-0014   | B 08 | 4861-0015   | B 59 | 4912-5130    | B 21 |
| 4711-1110   | B 30 | 4711-7309   | B 30 | 4720-2015   | B 40 | 4801-1002   | B 08 | 4861-0020   | B 59 | 4920-0005    | B 56 |
| 4711-1115   | B 30 | 4711-7309-A | B 31 | 4720-2020   | B 40 | 4801-1003   | B 08 | 4861-2005   | B 59 | 4920-0010    | B 56 |
| 4711-1120   | B 30 | 4711-7310   | B 30 | 4731-0005   | B 51 | 4801-1004   | B 08 | 4861-2010   | B 59 | 4920-0015    | B 56 |
| 4711-2101   | B 30 | 4711-7310-A | B 31 | 4731-0010   | B 51 | 4801-1005   | B 08 | 4861-2015   | B 59 | 4920-0020    | B 56 |
| 4711-2102   | B 30 | 4711-7311   | B 30 | 4731-0015   | B 51 | 4801-1006   | B 08 | 4861-2020   | B 59 |              |      |
| 4711-2103   | B 30 | 4711-7311-A | B 31 | 4733-7315-A | B 60 | 4801-1007   | B 08 |             |      | <b>49</b>    |      |
| 4711-2104   | B 30 | 4711-7312   | B 30 | 4733-7320-A | B 60 | 4801-1008   | B 08 | 4905-0005   | B 17 | 5111-0000    | C 07 |
| 4711-2105   | B 30 | 4711-7312-A | B 31 | 4733-8105   | B 60 | 4801-1009   | B 08 | 4905-0006   | B 17 | 5111-0001-LB | C 23 |
| 4711-2106   | B 30 | 4711-7313   | B 30 | 4733-8110   | B 60 | 4801-1010   | B 08 | 4905-0007   | B 17 | 5111-0001    | C 22 |
| 4711-2107   | B 30 | 4711-7313-A | B 31 | 4733-8115-A | B 60 | 4801-1011   | B 08 | 4905-0008   | B 17 | 5111-0010    | C 23 |
| 4711-2108   | B 30 | 4711-7315-A | B 60 | 4733-8120-A | B 60 | 4801-1012   | B 08 | 4905-0009   | B 17 | 5111-1005    | C 07 |
| 4711-2109   | B 30 | 4711-7405-A | B 32 | 4750-3108   | B 27 | 4806-0005   | B 20 | 4905-0010   | B 17 | 5111-1010    | C 22 |
| 4711-2110   | B 30 | 4711-7410-A | B 32 | 4750-3109   | B 27 | 4806-0010   | B 20 | 4905-0011   | B 17 | 5111-1105    | C 08 |
| 4711-2111   | B 30 | 4711-7415-A | B 32 | 4750-3110   | B 27 | 4806-0015   | B 20 | 4905-0011   | B 17 | 5111-1110    | C 08 |
| 4711-2112   | B 30 | 4711-7420-A | B 32 | 4750-4110   | B 27 | 4806-0020   | B 20 | 4910-2105   | B 62 | 5111-1205    | C 08 |
| 4711-2113   | B 30 | 4711-7425-A | B 32 | 4750-5110   | B 27 | 4806-0025   | B 20 | 4910-2110   | B 62 | 5111-1210    | C 08 |
| 4711-3101   | B 30 | 4711-8115-A | B 60 | 4750-5111   | B 27 | 4806-0030   | B 20 | 4910-2115   | B 62 | 5111-2020    | C 03 |
| 4711-3102   | B 30 |             |      |             |      | 4810-0005   | B 07 | 4910-2120   | B 62 | 5111-5005    | C 07 |
| 4711-3103   | B 30 | 4711-8125   | B 61 |             |      | 4810-0010   | B 07 | 4910-2125   | B 62 | 5121-0010    | C 23 |
| 4711-3104   | B 30 | 4711-8301   | B 30 |             |      | 4810-0015   | B 07 | 4910-2130   | B 62 | 5121-1101    | C 06 |
| 4711-3105   | B 30 | 4711-8301-A | B 31 |             |      | 4810-0020   | B 07 | 4910-2135   | B 62 | 5121-1102    | C 06 |
| 4711-3106   | B 30 | 4711-8302   | B 30 |             |      | 4810-0025   | B 07 | 4910-2140   | B 62 | 5121-1105    | C 09 |
| 4711-3107   | B 30 | 4711-8302-A | B 31 |             |      | 4810-0030   | B 07 | 4910-4105   | B 22 | 5121-1106    | C 10 |
| 4711-3108   | B 30 | 4711-8303   | B 30 |             |      | 4810-0035   | B 07 | 4910-4110   | B 22 | 5121-1107    | C 10 |
| 4711-3109   | B 30 | 4711-8303-A | B 31 |             |      | 4811-7315-A | B 60 | 4910-4115   | B 22 | 5121-1110    | C 10 |
| 4711-3110   | B 30 | 4711-8304   | B 30 |             |      | 4811-7320-A | B 60 | 4910-4120   | B 22 | 5121-1115    | C 10 |
| 4711-4405   | B 30 | 4711-8304-A | B 31 |             |      | 4811-8110   | B 60 | 4911-8105   | B 21 | 5121-1120    | C 10 |
| 4711-4410   | B 30 | 4711-8305   | B 30 |             |      | 4811-8115-A | B 60 | 4911-8110   | B 21 | 5121-1125    | C 10 |
| 4711-4415   | B 30 | 4711-8305-A | B 31 |             |      | 4811-8120-A | B 60 | 4911-8115   | B 21 | 5121-1201    | C 06 |
| 4711-4420   | B 30 | 4711-8306   | B 30 |             |      | 4811-8125   | B 61 | 4911-8120   | B 21 | 5121-1202    | C 06 |
| 4711-7301   | B 30 | 4711-8306-A | B 31 |             |      | 4811-8130   | B 61 | 4911-8125   | B 21 | 5121-1203    | C 06 |
| 4711-7301-A | B 31 | 4711-8307   | B 30 |             |      | 4812-5105   | B 61 | 4911-8129   | B 21 | 5121-1204    | C 06 |
| 4711-7302   | B 30 | 4711-8307-A | B 31 |             |      | 4812-5110   | B 61 | 4911-8130   | B 22 | 5121-1205    | C 09 |
| 4711-7302-A | B 31 |             |      |             |      | 4812-5115-A | B 61 | 4911-8135   | B 22 | 5121-1210    | C 10 |
| 4711-7303   | B 30 | 4711-8308-A | B 31 |             |      | 4812-5120-A | B 61 | 4911-8140   | B 22 | 5121-1215    | C 10 |

| CODE        | PAGE | CODE        | PAGE | CODE      | PAGE | CODE      | PAGE | CODE      | PAGE | CODE      | PAGE |
|-------------|------|-------------|------|-----------|------|-----------|------|-----------|------|-----------|------|
| 5121-1220   | C 10 | 5221-1000   | C 30 | 5260-4215 | C 16 | 5333-6309 | C 24 | 5333-7704 | C 25 | 5340-8105 | C 18 |
| 5121-1225   | C 10 | 5221-1001   | C 30 | 5260-4220 | C 16 | 5333-6310 | C 24 | 5333-7705 | C 25 | 5340-8110 | C 18 |
| 5121-1230   | C 06 | 5221-1002   | C 32 | 5261-0205 | C 19 | 5333-6401 | C 24 | 5333-7706 | C 25 | 5340-8115 | C 18 |
| 5121-1235   | C 06 | 5221-1070   | C 38 | 5261-0210 | C 19 | 5333-6601 | C 24 | 5333-7707 | C 25 | 5340-9105 | C 18 |
| 5121-1305   | C 20 | 5221-1072   | C 38 | 5261-0215 | C 19 | 5333-6701 | C 24 | 5333-7708 | C 25 | 5340-9110 | C 18 |
| 5121-1310   | C 20 | 5221-1115   | C 32 | 5261-1205 | C 14 | 5333-6901 | C 24 | 5333-7709 | C 25 | 5340-9115 | C 18 |
| 5121-1315   | C 20 | 5221-1129   | C 28 | 5261-1210 | C 14 | 5333-7001 | C 25 | 5333-7710 | C 25 | 5351-0005 | C 21 |
| 5121-1320   | C 20 | 5221-1129-A | C 28 | 5261-1215 | C 14 | 5333-7002 | C 25 | 5333-7711 | C 25 | 5351-0010 | C 21 |
| 5121-1325   | C 20 | 5221-1140   | C 28 | 5261-2205 | C 14 | 5333-7101 | C 24 | 5333-7712 | C 25 | 5351-2105 | C 21 |
| 5121-1330   | C 20 | 5221-1140-A | C 28 | 5261-2210 | C 14 | 5333-7102 | C 24 | 5333-7713 | C 25 | 5351-2110 | C 21 |
| 5121-1340   | C 20 | 5221-1145-A | C 29 | 5261-2215 | C 14 | 5333-7103 | C 24 | 5333-7714 | C 25 | 5361-0005 | C 21 |
| 5121-1345   | C 20 | 5221-1205   | C 31 | 5261-3205 | C 19 | 5333-7104 | C 24 | 5333-7715 | C 25 | 5361-0010 | C 21 |
| 5121-2101   | C 05 | 5221-1210   | C 31 | 5261-3210 | C 19 | 5333-7105 | C 24 | 5333-7716 | C 25 | 5361-0020 | C 22 |
| 5121-2106   | C 05 | 5221-1215   | C 31 | 5261-3215 | C 19 | 5333-7106 | C 24 | 5333-7717 | C 25 | 5361-0025 | C 22 |
| 5121-2107   | C 05 | 5221-1220   | C 31 | 5262-0205 | C 22 | 5333-7107 | C 24 | 5333-7718 | C 25 |           |      |
| 5121-2201   | C 05 | 5221-3010   | C 38 | 5262-1205 | C 22 | 5333-7108 | C 24 | 5333-7719 | C 25 |           |      |
| 5121-3005   | C 04 | 5221-3015   | C 38 | 5271-0010 | C 20 | 5333-7109 | C 24 | 5333-7720 | C 25 |           |      |
| 5121-3010   | C 04 | 5221-3020   | C 38 |           |      | 5333-7110 | C 24 | 5333-7721 | C 25 |           |      |
| 5122-4205   | C 11 | 5221-3025   | C 38 |           |      | 5333-7111 | C 24 | 5333-7722 | C 25 |           |      |
| 5122-4211   | C 22 | 5221-3026   | C 38 |           |      | 5333-7201 | C 25 | 5333-7723 | C 25 |           |      |
| 5122-4212   | C 12 | 5221-3030   | C 38 |           |      | 5333-7202 | C 25 | 5333-7724 | C 25 |           |      |
| 5122-4213   | C 12 | 5221-3031   | C 38 |           |      | 5333-7203 | C 25 | 5333-7725 | C 25 |           |      |
| 5122-4214   | C 11 | 5221-3035   | C 38 |           |      | 5333-7204 | C 25 | 5333-7801 | C 26 |           |      |
| 5122-4215   | C 11 | 5221-3105   | C 28 |           |      | 5333-7205 | C 25 | 5333-7802 | C 26 |           |      |
| 5122-4245   | C 11 | 5221-3105-A | C 28 |           |      | 5333-7206 | C 25 | 5333-7803 | C 26 |           |      |
| 5122-4250   | C 22 | 5221-3106   | C 33 |           |      | 5333-7207 | C 25 | 5333-7901 | C 26 |           |      |
| 5122-4270   | C 03 | 5222-6000   | C 34 |           |      | 5333-7208 | C 25 | 5333-8001 | C 26 |           |      |
| 5130-1105   | C 17 | 5222-6001   | C 35 |           |      | 5333-7209 | C 25 | 5333-8002 | C 26 |           |      |
| 5130-1110   | C 17 | 5222-6002   | C 36 |           |      | 5333-7210 | C 25 | 5333-8003 | C 26 |           |      |
| 5131-2105   | C 10 | 5222-6103   | C 34 |           |      | 5333-7211 | C 25 | 5333-8004 | C 26 |           |      |
| 5131-4405   | C 10 | 5222-6105   | C 33 |           |      | 5333-7601 | C 25 | 5333-8005 | C 26 |           |      |
| 5132-7105   | C 10 | 5222-6106   | C 34 |           |      | 5333-7602 | C 25 | 5333-8006 | C 26 |           |      |
| 5140-1105   | C 17 | 5222-6110   | C 35 |           |      | 5333-7603 | C 25 | 5333-8007 | C 26 |           |      |
| 5140-1110   | C 17 | 5222-6405   | C 36 |           |      | 5333-7604 | C 25 | 5333-8008 | C 26 |           |      |
| 5140-1115   | C 17 | 5222-7103   | C 34 |           |      | 5333-7605 | C 25 | 5333-8009 | C 26 |           |      |
| 5140-1120   | C 17 | 5223-3105-A | C 29 |           |      | 5333-7606 | C 25 | 5333-8010 | C 26 |           |      |
| 5141-1105   | C 10 | 5260-1104   | C 15 |           |      | 5333-7607 | C 25 | 5333-8011 | C 26 |           |      |
| 5141-2105   | C 10 | 5260-1105   | C 15 |           |      | 5333-7608 | C 25 | 5333-8012 | C 26 |           |      |
| 5181-0005-A | C 02 | 5260-1110   | C 15 |           |      | 5333-7609 | C 25 | 5333-8013 | C 26 |           |      |
|             |      | 5260-1115   | C 15 |           |      | 5333-6301 | C 24 | 5333-8014 | C 26 |           |      |
|             |      | 5260-1120   | C 15 |           |      | 5333-6302 | C 24 | 5333-8015 | C 26 |           |      |
|             |      | 5260-3705   | C 13 |           |      | 5333-6303 | C 24 | 5333-8016 | C 26 |           |      |
|             |      | 5260-3710   | C 13 |           |      | 5333-6304 | C 24 | 5333-8017 | C 26 |           |      |
|             |      | 5260-3715   | C 13 |           |      | 5333-6305 | C 24 | 5333-8018 | C 26 |           |      |
|             |      | 5260-3720   | C 13 |           |      | 5333-6306 | C 24 | 5333-8019 | C 26 |           |      |
|             |      | 5260-4205   | C 16 |           |      | 5333-6307 | C 24 | 5333-8020 | C 26 |           |      |
|             |      | 5260-4210   | C 16 |           |      | 5333-6308 | C 24 | 5333-7703 | C 25 |           |      |

| CODE      | PAGE | CODE      | PAGE | CODE        | PAGE | CODE      | PAGE | CODE      | PAGE | CODE      | PAGE |
|-----------|------|-----------|------|-------------|------|-----------|------|-----------|------|-----------|------|
| 5511-1120 | C 40 | 5610-8115 | C 40 | 5712-1100-A | H 07 | 5810-0800 | A 65 | 5811-0065 | C 56 | 5813-1105 | C 55 |
| 5511-1121 | C 40 | 5610-8120 | C 40 | 5720-0025   | L 25 | 5810-0850 | A 65 | 5811-0070 | C 56 | 5813-1110 | C 55 |
| 5511-1125 | C 40 | 5610-8125 | C 40 | 5721-0005   | C 60 | 5810-0900 | A 65 | 5811-0075 | C 56 | 5813-1115 | C 55 |
| 5511-1130 | C 40 | 5610-8130 | C 40 | 5721-0010   | C 60 | 5810-1000 | A 65 | 5812-2005 | C 56 | 5813-1120 | C 55 |
| 5511-1135 | C 40 | 5610-8135 | C 40 | 5721-0015   | C 60 | 5810-1105 | A 64 | 5812-2010 | C 56 | 5813-1125 | C 55 |
| 5511-1140 | C 40 | 5612-2005 | C 40 | 5721-0020   | C 60 | 5810-1110 | A 64 | 5812-2015 | C 56 | 5813-1130 | C 55 |
| 5511-2105 | C 40 | 5612-2010 | C 40 | 5721-0025   | C 60 | 5810-1115 | A 64 | 5812-2020 | C 56 | 5814-0005 | C 59 |
| 5511-2110 | C 40 | 5612-2015 | C 40 | 5721-0030   | C 60 | 5810-1120 | A 64 | 5812-2025 | C 56 | 5814-0010 | C 59 |
| 5511-2115 | C 40 | 5612-2020 | C 40 | 5722-4005   | C 60 | 5810-1125 | A 64 | 5812-2030 | C 56 | 5814-0013 | C 59 |
| 5511-2120 | C 40 | 5612-2025 | C 40 | 5722-4010   | C 60 | 5810-2000 | C 54 | 5812-2035 | C 56 | 5814-0015 | C 59 |
| 5511-2125 | C 40 | 5612-2030 | C 40 | 5722-4015   | C 60 | 5810-2001 | C 54 | 5812-2040 | C 56 | 5814-0020 | C 59 |
| 5511-2130 | C 40 | 5612-2035 | C 40 | 5722-4020   | C 60 | 5810-2002 | C 54 | 5812-2210 | C 59 | 5814-0105 | C 59 |
| 5511-2135 | C 40 | 5630-1005 | C 61 | 5722-4025   | C 60 | 5810-2003 | C 54 | 5812-2215 | C 59 | 5814-0110 | C 59 |
| 5511-2140 | C 40 | 5630-1010 | C 61 | 5751-0005   | C 63 | 5810-2005 | C 57 | 5812-2220 | C 59 | 5814-0113 | C 59 |
| 5512-6105 | C 40 | 5630-1015 | C 61 | 5751-0010   | C 63 | 5810-2010 | C 57 | 5812-3105 | C 57 | 5814-0115 | C 59 |
| 5512-6110 | C 40 | 5630-1020 | C 61 | 5760-1005   | H 05 | 5810-2015 | C 57 | 5812-3110 | C 57 | 5814-0120 | C 59 |
| 5512-6115 | C 40 | 5630-1025 | C 61 | 5760-1015   | H 05 | 5810-2020 | C 57 | 5812-3115 | C 57 | 5814-0105 | C 58 |
| 5512-6120 | C 40 | 5671-0005 | C 44 | 5761-0005   | H 03 | 5810-2025 | C 57 | 5812-3120 | C 57 | 5814-1010 | C 58 |
| 5512-6125 | C 40 | 5671-0010 | C 44 | 5761-0010   | H 03 | 5810-2030 | C 57 | 5812-3125 | C 57 | 5814-1013 | C 58 |
| 5512-6130 | C 40 | 5671-0015 | C 44 | 5761-0015   | H 03 | 5810-3105 | A 63 | 5812-3130 | C 57 | 5814-1015 | C 58 |
| 5512-6135 | C 40 |           |      | 5761-0020   | H 03 | 5810-3110 | A 63 | 5812-3135 | C 57 | 5814-1020 | C 58 |
| 5512-6140 | C 40 |           |      | 5761-0040   | H 06 | 5810-3115 | A 63 | 5812-3305 | C 60 | 5814-1105 | C 58 |
| 5512-7105 | C 40 |           |      | 5761-0045   | H 06 | 5810-3120 | A 63 | 5812-3310 | C 60 | 5814-1110 | C 58 |
| 5512-7110 | C 40 |           |      | 5761-0050   | H 06 | 5810-3125 | A 63 | 5812-3315 | C 60 | 5814-1115 | C 58 |
| 5512-7115 | C 40 |           |      | 5761-0070   | H 03 | 5810-4405 | A 64 | 5812-3320 | C 60 | 5814-1115 | C 58 |
| 5512-7120 | C 40 |           |      |             |      | 5810-4410 | A 64 | 5812-3325 | C 60 | 5814-1120 | C 58 |
| 5512-7125 | C 40 |           |      |             |      | 5810-4415 | A 64 | 5812-4010 | C 57 | 5820-0005 | C 19 |
| 5512-7130 | C 40 |           |      |             |      | 5810-4420 | A 64 | 5812-4015 | C 57 | 5820-0010 | C 19 |
| 5512-7135 | C 40 |           |      |             |      | 5810-4425 | A 64 | 5812-4020 | C 57 | 5820-0015 | C 19 |
| 5512-7140 | C 40 |           |      |             |      | 5810-7105 | A 63 | 5813-0005 | C 55 | 5820-0020 | C 19 |
| 5514-0005 | C 43 |           |      |             |      | 5810-7110 | A 63 | 5813-0010 | C 55 | 5820-0005 | C 63 |
| 5514-0010 | C 43 |           |      |             |      | 5810-7115 | A 63 | 5813-0015 | C 55 | 5820-1010 | C 63 |
| 5581-0005 | C 42 |           |      |             |      | 5810-7120 | A 63 | 5813-0020 | C 55 | 5820-1015 | C 63 |
| 5581-0010 | C 42 |           |      |             |      | 5810-7125 | A 63 | 5813-0025 | C 55 | 5820-1020 | C 63 |
|           |      |           |      |             |      | 5811-0000 | C 56 | 5813-0030 | C 55 | 5821-1100 | C 62 |
|           |      |           |      |             |      | 5811-0005 | C 58 | 5813-0105 | C 55 | 5821-1105 | C 62 |
|           |      |           |      |             |      | 5811-0010 | C 58 | 5813-0110 | C 55 | 5822-4100 | C 62 |
|           |      |           |      |             |      | 5811-0015 | C 58 | 5813-0115 | C 55 | 5822-4105 | C 62 |
|           |      |           |      |             |      | 5811-0020 | C 58 | 5813-0120 | C 55 | 5831-0005 | C 64 |
|           |      |           |      |             |      | 5811-0025 | C 58 | 5813-0125 | C 55 | 5840-6200 | C 48 |
|           |      |           |      |             |      | 5811-0030 | C 58 | 5813-0130 | C 55 | 5840-6205 | C 49 |
|           |      |           |      |             |      | 5811-0035 | C 56 | 5813-1005 | C 55 | 5840-6215 | C 50 |
|           |      |           |      |             |      | 5811-0040 | C 56 | 5813-1010 | C 55 | 5840-6220 | C 50 |
|           |      |           |      |             |      | 5811-0045 | C 56 | 5813-1015 | C 55 | 5840-6225 | C 50 |
|           |      |           |      |             |      | 5811-0050 | C 56 | 5813-1020 | C 55 | 5840-6230 | C 50 |
|           |      |           |      |             |      | 5811-0055 | C 56 | 5813-1025 | C 55 | 5840-6235 | C 51 |
|           |      |           |      |             |      | 5811-0060 | C 56 | 5813-1030 | C 55 | 5841-1115 | C 48 |



|           | CODE        | PAGE      | CODE      | PAGE      | CODE      | PAGE      | CODE      | PAGE      | CODE      | PAGE      | CODE      | PAGE |
|-----------|-------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|------|
| 5841-1120 | 5841-1120   | C 48      | 6110-1246 | 116       | 6205-3001 | 124       | 6211-4314 | 123       | 6220-6605 | 119       | 6312-0145 | 111  |
|           | 5841-1125   | C 48      | 6110-1247 | 116       | 6205-3002 | 124       | 6211-4315 | 123       | 6220-6608 | 119       | 6312-0150 | 111  |
|           | 5841-1130   | C 48      | 6110-1283 | 116       | 6205-3003 | 124       | 6211-4316 | 123       | 6221-5103 | 113       | 6312-0155 | 111  |
|           | 5841-1135   | C 48      | 6110-1287 | 116       | 6205-3004 | 124       | 6211-4317 | 123       | 6221-5112 | 113       | 6312-0160 | 111  |
|           | 5841-1140   | C 48      | 6110-1405 | B 63      | 6205-3005 | 124       | 6211-4318 | 123       | 6221-5232 | 113       | 6312-0165 | 111  |
|           | 5841-1145   | C 48      | 6110-3236 | 116       | 6205-3006 | 124       | 6211-4319 | 123       | 6221-5246 | 113       | 6312-0170 | 111  |
|           | 5841-2005   | C 52      | 6110-3281 | 116       | 6205-3007 | 124       | 6211-4320 | 123       | 6221-5247 | 113       | 6312-0175 | 111  |
|           | 5841-2010   | C 52      | 6111-0010 | 116       | 6205-3008 | 124       | 6211-4321 | 123       | 6221-5287 | 113       | 6312-0180 | 111  |
|           | 5841-3015   | C 54      | 6111-1010 | 116       | 6205-3009 | 124       | 6211-4322 | 123       | 6221-6605 | 119       | 6312-0185 | 111  |
|           | 5841-8105   | C 47      | 6111-1112 | 116       | 6205-3010 | 124       | 6211-4323 | 123       | 6221-6608 | 119       | 6312-0190 | 111  |
| 5841-8106 | 5841-8106   | C 47      | 6111-1122 | 116       | 6205-3011 | 124       | 6211-4324 | 123       | 6221-6605 | 119       | 6312-0195 | 111  |
|           | 5841-8110   | C 47      | 6111-1201 | 116       | 6205-3012 | 124       | 6211-4325 | 123       | 6222-6608 | 119       | 6312-0200 | 111  |
|           | 5841-8115   | C 47      | 6111-1204 | A 61      | 6205-3013 | 124       | 6211-4326 | 123       | 63        | 6312-0250 | 111       |      |
|           | 5841-8120   | C 47      | 6111-1210 | B 63      | 6205-3014 | 124       | 6211-4327 | 123       |           | 6312-0260 | 111       |      |
|           | 5841-8125   | C 47      | 6111-1211 | B 63      | 6205-3015 | 124       | 6211-4328 | 123       |           | 6312-0300 | 111       |      |
|           | 5841-8130   | C 47      | 6111-1220 | B 64      | 6205-3016 | 124       | 6211-4329 | 123       |           | 6311-3105 | 110       |      |
|           | 5841-9105   | C 49      | 6111-1225 | B 64      | 6205-3017 | 124       | 6211-4330 | 123       | 6311-3106 | 110       | 6312-0400 | 111  |
|           | 5842-1005   | C 47      | 6111-1230 | B 64      | 6205-3018 | 124       | 6211-4331 | 123       | 6311-3110 | 110       | 6312-0450 | 111  |
|           | 59          | 6111-1232 | 116       | 6205-3019 | 124       | 6211-4332 | 123       | 6311-3202 | 110       | 6312-0500 | 111       |      |
|           |             | 6111-1235 | B 64      | 6205-3020 | 124       | 6211-4333 | 123       | 6311-3203 | 110       | 6312-0550 | 111       |      |
| 6111-1246 |             | 116       | 6205-3021 | 124       | 6211-4334 | 123       | 6311-3205 | 110       | 6312-0600 | 111       |           |      |
| 6111-1247 |             | 116       | 6205-3022 | 124       | 6211-4335 | 123       | 6312-0015 | 111       | 6312-0620 | 111       |           |      |
| 6111-1283 |             | 116       | 6205-3023 | 124       | 6211-4336 | 123       | 6312-0020 | 111       | 6312-0650 | 111       |           |      |
| 6111-1287 |             | 116       | 6205-3024 | 124       | 6211-4337 | 123       | 6312-0025 | 111       | 6312-0660 | 111       |           |      |
| 6111-1305 |             | A 62      | 6205-4005 | 124       | 6211-4338 | 123       | 6312-0030 | 111       | 6312-0750 | 111       |           |      |
| 6111-1310 |             | A 62      | 6205-4010 | 124       | 6211-4339 | 123       | 6312-0035 | 111       | 6312-0800 | 111       |           |      |
| 6111-1315 |             | A 62      | 6205-4015 | 124       | 6211-4400 | 123       | 6312-0040 | 111       | 6312-0850 | 111       |           |      |
| 6111-1505 |             | B 63      | 6205-4020 | 124       | 6211-4405 | 123       | 6312-0045 | 111       | 6312-0870 | 111       |           |      |
| 5911-0001 | 5911-0001   | J 03      | 6111-3236 | 116       | 6205-4025 | 124       | 6211-4410 | 123       | 6312-0050 | 111       | 6312-0900 | 111  |
|           | 5911-0001-A | J 03      | 6111-3281 | 116       | 6205-4030 | 124       | 6211-4415 | 123       | 6312-0055 | 111       | 6312-0950 | 111  |
|           | 5911-0010   | J 03      | 6112-0010 | 116       | 6205-4035 | 124       | 6211-4420 | 123       | 6312-0060 | 111       | 6312-1000 | 111  |
|           | 5911-0002-A | J 03      | 6112-1100 | 116       | 6211-4205 | 116       | 6211-4425 | 123       | 6312-0065 | 111       | 6312-1005 | 111  |
|           | 5921-0005   | J 04      | 6112-1112 | 116       | 6211-4210 | 123       | 6211-4430 | 123       | 6312-0070 | 111       | 6312-1100 | 111  |
|           | 6112-1122   | 116       | 6211-4300 | 123       | 6211-4435 | 123       | 6312-0075 | 111       | 6312-1200 | 111       |           |      |
|           | 6112-1201   | 116       | 6211-4301 | 123       | 6211-4440 | 123       | 6312-0080 | 111       | 6312-1250 | 111       |           |      |
|           | 6112-1204   | A 61      | 6211-4302 | 123       | 6211-4405 | 123       | 6312-0085 | 111       | 6312-1300 | 111       |           |      |
|           | 6112-1232   | 116       | 6211-4303 | 123       | 6211-4505 | 123       | 6312-0090 | 111       | 6312-1400 | 111       |           |      |
|           | 6112-1246   | 116       | 6211-4304 | 123       | 6211-4510 | 123       | 6312-0095 | 111       | 6312-1500 | 111       |           |      |
| 60        | 6112-1247   | 116       | 6211-4305 | 123       | 6211-4515 | 123       | 6312-0100 | 111       | 6312-1700 | 111       |           |      |
|           | 6112-1283   | 116       | 6211-4306 | 123       | 6212-0205 | 123       | 6312-0105 | 111       | 6312-1750 | 111       |           |      |
|           | 6112-1287   | 116       | 6211-4307 | 123       | 6212-0210 | 123       | 6312-0110 | 111       | 6312-1900 | 111       |           |      |
|           | 6112-3236   | 116       | 6211-4308 | 123       | 6220-5103 | 113       | 6312-0115 | 111       | 6312-2000 | 111       |           |      |
|           | 6112-3281   | 116       | 6211-4309 | 123       | 6220-5112 | 113       | 6312-0120 | 111       | 6312-2100 | 111       |           |      |
|           | 6112-1122   | 116       | 6211-4310 | 123       | 6220-5232 | 113       | 6312-0125 | 111       | 6312-2200 | 111       |           |      |
|           | 6112-1201   | 116       | 6211-4311 | 123       | 6220-5246 | 113       | 6312-0130 | 111       | 6312-2300 | 111       |           |      |
|           | 6112-1211   | B 63      | 6211-4312 | 123       | 6220-5247 | 113       | 6312-0135 | 111       | 6312-2400 | 111       |           |      |
|           | 6112-1232   | 116       | 6201-3505 | A 63      | 6211-4313 | 123       | 6220-5287 | 113       | 6312-0140 | 111       | 6312-2500 | 111  |

## CODE INDEX

| CODE      | PAGE | CODE      | PAGE | CODE                  | PAGE | CODE                  | PAGE | CODE      | PAGE | CODE      | PAGE |
|-----------|------|-----------|------|-----------------------|------|-----------------------|------|-----------|------|-----------|------|
| 6312-3000 | I 11 | 6451-1020 | I 22 | 6700-0104-6.0         | C 45 | 6700-0311-60.0-70.0   | C 45 | 7000-0005 | D 07 | 7212-0055 | L 11 |
| 6312-4000 | I 11 |           |      | 6700-0104-60.0        | C 45 | 6700-0312-70.0-80.0   | C 45 | 7000-0010 | D 07 | 7212-0690 | L 11 |
| 6312-5000 | I 11 | <b>66</b> |      | 6700-0105-90.0-110.0  | C 45 | 6700-0313-80.0-90.0   | C 45 | 7000-0015 | D 07 | 7212-0065 | L 11 |
| 6312-0003 | I 20 | 6614-0002 | I 12 | 6700-0106-100.0-120.0 | C 45 | 6700-0314-90.0-100.0  | C 45 | 7000-0020 | D 07 | 7212-7007 | L 11 |
| 6321-0005 | I 20 | 6614-0003 | I 12 | 6700-0107-120.0-20.0  | C 45 | 6700-0315-100.0-110.0 | C 45 | 7000-1005 | D 09 | 7212-1005 | L 12 |
| 6321-0050 | I 20 | 6614-0004 | I 12 | 6700-0108-20.0-45.0   | C 45 | 6700-0316-110.0-120.0 | C 45 |           |      | 7212-1010 | L 12 |
| 6321-0100 | I 20 | 6614-0004 | I 12 | 6700-0109-45.0-50.0   | C 45 | 6700-0317-120.0-130.0 | C 45 | <b>71</b> |      | 7212-1015 | L 12 |
| 6321-0200 | I 20 | 6614-0005 | I 12 | 6700-0110-50.0-60.0   | C 45 | 6700-0318-130.0-140.0 | C 45 | 7100-0015 | D 08 | 7212-4005 | L 12 |
| 6321-0300 | I 20 | 6614-0006 | I 12 | 6700-0111-60.0-70.0   | C 45 | 6700-0319-140.0-150.0 | C 45 |           |      | 7212-4010 | L 12 |
| 6321-0400 | I 20 | 6614-0008 | I 12 | 6700-0112-70.0-80.0   | C 45 | 6700-0320-150.0-160.0 | C 45 | 7100-0055 | D 12 | 7212-4015 | L 12 |
| 6321-0500 | I 20 | 6614-0010 | I 12 | 6700-0113-80.0-90.0   | C 45 | 6700-0321-160.0-170.0 | C 45 | 7100-1000 | D 11 | 7212-4020 | L 12 |
| 6321-1005 | I 21 | 6614-0012 | I 12 | 6700-0114-90.0-100.0  | C 45 | 6700-0005             | L 22 | 7111-1105 | D 11 |           |      |
| 6321-1010 | I 21 | 6614-0013 | I 12 | 6700-0115-100.0-110.0 | C 45 | 6712-0005             | L 24 | 7111-1115 | D 12 | <b>73</b> |      |
| 6321-1015 | I 21 | 6614-0014 | I 12 | 6700-0116-110.0-120.0 | C 45 | 6712-1010             | L 24 | 7121-0016 | D 02 |           |      |
| 6321-2005 | I 21 | 6614-0015 | I 12 | 6700-0117-120.0-130.0 | C 45 | 6712-1015             | L 24 | 7121-0019 | D 05 | 7312-0004 | D 05 |
| 6321-2010 | I 21 | 6614-0016 | I 12 | 6700-0118-130.0-140.0 | C 45 | 6712-2005-XX          | L 24 | 7121-0020 | D 03 | 7312-0005 | D 06 |
| 6340-1013 | I 14 | 6614-0017 | I 12 | 6700-0119-140.0-150.0 | C 45 | 6712-2010-XX          | L 24 | 7121-0025 | D 03 | 7312-0010 | D 06 |
| 6340-0402 | I 14 | 6614-0018 | I 12 | 6700-0120-150.0-160.0 | C 45 | 6712-2015-XX          | L 24 | 7121-0030 | D 03 | 7312-0015 | D 06 |
| 6340-4232 | I 14 | 6614-0019 | I 12 | 6700-0121-160.0-170.0 | C 45 | 6712-2020-XX          | L 24 | 7121-0035 | D 03 | 7312-0020 | D 06 |
| 6340-4246 | I 14 | 6614-0020 | I 12 | 6700-0201-30.3-5      | C 45 | 6712-2025-XX          | L 24 | 7121-0040 | D 02 | 7312-0025 | D 05 |
| 6340-4247 | I 14 | 6614-0021 | I 12 | 6700-0202-35.4-6      | C 45 | 6712-2030-XX          | L 24 | 7121-0045 | D 03 |           |      |
| 6340-4283 | I 14 | 6614-0022 | I 12 | 6700-0203-46.0-50     | C 45 | 6712-2035-XX          | L 24 | 7121-0050 | D 02 | <b>74</b> |      |
| 6340-4287 | I 14 | 6614-0023 | I 12 | 6700-0204-60.0-60     | C 45 | 6712-2040-XX          | L 24 | 7122-0004 | D 04 |           |      |
| 6341-4112 | I 14 | 6614-0024 | I 12 | 6700-0205-60.0-10.0   | C 45 | 6712-2045-XX          | L 24 | 7122-0005 | D 04 | 7412-0005 | D 07 |
| 6341-4112 | I 14 | 6614-0025 | I 12 | 6700-0206-10.0-12.0   | C 45 | 6712-2050-XX          | L 24 | 7122-0010 | D 04 | <b>75</b> |      |
| 6341-4232 | I 14 | 6614-0026 | I 12 | 6700-0207-12.0-20.0   | C 45 | 6712-2055-XX          | L 24 | 7122-0015 | D 04 |           |      |
| 6341-4246 | I 14 | 6614-0027 | I 12 | 6700-0208-20.0-45.0   | C 45 | 6712-3005-XX          | L 24 | 7122-0025 | D 06 |           |      |
| 6341-4247 | I 14 | 6614-0028 | I 12 | 6700-0209-45.0-50.0   | C 45 | 6712-3010-XX          | L 24 | 7122-0030 | D 06 | 7511-0005 | D 08 |
| 6341-4283 | I 14 | 6614-0030 | I 12 | 6700-0210-50.0-60.0   | C 45 | 6712-3015-XX          | L 24 | 7122-0035 | D 06 | 7521-0005 | D 08 |
| 6341-4287 | I 14 | 6614-0032 | I 12 | 6700-0211-60.0-70.0   | C 45 | 6712-3020-XX          | L 24 | 7123-0005 | D 09 | 7521-0010 | D 08 |
| 6350-0005 | I 22 | 6614-0033 | I 12 | 6700-0212-70.0-80.0   | C 45 | 6712-3025-XX          | L 24 | 7123-1004 | D 04 |           |      |
|           |      | 6614-0036 | I 12 | 6700-0213-80.0-90.0   | C 45 | 6714-0005             | L 24 | 7123-1005 | D 04 | <b>76</b> |      |
|           |      | 6614-0038 | I 12 | 6700-0214-90.0-100.0  | C 45 | 6714-0010             | L 24 | 7123-1010 | D 04 |           |      |
|           |      | 6614-0040 | I 12 | 6700-0215-100.0-110.0 | C 45 | 6714-0015             | L 24 | 7123-1015 | D 04 | 7611-0010 | K 06 |
|           |      | 6614-0042 | I 12 | 6700-0216-110.0-120.0 | C 45 | 6714-0020             | L 24 |           |      | 7611-0020 | D 13 |
|           |      | 6614-0045 | I 12 | 6700-0217-120.0-130.0 | C 45 | 6719-0005             | L 24 |           |      | 7611-0026 | K 08 |
|           |      | 6614-0048 | I 12 | 6700-0218-130.0-140.0 | C 45 | 6720-1005             | M 02 | <b>72</b> |      | 7611-0031 | K 08 |
|           |      | 6614-0050 | I 12 | 6700-0219-140.0-150.0 | C 45 | 6720-1010             | M 04 | 7212-0005 | L 11 | 7611-0080 | K 08 |
|           |      | 6614-1003 | I 12 | 6700-0220-150.0-160.0 | C 45 | 6720-2005             | M 08 | 7212-0010 | L 11 | 7611-1005 | K 06 |
|           |      |           |      | 6700-0221-160.0-170.0 | C 45 | 6720-3005             | M 10 | 7212-0015 | L 11 | 7611-1010 | K 07 |
|           |      |           |      | 6700-0304-60.90       | C 45 | 6720-3010             | M 11 | 7212-0020 | L 11 | 7611-1011 | K 07 |
|           |      |           |      | 6700-0305-90.00       | C 45 | 6720-3015             | M 11 | 7212-0025 | L 11 | 7611-1012 | K 07 |
|           |      |           |      | 6700-0306-10.0-120    | C 45 | 6720-3020             | M 11 | 7212-0030 | L 11 | 7611-1013 | K 07 |
|           |      |           |      | 6700-0307-120.0-140   | C 45 | 6724-0005             | L 40 | 7212-0035 | L 11 | 7611-1015 | K 07 |
|           |      |           |      | 6700-0308-20.0-45.0   | C 45 |                       |      | 7212-0040 | L 11 | 7611-2005 | K 06 |
|           |      |           |      | 6700-0309-45.0-50.0   | C 45 |                       |      | 7212-0045 | L 11 | 7611-2010 | K 07 |
|           |      |           |      | 6700-0310-50.0-60.0   | C 45 | <b>70</b>             |      | 7212-0050 | L 11 | 7612-0005 | D 07 |

| CODE      | PAGE |
|-----------|------|
| 7612-0010 | D 10 |
| 7612-0015 | D 10 |
| 7612-0020 | D 10 |
| 7612-0025 | D 10 |
| <b>77</b> |      |
| 7700-0005 | D 02 |
| 7700-0010 | D 02 |
| 7712-0006 | D 15 |
| 7712-0020 | D 15 |
| 7712-0025 | D 15 |
| 7712-0030 | D 15 |
| 7712-0035 | E 03 |
| 7712-0036 | E 03 |
| 7712-0040 | E 03 |
| 7712-0041 | E 03 |
| 7712-0045 | E 03 |
| 7712-0046 | E 03 |
| <b>78</b> |      |
| 7801-0005 | L 25 |
| 7801-0010 | L 25 |
| 7812-0015 | D 14 |
| 7851-0005 | H 25 |
| 7851-0006 | H 25 |
| 7851-0007 | H 25 |
| 7851-0008 | H 25 |
| 7851-0009 | H 25 |
| 7851-0011 | H 25 |
| 7851-0013 | H 25 |
| 7851-0014 | H 25 |
| 7851-0015 | H 25 |
| 7851-0016 | H 25 |
| 7851-2005 | H 26 |
| 7851-2010 | H 26 |
| <b>79</b> |      |
| 7912-0004 | D 13 |
| 7912-0005 | D 13 |
| 7912-0010 | D 13 |
| 7912-0030 | D 14 |
| 7912-0035 | D 14 |
| 7912-0040 | D 14 |

| CODE      | PAGE |
|-----------|------|
| <b>81</b> |      |
| 8101-0005 | H 19 |
| 8101-0015 | H 19 |
| 8101-0020 | H 19 |
| 8101-2005 | H 19 |
| 8101-2010 | H 19 |
| 8101-2015 | H 19 |
| 8101-2020 | H 19 |
| 8123-0025 | H 24 |
| 8123-0030 | H 24 |
| 8123-0035 | H 23 |
| 8123-0040 | H 23 |
| 8123-0045 | H 29 |
| 8123-0050 | H 29 |
| 8123-0055 | H 29 |
| 8123-0060 | H 29 |
| 8123-0065 | H 21 |
| 8123-0070 | H 21 |
| 8123-0075 | H 21 |
| 8123-0080 | H 21 |
| 8123-0085 | H 21 |
| 8123-0090 | H 25 |
| 8123-0095 | H 25 |
| 8123-0105 | H 24 |
| 8123-1002 | H 30 |
| 8123-1003 | H 30 |
| 8123-1004 | H 30 |
| 8123-1005 | H 30 |
| 8123-1006 | H 30 |
| 8123-1007 | H 30 |
| 8123-1008 | H 30 |
| 8123-1009 | H 30 |
| 8123-1010 | H 30 |
| 8123-1011 | H 30 |
| 8123-1012 | H 30 |
| 8123-1013 | H 30 |
| 8123-1014 | H 30 |
| 8123-1015 | H 30 |
| 8123-1016 | H 30 |
| 8123-1017 | H 30 |
| 8123-1018 | H 30 |
| <b>82</b> |      |
| 8201-0005 | H 11 |

| CODE        | PAGE |
|-------------|------|
| 8202-0005   | H 11 |
| 8203-0010-A | H 12 |
| 8203-0025-A | H 12 |
| 8203-0030-A | H 12 |
| 8204-0010-A | H 12 |
| 8204-0015-A | H 12 |
| 8204-0025-A | H 12 |
| 8204-0027   | H 12 |
| 8295-0005   | H 28 |
| 8295-0010   | H 28 |
| 8295-0015   | H 28 |
| 8295-0020   | H 28 |
| 8295-1005   | H 28 |
| 8295-1010   | H 28 |
| 8295-1015   | H 28 |
| 8295-1020   | H 28 |
| <b>83</b>   |      |
| 8300-0010   | G 05 |
| 8300-0015   | G 05 |
| 8300-0020   | G 05 |
| 8300-0025   | G 03 |
| 8300-0030   | G 03 |
| 8300-0035   | G 03 |
| 8300-0055   | G 03 |
| 8300-0070   | G 08 |
| 8300-0075   | G 12 |
| 8300-0090   | K 13 |
| 8300-0105   | K 13 |
| 8300-1000   | G 06 |
| 8301-0003-A | G 05 |
| 8301-0005-A | G 04 |
| 8301-0009-A | G 05 |
| 8301-0013-A | G 05 |
| 8301-0015-A | G 04 |
| 8301-0020-A | G 04 |
| 8301-1003-A | G 05 |
| 8301-1003-B | G 04 |
| 8301-1005-A | G 04 |
| 8301-1005-B | G 02 |
| 8301-1006-A | G 05 |
| 8301-1006-B | G 04 |
| 8301-1009-A | G 05 |
| 8301-1009-B | G 04 |

| CODE        | PAGE |
|-------------|------|
| 8301-1010-A | G 04 |
| 8301-1010-B | G 02 |
| 8301-1013-A | G 05 |
| 8301-1013-B | G 04 |
| 8301-1015-A | G 04 |
| 8301-1015-B | G 02 |
| 8301-1020-A | G 04 |
| 8301-1020-B | G 02 |
| 8301-2505   | G 10 |
| 8301-2510   | G 10 |
| 8301-2645   | G 09 |
| 8301-2655   | G 09 |
| 8302-0003-A | G 05 |
| 8302-0005-A | G 04 |
| 8302-0006-A | G 05 |
| 8302-0009-A | G 05 |
| 8302-0010-A | G 04 |
| 8302-0013-A | G 05 |
| 8302-0015-A | G 04 |
| 8302-0020-A | G 04 |
| 8303-0005   | G 07 |
| 8303-0010   | G 07 |
| 8303-0015   | G 07 |
| 8321-1005   | H 21 |
| 8321-1010   | H 21 |
| 8321-2005   | H 21 |
| 8321-2010   | H 21 |
| 8321-2015   | H 21 |
| 8321-3005   | H 20 |
| 8321-3010   | H 20 |
| 8321-3015   | H 20 |
| 8321-3020   | H 20 |
| 8321-3025   | H 20 |
| 8321-5005   | H 20 |
| 8321-5010   | H 20 |
| 8321-5015   | H 20 |
| 8321-5020   | H 20 |
| 8321-5025   | H 20 |
| 8340-0005   | H 28 |
| 8340-0010   | H 28 |
| 8340-0015   | H 28 |
| 8340-0020   | H 28 |
| <b>84</b>   |      |
| 8400-0000   | G 09 |
| 8400-0005   | G 11 |

| CODE        | PAGE |
|-------------|------|
| 8400-0010   | G 08 |
| 8400-0020   | G 07 |
| 8400-0035   | G 12 |
| 8405-0005   | H 14 |
| 8405-0010   | H 14 |
| 8405-0015   | H 15 |
| 8405-1005   | H 15 |
| 8405-1010   | H 15 |
| 8405-1015   | H 15 |
| 8405-1020   | H 15 |
| 8405-1025   | H 15 |
| 8405-1030   | H 15 |
| 8405-1035   | H 16 |
| 8405-1040   | H 16 |
| 8405-2005   | H 11 |
| 8407-0005-A | H 16 |
| 8407-0010-A | H 16 |
| 8407-0015   | H 16 |
| 8407-0020   | H 16 |
| 8407-0025   | H 16 |
| 8407-0030   | H 17 |
| 8407-0035   | H 17 |
| 8407-0040   | H 17 |
| 8407-0050   | H 17 |
| 8407-2005   | H 16 |
| 8407-2010   | H 16 |
| 8407-8201   | H 17 |
| <b>85</b>   |      |
| 8511-0005   | J 16 |
| 8511-0010   | J 16 |
| 8511-0015   | J 22 |
| 8511-0020   | J 24 |
| 8511-0025   | J 25 |
| 8511-0030   | J 24 |
| 8511-0035   | J 26 |
| 8511-0040   | J 26 |
| 8511-0041   | J 26 |
| 8511-0045   | J 26 |
| 8511-0050   | J 26 |
| 8511-0067   | J 17 |
| 8511-0068   | J 17 |
| 8511-0069   | J 18 |
| 8511-0070   | J 28 |
| 8511-0075   | J 23 |
| 8511-0090   | J 20 |

| CODE        | PAGE |
|-------------|------|
| 8511-0091   | J 27 |
| 8511-0093   | J 27 |
| 8511-0098   | J 28 |
| 8511-0100   | J 21 |
| 8511-2005   | J 06 |
| 8511-2010   | J 06 |
| 8511-2015   | J 06 |
| 8511-2020   | J 06 |
| 8521-0005   | J 12 |
| 8521-0010   | J 12 |
| 8521-0015   | J 12 |
| 8522-0005   | J 12 |
| 8522-0010   | J 12 |
| 8522-0015   | J 12 |
| 8522-0020   | J 12 |
| 8530-1005   | J 19 |
| 8531-0005   | J 19 |
| 8560-0005   | H 20 |
| 8560-0010   | H 20 |
| 8560-0015   | H 20 |
| 8560-0020   | H 20 |
| 8560-0025   | H 20 |
| 8561-2005   | H 22 |
| 8561-2010   | H 22 |
| 8561-2015   | H 22 |
| 8561-2020   | H 23 |
| 8561-2025   | H 23 |
| 8561-2030   | H 22 |
| 8561-2035   | H 22 |
| <b>86</b>   |      |
| 8600-3232N  | H 29 |
| 8600-8080N  | H 29 |
| 8610-3030-A | H 29 |
| <b>87</b>   |      |
| 8730-1063   | H 27 |
| 8730-3020   | H 27 |
| 8730-4025   | H 27 |
| 8730-4026   | H 27 |
| 8730-4027   | H 27 |
| 8730-4040   | H 27 |
| 8730-5032   | H 27 |
| 8730-6340   | H 27 |

| CODE      | PAGE |
|-----------|------|
| 8730-6363 | H 27 |
| 8730-8050 | H 27 |
| 8741-2105 | H 19 |
| 8741-2110 | H 19 |
| 8741-2115 | H 19 |
| 8741-2130 | H 19 |
| 8741-4105 | H 19 |
| 8741-4110 | H 19 |
| 8741-4115 | H 19 |
| 8741-4130 | H 19 |
| <b>88</b> |      |
| 8802-0005 | H 14 |
| 8802-1105 | H 13 |
| 8802-1110 | H 13 |
| 8802-1115 | H 13 |
| 8802-1118 | H 13 |
| 8802-1120 | H 13 |
| 8802-1125 | H 13 |
| 8802-1130 | H 13 |
| 8802-5105 | H 13 |
| 8802-5110 | H 13 |
| 8802-5115 | H 13 |
| 8802-5118 | H 13 |
| 8802-5120 | H 13 |
| 8802-5123 | H 13 |
| 8802-5125 | H 13 |
| <b>89</b> |      |
| 8905-0005 | F 25 |
| 8905-0010 | F 25 |
| 8905-0015 | F 25 |
| 8950-1063 | H 27 |
| 8950-4025 | H 27 |
| 8950-4026 | H 27 |
| 8950-4040 | H 27 |
| 8950-5032 | H 27 |
| 8950-6340 | H 27 |
| 8950-6363 | H 27 |
| 8950-8050 | H 27 |
| <b>90</b> |      |
| 9000-1005 | J 13 |
| 9000-1010 | J 13 |

| CODE      | PAGE |
|-----------|------|
| 9000-1015 | J 13 |
| 9000-1105 | F 20 |
| 9000-1110 | F 19 |
| 9000-1115 | J 13 |
| <b>91</b> |      |
| 9100-1102 | F 14 |
| 9100-1104 | F 14 |
| 9100-1105 | F 14 |
| 9100-1110 | F 14 |
| 9100-1115 | F 14 |
| 9100-1120 | F 14 |
| 9100-1125 | F 14 |
| 9100-4402 | F 15 |
| 9100-4404 | F 15 |
| 9100-4405 | F 15 |
| 9100-4410 | F 15 |
| 9100-4415 | F 15 |
| 9100-4420 | F 15 |
| 9100-4425 | F 15 |
| 9100-4430 | F 15 |
| 9100-4435 | F 15 |
| 9110-0005 | F 15 |
| 9110-0010 | F 15 |
| 9110-0015 | F 15 |
| 9110-0020 | F 15 |
| 9110-0025 | F 15 |
| 9110-0030 | F 15 |
| 9110-0035 | F 15 |
| 9111-1102 | F 14 |
| 9111-1104 | F 14 |
| 9111-1105 | F 14 |
| 9111-1110 | F 14 |
| 9111-1115 | F 14 |
| 9111-1120 | F 14 |
| 9111-1125 | F 14 |
| 9111-1130 | F 14 |
| 9111-1135 | F 14 |
| 9130-4105 | F 20 |
| 9130-4110 | F 20 |
| 9130-4115 | F 20 |
| 9130-4120 | F 20 |
| 9130-4125 | F 20 |
| 9130-4130 | F 20 |
| 9130-4140 | F 20 |

| CODE      | PAGE |
|-----------|------|
| 9130-4145 | F 20 |
| 9130-4150 | F 20 |
| 9131-2105 | F 19 |
| 9131-2110 | F 19 |
| 9131-2115 | F 19 |
| 9131-2120 | F 19 |
| 9131-2125 | F 19 |
| 9131-2130 | F 19 |
| 9131-2135 | F 19 |
| 9131-2140 | F 19 |
| 9131-2145 | F 19 |
| 9131-2150 | F 19 |
| 9161-1105 | F 20 |
| <b>92</b> |      |
| 9210-4104 | F 17 |
| 9210-4105 | F 18 |
| 9210-4108 | F 17 |
| 9213-4010 | H 27 |
| 9213-4015 | H 27 |
| 9213-4020 | F 19 |
| 9213-4025 | F 19 |
| 9213-4030 | F 19 |
| 9213-4035 | F 19 |
| 9213-4040 | F 19 |
| 9213-4045 | F 19 |
| 9213-4050 | F 19 |
| 9213-4055 | F 19 |
| 9213-4060 | F 19 |
| 9213-4065 | F 19 |
| 9213-4070 | F 19 |
| 9213-4075 | F 19 |
| 9213-4080 | F 19 |
| 9213-4085 | F 19 |
| 9213-4090 | F 19 |
| 9213-4095 | F 19 |
| 9213-4100 | F 19 |
| 9213-4105 | F 19 |
| 9213-4110 | F 19 |
| 9213-4115 | F 19 |
| 9213-4120 | F 19 |
| 9213-4125 | F 19 |
| 9213-4130 | F 19 |
| 9213-4135 | F 19 |
| 9213-4140 | F 19 |
| 9213-4145 | F 19 |
| 9213-4150 | F 19 |
| 9213-4155 | F 19 |
| 9213-4160 | F 19 |
| 9213-4165 | F 19 |
| 9213-4170 | F 19 |
| 9213-4175 | F 19 |
| 9213-4180 | F 19 |
| 9213-4185 | F 19 |
| 9213-4190 | F 19 |
| 9213-4195 | F 19 |
| 9213-4200 | F 19 |
| 9213-4205 | F 19 |
| 9213-4210 | F 19 |
| 9213-4215 | F 19 |
| 9213-4220 | F 19 |
| 9213-4225 | F 19 |
| 9213-4230 | F 19 |
| 9213-4235 | F 19 |
| 9213-4240 | F 19 |
| 9213-4245 | F 19 |
| 9213-4250 | F 19 |
| 9213-4255 | F 19 |
| 9213-4260 | F 19 |
| 9213-4265 | F 19 |
| 9213-4270 | F 19 |
| 9213-4275 | F 19 |
| 9213-4280 | F 19 |

# CALIPER

BORN IN ITALY, RAISED BY THE WORLD

## 02-06 VERNIER CALIPER



## 06-10 HEAVY DUTY VERNIER CALIPER



## 11-15 DIAL CALIPER



## 16-24 DIGITAL CALIPER



## 25-28 HEAVY DUTY DIGITAL CALIPER



## 29-33 DEPTH CALIPER



## 34-35 DEPTH CALIPER FOR SPECIAL MEASURING



## 36-42 CALIPER FOR GROOVE MEASURING



## 42-44 CALIPER FOR SCRIBING



## 45-60 CALIPER FOR SPECIAL MEASURING



## 61-63 CALIPER RELATED PRODUCTS

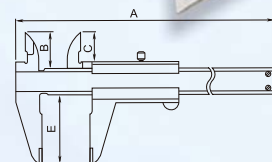


## 63-66 SCALES



## MONOBLOCK VERNIER CALIPER

- Strictly made in accordance with DIN862
- Supplied in fitted solid ABS case and warranty card in it



Unit:mm

| Code      | Range       | Graduation  | A   | B  | C    | D  | E  | Accuracy |
|-----------|-------------|-------------|-----|----|------|----|----|----------|
| 1120-3115 | 0-150/0-6"  | 0.05/1/128" | 235 | 21 | 16.5 | 16 | 40 | 0.05     |
| 1120-3120 | 0-200/0-8"  | 0.05/1/128" | 298 | 24 | 19.5 | 16 | 50 | 0.05     |
| 1120-3130 | 0-300/0-12" | 0.05/1/128" | 410 | 28 | 22   | 20 | 64 | 0.05     |
| 1380-3005 | 0-150/0-6"  | 0.02/0.001" | 235 | 21 | 16.5 | 16 | 40 | 0.03     |
| 1380-3010 | 0-200/0-8"  | 0.02/0.001" | 298 | 24 | 19.5 | 16 | 50 | 0.03     |
| 1380-3015 | 0-300/0-12" | 0.02/0.001" | 410 | 28 | 22   | 20 | 64 | 0.03     |



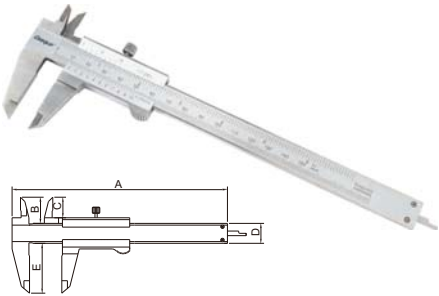
- Surfaces of beam ground (Parallelism less than 0.015, 20% better than normal) to ensure smooth movement throughout

- Distinct lines and figures laser etched on satin chrome finish beam

- Jaws ground to raise the accuracy of measurement



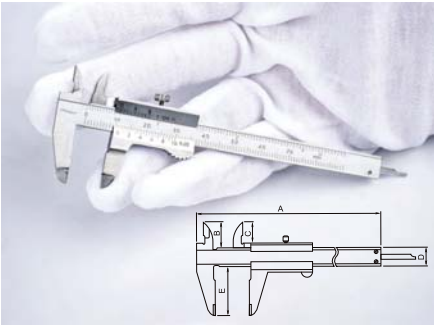
MONOBLOCK VERNIER CALIPER



- Monoblock structure
- Made of solid stainless steel
- With locking screw for stable reading
- Distinct lines and figures etched against satin chrome finish
- 4 usages for measuring outside diameter, inside diameter, step and depth

| Unit:mm   |               |                |     |      |      |    |    |          |  |
|-----------|---------------|----------------|-----|------|------|----|----|----------|--|
| Code      | Range         | Graduation     | A   | B    | C    | D  | E  | Accuracy |  |
| 1120-3135 | 0-150mm/0-6"  | 0.05mm/ 1/128" | 233 | 21   | 16.5 | 16 | 40 | 0.05     |  |
| 1120-3140 | 0-200mm/0-8"  | 0.05mm/ 1/128" | 288 | 23.5 | 19   | 16 | 50 | 0.05     |  |
| 1120-3145 | 0-300mm/0-12" | 0.05mm/ 1/128" | 405 | 30   | 24.5 | 20 | 62 | 0.05     |  |
| 1380-3035 | 0-150mm/0-6"  | 0.02mm/0.001"  | 233 | 21   | 16.5 | 16 | 40 | 0.05     |  |
| 1380-3040 | 0-200mm/0-8"  | 0.02mm/0.001"  | 288 | 23.5 | 19   | 16 | 50 | 0.05     |  |
| 1380-3045 | 0-300mm/0-12" | 0.02mm/0.001"  | 405 | 30   | 24.5 | 20 | 62 | 0.05     |  |

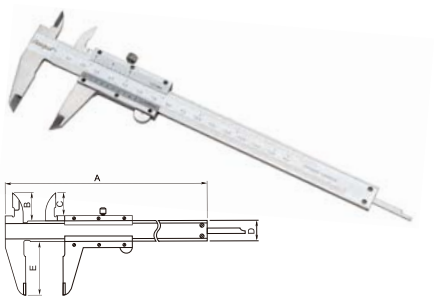
MINI VERNIER CALIPER



- 4 usages for measuring outside diameter, inside diameter, step and depth
- Made of solid stainless steel
- Strictly made in accordance with DIN862
- With locking screw for stable reading
- Monoblock structure
- Distinct lines and figures etched against satin chrome finish

| Unit:mm   |            |             |     |      |    |    |    |          |  |
|-----------|------------|-------------|-----|------|----|----|----|----------|--|
| Code      | Range      | Graduation  | A   | B    | C  | D  | E  | Accuracy |  |
| 1120-3113 | 0-70/0-3"  | 0.05/1/128" | 113 | 11   | 8  | 8  | 19 | ±0.05    |  |
| 1380-3004 | 0-100/0-4" | 0.02/0.001" | 160 | 17.5 | 13 | 12 | 30 | ±0.03    |  |
| 1120-3114 | 0-100/0-4" | 0.05/1/128" | 160 | 17.5 | 13 | 12 | 30 | ±0.05    |  |

VERNIER CALIPER

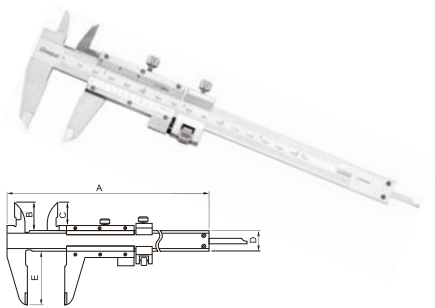


- 4 usages for measuring outside diameter, inside diameter, step and depth
- Made of solid stainless steel
- Strictly made in accordance with DIN862
- Distinct lines and figures etched against satin chrome finish
- With locking screw for stable reading

| Unit:mm   |             |             |     |    |      |    |    |          |  |
|-----------|-------------|-------------|-----|----|------|----|----|----------|--|
| Code      | Range       | Graduation  | A   | B  | C    | D  | E  | Accuracy |  |
| 1110-3114 | 0-100/0-4"  | 0.05/1/128" | 160 | 18 | 13.5 | 12 | 30 | 0.05     |  |
| 1110-3115 | 0-150/0-6"  | 0.05/1/128" | 235 | 21 | 16.5 | 16 | 40 | 0.05     |  |
| 1110-3120 | 0-200/0-8"  | 0.05/1/128" | 298 | 24 | 19.5 | 16 | 50 | 0.05     |  |
| 1110-3130 | 0-300/0-12" | 0.05/1/128" | 410 | 26 | 20   | 18 | 55 | 0.05     |  |
| 1550-2004 | 0-100/0-4"  | 0.02/0.001" | 160 | 18 | 13.5 | 12 | 30 | 0.03     |  |
| 1550-2005 | 0-150/0-6"  | 0.02/0.001" | 235 | 21 | 16.5 | 16 | 40 | 0.03     |  |
| 1550-2010 | 0-200/0-8"  | 0.02/0.001" | 298 | 24 | 19.5 | 16 | 50 | 0.03     |  |
| 1550-2015 | 0-300/0-12" | 0.02/0.001" | 410 | 26 | 20   | 18 | 55 | 0.03     |  |

VERNIER CALIPER

WITH FINE ADJUSTMENT



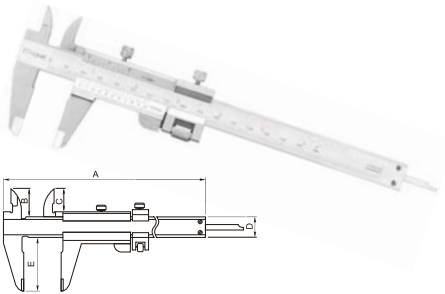
- 4 usages for measuring outside diameter, inside diameter, step and depth
- Made of solid stainless steel
- Strictly made in accordance with DIN862
- Distinct lines and figures etched against satin chrome finish
- With locking screw for stable reading
- With fine adjustment

| Unit:mm   |             |             |     |    |      |    |    |          |  |
|-----------|-------------|-------------|-----|----|------|----|----|----------|--|
| Code      | Range       | Graduation  | A   | B  | C    | D  | E  | Accuracy |  |
| 1210-3105 | 0-130/0-5"  | 0.05/1/128" | 235 | 21 | 16.5 | 16 | 40 | 0.05     |  |
| 1210-3110 | 0-180/0-7"  | 0.05/1/128" | 298 | 24 | 19.5 | 16 | 50 | 0.05     |  |
| 1210-3115 | 0-280/0-11" | 0.05/1/128" | 410 | 26 | 20   | 18 | 55 | 0.05     |  |
| 1490-7005 | 0-130/0-5"  | 0.02/0.001" | 235 | 21 | 16.5 | 16 | 40 | 0.03     |  |
| 1490-7010 | 0-180/0-7"  | 0.02/0.001" | 298 | 24 | 19.5 | 16 | 50 | 0.03     |  |
| 1490-7015 | 0-280/0-11" | 0.02/0.001" | 410 | 26 | 20   | 18 | 55 | 0.03     |  |

MONOBLOCK VERNIER CALIPER  
WITH FINE ADJUSTMENT



DIN  
862



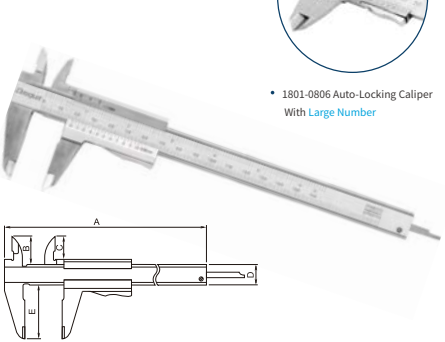
- 4 usages for measuring outside diameter, inside diameter, step and depth
- Made of solid stainless steel
- Strictly made in accordance with DIN862
- Distinct lines and figures etched against satin chrome finish
- With locking screw for stable reading
- With fine adjustment

| Unit:mm   |             |             |     |    |      |    |    |          |  |
|-----------|-------------|-------------|-----|----|------|----|----|----------|--|
| Code      | Range       | Graduation  | A   | B  | C    | D  | E  | Accuracy |  |
| 1220-3105 | 0-130/0-5"  | 0.05/1/128" | 235 | 21 | 16.5 | 16 | 40 | 0.05     |  |
| 1220-3110 | 0-180/0-7"  | 0.05/1/128" | 298 | 24 | 19.5 | 16 | 50 | 0.05     |  |
| 1220-3115 | 0-280/0-11" | 0.05/1/128" | 410 | 28 | 22   | 20 | 64 | 0.05     |  |
| 1560-7005 | 0-130/0-5"  | 0.02/0.001" | 235 | 21 | 16.5 | 16 | 40 | 0.03     |  |
| 1560-7010 | 0-180/0-7"  | 0.02/0.001" | 298 | 24 | 19.5 | 16 | 50 | 0.03     |  |
| 1560-7015 | 0-280/0-11" | 0.02/0.001" | 410 | 28 | 22   | 20 | 64 | 0.03     |  |

MONOBLOCK VERNIER CALIPER  
WITH AUTO-LOCKING



DIN  
862

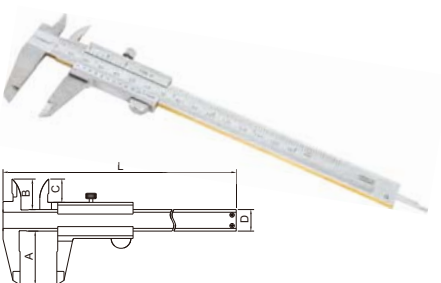


- 1801-0806 Auto-Locking Caliper  
With Large Number

- The whole blade of the beam is vacuum hardened with uniform hardness, guaranteeing wear-resistance and longer service life
- The upper and lower parts of the ruler are precisely ground to ensure smooth use
- Strictly in accordance with DIN862 standard
- Made of high quality stainless steel

| Unit:mm   |            |             |     |    |      |    |    |          |  |
|-----------|------------|-------------|-----|----|------|----|----|----------|--|
| Code      | Range      | Graduation  | A   | B  | C    | D  | E  | Accuracy |  |
| 1801-0810 | 0-150/0-6" | 0.05/1/128" | 235 | 21 | 16.5 | 16 | 40 | 0.05     |  |
| 1801-0809 | 0-150/0-6" | 0.02/0.001" | 235 | 21 | 16.5 | 16 | 40 | 0.03     |  |
| 1801-0806 | 0-150      | 0.05        | 235 | 21 | 16.5 | 16 | 40 | 0.05     |  |

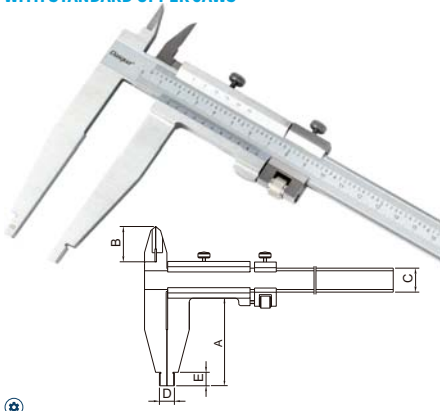
VERNIER CALIPER MONOBLOCK  
WITH TIN COATED BEAM FACE



- Main ruler body is plated with titanium, durable
- Monoblock structure
- Made of solid stainless steel, with locking screw for stable reading
- Distinct lines and figures etched against satin chrome finish
- 4 usages for measuring outside diameter, inside diameter, step and depth

| Unit:mm   |               |                |    |    |      |    |     |          |  |
|-----------|---------------|----------------|----|----|------|----|-----|----------|--|
| Code      | Range         | Graduation     | A  | B  | C    | D  | L   | Accuracy |  |
| 1801-0505 | 0-150mm/0-6"  | 0.05mm/ 1/128" | 40 | 21 | 16.5 | 16 | 230 | ±0.03    |  |
| 1801-0510 | 0-200mm/0-8"  | 0.05mm/ 1/128" | 50 | 24 | 19.5 | 16 | 305 | ±0.03    |  |
| 1801-0515 | 0-300mm/0-12" | 0.05mm/ 1/128" | 62 | 26 | 20.5 | 20 | 418 | ±0.04    |  |
| 1640-1005 | 0-150mm/0-6"  | 0.02mm/ 0.001" | 40 | 21 | 16.5 | 16 | 230 | ±0.03    |  |
| 1640-1010 | 0-200mm/0-8"  | 0.02mm/ 0.001" | 50 | 24 | 19.5 | 16 | 305 | ±0.03    |  |
| 1640-1015 | 0-300mm/0-12" | 0.02mm/ 0.001" | 62 | 26 | 20.5 | 20 | 418 | ±0.04    |  |

MONOBLOCK VERNIER CALIPER  
WITH STANDARD UPPER JAWS

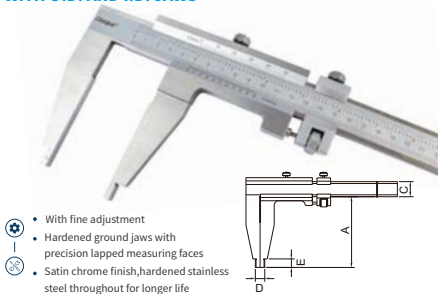


- With fine adjustment
- Hardened ground jaws with precision lapped measuring faces
- Satin chrome finish, hardened stainless steel throughout for longer life
- Distinct lines and figures etched against satin chrome finish

| Unit:mm   |                |                |     |    |    |    |    |          |  |
|-----------|----------------|----------------|-----|----|----|----|----|----------|--|
| Code      | Range          | Graduation     | A   | B  | C  | D  | E  | Accuracy |  |
| 1300-5005 | 0-300mm/12"    | 0.02mm/ 0.001" | 90  | 23 | 17 | 10 | 10 | ±0.09    |  |
| 1300-5010 | 0-500mm/0-20"  | 0.02mm/ 0.001" | 100 | 40 | 25 | 10 | 12 | ±0.07    |  |
| 1300-5015 | 0-500mm/0-20"  | 0.02mm/ 0.001" | 150 | 40 | 25 | 10 | 12 | ±0.12    |  |
| 1300-5020 | 0-600mm/0-24"  | 0.02mm/ 0.001" | 100 | 40 | 25 | 10 | 12 | ±0.08    |  |
| 1300-5025 | 0-800mm/0-32"  | 0.02mm/ 0.001" | 150 | 47 | 32 | 20 | 18 | ±0.14    |  |
| 1300-5030 | 0-1000mm/0-40" | 0.02mm/ 0.001" | 150 | 47 | 32 | 20 | 18 | ±0.14    |  |

MONOBLOCK VERNIER CALIPER

WITH O.D. AND I.D. JAWS



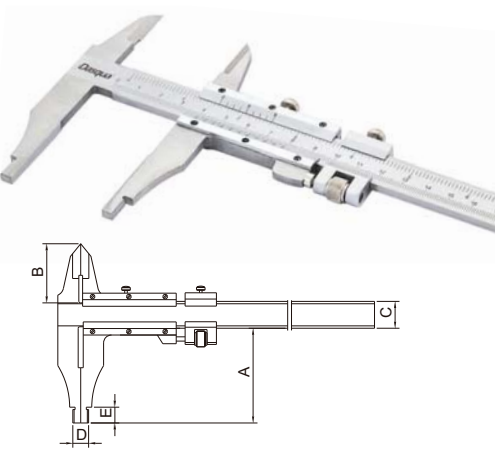
- With fine adjustment
- Hardened ground jaws with precision lapped measuring faces
- Satin chrome finish, hardened stainless steel throughout for longer life
- Distinct lines and figures etched against satin chrome finish

| Code      | Range         | Graduation     | A   | C  | D  | E  | Accuracy |
|-----------|---------------|----------------|-----|----|----|----|----------|
| 1310-0004 | 0-200mm/0-8"  | 0.02mm/ 0.001" | 60  | 17 | 10 | 10 | ±0.03    |
| 1310-0028 | 0-250mm/0-10" | 0.02mm/ 0.001" | 60  | 17 | 10 | 10 | ±0.04    |
| 1310-0065 | 0-250mm/0-10" | 0.02mm/ 0.001" | 90  | 17 | 10 | 10 | ±0.09    |
| 1310-0050 | 0-300mm/0-12" | 0.02mm/ 0.001" | 60  | 17 | 10 | 10 | ±0.04    |
| 1310-0030 | 0-300mm/0-12" | 0.02mm/ 0.001" | 90  | 17 | 10 | 10 | ±0.09    |
| 1310-0070 | 0-300mm/0-12" | 0.02mm/ 0.001" | 125 | 25 | 10 | 12 | ±0.12    |
| 1310-0031 | 0-300mm/0-12" | 0.02mm/ 0.001" | 150 | 25 | 10 | 12 | ±0.15    |
| 1310-0005 | 0-500mm/0-20" | 0.02mm/ 0.001" | 100 | 25 | 10 | 12 | ±0.05    |
| 1310-0035 | 0-500mm/0-20" | 0.02mm/ 0.001" | 125 | 25 | 10 | 12 | ±0.10    |
| 1310-0006 | 0-500mm/0-20" | 0.02mm/ 0.001" | 150 | 25 | 10 | 12 | ±0.12    |
| 1310-0007 | 0-500mm/0-20" | 0.02mm/ 0.001" | 200 | 25 | 10 | 12 | ±0.16    |
| 1310-0008 | 0-500mm/0-20" | 0.02mm/ 0.001" | 250 | 25 | 10 | 12 | ±0.20    |
| 1310-0009 | 0-500mm/0-20" | 0.02mm/ 0.001" | 300 | 25 | 10 | 12 | ±0.24    |
| 1310-0010 | 0-600mm/0-24" | 0.02mm/ 0.001" | 100 | 25 | 10 | 12 | ±0.05    |
| 1310-0040 | 0-600mm/0-24" | 0.02mm/ 0.001" | 125 | 25 | 10 | 12 | ±0.10    |
| 1310-0011 | 0-600mm/0-24" | 0.02mm/ 0.001" | 150 | 25 | 10 | 12 | ±0.12    |
| 1310-0012 | 0-600mm/0-24" | 0.02mm/ 0.001" | 200 | 25 | 10 | 12 | ±0.16    |

| Code      | Range           | Graduation     | A   | C    | D  | E  | Accuracy |
|-----------|-----------------|----------------|-----|------|----|----|----------|
| 1310-0041 | 0-600mm/0-24"   | 0.03mm/ 0.001" | 250 | 25   | 10 | 12 | ±0.22    |
| 1310-0042 | 0-600mm/0-24"   | 0.02mm/ 0.001" | 300 | 25   | 10 | 12 | ±0.26    |
| 1310-0085 | 0-800mm/0-32"   | 0.02mm/ 0.001" | 125 | 32   | 20 | 18 | ±0.06    |
| 1310-0090 | 0-800mm/0-32"   | 0.02mm/ 0.001" | 150 | 32   | 20 | 18 | ±0.14    |
| 1310-0043 | 0-800mm/0-32"   | 0.02mm/ 0.001" | 200 | 32   | 20 | 18 | ±0.18    |
| 1310-0095 | 0-800mm/0-32"   | 0.02mm/ 0.001" | 250 | 32   | 20 | 18 | ±0.20    |
| 1310-0044 | 0-800mm/0-32"   | 0.02mm/ 0.001" | 300 | 32   | 20 | 18 | ±0.24    |
| 1310-0015 | 0-1000mm/0-40"  | 0.02mm/ 0.001" | 125 | 32   | 20 | 18 | ±0.07    |
| 1310-0060 | 0-1000mm/0-40"  | 0.02mm/ 0.001" | 150 | 32   | 20 | 18 | ±0.14    |
| 1310-0016 | 0-1000mm/0-40"  | 0.02mm/ 0.001" | 200 | 32   | 20 | 18 | ±0.18    |
| 1310-0100 | 0-1000mm/0-40"  | 0.03mm/ 0.001" | 250 | 32   | 20 | 18 | ±0.23    |
| 1310-0017 | 0-1000mm/0-40"  | 0.02mm/ 0.001" | 300 | 32   | 20 | 18 | ±0.28    |
| 1310-0105 | 0-1500mm/0-60"  | 0.02mm/ 0.001" | 125 | 41.5 | 20 | 20 | ±0.11    |
| 1310-0020 | 0-1500mm/0-60"  | 0.02mm/ 0.001" | 150 | 41.5 | 20 | 20 | ±0.11    |
| 1310-0055 | 0-1500mm/0-60"  | 0.02mm/ 0.001" | 200 | 41.5 | 20 | 20 | ±0.11    |
| 1310-0110 | 0-1500mm/0-60"  | 0.02mm/ 0.001" | 250 | 41.5 | 20 | 20 | ±0.27    |
| 1310-0021 | 0-1500mm/0-60"  | 0.02mm/ 0.001" | 300 | 41.5 | 20 | 20 | ±0.32    |
| 1310-0115 | 0-2000mm/0-80"  | 0.02mm/ 0.001" | 150 | 41.5 | 20 | 20 | ±0.14    |
| 1310-0025 | 0-2000mm/0-80"  | 0.02mm/ 0.001" | 200 | 41.5 | 20 | 20 | ±0.14    |
| 1310-0120 | 0-2000mm/0-80"  | 0.02mm/ 0.001" | 250 | 41.5 | 20 | 20 | ±0.25    |
| 1310-0125 | 0-2000mm/0-80"  | 0.02mm/ 0.001" | 300 | 41.5 | 20 | 20 | ±0.30    |
| 1310-0130 | 0-2500mm/0-100" | 0.02mm/ 0.001" | 150 | 53   | 20 | 20 | ±0.22    |
| 1310-0135 | 0-2500mm/0-100" | 0.02mm/ 0.001" | 200 | 53   | 20 | 20 | ±0.22    |
| 1310-0140 | 0-2500mm/0-100" | 0.02mm/ 0.001" | 250 | 53   | 20 | 20 | ±0.22    |
| 1310-0145 | 0-2500mm/0-100" | 0.02mm/ 0.001" | 300 | 53   | 20 | 20 | ±0.22    |
| 1310-0126 | 0-3000mm/0-120" | 0.02mm/ 0.001" | 150 | 53   | 20 | 20 | ±0.26    |
| 1310-0026 | 0-3000mm/0-120" | 0.02mm/ 0.001" | 200 | 53   | 20 | 20 | ±0.26    |
| 1310-0150 | 0-3000mm/0-120" | 0.02mm/ 0.001" | 250 | 53   | 20 | 20 | ±0.26    |
| 1310-0155 | 0-3000mm/0-120" | 0.02mm/ 0.001" | 300 | 53   | 20 | 20 | ±0.26    |
| 1310-0160 | 0-3500mm/0-140" | 0.02mm/ 0.001" | 150 | 53   | 20 | 20 | ±0.30    |
| 1310-0165 | 0-3500mm/0-140" | 0.02mm/ 0.001" | 200 | 53   | 20 | 20 | ±0.30    |
| 1310-0170 | 0-3500mm/0-140" | 0.02mm/ 0.001" | 250 | 53   | 20 | 20 | ±0.30    |
| 1310-0175 | 0-3500mm/0-140" | 0.02mm/ 0.001" | 300 | 53   | 20 | 20 | ±0.30    |
| 1310-0180 | 0-4000mm/0-160" | 0.02mm/ 0.001" | 150 | 53   | 20 | 20 | ±0.34    |
| 1310-0185 | 0-4000mm/0-160" | 0.02mm/ 0.001" | 200 | 53   | 20 | 20 | ±0.34    |
| 1310-0190 | 0-4000mm/0-160" | 0.02mm/ 0.001" | 250 | 53   | 20 | 20 | ±0.34    |
| 1310-0195 | 0-4000mm/0-160" | 0.02mm/ 0.001" | 300 | 53   | 20 | 20 | ±0.34    |
| 1310-0200 | 0-5000mm/0-200" | 0.02mm/ 0.001" | 300 | 53   | 20 | 20 | ±0.42    |

VERNIER CALIPER

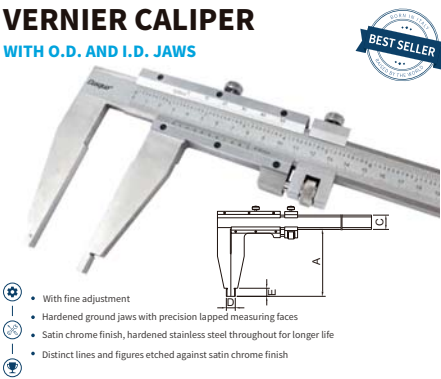
WITH O.D. AND I.D. JAWS & STANDARD JAWS



- With fine adjustment
- Hardened ground jaws with precision lapped measuring faces
- Satin chrome finish, hardened stainless steel throughout for longer life
- Distinct lines and figures etched against satin chrome finish

| Code      | Range          | Graduation     | A   | B    | C    | D  | E  | Accuracy |
|-----------|----------------|----------------|-----|------|------|----|----|----------|
| 1315-0000 | 0-200mm/0-8"   | 0.02mm/ 0.001" | 60  | 36.5 | 17   | 10 | 10 | ±0.03    |
| 1315-0060 | 0-250mm/0-10"  | 0.02mm/ 0.001" | 60  | 36.5 | 17   | 10 | 10 | ±0.04    |
| 1300-0001 | 0-300mm/0-12"  | 0.02mm/ 0.001" | 60  | 36.5 | 17   | 10 | 10 | ±0.04    |
| 1315-0025 | 0-300mm/0-12"  | 0.02mm/ 0.001" | 90  | 36.5 | 17   | 10 | 10 | ±0.09    |
| 1315-0065 | 0-300mm/0-12"  | 0.02mm/ 0.001" | 125 | 36.5 | 17   | 10 | 10 | ±0.12    |
| 1315-0009 | 0-300mm/0-12"  | 0.02mm/ 0.001" | 150 | 36.5 | 17   | 10 | 10 | ±0.15    |
| 1300-0002 | 0-500mm/0-20"  | 0.02mm/ 0.001" | 100 | 55   | 25   | 10 | 12 | ±0.05    |
| 1315-0070 | 0-500mm/0-20"  | 0.02mm/ 0.001" | 125 | 55   | 25   | 10 | 12 | ±0.1     |
| 1315-0010 | 0-500mm/0-20"  | 0.02mm/ 0.001" | 150 | 55   | 25   | 10 | 12 | ±0.12    |
| 1315-0011 | 0-500mm/0-20"  | 0.02mm/ 0.001" | 200 | 55   | 25   | 10 | 12 | ±0.16    |
| 1315-0080 | 0-500mm/0-20"  | 0.02mm/ 0.001" | 250 | 55   | 25   | 10 | 12 | ±0.20    |
| 1315-0085 | 0-500mm/0-20"  | 0.02mm/ 0.001" | 300 | 55   | 25   | 10 | 12 | ±0.24    |
| 1300-0003 | 0-600mm/0-24"  | 0.02mm/ 0.001" | 100 | 55   | 25   | 10 | 12 | ±0.05    |
| 1315-0090 | 0-600mm/0-24"  | 0.02mm/ 0.001" | 125 | 55   | 25   | 10 | 12 | ±0.1     |
| 1315-0030 | 0-600mm/0-24"  | 0.02mm/ 0.001" | 150 | 55   | 25   | 10 | 12 | ±0.12    |
| 1315-0095 | 0-600mm/0-24"  | 0.02mm/ 0.001" | 200 | 55   | 25   | 10 | 12 | ±0.16    |
| 1315-0105 | 0-600mm/0-24"  | 0.02mm/ 0.001" | 250 | 55   | 25   | 10 | 12 | ±0.22    |
| 1315-0110 | 0-600mm/0-24"  | 0.02mm/ 0.001" | 300 | 55   | 25   | 10 | 12 | ±0.26    |
| 1315-0115 | 0-800mm/0-32"  | 0.02mm/ 0.001" | 125 | 64   | 32   | 20 | 18 | ±0.06    |
| 1315-0035 | 0-800mm/0-32"  | 0.02mm/ 0.001" | 150 | 64   | 32   | 20 | 18 | ±0.14    |
| 1315-0040 | 0-800mm/0-32"  | 0.02mm/ 0.001" | 200 | 64   | 32   | 20 | 18 | ±0.18    |
| 1315-0120 | 0-800mm/0-32"  | 0.02mm/ 0.001" | 250 | 64   | 32   | 20 | 18 | ±0.20    |
| 1315-0125 | 0-800mm/0-32"  | 0.02mm/ 0.001" | 300 | 64   | 32   | 20 | 18 | ±0.24    |
| 1300-0004 | 0-1000mm/0-40" | 0.02mm/ 0.001" | 125 | 64   | 32   | 20 | 18 | ±0.07    |
| 1315-0015 | 0-1000mm/0-40" | 0.02mm/ 0.001" | 150 | 64   | 32   | 20 | 18 | ±0.14    |
| 1315-0045 | 0-1000mm/0-40" | 0.02mm/ 0.001" | 200 | 64   | 32   | 20 | 18 | ±0.18    |
| 1315-0130 | 0-1000mm/0-40" | 0.02mm/ 0.001" | 250 | 64   | 32   | 20 | 18 | ±0.23    |
| 1315-0135 | 0-1000mm/0-40" | 0.02mm/ 0.001" | 300 | 64   | 32   | 20 | 18 | ±0.28    |
| 1315-0140 | 0-1500mm/0-58" | 0.02mm/ 0.001" | 125 | 73   | 41.5 | 20 | 20 | ±0.11    |
| 1315-0016 | 0-1500mm/0-59" | 0.02mm/ 0.000" | 150 | 73   | 41.5 | 20 | 20 | ±0.11    |
| 1315-0050 | 0-1500mm/0-60" | 0.02mm/ 0.001" | 200 | 73   | 41.5 | 20 | 20 | ±0.11    |
| 1315-0145 | 0-1500mm/0-60" | 0.02mm/ 0.001" | 250 | 73   | 41.5 | 20 | 20 | ±0.27    |
| 1315-0150 | 0-1500mm/0-60" | 0.02mm/ 0.001" | 300 | 73   | 41.5 | 20 | 20 | ±0.32    |
| 1315-0155 | 0-2000mm/0-80" | 0.02mm/ 0.001" | 150 | 73   | 41.5 | 20 | 20 | ±0.14    |
| 1315-0055 | 0-2000mm/0-80" | 0.02mm/ 0.001" | 200 | 73   | 41.5 | 20 | 20 | ±0.14    |
| 1315-0160 | 0-2000mm/0-80" | 0.02mm/ 0.001" | 250 | 73   | 41.5 | 20 | 20 | ±0.25    |
| 1315-0020 | 0-2000mm/0-80" | 0.02mm/ 0.001" | 300 | 73   | 41.5 | 20 | 20 | ±0.30    |

VERNIER CALIPER  
WITH O.D. AND I.D. JAWS

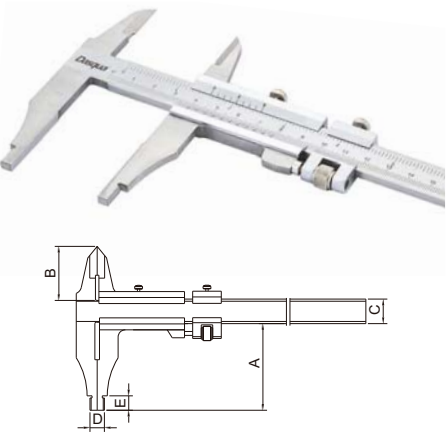


- With fine adjustment
- Hardened ground jaws with precision lapped measuring faces
- Satin chrome finish, hardened stainless steel throughout for longer life
- Distinct lines and figures etched against satin chrome finish

| Unit:mm   |               |                |     |    |    |    |          |
|-----------|---------------|----------------|-----|----|----|----|----------|
| Code      | Range         | Graduation     | A   | C  | D  | E  | Accuracy |
| 1320-0004 | 0-200mm/0-8"  | 0.02mm/ 0.001" | 60  | 17 | 10 | 10 | ±0.03    |
| 1320-0028 | 0-250mm/0-10" | 0.02mm/ 0.001" | 60  | 17 | 10 | 10 | ±0.04    |
| 1320-0065 | 0-250mm/0-10" | 0.02mm/ 0.001" | 90  | 17 | 10 | 10 | ±0.09    |
| 1320-0050 | 0-300mm/0-12" | 0.02mm/ 0.001" | 60  | 17 | 10 | 10 | ±0.04    |
| 1320-0030 | 0-300mm/0-12" | 0.02mm/ 0.001" | 90  | 17 | 10 | 10 | ±0.09    |
| 1320-0070 | 0-300mm/0-12" | 0.02mm/ 0.001" | 125 | 25 | 10 | 12 | ±0.12    |
| 1320-0031 | 0-300mm/0-12" | 0.02mm/ 0.001" | 150 | 25 | 10 | 12 | ±0.15    |
| 1300-0005 | 0-500mm/0-20" | 0.02mm/ 0.001" | 100 | 25 | 10 | 12 | ±0.05    |
| 1320-0035 | 0-500mm/0-20" | 0.02mm/ 0.001" | 125 | 25 | 10 | 12 | ±0.10    |
| 1300-0006 | 0-500mm/0-20" | 0.02mm/ 0.001" | 150 | 25 | 10 | 12 | ±0.12    |
| 1320-0007 | 0-500mm/0-20" | 0.02mm/ 0.001" | 200 | 25 | 10 | 12 | ±0.16    |
| 1320-0008 | 0-500mm/0-20" | 0.02mm/ 0.001" | 250 | 25 | 10 | 12 | ±0.20    |
| 1320-0009 | 0-500mm/0-20" | 0.02mm/ 0.001" | 300 | 25 | 10 | 12 | ±0.24    |
| 1300-0010 | 0-600mm/0-24" | 0.02mm/ 0.001" | 100 | 25 | 10 | 12 | ±0.05    |
| 1320-0040 | 0-600mm/0-24" | 0.02mm/ 0.001" | 125 | 25 | 10 | 12 | ±0.10    |

| Code      | Range           | Graduation     | A   | C    | D  | E  | Accuracy |
|-----------|-----------------|----------------|-----|------|----|----|----------|
| 1300-0011 | 0-600mm/0-24"   | 0.02mm/ 0.001" | 150 | 25   | 10 | 12 | ±0.12    |
| 1320-0012 | 0-600mm/0-24"   | 0.02mm/ 0.001" | 200 | 25   | 10 | 12 | ±0.16    |
| 1320-0041 | 0-600mm/0-24"   | 0.02mm/ 0.001" | 250 | 25   | 10 | 12 | ±0.22    |
| 1320-0042 | 0-600mm/0-24"   | 0.02mm/ 0.001" | 300 | 25   | 10 | 12 | ±0.26    |
| 1320-0085 | 0-800mm/0-32"   | 0.02mm/ 0.001" | 125 | 32   | 20 | 18 | ±0.06    |
| 1320-0090 | 0-800mm/0-32"   | 0.02mm/ 0.001" | 150 | 32   | 20 | 18 | ±0.14    |
| 1320-0043 | 0-800mm/0-32"   | 0.02mm/ 0.001" | 200 | 32   | 20 | 18 | ±0.18    |
| 1320-0095 | 0-800mm/0-32"   | 0.02mm/ 0.001" | 250 | 32   | 20 | 18 | ±0.20    |
| 1320-0044 | 0-800mm/0-32"   | 0.02mm/ 0.001" | 300 | 32   | 20 | 18 | ±0.24    |
| 1300-0015 | 0-1000mm/0-40"  | 0.02mm/ 0.001" | 125 | 32   | 20 | 18 | ±0.07    |
| 1320-0060 | 0-1000mm/0-40"  | 0.02mm/ 0.001" | 150 | 32   | 20 | 18 | ±0.14    |
| 1300-0016 | 0-1000mm/0-40"  | 0.02mm/ 0.001" | 200 | 32   | 20 | 18 | ±0.18    |
| 1320-0100 | 0-1000mm/0-40"  | 0.02mm/ 0.001" | 250 | 32   | 20 | 18 | ±0.23    |
| 1320-0017 | 0-1000mm/0-40"  | 0.02mm/ 0.001" | 300 | 32   | 20 | 18 | ±0.28    |
| 1320-0105 | 0-1500mm/0-60"  | 0.02mm/ 0.001" | 125 | 41.5 | 20 | 20 | ±0.11    |
| 1300-0020 | 0-1500mm/0-60"  | 0.02mm/ 0.001" | 150 | 41.5 | 20 | 20 | ±0.11    |
| 1320-0055 | 0-1500mm/0-60"  | 0.02mm/ 0.001" | 200 | 41.5 | 20 | 20 | ±0.11    |
| 1320-0110 | 0-1500mm/0-60"  | 0.02mm/ 0.001" | 250 | 41.5 | 20 | 20 | ±0.27    |
| 1320-0021 | 0-1500mm/0-60"  | 0.02mm/ 0.001" | 300 | 41.5 | 20 | 20 | ±0.32    |
| 1320-0115 | 0-2000mm/0-80"  | 0.02mm/ 0.001" | 150 | 41.5 | 20 | 20 | ±0.14    |
| 1300-0025 | 0-2000mm/0-80"  | 0.02mm/ 0.001" | 200 | 41.5 | 20 | 20 | ±0.14    |
| 1320-0120 | 0-2000mm/0-80"  | 0.02mm/ 0.001" | 250 | 41.5 | 20 | 20 | ±0.25    |
| 1320-0125 | 0-2000mm/0-80"  | 0.02mm/ 0.001" | 300 | 41.5 | 20 | 20 | ±0.30    |
| 1320-0130 | 0-2500mm/0-100" | 0.02mm/ 0.001" | 150 | 53   | 20 | 20 | ±0.22    |
| 1320-0135 | 0-2500mm/0-100" | 0.02mm/ 0.001" | 200 | 53   | 20 | 20 | ±0.22    |
| 1320-0140 | 0-2500mm/0-100" | 0.02mm/ 0.001" | 250 | 53   | 20 | 20 | ±0.22    |
| 1320-0145 | 0-2500mm/0-100" | 0.02mm/ 0.001" | 300 | 53   | 20 | 20 | ±0.22    |
| 1320-0155 | 0-3000mm/0-120" | 0.02mm/ 0.001" | 300 | 53   | 20 | 20 | ±0.26    |
| 1320-0160 | 0-3500mm/0-140" | 0.02mm/ 0.001" | 150 | 53   | 20 | 20 | ±0.30    |
| 1320-0165 | 0-3500mm/0-140" | 0.02mm/ 0.001" | 200 | 53   | 20 | 20 | ±0.30    |
| 1320-0170 | 0-3500mm/0-140" | 0.02mm/ 0.001" | 250 | 53   | 20 | 20 | ±0.30    |
| 1320-0175 | 0-3500mm/0-140" | 0.02mm/ 0.001" | 300 | 53   | 20 | 20 | ±0.30    |
| 1320-0180 | 0-4000mm/0-160" | 0.02mm/ 0.001" | 150 | 53   | 20 | 20 | ±0.34    |
| 1320-0185 | 0-4000mm/0-160" | 0.02mm/ 0.001" | 200 | 53   | 20 | 20 | ±0.34    |
| 1320-0190 | 0-4000mm/0-160" | 0.02mm/ 0.001" | 250 | 53   | 20 | 20 | ±0.34    |
| 1320-0195 | 0-4000mm/0-160" | 0.02mm/ 0.001" | 300 | 53   | 20 | 20 | ±0.34    |
| 1320-0200 | 0-5000mm/0-200" | 0.02mm/ 0.001" | 300 | 53   | 20 | 20 | ±0.42    |

MONOBLOCK VERNIER CALIPER  
WITH O.D. AND I.D. JAWS & STANDARD JAWS



- With fine adjustment
- Hardened ground jaws with precision lapped measuring faces
- Satin chrome finish, hardened stainless steel throughout for longer life
- Distinct lines and figures etched against satin chrome finish

| Unit:mm   |                |                |     |      |      |    |            |
|-----------|----------------|----------------|-----|------|------|----|------------|
| Code      | Range          | Graduation     | A   | B    | C    | D  | E Accuracy |
| 1305-0000 | 0-200mm/0-8"   | 0.02mm/ 0.001" | 60  | 36.5 | 17   | 10 | 10 ±0.03   |
| 1305-0060 | 0-250mm/0-10"  | 0.02mm/ 0.001" | 60  | 36.5 | 17   | 10 | 10 ±0.04   |
| 1305-0001 | 0-300mm/0-12"  | 0.02mm/ 0.001" | 60  | 36.5 | 17   | 10 | 10 ±0.04   |
| 1305-0025 | 0-300mm/0-12"  | 0.02mm/ 0.001" | 90  | 36.5 | 17   | 10 | 10 ±0.09   |
| 1305-0065 | 0-300mm/0-12"  | 0.02mm/ 0.001" | 125 | 36.5 | 17   | 10 | 10 ±0.12   |
| 1305-0009 | 0-300mm/0-12"  | 0.02mm/ 0.001" | 150 | 36.5 | 17   | 10 | 10 ±0.15   |
| 1305-0002 | 0-500mm/0-20"  | 0.02mm/ 0.001" | 100 | 55   | 25   | 10 | 12 ±0.05   |
| 1305-0070 | 0-500mm/0-20"  | 0.02mm/ 0.001" | 125 | 55   | 25   | 10 | 12 ±0.1    |
| 1305-0010 | 0-500mm/0-20"  | 0.02mm/ 0.001" | 150 | 55   | 25   | 10 | 12 ±0.12   |
| 1305-0011 | 0-500mm/0-20"  | 0.02mm/ 0.001" | 200 | 55   | 25   | 10 | 12 ±0.16   |
| 1305-0080 | 0-500mm/0-20"  | 0.02mm/ 0.001" | 250 | 55   | 25   | 10 | 12 ±0.20   |
| 1305-0085 | 0-500mm/0-20"  | 0.02mm/ 0.001" | 300 | 55   | 25   | 10 | 12 ±0.24   |
| 1305-0003 | 0-600mm/0-24"  | 0.02mm/ 0.001" | 100 | 55   | 25   | 10 | 12 ±0.05   |
| 1305-0090 | 0-600mm/0-24"  | 0.02mm/ 0.001" | 125 | 55   | 25   | 10 | 12 ±0.1    |
| 1305-0030 | 0-600mm/0-24"  | 0.02mm/ 0.001" | 150 | 55   | 25   | 10 | 12 ±0.12   |
| 1305-0095 | 0-600mm/0-24"  | 0.02mm/ 0.001" | 200 | 55   | 25   | 10 | 12 ±0.16   |
| 1305-0105 | 0-600mm/0-24"  | 0.02mm/ 0.001" | 250 | 55   | 25   | 10 | 12 ±0.22   |
| 1305-0110 | 0-600mm/0-24"  | 0.02mm/ 0.001" | 300 | 55   | 25   | 10 | 12 ±0.26   |
| 1305-0115 | 0-800mm/0-32"  | 0.02mm/ 0.001" | 125 | 64   | 32   | 20 | 18 ±0.06   |
| 1305-0035 | 0-800mm/0-32"  | 0.02mm/ 0.001" | 150 | 64   | 32   | 20 | 18 ±0.14   |
| 1305-0040 | 0-800mm/0-32"  | 0.02mm/ 0.001" | 200 | 64   | 32   | 20 | 18 ±0.18   |
| 1305-0120 | 0-800mm/0-32"  | 0.02mm/ 0.001" | 250 | 64   | 32   | 20 | 18 ±0.20   |
| 1305-0125 | 0-800mm/0-32"  | 0.02mm/ 0.001" | 300 | 64   | 32   | 20 | 18 ±0.24   |
| 1305-0004 | 0-1000mm/0-40" | 0.02mm/ 0.001" | 125 | 64   | 32   | 20 | 18 ±0.07   |
| 1305-0015 | 0-1000mm/0-40" | 0.02mm/ 0.001" | 150 | 64   | 32   | 20 | 18 ±0.14   |
| 1305-0045 | 0-1000mm/0-40" | 0.02mm/ 0.001" | 200 | 64   | 32   | 20 | 18 ±0.18   |
| 1305-0130 | 0-1000mm/0-40" | 0.02mm/ 0.001" | 250 | 64   | 32   | 20 | 18 ±0.23   |
| 1305-0135 | 0-1000mm/0-40" | 0.02mm/ 0.001" | 300 | 64   | 32   | 20 | 18 ±0.28   |
| 1305-0140 | 0-1500mm/0-60" | 0.02mm/ 0.001" | 125 | 73   | 41.5 | 20 | 20 ±0.11   |
| 1305-0016 | 0-1500mm/0-60" | 0.02mm/ 0.001" | 250 | 73   | 41.5 | 20 | 20 ±0.27   |
| 1305-0050 | 0-1500mm/0-60" | 0.02mm/ 0.001" | 200 | 73   | 41.5 | 20 | 20 ±0.11   |
| 1305-0145 | 0-1500mm/0-60" | 0.02mm/ 0.001" | 250 | 73   | 41.5 | 20 | 20 ±0.27   |
| 1305-0150 | 0-1500mm/0-60" | 0.02mm/ 0.001" | 300 | 73   | 41.5 | 20 | 20 ±0.32   |
| 1305-0055 | 0-2000mm/0-80" | 0.02mm/ 0.001" | 200 | 73   | 41.5 | 20 | 20 ±0.14   |
| 1305-0160 | 0-2000mm/0-80" | 0.02mm/ 0.001" | 250 | 73   | 41.5 | 20 | 20 ±0.25   |
| 1305-0020 | 0-2000mm/0-80" | 0.02mm/ 0.001" | 300 | 73   | 41.5 | 20 | 20 ±0.30   |

# IP65 DIAL CALIPER

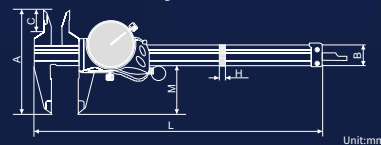
AGAINST FLUIDS AND DEBRIS STRONGLY

**Dasqua** *Blue*  
MADE IN USA



• New design of the metal housing, ensure protect the caliper from fluids and debris.

• No gears at front, avoid any metal shavings stuck effectively. It ensures the longer service life.

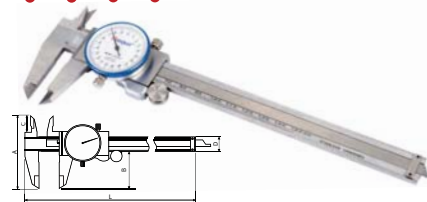
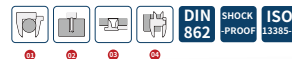


| Code      | Range        | L   | A   | B    | C  | H   | M  | Accuracy |
|-----------|--------------|-----|-----|------|----|-----|----|----------|
| 1332-2110 | 0-6"±0.001"  | 238 | 87  | 16.3 | 20 | 4.2 | 40 | ±0.001"  |
| 1332-2115 | 0-8"±0.001"  | 288 | 96  | 16.3 | 20 | 4.2 | 50 | ±0.001"  |
| 1332-2120 | 0-12"±0.001" | 388 | 111 | 16.3 | 20 | 4.2 | 64 | ±0.0015" |

• Longer upper jaws for measuring deeper holes (30% deeper)

## DIAL CALIPER

**GREAT RELIABILITY**  
50% HIGHER ACCURACY THAN  
DIN862 STANDARD



- Tough shock-proof gearing
- Made according to ISO13385-1 (DIN 862)
- Made of solid stainless steel
- 4 usages for measuring outside diameter, inside diameter, step and depth
- Vacuum quenched caliper, provides wear resistance, longer service life
- With locking screw for stable reading
- Measuring force strictly controlled in 2.5N-3.5N
- The parallelism of the measuring surface≤0.007mm
- Distinct lines and figures laser etched against satin chrome finish

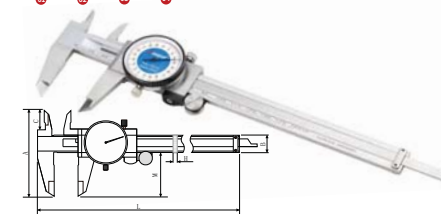
Unit:mm

| Code        | Range | Graduation | L   | A   | B  | C    | D  | Accuracy  |
|-------------|-------|------------|-----|-----|----|------|----|-----------|
| 1331-2115-A | 0-150 | 0.02       | 236 | 77  | 40 | 16.5 | 16 | ±0.015    |
| 1331-2120-A | 0-200 | 0.02       | 285 | 88  | 48 | 19.5 | 16 | ±0.02     |
| 1331-2130-A | 0-300 | 0.02       | 410 | 110 | 62 | 22.5 | 20 | ±0.025    |
| 1350-5005-A | 0-150 | 0.01       | 236 | 77  | 40 | 16.5 | 16 | ±0.01     |
| 1350-5010-A | 0-200 | 0.01       | 285 | 88  | 48 | 19.5 | 16 | ±0.015    |
| 1350-5015-A | 0-300 | 0.01       | 410 | 110 | 62 | 22.5 | 20 | ±0.02     |
| 1332-4110-A | 0-6"  | 0.001"     | 236 | 77  | 40 | 16.5 | 16 | ±0.00065" |
| 1332-4115-A | 0-8"  | 0.001"     | 285 | 88  | 48 | 19.5 | 16 | ±0.00085" |
| 1332-4120-A | 0-12" | 0.001"     | 410 | 110 | 62 | 22.5 | 20 | ±0.001"   |

BORN IN ITALY, RAISED BY THE WORLD **CALIPERS**

## DIAL CALIPER

**DOUBLE SHOCK-PROOF**



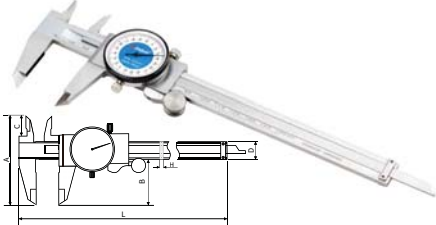
- Tough shock-proof gearing
- 4 usages for measuring outside diameter, inside diameter, step and depth
- Made of solid stainless steel
- Strictly made in accordance with DIN862
- Distinct lines and figures laser etched against satin chrome finish
- With locking screw for stable reading
- Large dial for easy and clear reading

Unit:mm

| Code      | Range | Graduation | L     | A   | B    | C    | H   | M  | Accuracy |
|-----------|-------|------------|-------|-----|------|------|-----|----|----------|
| 1331-2110 | 0-100 | 0.02       | 166.5 | 62  | 13.5 | 13.8 | 3.3 | 30 | ±0.02    |
| 1331-2115 | 0-150 | 0.02       | 236   | 77  | 16   | 16.5 | 3.5 | 40 | ±0.03    |
| 1331-2120 | 0-200 | 0.02       | 285   | 88  | 16   | 19.5 | 3.5 | 48 | ±0.03    |
| 1331-2130 | 0-300 | 0.02       | 410   | 110 | 20   | 22.5 | 4.0 | 62 | ±0.04    |
| 1350-5004 | 0-100 | 0.01       | 166.5 | 62  | 13.5 | 13.8 | 3.3 | 30 | ±0.02    |
| 1350-5005 | 0-150 | 0.01       | 236   | 77  | 16   | 16.5 | 3.5 | 40 | ±0.03    |
| 1350-5010 | 0-200 | 0.01       | 285   | 88  | 16   | 19.5 | 3.5 | 48 | ±0.03    |
| 1350-5015 | 0-300 | 0.01       | 410   | 110 | 20   | 22.5 | 4.0 | 62 | ±0.04    |
| 1332-4105 | 0-4"  | 0.001"     | 166.5 | 62  | 13.5 | 13.8 | 3.3 | 30 | ±0.001"  |
| 1332-4110 | 0-6"  | 0.001"     | 236   | 77  | 16   | 16.5 | 3.5 | 40 | ±0.001"  |
| 1332-4115 | 0-8"  | 0.001"     | 285   | 88  | 16   | 19.5 | 3.5 | 48 | ±0.001"  |
| 1332-4120 | 0-12" | 0.001"     | 410   | 110 | 20   | 22.5 | 4.0 | 62 | ±0.0015" |



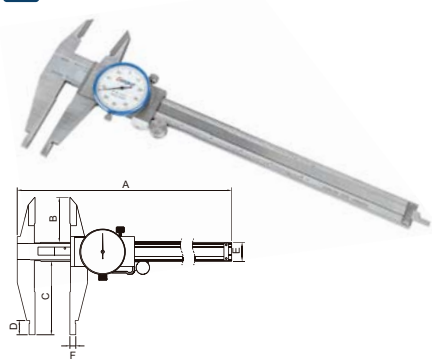
DIAL CALIPER  
CARBIDE TIPPED



- Special carbide measuring surface which has a 5 times longer service life than common calipers, surfaces are hardened and ground by special hardness process
- Made according to ISO13385-1 (DIN 862)
- With locking screw for stable reading
- 4 usages for measuring outside diameter, inside diameter, step and depth
- Made of solid stainless steel
- Vacuum quenched caliper, provides wear resistance, longer service life
- Distinct lines and figures laser etched against sat in chrome finish

|           |       |            |     |     |    |      |    | Unit:mm  |
|-----------|-------|------------|-----|-----|----|------|----|----------|
| Code      | Range | Graduation | L   | A   | B  | C    | D  | Accuracy |
| 1362-0005 | 0-150 | 0.02       | 236 | 77  | 40 | 16.5 | 16 | ±0.03    |
| 1362-0010 | 0-200 | 0.02       | 288 | 88  | 48 | 19.5 | 16 | ±0.03    |
| 1362-0015 | 0-300 | 0.02       | 410 | 110 | 62 | 22.5 | 20 | ±0.04    |
| 1362-1005 | 0-150 | 0.01       | 236 | 77  | 40 | 16.5 | 16 | ±0.03    |
| 1362-1010 | 0-200 | 0.01       | 288 | 88  | 48 | 19.5 | 16 | ±0.03    |
| 1362-1015 | 0-300 | 0.01       | 410 | 110 | 62 | 22.5 | 20 | ±0.04    |
| 1345-0205 | 0-6"  | 0.001"     | 236 | 77  | 40 | 16.5 | 16 | ±0.03    |
| 1345-0210 | 0-8"  | 0.001"     | 288 | 88  | 48 | 19.5 | 16 | ±0.03    |
| 1345-0215 | 0-12" | 0.001"     | 410 | 110 | 62 | 22.5 | 20 | ±0.04    |

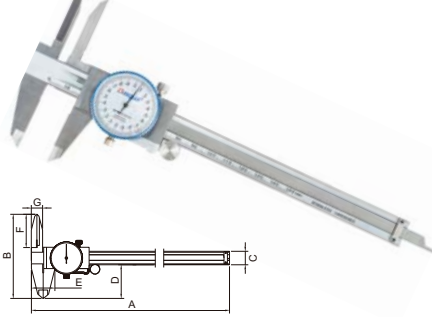
DIAL CALIPER  
WITH O.D. AND I.D. JAWS & OUTSIDE UPPER JAWS



- Tough shock-proof gearing
- Made of solid stainless steel
- Distinct lines and figures laser etched against satin chrome finish
- With locking screw for stable reading
- Large dial for easy and clear reading
- Support both metric and British system

|           |         |            |     |    |    |    |    |   |          | Unit:mm |
|-----------|---------|------------|-----|----|----|----|----|---|----------|---------|
| Code      | Range   | Graduation | A   | B  | C  | D  | E  | F | Accuracy |         |
| 1431-4020 | 0-200mm | 0.02mm     | 310 | 38 | 62 | 12 | 20 | 5 | ±0.03    |         |
| 1431-4025 | 0-300mm | 0.02mm     | 410 | 40 | 90 | 12 | 20 | 5 | ±0.04    |         |

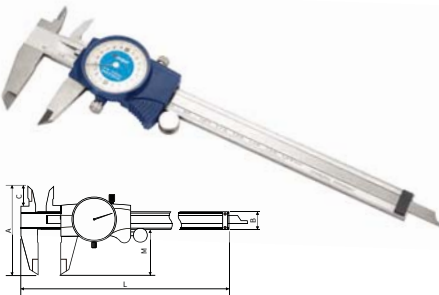
DIAL CALIPER  
WITH LONG UPPER JAWS



- Tough shock-proof gearing
- Made of solid stainless steel
- Distinct lines and figures laser etched against satin chrome finish
- With locking screw for stable reading
- Large dial for easy and clear reading
- Extended upper jaw design for easy measurement of the inner diameter of small deep holes

|           |         |            |     |     |    |    |    |    |    |          | Unit:mm |
|-----------|---------|------------|-----|-----|----|----|----|----|----|----------|---------|
| Code      | Range   | Graduation | A   | B   | C  | D  | E  | F  | G  | Accuracy |         |
| 1355-0005 | 0-150mm | 0.02mm     | 236 | 101 | 16 | 40 | 30 | 40 | 13 | ±0.03    |         |
| 1355-0010 | 0-200mm | 0.02mm     | 288 | 116 | 16 | 45 | 32 | 45 | 15 | ±0.04    |         |
| 1355-0015 | 0-300mm | 0.02mm     | 400 | 131 | 16 | 50 | 36 | 50 | 16 | ±0.05    |         |

DIAL CALIPER  
WITH DUSTPROOF SHIELD



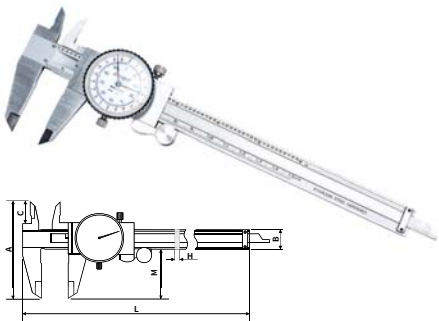
- 4 usages for measuring outside diameter, inside diameter, step and depth
- Strictly made in accordance with DIN862
- With locking screw for stable reading
- Large dial for easy and clear reading
- With dustproof shield for easy holding

|           |       |            |     |     |    |      |    |          |  | Unit:mm |
|-----------|-------|------------|-----|-----|----|------|----|----------|--|---------|
| Code      | Range | Graduation | L   | A   | B  | C    | M  | Accuracy |  |         |
| 1345-0105 | 0-150 | 0.02       | 236 | 77  | 16 | 16.5 | 40 | ±0.03    |  |         |
| 1345-0110 | 0-200 | 0.02       | 285 | 88  | 16 | 19.5 | 48 | ±0.03    |  |         |
| 1345-0115 | 0-300 | 0.02       | 410 | 110 | 20 | 22.5 | 62 | ±0.04    |  |         |

CALIPERS BORN IN ITALY, RAISED BY THE WORLD

DIAL CALIPER

METRIC / INCH COMBINED



- Tough shock-proof gearing
- 4 usages for measuring outside diameter, inside diameter step and depth
- Made of solid stainless steel
- Distinct lines and figures laser etched against satin chrome finish
- With locking screw for stable reading
- Large dial for easy and clear reading

| Code      | Range     | Graduation  | L   | A   | B  | C    | H   | M  | Accuracy     |
|-----------|-----------|-------------|-----|-----|----|------|-----|----|--------------|
| 3002-1901 | 0-150/6"  | 0.02/0.001" | 236 | 77  | 16 | 16.5 | 3.5 | 40 | ±0.03/0.001" |
| 3002-1902 | 0-200/8"  | 0.02/0.001" | 285 | 88  | 16 | 19.5 | 3.5 | 48 | ±0.03/0.001" |
| 3002-1903 | 0-300/12" | 0.02/0.001" | 410 | 110 | 20 | 22.5 | 4   | 62 | ±0.04/0.001" |

HEAVY DUTY DIAL CALIPER



- Tough shock-proof gearing
- Made of solid stainless steel
- Strictly made in accordance with DIN862
- 4 usages for measuring outside diameter, inside diameter, step and depth
- Distinct lines and figures laser etched against satin chrome finish
- With locking screw for stable reading
- Extra rigid beam for high stability

| Code      | Range  | Graduation | L    | A   | B  | F  | H   | K  | M   | Accuracy |
|-----------|--------|------------|------|-----|----|----|-----|----|-----|----------|
| 1431-2105 | 0-450  | 0.02       | 580  | 108 | 22 | 20 | 6.0 | 5  | 86  | ±0.05    |
| 1431-2110 | 0-500  | 0.02       | 630  | 108 | 22 | 20 | 6.0 | 5  | 86  | ±0.05    |
| 1431-2115 | 0-600  | 0.02       | 730  | 108 | 22 | 20 | 6.0 | 5  | 86  | ±0.05    |
| 1431-2120 | 0-1000 | 0.02       | 1200 | 168 | 28 | 22 | 8.0 | 10 | 140 | ±0.07    |
| 1432-4105 | 0-18"  | 0.001"     | 580  | 108 | 22 | 20 | 6.0 | 5  | 86  | ±0.002"  |
| 1432-4110 | 0-20"  | 0.001"     | 630  | 108 | 22 | 20 | 6.0 | 5  | 86  | ±0.002"  |
| 1432-4115 | 0-24"  | 0.001"     | 730  | 108 | 22 | 20 | 6.0 | 5  | 86  | ±0.002"  |
| 1432-4120 | 0-40"  | 0.001"     | 1200 | 168 | 28 | 22 | 8.0 | 10 | 140 | ±0.0025" |

OIL & WATER PROOF DIGITAL CALIPER



Dasqua Blu

Digit Size: 11.5mm

• 20% larger than normal screens; Larger size digital screen for easy reading

• Not only IP67 against water and dust, but also good oil proof ability

• Electronic components sealed to improve its anti-liquid ability

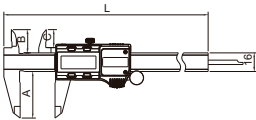
• Jaws ground to raise the accuracy of measurement

• Surfaces of beam ground (Parallelism less than 0.015, 20% better than normal) to ensure smooth movement throughout

| Code        | Range       | Resolution          | A  | B  | C    | D  | L   | Accuracy     |
|-------------|-------------|---------------------|----|----|------|----|-----|--------------|
| 2015-1005-A | 0-150/0-6"  | 0.01/0.0005"/1/128" | 40 | 20 | 15.5 | 16 | 235 | 0.02/0.001"  |
| 2015-1010-A | 0-200/0-8"  | 0.01/0.0005"/1/128" | 50 | 24 | 19.5 | 16 | 287 | 0.03/0.0015" |
| 2015-1015-A | 0-300/0-12" | 0.01/0.0005"/1/128" | 60 | 26 | 21.5 | 16 | 390 | 0.03/0.0015" |

CALIPERS BORN IN ITALY, RAISED BY THE WORLD

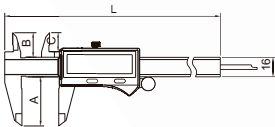
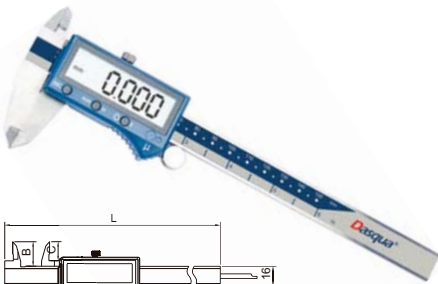
METAL CASING  
IP67 DIGITAL CALIPER



- Zinc aluminum alloy cover
- Hardened, ground and lapped measuring surfaces for longer service life
- Measuring surfaces ground for ultimate accuracy and smooth throughout
- IP67 protection against liquid
- With inductive measurement system

| Unit:mm   |               |                       |    |    |      |     |          |
|-----------|---------------|-----------------------|----|----|------|-----|----------|
| Code      | Range         | Graduation            | A  | B  | C    | L   | Accuracy |
| 2015-3005 | 0-150mm/0-6"  | 0.01mm/0.0005"/1/128" | 40 | 20 | 15.5 | 235 | 0.02     |
| 2015-3010 | 0-200mm/0-8"  | 0.01mm/0.0005"/1/128" | 50 | 24 | 19.5 | 287 | 0.03     |
| 2015-3015 | 0-300mm/0-12" | 0.01mm/0.0005"/1/128" | 60 | 26 | 21.5 | 390 | 0.03     |

0.001MM RESOLUTION  
IP67 WATERPROOF  
DIGITAL CALIPER



- Hardened, ground and lapped measuring surfaces for longer service life
- Measuring surfaces ground for ultimate accuracy and smooth throughout
- IP67 protection against liquid
- With inductive measurement system

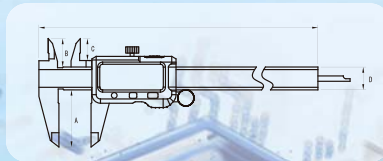
| Unit:mm   |              |                  |    |    |      |     |          |
|-----------|--------------|------------------|----|----|------|-----|----------|
| Code      | Range        | Graduation       | A  | B  | C    | L   | Accuracy |
| 2015-4205 | 0-150mm/0-6" | 0.001mm/0.00005" | 40 | 20 | 15.5 | 235 | 0.02     |

PRO DIGITAL CALIPER  
WITH ACCURACY 0.01MM



• Large screen for easy reading

- Flatness of measuring surface is 0.003mm to ensure high precision
- Accuracy: 0.01mm, more excellent



| Unit:mm     |            |              |    |    |      |    |     |              |
|-------------|------------|--------------|----|----|------|----|-----|--------------|
| Code        | Range      | Resolution   | A  | B  | C    | D  | L   | Accuracy     |
| 2000-0005-A | 0-150/0-6" | 0.01/0.0005" | 40 | 20 | 15.5 | 16 | 235 | 0.01/0.0005" |



Calibration Certificate

Calibration No. 150-000000

Customer: DASQUA TECHNOLOGY LTD.  
Address: 2nd Floor, Unit 1, Building 1, Via 49 Shanghai  
Laboratory Road, South New District, Shanghai, China

Type of Instrument: DIGITAL CALIPER  
Serial No.: 00000004  
Manufacturer: DASQUA  
Expiry Date: 2020/01/01

Accepted by: Edward  
Checked by: Robert  
Calibrated by: Daniel

Date of Sample: 2015 Year 05 Month 20 Day  
Date of Calibration: 2015 Year 05 Month 24 Day  
Date of Report: 2015 Year 05 Month 24 Day

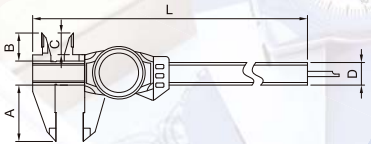
Place: Room 1, Building 1, Unit 1, Shanghai  
Telephone: 0086-21-51011113

Page 1 of 1

# COMBINED DIAL & DIGITAL CALIPER



- Strictly made in accordance with DIN862
- Hardened, ground and lapped measuring surfaces for longer service life
- Measuring surfaces ground for ultimate accuracy and smooth throughout
- IP67 protection against liquid
- With inductive measurement system
- Tolerance set & tolerance alarm are optional
- Product built-in wireless system is optional (Code: 3004-0010)



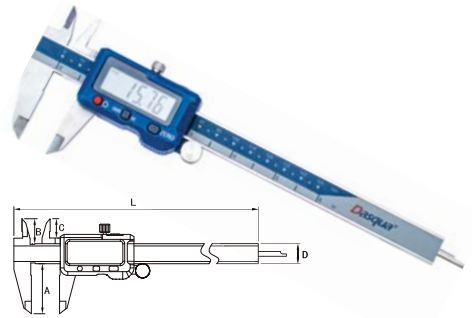
| Code      | Range       | Resolution          | A  | B  | C    | D  | L   | Accuracy | Type                     |
|-----------|-------------|---------------------|----|----|------|----|-----|----------|--------------------------|
| 3004-0005 | 0-150/0-6"  | 0.01/0.0005"/1/128" | 40 | 20 | 15.5 | 16 | 235 | ±0.02    | /                        |
| 3004-1005 | 0-200/0-8"  | 0.01/0.0005"/1/128" | 50 | 24 | 19.5 | 16 | 287 | ±0.03    | /                        |
| 3004-2005 | 0-300/0-12" | 0.01/0.0005"/1/128" | 60 | 26 | 21.5 | 16 | 390 | ±0.03    | /                        |
| 3004-0010 | 0-150/0-6"  | 0.01/0.0005"/1/128" | 40 | 20 | 15.5 | 16 | 235 | ±0.02    | Built-in wireless system |
| 3004-1010 | 0-200/0-8"  | 0.01/0.0005"/1/128" | 50 | 24 | 19.5 | 16 | 287 | ±0.03    | Built-in wireless system |
| 3004-2010 | 0-300/0-12" | 0.01/0.0005"/1/128" | 60 | 26 | 21.5 | 16 | 390 | ±0.03    | Built-in wireless system |

Unit:mm



- High-capacity lithium battery With magnetic charging

## DIGITAL CALIPER



- Strictly made in accordance with DIN862
- Hardened, ground and lapped measuring surfaces for longer service life
- Measuring surfaces ground for ultimate accuracy and smooth throughout
- With data output

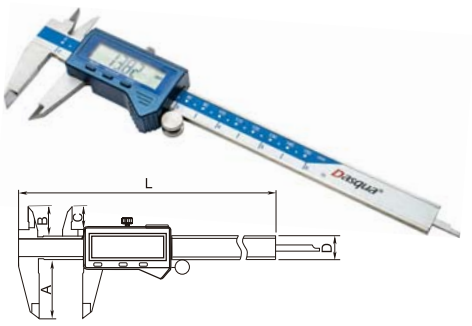
| Code      | Range       | Resolution          | A  | B  | C    | D  | L   | Accuracy     |
|-----------|-------------|---------------------|----|----|------|----|-----|--------------|
| 2000-2005 | 0-150/0-6"  | 0.01/0.0005"        | 40 | 20 | 15.5 | 16 | 235 | 0.02/0.001"  |
| 2000-2010 | 0-200/0-8"  | 0.01/0.0005"        | 50 | 24 | 19.5 | 16 | 287 | 0.03/0.0015" |
| 2000-2015 | 0-300/0-12" | 0.01/0.0005"        | 60 | 26 | 21.5 | 16 | 390 | 0.03/0.0015" |
| 2002-1005 | 0-150/0-6"  | 0.01/0.0005"/1/128" | 40 | 20 | 15.5 | 16 | 235 | 0.02/0.001"  |
| 2002-1010 | 0-200/0-8"  | 0.01/0.0005"/1/128" | 50 | 24 | 19.5 | 16 | 287 | 0.03/0.0015" |
| 2002-1015 | 0-300/0-12" | 0.01/0.0005"/1/128" | 60 | 26 | 21.5 | 16 | 390 | 0.03/0.0015" |

• 2002-1005, 2002-1010, 2002-1015 are with fraction

Unit:mm

BORN IN ITALY, RAISED BY THE WORLD CALIPERS

## DIGITAL CALIPER



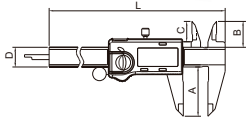
- Bigger screen with larger digits for easy reading
- Strictly made in accordance with DIN862
- Hardened, ground and lapped measuring surfaces for longer service life
- Measuring surfaces ground for ultimate accuracy and smooth throughout
- With data output
- With fraction function

| Code      | Range       | Resolution          | A  | B  | C    | D  | L   | Accuracy     |
|-----------|-------------|---------------------|----|----|------|----|-----|--------------|
| 1804-1065 | 0-150/0-6"  | 0.01/0.0005"/1/128" | 40 | 20 | 15.5 | 16 | 235 | 0.02/0.001"  |
| 1804-1070 | 0-200/0-8"  | 0.01/0.0005"/1/128" | 50 | 24 | 19.5 | 16 | 287 | 0.03/0.0015" |
| 1804-1075 | 0-300/0-12" | 0.01/0.0005"/1/128" | 60 | 26 | 21.5 | 16 | 390 | 0.03/0.0015" |

Unit:mm



LEFT HAND DIGITAL CALIPER

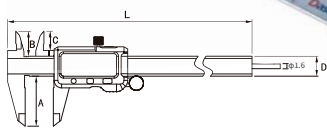


- Suitable for left-handed users or situations where measurements can only be taken from the left side
- Made of high-quality stainless steel material
- Automatic power-off
- Zero setting at any position
- Inch/mm system interchangeable

| Unit:mm   |               |                |    |    |      |    |     |          |
|-----------|---------------|----------------|----|----|------|----|-----|----------|
| Code      | Range         | Graduation     | A  | B  | C    | D  | E   | Accuracy |
| 2030-1005 | 0-150mm/0-6"  | 0.01mm/0.0005" | 40 | 21 | 16.5 | 16 | 236 | ±0.03    |
| 2030-1010 | 0-200mm/0-8"  | 0.01mm/0.0005" | 50 | 24 | 19.5 | 16 | 286 | ±0.03    |
| 2030-1015 | 0-300mm/0-12" | 0.01mm/0.0005" | 60 | 26 | 21.5 | 16 | 400 | ±0.04    |

DIGITAL CALIPER

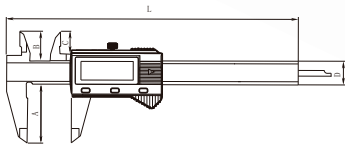
WITH ROUND DEPTH BAR



- Bigger screen with larger digits for easy reading
- Strictly made in accordance with DIN862
- Hardened, ground and lapped measuring surfaces for longer service life
- Measuring surfaces ground for ultimate accuracy and smooth throughout
- With data output
- With fraction function

| Unit:mm   |             |                     |    |    |      |    |     |              |
|-----------|-------------|---------------------|----|----|------|----|-----|--------------|
| Code      | Range       | Resolution          | A  | B  | C    | D  | L   | Accuracy     |
| 2000-1605 | 0-150/0-6"  | 0.01/0.0005"/1/128" | 40 | 20 | 15.5 | 16 | 235 | 0.02/0.001"  |
| 2000-1610 | 0-200/0-8"  | 0.01/0.0005"/1/128" | 50 | 24 | 19.5 | 16 | 287 | 0.03/0.0015" |
| 2000-1615 | 0-300/0-12" | 0.01/0.0005"/1/128" | 60 | 26 | 21.5 | 16 | 390 | 0.03/0.0015" |

MINI DIGITAL CALIPER

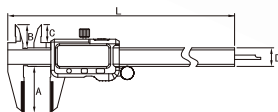


- Mini model for great portability
- Made of solid stainless steel
- Strictly made in accordance with DIN862

| Unit:mm   |             |              |    |    |    |    |     |             |
|-----------|-------------|--------------|----|----|----|----|-----|-------------|
| Code      | Range       | Resolution   | A  | B  | C  | D  | L   | Accuracy    |
| 2050-0004 | 0-70/0-2.8" | 0.01/0.0005" | 30 | 17 | 12 | 13 | 140 | 0.02/0.001" |
| 2050-0005 | 0-100/0-4"  | 0.01/0.0005" | 30 | 17 | 12 | 13 | 170 | 0.02/0.001" |

DIGITAL CALIPER

WITH CARBIDE-TIPPED JAW

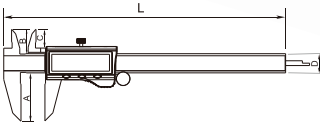


- Used to measure outside diameter, inside diameter, step and depth measurement and also for scribing
- Carbide tipped measuring faces making scribing clear and ensuring abrasive resistance
- Strictly made in accordance with DIN862
- Hardened, ground and lapped measuring surfaces for longer service life
- Measuring surfaces ground for ultimate accuracy and smooth throughout

| Unit:mm   |             |              |    |    |      |    |     |          |
|-----------|-------------|--------------|----|----|------|----|-----|----------|
| Code      | Range       | Resolution   | A  | B  | C    | D  | L   | Accuracy |
| 2406-1005 | 0-150/0-6"  | 0.01/0.0005" | 40 | 21 | 16.5 | 16 | 236 | ±0.03    |
| 2406-1010 | 0-200/0-8"  | 0.01/0.0005" | 50 | 24 | 19.5 | 16 | 286 | ±0.03    |
| 2406-1015 | 0-300/0-12" | 0.01/0.0005" | 60 | 26 | 21.5 | 16 | 400 | ±0.04    |



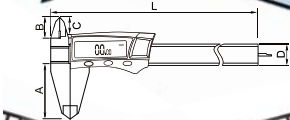
METAL HOUSING  
DIGITAL CALIPER



- With sturdy metal housing for high stability
- Made of solid stainless steel
- Strictly made in accordance with DIN862
- Hardened, ground and lapped measuring surfaces for longer service life

| Unit:mm   |             |              |    |    |      |    |     |              |  |
|-----------|-------------|--------------|----|----|------|----|-----|--------------|--|
| Code      | Range       | Resolution   | A  | B  | C    | D  | L   | Accuracy     |  |
| 2115-2305 | 0-150/0-6"  | 0.01/0.0005" | 40 | 20 | 15.5 | 16 | 235 | 0.02/0.001"  |  |
| 2115-2310 | 0-200/0-8"  | 0.01/0.0005" | 50 | 24 | 19.5 | 16 | 287 | 0.03/0.0015" |  |
| 2115-2315 | 0-300/0-12" | 0.01/0.0005" | 60 | 26 | 21.5 | 16 | 390 | 0.03/0.0015" |  |

PLASTIC CALIPER  
MADE OF FIBERGLASS



- Made of fiberglass composite for strong beam, durability & longer life.
- Harm-free to the surfaces of measured objects, like jewels, handcrafts.
- Non conductive for safe in oily working-site, like auto repair workshop, etc.

| Unit:mm   |            |                    |      |    |     |    |     |          |  |
|-----------|------------|--------------------|------|----|-----|----|-----|----------|--|
| Code      | Range      | Resolution         | A    | B  | C   | D  | L   | Accuracy |  |
| 2035-0004 | 0-75/0-3"  | 0.01/0.0005"       | 25.5 | 14 | 9.5 | 13 | 138 | ±0.2     |  |
| 2035-0005 | 0-150/0-6" | 0.01/0.0005"       | 39.5 | 21 | 16  | 16 | 236 | ±0.2     |  |
| 2035-0006 | 0-150/0-6" | 0.01/0.0005"/1/64" | 39.5 | 21 | 16  | 16 | 236 | ±0.2     |  |

DIGITAL CALIPER



- With calibration certificate
- Made of solid stainless steel
- Strictly made in accordance with DIN862
- Hardened, ground and lapped measuring surfaces for longer service life

| Unit:mm   |             |                     |    |    |      |    |     |              |  |
|-----------|-------------|---------------------|----|----|------|----|-----|--------------|--|
| Code      | Range       | Resolution          | A  | B  | C    | D  | L   | Accuracy     |  |
| 2000-1005 | 0-150/0-6"  | 0.01/0.0005"/1/128" | 40 | 20 | 15.5 | 16 | 235 | 0.02/0.001"  |  |
| 2000-1010 | 0-200/0-8"  | 0.01/0.0005"/1/128" | 50 | 24 | 19.5 | 16 | 287 | 0.03/0.0015" |  |
| 2000-1015 | 0-300/0-12" | 0.01/0.0005"/1/128" | 60 | 26 | 21.5 | 16 | 390 | 0.03/0.0015" |  |

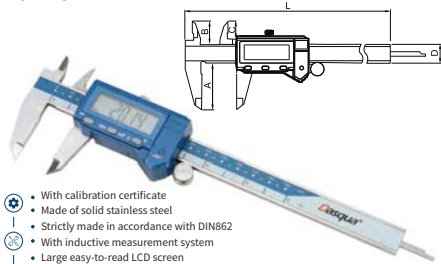
WITH IP54 WATER PROOF AND ABSOLUTE FUNCTION

| Unit:mm   |             |                     |    |    |      |    |     |              |  |
|-----------|-------------|---------------------|----|----|------|----|-----|--------------|--|
| Code      | Range       | Resolution          | A  | B  | C    | D  | L   | Accuracy     |  |
| 2040-1005 | 0-150/0-6"  | 0.01/0.0005"/1/128" | 40 | 20 | 15.5 | 16 | 235 | 0.02/0.001"  |  |
| 2040-1010 | 0-200/0-8"  | 0.01/0.0005"/1/128" | 50 | 24 | 19.5 | 16 | 287 | 0.03/0.0015" |  |
| 2040-1015 | 0-300/0-12" | 0.01/0.0005"/1/128" | 60 | 26 | 21.5 | 16 | 390 | 0.03/0.0015" |  |

WITH WIRELESS SYSTEM

| Unit:mm     |             |                     |    |    |      |    |     |              |  |
|-------------|-------------|---------------------|----|----|------|----|-----|--------------|--|
| Code        | Range       | Resolution          | A  | B  | C    | D  | L   | Accuracy     |  |
| 2025-1005-A | 0-150/0-6"  | 0.01/0.0005"/1/128" | 40 | 20 | 15.5 | 16 | 235 | 0.02/0.001"  |  |
| 2025-1010-A | 0-200/0-8"  | 0.01/0.0005"/1/128" | 50 | 24 | 19.5 | 16 | 287 | 0.03/0.0015" |  |
| 2025-1015-A | 0-300/0-12" | 0.01/0.0005"/1/128" | 60 | 26 | 21.5 | 16 | 390 | 0.03/0.0015" |  |

IP67 WATER PROOF  
DIGITAL CALIPER



- With calibration certificate
- Made of solid stainless steel
- Strictly made in accordance with DIN862
- With inductive measurement system
- Large easy-to-read LCD screen
- Glass grating adapted
- IP67 protection against liquid

WITH OIL PROOF ABILITY

| Unit:mm   |             |                     |    |    |      |    |     |              |  |
|-----------|-------------|---------------------|----|----|------|----|-----|--------------|--|
| Code      | Range       | Resolution          | A  | B  | C    | D  | L   | Accuracy     |  |
| 2015-2405 | 0-150/0-6"  | 0.01/0.0005"/1/128" | 40 | 20 | 15.5 | 16 | 235 | 0.02/0.001"  |  |
| 2015-2410 | 0-200/0-8"  | 0.01/0.0005"/1/128" | 50 | 24 | 19.5 | 16 | 287 | 0.03/0.0015" |  |
| 2015-2415 | 0-300/0-12" | 0.01/0.0005"/1/128" | 60 | 26 | 21.5 | 16 | 390 | 0.03/0.0015" |  |

WITH WIRELESS SYSTEM

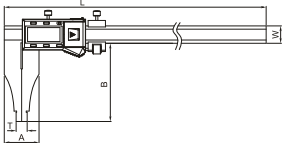
| Unit:mm     |             |                     |    |    |      |    |     |              |  |
|-------------|-------------|---------------------|----|----|------|----|-----|--------------|--|
| Code        | Range       | Resolution          | A  | B  | C    | D  | L   | Accuracy     |  |
| 2020-1005-A | 0-150/0-6"  | 0.01/0.0005"/1/128" | 40 | 20 | 15.5 | 16 | 235 | 0.02/0.001"  |  |
| 2020-1010-A | 0-200/0-8"  | 0.01/0.0005"/1/128" | 50 | 24 | 19.5 | 16 | 287 | 0.03/0.0015" |  |
| 2020-1015-A | 0-300/0-12" | 0.01/0.0005"/1/128" | 60 | 26 | 21.5 | 16 | 390 | 0.03/0.0015" |  |



IP54 WATER PROOF HEAVY DUTY DIGITAL CALIPER



- With sturdy frame and big size for high stability
- Made of solid stainless steel
- Strictly made in accordance with DIN862
- With fine adjustment
- With Data-Output and Metric-Inch-Fraction Conversion function

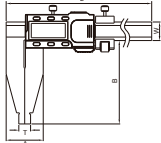


EUROPEAN STYLE Unit:mm

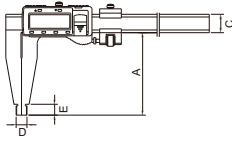
| Code      | Range        | Resolution   | L    | A  | B   | W  | T  | Accuracy     |
|-----------|--------------|--------------|------|----|-----|----|----|--------------|
| 2220-8105 | 0-300/0-12"  | 0.01/0.0005" | 445  | 40 | 90  | 20 | 10 | 0.04/0.002"  |
| 2220-8110 | 0-500/0-20"  | 0.01/0.0005" | 670  | 52 | 150 | 24 | 20 | 0.05/0.002"  |
| 2220-8115 | 0-1000/0-40" | 0.01/0.0005" | 1210 | 60 | 150 | 30 | 20 | 0.06/0.0025" |



AMERICAN STYLE



WITH LARGE RANGE



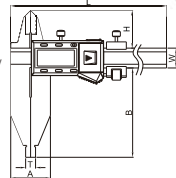
AMERICAN STYLE Unit:mm

| Code      | Range        | Resolution   | L    | A  | B   | W  | T        | Accuracy     |
|-----------|--------------|--------------|------|----|-----|----|----------|--------------|
| 2220-8113 | 0-300/0-12"  | 0.01/0.0005" | 445  | 40 | 90  | 20 | 10(0.5") | 0.04/0.002"  |
| 2220-8116 | 0-600/0-24"  | 0.01/0.0005" | 770  | 44 | 100 | 24 | 20(0.8") | 0.05/0.002"  |
| 2220-8119 | 0-1000/0-40" | 0.01/0.0005" | 1210 | 46 | 125 | 30 | 20(0.8") | 0.06/0.0025" |
| 2220-8165 | 0-600/0-24"  | 0.01/0.0005" | 770  | 52 | 150 | 24 | 20(0.8") | 0.05/0.002"  |

IP54 WATER PROOF HEAVY DUTY DIGITAL CALIPER WITH UPPER JAWS



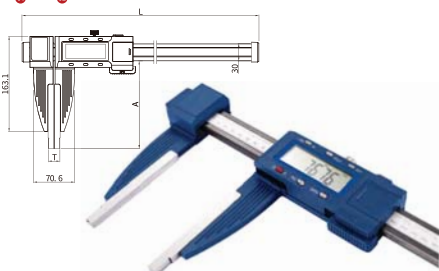
- With sturdy frame and big size for high stability
- Made of solid stainless steel
- Strictly made in accordance with DIN862
- With fine adjustment
- With Data-Output and Metric-Inch Conversion function



Unit:mm

| Code      | Range        | Resolution   | L    | A  | B   | W  | T  | H  | Accuracy     |
|-----------|--------------|--------------|------|----|-----|----|----|----|--------------|
| 2710-1105 | 0-300/0-12"  | 0.01/0.0005" | 445  | 40 | 90  | 20 | 10 | 38 | 0.04/0.002"  |
| 2710-1110 | 0-500/0-20"  | 0.01/0.0005" | 670  | 52 | 150 | 24 | 20 | 60 | 0.05/0.002"  |
| 2710-1113 | 0-600/0-24"  | 0.01/0.0005" | 770  | 54 | 150 | 24 | 20 | 60 | 0.05/0.002"  |
| 2710-1115 | 0-1000/0-40" | 0.01/0.0005" | 1210 | 60 | 150 | 30 | 20 | 63 | 0.06/0.0025" |

IP65 WATER PROOF ULTRA-LIGHT GIANT CALIPER MADE OF CARBON FIBER & WITH WIRELESS SYSTEM

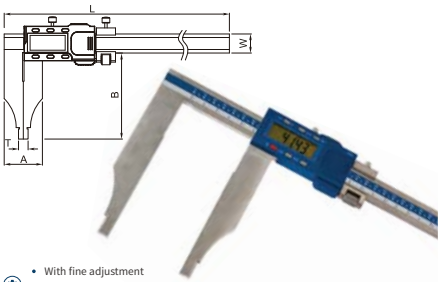


- Light weight digital calipers employing Carbon Fiber Reinforced Plastics in the beam and jaws
- Non-conductive and especially made for the electronic and sensitive purposes
- Made of carbon fiber, guaranteeing lower weight and portability
- Made of carbon fiber, the results rarely affected by temperature
- With Inductive measurement system
- IP65 protection against water
- With data output and wireless transmission function

Unit:mm

| Code      | Range        | Resolution   | A   | T        | L    | Accuracy     |
|-----------|--------------|--------------|-----|----------|------|--------------|
| 2810-0003 | 0-600/0-24"  | 0.01/0.0005" | 100 | 20(0.8") | 770  | 0.05/0.002"  |
| 2810-0004 | 0-800/0-32"  | 0.01/0.0005" | 150 | 20(0.8") | 970  | 0.06/0.0025" |
| 2810-0005 | 0-1000/0-40" | 0.01/0.0005" | 150 | 20(0.8") | 1226 | 0.06/0.0025" |
| 2810-0010 | 0-1500/0-60" | 0.01/0.0005" | 200 | 20(0.8") | 1736 | 0.09/0.0035" |
| 2810-0015 | 0-2000/0-80" | 0.01/0.0005" | 300 | 20(0.8") | 2246 | 0.012/0.005" |

IP65 WATER PROOF  
HEAVY DUTY DIGITAL CALIPER  
EUROPEAN STYLE

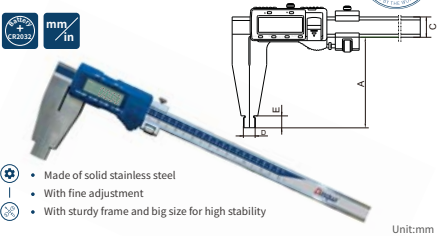


- With fine adjustment
- Made of solid stainless steel
- Strictly made in accordance with DIN862
- With sturdy frame and big size for high stability
- With Data-Output and Metric-Inch-Fraction Conversion function
- IP65 protection against liquid
- Product built-in wireless system is optional (Code: 2510-3115)

Unit:mm

| Code      | Range        | Resolution   | L    | A  | B   | W  | T  | Accuracy     |
|-----------|--------------|--------------|------|----|-----|----|----|--------------|
| 2320-1105 | 0-300/0-12"  | 0.01/0.0005" | 445  | 40 | 90  | 20 | 10 | 0.03/0.0015" |
| 2320-1106 | 0-500/0-20"  | 0.01/0.0005" | 670  | 52 | 150 | 24 | 20 | 0.05/0.002"  |
| 2320-1110 | 0-600/0-24"  | 0.01/0.0005" | 770  | 44 | 100 | 24 | 20 | 0.05/0.002"  |
| 2320-1115 | 0-1000/0-40" | 0.01/0.0005" | 1210 | 60 | 150 | 30 | 20 | 0.06/0.0025" |
| 2320-1120 | 0-600/0-24"  | 0.01/0.0005" | 770  | 52 | 150 | 24 | 20 | 0.05/0.0025" |
| 2510-3115 | 0-1000/0-40" | 0.01/0.0005" | 1210 | 60 | 150 | 30 | 20 | 0.06/0.0025" |

LONG JAW HEAVY DUTY  
DIGITAL CALIPER

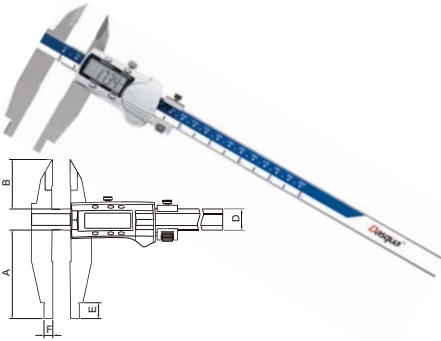


- Made of solid stainless steel
- With fine adjustment
- With sturdy frame and big size for high stability

Unit:mm

| Code      | Range         | Graduation   | A   | C    | D  | E  | Accuracy |
|-----------|---------------|--------------|-----|------|----|----|----------|
| 2220-8170 | 0-300/0-12"   | 0.01/0.0005" | 150 | 25   | 10 | 12 | ±0.15    |
| 2220-8175 | 0-500/0-20"   | 0.01/0.0005" | 100 | 25   | 10 | 12 | ±0.05    |
| 2220-8117 | 0-500/0-20"   | 0.01/0.0005" | 200 | 25   | 10 | 12 | ±0.16    |
| 2220-8180 | 0-500/0-20"   | 0.01/0.0005" | 250 | 32   | 20 | 18 | ±0.20    |
| 2220-8185 | 0-500/0-20"   | 0.01/0.0005" | 300 | 32   | 20 | 18 | ±0.24    |
| 2220-8190 | 0-600/0-24"   | 0.01/0.0005" | 100 | 25   | 10 | 12 | ±0.05    |
| 2220-8200 | 0-600/0-24"   | 0.01/0.0005" | 150 | 25   | 10 | 12 | ±0.14    |
| 2220-8150 | 0-600/0-24"   | 0.01/0.0005" | 200 | 25   | 10 | 12 | ±0.16    |
| 2220-8205 | 0-600/0-24"   | 0.01/0.0005" | 250 | 32   | 20 | 18 | ±0.22    |
| 2220-8210 | 0-600/0-24"   | 0.01/0.0005" | 300 | 32   | 20 | 18 | ±0.26    |
| 2220-8215 | 0-800/0-32"   | 0.01/0.0005" | 150 | 32   | 20 | 18 | ±0.14    |
| 2220-8220 | 0-800/0-32"   | 0.01/0.0005" | 200 | 32   | 20 | 18 | ±0.18    |
| 2220-8155 | 0-800/0-32"   | 0.01/0.0005" | 300 | 32   | 20 | 18 | ±0.24    |
| 2220-8225 | 0-1000/0-40"  | 0.01/0.0005" | 150 | 32   | 20 | 18 | ±0.14    |
| 2220-8230 | 0-1000/0-40"  | 0.01/0.0005" | 200 | 32   | 20 | 18 | ±0.18    |
| 2220-8130 | 0-1000/0-40"  | 0.01/0.0005" | 250 | 32   | 20 | 18 | ±0.24    |
| 2220-8135 | 0-1000/0-40"  | 0.01/0.0005" | 300 | 32   | 20 | 18 | ±0.28    |
| 2220-3570 | 0-1500/0-60"  | 0.01/0.0005" | 200 | 41.5 | 20 | 20 | ±0.11    |
| 2220-3575 | 0-1500/0-60"  | 0.01/0.0005" | 125 | 41.5 | 20 | 20 | ±0.11    |
| 2220-3580 | 0-2000/0-80"  | 0.01/0.0005" | 150 | 41.5 | 20 | 20 | ±0.14    |
| 2220-8195 | 0-2500/0-100" | 0.01/0.001"  | 150 | 53   | 20 | 20 | ±0.22    |
| 2220-8240 | 0-3000/0-120" | 0.01/0.001"  | 150 | 53   | 20 | 20 | ±0.26    |
| 2220-8160 | 0-3000/0-120" | 0.01/0.001"  | 300 | 53   | 20 | 20 | ±0.26    |

METAL HOUSING  
HEAVY DUTY DIGITAL CALIPER  
WITH WITH O.D. AND I.D. JAWS & STANDARD JAWS

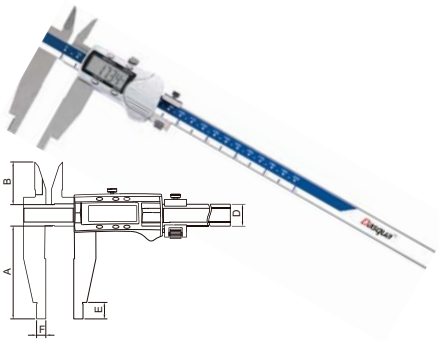


- High quality stainless steel material manufacturing
- Precision grinding under the ruler body to ensure smooth feel
- With data interface, support wired, wireless transmission
- Nib shaped jaws for ID and OD measurement, carrying upper jaws for OD measurements
- The whole body vacuum quenching, uniform hardness, wear resistance, longer service life
- With fine-adjustment carriage

Unit:mm

| Code        | Range         | Graduation     | A  | B  | D  | E  | F | Accuracy |
|-------------|---------------|----------------|----|----|----|----|---|----------|
| 2710-1104-A | 0-200mm/0-8"  | 0.01mm/0.0005" | 60 | 38 | 17 | 12 | 5 | ±0.03    |
| 2710-1105-A | 0-300mm/0-12" | 0.01mm/0.0005" | 60 | 38 | 17 | 12 | 5 | ±0.04    |

METAL HOUSING  
HEAVY DUTY DIGITAL CALIPER  
WITH WITH O.D. AND I.D. JAWS & STANDARD JAWS



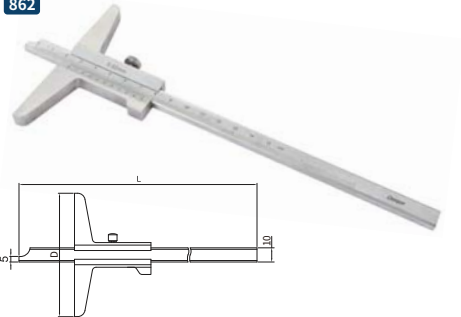
- High quality stainless steel material manufacturing
- Precision grinding under the ruler body to ensure smooth feel
- With data interface, support wired, wireless transmission
- Nib shaped jaws for ID and OD measurement, carrying upper jaws for OD measurements
- The whole body vacuum quenching, uniform hardness, wear resistance, longer service life
- With fine-adjustment carriage

Unit:mm

| Code        | Range         | Graduation     | A  | B  | D  | E  | F | Accuracy |
|-------------|---------------|----------------|----|----|----|----|---|----------|
| 2710-1108-A | 0-200mm/0-8"  | 0.01mm/0.0005" | 60 | 38 | 17 | 12 | 5 | ±0.03    |
| 2710-1130-A | 0-300mm/0-12" | 0.01mm/0.0005" | 60 | 38 | 17 | 12 | 5 | ±0.04    |

MONOBLOCK DEPTH  
VERNIER GAUGE

DIN  
862

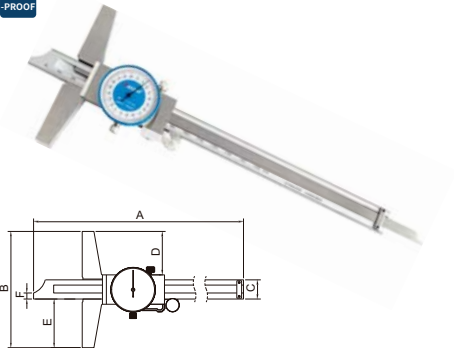


- Hardened ground jaws with precision lapped measuring faces
- Satin chrome finish, hardened stainless steel throughout for longer life
- Distinct lines and figures etched against satin chrome finish

| Unit:mm     |       |            |     |     |          |
|-------------|-------|------------|-----|-----|----------|
| Code        | Range | Graduation | L   | D   | Accuracy |
| 3001-1901-A | 0-150 | 0.02       | 250 | 100 | ±0.03    |
| 3001-1903-A | 0-200 | 0.02       | 300 | 100 | ±0.03    |
| 3001-1905-A | 0-300 | 0.02       | 400 | 100 | ±0.04    |
| 3001-1909-A | 0-500 | 0.02       | 595 | 102 | ±0.05    |
| 3001-1915-A | 0-600 | 0.02       | 695 | 102 | ±0.05    |
| 3001-2901-A | 0-6"  | 0.0001"    | 250 | 100 | ±0.03    |
| 3001-2903-A | 0-8"  | 0.0001"    | 300 | 100 | ±0.03    |
| 3001-2905-A | 0-12" | 0.0001"    | 400 | 100 | ±0.04    |

DIAL DEPTH CALIPER

SHOCK  
PROOF

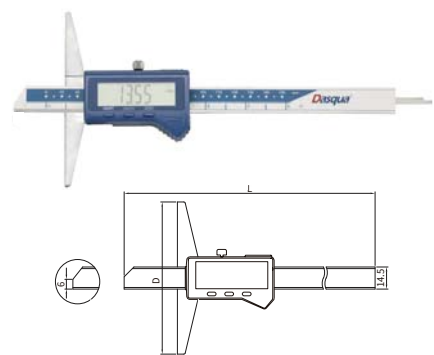


- Tough shock-proof gearing
- Made of solid stainless steel
- Distinct lines and figures laser etched against satin chrome finish
- With locking screw for stable reading
- Large dial for easy and clear reading
- Used to measure depth dimensions

| Unit:mm   |         |            |     |     |    |    |    |   |          |
|-----------|---------|------------|-----|-----|----|----|----|---|----------|
| Code      | Range   | Graduation | A   | B   | C  | D  | E  | F | Accuracy |
| 2401-1005 | 0-150mm | 0.01mm     | 250 | 100 | 16 | 37 | 42 | 5 | ±0.02    |
| 2401-1010 | 0-200mm | 0.01mm     | 300 | 100 | 16 | 37 | 42 | 5 | ±0.02    |
| 2401-1015 | 0-300mm | 0.01mm     | 400 | 100 | 16 | 37 | 42 | 5 | ±0.03    |
| 2401-2105 | 0-150mm | 0.02mm     | 250 | 100 | 16 | 37 | 42 | 5 | ±0.03    |
| 2401-2110 | 0-200mm | 0.02mm     | 300 | 100 | 16 | 37 | 42 | 5 | ±0.03    |
| 2401-2115 | 0-300mm | 0.02mm     | 400 | 100 | 16 | 37 | 42 | 5 | ±0.04    |

DIGITAL DEPTH CALIPER

DIN 862 mm/in

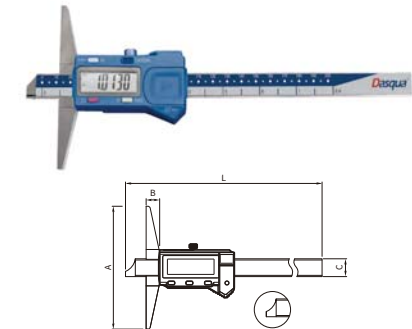


- Used to measure step and depth
- Made of solid stainless steel, widened and thickened
- Strictly made in accordance with DIN862
- Hardened, ground and lapped measuring surfaces for longer service life

| Unit:mm   |             |             |          |
|-----------|-------------|-------------|----------|
| Code      | Range       | Resolution  | Accuracy |
| 2001-2005 | 0-150/0-6"  | 0.01/0.005" | ±0.03    |
| 2001-2010 | 0-200/0-8"  | 0.01/0.005" | ±0.03    |
| 2001-2015 | 0-300/0-12" | 0.01/0.005" | ±0.04    |
| 2001-2020 | 0-500/0-20" | 0.01/0.005" | ±0.05    |

DIGITAL DEPTH CALIPER

DIN 862 mm/in



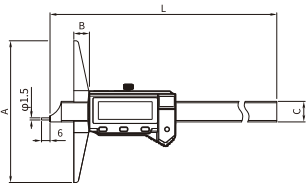
- Used to measure step and depth
- Made of solid stainless steel
- Strictly made in accordance with DIN862
- IP54 protection against liquid
- Hardened, ground and lapped measuring surfaces for longer service life
- With Absolute-Reference System and no need to set the reference point at every power-on

| Unit:mm     |             |             |     |      |      |              |
|-------------|-------------|-------------|-----|------|------|--------------|
| Code        | Range       | Resolution  | A   | B    | C    | Accuracy     |
| 2230-8105-A | 0-150/0-6"  | 0.01/0.005" | 100 | 11   | 14.5 | 0.03/0.0015" |
| 2230-8115-A | 0-200/0-8"  | 0.01/0.005" | 100 | 11   | 14.5 | 0.03/0.0015" |
| 2230-8125-A | 0-300/0-12" | 0.01/0.005" | 150 | 13.5 | 14.5 | 0.03/0.0015" |

DIGITAL DEPTH CALIPER  
WITH NEEDLE

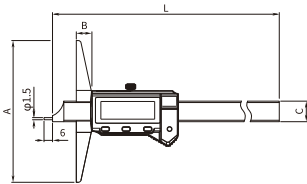


• IP67 waterproof



| Unit:mm   |             |             |     |      |      |          |
|-----------|-------------|-------------|-----|------|------|----------|
| Code      | Range       | Resolution  | A   | B    | C    | Accuracy |
| 2250-2105 | 0-150/0-6"  | 0.01/0.005" | 100 | 11   | 14.5 | ±0.03    |
| 2250-2110 | 0-200/0-8"  | 0.01/0.005" | 100 | 11   | 14.5 | ±0.03    |
| 2250-2115 | 0-300/0-12" | 0.01/0.005" | 150 | 13.5 | 14.5 | ±0.04    |

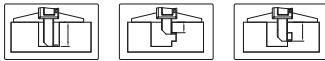
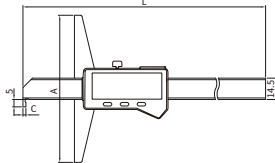
IP67 DIGITAL DEPTH CALIPER  
WITH NEEDLE



| Unit:mm   |             |             |     |      |      |          |
|-----------|-------------|-------------|-----|------|------|----------|
| Code      | Range       | Resolution  | A   | B    | C    | Accuracy |
| 2001-7005 | 0-150/0-6"  | 0.01/0.005" | 100 | 11   | 14.5 | ±0.03    |
| 2001-7010 | 0-200/0-8"  | 0.01/0.005" | 100 | 11   | 14.5 | ±0.03    |
| 2001-7015 | 0-300/0-12" | 0.01/0.005" | 150 | 13.5 | 14.5 | ±0.04    |
| 2460-3105 | 0-150/0-6"  | 0.01/0.005" | 100 | 11   | 14.5 | ±0.03    |
| 2460-3110 | 0-200/0-8"  | 0.01/0.005" | 100 | 11   | 14.5 | ±0.03    |
| 2460-3115 | 0-300/0-12" | 0.01/0.005" | 150 | 13.5 | 14.5 | ±0.04    |

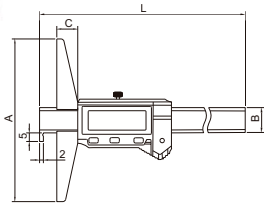
2460-3105, 3110, 3115 are with Bluetooth built in.

DIGITAL DEPTH CALIPER  
WITH HOOK



| Unit:mm   |             |             |     |   |     |          |
|-----------|-------------|-------------|-----|---|-----|----------|
| Code      | Range       | Resolution  | A   | C | L   | Accuracy |
| 2001-1005 | 0-150/0-6"  | 0.01/0.005" | 100 | 2 | 230 | ±0.03    |
| 2001-1010 | 0-200/0-8"  | 0.01/0.005" | 100 | 2 | 280 | ±0.03    |
| 2001-1015 | 0-300/0-12" | 0.01/0.005" | 100 | 2 | 380 | ±0.04    |

IP67 DIGITAL DEPTH CALIPER  
WITH HOOK



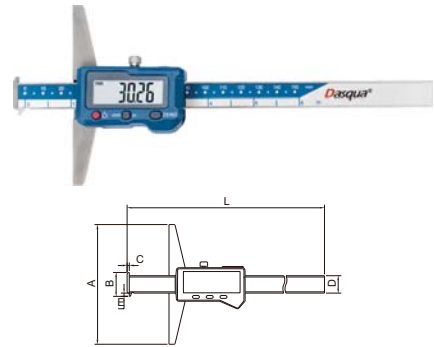
- Used to measure step and depth
- Made of solid stainless steel, widened and thickened
- Hardened, ground and lapped measuring surfaces for longer service life

| Unit:mm   |               |                       |     |      |      |          |
|-----------|---------------|-----------------------|-----|------|------|----------|
| Code      | Range         | Graduation            | A   | B    | C    | Accuracy |
| 2001-5005 | 0-150mm/0-6"  | 0.01mm/0.0005"/1/128" | 100 | 14.5 | 11   | ±0.03    |
| 2001-5010 | 0-200mm/0-8"  | 0.01mm/0.0005"/1/128" | 100 | 14.5 | 11   | ±0.03    |
| 2001-5015 | 0-300mm/0-12" | 0.01mm/0.0005"/1/128" | 150 | 14.5 | 13.5 | ±0.04    |



DIGITAL DEPTH CALIPER

WITH DOUBLE HOOK

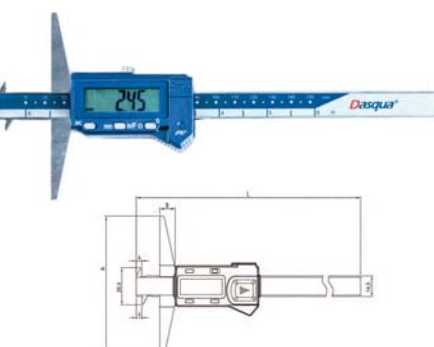


- Used to measure step and depth
- Made of solid stainless steel, widened and thickened
- Hardened, ground and lapped measuring surfaces for longer service life

| Unit:mm   |               |                |     |      |     |      |     |       |          |
|-----------|---------------|----------------|-----|------|-----|------|-----|-------|----------|
| Code      | Range         | Graduation     | A   | B    | C   | D    | E   | L     | Accuracy |
| 2001-3005 | 0-150mm/0-6"  | 0.01mm/0.0005" | 100 | 21.5 | 2.5 | 14.5 | 3.5 | 237.5 | ±0.03    |
| 2001-3010 | 0-200mm/0-8"  | 0.01mm/0.0005" | 100 | 21.5 | 2.5 | 14.5 | 3.5 | 287.5 | ±0.03    |
| 2001-3015 | 0-300mm/0-12" | 0.01mm/0.0005" | 100 | 21.5 | 2.5 | 14.5 | 3.5 | 387.5 | ±0.04    |

IP67 DIGITAL DEPTH CALIPER

WITH DOUBLE HOOK



- Double hook design allows taking reading from the edge of a workpiece to edge of slots, grooves, shoulders and other inside length dimension
- Measuring base face is precision ground and lapped to give it a mirror finished

| Unit:mm   |               |                |     |      |       |              |
|-----------|---------------|----------------|-----|------|-------|--------------|
| Code      | Range         | Graduation     | A   | B    | L     | Accuracy     |
| 2001-6005 | 0-150mm/0-6"  | 0.01mm/0.0005" | 100 | 11   | 232.5 | 0.03/0.0015" |
| 2001-6010 | 0-200mm/0-8"  | 0.01mm/0.0005" | 100 | 11   | 285   | 0.03/0.0015" |
| 2001-6015 | 0-300mm/0-12" | 0.01mm/0.0005" | 100 | 13.5 | 390   | 0.03/0.0015" |

DEPTH VERNIER GAUGE

WITH MOUNTING HOLES FOR EXTENSION BASE

**EXTENSION BASE FOR DEPTH GAUGE**

- With two stainless steel locking screws
- Material: 4213 stainless steel
- Suitable for 3001-3005 to 3001-3025 series and 2001-3305 to 2001-3325 series
- Quenching hardness 52.5-55HRC

| Code      | Range              |
|-----------|--------------------|
| 2730-1005 | 180mm with 2 holes |
| 2730-1010 | 260mm with 3 holes |
| 2730-1015 | 320mm with 4 holes |

- Hardened ground jaws with precision lapped measuring faces
- Satin chrome finish, hardened stainless steel throughout for longer life
- Distinct lines and figures etched against satin chrome finish

Unit:mm

| Code      | Range   | Graduation | A   | B  | D  | L   | Accuracy |
|-----------|---------|------------|-----|----|----|-----|----------|
| 3001-3005 | 0-150mm | 0.02mm     | 100 | 8  | 16 | 240 | ±0.03    |
| 3001-3010 | 0-200mm | 0.02mm     | 100 | 8  | 16 | 290 | ±0.03    |
| 3001-3015 | 0-300mm | 0.02mm     | 100 | 8  | 16 | 390 | ±0.04    |
| 3001-3020 | 0-500mm | 0.02mm     | 150 | 8  | 16 | 620 | ±0.05    |
| 3001-3025 | 0-700mm | 0.02mm     | 150 | 10 | 18 | 850 | ±0.06    |

DIGITAL DEPTH GAUGE

WITH MOUNTING HOLES FOR EXTENSION BASE

**EXTENSION BASE FOR DEPTH GAUGE**

- With two stainless steel locking screws
- Material: 4213 stainless steel
- Suitable for 3001-3005 to 3001-3025 series and 2001-3305 to 2001-3325 series
- Quenching hardness 52.5-55HRC

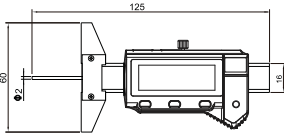
| Code      | Range              |
|-----------|--------------------|
| 2730-1005 | 180mm with 2 holes |
| 2730-1010 | 260mm with 3 holes |
| 2730-1015 | 320mm with 4 holes |

- Used to measure step and depth
- Made of solid stainless steel, widened and thickened
- Hardened, ground and lapped measuring surfaces for longer service life

Unit:mm

| Code      | Range           | Graduation     | A   | B  | D  | L   | Accuracy |
|-----------|-----------------|----------------|-----|----|----|-----|----------|
| 2001-3305 | 0-150mm/0-6"    | 0.01mm/0.0005" | 100 | 8  | 16 | 240 | ±0.03    |
| 2001-3310 | 0-200mm/0-8"    | 0.01mm/0.0005" | 100 | 8  | 16 | 290 | ±0.03    |
| 2001-3315 | 0-300mm/0-12"   | 0.01mm/0.0005" | 100 | 8  | 16 | 390 | ±0.04    |
| 2001-3320 | 0-500mm/0-20"   | 0.01mm/0.0005" | 150 | 8  | 16 | 620 | ±0.05    |
| 2001-3325 | 0-700mm/0-27.5" | 0.01mm/0.0005" | 150 | 10 | 18 | 850 | ±0.06    |

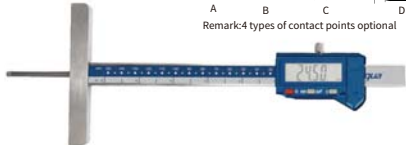
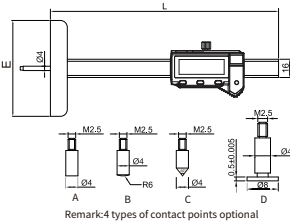
MINI DIGITAL DEPTH GAUGE



- Used to measure depth of small groove and hole, also to measure depth of tire
- With thin and long depth measuring bar
- Zero setting at any position
- Made of high quality stainless steel

| Unit:mm   |           |              |     |    |    |     |          |
|-----------|-----------|--------------|-----|----|----|-----|----------|
| Code      | Range     | Graduation   | A   | B  | D  | L   | Accuracy |
| 2240-0030 | 0-30/1.2" | 0.01/0.0005" | 60  | φ2 | 16 | 125 | ±0.02    |
| 2240-0035 | 0-50/2"   | 0.01/0.0005" | 100 | φ2 | 16 | 130 | ±0.03    |
| 2240-0036 | 0-100/4"  | 0.01/0.0005" | 100 | φ4 | 16 | 180 | ±0.03    |

DIGITAL DEPTH GAUGE  
WITH ROUND DEPTH BAR



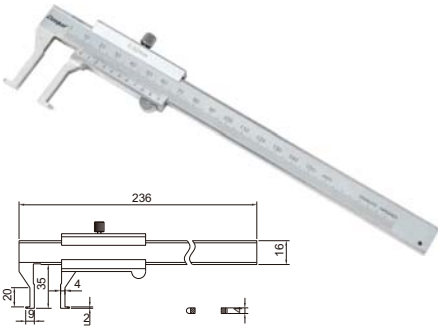
- Specially designed for narrow bore depth
- With thin and long depth measuring bar
- Pointed contact, flat contact or spherical contact is optional.
- Made of high quality stainless steel
- Zero setting at any position

| Code      | Description                         | Remark                                |
|-----------|-------------------------------------|---------------------------------------|
| 2730-0050 | Spare Parts for Digital Depth Gauge | Type D, Disc Type, Standard accessory |
| 2730-0055 | Spare Parts for Digital Depth Gauge | Type A, Flat Type                     |
| 2730-0060 | Spare Parts for Digital Depth Gauge | Type B, Spherical Type                |
| 2730-0065 | Spare Parts for Digital Depth Gauge | Type C, point Type                    |

| Code      | Range       | Resolution           | L   | E   | Accuracy |
|-----------|-------------|----------------------|-----|-----|----------|
| 2730-0030 | 0-150/0-6"  | 0.01/0.0005"/.1/128" | 230 | 101 | ±0.03    |
| 2730-0020 | 0-200/0-8"  | 0.01/0.0005"/.1/128" | 280 | 101 | ±0.03    |
| 2730-0025 | 0-300/0-12" | 0.01/0.0005"/.1/128" | 330 | 101 | ±0.04    |

INSIDE GROOVE CALIPER

WITHOUT UPPER INSIDE JAW

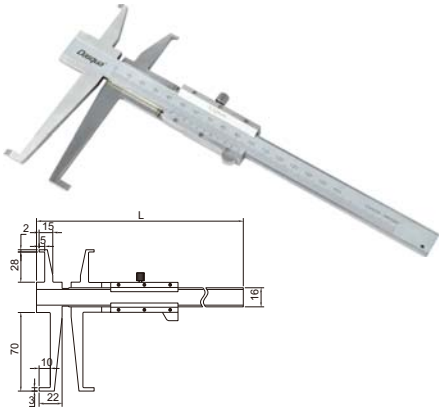


- For measuring grooves in holes
- Hardened ground jaws with precision lapped measuring faces
- Satin chrome finish, hardened stainless steel throughout for longer life
- Distinct lines and figures etched against satin chrome finish
- Monoblock structure

| Code      | Range  | Graduation | Accuracy |
|-----------|--------|------------|----------|
| 2080-2005 | 18-150 | 0.02mm     | ±0.04    |

INSIDE GROOVE CALIPER

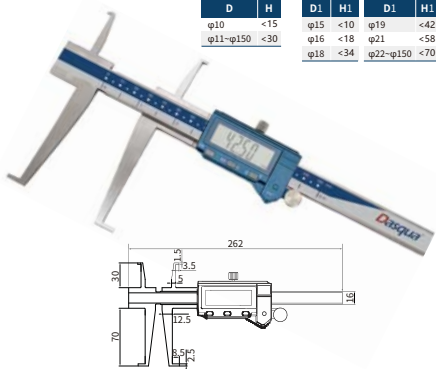
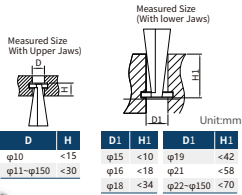
BOTH UPPER AND LOWER INSIDE JAW



- For measuring grooves in holes
- Hardened ground jaws with precision lapped measuring faces
- Satin chrome finish, hardened stainless steel throughout for longer life
- Distinct lines and figures etched against satin chrome finish

| Code      | Range   | Graduation | L   | Accuracy |
|-----------|---------|------------|-----|----------|
| 2605-0040 | 9-150mm | 0.02mm     | 260 | ±0.03    |
| 2605-0045 | 9-200mm | 0.02mm     | 310 | ±0.04    |
| 2605-0050 | 9-300mm | 0.02mm     | 410 | ±0.05    |

DIGITAL INSIDE GROOVE CALIPER

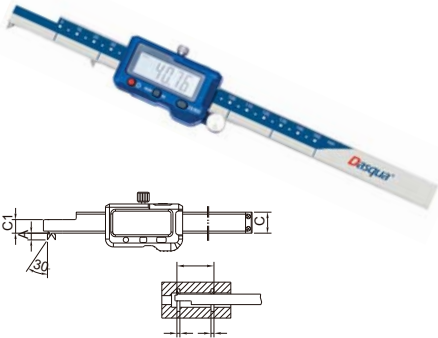


- Used for measuring diameter of grooves inside bores
- Automatic power off
- Made of high quality stainless steel

Unit:mm

| Code      | Range of upper jaw | Range of lower jaw | Resolution   | Accuracy |
|-----------|--------------------|--------------------|--------------|----------|
| 2240-0025 | 10-150/0.39-6"     | 15-150/0.59-6"     | 0.01/0.0005" | ±0.04    |
| 2240-0026 | 10-200/0.39-8"     | 15-200/0.59-8"     | 0.01/0.0005" | ±0.04    |
| 2240-0027 | 10-300/0.39-12"    | 15-300/0.59-12"    | 0.01/0.0005" | ±0.05    |

DIGITAL INSIDE GROOVE CALIPER

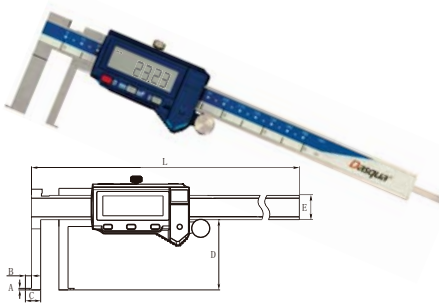


- To measure the width of inside grooves
- Bigger screen with larger digits for easy reading
- Hardened, ground and lapped measuring surfaces for longer service life
- Measuring surfaces ground for ultimate accuracy and smooth throughout
- With data output

Unit:mm

| Code      | Range         | Graduation     | A | B  | C  | Accuracy |
|-----------|---------------|----------------|---|----|----|----------|
| 2101-1005 | 3-150mm/0-6"  | 0.01mm/0.0005" | 5 | 16 | 10 | ±0.03    |
| 2101-1010 | 3-200mm/0-8"  | 0.01mm/0.0005" | 5 | 16 | 10 | ±0.03    |
| 2101-1015 | 3-300mm/0-12" | 0.01mm/0.0005" | 5 | 16 | 10 | ±0.04    |

DIGITAL INSIDE GROOVE CALIPER

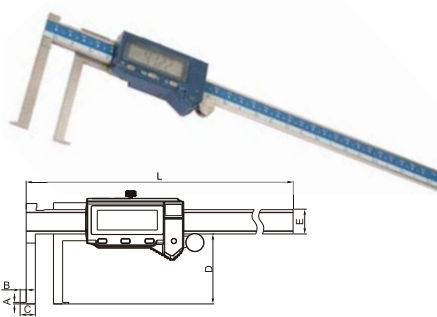


- Measure diameter of grooves inside bores
- NEW Advanced design
- Strictly made in accordance with DIN862
- IP54 protection against water, oil, dust or any other liquid
- Silky smooth movement throughout
- Hardened, ground and lapped measuring surfaces
- Tips: Without presetting!

Unit:mm

| Code      | range           | Reading             | A   | B | C  | D  | E  | L   | Accuracy       |
|-----------|-----------------|---------------------|-----|---|----|----|----|-----|----------------|
| 2070-1105 | 10-150/0.39-6"  | 0.01/0.0005"/1/128" | 1   | 4 | 10 | 46 | 16 | 235 | 0.03mm/0.0015" |
| 2070-1110 | 11-200/0.43-8"  | 0.01/0.0005"/1/128" | 1   | 5 | 11 | 56 | 16 | 287 | 0.03mm/0.0015" |
| 2070-1115 | 12-300/0.47-12" | 0.01/0.0005"/1/128" | 1.5 | 5 | 12 | 66 | 16 | 390 | 0.04mm/0.0015" |

DIGITAL INSIDE GROOVE CALIPER



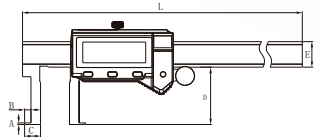
- Used to measure inside grooves
- Made of solid stainless steel
- Strictly made in accordance with DIN862
- IP67 protection against liquid
- Hardened, ground and lapped measuring surfaces for longer service life
- Measuring surfaces ground for ultimate accuracy and smooth movement throughout

Unit:mm

| Code      | Range           | Resolution   | A   | B | C  | D  | E  | L   | Accuracy     |
|-----------|-----------------|--------------|-----|---|----|----|----|-----|--------------|
| 2570-5105 | 10-150/0.39-6"  | 0.01/0.0005" | 1   | 4 | 10 | 46 | 16 | 235 | 0.03/0.0015" |
| 2570-5110 | 11-200/0.43-8"  | 0.01/0.0005" | 1   | 5 | 11 | 56 | 16 | 287 | 0.03/0.0015" |
| 2570-5115 | 12-300/0.47-12" | 0.01/0.0005" | 1.5 | 5 | 12 | 66 | 16 | 390 | 0.04/0.0015" |

DIGITAL INSIDE NECK CALIPER

DIN 862 mm/in IP54

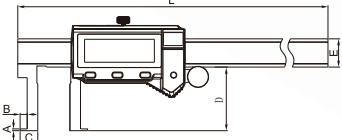


- Measure diameter of grooves inside bores
- NEW Advanced design
- Strictly made in accordance with DIN862
- IP54 protection against water, oil, dust or any other liquid
- Silky smooth movement throughout
- Hardened, ground and lapped measuring surfaces for longer service life

| Unit:mm   |                 |                     |     |   |    |    |    |     |                |
|-----------|-----------------|---------------------|-----|---|----|----|----|-----|----------------|
| Code      | range           | Reading             | A   | B | C  | D  | E  | L   | Accuracy       |
| 2080-1105 | 10-150/0.79-6"  | 0.01/0.0005"/1/128" | 1   | 4 | 36 | 36 | 16 | 235 | 0.03mm/0.0015" |
| 2080-1110 | 11-200/0.98-8"  | 0.01/0.0005"/1/128" | 1   | 5 | 46 | 46 | 16 | 287 | 0.03mm/0.0015" |
| 2080-1115 | 12-300/1.18-12" | 0.01/0.0005"/1/128" | 1.5 | 5 | 56 | 56 | 16 | 390 | 0.04mm/0.0015" |

DIGITAL INSIDE NECK CALIPER

DIN 862 mm/in IP67

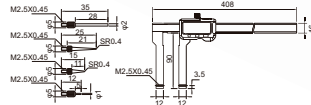
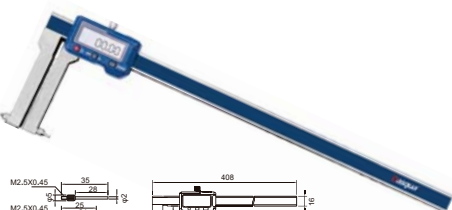


- Used to measure inside grooves
- Made of solid stainless steel
- Strictly made in accordance with DIN862
- IP67 protection against liquid
- Hardened, ground and lapped measuring surfaces for longer service life
- Measuring surfaces ground for ultimate accuracy and smooth movement throughout

| Unit:mm   |                  |              |     |   |      |    |    |     |              |
|-----------|------------------|--------------|-----|---|------|----|----|-----|--------------|
| Code      | Range            | Resolution   | A   | B | C    | D  | E  | L   | Accuracy     |
| 2580-5105 | 20-150/0.787-6"  | 0.01/0.0005" | 1   | 4 | 10   | 36 | 16 | 235 | 0.03/0.0015" |
| 2580-5110 | 25-200/0.984-8"  | 0.01/0.0005" | 1   | 5 | 12.5 | 46 | 16 | 287 | 0.03/0.0015" |
| 2580-5115 | 30-300/1.181-12" | 0.01/0.0005" | 1.5 | 5 | 15   | 56 | 16 | 390 | 0.04/0.0015" |

DIGITAL CALIPER WITH INTERCHANGEABLE POINTS

mm/in Data output

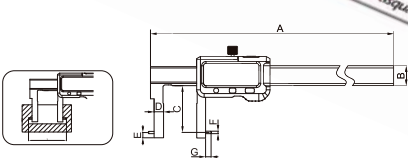


- Hardened ground jaws with precision lapped measuring faces
- Satin chrome finish, hardened stainless steel throughout for longer life
- Matches 4 pairs of interchangeable heads to measure internal and external groove dimensions

| Unit:mm   |               |                |
|-----------|---------------|----------------|
| Code      | Range         | Graduation     |
| 2615-1025 | 0-300mm/0-12" | 0.01mm/0.0005" |

DIGITAL INSIDE POINT CALIPER

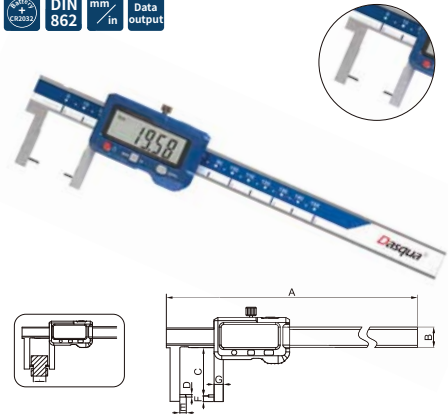
DIN 862 mm/in Data output



- Measure groove diameter
- Made of solid stainless steel
- Strictly made in accordance with DIN862
- Hardened, ground and lapped measuring surfaces for longer service life
- Measuring surfaces ground for ultimate accuracy and smooth movement throughout

| Unit:mm   |        |              |     |    |    |     |   |   |   |
|-----------|--------|--------------|-----|----|----|-----|---|---|---|
| Code      | Range  | Resolution   | A   | B  | C  | D   | E | F | G |
| 2100-1115 | 24-150 | 0.01/0.0005" | 250 | 16 | 40 | 7   | 3 | 2 | 5 |
| 2100-1120 | 25-200 | 0.01/0.0005" | 310 | 16 | 50 | 7.5 | 3 | 2 | 5 |
| 2100-1130 | 30-300 | 0.01/0.0005" | 410 | 16 | 60 | 10  | 3 | 2 | 5 |

DIGITAL OUTSIDE POINT CALIPER

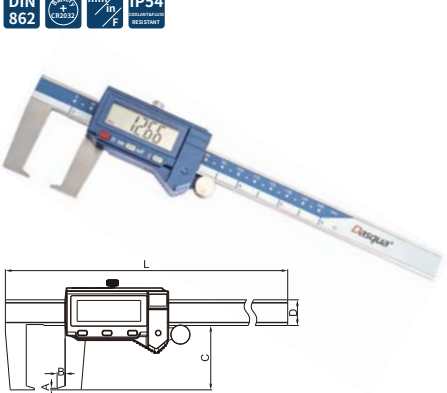


- Measure outside groove diameter
- Made of solid stainless steel
- Strictly made in accordance with DIN862
- Hardened, ground and lapped measuring surfaces for longer service life
- Measuring surfaces ground for ultimate accuracy and smooth movement throughout

Unit:mm

| Code      | Range       | Resolution   | A   | B  | C  | D   | E  | F | G  | Accuracy     |
|-----------|-------------|--------------|-----|----|----|-----|----|---|----|--------------|
| 2100-1215 | 0-150/0-6"  | 0.01/0.0005" | 250 | 16 | 40 | 2   | 5  | 2 | 10 | 0.03/0.0015" |
| 2100-1220 | 0-200/0-8"  | 0.01/0.0005" | 310 | 16 | 50 | 2.5 | 8  | 2 | 12 | 0.04/0.0015" |
| 2100-1230 | 0-300/0-12" | 0.01/0.0005" | 410 | 16 | 60 | 2.5 | 10 | 2 | 17 | 0.04/0.0015" |

DIGITAL OUTSIDE NECK CALIPER

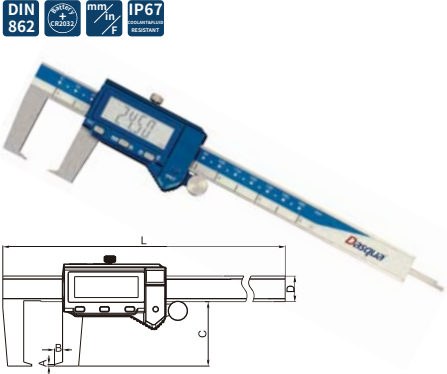


- Used to measure outside grooves
- Made of solid stainless steel
- Strictly made in accordance with DIN862
- IP54 protection against liquid
- Hardened, ground and lapped measuring surfaces for longer service life
- Measuring surfaces ground for ultimate accuracy and smooth movement throughout

Unit:mm

| Code      | Range       | Resolution          | A   | B | C  | D  | L   | Accuracy     |
|-----------|-------------|---------------------|-----|---|----|----|-----|--------------|
| 2065-1105 | 0-150/0-6"  | 0.01/0.0005"/1/128" | 1   | 5 | 40 | 16 | 250 | 0.03/0.0015" |
| 2065-1110 | 0-200/0-8"  | 0.01/0.0005"/1/128" | 1   | 7 | 50 | 16 | 300 | 0.03/0.0015" |
| 2065-1115 | 0-300/0-12" | 0.01/0.0005"/1/128" | 1.5 | 8 | 60 | 16 | 405 | 0.04/0.0015" |

IP67 DIGITAL OUTSIDE NECK CALIPER

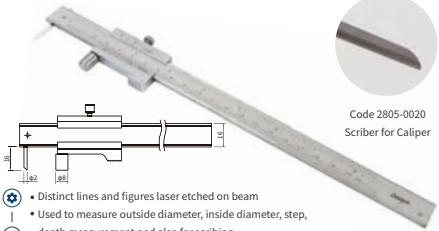


- Flat jaw type can measure grooves and recesses
- IP67 Dust/Waterproof
- Hardened, ground and lapped measuring surfaces for longer service life
- Measuring surfaces ground for ultimate accuracy and smooth throughout

Unit:mm

| Code      | Range       | Resolution   | A   | B | C  | D  | L   | Accuracy |
|-----------|-------------|--------------|-----|---|----|----|-----|----------|
| 2065-1135 | 0-150/0-6"  | 0.01/0.0005" | 1   | 5 | 40 | 16 | 250 | ±0.03    |
| 2065-1140 | 0-200/0-8"  | 0.01/0.0005" | 1   | 7 | 50 | 16 | 300 | ±0.03    |
| 2065-1145 | 0-300/0-12" | 0.01/0.0005" | 1.5 | 8 | 60 | 16 | 405 | ±0.04    |

SCRIBING CALIPER

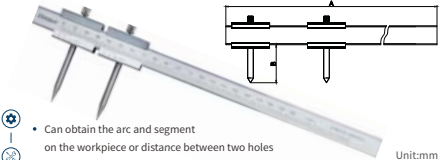


- Distinct lines and figures laser etched on beam
- Used to measure outside diameter, inside diameter, step, depth measurement and also for scribing
- Made of high quality stainless steel
- Carbide tipped measuring faces making scribing clear

Unit:mm

| Code        | Range       | Graduation | Accuracy |
|-------------|-------------|------------|----------|
| 2805-0005-A | 0-200/0-8"  | 0.1/1/128" | ±0.1     |
| 2805-0010-A | 0-400/0-16" | 0.1/1/128" | ±0.1     |
| 2805-0015-A | 0-500/0-20" | 0.1/1/128" | ±0.1     |

MARKING GAUGE WITH TWO POINTER



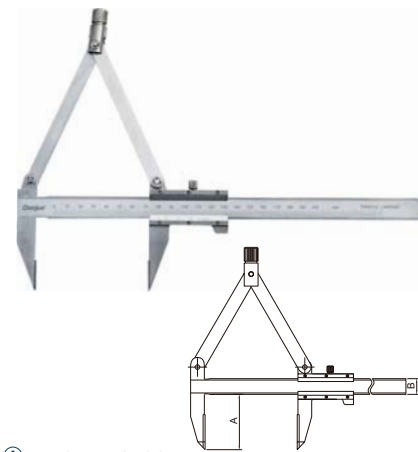
- Can obtain the arc and segment on the workpiece or distance between two holes

Unit:mm

| Code      | Range | Graduation | Accuracy |
|-----------|-------|------------|----------|
| 2805-0025 | 0-200 | 0.02mm     | ±0.05    |



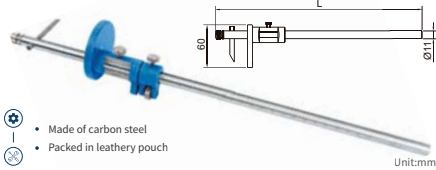
MARKING GAUGE



- Marking jaw with carbide
- Can obtain the parallel line on the workpiece
- Hardened ground jaws with precision lapped measuring faces
- Satin chrome finish, hardened stainless steel throughout for longer life
- Distinct lines and figures etched against satin chrome finish

| Code      | Range   | Graduation | A  | B  | Accuracy |
|-----------|---------|------------|----|----|----------|
| 2605-0225 | 0-150mm | 0.02mm     | 40 | 17 | ±0.05    |
| 2605-0230 | 0-200mm | 0.02mm     | 50 | 17 | ±0.07    |
| 2605-0240 | 0-300mm | 0.02mm     | 60 | 17 | ±0.09    |

ROUND ROD MARKING GAUGE



- Made of carbon steel
- Packed in leathery pouch

| Code      | Range | Graduation | L   | Accuracy |
|-----------|-------|------------|-----|----------|
| 2805-1105 | 0-200 | 0.1mm      | 312 | ±0.1     |
| 2805-1110 | 0-300 | 0.1mm      | 412 | ±0.1     |
| 2805-1115 | 0-400 | 0.1mm      | 512 | ±0.1     |
| 2805-1120 | 0-500 | 0.1mm      | 612 | ±0.1     |

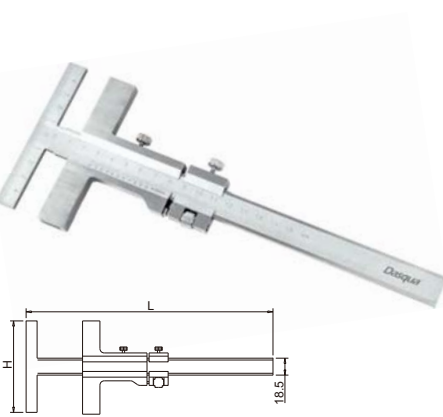
MARKING GAUGE



- Perfect tool for engineers, craft persons, model makers for a variety of marking out jobs
- Made of high quality steel
- Stress-relieved and precision ground in pairs
- Distinct lines and figures laser etched on beam

| Code      | Range | Graduation | Accuracy | L   | W  |
|-----------|-------|------------|----------|-----|----|
| 9241-3105 | 0-200 | 0.1        | ±0.1     | 250 | 40 |
| 9241-3110 | 0-250 | 0.1        | ±0.1     | 300 | 40 |
| 9241-3115 | 0-300 | 0.1        | ±0.1     | 350 | 40 |

T TYPE VERNIER CALIPER

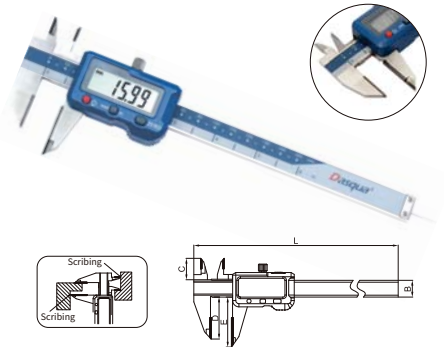


- With locking clamp
- Made of hardened stainless steel
- Packed in wooden box

| Code      | Range | Graduation | L   | H   | Accuracy |
|-----------|-------|------------|-----|-----|----------|
| 2805-0035 | 0-160 | 0.05mm     | 270 | 100 | ±0.05    |
| 2805-0040 | 0-250 | 0.05mm     | 370 | 140 | ±0.05    |
| 2805-0045 | 0-300 | 0.05mm     | 420 | 160 | ±0.05    |
| 2805-0050 | 0-400 | 0.05mm     | 520 | 160 | ±0.05    |

SCRIBING CALIPER

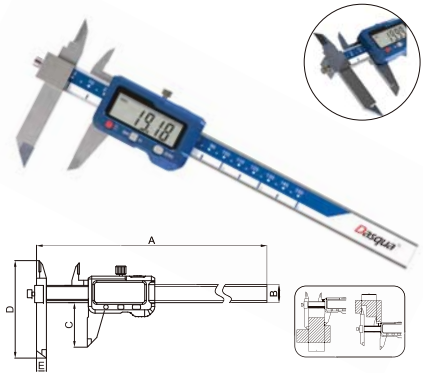
CARBIDE-TIPPED JAWS



- Carbide tipped measuring faces for easier making scribing and ensuring a brasive resistance
- Made of solid stainless steel
- Strictly made in accordance with DIN862
- Hardened, ground and lapped measuring surfaces for longer service life
- Measuring surfaces ground for ultimate accuracy and smooth movement throughout

| Code      | Range       | Resolution   | A   | B  | C  | D  | E  | Accuracy     |
|-----------|-------------|--------------|-----|----|----|----|----|--------------|
| 2100-0015 | 0-150/0-6"  | 0.01/0.0005" | 236 | 16 | 20 | 30 | 40 | 0.02/0.001"  |
| 2100-0020 | 0-200/0-8"  | 0.01/0.0005" | 286 | 16 | 24 | 40 | 50 | 0.03/0.0015" |
| 2100-0030 | 0-300/0-12" | 0.01/0.0005" | 400 | 17 | 26 | 50 | 60 | 0.04/0.0015" |

# DIGITAL OFFSET CALIPER



- The left jaw can slide up and down to facilitate measurement of stepped sections
- Made of solid stainless steel
- Strictly made in accordance with DIN862
- Hardened, ground and lapped measuring surfaces for longer service life
- Measuring surfaces ground for ultimate accuracy and smooth movement throughout

Unit:mm

| Code      | Range       | Resolution   | A   | B  | C  | D   | E  | Accuracy     |
|-----------|-------------|--------------|-----|----|----|-----|----|--------------|
| 2100-1015 | 0-150/0-6"  | 0.01/0.0005" | 239 | 16 | 40 | 110 | 10 | 0.04/0.0015" |
| 2100-1020 | 0-200/0-8"  | 0.01/0.0005" | 289 | 16 | 50 | 120 | 10 | 0.04/0.0015" |
| 2100-1030 | 0-300/0-12" | 0.01/0.0005" | 389 | 16 | 60 | 130 | 10 | 0.05/0.002"  |

# IP67 DIGITAL CENTERLINE & APOTHEM CALIPER

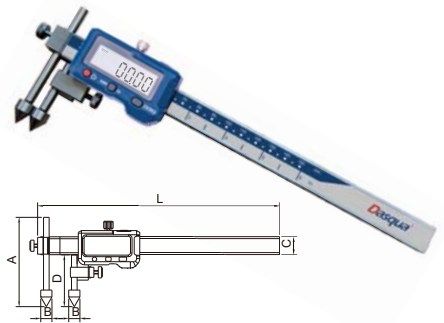


- Specially designed to measure distances between centers on the same and offset planes
- Can preset the size of measuring anvil

Unit:mm

| Code      | Apothem Range | Centerline Range | Resolution   | A    | B  | C  | D   | L   | Accuracy |
|-----------|---------------|------------------|--------------|------|----|----|-----|-----|----------|
| 2130-1005 | 5-300         | 10-300           | 0.01/0.0005" | 44.5 | 55 | 17 | φ10 | 410 | ±0.08    |
| 2130-1010 | 10-500        | 20-500           | 0.01/0.0005" | 40   | 50 | 24 | φ20 | 690 | ±0.09    |

# DIGITAL CERNTERLINE CALIPER

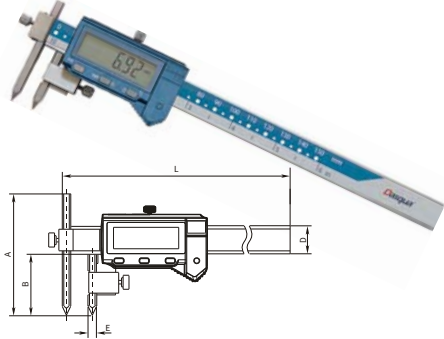


- Measure the distance between two holes or edge to hole
- Made of solid stainless steel
- Hardened, ground and lapped measuring surfaces for longer service life

Unit:mm

| Code      | Range     | Graduation     | A   | B   | C  | D  | L    | Accuracy |
|-----------|-----------|----------------|-----|-----|----|----|------|----------|
| 2730-4065 | 10-150mm  | 0.01mm/0.0005" | 80  | φ10 | 16 | 46 | 250  | ±0.05    |
| 2730-4070 | 10-200mm  | 0.01mm/0.0005" | 80  | φ10 | 16 | 46 | 300  | ±0.07    |
| 2730-4075 | 10-300mm  | 0.01mm/0.0005" | 80  | φ10 | 16 | 46 | 400  | ±0.09    |
| 2730-4080 | 20-500mm  | 0.01mm/0.0005" | 110 | φ20 | 24 | 70 | 686  | ±0.09    |
| 2730-4085 | 30-1000mm | 0.01mm/0.0005" | 120 | φ30 | 31 | 75 | 1241 | ±0.12    |
| 2730-4090 | 30-1500mm | 0.01mm/0.0005" | 120 | φ30 | 31 | 75 | 1241 | ±0.15    |

# IP67 DIGITAL CENTERLINE CALIPER

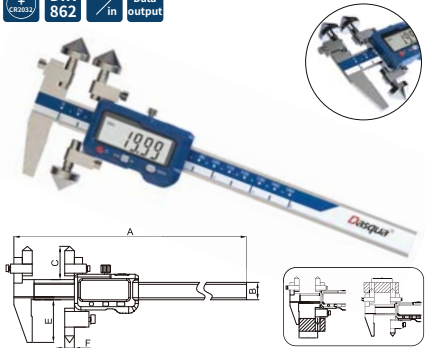


- Used to measure the center distance between two holes
- Can preset the size of measuring anvil
- The conical points can be adjusted up or down to measure the center distance between two holes on different heights.
- Hardened, ground and lapped measuring surfaces for longer service life
- Measuring surfaces ground for ultimate accuracy and smooth throughout
- Made of high quality stainless steel

Unit:mm

| Code      | Range | Resolution   | A  | B  | D  | E  | L   | Accuracy |
|-----------|-------|--------------|----|----|----|----|-----|----------|
| 2730-3105 | 5-150 | 0.01/0.0005" | 65 | 32 | 16 | φ5 | 236 | ±0.05    |
| 2730-3110 | 5-200 | 0.01/0.0005" | 65 | 32 | 16 | φ5 | 286 | ±0.07    |
| 2730-3115 | 5-300 | 0.01/0.0005" | 65 | 32 | 16 | φ5 | 396 | ±0.09    |

DIGITAL APOTHEM CENTERLINE CALIPERS

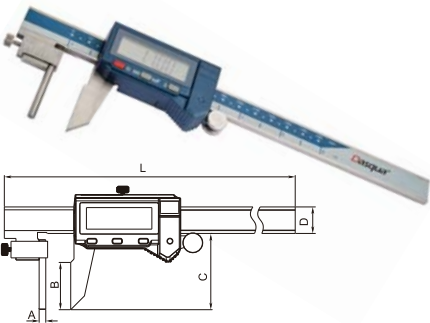


- Measure the distance between two holes or edge to hole
- Made of solid stainless steel
- Strictly made in accordance with DIN862
- Hardened, ground and lapped measuring surfaces for longer service life
- Measuring surfaces ground for ultimate accuracy and smooth movement throughout

Unit:mm

| Code      | Range  | Resolution   | A   | B  | C  | E  | F  | Accuracy     |
|-----------|--------|--------------|-----|----|----|----|----|--------------|
| 2100-1315 | 5-150  | 0.01/0.0005" | 236 | 16 | 29 | 50 | 5  | 0.03/0.0015" |
| 2101-1315 | 10-150 | 0.01/0.0005" | 236 | 16 | 35 | 50 | 10 | 0.03/0.0015" |
| 2100-1320 | 5-200  | 0.01/0.0005" | 285 | 16 | 29 | 50 | 5  | 0.04/0.0015" |
| 2101-1320 | 10-200 | 0.01/0.0005" | 285 | 16 | 35 | 50 | 10 | 0.04/0.0015" |
| 2100-1330 | 5-300  | 0.01/0.0005" | 385 | 16 | 29 | 50 | 5  | 0.05/0.002"  |
| 2101-1330 | 10-300 | 0.01/0.0005" | 385 | 16 | 35 | 50 | 10 | 0.05/0.002"  |

DIGITAL TUBE THICKNESS CALIPER

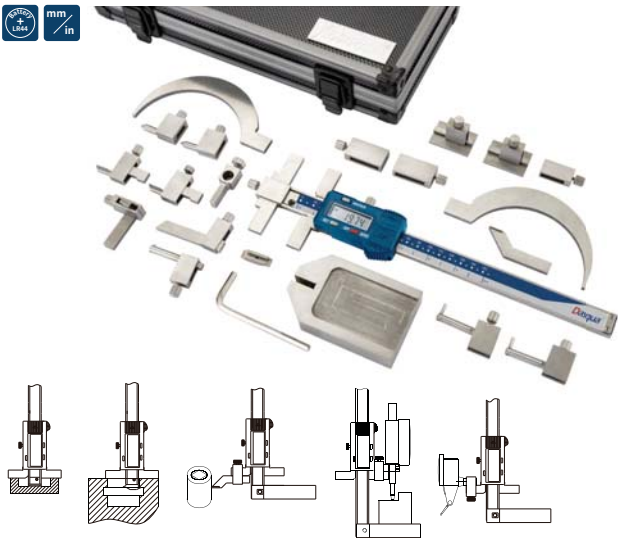


- Used to measure tube thickness
- Made of solid stainless steel
- Strictly made in accordance with DIN862
- IP54 protection against liquid
- Hardened, ground and lapped measuring surfaces for longer service life
- Measuring surfaces ground for ultimate accuracy and smooth movement throughout

Unit:mm

| Code      | Range       | Resolution          | A  | B    | C  | D  | L   | Accuracy     |
|-----------|-------------|---------------------|----|------|----|----|-----|--------------|
| 2060-1105 | 0-150/0-6"  | 0.01/0.0005"/1/128" | Φ4 | 28.5 | 46 | 16 | 250 | 0.03/0.0015" |
| 2060-1110 | 0-200/0-8"  | 0.01/0.0005"/1/128" | Φ4 | 32.5 | 50 | 16 | 300 | 0.03/0.0015" |
| 2060-1115 | 0-300/0-12" | 0.01/0.0005"/1/128" | Φ4 | 48.5 | 66 | 16 | 400 | 0.04/0.0015" |

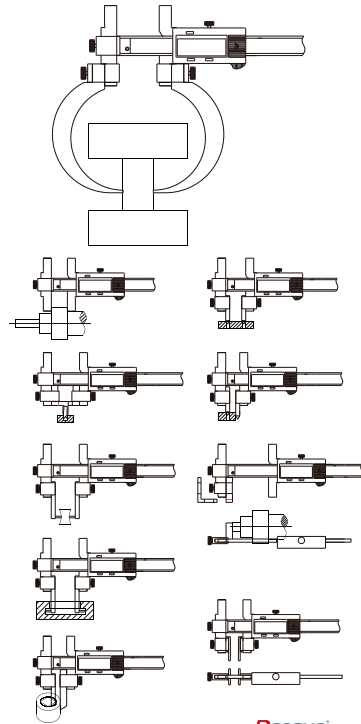
MULTI-FUNCTION DIGITAL CALIPER



- Used to satisfy users various aims in measuring
- Made of high quality stainless steel
- Zero setting at any position

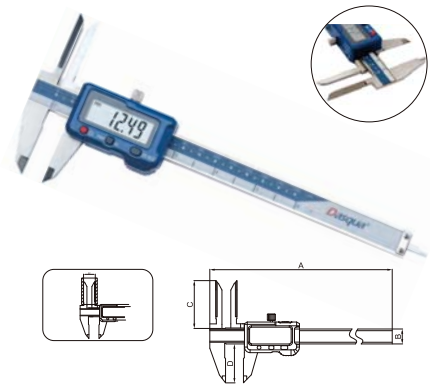
Unit:mm

| Code      | Range      | Resolution   |
|-----------|------------|--------------|
| 2615-0015 | 0-150/0-6" | 0.01/0.0005" |



DIGITAL CALIPER

WITH LONG UPPER JAWS



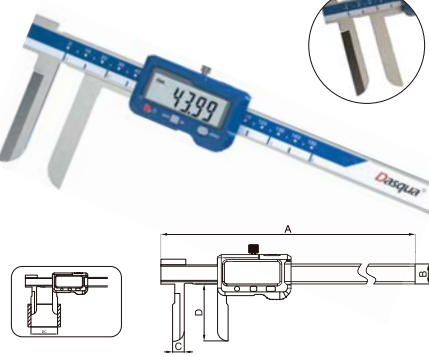
- Made of solid stainless steel
- Long upper jaws for measuring diameter of deep holes
- Strictly made in accordance with DIN862
- Hardened, ground and lapped measuring surfaces for longer service life
- Measuring surfaces ground for ultimate accuracy and smooth movement throughout

Unit:mm

| Code      | Range       | Resolution   | A   | B  | C  | D  | E  | Accuracy     |
|-----------|-------------|--------------|-----|----|----|----|----|--------------|
| 2100-0615 | 0-150/0-6"  | 0.01/0.0005" | 235 | 16 | 44 | 30 | 40 | 0.04/0.0015" |
| 2100-0620 | 0-200/0-8"  | 0.01/0.0005" | 285 | 16 | 44 | 40 | 50 | 0.04/0.0015" |
| 2100-0630 | 0-300/0-12" | 0.01/0.0005" | 400 | 17 | 44 | 50 | 60 | 0.05/0.002"  |

DIGITAL CALIPER

WITH LONG LOWER JAWS

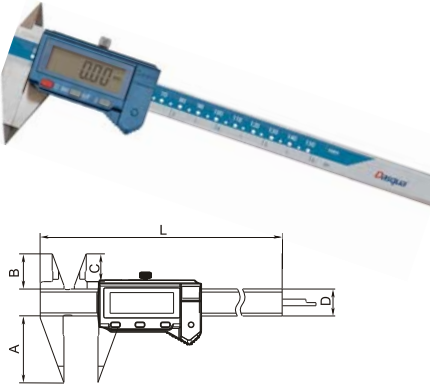


- Long jaws for measuring diameter of deep holes
- Made of solid stainless steel
- Strictly made in accordance with DIN862
- Hardened, ground and lapped measuring surfaces for longer service life
- Measuring surfaces ground for ultimate accuracy and smooth movement throughout

Unit:mm

| Code      | Range  | Resolution   | A   | B  | C  | D  | Accuracy     |
|-----------|--------|--------------|-----|----|----|----|--------------|
| 2100-1615 | 15-150 | 0.01/0.0005" | 250 | 16 | 12 | 60 | 0.03/0.0015" |
| 2100-1620 | 18-200 | 0.01/0.0005" | 305 | 16 | 14 | 75 | 0.05/0.002"  |
| 2100-1630 | 20-300 | 0.01/0.0005" | 410 | 16 | 14 | 90 | 0.06/0.0025" |

DIGITAL POINT CALIPER



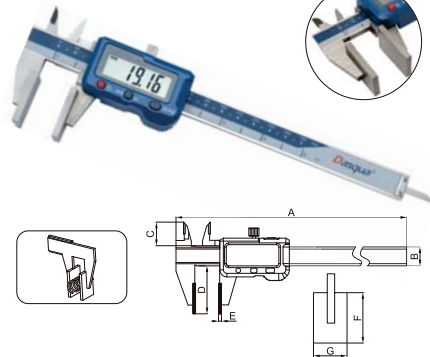
- The narrow pointed jaws fit into very small grooves and tracks, making many previously difficult outside measurements far easier to obtain
- Strictly made in accordance with DIN862
- With depth bar

Unit:mm

| Code      | Range      | Resolution          | A  | B  | C    | D  | L   | Accuracy     |
|-----------|------------|---------------------|----|----|------|----|-----|--------------|
| 2090-0010 | 0-150/0-6" | 0.01/0.0005"/1/128" | 40 | 20 | 15.4 | 16 | 235 | 0.03/0.0015" |

DIGITAL CALIPER

WITH LARGE MEASURING FACE



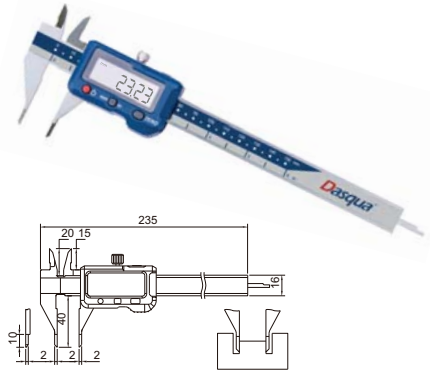
- Measure diameter of wire ropes and thickness of soft materials like rubbers, pongs, etc
- Made of solid stainless steel
- Strictly made in accordance with DIN862
- Hardened, ground and lapped measuring surfaces for longer service life
- Measuring surfaces ground for ultimate accuracy and smooth movement throughout

Unit:mm

| Code      | Range       | Resolution   | A   | B  | C  | D  | E | F  | G  | H | Accuracy     |
|-----------|-------------|--------------|-----|----|----|----|---|----|----|---|--------------|
| 2100-0115 | 0-150/0-6"  | 0.01/0.0005" | 236 | 16 | 20 | 40 | 4 | 30 | 20 |   | 0.03/0.0015" |
| 2100-0120 | 0-200/0-8"  | 0.01/0.0005" | 286 | 16 | 24 | 40 | 4 | 30 | 20 |   | 0.04/0.0015" |
| 2100-0130 | 0-300/0-12" | 0.01/0.0005" | 400 | 17 | 26 | 40 | 4 | 30 | 20 |   | 0.05/0.002"  |

DIGITAL CALIPER

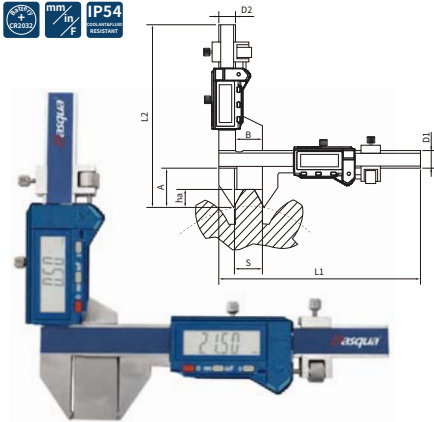
WITH SMALL POINTED JAW



- For small grooves and recesses
- Bigger screen with larger digits for easy reading
- Hardened, ground and lapped measuring surfaces for longer service life
- Measuring surfaces ground for ultimate accuracy and smooth throughout
- With data output

| Unit:mm   |         |            |          |
|-----------|---------|------------|----------|
| Code      | Range   | Graduation | Accuracy |
| 2240-6105 | 0-150mm | 0.01mm     | ±0.03    |

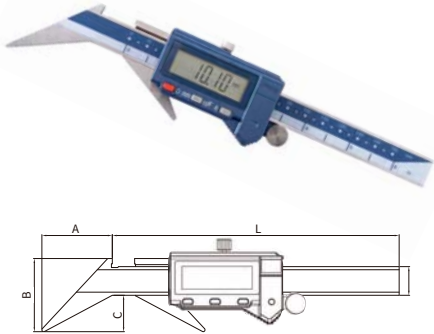
DIGITAL TOOTH-THICKNESS CALIPER



- Used for measuring gear thickness
- Made of high quality stainless steel
- LCD display with clear reading
- With fixing screw and fine adjustment on both sides
- Zero setting at any position

| Unit:mm   |       |                     |     |     |      |      |    |    |          |  |
|-----------|-------|---------------------|-----|-----|------|------|----|----|----------|--|
| Code      | Range | Resolution          | L1  | L2  | A    | B    | D1 | D2 | Accuracy |  |
| 2075-1105 | M1-25 | 0.01/0.0005"/1/128" | 170 | 165 | 30.5 | 21   | 16 | 16 | ±0.04    |  |
| 2075-1110 | M5-50 | 0.01/0.0005"/1/128" | 220 | 190 | 55   | 50.5 | 16 | 16 | ±0.04    |  |

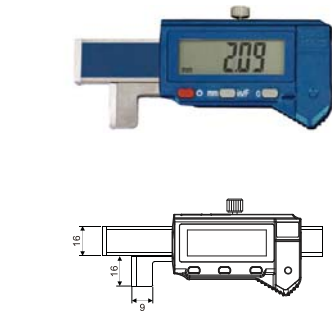
DIGITAL ARC-RADIUS CALIPER



- Used to measure non-full-round arc
- Made of solid stainless steel
- IP54 protection against liquid
- Hardened, ground and lapped measuring surfaces for longer service life
- Measuring surfaces ground for ultimate accuracy and smooth movement throughout

| Unit:mm   |       |                     |      |      |      |     |          |
|-----------|-------|---------------------|------|------|------|-----|----------|
| Code      | Range | Resolution          | A    | B    | C    | L   | Accuracy |
| 2240-4005 | 3-150 | 0.01/0.0005"/1/128" | 39.3 | 40.8 | 20.3 | 160 | ±0.1     |
| 2240-4010 | 3-300 | 0.01/0.0005"/1/128" | 76.8 | 60.8 | 40.3 | 242 | ±0.2     |

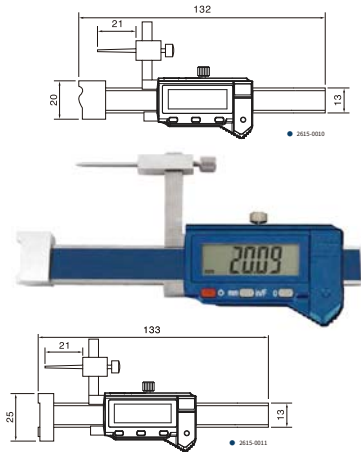
DIGITAL STEP & GAP GAUGE



- Used for checking the mutual position of two adjacent surfaces of vehicle
- Can measure the gap between two adjacent surfaces
- Portable and easy to operate

| Unit:mm   |        |                     |          |
|-----------|--------|---------------------|----------|
| Code      | Range  | Resolution          | Accuracy |
| 2615-0005 | 0-12.7 | 0.01/0.0005"/1/128" | ±0.03    |

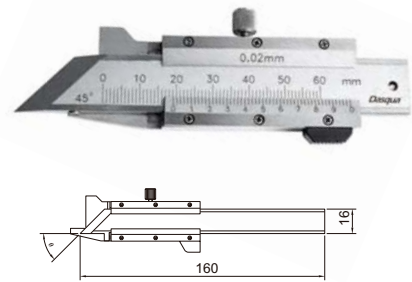
DIGITAL STEP & GAP GAUGE



- Digital step gauge, also known as high and low gauges
- Used for checking the mutual position of two adjacent surfaces of vehicles
- Zero setting at any position

| Unit:mm   |        |                     |          |
|-----------|--------|---------------------|----------|
| Code      | Range  | Resolution          | Accuracy |
| 2615-0010 | -10-30 | 0.01/0.0005"/1/128" | ±0.02    |
| 2615-0011 | -10-30 | 0.01/0.0005"/1/128" | ±0.02    |

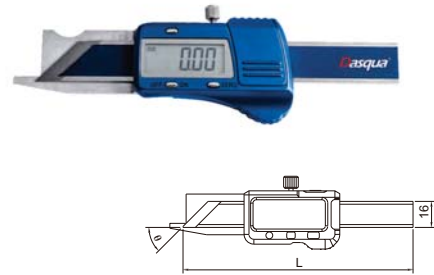
STAINLESS STEEL  
CHAMFER GAUGE



- Measure 15°/20°/30°/45°/60° chamfer dimensions
- Hardened ground jaws with precision lapped measuring faces
- Satin chrome finish, hardened stainless steel throughout for longer life
- Distinct lines and figures etched against satin chrome finish

| Unit:mm   |        |            |     |          |
|-----------|--------|------------|-----|----------|
| Code      | Range  | Graduation | θ   | Accuracy |
| 2240-1005 | 0-10mm | 0.02mm     | 15° | ±0.03    |
| 2240-1010 | 0-10mm | 0.02mm     | 20° | ±0.03    |
| 2240-1015 | 0-10mm | 0.02mm     | 30° | ±0.03    |
| 2240-1020 | 0-10mm | 0.02mm     | 45° | ±0.03    |
| 2240-1025 | 0-10mm | 0.02mm     | 60° | ±0.03    |

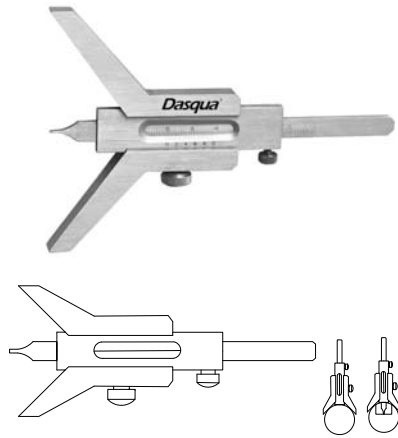
STAINLESS STEEL  
DIGITAL CHAMFER GAUGE



- Measure 15°/20°/30°/45°/60° chamfer dimensions
- Hardened ground jaws with precision lapped measuring faces
- Satin chrome finish, hardened stainless steel throughout for longer life

| Unit:mm   |             |                |     |            |
|-----------|-------------|----------------|-----|------------|
| Code      | Range       | Graduation     | L   | θ Accuracy |
| 2240-2005 | 0-6mm/0.22" | 0.01mm/0.0005" | 179 | 15° ±0.03  |
| 2240-2010 | 0-6mm/0.22" | 0.01mm/0.0005" | 154 | 20° ±0.03  |
| 2240-2015 | 0-6mm/0.22" | 0.01mm/0.0005" | 143 | 30° ±0.03  |
| 2240-2020 | 0-6mm/0.22" | 0.01mm/0.0005" | 141 | 45° ±0.03  |
| 2240-2025 | 0-6mm/0.22" | 0.01mm/0.0005" | 140 | 60° ±0.03  |

SPLINE GAUGE

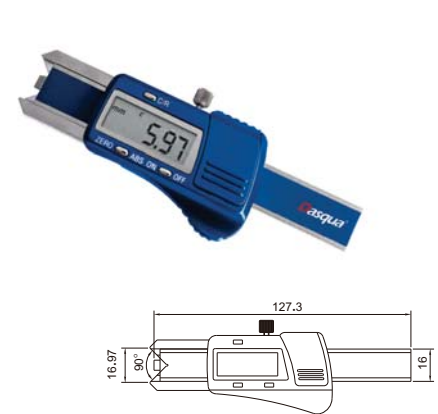


- To measure the depth of key way
- Made of hardened stainless steel

| Code      | Range   | READING |
|-----------|---------|---------|
| 2240-2030 | 5-80mm  | 0.05mm  |
| 2240-2035 | 6-120mm | 0.05mm  |
| 2240-2040 | 7-160mm | 0.05mm  |
| 2240-2045 | 8-200mm | 0.05mm  |



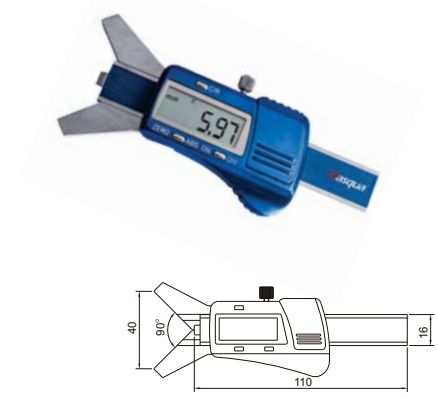
STAINLESS STEEL DIGITAL CHAMFER AND RADIUS GAUGE



- Hardened ground jaws with precision lapped measuring faces
- Satin chrome finish, hardened stainless steel throughout for longer life

| Unit:mm   |       |            |          |
|-----------|-------|------------|----------|
| Code      | Range | Graduation | Accuracy |
| 2240-5005 | 0-20  | 0.01mm     | ±0.03    |

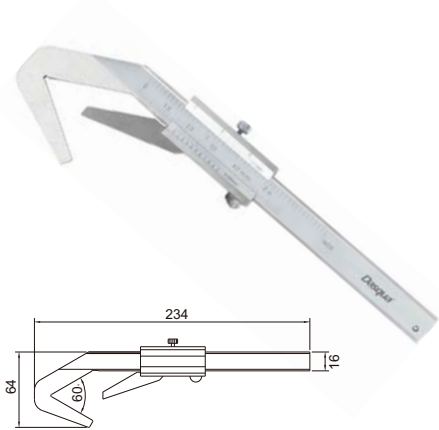
STAINLESS STEEL DIGITAL CHAMFER AND RADIUS GAUGE



- The 45° chamfer and full fillet dimensions of the outer edges of two perpendicular planes can be measured

| Unit:mm   |       |            |          |
|-----------|-------|------------|----------|
| Code      | Range | Graduation | Accuracy |
| 2240-5010 | 0-20  | 0.01mm     | ±0.03    |

THREE FLUTE 60 V-MEASURING CALIPER



- Measure diameter of cylinder (such as taps, reamers, end mills) with odd number of flutes
- Made of hardened stainless steel

| Unit:mm   |       |                |          |        |
|-----------|-------|----------------|----------|--------|
| Code      | Range | Graduation     | Accuracy | Type   |
| 2100-0305 | 4-40  | 0.05mm/1/1000" | ±0.05    | closed |

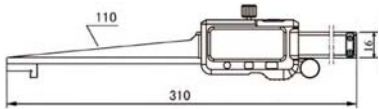
THREE FLUTE V-ANVIL DIGITAL CALIPER



- V-Anvil Digital Caliper
- For measurement of the diameter of cutting heads (such as taps, reamers, end mills) with an odd number of 3 flutes or 5 flutes

| Unit:mm   |       |                |          |        |
|-----------|-------|----------------|----------|--------|
| Code      | Range | Graduation     | Accuracy | Type   |
| 2013-0005 | 4-40  | 0.05mm/1/1000" | ±0.05    | closed |

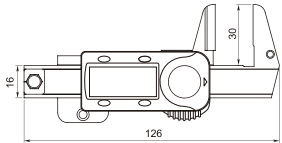
DIGITAL TAPER SLOT GAGE



- Made of stainless steel
- Automatic power off, move the digital unit to turn on power
- To measure the slot width

| Unit:mm   |                     |                  |          |
|-----------|---------------------|------------------|----------|
| Code      | Range               | Resolution       | Accuracy |
| 1051-3020 | 0.2-10mm/0.01-0.39" | 0.01 mm/ 0.0005" | ±0.03mm  |

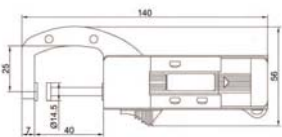
SNAP ACTION CALIPER



- With spring-loaded mechanism to allow quick and efficient measurements
- With large LCD display for clear and error-free readings
- Wide jaw for easy position
- Hardened stainless steel construction
- Hanging loop included for attachment to belt or chain

| Unit:mm   |           |                   |              |
|-----------|-----------|-------------------|--------------|
| Code      | Range     | Resolution        | Accuracy     |
| 2140-8101 | 0-25/0-1" | 0.0005"/0.01/1/64 | 0.03/0.0015" |

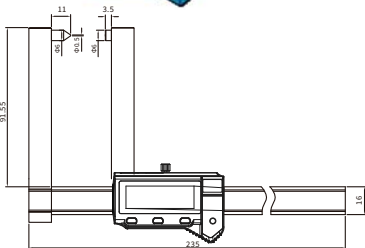
DIGITAL SNAP GAUGE



- To measure board thickness
- Quicker, more Accurate, and Easier to use
- Flat disc contact pads for even, accurate measurements of flat to flat surfaces
- Automatic power on/off

| Unit:mm   |               |                |          |
|-----------|---------------|----------------|----------|
| Code      | Range         | Graduation     | Accuracy |
| 4147-3005 | 0-25.4mm/0-1" | 0.01mm/0.0005" | ±0.03mm  |

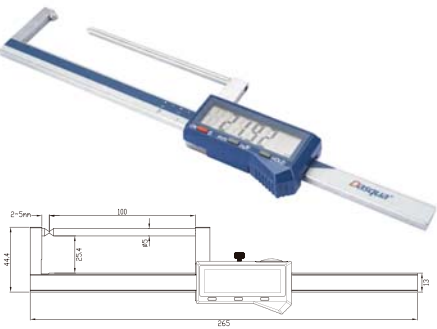
DIGITAL DISK-BRAKE CALIPER



- Fast and easy measurement of the brake disc thickness
- Made of high quality stainless steel
- LCD display with clear reading
- Zero setting at any position, mm/inch conversion at any position

| Unit:mm   |            |              |       |               |
|-----------|------------|--------------|-------|---------------|
| Code      | Range      | Resolution   | L(mm) | Accuracy      |
| 2240-0006 | 0-150/0-6" | 0.01/0.0005" | 235   | 0.05mm/0.002" |

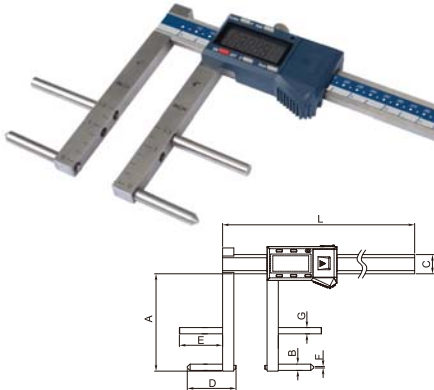
BRAKE ROTOR GAUGE  
 WHEEL ON CALIPER



- Used to measure brake rotors without removing the wheel
- Made of solid stainless steel
- Hold function for easy recording of measurement
- Hardened, ground and lapped measuring surfaces for longer service life
- Measuring surfaces ground for ultimate accuracy and smooth movement throughout

| Unit:mm   |             |                    |
|-----------|-------------|--------------------|
| Code      | Range       | Resolution         |
| 1804-1030 | 0-80/0-3.2" | 0.01/0.0005"/1/64" |

EASY OUT/INSIDE  
 DIGITAL CALIPER



- Used to measure brake drum
- Made of solid stainless steel
- Strictly made in accordance with DIN862
- With Hold and Metric-Inch-Fraction Conversion function
- Hardened, ground and lapped measuring surfaces for longer service life

| Unit:mm   |               |                    |        |      |    |      |    |      |     |              |
|-----------|---------------|--------------------|--------|------|----|------|----|------|-----|--------------|
| Code      | Range         | Resolution         | A      | B    | C  | D    | E  | F    | G   | L Accuracy   |
| 2220-8103 | 100-500/4-20" | 0.01/0.0005"/1/64" | 101.35 | φ6.5 | 20 | 50.8 | 45 | φ1.5 | 520 | 0.06/0.0025" |

BREAK DRUM CALIPER



- For Brake Drum, with Locating Device
- Specification: 0-530mm\*0.01/0-20.8in\*0.0005
- MPE=80 m
- Zero setting at any position
- Metric/Inch system interchange
- Stainless Hardened

| Unit:mm   |                 |          |                    |
|-----------|-----------------|----------|--------------------|
| Code      | Range           | Accuracy | Resolution         |
| 1804-1030 | 0-500mm/0-20.8" | 0.08mm   | 0.01/0.0005"/1/64" |

BREAK DRUM CALIPER



- For Brake Drum, with Locating Device
- Specification: 0-530mm\*0.01/0-20.8in\*0.0005
- MPE=80 m
- Zero setting at any position
- Metric/Inch system interchange
- Stainless Hardened

| Unit:mm   |               |          |                    |
|-----------|---------------|----------|--------------------|
| Code      | Range         | Accuracy | Resolution         |
| 2240-1215 | 0-400mm/0-16" | 0.08mm   | 0.01/0.0005"/1/64" |

BREAK DRUM CALIPER



- For Brake Drum, with Locating Device
- Specification: 0-300mm\*0.01/0-12"±0.0005"
- MPE=50 μm
- Zero setting at any position
- Metric/Inch system interchange
- Stainless Hardened

| Unit:mm   |               |          |                    |
|-----------|---------------|----------|--------------------|
| Code      | Range         | Accuracy | Resolution         |
| 2240-1220 | 0-300mm/0-12" | 0.05mm   | 0.01/0.0005"/1/64" |

CALIPER CALIBRATION GAUGE BLOCK SET  
MADE OF STEEL

DIN 861



- Gauge block calibration set for calipers
- Made of steel
- Extremely wear resistance and corrosion resistance

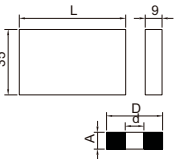
| Unit:mm   |       |                                                             |
|-----------|-------|-------------------------------------------------------------|
| Code      | Grade | Contents                                                    |
| 6111-1204 | 1     | 1 each of gauge block 41.3,131.4;Setting ring Dia. 20.0,4.0 |
| 6112-1204 | 2     | 1 each of gauge block 41.3,131.4;Setting ring Dia. 20.0,4.0 |

CALIPER CALIBRATION GAUGE BLOCK SET

DIN 861

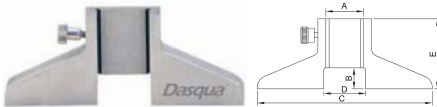


- Made of hardened steel
- Gauge block calibration set for calipers
- Extremely wear resistance and corrosion resistance
- 6111-1315——For inspecting calipers, one should combine block and pin gauge to get more accurate inspection, Especial for length less than 10mm



| Code      | Grade | Contents                                                                            |
|-----------|-------|-------------------------------------------------------------------------------------|
| 6111-1305 | 1     | Gauge Block 30,41.3,131.4;Ring Gauge 10/25                                          |
| 6111-1310 | 2     | Gauge Block 30,41.3,131.4;Ring Gauge 10/25                                          |
| 6111-1315 | 2     | Gauge Block 10/20(2pcs), 41.2, 51.2, 81.5, 101.2, 121.5, 121.8, 191.8, 201.5, 291.8 |

DEPTH BASE ATTACHMENT



- Increasing the stability of caliper measurement
- Made of solid stainless steel
- Measuring surfaces ground for ultimate accuracy

| Unit:mm   |      |   |    |    |    | Application                                 |
|-----------|------|---|----|----|----|---------------------------------------------|
| Code      | A    | B | C  | D  | E  |                                             |
| 3001-1002 | 16.5 | 9 | 75 | 18 | 30 | Base Length 75mm,for width of the beam 16mm |



CALIPER CALIBRATION  
GAUGE BLOCK SET

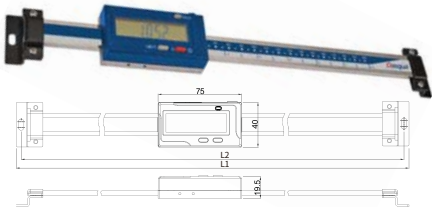
DIN  
861



- Gauge block calibration set for calipers
- Extremely wear resistance and corrosion resistance

| Unit:mm   |       |                                   |
|-----------|-------|-----------------------------------|
| Code      | Grade | Contents                          |
| 6201-3505 | 1     | 1 each of gauge block 41.3,131.4; |

IP67 WATER PROOF  
DIGITAL SCALE



- Used for improving the old-style machines
- Made of solid stainless steel, widened and thickened
- IP67 protection against liquid
- Super large LCD screen for easy reading
- With Hold and Metric-Inch-Fraction Conversion function,no need to set the reference point at every power-on

Unit:mm

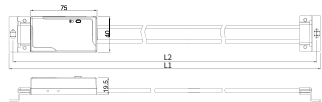
| Code      | Range        | Resolution   | L1   | L2   | Accuracy     |
|-----------|--------------|--------------|------|------|--------------|
| 5810-3105 | 0-150/0-6"   | 0.01/0.0005" | 286  | 277  | 0.02/0.001"  |
| 5810-3110 | 0-200/0-8"   | 0.01/0.0005" | 326  | 317  | 0.03/0.0015" |
| 5810-3115 | 0-300/0-12"  | 0.01/0.0005" | 426  | 417  | 0.03/0.0015" |
| 5810-3120 | 0-600/0-24"  | 0.01/0.0005" | 746  | 737  | 0.05/0.005"  |
| 5810-3125 | 0-1000/0-40" | 0.01/0.0005" | 1146 | 1137 | 0.05/0.0025" |

WITH WIRELESS SYSTEM

Unit:mm

| Code      | Range        | Resolution   | L1   | L2   | Accuracy     |
|-----------|--------------|--------------|------|------|--------------|
| 5810-7105 | 0-150/0-6"   | 0.01/0.0005" | 286  | 277  | 0.02/0.001"  |
| 5810-7110 | 0-200/0-8"   | 0.01/0.0005" | 326  | 317  | 0.03/0.0015" |
| 5810-7115 | 0-300/0-12"  | 0.01/0.0005" | 426  | 417  | 0.03/0.0015" |
| 5810-7120 | 0-600/0-24"  | 0.01/0.0005" | 746  | 737  | 0.05/0.005"  |
| 5810-7125 | 0-1000/0-40" | 0.01/0.0005" | 1146 | 1137 | 0.05/0.0025" |

IP54 WATER PROOF  
DIGITAL SCALE  
WITH SEPARATE READOUT

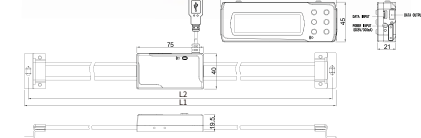


- Used for improving the old-style machine
- Made of solid stainless steel, widened and thickened
- IP54 protection against liquid
- Super large separate LCD screen for easy and clear reading
- With Hold, Metric-Inch-Fraction Conversion and Absolute function, no need to set the reference point at every power-on

Unit:mm

| Code      | Range        | Resolution   | L1   | L2   | Accuracy     |
|-----------|--------------|--------------|------|------|--------------|
| 5810-4405 | 0-150/0-6"   | 0.01/0.0005" | 286  | 277  | 0.02/0.001"  |
| 5810-4410 | 0-200/0-8"   | 0.01/0.0005" | 326  | 317  | 0.03/0.0015" |
| 5810-4415 | 0-300/0-12"  | 0.01/0.0005" | 426  | 417  | 0.03/0.0015" |
| 5810-4420 | 0-600/0-24"  | 0.01/0.0005" | 746  | 737  | 0.05/0.002"  |
| 5810-4425 | 0-1000/0-40" | 0.01/0.0005" | 1146 | 1137 | 0.06/0.0025" |

IP67 WATER PROOF  
DIGITAL SCALE  
WITH SEPARATE READOUT



- Used for improving the old-style machine
- Made of solid stainless steel, widened and thickened
- IP67 protection against liquid
- Super large separate LCD screen for easy and clear reading
- With Hold, Metric-Inch-Fraction Conversion and Absolute function, no need to set the reference point at every power-on

Unit:mm

| Code      | Range        | Resolution   | L1   | L2   | Accuracy     |
|-----------|--------------|--------------|------|------|--------------|
| 5810-1105 | 0-150/0-6"   | 0.01/0.0005" | 286  | 277  | 0.02/0.001"  |
| 5810-1110 | 0-200/0-8"   | 0.01/0.0005" | 326  | 317  | 0.03/0.0015" |
| 5810-1115 | 0-300/0-12"  | 0.01/0.0005" | 426  | 417  | 0.03/0.0015" |
| 5810-1120 | 0-600/0-24"  | 0.01/0.0005" | 746  | 737  | 0.05/0.002"  |
| 5810-1125 | 0-1000/0-40" | 0.01/0.0005" | 1146 | 1137 | 0.06/0.0025" |

LINEAR SCALES



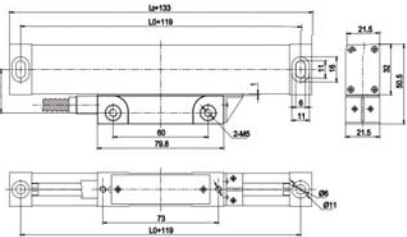
- Output Signal:5VTTL,5V RS422
- Cross Section:20.5\*31 mm
- Accuracy:  $\pm 5\mu$ ,  $\pm 10\mu$ m/M
- Working Temperature: -10°C-60°C
- Sealing Protection: Ip55
- Max. Moving Speed: 60M/Min
- Reference Point: Every 50mm
- Full sealing structure, swarf and coolant proof
- Vertical five bearings sliding system, smooth and accurate movement
- Calibrated by Laser interferometer,accuracy guaranteed

Unit:mm

| Standard Delivery    |  |      |
|----------------------|--|------|
| Main unit            |  | 1pc  |
| L' shape support     |  | 1pc  |
| Anti-dust cover      |  | 1pc  |
| Mounting accessories |  | 1set |

Unit:mm

| Code      | Range | Resolution | L0   |
|-----------|-------|------------|------|
| 5810-0150 | 150   | 0.005      | 150  |
| 5810-0200 | 200   | 0.005      | 200  |
| 5810-0250 | 250   | 0.005      | 250  |
| 5810-0300 | 300   | 0.005      | 300  |
| 5810-0350 | 350   | 0.005      | 350  |
| 5810-0400 | 400   | 0.005      | 400  |
| 5810-0450 | 450   | 0.005      | 450  |
| 5810-0500 | 500   | 0.005      | 500  |
| 5810-0550 | 550   | 0.005      | 550  |
| 5810-0600 | 600   | 0.005      | 600  |
| 5810-0650 | 650   | 0.005      | 650  |
| 5810-0700 | 700   | 0.005      | 700  |
| 5810-0750 | 750   | 0.005      | 750  |
| 5810-0800 | 800   | 0.005      | 800  |
| 5810-0850 | 850   | 0.005      | 850  |
| 5810-0900 | 900   | 0.005      | 900  |
| 5810-1000 | 1000  | 0.005      | 1000 |



DIGITAL READOUTS



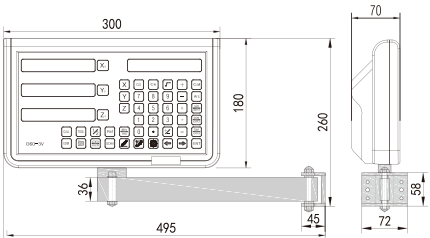
- Displaying as 8 digits with green LED
- Aluminum casing with industrial quality
- Unique film makes covering on the Windows makes the displaying much more recognizable
- High integration makes the performance be stable
- Switching on& switching off can meet more than 100000 times
- Adopting the advanced digital filtering makes the counting be more accurate and stable

Unit:mm

| Code                | 5810-0015                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 5810-0005  |
|---------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|
| Application         | Two axis                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Three axis |
| Scale input ports   | 2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 3          |
| Resolution          | 0.1μm, 0.2μm, 0.5μm, 1μm, 2μm, 2.5μm, 5μm, 10μm                                                                                                                                                                                                                                                                                                                                                                                                                                                               |            |
| Function            | Zeroing, Data Recovery, Value Inputting, Metric and Imperial Switching, Power off memory, Encoder Selection(Rotary or Linear), Linear Compensation, Non-linear Compensation, Calculator, Counting Direction Setting, ABS/INC Coordinate, 200 sets of SDM Coordinates, REF Centering, PLD Function, PCD Function, Simple R function, Smooth R Function, Radius/Diameter switching, Axis summing, Digital Filtering Function, Taper Measuring Function, RS232 Interface, EDM Function, 200 sets of Tool Memory. |            |
| Power supply        | AC80V-260V/50HZ-60HZ                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |            |
| Working Temperature | -10°C-60°C                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |            |
| Input Signal        | 5V TTL/RS422                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |            |
| Input Frequency     | <4MHZ                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |            |

Unit:mm

| Standard Delivery |  |     |
|-------------------|--|-----|
| Main Unit         |  | 1pc |
| Mounting bracket  |  | 1pc |
| Ground cable      |  | 1pc |





# MICROMETER

BORN IN ITALY, RAISED BY THE WORLD

## 02-04 MICROMETER (SIZE UP TO 150MM)



## 05-06 MICROMETER (SIZE UP TO 300MM)



## 07-09 MICROMETER (SIZE UP TO 3000MM)



## 09-10 MICROMETER SET



## 11-17 DIGITAL MICROMETER (SIZE UP TO 150MM)



## 17-18 DIGITAL MICROMETER (SIZE UP TO 1000MM)



## 18-19 MICROMETER FOR SPECIAL MEASURING



## 19-21 DEPTH MICROMETER



## 21-22 INSIDE MICROMETER



## 23-25 TUBULAR INSIDE MICROMETER



## 26-33 3 POINTS INSIDE MICROMETER



## 34-37 SNAP GAUGE



## 37-59 MICROMETER FOR SPECIAL MEASURING



## 60-62 MICROMETER HEAD



## 63-64 MICROMETER RELATED PRODUCTS



## OUTSIDE MICROMETER WITH STAINLESS STEEL SPINDLE

- Strictly made in accordance with DIN 863
- Spindle thread hardened, ground and lapped for ultimate accuracy
- With spindle lock

DIN 863



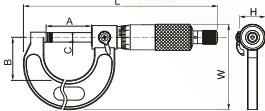
- New special carbide used on measuring anvil instead of traditional easy-wear off carbide tip
- Precision Ground STAINLESS STEEL threading rod replacing alloy/carbon steel threading rod mostly used in the industry

| Code       | Range   | Graduation | A   | B    | C    | L     | W    | H   | Accuracy |
|------------|---------|------------|-----|------|------|-------|------|-----|----------|
| M11-8105-A | 0-25    | 0.01       | 31  | 29.5 | ø6.5 | 112.8 | 58.5 | ø18 | 0.004    |
| M11-8110-A | 25-50   | 0.01       | 56  | 38   | ø6.5 | 160   | 76   | ø18 | 0.004    |
| M11-8115-A | 50-75   | 0.01       | 81  | 53   | ø6.5 | 185.5 | 93   | ø18 | 0.005    |
| M11-8120-A | 75-100  | 0.01       | 106 | 63.5 | ø6.5 | 210.5 | 105  | ø18 | 0.005    |
| M11-8125-A | 100-125 | 0.01       | 131 | 76   | ø6.5 | 237.3 | 125  | ø18 | 0.006    |
| M11-8130-A | 125-150 | 0.01       | 156 | 89   | ø6.5 | 263.8 | 142  | ø18 | 0.006    |
| M12-5105-A | 0-1"    | 0.0001"    | 31  | 29.5 | ø6.5 | 112.8 | 58.5 | ø18 | 0.00015" |
| M12-5110-A | 1-2"    | 0.0001"    | 56  | 38   | ø6.5 | 160   | 76   | ø18 | 0.00015" |
| M12-5115-A | 2-3"    | 0.0001"    | 81  | 53   | ø6.5 | 185.5 | 93   | ø18 | 0.0002"  |
| M12-5120-A | 3-4"    | 0.0001"    | 106 | 63.5 | ø6.5 | 210.5 | 105  | ø18 | 0.0002"  |
| M12-5125-A | 4-5"    | 0.0001"    | 131 | 76   | ø6.5 | 237.3 | 125  | ø18 | 0.00025" |
| M12-5130-A | 5-6"    | 0.0001"    | 156 | 89   | ø6.5 | 263.8 | 142  | ø18 | 0.00025" |



OUTSIDE MICROMETER  
WITH 0.001MM GRADUATION

DIN 863

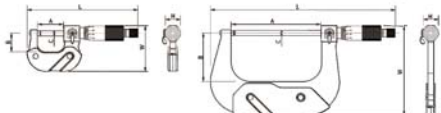


- Stainless steel newly adapted on spindle
- Strictly made in accordance with DIN 863
- With ratchet stop for constant force
- Spindle thread hardened, ground and lapped for ultimate accuracy
- Clear graduations laser-etched on satin chrome finish for easy reading
- With spindle lock
- Carbide measuring surfaces ground for longer service life

| Code        | Range*Graduation | A   | B    | C    | L     | W    | H   | Accuracy |
|-------------|------------------|-----|------|------|-------|------|-----|----------|
| 4111-9105-A | 0-25*0.001       | 31  | 29.5 | φ6.5 | 133.8 | 58.5 | φ18 | 0.004    |
| 4111-9110-A | 25-50*0.001      | 56  | 38   | φ6.5 | 160   | 76   | φ18 | 0.004    |
| 4111-9115-A | 50-75*0.001      | 81  | 51   | φ6.5 | 185.5 | 91   | φ18 | 0.005    |
| 4111-9120-A | 75-100*0.001     | 106 | 63.5 | φ6.5 | 210.5 | 105  | φ18 | 0.005    |
| 4111-9125-A | 100-125*0.001    | 131 | 76   | φ6.5 | 237.3 | 125  | φ18 | 0.006    |
| 4111-9130-A | 125-150*0.001    | 156 | 89   | φ6.5 | 263.8 | 142  | φ18 | 0.006    |
| 4112-0105-A | 0-1*0.0001"      | 31  | 29.5 | φ6.5 | 133.8 | 58.5 | φ18 | 0.00015" |
| 4112-0110-A | 1-2*0.0001"      | 56  | 38   | φ6.5 | 160   | 76   | φ18 | 0.00015" |
| 4112-0115-A | 2-3*0.0001"      | 81  | 51   | φ6.5 | 185.5 | 91   | φ18 | 0.0002"  |
| 4112-0120-A | 3-4*0.0001"      | 106 | 63.5 | φ6.5 | 210.5 | 105  | φ18 | 0.0002"  |
| 4112-0125-A | 4-5*0.0001"      | 131 | 76   | φ6.5 | 237.3 | 125  | φ18 | 0.00025" |
| 4112-0130-A | 5-6*0.0001"      | 156 | 89   | φ6.5 | 263.8 | 142  | φ18 | 0.00025" |

OUTSIDE MICROMETER  
CHROME PLATED FRAME

DIN 863 ISO 3611

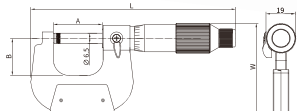


- Cover-type heat isolation shield avoids deformation, provides stability
- Distinct lines and figures laser etched against satin chrome finish
- Metallurgical ratchet stop provides stable measurement force which can avoid different measurement result caused by various operators
- Strictly made according to ISO 3611(DIN863)
- Overall chrome plated, lower stress, smaller deformation
- The anvil adopts alloy with high hardness, reaches to HRC63

| Code      | Range  | Graduation | A   | B    | C    | L   | W   | H   | Accuracy |
|-----------|--------|------------|-----|------|------|-----|-----|-----|----------|
| 4111-5205 | 0-25   | 0.01       | 31  | 22   | φ6.5 | 126 | 52  | φ18 | 0.004    |
| 4111-5210 | 25-50  | 0.01       | 56  | 27   | φ6.5 | 151 | 61  | φ18 | 0.004    |
| 4111-5215 | 50-75  | 0.01       | 81  | 44.5 | φ6.5 | 178 | 86  | φ18 | 0.005    |
| 4111-5220 | 75-100 | 0.01       | 106 | 57   | φ6.5 | 205 | 104 | φ18 | 0.005    |

OUTSIDE MICROMETER  
WITH THERMAL PROTECTION

DIN 863



- With thermal protection
- Strictly made in accordance with DIN 863
- With ratchet stop for constant force
- Spindle thread hardened, ground and lapped for ultimate accuracy
- Clear graduations laser-etched on satin chrome finish for easy reading
- With spindle lock

| Code      | Range*Graduation | A     | B    | L     | W     | Accuracy |
|-----------|------------------|-------|------|-------|-------|----------|
| 4111-6405 | 0-25*0.01        | 31    | 23.5 | 127.8 | 56.2  | 0.004    |
| 4111-6410 | 25-50*0.01       | 56.5  | 31   | 160.1 | 72.9  | 0.004    |
| 4111-6415 | 50-75*0.01       | 81.5  | 44   | 186.6 | 88.2  | 0.005    |
| 4111-6420 | 75-100*0.01      | 107.1 | 56   | 214.6 | 104.2 | 0.005    |
| 4111-6425 | 100-125*0.01     | 132.5 | 66   | 243.3 | 122.2 | 0.006    |
| 4111-6430 | 125-150*0.01     | 157.5 | 80   | 271.1 | 139.7 | 0.006    |
| 4111-8405 | 0-1*0.0001"      | 31    | 23.5 | 127.8 | 56.2  | 0.00015" |
| 4111-8410 | 1-2*0.0001"      | 56.5  | 31   | 160.1 | 72.9  | 0.00015" |
| 4111-8415 | 2-3*0.0001"      | 81.5  | 44   | 186.6 | 88.2  | 0.0002"  |
| 4111-8420 | 3-4*0.0001"      | 107.1 | 56   | 214.6 | 104.2 | 0.0002"  |
| 4111-8425 | 4-5*0.0001"      | 132.5 | 66   | 243.3 | 122.2 | 0.00025" |
| 4111-8430 | 5-6*0.0001"      | 157.5 | 80   | 271.1 | 139.7 | 0.00025" |

WHY  
DASQUA MICROMETER  
MORE VALUABLE?



CONTROL THE ACCURACY STARTING FROM THE SEMI PARTS



6 MONTHS TRACEABLE AGING TREATMENT ON EACH FRAME

OUTSIDE MICROMETER TYPE A

DIN 863



- Bigger size for larger range
- With spindle lock
- Stainless steel newly adapted on spindle
- Strictly made in accordance with DIN 863
- With ratchet stop for constant force
- Spindle thread hardened, ground and lapped for ultimate accuracy
- Clear graduations laser-etched on satin chrome finish for easy reading
- Carbide measuring surfaces ground for longer service life

| Unit:mm   |         |            |     |       |     |          |
|-----------|---------|------------|-----|-------|-----|----------|
| Code      | Range   | Graduation | L   | H     | Lo  | Accuracy |
| 4112-8135 | 150-175 | 0.01       | 185 | 99    | 150 | 0.007    |
| 4112-8140 | 175-200 | 0.01       | 210 | 111.5 | 175 | 0.007    |
| 4112-8145 | 200-225 | 0.01       | 238 | 127   | 200 | 0.008    |
| 4112-8150 | 225-250 | 0.01       | 264 | 140   | 225 | 0.008    |
| 4112-8155 | 250-275 | 0.01       | 289 | 152.5 | 250 | 0.009    |
| 4112-8160 | 275-300 | 0.01       | 315 | 165.5 | 275 | 0.009    |
| 4112-5135 | 6-7"    | 0.001"     | 185 | 99    | 150 | 0.00027" |
| 4112-5140 | 7-8"    | 0.001"     | 210 | 111.5 | 175 | 0.00027" |
| 4112-5145 | 8-9"    | 0.001"     | 238 | 127   | 200 | 0.0003"  |
| 4112-5150 | 9-10"   | 0.001"     | 264 | 140   | 225 | 0.0003"  |
| 4112-5155 | 10-11"  | 0.001"     | 289 | 152.5 | 250 | 0.00035" |
| 4112-5160 | 11-12"  | 0.001"     | 315 | 165.5 | 275 | 0.00035" |

OUTSIDE MICROMETER TYPE B(FRAME WITH HOLES)

DIN 863

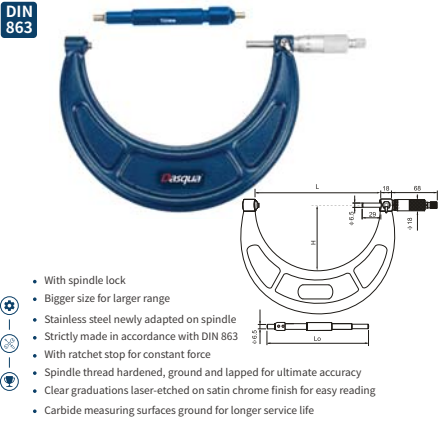


- Strictly made in accordance with DIN863
- With ratchet stop for constant force
- Spindle thread hardened, ground, and lapped for ultimate accuracy
- Clear graduations laser-etched on satin chrome finish for easy reading
- Bigger size for large range
- With spindle lock

| Code      | Range     | Resolution | A     | B     | L     | W     | Accuracy |
|-----------|-----------|------------|-------|-------|-------|-------|----------|
| 4112-7435 | 150-175mm | 0.01mm     | 180mm | 115mm | 290mm | 160mm | 0.007mm  |
| 4112-7440 | 175-200mm | 0.01mm     | 206mm | 125mm | 313mm | 173mm | 0.007mm  |
| 4112-7445 | 200-225mm | 0.01mm     | 232mm | 140mm | 340mm | 190mm | 0.008mm  |
| 4112-7450 | 225-250mm | 0.01mm     | 258mm | 145mm | 366mm | 198mm | 0.008mm  |
| 4112-7455 | 250-275mm | 0.01mm     | 281mm | 160mm | 392mm | 220mm | 0.009mm  |
| 4112-7460 | 275-300mm | 0.01mm     | 308mm | 167mm | 416mm | 230mm | 0.009mm  |
| 4112-4435 | 6-7"      | 0.001"     | 180mm | 115mm | 290mm | 160mm | 0.00025" |
| 4112-4440 | 7-8"      | 0.001"     | 206mm | 125mm | 313mm | 173mm | 0.00025" |
| 4112-4445 | 8-9"      | 0.001"     | 232mm | 140mm | 340mm | 190mm | 0.0003"  |
| 4112-4450 | 9-10"     | 0.001"     | 258mm | 145mm | 366mm | 198mm | 0.0003"  |
| 4112-4455 | 10-11"    | 0.001"     | 281mm | 160mm | 392mm | 220mm | 0.00035" |
| 4112-4460 | 11-12"    | 0.001"     | 308mm | 167mm | 416mm | 230mm | 0.00035" |

OUTSIDE MICROMETER TYPE A WITH 0.001MM GRADUATION

DIN 863



- With spindle lock
- Bigger size for larger range
- Stainless steel newly adapted on spindle
- Strictly made in accordance with DIN 863
- With ratchet stop for constant force
- Spindle thread hardened, ground and lapped for ultimate accuracy
- Clear graduations laser-etched on satin chrome finish for easy reading
- Carbide measuring surfaces ground for longer service life

| Unit:mm   |         |            |     |       |     |          |
|-----------|---------|------------|-----|-------|-----|----------|
| Code      | Range   | Graduation | L   | H     | Lo  | Accuracy |
| 4111-9135 | 150-175 | 0.001      | 185 | 99    | 150 | 0.007    |
| 4111-9140 | 175-200 | 0.001      | 210 | 111.5 | 175 | 0.007    |
| 4111-9145 | 200-225 | 0.001      | 238 | 127   | 200 | 0.008    |
| 4111-9150 | 225-250 | 0.001      | 264 | 140   | 225 | 0.008    |
| 4111-9155 | 250-275 | 0.001      | 289 | 152.5 | 250 | 0.009    |
| 4111-9160 | 275-300 | 0.001      | 315 | 165.5 | 275 | 0.009    |
| 4112-1135 | 6-7"    | 0.0001"    | 185 | 99    | 150 | 0.00027" |
| 4112-1140 | 7-8"    | 0.0001"    | 210 | 111.5 | 175 | 0.00027" |
| 4112-1145 | 8-9"    | 0.0001"    | 238 | 127   | 200 | 0.0003"  |
| 4112-1150 | 9-10"   | 0.0001"    | 264 | 140   | 225 | 0.0003"  |
| 4112-1155 | 10-11"  | 0.0001"    | 289 | 152.5 | 250 | 0.00035" |
| 4112-1160 | 11-12"  | 0.0001"    | 315 | 165.5 | 275 | 0.00035" |

OUTSIDE MICROMETER TYPE B(FRAME WITH HOLES) WITH 0.001MM RESOLUTION

DIN 863

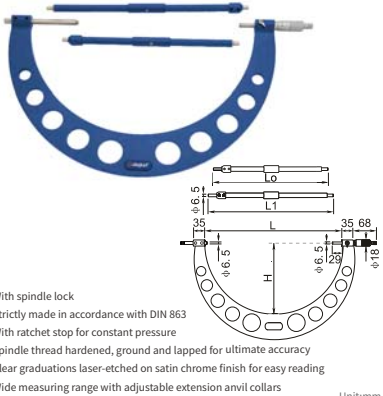


- With spindle lock
- Bigger size for large range
- Strictly made in accordance with DIN863
- With ratchet stop for constant force
- Spindle thread hardened, ground, and lapped for ultimate accuracy
- Clear graduations laser-etched on satin chrome finish for easy reading

| Code      | Range     | Resolution | A   | B   | L   | W   | Accuracy |
|-----------|-----------|------------|-----|-----|-----|-----|----------|
| 4111-8435 | 150-175mm | 0.001mm    | 180 | 115 | 290 | 160 | 0.007mm  |
| 4111-8440 | 175-200mm | 0.001mm    | 206 | 125 | 313 | 173 | 0.007mm  |
| 4111-8445 | 200-225mm | 0.001mm    | 232 | 140 | 340 | 190 | 0.008mm  |
| 4111-8450 | 225-250mm | 0.001mm    | 258 | 145 | 366 | 198 | 0.008mm  |
| 4111-8455 | 250-275mm | 0.001mm    | 281 | 160 | 392 | 220 | 0.009mm  |
| 4111-8460 | 275-300mm | 0.001mm    | 308 | 167 | 416 | 230 | 0.009mm  |
| 4042-0435 | 6-7"      | 0.0001"    | 180 | 115 | 290 | 160 | 0.00025" |
| 4042-0440 | 7-8"      | 0.0001"    | 206 | 125 | 313 | 173 | 0.00025" |
| 4042-0445 | 8-9"      | 0.0001"    | 232 | 140 | 340 | 190 | 0.0003"  |
| 4042-0450 | 9-10"     | 0.0001"    | 258 | 145 | 366 | 198 | 0.0003"  |
| 4042-0455 | 10-11"    | 0.0001"    | 281 | 160 | 392 | 220 | 0.00035" |
| 4042-0460 | 11-12"    | 0.0001"    | 308 | 167 | 416 | 230 | 0.00035" |

OUTSIDE MICROMETER  
WITH ADJUSTABLE ANVILS

DIN 863

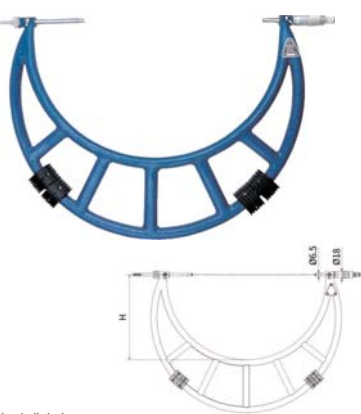


- With spindle lock
- Strictly made in accordance with DIN 863
- With ratchet stop for constant pressure
- Spindle thread hardened, ground and lapped for ultimate accuracy
- Clear graduations laser-etched on satin chrome finish for easy reading
- Wide measuring range with adjustable extension anvil collars

| Code      | Range    | Graduation | L    | H   | L0/L1   | Accuracy |
|-----------|----------|------------|------|-----|---------|----------|
| 4800-0005 | 300-400  | 0.01       | 410  | 215 | 325/375 | 0.011    |
| 4800-0010 | 400-500  | 0.01       | 510  | 265 | 425/475 | 0.013    |
| 4800-0015 | 500-600  | 0.01       | 610  | 315 | 525/575 | 0.015    |
| 4800-0020 | 600-700  | 0.01       | 710  | 365 | 625/675 | 0.016    |
| 4800-0025 | 700-800  | 0.01       | 810  | 415 | 725/775 | 0.018    |
| 4800-0030 | 800-900  | 0.01       | 910  | 465 | 825/875 | 0.02     |
| 4800-0035 | 900-1000 | 0.01       | 1010 | 515 | 925/975 | 0.022    |
| 4810-0005 | 12"-16"  | 0.001"     | 410  | 215 | 325/375 | 0.0004"  |
| 4810-0010 | 16-20"   | 0.001"     | 510  | 265 | 425/475 | 0.0005"  |
| 4810-0015 | 20"-24"  | 0.001"     | 610  | 315 | 525/575 | 0.0006"  |
| 4810-0020 | 24"-28"  | 0.001"     | 710  | 365 | 625/675 | 0.0006"  |
| 4810-0025 | 28"-32"  | 0.001"     | 810  | 415 | 725/775 | 0.0007"  |
| 4810-0030 | 32"-36"  | 0.001"     | 910  | 465 | 825/875 | 0.0008"  |
| 4810-0035 | 36"-40"  | 0.001"     | 1010 | 515 | 925/975 | 0.00085" |

OUTSIDE MICROMETER  
WITH ADJUSTABLE ANVILS

DIN 863



- With spindle lock
- Strictly made in accordance with DIN 863
- With ratchet stop for constant pressure
- Wide measuring range with adjustable extension anvil collars
- Spindle thread hardened, ground and lapped for ultimate accuracy
- Clear graduations laser-etched on satin chrome finish for easy reading

| Code      | Range       | Graduation | H       | Accuracy |
|-----------|-------------|------------|---------|----------|
| 4800-0040 | 1000-1200mm | 0.01mm     | 638.5mm | 0.024mm  |
| 4800-0041 | 1200-1400mm | 0.01mm     | 748.5mm | 0.028mm  |
| 4800-0042 | 1400-1600mm | 0.01mm     | 858.5mm | 0.031mm  |
| 4800-0045 | 1600-1800mm | 0.01mm     | 961mm   | 0.034mm  |

OUTSIDE MICROMETER  
WITH INTERCHANGEABLE ANVILS

DIN 863



- Strictly made in accordance with DIN863
- Wide measuring range with interchangeable anvils
- Distinct black lines and figures laser engraved against satin chrome finish provide easy and error-free reading
- Carbide tipped measuring face

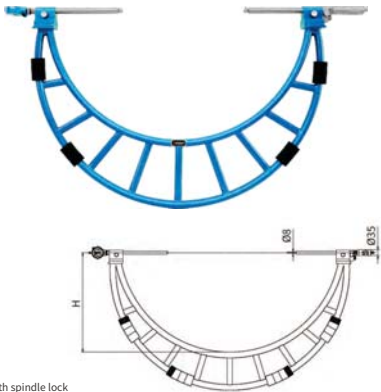
| Unit:mm   |          |            |     |      |          |
|-----------|----------|------------|-----|------|----------|
| Code      | Range    | Graduation | A   | L    | Accuracy |
| 4801-0001 | 0-50     | 0.01       | 35  | 58   | 0.004    |
| 4801-0002 | 0-100    | 0.01       | 57  | 108  | 0.005    |
| 4801-0003 | 0-150    | 0.01       | 82  | 158  | 0.006    |
| 4801-0004 | 100-200  | 0.01       | 114 | 208  | 0.007    |
| 4801-0005 | 150-300  | 0.01       | 165 | 308  | 0.009    |
| 4801-0006 | 200-300  | 0.01       | 165 | 308  | 0.009    |
| 4801-0007 | 300-400  | 0.01       | 224 | 409  | 0.011    |
| 4801-0008 | 400-500  | 0.01       | 275 | 509  | 0.013    |
| 4801-0009 | 500-600  | 0.01       | 321 | 609  | 0.015    |
| 4801-0010 | 600-700  | 0.01       | 371 | 709  | 0.016    |
| 4801-0011 | 700-800  | 0.01       | 426 | 809  | 0.018    |
| 4801-0012 | 800-900  | 0.01       | 476 | 909  | 0.020    |
| 4801-0013 | 900-1000 | 0.01       | 576 | 1009 | 0.020    |

| Unit:inch |        |            |     |      |          |
|-----------|--------|------------|-----|------|----------|
| Code      | Range  | Graduation | A   | L    | Accuracy |
| 4801-1001 | 0-2"   | 0.0001"    | 35  | 58   | 0.00015" |
| 4801-1002 | 0-4"   | 0.0001"    | 57  | 108  | 0.0002"  |
| 4801-1003 | 0-6"   | 0.0001"    | 82  | 158  | 0.00025" |
| 4801-1004 | 4-8"   | 0.0001"    | 114 | 208  | 0.00025" |
| 4801-1005 | 6-12"  | 0.0001"    | 165 | 308  | 0.00035" |
| 4801-1006 | 8-12"  | 0.0001"    | 165 | 308  | 0.00035" |
| 4801-1007 | 12-16" | 0.0001"    | 224 | 409  | 0.0004"  |
| 4801-1008 | 16-20" | 0.0001"    | 275 | 509  | 0.0005"  |
| 4801-1009 | 20-24" | 0.0001"    | 321 | 609  | 0.0006"  |
| 4801-1010 | 24-28" | 0.0001"    | 371 | 709  | 0.0006"  |
| 4801-1011 | 28-32" | 0.0001"    | 426 | 809  | 0.0007"  |
| 4801-1012 | 32-36" | 0.0001"    | 476 | 909  | 0.0008"  |
| 4801-1013 | 36-40" | 0.0001"    | 576 | 1009 | 0.0008"  |

OUTSIDE MICROMETER

WITH ADJUSTABLE ANVILS

DIN 863



- With spindle lock
- Strictly made in accordance with DIN 863
- With ratchet stop for constant pressure
- Wide measuring range with adjustable extension anvil collars
- Spindle thread hardened, ground and lapped for ultimate accuracy
- Clear graduations laser-etched on satin chrome finish for easy reading

| Unit:mm   |             |            |        |          |
|-----------|-------------|------------|--------|----------|
| Code      | Range       | Graduation | H      | Accuracy |
| 4005-0035 | 500-1000mm  | 0.01mm     | 525mm  | 0.022mm  |
| 4005-0040 | 1000-1500mm | 0.01mm     | 764mm  | 0.029mm  |
| 4005-0045 | 1500-2000mm | 0.01mm     | 1014mm | 0.037mm  |
| 4005-0050 | 2000-2500mm | 0.01mm     | 1264mm | 0.044mm  |
| 4005-0055 | 2500-3000mm | 0.01mm     | 1513mm | 0.052mm  |

OUTSIDE MICROMETER SET

DIN 863



- With spindle lock
- Strictly made in accordance with DIN 863
- With ratchet stop for constant pressure
- Spindle thread hardened, ground and lapped for ultimate accuracy
- Clear graduations laser-etched on satin chrome finish for easy reading
- 3pcs, 4pcs, 6pcs, 12pcs optional for customers' desire

| Unit:mm   |         |            |          |                |
|-----------|---------|------------|----------|----------------|
| Code      | Range   | Graduation | Set(Pcs) | Package        |
| 4111-8206 | 0-75    | 0.01       | 3        | Plastic Box    |
| 4111-8210 | 0-100   | 0.01       | 4        | Plastic Box    |
| 4111-8215 | 0-150   | 0.01       | 6        | Aluminium Case |
| 4111-8203 | 0-300   | 0.01       | 12       | Aluminium Case |
| 4111-8213 | 150-300 | 0.01       | 6        | Aluminium Case |
| 4112-0206 | 0-3"    | 0.001"     | 3        | Plastic Box    |
| 4112-0210 | 0-4"    | 0.001"     | 4        | Plastic Box    |
| 4112-0216 | 0-6"    | 0.001"     | 6        | Aluminium Case |
| 4112-0208 | 0-12"   | 0.001"     | 12       | Aluminium Case |
| 4112-0218 | 6"-12"  | 0.001"     | 6        | Aluminium Case |
| 4111-8006 | 0-75    | 0.001      | 3        | Plastic Box    |
| 4111-8010 | 0-100   | 0.001      | 4        | Plastic Box    |
| 4111-8220 | 0-150   | 0.001      | 6        | Aluminium Case |
| 4111-8408 | 0-300   | 0.001      | 12       | Aluminium Case |
| 4111-8008 | 150-300 | 0.001      | 6        | Aluminium Case |
| 4112-0006 | 0-3"    | 0.0001"    | 3        | Plastic Box    |
| 4112-0010 | 0-4"    | 0.0001"    | 4        | Plastic Box    |
| 4112-0215 | 0-6"    | 0.0001"    | 6        | Aluminium Case |
| 4112-0203 | 0-12"   | 0.0001"    | 12       | Aluminium Case |
| 4112-0213 | 6"-12"  | 0.0001"    | 6        | Aluminium Case |

OUTSIDE MICROMETER SET

WITH STAINLESS SPINDLE

DIN 863



- 3pcs, 4pcs, 6pcs, 12pcs optional for customers' desire
- Strictly made in accordance with DIN 863
- With ratchet stop for constant pressure
- Spindle thread hardened, ground and lapped for ultimate accuracy
- Clear graduations laser-etched on satin chrome finish for easy reading
- With spindle lock

| Unit:mm     |       |            |          |                |
|-------------|-------|------------|----------|----------------|
| Code        | Range | Graduation | Set(Pcs) | Package        |
| 4111-8206-A | 0-75  | 0.01       | 3        | Plastic Box    |
| 4111-8210-A | 0-100 | 0.01       | 4        | Plastic Box    |
| 4111-8215-A | 0-150 | 0.01       | 6        | Aluminium Case |
| 4111-8220-A | 0-150 | 0.001      | 6        | Aluminium Case |

OUTSIDE MICROMETER SET

DIN 863



- 3pcs, 4pcs, 6pcs optional for customers' desire
- Strictly made in accordance with DIN 863
- With ratchet stop for constant pressure
- Spindle thread hardened, ground and lapped for ultimate accuracy
- Clear graduations laser-etched on satin chrome finish for easy reading
- With spindle lock
- Made with thermal protection frame

| Unit:mm   |       |            |          |                |
|-----------|-------|------------|----------|----------------|
| Code      | Range | Graduation | Set(Pcs) | Package        |
| 4111-8205 | 0-75  | 0.01       | 3        | Plastic Box    |
| 4111-8240 | 0-100 | 0.01       | 4        | Plastic Box    |
| 4111-8245 | 0-150 | 0.01       | 6        | Aluminium Case |
| 4112-0205 | 0-3"  | 0.0001"    | 3        | Plastic Box    |
| 4112-0240 | 0-4"  | 0.0001"    | 4        | Plastic Box    |
| 4112-0245 | 0-6"  | 0.0001"    | 6        | Aluminium Case |



# DIGITAL OUTSIDE MICROMETER

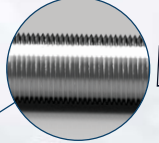
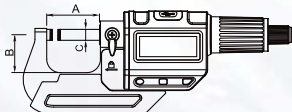
## WITH STAINLESS STEEL SPINDLE

- Spindle ground twice which makes pitch error 1μ less than before and reaches world-class standard

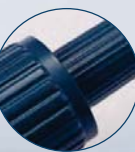


| Code        | Range           | Resolution     | A     | B     | C    | Accuracy |
|-------------|-----------------|----------------|-------|-------|------|----------|
| 4230-2005-A | 0-25/0-1"       | 0.001/0.00005" | 31.5  | 22.5  | ø6.5 | 0.003    |
| 4230-2010-A | 25-50/1"-2"     | 0.001/0.00005" | 56.5  | 31    | ø6.5 | 0.003    |
| 4230-2015-A | 50-75/2"-3"     | 0.001/0.00005" | 81.5  | 44    | ø6.5 | 0.004    |
| 4230-2020-A | 75-100/3"-4"    | 0.001/0.00005" | 107.1 | 56    | ø6.5 | 0.004    |
| 4230-2025-A | 100-125/4"-5"   | 0.001/0.00005" | 132   | 66    | ø6.5 | 0.005    |
| 4230-2030-A | 125-150/5"-6"   | 0.001/0.00005" | 156.5 | 80    | ø6.5 | 0.005    |
| 4210-2135-A | 150-175/6"-7"   | 0.001/0.00005" | 184   | 94.5  | ø6.5 | 0.007    |
| 4210-2140-A | 175-200/7"-8"   | 0.001/0.00005" | 209.5 | 107   | ø6.5 | 0.007    |
| 4210-2145-A | 200-225/8"-9"   | 0.001/0.00005" | 234   | 129.5 | ø6.5 | 0.008    |
| 4210-2150-A | 225-250/9"-10"  | 0.001/0.00005" | 259.5 | 142.5 | ø6.5 | 0.008    |
| 4210-2155-A | 250-275/10"-11" | 0.001/0.00005" | 285   | 155   | ø6.5 | 0.009    |
| 4210-2160-A | 275-300/11"-12" | 0.001/0.00005" | 310.5 | 167.5 | ø6.5 | 0.009    |

Unit:mm



- Stainless steel newly adapted on spindle instead of carbon steel



- With ratchet stop for constant force(5- 8N 20% higher than normal)

# IP65 OIL & WATER PROOF DIGITAL MICROMETER



- With large easy-to-read LCD screen
- Strictly made in accordance with DIN863
- Spindle hardened, ground and lapped for ultimate accuracy
- With spindle lock
- With absolute, inch-metric conversion and zero-set function
- IP65 protection against liquid
- Stainless steel newly adapted on spindle
- Carbide measuring surfaces ground for longer service life



- New special carbide used on measuring anvil instead of traditional easy-wear off carbide tip



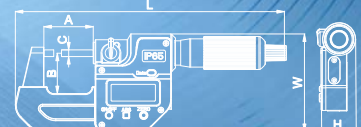
- IP65 Oil and waterproof ability



- With calibration certificate



- With ratchet stop for constant force(5- 8N 20% higher than normal)



Unit:mm

| Code        | Range        | Resolution     | A     | B    | C    | L     | W     | H    | Accuracy       |
|-------------|--------------|----------------|-------|------|------|-------|-------|------|----------------|
| 4410-1105-A | 0-25/0-1"    | 0.001/0.00005" | 29.8  | 24.5 | ø6.5 | 159.5 | 59.6  | 23.5 | 0.003/0.00015" |
| 4410-1110-A | 25-50/1"-2"  | 0.001/0.00005" | 55.3  | 31   | ø6.5 | 188.5 | 75.7  | 23.5 | 0.003/0.00015" |
| 4410-1115-A | 50-75/2"-3"  | 0.001/0.00005" | 80.8  | 44   | ø6.5 | 219   | 90.7  | 23.5 | 0.004/0.00015" |
| 4410-1120-A | 75-100/3"-4" | 0.001/0.00005" | 105.8 | 56   | ø6.5 | 246.5 | 107.2 | 23.5 | 0.004/0.00015" |

### INCH ENGRAVING ON THE SLEEVE

| Code        | Range        | Resolution     | A     | B    | C    | L     | W     | H    | Accuracy       |
|-------------|--------------|----------------|-------|------|------|-------|-------|------|----------------|
| 4410-2405-A | 0-25/0-1"    | 0.001/0.00005" | 29.8  | 24.5 | ø6.5 | 159.5 | 59.6  | 23.5 | 0.003/0.00015" |
| 4410-2410-A | 25-50/1"-2"  | 0.001/0.00005" | 55.3  | 31   | ø6.5 | 188.5 | 75.7  | 23.5 | 0.003/0.00015" |
| 4410-2415-A | 50-75/2"-3"  | 0.001/0.00005" | 80.8  | 44   | ø6.5 | 219   | 90.7  | 23.5 | 0.004/0.00015" |
| 4410-2420-A | 75-100/3"-4" | 0.001/0.00005" | 105.8 | 56   | ø6.5 | 246.5 | 107.2 | 23.5 | 0.004/0.00015" |



IP65 WATER PROOF DIGITAL OUTSIDE MICROMETER

DIN 863 mm/in IP65



- With large easy-to-read LCD screen
- Strictly made in accordance with DIN863
- Spindle hardened, ground and lapped for ultimate accuracy
- With spindle lock
- With absolute, inch-metric conversion and zero-set function
- IP65 protection against liquid
- Stainless steel newly adapted on spindle
- Carbide measuring surfaces ground for longer service life

METRIC GRADUATION

| Code      | Range        | Resolution     | Graduation | A     | B    | C    | L     | W     | H    | Accuracy       |
|-----------|--------------|----------------|------------|-------|------|------|-------|-------|------|----------------|
| 4410-1105 | 0-25/0-1"    | 0.001/0.00005" | 0.01       | 29.8  | 24.5 | ø6.5 | 159.5 | 59.6  | 23.5 | 0.003/0.00015" |
| 4410-1110 | 25-50/1-2"   | 0.001/0.00005" | 0.01       | 55.3  | 31   | ø6.5 | 188.5 | 75.7  | 23.5 | 0.003/0.00015" |
| 4410-1115 | 50-75/2-3"   | 0.001/0.00005" | 0.01       | 80.8  | 44   | ø6.5 | 219   | 90.7  | 23.5 | 0.004/0.00015" |
| 4410-1120 | 75-100/3-4"  | 0.001/0.00005" | 0.01       | 105.8 | 56   | ø6.5 | 246.5 | 107.2 | 23.5 | 0.004/0.00015" |
| 4410-1125 | 100-125/4-5" | 0.001/0.00005" | 0.01       | 130.8 | 68   | ø6.5 | 278   | 125.3 | 23.5 | 0.005/0.0002"  |
| 4410-1130 | 125-150/5-6" | 0.001/0.00005" | 0.01       | 155.8 | 81   | ø6.5 | 307.5 | 141.3 | 23.5 | 0.005/0.0002"  |

INCH GRADUATION

| Code      | Range        | Resolution     | Graduation | A     | B    | C    | L     | W     | H    | Accuracy       |
|-----------|--------------|----------------|------------|-------|------|------|-------|-------|------|----------------|
| 4410-2405 | 0-25/0-1"    | 0.001/0.00005" | 0.0001"    | 29.8  | 24.5 | ø6.5 | 159.5 | 59.6  | 23.5 | 0.003/0.00015" |
| 4410-2410 | 25-50/1-2"   | 0.001/0.00005" | 0.0001"    | 55.3  | 31   | ø6.5 | 188.5 | 75.7  | 23.5 | 0.003/0.00015" |
| 4410-2415 | 50-75/2-3"   | 0.001/0.00005" | 0.0001"    | 80.8  | 44   | ø6.5 | 219   | 90.7  | 23.5 | 0.004/0.00015" |
| 4410-2420 | 75-100/3-4"  | 0.001/0.00005" | 0.0001"    | 105.8 | 56   | ø6.5 | 246.5 | 107.2 | 23.5 | 0.004/0.00015" |
| 4410-2425 | 100-125/4-5" | 0.001/0.00005" | 0.0001"    | 130.8 | 68   | ø6.5 | 278   | 125.3 | 23.5 | 0.005/0.0002"  |
| 4410-2430 | 125-150/5-6" | 0.001/0.00005" | 0.0001"    | 155.8 | 81   | ø6.5 | 307.5 | 141.3 | 23.5 | 0.005/0.0002"  |

IP65 DIGITAL MICROMETER WITH WIRELESS SYSTEM

DIN 863 mm/in Data output Wireless Transmitter Absolute IP65



- Wireless System for data output
- With large easy-to-read LCD screen
- Strictly made in accordance with DIN863
- Spindle hardened, ground and lapped for ultimate accuracy
- With spindle lock
- With absolute, inch-metric conversion and zero-set function
- IP65 protection against liquid
- Stainless steel newly adapted on spindle
- Carbide measuring surfaces ground for longer service life

| Code        | Range       | Resolution     | A     | B    | C    | E     | F     | F    | Accuracy       |
|-------------|-------------|----------------|-------|------|------|-------|-------|------|----------------|
| 4410-2105-A | 0-25/0-1"   | 0.001/0.00005" | 29.8  | 24.5 | ø6.5 | 159.5 | 59.6  | 23.5 | 0.003/0.00015" |
| 4410-2110-A | 25-50/1-2"  | 0.001/0.00005" | 55.3  | 31   | ø6.5 | 188.5 | 75.7  | 23.5 | 0.003/0.00015" |
| 4410-2115-A | 50-75/2-3"  | 0.001/0.00005" | 80.8  | 44   | ø6.5 | 219   | 90.7  | 23.5 | 0.004/0.00015" |
| 4410-2120-A | 75-100/3-4" | 0.001/0.00005" | 105.8 | 56   | ø6.5 | 246.5 | 107.2 | 23.5 | 0.004/0.00015" |

DIGITAL MICROMETER WITH WIRELESS SYSTEM

DIN 863 mm/in Data output Wireless Transmitter Absolute



- Wireless System for data output
- With large easy-to-read LCD screen
- Strictly made in accordance with DIN863
- Spindle hardened, ground and lapped for ultimate accuracy
- With spindle lock
- With Absolute, Inch-Metric Conversion and Zero-Set function
- Stainless steel newly adapted on spindle
- Carbide measuring surfaces ground for longer service life

| Code      | Range        | Resolution     | A     | B    | C    | Accuracy       |
|-----------|--------------|----------------|-------|------|------|----------------|
| 4230-3105 | 0-25/0-1"    | 0.001/0.00005" | 31.5  | 22.5 | ø6.5 | 0.003/0.00015" |
| 4230-3110 | 25-50/1-2"   | 0.001/0.00005" | 56.5  | 31   | ø6.5 | 0.003/0.00015" |
| 4230-3115 | 50-75/2-3"   | 0.001/0.00005" | 81.5  | 44   | ø6.5 | 0.004/0.00015" |
| 4230-3120 | 75-100/3-4"  | 0.001/0.00005" | 107.1 | 56   | ø6.5 | 0.004/0.00015" |
| 4230-3125 | 100-125/4-5" | 0.001/0.00005" | 132   | 66   | ø6.5 | 0.005/0.0002"  |
| 4230-3130 | 125-150/5-6" | 0.001/0.00005" | 156.5 | 80   | ø6.5 | 0.005/0.0002"  |

DIGITAL OUTSIDE MICROMETER SET

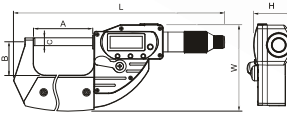


- Spindle ground twice which makes pitch error 1 μ less than before and ratches world class standard
- With ratchet stop for constant force
- Strictly made in accordance with DIN863
- Stainless steel newly adapted on spindle instead of carbon steel
- New special carbide used on measuring anvil instead of traditional easy-wear off carbide tip

| Code      | Range           | Resolution     | Set (Pcs) |
|-----------|-----------------|----------------|-----------|
| 4005-0175 | 0-100/ 0-4"     | 0.001/0.00005" | 4         |
| 4005-0177 | 0-150/ 0-6"     | 0.001/0.00005" | 6         |
| 4005-0179 | 0-300/ 0-12"    | 0.001/0.00005" | 12        |
| 4005-0178 | 150-300/ 4"-12" | 0.001/0.00005" | 6         |

IP65 WATER PROOF DIGITAL QUICK-MOVE MICROMETER

DIN 863 mm/in IP65 Absolute Data output WIRELESS TRANSMITTER



Unit:mm

| Code      | Range       | Resolution     | A     | B    | C    | L     | W     | H    | Accuracy       |
|-----------|-------------|----------------|-------|------|------|-------|-------|------|----------------|
| 4220-2105 | 0-25/0-1"   | 0.001/0.00005" | 29.8  | 25.4 | φ6.5 | 168.6 | 64.6  | 30.8 | 0.003/0.00015" |
| 4220-2110 | 25-50/1-2"  | 0.001/0.00005" | 55.3  | 31   | φ6.5 | 197.2 | 80.5  | 30.8 | 0.003/0.00015" |
| 4220-2115 | 50-75/2-3"  | 0.001/0.00005" | 80.3  | 44   | φ6.5 | 227.5 | 96    | 30.8 | 0.004/0.00015" |
| 4220-2120 | 75-100/3-4" | 0.001/0.00005" | 105.3 | 56   | φ6.5 | 257.6 | 112.5 | 30.8 | 0.004/0.00015" |

WITH WIRELESS SYSTEM

Unit:mm

| Code      | Range       | Resolution     | A     | B    | C    | L     | W     | H    | Accuracy       |
|-----------|-------------|----------------|-------|------|------|-------|-------|------|----------------|
| 4610-3105 | 0-25/0-1"   | 0.001/0.00005" | 29.8  | 25.4 | φ6.5 | 168.6 | 64.6  | 30.8 | 0.003/0.00015" |
| 4610-3110 | 25-50/1-2"  | 0.001/0.00005" | 55.3  | 31   | φ6.5 | 197.2 | 80.5  | 30.8 | 0.003/0.00015" |
| 4610-3115 | 50-75/2-3"  | 0.001/0.00005" | 80.3  | 44   | φ6.5 | 227.5 | 96    | 30.8 | 0.004/0.00015" |
| 4610-3120 | 75-100/3-4" | 0.001/0.00005" | 105.3 | 56   | φ6.5 | 257.6 | 112.5 | 30.8 | 0.004/0.00015" |

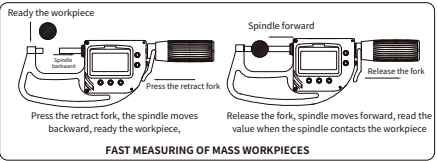
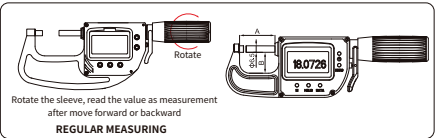
HIGH PRECISION DIGITAL MICROMETER/SNAP GAUGES



- Absolute encoder, the original data remains after power off
- Adjustable resolution: 0.001mm/0.00005", 0.01mm/0.0005"
- One turn of sleeve makes 5mm spindle feed
- Measurement accuracy is not affected by the use of sleeve
- Press the fork the spindle retracts 3mm, for fast measuring of mass workpieces
- Linear ball bearings for ten million times use
- Carbide spindle and anvil
- Button function: data output tolerance data preset data hold measuring direction
- changemax/min./TIRpower off time,on/off,zero,mm/inchadjustresolution
- Supplied with gage blocks for zero setting (except0-25mm/0-1")

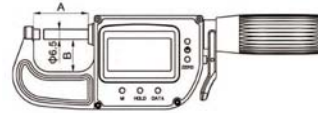
Unit:mm

| Code      | Range       | Repeatability | Accuracy | Measuring faces Flatness Parallelism | A   | B  | Data output |
|-----------|-------------|---------------|----------|--------------------------------------|-----|----|-------------|
| 4105-0005 | 0-25/0-1"   | 0.001         | 0.002    | 0.0005 0.0012                        | 38  | 24 | Cable       |
| 4105-0010 | 25-50/1-2"  | 0.001         | 0.002    | 0.0005 0.0012                        | 63  | 28 | Cable       |
| 4105-0015 | 50-75/2-3"  | 0.001         | 0.003    | 0.0005 0.0012                        | 88  | 45 | Cable       |
| 4105-0020 | 75-100/3-4" | 0.001         | 0.005    | 0.0005 0.0012                        | 113 | 57 | Cable       |
| 4331-0105 | 0-25/0-1"   | 0.001         | 0.002    | 0.0005 0.0012                        | 38  | 24 | Wireless    |
| 4331-0110 | 25-50/1-2"  | 0.001         | 0.002    | 0.0005 0.0012                        | 63  | 28 | Wireless    |
| 4331-0115 | 50-75/2-3"  | 0.001         | 0.003    | 0.0005 0.0012                        | 88  | 45 | Wireless    |
| 4331-0120 | 75-100/3-4" | 0.001         | 0.005    | 0.0005 0.0012                        | 113 | 57 | Wireless    |



MICROMETER/DIGITAL INDICATING GAUGE

WITH LINEAR ENCODER



- Data output
- More wear-resistance & durable
- Quick-move measurement
- Super long life built-in Battery
- Integration Multi- functions
- Carbide for whole anvils & spindle ensure longer life& higher reliability
- IP65 Water, Oil & Coolant proof, much more reliable in adverse working condition
- Optical grating technology, much higher accuracy control(±0.0001mm) in measurement

Unit:mm

| Code      | Range       | Resolution | Repeatability | Measuring faces Flatness Parallelism | Accuracy |
|-----------|-------------|------------|---------------|--------------------------------------|----------|
| 4205-0005 | 0-25mm/0-1" | 0.0001     | 0.0003        | 0.0003 0.0006                        | ±0.0005  |

IP65 QUICK ACTION TYPE  
DIGITAL INDICATING GAUGE

WITH LINEAR ENCODER

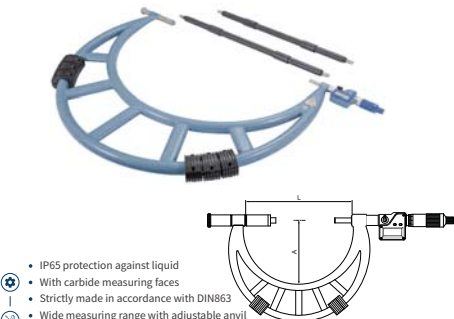


- Used to measuring diameters of mass-produced cylinder and shifts
- Angles in the ends of the the two anvils for easy inserting works
- High precision of dial indicator is optional
- Dimension of measuring face:14\*11mm
- Installing dimension is 8mm
- Travel of moving anvil:3mm

| Code      | Range         | Repeatability | Measuring faces |             | A   | B  | Accuracy | Data output |
|-----------|---------------|---------------|-----------------|-------------|-----|----|----------|-------------|
|           |               |               | Flatness        | Parallelism |     |    |          |             |
| 4005-0245 | 0-25mm/0-1"   | 0.0006        | 0.0005          | 0.001       | 38  | 24 | 0.0014   | Cable       |
| 4005-0250 | 25-50mm/1-2"  | 0.001         | 0.0005          | 0.001       | 63  | 28 | 0.0014   | Cable       |
| 4005-0255 | 50-75mm/2-3"  | 0.001         | 0.0005          | 0.001       | 88  | 45 | 0.002    | Cable       |
| 4005-0260 | 75-100mm/3-4" | 0.001         | 0.0005          | 0.001       | 113 | 57 | 0.002    | Cable       |
| 4231-0205 | 0-25mm/0-1"   | 0.0006        | 0.0005          | 0.001       | 38  | 24 | 0.0014   | Wireless    |
| 4231-0210 | 25-50mm/1-2"  | 0.001         | 0.0005          | 0.001       | 63  | 28 | 0.0014   | Wireless    |
| 4231-0215 | 50-75mm/2-3"  | 0.001         | 0.0005          | 0.001       | 88  | 45 | 0.002    | Wireless    |
| 4231-0220 | 75-100mm/3-4" | 0.001         | 0.0005          | 0.001       | 113 | 57 | 0.002    | Wireless    |
| 4231-1205 | 0-25mm/0-1"   | 0.0006        | 0.0005          | 0.001       | 38  | 24 | 0.0014   | Zigbee      |
| 4231-1210 | 25-50mm/1-2"  | 0.001         | 0.0005          | 0.001       | 63  | 28 | 0.0014   | Zigbee      |
| 4231-1215 | 50-75mm/2-3"  | 0.001         | 0.0005          | 0.001       | 88  | 45 | 0.002    | Zigbee      |
| 4231-1220 | 75-100mm/3-4" | 0.001         | 0.0005          | 0.001       | 113 | 57 | 0.002    | Zigbee      |

IP65 WATER PROOF  
DIGITAL OUTSIDE MICROMETER  
WITH ADJUSTABLE ANVILS

DIN 863 IP65 mm/in Data output

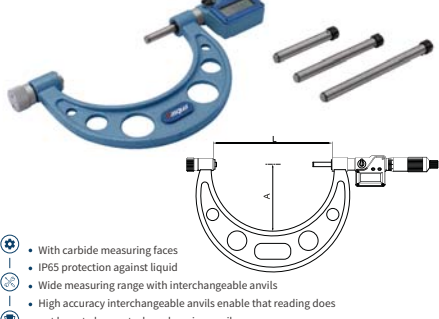


- IP65 protection against liquid
- With carbide measuring faces
- Strictly made in accordance with DIN863
- Wide measuring range with adjustable anvil
- High accuracy standard collars enable that reading does not have to be reset when changing collars
- Standard collars: Within 1000mm/40":25mm/1", 50mm/2"
- Pipe combined frame for light weight and high rigidity

| Code      | Range    | A   | L    | Resolution     | Accuracy |
|-----------|----------|-----|------|----------------|----------|
| 4905-0005 | 300-400  | 224 | 409  | 0.001/0.00005" | 0.011    |
| 4905-0006 | 400-500  | 275 | 509  | 0.001/0.00005" | 0.013    |
| 4905-0007 | 500-600  | 321 | 609  | 0.001/0.00005" | 0.015    |
| 4905-0008 | 600-700  | 371 | 709  | 0.001/0.00005" | 0.016    |
| 4905-0009 | 700-800  | 426 | 809  | 0.001/0.00005" | 0.018    |
| 4905-0010 | 800-900  | 476 | 909  | 0.001/0.00005" | 0.020    |
| 4905-0011 | 900-1000 | 576 | 1009 | 0.001/0.00005" | 0.020    |

IP65 WATER PROOF  
OUTSIDE MICROMETER  
WITH INTERCHANGEABLE ANVILS

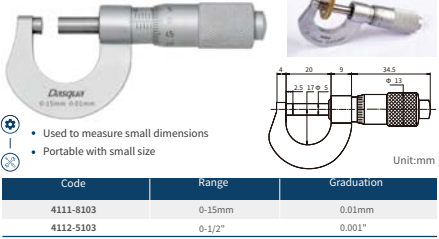
DIN 863 IP65 mm/in Data output



- With carbide measuring faces
- IP65 protection against liquid
- Wide measuring range with interchangeable anvils
- High accuracy interchangeable anvils enable that reading does not have to be reset when changing anvils

| Code      | Range    | Resolution     | Anvil(pcs) | A   | L    | Accuracy |
|-----------|----------|----------------|------------|-----|------|----------|
| 4706-0001 | 0-100    | 0.001/0.00005" | 4          | 57  | 108  | ±0.003   |
| 4706-0011 | 0-150    | 0.001/0.00005" | 4          | 82  | 158  | ±0.003   |
| 4706-0002 | 100-200  | 0.001/0.00005" | 4          | 114 | 208  | ±0.004   |
| 4706-0012 | 150-300  | 0.001/0.00005" | 4          | 165 | 308  | ±0.005   |
| 4706-0003 | 200-300  | 0.001/0.00005" | 4          | 165 | 308  | ±0.005   |
| 4706-0004 | 300-400  | 0.001/0.00005" | 4          | 224 | 409  | ±0.006   |
| 4706-0005 | 400-500  | 0.001/0.00005" | 4          | 275 | 509  | ±0.007   |
| 4706-0006 | 500-600  | 0.001/0.00005" | 4          | 321 | 609  | ±0.007   |
| 4706-0007 | 600-700  | 0.001/0.00005" | 4          | 371 | 709  | ±0.008   |
| 4706-0008 | 700-800  | 0.001/0.00005" | 4          | 426 | 809  | ±0.009   |
| 4706-0009 | 800-900  | 0.001/0.00005" | 4          | 476 | 909  | ±0.010   |
| 4706-0010 | 900-1000 | 0.001/0.00005" | 4          | 576 | 1009 | ±0.010   |

MINI MICROMETER  
FOR CRAFTMAN JOB

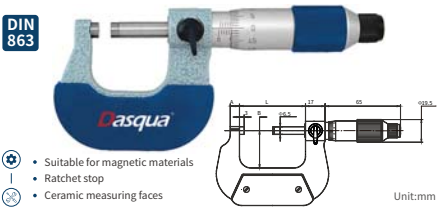


- Used to measure small dimensions
- Portable with small size

| Code      | Range  | Graduation |
|-----------|--------|------------|
| 4111-8103 | 0-15mm | 0.01mm     |
| 4112-5103 | 0-1/2" | 0.001"     |

NON-MAGNETIC  
OUTSIDE MICROMETER

DIN 863



- Suitable for magnetic materials
- Ratchet stop
- Ceramic measuring faces

| Code      | Range    | Resolution | Accuracy |
|-----------|----------|------------|----------|
| 4005-0205 | 0-25mm   | 0.01       | 0.004    |
| 4005-0210 | 25-50mm  | 0.01       | 0.004    |
| 4005-0215 | 50-75mm  | 0.01       | 0.005    |
| 4005-0220 | 75-100mm | 0.01       | 0.005    |

OUTSIDE MICROMETER

WITH COUNTER

DIN 863

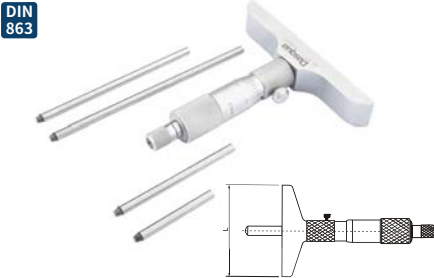


- Carbide measuring face
- Resolution: 0.01mm(Metric)
- Counter readout: 0.01mm(Metric)
- Strictly made in accordance with DIN863
- Mechanical digit counter for quick and error-free reading

| Code      | Range     | A   | B  | C     | L     | Accuracy |
|-----------|-----------|-----|----|-------|-------|----------|
| 4150-1005 | 0-25mm    | 3.0 | 6  | 26    | 32    | 0.004    |
| 4150-1010 | 25-50mm   | 3.0 | 8  | 32    | 57    | 0.004    |
| 4150-1015 | 50-75mm   | 3.0 | 8  | 44.5  | 82    | 0.005    |
| 4150-1020 | 75-100mm  | 3.0 | 8  | 57    | 107   | 0.005    |
| 4150-1025 | 100-125mm | 3.0 | 17 | 71.8  | 132.4 | 0.006    |
| 4150-1030 | 125-150mm | 3.0 | 17 | 84    | 157.8 | 0.006    |
| 4150-1035 | 150-175mm | 3.0 | 20 | 98.2  | 185   | 0.007    |
| 4150-1040 | 175-200mm | 3.0 | 20 | 111   | 210.4 | 0.007    |
| 4150-1045 | 200-225mm | 5.5 | 20 | 124   | 236   | 0.008    |
| 4150-1050 | 225-250mm | 5.5 | 20 | 136.5 | 261   | 0.008    |
| 4150-1055 | 250-275mm | 5.5 | 20 | 149   | 287   | 0.009    |
| 4150-1060 | 275-300mm | 5.5 | 20 | 162   | 312   | 0.009    |
| 4150-2005 | 0-1"      | 3.0 | 6  | 26    | 32    | 0.004    |
| 4150-2010 | 1-2"      | 3.0 | 8  | 32    | 57    | 0.004    |
| 4150-2015 | 2-3"      | 3.0 | 8  | 44.5  | 82    | 0.005    |
| 4150-2020 | 3-4"      | 3.0 | 8  | 57    | 107   | 0.005    |
| 4150-2025 | 4-5"      | 3.0 | 17 | 71.8  | 132.4 | 0.006    |
| 4150-2030 | 5-6"      | 3.0 | 17 | 84    | 157.8 | 0.006    |
| 4150-2035 | 6-7"      | 3.0 | 20 | 98.2  | 185   | 0.007    |
| 4150-2040 | 7-8"      | 3.0 | 20 | 111   | 210.4 | 0.007    |
| 4150-2045 | 8-9"      | 5.5 | 20 | 124   | 236   | 0.008    |
| 4150-2050 | 9-10"     | 5.5 | 20 | 136.5 | 261   | 0.008    |
| 4150-2055 | 10-11"    | 5.5 | 20 | 149   | 287   | 0.009    |
| 4150-2060 | 11-12"    | 5.5 | 20 | 162   | 312   | 0.009    |

DEPTH MICROMETER

DIN 863

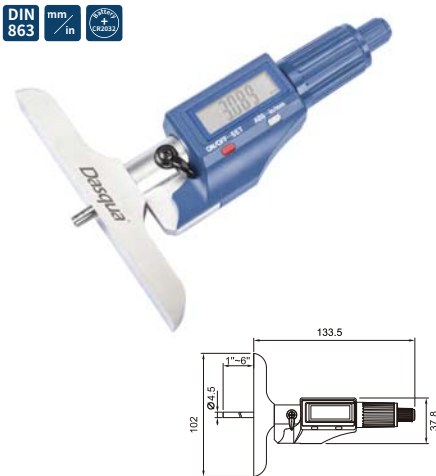


- Used to measure depth of holes or parts with grooved or elevated surfaces
- Strictly made in accordance with DIN 863
- With ratchet stop for constant force
- Spindle hardened, ground and lapped for ultimate accuracy
- Clear graduations laser-etched on satin chrome finish for easy reading
- With measuring rod clamp
- Carbide measuring surfaces ground for longer service life

| Code      | Range | Graduation | Accuracy  | L   | Anvil(pcs) |
|-----------|-------|------------|-----------|-----|------------|
| 4611-8106 | 0-25  | 0.01       | ±0.004    | 100 | 1          |
| 4611-8110 | 0-50  | 0.01       | ±0.004    | 100 | 2          |
| 4611-8115 | 0-75  | 0.01       | ±0.006    | 100 | 3          |
| 4611-8120 | 0-100 | 0.01       | ±0.006    | 100 | 4          |
| 4611-8125 | 0-150 | 0.01       | ±0.007    | 100 | 6          |
| 4611-8129 | 0-200 | 0.01       | ±0.008    | 100 | 8          |
| 4611-8130 | 0-300 | 0.01       | ±0.010    | 100 | 12         |
| 4612-5106 | 0-1"  | 0.001"     | ±0.00016" | 100 | 1          |
| 4612-5110 | 0-2"  | 0.001"     | ±0.00016" | 100 | 2          |
| 4612-5115 | 0-3"  | 0.001"     | ±0.00025" | 100 | 3          |
| 4612-5120 | 0-4"  | 0.001"     | ±0.00025" | 100 | 4          |
| 4612-5125 | 0-6"  | 0.001"     | ±0.00025" | 100 | 6          |
| 4612-5130 | 0-8"  | 0.001"     | ±0.0003"  | 100 | 8          |
| 4612-5135 | 0-12" | 0.001"     | ±0.0004"  | 100 | 12         |

DIGITAL DEPTH MICROMETER

DIN 863



- Large easy-to-read display
- Used to measure depth of holes or parts with grooved or elevated surfaces
- Strictly made in accordance with DIN 863
- With ratchet stop for constant force
- Spindle hardened, ground and lapped for ultimate accuracy
- Extension rods of different lengths offering larger measuring ranges
- With Hold, Zero, Metric/Inch Conversion function

| Code      | Range      | Resolution     | Accuracy      |
|-----------|------------|----------------|---------------|
| 4710-2205 | 0-150/0-6" | 0.001/0.00005" | 0.005/0.0002" |

DIGITAL DEPTH MICROMETER

mm/in

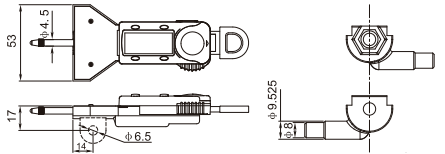
DIN 863 Data output IP65 Absolute



- Large measuring range
- High precision replaceable rod, no need to replace the zero position
- Probe accuracy: ±0.003mm
- Replaceable rod accuracy: ±(2+L/75)µm, L= Maximum measurement length (mm)
- Electronic display, scale display
- Ratchet measures force

| Code      | Range         | L  | A  | B   | Resolution     |
|-----------|---------------|----|----|-----|----------------|
| 4806-0005 | 0-25mm/0.1"   | 63 | 1  | 4.5 | 0.001/0.00005" |
| 4806-0010 | 0-50mm/0.2"   | 63 | 2  | 4.5 | 0.001/0.00005" |
| 4806-0015 | 0-100mm/0.4"  | 63 | 4  | 4.5 | 0.001/0.00005" |
| 4806-0020 | 0-150mm/0.6"  | 63 | 6  | 4.5 | 0.001/0.00005" |
| 4806-0025 | 0-200mm/0.8"  | 63 | 8  | 4.5 | 0.001/0.00005" |
| 4806-0030 | 0-300mm/0.12" | 63 | 12 | 4.5 | 0.001/0.00005" |

DIGITAL DEPTH GAGE



- Spring-loaded and hold measurement button for easy-to-use
- Hardened, ground and lapped measuring face
- Supplied in fitted case
- Super-large display

| Code      | Range     | Resolution   | Travel    | Accuracy     | Anvil          |
|-----------|-----------|--------------|-----------|--------------|----------------|
| 4710-1205 | 0-16"/400 | 0.01/0.0005" | 0-25/0-1" | 0.03/0.0015" | 1"/2"/3"/4"/5" |

INSIDE MICROMETER



- Spindle thread hardened, ground and lapped for ultimate accuracy
- Clear graduations laser-etched on satin chrome finish for easy reading
- Carbide measuring surfaces ground for longer service life
- Used to measure various inside dimensions
- With ratchet stop for constant pressure
- An inside micrometer set is optional
- With spindle lock

| Code      | Range    | Graduation | Type | A    | B   | C   | D    | Accuracy  | Unit:mm | Ring gage |
|-----------|----------|------------|------|------|-----|-----|------|-----------|---------|-----------|
| 4911-8105 | 5-30     | 0.01       | A    | 2.3  | 4.5 | 5.5 | 27.5 | ±0.005    |         | ✓         |
| 4911-8110 | 25-50    | 0.01       | B    | 12.3 | 4.5 | /   | 27.5 | ±0.006    |         | ✓         |
| 4911-8115 | 50-75    | 0.01       | B    | 12.3 | 4.5 | /   | 27.5 | ±0.007    |         | /         |
| 4911-8120 | 75-100   | 0.01       | B    | 12.3 | 4.5 | /   | 27.5 | ±0.008    |         | /         |
| 4911-8125 | 5-100    | 0.01       | /    | /    | /   | /   | /    | /         |         | /         |
| 4912-8129 | 5-150    | 0.01       | /    | /    | /   | /   | /    | /         |         | /         |
| 4912-5105 | 0.2-1.2" | 0.001"     | A    | 2.3  | 4.5 | 5.5 | 27.5 | ±0.00025" |         | ✓         |
| 4912-5110 | 1-2"     | 0.001"     | B    | 12.3 | 4.5 | /   | 27.5 | ±0.0003"  |         | ✓         |
| 4912-5115 | 2-3"     | 0.001"     | B    | 12.3 | 4.5 | /   | 27.5 | ±0.00035" |         | /         |
| 4912-5120 | 3-4"     | 0.001"     | B    | 12.3 | 4.5 | /   | 27.5 | ±0.0004"  |         | /         |
| 4912-5125 | 0.2-4"   | 0.001"     | /    | /    | /   | /   | /    | /         |         | /         |
| 4912-5130 | 0.2-6"   | 0.001"     | /    | /    | /   | /   | /    | /         |         | /         |

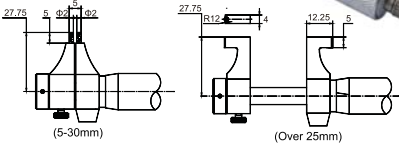
INSIDE MICROMETER



- Spindle thread hardened, ground and lapped for ultimate accuracy
- Clear graduations laser-etched on satin chrome finish for easy reading
- Carbide measuring surfaces ground for longer service life
- Used to measure various inside dimensions
- With ratchet stop for constant pressure
- An inside micrometer set is optional
- With spindle lock

| Code      | Range     | Resolution | Accuracy | Unit:mm |
|-----------|-----------|------------|----------|---------|
| 4911-8130 | 100-125mm | 0.01mm     | 0.009mm  |         |
| 4911-8135 | 125-150mm | 0.01mm     | 0.009mm  |         |
| 4911-8140 | 150-175mm | 0.01mm     | 0.01mm   |         |
| 4911-8145 | 175-200mm | 0.01mm     | 0.01mm   |         |
| 4911-8150 | 4-5"      | 0.01"      | 0.00036" |         |
| 4911-8155 | 5-6"      | 0.01"      | 0.00036" |         |
| 4911-8160 | 6-7"      | 0.01"      | 0.0004"  |         |
| 4911-8165 | 7-8"      | 0.01"      | 0.0004"  |         |

DIGITAL INSIDE MICROMETER



- Incl. 1x 1.5V battery
- Zero setting at any position
- Strictly made in accordance with DIN863
- For easy and rapid measurement of various inside dimensions
- LCD display with clear reading, metric/inch conversion
- With ratchet for constant measuring pressure
- Clamp wheel for quick and precise fixing

| Code      | Range          | Resolution     | Accuracy | Unit:mm |
|-----------|----------------|----------------|----------|---------|
| 4910-4105 | 5-30/0.2"-1.2" | 0.001/0.00005" | ±0.003   |         |
| 4910-4110 | 25-50/1"-2"    | 0.001/0.00005" | ±0.003   |         |
| 4910-4115 | 50-75/2"-3"    | 0.001/0.00005" | ±0.004   |         |
| 4910-4120 | 75-100/3"-4"   | 0.001/0.00005" | ±0.004   |         |
| 4905-0090 | 100-125/4-5"   | 0.001/0.00005" | ±0.005   |         |
| 4905-0095 | 125-150/5-6"   | 0.001/0.00005" | ±0.005   |         |
| 4905-0100 | 150-175/6-7"   | 0.001/0.00005" | ±0.005   |         |
| 4905-0105 | 175-200/7-8"   | 0.001/0.00005" | ±0.005   |         |

## TUBULAR INSIDE MICROMETER



- Wide range by combining extension rods and anvils with the micrometer head
- Strictly made in accordance with DIN 863
- Measuring rods hardened, ground and lapped
- Clear graduations laser-etched on satin chrome finish for easy reading

|           |         |            |                                            |          | Unit:mm |
|-----------|---------|------------|--------------------------------------------|----------|---------|
| Code      | Range   | Graduation | Extension Rod                              | Accuracy |         |
| 4311-8103 | 50-63   | 0.01       | Micrometer head                            | 0.005    |         |
| 4311-8106 | 50-100  | 0.01       | 13,25                                      | 0.007    |         |
| 4311-8107 | 50-150  | 0.01       | 13,25,50                                   | 0.009    |         |
| 4311-8109 | 50-300  | 0.01       | 13,25,50(2pcs),100                         | 0.014    |         |
| 4311-8111 | 50-500  | 0.01       | 13,25,50(2pcs),100,200                     | 0.019    |         |
| 4311-8113 | 50-600  | 0.01       | 13,25,50,100,150,200                       | 0.021    |         |
| 4311-8118 | 50-1000 | 0.01       | 13,25,50,100(2pcs),150,200,300             | 0.031    |         |
| 4311-8119 | 50-1500 | 0.01       | 13,25,50,100(2pcs),150,200(2pcs),300(2pcs) | 0.043    |         |
| 4312-5103 | 2.5~5"  | 0.001"     | Micrometer head                            | 0.0002"  |         |
| 4312-5106 | 2.4"    | 0.001"     | 0.5~1"                                     | 0.0025"  |         |
| 4312-5109 | 2.12"   | 0.001"     | 0.5~1.2"(2pcs),4"                          | 0.00045" |         |
| 4312-5112 | 2.20"   | 0.001"     | 0.5~1.2"(2pcs),4",8"                       | 0.00065" |         |
| 4312-5113 | 2.40"   | 0.001"     | 0.5~1.2~2.4"(2pcs),6",8",12"               | 0.00115" |         |
| 4312-5117 | 2.60"   | 0.001"     | 0.5~1~1.2~2.4"(2pcs),6"/8"/12pcs/12"(2pcs) | 0.00169" |         |

## TUBULAR INSIDE MICROMETER



- Wide range by combining extension rods and anvils with the micrometer head
- Strictly made in accordance with DIN 863
- Measuring rods hardened, ground and lapped
- Clear graduations laser-etched on satin chrome finish for easy reading

| Unit:mm          |           |            |                      |                                           |
|------------------|-----------|------------|----------------------|-------------------------------------------|
| Code             | Range     | Graduation | Travel of micrometer | Extension Rod                             |
| <b>4311-8220</b> | 1000-2000 | 0.01       | 50                   | 50,100(2pcs),200,500,1000                 |
| <b>4311-8225</b> | 1000-3000 | 0.01       | 50                   | 50,100(2pcs),200,500,1000,1500            |
| <b>4311-8230</b> | 1000-4000 | 0.01       | 50                   | 50,100(2pcs),200,500,1000(2pcs),1500,2000 |
| <b>4311-8235</b> | 1000-5000 | 0.01       | 50                   | 50,100(2pcs),200,500,1000(3pcs),1500,2000 |

## TUBULAR INSIDE MICROMETER



- Wide range by combining extensions rods and anvils with micrometer head
- Clear graduation laser etched on satin chrome finish for easy reading
- Strictly made in accordance with DIN863
- Measuring rods hardened, ground and lapped

| Code      | Range      | Resolution | Travel of micrometer | Extension Rods                   |
|-----------|------------|------------|----------------------|----------------------------------|
| 4311-8305 | 100-125mm  | 0.01       | 25                   | Micrometer head                  |
| 4311-8310 | 100-500mm  | 0.01       | 25                   | 25mm,50mm,100mm,200mm            |
| 4311-8315 | 100-900mm  | 0.01       | 25                   | 25mm,50mm,100mm,200mm,400mm      |
| 4311-8320 | 100-1300mm | 0.01       | 25                   | 25mm,50mm,100mm,200mm,400mm(2pc) |
| 4311-8325 | 100-1700mm | 0.01       | 25                   | 25mm,50mm,100mm,200mm,400mm(3pc) |
| 4311-8330 | 100-2100mm | 0.01       | 25                   | 25mm,50mm,100mm,200mm,400mm(4pc) |

## DIGITAL TUBLER INSIDE MICROMETER



- Wide range by combining extensions rods and anvils with micrometer head
- Clear graduation laser etched on satin chrome finish for easy reading
- Strictly made in accordance with DIN863
- Supplied with a standard gauge for zero setting

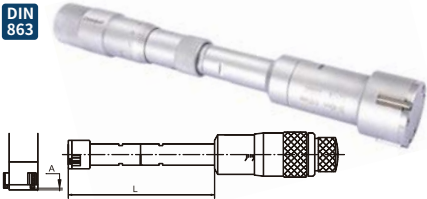
| Code      | Range      | Resolution | Extension Kods                                |
|-----------|------------|------------|-----------------------------------------------|
| 4341-0005 | 150-175mm  | 0.001      | Micrometer head                               |
| 4341-0010 | 150-1000mm | 0.001      | 25mm,50mm(2pcs),100mm,200mm,400mm             |
| 4341-0015 | 150-1500mm | 0.001      | 25mm,50mm(2pcs),100mm(2pcs),200mm,400mm(3pcs) |
| 4341-0020 | 150-2000mm | 0.001      | 25mm,50mm(2pcs),100mm(2pcs),200mm,400mm(2pcs) |





THREE POINTS INSIDE MICROMETER

DIN 863



| Code      | Range     | Resolution | Setting Ring | L      | A     | Accuracy |
|-----------|-----------|------------|--------------|--------|-------|----------|
| 4750-3108 | 2-2.5mm   | 0.001      | φ2.5mm       | 12.5mm | /     | 0.004mm  |
| 4750-3109 | 2.5-3mm   | 0.001      | φ2.5mm       | 12.5mm | /     | 0.004mm  |
| 4750-3110 | 3-4mm     | 0.001      | φ4mm         | 22.5mm | /     | 0.004mm  |
| 4750-4110 | 4-5mm     | 0.001      | φ5mm         | 22.5mm | /     | 0.004mm  |
| 4750-5110 | 5-6mm     | 0.001      | φ6mm         | 22.5mm | /     | 0.004mm  |
| 4411-5101 | 6-8mm     | 0.001      | φ6mm         | 54.5mm | 1.5mm | 0.004mm  |
| 4411-5102 | 8-10mm    | 0.001      | φ8mm         | 54.5mm | 1.5mm | 0.004mm  |
| 4411-5103 | 10-12mm   | 0.001      | φ10mm        | 54.5mm | 1.5mm | 0.004mm  |
| 4411-5104 | 12-16mm   | 0.001      | φ16mm        | 80mm   | 0.5mm | 0.004mm  |
| 4411-5105 | 16-20mm   | 0.001      | φ16mm        | 80mm   | 0.5mm | 0.004mm  |
| 4411-5106 | 20-25mm   | 0.001      | φ25mm        | 90mm   | 0.5mm | 0.004mm  |
| 4411-5107 | 25-30mm   | 0.001      | φ25mm        | 90mm   | 0.5mm | 0.004mm  |
| 4411-5108 | 30-40mm   | 0.001      | φ40mm        | 97mm   | 0.5mm | 0.004mm  |
| 4411-5109 | 40-50mm   | 0.001      | φ40mm        | 97mm   | 0.5mm | 0.005mm  |
| 4411-5110 | 50-63mm   | 0.001      | φ62mm        | 114mm  | 0.5mm | 0.005mm  |
| 4411-5111 | 62-75mm   | 0.001      | φ62mm        | 114mm  | 0.5mm | 0.005mm  |
| 4411-5112 | 75-88mm   | 0.001      | φ87mm        | 114mm  | 0.5mm | 0.005mm  |
| 4411-5113 | 87-100mm  | 0.001      | φ87mm        | 114mm  | 0.5mm | 0.005mm  |
| 4411-5114 | 100-125mm | 0.001      | Optional     | 145mm  | 0.5mm | 0.005mm  |
| 4411-5115 | 125-150mm | 0.001      | Optional     | 145mm  | 0.5mm | 0.005mm  |
| 4411-5116 | 150-175mm | 0.001      | Optional     | 145mm  | 0.5mm | 0.005mm  |
| 4411-5117 | 175-200mm | 0.001      | Optional     | 145mm  | 0.5mm | 0.005mm  |
| 4411-5118 | 200-225mm | 0.001      | Optional     | 145mm  | 0.5mm | 0.007mm  |
| 4411-5119 | 225-250mm | 0.001      | Optional     | 145mm  | 0.5mm | 0.007mm  |
| 4411-5120 | 250-275mm | 0.001      | Optional     | 145mm  | 0.5mm | 0.007mm  |
| 4411-5121 | 275-300mm | 0.001      | Optional     | 145mm  | 0.5mm | 0.007mm  |

- Applied for measuring through-holes and blind-holes
- With extension rods which are available in deeper holes
- With Ratchet stop for constant force
- Highly durable because of carbide-tipped measuring surfaces
- Setting rings for zero point adjustment
- Clear graduations laser-etched on satin chrome finish for easy reading
- Spindle hardened, ground and lapped for ultimate accuracy
- Setting ring gauge not included for sizes above 100mm

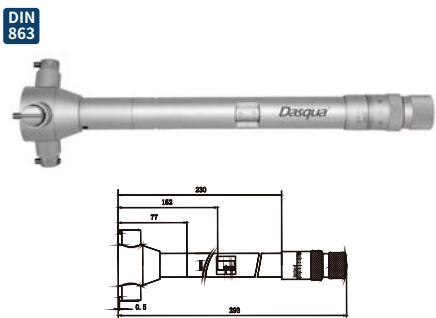


3 POINTS INSIDE MICROMETER SET

| Code      | Range                                     | Setting Ring | Graduation | Extension Rod | L          | A     | Accuracy |
|-----------|-------------------------------------------|--------------|------------|---------------|------------|-------|----------|
| 4411-9205 | 6-12 (6-8/8-10/10-12)                     | φ8/φ10       | 0.001      | 100           | 54.5       | 1.5   | 0.004    |
| 4411-3210 | 12-20 (12-16/16-20)                       | φ16          | 0.001      | 150           | 80         | 0.5   | 0.004    |
| 4411-3215 | 20-50 (20-25/25-30/30-40/40-50)           | φ25/φ40      | 0.001      | 150           | 90/97      | 0.5   | 0.004    |
| 4411-3220 | 50-100 (50-63/62-75/75-88/87-100)         | φ62/φ87      | 0.001      | 150           | 114        | 0.5   | 0.005    |
| 4412-0205 | 0.35"-0.5" (0.35"/0.35-0.425"/0.425-0.5") | 0.35"/0.5"   | 0.0001"    | 4"            | 2.18"      | 0.06" | 0.00016" |
| 4412-4210 | 0.5"-0.8" (0.5-0.65"/0.65-0.8")           | 0.65"        | 0.0001"    | 6"            | 3.2"       | 0.02" | 0.00016" |
| 4412-4207 | 0.8"-2" (0.8-1"/1-1.2"/1.2-1.6"/1.6-2")   | 1"/1.6"      | 0.0001"    | 6"            | 3.6"/3.88" | 0.02" | 0.00016" |
| 4412-4208 | 2"-4" (2-2.5"/2.5-3"/3-3.5"/3.5-4")       | 2.5"/3.5"    | 0.0001"    | 6"            | 4.56"      | 0.02" | 0.0002"  |
| 4750-5111 | 3-6mm(3-4-5-5.5-6mm)                      | φ4/φ5/φ6     | 0.001      | /             | 22.5       | /     | 0.004    |

THREE POINTS INSIDE MICROMETER

DIN 863

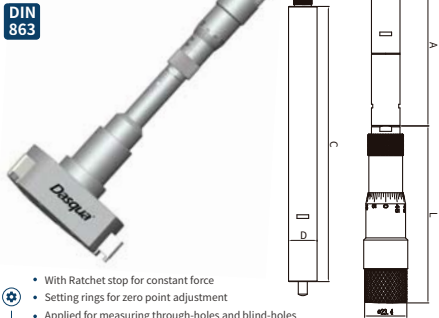


- Ratchet stop
- Measurements can be made close to the bottom of blind holes or into deep holes with an extension rod
- Self-centering 3-point precise measurement of inside diameter
- Patented construction for large measuring range
- Highly durable due to carbide tip contact points
- Supplied with zero adjustment setting ring

| Code      | Range     | Resolution | Setting rings | Accuracy |
|-----------|-----------|------------|---------------|----------|
| 4005-0110 | 50-70mm   | 0.001      | φ50           | 0.004    |
| 4005-0115 | 70-100mm  | 0.001      | φ70           | 0.004    |
| 4005-0120 | 100-150mm | 0.001      | φ100          | 0.005    |
| 4005-0125 | 150-250mm | 0.001      | φ150          | 0.007    |
| 4005-0130 | 200-300mm | 0.001      | Optional      | 0.007    |

THREE POINTS INSIDE MICROMETER

DIN 863



- With Ratchet stop for constant force
- Setting rings for zero point adjustment
- Applied for measuring through-holes and blind-holes
- With extension rods which are available in deeper holes
- Highly durable because of carbide-tipped measuring surfaces
- Clear graduation laser-etched on satin chrome finish for easy reading
- Spindle hardened, ground and lapped for ultimate accuracy

| Code        | Range     | Resolution | A   | B | L  | C     | D      | Accuracy |
|-------------|-----------|------------|-----|---|----|-------|--------|----------|
| 4411-5114-H | 100-125mm | 0.001      | 156 | 1 | 98 | 152.4 | Ø25.5  | 0.005    |
| 4411-5115-H | 125-150mm | 0.001      | 156 | 1 | 98 | 152.4 | Ø25.6  | 0.005    |
| 4411-5116-H | 150-175mm | 0.001      | 156 | 1 | 98 | 152.4 | Ø25.7  | 0.006    |
| 4411-5117-H | 175-200mm | 0.001      | 156 | 1 | 98 | 152.4 | Ø25.8  | 0.006    |
| 4411-5118-H | 200-225mm | 0.001      | 156 | 1 | 98 | 152.4 | Ø25.9  | 0.007    |
| 4411-5119-H | 225-250mm | 0.001      | 156 | 1 | 98 | 152.4 | Ø25.10 | 0.007    |
| 4411-5120-H | 250-275mm | 0.001      | 156 | 1 | 98 | 152.4 | Ø25.11 | 0.008    |
| 4411-5121-H | 275-300mm | 0.001      | 156 | 1 | 98 | 152.4 | Ø25.12 | 0.008    |
| 4411-5122-H | 300-325mm | 0.001      | 156 | 1 | 98 | 152.4 | Ø25.13 | 0.009    |
| 4411-5123-H | 325-350mm | 0.001      | 156 | 1 | 98 | 152.4 | Ø25.14 | 0.009    |

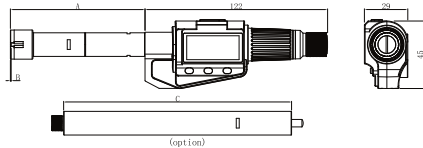
IP54 WATER PROOF DIGITAL  
3 POINTS INSIDE MICROMETER



- Large easy-to-read display
- IP54 protection against liquid
- With Ratchet stop for constant force
- Setting rings for zero point adjustment
- Setting ring gauge not included for sizes above 100mm
- Applied for measuring through-holes and blind-holes
- With extension rods which are available in deeper holes
- Spindle hardened, ground and lapped for ultimate accuracy
- Highly durable because of carbide-tipped measuring surfaces
- With ABSOLUTE, Hold and Metric/Inch Conversion function

| Code      | Range   | Setting Ring | Resolution     | A   | B   | Accuracy |
|-----------|---------|--------------|----------------|-----|-----|----------|
| 4511-5101 | 6-8     | φ6           | 0.001/0.00005" | 55  | 1   | 0.004    |
| 4511-5102 | 8-10    | φ8           | 0.001/0.00005" | 55  | 1.5 | 0.004    |
| 4511-5103 | 10-12   | φ10          | 0.001/0.00005" | 55  | 1.5 | 0.004    |
| 4511-5104 | 12-16   | φ12          | 0.001/0.00005" | 80  | 0.5 | 0.004    |
| 4511-5105 | 16-20   | φ16          | 0.001/0.00005" | 80  | 0.5 | 0.004    |
| 4511-5106 | 20-25   | φ20          | 0.001/0.00005" | 90  | 0.5 | 0.004    |
| 4511-5107 | 25-30   | φ25          | 0.001/0.00005" | 90  | 0.5 | 0.004    |
| 4511-5108 | 30-40   | φ30          | 0.001/0.00005" | 105 | 0.5 | 0.004    |
| 4511-5109 | 40-50   | φ40          | 0.001/0.00005" | 105 | 0.5 | 0.005    |
| 4511-5110 | 50-63   | φ50          | 0.001/0.00005" | 127 | 0.5 | 0.005    |
| 4511-5111 | 62-75   | φ62          | 0.001/0.00005" | 127 | 0.5 | 0.005    |
| 4511-5112 | 75-88   | φ75          | 0.001/0.00005" | 127 | 0.5 | 0.005    |
| 4511-5113 | 87-100  | φ87          | 0.001/0.00005" | 127 | 0.5 | 0.005    |
| 4511-5114 | 100-125 | Optional     | 0.001/0.00005" | 156 | 1   | 0.005    |
| 4511-5115 | 125-150 | Optional     | 0.001/0.00005" | 156 | 1   | 0.005    |
| 4511-5116 | 150-175 | Optional     | 0.001/0.00005" | 156 | 1   | 0.006    |
| 4511-5117 | 175-200 | Optional     | 0.001/0.00005" | 156 | 1   | 0.006    |
| 4511-5118 | 200-225 | Optional     | 0.001/0.00005" | 156 | 1   | 0.007    |
| 4511-5119 | 225-250 | Optional     | 0.001/0.00005" | 156 | 1   | 0.007    |
| 4511-5120 | 250-275 | Optional     | 0.001/0.00005" | 156 | 1   | 0.008    |
| 4511-5121 | 275-300 | Optional     | 0.001/0.00005" | 156 | 1   | 0.008    |
| 4511-5122 | 300-325 | Optional     | 0.001/0.00005" | 156 | 1   | 0.009    |
| 4511-5123 | 325-350 | Optional     | 0.001/0.00005" | 156 | 1   | 0.009    |

IP54 WATER PROOF DIGITAL  
3 POINTS INSIDE MICROMETER SET

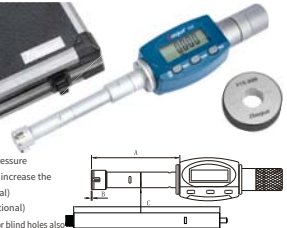


| Code      | Range                             | Resolution     | Setting Ring | Extension Rod(C) | A      | B     | Accuracy |
|-----------|-----------------------------------|----------------|--------------|------------------|--------|-------|----------|
| 4511-9205 | 6-12 (6-8/8-10/10-12)             | 0.001/0.00005" | φ8/φ10       | 101.6            | 55     | 1/1.5 | 0.004    |
| 4511-9210 | 12-20 (12-16/16-20)               | 0.001/0.00005" | φ16          | 152.4            | 80     | 0.5   | 0.004    |
| 4511-9215 | 20-50 (20-25/25-30/30-40/40-50)   | 0.001/0.00005" | φ25/φ40      | 152.4            | 90/105 | 0.5   | 0.004    |
| 4511-9220 | 50-100 (50-63/62-75/75-88/87-100) | 0.001/0.00005" | φ62/φ87      | 152.4            | 127    | 0.5   | 0.005    |

IP65 WATER PROOF DIGITAL  
THREE POINTS INSIDE MICROMETER



- Large LCD display with clear reading
- IP65 protection against liquid
- 3V Lithium battery CR2032
- With data output
- With carbide measuring face
- Setting rings for origin point setting
- With ratchet for constant measuring pressure
- Additional extensions can be added to increase the measuring depth (12mm above optional)
- Built in wireless data transmission (optional)
- For through holes and from up 12.5 mm for blind holes also
- Setting ring gauge not included for sizes above 100mm



| Code      | Range   | Setting Ring | Resolution     | A   | B   | Accuracy |
|-----------|---------|--------------|----------------|-----|-----|----------|
| 4711-7301 | 6-8     | φ6           | 0.001/0.00005" | 55  | 1   | 0.004    |
| 4711-7302 | 8-10    | φ8           | 0.001/0.00005" | 55  | 1.5 | 0.004    |
| 4711-7303 | 10-12   | φ10          | 0.001/0.00005" | 55  | 1.5 | 0.004    |
| 4711-7304 | 12-16   | φ12          | 0.001/0.00005" | 80  | 0.5 | 0.004    |
| 4711-7305 | 16-20   | φ16          | 0.001/0.00005" | 80  | 0.5 | 0.004    |
| 4711-7306 | 20-25   | φ20          | 0.001/0.00005" | 90  | 0.5 | 0.004    |
| 4711-7307 | 25-30   | φ25          | 0.001/0.00005" | 90  | 0.5 | 0.004    |
| 4711-7308 | 30-40   | φ30          | 0.001/0.00005" | 105 | 0.5 | 0.004    |
| 4711-7309 | 40-50   | φ40          | 0.001/0.00005" | 105 | 0.5 | 0.005    |
| 4711-7310 | 50-63   | φ50          | 0.001/0.00005" | 127 | 0.5 | 0.005    |
| 4711-7311 | 62-75   | φ62          | 0.001/0.00005" | 127 | 0.5 | 0.005    |
| 4711-7312 | 75-88   | φ75          | 0.001/0.00005" | 127 | 0.5 | 0.005    |
| 4711-7313 | 87-100  | φ87          | 0.001/0.00005" | 127 | 0.5 | 0.005    |
| 4711-8301 | 100-125 | Optional     | 0.001/0.00005" | 156 | 1   | 0.005    |
| 4711-8302 | 125-150 | Optional     | 0.001/0.00005" | 156 | 1   | 0.005    |
| 4711-8303 | 150-175 | Optional     | 0.001/0.00005" | 156 | 1   | 0.006    |
| 4711-8304 | 175-200 | Optional     | 0.001/0.00005" | 156 | 1   | 0.006    |
| 4711-8305 | 200-225 | Optional     | 0.001/0.00005" | 156 | 1   | 0.007    |
| 4711-8306 | 225-250 | Optional     | 0.001/0.00005" | 156 | 1   | 0.007    |
| 4711-8307 | 250-275 | Optional     | 0.001/0.00005" | 156 | 1   | 0.008    |
| 4711-8308 | 275-300 | Optional     | 0.001/0.00005" | 156 | 1   | 0.008    |
| 4711-8309 | 300-325 | Optional     | 0.001/0.00005" | 156 | 1   | 0.009    |
| 4711-8310 | 325-350 | Optional     | 0.001/0.00005" | 156 | 1   | 0.009    |

WITH WIRELESS SYSTEM:

| Code      | Range   | Setting Ring | Resolution     | A   | B   | Accuracy |
|-----------|---------|--------------|----------------|-----|-----|----------|
| 4711-2101 | 6-8     | φ8           | 0.001/0.00005" | 55  | 1   | 0.004    |
| 4711-2102 | 8-10    | φ8           | 0.001/0.00005" | 55  | 1.5 | 0.004    |
| 4711-2103 | 10-12   | φ12          | 0.001/0.00005" | 55  | 1.5 | 0.004    |
| 4711-2104 | 12-16   | φ16          | 0.001/0.00005" | 80  | 0.5 | 0.004    |
| 4711-2105 | 16-20   | φ16          | 0.001/0.00005" | 80  | 0.5 | 0.004    |
| 4711-2106 | 20-25   | φ25          | 0.001/0.00005" | 90  | 0.5 | 0.004    |
| 4711-2107 | 25-30   | φ25          | 0.001/0.00005" | 90  | 0.5 | 0.004    |
| 4711-2108 | 30-40   | φ40          | 0.001/0.00005" | 105 | 0.5 | 0.004    |
| 4711-2109 | 40-50   | φ40          | 0.001/0.00005" | 105 | 0.5 | 0.004    |
| 4711-2110 | 50-63   | φ62          | 0.001/0.00005" | 127 | 0.5 | 0.005    |
| 4711-2111 | 62-75   | φ62          | 0.001/0.00005" | 127 | 0.5 | 0.005    |
| 4711-2112 | 75-88   | φ87          | 0.001/0.00005" | 127 | 0.5 | 0.005    |
| 4711-2113 | 87-100  | φ87          | 0.001/0.00005" | 127 | 0.5 | 0.005    |
| 4711-3101 | 100-125 | Optional     | 0.001/0.00005" | 156 | 1   | 0.005    |
| 4711-3102 | 125-150 | Optional     | 0.001/0.00005" | 156 | 1   | 0.005    |
| 4711-3103 | 150-175 | Optional     | 0.001/0.00005" | 156 | 1   | 0.006    |
| 4711-3104 | 175-200 | Optional     | 0.001/0.00005" | 156 | 1   | 0.006    |
| 4711-3105 | 200-225 | Optional     | 0.001/0.00005" | 156 | 1   | 0.007    |
| 4711-3106 | 225-250 | Optional     | 0.001/0.00005" | 156 | 1   | 0.007    |
| 4711-3107 | 250-275 | Optional     | 0.001/0.00005" | 156 | 1   | 0.008    |
| 4711-3108 | 275-300 | Optional     | 0.001/0.00005" | 156 | 1   | 0.008    |
| 4711-3109 | 300-325 | Optional     | 0.001/0.00005" | 156 | 1   | 0.009    |
| 4711-3110 | 325-350 | Optional     | 0.001/0.00005" | 156 | 1   | 0.009    |

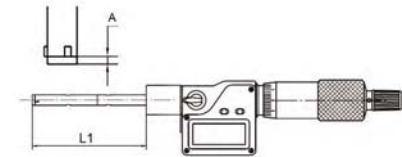
IP65 WATER PROOF DIGITAL  
3 POINTS INSIDE MICROMETER SET

| Code      | Range  | Resolution     | Setting Ring | Extension Rod | A      | B     | Accuracy |
|-----------|--------|----------------|--------------|---------------|--------|-------|----------|
| 4711-4405 | 6-12   | 0.001/0.00005" | φ8/φ10       | 101.6         | 55     | 1/1.5 | 0.004    |
| 4711-4410 | 12-20  | 0.001/0.00005" | φ16          | 152.4         | 80     | 0.5   | 0.004    |
| 4711-4415 | 20-50  | 0.001/0.00005" | φ25/φ40      | 152.4         | 90/105 | 0.5   | 0.004    |
| 4711-4420 | 50-100 | 0.001/0.00005" | φ62/φ87      | 152.4         | 127    | 0.5   | 0.005    |

WITH WIRELESS SYSTEM SET

| Code      | Range  | Resolution     | Setting Ring | Extension Rod | A      | B     | Accuracy |
|-----------|--------|----------------|--------------|---------------|--------|-------|----------|
| 4711-1105 | 6-12   | 0.001/0.00005" | φ8/φ10       | 101.6         | 55     | 1/1.5 | 0.004    |
| 4711-1110 | 12-20  | 0.001/0.00005" | φ16          | 152.4         | 80     | 0.5   | 0.004    |
| 4711-1115 | 20-50  | 0.001/0.00005" | φ25/φ40      | 152.4         | 90/105 | 0.5   | 0.004    |
| 4711-1120 | 50-100 | 0.001/0.00005" | φ62/φ87      | 152.4         | 127    | 0.5   | 0.005    |

IP65 DIGITAL THREE POINTS  
INSIDE MICROMETER



- Standard extension rod
- Ratchet force measurement
- Large screen digital display, easy to read
- Heat treatment and precision grinding of the measuring rod
- Standard calibration ring gauge for ranges of 100mm and below
- Carbide measuring surface, product surface hard chrome plated
- IP65 protection level ensures that the product can work reliably in harsh environments
- The measuring range can be expanded by connecting an extension rod and a probe with a micrometer head
- Suitable for precision measurement of blind holes and through holes, equipped with an extension rod to measure deep hole dimensions

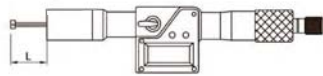
Unit:mm

| Code        | Range   | Setting rings | Extension rod | L1 | A   | Accuracy |
|-------------|---------|---------------|---------------|----|-----|----------|
| 4711-7301-A | 6-8mm   | Φ6            | 100           | 55 | 1   | 0.004    |
| 4711-7302-A | 8-10mm  | Φ8            | 100           | 55 | 1.5 | 0.004    |
| 4711-7303-A | 10-12mm | Φ10           | 100           | 55 | 1.5 | 0.004    |
| 4711-7304-A | 12-16mm | Φ16           | 150           | 80 | 0.5 | 0.004    |
| 4711-7305-A | 16-20mm | Φ16           | 150           | 80 | 0.5 | 0.004    |
| 4711-7306-A | 20-25mm | Φ25           | 150           | 90 | 0.5 | 0.004    |
| 4711-7307-A | 25-30mm | Φ25           | 150           | 90 | 0.5 | 0.004    |
| 4711-7308-A | 30-40mm | Φ40           | 150           | 97 | 0.5 | 0.004    |
| 4711-7309-A | 40-50mm | Φ40           | 150           | 97 | 0.5 | 0.005    |

Unit:mm

| Code        | Range     | Setting rings | Extension rod | L1  | A   | Accuracy |
|-------------|-----------|---------------|---------------|-----|-----|----------|
| 4711-7310-A | 50-63mm   | Φ62           | 150           | 114 | 0.5 | 0.005    |
| 4711-7311-A | 62-75mm   | Φ62           | 150           | 114 | 0.5 | 0.005    |
| 4711-7312-A | 75-88mm   | Φ87           | 150           | 114 | 0.5 | 0.005    |
| 4711-7313-A | 87-100mm  | Φ87           | 150           | 114 | 0.5 | 0.005    |
| 4711-8301-A | 100-125mm | Optional      | 150           | 114 | 0.5 | 0.005    |
| 4711-8302-A | 125-150mm | Optional      | 150           | 150 | 0.5 | 0.005    |
| 4711-8303-A | 150-175mm | Optional      | 150           | 150 | 0.5 | 0.005    |
| 4711-8304-A | 175-200mm | Optional      | 150           | 150 | 0.5 | 0.005    |
| 4711-8305-A | 200-225mm | Optional      | 150           | 150 | 0.5 | 0.007    |
| 4711-8306-A | 225-250mm | Optional      | 150           | 150 | 0.5 | 0.007    |
| 4711-8307-A | 250-275mm | Optional      | 150           | 150 | 0.5 | 0.007    |
| 4711-8308-A | 275-300mm | Optional      | 150           | 150 | 0.5 | 0.007    |

IP65 DIGITAL THREE POINTS  
INSIDE MICROMETER



- Ratchet force measurement
- Equipped with calibration ring gauge
- Data can be transmitted via wire or wireless
- IP65 Protection against liquid and dust
- Suitable for precision measurement of blind holes and through holes
- Measuring range 2-6mm, two-point type, used to measure small hole carbide measuring surface

Unit:mm

| Code        | Range   | Setting rings | L    | Accuracy |
|-------------|---------|---------------|------|----------|
| 4711-7405-A | 2-2.5mm | Φ2.5          | 12.5 | 0.004    |
| 4711-7410-A | 2.5-3mm | Φ2.5          | 12.5 | 0.004    |
| 4711-7415-A | 3-4mm   | Φ4            | 22.5 | 0.004    |
| 4711-7420-A | 4-5mm   | Φ5            | 22.5 | 0.004    |
| 4711-7425-A | 5-6mm   | Φ6            | 22.5 | 0.004    |

SETTING RING

- This setting ring is applicable for zero setting of inside micrometers, three points internal micrometers



Unit:mm

| Code           | Diameter |
|----------------|----------|
| 4411-5101-H-RG | Φ6       |
| 4411-5102-H-RG | Φ8       |
| 4411-5103-H-RG | Φ10      |
| 4411-5104-H-RG | Φ12      |
| 4411-5105-H-RG | Φ16      |
| 4411-5106-H-RG | Φ20      |
| 4411-5107-H-RG | Φ25      |
| 4411-5108-H-RG | Φ30      |
| 4411-5109-H-RG | Φ40      |
| 4411-5110-H-RG | Φ50      |
| 4411-5111-H-RG | Φ62      |
| 4411-5112-H-RG | Φ75      |
| 4411-5113-H-RG | Φ87      |
| 4411-5114-H-RG | Φ125     |
| 4411-5115-H-RG | Φ175     |
| 4411-5116-H-RG | Φ100     |

EXTENSION ROD

FOR 3 POINTS INSIDE MICROMETER



- This extension rod for 3 points inside micrometer

Unit:mm

| Code      | Size       | Diameter | Model | Length |
|-----------|------------|----------|-------|--------|
| 4411-0000 | 6-12mm     | 5.8      | M5    | 100    |
| 4411-0005 | 12-20mm    | 11.8     | M8    | 150    |
| 4411-0010 | 20-30mm    | 16       | M10   | 150    |
| 4411-0015 | 30-50mm    | 23.4     | M18   | 150    |
| 4411-0020 | 50-100mm   | 23.4     | M21   | 150    |
| 4411-0025 | over 100mm | 23.4     | M18   | 150    |

DIGITAL 3-POINT PISTOL BORE GAUGE

mm/in DIN 863 Absolute Data output



- SPC data output
- Display can rotate 90°
- Absolute system
- 3V Lithium battery CR2032
- With carbide measuring face
- Setting rings for origin point setting
- 100mm unpaired calibration ring gauge
- Built in wireless data transmission (optional)
- Measuring contact points are designed to allow measurements near the bottom of blind holes

Unit:mm

| Code        | Range             | Ring gauge | A   | B   | D     | Accuracy       |
|-------------|-------------------|------------|-----|-----|-------|----------------|
| 4600-0001-A | 6-8/0.275-0.315"  | φ8         | 55  | 1   | φ5.8  | 0.004/0.00015" |
| 4600-0002-A | 8-10/0.315-0.425" | φ8         | 55  | 1.5 | φ5.8  | 0.004/0.00015" |
| 4600-0003-A | 10-12/0.425-0.5"  | φ12        | 55  | 1.5 | φ5.8  | 0.004/0.00015" |
| 4600-0004-A | 12-16/0.5-0.65"   | φ16        | 80  | 0.5 | φ11.8 | 0.004/0.00015" |
| 4600-0005-A | 16-20/0.65-0.8"   | φ16        | 80  | 0.5 | φ11.8 | 0.004/0.00015" |
| 4600-0006-A | 20-25/0.8-1.0"    | φ25        | 90  | 0.5 | φ15.8 | 0.004/0.00015" |
| 4600-0007-A | 25-30/1.0-1.2"    | φ25        | 90  | 0.5 | φ15.8 | 0.004/0.00015" |
| 4600-0008-A | 30-40/1.2-1.6"    | φ40        | 105 | 0.5 | φ23.8 | 0.004/0.00015" |
| 4600-0009-A | 40-50/1.6-2.0"    | φ40        | 105 | 0.5 | φ23.8 | 0.005/0.0002"  |
| 4600-0010-A | 50-63/2.0-2.5"    | φ62        | 127 | 0.5 | φ23.8 | 0.005/0.0002"  |
| 4600-0011-A | 62-75/2.5-3.0"    | φ62        | 127 | 0.5 | φ23.8 | 0.005/0.0002"  |
| 4600-0012-A | 75-88/3.0-3.5"    | φ87        | 127 | 0.5 | φ23.8 | 0.005/0.0002"  |
| 4600-0013-A | 87-100/3.5-4.0"   | φ87        | 127 | 0.5 | φ23.8 | 0.005/0.0002"  |

DIGITAL 3-POINT PISTOL BORE GAUGE 100-300MM

mm/in DIN 863 Absolute Data output

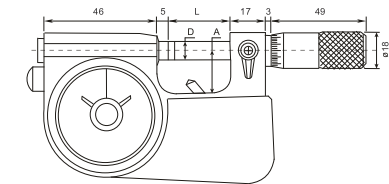


- Digital indicator is optional
- Absolute Capacitor system
- 3V Lithium battery CR2032
- SPC data output
- Setting rings for origin point setting
- Display can rotate 90°
- Built in wireless data transmission (optional)
- With ratchet for constant measuring pressure
- Measuring contact points are designed to allow measurements near the bottom of blind holes. With carbide measuring face
- Additional extensions can be added to increase the measuring depth (12mm above optional)

Unit:mm

| Code      | Range            | Ring gauge | A   | B | D     | Accuracy       |
|-----------|------------------|------------|-----|---|-------|----------------|
| 4600-0014 | 100-125/4-5.0"   | Optional   | 156 | 1 | φ25.5 | 0.005/0.0002"  |
| 4600-0015 | 125-150/5-6.0"   | Optional   | 156 | 1 | φ25.5 | 0.005/0.0002"  |
| 4600-0016 | 150-175/6-7.0"   | Optional   | 156 | 1 | φ25.5 | 0.006/0.00025" |
| 4600-0017 | 175-200/7-8.0"   | Optional   | 165 | 1 | φ25.5 | 0.006/0.00025" |
| 4600-0018 | 200-225/8-9.0"   | Optional   | 156 | 1 | φ25.5 | 0.007/0.0003"  |
| 4600-0019 | 225-250/9-10.0"  | Optional   | 156 | 1 | φ25.5 | 0.007/0.0003"  |
| 4600-0020 | 250-275/10-11.0" | Optional   | 156 | 1 | φ25.5 | 0.008/0.0003"  |
| 4600-0021 | 275-300/11-12.0" | Optional   | 156 | 1 | φ25.5 | 0.008/0.0003"  |

DIAL SNAP MICROMETER



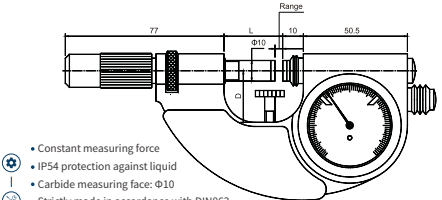
- Retractable anvils with indicator to quickly check go/no-go of mass-produced parts
- Spindle hardened, ground and lapped for ultimate accuracy
- Clear graduations laser-etched on satin chrome finish for easy reading for double-checking
- With spindle lock

Unit:mm

| Code      | Range  | Graduation of Micrometer Head | Graduation of Indicator | A  | D    | L     |
|-----------|--------|-------------------------------|-------------------------|----|------|-------|
| 4146-1005 | 0-25   | 0.002                         | 0.001                   | 19 | φ6.5 | 28.5  |
| 4146-1010 | 25-50  | 0.002                         | 0.001                   | 30 | φ6.5 | 53.5  |
| 4146-1015 | 50-75  | 0.002                         | 0.001                   | 45 | φ6.5 | 78.5  |
| 4146-1020 | 75-100 | 0.002                         | 0.001                   | 57 | φ6.5 | 103.5 |
| 4146-1000 | 0-25   | 0.002                         | 0.001                   | 19 | φ8   | 28.5  |

DIAL SNAP GAUGE

IP54



- Constant measuring force
- IP54 protection against liquid
- Carbide measuring face: φ10
- Strictly made in accordance with DIN863
- Direct GO/NG judgement for mass produced parts
- Operating and display units antiglare with satin chrome finish
- Adjustable tolerance makers

Unit:mm

| Code      | Range  | Graduation | L     | D    |
|-----------|--------|------------|-------|------|
| 4146-5105 | 0-25   | 0.001      | 28.5  | 25   |
| 4146-5110 | 25-50  | 0.001      | 53.5  | 35   |
| 4146-5115 | 50-75  | 0.001      | 78.5  | 47.5 |
| 4146-5120 | 75-100 | 0.001      | 103.5 | 60   |



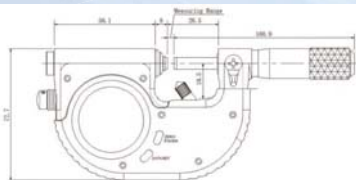
## WITH DIAL & DIGITAL COMBINED

- **Efficient Measurement:**
  - Back to ZERO at the touch of the button
  - Easy-to-Read: with Tolerance Alarm function with Dual display(Dial & Digit)
  - Efficient Data Collection : Built-in Wireless Data. Transmission system
  - Built-in Rechargeable Battery

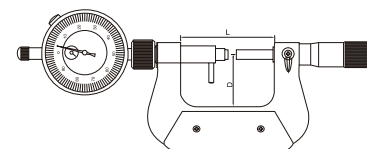


| Unit:mm   |        |            |          |             |
|-----------|--------|------------|----------|-------------|
| Code      | Range  | Resolution | Accuracy | Data output |
| 4146-5005 | 0-25   | 0.005      | ±0.001   | /           |
| 4146-5010 | 25-50  | 0.005      | ±0.001   | /           |
| 4146-5015 | 50-75  | 0.005      | ±0.001   | /           |
| 4146-5020 | 75-100 | 0.005      | ±0.001   | /           |
| 4146-5025 | 0-25   | 0.002      | ±0.001   | /           |
| 4146-5030 | 25-50  | 0.002      | ±0.001   | /           |
| 4146-5035 | 50-75  | 0.002      | ±0.001   | /           |
| 4146-5040 | 75-100 | 0.002      | ±0.001   | /           |
| 4146-5045 | 0-25   | 0.002      | ±0.001   | Bluetooth   |
| 4146-5050 | 25-50  | 0.002      | ±0.001   | Bluetooth   |
| 4146-5055 | 50-75  | 0.002      | ±0.001   | Bluetooth   |
| 4146-5060 | 75-100 | 0.002      | ±0.001   | Bluetooth   |
| 4146-5065 | 0-25   | 0.001      | ±0.001   | Bluetooth   |
| 4146-5070 | 25-50  | 0.001      | ±0.001   | Bluetooth   |
| 4146-5075 | 50-75  | 0.001      | ±0.001   | Bluetooth   |
| 4146-5080 | 75-100 | 0.001      | ±0.001   | Bluetooth   |

Unit:mm



## MICROMETER WITH DIAL INDICATOR



- Uses dial indicator for direct GO/NG-GO judgment for mass-produced parts
- Anvil retracting trigger for quick measurement
- With a standard bar except for 0 - 25mm models

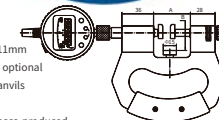
| Unit:mm   |         |     |     |            |          |
|-----------|---------|-----|-----|------------|----------|
| Code      | Range   | L   | D   | Graduation | Accuracy |
| 4403-0005 | 0-25    | 67  | 38  | 0.01       | 0.004    |
| 4403-0010 | 25-50   | 92  | 50  | 0.01       | 0.004    |
| 4403-0015 | 50-75   | 118 | 62  | 0.01       | 0.005    |
| 4403-0020 | 75-100  | 143 | 70  | 0.01       | 0.005    |
| 4403-0025 | 100-125 | 168 | 82  | 0.01       | 0.006    |
| 4403-0030 | 125-150 | 192 | 95  | 0.01       | 0.006    |
| 4403-0035 | 150-175 | 217 | 107 | 0.01       | 0.007    |

Unit:mm

### WITHOUT INDICATOR

DIN  
863

- Installing dimension is 8mm
  - Travel of moving anvil: 3mm
  - Dimension of measuring face: 14\*11mm
  - High precision of dial indicator is optional
  - Angles in the ends of the two anvils for easy inserting works
  - Used to measuring diameters of mass-produced cylinder and shafts
- 



Unit:mm

| Code      | Range     | A   | B     |
|-----------|-----------|-----|-------|
| 4147-4005 | 0-25mm    | 42  | 20.0  |
| 4147-4010 | 25-50mm   | 69  | 32.5  |
| 4147-4015 | 50-75mm   | 94  | 45.0  |
| 4147-4020 | 75-100mm  | 119 | 57.5  |
| 4147-4025 | 100-125mm | 144 | 70.0  |
| 4147-4030 | 125-150mm | 169 | 82.5  |
| 4147-4035 | 150-175mm | 194 | 95.5  |
| 4147-4040 | 175-200mm | 219 | 107.5 |
| 4147-4045 | 200-225mm | 244 | 120.0 |
| 4147-4050 | 225-250mm | 269 | 132.5 |
| 4147-4055 | 250-275mm | 294 | 145.0 |
| 4147-4060 | 275-300mm | 319 | 157.5 |



DIAL SNAP GAUGE FOR GO/NOGO

DIN 863



Type A

Type B

Type D

- Travel of moving anvil:3mm
- Used to measure mass-produced part
- High precision of dial indicator is optional
- Probes types: Type A/Type B and Type D
- Interchangeable anvils for type D(optional)

WITHOUT INDICATOR

| Code      | Range     | Type |
|-----------|-----------|------|
| 4147-2405 | 0-25mm    | A    |
| 4147-2410 | 0-50mm    | A    |
| 4147-2415 | 50-100mm  | A    |
| 4147-2420 | 100-150mm | A    |
| 4147-2425 | 150-200mm | A    |
| 4147-2430 | 0-40mm    | B    |
| 4147-2435 | 40-90mm   | B    |
| 4147-2440 | 90-140mm  | B    |
| 4147-2445 | 140-190mm | B    |
| 4147-2450 | 0-40mm    | D    |
| 4147-2455 | 40-90mm   | D    |
| 4147-2460 | 90-140mm  | D    |
| 4147-2465 | 140-190mm | D    |

WITH INDICATOR

| Code      | Range     | Type |
|-----------|-----------|------|
| 4147-3305 | 0-25mm    | A    |
| 4147-3310 | 0-50mm    | A    |
| 4147-3315 | 50-100mm  | A    |
| 4147-3320 | 100-150mm | A    |
| 4147-3325 | 150-200mm | A    |
| 4147-3330 | 0-40mm    | B    |
| 4147-3335 | 40-90mm   | B    |
| 4147-3340 | 90-140mm  | B    |
| 4147-3345 | 140-190mm | B    |
| 4147-3350 | 0-40mm    | D    |
| 4147-3355 | 40-90mm   | D    |
| 4147-3360 | 90-140mm  | D    |
| 4147-3365 | 140-190mm | D    |

UNIVERSAL DIGITAL MICROMETER

DIN 863

mm in

IP65



- 7 pairs of interchangeable anvils for universal use of measurement
- Strictly made in accordance with DIN863
- Spindle hardened, ground and lapped for ultimate accuracy
- Carbide measuring surfaces ground for longer service life
- With Absolute, Inch-Metric Conversion and Zero-Set function
- Stainless steel newly adapted on spindle
- With spindle lock

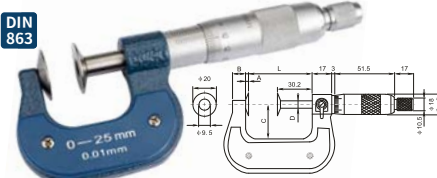
| Code      | Range       | Resolution     |
|-----------|-------------|----------------|
| 4210-2103 | 0-25/0-1"   | 0.001/0.00005" |
| 4210-2106 | 25-50/1"-2" | 0.001/0.00005" |

DISC MICROMETER

DIN 863

mm in

IP65



- Used to easily measure root tangent length of spur gears and helical gears
- Stainless steel newly adapted on spindle
- Strictly made in accordance with DIN863
- Spindle thread hardened, ground and lapped for ultimate accuracy
- Clear graduations laser-etched on satin chrome finish for easy reading
- With ratchet stop for constant force

| Code        | Range*Graduation | L     | A   | B  | C     | D    | Accuracy |
|-------------|------------------|-------|-----|----|-------|------|----------|
| 4111-8102   | 0-25*0.01        | 33    | 2.8 | 7  | 24    | φ6.5 | 0.004    |
| 4111-8104   | 25-50*0.01       | 58    | 2.8 | 11 | 30    | φ6.5 | 0.004    |
| 4111-8106   | 50-75*0.01       | 83    | 2.8 | 11 | 42.5  | φ6.5 | 0.005    |
| 4111-8108   | 75-100*0.01      | 108   | 2.8 | 11 | 55    | φ6.5 | 0.005    |
| 4111-8620   | 100-125*0.01     | 133.5 | 6   | 11 | 67    | 8    | 0.006    |
| 4111-8625   | 125-150*0.01     | 158.5 | 6   | 11 | 80    | 8    | 0.006    |
| 4111-8630   | 150-175*0.01     | 183.5 | 6   | 11 | 92    | 8    | 0.007    |
| 4111-8635   | 175-200*0.01     | 208.5 | 6   | 11 | 104   | 8    | 0.007    |
| 4111-8640   | 200-225*0.01     | 233.5 | 6   | 11 | 116.5 | 8    | 0.008    |
| 4111-8645   | 225-250*0.01     | 258.5 | 6   | 11 | 129   | 8    | 0.008    |
| 4111-8650   | 250-275*0.01     | 283.5 | 6   | 11 | 141.5 | 8    | 0.009    |
| 4111-8655   | 275-300*0.01     | 308.5 | 6   | 11 | 154   | 8    | 0.009    |
| 4112-5102   | 0-1*0.001        | 33    | 2.8 | 7  | 24    | φ6.5 | 0.0002"  |
| 4112-5104   | 1-2*0.001        | 58    | 2.8 | 11 | 30    | φ6.5 | 0.0002"  |
| 4112-5106   | 2-3*0.001        | 83    | 2.8 | 11 | 42.5  | φ6.5 | 0.00025" |
| 4112-5108   | 3-4*0.001        | 108   | 2.8 | 11 | 55    | φ6.5 | 0.00025" |
| 4112-5111-A | 4-5*0.001        | 133.5 | 6   | 11 | 67    | φ8   | 0.00025" |
| 4112-5112-A | 5-6*0.001        | 158.5 | 6   | 11 | 80    | φ8   | 0.00025" |

DIGITAL QUICK-MOVE DISC MICROMETER

DIN 863

mm in

IP65



- Used to easily measure root tangent length of spur gears and helical gears
- Stainless steel newly adapted on spindle
- Strictly made in accordance with DIN863
- Spindle thread hardened, ground and lapped for ultimate accuracy
- IP65 protection against liquid
- With Absolute and Metric-Inch Conversion System
- With ratchet stop for constant force

| Code      | Range      | Resolution     | A     | B  | C    | D   | L     | W     | H    | Accuracy       |
|-----------|------------|----------------|-------|----|------|-----|-------|-------|------|----------------|
| 4220-2104 | 0-25/0-1"  | 0.001/0.00005" | 55.3  | 31 | φ6.5 | φ20 | 197.2 | 80.5  | 30.8 | 0.003/0.00015" |
| 4220-2108 | 25-50/1-2" | 0.001/0.00005" | 80.3  | 44 | φ6.5 | φ20 | 227.5 | 96    | 30.8 | 0.003/0.00015" |
| 4220-2112 | 50-75/2-3" | 0.001/0.00005" | 105.3 | 56 | φ6.5 | φ20 | 257.6 | 112.5 | 30.8 | 0.004/0.00015" |

DIGITAL DISC MICROMETER

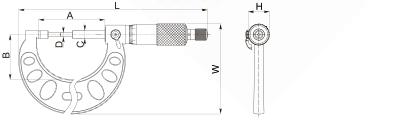


- Easy to measure tooth width of straight or bevel wheel, and small thickness
- Inside force-limited device for precise repeatable reading
- Spindle made of special steel to ensure high precision and stability

Unit:mm

| Code      | Range    | Resolution | A  | D    | L   | Accuracy |
|-----------|----------|------------|----|------|-----|----------|
| 4320-2005 | 0-25mm   | 0.001      | 25 | φ6.5 | 31  | ±0.004   |
| 4320-2010 | 25-50mm  | 0.001      | 35 | φ6.5 | 56  | ±0.004   |
| 4320-2015 | 50-75mm  | 0.001      | 45 | φ6.5 | 81  | ±0.005   |
| 4320-2020 | 75-100mm | 0.001      | 55 | φ6.5 | 106 | ±0.005   |

SPLINE MICROMETER

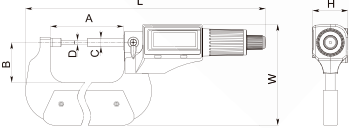


- Used to measure spline shafts, slots and keyways
- Stainless steel newly adapted on spindle
- Strictly made in accordance with DIN863
- Spindle thread hardened, ground and lapped for ultimate accuracy
- Clear graduations laser-etched on satin chrome finish for easy reading
- With ratchet stop for constant force

Unit:mm

| Code      | Range  | Graduation | A   | B    | C    | D    | L     | W   | H   | Accuracy       |
|-----------|--------|------------|-----|------|------|------|-------|-----|-----|----------------|
| 4710-1005 | 0-25   | 0.01       | 56  | 38   | φ6.5 | φ3.0 | 160   | 76  | φ18 | 0.004/0.00015" |
| 4710-1010 | 25-50  | 0.01       | 81  | 51   | φ6.5 | φ3.0 | 185.5 | 91  | φ18 | 0.004/0.00015" |
| 4710-1015 | 50-75  | 0.01       | 106 | 63.5 | φ6.5 | φ3.0 | 210.5 | 105 | φ18 | 0.005/0.0002"  |
| 4710-1020 | 75-100 | 0.01       | 131 | 76   | φ6.5 | φ3.0 | 237.3 | 125 | φ18 | 0.005/0.0002"  |
| 4710-2005 | 0-1"   | 0.001"     | 56  | 38   | φ6.5 | φ3.0 | 160   | 76  | φ18 | 0.004/0.00015" |
| 4710-2010 | 1-2"   | 0.001"     | 81  | 51   | φ6.5 | φ3.0 | 185.5 | 91  | φ18 | 0.004/0.00015" |
| 4710-2015 | 2-3"   | 0.001"     | 106 | 63.5 | φ6.5 | φ3.0 | 210.5 | 105 | φ18 | 0.005/0.0002"  |
| 4710-2020 | 3-4"   | 0.001"     | 131 | 76   | φ6.5 | φ3.0 | 237.3 | 125 | φ18 | 0.005/0.0002"  |
| 4710-2305 | 0-1"   | 0.0001"    | 56  | 38   | φ6.5 | φ3.0 | 160   | 76  | φ18 | 0.004/0.00015" |
| 4710-2310 | 1-2"   | 0.0001"    | 81  | 51   | φ6.5 | φ3.0 | 185.5 | 91  | φ18 | 0.004/0.00015" |
| 4710-2315 | 2-3"   | 0.0001"    | 106 | 63.5 | φ6.5 | φ3.0 | 210.5 | 105 | φ18 | 0.005/0.0002"  |
| 4710-2320 | 3-4"   | 0.0001"    | 131 | 76   | φ6.5 | φ3.0 | 237.3 | 125 | φ18 | 0.005/0.0002"  |

DIGITAL SPLINE MICROMETER

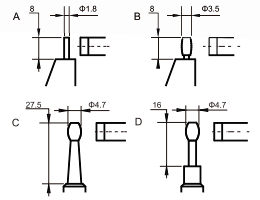


- Used to measure spline shafts, slots and keyways
- Stainless steel newly adapted on spindle
- Strictly made in accordance with DIN863
- Spindle thread hardened, ground and lapped for ultimate accuracy
- With Absolute and Metric-Inch Conversion System
- With ratchet stop for constant force

Unit:mm

| Code      | Range       | Resolution     | A     | B  | C    | D    | L     | W     | H    | Accuracy       |
|-----------|-------------|----------------|-------|----|------|------|-------|-------|------|----------------|
| 4720-2005 | 0-25/0-1"   | 0.001/0.00005" | 56.5  | 31 | φ6.5 | φ3.0 | 185.4 | 77.9  | 27.3 | 0.003/0.00015" |
| 4720-2010 | 25-50/1-2"  | 0.001/0.00005" | 81.5  | 44 | φ6.5 | φ3.0 | 211.9 | 93.4  | 27.3 | 0.003/0.00015" |
| 4720-2015 | 50-75/2-3"  | 0.001/0.00005" | 107.1 | 56 | φ6.5 | φ3.0 | 239.9 | 111.4 | 27.3 | 0.004/0.00015" |
| 4720-2020 | 75-100/3-4" | 0.001/0.00005" | 132   | 66 | φ6.5 | φ3.0 | 269.7 | 127.8 | 27.3 | 0.004/0.00015" |

TUBE MICROMETER

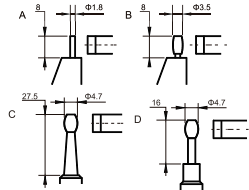


- Strictly made in accordance with DIN863
- Used to measure wall thickness of various tubes
- With Carbide-tipped measuring faces
- With ratchet for constant measuring pressure

Unit:mm

| Code      | Range | Graduation | Type         | Accuracy |
|-----------|-------|------------|--------------|----------|
| 4440-1005 | 0-25  | 0.01       | Anvil Type A | 0.006    |
| 4440-1010 | 0-25  | 0.01       | Anvil Type B | 0.006    |
| 4440-1015 | 0-25  | 0.01       | Anvil Type C | 0.006    |
| 4440-1020 | 0-25  | 0.01       | Anvil Type D | 0.006    |

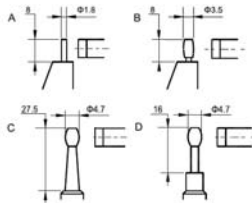
DIGITAL TUBE MICROMETER



- Strictly made in accordance with DIN863
- Protection level IP65
- For measuring wall thickness of various tubes
- Carbide-tipped measuring faces
- With ratchet for constant measuring pressure

| Unit:mm   |           |                |              |          |
|-----------|-----------|----------------|--------------|----------|
| Code      | Range     | Resolution     | Type         | Accuracy |
| 4400-0005 | 0-25/0-1" | 0.001/0.00005" | Anvil Type A | ±0.003   |
| 4400-0010 | 0-25/0-1" | 0.001/0.00005" | Anvil Type B | ±0.003   |
| 4400-0015 | 0-25/0-1" | 0.001/0.00005" | Anvil Type C | ±0.003   |
| 4400-0020 | 0-25/0-1" | 0.001/0.00005" | Anvil Type D | ±0.003   |

TUBE MICROMETER



- Used to measure wall thickness of various tubes.
- Carbide-tipped measuring face
- Ratchet stop

| Unit:mm   |        |              |          |
|-----------|--------|--------------|----------|
| Code      | Range  | Type         | Accuracy |
| 4005-0135 | 0-25mm | Anvil Type A | 0.006    |
| 4005-0140 | 0-25mm | Anvil Type B | 0.006    |
| 4005-0145 | 0-25mm | Anvil Type C | 0.006    |
| 4005-0150 | 0-25mm | Anvil Type D | 0.006    |

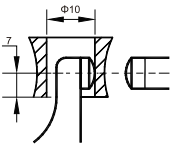
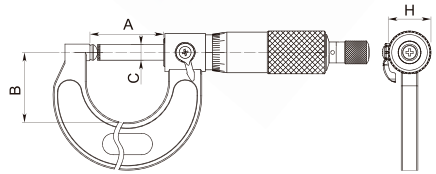
SPHERICAL ANVIL  
TUBE MICROMETER



• S-F : 4510-1005



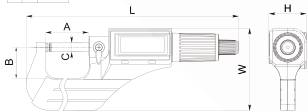
• S-S : 4330-1005



- Used to measure wall thickness of tubes
- Stainless steel newly adapted on spindle
- Strictly made in accordance with DIN863
- Style: S-F:Spherical anvil and flat spindle
- S-S:Spherical anvil and spherical spindle
- Spindle thread hardened, ground and lapped for ultimate accuracy
- Clear graduations laser-etched on satin chrome finish for easy reading
- With ratchet stop for constant force

| Unit:mm   |        |            |     |      |      |     |       |          |  |
|-----------|--------|------------|-----|------|------|-----|-------|----------|--|
| Code      | Range  | Graduation | A   | B    | C    | H   | Style | Accuracy |  |
| 4510-1005 | 0-25   | 0.01       | 31  | 29.5 | φ6.5 | φ18 | S-F   | 0.004    |  |
| 4510-1010 | 25-50  | 0.01       | 56  | 38   | φ6.5 | φ18 | S-F   | 0.004    |  |
| 4510-1015 | 50-75  | 0.01       | 81  | 51   | φ6.5 | φ18 | S-F   | 0.005    |  |
| 4510-1020 | 75-100 | 0.01       | 106 | 63.5 | φ6.5 | φ18 | S-F   | 0.005    |  |
| 4510-2005 | 0-1"   | 0.001"     | 31  | 29.5 | φ6.5 | φ18 | S-F   | 0.004    |  |
| 4510-2010 | 1-2"   | 0.001"     | 56  | 38   | φ6.5 | φ18 | S-F   | 0.004    |  |
| 4510-2015 | 2-3"   | 0.001"     | 81  | 51   | φ6.5 | φ18 | S-F   | 0.005    |  |
| 4510-2020 | 3-4"   | 0.001"     | 106 | 63.5 | φ6.5 | φ18 | S-F   | 0.005    |  |
| 4510-2305 | 0-1"   | 0.0001"    | 31  | 29.5 | φ6.5 | φ18 | S-F   | 0.004    |  |
| 4510-2310 | 1-2"   | 0.0001"    | 56  | 38   | φ6.5 | φ18 | S-F   | 0.004    |  |
| 4510-2315 | 2-3"   | 0.0001"    | 81  | 51   | φ6.5 | φ18 | S-F   | 0.005    |  |
| 4510-2320 | 3-4"   | 0.0001"    | 106 | 63.5 | φ6.5 | φ18 | S-F   | 0.005    |  |
| 4330-1005 | 0-25   | 0.01       | 32  | 24   | φ6.5 | φ18 | S-S   | 0.004    |  |
| 4330-1010 | 25-50  | 0.01       | 57  | 32   | φ6.5 | φ18 | S-S   | 0.004    |  |
| 4330-1015 | 50-75  | 0.01       | 82  | 45   | φ6.5 | φ18 | S-S   | 0.005    |  |
| 4330-1020 | 75-100 | 0.01       | 107 | 57   | φ6.5 | φ18 | S-S   | 0.005    |  |

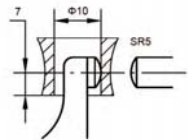
DIGITAL SPHERICAL ANVIL  
TUBE MICROMETER



- Used to measure wall thickness of tubes
- Strictly made in accordance with DIN863
- Spindle thread hardened, ground and lapped for ultimate accuracy
- With Absolute and Metric-Inch Conversion System
- S-F: Spherical anvil and flat spindle
- S-S: Spherical anvil and spherical spindle

| Unit:mm   |             |                |       |      |      |       |       |      |                |      |
|-----------|-------------|----------------|-------|------|------|-------|-------|------|----------------|------|
| Code      | Range       | Resolution     | A     | B    | C    | L     | W     | H    | Accuracy       | Type |
| 4520-2005 | 0-25/0-1"   | 0.001/0.00005" | 31.5  | 22.5 | ø6.5 | 155   | 60.2  | 27.3 | 0.003/0.00015" | S-F  |
| 4520-2010 | 25-50/1-2"  | 0.001/0.00005" | 56.5  | 31   | ø6.5 | 185.4 | 77.9  | 27.3 | 0.003/0.00015" | S-F  |
| 4520-2015 | 50-75/2-3"  | 0.001/0.00005" | 81.5  | 44   | ø6.5 | 211.9 | 93.4  | 27.3 | 0.004/0.00015" | S-F  |
| 4520-2020 | 75-100/3-4" | 0.001/0.00005" | 107.1 | 56   | ø6.5 | 239.9 | 111.4 | 27.3 | 0.004/0.00015" | S-F  |
| 4520-6405 | 0-25/0-1"   | 0.001/0.00005" | 31.5  | 22.5 | ø6.5 | 155   | 60.2  | 27.3 | 0.003/0.00015" | S-S  |
| 4520-6410 | 25-50/1-2"  | 0.001/0.00005" | 56.5  | 31   | ø6.5 | 185.4 | 77.9  | 27.3 | 0.003/0.00015" | S-S  |
| 4520-6415 | 50-75/2-3"  | 0.001/0.00005" | 81.5  | 44   | ø6.5 | 211.9 | 93.4  | 27.3 | 0.004/0.00015" | S-S  |
| 4520-6420 | 75-100/3-4" | 0.001/0.00005" | 107.1 | 56   | ø6.5 | 239.9 | 111.4 | 27.3 | 0.004/0.00015" | S-S  |

IP65 DIGITAL TUBE  
MICROMETERS  
WITH TWO SPHERICAL ANVIL



- Use to measure wall thickness of tube
- Carbide measuring surface
- Electronic display, scale display
- Ratchet measures force

| Unit:mm   |          |          |
|-----------|----------|----------|
| Code      | Range    | Accuracy |
| 4520-6335 | 0-25mm   | ±0.002   |
| 4520-6340 | 25-50mm  | ±0.002   |
| 4520-6345 | 50-75mm  | ±0.003   |
| 4520-6350 | 75-100mm | ±0.003   |

POINT MICROMETER

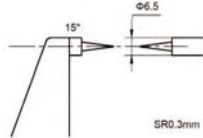
DIN  
863



- Used to measure the web thickness of drills, small grooves and other hard to reach dimensions
- Stainless steel newly adapted on spindle
- Strictly made in accordance with DIN863
- Spindle thread hardened, ground and lapped for ultimate accuracy
- Clear graduations laser-etched on satin chrome finish for easy reading
- With ratchet stop for constant force
- Style: F-F: Flat Anvil and Flat Spindle
- S-S: Spherical Anvil and Spherical Spindle

| Unit:mm   |        |            |     |      |      |     |       |          |  |  |
|-----------|--------|------------|-----|------|------|-----|-------|----------|--|--|
| Code      | Range  | Graduation | A   | B    | C    | H   | Style | Accuracy |  |  |
| 4610-1005 | 0-25   | 0.01       | 56  | 38   | ø6.5 | ø18 | F-F   | 0.004    |  |  |
| 4610-1010 | 25-50  | 0.01       | 81  | 51   | ø6.5 | ø18 | F-F   | 0.004    |  |  |
| 4610-1015 | 50-75  | 0.01       | 106 | 63.5 | ø6.5 | ø18 | F-F   | 0.005    |  |  |
| 4610-1020 | 75-100 | 0.01       | 131 | 76   | ø6.5 | ø18 | F-F   | 0.005    |  |  |
| 4610-1405 | 0-25   | 0.01       | 57  | 32   | ø6.5 | ø18 | S-S   | 0.004    |  |  |
| 4610-1410 | 25-50  | 0.01       | 82  | 45   | ø6.5 | ø18 | S-S   | 0.004    |  |  |
| 4610-1415 | 50-75  | 0.01       | 107 | 57   | ø6.5 | ø18 | S-S   | 0.005    |  |  |
| 4610-1420 | 75-100 | 0.01       | 133 | 70   | ø6.5 | ø18 | S-S   | 0.005    |  |  |
| 4610-2005 | 0-1"   | 0.0001"    | 56  | 38   | ø6.5 | ø18 | S-S   | 0.004    |  |  |
| 4610-2010 | 1-2"   | 0.0001"    | 81  | 51   | ø6.5 | ø18 | S-S   | 0.004    |  |  |
| 4610-2015 | 2-3"   | 0.0001"    | 106 | 63.5 | ø6.5 | ø18 | S-S   | 0.005    |  |  |
| 4610-2020 | 3-4"   | 0.0001"    | 131 | 76   | ø6.5 | ø18 | S-S   | 0.005    |  |  |
| 4610-2305 | 0-1"   | 0.00001"   | 56  | 38   | ø6.5 | ø18 | F-F   | 0.004    |  |  |
| 4610-2310 | 1-2"   | 0.00001"   | 81  | 51   | ø6.5 | ø18 | F-F   | 0.004    |  |  |
| 4610-2315 | 2-3"   | 0.00001"   | 106 | 63.5 | ø6.5 | ø18 | F-F   | 0.005    |  |  |
| 4610-2320 | 3-4"   | 0.00001"   | 131 | 76   | ø6.5 | ø18 | F-F   | 0.005    |  |  |
| 4610-2505 | 0-1"   | 0.00001"   | 56  | 38   | ø6.5 | ø18 | S-S   | 0.00015  |  |  |
| 4610-2510 | 1-2"   | 0.00001"   | 81  | 51   | ø6.5 | ø18 | S-S   | 0.00015  |  |  |
| 4610-2515 | 2-3"   | 0.00001"   | 106 | 63.5 | ø6.5 | ø18 | S-S   | 0.0002   |  |  |
| 4610-2520 | 3-4"   | 0.00001"   | 131 | 76   | ø6.5 | ø18 | S-S   | 0.0002   |  |  |

POINT MICROMETER  
WITH SR0.3 TIP

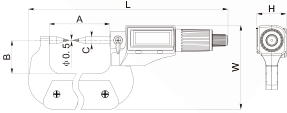


- Stainless steel newly adapted on spindle
- Strictly made in accordance with DIN863
- Spindle thread hardened, ground and lapped for ultimate accuracy
- Clear graduations laser-etched on satin chrome finish for easy reading
- Used to measure the web thickness of drills, small grooves and other hard to reach dimensions

Unit:mm

| Code      | Range    | Accuracy |
|-----------|----------|----------|
| 4610-1105 | 0-25mm   | 0.004    |
| 4610-1110 | 25-50mm  | 0.004    |
| 4610-1115 | 50-75mm  | 0.005    |
| 4610-1120 | 75-100mm | 0.005    |

DIGITAL POINT MICROMETER  
WITH SR0.3 TIP

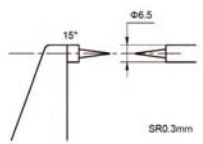


- Used to measure the web thickness of drills, small grooves and other hard to reach dimensions
- Stainless steel newly adapted on spindle
- Strictly made in accordance with DIN863
- Spindle thread hardened, ground and lapped for ultimate accuracy
- With Absolute and Metric-Inch Conversion System
- With ratchet stop for constant force

Unit:mm

| Code      | Range       | Resolution     | A     | B  | C    | L     | W     | H     | Accuracy       |
|-----------|-------------|----------------|-------|----|------|-------|-------|-------|----------------|
| 4620-5405 | 0-25/0-1"   | 0.001/0.00005" | 56.5  | 31 | φ6.5 | 185.4 | 77.9  | φ27.3 | 0.003/0.00015" |
| 4620-5410 | 25-50/1-2"  | 0.001/0.00005" | 81.5  | 44 | φ6.5 | 211.9 | 93.4  | φ27.3 | 0.003/0.00015" |
| 4620-5415 | 50-75/2-3"  | 0.001/0.00005" | 107.1 | 56 | φ6.5 | 239.9 | 111.4 | φ27.3 | 0.004/0.00015" |
| 4620-5420 | 75-100/3-4" | 0.001/0.00005" | 132   | 66 | φ6.5 | 269.7 | 127.8 | φ27.3 | 0.004/0.00015" |

DIGITAL POINT MICROMETER  
WITH SR0.3 TIP

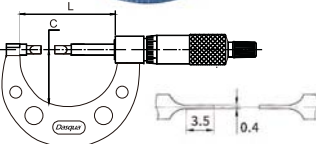


- Used to measure the dimensions that are difficult to measure, such as drill grooves
- Carbide measuring surface
- Electronic display, scale display
- Ratchet force measurement

Unit:mm

| Code      | Range         | Resolution       | Accuracy |
|-----------|---------------|------------------|----------|
| 4620-5105 | 0-25mm/0-1"   | 0.001mm/0.00005" | ±0.002mm |
| 4620-5110 | 25-50mm/1-2"  | 0.001mm/0.00005" | ±0.002mm |
| 4620-5115 | 50-75mm/2-3"  | 0.001mm/0.00005" | ±0.003mm |
| 4620-5120 | 75-100mm/3-4" | 0.001mm/0.00005" | ±0.003mm |

BLADE MICROMETER



- Used to measure non-rotating spindle with blade type measuring face
- Stainless steel newly adapted on spindle
- Strictly made in accordance with DIN863
- Spindle thread hardened, ground and lapped for ultimate accuracy

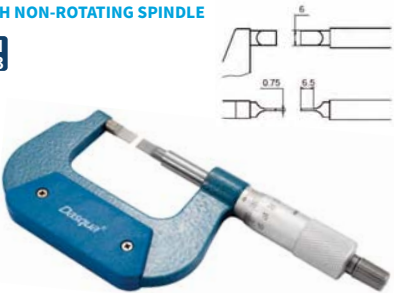
Unit:mm

| Code      | Range       | Graduation | C  | L   |
|-----------|-------------|------------|----|-----|
| 4570-1005 | 0-25        | 0.01       | 32 | 57  |
| 4570-1010 | 25-50       | 0.01       | 45 | 82  |
| 4570-1015 | 50-75       | 0.01       | 57 | 107 |
| 4570-1020 | 75-100      | 0.01       | 70 | 133 |
| 4570-1025 | 100-125     | 0.01       | 82 | 159 |
| 4570-1030 | 125-150     | 0.01       | 95 | 184 |
| 4570-2005 | 0-1"-0.001" | 0.001"     | 32 | 57  |
| 4570-2010 | 1-2"-0.001" | 0.001"     | 45 | 82  |
| 4570-2015 | 2-3"-0.001" | 0.001"     | 57 | 107 |
| 4570-2020 | 3-4"-0.001" | 0.001"     | 70 | 133 |
| 4570-2025 | 4-5"-0.001" | 0.001"     | 82 | 159 |
| 4570-2030 | 5-6"-0.001" | 0.001"     | 95 | 184 |

BLADE MICROMETERS

WITH NON-ROTATING SPINDLE

DIN 863



• 4570-6035-4570-6060 4571-2035-4571-2060



• 4570-4005-4570-6030 4571-2005-4571-2030

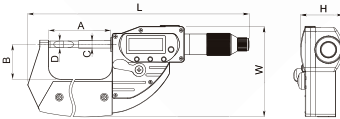
- Used to measure non-rotating spindle with blade type measuring face
- Stainless steel newly adapted on spindle
- Strictly made in accordance with DIN863
- Spindle thread hardened, ground and lapped for ultimate accuracy
- Blade thickness is 0.75mm

Unit:mm

| Code      | Range     | Resolution | Accuracy |
|-----------|-----------|------------|----------|
| 4570-4005 | 0-25mm    | 0.01mm     | 0.004mm  |
| 4570-4010 | 25-50mm   | 0.01mm     | 0.004mm  |
| 4570-4015 | 50-75mm   | 0.01mm     | 0.005mm  |
| 4570-4020 | 75-100mm  | 0.01mm     | 0.005mm  |
| 4570-4025 | 100-125mm | 0.01mm     | 0.006mm  |
| 4570-4030 | 125-150mm | 0.01mm     | 0.007mm  |
| 4570-6005 | 0-1"      | 0.001"     | 0.00015" |
| 4570-6010 | 1-2"      | 0.001"     | 0.00015" |
| 4570-6015 | 2-3"      | 0.001"     | 0.0002"  |
| 4570-6020 | 3-4"      | 0.001"     | 0.0002"  |
| 4570-6025 | 4-5"      | 0.001"     | 0.00025" |
| 4570-6030 | 5-6"      | 0.001"     | 0.00025" |
| 4570-6035 | 6-7"      | 0.001"     | 0.00025" |
| 4570-6040 | 7-8"      | 0.001"     | 0.00025" |
| 4570-6045 | 8-9"      | 0.001"     | 0.0003"  |
| 4570-6050 | 9-10"     | 0.001"     | 0.0003"  |
| 4570-6055 | 10-11"    | 0.001"     | 0.00035" |
| 4570-6060 | 11-12"    | 0.001"     | 0.00035" |
| 4571-2005 | 0-1"      | 0.0001"    | 0.00015" |
| 4571-2010 | 1-2"      | 0.0001"    | 0.00015" |
| 4571-2015 | 2-3"      | 0.0001"    | 0.0002"  |
| 4571-2020 | 3-4"      | 0.0001"    | 0.0002"  |
| 4571-2025 | 4-5"      | 0.0001"    | 0.00025" |
| 4571-2030 | 5-6"      | 0.0001"    | 0.00025" |
| 4571-2035 | 6-7"      | 0.0001"    | 0.00025" |
| 4571-2040 | 7-8"      | 0.0001"    | 0.00025" |
| 4571-2045 | 8-9"      | 0.0001"    | 0.0003"  |
| 4571-2050 | 9-10"     | 0.0001"    | 0.0003"  |
| 4571-2055 | 10-11"    | 0.0001"    | 0.00035" |
| 4571-2060 | 11-12"    | 0.0001"    | 0.00035" |

DIGITAL QUICK-MOVE BLADE MICROMETER

mm/in DIN 863 IP65 Absolute



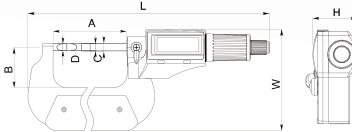
- Used to measure non-rotating spindle with blade type measuring face
- Stainless steel newly adapted on spindle
- Strictly made in accordance with DIN863
- Spindle thread hardened, ground and lapped for ultimate accuracy
- With Absolute and Metric-Inch Conversion System
- With ratchet stop for constant force

Unit:mm

| Code      | Range      | Resolution     | A     | B  | C    | D  | L     | W     | H    | Accuracy       |
|-----------|------------|----------------|-------|----|------|----|-------|-------|------|----------------|
| 4220-2103 | 0-25/0-1"  | 0.001/0.00005" | 55.3  | 31 | φ6.5 | φ6 | 197.2 | 80.5  | 30.8 | 0.003/0.00015" |
| 4220-2106 | 25-50/1-2" | 0.001/0.00005" | 80.3  | 44 | φ6.5 | φ6 | 227.5 | 96    | 44   | 0.003/0.00015" |
| 4220-2109 | 50-75/2-3" | 0.001/0.00005" | 105.3 | 56 | φ6.5 | φ6 | 257.6 | 112.5 | 56   | 0.004/0.00015" |

DIGITAL BLADE MICROMETER

DIN 863 mm/in



- Used to measure non-rotating spindle with blade type measuring face
- Stainless steel newly adapted on spindle
- Strictly made in accordance with DIN863
- Spindle thread hardened, ground and lapped for ultimate accuracy
- With Absolute and Metric-Inch Conversion System

Unit:mm

| Code      | Range       | Resolution     | A     | B  | C    | D  | L     | W     | H    | Accuracy       |
|-----------|-------------|----------------|-------|----|------|----|-------|-------|------|----------------|
| 4570-5005 | 0-25/0-1"   | 0.001/0.00005" | 55.3  | 31 | φ6.5 | φ6 | 197.2 | 80.5  | 30.8 | 0.003/0.00015" |
| 4570-5010 | 25-50/1-2"  | 0.001/0.00005" | 80.3  | 44 | φ6.5 | φ6 | 227.5 | 96    | 30.8 | 0.003/0.00015" |
| 4570-5015 | 50-75/2-3"  | 0.001/0.00005" | 105.3 | 56 | φ6.5 | φ6 | 257.6 | 112.5 | 30.8 | 0.004/0.00015" |
| 4570-5020 | 75-100/3-4" | 0.001/0.00005" | 132   | 66 | φ6.5 | φ6 | 269.7 | 127.8 | 30.8 | 0.004/0.00015" |



GEAR MICROMETER

WITHOUT ANVILS

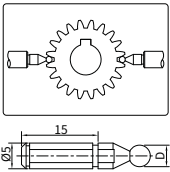
DIN 863



- Interchangeable ball tips for various gear modules (0.6~3.5) are optional
- Strictly made in accordance with DIN863
- With ratchet for constant measuring pressure

ANVILS FOR BOTH MECHANIC AND DIGITAL GEAR MICROMETER

| Code      | Ball dia. (D)           | Module   | Dia. Pitch | Remark                                          |
|-----------|-------------------------|----------|------------|-------------------------------------------------|
| 4560-0001 | sg1.0mm                 | 0.6-0.65 | 45         | anvil available for both mechanical and digital |
| 4560-0002 | sg1.5mm                 | 0.9-1.0  | 28-26      |                                                 |
| 4560-0003 | sg2.0mm                 | 1.25     | 22         |                                                 |
| 4560-0004 | sg2.5mm                 | 1.5      | 17         |                                                 |
| 4560-0005 | sg3.0mm                 | 1.75     | 15         |                                                 |
| 4560-0006 | sg3.5mm                 | 2        | 13         |                                                 |
| 4560-0007 | sg4.0mm                 | 2.25     | 11         |                                                 |
| 4560-0008 | sg4.5mm                 | 2.5      | 10         |                                                 |
| 4560-0009 | sg5.0mm                 | 2.75     | 9          |                                                 |
| 4560-0010 | sg6.0mm                 | 3.5      | 7          |                                                 |
| 4560-0011 | Set including all above |          |            |                                                 |



Unit:mm

| Code      | Range   | Graduation | C  | L   | Accuracy |
|-----------|---------|------------|----|-----|----------|
| 4550-1005 | 0-25    | 0.01       | 38 | 67  | 0.004    |
| 4550-1010 | 25-50   | 0.01       | 50 | 92  | 0.004    |
| 4550-1015 | 50-75   | 0.01       | 62 | 118 | 0.005    |
| 4550-1020 | 75-100  | 0.01       | 70 | 143 | 0.005    |
| 4550-1025 | 100-125 | 0.01       | 82 | 168 | 0.006    |
| 4550-1030 | 125-150 | 0.01       | 95 | 192 | 0.006    |

DIGITAL GEAR MICROMETER

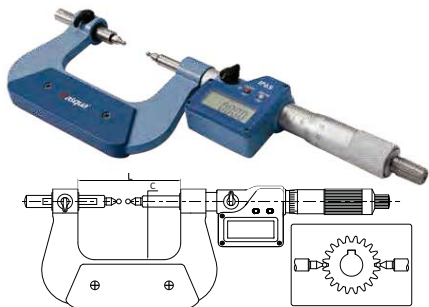
WITHOUT ANVILS

IP65

mm / in

DATA

output



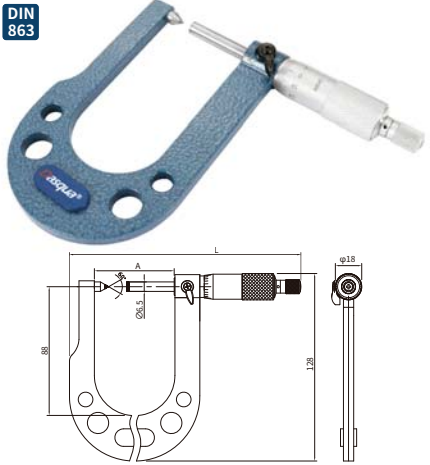
- Strictly made in accordance with DIN863
- Used to measure over-pin diameter of external gears
- Interchangeable ball tips for various gear modules (0.6~3.5) are optional.
- IP65 protection against liquid
- With ratchet for constant measuring pressure

Unit:mm

| Code      | Range        | Resolution     | C  | L   | Accuracy |
|-----------|--------------|----------------|----|-----|----------|
| 4570-0005 | 0-25/0-1"    | 0.001/0.00005" | 38 | 67  | ±0.002   |
| 4570-0010 | 25-50/1-2"   | 0.001/0.00005" | 50 | 92  | ±0.002   |
| 4570-0015 | 50-75/2-3"   | 0.001/0.00005" | 62 | 118 | ±0.003   |
| 4570-0020 | 75-100/3-4"  | 0.001/0.00005" | 70 | 143 | ±0.003   |
| 4570-0025 | 100-125/4-5" | 0.001/0.00005" | 82 | 168 | ±0.003   |
| 4570-0030 | 125-150/5-6" | 0.001/0.00005" | 95 | 192 | ±0.003   |

DISK BRAKE MICROMETER

DIN 863



- Strictly made in accordance with DIN863
- To measure brake disc thickness in car
- With carbide measuring face
- With ratchet for constant measuring force

Unit:mm

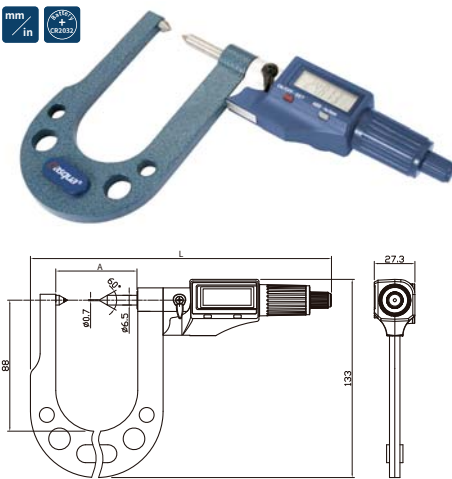
| Code      | Range     | Graduation | A    | L   | Accuracy |
|-----------|-----------|------------|------|-----|----------|
| 4521-0005 | 7-32      | 0.01       | 44.5 | 148 | 0.004    |
| 4521-0010 | 10-45     | 0.01       | 54.5 | 158 | 0.004    |
| 4521-0015 | 0.25-1.3" | 0.0001"    | 44.5 | 148 | 0.00015" |
| 4521-0020 | 0.7-1.7"  | 0.0001"    | 54.5 | 158 | 0.00015" |

DIGITAL DISK BRAKE MICROMETER

mm / in

DATA

output



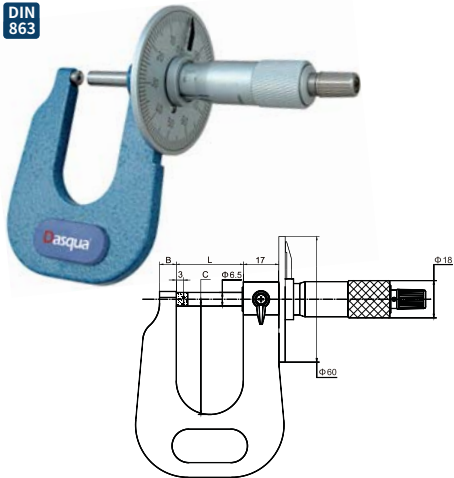
- Strictly made in accordance with DIN863
- With incremental capacity measurement system
- With carbide measurement surface
- Adapt to measuring the dimension that is not easy to measure

Unit:mm

| Code      | Range          | Resolution     | A    | L   | Accuracy      |
|-----------|----------------|----------------|------|-----|---------------|
| 4520-1005 | 7-32/0.3-1.3"  | 0.001/0.00005" | 44.5 | 192 | 0.004/0.0002" |
| 4520-1010 | 18-43/0.7-1.7" | 0.001/0.00005" | 54.5 | 202 | 0.004/0.0002" |

SHEET METAL MICROMETER

DIN 863

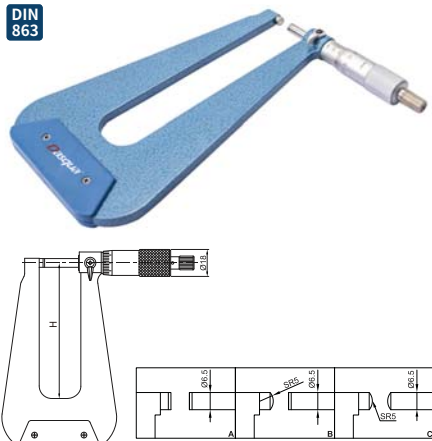


- Strictly made in accordance with DIN863
- A dial is attached to the sleeve for making easy and quick reading of sheet metal thickness
- With carbide measuring face
- With ratchet for constant measuring force

| Code      | Range | Graduation | L  | B  | C   | Accuracy |
|-----------|-------|------------|----|----|-----|----------|
| 4731-0005 | 0-15  | 0.01       | 22 | 8  | 50  | 0.004    |
| 4731-0010 | 0-25  | 0.01       | 32 | 8  | 50  | 0.004    |
| 4731-0015 | 0-50  | 0.01       | 57 | 12 | 100 | 0.005    |

SHEET METAL MICROMETER

DIN 863

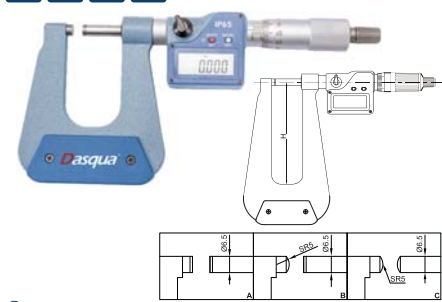


- Strictly made in accordance with DIN863
- Deep throat frame for measuring thickness of sheet metal, paper, plastic and rubber parts
- With carbide measuring face
- With ratchet for constant measuring force

| Code      | Range | Graduation | H   | Style | Accuracy |
|-----------|-------|------------|-----|-------|----------|
| 4561-1005 | 0-25  | 0.01       | 150 | A     | 0.006    |
| 4561-1010 | 0-25  | 0.01       | 150 | B     | 0.006    |
| 4561-1015 | 0-25  | 0.01       | 150 | C     | 0.006    |
| 4561-1020 | 0-25  | 0.01       | 300 | B     | 0.007    |

DIGITAL SHEET METAL MICROMETER

IP65 mm/in



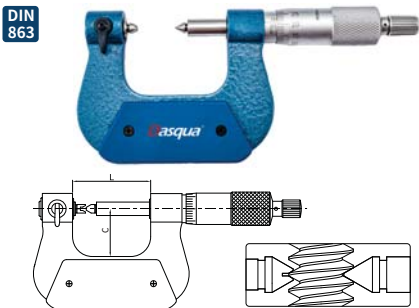
- Strictly made in accordance with DIN863
- Deep throat frame for measuring thickness of sheet metal, paper, plastic, and rubber parts
- With carbide measuring face
- With ratchet for constant measuring pressure
- IP65 protection against liquid

| Code      | Range      | Resolution     | H   | Style | Accuracy |
|-----------|------------|----------------|-----|-------|----------|
| 4560-4005 | 0-25/0-1"  | 0.001/0.00005" | 150 | A     | ±0.003   |
| 4560-4010 | 0-25/0-1"  | 0.001/0.00005" | 150 | B     | ±0.003   |
| 4560-4015 | 0-25/0-1"  | 0.001/0.00005" | 150 | C     | ±0.003   |
| 4560-4020 | 0-25/0-1"  | 0.001/0.00005" | 300 | B     | ±0.004   |
| 4560-4025 | 25-50/0-1" | 0.001/0.00005" | 150 | A     | ±0.003   |
| 4560-4030 | 25-51/0-1" | 0.001/0.00005" | 150 | B     | ±0.003   |
| 4560-4035 | 25-52/0-1" | 0.001/0.00005" | 150 | C     | ±0.003   |
| 4560-4040 | 25-53/0-1" | 0.001/0.00005" | 300 | B     | ±0.004   |

SCREW THREAD MICROMETER

ROTATING SPINDLE TYPE WITH ANVILS

DIN 863



- Strictly made in accordance with DIN863
- Used for external thread measurements
- 60° or 55° V-shaped and con-shaped anvils (interchangeable) are available
- Dimension of anvil-tail: Ø5X15mm
- With ratchet for constant measuring pressure

| Code      | Range   | Graduation | L   | C  | Accuracy |
|-----------|---------|------------|-----|----|----------|
| 4107-1005 | 0-25    | 0.01       | 42  | 26 | 0.004    |
| 4107-1010 | 25-50   | 0.01       | 67  | 38 | 0.004    |
| 4107-1015 | 50-75   | 0.01       | 92  | 50 | 0.005    |
| 4107-1020 | 75-100  | 0.01       | 118 | 62 | 0.005    |
| 4107-1025 | 100-125 | 0.01       | 143 | 70 | 0.006    |
| 4107-3005 | 0-1"    | 0.01       | 42  | 26 | 0.004    |
| 4107-3010 | 1-2"    | 0.01       | 67  | 38 | 0.004    |
| 4107-3015 | 2-3"    | 0.01       | 92  | 50 | 0.005    |
| 4107-3020 | 3-4"    | 0.01       | 118 | 62 | 0.005    |

IP65 DIGITAL SCREW  
THREAD MICROMETER  
WITH INTERCHANGEABLE ANVIL AND SPINDLE TIPS



- Strictly made in accordance with DIN863
- Used for external thread measurements
- 60° or 55° V-shaped and con-shaped anvils (interchangeable) are available
- Dimension of anvil-tail: Ø5X15mm
- With ratchet for constant measuring pressure
- Protection level IP65

| Unit:mm   |          |          |
|-----------|----------|----------|
| Code      | Range    | Accuracy |
| 4117-0005 | 0-25mm   | ±0.002   |
| 4117-0010 | 25-50mm  | ±0.002   |
| 4117-0015 | 50-75mm  | ±0.002   |
| 4117-0020 | 75-100mm | ±0.003   |
| 4167-1005 | 0-1"     | ±0.002   |
| 4167-1010 | 1-2"     | ±0.002   |
| 4167-1015 | 2-3"     | ±0.002   |
| 4167-1020 | 3-4"     | ±0.003   |

TUBULAR INSIDE SCREW  
THREAD MICROMETER



- Operating and display units antiglare with satin chrome finish
- Measuring head and End piece with mounting bore for interchangeable anvils
- Rigid, lightweight tubular construction
- Interchangeable extensions with cylindrical gauge rods which are spring-mounted in protective sleeve for the extension of the measuring range
- Protection sleeve has a satin chrome finish
- Without screw thread heads, which can be found and ordered in page B54

| Unit:mm   |         |            |          |
|-----------|---------|------------|----------|
| Code      | Range   | Graduation | Accuracy |
| 4321-0001 | 75-100  | 0.01       | 0.03     |
| 4321-0002 | 100-125 | 0.01       | 0.03     |
| 4321-0003 | 125-150 | 0.01       | 0.03     |
| 4321-0004 | 150-175 | 0.01       | 0.03     |
| 4321-0005 | 175-200 | 0.01       | 0.04     |
| 4321-0006 | 200-225 | 0.01       | 0.04     |
| 4321-0007 | 225-250 | 0.01       | 0.04     |
| 4321-0008 | 250-275 | 0.01       | 0.04     |
| 4321-0009 | 275-300 | 0.01       | 0.05     |

ANVILS FOR  
TUBULAR INSIDE  
SCREW THREAD  
MICROMETER



| Code      | Thread type   | Pitch            | Remark               |
|-----------|---------------|------------------|----------------------|
| 4561-2001 | Metric 60°    | 0.6-0.9/64-48TPI | anvil available for: |
| 4561-2002 | Metric 60°    | 0.6-0.9/44-28TPI | 4321-0001            |
| 4561-2003 | Metric 60°    | 1-1.75/24-14TPI  | 4321-0003            |
| 4561-2004 | Metric 60°    | 2-3/13-9TPI      | 4321-0004            |
| 4561-2005 | Metric 60°    | 3.5-5/8-5TPI     | 4321-0005            |
| 4561-2006 | Metric 60°    | 5.5-7/4.5-3.5TPI | 4321-0007            |
| 4561-3501 | Whitworth 55° | 60-48TPI         | 4321-0008            |
| 4561-3502 | Whitworth 55° | 48-40TPI         | 4321-0009            |
| 4561-3503 | Whitworth 55° | 40-32TPI         |                      |
| 4561-3504 | Whitworth 55° | 32-24TPI         |                      |
| 4561-3505 | Whitworth 55° | 24-18TPI         |                      |
| 4561-3506 | Whitworth 55° | 18-14TPI         |                      |
| 4561-3507 | Whitworth 55° | 14-10TPI         |                      |
| 4561-3508 | Whitworth 55° | 10-7TPI          |                      |
| 4561-3509 | Whitworth 55° | 7-4.5TPI         |                      |
| 4561-3510 | Whitworth 55° | 4.5-3.5TPI       |                      |

PITCH DIAMETER GAUGE



- Designed to be suspended over a test specimen
- Pin gauges are the most reliable tools for measuring the pitch diameter of external thread, which is the most important dimension in a screw thread.
- A set is consisting of 3 pin gauges

| Code              |                  | Size   | Code              |                  | Size   | Code              |                  | Size   |
|-------------------|------------------|--------|-------------------|------------------|--------|-------------------|------------------|--------|
| Grade 0 ± 0.00025 | Grade 1 ± 0.0005 |        | Grade 0 ± 0.00025 | Grade 1 ± 0.0005 |        | Grade 0 ± 0.00025 | Grade 1 ± 0.0005 |        |
| 4090-7730         | 4091-5510        | φ0.118 | 4090-7747         | 4091-5527        | φ1.008 | 4090-7765         | 4091-5545        | φ3.177 |
| 4090-7731         | 4091-5511        | φ0.142 | 4090-7748         | 4091-5528        | φ1.047 | 4090-7766         | 4091-5546        | φ3.287 |
| 4090-7732         | 4091-5512        | φ0.170 | 4090-7749         | 4091-5529        | φ1.157 | 4090-7767         | 4091-5547        | φ3.310 |
| 4090-7733         | 4091-5513        | φ0.185 | 4090-7750         | 4091-5530        | φ1.302 | 4090-7768         | 4091-5548        | φ3.550 |
| 4090-7782         | 4091-5562        | φ0.210 | 4090-7751         | 4091-5531        | φ1.411 | 4090-7769         | 4091-5549        | φ3.580 |
| 4090-7734         | 4091-5514        | φ0.232 | 4090-7752         | 4091-5532        | φ1.553 | 4090-7770         | 4091-5550        | φ3.666 |
| 4090-7735         | 4091-5515        | φ0.250 | 4090-7753         | 4091-5533        | φ1.591 | 4090-7771         | 4091-5551        | φ4.091 |
| 4090-7736         | 4091-5516        | φ0.260 | 4090-7754         | 4091-5534        | φ1.732 | 4090-7772         | 4091-5552        | φ4.120 |
| 4090-7737         | 4091-5517        | φ0.291 | 4090-7755         | 4091-5535        | φ1.833 | 4090-7773         | 4091-5553        | φ4.141 |
| 4090-7738         | 4091-5518        | φ0.343 | 4090-7756         | 4091-5536        | φ2.020 | 4090-7774         | 4091-5554        | φ4.211 |
| 4090-7739         | 4091-5519        | φ0.402 | 4090-7757         | 4091-5537        | φ2.050 | 4090-7775         | 4091-5555        | φ4.400 |
| 4090-7740         | 4091-5520        | φ0.433 | 4090-7758         | 4091-5538        | φ2.071 | 4090-7776         | 4091-5556        | φ4.773 |
| 4090-7741         | 4091-5521        | φ0.461 | 4090-7759         | 4091-5539        | φ2.217 | 4090-7777         | 4091-5557        | φ5.150 |
| 4090-7742         | 4091-5522        | φ0.511 | 4090-7760         | 4091-5540        | φ2.311 | 4090-7778         | 4091-5558        | φ5.176 |
| 4090-7743         | 4091-5523        | φ0.572 | 4090-7761         | 4091-5541        | φ2.595 | 4090-7779         | 4091-5559        | φ5.493 |
| 4090-7744         | 4091-5524        | φ0.724 | 4090-7762         | 4091-5542        | φ2.866 | 4090-7780         | 4091-5560        | φ6.212 |
| 4090-7745         | 4091-5525        | φ0.796 | 4090-7763         | 4091-5543        | φ2.886 | 4090-7781         | 4091-5561        | φ6.585 |
| 4090-7746         | 4091-5526        | φ0.866 | 4090-7764         | 4091-5544        | φ3.106 |                   |                  |        |

THREAD MEASURING WIRE SET

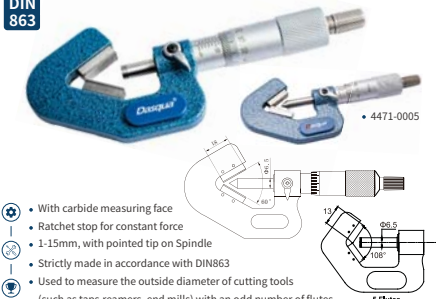


- 48 pieces 16 different sizes for all 60 threads
- 3 wire method of measuring external threads
- Measures all threads from 3 to 48 threads per inch and all metric from 0.5mm to 6mm pitch

| Unit:mm   |                           |                                                  |
|-----------|---------------------------|--------------------------------------------------|
| Code      | Range                     | Description                                      |
| 4005-0155 | Thread Measuring Wire Set | 48 pieces 16 different sizes for all 60° threads |

V-ANVIL MICROMETER

DIN 863



- With carbide measuring face
- Ratchet stop for constant force
- 1-15mm, with pointed tip on Spindle
- Strictly made in accordance with DIN863
- Used to measure the outside diameter of cutting tools (such as taps,reamers, end mills) with an odd number of flutes.
- V-anvils with a centerline groove are available. They are useful for measuring pitch diameters of taps which have a small diameter by using single-wire method.

| Code      | Range  | Graduation | Ratchet stop | Accuracy |
|-----------|--------|------------|--------------|----------|
| 4471-0005 | 1-15   | 0.01       | 3 Flutes     | 0.004    |
| 4471-0010 | 5-20   | 0.01       | 3 Flutes     | 0.004    |
| 4471-0015 | 20-35  | 0.01       | 3 Flutes     | 0.005    |
| 4471-0020 | 35-50  | 0.01       | 3 Flutes     | 0.005    |
| 4471-0025 | 50-65  | 0.01       | 3 Flutes     | 0.006    |
| 4471-0030 | 65-80  | 0.01       | 3 Flutes     | 0.006    |
| 4471-0035 | 80-95  | 0.01       | 3 Flutes     | 0.007    |
| 4471-0040 | 2.3-25 | 0.01       | 3 Flutes     | 0.004    |
| 4471-0045 | 25-50  | 0.01       | 3 Flutes     | 0.005    |
| 4471-0050 | 5-25   | 0.01       | 5 Flutes     | 0.004    |
| 4471-0055 | 25-45  | 0.01       | 5 Flutes     | 0.005    |
| 4471-0060 | 45-65  | 0.01       | 5 Flutes     | 0.006    |
| 4471-0065 | 65-85  | 0.01       | 5 Flutes     | 0.007    |
| 4471-0070 | 85-105 | 0.01       | 5 Flutes     | 0.008    |

IP65 WATER PROOF DIGITAL V-ANVIL MICROMETER

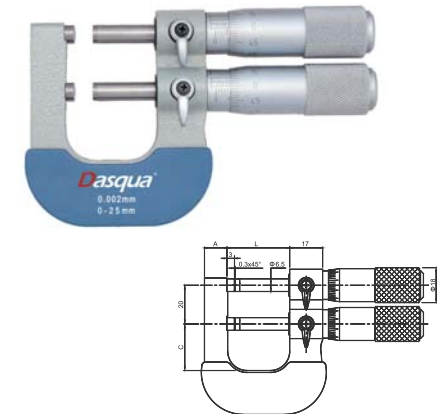
mm in IP65 Data output DIN 863 IP65



- IP65 protection against liquid
- With carbide measuring face
- Strictly made in accordance with DIN863
- With ratchet for constant measuring pressure
- Measuring diameter of cylinder with an odd number flutes, such as taps, reamers and end mills

| Code      | Range  | Resolution     | Ratchet stop | Accuracy |
|-----------|--------|----------------|--------------|----------|
| 4470-0005 | 1-15   | 0.001/0.00005" | 3 Flutes     | ±0.002   |
| 4470-0010 | 5-20   | 0.001/0.00005" | 3 Flutes     | ±0.002   |
| 4470-0015 | 20-35  | 0.001/0.00005" | 3 Flutes     | ±0.003   |
| 4470-0020 | 35-50  | 0.001/0.00005" | 3 Flutes     | ±0.003   |
| 4470-0025 | 50-65  | 0.001/0.00005" | 3 Flutes     | ±0.003   |
| 4470-0030 | 65-80  | 0.001/0.00005" | 3 Flutes     | ±0.003   |
| 4470-0035 | 80-95  | 0.001/0.00005" | 3 Flutes     | ±0.004   |
| 4470-0040 | 2.3-25 | 0.001/0.00005" | 3 Flutes     | ±0.002   |
| 4470-0045 | 25-50  | 0.001/0.00005" | 3 Flutes     | ±0.003   |
| 4470-0050 | 5-25   | 0.001/0.00005" | 5 Flutes     | ±0.002   |
| 4470-0055 | 25-45  | 0.001/0.00005" | 5 Flutes     | ±0.003   |
| 4470-0060 | 45-65  | 0.001/0.00005" | 5 Flutes     | ±0.003   |
| 4470-0065 | 65-85  | 0.001/0.00005" | 5 Flutes     | ±0.004   |
| 4470-0070 | 85-105 | 0.001/0.00005" | 5 Flutes     | ±0.004   |

LIMIT MICROMETER

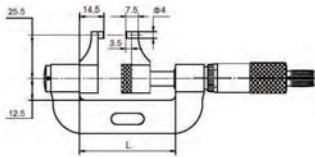


- Used as a go/no-go gage by setting the upper and lower limits
- Provided with a standard bar for 25mm- 50mm model
- With carbide measuring face
- Ratchet stop for constant force

| Code      | Range | Graduation | A  | L  | C  | Accuracy |
|-----------|-------|------------|----|----|----|----------|
| 4920-0005 | 0-25  | 0.002      | 12 | 32 | 24 | 0.003    |
| 4920-0010 | 25-50 | 0.002      | 15 | 57 | 32 | 0.003    |
| 4920-0015 | 0-1"  | 0.0001"    | 12 | 32 | 24 | 0.00012" |
| 4920-0020 | 1-2"  | 0.0001"    | 15 | 57 | 32 | 0.00012" |

CALIPER TYPE MICROMETER

DIN 863



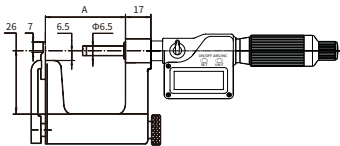
- Carbide measuring faces
- Caliper Type Micrometers enable precise measuring of hard to reach parts

Unit:mm

| Code      | Range    | Resolution | L   | Accuracy |
|-----------|----------|------------|-----|----------|
| 4005-0005 | 0-25mm   | 0.01       | 56  | ±0.005   |
| 4005-0010 | 25-50mm  | 0.01       | 81  | ±0.006   |
| 4005-0015 | 50-75mm  | 0.01       | 106 | ±0.007   |
| 4005-0020 | 75-100mm | 0.01       | 131 | ±0.008   |

INTERCHANGEABLE ANVIL MICROMETER

DIN 863



- With interchangeable anvils(flat anvil and rod anvil)
- Used to measure tube thickness, shoulder-edge distance, rivet head height, etc
- Can measure step height when removing anvils and clamp

Unit:mm

| Code      | Range   | Resolution | A    | D  | Accuracy |
|-----------|---------|------------|------|----|----------|
| 4005-0025 | 0-25mm  | 0.01       | 28.5 | Φ3 | 0.004    |
| 4005-0030 | 25-50mm | 0.01       | 53.5 | Φ5 | 0.004    |

ADJUSTABLE ANVIL-PITCH ROOT MICROMETERS

DIN 863



- Wide measuring range with adjustable anvil
- Carbide-tipped measuring faces
- Pipe combined frame for light weight and high rigidity(over 200mm/8" range)
- Resolution:0.01mm(Metric);0.001"(Inch)
- High accuracy interchangeable anvils enable that reading does not have to be reset when changing anvils

Unit:mm

| Code      | Range     | Resolution | Accuracy |
|-----------|-----------|------------|----------|
| 4005-0160 | 5-100mm   | 0.01       | 0.005    |
| 4005-0165 | 100-200mm | 0.01       | 0.007    |
| 4005-0170 | 200-300mm | 0.01       | 0.009    |

WIRE MICROMETER

DIN 863



- With finely ground carbide face
- Strictly made in accordance with DIN863
- With ratchet for constant measuring force
- Used to measure the diameter of wire or small ball

Unit:mm

| Code      | Range | Graduation | Accuracy |
|-----------|-------|------------|----------|
| 4631-0005 | 0-10  | 0.01       | 0.004    |

CAN SEAM MICROMETERS

DIN 863



- Strictly made in accordance with DIN863
- Measuring the wide, height and depth of can seams
- For aluminum can

Unit:mm

| Code      | Range  | Resolution | Accuracy |
|-----------|--------|------------|----------|
| 4631-0015 | 0-13mm | 0.01       | 0.004    |

CAN SEAM MICROMETERS

DIN 863



+

✗

↓

- Strictly made in accordance with DIN863
- Measuring the wide, height and depth of can seams
- For spray cans

| Code      | Range  | Resolution | Accuracy |
|-----------|--------|------------|----------|
| 4631-0020 | 0-13mm | 0.01       | 0.004    |

HOT SHEET MICROMETER

DIN 863



+

✗

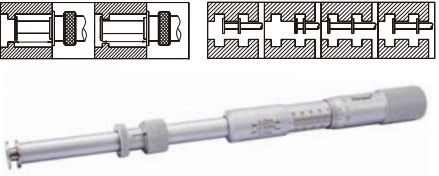
↓

- Painted frame
- Measure thickness of hot rolling sheet metal
- Carbide measuring faces

| Code      | Range    | Graduation | Accuracy |
|-----------|----------|------------|----------|
| 4718-0005 | 0-15mm   | 0.05       | 0.05     |
| 4718-0010 | 15-30mm  | 0.05       | 0.05     |
| 4718-0015 | 30-45mm  | 0.05       | 0.05     |
| 4718-0020 | 45-60mm  | 0.05       | 0.05     |
| 4718-0025 | 60-75mm  | 0.05       | 0.05     |
| 4718-0030 | 75-90mm  | 0.05       | 0.05     |
| 4718-0035 | 90-105mm | 0.05       | 0.05     |

GROOVE MICROMETER

DIN 863



+

✗

↓

- With non-rotating spindle
- Strictly made in accordance with DIN863
- Flanged measuring faces for measuring width,depth, and location of grooves inside bores
- Provided with 2 types of laser engraved graduations for inside and outside measurement

| Code      | Range  | Graduation | Parallelism | D    | Accuracy |
|-----------|--------|------------|-------------|------|----------|
| 4861-0005 | 0-25   | 0.01       | 0.01        | φ6.5 | 0.01     |
| 4861-0010 | 25-50  | 0.01       | 0.01        | φ13  | 0.01     |
| 4861-0015 | 50-75  | 0.01       | 0.01        | φ13  | 0.01     |
| 4861-0020 | 75-100 | 0.01       | 0.01        | φ13  | 0.01     |
| 4861-2005 | 0-1"   | 0.001"     | 0.001"      | φ6.5 | 0.001"   |
| 4861-2010 | 1-2"   | 0.001"     | 0.001"      | φ13  | 0.001"   |
| 4861-2015 | 2-3"   | 0.001"     | 0.001"      | φ13  | 0.001"   |
| 4861-2020 | 3-4"   | 0.001"     | 0.001"      | φ13  | 0.001"   |

6.5MM MICROMETER HEAD

+

✗

↓

- Carbide measuring surfaces ground for longer service life
- Straight stem/Stem with clamp nut optional
- With ratchet stop for constant pressure
- Spindle thread hardened, ground and lapped for ultimate accuracy
- Clear graduations laser-etched on satin chrome finish for easy reading
- Flat face/Spherical face optional
- Mount on precision equipment or machinery like machines, fixed devices, special tools, etc



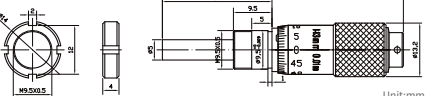
| Code      | Range | Graduation | Accuracy | Remark                |
|-----------|-------|------------|----------|-----------------------|
| 4833-8105 | 0-6.5 | 0.01       | 0.004    | W/Clamp Nut           |
| 4733-8105 | 0-6.5 | 0.01       | 0.004    | W/Clamp Nut/Spherical |

13MM MICROMETER HEAD

+

✗

↓



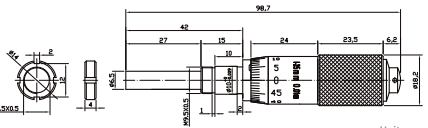
| Code      | Range | Graduation | Accuracy | Remark                               |
|-----------|-------|------------|----------|--------------------------------------|
| 4811-8110 | 0-13  | 0.01       | 0.004    | /                                    |
| 4833-8110 | 0-13  | 0.01       | 0.004    | W/Clamp Nut                          |
| 4811-7310 | 0-13  | 0.01       | 0.004    | W/Spindle Lock                       |
| 4733-8110 | 0-13  | 0.01       | 0.004    | W/Clamp Nut/Spherical                |
| 4711-7314 | 0-13  | 0.01       | 0.004    | W/Spindle Lock/Spherical             |
| 4733-7310 | 0-13  | 0.01       | 0.004    | W/Clamp Nut+W/Spindle Lock/Spherical |

25MM MICROMETER HEAD

+

✗

↓



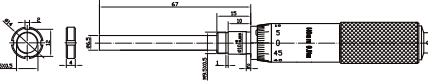
| Code        | Range | Graduation | Accuracy | Remark                               |
|-------------|-------|------------|----------|--------------------------------------|
| 4811-8115-A | 0-25  | 0.01       | 0.004    | /                                    |
| 4833-8115-A | 0-25  | 0.01       | 0.004    | W/Clamp Nut                          |
| 4811-7315-A | 0-25  | 0.01       | 0.004    | W/Spindle Lock                       |
| 4833-7315-A | 0-25  | 0.01       | 0.004    | W/Clamp Nut+W/Spindle Lock           |
| 4711-8115-A | 0-25  | 0.01       | 0.004    | Spherical                            |
| 4733-8115-A | 0-25  | 0.01       | 0.004    | W/Clamp Nut/Spherical                |
| 4711-7315-A | 0-25  | 0.01       | 0.004    | W/Spindle Lock/Spherical             |
| 4733-7315-A | 0-25  | 0.01       | 0.004    | W/Clamp Nut+W/Spindle Lock/Spherical |

50MM MICROMETER HEAD

+

✗

↓



| Code        | Range | Graduation | Accuracy | Remark                               |
|-------------|-------|------------|----------|--------------------------------------|
| 4811-8120-A | 0-50  | 0.01       | 0.004    | /                                    |
| 4833-8120-A | 0-50  | 0.01       | 0.004    | W/Clamp Nut                          |
| 4811-7320-A | 0-50  | 0.01       | 0.004    | W/Spindle Lock                       |
| 4833-7320-A | 0-50  | 0.01       | 0.004    | W/Clamp Nut+W/Spindle Lock           |
| 4711-8120-A | 0-50  | 0.01       | 0.004    | Spherical                            |
| 4733-8120-A | 0-50  | 0.01       | 0.004    | W/Clamp Nut/Spherical                |
| 4711-7320-A | 0-50  | 0.01       | 0.004    | W/Spindle Lock/Spherical             |
| 4733-7320-A | 0-50  | 0.01       | 0.004    | W/Clamp Nut+W/Spindle Lock/Spherical |



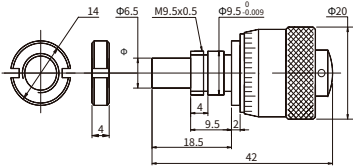
INCH MICROMETER HEAD



- Mount on precision equipment or machinery like machines, fixed devices, special tools, etc
- Carbide measuring surfaces ground for longer service life
- With ratchet stop for constant pressure
- Spindle thread hardened, ground and lapped for ultimate accuracy
- Clear graduations laser-etched on satin chrome finish for easy reading
- Straight stem/Stem with clamp nut optional
- Flat face/Spherical face optional

| Unit:mm     |         |            |          |                            |
|-------------|---------|------------|----------|----------------------------|
| Code        | Range   | Graduation | Accuracy | Remark                     |
| 4812-S105   | 0-0.25" | 0.001"     | 0.0015"  | W/Clamp Nut                |
| 4812-S110   | 0-0.5"  | 0.001"     | 0.0015"  | W/Clamp Nut                |
| 4812-S115-A | 0-1"    | 0.001"     | 0.0015"  | W/Clamp Nut+W/Spindle Lock |
| 4812-S120-A | 0-2"    | 0.001"     | 0.0015"  | W/Clamp Nut+W/Spindle Lock |

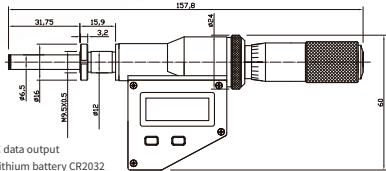
MICROMETER HEAD  
WITH LARGE THIMBLE DIAMETER



- Strictly made in accordance with DIN863
- Operating and display units antiglare with satin chrome finish
- Stainless spindle is hardened throughout and ground
- Rapid drive with integrated ratchet
- Carbide tipped measuring face
- with clamp nut

| Unit:mm   |       |            |          |                       |
|-----------|-------|------------|----------|-----------------------|
| Code      | Range | Graduation | Accuracy | Remark                |
| 4811-8125 | 0-6.5 | 0.01       | 0.005    | /                     |
| 4833-8125 | 0-6.5 | 0.01       | 0.005    | W/Clamp Nut           |
| 4711-8125 | 0-6.5 | 0.01       | 0.005    | Spherical             |
| 4733-8125 | 0-6.5 | 0.01       | 0.005    | W/Clamp Nut/Spherical |
| 4811-8130 | 0-13  | 0.01       | 0.004    | /                     |
| 4833-8130 | 0-13  | 0.01       | 0.004    | W/Clamp Nut           |

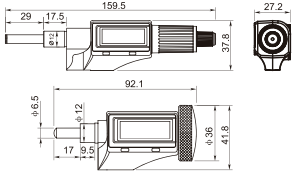
IP65 DIGITAL MICROMETER HEAD  
WITH CLAMP NUT



- SPC data output
- 3V lithium battery CR2032
- IP65 protection against liquid
- Strictly made in accordance with DIN863
- Incremental capacitor measurement system
- With carbide measuring face
- With painted frame
- Flat face (spherical tip optional)
- Spindle hardened and ground

| Unit:mm   |           |                |                |                |
|-----------|-----------|----------------|----------------|----------------|
| Code      | Range     | Resolution     | Accuracy       | Tip Type       |
| 4910-2125 | 0-25/0-1" | 0.001/0.00005" | 0.003/0.00015" | Spherical head |
| 4910-2130 | 0-50/0-2" | 0.001/0.00005" | 0.003/0.00015" | Flat head      |
| 4910-2135 | 0-25/0-1" | 0.001/0.00005" | 0.003/0.00015" | Flat head      |
| 4910-2140 | 0-50/0-2" | 0.001/0.00005" | 0.003/0.00015" | Spherical head |

DIGITAL MICROMETER HEAD



- Mount on precision equipment or machinery like machines, fixed devices, special tools, etc
- where need 0.001mm accuracy
- Strictly made in accordance with DIN863
- Equipped with large LCD screen for easy reading
- Spindle thread hardened, ground and lapped for ultimate accuracy
- Carbide measuring surfaces ground for longer service life
- Flat face/Spherical face optional

| Unit:mm   |             |                |                |                |
|-----------|-------------|----------------|----------------|----------------|
| Code      | Range       | Resolution     | Accuracy       | Tip Type       |
| 4910-2105 | 0-15/0-0.5" | 0.001/0.00005" | 0.003/0.00015" | Flat head      |
| 4910-2110 | 0-15/0-0.5" | 0.001/0.00005" | 0.003/0.00015" | Spherical head |
| 4910-2115 | 0-25/0-1"   | 0.001/0.00005" | 0.003/0.00015" | Spherical head |
| 4910-2120 | 0-25/0-1"   | 0.001/0.00005" | 0.003/0.00015" | Flat head      |

MICROMETER ANVIL ATTACHMENT SET

- Turns your micrometer for multi-measuring tool
- Each set include: spline, knife, super spline, blade, comparator, disc and ball style anvils
- Fits all micrometers up to 300mm(12")



| Code      | Range                                                                                   |
|-----------|-----------------------------------------------------------------------------------------|
| 4410-0005 | 7pcs Set [ spline, knife, super spline, blade, comparator, disc and ball style anvils ] |

MICROMETER CALIBRATION GAUGE BLOCK SET

DIN ISO 3650

- Made of Stainless steel
- Grade 1
- 5 pcs rectangular blocks and 1 optical flat



| Code      | Grade | Contents                                                                                |
|-----------|-------|-----------------------------------------------------------------------------------------|
| 6111-1505 | 1     | The size of the each gauge block: 5.1mm, 10.3mm, 15mm, 20.2mm, 25mm with 1 optical Flat |

MICROMETER CALIBRATION GAUGE BLOCK SET

DIN ISO 3650

- Garde 0 or Grade 1 (optional)
- 10 pcs rectangular blocks and 1 optical flat
- 1 Optical Flat which allows checking anvil faces at half rotations of spindle for measuring flatness

MADE OF CERAMIC



| Code      | Grade | Contents                                                                                                        |
|-----------|-------|-----------------------------------------------------------------------------------------------------------------|
| 6110-1211 | 0     | The size of each gauge block 2,5,5,1,7,7,10,3,12,9,15,0,17,6,20,2,22,8,25,0; 1 pc optical with a flat glass q30 |
| 6110-1405 | 1     | The size of each gauge block 2,5,5,1,7,7,10,3,12,9,15,0,17,6,20,2,22,8,25,0; 1 pc optical with a flat glass q30 |

MADE OF STAINLESS STEEL



| Code      | Grade | Contents                                                                                                        |
|-----------|-------|-----------------------------------------------------------------------------------------------------------------|
| 6111-1210 | 0     | The size of each gauge block 2,5,5,1,7,7,10,3,12,9,15,0,17,6,20,2,22,8,25,0; 1 pc optical with a flat glass q30 |
| 6111-1211 | 1     | The size of each gauge block 2,5,5,1,7,7,10,3,12,9,15,0,17,6,20,2,22,8,25,0; 1 pc optical with a flat glass q30 |

OPTICAL PARALLEL

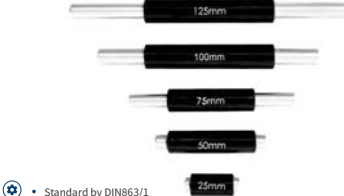
- Check the flatness and parallelism of measuring faces of micrometer



| Code      | Range    | D    |
|-----------|----------|------|
| 6111-1220 | 0-25mm   | 30mm |
| 6111-1225 | 25-50mm  | 30mm |
| 6111-1230 | 50-75mm  | 40mm |
| 6111-1235 | 75-100mm | 50mm |

MICROMETER CALIBRATION STANDARD

- Standard by DIN863/1
- For calibrating the zero position of outside micrometers
- With a heat-insulating handle to prevent heat expansion



| Code      | Contents | Contents | Range for micrometer |
|-----------|----------|----------|----------------------|
| 4005-4001 | 25mm     | Ø7mm     | ±0.0012              |
| 4005-4002 | 50mm     | Ø7mm     | ±0.0012              |
| 4005-4003 | 75mm     | Ø7mm     | ±0.0015              |
| 4005-4004 | 100mm    | Ø8mm     | ±0.0020              |
| 4005-4005 | 125mm    | Ø8mm     | ±0.0025              |
| 4005-4006 | 150mm    | Ø8mm     | ±0.0025              |
| 4005-4007 | 175mm    | Ø8mm     | ±0.0025              |
| 4005-4008 | 200mm    | Ø8mm     | ±0.0035              |
| 4005-4009 | 225mm    | Ø8mm     | ±0.0035              |
| 4005-4010 | 250mm    | Ø8mm     | ±0.0035              |
| 4005-4011 | 275mm    | Ø8mm     | ±0.0040              |
| 4005-4012 | 300mm    | Ø16mm    | ±0.0040              |
| 4005-4013 | 325mm    | Ø16mm    | ±0.0045              |
| 4005-4014 | 350mm    | Ø16mm    | ±0.0045              |
| 4005-4015 | 375mm    | Ø16mm    | ±0.0045              |
| 4005-4016 | 400mm    | Ø16mm    | ±0.0045              |
| 4005-4017 | 425mm    | Ø16mm    | ±0.0050              |
| 4005-4018 | 450mm    | Ø16mm    | ±0.0050              |
| 4005-4019 | 475mm    | Ø16mm    | ±0.0050              |
| 4005-4020 | 500mm    | Ø16mm    | ±0.0050              |
| 4005-4021 | 525mm    | Ø16mm    | ±0.0055              |
| 4005-4022 | 550mm    | Ø16mm    | ±0.006               |
| 4005-4023 | 575mm    | Ø16mm    | ±0.0055              |
| 4005-4024 | 600mm    | Ø16mm    | ±0.007               |
| 4005-4025 | 625mm    | Ø16mm    | ±0.0055              |
| 4005-4026 | 650mm    | Ø16mm    | ±0.007               |
| 4005-4027 | 675mm    | Ø16mm    | ±0.0065              |
| 4005-4028 | 700mm    | Ø16mm    | ±0.008               |
| 4005-4029 | 725mm    | Ø16mm    | ±0.0065              |
| 4005-4030 | 750mm    | Ø16mm    | ±0.008               |
| 4005-4031 | 775mm    | Ø16mm    | ±0.0065              |
| 4005-4032 | 800mm    | Ø16mm    | ±0.009               |
| 4005-4033 | 825mm    | Ø16mm    | ±0.0075              |
| 4005-4034 | 850mm    | Ø16mm    | ±0.009               |
| 4005-4035 | 875mm    | Ø16mm    | ±0.0075              |
| 4005-4036 | 900mm    | Ø16mm    | ±0.010               |
| 4005-4037 | 925mm    | Ø16mm    | ±0.0075              |
| 4005-4038 | 950mm    | Ø16mm    | ±0.010               |
| 4005-4039 | 975mm    | Ø16mm    | ±0.0075              |

# INDICATORS

BORN IN ITALY, RAISED BY THE WORLD

02-06 DIAL INDICATOR (SIZE OF 1/3/5MM)



07-10 DIAL INDICATOR (SIZE OF 10MM)



10 DIAL INDICATOR (SIZE OF 20/25/30/50/80/100MM)



11-12 INCH SIZE DIAL INDICATOR



12-19 DIGITAL INDICATOR



20-22 INDICATOR FOR SPECIAL MEASURING



23-26 INDICATOR RELATED PRODUCTS



27-37 DIAL TEST INDICATOR



38 DIAL TEST INDICATOR RELATED PRODUCTS



39-42 DIAL BORE GAUGE



44-46 DIAL BORE GAUGE RELATED PRODUCTS



47-54 DIAL THICKNESS GAUGE RELATED PRODUCTS



54-61 DIAL CALIPER GAUGE RELATED PRODUCTS



61 DIAL DEPTH GAUGE RELATED PRODUCTS



62 OTHER DIAL INDICATOR RELATED PRODUCTS

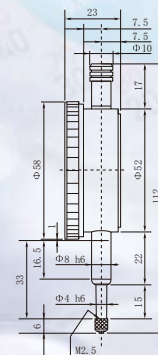


## DIAL INDICATOR PRIME

WITH 0.001MM GRADUATION

- Made in Germany
- Used to measure surface flatness, check tool set-up and squareness
- Knurled top screw or lifting cap to raise the plunger easily
- With adjustable limit hands to set tolerance
- O-Ring sealed between inner and outer lid to protect from water or oil

DIN 878



| Code        | Range | Graduation | Accuracy | Hysteresis | Range/Rev | Reading | Housing Diameter |
|-------------|-------|------------|----------|------------|-----------|---------|------------------|
| S181-0005-A | 0-1   | 0.001      | 0.005    | 0.002      | 0.2       | 0-100-0 | φ58              |

Unit:mm

**Dasqua Blu**  
MADE IN GERMANY



• Each indicator is with a matched certificate



• Double figures in different colors for easy and correct reading



• Measuring rod nearly does not wobble. Both the sleeve reamed hole and measuring rod are very smooth when gripped.

DIAL INDICATOR



- Come with certificate
- Heat-treated steel case with chrome finishing for durability
- Hardened stainless steel stem, 3/8" and 8mm diameter standard
- Knurled bezels for easy, no-slip grip
- Hardened stainless steel rack
- Fine, easy-to-read graduations on non-glare dials

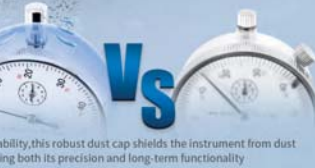
2X 210G HEAVIER

than standard models on the market our dial indicator offers enhanced precision and superior durability, designed to excel in the toughest industrial settings and ensure reliability



- A PULLEY + TENSION SPRING**  
Features a finely calibrated pulley and tension spring system that ensures smooth operation and minimal force requirement, resulting in more accurate measurements.
- B INTERNAL COPPER STRUCTURE**  
Built with a precision-engineered, full copper internal structure that is not affected by temperature variations providing exceptional precision and enhanced stability.
- C HEAT-TREATED STEEL CASE WITH CHROME PLATING**  
Encased in a heat-treated steel with chrome plating for extra durability and corrosion resistance, making the tool suitable for heavy-duty industrial use
- D COPPER GUIDE SUPPORT**  
Incorporates copper guide supports that enhance the stability and durability of the guiding movement, ensuring long-term reliability

Each dial indicator comes with Calibration Certified to ASME B89.1.10M-2001 Standards



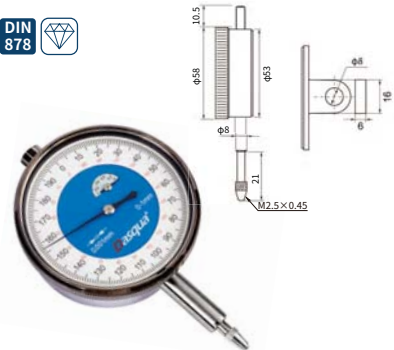
**DUST CAP**  
Engineered for durability, this robust dust cap shields the instrument from dust and debris, preserving both its precision and long-term functionality

Unit:mm

| Code      | Range | Graduation | Style    | B    | D      | E     | Dial Reading | Accuracy | Hysteresis |
|-----------|-------|------------|----------|------|--------|-------|--------------|----------|------------|
| 5111-2020 | 0-10  | 0.01       | lug back | 20   | φ8h8   | 110   | 0-100        | 0.017    | 0.003      |
| 5122-4270 | 0-1"  | 0.001"     | lug back | 22.5 | φ9.525 | 141.5 | 0-100        | 0.002"   | 0.00033"   |

BORN IN ITALY, RAISED BY THE WORLD INDICATORS

DIAL INDICATOR  
WITH 0.001MM GRADUATION



- With calibration certificate
- Heavier steel case against indicator failure due to shock or wear
- Used to measure surface flatness as well as axial runout and also used to check tool set up and squareness
- Strictly made in accordance with DIN878
- Jeweled bearings providing the lowest possible bearing friction
- With narrowed range and higher accuracy

Unit:mm

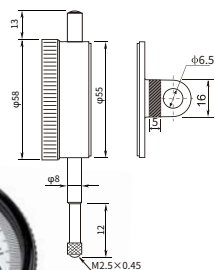
| Code      | Range | Graduation | Dial Reading | Accuracy | Hysteresis | Style     |
|-----------|-------|------------|--------------|----------|------------|-----------|
| 5121-3005 | 0-1   | 0.001      | 0-200        | ±0.005   | 0.002      | Flat back |
| 5121-3010 | 0-1   | 0.001      | 0-200        | ±0.005   | 0.002      | Lug back  |





## DIAL INDICATOR

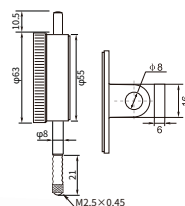
WITH 0.001MM GRADUATION



- With calibration certificate
- Used to measure surface flatness as well as axial runout and also used to check tool set up and squareness
- Limit indicator clips included
- Strictly made in accordance with DIN878
- Jeweled bearings providing the lowest possible bearing friction
- With narrowed range and higher accuracy

|           |       |            |           |              |          | Unit:mm    |
|-----------|-------|------------|-----------|--------------|----------|------------|
| Code      | Range | Graduation | Style     | Dial Reading | Accuracy | Hysteresis |
| 5121-2101 | 0-1   | 0.001      | flat back | 0-200        | 0.005    | 0.002      |
| 5121-2201 | 0-1   | 0.001      | lug back  | 0-200        | 0.005    | 0.002      |

## WATER PROOF INDICATOR

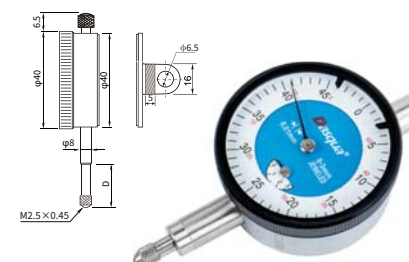


- O-ring seal on safety cap for bezel and rotating dial
- Strictly made in accordance with DIN878
- Used to measure surface flatness as well as axial runout and also used to check tool set up and squareness
- Hardened gears-lasting against indicator failure due to shock or wear

|           |       |            |           |              |          | Unit:mm    |
|-----------|-------|------------|-----------|--------------|----------|------------|
| Code      | Range | Graduation | Style     | Dial Reading | Accuracy | Hysteresis |
| 5121-2106 | 0-1   | 0.001      | flat back | 0-200        | 0.005    | 0.002      |
| 5121-2107 | 0-1   | 0.001      | lug back  | 0-200        | 0.005    | 0.002      |

## MINI DIAL INDICATOR

### STANDARD VERSION

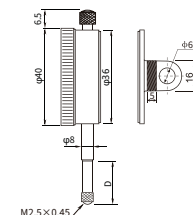


- With calibration certificate
- Used to measure surface flatness as well as axial runout and also used to check tool set up and squareness
- Limit indicator clips included
- Strictly made in accordance with DIN878
- Jeweled bearings providing the lowest possible bearing friction
- With narrowed range and higher accuracy

Unit:mm

| Code      | Range | Graduation | Style     | Dial Reading | D    | Accuracy | Hysteresis |
|-----------|-------|------------|-----------|--------------|------|----------|------------|
| 5121-1230 | 0-3   | 0.01       | flat back | 0-50         | 10.6 | 0.014    | 0.003      |
| 5121-1203 | 0-3   | 0.01       | lug back  | 0-50         | 10.6 | 0.014    | 0.003      |
| 5121-1235 | 0-5   | 0.01       | flat back | 0-50         | 12.5 | 0.016    | 0.003      |
| 5121-1204 | 0-5   | 0.01       | lug back  | 0-50         | 12.5 | 0.016    | 0.003      |

## MINI DIAL INDICATOR



- With calibration certificate
- Used to measure surface flatness as well as axial runout and also used to check tool set up and squareness
- Limit indicator clips included
- Strictly made in accordance with DIN878
- Jeweled bearings providing the lowest possible bearing friction
- With narrowed range and higher accuracy

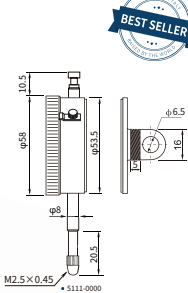
| Unit:m    |       |            |           |      |              |          |            |
|-----------|-------|------------|-----------|------|--------------|----------|------------|
| Code      | Range | Graduation | Style     | D    | Dial Reading | Accuracy | Hysteresis |
| 5121-1101 | 0-3   | 0.01       | flat back | 10.6 | 0-100        | 0.012    | 0.003      |
| 5121-1201 | 0-3   | 0.01       | lug back  | 10.6 | 0-100        | 0.012    | 0.003      |
| 5121-1102 | 0-5   | 0.01       | flat back | 12.5 | 0-100        | 0.014    | 0.003      |
| 5121-1202 | 0-5   | 0.01       | lug back  | 12.5 | 0-100        | 0.014    | 0.003      |

DIAL INDICATOR

DIN 878



• 5111-0000 Metric Dial Indicator

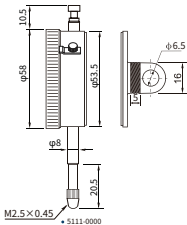


- Used to measure surface flatness as well as axial runout and also used to check tool set up and squareness
- Limit indicator clips included
- Strictly made in accordance with DIN878
- Jeweled bearings providing the lowest possible bearing friction
- With narrowed range and higher accuracy

| Unit:mm   |       |            |           |              |          |            |
|-----------|-------|------------|-----------|--------------|----------|------------|
| Code      | Range | Graduation | Style     | Dial Reading | Accuracy | Hysteresis |
| 5111-0000 | 0-10  | 0.01       | flat back | 0-100        | 0.017    | 0.003      |
| 5111-1005 | 0-10  | 0.01       | lug back  | 0-100        | 0.017    | 0.003      |

DIAL INDICATOR

DIN 878

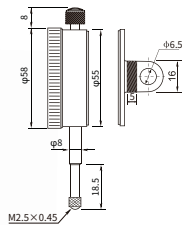


- Used to measure surface flatness as well as axial runout and also used to check tool set up and squareness
- Limit indicator clips included
- Strictly made in accordance with DIN878
- Jeweled bearings providing the lowest possible bearing friction
- With narrowed range and higher accuracy

| Unit:mm   |       |            |           |              |          |            |
|-----------|-------|------------|-----------|--------------|----------|------------|
| Code      | Range | Graduation | Style     | Dial Reading | Accuracy | Hysteresis |
| 5111-5005 | 0-10  | 0.01       | flat back | 0-100        | 0.017    | 0.003      |

DIAL INDICATOR

DIN 878



5122-4245  
Contact point available

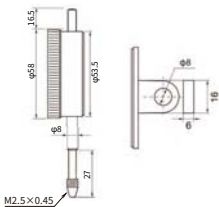
- Used to measure surface flatness as well as axial runout and also used to check tool set up and squareness
- Limit indicator clips included
- Strictly made in accordance with DIN878
- Jeweled bearings providing the lowest possible bearing friction
- With narrowed range and higher accuracy

| Unit:mm   |       |            |           |              |          |            |
|-----------|-------|------------|-----------|--------------|----------|------------|
| Code      | Range | Graduation | Style     | Dial Reading | Accuracy | Hysteresis |
| 5111-1105 | 0-10  | 0.01       | flat back | 0-100        | 0.017    | 0.003      |
| 5111-1205 | 0-10  | 0.01       | lug back  | 0-100        | 0.017    | 0.003      |

DIAL INDICATOR

WITH CALIBRATION CERTIFICATE

DIN 878

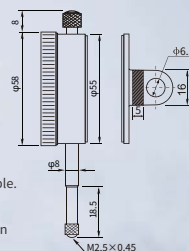
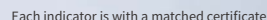
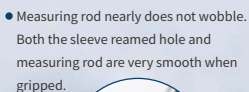
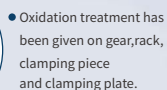
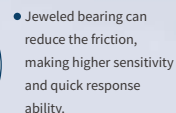


- With calibration certificate
- Strictly made in accordance with DIN878
- With narrowed range and higher accuracy
- Heavier steel case against indicator failure due to shock or wear
- Used to measure surface flatness as well as axial runout and also used to check tool set up and squareness

| Unit:mm   |        |            |              |          |            |           |
|-----------|--------|------------|--------------|----------|------------|-----------|
| Code      | Range  | Graduation | Dial Reading | Accuracy | Hysteresis | Style     |
| 5111-1110 | 0-10mm | 0.01       | 0-100        | ±0.017   | 0.003      | Flat back |
| 5111-1210 | 0-10mm | 0.01       | 0-100        | ±0.017   | 0.003      | Lug back  |



**WITH SHOCK RESISTANT ABILITY**

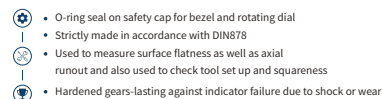
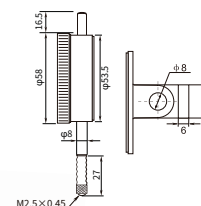
Unit:mm

SHOCK  
-PROOF

IP54

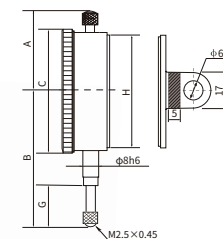
DIN  
878

ISO  
463



1101110000

## DIAL INDICATOR

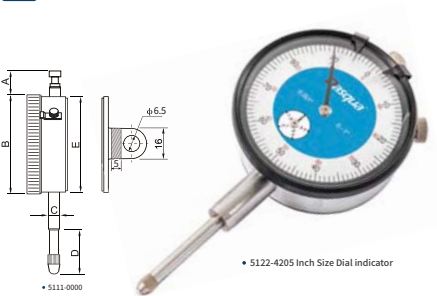


- Graduation 0.01mm
- Used for long stroke measurement
- Limit indicator clips included
- Strictly made in accordance with DIN878
- Jeweled bearings providing the lowest possible bearing friction
- With larger range than normal indicators

Unit:mm

INCH SIZE DIAL INDICATOR

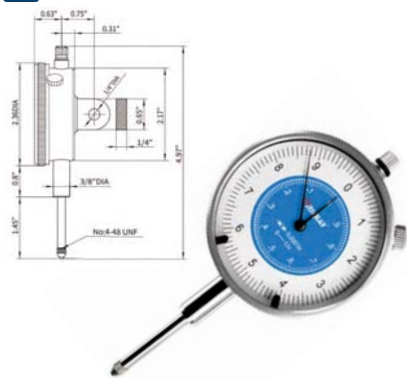
STANDARD VERSION



- With calibration certificate
- Used to measure surface flatness as well as axial runout and also
- Limit indicator clips included
- Strictly made in accordance with DIN878
- With narrowed range and higher accuracy

| Unit:inch |        |            |              |          |                     |
|-----------|--------|------------|--------------|----------|---------------------|
| Code      | Range  | Graduation | Dial Reading | Style    | Protection Standard |
| 5122-4205 | 0-0.5" | 0.0005"    | 0-100        | lug back | No Jeweled Bearing  |
| 5122-4230 | 0-1"   | 0.0005"    | 0-100        | lug back | No Jeweled Bearing  |
| 5122-4214 | 0-2"   | 0.001"     | 0-100        | lug back | No Jeweled Bearing  |
| 5122-4215 | 0-2"   | 0.001"     | 0-100        | lug back | Jeweled Bearing     |

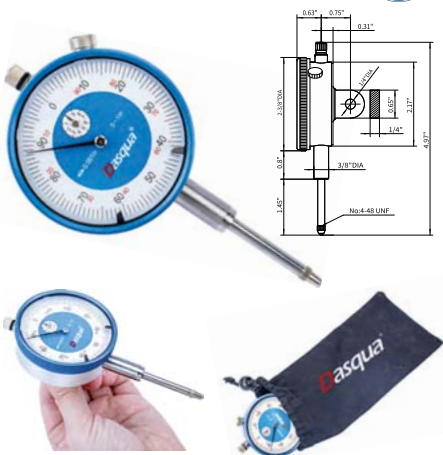
DIAL INDICATOR



- With calibration certificate
- Limit indicator clips included
- Strictly made in accordance with DIN878
- With narrowed range and higher accuracy
- Jeweled bearings providing the lowest possible bearing friction
- Used to measure surface flatness as well as axial runout and also used to check tool set up and squareness

| Unit:mm   |       |            |              |                   |          |
|-----------|-------|------------|--------------|-------------------|----------|
| Code      | Range | Graduation | Dial Reading | Clamping diameter | Accuracy |
| 5122-4245 | 0-1"  | 0.0001"    | 0-10         | Φ2.28"/58mm       | ±.2"     |

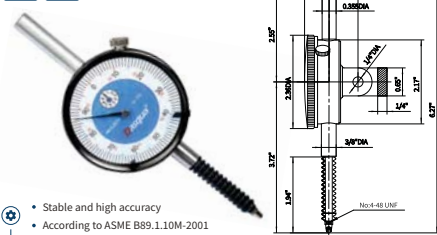
INCH DIAL INDICATOR



- Hardened metal construction for longer life
- Stable and high accuracy. According to ASME B89.1.10M-2001
- Extra flannelette bag to protect the dial indicator for repeated usage

| Code      | Range | Graduation | Style    | Dial Reading | Range per Rev | Accuracy First 2.5 rev | Accuracy Overall | Hysteresis |
|-----------|-------|------------|----------|--------------|---------------|------------------------|------------------|------------|
| 5122-4212 | 0-1"  | 0.001"     | lug back | 0-100        | 0.1"          | ±0.001"                | ±0.0002"         | 0.00033"   |

IP54 WATER PROOF INDICATOR



- Stable and high accuracy
- According to ASME B89.1.10M-2001
- Hardened metal construction for longer life
- Extra flannelette bag to protect the dial indicator for repeated usage

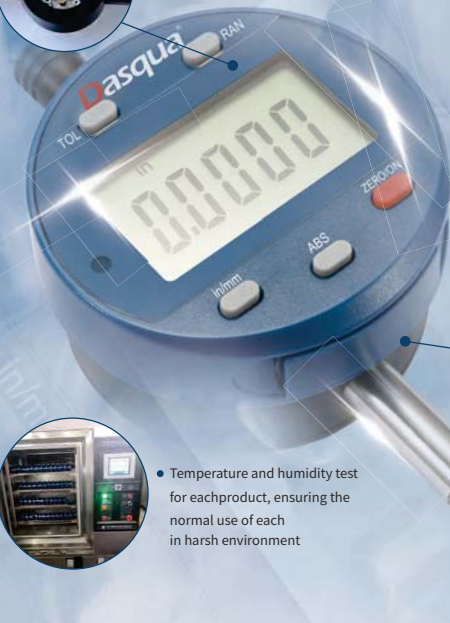


| Unit:inch |       |            |          |              |               |          |            |  |
|-----------|-------|------------|----------|--------------|---------------|----------|------------|--|
| Code      | Range | Graduation | Style    | Dial Reading | Range per Rev | Accuracy | Hysteresis |  |
| 5122-4213 | 0-1"  | 0.001"     | lug back | 0-100        | 0.1"          | ±.2      | 0.33       |  |

# MULTIFUNCTIONAL DIGITAL INDICATOR



- Glass grating for high accuracy and stable performance



- Temperature and humidity test for each product, ensuring the normal use of each in harsh environment



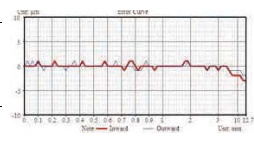
- Housing entirely cast made of high-strength alloy aluminum guaranteeing low deformation

| Code      | Range         | Resolution   | Accuracy |
|-----------|---------------|--------------|----------|
| 5260-3705 | 0-12.7/0-0.5" | 0.01/0.0005" | 0.02     |
| 5260-3710 | 0-25.4/0-1.0" | 0.01/0.0005" | 0.02     |
| 5260-3715 | 0-50.8/0-2.0" | 0.01/0.0005" | 0.02     |
| 5260-3720 | 0-101.6/0-4"  | 0.01/0.0005" | 0.02     |

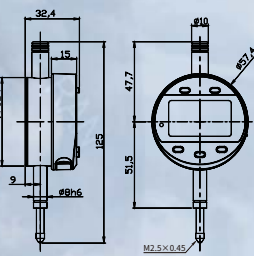
**Digital Indicator Certificate**

Product Name: Digital Indicator      Name of Inspection Standard: Factory Standard  
Part No.: 2041351      Unit: mm  
Serial No.: 2041351      Scale Interval: 0.01mm  
Date of Inspection: 2020-04-16      Measuring Range: 0-12.7mm  
Reference Point: 0mm  
Inspector:      End Point: 0-12.7mm

Inspection Item Name: Judgment  
Inspection of Function and Appearance: **Pass**

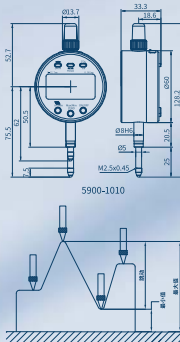


Each indicator is with a matched certificate.



# HIGH PRECISION DIGITAL INDICATOR

## NEW GENERATION GRATING SENSOR TECHNOLOGY



5900-1010





FULL CHARGED FOR  
**24HOURS**  
CONTINUOUS USAGE

**HIGH RELIABILITY**

MULTI FUNCTIONS BUILT  
IN(MIN/MAX/ZERO, TOL, DATA,  
PRESET, AUTO OFF, ETC.)

**HIGH ACCURACY  
AND REPEATABILITY**

MAXIMUM ERROR OF **0.0014MM**  
REPEATABILITY **≤0.0006MM**

Unit:mm

| Code      | Range         | Resolution      | Accuracy | Hysteresis | Data output | Repeatability |
|-----------|---------------|-----------------|----------|------------|-------------|---------------|
| 5900-1010 | 0-12.7/0-0.5" | 0.0002/0.00001" | 0.0014   | 0.001      | Cable       | ≤0.0006mm     |
| 5900-1025 | 0-25.4/0-1.0" | 0.0002/0.00001" | 0.0018   | 0.001      | Cable       | ≤0.0008mm     |
| 5900-1050 | 0-50.8/0-2.0" | 0.0002/0.00001" | 0.003    | 0.0015     | Cable       | ≤0.001mm      |
| 5261-1205 | 0-12.7/0-0.5" | 0.0002/0.00001" | 0.0014   | 0.001      | Wireless    | ≤0.0006mm     |
| 5261-1210 | 0-25.4/0-1.0" | 0.0002/0.00001" | 0.0018   | 0.001      | Wireless    | ≤0.0008mm     |
| 5261-1215 | 0-50.8/0-2.0" | 0.0002/0.00001" | 0.003    | 0.0015     | Wireless    | ≤0.001mm      |
| 5261-2205 | 0-12.7/0-0.5" | 0.0002/0.00001" | 0.0014   | 0.001      | Zigbee      | ≤0.0006mm     |
| 5261-2210 | 0-25.4/0-1.0" | 0.0002/0.00001" | 0.0018   | 0.001      | Zigbee      | ≤0.0008mm     |
| 5261-2215 | 0-50.8/0-2.0" | 0.0002/0.00001" | 0.003    | 0.0015     | Zigbee      | ≤0.001mm      |

SMALL DIGITAL INDICATOR



- Glass grating for high accuracy and stable performance
- Copper sleeve and rod precisely ground to reduce shaking
- Watchcase made of high-strength aluminum alloy guaranteeing low deformation
- Temperature and humidity test for each product, ensuring the normal use of each in harsh environment
- Calibration certificate provided with total forward error, hysteresis error, total error and deviation error on it

| Unit:mm   |                |                  |          |
|-----------|----------------|------------------|----------|
| Code      | Range          | Graduation       | Accuracy |
| 5260-1104 | 0-5mm / 0-0.2" | 0.01mm / 0.0005" | 0.02     |

DIGITAL INDICATOR



- Calibration certificate provided with total forward error, hysteresis error, total error and deviation error on it
- Watchcase made of high-strength aluminum alloy guaranteeing low deformation
- Glass grating for high accuracy and stable performance
- Temperature and humidity test for each product, ensuring the normal use of each in harsh environment
- Copper sleeve and rod precisely ground to reduce shaking
- The functions of tolerance set and tolerance alarm are optional. Alarm light is also available for quick-checking products' tolerance

| Unit:mm   |                 |                |          |
|-----------|-----------------|----------------|----------|
| Code      | Range           | Resolution     | Accuracy |
| 5260-1105 | 0-12.7 / 0-0.5" | 0.01 / 0.0005" | 0.02     |
| 5260-1110 | 0-25.4 / 0-1.0" | 0.01 / 0.0005" | 0.02     |
| 5260-1115 | 0-50.8 / 0-2.0" | 0.01 / 0.0005" | 0.02     |
| 5260-1120 | 0-101.6 / 0-4"  | 0.01 / 0.0005" | 0.02     |

DIGITAL INDICATOR

WITH 0.001MM RESOLUTION



- Calibration certificate provided with total forward error, hysteresis error, total error and deviation error on it
- Watchcase made of high-strength aluminum alloy guaranteeing low deformation
- Glass grating for high accuracy and stable performance
- Temperature and humidity test for each product, ensuring the normal use of each in harsh environment
- Copper sleeve and rod precisely ground to reduce shaking

| Unit:mm   |                 |                  |          |
|-----------|-----------------|------------------|----------|
| Code      | Range           | Resolution       | Accuracy |
| 5260-4205 | 0-12.7 / 0-0.5" | 0.001 / 0.00005" | 0.004    |
| 5260-4210 | 0-25.4 / 0-1.0" | 0.001 / 0.00005" | 0.005    |
| 5260-4215 | 0-50.8 / 0-2.0" | 0.001 / 0.00005" | 0.006    |
| 5260-4220 | 0-101.6 / 0-4"  | 0.001 / 0.00005" | 0.010    |

DIGITAL INDICATOR



- Glass grating for high accuracy and stable performance
- Copper sleeve and rod precisely ground to reduce shaking
- Watchcase made of high-strength aluminum alloy guaranteeing low deformation
- Temperature and humidity test for each product, ensuring the normal use of each in harsh environment
- Calibration certificate provided with total forward error, hysteresis error, total error and deviation error on it

| Unit:mm   |                   |                  |          |
|-----------|-------------------|------------------|----------|
| Code      | Range             | Graduation       | Accuracy |
| 5330-8105 | 0-12.7mm / 0-0.5" | 0.01mm / 0.0005" | 0.02     |



DIGITAL INDICATOR



- Glass grating for high accuracy and stable performance
- Copper sleeve and rod precisely ground to reduce shaking
- Watchcase made of high-strength aluminum alloy guaranteeing low deformation
- Temperature and humidity test for each product, ensuring the normal use of each in harsh environment
- Calibration certificate provided with total forward error, hysteresis error, total error and deviation error on it

| Code      | Range             | Graduation            | Accuracy |
|-----------|-------------------|-----------------------|----------|
| 5130-1105 | 0-12.7mm / 0-0.5" | 0.01mm/0.0005"/1/128" | 0.02     |
| 5130-1110 | 0-25.4mm / 0-1"   | 0.01mm/0.0005"/1/128" | 0.02     |

ABSOLUTE DIGITAL INDICATOR



- Large easy-to-read digital display
- With ABS and Metric/Inch Conversion System
- With long battery-use
- With Absolute-Reference System and no need to set the reference point at every power-on

| Code      | Range             | Graduation     | A     | B   |
|-----------|-------------------|----------------|-------|-----|
| 5140-1105 | 0-12.7mm / 0-0.5" | 0.01mm/0.0005" | 101.4 | 15  |
| 5140-1110 | 0-25.4mm / 0-1"   | 0.01mm/0.0005" | 126.4 | 37  |
| 5140-1115 | 0-50.8mm / 0-2"   | 0.01mm/0.0005" | 176.9 | 63  |
| 5140-1120 | 0-101.6mm / 0-4"  | 0.01mm/0.0005" | 277.4 | 113 |

DIGITAL INDICATOR WITH ABSOLUTE FUNCTION



- Wireless system built-in (optional)
- With Absolute-Reference System and no need to set the reference point at every power-on
- Large easy-to-read digital display
- With ABS and Metric/Inch Conversion System
- With long battery-use

| Code      | Range         | Resolution     | A    | B    | C    | D    | E     | F    | G          | H    | Accuracy       |
|-----------|---------------|----------------|------|------|------|------|-------|------|------------|------|----------------|
| 5340-8105 | 0-12.7/0-0.5" | 0.01/0.0005"   | 60.2 | 53.8 | 14.2 | 40.2 | φ60.1 | φ6.5 | φ8 or 3/8" | φ4.5 | 0.01/0.0005"   |
| 5340-8110 | 0-25.4/0-1.0" | 0.01/0.0005"   | 55.7 | 68.8 | 32.7 | 46.2 | φ61.1 | φ6.5 | φ8 or 3/8" | φ4.5 | 0.01/0.0005"   |
| 5340-8115 | 0-50.8/0-2.0" | 0.01/0.0005"   | 83.7 | 94.8 | 57.7 | 46.1 | φ61.1 | φ6.5 | φ8 or 3/8" | φ4.5 | 0.015/0.001"   |
| 5340-9105 | 0-12.7/0-0.5" | 0.001/0.00005" | 60.2 | 53.8 | 14.2 | 40.2 | φ60.1 | φ6.5 | φ8 or 3/8" | φ4.5 | 0.004/0.00016" |
| 5340-9110 | 0-25.4/0-1.0" | 0.001/0.00005" | 55.7 | 68.8 | 32.7 | 46.2 | φ61.1 | φ6.5 | φ8 or 3/8" | φ4.5 | 0.004/0.00016" |
| 5340-9115 | 0-50.8/0-2.0" | 0.001/0.00005" | 83.7 | 94.8 | 57.7 | 46.1 | φ61.1 | φ6.5 | φ8 or 3/8" | φ4.5 | 0.005/0.0002"  |

| Code        | Range         | Resolution     | A    | B    | C    | D    | E     | F    | G          | H    | Accuracy       |
|-------------|---------------|----------------|------|------|------|------|-------|------|------------|------|----------------|
| 5610-1105-A | 0-12.7/0-0.5" | 0.01/0.0005"   | 60.2 | 53.8 | 14.2 | 40.2 | φ60.1 | φ6.5 | φ8 or 3/8" | φ4.5 | 0.01/0.0005"   |
| 5610-1110-A | 0-25.4/0-1.0" | 0.01/0.0005"   | 55.7 | 68.8 | 32.7 | 46.2 | φ61.1 | φ6.5 | φ8 or 3/8" | φ4.5 | 0.01/0.0005"   |
| 5610-1115-A | 0-50.8/0-2.0" | 0.01/0.0005"   | 83.7 | 94.8 | 57.7 | 46.1 | φ61.1 | φ6.5 | φ8 or 3/8" | φ4.5 | 0.015/0.001"   |
| 5610-4105-A | 0-12.7/0-0.5" | 0.001/0.00005" | 60.2 | 53.8 | 14.2 | 40.2 | φ60.1 | φ6.5 | φ8 or 3/8" | φ4.5 | 0.004/0.00016" |
| 5610-4110-A | 0-25.4/0-1.0" | 0.001/0.00005" | 55.7 | 68.8 | 32.7 | 46.2 | φ61.1 | φ6.5 | φ8 or 3/8" | φ4.5 | 0.004/0.00016" |
| 5610-4115-A | 0-50.8/0-2.0" | 0.001/0.00005" | 83.7 | 94.8 | 57.7 | 46.1 | φ61.1 | φ6.5 | φ8 or 3/8" | φ4.5 | 0.005/0.0002"  |

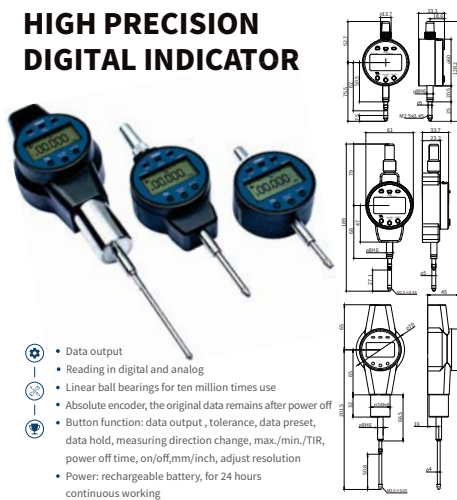


## IP65 DIGITAL INDICATOR WITH 0.001MM RESOLUTION



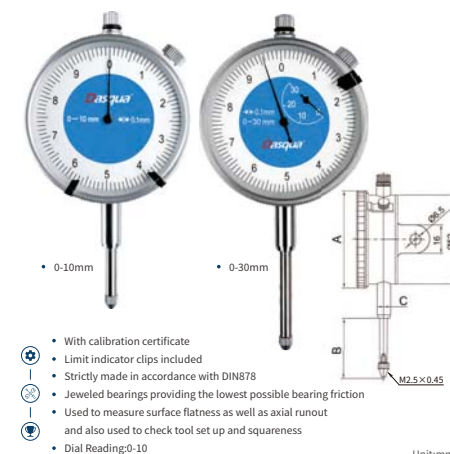
| Code      | Range         | Resolution     | A     | B     | Accuracy      | Repeatability |
|-----------|---------------|----------------|-------|-------|---------------|---------------|
| 5820-0005 | 0-12.7/0-0.5" | 0.001/0.00005" | 91.9  | 14.3  | 0.007/0.0003" | 0.003/0.0001" |
| 5820-0010 | 0-25.4/0-1.0" | 0.001/0.00005" | 129.2 | 27    | 0.008/0.0003" | 0.003/0.0001" |
| 5820-0015 | 0-50.8/0-2.0" | 0.001/0.00005" | 179.7 | 52    | 0.010/0.0004" | 0.003/0.0001" |
| 5820-0020 | 0-101.6/0-4"  | 0.001/0.00005" | 281.8 | 103.4 | 0.015/0.0006" | 0.003/0.0001" |

## HIGH PRECISION DIGITAL INDICATOR



| Code      | Range       | Adjustable Resolution                                                      | Hysteresis | Accuracy | Measuring Force | Data output |
|-----------|-------------|----------------------------------------------------------------------------|------------|----------|-----------------|-------------|
| 5900-0010 | 0.12/7.0/5" |                                                                            | 0.0015     | 0.003    | 1.5N            | Cable       |
| 5900-0025 | 0.25/4.0/1" |                                                                            | 0.0015     | 0.003    | 1.8N            | Cable       |
| 5900-0050 | 0.50/2.0/0" | 0.00005/0.00002"                                                           | 0.0020     | 0.005    | 2.2N            | Cable       |
| 5261-0025 | 0.12/7.0/5" | 0.0001/0.00005"                                                            | 0.0015     | 0.003    | 1.5N            | Wireless    |
| 5261-0210 | 0.25/4.0/1" | 0.0003                                                                     | 0.0015     | 0.003    | 1.8N            | Wireless    |
| 5261-0215 | 0.50/2.0/0" | 0.005                                                                      | 0.002      | 0.005    | 2.2N            | Wireless    |
| 5261-3205 | 0.12/7.0/5" | Note for resolution selection:<br>Resolution adjustable to 1 : 0.1 : 0.005 | 0.0015     | 0.003    | 1.5N            | Zipbee      |
| 5261-3210 | 0.25/4.0/1" |                                                                            | 0.0015     | 0.003    | 1.8N            | Zipbee      |
| 5261-3215 | 0.50/2.0/0" |                                                                            | 0.002      | 0.005    | 2.2N            | Zipbee      |

## DIAL INDICATOR



| Code      | Range  | Graduation | A   | B  | C   | D  | Accuracy | Hysteresis | Style     |
|-----------|--------|------------|-----|----|-----|----|----------|------------|-----------|
| 5121-1305 | 0-10mm | 0.1        | ±60 | 70 | ±55 | 20 | ±0.04    | 0.02       | Flat back |
| 5121-1310 | 0-10mm | 0.1        | ±60 | 70 | ±55 | 70 | ±0.04    | 0.02       | Lug back  |
| 5121-1340 | 0-20mm | 0.1        | ±60 | 85 | ±55 | 35 | ±0.04    | 0.02       | Flat back |
| 5121-1345 | 0-20mm | 0.1        | ±60 | 85 | ±55 | 35 | ±0.04    | 0.02       | Lug back  |
| 5121-1315 | 0-25mm | 0.1        | ±60 | 85 | ±55 | 35 | ±0.04    | 0.02       | Flat back |
| 5121-1320 | 0-25mm | 0.1        | ±60 | 85 | ±55 | 35 | ±0.04    | 0.02       | Lug back  |
| 5121-1325 | 0-30mm | 0.1        | ±60 | 90 | ±55 | 40 | ±0.04    | 0.02       | Flat back |
| 5121-1330 | 0-30mm | 0.1        | ±60 | 90 | ±55 | 40 | ±0.04    | 0.02       | Lug back  |

BORN IN ITALY, RAISED BY THE WORLD **INDICATORS**

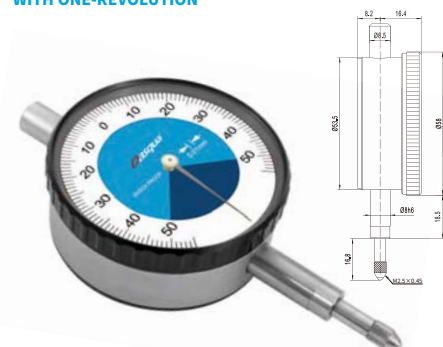
## BACK PLUNGER DIAL INDICATOR



| Code      | Range | Graduation |
|-----------|-------|------------|
| 5271-0010 | 0-5   | 0.01       |



## DIAL INDICATOR WITH ONE-REVOLUTION

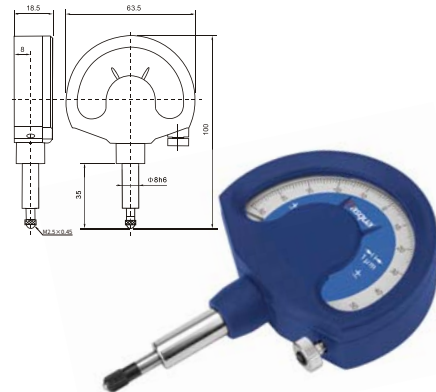


- Unlike many other dial indicators, the one revolution dial indicator literally shows the entire spindle travel or range as one sweep of the hand, eliminating the possibility of reading errors due to miscounting the multiple revolutions
- With one-revolution dial indicators, "within tolerance" and "out-of tolerance" can never misinterpreted
- An unique shock-proof mechanism is incorporated, providing improved immunity to shock due to sudden spindle retraction caused by high impact
- Dial Reading: 50-0-50

Unit:mm

| Code      | Range | Graduation | Style     |
|-----------|-------|------------|-----------|
| 5351-0005 | ±0.25 | 0.01       | flat back |
| 5351-2105 | ±0.25 | 0.01       | lug back  |
| 5351-0010 | ±0.5  | 0.01       | flat back |
| 5351-2110 | ±0.5  | 0.01       | lug back  |

## COMPARATOR GAUGE



- IP53 protection against liquid
- With shockproof ability
- To check parallelism, smoothness and through running
- Sturdy metal housing with sturdy plastic cover
- Stem and spindle hardened and lapped
- Adjustable tolerance fingers
- With spindle lifting cable
- Dial Reading: 50.0-50

Unit:mm

| Code      | Range         | Graduation |
|-----------|---------------|------------|
| 5361-0005 | $\pm 0.05$    | 0.001      |
| 5361-0010 | $\pm 0.002''$ | 0.0005''   |

## DIGITAL COMPARATOR GAUGE



- Wireless system built-in (optional)
- Calibration certificate provided with total forward error, hysteresis error, total error and deviation error on it
- Watch case made of high-strength aluminum alloy guaranteeing low deformation
- Glass grating for high accuracy and stable performance
- Temperature and humidity test for each product, ensuring the normal use of each in harsh environment

Unit:mm

| Code      | Range         | Graduation | Repeatability | Clamping diameter | Transmission Mode | Accuracy | Hysteresis |
|-----------|---------------|------------|---------------|-------------------|-------------------|----------|------------|
| 5361-0020 | 0-5mm/0-0.19" | 0.002      | 0.0006        | Φ28               | Cable             | 0.0014   | 0.001      |
| 5361-0025 | 0-5mm/0-0.19" | 0.001      | 0.0003        | Φ28               | Cable             | 0.0005   | 0.0004     |
| 5262-0025 | 0-5mm/0-0.19" | 0.002      | 0.0006        | Φ28               | Wireless          | 0.0014   | 0.001      |
| 5262-1205 | 0-5mm/0-0.19" | 0.001      | 0.0003        | Φ28               | Wireless          | 0.0005   | 0.0004     |

BORN IN ITALY, RAISED BY THE WORLD **INDICATORS**

## DIAL INDICATOR



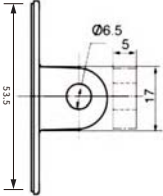
- Permanent powerful magnet
- Fitting for all dial indicator
- Magnet screws off
- Magnetic force: 20kg

- 5111-1010

Unit:mm

| Code      | Covering  | Range | Graduation |
|-----------|-----------|-------|------------|
| 5111-1010 | /         | /     | /          |
| 5111-0001 | 5111-1010 | /     | /          |
|           | 5111-0000 | 0-10  | 0.01       |
| 5122-4211 | 5111-1010 | /     | /          |
|           | 5122-6216 | 0-1"  | 0.001"     |

LUG BACK FOR DIAL INDICATOR



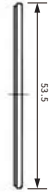


Optional for Dial indicators

| Code         | For dial indicator  |
|--------------|---------------------|
| 5111-0000-LB | 5111-1005 5111-0000 |

Unit:mm

FLAT BACK FOR DIAL INDICATOR





Optional for Dial indicators

| Code      | For dial indicator  |
|-----------|---------------------|
| 5111-0010 | 5111-1005 5111-0000 |

Unit:mm

22PCS/SET INDICATOR POINT

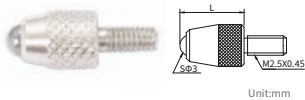


- 

Optional for Dial indicators
- Durable in use
  - Suitable for dial gauge
  - High strength and hardness
  - AGD specifications (M2.5 thread)
  - Made of stainless steel, not easy to rust and long service life

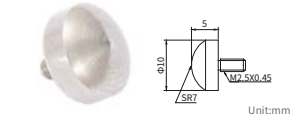
| Code      | Range                     | Thread |
|-----------|---------------------------|--------|
| 5121-0010 | 22PCS/Set Indicator Point | M2.5   |

BALL POINT



| Code      | Material | L   |
|-----------|----------|-----|
| 5333-6101 | Carbide  | 7   |
| 5333-6102 | Carbide  | 14  |
| 5333-6103 | Carbide  | 10  |
| 5333-6104 | Carbide  | 15  |
| 5333-6105 | Carbide  | 20  |
| 5333-6106 | Carbide  | 25  |
| 5333-6107 | Carbide  | 30  |
| 5333-6108 | Carbide  | 35  |
| 5333-6109 | Carbide  | 40  |
| 5333-6110 | Carbide  | 45  |
| 5333-6111 | Carbide  | 50  |
| 5333-6112 | Carbide  | 60  |
| 5333-6113 | Carbide  | 70  |
| 5333-6114 | Carbide  | 80  |
| 5333-6115 | Carbide  | 90  |
| 5333-6116 | Carbide  | 100 |

SPHERICAL POINT



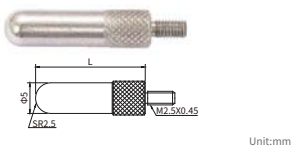
| Code      | Material |
|-----------|----------|
| 5333-6401 | steel    |

BALL POINT



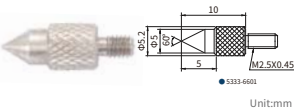
| Code      | Material | SØD |
|-----------|----------|-----|
| 5333-6301 | carbide  | 1.0 |
| 5333-6302 | carbide  | 1.5 |
| 5333-6303 | carbide  | 1.8 |
| 5333-6304 | carbide  | 2.0 |
| 5333-6305 | carbide  | 2.5 |
| 5333-6306 | carbide  | 3.0 |
| 5333-6307 | carbide  | 3.5 |
| 5333-6308 | carbide  | 4.0 |
| 5333-6309 | carbide  | 4.5 |
| 5333-6310 | carbide  | 5.0 |

SHELL TYPE POINT



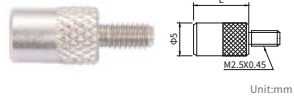
| Code      | Material | L  |
|-----------|----------|----|
| 5333-6201 | steel    | 10 |
| 5333-6202 | steel    | 10 |

CONICAL POINT



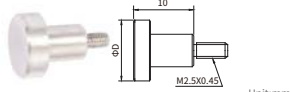
| Code      | Material |
|-----------|----------|
| 5333-6601 | steel    |
| 5333-6701 | steel    |
| 5333-6901 | carbide  |

FLAT POINT



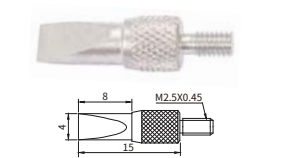
| Code      | Material | L  |
|-----------|----------|----|
| 5333-7101 | steel    | 8  |
| 5333-7102 | steel    | 10 |
| 5333-7103 | steel    | 15 |
| 5333-7104 | steel    | 20 |
| 5333-7105 | steel    | 8  |
| 5333-7106 | steel    | 10 |
| 5333-7107 | steel    | 15 |
| 5333-7108 | steel    | 20 |
| 5333-7109 | steel    | 8  |
| 5333-7110 | steel    | 10 |
| 5333-7111 | steel    | 15 |

FLAT POINT



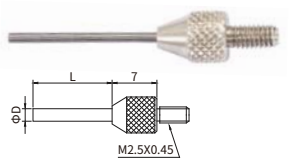
| Code      | Material | D    |
|-----------|----------|------|
| 5333-7201 | steel    | 4.0  |
| 5333-7202 | steel    | 5.0  |
| 5333-7203 | steel    | 6.0  |
| 5333-7204 | steel    | 8.0  |
| 5333-7205 | steel    | 10.0 |
| 5333-7206 | steel    | 12.0 |
| 5333-7207 | steel    | 15.0 |
| 5333-7208 | steel    | 20.0 |
| 5333-7209 | steel    | 30.0 |
| 5333-7210 | steel    | 8.0  |
| 5333-7211 | steel    | 10.0 |

KNIFE EDGE POINT



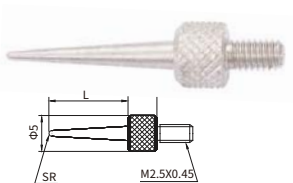
| Code      | Material |
|-----------|----------|
| 5333-7001 | steel    |
| 5333-7002 | carbide  |

NEEDLE POINT



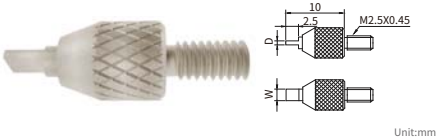
| Code      | Material | L  | D   |
|-----------|----------|----|-----|
| 5333-7701 | carbide  | 5  | 0.5 |
| 5333-7702 | carbide  | 10 | 0.5 |
| 5333-7703 | carbide  | 15 | 0.5 |
| 5333-7704 | carbide  | 20 | 0.5 |
| 5333-7705 | carbide  | 2  | 1.0 |
| 5333-7706 | carbide  | 10 | 1.0 |
| 5333-7707 | carbide  | 15 | 1.0 |
| 5333-7708 | carbide  | 20 | 1.0 |
| 5333-7709 | carbide  | 30 | 1.0 |
| 5333-7710 | carbide  | 40 | 1.0 |
| 5333-7711 | carbide  | 50 | 1.0 |
| 5333-7712 | carbide  | 5  | 1.5 |
| 5333-7713 | carbide  | 10 | 1.5 |
| 5333-7714 | carbide  | 15 | 1.5 |
| 5333-7715 | carbide  | 20 | 1.5 |
| 5333-7716 | carbide  | 30 | 1.5 |
| 5333-7717 | carbide  | 40 | 1.5 |
| 5333-7718 | carbide  | 50 | 1.5 |
| 5333-7719 | carbide  | 5  | 2.0 |
| 5333-7720 | carbide  | 10 | 2.0 |
| 5333-7721 | carbide  | 15 | 2.0 |
| 5333-7722 | carbide  | 20 | 2.0 |
| 5333-7723 | carbide  | 30 | 2.0 |
| 5333-7724 | carbide  | 40 | 2.0 |
| 5333-7725 | carbide  | 50 | 2.0 |

NEEDLE POINT



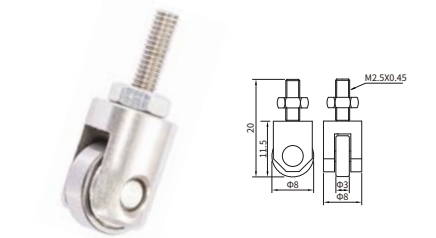
| Code      | Material | L  | SR  |
|-----------|----------|----|-----|
| 5333-7601 | steel    | 7  | 0.2 |
| 5333-7602 | steel    | 11 | 0.2 |
| 5333-7603 | steel    | 13 | 0.2 |
| 5333-7604 | steel    | 15 | 0.2 |
| 5333-7605 | steel    | 17 | 0.2 |
| 5333-7606 | steel    | 21 | 0.2 |
| 5333-7607 | steel    | 31 | 0.2 |
| 5333-7608 | steel    | 41 | 0.2 |
| 5333-7609 | steel    | 50 | 0.2 |
| 5333-7610 | steel    | 15 | 0.3 |
| 5333-7611 | steel    | 21 | 0.3 |
| 5333-7612 | steel    | 31 | 0.3 |
| 5333-7613 | steel    | 41 | 0.3 |
| 5333-7614 | steel    | 51 | 0.3 |

BLADE POINT



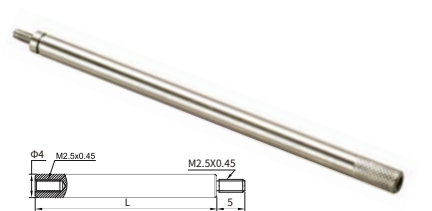
| Code      | Material | D    | W   |
|-----------|----------|------|-----|
| 5333-7801 | carbide  | 0.40 | 2.0 |
| 5333-7802 | carbide  | 0.60 | 2.0 |
| 5333-7803 | carbide  | 0.40 | 4.0 |

ROLLER POINT



| Code      | Material |
|-----------|----------|
| 5333-7901 | steel    |

EXTENSION ROD



| Code      | Material | L   |
|-----------|----------|-----|
| 5333-8001 | steel    | 10  |
| 5333-8002 | steel    | 15  |
| 5333-8003 | steel    | 20  |
| 5333-8004 | steel    | 25  |
| 5333-8005 | steel    | 30  |
| 5333-8006 | steel    | 35  |
| 5333-8007 | steel    | 40  |
| 5333-8008 | steel    | 45  |
| 5333-8009 | steel    | 50  |
| 5333-8010 | steel    | 55  |
| 5333-8011 | steel    | 60  |
| 5333-8012 | steel    | 65  |
| 5333-8013 | steel    | 70  |
| 5333-8014 | steel    | 75  |
| 5333-8015 | steel    | 80  |
| 5333-8016 | steel    | 90  |
| 5333-8017 | steel    | 100 |
| 5333-8018 | steel    | 130 |
| 5333-8019 | steel    | 150 |
| 5333-8020 | steel    | 200 |
| 5333-8021 | steel    | 300 |

# DIAL TEST INDICATOR

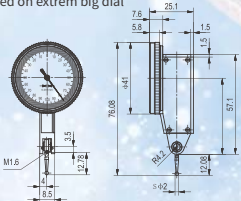
WITH 0.001MM GRADUATION



- Used to measure surface flatness, straightness and axial runout and easy to reach places where normal indicators can't reach
- Large dial with scratch-resistance coating to make reading clear
- Graduation at 0.001mm, which is better than the limit of most other test indicators(0.002mm)
- With high abrasion resistance and non-magnetictness
- Owning water proof ability
- Made in Germany



- Distinct lines and figures etched on extrem big dial



Unit: mm

| Code        | Range | Graduation | Dail Reading |
|-------------|-------|------------|--------------|
| 5221-0105-A | 0-0.2 | 0.001      | 0-100-0      |

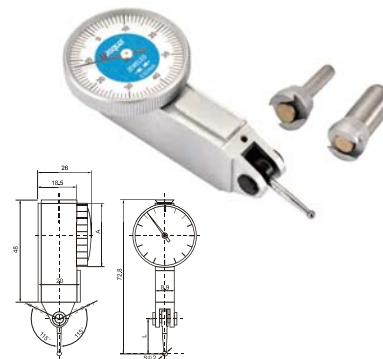


- Each test indicator is examined carefully and enclosed with calibration certificate



- Jeweled bearing and ruby contact point to ensure high durability

## DIAL TEST INDICATOR



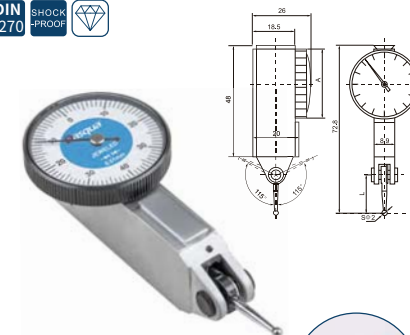
- A hard frame body providing excellent rigidity
- White edge of dial for easy to read
- Hardened and ground contact point
- Satin chrome-finish case for durability
- Precision gear-driven design with smooth movement

Unit:mm

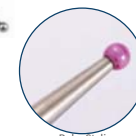
| Code        | Range | Graduation | Casing Dia.(A) | Length of Styli(L) | Dial Reading | Range per Rev | Accuracy | Styli |
|-------------|-------|------------|----------------|--------------------|--------------|---------------|----------|-------|
| 5221-0005   | 0.8   | 0.01       | φ30            | 16.5               | 0-40-0       | 0.8           | 0.01     | Steel |
| 5221-0000   | 0.8   | 0.01       | φ37.5          | 16.5               | 0-40-0       | 0.8           | 0.01     | Steel |
| 5221-0005-A | 0.8   | 0.01       | φ30            | 16.5               | 0-40-0       | 0.8           | 0.01     | Ruby  |
| 5221-0000-A | 0.8   | 0.01       | φ37.5          | 16.5               | 0-40-0       | 0.8           | 0.01     | Ruby  |

BORN IN ITALY, RAISED BY THE WORLD **INDICATORS**

## DIAL TEST INDICATOR



- With calibration certificate
- Tough shock-proof gearing
- A hard frame body providing excellent rigidity
- White edge of dial for easy to read
- Hardened and ground contact point
- Satin chrome-finish case for durability
- Precision gear-driven design with smooth movement



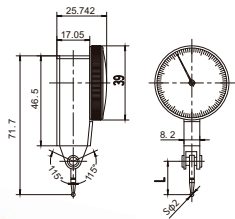
Ruby Styli

Unit:mm

| Code        | Range | Graduation | Casing Dia (A) | Length of Stylus (L) | Dial Reading | Range per Rev | Accuracy | Styli |
|-------------|-------|------------|----------------|----------------------|--------------|---------------|----------|-------|
| 5221-1129   | 0.8   | 0.01       | ø30            | 16.5                 | 0.4-0.0      | 0.8           | 0.01     | Steel |
| 5221-1140   | 0.8   | 0.01       | ø37.5          | 16.5                 | 0.4-0.0      | 0.8           | 0.01     | Steel |
| 5221-1105   | 0.2   | 0.002      | ø30            | 16.0                 | 0.100-0.0    | 0.2           | 0.004    | Steel |
| 5221-1129-A | 0.8   | 0.01       | ø30            | 16.5                 | 0.4-0.0      | 0.8           | 0.01     | Ruby  |
| 5221-1140-A | 0.8   | 0.01       | ø37.5          | 16.5                 | 0.4-0.0      | 0.8           | 0.01     | Ruby  |
| 5221-3105-A | 0.2   | 0.002      | ø30            | 16.0                 | 0.100-0.0    | 0.2           | 0.004    | Ruby  |

DIAL TEST INDICATOR

ANTI MAGNETIC TYPE



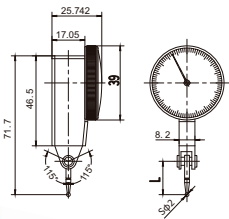
- Anti Magnetic body
- With calibration certificate
- Tough shock-proof gearing
- A hard frame body providing excellent rigidity
- White edge of dial for easy to read
- Hardened and ground contact point
- Satin chrome-finish case for durability
- Precision gear-driven design with smooth movement

Unit:mm

| Code        | Range | Graduation | Dial Reading | Range per Revolution | L    | Accuracy | Hysteresis | Styli |
|-------------|-------|------------|--------------|----------------------|------|----------|------------|-------|
| 5221-1145   | 0.8   | 0.01       | 0-40-0       | 0.8                  | 17.2 | ±0.013   | ±0.003     | Steel |
| 5221-1145-A | 0.8   | 0.01       | 0-40-0       | 0.8                  | 17.2 | ±0.013   | ±0.003     | Ruby  |

DIAL TEST INDICATOR

WITH 0.002MM GRADUATION

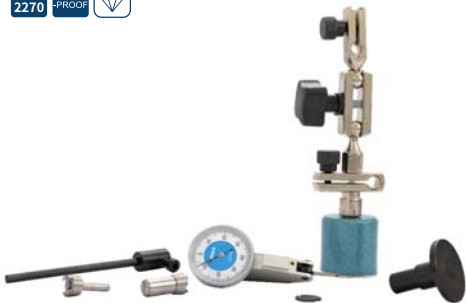


- Anti Magnetic body
- With calibration certificate
- Tough shock-proof gearing
- A hard frame body providing excellent rigidity
- White edge of dial for easy to read
- Hardened and ground contact point
- Satin chrome-finish case for durability
- Precision gear-driven design with smooth movement

Unit:mm

| Code        | Range | Graduation | Dial Reading | Range per Revolution | L    | Accuracy | Hysteresis | Styli |
|-------------|-------|------------|--------------|----------------------|------|----------|------------|-------|
| 5223-3105   | 0.2   | 0.002      | 0-100-0      | 0.2                  | 17.2 | ±0.004   | ±0.002     | Steel |
| 5223-3105-A | 0.2   | 0.002      | 0-100-0      | 0.2                  | 17.2 | ±0.004   | ±0.002     | Ruby  |

BI-DIRECTIONAL TEST INDICATOR  
AND MAG BASE SET



- With auto-reverse contact point
- With jeweled bearing
- Bi-directional constant clockwise rotation
- Hard frame body providing excellent rigidity
- Satin chrome-finish case for durability
- Together with a magnetic base for easy mounting

Unit:mm

| Code      | Range | Graduation | Dial Reading | Range per Revolution |
|-----------|-------|------------|--------------|----------------------|
| 5221-1000 | 0-0.8 | 0.01       | 0-40-0       | 0.8                  |

TEST INDICATOR KIT  
WITH UNIVERSAL HOLDER



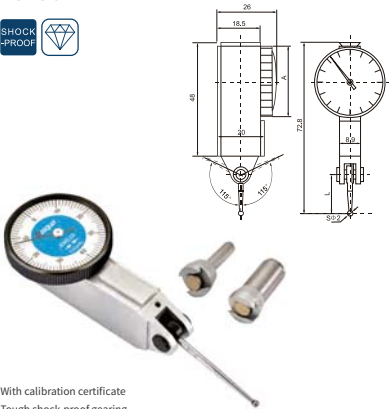
- Tough shock-proof gearing
- A hard frame body providing excellent rigidity
- White edge of dial for easy to read
- Hardened and ground contact point
- Satin chrome-finish case for durability
- Precision gear-driven design with smooth movement
- With Universal holder to measure universal direction

Unit:mm

| Code      | Range | Graduation | Dial Reading | Range per Revolution |
|-----------|-------|------------|--------------|----------------------|
| 5221-1001 | 0-0.8 | 0.01       | 0-40-0       | 0.8                  |

DIAL TEST INDICATOR  
WITH LONG STYL

DIN 2270 SHOCK-PROOF



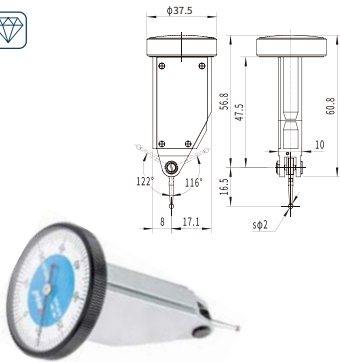
- With calibration certificate
- Tough shock-proof gearing
- With long styl for easily measuring hard-to-get places
- A hard frame body providing excellent rigidity
- White edge of dial for easy to read
- Hardened and ground contact point
- Satin chrome-finish case for durability
- Precision gear-driven design with smooth movement

Unit:mm

| Code      | Range | Graduation | Casing Dia.(A) | Length of Stylus(L) | Dial Reading | Range per Revolution |
|-----------|-------|------------|----------------|---------------------|--------------|----------------------|
| 5221-1215 | 0.8   | 0.013      | φ30            | 30                  | 0-40-0       | 0.8                  |
| 5221-1220 | 0.8   | 0.013      | φ37.5          | 30                  | 0-40-0       | 0.8                  |
| 5221-1205 | 0.8   | 0.013      | φ30            | 46.4                | 0-40-0       | 0.8                  |
| 5221-1210 | 0.8   | 0.013      | φ37.5          | 46.4                | 0-40-0       | 0.8                  |

BACK PLUNGER DIAL  
TEST INDICATOR

DIN 2270 SHOCK-PROOF



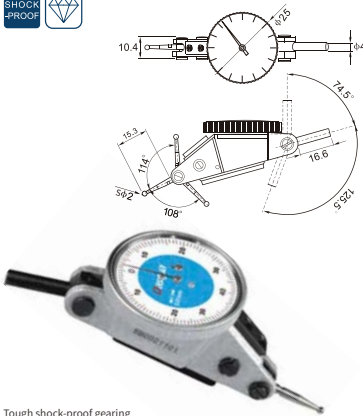
- With upward dial for measuring up side of a large workpiece or high workbench
- With calibration certificate
- Tough shock-proof gearing
- A hard frame body providing excellent rigidity
- White edge of dial for easy to read
- Hardened and ground contact point
- Satin chrome-finish case for durability
- Precision gear-driven design with smooth movement

Unit:mm

| Code      | Range | Graduation | Casing Dia. | Length of Stylus | Dial Reading | Clamping diameter |
|-----------|-------|------------|-------------|------------------|--------------|-------------------|
| 5461-0005 | 0.8   | 0.01       | φ37.5       | 16.5             | 0-40-0       | 0.8               |

TWICE RANGE DIAL  
TEST INDICATOR

DIN 2270 SHOCK-PROOF



- Tough shock-proof gearing
- A hard frame body providing excellent rigidity
- White edge of dial for easy to read
- Satin chrome-finish case for durability
- Precision gear-driven design with smooth movement
- With twice range on large easy-to-read tilted dial

Unit:mm

| Code      | Range | Graduation | Casing Diameter | Reading |
|-----------|-------|------------|-----------------|---------|
| 5221-1115 | 0-1.6 | 0.01       | φ25             | 0-40-0  |

TWICE RANGE DIAL  
TEST INDICATOR KIT



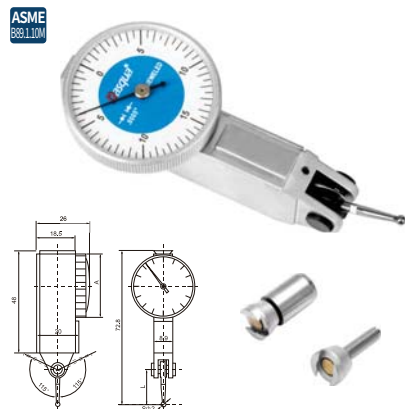
- Tough shock-proof gearing
- A hard frame body providing excellent rigidity
- White edge of dial for easy to read
- Hardened and ground extra contact point
- Satin chrome-finish case for durability
- Precision gear-driven design with smooth movement
- With twice range on large easy-to-read tilted dial

Unit:mm

| Code      | Range | Graduation | Dial Reading |
|-----------|-------|------------|--------------|
| 5221-1002 | 0-1.6 | 0.01       | 0-40-0       |



## INCH SIZE DIAL TEST INDICATOR



- A hard frame body providing excellent rigidity
- White edge of dial for easy to read
- Hardened and ground contact point
- Satin chrome-finish case for durability
- Precision gear-driven design with smooth movement

Unit:inch

| Code      | Range   | Graduation | Casing Dia.(A) | Length of Stylus(L) | Dial Reading |
|-----------|---------|------------|----------------|---------------------|--------------|
| 5610-0165 | 0-0.03" | 0.0005"    | 1.18"          | 0.62"               | 0-15-0       |
| 5610-0162 | 0-0.03" | 0.0005"    | 1.48"          | 0.62"               | 0-15-0       |

## INCH SIZE DIAL TEST INDICATOR

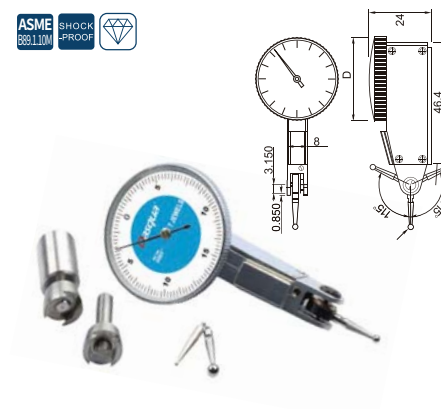


- With calibration certificate
- Tough shock-proof gearing
- A hard frame body providing excellent rigidity
- White edge of dial for easy to read
- Hardened and ground contact point
- Satin chrome-finish case for durability
- Precision gear-driven design with smooth movement

Unit:inch

| Code      | Range   | Graduation | Casing Dia. (A) | Length of Stylus(L) | Dial Reading |
|-----------|---------|------------|-----------------|---------------------|--------------|
| 5221-3106 | 0-0.03" | 0.0005"    | 1.18"           | 0.62"               | 0-15-0       |
| 5222-6105 | 0-0.02" | 0.0005"    | 1.5"            | 0.53"               | 0-15-0       |

## BI-DIRECTIONAL DIAL TEST INDICATOR



- With auto-reverse contact point
- With jeweled bearing
- Bi-directional constant clockwise rotation
- Hard frame body providing excellent rigidity
- Satin chrome-finish case for durability

Unit:mm

| Code      | Range    | Graduation | D   | Probe       | Dail Reading |
|-----------|----------|------------|-----|-------------|--------------|
| 5222-6103 | 0-0.03"  | 0.0005"    | φ40 | Sφ1,Sφ2,Sφ3 | 0-15-0       |
| 5222-6106 | 0-0.02"  | 0.0005"    | φ40 | Sφ1,Sφ2,Sφ3 | 0-15-0       |
| 5222-7103 | 0-0.008" | 0.0001"    | φ32 | Sφ1,Sφ2,Sφ3 | 0-15-0       |

## BI-DIRECTIONAL TEST INDICATOR AND MAG BASE SET



- With auto-reverse contact point
- With jeweled bearing
- Bi-directional constant clockwise rotation
- Hard frame body providing excellent rigidity
- Satin chrome-finish case for durability
- Together with a magnetic base for easy mounting

Unit:mm

| Code      | Range   | Graduation | Dial Reading |
|-----------|---------|------------|--------------|
| 5222-6000 | 0-0.03" | 0.0005"    | 0-15-0       |

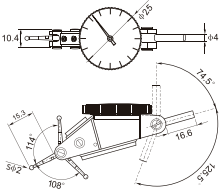
TEST INDICATOR KIT  
WITH UNIVERSAL HOLDER



- Tough shock-proof gearing
- A hard frame body providing excellent rigidity
- White edge of dial for easy to read
- Hardened and ground contact point
- Satin chrome-finish case for durability
- Precision gear-driven design with smooth movement
- With Universal holder to measure universal direction

| Unit:mm   |         |            |              |
|-----------|---------|------------|--------------|
| Code      | Range   | Graduation | Dial Reading |
| 5222-6001 | 0-0.03" | 0.0005"    | 0-15-0       |

TWICE RANGE DIAL  
TEST INDICATOR



- Tough shock-proof gearing
- A hard frame body providing excellent rigidity
- White edge of dial for easy to read
- Satin chrome-finish case for durability
- Precision gear-driven design with smooth movement
- With twice range on large easy-to-read tilted dial

| Unit:mm   |         |            |                 |         |
|-----------|---------|------------|-----------------|---------|
| Code      | Range   | Graduation | Casing Diameter | Reading |
| 5222-6110 | 0-0.06" | 0.0005"    | 1.5"            | 0-15-0  |

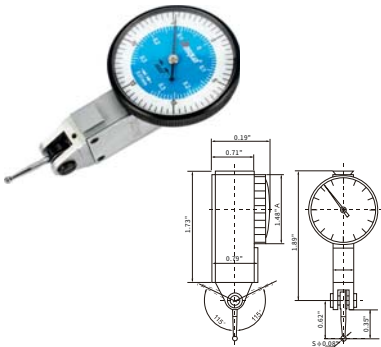
TWICE RANGE DIAL  
TEST INDICATOR KIT



- Tough shock-proof gearing
- A hard frame body providing excellent rigidity
- White edge of dial for easy to read
- Hardened and ground extra contact point
- Satin chrome-finish case for durability
- Precision gear-driven design with smooth movement
- With twice range on large easy-to-read tilted dial

| Unit:mm   |         |            |         |
|-----------|---------|------------|---------|
| Code      | Range   | Graduation | Reading |
| 5222-6002 | 0-0.06" | 0.0005"    | 0-15-0  |

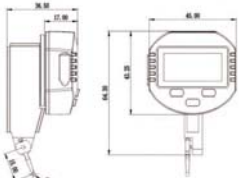
METRIC&INCH COMBINED  
DIAL TEST INDICATOR



- Metric/Inch system conversion at any position
- A hard frame body providing excellent rigidity
- White edge of dial for easy to read
- Hardened and ground contact point
- Satin chrome-finish case for durability
- Precision gear-driven design with smooth movement

| Unit:mm   |                 |              |               |                  |         |          |
|-----------|-----------------|--------------|---------------|------------------|---------|----------|
| Code      | Range           | Graduation   | Clamping dia. | Length of Stylus | Reading | Accuracy |
| 5222-6405 | 0-0.6mm / 0.03" | 0.01/0.0005" | 1.48"         | 0.62"            | 0-15-0  | ±0.0005" |

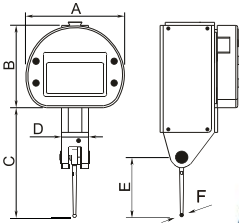
IP65 DIGITAL TEST INDICATOR



- Carbide probe
- Packed in a fitted case
- With large easy-to-read digital display
- With zero setting and metric-inch conversion functions

| Unit:mm   |                |                   |                 |                 |
|-----------|----------------|-------------------|-----------------|-----------------|
| Code      | Range          | Graduation        | Repeatability   | Accuracy        |
| 5410-8205 | 0-0.8mm/ 0.03" | 0.001mm /0.00005" | 0.003mm/0.0005" | 0.013mm/0.0005" |

DIGITAL TEST INDICATOR



- With large easy-to-read digital display
- With zero setting and metric-inch conversion functions
- Carbide probe
- Packed in a fitted case

| Unit:mm   |               |                |       |    |      |       |    |     |          |
|-----------|---------------|----------------|-------|----|------|-------|----|-----|----------|
| Code      | Range         | Resolution     | A     | B  | C    | D     | E  | F   | Accuracy |
| 5410-9105 | 0-0.4/0-0.02" | 0.001/0.00005" | 47.65 | 40 | 44.6 | 13.27 | 20 | sp2 | ±0.020   |

STYLI FOR DIAL TEST INDICATOR

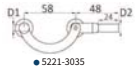


• 5221-1070  
Made of ruby

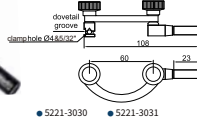
Unit:mm

| Code      | Size    | Points' Material |
|-----------|---------|------------------|
| 5221-1070 | 16.5xp2 | ruby             |
| 5221-1072 | 17.8xp2 | ruby             |

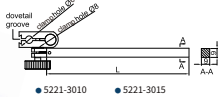
HOLDER FOR DIAL TEST INDICATOR



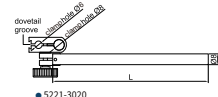
• 5221-3035



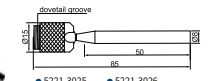
• 5221-3030 • 5221-3031



• 5221-3010 • 5221-3015



• 5221-3020



• 5221-3025 • 5221-3026

Unit:mm

| Code      | Size                                                       |
|-----------|------------------------------------------------------------|
| 5221-3010 | Stem Section 9x9,Stem length 100,clamp hole 6/8/Dovetail   |
| 5221-3015 | Stem Section 9x9,Stem length 50,clamp hole 6/8/Dovetail    |
| 5221-3020 | Stem Section Dia 8,Stem length 115,clamp hole 6/8/Dovetail |
| 5221-3025 | Stem Section Dia 8,Stem Length 55                          |
| 5221-3026 | Stem Section Dia 1/4",Stem Length 2"                       |
| 5221-3030 | Stem Section Dia 8,clamp hole Dia 4                        |
| 5221-3031 | Stem Section Dia 1/4",clamp hole 5/32"                     |
| 5221-3035 | Stem Section Dia 8,clamp hole Dia 4                        |

# DIAL BORE GAUGE SET

## WITH EXTRA LONG RANGE

| Unit:mm   |          |            |
|-----------|----------|------------|
| Code      | Range    | Graduation |
| S510-0015 | 18-50    | 0.01       |
| S510-0010 | 18-160   | 0.01       |
| S510-0005 | 35-160   | 0.01       |
| S510-0025 | 50-300mm | 0.01       |
| S510-0020 | 2-12"    | 0.0005"    |

- Large measuring range from 35mm to 160mm
- So cost effective that can reach the range of 2 or 3 dial bore gauges
- Carbide-tipped and ceramic contact points optional for customers' desire
- Strictly made in accordance with DIN878

|          |    |          |
|----------|----|----------|
| 35-50mm  | VS | 35-160mm |
| 50-100mm |    |          |
| 50-160mm |    |          |
| NORMAL   |    | DASQUA   |

- Double fulcrum-points design for getting the correct measuring results

## DIAL BORE GAUGE



- Used to measure close tolerance of holes, taper and roundness
- Steel body and interchangeable carbide anvils
- Dial indicator fully protected by a rugged cover
- Extension rods and washers for fine adjustment in sizes to select a specific range

BORN IN ITALY, RAISED BY THE WORLD INDICATORS

| Unit:mm   |           |            |       |
|-----------|-----------|------------|-------|
| Code      | Range     | Graduation | Depth |
| S511-1100 | 4-6       | 0.01       | 40    |
| S511-1105 | 6-10      | 0.01       | 40    |
| S511-1110 | 10-18     | 0.01       | 100   |
| S511-1115 | 18-35     | 0.01       | 150   |
| S511-1120 | 35-50     | 0.01       | 150   |
| S511-1121 | 35-60     | 0.01       | 150   |
| S511-1125 | 50-100    | 0.01       | 150   |
| S511-1130 | 50-160    | 0.01       | 150   |
| S511-1135 | 160-250   | 0.01       | 400   |
| S511-1140 | 250-450   | 0.01       | 400   |
| S512-6105 | 0.24-0.4" | 0.0005"    | 1.57" |
| S512-6110 | 0.4-0.7"  | 0.0005"    | 4"    |
| S512-6115 | 0.7-1.5"  | 0.0005"    | 6"    |
| S512-6120 | 1.4-2.4"  | 0.0005"    | 6"    |
| S512-6125 | 2-4"      | 0.0005"    | 6"    |
| S512-6130 | 2-6"      | 0.0005"    | 6"    |
| S512-6135 | 6-10"     | 0.0005"    | 16"   |
| S512-6140 | 10-16"    | 0.0005"    | 16"   |

| Unit:mm   |           |            |       |
|-----------|-----------|------------|-------|
| Code      | Range     | Graduation | Depth |
| S511-2105 | 6-10      | 0.001      | 40    |
| S511-2110 | 10-18     | 0.001      | 100   |
| S511-2115 | 18-35     | 0.001      | 150   |
| S511-2120 | 35-50     | 0.001      | 150   |
| S511-2125 | 50-100    | 0.001      | 150   |
| S511-2130 | 50-160    | 0.001      | 150   |
| S511-2135 | 160-250   | 0.001      | 400   |
| S511-2140 | 250-450   | 0.001      | 400   |
| S512-7105 | 0.24-0.4" | 0.0001"    | 1.57" |
| S512-7110 | 0.4-0.7"  | 0.0001"    | 4"    |
| S512-7115 | 0.7-1.5"  | 0.0001"    | 6"    |
| S512-7120 | 1.4-2.4"  | 0.0001"    | 6"    |
| S512-7125 | 2-4"      | 0.0001"    | 6"    |
| S512-7130 | 2-6"      | 0.0001"    | 6"    |
| S512-7135 | 6-10"     | 0.0001"    | 16"   |
| S512-7140 | 10-16"    | 0.0001"    | 16"   |

## DIGITAL BORE GAUGE



- Large digital display for easy reading
- Steel body and interchangeable carbide anvils
- Thermally insulated for extra stability of accuracy
- Light weight housing for extra length and protection
- Used to measure close tolerance of holes, taper and roundness
- Extension rods and washers for fine adjustment in sizes to select a specific range

| Unit:mm   |                  |                  |     |     |          |           |                                       |  |  |
|-----------|------------------|------------------|-----|-----|----------|-----------|---------------------------------------|--|--|
| Code      | Range            | Graduation       | A   | B   | Accuracy | Anvil Qty | Anvil size                            |  |  |
| S610-8105 | 6-10mm/0.24-0.4" | 0.002mm/0.0005"  | 60  | 40  | ± 0.012  | 3         | 9/6.5/11/12/13/14/15/16/17/18         |  |  |
| S610-8110 | 10-18mm/0.4-0.7" | 0.002mm/0.0005"  | 60  | 100 | ± 0.012  | 9         | 9/10/11/12/13/14/15/16/17/18          |  |  |
| S610-8115 | 18-35mm/0.7-1.5" | 0.002mm/0.0005"  | 80  | 150 | ± 0.015  | 9         | 18/20/22/24/26/28/30/32/34            |  |  |
| S610-8120 | 35-50mm/1.4-2.4" | 0.002mm/0.0005"  | 80  | 150 | ± 0.018  | 4         | 35/40/45/50                           |  |  |
| S610-8125 | 50-160mm/2-6.3"  | 0.002mm/0.005"   | 80  | 150 | ± 0.018  | 12        | 50/55/60/65/70/75/80/85/90/95/100/105 |  |  |
| S610-8130 | 160-250mm/6-10"  | 0.002mm/0.005"   | 100 | 300 | ± 0.018  | 5         | 160/170/180/190/200                   |  |  |
| S610-8135 | 250-450mm/10-16" | 0.002mm/0.005"   | 100 | 400 | ± 0.018  | 5         | 250/260/270/280/290                   |  |  |
| S612-2005 | 6-10mm/0.24-0.4" | 0.001mm/0.00005" | 60  | 40  | ± 0.005  | 9         | 6/6.5/7/7.5/8/8.5/9/9.5/10            |  |  |
| S612-2010 | 10-18mm/0.4-0.7" | 0.001mm/0.00005" | 60  | 100 | ± 0.005  | 9         | 9/10/11/12/13/14/15/16/17/18          |  |  |
| S612-2015 | 18-35mm/0.7-1.5" | 0.001mm/0.00005" | 80  | 150 | ± 0.006  | 9         | 18/20/22/24/26/28/30/32/34            |  |  |
| S612-2020 | 35-50mm/1.4-2"   | 0.001mm/0.00005" | 80  | 150 | ± 0.006  | 4         | 35/40/45/50                           |  |  |
| S612-2025 | 50-160mm/2-6.3"  | 0.001mm/0.00005" | 80  | 150 | ± 0.007  | 12        | 50/55/60/65/70/75/80/85/90/95/100/105 |  |  |
| S612-2030 | 160-250mm/6-10"  | 0.001mm/0.005"   | 100 | 300 | ± 0.007  | 5         | 160/170/180/190/200                   |  |  |
| S612-2035 | 250-450mm/10-16" | 0.001mm/0.005"   | 100 | 400 | ± 0.007  | 5         | 250/260/270/280/290                   |  |  |

DIAL BORE GAUGE  
WITH LONG HANDLE



- Equipped with 0-3mm universal dial indicator
- Carbide-tipped contact points for durability
- The dial indicator is fully protected by a solid cover
- With screw anvils, convenience to set dimension

| Code      | Range   | Graduation | Depth |
|-----------|---------|------------|-------|
| 5411-0005 | 35-50   | 0.01       | 500   |
| 5411-0010 | 50-160  | 0.01       | 500   |
| 5411-0015 | 35-50   | 0.01       | 1000  |
| 5411-0020 | 50-160  | 0.01       | 1000  |
| 5411-0025 | 160-250 | 0.01       | 1000  |
| 5411-0030 | 250-450 | 0.01       | 1000  |
| 5411-0035 | 50-160  | 0.01       | 1500  |

Unit:mm

EXTENSION ROD  
FOR BORE GAUGE  
IN DEEP HOLE MEASUREMENT

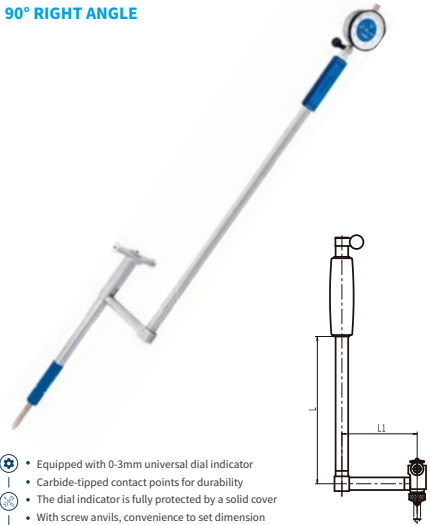
- To extend the handle for deep hole measurement



Unit:mm

| Code      | Roller distance | Available size | Thread   |
|-----------|-----------------|----------------|----------|
| 5411-2000 | 500             | 35-160mm       | 500”M8   |
| 5411-2001 | 1000            | 35-160mm       | 1000”M8  |
| 5411-2005 | 500             | 160-450mm      | 500”M10  |
| 5411-2010 | 1000            | 160-450mm      | 1000”M10 |

DIAL BORE GAUGE  
90° RIGHT ANGLE



- Equipped with 0-3mm universal dial indicator
- Carbide-tipped contact points for durability
- The dial indicator is fully protected by a solid cover
- With screw anvils, convenience to set dimension
- For inside measurement of deep holes

Unit:mm

| Code      | Range   | Graduation | L   | L1   |
|-----------|---------|------------|-----|------|
| 5441-1005 | 35-50   | 0.01       | 150 | 76.2 |
| 5441-1010 | 50-160  | 0.01       | 150 | 76.2 |
| 5441-1015 | 160-250 | 0.01       | 250 | 100  |
| 5441-1020 | 250-450 | 0.01       | 250 | 100  |

DIAL BORE GAUGE  
WITH LARGE MEASURING RANGE



• 5581-0010  
Digital available

- Equipped with 0-3mm universal dial indicator
- Carbide-tipped contact points for durability
- The dial indicator is fully protected by a solid cover
- With screw anvils, convenience to set dimension
- For inside measurement of special holes

Unit:mm

| Code      | Range           | Graduation    | Depth |
|-----------|-----------------|---------------|-------|
| 5581-0005 | 400-800         | 0.01          | 400   |
| 5581-0010 | 400-800/16”-32” | 0.002/0.0005” | 400   |

# BORE GAUGE SETTING MASTER KIT

**Features:**

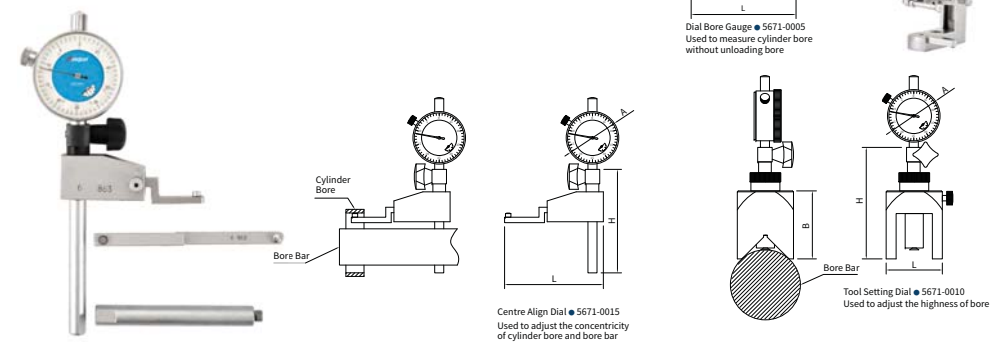
- Base anvil: 2.750" x .80"
- Adjustable anvil 2.375" x .375" (two each)
- Internal capacity: 6"/150mm
- Depth capacity: 1"/25mm
- Centralizer capacity width: 2.625"/66.7mm
- Quick-release holder for fast adjustment.
- Can also be used of external setting, depending on application (external mics, snap gages, caliper gages)

| Code      | Description                               | Size                                                   |
|-----------|-------------------------------------------|--------------------------------------------------------|
| 5514-0005 | Bore Gauge<br>Master Kit Setting 1000" M8 | 0-6" Setting Capacity,<br>36pcs Inch gize gauge blocks |
| 5514-0010 | Bore Gauge<br>Master Kit Setting          | 0-160mm Setting Capacity,<br>33pcs metric Gauge blocks |

## GAUGE FOR BEARING METAL BORING MACHINE

- Used to measure cylinder bore without unloading bore and to adjust the concentricity of cylinder bore and bore bar as well as adjust the highness of bore
- Large dial for easy reading
- Graduation: 0.01mm
- Accuracy: 0.03mm

| Code      | Name              | Range                                                        | Graduation | Unit:mm |    |     |         | Accuracy |
|-----------|-------------------|--------------------------------------------------------------|------------|---------|----|-----|---------|----------|
|           |                   |                                                              |            | A       | B  | L   | H       |          |
| 5671-0005 | Dial bore gauge   | φ48-45(Use to φ1.2 bore bar)<br>φ62-100(Use to φ45 bore bar) | 0.01       | φ42     | 28 | 77  | 250     | 0.03     |
| 5671-0010 | Tool Setting Dial | φ36-66(Use to φ32 bore bar)<br>φ50-100(Use to φ45 bore bar)  | 0.01       | φ42     | 63 | 46  | 100-128 | 0.03     |
| 5671-0015 | Centre align dial | φ47-75(Use to φ32 bore bar)<br>φ58-150(Use to φ45 bore bar)  | 0.01       | φ42     | /  | 107 | 111     | 0.03     |



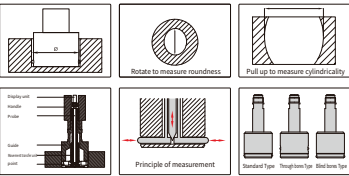
BORN IN ITALY, RAISED BY THE WORLD **INDICATORS**



INDICATORS BORN IN ITALY, RAISED BY THE WORLD

INDICATING PLUG GAGE

- Easy to use, no need to shake repeatedly to find the minimum value, just insert the measured position to read the value
- The measurement transmission system is very durable and can perform more than 5,000,000 measurement cycles
- Excellent metrological performance is guaranteed for all diameters within the measurement range
- Can be connected to any measuring device (dial type, digital display micrometer or electronic unit)
- Can achieve fast and high-precision measurement on the machine
- The handle can be customized and can be adapted to inductive handle
- High measurement accuracy, repeatability up to 1um
- Strong and unique impact-resistant structure
- Special-shaped probes can be customized
- Measurable diameter range: 3-450mm
- Ring gauges are included



| Range of Application | Repeatability | Travel   | Standard type |                 | Through bores Type |                 | Blind bores Type |                 |
|----------------------|---------------|----------|---------------|-----------------|--------------------|-----------------|------------------|-----------------|
|                      |               |          | Code          | Height of point | Code               | Height of point | Code             | Height of point |
| φ3.0-3.5             | <0.001        | 0.15     | 6700-0101-□□  | 1.3             | 6700-0201-□□       | 3.5             | /                | /               |
| φ3.5-4.6             | <0.001        | 0.15     | 6700-0102-□□  | 1.5             | 6700-0202-□□       | 3.5             | /                | /               |
| φ4.6-6.0             | <0.001        | 0.2-0.25 | 6700-0103-□□  | 1.5             | 6700-0203-□□       | 4               | /                | /               |
| φ6.0-9.0             | <0.001        | 0.2-0.25 | 6700-0104-□□  | 2               | 6700-0204-□□       | 5               | 6700-0304-□□     | 1               |
| φ9.0-10.0            | <0.001        | 0.2-0.25 | 6700-0105-□□  | 2.5             | 6700-0205-□□       | 10              | 6700-0305-□□     | 1.2             |
| φ10.0-12.0           | <0.001        | 0.2-0.4  | 6700-0106-□□  | 2.5             | 6700-0206-□□       | 10              | 6700-0306-□□     | 1.2             |
| φ12.0-20.0           | <0.001        | 0.2-0.4  | 6700-0107-□□  | 2.8             | 6700-0207-□□       | 10              | 6700-0307-□□     | 1.2             |
| φ20.0-45.0           | <0.001        | 0.2-0.4  | 6700-0108-□□  | 4               | 6700-0208-□□       | 10              | 6700-0308-□□     | 2.2             |
| φ45.0-50.0           | <0.001        | 0.2-0.4  | 6700-0109-□□  | 4.5             | 6700-0209-□□       | 10              | 6700-0309-□□     | 4.5             |
| φ50.0-60.0           | <0.002        | 0.4      | 6700-0110-□□  | 4.5             | 6700-0210-□□       | 10              | 6700-0310-□□     | 4.5             |
| φ60.0-70.0           | <0.002        | 0.4      | 6700-0111-□□  | 4.5             | 6700-0211-□□       | 10              | 6700-0311-□□     | 4.5             |
| φ70.0-80.0           | <0.002        | 0.4      | 6700-0112-□□  | 4.5             | 6700-0212-□□       | 10              | 6700-0312-□□     | 4.5             |
| φ80.0-90.0           | <0.002        | 0.4      | 6700-0113-□□  | 4.5             | 6700-0213-□□       | 10              | 6700-0313-□□     | 4.5             |
| φ90.0-100.0          | <0.002        | 0.4      | 6700-0114-□□  | 4.5             | 6700-0214-□□       | 10              | 6700-0314-□□     | 4.5             |
| φ100.0-110.0         | <0.002        | 0.4      | 6700-0115-□□  | 4.5             | 6700-0215-□□       | 10              | 6700-0315-□□     | 4.5             |
| φ110.0-120.0         | <0.002        | 0.4      | 6700-0116-□□  | 4.5             | 6700-0216-□□       | 10              | 6700-0316-□□     | 4.5             |
| φ120.0-130.0         | <0.002        | 0.4      | 6700-0117-□□  | 4.5             | 6700-0217-□□       | 10              | 6700-0317-□□     | 4.5             |
| φ130.0-140.0         | <0.002        | 0.4      | 6700-0118-□□  | 4.5             | 6700-0218-□□       | 10              | 6700-0318-□□     | 4.5             |
| φ140.0-150.0         | <0.002        | 0.4      | 6700-0119-□□  | 4.5             | 6700-0219-□□       | 10              | 6700-0319-□□     | 4.5             |
| φ150.0-160.0         | <0.002        | 0.4      | 6700-0120-□□  | 4.5             | 6700-0220-□□       | 10              | 6700-0320-□□     | 4.5             |
| φ160.0-170.0         | <0.002        | 0.4      | 6700-0121-□□  | 4.5             | 6700-0221-□□       | 10              | 6700-0321-□□     | 4.5             |
| >φ170.0              | <0.002        | 0.4      |               |                 | 6700-0122-□□       |                 |                  |                 |

|                       |           |                                    |             |
|-----------------------|-----------|------------------------------------|-------------|
| Must select accessory | 6700-0015 | Short handle                       | Alternative |
|                       | 6700-0020 | Long handle                        |             |
|                       | 5261-0205 | Single channel grating indicator   | Alternative |
|                       | 5261-3205 | Multiple channel grating indicator |             |



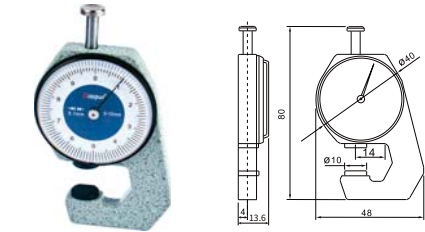
INTERCHANGEABLE POINTS BORE GAUGE

| Code      | Graduation | Measuring Range | Indicating range | H  | I   | Error |
|-----------|------------|-----------------|------------------|----|-----|-------|
| 5800-1015 | 0.01       | 55-153          | 2                | 90 | 3.5 | ±20μm |

MOST VALUE SAVER

The range of this product equals 5 same-kind products thanks to interchangeable points.

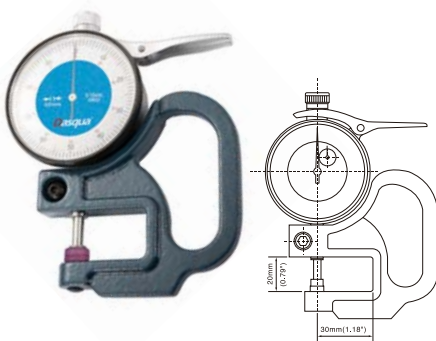
THICKNESS GAUGE



- Thickness gauges are attachment to the dial indicators and offer a quick and efficient means with a convenient grip handle to measure the thickness of paper, leather, rubber, fabric, metal plate, glass ,plastic plate, etc
- With steel or ceramic measuring faces
- Sturdy light metal frame, lacquered, with spindle lifting lever
- Stainless spindle, hardened and precision ground

| Unit:mm   |       |            |          |
|-----------|-------|------------|----------|
| Code      | Range | Graduation | Accuracy |
| 5841-8110 | 0-10  | 0.1        | ±0.05    |

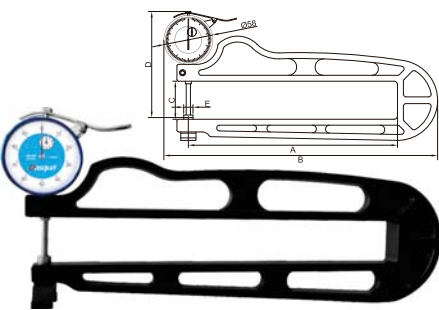
THICKNESS GAUGE



- 5841-8105
- With ceramic measuring faces
- Thickness gauges are attachment to the dial indicators and offer a quick and efficient means with a convenient grip handle to measure the thickness of paper, leather, rubber,fabric, metal plate, glass ,plastic plate, etc
- Sturdy light metal frame, lacquered, with spindle lifting lever
- Stainless spindle, hardened and precision ground

| Code      | Range  | Graduation | Accuracy |
|-----------|--------|------------|----------|
| 2140-8115 | 0-10mm | 0.01mm     | ±0.02mm  |
| 5841-8105 | 0-10mm | 0.01mm     | ±0.02mm  |
| 5841-8130 | 0-20mm | 0.01mm     | ±0.03mm  |
| 5841-8106 | 0-30mm | 0.01mm     | ±0.035mm |
| 5842-4105 | 0-1/2" | 0.0005"    | ±0.001"  |
| 5841-8115 | 0-1mm  | 0.001mm    | ±0.005mm |
| 5841-8120 | 0-1mm  | 0.001mm    | ±0.005mm |
| 5841-8125 | 0-1mm  | 0.001mm    | ±0.005mm |

THICKNESS GAUGE  
WITH DEEP-THROAT



- Contact point and the flat anvil are ceramic for corrosion resistance
- Depth throat for measuring the thickness of items where a greater depth is required
- Grip handle, thumb trigger, and spring-loaded spindle for accurate measurements
- Provide quick and efficient inspection of thickness

| Code      | Range | Graduation  | A   | B   | C  | D   | E   | Accuracy |
|-----------|-------|-------------|-----|-----|----|-----|-----|----------|
| 5841-1111 | 0-10  | 0.01/0.0005 | 200 | 270 | 36 | 138 | ø10 | ±0.02    |
| 5841-1112 | 0-10  | 0.01/0.0005 | 300 | 375 | 36 | 138 | ø10 | ±0.02    |
| 5841-1113 | 0-10  | 0.01/0.0005 | 400 | 495 | 36 | 138 | ø10 | ±0.02    |
| 5841-1114 | 0-10  | 0.01/0.0005 | 500 | 593 | 53 | 165 | ø10 | ±0.02    |
| 5841-1115 | 0-30  | 0.01/0.0005 | 200 | 276 | 78 | 232 | ø10 | ±0.02    |
| 5841-1120 | 0-30  | 0.01/0.0005 | 300 | 376 | 78 | 232 | ø10 | ±0.02    |
| 5841-1125 | 0-30  | 0.01/0.0005 | 400 | 506 | 53 | 217 | ø10 | ±0.02    |
| 5841-1127 | 0-30  | 0.01/0.0005 | 500 | 593 | 53 | 217 | ø10 | ±0.02    |
| 5841-1130 | 0-50  | 0.01/0.0005 | 200 | 276 | 78 | 280 | ø10 | ±0.02    |
| 5841-1135 | 0-50  | 0.01/0.0005 | 300 | 376 | 78 | 280 | ø10 | ±0.02    |
| 5841-1140 | 0-50  | 0.01/0.0005 | 400 | 510 | 78 | 280 | ø10 | ±0.02    |
| 5841-1145 | 0-50  | 0.01/0.0005 | 500 | 620 | 78 | 280 | ø10 | ±0.02    |

DIGITAL THICKNESS GAUGE



- Thickness gauges are attachment to the dial indicators and offer a quick and efficient means with a convenient grip handle to measure the thickness of paper, leather, rubber ,fabric, metal plate, glass ,plastic plat, etc
- With large LCD Screen and provide error-free reading
- With ceramic measuring faces
- With convenient grip handle, thumb trigger and spring-loaded spindle for accurate measurements

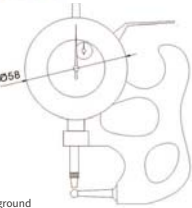
| Unit:mm   |             |             |          |
|-----------|-------------|-------------|----------|
| Code      | Range       | Resolution  | Accuracy |
| 5840-6200 | 0-10/0-0.4" | 0.01/0.0005 | ±0.02    |

TUBE THICKNESS GAUGE

DIN 878



- Thickness gauges are attachment to the dial indicators and offer a quick and efficient means with a convenient grip handle to measure the thickness of paper, leather, rubber, fabric, metal plate, glass, plastic plate, etc
- With ceramic measuring faces
- Sturdy light metal frame, lacquered, with spindle lifting lever
- Stainless spindle, hardened and precision ground



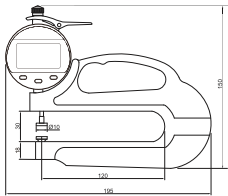
| Code      | Range | Graduation | Accuracy |
|-----------|-------|------------|----------|
| 5841-9105 | 0-10  | 0.01       | ±0.02    |

DIGITAL THICKNESS GAUGE WITH DEEP-THROAT

mm/in



Data output



- Contact point and the flat anvil are ceramic for corrosion resistance
- 120mm throat for measuring the thickness of items where a greater depth is required
- Grip handle, thumb trigger, and spring-loaded spindle for accurate measurements
- Provide quick and efficient inspection of thickness
- With large LCD Screen and provide error-free reading

| Code      | Range     | Resolution   | Accuracy |
|-----------|-----------|--------------|----------|
| 5840-6205 | 0-10/0.4" | 0.01/0.0005" | ±0.02    |

DIGITAL THICKNESS GAUGE WITH DEEP-THROAT

mm/in



Data output



- Contact point and the flat anvil are ceramic for corrosion resistance
- Depth throat for measuring the thickness of items where a greater depth is required
- Grip handle, thumb trigger, and spring-loaded spindle for accurate measurements
- Provide quick and efficient inspection of thickness
- With large LCD Screen and provide error-free reading

Unit:mm

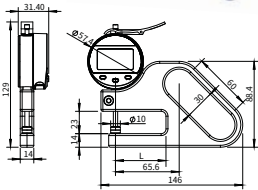
| Code      | Range | Graduation  | A   | B   | C  | D   | E   | Accuracy |
|-----------|-------|-------------|-----|-----|----|-----|-----|----------|
| 5839-0005 | 0-10  | 0.01/0.0005 | 200 | 270 | 36 | 138 | φ10 | ±0.02    |
| 5839-0010 | 0-10  | 0.01/0.0005 | 300 | 375 | 36 | 138 | φ10 | ±0.02    |
| 5839-0015 | 0-10  | 0.01/0.0005 | 400 | 495 | 36 | 138 | φ10 | ±0.02    |
| 5839-0020 | 0-10  | 0.01/0.0005 | 500 | 593 | 53 | 165 | φ10 | ±0.02    |
| 5839-0105 | 0-30  | 0.01/0.0005 | 200 | 276 | 78 | 232 | φ10 | ±0.02    |
| 5839-0110 | 0-30  | 0.01/0.0005 | 300 | 376 | 78 | 232 | φ10 | ±0.02    |
| 5839-0115 | 0-30  | 0.01/0.0005 | 400 | 506 | 53 | 217 | φ10 | ±0.02    |
| 5839-0120 | 0-30  | 0.01/0.0005 | 500 | 593 | 53 | 217 | φ10 | ±0.02    |
| 5839-0205 | 0-50  | 0.01/0.0005 | 200 | 276 | 78 | 280 | φ10 | ±0.02    |
| 5839-0210 | 0-50  | 0.01/0.0005 | 300 | 376 | 78 | 280 | φ10 | ±0.02    |
| 5839-0215 | 0-50  | 0.01/0.0005 | 400 | 510 | 78 | 280 | φ10 | ±0.02    |
| 5839-0220 | 0-50  | 0.01/0.0005 | 500 | 620 | 78 | 280 | φ10 | ±0.02    |

DIGITAL THICKNESS GAUGE WITH BLACK HANDLE

mm/in



Data output



- Handle with anodization for longer service life
- Contact point and the flat anvil are ceramic for corrosion resistance
- Grip handle, thumb trigger, and spring-loaded spindle for accurate measurements
- Provide quick and efficient inspection of thickness
- With large LCD Screen and provide error-free reading

Unit:mm

| Code      | Range     | Resolution   | L   | Accuracy |
|-----------|-----------|--------------|-----|----------|
| 5840-6215 | 0-10/0.4" | 0.01/0.0005" | 30  | ±0.02    |
| 5840-6220 | 0-10/0.4" | 0.01/0.0005" | 50  | ±0.02    |
| 5840-6225 | 0-10/0.4" | 0.01/0.0005" | 100 | ±0.02    |
| 5840-6230 | 0-10/0.4" | 0.01/0.0005" | 120 | ±0.02    |

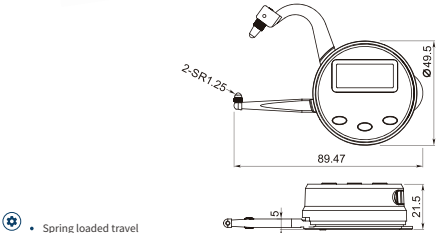
DIGITAL GAUGE  
FOR TUBE THICKNESS



- Thickness gauges are attachment to the dial indicators and offer a quick and efficient means with a convenient grip handle to measure the thickness of paper, leather, rubber, fabric, metal plate, glass, plastic plat, etc
- With ceramic measuring faces
- With convenient grip handle, thumb trigger and spring-loaded spindle for accurate measurements
- With large LCD Screen and provide error-free reading

| Code      | Range          | Graduation     | Accuracy |
|-----------|----------------|----------------|----------|
| 5840-6250 | 0-10mm/ 0-0.4" | 0.01mm/0.0005" | ±0.02mm  |

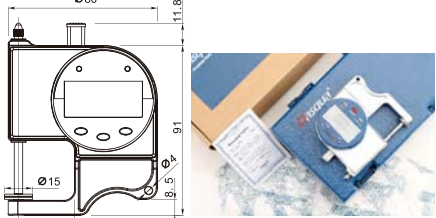
DIGITAL THICKNESS GAUGE



- Spring loaded travel
- Large LCD display for easy and clear reading
- Class A for electrostatic discharge
- The compact size and lightweight ensure it is very convenient, handy and easy to operate
- Data hold function

| Code      | Range     | Resolution         | Accuracy    |
|-----------|-----------|--------------------|-------------|
| 2140-8105 | 0-25/0-1" | 0.01/0.0005"/1/64" | 0.05/0.002" |

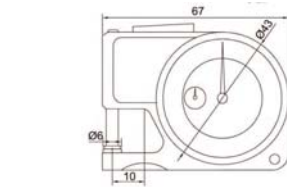
DIGITAL THICKNESS GAUGE



- Spring load movement with a push button
- Large LCD display for easy and clear readings
- Thickness measurement of different materials
- Data hold function

| Code      | Range     | Resolution         | Accuracy    |
|-----------|-----------|--------------------|-------------|
| 2140-8110 | 0-25/0-1" | 0.01/0.0005"/1/64" | 0.05/0.002" |

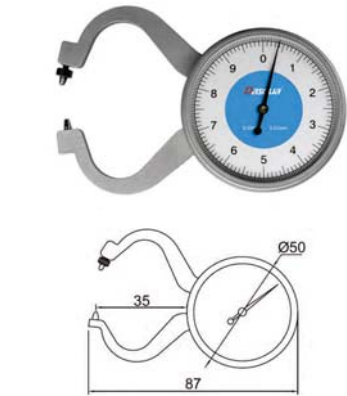
POCKET DIAL  
THICKNESS GAUGES



- Designed for carrying convenience and ideally suited for quick inspection of paper, leather, wire, plastic, sheet metal and similar materials
- Aluminum main body, stainless steel contact point and anvil

| Code      | Range  | Graduation | Accuracy |
|-----------|--------|------------|----------|
| 5841-2005 | 0-10   | 0.01       | ±0.03    |
| 5841-2010 | 0-0.5" | 0.001"     | ±0.001"  |

DIAL THICKNESS GAUGE



- Thickness gauges are attachment to the dial indicators and offer a quick and efficient means with a convenient grip handle to measure the thickness of paper, leather, rubber,fabric, metal plate, glass ,plastic plate, etc
- Sturdy light metal frame, lacquered, with spindle lifting lever
- Stainless spindle, hardened and precision ground

| Unit:mm   |       |            |          |
|-----------|-------|------------|----------|
| Code      | Range | Graduation | Accuracy |
| 2140-8106 | 0-10  | 0.01       | ±0.1     |

DIAL THICKNESS GAUGE



- Thickness gauges are attachment to the dial indicators and offer a quick and efficient means with a convenient grip handle to measure the thickness of paper, leather, rubber,fabric, metal plate, glass ,plastic plate, etc
- Sturdy light metal frame, lacquered, with spindle lifting lever
- Stainless spindle, hardened and precision ground

| Unit:mm   |       |            |          |
|-----------|-------|------------|----------|
| Code      | Range | Graduation | Accuracy |
| 2140-8120 | 0-10  | 0.01       | ±0.1     |

INTERNAL DIAL CALIPER GAUGE



- To measure the inside groove, bores, other hard to reach inside dimension
- Made of stainless steel
- Easy to use

| Unit:mm   |       |            |    |   |     |      |          |
|-----------|-------|------------|----|---|-----|------|----------|
| Code      | Range | Graduation | L  | W | H   | A(R) | Accuracy |
| 5810-2000 | 5-15  | 0.01       | 20 | 1 | 1.5 | 0.3  | 0.02     |
| 5810-2001 | 5-25  | 0.01       | 35 | 1 | 1.5 | 0.3  | 0.03     |
| 5810-2002 | 10-30 | 0.01       | 55 | 2 | 3.5 | 0.5  | 0.03     |
| 5810-2003 | 20-40 | 0.01       | 80 | 3 | 6.5 | 0.5  | 0.03     |



SAW TEETH SETTING GAUGE



- Dial on both sides
- Hardened bearing pins ground together with the contact point
- Tough, industrial quality metal casting
- Large gripping surface
- Contact point that is hardened and grind

| Code      | Range       | Graduation     | Accuracy |
|-----------|-------------|----------------|----------|
| 5841-3015 | 2mm /0.080" | 0.02mm /0.001" | ±0.04    |



## INTERNAL DIGITAL CALIPER GAUGE WITH SPHERICAL PROBE

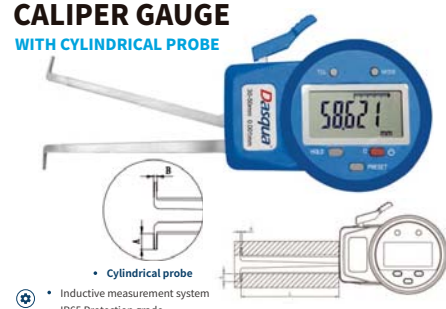


- Spherical probe
- Inductive measurement system
- IP65 Protection grade
- Built in rechargeable lithium battery
- Built in wireless transmission (optional)
- Tolerance preset and GO/NG judgement
- Display value lock (without this function in built-in wireless transmission models)
- With preset function

Unit:mm

| Code      | Range          | Resolution | A    | B   | L   | Accuracy        | Data output |
|-----------|----------------|------------|------|-----|-----|-----------------|-------------|
| 5813-0005 | 5-15/0.2-0.6"  | 0.002      | 2.3  | 0.8 | 35  | ±0.015/±0.0006" | /           |
| 5813-0010 | 10-30/0.4-1.2" | 0.005      | 5.2  | 1.2 | 85  | ±0.025/±0.001"  | /           |
| 5813-0015 | 30-50/1.2-2"   | 0.005      | 7.2  | 1.2 | 85  | ±0.025/±0.001"  | /           |
| 5813-0020 | 50-100/2-4"    | 0.01       | 11.7 | 2.4 | 236 | ±0.050/±0.002"  | /           |
| 5813-0025 | 100-150/4-6"   | 0.01       | 11.7 | 2.4 | 236 | ±0.050/±0.002"  | /           |
| 5813-0030 | 150-200/6-8"   | 0.01       | 11.7 | 2.4 | 236 | ±0.050/±0.002"  | /           |
| 5813-0105 | 5-15/0.2-0.6"  | 0.002      | 2.3  | 0.8 | 35  | ±0.015/±0.0006" | Bluetooth   |
| 5813-0110 | 10-30/0.4-1.2" | 0.005      | 5.2  | 1.2 | 85  | ±0.025/±0.001"  | Bluetooth   |
| 5813-0115 | 30-50/1.2-2"   | 0.005      | 7.2  | 1.2 | 85  | ±0.025/±0.001"  | Bluetooth   |
| 5813-0120 | 50-100/2-4"    | 0.01       | 11.7 | 2.4 | 236 | ±0.050/±0.002"  | Bluetooth   |
| 5813-0125 | 100-150/4-6"   | 0.01       | 11.7 | 2.4 | 236 | ±0.050/±0.002"  | Bluetooth   |
| 5813-0130 | 150-200/6-8"   | 0.01       | 11.7 | 2.4 | 236 | ±0.050/±0.002"  | Bluetooth   |

## INTERNAL DIGITAL CALIPER GAUGE WITH CYLINDRICAL PROBE



- Cylindrical probe
- Inductive measurement system
- IP65 Protection grade
- Built in rechargeable lithium battery
- Built in wireless transmission (optional)
- Tolerance preset and GO/NG judgement
- Display value lock (without this function in built-in wireless transmission models)
- With preset function

Unit:mm

| Code      | Range          | Resolution | A    | B   | L   | Accuracy        | Data output |
|-----------|----------------|------------|------|-----|-----|-----------------|-------------|
| 5813-1005 | 5-15/0.2-0.6"  | 0.002      | 2.3  | 0.8 | 35  | ±0.015/±0.0006" | /           |
| 5813-1010 | 10-30/0.4-1.2" | 0.005      | 5.2  | 1.2 | 85  | ±0.025/±0.001"  | /           |
| 5813-1015 | 30-50/1.2-2"   | 0.005      | 7.2  | 2   | 85  | ±0.025/±0.001"  | /           |
| 5813-1020 | 50-100/2-4"    | 0.01       | 11.7 | 2   | 236 | ±0.050/±0.002"  | /           |
| 5813-1025 | 100-150/4-6"   | 0.01       | 11.7 | 2   | 236 | ±0.050/±0.002"  | /           |
| 5813-1030 | 150-200/6-8"   | 0.01       | 11.7 | 2   | 236 | ±0.050/±0.002"  | /           |
| 5813-1105 | 5-15/0.2-0.6"  | 0.002      | 2.3  | 0.8 | 35  | ±0.015/±0.0006" | Bluetooth   |
| 5813-1110 | 10-30/0.4-1.2" | 0.005      | 5.2  | 1.2 | 85  | ±0.025/±0.001"  | Bluetooth   |
| 5813-1115 | 30-50/1.2-2"   | 0.005      | 7.2  | 2   | 85  | ±0.025/±0.001"  | Bluetooth   |
| 5813-1120 | 50-100/2-4"    | 0.01       | 11.7 | 2   | 236 | ±0.050/±0.002"  | Bluetooth   |
| 5813-1125 | 100-150/4-6"   | 0.01       | 11.7 | 2   | 236 | ±0.050/±0.002"  | Bluetooth   |
| 5813-1130 | 150-200/6-8"   | 0.01       | 11.7 | 2   | 236 | ±0.050/±0.002"  | Bluetooth   |

## INTERNAL DIGITAL CALIPER GAUGE-RANGE 10MM

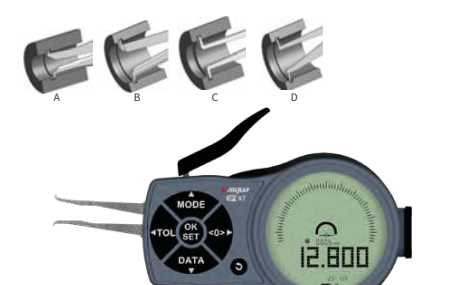


- 5811-0055
- 5810-0000
- CR2032 battery
- Automatic power off
- Data transmission
- Display can be rotated 170°
- Relative & absolute conversion
- To measure the inside groove, bores, other hard to reach inside dimension
- Set tolerance, preset value, maximum/minimum value measurement, data hold and other functions

Unit:mm

| Code      | Range | Resolution | L  | W   | H   | A(R) | Accuracy |
|-----------|-------|------------|----|-----|-----|------|----------|
| 5811-0000 | 5-15  | 0.005      | 20 | 1   | 1.5 | 0.3  | 0.02     |
| 5811-0035 | 10-20 | 0.005      | 25 | 1.5 | 3.0 | 0.3  | 0.02     |
| 5811-0040 | 20-30 | 0.005      | 30 | 2   | 6.5 | 0.5  | 0.02     |
| 5811-0045 | 30-40 | 0.005      | 30 | 2.5 | 9.0 | 0.5  | 0.02     |
| 5811-0050 | 40-50 | 0.005      | 30 | 2.5 | 9.0 | 0.5  | 0.02     |
| 5811-0055 | 5-25  | 0.005      | 35 | 1   | 1.5 | 0.3  | 0.03     |
| 5811-0060 | 10-30 | 0.005      | 55 | 2   | 3.5 | 0.5  | 0.03     |
| 5811-0065 | 20-40 | 0.005      | 80 | 3   | 6.5 | 0.5  | 0.03     |
| 5811-0070 | 30-50 | 0.005      | 80 | 3   | 8.5 | 0.5  | 0.03     |
| 5811-0075 | 40-60 | 0.005      | 80 | 3   | 8.5 | 0.5  | 0.03     |

## INTERNAL DIGITAL CALIPER GAUGE



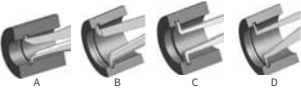
- Protection class IP67
- Interactive keypad
- Battery 2x type AAA
- Digital display with analog bar
- Data Logger (100 measuring values)
- Numerical interval adjustable 0,001 / 0,002 / 0,005 / 0,01 / 0,02 / 0,05 mm ergonomically designed available on request
- Bluetooth interface up to 8 gauges simultaneously

Unit:mm

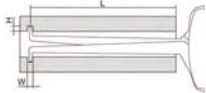
| Code      | Range      | Resolution | Repeatability | Contact Type | H    | L   | W    | Accuracy |
|-----------|------------|------------|---------------|--------------|------|-----|------|----------|
| 5812-2005 | 2,5 - 12,5 | 0.005      | 0.005         | A            | <0.7 | <12 | >0.5 | ±0.015   |
| 5812-2010 | 5 - 15     | 0.005      | 0.005         | B            | <2.3 | <35 | >0.8 | ±0.015   |
| 5812-2015 | 10 - 30    | 0.01       | 0.01          | B            | <5.2 | <85 | >1.2 | ±0.03    |
| 5812-2020 | 20 - 40    | 0.01       | 0.01          | C            | <7   | <85 | >1.3 | ±0.03    |
| 5812-2025 | 30 - 50    | 0.01       | 0.01          | C            | <7   | <85 | >1.4 | ±0.03    |
| 5812-2030 | 40 - 60    | 0.01       | 0.01          | D            | <8.3 | <85 | >1.5 | ±0.03    |
| 5812-2035 | 50 - 70    | 0.01       | 0.01          | D            | <8.3 | <85 | >1.6 | ±0.03    |



INTERNAL DIAL CALIPER GAUGE



- Protection class Ip65 optimized measuring force accurate measurement ergonomically designed



| Code      | Range      | Resolution | Repeatability | Contact Type | H    | L   | W    | Accuracy |
|-----------|------------|------------|---------------|--------------|------|-----|------|----------|
| 5812-3105 | 2.5 - 12.5 | 0.005      | 0.005         | A            | <0.7 | <12 | >0.5 | ±0.015   |
| 5812-3110 | 5 - 15     | 0.005      | 0.005         | B            | <2.3 | <35 | >0.8 | ±0.015   |
| 5812-3115 | 10 - 30    | 0.01       | 0.01          | B            | <5.2 | <85 | >1.2 | ±0.03    |
| 5812-3120 | 20 - 40    | 0.01       | 0.01          | C            | <7   | <85 | >1.3 | ±0.03    |
| 5812-3125 | 30 - 50    | 0.01       | 0.01          | C            | <7   | <85 | >1.4 | ±0.03    |
| 5812-3130 | 40 - 60    | 0.01       | 0.01          | D            | <8.3 | <85 | >1.5 | ±0.03    |
| 5812-3135 | 50 - 70    | 0.01       | 0.01          | D            | <8.3 | <85 | >1.6 | ±0.03    |

INTERNAL DIAL CALIPER GAUGE

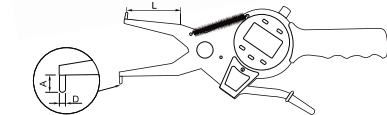


- Versatile internal dial caliper gauge for measuring inside diameter, ring groove bottom diameter and inside step diameter or special holes of the workpiece
- The gauge is spring loaded and makes point contact at a constant measuring force
- Carbide measuring contact points
- Can be set with a micrometer or ring gauge
- Bezel rotates for zero setting

Unit:mm

| Code      | Range    | Graduation | Accuracy | A      | B      | L    |
|-----------|----------|------------|----------|--------|--------|------|
| 5810-2005 | 15-35    | 0.01       | ±0.035   | 3      | φ3     | 50   |
| 5810-2010 | 35-55    | 0.01       | ±0.035   | 6      | φ3     | 80   |
| 5810-2015 | 55-75    | 0.01       | ±0.035   | 8      | φ3     | 90   |
| 5810-2020 | 75-95    | 0.01       | ±0.035   | 8      | φ3     | 100  |
| 5810-2025 | 95-115   | 0.01       | ±0.035   | 10     | φ3.2   | 150  |
| 5810-2030 | 115-135  | 0.01       | ±0.035   | 10     | φ3.2   | 150  |
| 5812-4005 | 0.6-1.4" | 0.0005"    | ±0.002"  | 0.118" | 0.118" | 1.9" |
| 5812-4010 | 1.4-2.2" | 0.0005"    | ±0.002"  | 0.236" | 0.118" | 3.1" |
| 5812-4015 | 2.2-3.0" | 0.0005"    | ±0.002"  | 0.315" | 0.118" | 3.1" |
| 5812-4020 | 3.0-3.8" | 0.0005"    | ±0.002"  | 0.315" | 0.118" | 3.9" |

INTERNAL DIGITAL CALIPER GAUGE

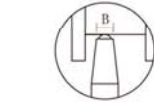


- Versatile internal dial caliper gauge for measuring inside diameter, ring groove bottom diameter and inside step diameter or special holes of the workpiece
- The gauge is spring loaded and makes point contact at a constant measuring force
- With large LCD display for clear and error-free readings adings
- Carbide measuring contact points
- With data output for SPC analysis

Unit:mm

| Code      | Range              | Resolution   | Accuracy      | L   | A  | D    |
|-----------|--------------------|--------------|---------------|-----|----|------|
| 5811-0005 | 15-35mm/0.6-1.4"   | 0.01/0.0005" | ±0.035/0.002" | 50  | 3  | φ3   |
| 5811-0010 | 35-55mm/1.4-2.2"   | 0.01/0.0005" | ±0.035/0.002" | 80  | 6  | φ3   |
| 5811-0015 | 55-75mm/2.2-3.0"   | 0.01/0.0005" | ±0.035/0.002" | 90  | 8  | φ3   |
| 5811-0020 | 75-95mm/3.0-3.8"   | 0.01/0.0005" | ±0.035/0.002" | 100 | 8  | φ3   |
| 5811-0025 | 95-115mm/3.8-4.6"  | 0.01/0.0005" | ±0.035/0.002" | 150 | 10 | φ3.2 |
| 5811-0030 | 115-135mm/4.6-5.4" | 0.01/0.0005" | ±0.035/0.002" | 150 | 10 | φ3.2 |

EXTERNAL DIGITAL CALIPER GAUGE WITH SPHERICAL PROBE



- Spherical probe
- Inductive measurement system
- IP65 Protection grade
- Built in rechargeable lithium battery
- Built in wireless transmission (optional)
- Tolerance preset and GO/NG judgement
- Display value lock (without this function in built-in wireless transmission models)
- With preset function

Unit:mm

| Code      | Range   | Resolution | A    | B | L   | Accuracy       | Data output |
|-----------|---------|------------|------|---|-----|----------------|-------------|
| 5814-1005 | 0-10mm  | 0.002      | 19.1 | 2 | 35  | ±0.01/±0.0005" | /           |
| 5814-1010 | 0-20mm  | 0.005      | 24.7 | 2 | 85  | ±0.02/±0.0008" | /           |
| 5814-1013 | 0-30mm  | 0.01       | 30   | 2 | 116 | ±0.03/±0.0012" | /           |
| 5814-1015 | 0-50mm  | 0.01       | 30   | 2 | 167 | ±0.04/±0.0016" | /           |
| 5814-1020 | 0-100mm | 0.01       | 35   | 2 | 382 | ±0.07/±0.003"  | /           |
| 5814-1105 | 0-10mm  | 0.002      | 19.1 | 2 | 35  | ±0.01/±0.0005" | Bluetooth   |
| 5814-1110 | 0-20mm  | 0.005      | 24.7 | 2 | 85  | ±0.02/±0.0008" | Bluetooth   |
| 5814-1113 | 0-30mm  | 0.01       | 30   | 2 | 116 | ±0.03/±0.0012" | Bluetooth   |
| 5814-1115 | 0-50mm  | 0.01       | 30   | 2 | 167 | ±0.04/±0.0016" | Bluetooth   |
| 5814-1120 | 0-100mm | 0.01       | 35   | 2 | 382 | ±0.07/±0.003"  | Bluetooth   |

EXTERNAL DIGITAL  
CALIPER GAUGE

WITH CYLINDRICAL PROBE



- Cylindrical probe
- Inductive measurement system
- IP65 Protection grade
- Built in rechargeable lithium battery
- Built in wireless transmission (optional)
- Tolerance preset and GO/NG judgement
- Display value lock (without this function in built-in wireless transmission models)
- With preset function

| Code      | Range   | Resolution | A    | B | L   | Accuracy                | Data output |
|-----------|---------|------------|------|---|-----|-------------------------|-------------|
| 5814-0005 | 0-10mm  | 0.002      | 19.1 | 1 | 35  | $\pm 0.01/\pm 0.0005''$ | /           |
| 5814-0010 | 0-20mm  | 0.005      | 24.7 | 1 | 85  | $\pm 0.02/\pm 0.0008''$ | /           |
| 5814-0013 | 0-30mm  | 0.01       | 30   | 1 | 116 | $\pm 0.03/\pm 0.0012''$ | /           |
| 5814-0015 | 0-50mm  | 0.01       | 30   | 1 | 167 | $\pm 0.04/\pm 0.0016''$ | /           |
| 5814-0020 | 0-100mm | 0.01       | 35   | 1 | 382 | $\pm 0.07/\pm 0.003''$  | /           |
| 5814-0105 | 0-10mm  | 0.002      | 19.1 | 1 | 35  | $\pm 0.01/\pm 0.0005''$ | Bluetooth   |
| 5814-0110 | 0-20mm  | 0.005      | 24.7 | 1 | 85  | $\pm 0.02/\pm 0.0008''$ | Bluetooth   |
| 5814-0113 | 0-30mm  | 0.01       | 30   | 1 | 116 | $\pm 0.03/\pm 0.0012''$ | Bluetooth   |
| 5814-0115 | 0-50mm  | 0.01       | 30   | 1 | 167 | $\pm 0.04/\pm 0.0016''$ | Bluetooth   |
| 5814-0120 | 0-100mm | 0.01       | 35   | 1 | 382 | $\pm 0.07/\pm 0.003''$  | Bluetooth   |

Unit:mm

EXTERNAL DIGITAL  
CALIPER GAUGE

- Protection class IP65
- optimized measuring force
- accurate measurement
- ergonomically designed

| Code      | Range  | Repeatability | Contact Type | L    | H    | h    | Accuracy    |
|-----------|--------|---------------|--------------|------|------|------|-------------|
| 5812-2205 | 0-20   | 0.005         | A            | <35  | 19.1 | 18.6 | $\pm 0.015$ |
| 5812-2210 | 0-50   | 0.03          | A            | <85  | 24.7 | 18.6 | $\pm 0.03$  |
| 5812-2215 | 0-50   | 0.04          | B            | <167 | 30   | 30   | $\pm 0.06$  |
| 5812-2220 | 50-100 | 0.06          | B            | <167 | 30   | 23   | $\pm 0.08$  |

Unit:mm

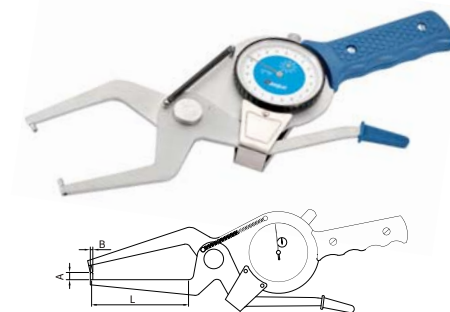
EXTERNAL DIAL  
CALIPER GAUGE

- Interactive keypad
- Protection class IP67
- Digital display with analog bar
- Numerical interval adjustable 0,001 / 0,002 / 0,005 / 0,01 / 0,02 / 0,05 mm ergonomically
- designed available on request
- Data Logger (100 measuring values)
- Battery 2x type AAA
- Bluetooth interface up to 8 gauges simultaneously

| Code      | Range  | Graduation | Repeatability | Contact Type | L    | H    | h    | Accuracy    |
|-----------|--------|------------|---------------|--------------|------|------|------|-------------|
| 5812-3305 | 0-20   | 0.005      | 0.005         | A            | <35  | 19.1 | 18.6 | $\pm 0.015$ |
| 5812-3310 | 0-50   | 0.01       | 0.01          | A            | <85  | 24.7 | 18.6 | $\pm 0.03$  |
| 5812-3315 | 0-50   | 0.05       | 0.025         | B            | <167 | 30   | 30   | $\pm 0.05$  |
| 5812-3320 | 50-100 | 0.05       | 0.05          | B            | <167 | 30   | 23   | $\pm 0.075$ |

Unit:mm

## EXTERNAL DIAL CALIPER GAUGE

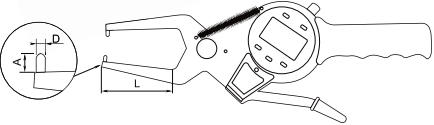


- Versatile external dial caliper gauge for measuring outside diameter, ring groove bottom diameter, narrow grooves and the dimensions that hard to reach
- The gauge is spring loaded and makes point contact at a constant measuring force
- Carbide measuring contact points
- Can be set with a micrometer or ring gauge
- Bezel rotates for zero setting

Unit:mm

| Code      | Range    | Graduation | Accuracy      | A      | B               | L    |
|-----------|----------|------------|---------------|--------|-----------------|------|
| 5721-0005 | 0-20     | 0.01       | $\pm 0.035$   | 6      | $\varnothing 3$ | 60   |
| 5721-0010 | 20-40    | 0.01       | $\pm 0.035$   | 6      | $\varnothing 3$ | 60   |
| 5721-0015 | 40-60    | 0.01       | $\pm 0.035$   | 6      | $\varnothing 3$ | 55   |
| 5721-0020 | 60-80    | 0.01       | $\pm 0.035$   | 6      | $\varnothing 3$ | 55   |
| 5721-0025 | 80-100   | 0.01       | $\pm 0.035$   | 6      | $\varnothing 3$ | 55   |
| 5722-4005 | 0-0.8"   | 0.0005"    | $\pm 0.002''$ | 0.236" | 0.118"          | 2.3" |
| 5722-4010 | 0.8-1.6" | 0.0005"    | $\pm 0.002''$ | 0.236" | 0.118"          | 2.3" |
| 5722-4015 | 1.6-2.4" | 0.0005"    | $\pm 0.002''$ | 0.236" | 0.118"          | 2.1" |
| 5722-4020 | 2.4-3.2" | 0.0005"    | $\pm 0.002''$ | 0.236" | 0.118"          | 2.1" |
| 5722-4025 | 3.2-4.0" | 0.0005"    | $\pm 0.002''$ | 0.236" | 0.118"          | 2.1" |

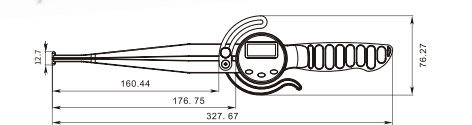
EXTERNAL DIGITAL CALIPER GAUGE



- Versatile internal dial caliper gauge for measuring outside diameter, ring groove bottom diameter, narrow grooves and the dimensions that hard to reach
- The gauge is spring loaded and makes point contact at a constant measuring force
- With large LCD display for clear and error-free readings
- Carbide measuring contact points
- With data output for SPC analysis

| Unit:mm   |                   |              |               |   |    |    |
|-----------|-------------------|--------------|---------------|---|----|----|
| Code      | Range             | Resolution   | Accuracy      | A | D  | L  |
| 5630-1005 | 0-20mm/0-0.8"     | 0.01/0.0005" | ±0.035/0.002" | 6 | φ3 | 60 |
| 5630-1010 | 20-40mm/0.8-1.6"  | 0.01/0.0005" | ±0.035/0.002" | 6 | φ3 | 60 |
| 5630-1015 | 40-60mm/1.6-2.4"  | 0.01/0.0005" | ±0.035/0.002" | 6 | φ3 | 55 |
| 5630-1020 | 60-80mm/2.4-3.2"  | 0.01/0.0005" | ±0.035/0.002" | 6 | φ3 | 55 |
| 5630-1025 | 80-100mm/3.2-4.0" | 0.01/0.0005" | ±0.035/0.002" | 6 | φ3 | 55 |

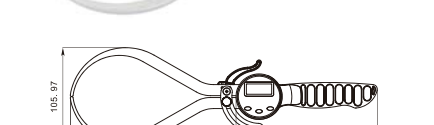
INTERNAL DIGITAL CALIPER GAUGE



- Make quick and accurate inside measurements of different materials
- Perfect for woodworking, carpentry, metal fabrication, etc
- High hardness and wear resistance
- With large LCD display for clear and error-free readings
- The gauge is spring loaded and makes point contact at a constant measuring force

| Code      | Range               | Resolution       | Accuracy  |
|-----------|---------------------|------------------|-----------|
| 1804-1010 | 12.7-165/0.5-6.5"   | 0.1/0.005"/1/64" | 0.2/0.01" |
| 1804-1015 | 12.7-257.4/0.5-8.5" | 0.1/0.005"/1/64" | 0.3/0.02" |

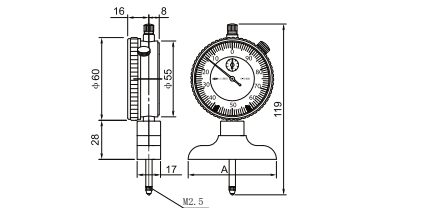
EXTERNAL DIGITAL CALIPER GAUGE



- Make quick and accurate outside measurements of different materials.
- Perfect for woodworking, carpentry, metal fabrication, etc
- High hardness and wear resistance
- With large LCD display for clear and error-free readings
- The gauge is spring loaded and makes point contact at a constant measuring force

| Code      | Range      | Resolution       | Accuracy  |
|-----------|------------|------------------|-----------|
| 1804-1020 | 0-150/0-6" | 0.1/0.005"/1/64" | 0.2/0.01" |
| 1804-1025 | 0-200/0-8" | 0.1/0.005"/1/64" | 0.3/0.02" |

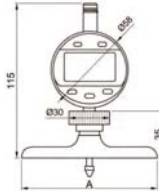
DIAL DEPTH GAUGE



- Dial Indicator for easy and clear reading
- Hardened base with fine lapped contact surface
- Used to measure depth of holes or parts with grooved or elevated surfaces
- Extension rods of different lengths offering larger measuring ranges

| Code      | Range | Graduation | Base Length(A) | Depth | Remark                            |
|-----------|-------|------------|----------------|-------|-----------------------------------|
| 5822-4100 | 0-1"  | 0.001"     | 2.5"           | 6"    | With 5 rods 1-5", step by 1"      |
| 5822-4105 | 0-1"  | 0.001"     | 2.5"           | 6"    | With 5 rods 1-5", step by 1"      |
| 5821-1100 | 0-10  | 0.01       | 100            | 100   | With 10 rods 10-100, step by 10mm |
| 5821-1105 | 0-10  | 0.01       | 64             | 100   | With 10 rods 10-100, step by 10mm |

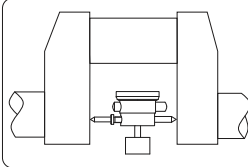
DIGITAL DEPTH GAUGE



- Large easy-to-read display
- With Hold, Zero, Metric/Inch Conversion function
- Extension rods of different lengths offering larger measuring ranges
- Used to measure depth of holes or parts with grooved or elevated surfaces
- Spindle hardened, ground and lapped for ultimate accuracy

| Code      | Range | Graduation     | Base Length(A) | Accuracy | Remark                            |
|-----------|-------|----------------|----------------|----------|-----------------------------------|
| 5820-1015 | 0-100 | 0.01/0.0005"   | 63             | ±0.02    | With 10 rods 10-100, step by 10mm |
| 5820-1005 | 0-100 | 0.01/0.0005"   | 100            | ±0.02    | With 10 rods 10-100, step by 10mm |
| 5820-1020 | 0-100 | 0.001/0.00005" | 63             | ±0.005   | With 10 rods 10-100, step by 10mm |
| 5820-1010 | 0-100 | 0.001/0.00005" | 100            | ±0.005   | With 10 rods 10-100, step by 10mm |

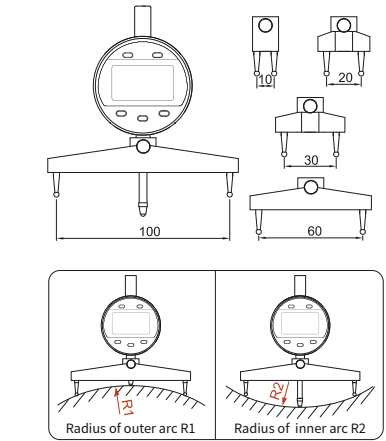
CRANKSHAFT TESTER



- To Measure crankshaft deflection
- The balance block is mounted on the back of dial indicator to keep the dial indicator facing up
- Measuring range: 60-500mm
- Graduation: 0.01mm
- Rotatable dial supplied with extensions

| Code      | Range  | Graduation | Dial indicator range | Extension rod      | Accuracy |
|-----------|--------|------------|----------------------|--------------------|----------|
| 5751-0005 | 60-300 | 0.01       | 0-3                  | 32,2,48,96,185     | ±0.014   |
| 5751-0010 | 60-500 | 0.01       | 0-3                  | 32,2,48,96,185,197 | ±0.014   |

DIGITAL RADIUS GAUGE



- Use to measure radius of internal and external arcs
- Supplied with 5 jaws for different sizes of arc
- USB data output
- Large LCD display with clear reading
- Stem and spindle stainless, hardened and lapped
- Different sized probes for arc measurements
- Measured value display in percent and radius display

| Code      | Outside Diameter Range | Inside Diameter Range | Graduation     | Radius Accuracy |
|-----------|------------------------|-----------------------|----------------|-----------------|
| 5831-0005 | 5-700                  | 6.3-700               | 0.005/0.00015" | ±1%             |

# MAGNETIC BASES

BORN IN ITALY, RAISED BY THE WORLD

## 02-07 MAGNETIC BASE



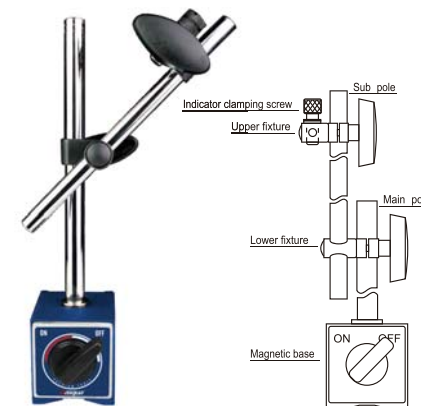
## 13-15 COMPARATOR STAND



## 08-12 MAGNETIC BASE RELATED PRODUCTS



## MAGNETIC STAND BASE

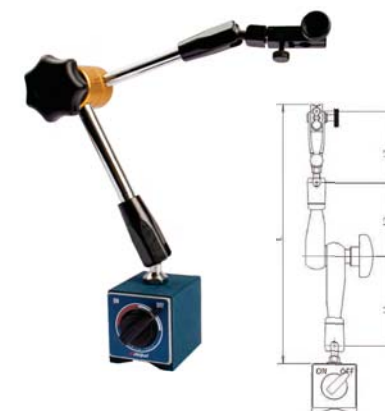


- Solid structure with electroplated surfaces, precision ground end-faces
- With fine adjustment device, which is heat-treated to ensure stability and durability
- With clamp holes of 6mm, 8mm, which satisfy the use of most indicators and test indicators
- 150° V-grooved base can be placed on the cylindrical surfaces for easily fixing the indicators
- On/Off switch for magnet, easy to move the base without the influence of magnetic force
- Well selected ferrite permanent magnet with magnetic force greater than calibration value

Unit:mm

| Code      | Holding Power | Base     | Main Pole | Sub Pole | Dia. of Clamp Hole | Weight |
|-----------|---------------|----------|-----------|----------|--------------------|--------|
| 7700-0005 | 80kg          | 58x50x55 | φ12x177   | φ10x165  | φ6/φ8              | 1.6kg  |
| 7700-0010 | 80kg          | 60x50x55 | φ12x177   | φ10x165  | φ6/φ8/φ3/8"        | 1.6kg  |

## MECHANICAL UNIVERSAL MAGNETIC BASE



- Mechanical fixation of joints at one point
- The stand can be completely locked from a single point
- The force required for locking the joints is mechanically transmitted through the cavities in the shoulders

Unit:mm

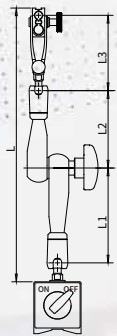
| Code      | Holding Power | Dia of Clamp Hole | Base     | L1  | L2  | L3 | L   | Weight |
|-----------|---------------|-------------------|----------|-----|-----|----|-----|--------|
| 7121-0016 | 60kg          | φ8/dovetail       | 60°50°55 | 132 | 120 | 51 | 345 | 1.4kg  |
| 7121-0050 | 80kg          | φ8/dovetail       | 60°50°55 | 132 | 120 | 51 | 345 | 1.5kg  |
| 7121-0040 | 100kg         | φ8/dovetail       | 73°50°55 | 132 | 120 | 51 | 345 | 1.8kg  |

# LOCK'T MAGNETIC BASE

- All wear parts use hardened high grade steel and with hardness over 58HRC
- Inner structure is made of bearing steel, delivering more wear-resisting ability and longer service life, delivering more wear-resistance and longer life

## TWO CLAMPING HOLES

Designed with two clamping holes, which are suitable for metric and inch dial indicators, plus dovetail groove for test indicators, bringing great convenience holding capabilities



### CNC Machining

Main parts produced on CNC machines, providing extremely accurate and high precision, ensuring high quality and high stability



• Equal locking force, more competitive price

• Super forced locking mechanical universal arm  
New type locking mechanism, super strong arm lock and super tight locking force guarantees long life and firm positioning

### Ergonomic design

Ergonomic-designed tightening knob provides comfortable and firm grip; Flexible and super strong rotary joints, providing smooth adjustments in any direction or location

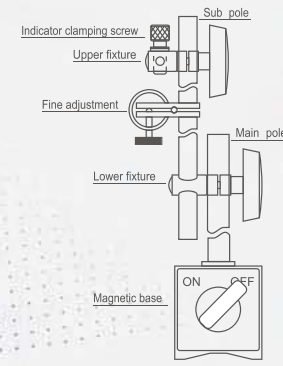


Unit: mm

| Code      | Holding Power | Base          | L1  | L2  | L3 | L   |
|-----------|---------------|---------------|-----|-----|----|-----|
| 7121-0020 | 50kg          | 40 x 40 x 40  | 62  | 52  | 79 | 220 |
| 7121-0025 | 80kg          | 60 x 50 x 55  | 100 | 82  | 81 | 290 |
| 7121-0030 | 100kg         | 73 x 50 x 55  | 145 | 95  | 81 | 355 |
| 7121-0035 | 100kg         | 73 x 50 x 55  | 175 | 125 | 81 | 415 |
| 7121-0045 | 130kg         | 117 x 50 x 55 | 175 | 125 | 81 | 415 |

# MAGNETIC BASE WITH FINE ADJUSTMENT

- 150° V-grooved base can be placed on the cylindrical surfaces as well as flat surfaces for easily fixing the indicators.
- Well selected ferrite permanent magnet with magnetic force greater than calibration value
- On/off switch for magnet, easy to move the base without the influence of magnetic force.



• Solid structure with surfaces electroplated and end-faces ground



• With clamp holes of  $\phi 4\text{mm}$ ,  $\phi 8\text{mm}$ ,  $3/8''$ , which satisfy the use of most indicators and test indicators.



• With fine adjustment device, which is heat-treated to ensure stability and durability.



Unit:mm

| Code      | Holding Power | Base      | Main Pole            | Sub Pole             | Dia. of Clam Hold     | weight |
|-----------|---------------|-----------|----------------------|----------------------|-----------------------|--------|
| 7122-0004 | 60kg          | 60x50x55  | $\phi 12 \times 1/6$ | $\phi 10 \times 150$ | $\phi 6/\phi 8$       | 1.5kg  |
| 7122-0005 | 80kg          | 60x50x55  | $\phi 12 \times 1/6$ | $\phi 10 \times 150$ | $\phi 6/\phi 8$       | 1.5kg  |
| 7122-0010 | 100kg         | 73x50x55  | $\phi 16 \times 255$ | $\phi 14 \times 165$ | $\phi 6/\phi 8$       | 2.3kg  |
| 7122-0015 | 130kg         | 117x50x55 | $\phi 20 \times 355$ | $\phi 14 \times 210$ | $\phi 6/\phi 8$       | 3.7kg  |
| 7123-1004 | 60kg          | 60x50x55  | $\phi 12 \times 1/6$ | $\phi 10 \times 150$ | $\phi 4/\phi 8/3/8''$ | 1.5kg  |
| 7123-1005 | 80kg          | 60x50x55  | $\phi 12 \times 1/6$ | $\phi 10 \times 150$ | $\phi 4/\phi 8/3/8''$ | 1.5kg  |
| 7123-1010 | 100kg         | 73x50x55  | $\phi 16 \times 255$ | $\phi 14 \times 165$ | $\phi 4/\phi 8/3/8''$ | 2.3kg  |
| 7123-1015 | 130kg         | 117x50x55 | $\phi 20 \times 355$ | $\phi 14 \times 210$ | $\phi 4/\phi 8/3/8''$ | 3.7kg  |



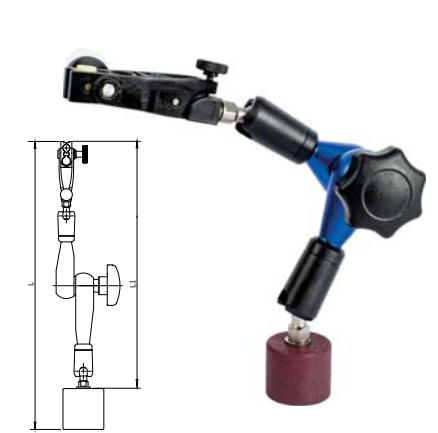
MINI MAGNETIC BASE  
WITH 3D&UNIVERSAL ARM



- Small shape ensures easy and fast fixing to machine
- Flexible, strong and precise rotary jointed arms, which can adjust to any position
- Ball joints enables quick and easy positioning, all three joints are controlled by a tightening knob
- With central locking mechanism
- Clamping force can be continuously adjusted, with high stability
- With clamp hole, dovetail groove, which can clamp many types of indicators

| Unit:mm   |               |        |                 |                   |                    |        |
|-----------|---------------|--------|-----------------|-------------------|--------------------|--------|
| Code      | Holding Power | Base   | Arm Length (L1) | Overall Length(L) | Dia. of Clamp Hole | Weight |
| 7312-0004 | 18kg          | φ30x25 | 180             | 205               | φ6/φ8/Dovetail     | 0.3kg  |
| 7312-0025 | 30kg          | φ30x35 | 53              | 88                | 6mm                | 0.3kg  |

MINI POWER MAGNETIC BASE  
WITH REINFORCED LOCKING & CLAMPING FORCE



- With central locking mechanism
- Small shape ensures easy and fast fixing to machine
- Clamping force can be continuously adjusted, with high stability
- With clamp hole, dovetail groove, which can clamp many types of indicators
- Flexible, strong and precise rotary jointed arms, which can adjust to any position
- Ball joints enables quick and easy positioning, all three joints are controlled by tightening knob

| Unit:mm   |               |                   |     |     |        |        |
|-----------|---------------|-------------------|-----|-----|--------|--------|
| Code      | Holding Power | Dia of Clamp Hole | L1  | L   | Weight | Base   |
| 7121-0019 | 18kg          | 18kg              | 140 | 165 | 0.3    | φ30*25 |

UNIVERSAL MAGNETIC BASE  
WITH NEW DESIGN FINE ADJUSTMENT



- Mechanical central locking of all joints
- Special structure ensures high pressure
- Powerful permanent magnet
- V-grooved base for ease of mount on cylindrical parts also
- Joined arms rotate 360° on the dial indicator holder and can be twisted 180°
- Smooth and easy on/off switch

| Unit:mm   |               |          |                   |     |     |        |
|-----------|---------------|----------|-------------------|-----|-----|--------|
| Code      | Holding Power | Base     | Dia of Clamp Hole | L1  | L   | Weight |
| 7122-0025 | 30kg          | 35x30x35 | φ6/φ8/Dovetail    | 160 | 210 | 0.4kg  |
| 7122-0030 | 80kg          | 60x50x55 | φ6/φ8/Dovetail    | 280 | 350 | 1.3kg  |
| 7122-0035 | 100kg         | 73x50x55 | φ6/φ8/Dovetail    | 356 | 424 | 1.7kg  |

MAGNETIC STAND BASE  
WITH FLEXIBLE JOINTED ARM

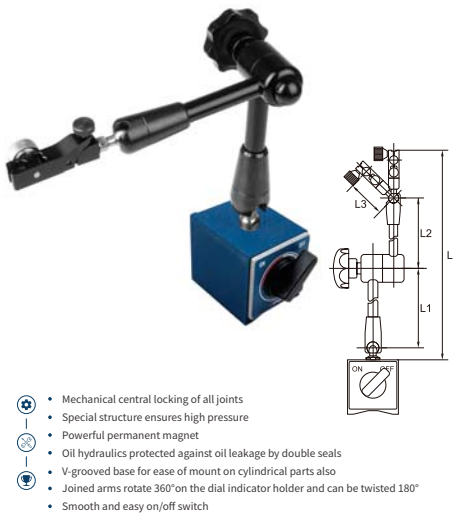


- Flexible, strong and precise rotary jointed arms, which can adjust to any position
- With central locking mechanism
- Clamping force can be continuously adjusted, with high stability
- With clamp hole, dovetail groove, which can clamp many types of indicators
- 150° V-grooved base, can be placed on the cylindrical surfaces for easily fixing the indicators
- On/off switch for magnet, easy to move the base without the influence of magnetic force
- Ball joints enables quick and easy positioning, all three joints are controlled by a tightening knob

| Unit:mm   |               |           |            |     |     |    |                    |        |
|-----------|---------------|-----------|------------|-----|-----|----|--------------------|--------|
| Code      | Holding Power | Base      | Arm length | L1  | L2  | L3 | Dia. of Clamp Hold | Weight |
| 7312-0005 | 30kg          | 50x50x55  | 150        | 50  | 51  | 17 | φ6/φ8/Dovetail     | 0.4kg  |
| 7312-0010 | 80kg          | 60x50x55  | 310        | 110 | 101 | 73 | φ6/φ8/Dovetail     | 1.4kg  |
| 7312-0015 | 100kg         | 73x50x55  | 385        | 147 | 130 | 76 | φ6/φ8/Dovetail     | 1.8kg  |
| 7312-0020 | 130kg         | 117x50x55 | 635        | 285 | 225 | 76 | φ6/φ8/Dovetail     | 5.0kg  |

MAGNETIC BASES BORN IN ITALY, RAISED BY THE WORLD

HYDRAULIC MAGNETIC BASE  
WITH 3D&UNIVERSAL ARM

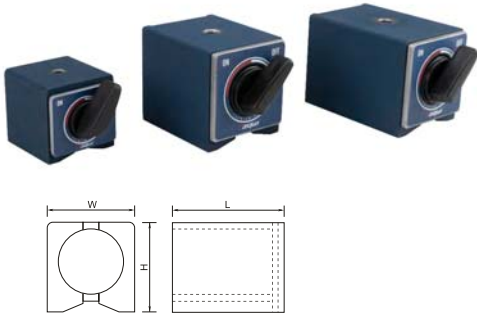


- Mechanical central locking of all joints
- Special structure ensures high pressure
- Powerful permanent magnet
- Oil hydraulics protected against oil leakage by double seals
- V-grooved base for ease of mount on cylindrical parts also
- Joined arms rotate 360° on the dial indicator holder and can be twisted 180°
- Smooth and easy on/off switch

Unit:mm

| Code      | Holding Power | Base     | L1  | L2  | L3 | L   | Dia of Clamp Hole    | Weight |
|-----------|---------------|----------|-----|-----|----|-----|----------------------|--------|
| 7412-0005 | 80            | 60°50°55 | 120 | 116 | 70 | 337 | φ6/φ8/φ3/8"/dovetail | 1.7kg  |

MAGNETIC BASE

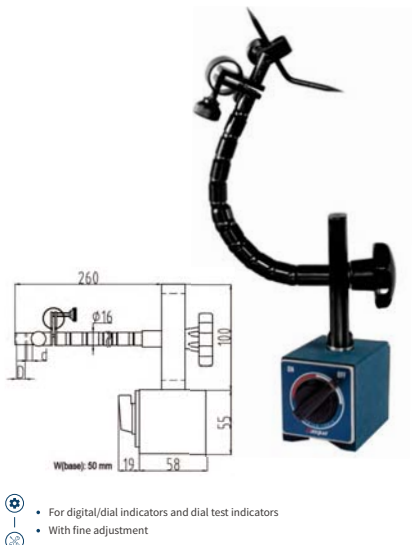


- 150° V-grooved base can be placed on the cylindrical surfaces for easily fixing the indicators
- Carefully selected ferrite permanent magnet with inspected magnetic force which is greater than calibration value
- On/o fswitch for magnet, easy to move the base without the influence of magnetic force
- Blue wrinkle finish on non-working surfaces

Unit:mm

| Code      | Holding Power | size(LxWxH) | Thread  | Magnet Type | Weight |
|-----------|---------------|-------------|---------|-------------|--------|
| 7000-0005 | 80kg          | 60x50x55    | M8x1.25 | Ferrite     | 1.0kg  |
| 7000-0010 | 100kg         | 73x50x55    | M8x1.25 | Ferrite     | 1.3kg  |
| 7000-0015 | 130kg         | 117x50x55   | M8x1.25 | Ferrite     | 2.0kg  |
| 7000-0020 | 30kg          | 35x30x35    | M5x0.8  | NdFeB       | 0.2kg  |

MAGNETIC BASE  
WITH ADJUSTABLE COOLANT HOSE



- For digital/dial indicators and dial test indicators
- With fine adjustment

BORN IN ITALY, RAISED BY THE WORLD MAGNETIC BASES

MINI MAGNETIC STAND



- Small shape ensures easy and fast fixing to machine
- With two round permanent magnets (7521-0005), with laminated permanent magnets and V-grooved base (7521-0010), without magnet on/o fswitch
- Low height enables fast, safe and easy mounting on machines and jigs
- Black enamel finish

Unit:mm

| Code      | Holding Power | Base     | Stem | Dia. of Clamp Hold | Weight |
|-----------|---------------|----------|------|--------------------|--------|
| 7511-0005 | 15kg          | φ30x25   | 165  | φ10/φ12/dovetail   | 200g   |
| 7521-0005 | 20kg          | 73x37x12 | /    | φ8                 | 160g   |
| 7521-0010 | 20kg          | 73x37x26 | /    | φ8                 | 300g   |

V GROOVE UNIVERSAL STAND

FOR DIGITAL/DIAL INDICATORS  
AND DIAL TEST INDICATORS

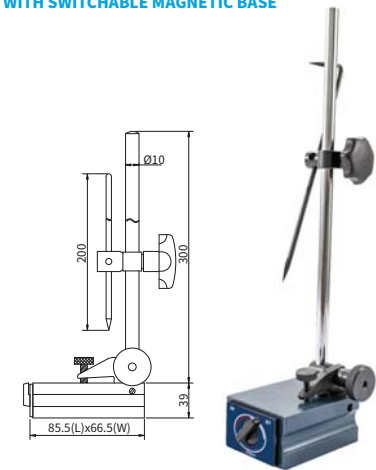


- For digital/dial indicators and dial test indicators
- With fine adjustment

| Unit:mm   |                  |           |           |          |        |
|-----------|------------------|-----------|-----------|----------|--------|
| Code      | Holding Power    | Base      | Main Pole | Sub Pole | Weight |
| 7000-1005 | φ8/φ3/8"(Option) | 250*62*50 | φ16*290   | φ18*310  | 6.5kg  |

SURFACE GAUGE

WITH SWITCHABLE MAGNETIC BASE



- Scriber head is hardened
- Combine the surface gauge and magnetic base in one
- Magnetic base embedded with permanent magnet and having on/off switch, magnetic pull of 80kg
- Hardened, ground, and lapped steel base for high stability
- Base with fine adjustment function

| Unit:mm   |               |                   |           |                      |  |
|-----------|---------------|-------------------|-----------|----------------------|--|
| Code      | Holding Power | Dia. of Clam Hold | Main Pole | Remark               |  |
| 7123-0005 | 80kg          | φ46.3/8"          | φ8x230    | with Fine Adjustment |  |

HEAVY DUTY  
PRECISION MEASURING BASE  
FOR INDICATOR



- The scale of clamping holes are 4mm, 8mm, 3/8", as to be suitable for most indicators
- End face fine ground. Electroplated surface
- With fine adjustment

| Unit:mm   |                                     |
|-----------|-------------------------------------|
| Code      | Scale                               |
| 7612-0005 | with two rods, φ12x176mm, φ10x150mm |
| 7612-0010 | with two rods, φ20x355mm, φ14x210mm |

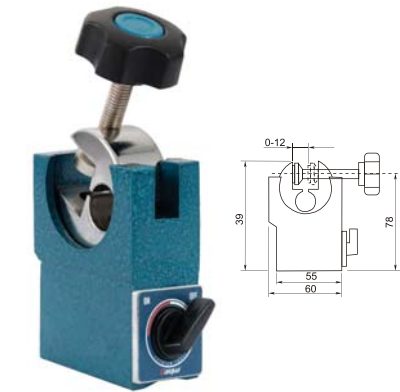
HEAVY DUTY UNIVERSAL  
PRECISION MEASURING BASE  
FOR INDICATOR



- Fine adjustment, 2 clamping holes, dovetail.
- Flexible, precise, rotatable, ergonomic designed arm can be adjusted to any position it can reach.
- Ball joints can be fast and easily positioned, and all three joints are controlled by one knob
- The bearing steel adopted internally, with stronger wear resistance ----- provides longer service life.
- CNC processed ----- precision size, high accuracy which ensure the great quality and strong stability of products.

| Unit:mm   |                |
|-----------|----------------|
| Code      | Scale          |
| 7612-0015 | with rod 290mm |
| 7612-0020 | with rod 355mm |
| 7612-0025 | with rod 635mm |

MICROMETER STAND  
WITH MAGNETIC BASE



- Keep hands free for operating micrometer and positioning workpiece
- Perfect for batch or mass production measurements in manufacturing and quality assurance
- Proper weight and low center of gravity ensure stable base
- Blue enamel finish

Unit:mm

| Code      | Capacity      | Magnetic           | Weight |
|-----------|---------------|--------------------|--------|
| 7111-1000 | up to 300/12" | with magnetic base | 0.8kg  |

MICROMETER STAND



- Keep hands free for operating micrometer and positioning workpiece
- Perfect for batch or mass production measurements in manufacturing and quality assurance
- Blue enamel finish
- Without digital micrometer, which can be found and ordered in page 53

Unit:mm

| Code      | Capacity     | Magnetic              |
|-----------|--------------|-----------------------|
| 7111-1105 | up to 100/4" | without magnetic base |

MICROMETER STAND



- Rubber foot pads to reduce slipping
- Clamps are made of die-casting aluminium
- Rubber pads on clamps to protect instruments
- Micrometer stand to suit micrometers up to 100mm
- Ideal when checking multiple items and setting the micrometer

Unit:mm

| Code      | Material              | Remark                           | Weight |
|-----------|-----------------------|----------------------------------|--------|
| 7111-1115 | die-casting aluminium | Suit for micrometers up to 100mm | 1.7    |

MICROMETER STAND



- Keep hands free for operating micrometer and positioning workpiece
- Proper weight and low center of gravity ensure stable base
- Perfect for batch or mass production measurements in manufacturing and quality assurance

Unit:mm

| Code      | Material | Remark                           | Weight |
|-----------|----------|----------------------------------|--------|
| 7100-0055 | Steel    | Suit for micrometers up to 300mm | 1.5    |

MINI LED LIGHT  
WITH MAGNETIC BASE



- Great for auto preparation work
- Lens "zoom" for concentrated lighting
- Articulating flex shaft allows easy and accurate positioning
- Flexible shaft of 120mm with universal movement
- Magnetic base with good magnetic pull of 12kg
- LED flashlight requires 3 AAA batteries, and flashlight is removable

| Unit:mm   |        |
|-----------|--------|
| Code      | Weight |
| 7611-0020 | 0.4kg  |

PRECISION GRANITE  
COMPARATOR STAND



- Easy maintenance due to the non-rusting base
- The rigid granite base is free from burrs and pileups due to its fine-grain composition and less viscosness compared with casting iron
- The flatness is always accurate and the workpiece is free from damage
- Used for indicator of Dia.8mm and 3/8"
- Measuring surface are precision ground and diamond lapped

| Unit:mm   |         |            |                   |        |
|-----------|---------|------------|-------------------|--------|
| Code      | Pole    | Base       | Dia. of Clam Hold | Weight |
| 7912-0004 | φ25x180 | 150x100x40 | φ8/3/8"           | 2.9kg  |
| 7912-0005 | φ30x300 | 210x150x50 | φ8/3/8"           | 7.0kg  |
| 7912-0010 | φ30x300 | 300x200x60 | φ8/3/8"           | 11.6kg |

PRECISION GRANITE  
COMPARATOR STAND  
WITH FINE ADJUSTMENT



- Used for the measuring room and calibration laboratory
- Easy maintenance due to the non-rusting base
- The rigid granite base is free from burrs and pileups due to its fine-grain composition and less viscosness compared with cast iron
- The flatness is always accurate and the workpiece is free from damage
- Measuring surface fine ground and diamond lapped
- Hardened column with height adjustment and setting ring
- Dial indicator shank φ8 mm
- With fine adjustment over the entire travel

| Unit:mm   |            |         |                   |
|-----------|------------|---------|-------------------|
| Code      | Base       | Pole    | Dia. of Clam Hole |
| 7812-0015 | 300x200x60 | φ30x300 | φ8/3/8"           |

PRECISION MEASURING TABLE  
WITH GRANITE BASE



- With fine adjustment
- Clamping hole diameter 8mm
- Thread size M8x1.25mm
- For digital/dial indicators and dial test indicators

| Unit:mm   |            |     |        |
|-----------|------------|-----|--------|
| Code      | Base       | L1  | Weight |
| 7912-0030 | 150*100x40 | 260 | 2.4    |
| 7912-0035 | 200*150x50 | 460 | 5.7    |
| 7912-0040 | 300*200x50 | 460 | 10.8   |

MAGNETIC BASES BORN IN ITALY, RAISED BY THE WORLD

PRECISION GRANITE  
COMPARATOR STAND  
WITH CAST IRON ANVIL



- Rapid positioning with coarse adjustment
- Heavy duty upright column and adjustable support arm ensure the high stability
- Upright column is made stainless steel and precision ground
- Round cast iron base

| Unit:mm   |         |       |                   |
|-----------|---------|-------|-------------------|
| Code      | Pole    | Base  | Dia. of Clam Hold |
| 7712-0005 | φ25x180 | φ60   | φ8/3/8"           |
| 7712-0006 | φ25x180 | φ60   | φ8/3/8"           |
| 7712-0030 | φ25x180 | 80x80 | φ8/3/8"           |

PRECISION MEASURING TABLE  
WITH CERAMIC ANVIL



- Strong cast iron base with rigid column and sturdy indicator holder
- Indicator holder φ8 mm
- The table is of high-quality ceramic,lapped
- Ra≤0.1μm

| Unit:mm   |         |       |                   |        |
|-----------|---------|-------|-------------------|--------|
| Code      | Pole    | Base  | Dia. of Clam Hold | Weight |
| 7712-0020 | φ25x180 | φ60   | φ8/3/8"           | 1.6kg  |
| 7712-0025 | φ25x180 | 80x80 | φ8/3/8"           | 2.5kg  |

HEIGHT GAUGES

BORN IN ITALY, RAISED BY THE WORLD

02-08 HEIGHT GAUGE





HEIGHT GAUGE



|                                    |                                |           |
|------------------------------------|--------------------------------|-----------|
| Code                               | 3000-0300                      | 3000-0600 |
| Measuring Range                    | 300                            | 600       |
| Expanded Measuring Rang(mm)        | 570                            | 870       |
| Dia. of Probe Holder(mm)           | ø8                             |           |
| Resolution(mm)                     | 0.01/0.001/0.0001              |           |
| MPE(μm)                            | ± 2.6μm+ (5*L in [M])          |           |
| Repeatability(μm)                  | Of Plane≤1μm* Of Aperture≤3μm* |           |
| CSTN                               | VGA, 6.4 "                     |           |
| Max Speed of Clicking Driver(mm/s) | 75                             |           |
| Device Driver                      | Machinery                      |           |
| Measuring Force(N)                 | 1.5±0.5                        |           |
| Working Temperature(°C)            | 10 to 40 (°C)                  |           |
| Storage Temperature(°C)            | -10 to 60 (°C)                 |           |
| Water Proof Grade                  | IP40                           |           |
| Unit                               | mm/in                          |           |
| Certificate                        | ✓                              |           |
| Height(mm)                         | 709                            | 1009      |
| Weight(kg)                         | 20                             | 22        |

\*In test condition and with standard probe

HIGH ACCURACY DIGITAL HEIGHT GAUGE



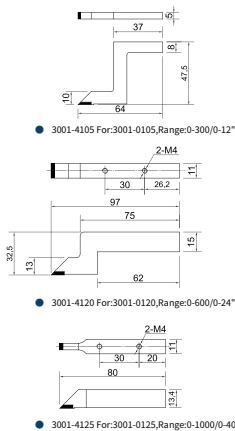
|                            |                                                       |           |           |                  |           |           |           |
|----------------------------|-------------------------------------------------------|-----------|-----------|------------------|-----------|-----------|-----------|
| Code                       | 7712-0035                                             | 7712-0036 | 7712-0037 | 7712-0040        | 7712-0041 | 7712-0045 | 7712-0046 |
| Measuring Range            | 0-50mm                                                | 0-50mm    | 0-100mm   | 0-50mm           | 0-100mm   | 0-50mm    | 0-100mm   |
| Accuracy (20°C)            | 2μm                                                   | 3μm       | 3μm       | 1.5μm            | 3μm       | 1μm       | 2μm       |
| Repeatability (20°C)       | 1μm                                                   |           | 0.5μm     |                  | 0.2μm     |           |           |
| Min. Readout               | 1μm                                                   |           | 0.5μm/1μm |                  | 0.5μm/1μm |           |           |
| Response Speed             | Max.up to 5000mm/s                                    |           |           |                  |           |           |           |
| Measuring Force            | 0.7-1.2N                                              | 0.7-1.2N  | 0.7-1.7N  | 0.7-1.2N         | 0.7-1.7N  | 0.7-1.2N  | 0.7-1.7N  |
| External Output            | TYPE-C / USB                                          |           |           |                  |           |           |           |
| Display                    | 7 Bits Green LED                                      |           |           | 8 Bits Green LED |           |           |           |
| Probe                      | Ball Probe,Flat Probe,Conical Probe                   |           |           |                  |           |           |           |
| Unit                       | mm/inch                                               |           |           |                  |           |           |           |
| Proper Working Environment | Temperature:0°C-40°C                                  |           |           | Humidity:20%-80% |           |           |           |
| Table Size/mm              | 200x250                                               | 130x130   | 200x250   | 130x130          | 130x130   |           |           |
| Power Adapter              | Input: AC100-240V 50/60Hz Output: DC 5V/1A            |           |           |                  |           |           |           |
| Accessories                | Stand,Ball Tip,FlatTip,ConicalTip,Handle,PowerAdaptor |           |           |                  |           |           |           |
| Optional Accessories       | DataTransmission Kit,SpecialTips, Portable Battery    |           |           |                  |           |           |           |
| Weight                     | 25kg                                                  |           | 12kg      |                  | 12kg      |           |           |

- High accuracy for more accurate measuring
- Small in size and easy to move
- Wide applicable temperature range, can be used normally during 0-40°C
- High durability and the maximum measuring height up to 100mm

VERNIER HEIGHT GAUGE

MADE OF STAINLESS STEEL

- Designed for scribing from a vertical base
- Stain chrome finished scales for glare-free reading
- At zero-position the scriber coincides exactly with the base
- Carbide tipped scriber for sharp, clean lines
- Beam and slider are made of stainless steel
- Dustproof shield optional

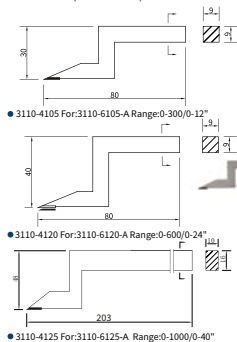


| Code      | Range        | Graduation  | Accuracy       |
|-----------|--------------|-------------|----------------|
| 3001-0105 | 0-300/0-12"  | 0.02/0.001" | ±2Graduation   |
| 3001-0120 | 0-600/0-24"  | 0.02/0.001" | ±3.5Graduation |
| 3001-0125 | 0-1000/0-40" | 0.02/0.001" | ±3.5Graduation |

Unit:mm

HEIGHT GAUGE WITH ADJUSTABLE BEAM WITH MAGNIFIER

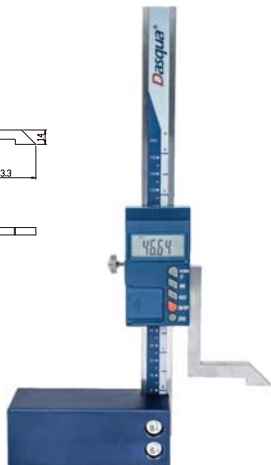
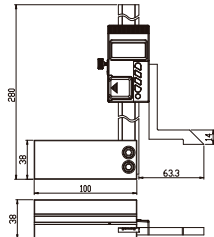
- Magnifier for easier reading
- Adjustable main beam to set the zero reference point
- Made of stainless steel, widened and thickened
- Carbide tipped scriber for sharp, clean lines
- With fine adjustment
- Satin chrome-finished scales
- Base hardened, ground and lapped for maximum flatness
- Dustproof shield optional



| Code        | Range        | Graduation  | Accuracy |
|-------------|--------------|-------------|----------|
| 3110-6105-A | 0-300/0-12"  | 0.02/0.001" | ±0.03    |
| 3110-6120-A | 0-600/0-24"  | 0.02/0.001" | ±0.06    |
| 3110-6125-A | 0-1000/0-40" | 0.02/0.001" | ±0.06    |

Unit:mm

DIGITAL HEIGHT GAUGE, LIGHT DUTY FOR WOODWORKING WITH MAGNETIC BASE

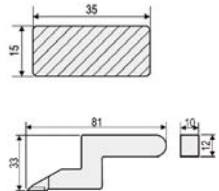


- Made of stainless steel
- Rigid, heavy duty beam
- With magnetic base for easy to fix on the workbench

Unit:mm

| Code      | Range      | Resolution          | Accuracy     |
|-----------|------------|---------------------|--------------|
| 3130-4005 | 0-150/0-6" | 0.01/0.0005"/1/128" | 0.03/0.0015" |

DIGITAL HEIGHT GAUGE WITH HANDWHEEL



- Power on/off
- With preset function
- With fine adjustment device
- With carbide-tipped scriber
- With handwheel, easy to use
- Used for height measurements and scribing
- MM/inch conversion at any position
- Zero-setting at any position, convenient for relative and absolute measure conversion

Unit:mm

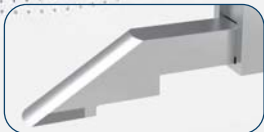
| Code      | Measuring Range(mm) | Graduation (mm) | Accuracy (mm) | Net Weight |
|-----------|---------------------|-----------------|---------------|------------|
| 3430-4110 | 0-300/0-12"         | 0.01/0.0005"    | ±0.04         | 6.60       |
| 3430-4115 | 0-500/0-20"         | 0.01/0.0005"    | ±0.05         | 8.00       |
| 3430-4120 | 0-600/0-24"         | 0.01/0.0005"    | ±0.05         | 8.40       |

# IP54 HEAVY DUTY DIGITAL HEIGHT GAUGE

WATER PROOF INDUCTANCE SENSOR



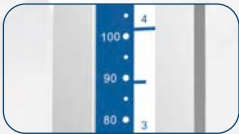
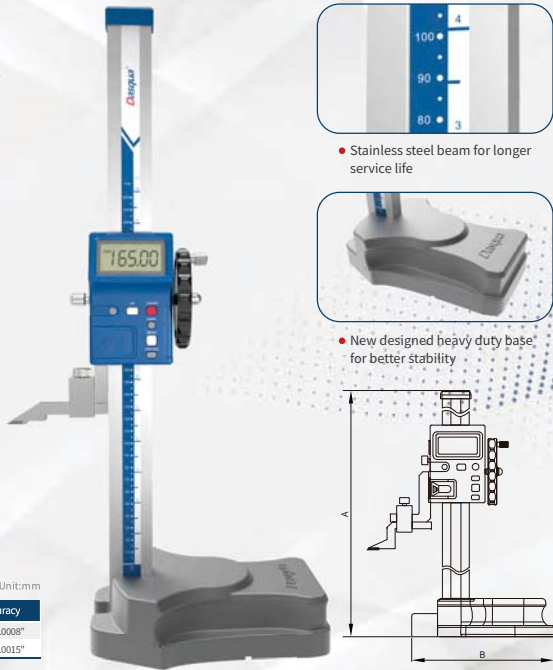
- Larger screen for easy reading



- Carbide tipped scriber for sharp, clean lines

| Code      | Range       | Resolution   | A   | B   | Accuracy     |
|-----------|-------------|--------------|-----|-----|--------------|
| 3530-0005 | 0-300/0-12" | 0.01/0.0005" | 492 | 190 | 0.02/0.0008" |
| 3530-0010 | 0-600/0-24" | 0.01/0.0005" | 796 | 190 | 0.04/0.0015" |

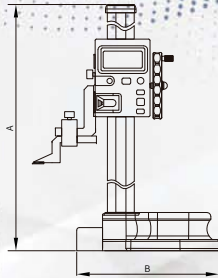
Unit:mm



- Stainless steel beam for longer service life



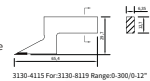
- New designed heavy duty base for better stability



## DIGITAL HEIGHT GAUGE WITH ABSOLUTE LINEAR ENCODER



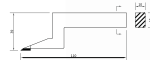
- Built-in absolute linear encoder, no need to set the reference point at every power-on
- Carbide tipped scriber for sharp, clean lines
- With SPC data output
- Large, easy-to-read LCD display
- Rigid, heavy duty beam and base
- Dustproof shield optional



3130-4115 For 3130-8119 Range:0-300/0-12"

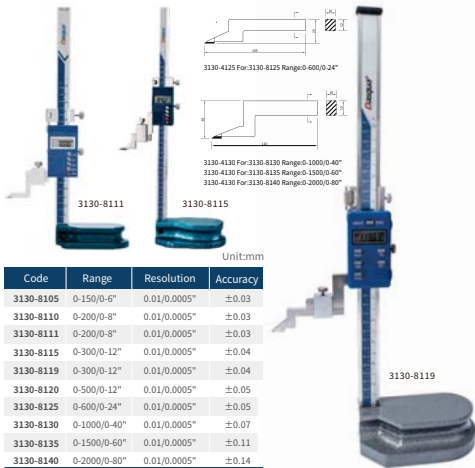


3130-4125 For 3130-8125 Range:0-600/0-24"



3130-4130 For 3130-8130 Range:0-1000/0-40"

3130-4130 For 3130-8140 Range:0-2000/0-80"



| Code      | Range        | Resolution   | Accuracy |
|-----------|--------------|--------------|----------|
| 3130-8105 | 0-150/0-6"   | 0.01/0.0005" | ±0.03    |
| 3130-8110 | 0-200/0-8"   | 0.01/0.0005" | ±0.03    |
| 3130-8111 | 0-200/0-8"   | 0.01/0.0005" | ±0.03    |
| 3130-8115 | 0-300/0-12"  | 0.01/0.0005" | ±0.04    |
| 3130-8119 | 0-300/0-12"  | 0.01/0.0005" | ±0.04    |
| 3130-8120 | 0-500/0-12"  | 0.01/0.0005" | ±0.05    |
| 3130-8125 | 0-600/0-24"  | 0.01/0.0005" | ±0.05    |
| 3130-8130 | 0-1000/0-40" | 0.01/0.0005" | ±0.07    |
| 3130-8135 | 0-1500/0-60" | 0.01/0.0005" | ±0.11    |
| 3130-8140 | 0-2000/0-80" | 0.01/0.0005" | ±0.14    |

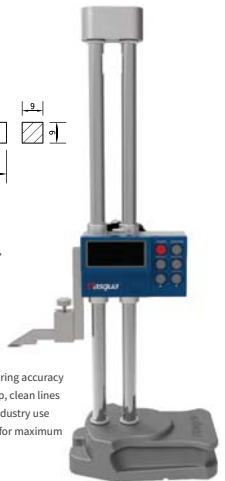
BORN IN ITALY, RAISED BY THE WORLD **HEIGHT GAUGES**

## DOUBLE-BEAM DIGITAL HEIGHT GAUGE



3230-4105 For:3230-8105-A Range:0-300/0-12"  
3230-4105 For:3230-8110-A Range:0-500/0-20"  
3230-4105 For:3230-8115-A Range:0-600/0-24"  
3230-4105 For:3230-8116-A Range:0-1000/0-40"

- With SPC data output
- With a feed wheel on the back
- Double-beam ensures higher measuring accuracy
- Long carbide tipped scriber for sharp, clean lines
- Rigid, heavy duty construction for industry use
- Base hardened, ground and lapped for maximum flatness
- Zero-setting at any position
- Dustproof shield optional



| Code        | Range        | Resolution   | Accuracy |
|-------------|--------------|--------------|----------|
| 3230-8105-A | 0-300/0-12"  | 0.01/0.0005" | ±0.04    |
| 3230-8110-A | 0-500/0-20"  | 0.01/0.0005" | ±0.05    |
| 3230-8115-A | 0-600/0-24"  | 0.01/0.0005" | ±0.05    |
| 3230-8116-A | 0-1000/0-40" | 0.01/0.0005" | ±0.07    |

Unit:mm

# DOUBLE-BEAM DIAL HEIGHT GAUGE

## WITH DIGIT COUNTER

- Provided with a dial and two digit counters for more accurate reading
- Double-beam ensures higher measuring accuracy
- One counter reads in the plus direction and the other reads in the minus direction
- With a feed wheel on the back
- Carbide tipped scriber for sharp, clean lines
- Both counters and dial can be re-zeroed at any scriber position
- Base hardened, ground and lapped for maximum flatness
- Dustproof shield optional



- 3230-4105 For:3221-1105-A Range:0-300
- 3230-4105 For:3221-1110-A Range:0-500
- 3230-4105 For:3221-1115-A Range:0-600
- 3230-4105 For:3221-1120-A Range:0-1000
- 3230-4105 For:3222-4205-A Range:0-12"
- 3230-4105 For:3222-4210-A Range:0-20"
- 3230-4105 For:3222-4215-A Range:0-24"
- 3230-4105 For:3222-4220-A Range:0-40"

| Unit:mm     |        |            |                    |          |
|-------------|--------|------------|--------------------|----------|
| Code        | Range  | Graduation | Counter Resolution | Accuracy |
| 3221-1105-A | 0-300  | 0.01       | 1                  | ±0.04    |
| 3221-1110-A | 0-500  | 0.01       | 1                  | ±0.05    |
| 3221-1115-A | 0-600  | 0.01       | 1                  | ±0.05    |
| 3221-1120-A | 0-1000 | 0.01       | 1                  | ±0.07    |
| 3222-4205-A | 0-12"  | 0.0005"    | 0.1"               | ±0.0015" |
| 3222-4210-A | 0-20"  | 0.0005"    | 0.1"               | ±0.002"  |
| 3222-4215-A | 0-24"  | 0.0005"    | 0.1"               | ±0.002"  |
| 3222-4220-A | 0-40"  | 0.0005"    | 0.1"               | ±0.0030" |



# ANGEL MEASURING

BORN IN ITALY, RAISED BY THE WORLD

## 02-23 ANGEL MEASURING

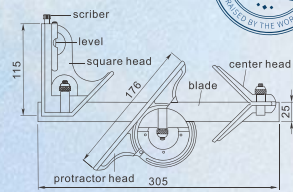


# 4 PCS COMBINATION SQUARE SET

• Made by procoated mold and no blister on the surface

| Code        | Ruler   | Measuring Range | Graduation                                  |
|-------------|---------|-----------------|---------------------------------------------|
| 1012-2010   | 300/12" | 0-180°          | 1.0/1/64" and 0.5/1/32"                     |
| 1012-2010-A | 300/12" | 0-180°          | 1.0/1/64" and 0.5/1/32"                     |
| 1012-2015   | 12"     | 0-180°          | 1/50 Inch, 1/100 Inch, 1/32 Inch, 1/64 Inch |
| 1012-2020   | 12"     | 0-180°          | 1/8&1/32 Inch, 1/16 & 1/64 Inch             |

Unit:mm



• Distinct lines and figures against the satin chrome finish making reading easily

• Low surface roughness and high accuracy with surfaces precisely ground

• Powder-coated process guaranteeing high surface durability

• Strong and elegant packing



## SPARE PARTS FOR COMBINATION SQUARE SET



Unit:mm

| Code      | Range                                                                                                    |
|-----------|----------------------------------------------------------------------------------------------------------|
| 1012-0055 | 90° Center Square                                                                                        |
| 1012-0060 | 45°/90° Angle Square with Scribe and Bubble                                                              |
| 1012-0090 | Angle/Main Square                                                                                        |
| 1012-1080 | Shorter size-Locking Clamp Screw for the Combination Square Set-45°/90° Angle Square & Angle/Main Square |
| 1012-1085 | Longer size-Locking Clamp Screw for the 90° Center Square                                                |
| 1012-1090 | Scribe for the 45°/90° Angle Square                                                                      |

## DOUBLE SQUARES



### GRADUATION STYLES

4R: 8ths & 16ths, 32nds & 64ths    16R: 32nds & 64ths, 50ths & 100ths  
Metric: mm & 0.5mm on both sides    E/M: 0.5mm & 32nds, mm & 64ths

- Ideal for precision layout work
- Used either as a parallel or double square
- All blades fully hardened and tempered
- High contrast, Micro-Fine blade graduations
- Durable, easy to read satin chrome finished blades

Unit:mm

| Code      | Blade length | Blade style |
|-----------|--------------|-------------|
| 1013-0005 | 4"           | 4R          |
| 1013-0105 | 4"           | 16R         |
| 1013-0205 | 4"           | E/M         |
| 1013-0305 | 100mm        | Metric      |
| 1013-0010 | 6"           | 4R          |
| 1013-0110 | 6"           | 16R         |
| 1013-0210 | 6"           | E/M         |
| 1013-0310 | 150mm        | Metric      |



# COMBINATION SQUARES

## NEW TIN-COATED BLADE

- All Blades Fully Hardened and Tempered
- Square/Miter Head Features Level Vial & Hardened Scribe Tool
- High Contrast, Micro-Fine Blade Graduations
- Durable, Easy to Read
- Reversible (Full-Body) Protractor Head with Hardened Sets
- Protractor Scale Graduated from 0-180° in Both Directions
- Heads Supplied with a Hammertone Powder-Coat Finish

## 4-PIECE SET INCLUDES

Machinist's Blade, Square/Miter Head, Protractor and Cent er Head

## GRADUATION STYLES

4R: 8ths & 16ths, 32nds & 64ths    16R: 32nds & 64ths, 50ths & 100ths  
Metric: mm & 0.5mm bo th sides    E/M: 0.5mm & 32nds, mm & 64ths

## CAST IRON COMBINATION SQUARE SETS

| Code      | Blade length | Protractor style | Blade style |
|-----------|--------------|------------------|-------------|
| 1012-5005 | 12"          | non-reversible   | 16R         |
| 1012-5010 | 18"          | non-reversible   | 16R         |
| 1012-5015 | 24"          | non-reversible   | 16R         |
| 1012-5105 | 12"          | non-reversible   | 4R          |
| 1012-5110 | 18"          | non-reversible   | 4R          |
| 1012-5115 | 24"          | non-reversible   | 4R          |
| 1012-5205 | 12"          | non-reversible   | E/M         |
| 1012-5210 | 18"          | non-reversible   | E/M         |
| 1012-5215 | 24"          | non-reversible   | E/M         |
| 1012-5305 | 300mm        | non-reversible   | Metric      |
| 1012-5310 | 450mm        | non-reversible   | Metric      |
| 1012-5315 | 600mm        | non-reversible   | Metric      |



## HARDENED COMBINATION SQUARE SETS

| Code      | Blade length | Protractor style | Blade style |
|-----------|--------------|------------------|-------------|
| 1012-6005 | 12"          | reversible       | 16R         |
| 1012-6010 | 18"          | reversible       | 16R         |
| 1012-6015 | 24"          | reversible       | 16R         |
| 1012-6105 | 12"          | reversible       | 4R          |
| 1012-6110 | 18"          | reversible       | 4R          |
| 1012-6115 | 24"          | reversible       | 4R          |
| 1012-6205 | 12"          | reversible       | E/M         |
| 1012-6210 | 18"          | reversible       | E/M         |
| 1012-6215 | 24"          | reversible       | E/M         |
| 1012-6305 | 300mm        | reversible       | Metric      |
| 1012-6310 | 450mm        | reversible       | Metric      |
| 1012-6315 | 600mm        | reversible       | Metric      |

# STAINLESS STEEL RULER

- Spare Parts for Combination Square Set



| Code      | Ruler size | Graduation                 |
|-----------|------------|----------------------------|
| 1012-2011 | 300mm/12"  | 1mm (1/64"), 0.5mm (1/32") |
| 1012-1070 | 150mm/6"   | 1mm (1/64"), 0.5mm (1/32") |
| 1012-1075 | 450mm/18"  | 1mm (1/64"), 0.5mm (1/32") |

# HEAVY DUTY 2 PCS COMBINATION SQUARE SET



- Protractor (cast iron): can set the ruler to form a certain angle with the workpiece, and can also be used for angle measurement

| Code      | Ruler size | Graduation                 | Measuring Range | Accuracy |
|-----------|------------|----------------------------|-----------------|----------|
| 1012-1045 | 300mm/12"  | 1mm (1/64"), 0.5mm (1/32") | 0-180°          | ±20"     |
| 1012-1050 | 150mm/6"   | 1mm (1/64"), 0.5mm (1/32") | 0-180°          | ±20"     |
| 1012-1055 | 450mm/18"  | 1mm (1/64"), 0.5mm (1/32") | 0-180°          | ±20"     |
| 1012-1060 | 600mm/24"  | 1mm (1/64"), 0.5mm (1/32") | 0-180°          | ±20"     |



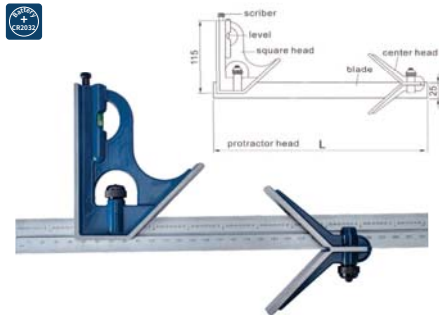
4PCS DIGITAL COMBINATION SQUARE SET



- Higher accuracy with digital protractor newly applied
- Made by procoated mold and no blister on the surface
- Distinct lines and figures against the satin chrome finish making reading easily
- Low surface roughness and high accuracy with surfaces precisely ground

| Unit:mm   |         |                           |                   |
|-----------|---------|---------------------------|-------------------|
| Code      | Ruler   | Graduation                | Accuracy          |
| 1012-0030 | 300/12" | 1.0, 1/64" and 0.5, 1/32" | ±10° within 0.15° |

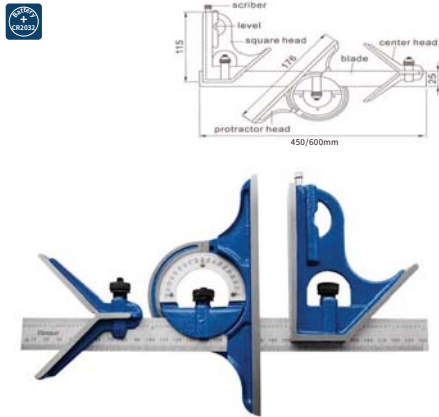
3 PCS COMBINATION SQUARE SET



- Centering ruler (cast iron): used to find the center of cylindrical workpieces, applicable cylindrical workpiece diameter (Ød): 30-100mm accuracy: ±0.15mm
- Right-angle ruler (cast iron): can be set to 90° or 45° with the workpiece, 90° angle accuracy: +8", 45° angle accuracy: ±10°
- Ruler (stainless steel): Measuring range: 300mm/12" Graduation value: 0.5mm and 1/32" on the front, 1mm and 1/64" on the back

| Unit:mm   |            |                            |
|-----------|------------|----------------------------|
| Code      | Ruler Size | Graduation                 |
| 1012-0100 | 300mm/12"  | 1mm (1/64"), 0.5mm (1/32") |

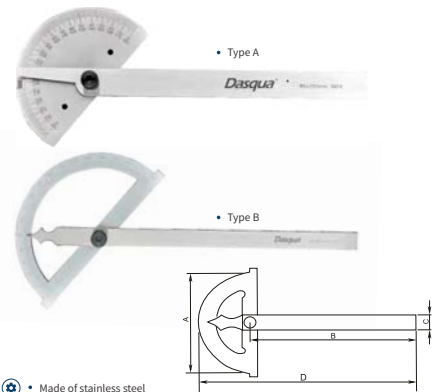
4 PCS COMBINATION SQUARE SET



- Centering ruler (cast iron): used to find the center of cylindrical workpieces, applicable cylindrical workpiece diameter (Ød): 30-100mm accuracy: ±0.15mm
- Protractor (cast iron): can set the ruler to a certain angle with the workpiece, and can also be used for angle measurement. Measuring range: 0-180, accuracy: ±20°
- Right-angle ruler (cast iron): can set the ruler to 90° or 45° with the workpiece, 90° angle accuracy: +8 points, 45° angle accuracy: ±10°

| Unit:mm   |            |                            |
|-----------|------------|----------------------------|
| Code      | Ruler Size | Graduation                 |
| 1012-1065 | 450mm/18"  | 1mm (1/64"), 0.5mm (1/32") |
| 1012-0105 | 600mm/24"  | 1mm (1/64"), 0.5mm (1/32") |

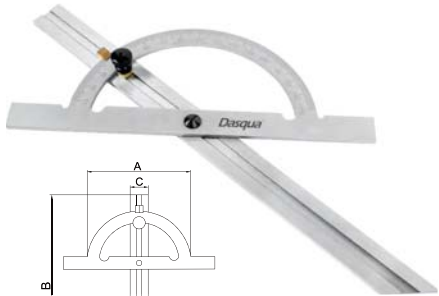
PROTRACTOR



- Made of stainless steel
- Satin chrome finish, anti-rust and durable
- Locking knob can hold any angle
- Multi-purpose, engineering drawing, angle measurement, architectural design, woodworking, length measurement, etc
- Packaged in a beautiful and durable leather bag

| Unit:mm   |        |            |           |       |      |          |        |  |
|-----------|--------|------------|-----------|-------|------|----------|--------|--|
| Code      | Range  | Graduation | Size(AxB) | D     | C    | Accuracy | Type   |  |
| 1011-1005 | 0-180° | 1°         | 85x150    | 199   | 15   | ±30'     | Type A |  |
| 1012-1005 | 0-180° | 1°         | 80x120    | 168   | 11   | ±30'     | Type B |  |
| 1012-1010 | 0-180° | 1°         | 120x150   | 220   | 14   | ±30'     | Type B |  |
| 1012-1020 | 0-180° | 1°         | 150x200   | 285   | 16   | ±30'     | Type B |  |
| 1012-1030 | 0-180° | 1°         | 200x300   | 413   | 20   | ±30'     | Type B |  |
| 1012-1035 | 0-180° | 1°         | 300x500   | 665.5 | 31.5 | ±30'     | Type B |  |
| 1012-1040 | 0-180° | 1°         | 300x600   | 665.5 | 32   | ±30'     | Type B |  |

PROTRACTOR  
WITH ADJUSTABLE BLADE

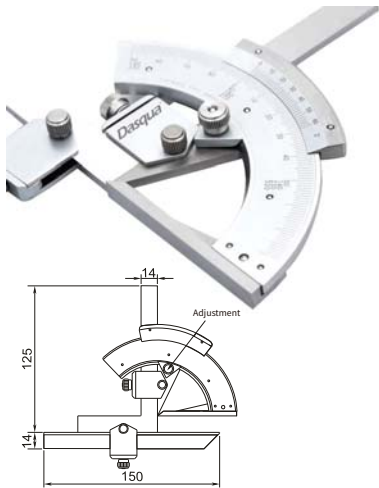


- Suitable for fast and accurate measurement of parts
- All measuring surfaces are hardened and ground

| Code      | Angle Measuring Range | Graduation | A   | B   | C  | Accuracy |
|-----------|-----------------------|------------|-----|-----|----|----------|
| 1012-4005 | 10-170°               | 1°         | 100 | 150 | 18 | ±10"     |
| 1012-4010 | 10-170°               | 1°         | 150 | 300 | 22 | ±10"     |
| 1012-4015 | 10-170°               | 1°         | 200 | 400 | 24 | ±10"     |
| 1012-4020 | 10-170°               | 1°         | 250 | 500 | 28 | ±10"     |
| 1012-4025 | 10-170°               | 1°         | 300 | 600 | 32 | ±10"     |

Unit:mm

UNIVERSAL PROTRACTOR

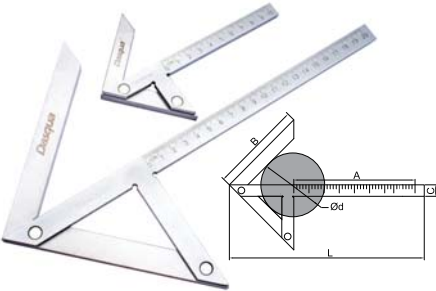


- Made of stainless steel
- With fine adjustment
- Measuring surface hardened, ground and lapped ensures smooth movement
- Satin chrome finish, anti-rust and durable

| Code      | Range  | Graduation | Accuracy |
|-----------|--------|------------|----------|
| 1012-2005 | 0-320° | 2°         | ±2°      |

Unit:mm

CENTERING SQUARE GAUGE

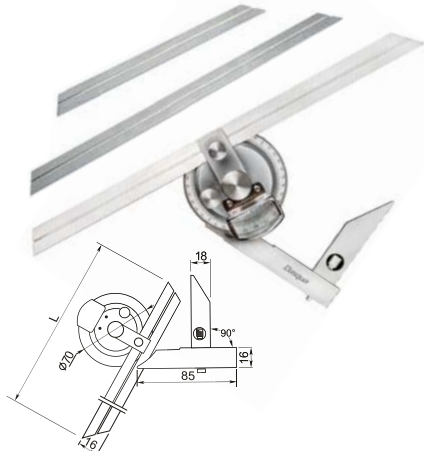


- Center Square Gauge
- For marking centers on round discs and shafts
- Stainless steel material
- Scale in matt chrome finish

| Code      | Size(AxØ) | Error Range | Max Shaft Diameter | Scale Bar | Bar Cross Section |
|-----------|-----------|-------------|--------------------|-----------|-------------------|
| 1012-3005 | 100 × 70  | 0.3         | 90                 | 100       | 12x4              |
| 1012-3010 | 150 × 130 | 0.3         | 190                | 150       | 15x4              |
| 1012-3015 | 200 × 150 | 0.3         | 220                | 200       | 15x4              |
| 1012-3016 | 250 × 160 | 0.37        | 230                | 250       | 15x4              |
| 1012-3020 | 300 × 180 | 0.4         | 280                | 300       | 20x5              |

Unit:mm

UNIVERSAL PROTRACTOR  
WITH FINE ADJUSTMENT AND MAGNIFIER

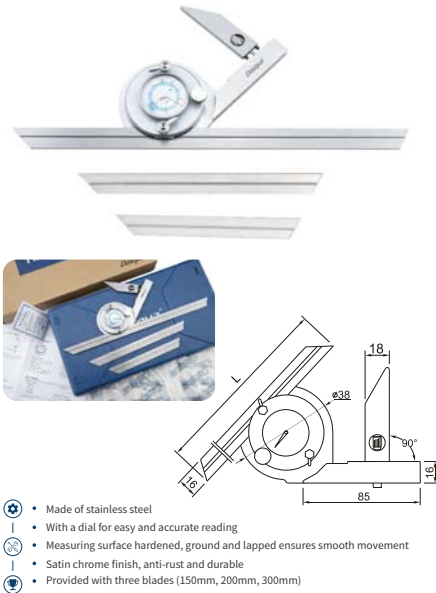


- Made of stainless steel
- With a magnifier for easy and clear reading
- Measuring surface hardened, ground and lapped ensures smooth movement
- Satin chrome finish, anti-rust and durable
- With fine adjustment
- Provided with 150mm, extra 200mm and 300mm for free

| Code      | Range  | Graduation | L                      | Accuracy |
|-----------|--------|------------|------------------------|----------|
| 1031-2005 | 0-360° | 5°         | 150/200/300 6 7/8 7/16 | ±5°      |

Unit:mm

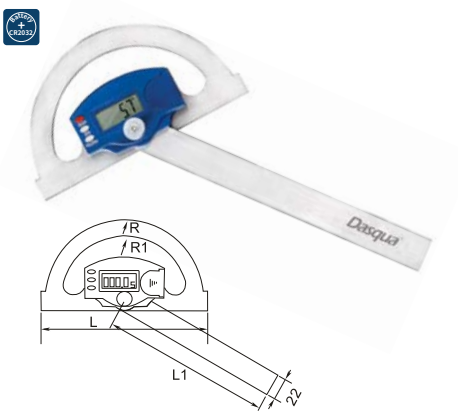
UNIVERSAL DIAL PROTRACTOR



- Made of stainless steel
- With a dial for easy and accurate reading
- Measuring surface hardened, ground and lapped ensures smooth movement
- Satin chrome finish, anti-rust and durable
- Provided with three blades (150mm, 200mm, 300mm)

| Unit:mm   |        |            |             |          |
|-----------|--------|------------|-------------|----------|
| Code      | Range  | Graduation | L           | Accuracy |
| 1031-2010 | 0-360° | 5'         | 150/200/300 | ±5'      |

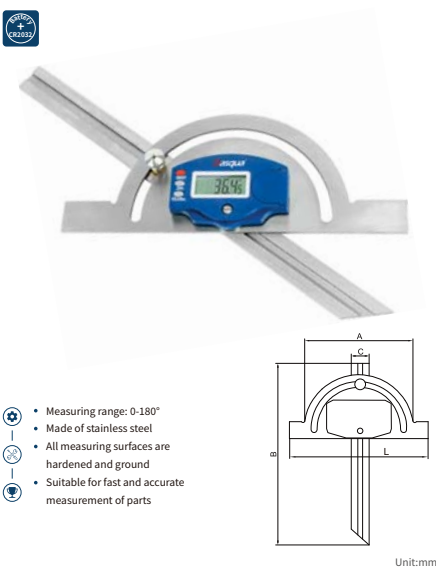
INDUSTRIAL DIGITAL PROTRACTOR



- Measuring range: 0-180°
- Big LCD display for easy and clear reading
- Stainless steel scale, measuring surface hardened, ground and lapped
- Locking knob can hold any angle
- Data hold function, zero setting at any position
- Satin chrome finish, anti-rust and durable

| Unit:mm   |        |         |            |     |       |    |    |          |
|-----------|--------|---------|------------|-----|-------|----|----|----------|
| Code      | Range  | Size    | Resolution | L   | L1    | R  | R1 | Accuracy |
| 1022-1005 | 0-180° | 120x150 | 0.05°      | 132 | 161.5 | 60 | /  | ±15'     |
| 1022-1010 | 0-180° | 150x200 | 0.05°      | 158 | 211.5 | 75 | 60 | ±15'     |
| 1022-1015 | 0-180° | 200x300 | 0.05°      | 221 | 311.5 | 98 | 78 | ±15'     |

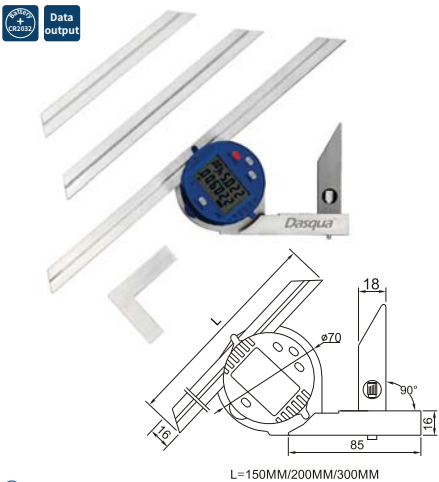
DIGITAL PROTRACTOR



- Measuring range: 0-180°
- Made of stainless steel
- All measuring surfaces are hardened and ground
- Suitable for fast and accurate measurement of parts

| Unit:mm   |                       |            |     |     |     |    |          |  |
|-----------|-----------------------|------------|-----|-----|-----|----|----------|--|
| Code      | Angle Measuring Range | Graduation | L   | L1  | R   | C  | Accuracy |  |
| 1012-0065 | 0-180°                | 0.05°      | 162 | 150 | 64  | 22 | ±20"     |  |
| 1012-0070 | 0-180°                | 0.05°      | 218 | 300 | 75  | 22 | ±20"     |  |
| 1012-0085 | 0-180°                | 0.05°      | 292 | 400 | 100 | 24 | ±20"     |  |

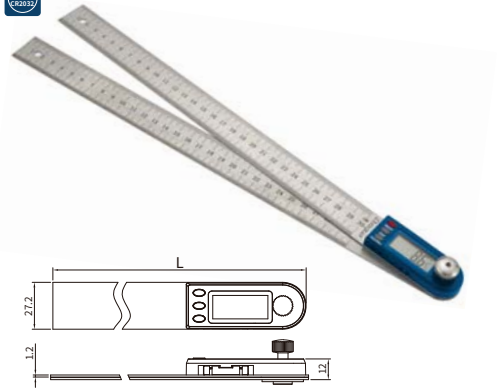
UNIVERSAL DIGITAL PROTRACTOR



- Made of stainless steel
- Large digital display for easy reading
- Measuring surface hardened, ground and lapped ensures smooth movement
- Satin chrome finish, anti-rust and durable
- Provided with three blades (150mm, 200mm, 300mm)

| Unit:mm   |        |            |             |          |
|-----------|--------|------------|-------------|----------|
| Code      | Range  | Resolution | L           | Accuracy |
| 1021-2005 | 0-360° | 10'        | 150/200/300 | ±5'      |
| 1021-2010 | 0-360° | 1"         | 150/200/300 | 2.5"     |

STAINLESS DIGITAL PROTRACTOR



- For easy measurement and transfer of angles
- Easy-to-read display
- With clamping screw to lock the blades
- Automatic power off
- Numeric value can be rotated through 180°
- Zero-setting at any position
- Upper and lower edges both with 1 mm graduations

| Unit:mm   |      |        |            |     |          |
|-----------|------|--------|------------|-----|----------|
| Code      | Size | Range  | Resolution | L   | Accuracy |
| 1022-0200 | 200  | 0-360° | 0.05°      | 277 | ±0.2°    |
| 1022-0300 | 300  | 0-360° | 0.05°      | 380 | ±0.2°    |

STAINLESS DIGITAL PROTRACTOR



- Both measure the angle and length, metric and inch display
- Calculating angles quickly and accurately, digital display clearly
- Easily operation with only two press button
- Good locking function could lock the measurement at any angle
- Compact structure to achieve convenient carrying and using
- Stainless steel scale achieve durable using
- Easily drawing line with the stainless steel rule
- It could be well used into various field instead of angle rule, straight ruler and square etc

| Unit:mm   |                       |            |           |                |          |
|-----------|-----------------------|------------|-----------|----------------|----------|
| Code      | Angle Measuring Range | Graduation | L*H*W     | Net Weight (g) | Accuracy |
| 1022-4125 | 0-360°/150mm          | 0.1°       | 168*20*35 | 150.00         | ±0.3°    |
| 1022-4200 | 0-360°/200mm          | 0.1°       | 218*20*35 | 163.00         | ±0.3°    |
| 1022-4250 | 0-360°/250mm          | 0.1°       | 268*20*35 | 190.00         | ±0.3°    |
| 1022-4300 | 0-360°/300mm          | 0.1°       | 318*20*35 | 222.00         | ±0.3°    |
| 1022-4305 | 0-360°/500mm          | 0.1°       | 518*20*35 | 335.00         | ±0.3°    |

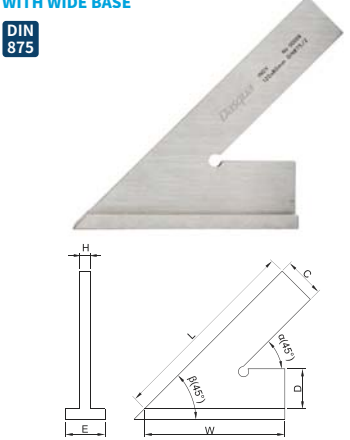
DIGITAL PROTRACTOR  
PLASTIC FOR WOODWORKING



- Plastic digital protractor, light and easy to carry and operate
- Professional thickness design for more accurate
- Good choice for wood working

| Unit:mm   |                       |            |
|-----------|-----------------------|------------|
| Code      | Angle Measuring Range | Graduation |
| 1022-2200 | 0-360°/200mm          | 0.1°/0.1mm |

45°SQUARE  
WITH WIDE BASE

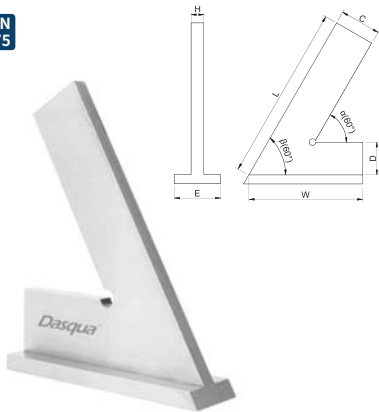


- Precision ground base for measuring and checking the flatness error
- Strictly made in accordance with DIN875
- Made of hardened stainless steel
- Satin chrome finish for glare-free easy reading
- Measuring surfaces are precision ground and lapped

| Unit:mm   |          |           |                 |    |    |   |    |
|-----------|----------|-----------|-----------------|----|----|---|----|
| Code      | Standard | Size(LxW) | Angle Tolerance | C  | D  | H | E  |
| 9222-3105 | DIN875/2 | 120x80    | 0.030           | 20 | 20 | 5 | 20 |
| 9222-3110 | DIN875/2 | 150x100   | 0.035           | 20 | 20 | 5 | 20 |
| 9222-3115 | DIN875/2 | 200x130   | 0.040           | 25 | 25 | 6 | 25 |

60° SQUARE  
WITH WIDE BASE

DIN  
875

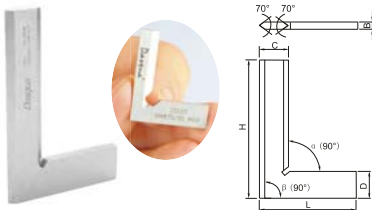


- Precision ground base for measuring and checking the flatness error
- Strictly made in accordance with DIN875
- Made of hardened stainless steel
- Satin chrome finish for glare-free easy reading
- Measuring surfaces are precision ground and lapped

| Unit:mm   |          |           |                 |    |    |   |    |
|-----------|----------|-----------|-----------------|----|----|---|----|
| Code      | Standard | Size(LxW) | Angle Tolerance | C  | D  | H | E  |
| 9272-1005 | DIN875/2 | 120x80    | 0.030           | 20 | 20 | 5 | 20 |
| 9272-1010 | DIN875/2 | 150x100   | 0.035           | 20 | 20 | 5 | 20 |
| 9272-1015 | DIN875/2 | 200x130   | 0.040           | 25 | 25 | 6 | 25 |

90° BEVELED EDGE SQUARE

DIN  
875



- Strictly made in accordance with DIN875
- Made of hardened stainless steel
- Beveled edges can be used for inside and outside measurement
- Measuring surfaces are precision ground and lapped

GRADE 0

| Unit:mm   |          |           |                 |    |    |     |  |
|-----------|----------|-----------|-----------------|----|----|-----|--|
| Code      | Standard | Size(HxL) | Angle Tolerance | C  | D  | B   |  |
| 9111-1102 | DIN875/0 | 25x20     | 0.005           | 4  | 6  | 3.5 |  |
| 9111-1104 | DIN875/0 | 40x28     | 0.006           | 4  | 6  | 3.5 |  |
| 9111-1105 | DIN875/0 | 50x40     | 0.006           | 13 | 13 | 4   |  |
| 9111-1110 | DIN875/0 | 75x50     | 0.007           | 15 | 15 | 4   |  |
| 9111-1115 | DIN875/0 | 100x70    | 0.007           | 20 | 20 | 5   |  |
| 9111-1120 | DIN875/0 | 150x100   | 0.008           | 30 | 30 | 6   |  |
| 9111-1125 | DIN875/0 | 200x130   | 0.009           | 33 | 33 | 7   |  |
| 9111-1130 | DIN875/0 | 250x165   | 0.01            | 35 | 35 | 7   |  |
| 9111-1135 | DIN875/0 | 300x200   | 0.011           | 40 | 40 | 8   |  |

GRADE 00

| Unit:mm   |           |           |                 |    |    |     |  |
|-----------|-----------|-----------|-----------------|----|----|-----|--|
| Code      | Standard  | Size(HxL) | Angle Tolerance | C  | D  | B   |  |
| 9100-1102 | DIN875/00 | 25x20     | 0.003           | 4  | 6  | 3.5 |  |
| 9100-1104 | DIN875/00 | 40x28     | 0.003           | 4  | 6  | 3.5 |  |
| 9100-1105 | DIN875/00 | 50x40     | 0.003           | 13 | 13 | 4   |  |
| 9100-1110 | DIN875/00 | 75x50     | 0.003           | 15 | 15 | 4   |  |
| 9100-1115 | DIN875/00 | 100x70    | 0.003           | 20 | 20 | 5   |  |
| 9100-1120 | DIN875/00 | 150x100   | 0.004           | 30 | 30 | 6   |  |
| 9100-1125 | DIN875/00 | 200x130   | 0.004           | 33 | 33 | 7   |  |

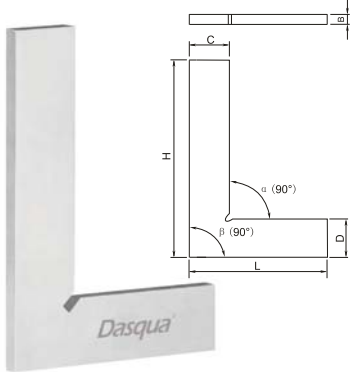
90° BEVELED EDGE  
SQUARE-BASIC VERSION

- Made of hardened stainless steel
- Strictly made in accordance with DIN875
- Beveled edges can be used for inside and outside measurement
- Measuring surfaces are precision ground and lapped

| Unit:mm   |           |                   |    |    |     |       |  |
|-----------|-----------|-------------------|----|----|-----|-------|--|
| Code      | Size      | Angular Deviation | C  | D  | B   | Grade |  |
| 9110-0005 | 50*40mm   | 0.006             | 13 | 13 | 4   | 0     |  |
| 9110-0010 | 75*50mm   | 0.007             | 15 | 15 | 4   | 0     |  |
| 9110-0015 | 100*70mm  | 0.007             | 20 | 20 | 5   | 0     |  |
| 9110-0020 | 150*100mm | 0.008             | 30 | 30 | 6   | 0     |  |
| 9110-0025 | 200*130mm | 0.009             | 33 | 33 | 7   | 0     |  |
| 9110-0030 | 250*165mm | 0.01              | 35 | 35 | 7   | 0     |  |
| 9110-0035 | 300*200mm | 0.011             | 40 | 40 | 8   | 0     |  |
| 9100-4402 | 25*20mm   | 0.003             | 4  | 6  | 3.5 | 00    |  |
| 9100-4404 | 40*28mm   | 0.003             | 4  | 6  | 3.5 | 00    |  |
| 9100-4405 | 50*40mm   | 0.003             | 13 | 13 | 4   | 00    |  |
| 9100-4410 | 75*50mm   | 0.003             | 15 | 15 | 4   | 00    |  |
| 9100-4415 | 100*70mm  | 0.003             | 20 | 20 | 5   | 00    |  |
| 9100-4420 | 150*100mm | 0.004             | 30 | 30 | 5   | 00    |  |
| 9100-4425 | 200*130mm | 0.004             | 33 | 33 | 7   | 00    |  |
| 9100-4430 | 250*165mm | 0.005             | 35 | 35 | 7   | 00    |  |
| 9100-4435 | 300*200mm | 0.005             | 40 | 40 | 8   | 00    |  |

90° FLAT EDGE SQUARE

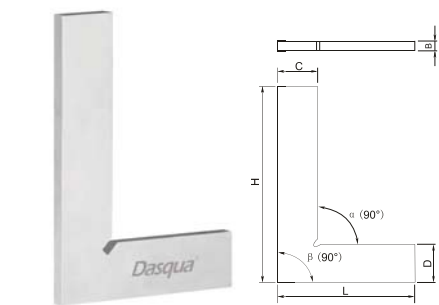
DIN  
875



- Used for checking the straightness, parallelism and perpendicularity
- Strictly made in accordance with DIN875
- Made of hardened stainless steel
- Satin chrome finish for glare-free easy reading
- Measuring surfaces are precision ground and lapped

| Unit:mm   |          |           |                 |    |    |   |  |
|-----------|----------|-----------|-----------------|----|----|---|--|
| Code      | Standard | Size(HxL) | Angle Tolerance | C  | D  | B |  |
| 9315-1105 | DIN875/0 | 50x40     | 0.006           | 15 | 15 | 4 |  |
| 9315-1110 | DIN875/0 | 75x50     | 0.007           | 15 | 15 | 4 |  |
| 9315-1115 | DIN875/0 | 100x70    | 0.007           | 20 | 20 | 5 |  |
| 9315-1120 | DIN875/0 | 150x100   | 0.008           | 30 | 30 | 6 |  |
| 9315-1125 | DIN875/0 | 200x130   | 0.009           | 30 | 30 | 7 |  |
| 9315-1126 | DIN875/0 | 250x165   | 0.009           | 35 | 35 | 7 |  |
| 9315-1130 | DIN875/0 | 300x200   | 0.01            | 40 | 40 | 7 |  |

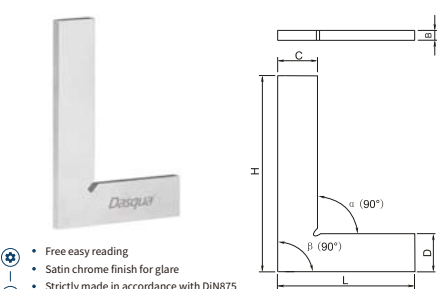
90°FLAT EDGE SQUARE-BASIC  
VERSION



- Free easy reading
- Satin chrome finish for glare
- Strictly made in accordance with DIN875
- Made of hardened stainless steel
- Used for checking the straightness, parallelism and perpendicularity
- Measuring surfaces are precision ground and lapped

| Unit:mm   |            |                   |    |    |   |       |
|-----------|------------|-------------------|----|----|---|-------|
| Code      | Size       | Angular Deviation | C  | D  | B | Grade |
| 9310-4105 | 50*40mm    | 0.006             | 15 | 13 | 4 | 0     |
| 9310-4110 | 75*50mm    | 0.007             | 15 | 15 | 4 | 0     |
| 9310-4115 | 100*70mm   | 0.007             | 20 | 20 | 5 | 0     |
| 9310-4120 | 150*100mm  | 0.008             | 30 | 30 | 6 | 0     |
| 9310-4125 | 200*130mm  | 0.009             | 33 | 33 | 7 | 0     |
| 9310-4126 | 250*165mm  | 0.01              | 35 | 35 | 7 | 0     |
| 9310-4130 | 300*200mm  | 0.011             | 40 | 40 | 8 | 0     |
| 9310-4150 | 1000*500mm | 0.05              |    |    |   | 0     |

90° EDGE SQUARE  
BASIC VERSION

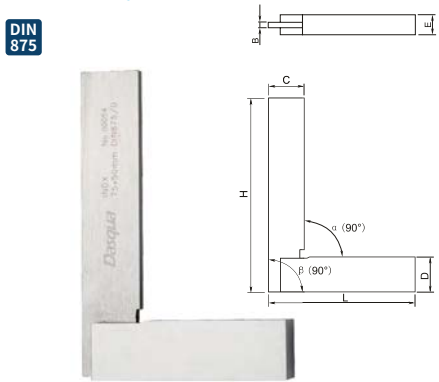


- Free easy reading
- Satin chrome finish for glare
- Strictly made in accordance with DIN875
- Made of hardened stainless steel
- Used for checking the straightness, parallelism and perpendicularity
- Measuring surfaces are precision ground and lapped

| Unit:mm   |                |                   |    |    |    |       |
|-----------|----------------|-------------------|----|----|----|-------|
| Code      | Size           | Angular Deviation | C  | D  | B  | Grade |
| 9312-0005 | 1-3/8"x1"      | 24                | 12 | 12 | 5  | 2     |
| 9312-0010 | 2-3/8"x1-3/8"  | 27                | 12 | 12 | 5  | 2     |
| 9312-0015 | 3"x2"          | 28                | 15 | 15 | 5  | 2     |
| 9312-0020 | 4"x3"          | 31                | 20 | 20 | 5  | 2     |
| 9312-0025 | 5"x3"          | 33                | 20 | 20 | 5  | 2     |
| 9312-0030 | 6"x4"          | 35                | 25 | 25 | 5  | 2     |
| 9312-0035 | 8"x5"          | 40                | 30 | 30 | 6  | 2     |
| 9312-0040 | 9"x5-1/2"      | 43                | 30 | 30 | 6  | 2     |
| 9312-0045 | 10-1/2"x5-3/8" | 47                | 35 | 35 | 7  | 2     |
| 9312-0050 | 12"x7"         | 51                | 40 | 40 | 8  | 2     |
| 9312-0055 | 14"x6"         | 56                | 40 | 40 | 8  | 2     |
| 9312-0060 | 18"x10"        | 66                | 40 | 40 | 8  | 2     |
| 9312-0065 | 24"x12"        | 81                | 50 | 50 | 10 | 2     |

90°FLAT EDGE SQUARE  
WITH HEAVY BASE

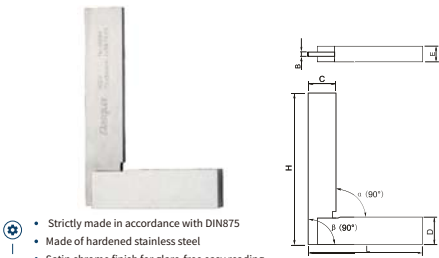
DIN  
875



- Precision ground base for measuring and checking the flatness error
- Used for checking the straightness, parallelism and perpendicularity
- Strictly made in accordance with DIN875
- Made of hardened stainless steel
- Satin chrome finish for glare-free easy reading
- Measuring surfaces are precision ground and lapped

| Unit:mm   |          |           |                 |    |    |        |
|-----------|----------|-----------|-----------------|----|----|--------|
| Code      | Standard | Size(HxL) | Angle Tolerance | C  | D  | B E    |
| 9212-1104 | DIN875/0 | 50x40     | 0.006           | 12 | 12 | 2.5 10 |
| 9212-1108 | DIN875/0 | 75x50     | 0.007           | 14 | 14 | 3 10   |
| 9212-1112 | DIN875/0 | 100x70    | 0.007           | 18 | 18 | 3 12   |
| 9212-1116 | DIN875/0 | 150x100   | 0.008           | 22 | 22 | 4 12   |
| 9212-1118 | DIN875/0 | 200x130   | 0.009           | 26 | 26 | 4 14   |

GRADE 2 INCH-90°FLAT EDGE  
SQUARE-BASIC VERSION



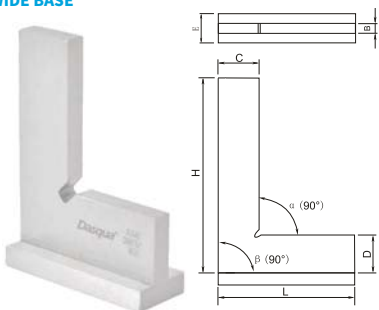
- Strictly made in accordance with DIN875
- Made of hardened stainless steel
- Satin chrome finish for glare-free easy reading
- Precision ground base for measuring and checking the flatness error
- Precision ground base for measuring and checking the flatness error
- Used for checking the straightness, parallelism and perpendicularity
- Measuring surfaces are precision ground and lapped

| Unit:mm   |           |                   |    |    |        |       |
|-----------|-----------|-------------------|----|----|--------|-------|
| Code      | Size      | Angular Deviation | C  | D  | B E    | Grade |
| 9210-4104 | 50*40mm   | 0.006             | 12 | 12 | 2.5 10 | 0     |
| 9210-4108 | 75*50mm   | 0.007             | 14 | 14 | 3 10   | 0     |
| 9210-4112 | 100*70mm  | 0.007             | 18 | 18 | 3 12   | 0     |
| 9210-4116 | 150*100mm | 0.008             | 22 | 22 | 4 12   | 0     |
| 9210-4118 | 200*130mm | 0.009             | 26 | 26 | 4 14   | 0     |
| 9210-4170 | 250*165mm | 0.01              | 30 | 30 | 5 14   | 0     |
| 9210-4175 | 300*200mm | 0.011             | 34 | 34 | 5 16   | 0     |
| 9212-2005 | 50*40mm   | 0.012             | 12 | 12 | 2.5 10 | 1     |
| 9212-2010 | 75*50mm   | 0.014             | 14 | 14 | 3 10   | 1     |
| 9212-2015 | 100*70mm  | 0.015             | 18 | 18 | 3 12   | 1     |
| 9212-2020 | 150*100mm | 0.018             | 22 | 22 | 4 12   | 1     |
| 9212-2025 | 200*130mm | 0.02              | 26 | 26 | 4 14   | 1     |
| 9212-2030 | 250*160mm | 0.023             | 30 | 30 | 5 14   | 1     |
| 9212-2035 | 300*200mm | 0.025             | 34 | 34 | 5 16   | 1     |



90° FLAT EDGE SQUARE  
WITH WIDE BASE

DIN  
875



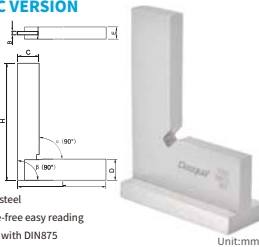
- Precision ground base for measuring and checking the flatness error
- Used for checking the straightness, parallelism and perpendicularity
- Strictly made in accordance with DIN875
- Made of hardened stainless steel
- Satin chrome finish for glare-free easy reading
- Measuring surfaces are precision ground and lapped

| Unit:mm   |          |           |                 |    |    |   |    |
|-----------|----------|-----------|-----------------|----|----|---|----|
| Code      | Standard | Size(HxL) | Angle Tolerance | C  | D  | B | E  |
| 9212-1105 | DIN875/0 | 50x40     | 0.006           | 15 | 15 | 4 | 15 |
| 9212-1110 | DIN875/0 | 75x50     | 0.007           | 15 | 15 | 4 | 15 |
| 9212-1115 | DIN875/0 | 100x70    | 0.007           | 20 | 20 | 5 | 20 |
| 9212-1120 | DIN875/0 | 150x100   | 0.007           | 30 | 30 | 6 | 30 |
| 9212-1125 | DIN875/0 | 200x130   | 0.009           | 30 | 30 | 7 | 30 |
| 9211-1105 | DIN875/1 | 50x40     | 0.012           | 15 | 15 | 4 | 15 |
| 9211-1110 | DIN875/1 | 75x50     | 0.014           | 15 | 15 | 4 | 15 |
| 9211-1115 | DIN875/1 | 100x70    | 0.015           | 20 | 20 | 5 | 20 |
| 9211-1120 | DIN875/1 | 150x100   | 0.018           | 30 | 30 | 6 | 30 |
| 9211-1125 | DIN875/1 | 200x130   | 0.020           | 30 | 30 | 7 | 30 |

90°FLAT EDGE SQUARE  
WITH WIDE BASE-BASIC VERSION



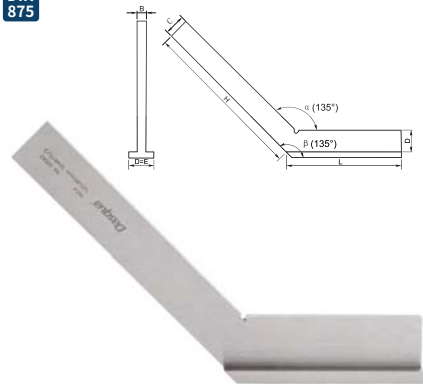
- Measuring surfaces are precision ground and lapped
- Precision ground base for measuring and checking the flatness error
- Used for checking the straightness, parallelism and perpendicularity
- Made of hardened stainless steel
- Satin chrome finish for glare-free easy reading
- Strictly made in accordance with DIN875



| Code      | Size                | Angular Deviation | C  | D  | B  | E  | Grade |
|-----------|---------------------|-------------------|----|----|----|----|-------|
| 9210-4105 | 50*40mm             | 0.006             | 15 | 15 | 4  | 15 | 0     |
| 9210-4110 | 75*50mm             | 0.007             | 15 | 15 | 4  | 15 | 0     |
| 9210-4115 | 100*70mm            | 0.007             | 20 | 20 | 5  | 20 | 0     |
| 9210-4120 | 150*100mm           | 0.008             | 30 | 30 | 6  | 30 | 0     |
| 9210-4125 | 200*130mm           | 0.009             | 30 | 30 | 7  | 30 | 0     |
| 9210-4130 | 250*165mm           | 0.01              | 35 | 35 | 7  | 35 | 0     |
| 9210-4135 | 300*200mm           | 0.011             | 40 | 40 | 8  | 40 | 0     |
| 9211-1105 | 50*40mm,DIN875/1    | 0.012             | 15 | 15 | 4  | 15 | 1     |
| 9211-1110 | 75*50mm,DIN875/1    | 0.014             | 15 | 15 | 4  | 15 | 1     |
| 9211-1115 | 100*70mm,DIN875/1   | 0.015             | 20 | 20 | 5  | 20 | 1     |
| 9211-1120 | 150*100mm,DIN875/1  | 0.018             | 30 | 30 | 6  | 30 | 1     |
| 9211-1125 | 200*130mm,DIN875/1  | 0.02              | 30 | 30 | 7  | 30 | 1     |
| 9211-1130 | 250*165mm,DIN875/1  | 0.023             | 35 | 35 | 7  | 35 | 1     |
| 9211-1134 | 300*180mm,DIN875/1  | 0.025             | 35 | 35 | 7  | 35 | 1     |
| 9211-1135 | 300*200mm,DIN875/1  | 0.025             | 40 | 40 | 8  | 40 | 1     |
| 9211-1139 | 400*200mm,DIN875/1  | 0.03              | 35 | 35 | 7  | 35 | 1     |
| 9211-1140 | 400*265mm,DIN875/1  | 0.03              | 40 | 40 | 8  | 40 | 1     |
| 9211-1145 | 500*330mm,DIN875/1  | 0.035             | 40 | 40 | 9  | 40 | 1     |
| 9211-1150 | 750*375mm,DIN875/1  | 0.048             | 45 | 45 | 9  | 45 | 1     |
| 9211-1155 | 1000*500mm,DIN875/1 | 0.06              | 50 | 50 | 11 | 50 | 1     |
| 9211-6340 | 630*400mm,DIN875/1  | 0.042             | 40 | 40 | 10 | 40 | 1     |

135° SQUARE  
WITH WIDE BASE

DIN  
875

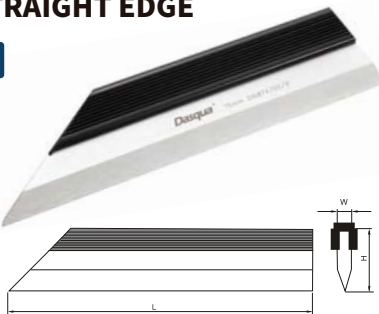


- Precision ground base for measuring and checking the flatness error
- Strictly made in accordance with DIN875
- Made of hardened stainless steel
- Satin chrome finish for glare-free easy reading
- Measuring surfaces are precision ground and lapped

| Unit:mm   |          |           |                 |    |    |   |
|-----------|----------|-----------|-----------------|----|----|---|
| Code      | Standard | Size(HxL) | Angle Tolerance | C  | D  | B |
| 9222-3102 | DIN875/2 | 120x80    | 0.030           | 20 | 20 | 5 |
| 9222-3104 | DIN875/2 | 150x100   | 0.035           | 20 | 20 | 5 |
| 9222-3106 | DIN875/2 | 200x130   | 0.040           | 30 | 30 | 7 |

STAINLESS STEEL  
STRAIGHT EDGE

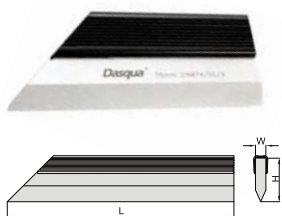
DIN  
874



- Use with feeler gauge or light gap method to measure the straightness and parallelism
- Strictly made in accordance with DIN874
- With one beveled edge
- Made of hardened stainless steel
- Satin chrome finish for glare-free easy reading
- Measuring surfaces are precision ground and lapped

| Unit:mm   |           |         |              |    |    |
|-----------|-----------|---------|--------------|----|----|
| Code      | Standard  | Size(L) | Straightness | H  | W  |
| 9131-2105 | DIN874/00 | 75      | 0.0015       | 25 | 5  |
| 9131-2110 | DIN874/00 | 100     | 0.0017       | 25 | 5  |
| 9131-2115 | DIN874/00 | 125     | 0.0018       | 30 | 6  |
| 9131-2120 | DIN874/00 | 150     | 0.0020       | 30 | 6  |
| 9131-2125 | DIN874/00 | 200     | 0.0023       | 30 | 6  |
| 9131-2130 | DIN874/00 | 250     | 0.003        | 40 | 8  |
| 9131-2135 | DIN874/00 | 300     | 0.003        | 40 | 8  |
| 9131-2130 | DIN874/00 | 400     | 0.0035       | 50 | 10 |
| 9131-2150 | DIN874/00 | 500     | 0.004        | 50 | 10 |

## STAINLESS STEEL STRAIGHT EDGE-BASIC VERSION

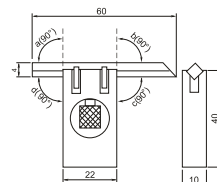


- Satin chrome finish for glare-free easy reading
- Strictly made in accordance with DIN874
- With one beveled edge
- Made of hardened stainless steel
- Measuring surfaces are precision ground and lapped
- Use with feeler gauge or light gap method to measure the straightness and parallelism

Unit:mm

| Code      | Size(L) | Straightness(mm) | H  | W  | Grade |
|-----------|---------|------------------|----|----|-------|
| 9130-4105 | 75mm    | 0.0015           | 20 | 5  | 00    |
| 9130-4110 | 100mm   | 0.0017           | 20 | 5  | 00    |
| 9130-4115 | 125mm   | 0.0018           | 20 | 5  | 00    |
| 9130-4120 | 150mm   | 0.0020           | 25 | 6  | 00    |
| 9130-4125 | 200mm   | 0.0023           | 25 | 6  | 00    |
| 9130-4130 | 250mm   | 0.0025           | 30 | 6  | 00    |
| 9130-4135 | 300mm   | 0.0030           | 35 | 8  | 00    |
| 9130-4140 | 400mm   | 0.0035           | 35 | 8  | 00    |
| 9130-4145 | 500mm   | 0.0040           | 42 | 10 | 00    |
| 9130-4150 | 600mm   | 0.0043           | 45 | 10 | 00    |

## ADJUSTABLE BEVEL SQUARE

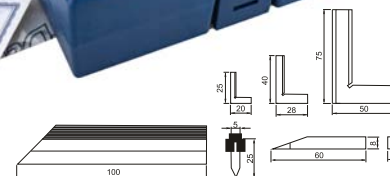


- Use with light gap method for inspection work
- Used to measure the short or small parts, chamfers and others by moving the straight edge
- High precision square, smooth straight edge which can be locked by the clamping screw at the desired position
- Measuring surfaces are precision ground and lapped
- Made of hardened stainless steel

Unit:mm

| Code      | Standard | Foot Size | Ruler Length | Ruler Cross Section |
|-----------|----------|-----------|--------------|---------------------|
| 9161-1105 | DIN875/0 | 40x22x10  | 60           | 4x4                 |

## 5 PCS MECHANIST SQUARE SET



- Measuring surfaces are precision ground and lapped
- Satin chrome finish for glare-free easy reading
- Stainless steel beveled straight edge 100mm grade 00 (DIN 874)
- Stainless steel beveled edge squares 75x50mm grade 00 (DIN 875)
- Stainless steel beveled edge squares 40x28mm and 25x20 grade 00
- Gauge block scriber point 60x8x8mm grade 00

Unit:mm

| Code      |
|-----------|
| 9383-2205 |

## FLANGE SQUARE



- Galvanized surface of steel material
- The vertical plane and the opening plane are precision machined
- Precision calibration right angle ruler for fitter special flange

Unit:mm

| Code      | Range     | A  | B   | C   | D    | E    | F   |
|-----------|-----------|----|-----|-----|------|------|-----|
| 2605-1005 | 300x300   | 30 | 105 | 65  | 300  | 300  | 5/6 |
| 2605-1010 | 400x400   | 30 | 115 | 65  | 400  | 400  | 5/6 |
| 2605-1015 | 500x500   | 30 | 125 | 70  | 500  | 500  | 5/6 |
| 2605-1020 | 600x600   | 30 | 125 | 70  | 600  | 600  | 5/6 |
| 2605-1025 | 800x800   | 30 | 125 | 100 | 800  | 800  | 5/6 |
| 2605-1030 | 1000x1000 | 30 | 158 | 138 | 1000 | 1000 | 5/6 |

MEASURING BEVEL

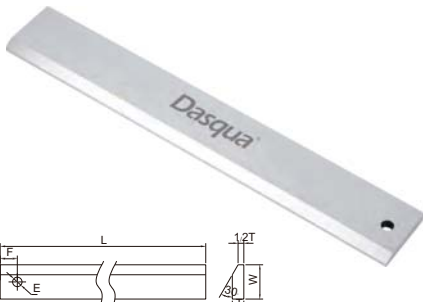


- Two movable blades can be locked by the wing nut
- Measuring surfaces are precision ground and lapped
- Used to duplicate any angle
- Made of hardened stainless steel

| Unit:mm   |      |
|-----------|------|
| Code      | Size |
| 9251-1105 | 200  |
| 9251-1110 | 250  |
| 9251-1115 | 300  |
| 9251-1120 | 400  |
| 9251-1125 | 500  |

PRECISION STRAIGHT EDGE

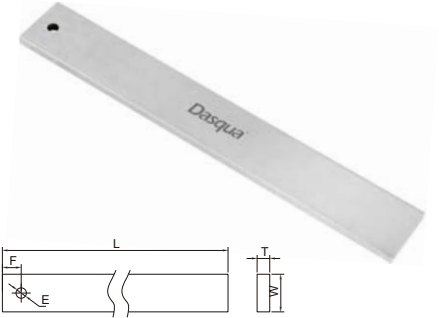
WITH BEVELED EDGE



- Made of high strength alloy steel, hardening; aging treatment after all measurement precision surface grinding and polishing processing.
- It is unparallel for drawing or marking lines and checking surface straightness.
- Its thickness and design allow it to maintain shape and precision yet remain easy to carry and operate

| Unit:mm   |       |     |    |      |      |      |                       |                       |
|-----------|-------|-----|----|------|------|------|-----------------------|-----------------------|
| Code      | Grade | L   | W  | T    | F    | E    | Two face straightness | Two side straightness |
| 9333-0020 | A     | 305 | 41 | 6.35 | 12.7 | φ8   | 0.005                 | 0.05                  |
| 9333-0025 | A     | 610 | 51 | 7.94 | 22.3 | φ8   | 0.006                 | 0.06                  |
| 9333-0030 | A     | 914 | 64 | 9.53 | 25.4 | φ9.5 | 0.007                 | 0.07                  |
| 9333-0035 | B     | 305 | 32 | 4.76 | 12.7 | φ8   | 0.009                 | 0.07                  |
| 9333-0040 | B     | 610 | 41 | 6.35 | 22.3 | φ8   | 0.012                 | 0.08                  |
| 9333-0045 | B     | 914 | 51 | 7.94 | 25.4 | φ9.5 | 0.014                 | 0.09                  |

PRECISION STRAIGHT EDGE

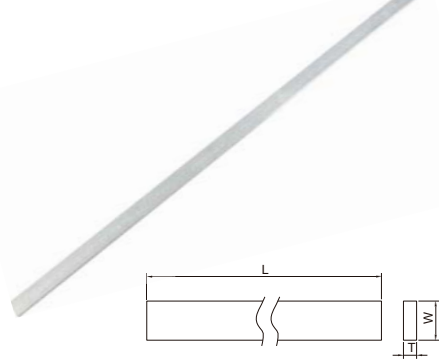


- Made of high strength alloy steel, hardening; aging treatment after all measurement precision surface grinding and polishing processing.
- It is unparallel for drawing or marking lines and checking surface straightness.
- Its thickness and design allow it to maintain shape and precision yet remain easy to carry and operate

| Unit:mm   |       |     |    |      |      |      |                       |                       |
|-----------|-------|-----|----|------|------|------|-----------------------|-----------------------|
| Code      | Grade | L   | W  | T    | F    | E    | Two face straightness | Two side straightness |
| 9333-0050 | A     | 305 | 41 | 6.35 | 12.7 | φ8   | 0.005                 | 0.05                  |
| 9333-0055 | A     | 610 | 51 | 7.94 | 22.3 | φ8   | 0.006                 | 0.06                  |
| 9333-0060 | A     | 914 | 64 | 9.53 | 25.4 | φ9.5 | 0.007                 | 0.07                  |
| 9333-0065 | B     | 305 | 32 | 4.76 | 12.7 | φ8   | 0.009                 | 0.07                  |
| 9333-0070 | B     | 610 | 41 | 6.35 | 22.3 | φ8   | 0.012                 | 0.08                  |
| 9333-0075 | B     | 914 | 51 | 7.94 | 25.4 | φ9.5 | 0.014                 | 0.09                  |

FLAT STRAIGHT EDGES

MORE THAN 2 METERS IN SUPPLYING



- Engraved surface dark chrome plated
- The material of 500mm-1000mm specifications is 4Cr13 quenching hardness 42-48HRC
- The material of 1500mm-2000mm specifications is 2Cr13 hardness 32-40HRC

| Unit:mm     |       |            |      |    |      |              |             |  |
|-------------|-------|------------|------|----|------|--------------|-------------|--|
| Code        | Range | Graduation | L    | W  | T    | Straightness | Parallelism |  |
| 9333-3105-A | 500   | 1mm*1/64"  | 510  | 24 | 5.5  | 0.07         | 0.05        |  |
| 9333-3110-A | 1020  | 1mm*1/64"  | 1010 | 32 | 8    | 0.05         | 0.05        |  |
| 9333-3115-A | 1530  | 1mm*1/64"  | 1510 | 42 | 12.5 | 0.15         | 0.1         |  |
| 9333-3120-A | 2040  | 1mm*1/64"  | 2010 | 42 | 12.5 | 0.2          | 0.15        |  |

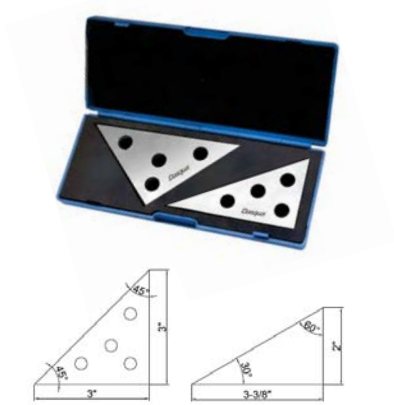
ANGLE BLOCK SET



- For fast, easy and accurate determination of angular dimensions
- Also can be stacked to create other angles
- Hardened and relieved special steel, high grade of abrasion resistance
- Measuring faces precision ground and lapped

| Unit:mm   |             |                                                         |                   |
|-----------|-------------|---------------------------------------------------------|-------------------|
| Code      | Amount(pcs) | Angle(α)                                                | Angular Precision |
| 9411-1205 | 10          | 1°, 2°, 3°, 4°, 5°, 10°, 15°, 20°, 25°, 30°             | ±20"              |
| 9412-4105 | 12          | 1/4°, 1/2°, 1°, 2°, 3°, 4°, 5°, 10°, 15°, 20°, 25°, 30° | ±20"              |

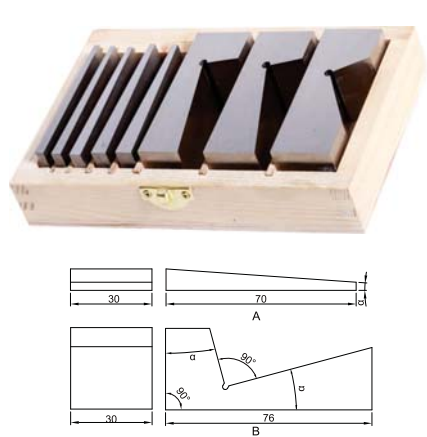
2 PCS/SET SOLID ANGLE PLATES & SETS



- Tool steel
- Hardness HRC60 ±2
- Used for angle setting and detection of machining

| Unit:mm   |                         |                         |                |
|-----------|-------------------------|-------------------------|----------------|
| Code      | Size                    | Angle                   | Angle accuracy |
| 9412-4110 | 15°, 30°, 45°, 60°, 90° | 45°/45°/90°/30°/60°/90° | ±9"            |

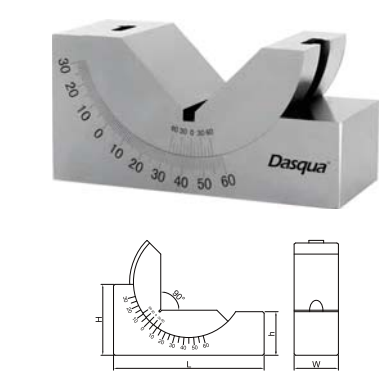
8PCS/SET UNIVERSAL ANGLE BLOCK



- Tool steel
- Hardness HRC45-50
- Used for angle setting and detection in machining

| Unit:mm   |                           |                                   |                |
|-----------|---------------------------|-----------------------------------|----------------|
| Code      | Size                      | Angle                             | Angle accuracy |
| 9412-4115 | 2-3/4"x1-3/16"-3"x1-3/16" | 1°, 2°, 3°, 4°, 5°, 10°, 15°, 30° | ±1"            |

ADJUSTABLE ANGLE BLOCK



- Tool steel
- For angle setting and detection in machining

| Unit:mm   |             |                  |                  |                |
|-----------|-------------|------------------|------------------|----------------|
| Code      | Size        | Adjustable Angle | Angle Resolution | Angle Accuracy |
| 8905-0005 | 25°32'75mm  | 30°-0°-60°       | 10"              | 10"            |
| 8905-0010 | 30°48'102mm | 30°-0°-60°       | 10"              | 10"            |
| 8905-0015 | 102°46°49mm | 30°-0°-60°       | 10"              | 10"            |

# LEVEL MEASURING

BORN IN ITALY, RAISED BY THE WORLD

## 02-14 LEVEL MEASURING



LASER LEVEL

## MASTER PRECISION LEVEL WITH WOODEN HANDLE DIN 877

- With more artistic wooden handle rather than normal plastic handle
- Strictly made in accordance with DIN877
- V-grooved base for ease of mount on cylindrical parts

Unit:mm

| Code        | Range | Accuracy |
|-------------|-------|----------|
| 8301-1005-B | 150   | 0.02mm/m |
| 8301-1010-B | 200   | 0.02mm/m |
| 8301-1015-B | 250   | 0.02mm/m |
| 8301-1020-B | 300   | 0.02mm/m |



HIGH PRECISION LEVEL



- The Dasqua ultra-high precision leveling device allows operators to save over 70% of the time spent on machine leveling
- The measuring end and the handheld terminal are connected wirelessly, and the measuring data are directly displayed on the handheld terminal so that the horizontal state of the machine can be viewed anytime.
- This completely solves the problem that operators have to repeatedly check the bubble of the traditional bar-type level instrument
- The unique network leveling function can help with improving leveling process to be more accurate and faster when completing the leveling work on large high-precision machine tools

| Code                                 | Resolution | Repeatability |
|--------------------------------------|------------|---------------|
| 8300-0025 (with Portable Display)    | 0.01       | 0.02mm/m      |
| 8300-0030 (without Portable Display) | 0.01       | 0.02mm/m      |
| 8300-0035 (Portable Display)         | 0.01       | 0.02mm/m      |

Unit:mm

OPTICAL COMPOSITE IMAGE LEVEL



- Used to detect the inclination of planes and cylindrical surfaces relative to the horizontal plane, as well as the flatness, straightness and correctness of the installation position of guide rails or bases
- With V-groove, suitable for cylindrical surfaces

| Code      | Size | Measuring Range | Graduation (mm/m) |
|-----------|------|-----------------|-------------------|
| 8300-0055 | 60kg | 0-10mm          | 0.01              |

Unit:mm

PRECISION FRAME LEVEL  
WITH WOODEN HANDLE

DIN 877



- Used to measure the angle of inclination, flatness and straightness of the machine machine guide rails, horizontal position and vertical position of equipment setup in machinery industry and instrument manufacturing
- With more artistic wooden handle rather than normal plastic handle
- The glass bubble is of great sensitivity and high transparency, easy for operators to read
- The bubble is adjustable
- Strictly made in accordance with DIN877
- Special lapped, hardened and polished steel body with no blister on the surface
- V-grooved base for ease of mount on cylindrical parts

Unit:mm

| Code        | Range     | Accuracy |
|-------------|-----------|----------|
| 8301-1003-B | 150 x 150 | 0.02mm/m |
| 8301-1006-B | 200 x 200 | 0.02mm/m |
| 8301-1009-B | 250 x 250 | 0.02mm/m |
| 8301-1013-B | 300 x 300 | 0.02mm/m |

PRECISION LEVEL

DIN 877



- Strictly made in accordance with DIN877
- Used to measure the straightness and flatness of machine guide rails
- Robust cast iron model, precision ground measuring surface ensures high accuracy
- Base with V-groove to allow use on round bars and shafts, cylindrical surfaces
- With main vial and cross test vial

Unit:mm

| Code        | Range | Accuracy    |
|-------------|-------|-------------|
| 8301-0005-A | 150   | 0.05mm/m    |
| 8301-0010-A | 200   | 0.05mm/m    |
| 8301-0015-A | 250   | 0.05mm/m    |
| 8301-0020-A | 300   | 0.05mm/m    |
| 8301-1005-A | 150   | 0.02mm/m    |
| 8301-1010-A | 200   | 0.02mm/m    |
| 8301-1015-A | 250   | 0.02mm/m    |
| 8301-1020-A | 300   | 0.02mm/m    |
| 8302-0005-A | 6"    | 0.0005"/10" |
| 8302-0010-A | 8"    | 0.0005"/10" |
| 8302-0015-A | 10"   | 0.0005"     |
| 8302-0020-A | 12"   | 0.0005"     |



LEVEL MEASURING BORN IN ITALY, RAISED BY THE WORLD

PRECISION FRAME LEVEL

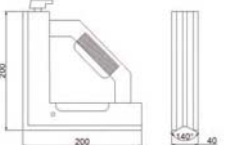
DIN 877



- Strictly made in accordance with DIN877
- Used to measure the straightness and flatness of machine guide rails
- Robust cast iron model, precision ground measuring surface ensures high accuracy
- Base with V-groove to allow use on round bars and shafts

| Unit:mm     |           |             |
|-------------|-----------|-------------|
| Code        | Range     | Accuracy    |
| 8301-0003-A | 150 x 150 | 0.05mm/m    |
| 8301-0006-A | 200 x 200 | 0.05mm/m    |
| 8301-0009-A | 250 x 250 | 0.05mm/m    |
| 8301-0013-A | 300 x 300 | 0.05mm/m    |
| 8301-1003-A | 150 x 150 | 0.02mm/m    |
| 8301-1006-A | 200 x 200 | 0.02mm/m    |
| 8301-1009-A | 250 x 250 | 0.02mm/m    |
| 8301-1013-A | 300 x 300 | 0.02mm/m    |
| 8302-0003-A | 6" x 6"   | 0.0005"/10" |
| 8302-0006-A | 8" x 8"   | 0.0005"/10" |
| 8302-0009-A | 10" x 10" | 0.0005"/10" |
| 8302-0013-A | 12" x 12" | 0.0005"/10" |

MAGNETIC PRECISION LEVEL



- Used to detect the straightness of guide rails of various machine tools and other equipment, the correctness of horizontal and vertical positions of installation, etc.
- With V-groove, suitable for cylindrical surfaces

| Unit:mm   |             |                   |                              |
|-----------|-------------|-------------------|------------------------------|
| Code      | Size        | Graduation (mm/m) | Magnetic force direction     |
| 8300-0010 | 100 x 100mm | 0.02              | Lateral magnetic force       |
| 8300-0015 | 100 x 100mm | 0.02              | Bidirectional magnetic force |
| 8300-0020 | 200 x 200mm | 0.02              | /                            |

HIGH PRECISION DIGITAL LEVEL

Sensitivity:  $\pm 0.01\text{mm/m}$   
Resolution:  $0.001^\circ$

• Metal button, water-proof

• Groove bottom design, ground and round level to measure both are applicative

• Customized professional aluminum box for well-protection

• One button for zero setting

• Rechargeable design for 3.7V batteries--2pcs

• Two modes: Abs and R for option

• Multi-data recording

Code: 8300-1000

MASTER PRECISION LEVEL

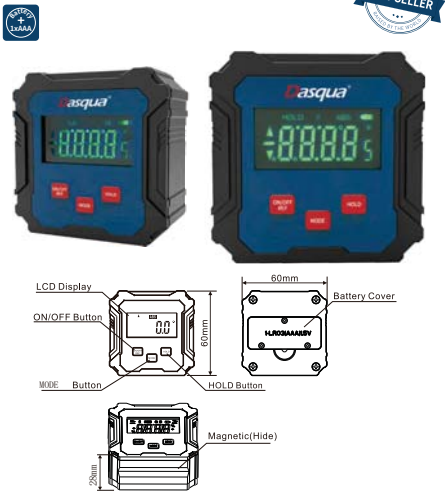


- With transverse and longitudinal vials
- V-groove on bottom for shafts
- Supplied with adjust wrench

Unit:mm

| Code      | Size(L) | Sensitivity    | A   | B  |
|-----------|---------|----------------|-----|----|
| 8303-0005 | 150     | 0.3/m(=0.017°) | 118 | 64 |
| 8303-0010 | 200     | 0.3/m(=0.017°) | 137 | 73 |
| 8303-0015 | 300     | 0.3/m(=0.017°) | 216 | 73 |

DIGITAL ANGLE GAUGE



- Temperature drift testing ensures no influence on accuracy from Temperature changing, others will not do the testing
- Imported chip to ensure 0.2° accuracy
- Powerful built-in magnets on the base
- LCD Display with Backlight

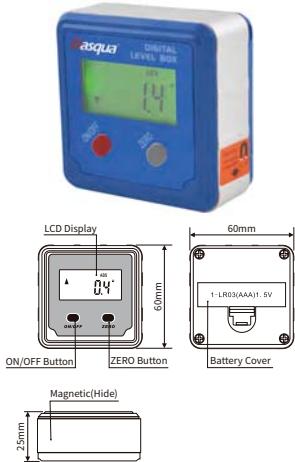
| Code      | Range | Resolution | Power         | Weight | Accuracy                    |
|-----------|-------|------------|---------------|--------|-----------------------------|
| 8400-0020 | 4x90° | 0.05°      | 1XAAA battery | 70g    | 0°-90°: ±0.1°, other: ±0.2° |

DIGITAL LEVEL BOX



- Built-in magnetic base
- Green backlit screen, easy to read
- Thickened metal frame
- With automatic data conversion function, easy to read
- Choose from three-button model (with data retention), bubble model, V-shaped base model
- 3A battery

DIGITAL ANGLE GAUGE



- Large easy-to-read backlit LCD display
- Absolute 0° measuring at level surface
- Measure relative bevel
- With permanent strong magnet on measuring faces
- CNC machined aluminum body

Unit:mm

| Code      | Range | Resolution | Accuracy |
|-----------|-------|------------|----------|
| 8400-0010 | 4x90° | 0.1°       | ±0.2°    |

DIGITAL ANGLE GAUGE

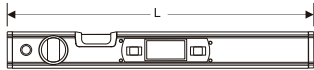
WITH FLIP-OUT DISPLAY



- With flip-out tilting display
- Ultra-precise magnetic gauge sets the angle of saw blades, jointer fences, bandsaw tables and drill press tables
- Measures both Absolute level and relative level with reading that are always visible
- V-groove in base for round objects like pipe and drill bits
- Specifications:
  - Range: +/- 180 degrees
  - Reading: 0.1 degrees
  - Accuracy: +/- 0.1 degrees
  - Repeatability: +/- 0.1 degrees
  - Size: 2.2" x 2.3" x 1.3"

| Unit:mm   |                 |             |                 |                 |                    |
|-----------|-----------------|-------------|-----------------|-----------------|--------------------|
| Code      | Measuring Range | Reading     | Accuracy        | Repeatability   | Size               |
| 8400-0000 | +/- 180 degrees | 0.1 degrees | +/- 0.1 degrees | +/- 0.1 degrees | 2.2" x 2.3" x 1.3" |

DIGITAL LEVEL



- Large easy-to-read backlight LCD display with hold function
- With horizontal and vertical vials
- Absolute level measuring, relative angle measuring, slope and angle conversion
- With embedded strong permanent magnet on measuring face
- CNC machined super flat edges

| Unit:mm   |        |       |            |     |          |
|-----------|--------|-------|------------|-----|----------|
| Code      | Magnet | Range | Resolution | L   | Accuracy |
| 8301-2640 | NO     | 4x90° | 0.1°       | 400 | 0.2°     |
| 8301-2645 | YES    | 4x90° | 0.1°       | 400 | 0.2°     |
| 8301-2655 | YES    | 4x90° | 0.1°       | 600 | 0.2°     |

DIGITAL PROTRACTOR (0 -360°)

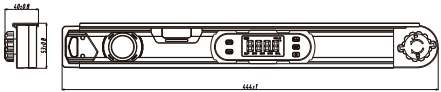


- Working temperature 0-50°C
- Easy to read on the full digital LCD display
- Tightening screws fix the measuring angle in any position
- Press the "HOLD" button to easily record data
- The V-groove design of the stainless steel measuring arm makes it easy to mark lines
- Made of anodized aluminum alloy material, the ruler body has high durability and reliability

| Unit:mm   |            |             |                 |          |            |
|-----------|------------|-------------|-----------------|----------|------------|
| Code      | Resolution | Size        | Measuring Range | Accuracy | Net Weight |
| 8301-2505 | 0.05°      | 268°50'25mm | 0-360°          | ±0.15°   | 335g       |

DOUBLE CHIPS DIGITAL PROTRACTOR & LEVEL (0 -220°)

WITH MTR & COM FUNCTION



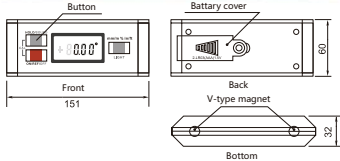
HIGH ACCURACY 0.2°

- With two bubbles for more accurate
- With 400mm extension plate, can slide left and right
- With locking device, easy to transfer angles
- Multiple measurement modes to meet various needs

| Unit:mm   |            |                 |        |          |
|-----------|------------|-----------------|--------|----------|
| Code      | Resolution | Measuring Range | Length | Accuracy |
| 8301-2510 | 0.1°       | 0-220°          | 425mm  | ±0.2°    |

DIGITAL PROTRACTOR

ABSOLUTE  
IP65  
DUST/STAIN  
RESISTANT



- Absolute function, zero setting is unnecessary when the battery is replaced
- Used as level and inclinometer to measure the included angle of non-continuous working surfaces
- V-groove base with powerful embedded magnets, which secures strong attachment to the measuring surfaces (including cylindrical surface)
- Backlight function enables it to use in the dim place
- IP65 dust-proof and water-proof

Unit:mm

| Code      | Range   | Resolution | Accuracy                           |
|-----------|---------|------------|------------------------------------|
| 8400-0005 | 4 x 90° | 0.05°      | 0°-90°:±0.05° Rest of angle:±0.15° |

DIGITAL SLIDING T-BEVEL  
GAUGE & DIGITAL  
PROTRACTOR IN ONE



- 2 in 1 sliding digital T-bevel and angle finder
- Memory flips, hold and reverses angle functions
- 4 function control buttons
- Full LCD display
- Range: 0° to 360°
- Measures, stores and transfers inside/outside angles
- Made of Stainless-steel

Unit:mm

| Code      | Range  | Resolution | Accuracy | Blade |
|-----------|--------|------------|----------|-------|
| 1801-2005 | 0-360° | 0.05°      | ±0.3°    | 200mm |

MINI LASER PROTRACTOR



- Two laser projections to meet various needs
- Automatically flip the reading to facilitate data viewing
- Two-sided ultra-wide color screen, high-definition display, effortless reading
- The shell is made of aluminum alloy, shockproof and dust proof
- Magnetic adsorption measuring surface, can be adsorbed on the workpiece to be measured for measurement
- Absolute zero point measurement based on the horizontal reference
- Lithium battery 3.7V

Unit:mm

| Code      | Resolution | Measuring Range | Dimension (mm) | Accuracy        | NetWeight |
|-----------|------------|-----------------|----------------|-----------------|-----------|
| 8400-0035 | 0.1°       | 4°90°           | 119°35°20      | ±2.5mm/m(0.14°) | 96g       |

POCKET SIZE MINI LASER LEVEL



- Laser wavelength: 625-670nm
- Max power output 5mw.
- Accuracy: ±1mm/M 90° ±0.05°
- Power: 2x1.5v AAA batteries.
- The length is 7 inch
- Laser class: US class IIIA, EU class IIIR

Unit:mm

| Code      |
|-----------|
| 8300-0075 |

# SETTING UP TOOLS

BORN IN ITALY, RAISED BY THE WORLD

## 02-10 MACHINE SETTING UP



## 21-28 V-BLOCKS AND BENCH CENTER



## 11-20 SETTING UP TOOLS



## 29-32 GRANITE PLATE



# 3D TESTER

WATER PROOF  
EASY ADJUSTMENT

ACCURACY: 0.01mm

**Dasqua Blu**  
MADE IN GERMANY

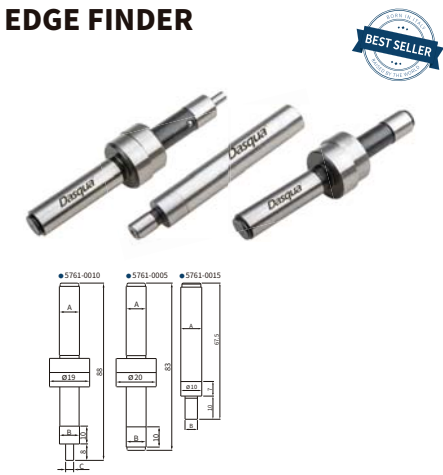
CODE: 5711-0005

5711-0004: anvil for 3D tester





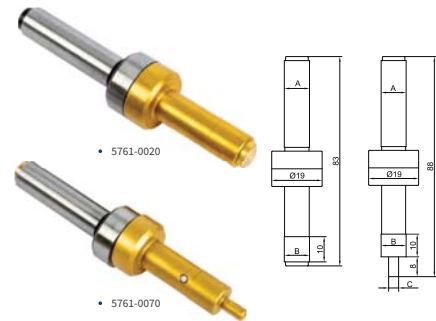
EDGE FINDER



- Body and contact are made of tool steel, hardened and ground and lapped to close tolerances for diameter and concentricity
- For adjusting basic surfaces or edges
- Ideal for locating work surfaces easily, quickly and accurately
- Useful for identifying center line on jig boring, milling and engraving machines
- Rotational speed of spindle approx 400 - 600 rpm

| Unit:mm   |                   |                    |          |
|-----------|-------------------|--------------------|----------|
| Code      | Shank Diameter(A) | Contact Point(B&C) | Accuracy |
| 5761-0005 | φ10               | φ10                | 0.005    |
| 5761-0010 | φ10               | φ10&φ4             | 0.005    |
| 5761-0015 | φ10               | φ6                 | 0.008    |

PRECISION TITANIUM  
NON-MAGNETIC MECHANICAL  
EDGE FINDER



- Titanium coating wear-resisting non-magnetic
- Hardness HV2500
- Suitable for machine speed 400-600rpm

| Unit:mm   |     |     |   |            |
|-----------|-----|-----|---|------------|
| Code      | A   | B   | C | Graduation |
| 5761-0020 | φ10 | φ10 | / | 0.003      |
| 5761-0070 | φ10 | φ10 | 4 | 0.003      |

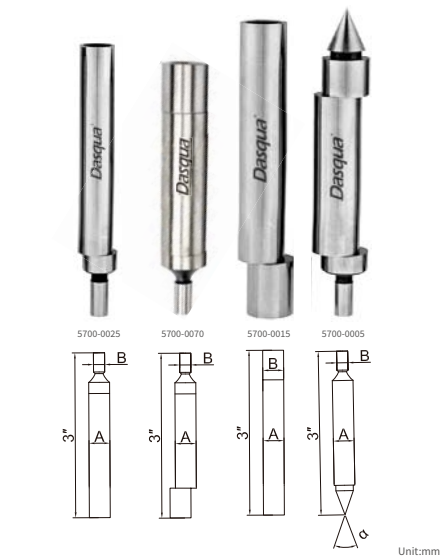
EDGE FINDER



- Cylinder contact
- Edge finders are hardened, and ground
- Ideal for locating work surfaces easily, quickly and accurately
- Useful for identifying center line on jig boring, milling and engraving machines

| Unit:mm   |       |       |     |          |
|-----------|-------|-------|-----|----------|
| Code      | A     | B     | α   | Accuracy |
| 5700-0005 | φ1/2" | φ0.2" | 42° | 0.0002"  |
| 5700-0010 | φ3/8" | φ0.2" | 42° | 0.0002"  |
| 5700-0015 | φ1/2" | φ0.5" |     | 0.0002"  |
| 5700-0020 | φ10mm | φ10mm |     | 0.005mm  |
| 5700-0025 | φ3/8" | φ0.2" |     | 0.0002"  |
| 5700-0030 | φ1/2" | φ0.2" |     | 0.0002"  |

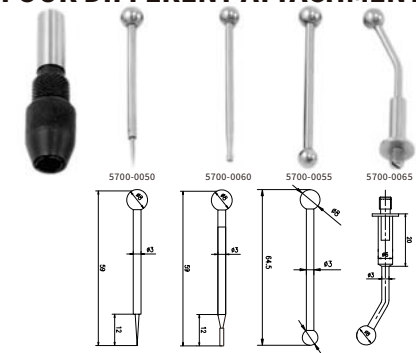
4PC EDGE FINDER SET



| Code      | Range     | A     | B         | α   | Accuracy |
|-----------|-----------|-------|-----------|-----|----------|
| 5700-0035 | 5700-0005 | Ø1/2" | Ø0.2"     | 42° | 0.024mm  |
|           | 5700-0015 | Ø1/2" | Ø0.5"     | /   | 0.028mm  |
|           | 5700-0025 | Ø3/8" | Ø0.2"     | /   | 0.031mm  |
|           | 5700-0070 | Ø1/2" | Ø0.2-0.5" | /   | 0.034mm  |



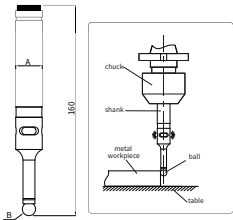
WIGGLER / CENTER FINDER AND FOUR DIFFERENT ATTACHMENTS



- Working centers can be quickly and accurately located
- Wiggler/Center Finder and four different attachments adapt to countless applications and are readily interchangeable. It is an essential tool for any machine shop
- Spring tension on the ball of the point permits guiding point to concentricity. Work can be brought into perfect alignment with the machine spindle
- 5700-0055: ball contact is useful in locating work by first bringing the contact
- 5700-0060: disc contact, which has a small disc at the end (.100"/2.54mm) diameter, permits use in more confined areas such as slots or shallow holes
- 5700-0065: the offset indicator holder can be used with test indicators, the user can sweep holes or o.d.s for checking run-out or concentricity, establish center distances, check straightness or alignment of flat surfaces

| Code      | Code      | Head diam                                        | Shank     | overall length |
|-----------|-----------|--------------------------------------------------|-----------|----------------|
| 5700-0040 | 5700-0050 | Conical Point                                    | 0.12"/3mm | 2.32"/59mm     |
|           | 5700-0055 | 1/4" /6mm                                        | 0.12"/3mm | 2.54"/64.5mm   |
|           | 5700-0060 | Disc Point (0.100"/2.54mm)                       | 0.12"/3mm | 2.32"/59mm     |
|           | 5700-0065 | Offset Indicator Holder Individual Wiggler Point |           |                |

ELECTRIC EDGE FINDER



- Edge finder lights and beeps instantly when probe touches workpiece
- High sensitivity probe for accurate positioning relative to workpiece
- Read off any electrically conductive metal
- Used to precisely determine the edge of a workpiece (zero setting)
- Hardened shank and contact ball

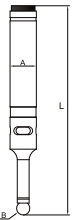
| Code      | Shank(A) | Contact ball(B) | length | Beeper | Accuracy |
|-----------|----------|-----------------|--------|--------|----------|
| 5760-1005 | q20      | Sq10            | 160    | with   | 0.005    |
| 5760-1015 | q20      | Sq10            | 100    | with   | 0.005    |

Unit:mm

ELECTRONIC EDGE FINDER

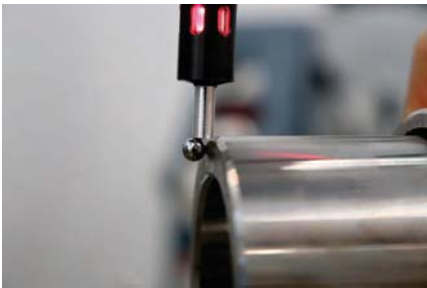


- Edge finder lights instantly when stylus touches work edge
- Six equally spaced light ports provide visibility at any angle
- Read off any electrically conductive metal
- Repeatability: 0.0002"

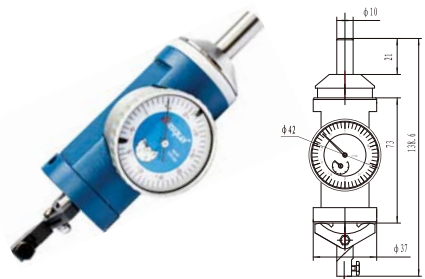


Unit:mm

| Code      | L     | A     | E     | Range    | Range   | Range  |
|-----------|-------|-------|-------|----------|---------|--------|
| 5761-0040 | 4.13" | φ1/2" | φ0.2" | ±0.0002" | without | 12Volt |
| 5761-0045 | 4.13" | φ1/2" | φ0.2" | ±0.0002" | without | 12Volt |
| 5761-0050 | 4.13" | φ3/4" | φ0.4" | ±0.0002" | with    | 12Volt |



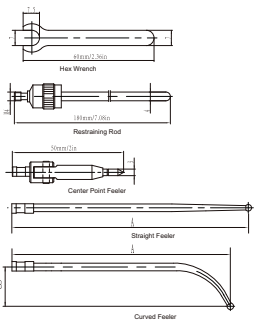
CENTERING INDICATOR GAUGE



| Code        | Range   | Graduation | Accuracy |
|-------------|---------|------------|----------|
| 5711-6100-A | 0-0.15" | 0.0005"    | 0.001"   |
| 5712-1100-A | 0-3mm   | 0.01mm     | 0.02mm   |

ACCESSORY

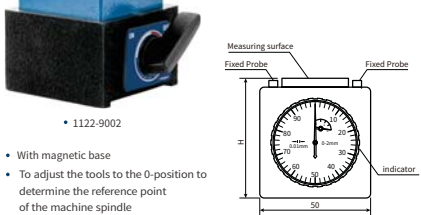
| Code      | Range                             | Graduation  | Accuracy                    |
|-----------|-----------------------------------|-------------|-----------------------------|
| 5712-1005 | inside probe                      | φ3mm/0.125" | 50mm/2"                     |
| 5712-1010 | inside probe                      | φ3mm/0.125" | 100mm/4"                    |
| 5712-1015 | inside probe                      | φ3mm/0.125" | 150mm/6"                    |
| 5712-1020 | outside probe                     | φ3mm/0.125" | 50mm/2"                     |
| 5712-1025 | outside probe                     | φ3mm/0.125" | 100mm/4"                    |
| 5712-1030 | outside probe                     | φ3mm/0.125" | 150mm/6"                    |
| 5712-1035 | centering probe                   | φ3mm/0.125" | 50mm/2"                     |
| 5712-1040 | restraining arm                   | φ4mm/0.157" | 150mm/6"                    |
| 5712-1045 | 3pcs inside & 3pcs outside probes | φ3mm/0.125" | 50mm/2", 100mm/4", 150mm/6" |



ZERO SETTING DEVICE



• 1122-9001



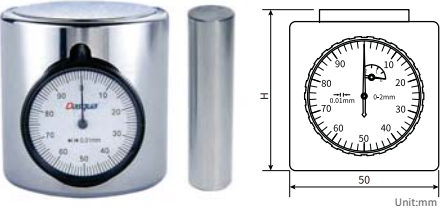
• 1122-9002

- With magnetic base
- To adjust the tools to the 0-position to determine the reference point of the machine spindle
- No feeler gauge or starting contact is needed
- Spring loaded setting face
- Mechanical zero-setting instrument for CNC machine centers
- Low spring force to prevent cutting tool from damage

| Code      | Range | Graduation | Height | Remark                    |
|-----------|-------|------------|--------|---------------------------|
| 1122-9001 | 0-2   | 0.01       | 50     | Magnetic base             |
| 1122-9002 | 0-2   | 0.01       | 100    | Magnetic base with switch |

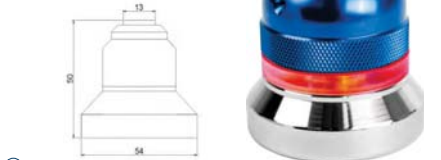
Unit:mm

ZERO SETTING DEVICES



| Code      | Range | Resolution | H  | Diam of measuring surface | Accuracy |
|-----------|-------|------------|----|---------------------------|----------|
| 1801-1015 | 0-2mm | 0.01       | 50 | 43                        | ±0.02    |

ELECTRONIC ZERO SETTING DEVICES WITH LUMINOUS LED



- 360 degree red lamp lights up when touched
- Magnetic base to prevent skid and improve work efficiency
- Battery: 23A 12V

| Code      | height | test face diameter | base diameter | Accuracy |
|-----------|--------|--------------------|---------------|----------|
| 1122-9003 | 50     | φ13                | φ54           | ±0.003   |

Unit:mm

# DIGITAL ZERO SETTING DEVICE

## WITH 0.001MM RESOLUTION



- Accuracy (tolerance range):  $\pm 0.002\text{mm}/0.0001''$
- Repeatability:  $0.003\text{mm}/0.0001''$
- 3V Lithium battery CR2032



- **RESOLUTION REACHES 0.001MM**  
Higher than other zero setting devices
- **USED TO HELP TOOL SETTING**  
Can be used in IP65 working environment (with inductive measurement against splash water) and will not damage the tool edge
- **LIGHTING INDICATING AT "0"**  
More obvious and accurate compared with mechanic zero setting device



| Code      | Height | Resolution     |
|-----------|--------|----------------|
| 1801-1005 | 50     | 0.001/0.00005" |
| 1801-1010 | 100    | 0.001/0.00005" |

Unit: mm



- Provided in fitted aluminum case



- Height of 100mm optional



- **With magnetic base**  
Fixed on machine steadily and shorten tool setting time and improve work efficiency greatly

# PREMIUM MAGNETIC PARALLEL SET WITH HANDLE



Patented design for easy installation and disassemble

- Higher Accuracy from Dasqua
- Height tolerance:  $\pm 0.005\text{mm}$  Width tolerance:  $\pm 0.01\text{mm}$
- Hardness: 55-60HRC



BEFORE USE



IN USE



- **Newly designed embeded magnets**  
leaving your hands for clamping and setting up reduce the clamping time significantly

| Code        | Amount(Pairs) | Length | Width          | Thickness |
|-------------|---------------|--------|----------------|-----------|
| 1801-0105-A | 5             | 100    | 15,22,25,30,32 | 2.5       |
| 1801-0110-A | 5             | 125    | 15,30,35,37,39 | 2.5       |
| 1801-0115-A | 5             | 150    | 25,35,40,45,47 | 2.5       |

Unit:mm



SETTING UP TOOLS BORN IN ITALY, RAISED BY THE WORLD

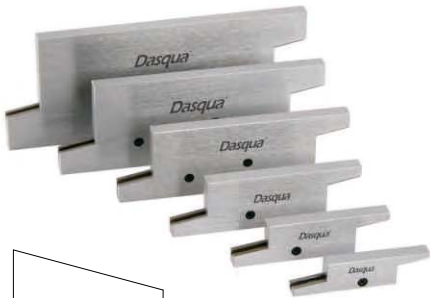
EXTRA THIN PREMIUM  
PARALLEL SET



- Come with 10 Pairs Precision Ultra Thin Parallel Set
- Made of premium alloy steel, hardened, stress-relieved, precision ground, used in pairs
- With high perpendicularity, parallelism, dimension accuracy, convenient to use and maintain
- Easy to operate during the drilling, milling, assembling work, convenient to clamp workpiece, and provide the reliable and accurate position for workpiece
- Accuracy: Height $\pm 0.01$ mm, thickness $\pm 0.01$ mm, use in pairs:  $\pm 0.01$ mm (height/thickness)
- Edges are slightly beveled
- Superior surface finish: Ra0.4um, high hardness: 56-61HRC, long service life

| Unit:mm   |               |                    |                                                           |  |
|-----------|---------------|--------------------|-----------------------------------------------------------|--|
| Code      | Amount(Pairs) | Thickness x Length | Height                                                    |  |
| 8201-0005 | 10            | 0.8 x 150          | 12,14,16,18,20,22,24,26,28,30                             |  |
| 8202-0005 | 10            | 1/32" x 6"         | 1/2",5/8",3/4",7/8",1",1-1/8",1-1/4",1-3/8",1-1/2"&1-5/8" |  |

6PCS/SET ADJUSTABLE  
PARALLEL SET



- Quickly Adjustable, and locked with set screws for micromoment
- For layout, inspection, stop work, set-up, etc.

| Unit:mm   |                   |              |            |             |               |
|-----------|-------------------|--------------|------------|-------------|---------------|
| Code      | Range             | L            | Thickness  | Parallelism | Tolerance     |
| 8405-2005 | 3/8" to 1/2"      | 1.78"/45mm.  | 0.275"/7mm | 0.0004"     | $\pm 0.0005"$ |
|           | 1/2" to 11/16"    | 2.13"/54mm.  |            |             |               |
|           | 11/16" to 15/16"  | 2.72"/69mm.  |            |             |               |
|           | 15/16" to 1-5/16" | 3.54"/90mm.  |            |             |               |
|           | 1-5/16" to 1-3/4" | 4.21"/107mm. |            |             |               |
|           | 1-3/4" to 2-1/4"  | 4.61"/117mm  |            |             |               |

PREMIUM PARALLEL SET  
WITH ALU.CASE

- Premium alloy steel, hardened and quenched, hardness of 58-63HRC, long service life
- Edges are slightly lapped for anti-collision.
- Fitted black aluminium case

| Unit:mm   |                 |                    |                                                                            |
|-----------|-----------------|--------------------|----------------------------------------------------------------------------|
| Code      | Quantity(Pairs) | Thickness x Length | Height                                                                     |
| 8203-0010 | 14              | 10 x 150           | 14,16,18,20,22,24,26,28,30,32,35,40,45,50                                  |
| 8203-0025 | 14              | 4 x 150            | 14,16,18,20,22,24,26,28,30,32,35,40,45,50                                  |
| 8203-0030 | 9               | 8.5 x 150          | 14,16,20,24,30,32,36,40,44                                                 |
| 8204-0010 | 9               | 1/4"x6"            | 3/4",7/8",1",1-1/8",1-1/4",1-3/8",1-1/2",1-5/8",1-3/4"                     |
| 8204-0015 | 10              | 1/8"x6"            | 1/2",5/8",3/4",7/8",1",1-1/8",1-1/4",1-3/8",1-1/2",1-5/8"                  |
| 8204-0025 | 4               | 3/16"x6"           | 1",1-1/4",1-1/2",1-3/4"                                                    |
| 8204-0027 | 11              | 3/32"x6"           | 1/2", 5/8", 3/4", 7/8", 1", 1-1/8", 1-1/4", 1-3/8", 1-1/2", 1-5/8", 1-3/4" |

- Precision ground with high accuracy: height  $\pm 0.01$ mm, parallelism  $\pm 0.005$ mm, use in pairs:  $\pm 0.01$ mm (height) with Inspection report (optional)



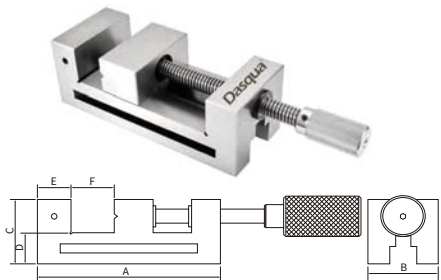
- Round chamfer to protect operators' hands from scratch



LONG HIGH SERVICE LIFE  
HARDNESS



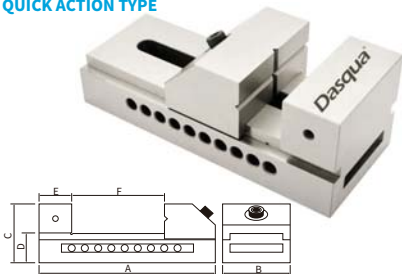
PRECISION TOOLMAKERS  
VICE-SCREW GUIDE TYPE



- Hardened and stabilized
- Precision ground to a mirror finish
- Squareness of the vice is within 0.005mm and parallelism of the all critical sidest
- Horizontal and Vertical V moveable jaws are provided for holding the round/square partst
- Jaw pressure on workpiece is forward and downward for repeatable positioning and maximum holding power
- Particularly suitable for erosion work
- Can be used on base, either side, end and top

| Unit:mm   |     |     |     |    |    |       |        |
|-----------|-----|-----|-----|----|----|-------|--------|
| Code      | A   | B   | C   | D  | E  | F     | Weight |
| 8802-5105 | 156 | 50  | 52  | 27 | 25 | 0-63  | 2.3kg  |
| 8802-5110 | 176 | 63  | 63  | 33 | 30 | 0-73  | 4.0kg  |
| 8802-5115 | 190 | 73  | 73  | 38 | 35 | 0-76  | 5.5kg  |
| 8802-5118 | 250 | 88  | 80  | 38 | 40 | 0-115 | 10.0kg |
| 8802-5120 | 255 | 100 | 82  | 42 | 40 | 0-120 | 11.0kg |
| 8802-5123 | 310 | 125 | 100 | 50 | 50 | 0-152 | 18.3kg |
| 8802-5125 | 325 | 150 | 199 | 50 | 50 | 0-165 | 20.0kg |

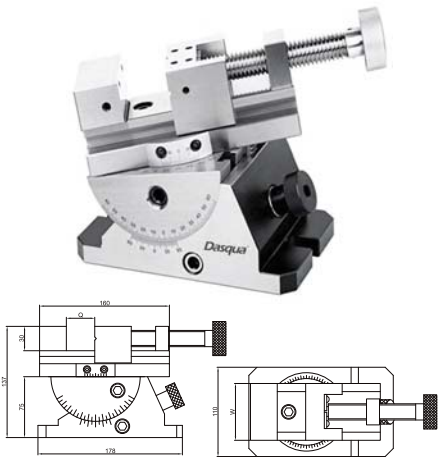
PRECISION TOOLMAKERS VICE  
QUICK ACTION TYPE



- Hardened and stabilized
- Precision ground to a mirror finish
- Squareness of the vice is within 0.005mm and parallelism of the vice is within 0.003mm on all critical sidest
- Positive download and rapid positioning notches for free Jaw movement
- Horizontal and Vertical V moveable jaws are provided for holding the round/square parts
- Locking Screw provided at the Vice base for adjustable positions of the moveable Jaw
- The rapid positioning notches allow the vice to be locked in any position by means of an allen key provided with the vice
- Jaw pressure on work piece is forward and downward for repeatable positioning and maximum holding power
- Particularly suitable for erosion work
- Can be used on base, either side, end and top

| Unit:mm   |     |     |     |    |    |       |        |
|-----------|-----|-----|-----|----|----|-------|--------|
| Code      | A   | B   | C   | D  | E  | F     | Weight |
| 8802-1105 | 150 | 50  | 53  | 28 | 30 | 0-80  | 1.6kg  |
| 8802-1110 | 175 | 63  | 63  | 31 | 35 | 0-90  | 2.9kg  |
| 8802-1115 | 190 | 73  | 70  | 35 | 35 | 0-100 | 4.3kg  |
| 8802-1118 | 235 | 88  | 80  | 40 | 40 | 0-130 | 6.5kg  |
| 8802-1120 | 245 | 100 | 90  | 45 | 45 | 0-130 | 10kg   |
| 8802-1125 | 285 | 125 | 100 | 45 | 45 | 0-160 | 15kg   |
| 8802-1130 | 330 | 150 | 100 | 50 | 50 | 0-180 | 20kg   |

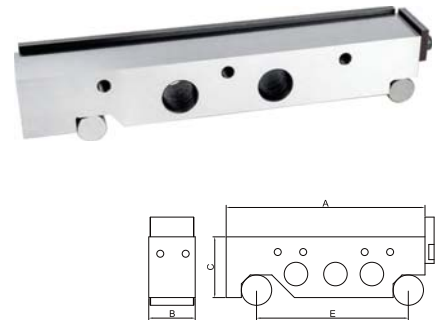
UNIVERSAL PRECISION VISE



- Including precision vise and a swivel angle plate base
- Vise is capable of revolving 360 degrees horizontally with a 3° graduation engraved
- ±45degree vertical with a 3° graduation engraved
- L-wrench included for locking vise horizontal at any position
- Vertical angle can be adjusted with fine adjustment knob
- Hardness HRC56-68, Hardened and ground

| Unit:mm   |               |              |              |              |              |              |              |              |  |
|-----------|---------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--|
| Code      | Jaw width     | Jaw opening  | Jaw depth    | Height       | Width        | Length       | Parallelism  | Squareness   |  |
| 8802-0005 | 70mm / 2-3/4" | 80mm / 3.15" | 30mm / 1.18" | 130mm / 5.1" | 110mm / 4.3" | 160mm / 6.3" | 0.05mm/100mm | 0.01mm/100mm |  |

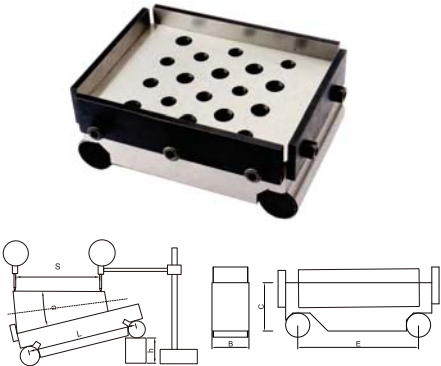
SINE BAR



- Roughness of the surface (Ra) is 0.8µm
- Sine bars are made from a high metal corrosion resistant steel, and is hardened, precision ground, and stabilized
- A sine bar is used either to measure an angle very accurately or face locate any work to a given angle
- A sine bar is used in conjunction with slip gauge blocks for precise angular measurement

| Unit:mm   |                 |     |    |    |                             |  |
|-----------|-----------------|-----|----|----|-----------------------------|--|
| Code      | Roller distance | A   | B  | H  | Accuracy of roller distance |  |
| 8405-0005 | 100             | 130 | 25 | 30 | ±0.0035                     |  |
| 8405-0010 | 200             | 250 | 40 | 45 | ±0.0050                     |  |

SINE BAR



- Sine bars are made from a high metal corrosion resistant steel, and is hardened, precision ground, and stabilized
- A sine bar is used either to measure an angle very accurately or face locate any work to a given angle
- A sine bar is used in conjunction with slip gauge blocks for precise angular measurement

| Unit:mm   |                 |    |    |        |
|-----------|-----------------|----|----|--------|
| Code      | Roller distance | B  | C  | weight |
| 8405-0015 | 100             | 40 | 80 | 3.5kg  |

SINE PLATE OF 45°



- Popular used for inspecting the milling machine and grinding machine
- Hardened steel, precision ground.
- Parallelism:100:0.001mm
- Perpendicular:100:0.003mm
- HRC:58-62°

| Code      | Length*Width*Height | Weight(KG) |
|-----------|---------------------|------------|
| 8405-1005 | 150*75*50mm         | 4          |
| 8405-1010 | 150*150*50mm        | 8          |
| 8405-1015 | 150*300*65mm        | 21         |
| 8405-1020 | 300*150*65mm        | 2.5        |
| 8405-1025 | 300*200*65mm        | 27         |
| 8405-1030 | 300*300*65mm        | 42         |

DOUBLE SINE PLATE OF 45°



- Popular used for inspecting the milling machine and grinding machine
- Hardened steel, precision ground.
- Parallelism:100:0.001mm
- Perpendicular:100:0.003mm
- HRC:58-62°

| Code      | Length*Width*Height |
|-----------|---------------------|
| 8405-1035 | 150*150*80mm        |
| 8405-1040 | 300*150*106mm       |

1-2-3 BLOCKS



- Hardened and precision ground on all 6 sides of each block
- Heat treated and case hardened to HRC 58-62
- Including 5 tapped holes that are 3/8-16 for clamping and 18 untapped holes
- Cross drilling design gives minimum weight and maximum strength

| Code        | Size       | Holes | Squareness   | Tolerance | Parallelism | Height of pair |
|-------------|------------|-------|--------------|-----------|-------------|----------------|
| 8407-2005   | 25/50/75mm | 23    | 0.003mm/25mm | ±0.005mm  | 0.005mm     | 0.005mm        |
| 8407-2010   | 25/50/75mm | 23    | 0.008mm/25mm | ±0.005mm  | 0.005mm     | 0.005mm        |
| 8407-0005-A | 1-2-3"     | 23    | 0.0001"/1"   | ±0.0002"  | 0.0002"     | 0.0002"        |
| 8407-0010-A | 1-2-3"     | 23    | 0.0003"/1"   | ±0.0002"  | 0.0002"     | 0.0002"        |
| 8407-0015   | 1-2-3"     | 11    | 0.0003"/1"   | ±0.0002"  | 0.0002"     | 0.0002"        |
| 8407-0020   | 1-2-3"     | 1     | 0.0003"/1"   | ±0.0002"  | 0.0002"     | 0.0002"        |
| 8407-0025   | 1-2-3"     | NO    | 0.0003"/1"   | ±0.0002"  | 0.0002"     | 0.0002"        |



2-3-4 BLOCKS



Unit:mm

| Code      | Size   | Holes | Squareness | Tolerance | Parallelism | Height of pair |
|-----------|--------|-------|------------|-----------|-------------|----------------|
| 8407-0030 | 2-3-4" | 23    | 0.0003"/1" | ±0.0003"  | 0.0002"     | 0.0002"        |

2-4-6 BLOCKS



Unit:mm

| Code      | Size         | Holes | Squareness   | Tolerance | Parallelism | Height of pair |
|-----------|--------------|-------|--------------|-----------|-------------|----------------|
| 8407-0035 | 2-4-6"       | 23    | 0.0003"/1"   | ±0.0005"  | 0.0002"     | 0.0002"        |
| 8407-0050 | 50/100/150mm | 23    | 0.008mm/25mm | ±0.005mm  | 0.005mm     | 0.005mm        |

PRECISION SET-UP BLOCKS  
WITH CAP BOLTS SET



Unit:mm

| Code      | Size                                        | Holes | Squareness | Tolerance | Parallelism | Height of pair |
|-----------|---------------------------------------------|-------|------------|-----------|-------------|----------------|
| 8407-0040 | 2 Pcs 123 Blocks,<br>5 Cap Bolts, 1 Hex Key | 23    | 0.0003"/1" | ±0.0002"  | 0.0002"     | 0.0002"        |

1-2-3 BLOCK PAIR & 10 PCS  
THIN PARALELL SET



This set includes 1-2-3 Blocks (1 Pair) 23 Holes & 1/8" 10 Pcs. Thin Parallel Set in a durable aluminium case.

- 1-2-3 Blocks:**
- 23 holes consists of 5 tapped holes that are 3/8-16 for clamping and 18 untapped holes
  - Hardened and precision Ground on all 6 sides of each block
  - Product Dimensions: 1"x2"x3"
  - Heat treated and case hardened to HRC 58-62
  - Tolerance of size ±0.0002", parallelism 0.0002", Height of pair 0.0002"
- 1/8" 10 Pcs. Thin Parallel Set**
- Premium alloy steel, hardened and quenched, hardness of 58-63HRC, long service life
  - Edges are slightly lapped for anti-collision
  - Round chamfer to protect operators hands from scratch
  - Precision ground with high accuracy: height/width ±0.01mm, parallelism ±0.005mm, use in pairs: ±0.01mm (height/thickness) with inspection report (optional)
  - Includes 10 pairs of the following heights:  
1/2", 5/8", 3/4", 7/8", 1", 1-1/8", 1-1/4", 1-3/8", 1-1/2", 1-5/8"

Unit:mm

| Code      | Description               | Size            |
|-----------|---------------------------|-----------------|
| 8407-8201 | Block Pair & Parallel Set | 1"-2"-3" & 1/8" |

PRECISION SET-UP BLOCK SET 15PCS



- CNC Machined, black anodized aluminum
- Easy-to-read, laser-etched markings
- Block Thickness Accuracy: 0.001"/0.025mm
- Set-up blocks are especially handy where space is limited or the area you're working in is obstructed. If you have a job that requires precise setups even in an accessible area

| Code      | Range                                                                                                       |
|-----------|-------------------------------------------------------------------------------------------------------------|
| 1804-1610 | 3"x2"x1/16", 3/32", 1/8", 5/32", 3/16", 7/32", 1/4", 5/16", 3/8", 7/16", 15/32", 1/2", 23/32", 3/4", 1 inch |
| 1804-1605 | 75x12.5x1, 1.5, 2, 3, 4, 5, 6, 7, 8, 10, 12, 15, 18, 20, 25 mm                                              |

PRECISION SET-UP BLOCK SET



- Thickness 1/16", 1/18", 1/4", 1/2", 3/4" Width 1/2", length 2" (accuracy within 0.0002")
- 1-2-3 block (accuracy within 0.0002")
- Heat treated and case hardened to HRC 58-62
- Set-up blocks for measuring distance and align machine fixtures into parallel
- Woodworkers will find them effective in position drill press components, table saw jigs and router fences.

| Code      | Range                                                           |
|-----------|-----------------------------------------------------------------|
| 1804-1615 | Mainly used for router table drill press table, band saw fences |

V-BLOCK & CLAMP SET



- Made of premium hardened steel, stress-relieved and precision ground in pairs
- Flatness and parallelism  $\pm 0.01\text{mm}$
- V-angle 90° clamping brackets can be used to check cylindrical precision machined parts
- Contact faces are ground and lapped
- Supplied in pair

| Unit:mm   |                |        |        |        |
|-----------|----------------|--------|--------|--------|
| Code      | Clamping Range | H      | W      | L      |
| 8101-0005 | 5-36           | 36     | 40     | 45     |
| 8101-0010 | 6-45           | 40     | 45     | 70     |
| 8101-0015 | 6-48           | 44     | 63     | 70     |
| 8101-0020 | 6-80           | 70     | 89     | 124    |
| 8101-2005 | 1"             | 1-3/8" | 1-3/4" | 1-5/8" |
| 8101-2010 | 1-1/2"         | 1-5/8" | 1-3/4" | 2-3/4" |
| 8101-2015 | 1-1/2"         | 1-3/4" | 2-1/2" | 2-3/4" |
| 8101-2020 | 2-1/8"         | 2-3/4" | 3-1/2" | 4-7/8" |

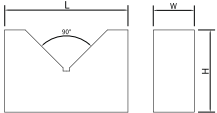
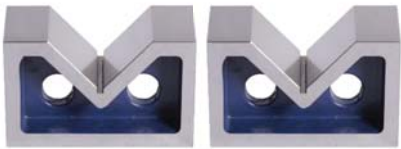
V-BLOCK & CLAMP SET



- Supplied in pair
- Hardness HRC 52-58
- Flatness and parallelism  $\pm 0.01\text{mm}$
- Stepped groove construction permits low or high clamping
- Made of premium hardened steel, stress-relieved and precision ground in pairs
- V-angle 90° clamping brackets can be used to check cylindrical precision machined parts

| Unit:mm   |                       |         |        |        |
|-----------|-----------------------|---------|--------|--------|
| Code      | Clamping range $\phi$ | H       | W      | L      |
| 8741-4105 | 3-15mm                | 30mm    | 35mm   | 35mm   |
| 8741-4110 | 4-30mm                | 50mm    | 60mm   | 60mm   |
| 8741-4130 | 6-65mm                | 76mm    | 76mm   | 100mm  |
| 8741-4115 | 6-65mm                | 78mm    | 105mm  | 105mm  |
| 8741-2105 | 3-15mm                | 1-3/16" | 1-3/8" | 1-3/8" |
| 8741-2110 | 4-30mm                | 2"      | 2-3/8" | 2-3/8" |
| 8741-2130 | 6-65mm                | 3"      | 3"     | 4"     |
| 8741-2115 | 6-65mm                | 3-1/16" | 4-1/8" | 4-1/8" |

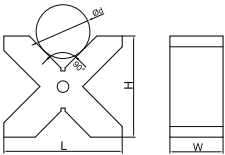
V-BLOCK



- Accuracy: 0.01mm, Squareness: 0.01mm
- Made of high quality casting, properly seasoned against distortion
- Machined square and parallel to meet standard specifications
- Supplied in pair

| Unit:mm   |                |         |        |       |
|-----------|----------------|---------|--------|-------|
| Code      | Clamping range | H       | W      | L     |
| 8321-3005 | 6-54           | 7/8"    | 1-1/4" | 2"    |
| 8321-3010 | 8-56           | 1-5/16" | 2-3/8" | 3"    |
| 8321-3015 | 10-72          | 1-5/8"  | 2-5/8" | 4"    |
| 8321-3020 | 10-80          | 2"      | 3-1/8" | 5"    |
| 8321-3025 | 10-100         | 2-1/2"  | 3-1/2" | 6"    |
| 8560-0005 | 6-54           | 32mm    | 23mm   | 50mm  |
| 8560-0010 | 5-44           | 30mm    | 53mm   | 75mm  |
| 8560-0015 | 10-60          | 38mm    | 60mm   | 100mm |
| 8560-0020 | 10-74          | 46mm    | 79mm   | 125mm |
| 8560-0025 | 10-104         | 57mm    | 88mm   | 150mm |

V-BLOCK



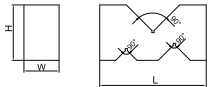
- Supplied in pair
- Hardness: HRC52-58
- Accuracy: 0.01mm
- Squareness: 0.01mm

| Unit:mm   |                |     |     |     |
|-----------|----------------|-----|-----|-----|
| Code      | Clamping range | H   | W   | H   |
| 8321-5005 | 5-20           | 38  | 38  | 30  |
| 8321-5010 | 6-50           | 80  | 80  | 50  |
| 8321-5015 | 6-68           | 100 | 100 | 60  |
| 8321-5020 | 8-120          | 130 | 75  | 150 |
| 8321-5025 | 12-180         | 170 | 90  | 200 |

V-BLOCK

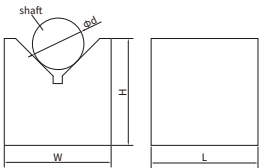


- Supplied in pair
- Accuracy: 0.01mm
- Squareness: 0.01mm



| Unit:mm   |                |    |     |     |
|-----------|----------------|----|-----|-----|
| Code      | Clamping range | H  | W   | L   |
| 8123-0065 | 4-54           | 37 | 35  | 75  |
| 8123-0070 | 8-68           | 33 | 52  | 100 |
| 8123-0075 | 8-80           | 44 | 69  | 125 |
| 8123-0080 | 8-100          | 50 | 80  | 150 |
| 8123-0085 | 8-136          | 70 | 110 | 200 |

GRANITE V-BLOCK SET

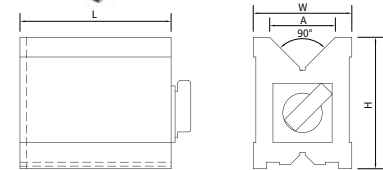


- Supplied in pair
- Made of granite, hard and no rusty, no dimensional change over time or temperature change
- With V-cut 90°, finely ground
- Side- and front-faces angular ground in regard to base area
- Ideal for testing cylinder

| Code      | L x W x H   | Range of shafts(φd) | Parallelism of V groove to bottom | Height difference of a matched pair | Grade |
|-----------|-------------|---------------------|-----------------------------------|-------------------------------------|-------|
| 8321-1005 | 70x50x70    | 5-45                | 0.003                             | 0.003                               | 00    |
| 8321-1010 | 100x50x70   | 5-45                | 0.004                             | 0.003                               | 00    |
| 8321-2005 | 50x50x65    | 6-70                | 0.004                             | 0.005                               | 00    |
| 8321-2010 | 75x75x75    | 6-84                | 0.004                             | 0.005                               | 00    |
| 8321-2015 | 150x150x150 | 6-130               | 0.004                             | 0.005                               | 00    |

Unit:mm

MAGNETIC V-BLOCK

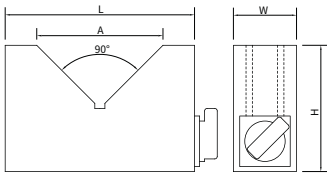


- All working surfaces are hardened
- Magnetic force on top, bottom and two V grooves
- Magnetic Measuring and Clamping V-Block
- Hardened, high accuracy, strong magnetic force for grinding, light milling, drilling and inspection of round and square jobs
- V groove on the top for large shafts V groove on the bottom for small shafts
- Magnet has an On/O fswitch which easily and quickly engages / releases magnet
- Suitable for cast iron surface plates

Unit:mm

| Code      | Holding power | L   | W  | H   | A  | Weight |
|-----------|---------------|-----|----|-----|----|--------|
| 8561-2005 | 70kg          | 100 | 70 | 95  | 46 | 4.0kg  |
| 8561-2010 | 80kg          | 115 | 75 | 100 | 50 | 5.2kg  |
| 8561-2015 | 60kg          | 70  | 60 | 72  | 36 | 1.6kg  |

MAGNETIC V-BLOCK SET

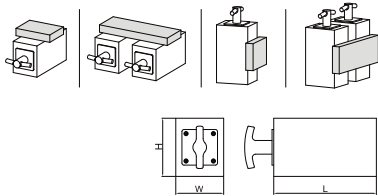


- Made of high quality steel and copper
- Magnet has an On/Off switch which easily and quickly engages / releases magnet
- Precision ground and lapped in pairs to ensure same size
- Both V-grooved part and bottom face have magnetic force

Unit:mm

| Code      | Holding power | L x W x H        | A   | Applicable Dia | weight |
|-----------|---------------|------------------|-----|----------------|--------|
| 8561-2030 | 15kg          | 70x40x50(2pcs)   | 34  | φ50            | 1kgx2  |
| 8561-2035 | 23kg          | 150x50x100(2pcs) | 100 | φ100           | 5kgx2  |

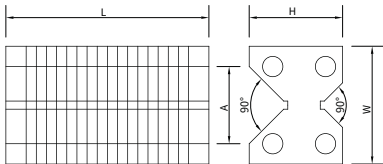
MAGNETIC RECTANGULAR BLOCKS



- Hardness HRC58-62
- Designed with 3 meticulously ground magnetic surfaces, ensuring a stable and reliable grip for precise measurements

| Unit:mm   |               |                          |                   |             |
|-----------|---------------|--------------------------|-------------------|-------------|
| Code      | Holding power | H x W x L                | Height difference | Parallelism |
| 8123-0035 | 100kgf        | 70x70x100 (Single Piece) | 0.005             | 0.005       |
| 8123-0040 | 125kgf        | 85x70x150 (2 Pcs/Set)    | 0.005             | 0.005       |

MAGNETIC INDUCTION V-BLOCK



- All working surfaces are hardened, precision ground
- For use on magnetic chucks
- These fine V-Blocks are now made universal holds in any direction on the magnetic chuck
- Integrally aluminum cast into one solid piece ground all over and series numbered in pairs

| Unit:mm   |                            |    |                |         |
|-----------|----------------------------|----|----------------|---------|
| Code      | L x W x H                  | A  | Material       | Weight  |
| 8561-2020 | 100x58x46/4"x2-1/4"x1-4/5" | 38 | Steel/Aluminum | 1.2kg   |
| 8561-2025 | 50x58x46/2"x2-1/4"x1-4/5"  | 38 | Steel/Aluminum | 0.6kgx2 |

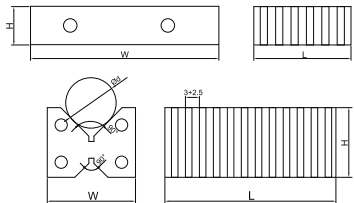
MAGNETIC INDUCTION PARALLEL SET

- Hardness HRB70
- supplied in pair



| Unit:mm   |                    |                |         |            |                   |
|-----------|--------------------|----------------|---------|------------|-------------------|
| Code      | L x W x H          | Material       | Weight  | Pole pitch | Height difference |
| 8123-0025 | 100x50x25/4"x2"x1" | Steel/Aluminum | 0.6kgx2 | 2.5+3mm    | 0.01              |
| 8123-0030 | 50x100x25/2"x4"x1" | Steel/Aluminum | 0.6kgx2 | 2.5+3mm    | 0.01              |

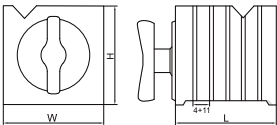
4PCS/SET(MAG.INDUCTION V-BLOCK+MAGNETIC INDUCTION PARALLEL)



- Hardness HRB70
- Supplied in pair

| Unit:mm   |           |                           |                |            |                   |
|-----------|-----------|---------------------------|----------------|------------|-------------------|
| Code      | Including | L x W x H                 | Clamping range | Pole pitch | Height difference |
| 8123-0105 | 8123-0025 | 100x50x25/4"x2"x1"        | /              | 2.5+3mm    | 0.01              |
|           | 8561-2025 | 50x58x46/2"x2-1/4"x1-4/5" | 6-50mm         | 2.5+3mm    | 0.01              |

MAGNETIC SQUARE V-BLOCK



- Perform high precision measuring operations without damaging the part
- Faces are precision ground for maximum accuracy
- Fast workholding for light machining operations on plate or round steel
- V-grooves, top, and both sides, and bottom, are magnetized

Unit:mm

| Code      | Holding power (V-groove) | Holding power (Surface) | L x W x H     | Material     | Weight |
|-----------|--------------------------|-------------------------|---------------|--------------|--------|
| 8123-0090 | 25kg                     | /                       | 100x100x100mm | Copper/Steel | 7kg    |
| 8123-0095 | 50kg                     | 6-50mm                  | 150x150x150mm | Copper/Steel | 25kg   |

HEAVY DUTY PRECISION BENCH CENTER



- Used to make fast and precise checks of runout on cylindrical/tapered parts
- Base and center-stocks are made of stress-relieved and aged cast iron
- Centers are made of hardened and precision ground steel
- Extra heavy duty adjustable indicator holder included
- Quick release centers, #2 Morse taper centers
- Head stock can be adjusted lengthwise and locked securely in any position by special lever type handle

Unit:mm

| Code      | Distance between two centers | Center height | Range | Accuracy        |                 |
|-----------|------------------------------|---------------|-------|-----------------|-----------------|
|           |                              |               |       | Parallelism(μm) | Verticality(μm) |
| 7851-0005 | 200                          | 100           | φ200  | ≤8              | ≤5              |
| 7851-0006 | 300                          | 100           | φ200  | ≤8              | ≤5              |
| 7851-0007 | 300                          | 170           | φ340  | ≤8              | ≤5              |
| 7851-0008 | 300                          | 300           | φ600  | ≤8              | ≤5              |
| 7851-0009 | 500                          | 170           | φ340  | ≤8              | ≤5              |
| 7851-0011 | 500                          | 300           | φ600  | ≤8              | ≤5              |
| 7851-0013 | 1000                         | 300           | φ600  | ≤10             | ≤8              |
| 7851-0014 | 1500                         | 250           | φ500  | ≤20             | ≤16             |
| 7851-0015 | 2000                         | 230           | φ460  | ≤30             | ≤20             |
| 7851-0016 | 2500                         | 300           | φ560  | ≤30             | ≤30             |

CONCENTRICITY GAUGE WITH CAST IRON BASE



- Hardened cast-iron guide surface
- Movable column
- V-slot for cylinder Ø4-Ø22mm

Unit:mm

| Code      | Center Height | Distance between two centers | Parallelism | Vertical accuracy | Runout accuracy | Taper of center | Dimension |
|-----------|---------------|------------------------------|-------------|-------------------|-----------------|-----------------|-----------|
| 7851-2005 | 300           | 80                           | 0.01        | 0.015             | 0.003           | 545°135°174     | 15.7      |

CONCENTRICITY GAUGE WITH GRANITE BASE



- Granite guide surface
- Movable column
- Maximum workpiece diameter 250mm

Unit:mm

| Code      | Center Height | Distance between two centers | Parallelism | Vertical accuracy | Runout accuracy | Taper of center | Dimension    |
|-----------|---------------|------------------------------|-------------|-------------------|-----------------|-----------------|--------------|
| 7851-2010 | 130           | 1000                         | 0.01        | 0.012             | 0.003           | MT3C18          | 1340°280°113 |

GRANITE SQUARE 90°



- Used to check squareness
- Holes are made to reduce weight so easy to handle and carry
- Made of natural granite, with two sides precision ground

| Unit:mm   |                 |                                                      |       |
|-----------|-----------------|------------------------------------------------------|-------|
| Code      | Size(H x W x D) | Squareness between meaning surface and datum surface | Grade |
| 9211-3005 | 250x160x40      | 0.002                                                | 00    |
| 9211-3010 | 400x250x50      | 0.003                                                | 00    |
| 9211-3015 | 630x400x50      | 0.004                                                | 00    |
| 9213-4005 | 250x160x40      | 0.005                                                | 0     |
| 9213-4010 | 400x250x50      | 0.007                                                | 0     |
| 9213-4015 | 630x400x50      | 0.009                                                | 0     |

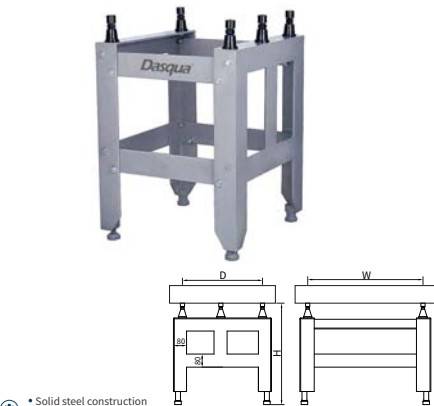
GRANITE SURFACE PLATE



- Meet DIN876, grade 00 is for inspection room or lab, grade 0 is for workshop
- Made of granite, free from deterioration or dimensional change over time, minimal changes in dimension due to temperature changes
- High density structure thus extremely homogeneous
- Surface plate is lapped and has a satin matt finish to prevent glare
- 100% corrosion proof
- Non-magnetic and non-conductive
- Measuring instruments and test equipment are easy to slide over surface
- For measuring tasks, layout work, touching up and lapping precision parts
- Optional accessory: stand for granite surface plate, jack for granite surface plate
- Supplied with calibration certificate

| Unit:mm   |              |                     |           |              |                    |
|-----------|--------------|---------------------|-----------|--------------|--------------------|
| Code      | L x W x H    | Flatness (Grade 00) | Code      | L x W x H    | Flatness (Grade 0) |
| 8500-3020 | 300x200x60   | 0.0027              | 8730-3020 | 300x200x60   | 0.0054             |
| 8500-4025 | 400x250x60   | 0.0029              | 8730-4025 | 400x250x60   | 0.0059             |
| 8500-4040 | 400x400x60   | 0.0031              | 8730-4040 | 400x400x60   | 0.0063             |
| 8500-5032 | 500x315x70   | 0.0032              | 8730-5032 | 500x315x70   | 0.0064             |
| 8500-6340 | 630x400x80   | 0.0035              | 8730-6340 | 630x400x80   | 0.0070             |
| 8500-6363 | 630x630x100  | 0.0038              | 8730-6363 | 630x630x100  | 0.0076             |
| 8500-8050 | 800x500x100  | 0.0039              | 8730-8050 | 800x500x100  | 0.0078             |
| 8500-1063 | 1000x630x140 | 0.0044              | 8730-1063 | 1000x630x140 | 0.0087             |

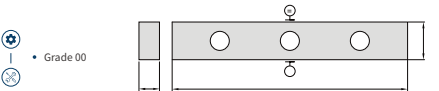
GRANITE PLATE STAND



- Solid steel construction
- For medium size granite surface plates
- One foot on the bottom is adjustable
- Adjusting range of jacks

| Unit:mm   |                                         |                   |
|-----------|-----------------------------------------|-------------------|
| Code      | For granite surface plate               | W x D x H         |
| 8295-0005 | 630x400x80 (code 8500-6340,8730-6340)   | 350x222x(700-725) |
| 8295-0010 | 630x630x100 (code 8500-6363,8730-6363)  | 350x350x(680-705) |
| 8295-0015 | 800x500x100 (code 8500-8050,8730-8050)  | 444x277x(680-705) |
| 8295-0020 | 1000x630x140 (code 8500-1063,8730-1063) | 555x350x(620-645) |
| 8295-1005 | 630x400x80 (code 8500-6340,8730-6340)   | 350x222x(930-955) |
| 8295-1010 | 630x630x100 (code 8500-6363,8730-6363)  | 350x350x(910-935) |
| 8295-1015 | 800x500x100 (code 8500-8050,8730-8050)  | 444x277x(910-935) |
| 8295-1020 | 1000x630x140 (code 8500-1063,8730-1063) | 555x350x(870-895) |

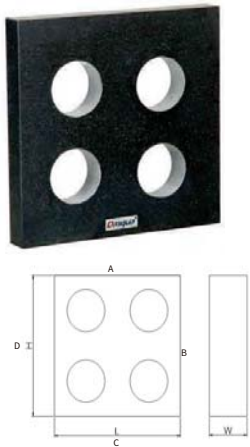
GRANITE STRAIGHT EDGE



| Unit:mm   |                |          |             |
|-----------|----------------|----------|-------------|
| Code      | Dimension      | Flatness | Parallelism |
| 8340-0015 | 500x50x80mm    | 0.0018mm | 0.0027mm    |
| 8340-0020 | 1000x60x120mm  | 0.003mm  | 0.0045mm    |
| 8340-0005 | 1000x300x300mm | 0.003mm  | 0.0045mm    |
| 8340-0010 | 1000x160x50mm  | 0.003mm  | 0.0045mm    |



GRANITE SQUARE



- Two large faces & four edges flat, square and parallel to each other, with lightening holes
- Made to manufacturer's spec available in custom sizes and thickness, with or without lightening holes

| Unit:mm     |            |                                 |                       |                                  |       |
|-------------|------------|---------------------------------|-----------------------|----------------------------------|-------|
| Code        | L x H x W  | Squareness between A, B,C and D | Flatness A, B,C and D | Parallelism between A, B,C and D | Grade |
| 8610-3030-A | 300x300x30 | 5.2µm                           | 2.3µm                 | 5.5µm                            | 0     |
| 8600-3232   | 315x315x40 | 2.6µm                           | 1.1µm                 | 2.6µm                            | 00    |
| 8600-8080   | 800x800x80 | 4.2µm                           | 2.1µm                 | 4.2µm                            | 00    |

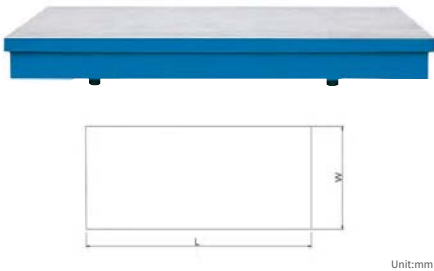
CAST IRON STRAIGHT EDGE



- With certificate

| Unit:mm   |             |          |             |       |
|-----------|-------------|----------|-------------|-------|
| Code      | Dimension   | Flatness | Parallelism | Grade |
| 8123-0045 | 500x50x70   | 0.006    | 0.010       | 0     |
| 8123-0050 | 1000x60x80  | 0.010    | 0.015       | 0     |
| 8123-0055 | 1500x60x87  | 0.015    | 0.020       | 1     |
| 8123-0060 | 2000x80x100 | 0.020    | 0.030       | 1     |

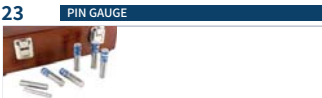
CAST IRON INSPECTION TABLE



| Code      | Dimension   | Flatness | Weight (kg) | Grade |
|-----------|-------------|----------|-------------|-------|
| 8123-1002 | 400x300mm   | 0.004    | 15          | 0     |
| 8123-1003 | 400x400mm   | 0.0045   | 18          | 0     |
| 8123-1004 | 200x200mm   | 0.003    | 9           | 0     |
| 8123-1005 | 200x300mm   | 0.0035   | 10          | 0     |
| 8123-1006 | 400x500mm   | 0.0045   | 21          | 0     |
| 8123-1007 | 400x600mm   | 0.005    | 24          | 0     |
| 8123-1008 | 500x800mm   | 0.0053   | 34          | 0     |
| 8123-1009 | 600x800mm   | 0.0055   | 48          | 0     |
| 8123-1010 | 600x900mm   | 0.0058   | 65          | 0     |
| 8123-1011 | 1000x750mm  | 0.0125   | 98          | 1     |
| 8123-1012 | 1000x1000mm | 0.014    | 145         | 1     |
| 8123-1013 | 1200x1000mm | 0.0145   | 170         | 1     |
| 8123-1014 | 1500x1000mm | 0.015    | 210         | 2     |
| 8123-1015 | 1000x2000mm | 0.025    | 290         | 2     |
| 8123-1016 | 1500x3000mm | 0.060    | 860         | 2     |
| 8123-1017 | 2000x4000mm | 0.121    | 2450        | 3     |
| 8123-1018 | 2000x5000mm | 0.130    | 4000        | 3     |

# THREADING AND GAUGE BLOCKS

BORN IN ITALY, RAISED BY THE WORLD



# GAUGES PRIME

ONE OF THE VERY FEW QUALIFIED THREADING GAUGE SUPPLIERS  
SERVING EUROPEAN INDUSTRIAL MARKET!

- All thread parameters per pitch inspection according to ISO thread DIN ISO 1502
- With calibration certificate

DIN ISO 1502

| CERTIFICATE              |                        |          |                        |                                                                                     | Dasqua                                                                               |  |
|--------------------------|------------------------|----------|------------------------|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|--|
| Cert. Nr.:               |                        |          | 190857984              |                                                                                     |                                                                                      |  |
| Measured object          | Internal Normal Thread |          | Left/Right Thread      |                                                                                     | Right                                                                                |  |
| Temperature              | 20                     |          | Nr of Starts           |                                                                                     | 1                                                                                    |  |
| Side                     | Go                     |          | Measurement            |                                                                                     |                                                                                      |  |
| Standard                 | DIN ISO 1502           |          | Flankpercentage(%)     |                                                                                     |                                                                                      |  |
| Type                     | M16x2-6g T             |          | Master Gauge           |                                                                                     |                                                                                      |  |
| Ident Number             |                        |          | Setting Gauge Diameter |                                                                                     |                                                                                      |  |
|                          | Min tol.               | Max tol. | Measured               | Graphical                                                                           |                                                                                      |  |
| Basic Major Diameter(mm) | 16.117                 | /        | 16.3141                |  |                                                                                      |  |
| Basic Minor Diameter(mm) | 13.788                 | 13.806   | 13.798                 |                                                                                     |                                                                                      |  |
| Basic Pitch Diameter(mm) | 14.646                 | 14.664   | 14.6579                |                                                                                     |                                                                                      |  |
| Pitch                    | 1.995                  | 2.005    |                        |                                                                                     |                                                                                      |  |
| Cumulative Pitch Error   | /                      |          |                        |                                                                                     |                                                                                      |  |
| Flank Angle              | 29°50'                 |          |                        |                                                                                     |  |  |
| Basic Major Diameter     | Basic Minor Diameter   | Pitch    |                        | Flank Angle                                                                         |                                                                                      |  |
| 16.3171                  | 13.7982                | 1.9999   |                        | 29°56'                                                                              |                                                                                      |  |
| 16.3125                  |                        | 1.9998   |                        | 29°56'27"                                                                           |                                                                                      |  |
| 16.3136                  |                        | 1.9998   |                        | 29°56'29"                                                                           |                                                                                      |  |
| 16.3171                  |                        | 1.9998   |                        | 29°56'55"                                                                           |                                                                                      |  |
|                          | 14.6579                | 1.9999   |                        | 29°56'43"                                                                           |                                                                                      |  |
| on Date:                 |                        |          |                        |                                                                                     |                                                                                      |  |



- Vacuum hardening ensures hardness reaches 58-62HRC Cryogenic treatment can increase the toughness and abrasion resistance significantly, and prolong the service life of the product.



- IAC Screw Thread Inspection Machine

THREAD PLUG GAUGES/GO&NO-GO ISO-METRIC

DIN ISO 1502



- Grade 6H
- With inspection certificate
- Strictly made in accordance with DIN ISO 1502
- With Go&No-Go ends
- Made of premium steel, hardened, cryogenic treatment
- Stable product dimensions, superior surface finish, wear resistance for long service life

| Unit:mm      |           |              |          |              |          |
|--------------|-----------|--------------|----------|--------------|----------|
| Code         | Size      | Code         | Size     | Code         | Size     |
| 6401-9100-25 | M1x0.25   | 6401-9600-75 | M6x0.75  | 6401-0141-25 | M14x1.25 |
| 6401-9110-25 | M1.1x0.25 | 6401-9701-00 | M7x1     | 6401-0141-00 | M14x1    |
| 6401-9120-25 | M1.2x0.25 | 6401-9801-25 | M8x1.25  | 6401-0151-50 | M15x1.5  |
| 6401-9140-30 | M1.4x0.3  | 6401-9801-00 | M8x1     | 6401-0151-00 | M15x1    |
| 6401-9160-35 | M1.6x0.35 | 6401-9901-25 | M9x1.25  | 6401-0162-00 | M16x2    |
| 6401-9180-35 | M1.8x0.35 | 6401-9901-00 | M9x1     | 6401-0161-50 | M16x1.5  |
| 6401-9200-40 | M2x0.4    | 6401-0101-50 | M10x1.5  | 6401-0161-00 | M16x1    |
| 6401-9200-40 | M2.3x0.4  | 6401-0101-25 | M10x1.25 | 6401-0171-50 | M17x1.5  |
| 6401-9250-45 | M2.5x0.45 | 6401-0101-00 | M10x1    | 6401-0171-00 | M17x1    |
| 6401-9260-45 | M2.6x0.45 | 6401-0111-50 | M11x1.5  | 6401-0182-50 | M18x2.5  |
| 6401-9300-45 | M3x0.5    | 6401-0111-00 | M11x1    | 6401-0182-00 | M18x2    |
| 6401-9350-60 | M3.5x0.6  | 6401-0121-75 | M12x1.75 | 6401-0181-50 | M18x1.5  |
| 6401-9400-70 | M4x0.7    | 6401-0121-50 | M12x1.5  | 6401-0181-00 | M18x1    |
| 6401-9400-50 | M4x0.5    | 6401-0121-25 | M12x1.25 | 6401-0202-50 | M20x2.5  |
| 6401-9450-75 | M4.5x0.75 | 6401-0121-00 | M12x1    | 6401-0202-00 | M20x2    |
| 6401-9500-80 | M5x0.8    | 6401-0131-50 | M13x1.5  | 6401-0201-50 | M20x1.5  |
| 6401-9500-50 | M5x0.5    | 6401-0131-00 | M13x1    | 6401-0201-00 | M20x1    |
| 6401-9550-50 | M5.5x0.5  | 6401-0142-00 | M14x2    | 6401-0222-50 | M22x2.5  |
| 6401-9601-00 | M6x1      | 6401-0141-50 | M14x1.5  | 6401-0222-00 | M22x2    |

| Unit:mm      |         |              |         |              |         |
|--------------|---------|--------------|---------|--------------|---------|
| Code         | Size    | Code         | Size    | Code         | Size    |
| 6401-0221-50 | M22x1.5 | 6401-0394-00 | M39x4   | 6401-0552-00 | M55x2   |
| 6401-0221-00 | M22x1   | 6401-0393-00 | M39x3   | 6401-0551-50 | M55x1.5 |
| 6401-0243-00 | M24x3   | 6401-0392-00 | M39x2   | 6401-0564-00 | M56x4   |
| 6401-0242-00 | M24x2   | 6401-0391-50 | M39x1.5 | 6401-0563-00 | M56x3   |
| 6401-0241-50 | M24x1.5 | 6401-0391-00 | M39x1   | 6401-0562-00 | M56x2   |
| 6401-0241-00 | M24x1   | 6401-0403-00 | M40x3   | 6401-0561-50 | M56x1.5 |
| 6401-0251-50 | M25x1.5 | 6401-0402-00 | M40x2   | 6401-0561-00 | M56x1   |
| 6401-0251-00 | M25x1   | 6401-0401-50 | M40x1.5 | 6401-0583-00 | M58x4   |
| 6401-0261-50 | M26x1.5 | 6401-0424-50 | M42x4.5 | 6401-0584-00 | M58x3   |
| 6401-0273-00 | M27x3   | 6401-0424-00 | M42x4   | 6401-0582-00 | M58x2   |
| 6401-0272-00 | M27x2   | 6401-0423-00 | M42x3   | 6401-0581-50 | M58x1.5 |
| 6401-0271-50 | M27x1.5 | 6401-0422-00 | M42x2   | 6401-0604-00 | M60x4   |
| 6401-0271-00 | M27x1   | 6401-0421-50 | M42x1.5 | 6401-0603-00 | M60x3   |
| 6401-0282-00 | M28x2   | 6401-0421-00 | M42x1   | 6401-0602-00 | M60x2   |
| 6401-0281-50 | M28x1.5 | 6401-0454-00 | M45x4   | 6401-0601-50 | M60x1.5 |
| 6401-0281-00 | M28x1   | 6401-0453-00 | M45x3   | 6401-0601-00 | M60x1   |
| 6401-0303-50 | M30x3.5 | 6401-0452-00 | M45x2   | 6401-0624-00 | M62x4   |
| 6401-0303-00 | M30x3   | 6401-0451-50 | M45x1.5 | 6401-0623-00 | M62x3   |
| 6401-0302-00 | M30x2   | 6401-0451-00 | M45x1   | 6401-0622-00 | M62x2   |
| 6401-0301-50 | M30x1.5 | 6401-0483-00 | M48x3   | 6401-0621-50 | M62x1.5 |
| 6401-0301-00 | M30x1   | 6401-0484-00 | M48x4   | 6401-0644-00 | M64x4   |
| 6401-0323-00 | M32x2   | 6401-0483-00 | M48x3   | 6401-0643-00 | M64x3   |
| 6401-0321-50 | M32x1.5 | 6401-0482-00 | M48x2   | 6401-0642-00 | M64x2   |
| 6401-0333-50 | M33x3.5 | 6401-0481-50 | M48x1.5 | 6401-0641-50 | M64x1.5 |
| 6401-0333-00 | M33x3   | 6401-0481-00 | M48x1   | 6401-0641-00 | M64x1   |
| 6401-0332-00 | M33x2   | 6401-0503-00 | M50x3   | 6401-0654-00 | M65x4   |
| 6401-0331-50 | M33x1.5 | 6401-0502-00 | M50x2   | 6401-0653-00 | M65x3   |
| 6401-0331-00 | M33x1   | 6401-0501-50 | M50x1.5 | 6401-0652-00 | M65x2   |
| 6401-0351-50 | M35x1.5 | 6401-0524-00 | M52x5   | 6401-0651-50 | M65x1.5 |
| 6401-0351-00 | M35x1   | 6401-0523-00 | M52x4   | 6401-0684-00 | M68x4   |
| 6401-0364-00 | M36x4   | 6401-0524-00 | M52x3   | 6401-0683-00 | M68x3   |
| 6401-0363-00 | M36x3   | 6401-0522-00 | M52x2   | 6401-0682-00 | M68x2   |
| 6401-0362-00 | M36x2   | 6401-0521-50 | M52x1.5 | 6401-0681-50 | M68x1.5 |
| 6401-0361-50 | M36x1.5 | 6401-0521-00 | M52x1   | 6401-0681-00 | M68x1   |
| 6401-0361-00 | M36x1   | 6401-0554-00 | M55x4   | 6401-0704-00 | M70x4   |
| 6401-0381-50 | M38x1.5 | 6401-0553-00 | M55x3   | 6401-0703-00 | M70x3   |

.....TO BE CONTINUED

CONTINUED FROM PREVIOUS PAGE.....

| Unit:mm      |          |              |          |              |        |
|--------------|----------|--------------|----------|--------------|--------|
| Code         | Size     | Code         | Size     | Code         | Size   |
| 6401-0702-00 | M70x2    | 6401-1052-00 | M105x2   | 6401-1604-00 | M160x4 |
| 6401-0701-50 | M70x1.5  | 6401-1051-50 | M105x1.5 | 6401-1603-00 | M160x3 |
| 6401-0724-00 | M72x4    | 6401-1104-00 | M110x4   | 6401-1602-00 | M160x2 |
| 6401-0723-00 | M72x3    | 6401-1103-00 | M110x3   | 6401-1654-00 | M165x4 |
| 6401-0722-00 | M72x2    | 6401-1102-00 | M110x2   | 6401-1653-00 | M165x3 |
| 6401-0721-50 | M72x1.5  | 6401-1101-50 | M110x1.5 | 6401-1652-00 | M165x2 |
| 6401-0753-00 | M75x3    | 6401-1154-00 | M115x4   | 6401-1704-00 | M170x4 |
| 6401-0752-00 | M75x2    | 6401-1153-00 | M115x3   | 6401-1703-00 | M170x3 |
| 6401-0751-50 | M75x1.5  | 6401-1152-00 | M115x2   | 6401-1702-00 | M170x2 |
| 6401-0763-00 | M76x3    | 6401-1151-50 | M115x1.5 | 6401-1754-00 | M175x4 |
| 6401-0762-00 | M76x2    | 6401-1204-00 | M120x4   | 6401-1753-00 | M175x3 |
| 6401-0761-50 | M76x1.5  | 6401-1203-00 | M120x3   | 6401-1752-00 | M175x2 |
| 6401-0782-00 | M78x2    | 6401-1202-00 | M120x2   | 6401-1804-00 | M180x4 |
| 6401-0804-00 | M80x4    | 6401-1201-50 | M120x1.5 | 6401-1803-00 | M180x3 |
| 6401-0803-00 | M80x3    | 6401-1254-00 | M125x4   | 6401-1802-00 | M180x2 |
| 6401-0802-00 | M80x2    | 6401-1253-00 | M125x3   |              |        |
| 6401-0801-50 | M80x1.5  | 6401-1252-00 | M125x2   |              |        |
| 6401-0822-00 | M82x2    | 6401-1251-50 | M125x1.5 |              |        |
| 6401-0854-00 | M85x4    | 6401-1304-00 | M130x4   |              |        |
| 6401-0853-00 | M85x3    | 6401-1303-00 | M130x3   |              |        |
| 6401-0852-00 | M85x2    | 6401-1302-00 | M130x2   |              |        |
| 6401-0851-50 | M85x1.5  | 6401-1354-00 | M135x4   |              |        |
| 6401-0904-00 | M90x4    | 6401-1353-00 | M135x3   |              |        |
| 6401-0903-00 | M90x3    | 6401-1352-00 | M135x2   |              |        |
| 6401-0902-00 | M90x2    | 6401-1404-00 | M140x4   |              |        |
| 6401-0901-50 | M90x1.5  | 6401-1403-00 | M140x3   |              |        |
| 6401-0954-00 | M95x4    | 6401-1402-00 | M140x2   |              |        |
| 6401-0953-00 | M95x3    | 6401-1454-00 | M145x4   |              |        |
| 6401-0952-00 | M95x2    | 6401-1453-00 | M145x3   |              |        |
| 6401-0951-50 | M95x1.5  | 6401-1452-00 | M145x2   |              |        |
| 6401-1004-00 | M100x4   | 6401-1504-00 | M150x4   |              |        |
| 6401-1003-00 | M100x3   | 6401-1503-00 | M150x3   |              |        |
| 6401-1002-00 | M100x2   | 6401-1502-00 | M150x2   |              |        |
| 6401-1001-50 | M100x1.5 | 6401-1554-00 | M155x4   |              |        |
| 6401-1054-00 | M105x4   | 6401-1553-00 | M155x3   |              |        |
| 6401-1053-00 | M105x3   | 6401-1552-00 | M155x2   |              |        |

.....TO BE CONTINUED

THREAD PLUG GAUGES/GO&NO-GO ANSI-INCH

ANSI B1.2



- With Go&No-Go ends
- Grade 2B
- Strictly made in accordance with ANSI B1.2
- Made of premium steel, hardened, cryogenic treatment
- Stable product dimensions, superior surface finish, wear resistance for long service life
- With inspection certificate

| Unit:mm      |              |              |             |              |               |
|--------------|--------------|--------------|-------------|--------------|---------------|
| Code         | Size         | Code         | Size        | Code         | Size          |
| 6407-0000-80 | No.0-80UNF   | 6407-0053-18 | 5/16-18UNC  | 6407-0173-24 | 1-1/16-24UNEF |
| 6407-0010-64 | No.1-64UNC   | 6407-0053-24 | 5/16-24UNF  | 6407-0034-10 | 3/4-10UNC     |
| 6407-0020-56 | No.2-56UNC   | 6407-0053-32 | 5/16-32UNEF | 6407-0034-16 | 3/4-16UNEF    |
| 6407-0030-48 | No.3-48UNC   | 6407-0038-16 | 3/8-16UNC   | 6407-0034-20 | 3/4-20UNEF    |
| 6407-0040-40 | No.4-40UNC   | 6407-0038-24 | 3/8-24UNF   | 6407-0193-20 | 1-3/16-20UNEF |
| 6407-0050-32 | No.5-40UNC   | 6407-0038-32 | 3/8-32UNEF  | 6407-0078-09 | 7/8-9UNC      |
| 6407-0060-32 | No.6-32UNC   | 6407-0073-14 | 7/16-14UNC  | 6407-0078-14 | 7/8-14UNC     |
| 6407-0070-40 | No.6-40UNC   | 6407-0073-20 | 7/16-20UNF  | 6407-0078-20 | 7/8-20UNEF    |
| 6407-0080-32 | No.8-32UNC   | 6407-0073-28 | 7/16-28UNEF | 6407-0213-20 | 1-5/16-20UNEF |
| 6407-0080-36 | No.8-36UNF   | 6407-0012-13 | 1/2-13UNC   | 6407-0011-08 | 1-8UNC        |
| 6407-0100-24 | No.10-24UNC  | 6407-0012-20 | 1/2-20UNF   | 6407-0011-12 | 1-12UNF       |
| 6407-0100-32 | No.10-32UNF  | 6407-0012-28 | 1/2-28UNEF  | 6407-0011-20 | 1-20UNEE      |
| 6407-0120-24 | No.12-24UNC  | 6407-0093-12 | 9/16-12UNC  | 6407-0173-18 | 1-1/16-18UNEF |
| 6407-0120-28 | No.12-28UNE  | 6407-0093-18 | 9/16-18UNF  | 6407-0098-07 | 1-1/8-7UNC    |
| 6407-0120-32 | No.12-32UNEF | 6407-0093-24 | 9/16-24UNEF | 6407-0098-12 | 1-1/8-12UNC   |
| 6407-0014-28 | 1/4-28UNF    | 6407-0058-11 | 5/8-11UNC   | 6407-0098-18 | 1-1/8-18UNEF  |
| 6407-0014-28 | 1/4-28UNF    | 6407-0058-18 | 5/8-18UNF   | 6407-0193-18 | 1-3/16-18UNEF |
| 6407-0014-32 | 1/4-32UNEF   | 6407-0058-24 | 5/8-24UNEF  | 6407-0054-07 | 1-1/4-7UNC    |

.....TO BE CONTINUED

THREADING AND GAUGE BLOCKS BORN IN ITALY, RAISED BY THE WORLD

CONTINUED FROM PREVIOUS PAGE.....

| Unit:mm      |               |              |            |              |            |
|--------------|---------------|--------------|------------|--------------|------------|
| Code         | Size          | Code         | Size       | Code         | Size       |
| 6407-0054-12 | 1-1/4-12UNF   | 6407-0198-16 | 2-3/8-16UN | 6407-0174-12 | 4-1/4-12UN |
| 6407-0054-18 | 1-1/4-18UNEF  | 6407-0052-04 | 2-1/2-4UNC | 6407-0174-16 | 4-1/4-16UN |
| 6407-0213-18 | 1-5/16-18UNEF | 6407-0052-12 | 2-1/2-12UN | 6407-0358-12 | 4-3/8-12UN |
| 6407-0118-6  | 1-3/8-6UNC    | 6407-0052-16 | 2-1/2-16UN | 6407-0358-16 | 4-3/8-16UN |
| 6407-0118-12 | 1-3/8-12UNF   | 6407-0218-12 | 2-5/8-12UN | 6407-0092-12 | 4-1/2-12UN |
| 6407-0118-18 | 1-3/8-18UNEE  | 6407-0218-16 | 2-5/8-16UN | 6407-0092-16 | 4-1/2-16UN |
| 6407-0233-18 | 1-7/16-18UNEF | 6407-0114-04 | 2-3/4-4UNC | 6407-0378-12 | 4-5/8-12UN |
| 6407-0032-06 | 1-1/2-6UNC    | 6407-0114-12 | 2-3/4-12UN | 6407-0378-16 | 4-5/8-16UN |
| 6407-0032-12 | 1-1/2-12UNF   | 6407-0114-16 | 2-3/4-16UN | 6407-0194-12 | 4-3/4-12UN |
| 6407-0032-18 | 1-1/2-18UNEF  | 6407-0238-12 | 2-7/8-12UN | 6407-0194-16 | 4-3/4-16UN |
| 6407-0253-18 | 1-9/16-18UNEF | 6407-0238-16 | 2-7/8-16UN | 6407-0398-12 | 4-7/8-12UN |
| 6407-0138-18 | 1-5/8-18UNEF  | 6407-0031-04 | 3-4UNC     | 6407-0398-16 | 4-7/8-16UN |
| 6407-0173-18 | 1-1/16-18UNEF | 6407-0031-12 | 3-12UN     | 6407-0051-12 | 5-12UN     |
| 6407-0074-05 | 1-3/4-5UNC    | 6407-0031-16 | 3-16UN     | 6407-0051-16 | 5-16UN     |
| 6407-0074-12 | 1-3/4-12UN    | 6407-0258-12 | 3-1/8-12UN | 6407-0418-12 | 5-1/8-12UN |
| 6407-0074-16 | 1-3/4-16UN    | 6407-0258-16 | 3-1/8-16UN | 6407-0418-16 | 5-1/8-16UN |
| 6407-0074-20 | 1-3/4-20UN    | 6407-0134-04 | 3-1/4-4UNC | 6407-0214-12 | 5-1/4-12UN |
| 6407-0193-12 | 1-3/16-12UN   | 6407-0134-12 | 3-1/4-12UN | 6407-0214-16 | 5-1/4-16UN |
| 6407-0193-16 | 1-3/16-16UN   | 6407-0134-16 | 3-1/4-16UN | 6407-0438-12 | 5-3/8-12UN |
| 6407-0193-20 | 1-3/16-20UN   | 6407-0278-12 | 3-3/8-12UN | 6407-0438-16 | 5-3/8-16UN |
| 6407-0158-12 | 1-7/8-12UN    | 6407-0278-16 | 3-3/8-16UN | 6407-0112-12 | 5-1/2-12UN |
| 6407-0158-16 | 1-7/8-16UN    | 6407-0072-04 | 3-1/2-4UNC | 6407-0112-16 | 5-1/2-16UN |
| 6407-0158-20 | 1-7/8-20UN    | 6407-0072-12 | 3-1/2-12UN | 6407-0458-12 | 5-7/8-12UN |
| 6407-0213-12 | 1-5/16-12UN   | 6407-0072-16 | 3-1/2-16UN | 6407-0458-16 | 5-7/8-16UN |
| 6407-0213-16 | 1-5/16-16UN   | 6407-0298-12 | 3-5/8-12UN | 6407-0234-12 | 5-3/4-12UN |
| 6407-0213-20 | 1-5/16-20UN   | 6407-0294-16 | 3-5/8-16UN | 6407-0234-16 | 5-3/4-16UN |
| 6407-0021-45 | 2-4-5UNC      | 6407-0154-04 | 3-3/4-4UNC | 6407-0478-12 | 5-7/8-12UN |
| 6407-0021-12 | 2-12UN        | 6407-0154-12 | 3-3/4-12UN | 6407-0478-16 | 5-7/8-16UN |
| 6407-0021-16 | 2-16UN        | 6407-0154-16 | 3-3/4-16UN | 6407-0061-12 | 6-12UN     |
| 6407-0021-20 | 2-20UN        | 6407-0318-12 | 3-7/8-12UN | 6407-0061-16 | 6-16UN     |
| 6407-0178-12 | 2-1/8-12UN    | 6407-0318-16 | 3-7/8-16UN |              |            |
| 6407-0178-16 | 2-1/8-16UN    | 6407-0041-04 | 4-4UNC     |              |            |
| 6407-0094-45 | 2-1/4-4-5UNC  | 6407-0041-12 | 4-12UN     |              |            |
| 6407-0094-12 | 2-1/4-12UN    | 6407-0041-16 | 4-16UN     |              |            |
| 6407-0094-16 | 2-1/4-16UN    | 6407-0338-12 | 4-1/8-12UN |              |            |
| 6407-0198-12 | 2-3/8-12UN    | 6407-0338-16 | 4-1/8-16UN |              |            |

THREAD RING GAUGES ISO-Metric

DIN ISO 1502

• With inspection certificate

• With Go&No-Go ends

• Grade 6g

• Strictly made in accordance with DIN ISO 1502

• Made of premium steel, hardened, cryogenic treatment

• Stable product dimensions, superior surface finish, wear resistance for long service life



Go

| Code         | Size      | Code         | Size     | Code         | Size    |
|--------------|-----------|--------------|----------|--------------|---------|
| 6405-9100-25 | M1x0.25   | 6405-0101-25 | M10x1.25 | 6405-0202-00 | M20×2   |
| 6405-9110-25 | M1.1x0.25 | 6405-0101-00 | M10x1    | 6405-0201-50 | M20×1.5 |
| 6405-9120-25 | M1.2x0.25 | 6405-0111-50 | M11×1.5  | 6405-0201-00 | M20×1   |
| 6405-9140-30 | M1.4x0.3  | 6405-0111-00 | M11×1    | 6405-0222-50 | M22×2.5 |
| 6405-9160-35 | M1.6x0.35 | 6405-0121-75 | M12x1.75 | 6405-0222-00 | M22x2   |
| 6405-9180-35 | M1.8x0.35 | 6405-0121-50 | M12×1.5  | 6405-0221-50 | M22x1.5 |
| 6405-9200-40 | M2x0.4    | 6405-0121-25 | M12x1.25 | 6405-0221-00 | M22x1   |
| 6405-9200-40 | M2.3x0.4  | 6405-0121-00 | M12×1    | 6405-0243-00 | M24x3   |
| 6405-9250-45 | M2.5x0.45 | 6405-0131-50 | M13x1.5  | 6405-0242-00 | M24x2   |
| 6405-9260-45 | M2.6x0.45 | 6405-0131-00 | M13×1    | 6405-0241-50 | M24x1.5 |
| 6405-9300-45 | M3x0.5    | 6405-0142-00 | M14x2    | 6405-0241-00 | M24x1   |
| 6405-9350-60 | M3.5x0.6  | 6405-0141-50 | M14×1.5  | 6405-0251-50 | M25x1.5 |
| 6405-9400-70 | M4x0.7    | 6405-0141-25 | M14x1.25 | 6405-0251-00 | M25x1   |
| 6405-9400-50 | M4x0.5    | 6405-0141-00 | M14x1    | 6405-0261-50 | M26x1.5 |
| 6405-9450-75 | M4.5x0.75 | 6405-0151-50 | M15x1.5  | 6405-0273-00 | M27x3   |
| 6405-9500-80 | M5x0.8    | 6405-0151-00 | M15×1    | 6405-0272-00 | M27x2   |
| 6405-9500-50 | M5x0.5    | 6405-0162-00 | M16×2    | 6405-0271-50 | M27x1.5 |
| 6405-9550-50 | M5.5x0.5  | 6405-0161-50 | M16×1.5  | 6405-0271-00 | M27x1   |
| 6405-9601-00 | M6x1      | 6405-0161-00 | M16×1    | 6405-0282-00 | M28x2   |
| 6405-9600-75 | M6x0.75   | 6405-0171-50 | M17×1.5  | 6405-0281-50 | M28x1.5 |
| 6405-9701-00 | M7x1      | 6405-0171-00 | M17×1    | 6405-0281-00 | M28x1   |
| 6405-9801-25 | M8x1.25   | 6405-0182-50 | M18×2.5  | 6405-0303-50 | M30x3.5 |
| 6405-9801-00 | M8x1      | 6405-0182-00 | M18x2    | 6405-0303-00 | M30x3   |
| 6405-9901-25 | M9x1.25   | 6405-0181-50 | M18×1.5  | 6405-0302-00 | M30x2   |
| 6405-9901-00 | M9x1      | 6405-0181-00 | M18x1    | 6405-0301-50 | M30x1.5 |
| 6405-0101-50 | M10x1.5   | 6405-0202-50 | M20×2.5  | 6405-0301-00 | M30x1   |

.....TO BE CONTINUED

BORN IN ITALY, RAISED BY THE WORLD THREADING AND GAUGE BLOCKS

CONTINUED FROM PREVIOUS PAGE.....

| Unit:mm      |         |              |         |              |         |
|--------------|---------|--------------|---------|--------------|---------|
| Code         | Size    | Code         | Size    | Code         | Size    |
| 6405-0323-00 | M32x2   | 6405-0483-00 | M48x3   | 6405-0643-00 | M64x3   |
| 6405-0321-50 | M32x1.5 | 6405-0482-00 | M48x2   | 6405-0642-00 | M64x2   |
| 6405-0333-50 | M33x1.5 | 6405-0481-50 | M48x1.5 | 6405-0641-50 | M64x1.5 |
| 6405-0333-00 | M33x3   | 6405-0481-00 | M48x1   | 6405-0641-00 | M64x1   |
| 6405-0332-00 | M33x2   | 6405-0503-00 | M50x3   | 6405-0654-00 | M65x4   |
| 6405-0331-50 | M33x1.5 | 6405-0502-00 | M50x2   | 6405-0653-00 | M65x3   |
| 6405-0331-00 | M33x1   | 6405-0501-50 | M50x1.5 | 6405-0652-00 | M65x2   |
| 6405-0351-50 | M35x1.5 | 6405-0524-00 | M52x5   | 6405-0651-50 | M65x1.5 |
| 6405-0351-00 | M35x1   | 6405-0523-00 | M52x4   | 6405-0684-00 | M68x4   |
| 6405-0364-00 | M36x4   | 6405-0524-00 | M52x3   | 6405-0683-00 | M68x3   |
| 6405-0363-00 | M36x3   | 6405-0522-00 | M52x2   | 6405-0682-00 | M68x2   |
| 6405-0362-00 | M36x2   | 6405-0521-50 | M52x1.5 | 6405-0681-50 | M68x1.5 |
| 6405-0361-50 | M36x1.5 | 6405-0521-00 | M52x1   | 6405-0681-00 | M68x1   |
| 6405-0361-00 | M36x1   | 6405-0554-00 | M55x4   | 6405-0704-00 | M70x4   |
| 6405-0381-50 | M38x1.5 | 6405-0553-00 | M55x3   | 6405-0703-00 | M70x3   |
| 6405-0394-00 | M39x4   | 6405-0552-00 | M55x2   | 6405-0702-00 | M70x2   |
| 6405-0393-00 | M39x3   | 6405-0551-50 | M55x1.5 | 6405-0701-50 | M70x1.5 |
| 6405-0392-00 | M39x2   | 6405-0564-00 | M56x4   | 6405-0724-00 | M72x4   |
| 6405-0391-50 | M39x1.5 | 6405-0563-00 | M56x3   | 6405-0723-00 | M72x3   |
| 6405-0391-00 | M39x1   | 6405-0562-00 | M56x2   | 6405-0722-00 | M72x2   |
| 6405-0403-00 | M40x3   | 6405-0561-50 | M56x1.5 | 6405-0721-50 | M72x1.5 |
| 6405-0402-00 | M40x2   | 6405-0561-00 | M56x1   | 6405-0753-00 | M75x3   |
| 6405-0401-50 | M40x1.5 | 6405-0583-00 | M58x4   | 6405-0752-00 | M75x2   |
| 6405-0424-50 | M42x1.5 | 6405-0584-00 | M58x3   | 6405-0751-50 | M75x1.5 |
| 6405-0424-00 | M42x4   | 6405-0582-00 | M58x2   | 6405-0763-00 | M76x3   |
| 6405-0423-00 | M42x3   | 6405-0581-50 | M58x1.5 | 6405-0762-00 | M76x2   |
| 6405-0422-00 | M42x2   | 6405-0604-00 | M60x4   | 6405-0761-50 | M76x1.5 |
| 6405-0421-50 | M42x1.5 | 6405-0603-00 | M60x3   | 6405-0782-00 | M78x2   |
| 6405-0421-00 | M42x1   | 6405-0602-00 | M60x2   | 6405-0804-00 | M80x4   |
| 6405-0454-00 | M45x4   | 6405-0601-50 | M60x1.5 | 6405-0803-00 | M80x3   |
| 6405-0453-00 | M45x3   | 6405-0601-00 | M60x1   | 6405-0802-00 | M80x2   |
| 6405-0452-00 | M45x2   | 6405-0624-00 | M62x4   | 6405-0801-50 | M80x1.5 |
| 6405-0451-50 | M45x1.5 | 6405-0623-00 | M62x3   | 6405-0822-00 | M82x2   |
| 6405-0451-00 | M45x1   | 6405-0622-00 | M62x2   | 6405-0854-00 | M85x4   |
| 6405-0483-00 | M48x5   | 6405-0621-50 | M62x1.5 | 6405-0853-00 | M85x3   |
| 6405-0484-00 | M48x4   | 6405-0644-00 | M64x4   | 6405-0852-00 | M85x2   |

| Unit:mm      |          |              |          |              |        |
|--------------|----------|--------------|----------|--------------|--------|
| Code         | Size     | Code         | Size     | Code         | Size   |
| 6405-0851-50 | M85x1.5  | 6405-1153-00 | M115x3   | 6405-1452-00 | M145x2 |
| 6405-0904-00 | M90x4    | 6405-1152-00 | M115x2   | 6405-1504-00 | M150x4 |
| 6405-0903-00 | M90x3    | 6405-1151-50 | M115x1.5 | 6405-1503-00 | M150x3 |
| 6405-0902-00 | M90x2    | 6405-1204-00 | M120x4   | 6405-1502-00 | M150x2 |
| 6405-0901-50 | M90x1.5  | 6405-1203-00 | M120x3   | 6405-1554-00 | M155x4 |
| 6405-0954-00 | M95x4    | 6405-1202-00 | M120x2   | 6405-1553-00 | M155x3 |
| 6405-0953-00 | M95x3    | 6405-1201-50 | M120x1.5 | 6405-1552-00 | M155x2 |
| 6405-0952-00 | M95x2    | 6405-1254-00 | M125x4   | 6405-1604-00 | M160x4 |
| 6405-0951-50 | M95x1.5  | 6405-1253-00 | M125x3   | 6405-1603-00 | M160x3 |
| 6405-1004-00 | M100x4   | 6405-1252-00 | M125x2   | 6405-1602-00 | M160x2 |
| 6405-1003-00 | M100x3   | 6405-1251-50 | M125x1.5 | 6405-1654-00 | M165x4 |
| 6405-1002-00 | M100x2   | 6405-1304-00 | M130x4   | 6405-1653-00 | M165x3 |
| 6405-1001-50 | M100x1.5 | 6405-1303-00 | M130x3   | 6405-1652-00 | M165x2 |
| 6405-1054-00 | M105x4   | 6405-1302-00 | M130x2   | 6405-1704-00 | M170x4 |
| 6405-1053-00 | M105x3   | 6405-1354-00 | M135x4   | 6405-1703-00 | M170x3 |
| 6405-1052-00 | M105x2   | 6405-1353-00 | M135x3   | 6405-1702-00 | M170x2 |
| 6405-1051-50 | M105x1.5 | 6405-1352-00 | M135x2   | 6405-1754-00 | M175x4 |
| 6405-1104-00 | M110x4   | 6405-1404-00 | M140x4   | 6405-1753-00 | M175x3 |
| 6405-1103-00 | M110x3   | 6405-1403-00 | M140x3   | 6405-1752-00 | M175x2 |
| 6405-1102-00 | M110x2   | 6405-1402-00 | M140x2   | 6405-1804-00 | M180x4 |
| 6405-1101-50 | M110x1.5 | 6405-1454-00 | M145x4   | 6405-1803-00 | M180x3 |
| 6405-1154-00 | M115x4   | 6405-1453-00 | M145x3   | 6405-1802-00 | M180x2 |

| Unit:mm      |           |              |           |              |          |
|--------------|-----------|--------------|-----------|--------------|----------|
| Code         | Size      | Code         | Size      | Code         | Size     |
| 6406-9100-25 | M1x0.25   | 6406-9400-70 | M4x0.7    | 6406-9901-00 | M9x1     |
| 6406-9110-25 | M1.1x0.25 | 6406-9400-50 | M4x0.5    | 6406-0101-50 | M10x1.5  |
| 6406-9120-25 | M1.2x0.25 | 6406-9450-75 | M4.5x0.75 | 6406-0101-25 | M10x1.25 |
| 6406-9140-30 | M1.4x0.3  | 6406-9500-80 | M5x0.8    | 6406-0101-00 | M10x1    |
| 6406-9160-35 | M1.6x0.35 | 6406-9500-50 | M5x0.5    | 6406-0111-50 | M11×1.5  |
| 6406-9180-35 | M1.8x0.35 | 6406-9550-50 | M5.5x0.5  | 6406-0111-00 | M11×1    |
| 6406-9200-40 | M2x0.4    | 6406-9600-75 | M6x0.75   | 6406-0121-75 | M12x1.75 |
| 6406-9250-45 | M2.5x0.45 | 6406-9701-00 | M7x1      | 6406-0121-25 | M12x1.25 |
| 6406-9260-45 | M2.6x0.45 | 6406-9801-25 | M8x1.25   | 6406-0121-00 | M12x1    |
| 6406-9300-45 | M3x0.5    | 6406-9801-00 | M8x1      | 6406-0131-50 | M13x1.5  |
| 6406-9350-60 | M3.5x0.6  | 64           |           |              |          |

THREADING AND GAUGE BLOCKS
 BORN IN ITALY, RAISED BY THE WORLD

CONTINUED FROM PREVIOUS PAGE.....

| NO GO        |          |              |         |              |         | Unit:mm |
|--------------|----------|--------------|---------|--------------|---------|---------|
| Code         | Size     | Code         | Size    | Code         | Size    |         |
| 6406-0142-00 | M14x2    | 6406-0281-00 | M28x1   | 6406-0453-00 | M45x3   |         |
| 6406-0141-50 | M14x1.5  | 6406-0303-50 | M30x3.5 | 6406-0452-00 | M45x2   |         |
| 6406-0141-25 | M14x1.25 | 6406-0303-00 | M30x3   | 6406-0451-50 | M45x1.5 |         |
| 6406-0141-00 | M14x1    | 6406-0302-00 | M30x2   | 6406-0451-00 | M45x1   |         |
| 6406-0151-50 | M15x1.5  | 6406-0301-50 | M30x1.5 | 6406-0483-00 | M48x5   |         |
| 6406-0151-00 | M15x1    | 6406-0301-00 | M30x1   | 6406-0484-00 | M48x4   |         |
| 6406-0162-00 | M16x2    | 6406-0323-00 | M32x2   | 6406-0483-00 | M48x3   |         |
| 6406-0161-50 | M16x1.5  | 6406-0321-50 | M32x1.5 | 6406-0482-00 | M48x2   |         |
| 6406-0161-00 | M16x1    | 6406-0333-50 | M33x3.5 | 6406-0481-50 | M48x1.5 |         |
| 6406-0171-50 | M17x1.5  | 6406-0333-00 | M33x3   | 6406-0481-00 | M48x1   |         |
| 6406-0171-00 | M17x1    | 6406-0332-00 | M33x2   | 6406-0503-00 | M50x3   |         |
| 6406-0182-50 | M18x2.5  | 6406-0331-50 | M33x1.5 | 6406-0502-00 | M50x2   |         |
| 6406-0182-00 | M18x2    | 6406-0331-00 | M33x1   | 6406-0501-50 | M50x1.5 |         |
| 6406-0181-50 | M18x1.5  | 6406-0351-50 | M35x1.5 | 6406-0524-00 | M52x5   |         |
| 6406-0181-00 | M18x1    | 6406-0351-00 | M35x1   | 6406-0523-00 | M52x4   |         |
| 6406-0202-50 | M20x2.5  | 6406-0364-00 | M36x4   | 6406-0524-00 | M52x3   |         |
| 6406-0202-00 | M20x2    | 6406-0363-00 | M36x3   | 6406-0522-00 | M52x2   |         |
| 6406-0201-50 | M20x1.5  | 6406-0362-00 | M36x2   | 6406-0521-50 | M52x1.5 |         |
| 6406-0201-00 | M20x1    | 6406-0361-50 | M36x1.5 | 6406-0521-00 | M52x1   |         |
| 6406-0222-50 | M22x2.5  | 6406-0361-00 | M36x1   | 6406-0554-00 | M55x4   |         |
| 6406-0222-00 | M22x2    | 6406-0381-50 | M38x1.5 | 6406-0553-00 | M55x3   |         |
| 6406-0221-50 | M22x1.5  | 6406-0394-00 | M39x4   | 6406-0552-00 | M55x2   |         |
| 6406-0221-00 | M22x1    | 6406-0393-00 | M39x3   | 6406-0551-50 | M55x1.5 |         |
| 6406-0243-00 | M24x3    | 6406-0393-00 | M39x2   | 6406-0564-00 | M56x4   |         |
| 6406-0242-00 | M24x2    | 6406-0391-50 | M39x1.5 | 6406-0563-00 | M56x3   |         |
| 6406-0241-50 | M24x1.5  | 6406-0391-00 | M39x1   | 6406-0562-00 | M56x2   |         |
| 6406-0241-00 | M24x1    | 6406-0403-00 | M40x3   | 6406-0561-50 | M56x1.5 |         |
| 6406-0251-50 | M25x1.5  | 6406-0402-00 | M40x2   | 6406-0561-00 | M56x1   |         |
| 6406-0251-00 | M25x1    | 6406-0401-50 | M40x1.5 | 6406-0583-00 | M58x4   |         |
| 6406-0261-50 | M26x1.5  | 6406-0424-50 | M42x4.5 | 6406-0584-00 | M58x3   |         |
| 6406-0273-00 | M27x3    | 6406-0424-00 | M42x4   | 6406-0582-00 | M58x2   |         |
| 6406-0272-00 | M27x2    | 6406-0423-00 | M42x3   | 6406-0581-50 | M58x1.5 |         |
| 6406-0271-50 | M27x1.5  | 6406-0422-00 | M42x2   | 6406-0604-00 | M60x4   |         |
| 6406-0271-00 | M27x1    | 6406-0421-50 | M42x1.5 | 6406-0603-00 | M60x3   |         |
| 6406-0282-00 | M28x2    | 6406-0421-00 | M42x1   | 6406-0602-00 | M60x2   |         |
| 6406-0281-50 | M28x1.5  | 6406-0454-00 | M45x4   | 6406-0601-50 | M60x1.5 |         |

| NO GO        |         |              |          |              |          | Unit:mm |
|--------------|---------|--------------|----------|--------------|----------|---------|
| Code         | Size    | Code         | Size     | Code         | Size     |         |
| 6406-0601-00 | M60x1   | 6406-0802-00 | M80x2    | 6406-1253-00 | M125x3   |         |
| 6406-0624-00 | M62x4   | 6406-0801-50 | M80x1.5  | 6406-1252-00 | M125x2   |         |
| 6406-0623-00 | M62x3   | 6406-0822-00 | M82x2    | 6406-1251-50 | M125x1.5 |         |
| 6406-0622-00 | M62x2   | 6406-0854-00 | M85x4    | 6406-1304-00 | M130x4   |         |
| 6406-0621-50 | M62x1.5 | 6406-0853-00 | M85x3    | 6406-1303-00 | M130x3   |         |
| 6406-0644-00 | M64x4   | 6406-0852-00 | M85x2    | 6406-1302-00 | M130x2   |         |
| 6406-0643-00 | M64x3   | 6406-0851-50 | M85x1.5  | 6406-1354-00 | M135x4   |         |
| 6406-0642-00 | M64x2   | 6406-0904-00 | M90x4    | 6406-1353-00 | M135x3   |         |
| 6406-0641-50 | M64x1.5 | 6406-0903-00 | M90x3    | 6406-1352-00 | M135x2   |         |
| 6406-0641-00 | M64x1   | 6406-0902-00 | M90x2    | 6406-1404-00 | M140x4   |         |
| 6406-0654-00 | M65x4   | 6406-0901-50 | M90x1.5  | 6406-1403-00 | M140x3   |         |
| 6406-0653-00 | M65x3   | 6406-0954-00 | M95x4    | 6406-1402-00 | M140x2   |         |
| 6406-0652-00 | M65x2   | 6406-0953-00 | M95x3    | 6406-1454-00 | M145x4   |         |
| 6406-0651-50 | M65x1.5 | 6406-0952-00 | M95x2    | 6406-1453-00 | M145x3   |         |
| 6406-0684-00 | M68x4   | 6406-0951-50 | M95x1.5  | 6406-1452-00 | M145x2   |         |
| 6406-0683-00 | M68x3   | 6406-1004-00 | M100x4   | 6406-1504-00 | M150x4   |         |
| 6406-0682-00 | M68x2   | 6406-1003-00 | M100x3   | 6406-1503-00 | M150x3   |         |
| 6406-0681-50 | M68x1.5 | 6406-1002-00 | M100x2   | 6406-1502-00 | M150x2   |         |
| 6406-0681-00 | M68x1   | 6406-1001-50 | M100x1.5 | 6406-1554-00 | M155x4   |         |
| 6406-0704-00 | M70x4   | 6406-1054-00 | M105x4   | 6406-1553-00 | M155x3   |         |
| 6406-0703-00 | M70x3   | 6406-1053-00 | M105x3   | 6406-1552-00 | M155x2   |         |
| 6406-0702-00 | M70x2   | 6406-1052-00 | M105x2   | 6406-1604-00 | M160x4   |         |
| 6406-0701-50 | M70x1.5 | 6406-1051-50 | M105x1.5 | 6406-1603-00 | M160x3   |         |
| 6406-0724-00 | M72x4   | 6406-1104-00 | M110x4   | 6406-1602-00 | M160x2   |         |
| 6406-0723-00 | M72x3   | 6406-1103-00 | M110x3   | 6406-1654-00 | M165x4   |         |
| 6406-0722-00 | M72x2   | 6406-1102-00 | M110x2   | 6406-1653-00 | M165x3   |         |
| 6406-0721-50 | M72x1.5 | 6406-1101-50 | M110x1.5 | 6406-1652-00 | M165x2   |         |
| 6406-0753-00 | M75x3   | 6406-1154-00 | M115x4   | 6406-1704-00 | M170x4   |         |
| 6406-0752-00 | M75x2   | 6406-1153-00 | M115x3   | 6406-1703-00 | M170x3   |         |
| 6406-0751-50 | M75x1.5 | 6406-1152-00 | M115x2   | 6406-1702-00 | M170x2   |         |
| 6406-0763-00 | M76x3   | 6406-1151-50 | M115x1.5 | 6406-1754-00 | M175x4   |         |
| 6406-0762-00 | M76x2   | 6406-1204-00 | M120x4   | 6406-1753-00 | M175x3   |         |
| 6406-0761-50 | M76x1.5 | 6406-1203-00 | M120x3   | 6406-1752-00 | M175x2   |         |
| 6406-0782-00 | M78x2   | 6406-1202-00 | M120x2   | 6406-1804-00 | M180x4   |         |
| 6406-0804-00 | M80x4   | 6406-1201-50 | M120x1.5 | 6406-1803-00 | M180x3   |         |
| 6406-0803-00 | M80x3   | 6406-1254-00 | M125x4   | 6406-1802-00 | M180x2   |         |

THREAD RING GAUGES

ANSI-Inch

ANSI B1.2



- With Go&No-Go ends
- Grade 2A
- Strictly made in accordance with ANSI B1.2
- Made of premium steel, hardened, cryogenic treatment
- Stable product dimensions, superior surface finish, wear resistance for long service life
- With inspection certificate

| Go           |              |              |             |              |               | Unit:mm |
|--------------|--------------|--------------|-------------|--------------|---------------|---------|
| Code         | Size         | Code         | Size        | Code         | Size          |         |
| 6411-0000-80 | No.0-80UNF   | 6411-0014-32 | 1/4-32UNEF  | 6411-0058-18 | 5/8-18UNF     |         |
| 6411-0010-64 | No.1-64UNC   | 6411-0053-18 | 5/16-18UNC  | 6411-0058-24 | 5/8-24UNEF    |         |
| 6411-0020-56 | No.2-56UNC   | 6411-0053-24 | 5/16-24UNF  | 6411-0173-24 | 1-1/16-24UNEF |         |
| 6411-0030-48 | No.3-48UNC   | 6411-0053-32 | 5/16-32UNEF | 6411-0034-10 | 3/4-10UNC     |         |
| 6411-0040-40 | No.4-40UNC   | 6411-0038-16 | 3/8-16UNC   | 6411-0034-16 | 3/4-16UNF     |         |
| 6411-0050-40 | No.5-40UNC   | 6411-0038-24 | 3/8-24UNF   | 6411-0034-20 | 3/4-20UNEF    |         |
| 6411-0060-32 | No.6-32UNC   | 6411-0038-32 | 3/8-32UNEF  | 6411-0193-20 | 1-3/16-20UNEF |         |
| 6411-0070-40 | No.6-40UNF   | 6411-0073-14 | 7/16-14UNC  | 6411-0078-09 | 7/8-9UNC      |         |
| 6411-0080-32 | No.8-32UNC   | 6411-0073-20 | 7/16-20UNF  | 6411-0078-14 | 7/8-14UNF     |         |
| 6411-0080-36 | No.8-36UNF   | 6411-0073-28 | 7/16-28UNEF | 6411-0078-20 | 7/8-20UNEF    |         |
| 6411-0100-24 | No.10-24UNC  | 6411-0012-13 | 1/2-13UNC   | 6411-0213-20 | 1-5/16-20UNEF |         |
| 6411-0100-32 | No.10-32UNF  | 6411-0012-20 | 1/2-20UNF   | 6411-0011-08 | 1-8UNC        |         |
| 6411-0120-24 | No.12-24UNC  | 6411-0012-28 | 1/2-28UNEF  | 6411-0011-12 | 1-12UNF       |         |
| 6411-0120-28 | No.12-28UNF  | 6411-0093-12 | 9/16-12UNC  | 6411-0011-20 | 1-20UNEF      |         |
| 6411-0120-32 | No.12-32UNEF | 6411-0093-18 | 9/16-18UNF  | 6411-0173-18 | 1-1/16-18UNEF |         |
| 6411-0014-20 | 1/4-20UNC    | 6411-0093-24 | 9/16-24UNEF | 6411-0098-07 | 1-1/8-7UNC    |         |
| 6411-0014-28 | 1/4-28UNF    | 6411-0058-11 | 5/8-11UNC   | 6411-0098-12 | 1-1/8-12UNF   |         |

| Unit:mm      |               |              |              |              |             |
|--------------|---------------|--------------|--------------|--------------|-------------|
| Code         | Size          | Code         | Size         | Code         | Size        |
| 6411-0098-18 | 1-1/8-18UNEF  | 6411-0094-45 | 2-1/4-4.5UNC | 6411-0041-04 | 4-4UNC      |
| 6411-0193-18 | 1-3/16-18UNEF | 6411-0094-12 | 2-1/4-12UNC  | 6411-0041-12 | 4-12UNC     |
| 6411-0054-07 | 1-1/4-7UNC    | 6411-0094-16 | 2-1/4-16UNC  | 6411-0041-16 | 4-16UNC     |
| 6411-0054-12 | 1-1/4-12UNF   | 6411-0198-12 | 2-3/8-12UNC  | 6411-0338-12 | 4-1/8-12UNC |
| 6411-0054-18 | 1-1/4-18UNEF  | 6411-0198-16 | 2-3/8-16UNC  | 6411-0338-16 | 4-1/8-16UNC |
| 6411-0213-18 | 1-5/16-18UNEF | 6411-0052-04 | 2-1/2-4UNC   | 6411-0174-12 | 4-1/4-12UNC |
| 6411-0118-6  | 1-3/8-6UNC    | 6411-0052-12 | 2-1/2-12UNC  | 6411-0174-16 | 4-1/4-16UNC |
| 6411-0118-12 | 1-3/8-12UNF   | 6411-0052-16 | 2-1/2-16UNC  | 6411-0358-12 | 4-3/8-12UNC |
| 6411-0118-18 | 1-3/8-18UNEF  | 6411-0218-12 | 2-5/8-12UNC  | 6411-0358-16 | 4-3/8-16UNC |
| 6411-0233-18 | 1-7/16-18UNEF | 6411-0218-16 | 2-5/8-16UNC  | 6411-0092-12 | 4-1/2-12UNC |
| 6411-0032-06 | 1-1/2-6UNC    | 6411-0114-04 | 2-3/4-4UNC   | 6411-0092-16 | 4-1/2-16UNC |
| 6411-0032-12 | 1-1/2-12UNF   | 6411-0114-12 | 2-3/4-12UNC  | 6411-0378-12 | 4-5/8-12UNC |
| 6411-0032-18 | 1-1/2-18UNEF  | 6411-0114-16 | 2-3/4-16UNC  | 6411-0378-16 | 4-5/8-16UNC |
| 6411-0253-18 | 1-9/16-18UNEF | 6411-0238-12 | 2-7/8-12UNC  | 6411-0194-12 | 4-3/4-12UNC |
| 6411-0138-18 | 1-5/8-18UNEF  | 6411-0238-16 | 2-7/8-16UNC  | 6411-0194-16 | 4-3/4-16UNC |
| 6411-0173-18 | 1-1/16-18UNEF | 6411-0031-04 | 3-4UNC       | 6411-0398-12 | 4-7/8-12UNC |
| 6411-0074-05 | 1-3/4-5UNC    | 6411-0031-12 | 3-12UNC      | 6411-0398-16 | 4-7/8-16UNC |
| 6411-0074-12 | 1-3/4-12UNC   | 6411-0031-16 | 3-16UNC      | 6411-0051-12 | 5-12UNC     |
| 6411-0074-16 | 1-3/4-16UNC   | 6411-0258-12 | 3-1/8-12UNC  | 6411-0051-16 | 5-16UNC     |
| 6411-0074-20 | 1-3/4-20UNC   | 6411-0258-16 | 3-1/8-16UNC  | 6411-0418-12 | 5-1/8-12UNC |
| 6411-0193-12 | 1-3/16-12UNC  | 6411-0134-04 | 3-1/4-4UNC   | 6411-0418-16 | 5-1/8-16UNC |
| 6411-0193-16 | 1-3/16-16UNC  | 6411-0134-12 | 3-1/4-12UNC  | 6411-0214-12 | 5-1/4-12UNC |
| 6411-0193-20 | 1-3/16-20UNC  | 6411-0134-16 | 3-1/4-16UNC  | 6411-0214-16 | 5-1/4-16UNC |
| 6411-0158-12 | 1-7/8-12UNC   | 6411-0278-12 | 3-3/8-12UNC  | 6411-0438-12 | 5-3/8-12UNC |
| 6411-0158-16 | 1-7/8-16UNC   | 6411-0278-16 | 3-3/8-16UNC  | 6411-0438-16 | 5-3/8-16UNC |
| 6411-0158-20 | 1-7/8-20UNC   | 6411-0072-04 | 3-1/2-4UNC   | 6411-0112-12 | 5-1/2-12UNC |
| 6411-0213-12 | 1-5/16-12UNC  | 6411-0072-12 | 3-1/2-12UNC  | 6411-0112-16 | 5-1/2-16UNC |
| 6411-0213-16 | 1-5/16-16UNC  | 6411-0072-16 | 3-1/2-16UNC  | 6411-0458-12 | 5-5/8-12UNC |
| 6411-0213-20 | 1-5/16-20UNC  | 6411-0298-12 | 3-5/8-12UNC  | 6411-0458-16 | 5-5/8-16UNC |
| 6411-0021-45 | 2-4.5UNC      | 6411-0294-16 | 3-5/8-16UNC  | 6411-0234-12 | 5-3/4-12UNC |
| 6411-0021-12 | 2-12UNC       | 6411-0154-04 | 3-3/4-4UNC   | 6411-0234-16 | 5-3/4-16UNC |
| 6411-0021-16 | 2-16UNC       | 6411-0154-12 | 3-3/4-12UNC  | 6411-0478-12 | 5-7/8-12UNC |
| 6411-0021-20 | 2-20UNC       | 6411-0154-16 | 3-3/4-16UNC  | 6411-0478-16 | 5-7/8-16UNC |
| 6411-0178-12 | 2-1/8-12UNC   | 6411-0318-12 | 3-7/8-12UNC  | 6411-0061-12 | 6-12UNC     |
| 6411-0178-16 | 2-1/8-16UNC   | 6411-0318-16 | 3-7/8-16UNC  | 6411-0061-16 | 6-16UNC     |

THREADING AND GAUGE BLOCKS BORN IN ITALY, RAISED BY THE WORLD

CONTINUED FROM PREVIOUS PAGE.....

| NO GO        |              |              |               |              |              | Unit:mm |
|--------------|--------------|--------------|---------------|--------------|--------------|---------|
| Code         | Size         | Code         | Size          | Code         | Size         |         |
| 6412-0000-80 | No.0-80UNF   | 6412-0173-24 | 1-1/16-24UNEF | 6412-0193-16 | 1-3/16-16UN  |         |
| 6412-0010-64 | No.1-64UNC   | 6412-0034-10 | 3/4-10UNC     | 6412-0193-20 | 1-3/16-20UN  |         |
| 6412-0020-56 | No.2-56UNC   | 6412-0034-16 | 3/4-16UNF     | 6412-0158-12 | 1-7/8-12UN   |         |
| 6412-0030-48 | No.3-48UNC   | 6412-0034-20 | 3/4-20UNEF    | 6412-0158-16 | 1-7/8-16UN   |         |
| 6412-0040-40 | No.4-40UNC   | 6412-0193-20 | 1-3/16-20UNEF | 6412-0158-20 | 1-7/8-20UN   |         |
| 6412-0050-40 | No.5-40UNC   | 6412-0078-09 | 7/8-9UNC      | 6412-0213-12 | 1-5/16-12UN  |         |
| 6412-0060-32 | No.6-32UNC   | 6412-0078-14 | 7/8-14UNF     | 6412-0213-16 | 1-5/16-16UN  |         |
| 6412-0070-40 | No.6-40UNF   | 6412-0078-20 | 7/8-20UNEF    | 6412-0213-20 | 1-5/16-20UN  |         |
| 6412-0080-32 | No.8-32UNC   | 6412-0213-20 | 1-5/16-20UNEF | 6412-0021-45 | 2-4.5UNC     |         |
| 6412-0080-36 | No.8-36UNF   | 6412-0011-08 | 1-8UNC        | 6412-0021-12 | 2-12UN       |         |
| 6412-0100-24 | No.10-24UNC  | 6412-0011-12 | 1-12UNF       | 6412-0021-16 | 2-16UN       |         |
| 6412-0100-32 | No.10-32UNF  | 6412-0011-20 | 1-20UNEF      | 6412-0021-20 | 2-20UN       |         |
| 6412-0120-24 | No.12-24UNC  | 6412-0173-18 | 1-1/16-18UNF  | 6412-0178-12 | 2-1/8-12UN   |         |
| 6412-0120-28 | No.12-28UNF  | 6412-0098-07 | 1-1/8-7UNC    | 6412-0178-16 | 2-1/8-16UN   |         |
| 6412-0120-32 | No.12-32UNEF | 6412-0098-12 | 1-1/8-12UNF   | 6412-0094-45 | 2-1/4-4.5UNC |         |
| 6412-0014-20 | 1/4-20UNC    | 6412-0098-18 | 1-1/8-18UNF   | 6412-0094-12 | 2-1/4-12UN   |         |
| 6412-0014-28 | 1/4-28UNF    | 6412-0193-18 | 1-3/16-18UNF  | 6412-0094-16 | 2-1/4-16UN   |         |
| 6412-0014-32 | 1/4-32UNEF   | 6412-0054-07 | 1-1/4-7UNC    | 6412-0198-12 | 2-3/8-12UN   |         |
| 6412-0053-18 | 5/16-18UNC   | 6412-0054-12 | 1-1/4-12UNF   | 6412-0198-16 | 2-3/8-16UN   |         |
| 6412-0053-24 | 5/16-24UNF   | 6412-0054-18 | 1-1/4-18UNF   | 6412-0052-04 | 2-1/2-4UNC   |         |
| 6412-0053-32 | 5/16-32UNEF  | 6412-0213-18 | 1-5/16-18UNF  | 6412-0052-12 | 2-1/2-12UN   |         |
| 6412-0038-16 | 3/8-16UNC    | 6412-0118-6  | 1-3/8-6UNC    | 6412-0052-16 | 2-1/2-16UN   |         |
| 6412-0038-24 | 3/8-24UNF    | 6412-0118-12 | 1-3/8-12UNF   | 6412-0218-12 | 2-5/8-12UN   |         |
| 6412-0038-32 | 3/8-32UNEF   | 6412-0118-18 | 1-3/8-18UNF   | 6412-0218-16 | 2-5/8-16UN   |         |
| 6412-0073-14 | 7/16-14UNC   | 6412-0233-18 | 1-7/16-18UNF  | 6412-0114-04 | 2-3/4-4UNC   |         |
| 6412-0073-20 | 7/16-20UNF   | 6412-0032-06 | 1-1/2-6UNC    | 6412-0114-12 | 2-3/4-12UN   |         |
| 6412-0073-28 | 7/16-28UNEF  | 6412-0032-12 | 1-1/2-12UNF   | 6412-0114-16 | 2-3/4-16UN   |         |
| 6412-0012-13 | 1/2-13UNC    | 6412-0032-18 | 1-1/2-18UNF   | 6412-0238-12 | 2-7/8-12UN   |         |
| 6412-0012-20 | 1/2-20UNF    | 6412-0253-18 | 1-9/16-18UNF  | 6412-0238-16 | 2-7/8-16UN   |         |
| 6412-0012-28 | 1/2-28UNEF   | 6412-0138-18 | 1-5/8-18UNF   | 6412-0031-04 | 3-4UNC       |         |
| 6412-0093-12 | 9/16-12UNC   | 6412-0173-18 | 1-1/16-18UNF  | 6412-0031-12 | 3-12UN       |         |
| 6412-0093-18 | 9/16-18UNF   | 6412-0074-05 | 1-3/4-5UNC    | 6412-0031-16 | 3-16UN       |         |
| 6412-0093-24 | 9/16-24UNEF  | 6412-0074-12 | 1-3/4-12UN    | 6412-0258-12 | 3-1/8-12UN   |         |
| 6412-0058-11 | 5/8-11UNC    | 6412-0074-16 | 1-3/4-16UN    | 6412-0258-16 | 3-1/8-16UN   |         |
| 6412-0058-18 | 5/8-18UNF    | 6412-0074-20 | 1-3/4-20UN    | 6412-0134-04 | 3-1/4-4UNC   |         |
| 6412-0058-24 | 5/8-24UNEF   | 6412-0193-12 | 1-3/16-12UN   | 6412-0134-12 | 3-1/4-12UN   |         |

| NO GO        |            |              |            |              |            | Unit:mm |
|--------------|------------|--------------|------------|--------------|------------|---------|
| Code         | Size       | Code         | Size       | Code         | Size       |         |
| 6412-0134-16 | 3-1/4-16UN | 6412-0338-12 | 4-1/8-12UN | 6412-0418-12 | 5-1/8-12UN |         |
| 6412-0278-12 | 3-3/8-12UN | 6412-0338-16 | 4-1/8-16UN | 6412-0418-16 | 5-1/8-16UN |         |
| 6412-0278-16 | 3-3/8-16UN | 6412-0174-12 | 4-1/4-12UN | 6412-0214-12 | 5-1/4-12UN |         |
| 6412-0072-04 | 3-1/2-4UNC | 6412-0174-16 | 4-1/4-16UN | 6412-0214-16 | 5-1/4-16UN |         |
| 6412-0072-12 | 3-1/2-12UN | 6412-0358-12 | 4-3/8-12UN | 6412-0438-12 | 5-3/8-12UN |         |
| 6412-0072-16 | 3-1/2-16UN | 6412-0358-16 | 4-3/8-16UN | 6412-0438-16 | 5-3/8-16UN |         |
| 6412-0298-12 | 3-5/8-12UN | 6412-0092-12 | 4-1/2-12UN | 6412-0112-12 | 5-1/2-12UN |         |
| 6412-0294-16 | 3-5/8-16UN | 6412-0092-16 | 4-1/2-16UN | 6412-0112-16 | 5-1/2-16UN |         |
| 6412-0154-04 | 3-3/4-4UNC | 6412-0378-12 | 4-5/8-12UN | 6412-0458-12 | 5-5/8-12UN |         |
| 6412-0154-12 | 3-3/4-12UN | 6412-0378-16 | 4-5/8-16UN | 6412-0458-16 | 5-5/8-16UN |         |
| 6412-0154-16 | 3-3/4-16UN | 6412-0194-12 | 4-3/4-12UN | 6412-0234-12 | 5-3/4-12UN |         |
| 6412-0318-12 | 3-7/8-12UN | 6412-0194-16 | 4-3/4-16UN | 6412-0234-16 | 5-3/4-16UN |         |
| 6412-0318-16 | 3-7/8-16UN | 6412-0398-12 | 4-7/8-12UN | 6412-0478-12 | 5-7/8-12UN |         |
| 6412-0041-04 | 4-4UNC     | 6412-0398-16 | 4-7/8-16UN | 6412-0478-16 | 5-7/8-16UN |         |
| 6412-0041-12 | 4-12UN     | 6412-0051-12 | 5-12UN     | 6412-0061-12 | 6-12UN     |         |
| 6412-0041-16 | 4-16UN     | 6412-0051-16 | 5-16UN     | 6412-0061-16 | 6-16UN     |         |

7PCS THREAD RING GAUGE SET GO & NO-GO

DIN ISO 1502 ANSI B1.2



- Strictly made in accordance with DIN ISO 1502
- Strictly made in accordance with ANSI B1.2
- 7pcs go or no-go thread ring gauges of different size
- Measuring faces hardened, ground and lapped
- Made of premium steel, hardened, cryogenic treatment
- Stable product dimensions, superior surface finish, wear resistance for long service life

| Unit:mm   |                                                                     |                  |
|-----------|---------------------------------------------------------------------|------------------|
| Code      | Including                                                           | Style            |
| 6311-3205 | M3,M4,M5,M6,M8,M10,M12                                              | Go Ring Gauge    |
| 6311-3203 | M3,M4,M5,M6,M8,M10,M12                                              | No-Go Ring Gauge |
| 6311-3105 | 6-32UNC,8-32UNC,10-24UNC,12-24UNC,1/4"-20UNC, 3/8"-16UNC,1/2"-13UNC | Go Ring Gauge    |
| 6311-3106 | 6-32UNC,8-32UNC,10-24UNC,12-24UNC,1/4"-20UNC, 3/8"-16UNC,1/2"-13UNC | No-Go Ring Gauge |

7PCS THREAD PLUG GAUGE SET GO&NO-GO

DIN ISO 1502 ANSI B1.2

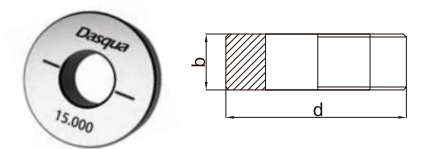


- Strictly made in accordance with DIN ISO 1502
- Strictly made in accordance with ANSI B1.2
- 7pcs go or no-go thread plug gauges of different size
- Measuring faces hardened, ground and lapped
- Made of premium steel, hardened, cryogenic treatment
- Stable product dimensions, superior surface finish, wear resistance for long service life

| Unit:mm   |                                                                     |                       |
|-----------|---------------------------------------------------------------------|-----------------------|
| Code      | Including                                                           | Style                 |
| 6311-3202 | M3,M4,M5,M6,M8,M10,M12                                              | Go & No-Go Plug Gauge |
| 6311-3110 | 6-32UNC,8-32UNC,10-24UNC,12-24UNC,1/4"-20UNC, 3/8"-16UNC,1/2"-13UNC | Go & No-Go Plug Gauge |



PLAIN RING GAUGE



| Unit:mm |    |     |                 |                            |
|---------|----|-----|-----------------|----------------------------|
| Size    | b  | d   | Size Difference | Roundness and cylindricity |
| 1.5-2.5 | 4  | 22  | ±10µm           | 0.5µm                      |
| 2.5-3   | 4  | 22  | ±10µm           | 0.5µm                      |
| 3-5     | 5  | 22  | ±10µm           | 0.5µm                      |
| 5-10    | 8  | 32  | ±10µm           | 0.5µm                      |
| 10-15   | 10 | 38  | ±10µm           | 0.5µm                      |
| 15-18   | 12 | 45  | ±10µm           | 0.5µm                      |
| 18-20   | 12 | 45  | ±10µm           | 0.5µm                      |
| 20-25   | 14 | 53  | ±10µm           | 0.5µm                      |
| 25-30   | 16 | 63  | ±10µm           | 0.5µm                      |
| 30-32   | 16 | 63  | ±10µm           | 0.8µm                      |
| 32-40   | 18 | 71  | ±10µm           | 0.8µm                      |
| 40-50   | 20 | 85  | ±10µm           | 0.8µm                      |
| 50-60   | 20 | 100 | ±10µm           | 0.8µm                      |
| 60-70   | 24 | 112 | ±10µm           | 0.8µm                      |
| 70-80   | 24 | 125 | ±10µm           | 0.8µm                      |
| 80-90   | 24 | 140 | ±10µm           | 1.0µm                      |
| 90-100  | 24 | 160 | ±10µm           | 1.0µm                      |
| 100-110 | 30 | 8   | ±10µm           | 1.0µm                      |
| 110-130 | 34 | 10  | ±10µm           | 1.0µm                      |
| 130-150 | 34 | 10  | ±10µm           | 1.0µm                      |
| 150-170 | 36 | 10  | ±10µm           | 2.5µm                      |
| 170-200 | 36 | 10  | ±10µm           | 2.5µm                      |

- Strictly made in accordance with DIN ISO 1502
- Stable product dimensions, superior surface finish, wear resistance for long service life
- Made of premium steel, hardened, cryogenic treatment
- With inspection certificate

| Unit:mm   |        |           |        |           |       |
|-----------|--------|-----------|--------|-----------|-------|
| Code      | Range  | Code      | Range  | Code      | Range |
| 6312-0015 | 1.5mm  | 6312-0140 | 14mm   | 6312-0800 | 80mm  |
| 6312-0020 | 2mm    | 6312-0145 | 14.5mm | 6312-0850 | 85mm  |
| 6312-0025 | 2.5mm  | 6312-0150 | 15mm   | 6312-0870 | 87mm  |
| 6312-0030 | 3mm    | 6312-0155 | 15.5mm | 6312-0900 | 90mm  |
| 6312-0035 | 3.5mm  | 6312-0160 | 16mm   | 6312-0950 | 95mm  |
| 6312-0040 | 4mm    | 6312-0165 | 16.5mm | 6312-1000 | 100mm |
| 6312-0045 | 4.5mm  | 6312-0170 | 17mm   | 6312-1100 | 110mm |
| 6312-0050 | 5mm    | 6312-0175 | 17.5mm | 6312-1200 | 120mm |
| 6312-0055 | 5.5mm  | 6312-0180 | 18mm   | 6312-1250 | 125mm |
| 6312-0060 | 6mm    | 6312-0185 | 18.5mm | 6312-1300 | 130mm |
| 6312-0065 | 6.5mm  | 6312-0190 | 19mm   | 6312-1400 | 140mm |
| 6312-0070 | 7mm    | 6312-0195 | 19.5mm | 6312-1500 | 150mm |
| 6312-0075 | 7.5mm  | 6312-0200 | 20mm   | 6312-1700 | 170mm |
| 6312-0080 | 8mm    | 6312-0250 | 25mm   | 6312-1750 | 175mm |
| 6312-0085 | 8.5mm  | 6312-0260 | 26mm   | 6312-1900 | 190mm |
| 6312-0090 | 9mm    | 6312-0300 | 30mm   | 6312-2000 | 200mm |
| 6312-0095 | 9.5mm  | 6312-0350 | 35mm   | 6312-2100 | 210mm |
| 6312-0100 | 10mm   | 6312-0400 | 40mm   | 6312-2200 | 220mm |
| 6312-0105 | 10.5mm | 6312-0450 | 45mm   | 6312-2300 | 230mm |
| 6312-0110 | 11mm   | 6312-0500 | 50mm   | 6312-2400 | 240mm |
| 6312-0115 | 11.5mm | 6312-0550 | 55mm   | 6312-2500 | 250mm |
| 6312-0120 | 12mm   | 6312-0600 | 60mm   | 6312-3000 | 300mm |
| 6312-0125 | 12.5mm | 6312-0650 | 65mm   | 6312-4000 | 400mm |
| 6312-0130 | 13mm   | 6312-0700 | 70mm   | 6312-5000 | 500mm |
| 6312-0135 | 13.5mm | 6312-0750 | 75mm   |           |       |

PLAIN PLUG GAUGE (GO/NO GO)



- Grade 7H
- With Go&No-Go ends
- With inspection certificate
- Strictly made in accordance with DIN ISO 1502
- Made of premium steel, hardened, cryogenic treatment
- Stable product dimensions, superior surface finish, wear resistance for long service life

| Unit:mm   |       |           |       |
|-----------|-------|-----------|-------|
| Code      | Range | Code      | Range |
| 6614-0002 | 2mm   | 6614-0022 | 22mm  |
| 6614-0003 | 3mm   | 6614-0023 | 23mm  |
| 6614-0004 | 4mm   | 6614-0024 | 24mm  |
| 6614-0005 | 5mm   | 6614-0025 | 25mm  |
| 6614-0006 | 6mm   | 6614-0026 | 26mm  |
| 6614-0008 | 8mm   | 6614-0027 | 27mm  |
| 6614-0010 | 10mm  | 6614-0028 | 28mm  |
| 6614-0012 | 12mm  | 6614-0030 | 30mm  |
| 6614-0013 | 13mm  | 6614-0032 | 32mm  |
| 6614-0014 | 14mm  | 6614-0035 | 35mm  |
| 6614-0015 | 15mm  | 6614-0036 | 36mm  |
| 6614-0016 | 16mm  | 6614-0038 | 38mm  |
| 6614-0017 | 17mm  | 6614-0040 | 40mm  |
| 6614-0018 | 18mm  | 6614-0042 | 42mm  |
| 6614-0019 | 19mm  | 6614-0045 | 45mm  |
| 6614-0020 | 20mm  | 6614-0046 | 46mm  |
| 6614-0021 | 21mm  | 6614-0050 | 50mm  |

7PCS PLAIN PLUG GAUGE SET

- Grade 7H
- With Go&No-Go ends
- With inspection certificate
- Strictly made in accordance with DIN ISO 1502
- Made of premium steel, hardened, cryogenic treatment
- Stable product dimensions, superior surface finish, wear resistance for long service life

| Code      | Including                   |
|-----------|-----------------------------|
| 6614-1005 | 3, 4, 5, 6, 8, 10, 12mm H 7 |

7PCS PLAIN RING GAUGE SET

- With inspection certificate
- Strictly made in accordance with DIN ISO 1502
- Made of premium steel, hardened, cryogenic treatment
- Stable product dimensions, superior surface finish, wear resistance for long service life

| Code      | Including               |
|-----------|-------------------------|
| 6312-1005 | 3, 4, 5, 6, 8, 10, 12mm |

CERAMIC GAUGE BLOCK SET

DIN ISO 3650

PURPOSE

Grade 0: Mainly used in calibration laboratory by specialized inspection staff, as reference standards for calibration of high precision measuring equipment and grade 1 and 2 gauge blocks

Grade 1: Mainly used in laboratory to inspect high precision workpiece, gauge blocks and set measuring equipment

- Hardness 1350HV
- High stability of material
- Non-magnetic and non-conductive, can be used under specific conditions
- Made of ceramic materials with high hardness, wear resistance, and long service life which is 5-10 times of steel gauge block, 4-5 times of carbide
- Corrosion resistant, anti-corrosion treatment is unnecessary when handle normally
- Superior fine material, high precision ground, smooth and flat surface, high wringing force
- Strictly made in accordance with DIN ISO 3650



|           |       |           |             |       | Unit:mm |
|-----------|-------|-----------|-------------|-------|---------|
| Code      | Grade | Piece/Set | Size        | Step  | Piece   |
| 6221-5232 | 1     | 32        | 1.005       | /     | 1       |
|           |       |           | 1.01-1.09   | 0.01  | 9       |
|           |       |           | 1.1-1.9     | 0.1   | 9       |
|           |       |           | 1-9         | 1     | 9       |
| 6220-5232 | 0     |           | 10-30       | 10    | 3       |
|           |       |           | 50          | /     | 1       |
| 6221-5246 | 1     | 46        | 1.001-1.009 | 0.001 | 9       |
|           |       |           | 1.01-1.09   | 0.01  | 9       |
|           |       |           | 1.1-1.9     | 0.1   | 9       |
| 6220-5246 | 0     |           | 1-9         | 1     | 9       |
|           |       |           | 10-100      | 10    | 10      |
| 6221-5247 | 1     | 47        | 1.005       | /     | 1       |
|           |       |           | 1.01-1.19   | 0.01  | 19      |
|           |       |           | 1.2-1.9     | 0.1   | 8       |
|           |       |           | 1-9         | 1     | 9       |
| 6220-5247 | 0     |           | 10-100      | 10    | 10      |
| 6221-5287 | 1     | 87        | 1.001-1.009 | 0.001 | 9       |
|           |       |           | 1.01-1.49   | 0.01  | 49      |
|           |       |           | 0.5-9.5     | 0.5   | 19      |
| 6220-5287 | 0     |           | 10-100      | 10    | 10      |
| 6221-5103 | 1     | 103       | 1.005       | /     | 1       |
|           |       |           | 1.01-1.49   | 0.01  | 49      |
|           |       |           | 0.5-24.5    | 0.5   | 49      |
|           |       |           | 25-100      | 25    | 4       |
| 6220-5103 | 0     |           | 1.0005      | /     | 1       |
| 6221-5112 | 1     | 112       | 1.001-1.009 | 0.001 | 9       |
|           |       |           | 1.01-1.49   | 0.01  | 49      |
|           |       |           | 0.5-24.5    | 0.5   | 49      |
| 6220-5112 | 0     |           | 25-100      | 25    | 4       |

Unit:mm

SOLID CARBIDE GAUGE BLOCK SET

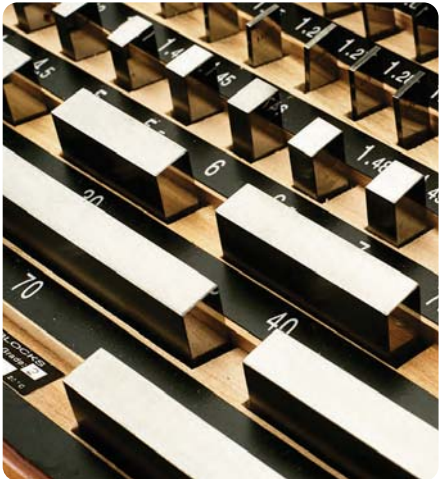
DIN ISO 3650

PURPOSE

Grade 0: Mainly used in calibration laboratory by specialized inspection staff, as reference standards for calibration of high precision measuring equipment and grade 1 and 2 gauge blocks

Grade 1: Mainly used in laboratory to inspect high precision workpiece, gauge blocks and set measuring equipment

Grade 2: Mainly used in workshop to install cutters and workpiece, inspect the gauge block for manufacturing and set measuring equipment



- High quality solid carbide which is harder than steel and ceramic
- Strictly made in accordance with DIN ISO 3650
- Made of carbide, extremely wear resistance and corrosion resistance, excellent dimension stability
- Supplied with manufacturer inspection certificate
- Hardness 89.5HRA

Unit:mm

| Code      | Grade | Piece/Set | Size        | Step  | Piece |
|-----------|-------|-----------|-------------|-------|-------|
| 6341-4232 | 1     | 32        | 1.005       | /     | 1     |
|           |       |           | 1.01-1.09   | 0.01  | 9     |
|           |       |           | 1.1-1.9     | 0.1   | 9     |
|           |       |           | 1-9         | 1     | 9     |
| 6340-4232 | 0     |           | 10-30       | 10    | 3     |
|           |       |           | 50          | /     | 1     |
| 6341-4246 | 1     | 46        | 1.001-1.009 | 0.001 | 9     |
|           |       |           | 1.01-1.09   | 0.01  | 9     |
|           |       |           | 1.1-1.9     | 0.1   | 9     |
| 6340-4246 | 0     |           | 1-9         | 1     | 9     |
|           |       |           | 10-100      | 10    | 10    |
| 6341-4247 | 1     | 47        | 1.005       | /     | 1     |
|           |       |           | 1.01-1.19   | 0.01  | 19    |
| 6340-4247 | 0     |           | 1.2-1.9     | 0.1   | 8     |
|           |       |           | 1-9         | 1     | 9     |
|           |       |           | 10-100      | 10    | 10    |
| 6341-4283 | 1     | 83        | 0.5         | /     | 1     |
|           |       |           | 1           | /     | 1     |
|           |       |           | 1.005       | /     | 1     |
|           |       |           | 1.01-1.49   | 0.01  | 49    |
| 6340-4283 | 0     |           | 1.5-1.9     | 0.1   | 5     |
|           |       |           | 2.0-9.5     | 0.5   | 16    |
|           |       |           | 10-100      | 10    | 10    |
| 6341-4287 | 1     | 87        | 1.001-1.009 | 0.001 | 9     |
|           |       |           | 1.01-1.49   | 0.01  | 49    |
| 6340-4287 | 0     |           | 0.5-9.5     | 0.5   | 19    |
|           |       |           | 10-100      | 10    | 10    |
| 6341-4103 | 1     | 103       | 1.005       | /     | 1     |
|           |       |           | 1.01-1.49   | 0.01  | 49    |
| 6340-4103 | 0     |           | 0.5-24.5    | 0.5   | 49    |
|           |       |           | 25-100      | 25    | 4     |
| 6341-4112 | 1     | 112       | 1.0005      | /     | 1     |
|           |       |           | 1.001-1.009 | 0.001 | 9     |
|           |       |           | 1.01-1.49   | 0.01  | 49    |
| 6340-4112 | 0     |           | 0.5-24.5    | 0.5   | 49    |
|           |       |           | 25-100      | 25    | 4     |

# CALIBRATION GAUGE BLOCK SET

MADE OF HIGH-QUALITY STEEL

DIN ISO 3650



- High-carbon, high-chrome steel provides high hardness ( $\geq 63\text{HRC}$ ) and wear resistance
- Strictly made in accordance with DIN ISO 3650
- made of high-quality alloy steel
- Edges are slightly lapped for protection



- Precision ground, mirror polish, heat treatment and cryogenic treatment for all measuring surfaces.



- Stable dimensions with high accuracy, low surface roughness, high wringing force.



- Provided with fitted Aluminum case

| CERTIFICATE                |                        |                   |                           |                   |              |
|----------------------------|------------------------|-------------------|---------------------------|-------------------|--------------|
| Product name: Gauge blocks |                        |                   | Dasqua                    |                   |              |
| Type: Rect                 | Standard: DIN ISO 3650 |                   | Set No: 6112-1232 (12PCS) |                   |              |
| Material: Steel            |                        | Grade: 2          |                           |                   |              |
| Nominal Size (mm)          | Run out (µm)           | Nominal Size (mm) | Run out (µm)              | Nominal Size (mm) | Run out (µm) |
| 1.005                      | +0.32                  | 1.20              | +0.20                     | 4                 | -0.10        |
| 1.01                       | +0.20                  | 1.30              | +0.20                     | 5                 | -0.17        |
| 1.02                       | +0.30                  | 1.40              | +0.20                     | 6                 | -0.10        |
| 1.03                       | +0.10                  | 1.50              | +0.10                     | 7                 | -0.10        |
| 1.04                       | +0.30                  | 1.60              | +0.20                     | 8                 | +0.20        |
| 1.05                       | -0.03                  | 1.70              | +0.12                     | 9                 | -0.17        |
| 1.06                       | -0.20                  | 1.80              | +0.30                     | 10                | +0.30        |
| 1.07                       | -0.05                  | 1.90              | +0.04                     | 20                | +0.08        |
| 1.08                       | -0.10                  | 1                 | -0.30                     | 30                | +0.20        |
| 1.09                       | +0.25                  | 2                 | +0.20                     | 50                | -0.19        |
| 1.10                       | +0.25                  | 3                 | -0.30                     |                   |              |

Remarks: Standard reference temperature: 68°F (20°C)  
Coefficient of thermal expansion:  $(11.5 \pm 1.0) \times 10^{-6}/^{\circ}\text{C}$

Reported by: David

| Unit:mm   |       |           |             |       |       |  |
|-----------|-------|-----------|-------------|-------|-------|--|
| Code      | Grade | Piece/Set | Size        | Step  | Piece |  |
| 6110-0010 | 0     | 10        | 1.000-1.009 | 0.001 | 10    |  |
| 6111-0010 | 1     |           | 1.000-1.009 | 0.001 | 10    |  |
| 6112-0010 | 2     |           | 1.000-1.009 | 0.001 | 10    |  |
| 6110-1010 | 0     |           | 0.991-1.000 | 0.001 | 10    |  |
| 6111-1010 | 1     |           | 0.991-1.000 | 0.001 | 10    |  |
| 6112-1010 | 2     |           | 0.991-1.000 | 0.001 | 10    |  |
| 6110-1232 | 0     | 32        | 1.005       | /     | 1     |  |
|           |       |           | 1.01-1.09   | 0.01  | 9     |  |
|           |       |           | 1.1-1.9     | 0.1   | 9     |  |
| 6111-1232 | 1     |           | 1-9         | 1     | 9     |  |
|           |       |           | 10-30       | 10    | 3     |  |
| 6112-1232 | 2     |           | 50          | /     | 1     |  |
|           |       |           | 1.001-1.009 | 0.001 | 9     |  |
| 6110-1246 | 0     | 46        | 1.01-1.09   | 0.01  | 9     |  |
| 6111-1246 | 1     |           | 1.1-1.9     | 0.1   | 9     |  |
| 6112-1246 | 2     |           | 1-9         | 1     | 9     |  |
| 6110-1247 | 0     | 47        | 10-100      | 10    | 10    |  |
|           |       |           | 1.005       | /     | 1     |  |
|           |       |           | 1.01-1.19   | 0.01  | 19    |  |
| 6111-1247 | 1     |           | 1.2-1.9     | 0.1   | 8     |  |
|           |       |           | 1-9         | 1     | 9     |  |
|           |       |           | 10-100      | 10    | 10    |  |
| 6112-1247 | 2     |           | 0.5         | /     | 1     |  |
|           |       |           | 1           | /     | 1     |  |
|           |       |           | 1.005       | /     | 1     |  |
| 6110-1283 | 0     | 83        | 1.01-1.49   | 0.01  | 49    |  |
|           |       |           | 1.5-1.9     | 0.1   | 5     |  |
|           |       |           | 2.0-9.5     | 0.5   | 16    |  |
| 6111-1283 | 1     |           | 10-100      | 10    | 10    |  |
|           |       |           | 1.001-1.009 | 0.001 | 9     |  |
|           |       |           | 1.01-1.49   | 0.01  | 49    |  |
| 6112-1283 | 2     |           | 0.5-9.5     | 0.5   | 19    |  |
|           |       |           | 10-100      | 10    | 10    |  |
|           |       |           | 1.001-1.009 | 0.001 | 9     |  |
| 6110-1287 | 0     | 87        | 1.01-1.49   | 0.01  | 49    |  |
| 6111-1287 | 1     |           | 0.5-9.5     | 0.5   | 19    |  |
| 6112-1287 | 2     |           | 10-100      | 10    | 10    |  |

| Unit:mm   |       |             |                 |         |       |
|-----------|-------|-------------|-----------------|---------|-------|
| Code      | Grade | Piece/Set   | Size            | Step    | Piece |
| 6110-1201 | 0     | 103         | 1.005           | /       | 1     |
| 6111-1201 | 1     |             | 1.01-1.49       | 0.01    | 49    |
| 6112-1201 | 2     |             | 0.5-24.5        | 0.5     | 49    |
| 6110-1112 | 0     | 112         | 25-100          | 25      | 4     |
| 6111-1112 | 1     |             | 1.0005          | /       | 1     |
|           |       |             | 1.001-1.009     | 0.001   | 9     |
| 6112-1112 | 2     | 1.01-1.49   | 0.01            | 49      |       |
| 6110-1122 | 0     | 0.5-24.5    | 0.5             | 49      |       |
|           |       | 25-100      | 25              | 4       |       |
|           |       | 0.5         | /               | 1       |       |
| 6111-1122 | 1     | 1           | /               | 1       |       |
|           |       | 1.0005      | /               | 1       |       |
|           |       | 1.001-1.009 | 0.001           | 9       |       |
| 6112-1122 | 2     | 1.01-1.49   | 0.01            | 49      |       |
|           |       | 1.5-1.9     | 0.1             | 5       |       |
|           |       | 2.0-25.0    | 0.5             | 47      |       |
| 6110-3236 | 0     | 30-70       | 10              | 5       |       |
|           |       | 75          | /               | 1       |       |
|           |       | 80-100      | 10              | 3       |       |
| 6111-3236 | 1     | 36          | 0.05"           | /       | 1     |
| 6112-3236 | 2     |             | 0.1001"-0.1009" | 0.0001" | 9     |
|           |       |             | 0.101"-0.109"   | 0.001"  | 9     |
| 6110-3281 | 0     | 81          | 0.11"-0.19"     | 0.01"   | 9     |
| 6111-3281 | 1     |             | 0.1"-0.5"       | 0.1"    | 5     |
| 6112-3281 | 2     |             | 1", 2", 4"      | /       | 3     |
|           |       |             | 0.1001"-0.1009" | 0.0001" | 9     |
|           |       |             | 0.101"-0.149"   | 0.001"  | 49    |
|           |       | 0.05"-0.95" | 0.05"           | 19      |       |

INDIVIDUAL STEEL GAUGE BLOCK

- Strictly made in accordance with DIN ISO 3650
- Made of high-quality alloy steel
- Edges are slightly lapped for protection
- With Calibration certificate
- Gauge blocks with clamping holes: 125, 150, 175, 200,250, 300, 400, 500, 600, 700, 800, 900, 1000mm

Grade 0

Unit:mm

| Code      | Size    | Code      | Size   | Code      | Size   | Code      | Size   | Code      | Size   |
|-----------|---------|-----------|--------|-----------|--------|-----------|--------|-----------|--------|
| 6000-0500 | 0.5mm   | 6000-1170 | 1.17mm | 6000-1440 | 1.44mm | 6001-0000 | 10mm   | 6002-3500 | 23.5mm |
| 6000-1000 | 1mm     | 6000-1180 | 1.18mm | 6000-1450 | 1.45mm | 6001-0500 | 10.5mm | 6002-4000 | 24mm   |
| 6000-1001 | 1.001mm | 6000-1190 | 1.19mm | 6000-1460 | 1.46mm | 6001-1000 | 11mm   | 6002-4500 | 24.5mm |
| 6000-1002 | 1.002mm | 6000-1200 | 1.2mm  | 6000-1470 | 1.47mm | 6001-1500 | 11.5mm | 6002-5000 | 25mm   |
| 6000-1003 | 1.003mm | 6000-1210 | 1.21mm | 6000-1480 | 1.48mm | 6001-2000 | 12mm   | 6003-0000 | 30mm   |
| 6000-1004 | 1.004mm | 6000-1220 | 1.22mm | 6000-1490 | 1.49mm | 6001-2500 | 12.5mm | 6004-0000 | 40mm   |
| 6000-1005 | 1.005mm | 6000-1230 | 1.23mm | 6000-1500 | 1.5mm  | 6001-3000 | 13mm   | 6005-0000 | 50mm   |
| 6000-1006 | 1.006mm | 6000-1240 | 1.24mm | 6000-1600 | 1.6mm  | 6001-3500 | 13.5mm | 6006-0000 | 60mm   |
| 6000-1007 | 1.007mm | 6000-1250 | 1.25mm | 6000-1700 | 1.7mm  | 6001-4000 | 14mm   | 6007-0000 | 70mm   |
| 6000-1008 | 1.008mm | 6000-1260 | 1.26mm | 6000-1800 | 1.8mm  | 6001-4500 | 14.5mm | 6007-5000 | 75mm   |
| 6000-1009 | 1.009mm | 6000-1270 | 1.27mm | 6000-1900 | 1.9mm  | 6001-5000 | 15mm   | 6008-0000 | 80mm   |
| 6000-1010 | 1.01mm  | 6000-1280 | 1.28mm | 6000-2000 | 2mm    | 6001-5500 | 15.5mm | 6009-0000 | 90mm   |
| 6000-1020 | 1.02mm  | 6000-1290 | 1.29mm | 6000-2500 | 2.5mm  | 6001-6000 | 16mm   | 6010-0000 | 100mm  |
| 6000-1030 | 1.03mm  | 6000-1300 | 1.3mm  | 6000-3000 | 3mm    | 6001-6500 | 16.5mm | 6012-5000 | 125mm  |
| 6000-1040 | 1.04mm  | 6000-1310 | 1.31mm | 6000-3500 | 3.5mm  | 6001-7000 | 17mm   | 6015-0000 | 150mm  |
| 6000-1050 | 1.05mm  | 6000-1320 | 1.32mm | 6000-4000 | 4mm    | 6001-7500 | 17.5mm | 6017-5000 | 175mm  |
| 6000-1060 | 1.06mm  | 6000-1330 | 1.33mm | 6000-4500 | 4.5mm  | 6001-8000 | 18mm   | 6020-0000 | 200mm  |
| 6000-1070 | 1.07mm  | 6000-1340 | 1.34mm | 6000-5000 | 5mm    | 6001-8500 | 18.5mm | 6025-0000 | 250mm  |
| 6000-1080 | 1.08mm  | 6000-1350 | 1.35mm | 6000-5500 | 5.5mm  | 6001-900  | 19mm   | 6030-0000 | 300mm  |
| 6000-1090 | 1.09mm  | 6000-1360 | 1.36mm | 6000-6000 | 6mm    | 6001-9500 | 19.5mm | 6040-0000 | 400mm  |
| 6000-1100 | 1.1mm   | 6000-1370 | 1.37mm | 6000-6500 | 6.5mm  | 6002-0000 | 20mm   | 6050-0000 | 500mm  |
| 6000-1110 | 1.11mm  | 6000-1380 | 1.38mm | 6000-7000 | 7mm    | 6002-0500 | 20.5mm | 6060-0000 | 600mm  |
| 6000-1120 | 1.12mm  | 6000-1390 | 1.39mm | 6000-7500 | 7.5mm  | 6002-1000 | 21mm   | 6070-0000 | 700mm  |
| 6000-1130 | 1.13mm  | 6000-1400 | 1.4mm  | 6000-8000 | 8mm    | 6002-1500 | 21.5mm | 6080-0000 | 800mm  |
| 6000-1140 | 1.14mm  | 6000-1410 | 1.41mm | 6000-8500 | 8.5mm  | 6002-2000 | 22mm   | 6090-0000 | 900mm  |
| 6000-1150 | 1.15mm  | 6000-1420 | 1.42mm | 6000-9000 | 9mm    | 6002-2500 | 22.5mm |           |        |
| 6000-1160 | 1.16mm  | 6000-1430 | 1.43mm | 6000-9500 | 9.5mm  | 6002-3000 | 23mm   |           |        |



Dimension:

Unit:mm

| Size     | W | H  |
|----------|---|----|
| 0.5-10mm | 9 | 30 |
| >10mm    | 9 | 35 |

Grade 1

Unit:mm

| Code      | Size    | Code      | Size   | Code      | Size   | Code      | Size   |
|-----------|---------|-----------|--------|-----------|--------|-----------|--------|
| 6100-0500 | 0.5mm   | 6100-1260 | 1.26mm | 6100-5500 | 5.5mm  | 6102-3500 | 23.5mm |
| 6100-1000 | 1mm     | 6100-1270 | 1.27mm | 6100-6000 | 6mm    | 6102-4000 | 24mm   |
| 6100-1001 | 1.001mm | 6100-1280 | 1.28mm | 6100-6500 | 6.5mm  | 6102-4500 | 24.5mm |
| 6100-1002 | 1.002mm | 6100-1290 | 1.29mm | 6100-7000 | 7mm    | 6102-5000 | 25mm   |
| 6100-1003 | 1.003mm | 6100-1300 | 1.3mm  | 6100-7500 | 7.5mm  | 6103-0000 | 30mm   |
| 6100-1004 | 1.004mm | 6100-1310 | 1.31mm | 6100-8000 | 8mm    | 6104-0000 | 40mm   |
| 6100-1005 | 1.005mm | 6100-1320 | 1.32mm | 6100-8500 | 8.5mm  | 6105-0000 | 50mm   |
| 6100-1006 | 1.006mm | 6100-1330 | 1.33mm | 6100-9000 | 9mm    | 6106-0000 | 60mm   |
| 6100-1007 | 1.007mm | 6100-1340 | 1.34mm | 6100-9500 | 9.5mm  | 6107-0000 | 70mm   |
| 6100-1008 | 1.008mm | 6100-1350 | 1.35mm | 6101-0000 | 10mm   | 6107-5000 | 75mm   |
| 6100-1009 | 1.009mm | 6100-1360 | 1.36mm | 6101-0500 | 10.5mm | 6108-0000 | 80mm   |
| 6100-1010 | 1.01mm  | 6100-1370 | 1.37mm | 6101-1000 | 11mm   | 6109-0000 | 90mm   |
| 6100-1020 | 1.02mm  | 6100-1380 | 1.38mm | 6101-1500 | 11.5mm | 61-100000 | 100mm  |
| 6100-1030 | 1.03mm  | 6100-1390 | 1.39mm | 6101-2000 | 12mm   | 6112-5000 | 125mm  |
| 6100-1040 | 1.04mm  | 6100-1400 | 1.4mm  | 6101-2500 | 12.5mm | 6115-0000 | 150mm  |
| 6100-1050 | 1.05mm  | 6100-1410 | 1.41mm | 6101-3000 | 13mm   | 6117-5000 | 175mm  |
| 6100-1060 | 1.06mm  | 6100-1420 | 1.42mm | 6101-3500 | 13.5mm | 6120-0000 | 200mm  |
| 6100-1070 | 1.07mm  | 6100-1430 | 1.43mm | 6101-4000 | 14mm   | 6125-0000 | 250mm  |
| 6100-1080 | 1.08mm  | 6100-1440 | 1.44mm | 6101-4500 | 14.5mm | 6130-0000 | 300mm  |
| 6100-1090 | 1.09mm  | 6100-1450 | 1.45mm | 6101-5000 | 15mm   | 6140-0000 | 400mm  |
| 6100-1100 | 1.1mm   | 6100-1460 | 1.46mm | 6101-5500 | 15.5mm | 6150-0000 | 500mm  |
| 6100-1110 | 1.11mm  | 6100-1470 | 1.47mm | 6101-6000 | 16mm   | 6160-0000 | 600mm  |
| 6100-1120 | 1.12mm  | 6100-1480 | 1.48mm | 6101-6500 | 16.5mm | 6170-0000 | 700mm  |
| 6100-1130 | 1.13mm  | 6100-1490 | 1.49mm | 6101-7000 | 17mm   | 6180-0000 | 800mm  |
| 6100-1140 | 1.14mm  | 6100-1500 | 1.5mm  | 6101-7500 | 17.5mm | 6190-0000 | 900mm  |
| 6100-1150 | 1.15mm  | 6100-1600 | 1.6mm  | 6101-8000 | 18mm   |           |        |
| 6100-1160 | 1.16mm  | 6100-1700 | 1.7mm  | 6101-8500 | 18.5mm |           |        |
| 6100-1170 | 1.17mm  | 6100-1800 | 1.8mm  | 6101-900  | 19mm   |           |        |
| 6100-1180 | 1.18mm  | 6100-1900 | 1.9mm  | 6101-9500 | 19.5mm |           |        |
| 6100-1190 | 1.19mm  | 6100-2000 | 2mm    | 6102-0000 | 20mm   |           |        |
| 6100-1200 | 1.2mm   | 6100-2500 | 2.5mm  | 6102-0500 | 20.5mm |           |        |
| 6100-1210 | 1.21mm  | 6100-3000 | 3mm    | 6102-1000 | 21mm   |           |        |
| 6100-1220 | 1.22mm  | 6100-3500 | 3.5mm  | 6102-1500 | 21.5mm |           |        |
| 6100-1230 | 1.23mm  | 6100-4000 | 4mm    | 6102-2000 | 22mm   |           |        |
| 6100-1240 | 1.24mm  | 6100-4500 | 4.5mm  | 6102-2500 | 22.5mm |           |        |
| 6100-1250 | 1.25mm  | 6100-5000 | 5mm    | 6102-3000 | 23mm   |           |        |

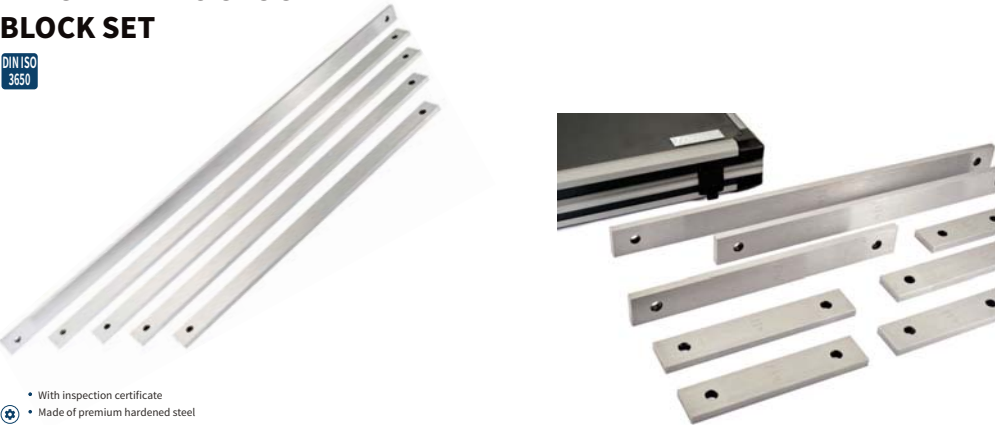
Grade 2

Unit:mm

| Code      | Size    | Code      | Size   | Code      | Size   | Code      | Size   |
|-----------|---------|-----------|--------|-----------|--------|-----------|--------|
| 6200-0500 | 0.5mm   | 6200-1260 | 1.26mm | 6200-5500 | 5.5mm  | 6202-3500 | 23.5mm |
| 6200-1000 | 1mm     | 6200-1270 | 1.27mm | 6200-6000 | 6mm    | 6202-4000 | 24mm   |
| 6200-1001 | 1.001mm | 6200-1280 | 1.28mm | 6200-6500 | 6.5mm  | 6202-4500 | 24.5mm |
| 6200-1002 | 1.002mm | 6200-1290 | 1.29mm | 6200-7000 | 7mm    | 6202-5000 | 25mm   |
| 6200-1003 | 1.003mm | 6200-1300 | 1.3mm  | 6200-7500 | 7.5mm  | 6203-0000 | 30mm   |
| 6200-1004 | 1.004mm | 6200-1310 | 1.31mm | 6200-8000 | 8mm    | 6204-0000 | 40mm   |
| 6200-1005 | 1.005mm | 6200-1320 | 1.32mm | 6200-8500 | 8.5mm  | 6205-0000 | 50mm   |
| 6200-1006 | 1.006mm | 6200-1330 | 1.33mm | 6200-9000 | 9mm    | 6206-0000 | 60mm   |
| 6200-1007 | 1.007mm | 6200-1340 | 1.34mm | 6200-9500 | 9.5mm  | 6207-0000 | 70mm   |
| 6200-1008 | 1.008mm | 6200-1350 | 1.35mm | 6201-0000 | 10mm   | 6207-5000 | 75mm   |
| 6200-1009 | 1.009mm | 6200-1360 | 1.36mm | 6201-0500 | 10.5mm | 6208-0000 | 80mm   |
| 6200-1010 | 1.01mm  | 6200-1370 | 1.37mm | 6201-1000 | 11mm   | 6209-0000 | 90mm   |
| 6200-1020 | 1.02mm  | 6200-1380 | 1.38mm | 6201-1500 | 11.5mm | 6210-0000 | 100mm  |
| 6200-1030 | 1.03mm  | 6200-1390 | 1.39mm | 6201-2000 | 12mm   | 6212-5000 | 125mm  |
| 6200-1040 | 1.04mm  | 6200-1400 | 1.4mm  | 6201-2500 | 12.5mm | 6215-0000 | 150mm  |
| 6200-1050 | 1.05mm  | 6200-1410 | 1.41mm | 6201-3000 | 13mm   | 6217-5000 | 175mm  |
| 6200-1060 | 1.06mm  | 6200-1420 | 1.42mm | 6201-3500 | 13.5mm | 6220-0000 | 200mm  |
| 6200-1070 | 1.07mm  | 6200-1430 | 1.43mm | 6201-4000 | 14mm   | 6225-0000 | 250mm  |
| 6200-1080 | 1.08mm  | 6200-1440 | 1.44mm | 6201-4500 | 14.5mm | 6230-0000 | 300mm  |
| 6200-1090 | 1.09mm  | 6200-1450 | 1.45mm | 6201-5000 | 15mm   | 6240-0000 | 400mm  |
| 6200-1100 | 1.1mm   | 6200-1460 | 1.46mm | 6201-5500 | 15.5mm | 6250-0000 | 500mm  |
| 6200-1110 | 1.11mm  | 6200-1470 | 1.47mm | 6201-6000 | 16mm   | 6260-0000 | 600mm  |
| 6200-1120 | 1.12mm  | 6200-1480 | 1.48mm | 6201-6500 | 16.5mm | 6270-0000 | 700mm  |
| 6200-1130 | 1.13mm  | 6200-1490 | 1.49mm | 6201-7000 | 17mm   | 6280-0000 | 800mm  |
| 6200-1140 | 1.14mm  | 6200-1500 | 1.5mm  | 6201-7500 | 17.5mm | 6290-0000 | 900mm  |
| 6200-1150 | 1.15mm  | 6200-1600 | 1.6mm  | 6201-8000 | 18mm   |           |        |
| 6200-1160 | 1.16mm  | 6200-1700 | 1.7mm  | 6201-8500 | 18.5mm |           |        |
| 6200-1170 | 1.17mm  | 6200-1800 | 1.8mm  | 6201-900  | 19mm   |           |        |
| 6200-1180 | 1.18mm  | 6200-1900 | 1.9mm  | 6201-9500 | 19.5mm |           |        |
| 6200-1190 | 1.19mm  | 6200-2000 | 2mm    | 6202-0000 | 20mm   |           |        |
| 6200-1200 | 1.2mm   | 6200-2500 | 2.5mm  | 6202-0500 | 20.5mm |           |        |
| 6200-1210 | 1.21mm  | 6200-3000 | 3mm    | 6202-1000 | 21mm   |           |        |
| 6200-1220 | 1.22mm  | 6200-3500 | 3.5mm  | 6202-1500 | 21.5mm |           |        |
| 6200-1230 | 1.23mm  | 6200-4000 | 4mm    | 6202-2000 | 22mm   |           |        |
| 6200-1240 | 1.24mm  | 6200-4500 | 4.5mm  | 6202-2500 | 22.5mm |           |        |
| 6200-1250 | 1.25mm  | 6200-5000 | 5mm    | 6202-3000 | 23mm   |           |        |

LARGE METRIC GAUGE BLOCK SET

DIN ISO 3650



- With inspection certificate
- Made of premium hardened steel
- Stable dimensions with high accuracy, low surface roughness, high wringing force
- Strictly made in accordance with DIN ISO 3650
- High-carbon, high-chrome steel provides high hardness ( $\geq 63\text{HRC}$ ) and wear resistance
- Edges are slightly beveled for protection
- Precision ground, mirror polish, heat treatment and cryogenic treatment for all measuring surfaces

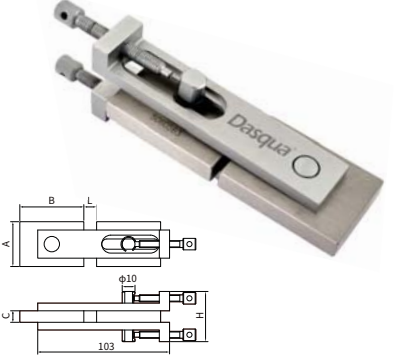
5PCS LARGE METRIC GAUGE BLOCK SET

| Code      | Size                 | Grade |
|-----------|----------------------|-------|
| 6220-6605 | 600/700/800/900/1000 | 0     |
| 6221-6605 | 600/700/800/900/1000 | 1     |
| 6222-6605 | 600/700/800/900/1000 | 2     |

8PCS LARGE METRIC GAUGE BLOCK SET

| Code      | Size                            | Grade |
|-----------|---------------------------------|-------|
| 6220-6608 | 125/150/175/200/250/300/400/500 | 0     |
| 6221-6608 | 125/150/175/200/250/300/400/500 | 1     |
| 6222-6608 | 125/150/175/200/250/300/400/500 | 2     |

GAUGE BLOCK HOLDERS



- To be used with gauge blocks for gaging both workpieces and fixtures
- To check, set and adjust gauges and measuring instruments
- Used to couple gauge block together to increase length
- Holders also can be used with reference points, scribers, and jaw to use as a Go/NoGo (G/NG) gage

| Code      | Type     | Unit | A  | B  | C | L    | H  |
|-----------|----------|------|----|----|---|------|----|
| 6321-0003 | 3Pcs/Set | Set  | 35 | 50 | 9 | 0-25 | 38 |
| 6321-0005 | 5Pcs/Set | Set  | 35 | 50 | 9 | 0-25 | 38 |

COUPLING HOLDER FOR GAUGE BLOCK



- For using of gauge blocks to measuring or adjustment of measuring instruments
- Made of stainless steel with base
- Base block's mounting surface lapped flat and parallel

| Code      | Clamping range |
|-----------|----------------|
| 6321-0050 | 0-50mm         |
| 6321-0100 | 0-100mm        |
| 6321-0200 | 0-200mm        |
| 6321-0300 | 0-300mm        |
| 6321-0400 | 0-400mm        |
| 6321-0500 | 0-500mm        |

ACCESSORIES SET  
FOR GAUGE BLOCKS



METRIC

Unit:mm

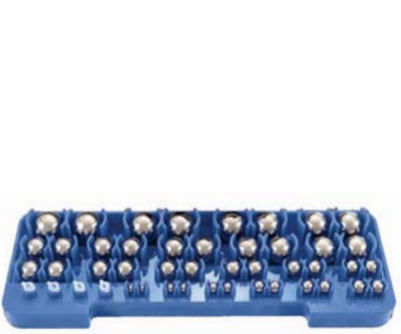
| Code                         | 6321-1005<br>(10pcs/set) | 6321-1010<br>(15pcs/set) | 6321-1015<br>(17pcs/set) |
|------------------------------|--------------------------|--------------------------|--------------------------|
| Description                  |                          |                          |                          |
| 50mm clamp                   | 1pc                      | 1pc                      | 1pc                      |
| 100mm clamp                  | 1pc                      | 1pc                      | 1pc                      |
| 200mm clamp                  | 1pc                      | 1pc                      | 1pc                      |
| 2mm Radius Cylindrical Jaws  | 1pair                    | 1pair                    | 1pair                    |
| 5mm Radius Cylindrical Jaws  | 1pair                    | 1pair                    | 1pair                    |
| 10mm Radius Cylindrical Jaws | -                        | 1pair                    | 1pair                    |
| 60mm Beveled Ends Jaws       | -                        | 1pair                    | 1pair                    |
| 100mm Parellel Jaw           | -                        | 1pair                    | 1pair                    |
| 100mm Straight Edge          | -                        | -                        | 1pc                      |
| Center Point                 | 1pc                      | 1pc                      | 1pc                      |
| Scriber Point                | 1pc                      | 1pc                      | 1pc                      |
| Base Block                   | 1pc                      | -                        | 1pc                      |

INCH

Unit:inch

| Code                          | 6321-2005<br>(14pcs/set) | 6321-2010<br>(27pcs/set) |
|-------------------------------|--------------------------|--------------------------|
| Description                   |                          |                          |
| 2.25" clamp                   | 1 Pcs                    | 1 Pcs                    |
| 4" clamp                      | -                        | 1 Pcs                    |
| 6" clamp                      | 1 Pcs                    | 1 Pcs                    |
| 10" clamp                     | -                        | 1 Pcs                    |
| 0.1" Radius Cylindrical Jaws  | 1 Pair                   | 1 Pair                   |
| 0.2" Radius Cylindrical Jaws  | 1 Pair                   | 1 Pair                   |
| 0.25" Radius Cylindrical Jaws | 1 Pair                   | 1 Pair                   |
| 0.5" Radius Cylindrical Jaws  | 1 Pair                   | 1 Pair                   |
| 0.75" Radius Cylindrical Jaws | -                        | 1 Pair                   |
| 4" Parellel Jaw               | 1 Pair                   | 1 Pair                   |
| 6" Parellel Jaw               | 1 Pair                   | 1 Pair                   |
| 6" Flat jaw                   | -                        | 1 Pair                   |
| Scriber Point                 | -                        | 1 Pcs                    |
| Center Point                  | -                        | 1 Pcs                    |
| Tram Point                    | -                        | 1 Pair                   |
| Jaws with reference lines     | -                        | 1 Pair                   |
| Base Block                    | -                        | 1 Pcs                    |

GAUGE BALL SET



- Measure difficult close tolerance dimensions in tool rooms inspection departments and production areas
- Ground and lapped
- Made by quality steel hardened
- Chrome steel hardened to Rc 63

Unit:mm

| Code      | Including            | Dimensional accuracy | Shape Accuracy | Quantity |
|-----------|----------------------|----------------------|----------------|----------|
| 6350-0005 | sg1,sg2,sg3,...,sg25 | 0.0025               | 0.0006         | 25 pairs |

CALIPER AND HEIGHT  
GAUGE CHECKER



- Used to set and inspect caliper and height gauges
- Ceramic gage blocks can be used in either vertical and horizontal orientation
- Measuring blocks are corrosion-resistant and dimensionally stable
- Supplied with inspection certificate

Unit:mm

| Code      | Range  | Internal Measuring Hand Size                                                       | Accuracy | Material |
|-----------|--------|------------------------------------------------------------------------------------|----------|----------|
| 6451-0005 | 0-300  | 20/50/100/150/200/250/300/330                                                      | ±0.005   | Ceramic  |
| 6451-0010 | 0-600  | 20/50/100/150/200/250/300/350/400/450/500/550/600                                  | ±0.007   | Ceramic  |
| 6451-0015 | 0-1000 | 20/50/100/150/200/250/300/350/400/450/500/550/600/650/700/750/800/850/900/950/1000 | ±0.007   | Ceramic  |
| 6451-1005 | 0-300  | 20/50/100/150/200/250/300/330                                                      | ±0.005   | Steel    |
| 6451-1020 | 0-400  | 20/50/100/150/200/250/300/350/400                                                  | ±0.007   | Steel    |
| 6451-1010 | 0-600  | 20/50/100/150/200/250/300/350/400/450/500/550/600                                  | ±0.007   | Steel    |
| 6451-1015 | 0-1000 | 20/50/100/150/200/250/300/350/400/450/500/550/600/650/700/750/800/850/900/950/1000 | ±0.007   | Steel    |



PIN GAUGE SET



- Strictly made in accordance with DIN2269
- Perfect for measuring the hole diameter, distance between holes, hole location, slot width, used as go/no-go gauges or as reference standards of setting measuring equipment
- Made of hardened steel, heat treatment, abrasion resistant, hardness 60-63HRC, precision ground for long service life

Individual Size Available



| Unit:mm   |             |                                                                                                           |        |          |
|-----------|-------------|-----------------------------------------------------------------------------------------------------------|--------|----------|
| Code      | Amount(Pcs) | Size                                                                                                      | Step   | Accuracy |
| 6211-4205 | 91          | 1-10                                                                                                      | 0.1    | ±0.001   |
| 6211-4210 | 273         | Include 273pcs(0.99/1.00/1.01[3pcs];1.09/1.10/1.11, 1.19/1.20/1.21...1.89/1.90/1.91,1.99/2.00/2.01[30pcs] |        | ±0.001   |
|           |             | 2.09/2.10/2.11...9.99/10.00/10.01[240pcs]                                                                 |        |          |
| 6212-4205 | 190         | 0.061"-0.250"                                                                                             | 0.001" | -0.0002" |
| 6212-4210 | 250         | 0.251"-0.5000"                                                                                            | 0.001" | -0.0002" |

| Unit:mm   |             |                            |        |          |
|-----------|-------------|----------------------------|--------|----------|
| Code      | Amount(Pcs) | Size                       | Step   | Accuracy |
| 6211-4300 | 31          | 0.20,0.21,0.22...-0.50     | 0.01mm | ±0.001   |
| 6211-4301 | 51          | 0.50,0.51,0.52...-1.00     | 0.01mm | ±0.001   |
| 6211-4302 | 51          | 1.00,1.01,1.02...-1.50     | 0.01mm | ±0.001   |
| 6211-4303 | 51          | 1.50,1.51,1.52...-2.00     | 0.01mm | ±0.001   |
| 6211-4304 | 51          | 2.00,2.01,2.02...-2.50     | 0.01mm | ±0.001   |
| 6211-4305 | 51          | 2.50,2.51,2.52...-3.00     | 0.01mm | ±0.001   |
| 6211-4306 | 51          | 3.00,3.01,3.02...-3.50     | 0.01mm | ±0.001   |
| 6211-4307 | 51          | 3.50,3.51,3.52...-4.00     | 0.01mm | ±0.001   |
| 6211-4308 | 51          | 4.00,4.01,4.02...-4.50     | 0.01mm | ±0.001   |
| 6211-4309 | 51          | 4.50,4.51,4.52...-5.00     | 0.01mm | ±0.001   |
| 6211-4310 | 51          | 5.00,5.01,5.02...-5.50     | 0.01mm | ±0.001   |
| 6211-4311 | 51          | 5.50,5.51,5.52...-6.00     | 0.01mm | ±0.001   |
| 6211-4312 | 51          | 6.00,6.01,6.02...-6.50     | 0.01mm | ±0.001   |
| 6211-4313 | 51          | 6.50,6.51,6.52...-7.00     | 0.01mm | ±0.001   |
| 6211-4314 | 51          | 7.00,7.01,7.02...-7.50     | 0.01mm | ±0.001   |
| 6211-4315 | 51          | 7.50,7.51,7.52...-8.00     | 0.01mm | ±0.001   |
| 6211-4316 | 51          | 8.00,8.01,8.02...-8.50     | 0.01mm | ±0.001   |
| 6211-4317 | 51          | 8.50,8.51,8.52...-9.00     | 0.01mm | ±0.001   |
| 6211-4318 | 51          | 9.00,9.01,9.02...-9.50     | 0.01mm | ±0.001   |
| 6211-4319 | 51          | 9.50,9.51,9.52...-10.00    | 0.01mm | ±0.001   |
| 6211-4320 | 51          | 10.00,10.01,10.02...-10.50 | 0.01mm | ±0.001   |
| 6211-4321 | 51          | 10.50,10.51,10.52...-11.00 | 0.01mm | ±0.001   |
| 6211-4322 | 51          | 11.00,11.01,11.02...-11.50 | 0.01mm | ±0.001   |
| 6211-4323 | 51          | 11.50,11.51,11.52...-12.00 | 0.01mm | ±0.001   |
| 6211-4324 | 51          | 12.00,12.01,12.02...-12.50 | 0.01mm | ±0.001   |
| 6211-4325 | 51          | 12.50,12.51,12.52...-13.00 | 0.01mm | ±0.001   |
| 6211-4326 | 51          | 13.00,13.01,13.02...-13.50 | 0.01mm | ±0.001   |
| 6211-4327 | 51          | 13.50,13.51,13.52...-14.00 | 0.01mm | ±0.001   |
| 6211-4328 | 51          | 14.00,14.01,14.02...-14.50 | 0.01mm | ±0.001   |
| 6211-4329 | 51          | 14.50,14.51,14.52...-15.00 | 0.01mm | ±0.001   |
| 6211-4330 | 51          | 15.00,15.01,15.02...-15.50 | 0.01mm | ±0.001   |
| 6211-4331 | 51          | 15.50,15.51,15.52...-16.00 | 0.01mm | ±0.001   |
| 6211-4332 | 51          | 16.00,16.01,16.02...-16.50 | 0.01mm | ±0.001   |
| 6211-4333 | 51          | 16.50,16.51,16.52...-17.00 | 0.01mm | ±0.001   |
| 6211-4334 | 51          | 17.00,17.01,17.02...-17.50 | 0.01mm | ±0.001   |
| 6211-4335 | 51          | 17.50,17.51,17.52...-18.00 | 0.01mm | ±0.001   |
| 6211-4336 | 51          | 18.00,18.01,18.02...-18.50 | 0.01mm | ±0.001   |
| 6211-4337 | 51          | 18.50,18.51,18.52...-19.00 | 0.01mm | ±0.001   |
| 6211-4338 | 51          | 19.00,19.01,19.02...-19.50 | 0.01mm | ±0.001   |
| 6211-4339 | 51          | 19.50,19.51,19.52...-20.00 | 0.01mm | ±0.001   |
| 6211-4400 | 101         | 1.00,1.01,1.02...-2.00     | 0.01mm | ±0.001   |
| 6211-4405 | 101         | 2.00,2.01,2.02...-3.00     | 0.01mm | ±0.001   |
| 6211-4410 | 101         | 3.00,3.01,3.02...-4.00     | 0.01mm | ±0.001   |
| 6211-4415 | 101         | 4.00,4.01,4.02...-5.00     | 0.01mm | ±0.001   |
| 6211-4420 | 101         | 5.00,5.01,5.02...-6.00     | 0.01mm | ±0.001   |
| 6211-4425 | 101         | 6.00,6.01,6.02...-7.00     | 0.01mm | ±0.001   |
| 6211-4430 | 101         | 7.00,7.01,7.02...-8.00     | 0.01mm | ±0.001   |
| 6211-4435 | 101         | 8.00,8.01,8.02...-9.00     | 0.01mm | ±0.001   |
| 6211-4440 | 101         | 9.00,9.01,9.02...-10.00    | 0.01mm | ±0.001   |
| 6211-4500 | 41          | 1.0,1.1,1.2...-5.0         | 0.1mm  | ±0.001   |
| 6211-4505 | 51          | 5.0,5.1,5.2...-10.0        | 0.1mm  | ±0.001   |
| 6211-4510 | 51          | 10.0,10.1,10.2...-15.0     | 0.1mm  | ±0.001   |
| 6211-4515 | 51          | 15.0,15.1,15.2...-20.0     | 0.1mm  | ±0.001   |

PIN GUAGE HANDLES

[GO/NO-GO][OPERATED WITHOUT WRENCH]



- Made of aluminum
- Optional clamping range
- Dedicated handle for pin gauge, no-go, go gauge and plug gage
- Simple structure, detachable design, easy to use

| Code      | Range                      |
|-----------|----------------------------|
| 6205-4005 | 0.28-1.51mm/0.011-0.0605"  |
| 6205-4010 | 1.52-6.35mm/0.061-0.2505"  |
| 6205-4015 | 6.36-12.71mm/0.251-0.5005" |
| 6205-4020 | 12.71-15.88mm/0.501-0.625" |
| 6205-4025 | 15.89-19mm/0.626-0.75"     |
| 6205-4030 | 19.01-21.13mm/0.751-0.832" |
| 6205-4035 | 21.14-25.4mm/0.833-1"      |

PIN GUAGE HANDLES

[GO/NO-GO][OPERATED WITH WRENCH]



- Clamping bushes are made of brass
- Supplied with wrench for installing pin gauges

| Code      | Range                         |
|-----------|-------------------------------|
| 6205-3001 | For Dia.φ0.3-1mm,Length:58mm  |
| 6205-3002 | For Dia.φ1-2mm,Length:58mm    |
| 6205-3003 | For Dia.φ2-3mm,Length:58mm    |
| 6205-3004 | For Dia.φ3-4mm,Length:58mm    |
| 6205-3005 | For Dia.φ4-5mm,Length:80mm    |
| 6205-3006 | For Dia.φ5-6mm,Length:80mm    |
| 6205-3007 | For Dia.φ6-7mm,Length:88mm    |
| 6205-3008 | For Dia.φ7-8mm,Length:88mm    |
| 6205-3009 | For Dia.φ8-9mm,Length:90mm    |
| 6205-3010 | For Dia.φ9-10mm,Length:90mm   |
| 6205-3011 | For Dia.φ10-11mm,Length:90mm  |
| 6205-3012 | For Dia.φ11-12mm,Length:90mm  |
| 6205-3013 | For Dia.φ12-13mm,Length:90mm  |
| 6205-3014 | For Dia.φ13-14mm,Length:90mm  |
| 6205-3015 | For Dia.φ14-15mm,Length:90mm  |
| 6205-3016 | For Dia.φ15-16mm,Length:90mm  |
| 6205-3017 | For Dia.φ16-17mm,Length:90mm  |
| 6205-3018 | For Dia.φ17-18mm,Length:90mm  |
| 6205-3019 | For Dia.φ18-19mm,Length:90mm  |
| 6205-3020 | For Dia.φ19-20mm,Length:90mm  |
| 6205-3021 | For Dia.φ20-21mm,Length:100mm |
| 6205-3022 | For Dia.φ21-22mm,Length:100mm |
| 6205-3023 | For Dia.φ22-23mm,Length:100mm |
| 6205-3024 | For Dia.φ23-24mm,Length:100mm |

# GAUGING TOOLS

BORN IN ITALY, RAISED BY THE WORLD

## 02-06 COMPARATIVE GAUGES



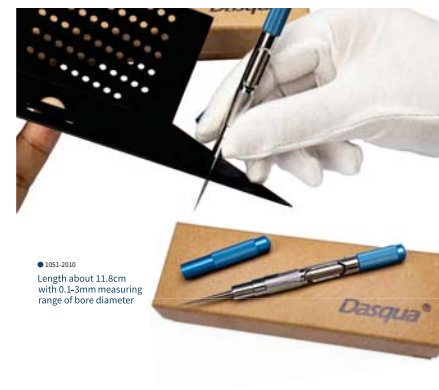
## 07-18 COMPARATIVE GAUGES



## 19-28 COMPARATIVE GAUGES FOR WELDING



## TAPER BORE GAUGE



● 1051-2010  
Length about 11.8cm  
with 0.1-3mm measuring  
range of bore diameter

BORN IN ITALY, RAISED BY THE WORLD **GAUGING TOOLS**



Mainly used to measure  
some special grooves  
like T-groove and  
V-groove, performing  
more stable than a  
normal taper gauge.

● 1051-3005  
Length about 16cm with 0.4-6mm  
measuring range of bore diameter

- Used to measure grooves and gaps or places where hard to reach
- Made of excellent stainless steel
- With a cap to protect the tip

## CIRCULAR TAPER GAUGE

Unit:mm

| Code      | Range | Graduation |
|-----------|-------|------------|
| 1051-2005 | 0.1-3 | 0.1        |
| 1051-2010 | 0.1-5 | 0.1        |

## TAPER GAUGE

Unit:mm

| Code      | Range | Graduation | Accuracy |
|-----------|-------|------------|----------|
| 1051-0005 | 1-6.5 | 0.1        | ±0.05    |
| 1051-0008 | 3-15  | 0.1        | ±0.05    |
| 1051-0015 | 3-16  | 0.1        | ±0.05    |
| 1051-0020 | 15-30 | 0.1        | ±0.05    |
| 1051-0025 | 30-45 | 0.1        | ±0.05    |

## CLEARANCE GAUGE

Unit:mm

| Code      | Range  | Graduation |
|-----------|--------|------------|
| 1051-3005 | 0.4-6  | 0.05       |
| 1051-3010 | 0.5-10 | 0.05       |
| 1051-3015 | 1-15   | 0.1        |



● 1051-0008  
Length about 19cm with 3-15mm  
measuring range of bore diameter

Mainly used to  
measure some  
deeper slots, holes  
and tube diameters.

TELESCOPING GAUGE SET



- The spring-loaded plunger expands within the bore, or groove, slots and holes, allowing determination of the internal diameter or groove width
- Each gage has a knurled clamp
- Satin chrome finish
- Contact plunger automatically self-centering at all times and in all positions
- Constant spring force on the measuring surface

| Unit:mm   |                                                                        |               |
|-----------|------------------------------------------------------------------------|---------------|
| Code      | Range                                                                  | length        |
| 5911-0001 | 8-150 and 5/16"-6" (8-12.7, 12.7-19, 19-32, 32-54, 54-90, 90-150)      | Up to 300/12" |
| 5911-0002 | 5/16"-1/2"-1/2"-3/4"-3/4"-1-1/4"-1-1/4"-2-1/8"-2-1/8"-3-1/2"-3-1/2"-6" | Up to 100/4"  |

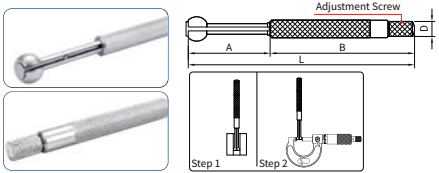
TIN-COATED TELESCOPING GAUGE SET



- 5911-0001-A
- 5911-0002-A
- Satin chrome finish
- Each gage has a knurled clamp
- Tin-Coated anvils for wear off resistance, longer service life
- The spring-loaded plunger expands within the bore, or groove, slots and holes, allowing determination of the internal diameter or groove width
- Contact plunger automatically self-centering at all times and in all positions
- Constant spring force on the measuring surface

| Unit:mm     |                                        |               |
|-------------|----------------------------------------|---------------|
| Code        | Range                                  | Length        |
| 5911-0001-A | 8-150mm/Up to 300mm[5/16-6"/Up to 12"] | Up to 300/12" |
| 5911-0002-A | 8-150mm/Up to 100mm[5/16-6"/Up to 4"]  | Up to 100/4"  |

SMALL HOLE GAUGE SET



- Measuring range: 3.0-5.0 mm, 5.0-7.5 mm, 7.5-10.0 mm, 10.0-13.0 mm
- Used with an outside micrometer for measuring inside diameter of bores
- Gaging surface is fully hardened to ensure long tool life
- Extra long for gaging deep and shallow holes, slots, and similar workpieces
- Satin chrome finish

| Unit:mm   |                   |    |    |    |    |
|-----------|-------------------|----|----|----|----|
| Code      | Range             | L  | A  | B  | D  |
| 5921-0005 | 3-5/1/8"-1/5"     | 76 | 22 | 53 | φ5 |
|           | 5-7.5/1/5"-3/10"  | 78 | 24 | 53 | φ5 |
|           | 7.5-10/3/10"-2/5" | 88 | 28 | 59 | φ6 |
|           | 10-13/2/5"-1/2"   | 92 | 32 | 59 | φ6 |

PRECISION CALIPERS / DIVIDER SET



- Made of top-grade high carbon steel
- Including: 1pc each of 150mm(6") outside caliper/inside caliper/Divider

| Unit:mm   |                                                              |
|-----------|--------------------------------------------------------------|
| Code      | Code                                                         |
| 1051-8005 | 1pc each of 150mm(6") outside caliper/inside caliper/Divider |

OUTSIDE CALIPER



- Hardened points
- Made of top-grade high carbon steel

| Code      | Range     |
|-----------|-----------|
| 1051-6005 | 5"/125mm  |
| 1051-6010 | 6"/150mm  |
| 1051-6015 | 8"/200mm  |
| 1051-6020 | 10"/250mm |
| 1051-6025 | 12"/300mm |
| 1051-6030 | 16"/400mm |
| 1051-6035 | 20"/500mm |
| 1051-6040 | 24"/600mm |

INSIDE CALIPER



- Hardened points
- Made of top-grade high carbon steel

| Code      | Range     |
|-----------|-----------|
| 1051-7005 | 5"/125mm  |
| 1051-7010 | 6"/150mm  |
| 1051-7015 | 8"/200mm  |
| 1051-7020 | 10"/250mm |
| 1051-7025 | 12"/300mm |
| 1051-7030 | 16"/400mm |
| 1051-7035 | 20"/500mm |
| 1051-7040 | 24"/600mm |

SPRING CALIPERS AND DIVIDERS SERIES



- Quick, positive adjustment
- Made of top-grade high carbon steel
- Precise fine adjustment due to solid nut
- Outside Spring Caliper/Inside Spring Caliper/Spring Divider
- Measuring and transferring precise dimensions and for various measurements
- Inside Spring Caliper — Ends fully rounded to give accurate contact with a workpiece
- Outside Spring Caliper — Contact ends fully rounded to give accurate dimensions
- Spring Divider — Fully hardened and tempered joints, spring, washers and divider points
- Centrally located adjustment screw to ensure smooth action

| Code Quick Action Type | Code Normal Type | Size    | Type    |
|------------------------|------------------|---------|---------|
| 1051-0105              | 1051-1010        | 150/6"  | outside |
| 1051-0110              | 1051-1015        | 200/8"  | outside |
| 1051-0115              | 1051-1020        | 250/10" | outside |
| 1051-0120              | 1051-1025        | 300/12" | outside |
| 1051-0305              | 1051-4010        | 150/6"  | inside  |
| 1051-0310              | 1051-4015        | 200/8"  | inside  |
| 1051-0315              | 1051-4020        | 250/10" | inside  |
| 1051-0320              | 1051-4025        | 300/12" | inside  |
| 1051-0321              | 1051-5005        | 100/4"  | divider |
| 1051-0505              | 1051-5010        | 150/6"  | divider |
| 1051-0510              | 1051-5015        | 200/8"  | divider |
| 1051-0515              | 1051-5020        | 250/10" | divider |
| 1051-0520              | 1051-5025        | 300/12" | divider |

THREAD DETECTIVE / IDENTIFIER



- Nut and bolt thread identifier. Each size has a nut and bolt checker on the same gauge
- Thread sizes are etched on each gauge
- The individual gauges rotate freely on the wire cable for fast thread verification
- Wire cable with loop for convenient hanging

| Code      | L x W x H                                                                                                                |
|-----------|--------------------------------------------------------------------------------------------------------------------------|
| 8511-2005 | Metric (12pcs):M4-0.7, M5-0.8, M6-1.0, M7-1.0, M8-1.0, M8-1.25, M10-1.0, M10-1.25, M10-1.5, M12-1.25, M12-1.5, M12-1.75  |
| 8511-2010 | Inch(14pcs):6-32, 8-32, 10-24, 10-32, 1/4-20, 1/4-28, 5/16-18, 5/16-24, 3/8-16, 3/8-24, 7/16-14, 7/16-20, 1/2-13, 1/2-20 |
| 8511-2015 | 26pcs/Set:Metric (12pcs)&Inch(14pcs)                                                                                     |
| 8511-2020 | 37pcs/Set:Metric (12pcs)&Inch(14pcs)&BSW(11 PCS)                                                                         |

CONTOUR PROFILE GAUGE



- Metric & Inch
- Quickly and easy in operation
- Ultra thin pins for deep measurement
- Stainless Steel pins for precise contour and longer use
- Used in hobby woodworking, precise woodworking or tile flooring installation, etc, precise contour duplication of the cut outs

| Code  | 1032-0190 | 1032-0195 | 1032-0200 |
|-------|-----------|-----------|-----------|
| Range | 5"/130mm  | 6"/150mm  | 10"/250mm |

# FEELER GAUGE SHIM ROLL BLUE TIN



| Code      | Size         |
|-----------|--------------|
| 1803-3110 | 0.01*50*5000 |
| 1803-3111 | 0.02*50*5000 |
| 1803-3112 | 0.03*50*5000 |
| 1803-3113 | 0.04*50*5000 |
| 1803-3114 | 0.05*50*5000 |
| 1803-3115 | 0.06*50*5000 |
| 1803-3116 | 0.07*50*5000 |
| 1803-3117 | 0.08*50*5000 |
| 1803-3118 | 0.09*50*5000 |
| 1803-3119 | 0.10*50*5000 |

Unit:mm



# FEELER GAUGE SHIM ROLL

- Made in Europe and strictly in accordance with DIN2275
- Surface roughness: Ra 0.4µm
- Hardness: 360-600HV and prolongs the service life significantly
- Material: premium stainless steel/alloy steel
- Thickness: 0.01, 0.02, 0.03, 0.04, 0.05, 0.06, 0.07, 0.08, 0.09, 0.10, 0.15, 0.20, 0.25, 0.30, 0.35, 0.40, 0.45, 0.50, 0.55, 0.60, 0.65, 0.70, 0.80, 0.90, 1.00mm
- Shaped size: 12.7mmx5m, desired length can be cut. Other sizes can be ordered separately

DIN  
2275

| Unit:mm   |           |                 |           |           |        |
|-----------|-----------|-----------------|-----------|-----------|--------|
| Code      | Thickness | Remark          | Code      | Thickness | Remark |
| 1803-2110 | 0.01      | Stainless Steel | 1803-4122 | 0.25      | 65Mn   |
| 1803-4111 | 0.02      | 65Mn            | 1803-4123 | 0.30      | 65Mn   |
| 1803-4112 | 0.03      | 65Mn            | 1803-4124 | 0.35      | 65Mn   |
| 1803-4113 | 0.04      | 65Mn            | 1803-4125 | 0.40      | 65Mn   |
| 1803-4114 | 0.05      | 65Mn            | 1803-4126 | 0.45      | 65Mn   |
| 1803-4115 | 0.06      | 65Mn            | 1803-4127 | 0.50      | 65Mn   |
| 1803-4116 | 0.07      | 65Mn            | 1803-4128 | 0.60      | 65Mn   |
| 1803-4117 | 0.08      | 65Mn            | 1803-4129 | 0.70      | 65Mn   |
| 1803-4118 | 0.09      | 65Mn            | 1803-4130 | 0.80      | 65Mn   |
| 1803-4119 | 0.10      | 65Mn            | 1803-4131 | 0.90      | 65Mn   |
| 1803-4120 | 0.15      | 65Mn            | 1803-4132 | 1.00      | 65Mn   |
| 1803-4121 | 0.20      | 65Mn            |           |           |        |

| Unit:mm   |                                                                  |        |
|-----------|------------------------------------------------------------------|--------|
| Code      | Thickness                                                        | Remark |
| 1803-0105 | 0.01,0.02,0.03,0.04,0.05,0.06,0.07,0.08,0.09,0.10,0.15,0.20,0.25 | Set    |





FEELER GAUGE

DIN 2275



- Suitable for electronic equipment, mold manufacturing, automotive, automation equipment, precision machinery, metal parts, machinery parts and so on
- Strictly made in accordance with DIN2275
- High tolerance accuracy for precise measurements
- Hardened spring steel, conical shaped blades,
- Nickel plated case with lock nut
- The numbers of size are etched into feeler gauge for easy identification
- Polished surface, durable and smooth

| Unit:mm   |         |                |             |                                                                                                                                                                                                                                                                                          |  |
|-----------|---------|----------------|-------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| Code      | Length  | Range          | Amount(Pcs) | Including                                                                                                                                                                                                                                                                                |  |
| 1825-0175 | 75      | 0.04-1.00      | 25          | 0.04,0.05,0.06,0.07,0.08,0.09,0.10,0.15,0.20,0.25,0.30,0.35,0.40,0.45,0.50,0.55,0.60,0.65,0.70,0.75,0.80,0.85,0.90,0.95,1.00                                                                                                                                                             |  |
| 1813-0100 | 100     | 0.05-1.00      | 13          | 0.05,0.10,0.15,0.20,0.25,0.30,0.40,0.50,0.60,0.70,0.80,0.90,1.00                                                                                                                                                                                                                         |  |
| 1813-1100 | 100     | 0.03-0.5       | 13          | 0.03,0.04,0.05,0.06,0.07,0.08,0.09,0.10,0.15,0.20,0.30,0.40,0.50                                                                                                                                                                                                                         |  |
| 1817-0100 | 100     | 0.02-1.00      | 17          | 0.02,0.03,0.04,0.05,0.06,0.07,0.08,0.09,0.10,0.15,0.20,0.25,0.30,0.40,0.50,0.75,1.00                                                                                                                                                                                                     |  |
| 1820-0100 | 100     | 0.05-1.00      | 20          | 0.05,0.10,0.15,0.20,0.25,0.30,0.35,0.40,0.45,0.50,0.55,0.60,0.65,0.70,0.75,0.80,0.85,0.90,0.95,1.00                                                                                                                                                                                      |  |
| 1828-0100 | 100     | 0.05-1.00      | 28          | 0.05,0.06,0.07,0.08,0.09,0.10,0.11,0.12,0.13,0.14,0.15,0.20,0.25,0.30,0.35,0.40,0.45,0.50,0.55,0.60,0.65,0.70,0.75,0.80,0.85,0.90,0.95,1.00                                                                                                                                              |  |
| 1832-0100 | 100     | 0.03-1.00      | 32          | 0.03,0.04,0.05,0.06,0.07,0.08,0.09,0.10,0.13,0.15,0.18,0.20,0.23,0.25,0.28,0.30,0.33,0.35,0.38,0.40,0.45,0.50,0.55,0.60,0.63,0.65,0.70,0.75,0.80,0.85,0.90,1.00                                                                                                                          |  |
| 1813-0150 | 150     | 0.05-1.00      | 13          | 0.05,0.10,0.15,0.20,0.25,0.30,0.40,0.50,0.60,0.70,0.80,0.90,1.00                                                                                                                                                                                                                         |  |
| 1817-0150 | 150     | 0.02-1.00      | 17          | 0.02,0.03,0.04,0.05,0.06,0.07,0.08,0.09,0.10,0.15,0.20,0.25,0.30,0.40,0.50,0.75,1.00                                                                                                                                                                                                     |  |
| 1820-0150 | 150     | 0.05-1.00      | 20          | 0.05,0.10,0.15,0.20,0.25,0.30,0.35,0.40,0.45,0.50,0.55,0.60,0.65,0.70,0.75,0.80,0.85,0.90,0.95,1.00                                                                                                                                                                                      |  |
| 1813-0200 | 200     | 0.05-1.00      | 13          | 0.05,0.10,0.15,0.20,0.25,0.30,0.40,0.50,0.60,0.70,0.80,0.90,1.00                                                                                                                                                                                                                         |  |
| 1817-0200 | 200     | 0.02-1.00      | 17          | 0.02,0.03,0.04,0.05,0.06,0.07,0.08,0.09,0.10,0.15,0.20,0.25,0.30,0.40,0.50,0.75,1.00                                                                                                                                                                                                     |  |
| 1820-0200 | 200     | 0.05-1.00      | 20          | 0.05,0.10,0.15,0.20,0.25,0.30,0.35,0.40,0.45,0.50,0.55,0.60,0.65,0.70,0.75,0.80,0.85,0.90,0.95,1.00                                                                                                                                                                                      |  |
| 1813-0300 | 300     | 0.05-1.00      | 13          | 0.05,0.10,0.15,0.20,0.25,0.30,0.40,0.50,0.60,0.70,0.80,0.90,1.00                                                                                                                                                                                                                         |  |
| 1817-0300 | 200     | 0.05-1.00      | 17          | 0.02,0.03,0.04,0.05,0.06,0.07,0.08,0.09,0.10,0.15,0.20,0.25,0.30,0.40,0.50,0.75,1.00                                                                                                                                                                                                     |  |
| 1820-0300 | 300     | 0.05-1.00      | 20          | 0.05,0.10,0.15,0.20,0.25,0.30,0.35,0.40,0.45,0.50,0.55,0.60,0.65,0.70,0.75,0.80,0.85,0.90,0.95,1.00                                                                                                                                                                                      |  |
| 1813-0500 | 500     | 0.05-1.00      | 13          | 0.05,0.10,0.15,0.20,0.25,0.30,0.40,0.50,0.60,0.70,0.80,0.90,1.00                                                                                                                                                                                                                         |  |
| 1820-0500 | 500     | 0.05-1.00      | 20          | 0.05,0.10,0.15,0.20,0.25,0.30,0.35,0.40,0.45,0.50,0.55,0.60,0.65,0.70,0.75,0.80,0.85,0.90,0.95,1.00                                                                                                                                                                                      |  |
| 1813-1000 | 500     | 0.05-1.00      | 13          | 0.05,0.10,0.15,0.20,0.25,0.30,0.40,0.50,0.60,0.70,0.80,0.90,1.00<br>0.04/0.0015",0.05/0.002",0.06/0.0025",0.08/0.003",0.10/0.004",0.13/0.005",0.15/0.006",0.18/0.007",0.20/0.008",0.23/0.009",                                                                                           |  |
| 1732-0035 | 90/3.5" | 0.0015"-0.035" | 32          | 0.25/0.01",0.28/0.011",0.30/0.012",0.33/0.013",0.35/0.014",0.38/0.015",0.40/0.016",0.43/0.017",0.45/0.018",0.48/0.019",0.50/0.02",0.53/0.021",0.55/0.022",0.58/0.023",0.60/0.024",0.63/0.025",0.65/0.026",0.70/0.028",0.75/0.03",0.80/0.032",0.88/0.035" Plus (Lpc of Copper) 0.25/0.01" |  |

GAUGE SET



- Used to check the pitch of screw thread
- Narrow designed blades can be used for internal and external screw threads
- Locking device at each end to secure all blades for storage or positioning
- Correct pitch is determined by matching blade teeth with threads
- Precisely ground and finished
- Blades marked with thread size
- Made of premium stainless steel

| Unit:mm   |               |             |           |                                                                                                                         |  |
|-----------|---------------|-------------|-----------|-------------------------------------------------------------------------------------------------------------------------|--|
| Code      | Thread type   | Amount(Pcs) | Range     | Including                                                                                                               |  |
| 1501-1024 | Metric 60°    | 24          | 0.25-7.00 | 0.25,0.30,0.35,0.40,0.50,0.70,0.75,0.80,0.90,1.00,1.25,1.50,1.75,2.00,2.50,3.00,3.50,4.00,4.50,5.00,5.50,6.00,6.50,7.00 |  |
| 1501-1020 | Metric 60°    | 20          | 0.4-6.00  | 0.40,0.50,0.60,0.70,0.75,0.80,0.9,1.00,1.25,1.50,1.75,2.00,2.50,3.00,3.50,4.00,4.50,5.00,5.50,6.00                      |  |
| 1502-2030 | Whitworth 55° | 30          | 4-42TPI   | 4,4-1/2,5-1/2,6,7,8,9,10,11,12,13,14,15,16,18,19,20,22,24,26,27,28,30,32,34,36,38,40,42TPI                              |  |
| 1503-3030 | Unified 60°   | 30          | 4-42TPI   | 4,4-1/2,5-1/2,6,7,8,9,10,11,11-1/2,12,13,14,15,16,18,20,22,24,26,27,28,30,32,34,36,38,40,42TPI                          |  |
| 1500-0052 | Metric 60°    | 24          | 0.25-6.00 | 0.25,0.3,0.35,0.4,0.45,0.5,0.6,0.7,0.75,0.8,0.9,1.1,25,1.5,1.75,2.2,2.5,3.3,5,4.5,5.5,6                                 |  |
| 1500-0052 | Whitworth 55° | 28          | 4-62TPI   | 4,4-1/2,5,6,7,8,9,10,11,12,13,14,16,18,19,20,22,24,25,26,28,30,32,36,40,48,60,62TPI                                     |  |
| 1500-1052 | Metric 60°    | 22          | 0.4-7.00  | 0.4,0.5,0.6,0.7,0.75,0.8,0.9,1.1,25,1.5,1.75,2.2,2.5,3.3,5,4.5,5.5,6,6.5,7                                              |  |
| 1500-1052 | Unified 60°   | 30          | 4-42TPI   | 4,4-1/2,5-1/2,6,7,8,9,10,11,11-1/2,12,13,14,15,16,18,20,22,24,26,27,28,30,32,34,36,38,40,42TPI                          |  |

TRAPEZOIDAL SCREW PITCH GAUGE SET



- Gear tooth sizes range from 30-40mm
- Made of stainless steel, the gauge set for 29° thread angle consists of 16 blades and the 30° angle 12 blades, with each sizing 90mm long
- Measure the pitch of 30°(Metric) and 29°(Inch) trapezoidal screw thread (Acme threads)

| Code      | Range  | Leaves | Sizes                         | Thread type |
|-----------|--------|--------|-------------------------------|-------------|
| 1041-0105 | 2-20mm | 12     | 2,3,4,5,6,7,8,9,10,12,16,20mm | 30°         |

2PCS FEELER GAUGE AND SCREW PITCH GAUGE SET



| Code      | Content                                                                                                                                                                                                                                             |
|-----------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1500-0005 | Dasqua Code 1813-0100 Feeler Gauge With 100mm Length  13pcs*0.05-1.0mm (0.05-0.10-0.15-0.20-0.25-0.30-0.40-0.50-0.60-0.70-0.80-0.90-1.0)<br>Dasqua Code 1500-0052 Thread Pitch Gauge 52pcs Metric 60°/24pcs/0.25-6.00mm Whitworth 55°/28pcs/4-62TPI |



BRASS FEELER GAUGE

- Made from brass, suitable for non-magnetic application,e.g. checking the electrode distance in spark plugs, or for setting sensors at ABS
- Conical shaped blades
- With lock nut
- Sizes in mm on each blade



| Code      | Length | Range     | Amount(Pcs) | Including                                                                                           |
|-----------|--------|-----------|-------------|-----------------------------------------------------------------------------------------------------|
| 1620-0101 | 100    | 0.05-1.00 | 13          | 0.05,0.10,0.15,0.20,0.25,0.30,0.40,0.50,0.60,0.70,0.80,0.90,1.00                                    |
| 1620-0100 | 100    | 0.05-1.00 | 20          | 0.05,0.10,0.15,0.20,0.25,0.30,0.35,0.40,0.45,0.50,0.55,0.60,0.65,0.70,0.75,0.80,0.85,0.90,0.95,1.00 |

SPARK-PLUG GAP GAUGE

- Used to measure and adjust spark plug electrode gaps
- Easy and reliable to use
- Made of high quality materials, sturdy and durable
- With corrosion-resistant finish



| Code | 1803-4005 |
|------|-----------|
|------|-----------|

RADIUS GAUGE

- Both concave and convex shaped blades become a pair
- For testing of raised and recessed curves
- Radius size is marked on each gauge
- With a locking clamp
- Fine cutted forms



| Code      | Range       | Step                     | Leaves      |              |
|-----------|-------------|--------------------------|-------------|--------------|
|           |             |                          | Convex(Pcs) | Concave(Pcs) |
| 1351-0005 | 1.0-7.0     | 1.0-3.0;0.25;3.0-7.0;0.5 | 17          | 17           |
| 1351-0010 | 7.5-15      | 7.5-15;0.5               | 16          | 16           |
| 1351-0015 | 15.5-25     | 15.5-20;0.5;20-25;1      | 15          | 15           |
| 1352-1005 | 1/32"-1/4"  | 1/64"                    | 15          | 15           |
| 1352-1010 | 17/64"-1/2" | 1/64"                    | 16          | 16           |
| 1352-1015 | 17/32"-1"   | 1/32"                    | 16          | 16           |

31PCS RADIUS GAUGE SETS 25-40MM

- Made of Stainless steel
- Better durability
- Different sizes of leaves for various measuring angles
- Easy to use radius gauge set for measuring the radius of objects



| Code      | Range   | Radius of leaves included (mm)                                                                                                                           | leaves |
|-----------|---------|----------------------------------------------------------------------------------------------------------------------------------------------------------|--------|
| 1005-0015 | 25-40mm | 25, 25.5, 26, 26.5, 27, 27.5, 28, 28.5, 29, 29.5, 30, 30.5, 31, 31.5, 32, 32.5, 33, 33.5, 34, 34.5, 35, 35.5, 36, 36.5, 37, 37.5, 38, 38.5, 39, 39.5, 40 | 31     |

CIRCUMFERENCE GAUGE

- Application areas include the pipelines, boiler and tank construction, tire industry, forestry, etc
- For measuring diameters and circumferences of all circular objects quickly and easily
- With laser etched scales
- Graduation in mm or inch available
- Made of stainless steel material



| Code        | Circumference Range | Graduation | Diameter Range |
|-------------|---------------------|------------|----------------|
| 1704-0005-A | 60-950              | 0.1        | φ20-φ300       |
| 1704-0010-A | 940-2200            | 0.1        | φ300-φ700      |
| 1704-0015-A | 2190-3460           | 0.1        | φ700-φ1100     |
| 1704-0020-A | 3450-4720           | 0.1        | φ1100-φ1500    |
| 1704-0025-A | 4710-5980           | 0.1        | φ1500-φ1900    |
| 1704-0030-A | 5960-7230           | 0.1        | φ1900-φ2300    |
| 1704-0035-A | 7220-8500           | 0.1        | φ2300-φ2700    |
| 1704-0040-A | 8480-9760           | 0.1        | φ2700-φ3100    |
| 1704-0045-A | 9730-11010          | 0.1        | φ3100-φ3500    |

TAPER GAUGE

- Made of polished stainless steel
- Used to measure inside diameter of tubing, hole size, slot width
- Satin chrome finish for easy and accurate readings
- Graduated to measure inside diameters or widths from metric size 1mm-60mm by 0.1mm and inch size 1/16"-2-3/8" in 1/64" another side



| Code      | Range                 | Graduation  |
|-----------|-----------------------|-------------|
| 8522-0005 | 1/16"-5/8"            | 1/64"       |
| 8521-0005 | 1-15; 1/16"-5/8"      | 0.1 & 1/64" |
| 8522-0010 | 5/8"-1-3/16"          | 1/64"       |
| 8521-0010 | 15-30; 5/8"-1-3/16"   | 0.1 & 1/64" |
| 8522-0015 | 1-3/16"-1-3/4"        | 1/64"       |
| 8521-0015 | 30-45; 1-3/16"-1-3/4" | 0.1 & 1/64" |
| 8522-0020 | 1-3/4"-2-3/8"         | 1/64"       |
| 8521-0020 | 45-60; 1-3/4"-2-3/8"  | 0.1 & 1/64" |

## WIRE & SHEET METAL GAUGE



- Satin finish for easy reading
- Diameter 3-1/4" (ø83mm)
- Heavy duty gage, hardened stainless steel
- Decimal equivalents on the reverse side
- Used to gauge wire, sheet, plate and non-ferrous metals such as copper, aluminum and brass
- Gage numbers are in American standard numbers 0-36

| Code      | Graduation           | Diameter      |
|-----------|----------------------|---------------|
| 1041-0020 | 0-36(0.3125"-0.007") | 3-1/4"(ø83mm) |
| 1041-0025 | 0-36(0.325"-0.005")  | 3-1/4"(ø83mm) |

## ACME SCREW THREAD GAUGE



- Used as the standard blocks when grinding acme threads
- Acme thread inclination:  $14\frac{1}{2}$  degree (29 degree inclined angle)
- Angles and edges are hardened and precision ground
- Threads: 1, 1-1/3, 1-1/2, 1-3/4, 2, 2-1/2, 3, 4, 5, 6, 7, 8, 9&10TPI

| Code        | Range   | Thread type | Pitch                                                       |
|-------------|---------|-------------|-------------------------------------------------------------|
| 1041-0005-A | 1-10TPI | ACME29°     | 1, 1-1/3, 1-1/2, 1-3/4, 2, 2-1/2, 3, 4, 5, 6, 7, 8, 9&10TPI |

## RIGID RULER



- Made from the European finest quality steel
- All rules fully hardened and tempered
- Precisely etched, then black filled for readability
- Any graduations available by special order
- Satin chrome finish

| Code      | Measuring range | Graduation                                                    | Thickness   | Width     |
|-----------|-----------------|---------------------------------------------------------------|-------------|-----------|
| 9000-1005 | 0-150mm/6"      | 0.5mm/1.0mm/1/64"/1/32"/1/16"<br>graduation on front and back | 1.0mm/0.04" | 19mm/3/4" |
| 9000-1010 | 0-300mm/12"     |                                                               | 1.0mm/0.04" | 19mm/3/4" |
| 9000-1015 | 0-600mm/24"     |                                                               | 1.0mm/0.04" | 19mm/3/4" |

## ROUND END RULER



- Satin chrome finish
- Made from the european finest quality steel
- All rules fully hardened and tempered
- Any graduations available by special order
- Precisely etched, then black filled for readability

| Code      | Measuring range | Graduation                                                    | Thickness | Width |
|-----------|-----------------|---------------------------------------------------------------|-----------|-------|
| 9000-1105 | 0-150mm/6"      | 0.5mm/1.0mm/1/64"/1/32"/1/16"<br>graduation on front and back | 0.5mm     | 19mm  |
| 9000-1110 | 0-300mm/12"     |                                                               | 1.0mm     | 25mm  |
| 9000-1115 | 0-600mm/24"     |                                                               | 1.0mm     | 25mm  |

## RULER WITH DRILL GAUGE



| Code      | Range        | Graduation      | Accuracy |
|-----------|--------------|-----------------|----------|
| 1005-0010 | 0-150mm/0-6" | 0.5mm/1mm/1/32" | ±0.1mm   |

## HOBBY DRILL GAUGE



| Code      | Hole Size                          | Dimension       | Accuracy |
|-----------|------------------------------------|-----------------|----------|
| 100S-0005 | 1/16" to 1/2" in 1/64th increments | 2-3/8" x 6-3/4" | ±1/64"   |

## ANGLE THREAD CUTTING GAUGE



- Accuracy:  $\pm 30\text{min}$
- Made of stainless steel
- Angles 55° whitworth or 60° metric
- For checking and set screw cutting tools, and check the angle and pitch of screw thread Angle

| Code        | Thread type   | Angle | Graduation                                                  |
|-------------|---------------|-------|-------------------------------------------------------------|
| 1041-2205-A | Metric 60°    | 60°   | 0.5,1                                                       |
| 1041-2210-A | Unified 60°   | 60°   | 14ths and 20ths on front side, 24ths and 32ths on back side |
| 1041-2215-A | Whitworth 55° | 55°   | 14ths and 20ths on front side, 24ths and 32ths on back side |

## THREAD CUTTING GAUGE



- Used to detect the angle and width of the thread cutting tool and set the position of the thread cutting tool
- For grinding & setting tools when cutting Acme threads
- Made of hardened stainless steel, wear resistance, long service life
- Used for woodworking, metalworking, machine, equipment and many other industries
- Laser etched graduations, satin chrome finish
- Fine machined edges

| Code        | Range | Thread type | Pitch                 |
|-------------|-------|-------------|-----------------------|
| 1041-0007-A | 2-12  | Tr30°       | 2,3,4,5,6,7,8,9,10,12 |

TURNING TOOLS/TRAPEZOIDAL  
THREAD GAUGE



- V thread, 55° and 60°
- Made of stainless steel
- Template for measuring angles lathe knives
- Trapezoidal thread, DIN 103, pitch 2 - 12 mm / cutting angle 40° - 80°

| Code      | Unit:mm |
|-----------|---------|
| 1005-0040 |         |

ACME THREAD CUTTING GAUGE



- For grinding & setting tools when cutting Acme threads
- SAE 60° / Ww-BSF 55° / 14.5° ACME / 47.5° BA
- Stainless steel with satin chrome finish
- Laser etched graduations

| Code      | Thickness | Thread type                                                        |
|-----------|-----------|--------------------------------------------------------------------|
| 1041-0006 | 1         | 60° American & Metric / 55° Whit & S.F / 47-1/2° BA / 14-1/2° Acme |

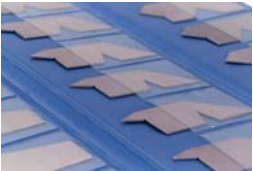
TURNING TOOLS/TRAPEZOIDAL  
THREAD GAUGE

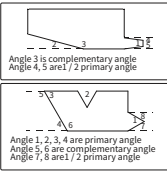


- Made of stainless steel
- Universal template for all sharp and flat threads
- Flat Threads 2, 2.5, 3, 3.5, 4, 4.5, 5, 6, 7, 8 (TPI), Angle Threads 45°, 53.8°, 55°, 60°, 70°

| Code      | Unit:mm |
|-----------|---------|
| 1041-9030 |         |

18PCS ANGLE GAGE SET





Angle 3 is complementary angle  
Angle 4, 5 are 1/2 primary angle

Angle 1, 2, 3, 4 are primary angle  
Angle 5, 6 are complementary angle  
Angle 7, 8 are 1/2 primary angle

- Angles 5° - 90°
- Stainless steel material
- Each gage checks primary, 1/2 primary and complimentary angles
- Quick and accurate inspection of angle and I.D or O.D chamfers in or out of the machine

| Code      | Amount(Pcs) | Primary angle   | 1/2 Primary angle | Complementary angle |
|-----------|-------------|-----------------|-------------------|---------------------|
| 1320-0005 | 18          | 5-90°, step: 5° | 2.5-45°           | 175-90°, step: 5°   |

ANGLE GAUGE



- Fine machined edges
- Made of hardened stainless steel
- The blade ends are beveled at various angles

| Code        | Range  | Amount(Pcs) | Including                                                                                                    | Unit:mm | Accuracy |
|-------------|--------|-------------|--------------------------------------------------------------------------------------------------------------|---------|----------|
| 1420-1025-A | 1°-45° | 20          | 1° / 2° / 3° / 4° / 5° / 6° / 7° / 8° / 9° / 10° / 12° / 14° / 16° / 18° / 20° / 25° / 30° / 35° / 40° / 45° |         | ±30'     |

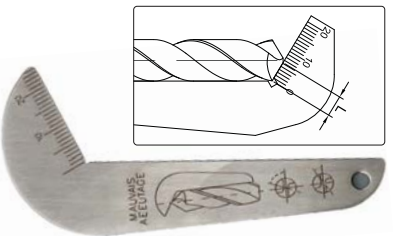
UNIVERSAL CUTTER POINT  
ANGLE GAUGE



- Easy to measure the angles of top point of drills and countersinks
- Made of premium polished stainless steel
- Thickness: 1.0mm, size: 80x80mm

| Code      | Thickness | Size  | Graduation                           | Unit:mm | Accuracy |
|-----------|-----------|-------|--------------------------------------|---------|----------|
| 8511-0005 | 1.0       | 80x80 | 60°/82°/90°/118°/120°/135°/150°/160° |         | ±0.5°    |

DRILL GRINDING GAUGE



- Used to check if the center of tip is concentric with the drill body
- Used for twist drills with cone angle 118°
- Made of premium polished stainless steel
- Hardened, precision ground and lapped

| Code      | Range                       | Accuracy      |
|-----------|-----------------------------|---------------|
|           | Angle                       | Length        |
| 8511-0010 | tip angle 118°, up to Ø50mm | ±0.5°<br>±0.5 |

DRILL GAUGE



- With Adjustable Pointer
- Made of Stainless steel
- with adjustable angle from 30° to 160°
- Measuring angle of drills up to Dia. 60mm

| Code      | Unit:mm |
|-----------|---------|
| 1005-0020 |         |

## MARKING BLACK

### Precision Layout Solution



Gage Holes  
Measure the Major Diameter of Bolt



Gage Holes  
Select Right Size Drills



Pitch Size  
Measure the Thread



Bolt Length  
Measure Length



Gage Leg  
Quick-Check Perpendicularity



Slot Size  
Measure Bore Diameter



- **BLACK ANODIZED**  
Protective anti-rust coating

- **CNC MACHINED**  
High accuracy & High repeatability  
& Grounded measuring face



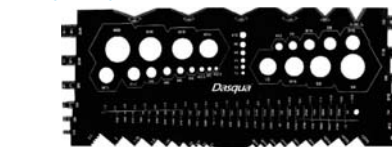
- **LASER-ENGRAVING SCALE**  
Black lines & figures against  
the sand blasted finish

| Code      | Product       | Style  | Size                | Pitches     | Hole Dia. For Bolt | Slot for Wire and Washer | Remark                          |
|-----------|---------------|--------|---------------------|-------------|--------------------|--------------------------|---------------------------------|
| 8511-0067 | Multigauge    | Metric | 90mm*170mm*1.25mm   | 0.3mm-3.0mm | M3 - M20           | 0.8mm - 2.5mm            | Can be ordered<br>independently |
| 8511-0068 | single piece  | Inch   | 3.5" * 6.7" * 0.05" | 10 - 40TPI  | No 5-3/4"          | 0.024" - 0.25"           |                                 |
| 1804-1405 | Marking Black | Metric |                     |             |                    |                          | Combination Kit                 |
| 1804-1406 | set           | Inch   |                     |             | /                  |                          |                                 |



## COMBINED TURNING AND THREAD CUTTING GAUGE

BLACK FINISH



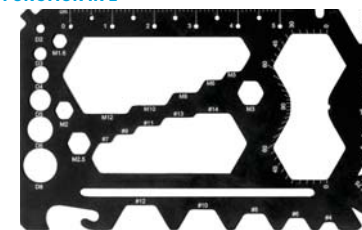
- Bolt & Screw Gauge:  
Metric: M2.5, M3, M3.5, M4, M5, M6, M8, M10, M12, M14, M16, M18, M20  
Imperial: #2, #4, #5, #6, #8, #10, #12, 1/4", 5/16", 3/8", 7/16", 1/2", 9/16", 5/8", 3/4"
- Nut Internal Thread Gauge:  
Metric: M4, M5, M6, M8, M10, M12  
Imperial: #8, #10, 1/4", 5/16", 3/8", 7/16", 1/2"  
Drill Point Angle: 140°, 135°, 130°, 118°, 90°, 60°
- Thread Pitch:  
Metric: 0.5, 0.7, 0.75, 0.8, 1, 1.25, 1.5, 1.75, 2, 2.5  
Imperial: 36TPI, 32TPI, 28TPI, 24TPI, 20TPI, 18TPI, 16TPI, 14TPI, 13TPI
- Taper Gauge:  
Metric: 1.0, 1.5, 2.0, 2.5, 3.0, 3.5, 4.0, 4.5, 5.0, 5.5, 6.0, 6.5, 7.0, 7.5, 8.0, 8.5, 9.0, 9.5,  
10.0, 10.5, 11.0, 11.5, 12.0, 12.5, 13.0  
Imperial: 1/16", 5/64", 3/32", 7/64", 1/8", 9/64", 5/32", 11/64", 3/16", 7/32", 15/64",  
1/4", 17/64", 9/32", 19/64", 5/16", 21/64", 11/32", 23/64", 3/8", 25/64", 13/32", 27/64",  
7/16", 29/64", 15/32", 31/64", 1/2"

Unit:mm

| Code      |
|-----------|
| 8511-0069 |

## MULTI-TOOL CARD

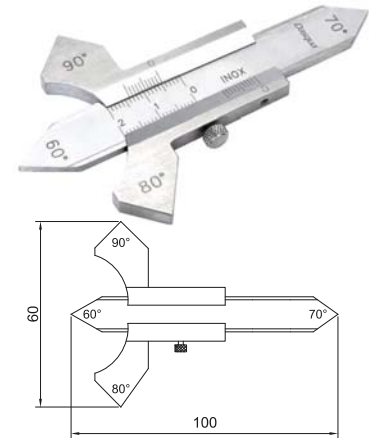
22 FUNCTION IN 1



Unit:mm

| Code      |
|-----------|
| 1041-0009 |

WELDING GAUGE

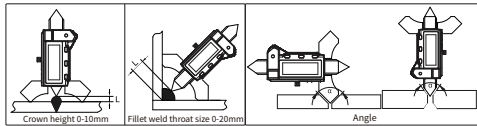


- Used to check the height of weld seam, thickness of fillet weld, bevel angle, etc
- Made of stainless steel, polished
- Measuring range: 20mm
- Slide with clamping screw

Unit:mm

| Code      | Angles          | Range*Graduation |
|-----------|-----------------|------------------|
| 8531-0005 | 60°,70°,80°,90° | 20x0.1           |

DIGITAL WELDING GAUGE

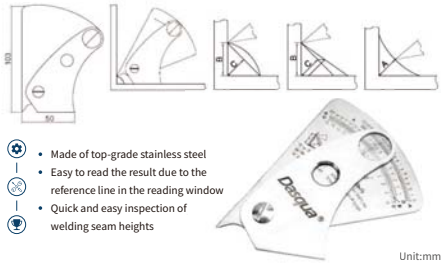


- 60° 70° 80° 90° angle measuring
- Seam crown height inspection
- Fillet weld throat size inspection
- Made of stainless steel, hardened and ground
- LCD display with clear reading, zero-setting at any position
- On/O fbutton, reading switchable mm/inch
- With data output

Unit:mm

| Code      | Range     | Resolution          | Accuracy |
|-----------|-----------|---------------------|----------|
| 8530-1005 | 0-10/0-20 | 0.01/0.0005"/1/128" | ±0.03    |

WELD SEAM GAUGE



- Made of top-grade stainless steel
- Easy to read the result due to the reference line in the reading window
- Quick and easy inspection of welding seam heights

Unit:mm

| Code      | Graduation | Accuracy |
|-----------|------------|----------|
| 1005-0025 | 0.2        | ±0.3mm   |

WELD SEAM GAUGE

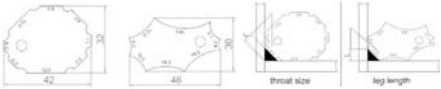


- For checking welding seams in right-angled corners
- 12 blades, held fan-shaped by a ring(3/3.5/4/4.5/5/5.5/6/ 6.5/7/8/10/12 mm)

Unit:mm

| Code      | Graduation      | Accuracy |
|-----------|-----------------|----------|
| 1005-0030 | 1005-00303-12mm | 12       |

WELD SEAM GAUGE



- To measure all parameters of a weld in millimeters, before and after welding for any welded joints
- Made of stainless steel
- Engraving of measurements on both sides

Unit:mm

| Code      | Throat size                                   | Leg length                                       | Accuracy |
|-----------|-----------------------------------------------|--------------------------------------------------|----------|
| 1005-0035 | 4.0, 5.0, 6.0, 7.0, 8.0, 9.0, 10.0, 12.0 (mm) | 4.0, 6.0, 7.5, 10.0, 12.0, 14.0, 16.0, 18.0 (mm) | ±0.5mm   |

WELD SEAM GAUGE



- Made of stainless steel
- 4 pieces welding gauge key with handy key chain
- Use for checking fillet leg size and throat size
- Pocket size, easy to carry
- Standard reading and laser engraving

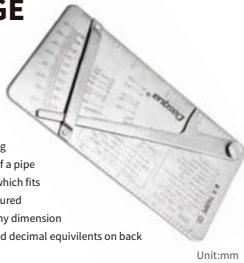
Unit:mm

| Code      | Throat size                                   | Leg length                                       | Accuracy |
|-----------|-----------------------------------------------|--------------------------------------------------|----------|
| 8511-0090 | 4.0, 5.0, 6.0, 7.0, 8.0, 9.0, 10.0, 12.0 (mm) | 4.0, 6.0, 7.5, 10.0, 12.0, 14.0, 16.0, 18.0 (mm) | ±0.5mm   |



PIPE PIT GAUGE

- Made of stainless steel
- Pocket size for easy carrying
- Laser engraving for clear reading
- Used to identify the condition of a pipe
- The indicator arm has a stylus which fits into the pits of pipe being measured
- Arm can be locked in place at any dimension
- Has handy formulas on front and decimal equivalents on back



| Code      | Range    | Graduation       |
|-----------|----------|------------------|
| 1005-0055 | 0 - 0.5" | 10mils and 1/16" |

SINGLE PURPOSE HI-LO WELDING GAUGE

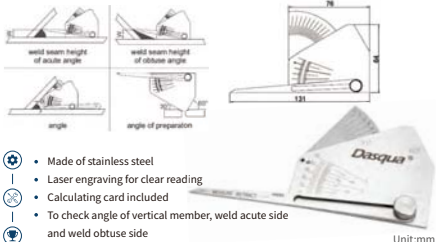
- Used to determine internal misalignment
- Made of stainless steel



| Code      | Measurement           | Range | Graduation | Accuracy |
|-----------|-----------------------|-------|------------|----------|
| 1005-0065 | internal misalignment | 0-30  | 1          | ±0.5     |
|           | fit-up gap            | 0.7-4 | 0.1        | ±0.1     |

WELD SEAM GAUGE

- Made of stainless steel
- Laser engraving for clear reading
- Calculating card included
- To check angle of vertical member, weld acute side and weld obtuse side



| Code      | Measurement      | Range       | Graduation | Accuracy |
|-----------|------------------|-------------|------------|----------|
| 1005-0060 | Weld seam height | 0-50mm/0-2" | 2mm/0.05"  | ±1mm     |
|           | Angle            | 30°-90      |            | ±1°      |
|           | 60° angle        | /           | /          | ±0.5°    |
|           |                  |             |            |          |

WELD SEAM GAUGE

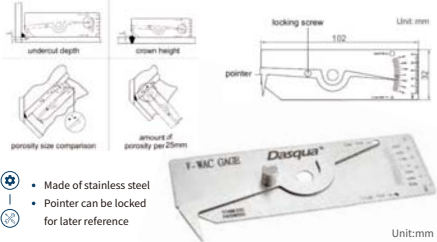
- To check undercuts, crown height or Pits
- Made of stainless steel
- Used to measure the wall thickness of structures like plates or pipes



| Code      | Graduation | Accuracy |
|-----------|------------|----------|
| 8511-0100 | 0-2        | 0.2      |

WELD SEAM GAUGE

- Made of stainless steel
- Pointer can be locked for later reference



| Code      | Measurement                 | Range      | Graduation | Accuracy |
|-----------|-----------------------------|------------|------------|----------|
| 1005-0070 | undercut depth              | 0-6mm      | 0.5        | ±0.5     |
|           | crown height                | 0-6mm      | 0.5        | ±0.5     |
|           | porosity size comparison    | 1.5mm, 3mm | /          | ±0.2     |
|           | amount of porosity per 25mm | 25mm       | 1          | /        |

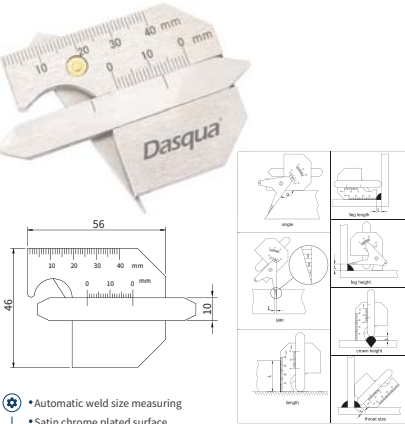
WET FILM THICKNESS GAUGE

- Practical and convenient, easy to operate
- Made of stainless steel
- The interval division is detailed and having high measuring precision
- Range in details: 25, 50, 75, 100, 125, 150, 175, 200, 225, 250, 275, 300, 350, 400, 450, 500, 550, 600, 650, 700, 750, 800, 850, 900, 1000, 1100, 1200, 1400, 1600, 1800, 2000, 2200, 2400, 2600, 2800, 3000um
- To measure the coating thickness of paint, varnish, etc



| Code      | Range     |
|-----------|-----------|
| 1041-0015 | 25-3000µm |

WELDING GAUGE

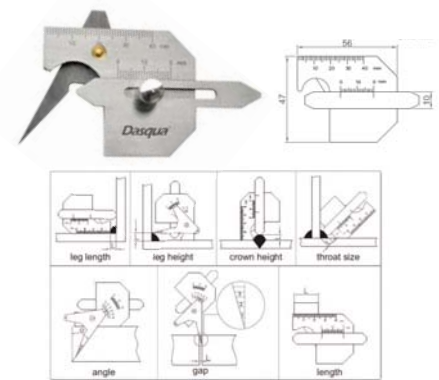


- Automatic weld size measuring
- Satin chrome plated surface
- Check the throat of fillet weld to determine the leg size of the fillet weld
- For accurate calibration of butt and fillet type welds
- Made of stainless steel, hardened and ground

| Code      | Measurement  | Range    | Graduation | Accuracy |
|-----------|--------------|----------|------------|----------|
| 8511-0015 | Leg Length   | 0-10     | 1          | ±0.5     |
|           | Leg Height   | 0-20     | 1          | ±0.5     |
|           | Crown Height | 0-10     | 1          | ±0.5     |
|           | Throat size  | 0-10     | 1          | ±0.5     |
|           | Angle        | 90°-150° | 5°         | ±1°      |
|           | Gap          | 1-3      | 1          | ±0.5     |
|           | Length       | 0-40     | 1          | ±0.5     |



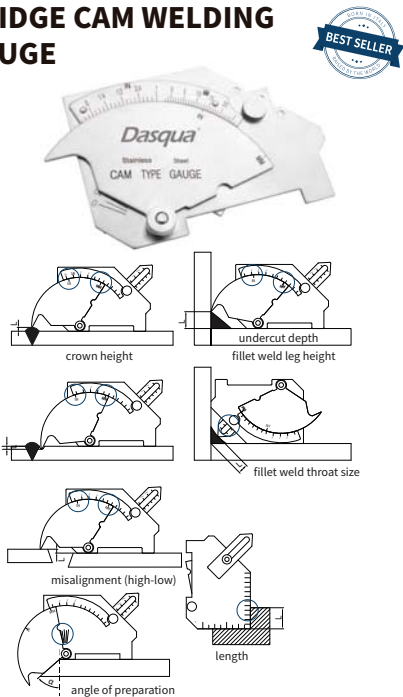
WELD SEAM GAUGE



- Made of stainless steel
- Satin chrome plated surface
- Used to measure different groove angles, heights, widths, gaps and undercut depths of welding parts with wide application
- Made up of four parts, including main ruler, height ruler, undercut depth ruler and multi-purpose ruler

| Unit:mm   |        |            |              |          |
|-----------|--------|------------|--------------|----------|
| Code      | Range  | Graduation | Measurement  | Accuracy |
| 8511-0075 | 0-20mm | 1mm        | Leg length   | ±0.3mm   |
|           | 0-40mm | 1mm        | Leg height   | ±0.3mm   |
|           | 0-20mm | 1mm        | Crown height | ±0.3mm   |
|           | 0-10mm | 1mm        | Throat size  | ±0.3mm   |
|           | 0-90°  | 5°         | Angle        | ±1°      |
|           | 1-3mm  | 0.5mm      | Gap          | ±0.2mm   |
|           | 0-40mm | 1mm        | Length       | ±0.3mm   |

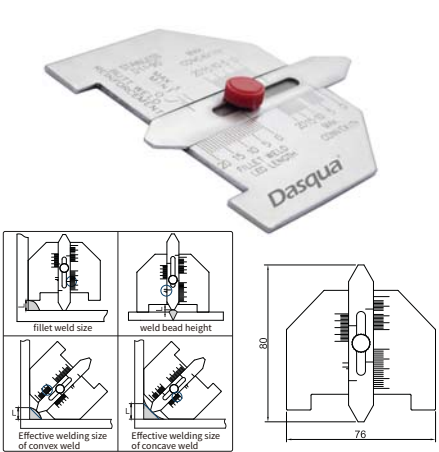
BRIDGE CAM WELDING GAUGE



- Bridge cam gauge is a unique, versatile instrument for the inspection of welded surfaces and joints
- Made of high quality stainless steel, this gauge is durable and not easily scratched
- Gauge surface is clearly laser etched which is wear-resisting and ensures a clear reading
- Used to measure angle of preparation(0 to 60degree), excess weld metal (capping size), depth of undercut, fillet weld throat size, fillet leg length, misalignment (high-low), and linear measurements up to 50mm(2 inches)
- Satin chrome finish surface

| Unit:mm   |                         |              |            |          |
|-----------|-------------------------|--------------|------------|----------|
| Code      | Measurement             | Range        | Graduation | Accuracy |
| 8511-0030 | Crown height            | 0-25(0-1")   | 1(1/16")   | ±0.5     |
|           | Fillet weld leg height  | 0-25(0-1")   | 1(1/16")   | ±0.5     |
|           | Misalignment(high-low)  | 0-25(0-1")   | 1(1/16")   | ±0.5     |
|           | Undercut depth          | 0-2(0-1/8")  | 1(1/16")   | ±0.5     |
|           | Fillet weld throat size | 0-20(0-3/4") | 1(1/16")   | ±0.5     |
|           | Angle of preparation    | 0-60°        | 5°         | ±1°      |
|           | Length                  | 0-60(0-2")   | 1(1/16")   | ±0.5     |

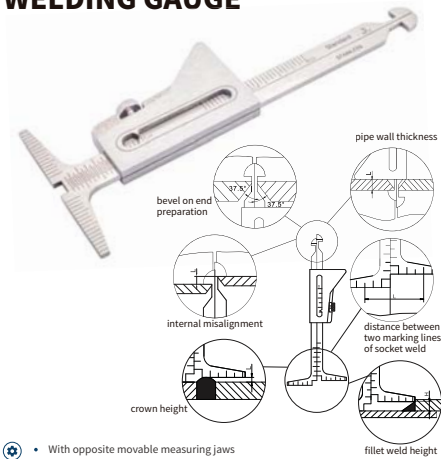
WELDING GAUGE



- For accurate calibration of butt and fillet type welds
- Used to measure reinforcement, fillet convexity / concavity throat and leg length
- Made of stainless steel, hardened and ground
- Satin chrome finish surface

| Unit:mm   |                                        |       |            |          |
|-----------|----------------------------------------|-------|------------|----------|
| Code      | Measurement                            | Range | Graduation | Accuracy |
| 8511-0020 | Inlet weld size                        | 0-20  | 1          | ±0.5     |
|           | Weld bead height                       | 0-3   | -          | ±0.5     |
|           | Effective welding size of convex weld  | 0-20  | 1          | ±0.5     |
|           | Effective welding size of concave weld | 0-20  | 1          | ±0.5     |

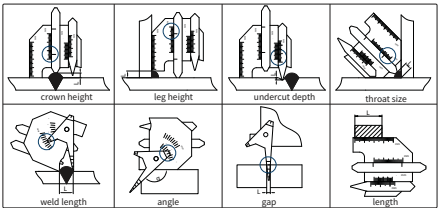
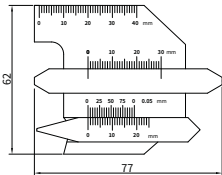
WELDING GAUGE



- With opposite movable measuring jaws
- For pipe welds up to 35 mm wall thickness
- Measure internal misalignment of pipe before and after tacking
- Measure internal alignment of pipe after fit-up alignment, cuts radiographic rejects
- Made of stainless steel, hardened and ground, polished surfaces
- With reading window, with fixing screw

| Unit:mm   |                                                   |                       |            |          |
|-----------|---------------------------------------------------|-----------------------|------------|----------|
| Code      | Measurement                                       | Range                 | Graduation | Accuracy |
| 8511-0025 | bevel on end preparation                          | 37.5°                 |            | ±1°      |
|           | pipe wall thickness                               | 0-45(0-1-3/4")        | 1(1/16")   | ±0.5     |
|           | internal misalignment                             | 0-30(0-1-1/4")        | 1(1/32")   | ±0.5     |
|           | internal misalignment                             | 0-35(0-1-3/8")        | 1(1/32")   | ±0.5     |
|           | crown height                                      | 11-61(7/16"-2-13/32") | 1(1/16")   | ±0.5     |
|           | distance between two marking lines of socket weld | 2-13(3/2")            | 1(1/32")   | ±0.5     |
|           | fillet weld height                                | 0-30(0-1-1/4")        | 1(1/32")   | ±0.5     |

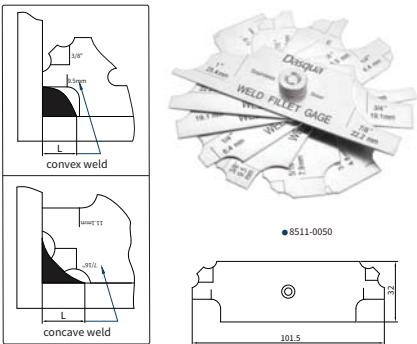
WELDING GAUGE



- Used for the measurement of the bevel angle, height, width, gap and undercut depth of weld
- Suitable for the detection of boilers, bridges, ships, pressure vessels and oil pipes
- The gauge consists of four components: main scale, height gauge, undercut depth gauge and multiple-purpose gauge
- Made of stainless steel, hardened and ground
- Satin chrome finish surface

| Unit:mm   |                |            |            |          |
|-----------|----------------|------------|------------|----------|
| Code      | Measurement    | Range      | Graduation | Accuracy |
| 8511-0035 | crown height   | 0 - 10     | 1          | ±0.5     |
|           | leg height     | 0 - 15     | 1          | ±0.5     |
|           | undercut depth | 0 - 5      | 0.05       | ±0.05    |
|           | throat size    | 0 - 13     | 1          | ±0.5     |
|           | weld length    | 0 - 40     | 1          | ±1       |
|           | angle          | 90° - 150° | 5°         | ±1°      |
|           | gap            | 1 - 5      | 2          | ±1       |
| 8511-0040 | length         | 0 - 40     | 1          | ±0.5     |
|           | crown height   | 0 - 10     | 1          | ±0.5     |
|           | leg height     | 0 - 15     | 1          | ±0.5     |
|           | undercut depth | 0 - 5      | 0.05       | ±0.05    |
|           | throat size    | 0 - 13     | 1          | ±0.5     |
|           | weld length    | 0 - 40     | 1          | ±1       |
|           | angle          | 90° - 150° | 5°         | ±1°      |
| 8511-0041 | gap            | 1 - 5      | 2          | ±1       |
|           | length         | 0 - 40     | 1          | ±0.5     |
|           | crown height   | 0 - 15     | 1          | ±0.5     |
|           | leg height     | 0 - 15     | 1          | ±0.5     |
|           | undercut depth | 0 - 5      | 0.05       | ±0.05    |
|           | throat size    | 0 - 13     | 1          | ±0.5     |
|           | weld length    | 0 - 60     | 1          | ±1       |
|           | angle          | 80° - 160° | 5°         | ±1°      |
|           | gap            | 1 - 5      | 2          | ±1       |
|           | length         | 0 - 50     | 1          | ±0.5     |

FILLET WELDING GAUGE



- Permits quick and accurate measuring of the most popular weld fillet sizes in imperial: 1/8"-1" and metric: 3.2mm-25.4mm
- All sizes and numbers are etched into the surface for clear and easier reading
- Check convex & concave weld
- 7 blades are included
- Made of stainless steel
- Satin chrome finish surface

| Unit:mm   |                                                      |             |
|-----------|------------------------------------------------------|-------------|
| Code      | Size                                                 | Accuracy    |
| 8511-0045 | 3,4,5,6,8,9,10,11,12,14,16,19,22,25                  | ±0.05mm     |
| 8511-0050 | 1/8"(3.2),3/16"(4.8),1/4"(6.4)                       | ±0.02"(0.5) |
|           | 5/16"(7.9),3/8"(9.5),7/16"(11.1)                     |             |
|           | 1/2"(12.7),5/8"(15.9),3/4"(19.1),7/8"(22.2),1"(25.4) |             |
|           |                                                      |             |

7 PIECES WELDING GAUGE SET



- Product list:**
- 4111-8105 Outside Micrometer, Range\*Graduation: 0-25mm\*0.01mm
  - 8511-0025 Welding Gauge
  - 8511-0035 Welding Gauge with screw locking, size L\*W=62\*77mm
  - 1005-0070 Weld Seam Gauge
  - 9000-0150 Steel Ruler 150mm/6"
  - 3026-1000 Magnifier with 4 lights, Bifocal, Magnification: 2X,6X
  - 3026-2000 LED Telescoping inspection mirror, length 280-870mm

Unit:mm

Code 8511- 0091

10 PIECES WELDING GAUGE SET



- Product list:**
- 4111-8105 Outside Micrometer 0-25mm\*0.01mm
  - 8511-0025 Welding Gauge
  - 8511-0035 Welding Gauge with screw locking, size L\*W=62\*77mm
  - 1005-0070 Weld Seam Gauge
  - 9000-0150 Stainless steel ruler 150mm
  - 3026-1000 Magnifier 4 lights, Bifocal, Magnification: 2X,6X
  - 3026-2000 LED Telescoping inspection mirror length 280-870mm, Mirror dia 80mm
  - 9315-1115 90°Flat Edge Square 100\*70mm,DIN875/0
  - 8531-0005 Weld Seam Gauge 20mm\*0.1mm
  - 8511-0030 Bridge Cam Welding Gauge

Unit:mm

Code 8511- 0093

12 PIECES WELDING GAUGE SET



- Product list:**
- 4111-8105 Outside Micrometer 0-25mm\*0.01mm
  - 8511-0025 Welding Gauge
  - 8511-0035 Welding Gauge with screw locking, size L\*W=62\*77mm
  - 1005-0070 Weld Seam Gauge
  - 9000-0150 Stainless steel ruler 150mm
  - 3026-1000 Magnifier 4 lights, Bifocal, Magnification: 2X,6X
  - 3026-2000 LED Telescoping inspection mirror length 280-870mm, Mirror dia 80mm
  - 9315-1115 90°Flat Edge Square 100\*70mm,DIN875/0
  - 8531-0005 Weld Seam Gauge 20mm\*0.1mm
  - 8511-0030 Bridge Cam Welding Gauge
  - 1120-3115 Vernier Caliper 0-150mm/0-6""\*0.05mm/ 1/128"
  - 1813-0100 Feeler Gauge With 100mm Length 13pcs\*0.05-1.0mm  
(0.05-0.10-0.15-0.20-0.25-0.30-0.40-0.50-0.60-0.70-0.80-0.90-1.0)

Unit:mm

Code 8511- 0098

16PC WELDING GAUGE SET



- Product list:**
- 8511-0041 Welding gauge
  - 8511-0035 Welding gauge
  - 8511-0015 Welding gauge
  - 8511-0030 Bridge cam welding gauge
  - 8511-0045 Fillet welding gauge
  - 1005-0055 Pipe Pit Gage
  - 1005-0060 Welding gauge
  - 8521-0005 Taper gauge
  - 8521-0010 Taper gauge
  - 8521-0015 Taper gauge
  - 1005-0025 Weld Seam Gauge
  - 8511-0025 Hi-lo welding gauge
  - 1005-0065 Weld Seam Gauge
  - 1005-0070 Weld Seam Gauge
  - 8511-0020 Welding gauge

Alu case x1

Unit:mm

Code 8511- 0070

# MEASURING TOOLS KIT

BORN IN ITALY, RAISED BY THE WORLD



BORN IN ITALY, RAISED BY THE WORLD **MEASURING TOOLS KIT**

## NEW 2PCS GENERAL PURPOSE MEASURING SET



- Product list:
- 2000-2005 New digital caliper
  - 4230-2005 New digital micrometer

| Unit:mm   |           |          |                |                |
|-----------|-----------|----------|----------------|----------------|
| Code      | Covering  | Range    | Resolution     | Accuracy       |
| 2210-8295 | 2000-2005 | 150/0-6" | 0.01/0.0005"   | 0.02/0.001"    |
|           | 4230-2005 | 25/0-1"  | 0.001/0.00005" | 0.003/0.00015" |

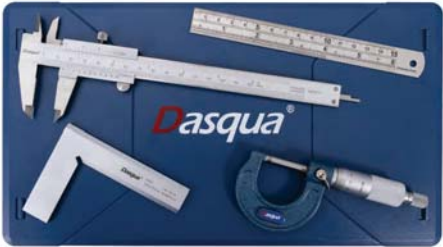
## CALIPER WITH DEPTH BASE ATTACHMENT SET



- Product list:
- Digital/Dial caliper
  - Depth base attachment 3001-1001

| Unit:mm   |                                                     |
|-----------|-----------------------------------------------------|
| Code      | Content                                             |
| 2210-8270 | 2000-2005 Digital caliper 0-6"/150mm*0.01mm/0.0005" |
| 2210-8275 | 3001-1001 Depth Base Attachment                     |
|           | 1331-2115 Dial caliper 0-150mm*0.02mm               |
| 2210-8280 | 3001-1001 Depth Base Attachment                     |
|           | 1332-4115 Dial caliper 0-6""*0.001"                 |
| 2210-8285 | 3001-1001 Depth Base Attachment                     |
|           | 1332-4115 Dial caliper 0-6""*0.001"                 |
| 2210-8285 | 3001-1001 Depth Base Attachment, wooden box         |

4PCS GENERAL PURPOSE MEASURING SET



- Product list:
- 1120-3115 Monoblock Vernier Caliper
  - 4111-8105 Outside Micrometer
  - 9111-1115 90°Beveled Edge Square
  - 9000-3100 Steel Ruler

| Unit:mm   |           |            |                           |          |
|-----------|-----------|------------|---------------------------|----------|
| Code      | Covering  | Range      | Graduation                | Accuracy |
| 2210-8203 | 1120-3115 | 0-150/0-6" | 0.05/1/128"               | 0.05     |
|           | 4111-8105 | 0-25/0-1"  | 0.01                      | 0.004    |
|           | 9111-1115 | 90°        | /                         | 0.007    |
|           | 9000-3100 | 0-150/0-6" | 0.5/1.0/1/64"/1/32"/1/16" | /        |

4PCS GENERAL PURPOSE MEASURING SET



- Product list:
- Big Screen Digital Caliper
  - Outside Micrometer
  - 90°Beveled Edge Square
  - Steel Ruler

| Unit:mm   |           |            |                           |             |
|-----------|-----------|------------|---------------------------|-------------|
| Code      | Covering  | Range      | Graduation/Resolution     | Accuracy    |
| 2210-8206 | 1804-1065 | 0-150/0-6" | 0.01/0.005"               | 0.02/0.001" |
|           | 4112-0105 | 0-1"       | 0.0001                    | 0.004       |
|           | 9211-4000 | 90°        | /                         | 0.007       |
|           | 9000-3100 | 0-150/0-6" | 0.5/1.0/1/64"/1/32"/1/16" | /           |

4PCS GENERAL PURPOSE MEASURING SET



- Product list:
- 1804-1065 Big Screen Digital Caliper
  - 4111-8105 Outside Micrometer
  - 9111-1115 90°Beveled Edge Square
  - 9000-3100 Steel Ruler

| Unit:mm   |           |            |                           |             |
|-----------|-----------|------------|---------------------------|-------------|
| Code      | Covering  | Range      | Graduation/Resolution     | Accuracy    |
| 2210-8204 | 1804-1065 | 0-150/0-6" | 0.01/0.005"               | 0.02/0.001" |
|           | 4111-8105 | 0-25       | 0.01                      | 0.004       |
|           | 9111-1115 | 90°        | /                         | 0.007       |
|           | 9000-3100 | 0-150/0-6" | 0.5/1.0/1/64"/1/32"/1/16" | /           |





BEGINNER SET



Metric  
Product list  
• 2210-8315



Inch  
Product list  
• 2210-8320

PRO SET



Metric  
Product list  
• 2210-8325



Inch  
Product list  
• 2210-8330

ADVANCED SET



Metric  
Product list  
• 2210-8335



Inch  
Product list  
• 2210-8340

| Unit:mm   |                             |                             |                           |             |
|-----------|-----------------------------|-----------------------------|---------------------------|-------------|
| Code      | Covering                    | Range                       | Graduation                | Accuracy    |
| 2210-8315 | 4111-8105                   | 0-25                        | 0.01                      | 0.004       |
|           | 1120-3115                   | 0-150/0-6"                  | 0.01/0.0005"              | 0.02/0.001" |
|           | 9000-3120                   | 0-150/0-6"                  | 0.5/1.1/1/64"/1/32"/1/16" | /           |
|           | 4112-0105                   | 0-1"                        | 0.001"                    | 0.0002"     |
| 2210-8320 | 1120-3115                   | 0-150/0-6"                  | 0.01/0.0005"              | 0.02/0.001" |
|           | 9000-3120                   | 0-150/0-6"                  | 0.5/1.1/1/64"/1/32"/1/16" | /           |
|           | 4111-8105                   | 0-25                        | 0.001"                    | 0.004       |
|           | 2000-2005                   | 0-150/0-6"                  | 0.01/0.0005"              | 0.02/0.001" |
| 2210-8325 | 1804-0804                   | 0-300/0-12"                 | 0.5/1.1/1/64"/1/32"/1/16" | /           |
|           | 4112-0105                   | 0-1"                        | 0.001"                    | 0.0002"     |
|           | 1332-4110                   | 0-6"                        | 0.001"                    | ±0.00065"   |
|           | 1804-0804                   | 0-300/0-12"                 | 0.5/1.1/1/64"/1/32"/1/16" | /           |
| 2210-8330 | 2000-2005                   | 0-150/0-6"                  | 0.01/0.0005"              | 0.02/0.001" |
|           | Metric 60°24pcs/0.25-6.00mm |                             |                           |             |
|           | 1500-0058                   | Whitworth 55°/28pcs/4-62TPI | /                         | /           |
|           | GAS 55°6pcs.8-28            |                             |                           |             |
| 2210-8335 | 9211-1120                   | 90°, 150x100                | /                         | /           |
|           | 1804-0804                   | 0-300/0-12"                 | 0.5/1.1/1/64"/1/32"/1/16" | /           |
|           | 2000-2005                   | 0-150/0-6"                  | 0.01/0.0005"              | 0.02/0.001" |
|           | Metric 60°24pcs/0.25-6.00mm |                             |                           |             |
| 2210-8340 | 1500-0058                   | Whitworth 55°/28pcs/4-62TPI | /                         | /           |
|           | GAS 55°6pcs.8-28            |                             |                           |             |
|           | 9211-4000                   | 90°, 6x4"                   | /                         | /           |
|           | 1804-0804                   | 0-300/0-12"                 | 0.5/1.1/1/64"/1/32"/1/16" | /           |

FLEX CHROME MAGNETIC BASE WITH DIAL INDICATOR SET



- Product list:
- 7611-1015 Flex chrome magnetic base
  - Dial Indicator(5111-0000 Metric;5122-4210 Inch)
  - 5111-1010 magnetic lug back

| Unit:mm   |                  |       |            |               |
|-----------|------------------|-------|------------|---------------|
| Code      | Difference       | Range | Graduation | Holding power |
| 7611-2005 | Inch indicator   | 0-1"  | 0.001"     | 60KG          |
| 7611-1005 | Metric indicator | 0-10  | 0.01       | 60KG          |

FLEX CHROME MAGNETIC BASE WITH DIAL INDICATOR SET



- Product list:
- 7611-1015 Flex chrome magnetic base
  - 5111-1010 magnetic lug back
  - 5340-8110 Absolute Digital Indicator

| Unit:mm   |           |              |               |
|-----------|-----------|--------------|---------------|
| Code      | Range     | Resolution   | Holding Power |
| 7611-0010 | 0-1"/0-25 | 0.0005"/0.01 | 60KG          |



FLEX CHROME MAGNETIC BASE



- Chrome plated flex arm
- With magnetic base
- Base can be mounted vertically as well as horizontally
- V-bottom base allows mounting on cylindrical surfaces
- Adjusts to virtually any position

| Unit:mm   |               |                   |
|-----------|---------------|-------------------|
| Code      | Holding Power | Dia of Clamp Hole |
| 7611-1015 | 60kg          | Φ8mm, Φ4mm, Φ3/8" |

MAGNETIC BASE  
WITH DIAL INDICATOR SET



- Product list:
- Optional dial Indicator
  - Optional magnetic base

| Code      | Range | Dial Indicator code | Magnetic base code | Class          |
|-----------|-------|---------------------|--------------------|----------------|
| 7611-1012 | 0-10  | 5111-0000           | 7122-0004          | Normal Metric  |
| 7611-1013 | 0-10  | 5111-0000           | 7312-0010          | Classic Metric |
| 7611-1010 | 0-10  | 5121-1106           | 7312-0010          | Pro Metric     |
| 7611-2010 | 0-1"  | 5122-4212           | 7123-1004          | Normal inch    |
| 7611-1011 | 0-1"  | 5122-4212           | 7121-0016          | Classic inch   |

Unit:mm

MINI UNIVERSAL MAG. BASE  
WITH TEST INDICATOR



- Product list:
- 5221-0005
  - 7312-0004

| Unit:mm   |         |           |           |
|-----------|---------|-----------|-----------|
| Code      | Range   | Dial code | Base code |
| 7611-0080 | 0-0.8mm | 5221-0005 | 7312-0004 |

DISC AND ROTOR FLEX  
CHROME KITS SET



- Product list:
- 7611-0035 Flex chrome shank
  - Dial Indicator 5122-4210 inch version 5111-0000 metric version

| Unit:mm   |       |            |
|-----------|-------|------------|
| Code      | Range | Graduation |
| 7611-0026 | 0-1"  | 0.001"     |
| 7611-0031 | 0-10  | 0.01       |

6PCS GENERAL PURPOSE MEASURING SET



- Product list:
- 1804-1065 Digital Caliper 0-150mm/0-6"
  - 4111-8105 Outside Micrometer 0-25mm\*0.01mm
  - 5111-0000 Dial indicator 0-10mm\*0.01mm,Flat back
  - 9111-1115 90°Beveled Edge Square100\*70mm,DIN875/0
  - 2875-4005 Scriber of 175mm with 90° hook
  - 9000-3100 Ruler 0-150mm/6\*\*0.5mm/1.0mm/1/64"/1/32"/1/16"graduation on front and back

| Unit:mm   |           |            |                           |             |
|-----------|-----------|------------|---------------------------|-------------|
| Code      | Covering  | Range      | Graduation                | Accuracy    |
| 2210-8210 | 1804-1065 | 0-150/0-6" | 0.01/0.0005"              | 0.02/0.001" |
|           | 4111-8105 | 0-25/0-1"  | 0.01                      | 0.004       |
|           | 5111-0000 | 0-10       | 0.01                      | 0.017       |
|           | 9111-1115 | 90°        | /                         | 0.007       |
|           | 2875-4005 | /          | /                         | /           |
|           | 9000-3100 | 0-150/0-6" | 0.5/1.0/1/64"/1/32"/1/16" | /           |

5PCS GENERAL PURPOSE MEASURING SET



- Product list:
- 1804-1065 Digital Caliper 0-150mm/0-6"
  - 4111-8105 Outside Micrometer 0-25mm\*0.01mm
  - 5111-0000 Dial indicator 0-10mm\*0.01mm,Flat back
  - 7122-0004 Magnetic Base with Fine Adjustment 60KG
  - 7111-1110 Micrometer Stand

| Unit:mm   |           |              |              |             |
|-----------|-----------|--------------|--------------|-------------|
| Code      | Covering  | Range        | Graduation   | Accuracy    |
| 2210-8220 | 1804-1065 | 0-150/0-6"   | 0.01/0.0005" | 0.02/0.001" |
|           | 4111-8105 | 0-25/0-1"    | 0.01         | 0.004       |
|           | 5111-0000 | 0-10         | 0.01         | 0.017       |
|           | 7122-0004 | /            | /            | /           |
|           | 7111-1110 | up to 100/4" | /            | /           |

Measuring Set for Metal Machining



7PCS GENERAL PURPOSE MEASURING SET

- DIGITAL PRO SET METRIC
- Product list:
- 7121-0025 Power Magnetic base 80kg magnetic force
  - 2015-2405 IP67 OIL Proof Digital Caliper 0-150mm/6"
  - 4410-1105 IP65 Digital Outside Micrometer 0-25mm/1"
  - 9000-3120 Steel Rulers 150mm/6"
  - 3001-1001 Depth Base Attachment
  - 5221-1129 Dial Test Indicator 0.8mm\*0.01mm
  - 8407-2005 Ultra-Precision 25/50/75mm Blocks

| Unit:mm   |           |              |                           |                |
|-----------|-----------|--------------|---------------------------|----------------|
| Code      | Covering  | Range        | Graduation/Resolution     | Accuracy       |
| 2210-8225 | 7121-0025 | 80kg         | /                         | /              |
|           | 2015-2405 | 0-150mm/6"   | 0.01/0.0005"/ 1/128"      | 0.02/0.001"    |
|           | 4410-1105 | 0-25mm/1"    | 0.001/0.00005"            | 0.003/0.00015" |
|           | 9000-3120 | 150mm/6"     | 0.5/1.0/1/64"/1/32"/1/16" | /              |
|           | 3001-1001 | /            | /                         | /              |
|           | 5221-1129 | 0.8mm/0.01mm | 0.01mm                    | /              |
|           | 8407-2005 | /            | /                         | /              |

- DIGITAL PRO SET INCH
- Product list:
- 7121-0025 Power Magnetic base 80kg magnetic force
  - 2015-2405 IP67 OIL Proof Digital Caliper 0-150mm/6"
  - 4410-2405 Inch Graduation IP65 Digital Outside Micrometer 0-25mm/1"
  - 9000-3120 Steel Rulers
  - 3001-1001 Depth Base Attachment 0-0.03\*\*0.0005"
  - 5610-0162 Dial Test Indicator 0-0.03\*\*0.0005"
  - 8407-0005 Ultra-Precision 1-2-3 Blocks

| Unit:inch |           |                 |                           |                |
|-----------|-----------|-----------------|---------------------------|----------------|
| Code      | Covering  | Range           | Graduation/Resolution     | Accuracy       |
| 2210-8250 | 7121-0025 | 80kg            | /                         | /              |
|           | 2015-2405 | 0-150mm/6"      | 0.01/0.0005"/ 1/128"      | 0.02/0.001"    |
|           | 4410-2405 | 0-25mm/1"       | 0.001/0.00005"            | 0.003/0.00015" |
|           | 9000-3120 | 150mm/6"        | 0.5/1.0/1/64"/1/32"/1/16" | /              |
|           | 3001-1001 | /               | /                         | /              |
|           | 5610-0162 | 0-0.03**0.0005" | 0.0005"                   | /              |
|           | 8407-0005 | /               | /                         | /              |

- DIGITAL NORMAL SET INCH**  
Product list:
- 7123-1004 Magnetic Base with Fine Adjustment 60KG
  - 1804-1065 Digital Caliper 0-150mm/6"
  - 4230-2005 Digital Outside Micrometer 0-25mm/1"
  - 9000-3120 Steel Rulers 150mm/6"
  - 3001-1001 Depth Base Attachment
  - 5610-0162 Dial Test Indicator 0-0.03\*\*0.0005"
  - 8407-0010 Precision 1-2-3 Blocks

| Unit:mm   |           |                 |                            |                |
|-----------|-----------|-----------------|----------------------------|----------------|
| Code      | Covering  | Range           | Graduation/Resolution      | Accuracy       |
| 2210-8230 | 7123-1004 | 60KG            | /                          | /              |
|           | 1804-1065 | 0-150mm/6"      | 0.01/0.0005"/ 1/128"       | 0.02/0.001"    |
|           | 4230-2005 | 0-25mm/1"       | 0.001/0.00005"             | 0.003/0.00015" |
|           | 9000-3120 | 150mm/6"        | 0.5/1.0/ 1/64"/1/32"/1/16" | /              |
|           | 3001-1001 | /               | /                          | /              |
|           | 5610-0162 | 0-0.03**0.0005" | 0.0005"                    | /              |
|           | 8407-0010 | /               | /                          | /              |
|           |           |                 |                            |                |

- DIGITAL NORMAL SET METRIC**  
Product list:
- 7122-0004 Magnetic Base with Fine Adjustment 60kg
  - 1804-1065 Digital Caliper 0-150mm/6"
  - 4230-2005 Digital Outside Micrometer 0-25mm/1"
  - 9000-3120 Steel Rulers 150mm/6"
  - 3001-1001 Depth Base Attachment
  - 5221-0005 Dial Test Indicators 0.8\*0.01mm
  - 5121-1205 Shock Resistant Dial Indicator 0-10mm\*0.01mm

| Unit:inch |           |              |                            |                |
|-----------|-----------|--------------|----------------------------|----------------|
| Code      | Covering  | Range        | Graduation/Resolution      | Accuracy       |
| 2210-8240 | 7122-0004 | 80kg         | /                          | /              |
|           | 1804-1065 | 0-150mm/6"   | 0.01/0.0005"/ 1/128"       | 0.02/0.001"    |
|           | 4230-2005 | 0-25mm/1"    | 0.001/0.00005"             | 0.003/0.00015" |
|           | 9000-3120 | 150mm/6"     | 0.5/1.0/ 1/64"/1/32"/1/16" | /              |
|           | 3001-1001 | /            | /                          | /              |
|           | 5221-0005 | 0.8mm/0.01mm | 0.01mm                     | /              |
|           | 5121-1205 | /            | 0.01mm                     | /              |
|           |           |              |                            |                |

- VERNIER SET METRIC**  
Product list:
- 7122-0004 Magnetic Base with Fine Adjustment 60kg
  - 1120-3115 Monoblock Vernier Caliper 0-150mm/0-6\*\*0.05mm/1/128"
  - 4111-8105 Outside Micrometer 0-25mm\*0.01mm
  - 9000-3120 Steel Rulers 150mm/6"
  - 3001-1001 Depth Base Attachment
  - 5221-0005 Dial Test Indicators 0.8\*0.01mm
  - 5121-1205 Shock Resistant Dial Indicator 0-10mm\*0.01mm

| Unit:mm   |           |                            |                            |                |
|-----------|-----------|----------------------------|----------------------------|----------------|
| Code      | Covering  | Range                      | Graduation/Resolution      | Accuracy       |
| 2210-8245 | 7122-0004 | 60kg                       | /                          | /              |
|           | 1120-3115 | 0-150mm/0-6**0.05mm/1/128" | 0.01/0.0005"/ 1/128"       | 0.05/0.002"    |
|           | 4111-8105 | 0-25mm/0.01"               | 0.01                       | 0.004/0.00015" |
|           | 9000-3120 | 150mm/6"                   | 0.5/1.0/ 1/64"/1/32"/1/16" | /              |
|           | 3001-1001 | /                          | 0.01                       | /              |
|           | 5221-0005 | 0.8*0.01mm                 | 0.01                       | /              |
|           | 5121-1205 | 0-10mm*0.01mm              | /                          | /              |
|           |           |                            |                            |                |

- VERNIER SET INCH**  
Product list:
- 7123-1004 Magnetic Base with Fine Adjustment 60kg
  - 1120-3115 Monoblock Vernier Caliper 0-150mm/0-6\*\*0.05mm/1/128"
  - 4111-8105 Outside Micrometer 0-25mm\*0.01mm
  - 9000-3120 Steel Rulers 150mm/6"
  - 3001-1001 Depth Base Attachment
  - 5610-0162 Dial Test Indicator 0-0.03\*\*0.0005"
  - 8407-0010 Precision 1-2-3 Blocks

| Unit:inch |           |                            |                            |                |
|-----------|-----------|----------------------------|----------------------------|----------------|
| Code      | Covering  | Range                      | Graduation/Resolution      | Accuracy       |
| 2210-8235 | 7123-1004 | 60kg                       | /                          | /              |
|           | 1120-3115 | 0-150mm/0-6**0.05mm/1/128" | 0.05"/ 1/128"              | 0.02/0.001"    |
|           | 4111-8105 | 0-25mm/0.01"               | 0.001/0.00005"             | 0.003/0.00015" |
|           | 9000-3120 | 150mm/6"                   | 0.5/1.0/ 1/64"/1/32"/1/16" | /              |
|           | 3001-1001 | /                          | /                          | /              |
|           | 5610-0162 | 0-0.03**0.0005"            | 0.0005"                    | /              |
|           | 8407-0010 | /                          | /                          | /              |
|           |           |                            |                            |                |

9PCS GENERAL PURPOSE MEASURING SET



- Product list:
- 1804-1065 Digital Caliper 0-150mm/0-6"
  - 4111-8105 Outside Micrometer 0-25mm\*0.01mm
  - 1012-1005 Protractor80\*120mm,open Head
  - 1501-1024 24pcs Screw pitch gauge 0.25- 7.0mm ,Thread Angle: 60°
  - 1351-0005 Radius gauge1.0-7.0mm,17 blades
  - 1820-0100 20pcs Feeler Gauge 100mm,(0.05-1.0mm)
  - 9111-1115 90°Beveled Edge Square100\*70mm,DIN875/0
  - 2875-4005 Scriber of 175mm with 90° hook
  - 9000-3100 Ruler 0-150mm/6\*\*0.5mm/1.0mm/1/64"/1/32"/1/16" graduation on front and back

| Unit:mm   |           |                    |                           |             |
|-----------|-----------|--------------------|---------------------------|-------------|
| Code      | Covering  | Range              | Graduation                | Accuracy    |
| 2210-8215 | 1804-1065 | 0-150/0-6"         | 0.01/0.0005"              | 0.02/0.001" |
|           | 4111-8105 | 0-25/0-1"          | 0.01                      | 0.004       |
|           | 1012-1005 | 0-180°             | 1°                        | ±10'        |
|           | 1501-1024 | 0.25-7(Metric 60°) | /                         | /           |
|           | 1351-0005 | 1.0-7.0            | /                         | /           |
|           | 1820-0100 | 0.05-1.0(20pcs)    | /                         | /           |
|           | 9111-1115 | 90°                | /                         | 0.007       |
|           | 2875-4005 | /                  | /                         | /           |
|           | 9000-3100 | 0-150/0-6"         | 0.5/1.0/1/64"/1/32"/1/16" | /           |
|           |           |                    |                           |             |
|           |           |                    |                           |             |
|           |           |                    |                           |             |

12PCS GENERAL PURPOSE MEASURING SET



| Unit:mm   |           |                    |                           |             |
|-----------|-----------|--------------------|---------------------------|-------------|
| Code      | Covering  | Range              | Graduation                | Accuracy    |
| 2210-8205 | 1804-1065 | 0-150/0-6"         | 0.01/0.0005"              | 0.02/0.001" |
|           | 4111-8105 | 0-25/0-1"          | 0.01                      | 0.004       |
|           | 5111-0000 | 0-10               | 0.01                      | 0.017       |
|           | 7122-0004 | /                  | /                         | /           |
|           | 1012-1005 | 0-180°             | 1°                        | ±10'        |
|           | 1501-1024 | 0.25-7(Metric 60°) | /                         | /           |
|           | 1351-0005 | 1.0-7.0            | /                         | /           |
|           | 1820-0100 | 0.05-1.0(20pcs)    | /                         | /           |
|           | 9111-1115 | 90°                | /                         | 0.007       |
|           | 2875-4005 | /                  | /                         | /           |
|           | 9000-3100 | 0-150/0-6"         | 0.5/1.0/1/64"/1/32"/1/16" | /           |
|           | 3001-1001 | /                  | /                         | /           |

MEASURING TOOLS KIT BORN IN ITALY, RAISED BY THE WORLD

4PCS PRECISION MEASURING TOOLS SET



• 8300-0090



• 8400-0020  
4x90°x0.2°  
Digital Angle gauge



• 1022-2200  
200mmx0.1mm  
Digital protractor

- A Must have for woodworking  
Include:
- Digital level box
  - Digital caliper
  - Digital depth gauge
  - Digital protractor

| Code      | Unit:mm |
|-----------|---------|
| 8300-0090 |         |

2PCS PRECISION MEASURING TOOLS SET



• 8300-0105



• 2605-0015  
Digital depth gauge



• 2035-0004  
0.75mm/0.3°  
Great handy plastic caliper

- Good set to confirm angle and depth for wood working  
Include:
- Digital level box
  - Digital depth gauge

| Code      | Unit:mm |
|-----------|---------|
| 8300-0105 |         |

5PCS MEASURING SET



- 1804-1500 (Metric)  
Vernier Caliper 150mm  
Try Square  
Center Punch Drill  
Scriber  
Multigauge  
\*For Inch set: 1804-1505

- 1804-1510 (Metric)  
Digital Caliper 150mm  
Try Square  
Center Punch Drill  
Scriber  
Multigauge  
\*For Inch set: 1804-1515

- 1804-1520 (Inch)  
Dial Caliper 150mm  
Try Square  
Center Punch Drill  
Scriber  
Multigauge

| Code                          | Unit:mm |
|-------------------------------|---------|
| 1804-1500 1804-1510 1804-1520 |         |



# PORTABLE TESTING INSTRUMENTS

BORN IN ITALY, RAISED BY THE WORLD

## 02-08 HARDNESS TESTING INSTRUMENTS



## 13-15 PRECISION SCALES



## 21-23 ROUGHNESS MEASURING DEVICES



## 26-28 AUTO DIAGNOSIS INSTRUMENTS



## 37-41 OTHER INSTRUMENTS



## 08-10 FORCE TESTING INSTRUMENTS



## 15-16 THICKNESS MEASURING INSTRUMENTS



## 24 AIR BORE GAUGE



## 28-35 AUTO DIAGNOSIS & CONSTRUCTION MEASURING TOOLS



## 11-12 TORQUE FORCE TESTING INSTRUMENTS



## 17-20 OPTICAL MEASURING INSTRUMENTS



## 24-25 OTHER MEASURING INSTRUMENTS



## 35-37 CONSTRUCTION MEASURING TOOLS



BORN IN ITALY, RAISED BY THE WORLD **PORTABLE TESTING INSTRUMENTS**

## SHORE DUROMETER



SHORE A

- Widely applied in the medium and low hardness plastic, all kinds of rubber, multidimensional fat, leather, wax hardness test and etc
- The product refers to ISO868 and the ISO7619 international standard production

|                        |             |
|------------------------|-------------|
| Code                   | 1804-1090   |
| Type                   | Shore A     |
| Measuring Range        | 0-100HA     |
| Pressure Needle Range  | 2.5mm       |
| Pressure Head Diameter | 0.79mm      |
| Outline Dimension      | 115*60*25mm |



SHORE C

- Used in measuring the hardness of oak model micro porous material, which includes vesicant, when the compression ratio is 50%, the stress above 0.5kg/cm<sup>2</sup>
- It also can be used in other similar hardness materials

|                        |             |
|------------------------|-------------|
| Code                   | 1804-1095   |
| Type                   | Shore C     |
| Measuring Range        | 0-100HC     |
| Pressure Needle Range  | 2.5mm       |
| Pressure Head Diameter | 2.5mm       |
| Outline Dimension      | 115*60*25mm |



SHORE D

- Suitable for hardness test of high degree, such as common hard rubber, hardened resin, acryl plexiglas, thermos plastic rubber, printing plate, fiber
- The product conforms to HG/2489 and other related standard request

|                        |             |
|------------------------|-------------|
| Code                   | 1804-1100   |
| Type                   | ShoreD      |
| Measuring Range        | 0-100HD     |
| Pressure Needle Range  | 2.5mm       |
| Pressure Head Diameter | 0.1mm       |
| Outline Dimension      | 115*60*25mm |

SHORE DUROMETER



- Application: Type A for soft rubber, Type D for hard rubber, Type C for rubber with plastic
- Scale Reading: 100 Degree

| Code                  | 1804-2405 | 1804-2410 | 1804-2415 |
|-----------------------|-----------|-----------|-----------|
| Type                  | SHORE A   | SHORE C   | SHORE D   |
| Measuring Range       | 0-100HA   | 0-100HW   | 0-100HD   |
| Pressure Needle Range | 0-2.5MM   | 0-2.5MM   | 0-2.5MM   |

DIGITAL SHORE DUROMETER



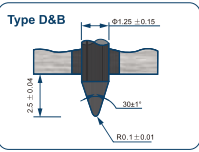
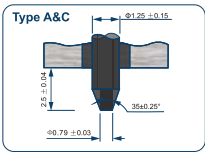
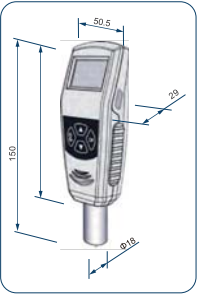
- Testing the hardness of soft rubber,printer roller and other elastomer material
- Portable device, rugged plastic housing,front plate made of rugged polyamide
- Large LED display for clear and easy reading
- ON/OFF button and data hold button for one-hand-use



- Testing the hardness of hard rubber,such as thermoplastic plastic, bowling,plastic floor and so on
- Portable device, rugged plastic housing,front plate made of rugged polyamide
- Large LED display for clear and easy reading
- ON/OFF button and data hold button for one-hand-use

| Code                  | 1804-1035 | 1804-1045 |
|-----------------------|-----------|-----------|
| Type                  | Shore A   | Shore D   |
| Resolution            | 0.5HA     | 0.5HD     |
| Measuring Range       | 0-100HA   | 0-100HD   |
| Pressure Needle Range | 2.5mm     | 2.5mm     |
| Accuracy              | 2HA       | 2HD       |

DIGITAL DUROMETER



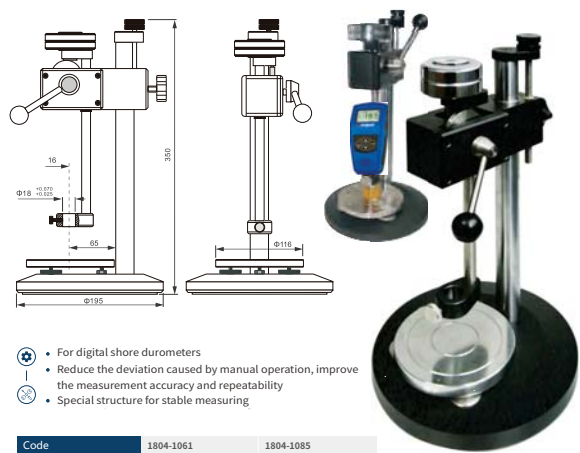
- This model is Suitable for measuring the hardness of rubber, plastic and other non-metallic materials. Calibration certificate Included
- With a large, easy-to-read LCD display with backlight. Conforms to ASTM D 2240, ISO7619-1, Wireless mini-printer is available
- Measurement data can be stored, browsing and batch printing, printing upload to PC
- Measurement mode: Averaging mode, Max Mode, Max-Average mode

|                       |                                                          |
|-----------------------|----------------------------------------------------------|
| Accuracy              | ≤ ± 1 H                                                  |
| Display:              | 128*64 dot matrix LCD with Backlight                     |
| Measuring Mode:       | AVE, MAX, Timing                                         |
| Power                 | Ni-MH Chargeable Battery                                 |
| Dimensions            | 150X50.5X29mm                                            |
| Resolution            | 0.1H                                                     |
| Memory                | 500 readings                                             |
| Communication         | USB to PC                                                |
| Operating Environment | -10 to 40°C, 20 to 80%RH                                 |
| Weight:               | 170g                                                     |
| Optional              | mini printer, test stand, HAS test block, HSD test block |

| Code      | Type | Intenter | Applications                                                                                                                              |
|-----------|------|----------|-------------------------------------------------------------------------------------------------------------------------------------------|
| 1804-1008 | A    |          | Soft vulcanized rubber, natural rubber, nitriles, thermoplastic elastomers, flexible polyacrylics and thermosets, wax, felt, and leathers |
| 1804-1009 | C    |          | Medium-hard rubber, thermoplastic elastomers, medium-hard plastics, and thermoplastics                                                    |
| 1804-1007 | D    |          | Hard rubber, thermoplastic elastomers, harder plastics, and rigid thermoplastics                                                          |



DUROMETER OPERATING STAND



- For digital shore durometers
- Reduce the deviation caused by manual operation, improve the measurement accuracy and repeatability
- Special structure for stable measuring

| Code                 | 1804-1061                 | 1804-1085                 |
|----------------------|---------------------------|---------------------------|
| Operating Type       | Indentor to specimen      | Indentor to specimen      |
| Loading Method       | Cam loading               | Cam loading               |
| Loading Stroke       | 18 mm                     | 18 mm                     |
| Specimen Thickness   | 60 mm                     | 60 mm                     |
| Throat Depth         | 65 mm                     | 65 mm                     |
| Support Table (dia.) | φ116 mm                   | φ116 mm                   |
| Lifting Adjustment   | Screw adjustment          | Screw adjustment          |
| Table Adjustment     | Three-point leveling      | Three-point leveling      |
| Net Weight           | 5.6kg(excluding S weight) | 5.6kg(excluding S weight) |
| Package Weight       | 7.6kg(excluding D weight) | 7.6kg(excluding D weight) |
| Applicable durometer | Shore A,B,E,O,00          | Shore D,DC,DO             |



DUROMETER FOR SPONGE



- The scale reading: 0-100 Degree
- Range: 0 ~ 2.5mm
- Pressure force of needle end: 550mN~4300mN/56~438.5g
- G.W.: 0.2kg
- Size: 17.3X15.3X11cm

|       |            |
|-------|------------|
| Code  | 1032-0210  |
| Type  | For Sponge |
| Range | 0~2.5mm    |

TEST BLOCK FOR SHORE DUROMETER



|          |                             |
|----------|-----------------------------|
| Code     | 1061-0026                   |
| Type     | For Shore A                 |
| Hardness | 6pcs/set(30,40,50,60,70,80) |

PORTABLE LEEB HARDNESS TESTER



Widely used in petrochemical, aerospace, electric power, gas, automotive, shipbuilding, railways, machinery manufacturing and other industries.

- Applied to wide range of materials
- High Accuracy
- Portable and easy to operate
- Non-destructive inspection
- 360° Measuring direction



THESE ACCESSORIES ARE APPLIED TO BOTH 1804-4612 AND 1804-4613



|                       |                                 |
|-----------------------|---------------------------------|
| Code                  | 1804-4612                       |
| Impact type           | D,DC,DL,D+15,C,G                |
| Accuracy              | ±6HL                            |
| Scales                | HRA, HRC, HRB, HB, HV, HSD, MPA |
| Display               | 160°128 TFT LCD                 |
| Data                  | 500 Pieces of data              |
| Power                 | 3*AAA                           |
| Statistics            | Avg                             |
| Connection            | TYPE-C USB                      |
| Print                 | Wireless printing(optional)     |
| Punch material        | Tungsten carbide ball           |
| Weight                | 230g                            |
| Sizes                 | 154*82*26mm                     |
| Operating temperature | -10 ~ +40°C (14°F~104°F)        |
| Storage temperature   | -30 ~ +80°C (-22°F~176°F)       |

PORTABLE LEEB HARDNESS TESTER

Widely used in petrochemical, aerospace, electric power, gas, automotive, shipbuilding, railways, machinery manufacturing and other industries.

- Applied to wide range of materials
- High Accuracy
- Portable and easy to operate
- Non-destructive inspection
- 360° Measuring direction
- Full and touch screen



|                       |                                                                   |
|-----------------------|-------------------------------------------------------------------|
| Code                  | 1804-4613                                                         |
| Impact type           | D,DC,DL,D+15,C,G                                                  |
| Precision             | ±6HL                                                              |
| Display               | 800°480 TFT LCD (with touch)                                      |
| Storage               | 2000 measurement data                                             |
| Conversion            | HV, HB, HRA, HRB, HRC, HSD, Mpa                                   |
| Statistics            | Mean, range                                                       |
| Communication         | Type-C USB                                                        |
| Print                 | Wireless printing (optional)                                      |
| Power                 | 3.7V 1400mA rechargeable lithium ion battery<br>Charging: DC5V 1A |
| Punch material        | Tungsten carbide ball                                             |
| Weight                | 255g                                                              |
| Dimensions            | 151*85*27mm                                                       |
| Operating temperature | Temperature: -10~40°C Humidity:20%-85%                            |
|                       | Temperature: -30~80°C Humidity:5%-95%                             |

## PORTABLE LEEB HARDNESS TESTER

- This model is recommended for the exclusive measurement of solid and heavy components in the Brinell range.
- Unit G places low demands on measuring location surface finish.
- Typical applications: forgings or solid castings.
- Impact Device integrated.
- Direction sensor integrated
- Highly accurate ( $\pm 6\text{HL}$ ) in any impact direction ( $360^\circ$ ) – automatically
- Integrated display of results for HB, HRB hardness scales.
- Large, high contrast LCD for optimum viewing in all conditions.
- Easy calibration.
- Full USB communication with PC, software included free of charge.
- Internal storage of data with day and time.
- Intelligent sleep mode.

|                                         |                                                                                                                                                                                                                                                                                    |                  |
|-----------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------|
| <b>Code</b>                             | <b>1804-4615</b>                                                                                                                                                                                                                                                                   | <b>1804-4616</b> |
| <b>Battery</b>                          | Rechargeable Li-Ion, charges through device USB port.<br>DH 50156 (2007), DG2P GuideLine MC 1 (2008), VDI / VDE<br>Guideline 2616 Paper 1 (2002), ISO 18625 (2003),<br>ASTM A956 (2000), GB/T 17394 (1998), JB/T 9378 (2001),<br>JG 747(1999), CNAL T0299 (2008), IS 87731 (2003). |                  |
| <b>Standards and Guidelines applied</b> | With mini wireless printer      Without mini wireless printer                                                                                                                                                                                                                      |                  |
| <b>Printer</b>                          | Temperature: 10~60°C; Humidity: 20%~85%.                                                                                                                                                                                                                                           |                  |
| <b>Operating environment</b>            | Temperature: 30~80°C; Humidity: 5%~95%.                                                                                                                                                                                                                                            |                  |
| <b>Storage environment</b>              | 254 x 52 x 32 mm                                                                                                                                                                                                                                                                   |                  |
| <b>Dimensions</b>                       | 230g                                                                                                                                                                                                                                                                               |                  |
| <b>Weight</b>                           |                                                                                                                                                                                                                                                                                    |                  |

| Material       | HLG     | HRB | HB      |
|----------------|---------|-----|---------|
| Steel          | 300-750 | /   | 90-646  |
| Grev cast iron | 340-600 | /   | 92-326  |
| Ductile Iron   | 340-600 | /   | 127-364 |



## ULTRASONIC HARDNESS TESTER

- \* Used for measuring the hardness for majority of ferrous metals, non-ferrous metals and alloys in industrial production
  - \* Small size and light weight for handy use, easy to carry. Easy to measure the large workpieces, also for some places difficult to reach
  - \* Minor damage to the workpiece
  - \* Large screen display, easy for reading - displays the current measurement value, cumulative value, maximum value, minimum value, average value, and unit conversion value
  - \* Easy calibration can save 5 group of one-point calibration data, 1 group of default data, and 5 group sets of multi-point calibration data
  - \* For unknown materials, can measure it in any hardness scale in multi-point test to eliminate systematic errors caused by conversion
  - \* Can save 50 group of measurement data and 10 group of calibration data
  - \* Fast measurement can have the test results within 1s
  - \* Data transmission(cable) to computer
  - \* Bluetooth data transmission(optional)
- 
- The image shows a handheld digital hardness testing device. It has a blue plastic casing. At the top, there's a small LCD screen displaying some numbers and units. Below the screen is a keypad with several circular buttons labeled with functions like 'HRC', 'HV', 'HB', etc., along with navigation arrows and a power button. The brand name 'EXCEL' is visible above the keypad. On the left side of the device, there are two ports: one for a cable connection and another for a different type of interface.



|                      |                                                                   |
|----------------------|-------------------------------------------------------------------|
| Code                 | 1804-5005                                                         |
| Hardness Scale       | Main Scale:HV    Convertible:HRC,HRA,HRB,HBW                      |
| Measuring Range      | HV:50~1599    HRC:20~76    HB:85~550<br>HRA:61-100    HRA:61-85.6 |
| Accuracy             | HV: ±4%<br>HB: ±4%<br>HR: ±1.5                                    |
| Standard Probe Types | 2kgf                                                              |
| Optional Probe Types | 1kgf/ 3kgf/ 5kgf/ 10kgf                                           |
| Measuring Direction  | 360°                                                              |
| Power Supplier       | 3.6V,3000mAh Li Battery                                           |

## FORCE GAUGE

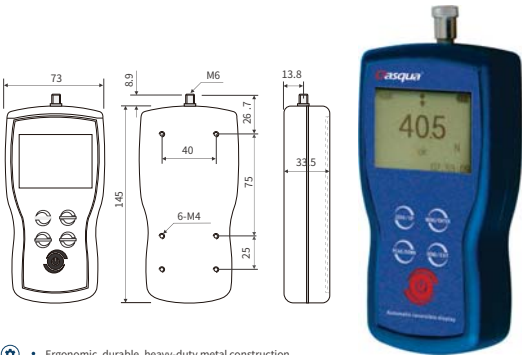
Analog Force Gauge with compact size, high accuracy, they are easy to operate and handy to carry out, and can show the unit of newton and kilogram at the same time. The PEAK/TRACK knob off it can switch between the peak value load test and the continuous load test. They are excellent products which can take the place of the old style force gauges, and widely applied in electric, high low voltage electric appliance, hardware, automobile parts, lighter and ignition system, light industry, mechanical, textile and so on industries for test of pull or push load test insertion force or pull and destructive experiment.



- The compact design, easy to carry
- The operation is simple and can be used combining with all kinds of fixture;
- The peak value holding function and duration test function switch freely;
- Newton and kg, according to two units at the same time do not need to unit conversion;
- Can be installed on a variety of test the machine as a dedicated tester use
- 10N-100N-500N available

| Code      | Capacity(N) | Graduation(N) |
|-----------|-------------|---------------|
| 1804-1130 | 10          | 0.5           |
| 1804-1131 | 50          | 0.25          |
| 1804-1132 | 500         | 2.5           |
| 1804-1133 | 100         | 0.5           |
| 1804-1134 | 200         | 1             |
| 1804-1136 | 300         | 2             |

DIGITAL FORCE GAUGE



- Ergonomic, durable, heavy-duty metal construction
- Touchpad to minimized disturbance
- Automatic reversible display
- Automatic display direction converting
- Variety of alarm output function
- USB port for upload to PC
- 10N,20N,50N,100N,200N,500N available

| Code      | Capacity / Resolution |           |            |          |           |           |
|-----------|-----------------------|-----------|------------|----------|-----------|-----------|
|           | N                     | Kgf       | Lbf        | Ozf      | Gf        | mN        |
| 1804-1105 | 10/0.001              | 1/0.0001  | 2.2/0.0005 | 35/0.01  | 1000/0.1  | 10000/1   |
| 1804-1115 | 1000/0.1              | 100/0.001 | 220/0.05   | 3500/1   | -         | -         |
| 1804-1135 | 5/0.005               | -         | 1.1/0.0001 | 18/0.005 | 500/0.05  | 5000/0.05 |
| 1804-1140 | 20/0.005              | 2/0.0005  | 4.4/0.001  | 70/0.01  | 2000/0.5  | 20000/5   |
| 1804-1145 | 50/0.005              | 5/0.0005  | 11/0.005   | 180/0.05 | 5000/0.05 | 50000/5   |
| 1804-1150 | 100/0.1               | 10/0.001  | 22/0.05    | 350/0.1  | 10000/1   | -         |
| 1804-1155 | 200/0.05              | 20/0.005  | 44/0.01    | 700/0.1  | 20000/5   | -         |
| 1804-1160 | 500/0.05              | 50/0.005  | 110/0.01   | 1800/0.5 | -         | -         |

|                       |                                       |
|-----------------------|---------------------------------------|
| Accuracy              | ±0.2% FS                              |
| Display               | 160*128 matrix LCD with LED Backlight |
| Units                 | N, gf, kgf, ozf, and lbf              |
| Measuring Mode        | Track, Peak, AutoPeak                 |
| Overload Capacity     | 120% F.S                              |
| Sampling Rate         | 2000 Hz                               |
| Memory                | 1000 data                             |
| Temperature Effects   | <0.03% FS/°C                          |
| Power                 | 3.6VDC Ni-MH batteries                |
| Charger / Adaptor     | USB/BM charger, 110~240VAC            |
| Outputs               | USB, Set point output, RS232C         |
| Operating Environment | -10 to 40°C, 20 to 80%RH              |
| Selectable Units      | N, kgf, lbf, ozf and/or gf            |
| Dimensions            | 160*73*34mm                           |
| Weight                | 0.7 kg (1.5 lb)                       |

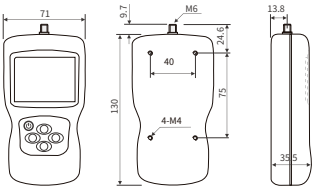
|                      |                   |                          |
|----------------------|-------------------|--------------------------|
| MiniPrinter          | Rs232 Cable       | Ergonomics measuring kit |
|                      |                   |                          |
| Motorised Test Stand | Manual Test Stand |                          |
|                      |                   |                          |

DIGITAL FORCE GAUGE



- Ergonomic, durable, heavy-duty metal construction
- Lighter weight, more suitable for handheld operation
- Reversible display
- Charger with US/EUR/UK Plugs selectable 50N,100N,500N available

|                       |                                       |
|-----------------------|---------------------------------------|
| Accuracy              | ± 0.3% F.S                            |
| Display               | 160*128 matrix LCD with LED Backlight |
| Units                 | N, gf, kgf, ozf, and lbf(Selectable)  |
| Measuring Mode:       | Track, Peak, Preset                   |
| Overload Capacity     | 120% F.S                              |
| Sampling Rate         | 1000 Hz                               |
| Memory                | 500 data                              |
| Temperature Effects   | <0.03% FS/°C                          |
| Power                 | Ni-MH rechargeable batteries          |
| Charger / Adaptor     | USB charger, Input:110~240VAC         |
| Outputs               | USB, Set point output, RS232C         |
| Operating Environment | -10 to 40°C, 20 to 80%RH              |
| Selectable Units      | N, kgf, lbf, ozf and/or gf            |
| Dimensions            | 150*72*33mm                           |
| Weight                | 0.45 kg (1 lb)                        |



|                      |                   |
|----------------------|-------------------|
| MiniPrinter          | Rs232 Cable       |
|                      |                   |
| Motorised Test Stand | Manual Test Stand |
|                      |                   |

| Code      | Capacity / Resolution |          |           |         |        |
|-----------|-----------------------|----------|-----------|---------|--------|
|           | N                     | Kgf      | Lbf       | Ozf     | Gf     |
| 1804-1120 | 10/0.01               | 1/0.001  | 2.2/0.001 | 35/0.01 | 1000/1 |
| 1804-1125 | 1000/1                | 100/0.01 | 220/0.1   | 3500/1  | -      |
| 1804-1165 | 50/0.01               | 5/0.001  | 11/0.01   | 180/0.1 | 5000/1 |
| 1804-1170 | 100/0.01              | 10/0.01  | 22/0.01   | 350/0.1 | -      |
| 1804-1175 | 500/0.1               | 50/0.01  | 110/0.1   | 1800/1  | -      |

TORQUE WRENCHES



- Do not use it as a pry bar or ratchet wrenches to pry nuts
- Do not exceed the maximum torque value in using
- Can only be used within the load range of the handle
- The torque value of the wrench must be adjusted to the same as the required
- If the torque value is too large or too small, it will cause the damage
- Do not disassemble or assemble this wrench casually
- Regular maintenance is necessary, at least once a year
- The wrench is also a very precise instrument,only used to tighten screws, bolts, and nuts to the required torque

| Code            | T212-0005 | T212-0010 | T212-0015 | T212-0020 | T212-0025 | T212-0030 | T212-0035 | T212-0040 | T212-0045 | T212-0050 | T212-0055 | T212-0060 | T212-0065 | T212-0070 |
|-----------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| Range(N.m)      | 1-6       | 2-20      | 5-25      | 5-25      | 5-30      | 5-60      | 5-60      | 10-110    | 10-110    | 10-150    | 20-210    | 65-350    | 70-400    | 90-450    |
| Graduation(N.m) | 0.05      | 0.15      | 0.25      | 0.25      | 0.25      | 0.5       | 0.5       | 0.5       | 0.5       | 0.5       | 1         | 1         | 1         | 1         |
| Accuracy        | ±3%       |           |           |           |           |           |           |           |           |           |           |           |           |           |
| Square Driver   | 1/4"      | 1/4"      | 1/4"      | 3/8"      | 3/8"      | 3/8"      | 1/2"      | 3/8"      | 1/2"      | 1/2"      | 1/2"      | 1/2"      | 1/2"      | 1/2"      |
| Length(mm)      | 205       | 230       | 250       | 250       | 250       | 310       | 310       | 460       | 460       | 460       | 490       | 550       | 550       | 550       |

DIGITAL TORQUE GAUGE WITH SHORT HAND



- With sound & light alarm function
- Clockwise and counter-clockwise operation
- Four units and switched: kgf.cm, N.m, lbf.ft, lbf.in
- Three modes and switched: Real-Time Mode, Peak Mode, Preset Mode
- With backlight function, convenient for use at night or in places with insufficient light
- Power off automatically in 10 minutes without any operations
- Silicone handle for non-slip grip

| Code             | T212-4005       | T212-4010 | T212-4015            | T212-4020 |
|------------------|-----------------|-----------|----------------------|-----------|
| Range (N.m)      | 0.3-10          | 0.9-30    | 1.8-60               | 3-100     |
| Square Driver    | 1/4"            | 1/4"      | 3/8"                 | 1/2"      |
| Length0(mm)      | 230             | 230       | 240                  | 285       |
| Graduation (N.m) | 0.01            |           |                      | 0.1       |
| Accuracy         | Clockwise:±2%   |           | Anti-clockwise:±2.5% |           |
| Data Save        | 999             |           |                      |           |
| Power Supply     | 2 * AAA Battery |           |                      |           |

DIGITAL TORQUE GAUGE



- Power supply: 2 \* AAA batteries
- Four units and switched: kgf.cm, N.m, lbf.ft, lbf.in
- With sound & light alarm function
- With backlight function, convenient for use at night or in places with insufficient light
- Three modes and switched: Real-Time Mode, Peak Mode, Preset Mode
- Power Off: Automatically power off if no operation in 10 minutes
- Can be used in both direction of clockwise and counter clock wise, for higher work efficiency

| Code             | T212-1005                              | T212-1010 | T212-1015 |
|------------------|----------------------------------------|-----------|-----------|
| Range (N.m)      | 3-30                                   | 13.5-135  | 20-200    |
| Graduation (N.m) | 0.01                                   | 0.01      | 0.01      |
| Square Driver    | 1/2"                                   | 1/2"      | 1/2"      |
| Accuracy         | Clockwise:±2%     Anti-clockwise:±2.5% |           |           |

DIGITAL POCKET SCALE



- Material:ABS engineering plastic housing and stainless steel table-boa
- Display: LCD display with blue backlight
- Equipped with a high precision strain gauge sensor system for accurate weighing
- Stainless Steel platform and Ultra-thin (19mm thickness)
- Multiple weighing units : G/ CT/OZT/OZ/ /DWT / GN
- Zero setting and tare function, counting and weighing function, auto zero tracking
- Low battery indication and overload warning
- 2\*AAA battery, easy to change and long stand-by time
- Auto power off, when there is on operation for a certain time
- Self-test when turned on

|                    |                |
|--------------------|----------------|
| Code               | 1030-2010      |
| Range              | 0-500g/0.01g   |
| Scale Size         | 16.4X10X2cm    |
| Platform Size      | 11.3X9cm       |
| Display size       | 4.6X4.8X0.11cm |
| Product net weight | 300g           |

WEIGHING SCALES



- Rechargeable battery inside ,low power consumption RS-232 interface for option
- RS-232 interface for option
- Display: LCD display with blue backlight
- Capacity:6kg,15kg,30kg
- Precision 1/6000, 1/15000,1/30000

|                |                                  |                       |           |
|----------------|----------------------------------|-----------------------|-----------|
| Code           | 1030-2015                        | 1030-2017             | 1030-2019 |
| Capacity       | 6KG                              | 15KG                  | 30KG      |
| Display        | LED/LCD                          |                       |           |
| Counting scale | 16 keys /24keys with 7 memory    |                       |           |
| Weighing scale | 8 keys(LCD), 6 keys/8 keys       |                       |           |
| Pan size       | 210mm/270mm (19 mold/queen mold) | 325*225mm (king mold) |           |
| Precision      | 1/6000                           | 1/15000               | 1/30000   |

WEIGHT SETS



- Made with stainless steel material
- With inspection certificate

|        |                  |                  |                  |
|--------|------------------|------------------|------------------|
| Code   | 1030-2020        | 1030-2025        | 1030-2030        |
| Range  | 1mg-100g         | 1mg-200g         | 1mg-1kg          |
| Weight |                  | 1x 1mg weights   | 1x 1mg weights   |
|        |                  |                  | 2x 2mg weights   |
|        | 1x 1mg weights   | 2x 2mg weights   | 1x 5mg weights   |
|        | 2x 2mg weights   | 1x 5mg weights   | 1x 10mg weights  |
|        | 1x 5mg weights   | 1x 10mg weights  | 2x 20mg weights  |
|        | 1x 10mg weights  | 2x 20mg weights  | 1x 50mg weights  |
|        | 2x 20mg weights  | 1x 50mg weights  | 1x 100mg weights |
|        | 1x 50mg weights  | 1x 100mg weights | 2x 200mg weights |
|        | 1x 100mg weights | 2x 200mg weights | 1x 500mg weights |
|        | 2x 200mg weights | 1x 500mg weights | 1x 1g weights    |
|        | 1x 500mg weights | 1x 1g weights    | 2x 2g weights    |
|        | 1x 1g weights    | 2x 2g weights    | 1x 5g weights    |
|        | 2x 2g weights    | 1x 5g weights    | 1x 10g weights   |
|        | 1x 5g weights    | 1x 10g weights   | 2x 20g weights   |
|        | 1x 10g weights   | 2x 20g weights   | 1x 50g weights   |
|        | 2x 20g weights   | 1x 50g weights   | 1x 100g weights  |
|        | 1x 50g weights   | 1x 100g weights  | 2x 200g weights  |
|        | 1x 100g weights  | 2x 200g weights  | 1x 500g weights  |
|        |                  |                  | 1x 1kg weights   |

SCALE



- More function, more storage
- Faster response, faster print
- Generic thermal paper and thermal sticker paper
- Working mode: pre-pack, batch print, auto print
- Water proof
- Easy in operation
- Power supply: ac 220v/50hz

|                        |                  |                  |                  |
|------------------------|------------------|------------------|------------------|
| Code                   | 1030-3105        | 1030-3110        | 1030-3115        |
| Pole                   | Without          | With             | With             |
| Display                | Front 5 + Back 4 | Front 4 + Back 4 | Front 5 + Back 4 |
| Working Table Size(mm) | 220*320          | 220*320          | 260*350          |
| Scale Size             | 345*390*170      | 345*440*460      | 410*500*510      |
| Capacity(Kg)           |                  | 6/15/30          |                  |
| Resolution(g)          |                  | 2/5/10           |                  |
| Accuracy               |                  | 1/3000           |                  |
| Printer Speed          |                  | 75mm/s           |                  |

## CASH REGISTER SCALE



| Code          | 1030-6205        | 1030-6210        | 1030-6215        |
|---------------|------------------|------------------|------------------|
| Pole          | Without          | With             | With             |
| Display       | Front 5 + Back 4 | Front 4 + Back 4 | Front 5 + Back 4 |
| Capacity(Kg)  |                  | 6/15/30          |                  |
| Resolution(g) |                  | 2/5/10           |                  |
| Accuracy      |                  | 1/3000           |                  |
| Printer Speed |                  | 60mm/s           |                  |

## COATING THICKNESS GAUGE



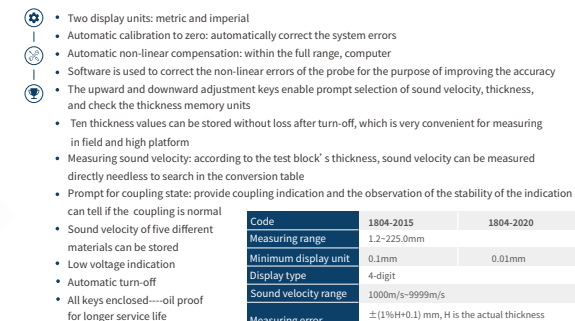
|                       |                                                                                                 |
|-----------------------|-------------------------------------------------------------------------------------------------|
| Code                  | 1804-2005                                                                                       |
| Test method           | Magnetic induction                                                                              |
| Measuring Range       | 0-1250µm (0-50 mil)                                                                             |
| Resolution            | 0 - 999µm: 0.1µm, ≥1000µm: 1µm                                                                  |
| Accuracy              | 0-100µm: ±2.0µm, 101-1250µm≤2.5%                                                                |
| Data Memory           | 500 readings                                                                                    |
| Display               | Graphic LCD with backlight                                                                      |
| Power Supply          | 1.5V*3 (AAA alkaline batteries)                                                                 |
| Operating Temperature | 0-50°C                                                                                          |
| Dimension             | 150X50.5X29mm                                                                                   |
| Weight                | 110g                                                                                            |
| Certificate           | CE                                                                                              |
| Accessories           | Thickness gauge, Substrate, Certification foils set, User's manual, Manufacturer's certificate. |

## COATING THICKNESS GAUGE



|                       |                                                                                                                                           |                            |
|-----------------------|-------------------------------------------------------------------------------------------------------------------------------------------|----------------------------|
| Code                  | 1804-2010                                                                                                                                 | 1804-2011                  |
| Test method           | Magnetic induction                                                                                                                        |                            |
| Measuring Range       | 0-1500µm (0-60 mil)                                                                                                                       |                            |
| Resolution            | 0 - 999µm: 0.1µm, ≥1000µm: 1µm                                                                                                            |                            |
| Accuracy              | 0-100µm: ±1.5µm, 101-1500µm≤1.5%                                                                                                          |                            |
| Data Memory           | Up to 1500 readings                                                                                                                       |                            |
| Display               | Graphic LCD with backlight                                                                                                                |                            |
| Power Supply          | 1.5V*3 (AAA alkaline batteries)                                                                                                           |                            |
| Operating Temperature | 0-50°C                                                                                                                                    |                            |
| Dimension             | 88x67x30mm                                                                                                                                |                            |
| Weight                | 120g                                                                                                                                      |                            |
| Printer               | Without mini wireless printer                                                                                                             | With mini wireless printer |
| Accessories           | Thickness gauge, Substrate, Certification foils logger software, Sheath, set, Data cable, Data User's manual, Manufacturer's certificate. |                            |

## ULTRASONIC THICKNESS GAUGE



|                                |                                                                       |           |
|--------------------------------|-----------------------------------------------------------------------|-----------|
| Code                           | 1804-2015                                                             | 1804-2020 |
| Measuring range                | 1.2-225.0mm                                                           |           |
| Minimum display unit           | 0.1mm                                                                 | 0.01mm    |
| Display type                   | 4-digit                                                               |           |
| Sound velocity range           | 1000m/s-9999m/s                                                       |           |
| Measuring error                | ±(1%H+0.1) mm, H is the actual thickness of the object to be measured |           |
| Power supply                   | two AA alkaline cells 1.5V                                            |           |
| Power consumption              | working current is smaller than 20mA(3V)                              |           |
| Range of operating temperature | 0°C-40°C                                                              |           |
| Dimensions (mm)                | 124×68×27                                                             |           |
| Weight (g)                     | 120                                                                   |           |
| Standard Delivery              |                                                                       |           |
| Main unit                      | 1                                                                     |           |
| 5PΦ10 probe                    | 1                                                                     |           |
| Couplant                       | 1                                                                     |           |
| AAA battery                    | 1                                                                     |           |
| TIME certificate               | 1                                                                     |           |
| Warranty card                  | 1                                                                     |           |
| Instruction manual             | 1                                                                     |           |
| Optional Accessory             |                                                                       |           |
|                                | SP 10/90 probe (1.2-225.0mm)                                          |           |
|                                | SZ2.5P probe (3.0-300.0mm)                                            |           |
|                                | 7PΦ6 probe (0.75-60mm)                                                |           |



TABLE MAGNIFIER  
WITH ILLUMINATION



- Colour available: white
- Lens size: 5"(127mm)
- Diopter: 3diopter/5diopter/8diopter for choice
- Optional with switching power
- Life of the LED: 20000h
- Luminance: 1000Lux
- The LED magnifying lamp is portable and can be used whenever you want

|               |                    |
|---------------|--------------------|
| Code          | 1030-2005          |
| magnification | 2.25x              |
| Lens          | 30/50/80           |
| Lens size     | 5"(127mm)          |
| Illumination  | 60pcs LED, 12W     |
| Power         | 100-240V~; 50/60Hz |
| Product size  | 226x56x1185mm      |

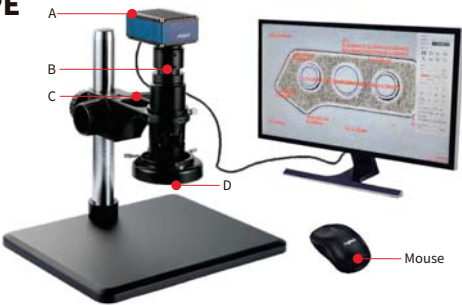
STEREO ZOOM MICROSCOPE



- Image always in focus throughout zoom range
- Stereo-tube can be rotated a full 360° for viewing at any angle
- Bilateral zoom control knob adds convenience and increases operator efficiency
- Diopter adjustment for both eyepieces

|                                    |                                                                                                                                                                                     |
|------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Code                               | 1804-7015                                                                                                                                                                           |
| Zoom scale of objective            | 0.7X—4.5X                                                                                                                                                                           |
| Eyeiece and view field diameter    | WF10X, 20mm                                                                                                                                                                         |
| Total magnification                | 7X—45X                                                                                                                                                                              |
| Working distance                   | 95mm                                                                                                                                                                                |
| Interpupillary adjustment distance | 55-75mm                                                                                                                                                                             |
| Round working stage diameter       | 50 mm                                                                                                                                                                               |
| Dioptic adjustment range           | ±5diopter                                                                                                                                                                           |
| Illumination                       | Input voltage :AC 110V or 220V<br>Oblique illumination:12V,10W halogen lamp (with cup)<br>Transmitted illumination:12V,10W halogen lamp<br>(alternative lamp:5 W fluorescent lamp ) |
| Output                             |                                                                                                                                                                                     |

DIGITAL MICROSCOPE



A:USB port, HDMI port, Power



C:Fine focus knob



B:Step-zoom lens 0.7X-4.5X



D:72 LED adjustable light sources



|                         |                                                                                                                                                                        |
|-------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Code                    | 1804-7013                                                                                                                                                              |
| Objective Specification | Objective magnification 0.7X-4.5X<br>CTV multiple 0.5X                                                                                                                 |
| Camera Specification    | Resolution 1920*1080<br>Dimension 80*60*42<br>Frame rate 60fps<br>Output HDMI<br>Function take picture/video, measuring, saving, sharpening, white balance, cross hair |
| Light Source            | 72 LED adjustable light sources                                                                                                                                        |
| Display screen          | 22"HDTV (OPTIONAL)                                                                                                                                                     |
| Frame                   | Focus range 42mm<br>Working distance 105mm<br>Center distance 140mm<br>Optical enlargement 0.35X-2.25X<br>Combined magnification 20X-136X                              |
| Field of view           | max 24mm*13mm min 3.5mm*1.9mm (Optional accessories to increase or decrease the field of view)                                                                         |
| Optional accessories    | 1804-7060 0.5xObjective Magnification 13.3X-85.5X<br>1804-7065 2xObjective Magnification 53.2X-342X                                                                    |

MAGNIFIER  
WITH INSIDE MEASURING SCALE

- High definition & high accuracy
- Can measure distance, angle, circle, etc
- Mainly used in the field of mechanical processing, circuit design, and printing plate mesh, etc



| Code          |             | 3026-0002     | 3026-0005     | 3026-0013      |
|---------------|-------------|---------------|---------------|----------------|
| Specification | 0-20*0.01mm | 1 Scale Chart | 9 Scale Chart | 12 Scale Chart |
| Magnification | 10x         | 10x           | 10x           | 10x            |

GLOSS METER

- Used for measuring the gloss of materials surfaces, such as coatings, printing inks, painting, wooden products, marble, granite, plastics, paper, etc.
- With Automatic measurement /Manual measurement/Single measurement/Average measurement modes
- Automatic Power Off



| Code                | 1030-5905         |
|---------------------|-------------------|
| Range               | 0-200Gu           |
| Incidence Angle     | 60 Degree         |
| Measuring Area      | 9*15mm            |
| Data Save           | 100 Groups        |
| Measuring Time      | 0.45              |
| Resolution          | 0.1Gu             |
| Repeatability       | 0.2Gu             |
| Display Error       | 1.0Gu             |
| Output              | Printer(Optional) |
| Dimension           | 122*34*60mm       |
| Working Temperature | 10-40°C           |

GLOSS METER PRO



- Used for measuring the gloss of materials surfaces, such as coatings, printing inks, painting, wooden products, marble, granite, plastics, paper, etc.
- With Automatic measurement /Manual measurement/Single measurement/Average measurement modes
- Automatic Power Off

| Code                      | 1030-5910                             |
|---------------------------|---------------------------------------|
| Incidence Angle           | 20/60/85 Degree                       |
| Range                     | 20°:0-2000Gu 60°:0-1000Gu 85°:0-160Gu |
| Measuring Area            | 20°:10*10mm 60°:9*15mm 85°:5*38mm     |
| Measuring Time            | 15                                    |
| Resolution                | 0-1000GU/0.1Gu 1000-2000Gu/1Gu        |
| Repeatability             | 0-100:0.2Gu >100:0.2%                 |
| Display Error             | 1.5Gu                                 |
| Zero Set Error            | 0.2Gu                                 |
| Power Supply              | 2 x AA Battery                        |
| Dimension                 | 159*49*72mm                           |
| WeightWorking Temperature | 500g 10-40°C                          |

HANDHELD ULTRA-HIGH  
PRECISION LASER DIAMETER GAUGE



- Can save 100000 pieces data
- Record with inspector & time
- Measure the outside diameter, ellipticity, etc
- High integration technology, faster measurement
- High definition touch screen, more convenient in operation
- Built-in Battery and Rechargeable with Type C USB

| Code       | 6719-0005    |
|------------|--------------|
| Range      | 0.02-2       |
| Resolution | 0.0001mm     |
| Accuracy   | ±0.0002mm    |
| Speed      | 10000times/s |
| Power      | 5V           |
| Dimension  | 225*50*35    |
| Weight     | 500g         |



DIGITAL SURFACE ROUGHNESS GAUGE



|                               |                                                        |
|-------------------------------|--------------------------------------------------------|
| Code                          | 1904-6302                                              |
| Testing parameters            | Ra,Rz,Rq,Rt,Rp,Rv,Rz3,R3y,RzJIS,<br>Rsk,Rku,Rsm,Rmr,Rc |
| Measuring range (um)          | Ra: 0.005-16.000<br>Rz: 0.02-160.00                    |
| Sample length (mm)            | 0.25, 0.80, 2.50                                       |
| Evaluation length(mm)         | (1-5)L                                                 |
| Maximum drive stroke          | 17.5mm/0.7inch                                         |
| Indication accuracy           | 0.001                                                  |
| Indication error              | ±(T-10)%                                               |
| Variability                   | <6%                                                    |
| Data Storage                  | 100 groups                                             |
| Power                         | Rechargeable li-battery                                |
| Working temperature           | -20°C~40°C                                             |
| Relative humidity             | <90%                                                   |
| Size                          | 158mmx63.5mmx46mm                                      |
| Weight of Host                | 0.3kg                                                  |
| Standard delivery             |                                                        |
| Host                          | 1                                                      |
| Standard Sensor               | 1                                                      |
| Calibration block and bracket | 1                                                      |
| Bracket                       | 1                                                      |
| Charger                       | 1                                                      |
| Adjustable support            | 1                                                      |
| Operating manual              | 1                                                      |
| Warranty card                 | 1                                                      |
| Certificate of approval       | 1                                                      |
| Instrument case               | 1                                                      |

- Optional bluetooth function
- Can be connected to a computer and printer
- Continuous working time: more than 20 hours
- Plastic shell, portable, high reliability
- Optional different sensor, measuring platform, mini printer, extension rod and other accessories
- 128 x 64 OLED dot matrix display, digital / graphic display, highlight no perspective
- Intuitive and rich display information, can display all the parameters and graphics
- Compatible with ISO, DIN, ANSI, JIS national standards
- Residual quantity icon, prompting the user to charge
- Using DSP chip to control and data processing, high speed, low power consumption
- Real time clock settings and display, convenient data recording and storage
- With automatic dormancy, automatic shutdown and power saving function
- Reliable control motor to go dead circuit and software design
- Electro mechanical integration design, small volume, light weight, easy to use
- Measurement information display, menu prompt information, false information and switch machine and other tips that information

PORTABLE SURFACE ROUGHNESS TESTER



|                                |                                                                                                                                              |
|--------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------|
| Code                           | 6710-0005                                                                                                                                    |
| Measuring Range (X)            | 30mm                                                                                                                                         |
| Measuring Range (Z)            | ±500um                                                                                                                                       |
| Resolution                     | 0.0016um/±50um-0.016um/±500um                                                                                                                |
| Sensor Straightness            | 1um/200mm                                                                                                                                    |
| Test principle                 | Inductive Type                                                                                                                               |
| Roughness Parameter            | Ra7S, Rq, Rp, Rv, Rc, Rt, S, Rz3, PPI, Ra, Rsk, Rku, Ry, Sm, RDa,<br>Rdq, Rz, Pc, RAa, Rdq, Ir, RSm, Rz94, RPl, RS, Rz1, Rpm, HSC            |
| Waviness Parameters            | WCA, WCC-q, WCC-p, WCC-v, WCC-m, WCC-Sm, WCA, WC-q,<br>WCA-p, WC-v, WCM, WC-Sm, WC-t, Wa, Wq, Wsk, Wku, Wp, Wv,<br>Wz, Wc, Wt, WSm, Wdq, WPC |
| Primary Profile Parameters     | Rsk, Rku, Rmax, Sm, Da, Dq, Rz, la, laq, Ir, TILT A, AVH, Hmax,<br>Hmin, AREA, Rz, J, Pa, Pq, Pku, Pp, Pv, Pc, I, Pt, PSm, Pdq,<br>PPc, Pc   |
| Material Ratio Curve Parameter | Rk, Rpk, Rvk, Mr1, Mr2, V0, K, A1, A2                                                                                                        |
| Graph Parameter                | NCRX, AR, R, Rz, NR, CPM, SR, SAR, AW, W, Wx, Wte, NW, SW,<br>SAW, Rke, Rpk, Rvke, Mr1, Mr2, V0, K                                           |
| Measuring Force                | 0.4-0.75mN                                                                                                                                   |
| Probe                          | 5umR Diamond 90°                                                                                                                             |
| Measuring Speed                | 0.05mm/s 0.10mm/s 0.50mm/s 1.00mm/s 2.00mm/s                                                                                                 |
| Returning Speed                | 0.05mm/s 0.10mm/s 0.50mm/s 1.00mm/s 2.00mm/s                                                                                                 |
| Screen                         | Not included                                                                                                                                 |
| Data Output                    | TF Card/ USB Pen Drive/Printer                                                                                                               |
| Power Supplier                 | Built-in Battery(Rechargeable)                                                                                                               |
| Dimension                      | 392*80*180mm 162*245*68mm                                                                                                                    |
| Power Supplier                 | Built-in Battery(Rechargeable)                                                                                                               |
| Standard Accessory             | Main Body * 1<br>Sensor * 1<br>Probe * 1<br>Charger * 1<br>Calibration Block * 1                                                             |

- With skidless probe
- Large range and various parameters in measurement
- High precision inductive sensor, fast measurement and high accuracy
- Can measure roughness parameter, waviness parameters, primary profile parameters, ratio curve parameter, graph parameter
- Different measurements requirements such as r-angle, deep groove, curved surface, deep hole, etc with one sensor only
- The sensor and the main body connected by a lifting device, the height of the sensor is adjustable without the stand

SURFACE ROUGHNESS GAUGE SET



- All standard roughness gauge included together with comparison chart
- Easy to checking all surface roughness.
- Set include gauge as below:  
consist of 30 specimens .size: 7/8x3/8",including:  
2 specimens checking Flat lapping 2 and 4 μ" AA  
4 specimens checking External grinding 8,16,32 and 63 μ" AA  
6 specimens checking surface grinding 2,4,8,16,32 and 63 μ" AA  
6 specimens Turing 16,32,63,125,250 and 500 μ" AA  
6 specimens checking Vernical milling 16,32,63,125,250 and 500 μ" AA  
6 specimens checking Horizontal milling 16,32,63,125,250 and 500 μ" AA

| Code      | Pieces |
|-----------|--------|
| 1804-6310 | 30     |

SURFACE PROFILE GAUGE



- Data output
- Large screen for free-error reading
- Easy to use, only requires a small area for measurement
- Measure surface contours and pits
- With calibration block for zero setting
- Accurately and quickly measure the surface roughness, to evaluate if it meets the painting requirements

|          |             |
|----------|-------------|
| Code     | 1804-6320   |
| Range    | 0-2000μm    |
| Accuracy | ±2μm        |
| Reading  | Metric/Inch |
| Power    |             |

AIR BORE GAUGE



- Used for measuring the Thickness,ID,OD,Roundness,Parallelism,Verticality, Concentricity,Radial runout,etc.
- High Accuracy
- LED Screen with Tri-Color
- LCD Screen with Back Light

|                     |                                                         |
|---------------------|---------------------------------------------------------|
| Code                | 6712-0005                                               |
| Measuring Range     | 20/50/100                                               |
| Resolution          | 0.2μm/0.5μm/1μm                                         |
| Resolution          | 0.1μm/0.5μm/1μm                                         |
| Display             | 3 Color LED Bargraph Display LCD Screen(With Backlight) |
| Indication Error    | 2% of Measuring Range                                   |
| Power               | AC220V±10%                                              |
| Air Pressure Change | ≤1% (0.4-0.8Mpa)                                        |
| Dimension           | 50*500*165mm                                            |
| Weight              | 4.5kg                                                   |

|                      |              |                            |            |                                     |                                    |
|----------------------|--------------|----------------------------|------------|-------------------------------------|------------------------------------|
| ACCESSORIES OPTIONAL |              |                            |            |                                     |                                    |
| Code                 | 6712-1005    | 6712-1010                  | 6712-1015  | 6712-2005-□                         | 6712-3005-□                        |
| Item                 | SPC Software | RS232 Cable or RS485 Cable | Air Filter | Outside Diameter Probe (Customized) | Inside Diameter Probe (Customized) |
| Specification        | /            | /                          | /          | 3-200mm                             | 4-120mm                            |

GAUSSMETER



- Easy to carry, wide range
- Push-button automatic zeroing
- Easy to operate, clear LCD display
- With measurement value/peak hold, MT/GS unit conversion
- 200MT/2000MT range conversion, etc

|                         |                                                                                                                       |                                                             |
|-------------------------|-----------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------|
| Code                    | 6714-0015                                                                                                             | 6714-0020                                                   |
| Range                   | 0mT-200mT-2000mT                                                                                                      |                                                             |
| Frequency bandwidth     | 10Hz-200Hz                                                                                                            | 1Hz-400Hz                                                   |
| Accuracy                | DC,2%/AC,2%                                                                                                           | DC,1%/AC,1%                                                 |
| Resolution              | DC×1:0.00mT-200.00mT 0.01mT<br>AC×1:0.00mT-200.00mT 0.01mT                                                            | TDC×10:0.0mT-2000.00mT 0.1mT<br>AC×10:0.0mT-2000.00mT 0.1mT |
| Measured magnetic field | DC magnetic field (static magnetic field)<br>AC magnetic field (dynamic magnetic field)                               |                                                             |
| Ambient temperature     | 5°C-40°C                                                                                                              |                                                             |
| Relative Humidity       | 20%-80% (non-condensing)                                                                                              |                                                             |
| Power supply            | 4*AAA 1.5V battery or external power supply                                                                           |                                                             |
| Display mode            | the measurement of the 3 1/2 LCD has a positive, negative, positive represents "N" pole, negative represents "S" pole |                                                             |
| Dimensions              | 140mm (L) X73mm (W) X 30mm (H)                                                                                        |                                                             |
| Weight                  | 180g                                                                                                                  |                                                             |
| Remarks                 | mT=milli tesla, 1mT = 10Gs Gaussian                                                                                   |                                                             |

|                    |       |
|--------------------|-------|
| STANDARD DELIVERY  |       |
| Main unit          | 1pc   |
| DC Adapter         | 1pc   |
| Metal Probe        | 1pc   |
| 4*AAA 1.5V battery | 1pack |
| User manual        |       |

2 IN 1 RADIAL RUNOUT AND HEIGHT TESTER



- Radial runout is critical to the service life of high-speed rotating cutting tools
- This Radial Runout Tester is specially designed to detect radial runout of cutting tools after clamping. And it also can check the height of cutting tools with a Digital Height Gauge(Optional)
- The principle axis structure of this tester adopts a precision ball bearing rotary shaft system, fully ensure the principle axis runout of 0.002mm at the proximal end and 0.003mm at the far end (at 300mm)
- The BT40 and BT50 bases are made of granite material and integrated, with smaller deformation and more stable performance than traditional castings
- The BT30 base is made of high-strength aviation aluminum alloy, CNC processing on a whole piece material, more stable in performance compared to castings
- The base equipped with 6 assembly holes M6, M8, M10, suitable for more assembly parts

| Code                                 | 5720-0025                              | 7801-0005                              | 7801-0010                              |
|--------------------------------------|----------------------------------------|----------------------------------------|----------------------------------------|
| Specification                        | For tool holder Shank ISO30/BT30/BBT30 | For tool holder Shank ISO40/BT40/BBT40 | For tool holder Shank ISO50/BT50/BBT50 |
| Granite Plate Base                   | ISO30/BT30/BBT30 included              | ISO40/BT40/BBT40 included              | ISO50/BT50/BBT50 included              |
| Working Tale size                    | 230*140mm                              | 350*200mm                              |                                        |
| Flexible Rod Code:1804-2308          | 290mm Length                           | Include                                | Include                                |
| Dial Test Indicator Code:5223-3105-A | 0.8*0.01mm Ruby point                  | Include                                | Include                                |
| Height Gauge Code:3130-8119          | 300mm*0.01mm                           | Optional                               | Optional                               |
| Dial Test Indicator Code:5221-0105-A | 0.02*0.002mm Ruby point                | Optional                               | Optional                               |

Unit:mm

NON-CONTACT DIGITAL TACHOMETER



- The streamlined appearance design, the body and the palm perfectly match,to ensure more convenient and comfortable use
- Wide application range, large measuring range, high resolution and small error
- Large screen display, clear reading, no parallax
- Automatically memorize the maximum, minimum, final value and 500 instantaneous values
- When the battery voltage is lower than the specified value, it will automatically indicate

|                       |                                                   |
|-----------------------|---------------------------------------------------|
| Code                  | 1030-2051                                         |
| Measuring Range       | 2.5~99999RPM                                      |
| Resolution            | 0.1 RPM (0.5~999.9 RPM)<br>1 RPM (above 1000 RPM) |
| Measuring distance    | 50~500mm                                          |
| Product Size          | 160mm×74mm×37mm                                   |
| Product Weight        | 180g (including battery)                          |
| Range Selection       | Automatic switching                               |
| Accuracy              | ±(0.05%+1digit)                                   |
| Power supply          | 3×1.5V AA UM-4 batteries                          |
| Operating Temperature | 0~40℃                                             |

CONTACT DIGITAL TACHOMETER



- The tachometer uses microcomputer (CPU) technique; anti-jamming technique for contact measurement of rotation speed (RPM), surface speed (m/min),and contact length (m)
- Wide measuring range and high resolution
- Large screen LCD display provides clear reading
- White back light guarantee reading in any light environment
- Smooth housing design, comfortable to hold and use
- Surface speed wheel with groove to test surface speed or length of wire, cable, or rope conveniently
- Low battery voltage indication

|                 |                                                                         |
|-----------------|-------------------------------------------------------------------------|
| Code            | 1030-2056                                                               |
| Measuring Range | 0.5~19999 RPM;0.05~1999.9 m/min;0.05~99999 m                            |
| Resolution      | Rotation Speed: 0.1 RPM (0.5~999.9RPM)                                  |
|                 | 1 RPM (above 1000RPM)                                                   |
|                 | Surface Speed: 0.01m/min (0.05~99.99m/min)<br>0.1m/min (above 100m/min) |
| Contact Length  | 0.02m (0.05~99999m)                                                     |
| Product Size    | 170mm×70mm×35mm                                                         |
| Accuracy        | ±(0.05%+1digital)                                                       |
| Sampling Time   | 0.8second (over 60RPM)                                                  |
| Power supply    | 3x1.5V AA battery                                                       |
| Time Base       | 6MHz Quartz crystal                                                     |

BATTERY ACID AND ENGINE COOLANT REFRACTOMETER



- The refractometer measures the freeze point of automotive coolants (propylene glycol and ethylene glycol) from 32°F to -60°F
- It also indicates the specific gravity of battery acid and provides a quick reference of battery charge condition
- It only requires a sample of 2 or 3 drops for fast and accurate readings
- Automatic Temperature Compensation provides repeatable results
- Comes complete with storage case and a screwdriver and vial of distilled water used for calibration

| Code       | 1030-2065                                                                                                                | 1030-0115          | 1030-0120               | 1030-0125             |
|------------|--------------------------------------------------------------------------------------------------------------------------|--------------------|-------------------------|-----------------------|
| Range      | Ethylene Glycol: -50°C-0°C<br>Propylene Glycol: -50°C-0°C<br>Cleaning Fluids: -40°C-0°C<br>Battery Fluids: 1.100-1.400sg | Salinity:<br>0-28% | Vol:0-25%<br>Brix:0-40% | Oil:<br>1.435-1.520Nd |
| Resolution | Ethylene Glycol: 5°C<br>Propylene Glycol: 5°C<br>Cleaning Fluids: 5°C<br>Battery Fluids: 0.01sg                          | 0.20%              | Vol:0.2%<br>Brix:0.2%   | 0.001Nd               |

SPARK TESTER INDICATOR



- Use in automotive repair & maintenance industrial
- Tests spark plugs, spark plug wires and coils without puncturing the wire
- Place the grooved end of the tool over the plug wire when the engine running, the bulb will flash to indicate spark

| Code         | 1032-0015 |
|--------------|-----------|
| Display Type | LED       |
| Material     | ABS       |
| Battery      | Lr44      |

CAR PAINTING THICKNESS GAUGE



- Main used in Automotive industrial
- Not-destructively measurement
- With integrated test sensor for fast response
- To measure the thickness of non-magnetic coatings (including paint, enamel, plastic, epoxy, plating, galvanizing, etc) on steel or iron
- LEDs shows test result

| Code                  | 1030-2070                                       |
|-----------------------|-------------------------------------------------|
| Max. Thickness        | 1.8mm                                           |
| Accuracy              | ±0.3mm                                          |
| Dimensions            | 68x40x16mm                                      |
| Operation Environment | Temperature: 0 - 40 °C Relative humidity: < 80% |
| Battery               | Cr2032                                          |
| Weight                | 25g                                             |

ELECTRONIC BRAKE FLUID TESTER



- Small size easy to use
- Measuring result
- Green : no water
- Yellow: less than 1% of water
- Yellow/yellow: approximately 2% of water
- Yellow/yellow/red: approximately 3% of water(the brake fluid should be changed)
- Yellow/yellow/red/red: at least 4% of water,(the brake fluid must be changed urgently)
- It can be used to test the brake fluid quality and indicates on five leds in terms of percent of water in the brake fluid, remind you to change the brake fluid when necessary to avoid traffic accident
- 4.1 x aaa/1.5v battery

| Code | 1032-0070 |
|------|-----------|
|------|-----------|

DIGITAL TYRE PRESSURE GAUGE



- Pressure range:0-100 PSI
- Accuracy: ±1%
- Multi-scales: PSI,Bar,Kgf/cm²,Kpa
- Key:ON/OFF,Unit conversion
- Auto power off
- Long-life 3 V lithium coin cell



| Code | 1030-3030 |
|------|-----------|
|------|-----------|



PORTABLE TESTING INSTRUMENTS BORN IN ITALY, RAISED BY THE WORLD

MULTIFUNCTION VIDEO SCOPE



This Multifunction video inspection has been designed as a user friendly and economical way of solving hidden problems and increasing productivity (eg. Inspect vent pipe and system of air conditioner, machine equipment, engine and so on) It is widely applied for maintenance of the industry,the building,the aviation, the vehicles also easy to inspect the pick up samll objects,record image

|                                  |                                                                                          |           |                                 |
|----------------------------------|------------------------------------------------------------------------------------------|-----------|---------------------------------|
| Code                             | 1030-2035                                                                                | 1030-2040 | 1030-2045                       |
| Outer diameter of camera head    | 5.5mm                                                                                    | 9mm       | 12mm                            |
| Focal length                     | 10mm                                                                                     | 50mm      | 50mm and 30cm (for your choice) |
| Viewable angle                   | 60°                                                                                      |           |                                 |
| Probe length for choice          | 1m/2m/3m or customized (max length 15m including extension)                              |           |                                 |
| Extension for choice             | (1030-2035 Max length 15m including extension)                                           |           |                                 |
| Image display                    | 3.5" TFT/LCD                                                                             |           |                                 |
| Image storage media              | Micro SD card (Support up to 16G)                                                        |           |                                 |
| Image resolution                 | 640×480 pixels                                                                           |           |                                 |
| LCD Resolution                   | 320×240 pixels                                                                           |           |                                 |
| Image zooming                    | 4 times                                                                                  |           |                                 |
| TV output format                 | NTSC/PAL                                                                                 |           |                                 |
| Wireless transmission frequency  | 2414MHz, 2432MHz, 2450MHz, 2468MHz                                                       |           |                                 |
| Wireless transmission distance   | Up to 10M; If no obstacles, will more than 10M                                           |           |                                 |
| Attachment                       | Micro SD card, one into two cable, Micro SD to SD transition pocket, TV cable, USB cable |           |                                 |
| Probe length                     | 100cm or your required length                                                            |           |                                 |
| Probe and camera head protection | IP67                                                                                     |           |                                 |

- 3.5" color LCD with high visibility
- Flexible probe with memory
- Fully adjustable LED lights
- With function of taking photos,video,rotation,partial zoom,
- TF memory card and USB interface
- The monitor can apart from the grip to transmit image wirelessly
- Four wireless frequency for your choice

HD INSPECTION CAMERA Code: 1030-2125

180°

USB

RESOLUTION 1280x720 (pixel)

WATERPROOF

LED LIGHT

ZOOM

IMMAGE SENSOR

LCD SCREEN

720P HD

IP67

1/9 inch HD CMOS image sensor made in USA. image sensor is the soul to a borescope. We believe US sensor make it better.

4.3" IPS LCD Screen gives you a wide view crystal clear display. You can see more details in a more convenient way.

180° image rotation and mirror flip feature

Large 4.3" (109 mm) color TFT LCD screen

9 mm camera probe with a 2.9 ft (88cm) flexible goose-neck cable

720P HD Camera

Photo Capture

9mm

Specs

| Camera head size  | Image sensor  | Camera Resolution | Lcd display size  | Lcd resolution           | Camera lens (field of view) | Camera depth of field | Camera probe length | Camera waterproof |
|-------------------|---------------|-------------------|-------------------|--------------------------|-----------------------------|-----------------------|---------------------|-------------------|
| Insert            | 1/9" CMOS     | 1280x720px        | 4.3 inch          | 480x272px                | 63 degree                   | 1.2-3.5m              | 2.9ft               | Yes               |
| Power             | Working: 1.5V | Standby: 0.5V     | Recording: medium | 168 image storage format | Image capture               | Image flip/rotate     | Interface           |                   |
| 4 pcs dry battery | 2.5-3.0 hours | 4 pcs led         | Internal memory   | jpg, 1280x720            | Real picture only           | Yes                   | USB                 |                   |

Drop Protection

Long-Lasting Battery

FC RoHS

PORTABLE TESTING INSTRUMENTS BORN IN ITALY, RAISED BY THE WORLD

INFRARED THERMOMETER



- It is widely applied for measuring temperature in the automobile, the electric power, the chemical industry, the food processing and so on
- Measure the surface temperature at a safe distance
- Auto power off

|                  |                         |
|------------------|-------------------------|
| Code             | 1030-2001               |
| Range            | -20°C~320(°C-4°F~608)°F |
| Pixel            | 8:1 optical resolution  |
| Temperature Unit | °C or °F selectable     |
| Accuracy         | ±0.40F(20C)             |

INFRARED THERMOMETER WITH LARGE RANGE



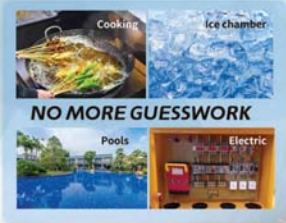
- Easy to read digital LCD display with blue backlight
- During the measurement, the max. reading will be displayed beside the "MAX" icon
- LASER EMITTER: Class IIIa Laser ( American Standard ), or Class II Laser ( European standard )
- Laser pointer

|                     |                           |
|---------------------|---------------------------|
| Code                | 1030-2003                 |
| Range               | -40°C~580(°C-40°F~1076)°F |
| Accuracy            | >0°C: ±2°C    ≤0°C: ±3°C  |
| Display resolution  | 0.1                       |
| Optical ratio (D:S) | 12:1                      |
| Spectral Response   | 8~14µm                    |
| Response Time       | 500mSec, 95% response     |
| Repetition          | 1% of reading or 1°C      |

IR THERMOMETER WITH WARNING

Model: 1030-2120

Wide Application



**12:1 Distance to spot ration**  
Unit: mm

|                 |                             |
|-----------------|-----------------------------|
| Response Time   | < 0.8s                      |
| High Precise    | ± 2% or ± 2°C               |
| IRT Temperature | -50°C~ 550°C (-58°F~1022°F) |



- Adjustable Emissivity (0.10-1.00)
- Low Battery Indicator
- C/ F Selection
- High and Low Temperature Alarm
- Data Hold Function
- Adjustable Emissivity (0.10-1.00)
- Auto shut-off
- Self-calibration
- Positioning Laser Conversion



Temprature Warning

# IR THERMOMETER WITH MILDEW ALARM

WITH TEMPERATURE READING  
Model: 1030-2115

Humidity Measure Window

Indicator Light

Emissivity Rate

Ambient Temperature

Ambient Humidity

Dew Point Temperature

Object Temperature

Yellow Indicator Light  
Free of Mildew

Red Indicator Light  
Suffered Mildew

WOOD, HUMIDITY AND CONSTRUCTION MOISTURE

UV LIGHT  
LEAK DETECTION ON  
FLUORESCENT (OPTIONAL)

MULTILASER DOTS  
SEE MEASURING ZONE EXACTLY, EASY TO FIND  
(OPTIONAL)

Ambient Humidity

Ambient Temperature

Mildew Alarm Mode

|                        |                                                                                          |
|------------------------|------------------------------------------------------------------------------------------|
| Response Time          | <0.9S                                                                                    |
| Emissivity             | Adjustable (0.1 to 1.0)                                                                  |
| Distance to Spot Ratio | 12:1                                                                                     |
| Temperature Range      | -50°C/-60°F (-50°F/-50°C) ±1.5°C/±1.5°F (-50°C/-50°F) ±1.5°C/±1.5°F (-50°C/-50°F)        |
| Ambient Temperature    | ±1.0°C/2°F (0-40°C/10-111°F) ±1.0°C/2°F (10-40°C/50-104°F) ±1.0°C/2°F (10-40°C/50-104°F) |
| Ambient Humidity       | ±4.0%RH (20-80%) ±5.0%RH (20%-100%)                                                      |
| Dew point temperature  | -10-50°C (14°F-122°F) ±1.5°C/±1.5°F                                                      |
| Laser target pointer   | Multi dots Targeting                                                                     |
| Color display LED      | Color display                                                                            |
| Storage Temperature    | -20-50 °C                                                                                |
| Power /Power Life      | 9h/About 10 hours                                                                        |

## INFRARED THERMAL IMAGER



- This instrument is a handheld thermal imager, which is powered by four 1.5V AA (or equivalent) batteries
- This instrument image display resolution is 320 x 240 pixels. The temperature of the center point of the displayed measured surface and the highest and lowest temperature measured surface and the highest and lowest temperature of the displayed measured surface can be modes: infrared image, visible image, fusion image
- Captured images can be saved in the TF card, and you can view them through menu and can edit the image files on a computer via USB port

|                          |                                                                |
|--------------------------|----------------------------------------------------------------|
| Code                     | 1030-2002                                                      |
| Range                    | -40~+400°C                                                     |
| Image display resolution | 320 x 240 pixels                                               |
| Display                  | 2.4" (495mmx377mm)                                             |
| Color Palettes           | Iron, Rainbow, White Hot, Red Hot, Black Hot, Lava, Rainbow HC |
| Detector resolution      | 120x90                                                         |
| Infrared Spectral Band   | 8um-14um                                                       |
| Emissivity correction    | 0.95(default)/0.01-0.99                                        |
| Response time            | <500ms                                                         |
| Built-in Digital Camera  | 640*480                                                        |
| Storage medium           | TF Card, 16GB                                                  |
| Power supply             | Li-ion 3.7V/2600mAh                                            |

## PORTABLE TESTING INSTRUMENTS

## DIGITAL AC CLAMP METER

To measure AC current, AC/DC voltage, and Resistance, Continuity tests of diode and circuit. Max voltage between the voltage input end and the earth is CATIII600V.



- Auto/manual ranging
- Data hold
- Display backlight
- Low battery display
- Auto power off
- Safety rating: CAT III 600V

| SPECIFICATION |              |                           |                             |                                      |
|---------------|--------------|---------------------------|-----------------------------|--------------------------------------|
| Code          | Function     | Range                     | Resolution                  | Accuracy                             |
| 1030-2095     | DC-Voltage   | 200mV/2V/20V/200V<br>600V | 0.1mV/1mV/10mV/0.1V<br>1V   | ±(0.8%rdg+2dgt)<br>±(1.0%rdg+2dgt)   |
|               | AC-Voltage   | 2V/20V<br>200V/600V       | 1mV/10mV<br>0.1V/1V         | ±(1.0%rdg+5dgt)<br>±(1.2%rdg+5dgt)   |
|               | AC-Current   | 2A/20A<br>200A/600A       | 0.001A/0.01A<br>0.1A/1A     | ±(3.0%rdg+15dgt)<br>±(3.0%rdg+10dgt) |
|               | Resistance   | 200Ω/2KΩ/20KΩ/200KΩ/2MΩ   | 0.1Ω/0.001KΩ/0.01KΩ/0.001MΩ | ±(1.2%rdg+2dgt)<br>±(2.0%rdg+5dgt)   |
|               | Diode        | open circuit voltage 1.5V |                             |                                      |
|               | Continuity   | < 60Ω                     |                             |                                      |
|               | buzzer       |                           |                             |                                      |
|               | Power supply | 3 x 1.5V AAA batteries    |                             |                                      |
|               |              |                           |                             |                                      |
|               |              |                           |                             |                                      |

| ACCESSORIES  |      |
|--------------|------|
| Main unit    | 1pc  |
| Probe        | 2pcs |
| 1.5V battery | 3pcs |
| User Manual  | 1pc  |



DIGITAL MULTIMETER

To measure DC Voltage,AC Voltage,DC Current, Resistance. Continuity tests of diode and circuit. 2000 counts display. With data hold, back light.

- Data hold
- Display backlight
- Low battery display
- Safety rating: CAT III 600V



| SPECIFICATION |                   |                                      |                     |                   |
|---------------|-------------------|--------------------------------------|---------------------|-------------------|
| Code          | Function          | Range                                | Resolution          | Accuracy          |
|               | DC-Voltage        | 200mV/2V/20V/200V                    | 100µV/1mV/10mV/100V | ± (0.5%rdg+2dgt)  |
|               | 600V              | 1V                                   | ± (0.8%rdg+2dgt)    |                   |
|               | AC-Voltage        | 200V/600V                            | 100mV/1V            | ± (1.2%rdg+10dgt) |
|               | 200µA/2mA/20mA    | 0.1µA/1µA/10µA                       | ± (1%rdg+2dgt)      |                   |
| 1030-2100     | DC-Current        | 200mA                                | 100µA               | ± (1.5%rdg+2dgt)  |
|               | 10A               | 10mA                                 | ± (3.0%rdg+2dgt)    |                   |
|               | Resistance        | 200Ω/2KΩ/20KΩ                        | 0.1Ω/1Ω/10Ω/100Ω    | ± (0.8%rdg+3dgt)  |
|               | 200KΩ/2MΩ         |                                      |                     |                   |
|               | Continuity buzzer | about less than70±30Ω                |                     |                   |
|               | Diode             | Open circuit voltage 3.2V            |                     |                   |
|               | Power supply      | 9V battery, NEDA 1604 6F22 006P type |                     |                   |

ACCESSORIES

|             |      |
|-------------|------|
| Main unit   | 1pc  |
| Probe       | 2pcs |
| 9V battery  | 1pc  |
| User Manual | 1pc  |

DIGITAL SOUND LEVEL METER



- Altitude up to 2000 meters
- Relative humidity 75% max
- Operation temperature from 0 - 40°C
- Operation Environment: 0 - 40°C (32 - 104°F) 10 - 75%RH
- Storage Environment: -10 - 50°C (-14 - 122°F) 10 - 90%RH

|                     |                                        |
|---------------------|----------------------------------------|
| Code                | 1030-2061                              |
| Measuring Range     | (28)30dB -130dB                        |
| Resolution          | 0.1dB                                  |
| Accuracy            | ±1.5dB(reference conditions 94dB@1kHz) |
| Response time       | FAST 125ms / SLOW 1sec                 |
| Display Update      | 2 times / second                       |
| Frequency Range     | 31.5Hz - 8KHz                          |
| Frequency Weighting | A / C                                  |
| Battery Life        | Approximately 110 hours                |
| Power supply        | One 9V battery                         |
| Product Size        | 185(L)x65(W)x35(H)mm                   |
| Product Weight      | 150g (including battery)               |
| Accessories         | 9V battery, instruction manual         |

CONCRETE TEST HAMMER



- Non-destructive measurement
- Fast Measurement and low cost
- Used to measure the strength of building components, bridges and various concrete components (such as slabs, beams, columns, bridges, etc.)

|                                       |                         |
|---------------------------------------|-------------------------|
| Code                                  | 1032-0030               |
| Range                                 | 10-70MPa                |
| Impact Energy                         | 2.207±0.1J (0.225kgf.m) |
| Length of Spring Stretch              | 75±0.3mm                |
| The static friction of pointer slider | 0.65±0.15N              |
| Radius of spherical tip               | 25mm±1mm                |
| Average rebound values on steel anvil | 80±2                    |
| Dimension                             | φ54*280mm               |
| Weight                                | 1kg                     |

VIBRATION TESTER



- Automatic power off
- Lightweight & small Size for operation
- Headphones is optional for detection
- USB & RS-232 for data output
- Bluetooth data output (Optional)
- Used to measure mechanical vibrations to detect imbalances and deviations of machines,providing data for quality control, operating time management and equipment maintenance
- High-performance accelerometers for precise measurements
- Wide frequency range,can reach 10Hz-10KHz in acceleration mode
- Equipped with AC signal output for easy detection and record

|                       |                                                                                                           |
|-----------------------|-----------------------------------------------------------------------------------------------------------|
| Code                  | 1032-0005                                                                                                 |
| Measuring Parameters  | Acceleration Speed Displacement                                                                           |
| Range                 | Acceleration:0.1~400m/s² Peak<br>Speed:0.01~400mm/s Effective Value<br>Displacement:0.001~4.0mm Peak-Peak |
| Frequency Range       | Acceleration:10Hz-10kHz<br>Speed:10Hz-1kHz<br>Displacement:10Hz-1kHz                                      |
| Accuracy              | ± (5%rn+2)                                                                                                |
| Reading               | Metric/Inch                                                                                               |
| Display               | LCD Display                                                                                               |
| Power Supply          | 4 x AAA Battery                                                                                           |
| Operation Temperature | 0-50°C                                                                                                    |
| Operation Humidity    | <90%RH                                                                                                    |
| Data Output           | USB,RS-232                                                                                                |
| Dimension             | 124*62*30                                                                                                 |
| Weight                | 120g(Excluded Battery)                                                                                    |

## PORTABLE TESTING INSTRUMENTS BORN IN ITALY, RAISED BY THE WORLD

### VIBRATION PEN



- Data save
- Automatic power off
- Single key control, easy to operate
- Low energy consumption
- Automatic switching between three measuring parameters
- Rapid inspection of equipment such as motors, fans, pumps, compressors, machine tools, etc., to prevent mechanical failures to equipments

|                       |                                                                                                                          |
|-----------------------|--------------------------------------------------------------------------------------------------------------------------|
| Code                  | 1030-2075                                                                                                                |
| Measuring Parameters  | Acceleration Speed Displacement                                                                                          |
| Range                 | Acceleration: 0.01mm/s <sup>2</sup> -199.9mm/s <sup>2</sup><br>Speed: 0.1mm/s-199.9mm/s<br>Displacement: 0.001mm-1.999mm |
| Frequency             | Acceleration: 10Hz-1kHz<br>Speed: 10Hz-1kHz<br>Displacement: 10Hz-500Hz                                                  |
| Display               | LCD Display                                                                                                              |
| Power Supply          | 2 * Lr44                                                                                                                 |
| Operation Temperature | 0-40°C                                                                                                                   |
| Operation Humidity    | <85%RH                                                                                                                   |

### GAS LEAK DETECTOR

- Auto Off
- With LCD display
- Easy to use and operation
- With visible & audible alarm
- Can detect a large number of flammable gases, like methane, natural gas, propane, butane, ethane, coal gas, gas oil, gasoline, etc
- Detect gas range between 50-10,000 parts per million (ppm)
- High precision gas sensor for fast response and accurate & reliable detection

|          |                   |
|----------|-------------------|
| Code     | 1032-0010         |
| Range    | 50-10000PPM       |
| Alarm    | Visible & Audible |
| Auto Off | Yes               |
| Material | ABS               |
| Power    | AAA battery       |

### MAGNETIC GAS LEVEL INDICATOR

- Mainly used for outdoor travel, camping, barbecues, boating, hiking, etc.
- The indicator color scale will changes according to gas level
- Small size and lightweight, for take & store and take
- Made of quality PET plastic, sturdy and solid, firm and strong, for long time use
- Easy to Use: place the test strips on the gas hydraulic tank and wait about 10 minutes, then the value will be displayed
- Safely and accurately measure the gas capacity

|          |                             |
|----------|-----------------------------|
| Code     | 1032-0025                   |
| Material | PET Plastic + Soft Magnetic |
| Quantity | 1pc                         |
| Size     | 100*60*10mm                 |

## CONBUSTIBLE GAS LEAK DETECTOR

Code: 1030-2130



### Audio-Visible Buzzer Alarm

Can detect many kinds of flammable gas

|                                           |                                             |                                                   |
|-------------------------------------------|---------------------------------------------|---------------------------------------------------|
| CH <sub>4</sub><br>Acetylene              | CO<br>Carbon monoxide                       | Gasoline (oil) control                            |
| CH <sub>3</sub> C <sub>2</sub><br>Propane | C <sub>2</sub> H <sub>6</sub><br>butane     | C <sub>2</sub> H <sub>4</sub> O<br>Ethylene Oxide |
| C <sub>3</sub> H <sub>8</sub><br>Hexane   | C <sub>3</sub> H <sub>10</sub><br>Isobutane | C <sub>2</sub> H <sub>2</sub><br>Acetylene        |

### Wide Application



It is widely used in: gas pipeline detection, household gas prevention, metallurgy, tunnel and mine operation, oil and gas mining, dangerous goods storage warehouse, etc

### Combustible Gas Detection

Launch Prepare <30s  
Quick Response <5s



- Detection range: 50-10000PPM (based on methane)
- Sensitivity: 2 level
- Alarm: sound
- Response time: Instantaneous
- Operating temperature: 14°F to 122°F

CE FCC RoHS

GAS INDICATOR

BELT TENSION METER-SONIC TYPE



- Automatic Power off
- Can save 20 set belt parameters
- Small size for handy use and tight spaces
- Direct result, more convenient than mechanical version
- Used to measure the tension of the belt during impact or rapid movement by sonic

|                       |                               |
|-----------------------|-------------------------------|
| Code                  | 1032-0205                     |
| Range                 | 10-680Hz                      |
| Input Range           | Free Belt Length: Max.999.9mm |
|                       | Belt Mass: Max.9.999g/m       |
|                       | Belt Width: Max.99.9mm/R      |
| Accuracy              | ±1Hz <100Hz    ±1% >100Hz     |
| Unit                  | Hz/N                          |
| Display Error         | ±1Hz                          |
| Total Error           | <5%                           |
| Power Supply          | 4 x 1.5V AAA                  |
| Dimension             | 140*72*34mm                   |
| Operating Temperature | 10°C~50°C                     |

BELT TENSION METER-SONIC TYPE



- Automatic Power off
- Can save 20 set belt parameters
- Small size for handy use and tight spaces
- Direct result, more convenient than mechanical version
- Used to measure the tension of the belt during impact or rapid movement by sonic

|                       |              |
|-----------------------|--------------|
| Code                  | 1032-0225    |
| Range                 | 10-500Hz     |
| Resolution            | 0.1Hz        |
| Accuracy              | ±1%          |
| Display               | LCD          |
| Power Supply          | 4 x 1.5V AAA |
| Dimension             | 140*72*32mm  |
| Operating Temperature | 10°C~50°C    |

BELT TENSION METER-LASER TYPE



- Metric & Inch
- Automatic Power off
- Small size for handy use and tight spaces
- Used to measure the tension the belt quickly by laser
- Direct result, more convenient than mechanical version

|                              |                               |                          |
|------------------------------|-------------------------------|--------------------------|
| Code                         | 1032-0235                     | 1032-0240                |
| Range                        | 10-500Hz                      | 10-800Hz                 |
| Input Range                  | Free Belt Length: Max.99.99mm |                          |
|                              | Belt Mass: Max.9.999kg/m      |                          |
| Accuracy                     | < 1%                          |                          |
| Unit                         | Metric: m, kg/m, N            | Inch:Inch, lbs/foot, lbf |
| Display Error                | ±1Hz                          |                          |
| Total Error                  | <5%                           |                          |
| Optical Measurement Distance | 3-20mm                        |                          |
| Power Supply                 | 4 x 1.5V AAA                  |                          |
| Dimension                    | 178*72*34mm                   |                          |
| Operating Temperature        | 10°C~50°C                     |                          |

MOISTURE METER



- Data output by USB
- Bluetooth(Optional)
- Large measuring range 0-80%
- With LCD display and LED light indication
- Adopts the pin type, can measure most of materials and with high accuracy
- Used to measure moisture of non-conductive materials such as wood, wood fiber (such as bamboo products, wooden products), traditional Chinese medicine, tobacco, cotton, building materials, oil products, etc
- By measuring the conductivity between two pins to measures the moisture content in materials

|                          |                                       |
|--------------------------|---------------------------------------|
| Code                     | 6724-0005                             |
| Sensor Type              | Pin Type                              |
| Range(Moisture)          | 0-80%                                 |
| Resolution               | 0.1                                   |
| Accuracy                 | ± (0.5%+1)                            |
| Display                  | LCD Screen                            |
| LED Indication           | Green:Decay Impossible                |
|                          | Yellow:Decay Possible                 |
|                          | Red:Decay Inevitable                  |
| Working Condition        | Temperature:0~50°C    Humidity:<90%RH |
| Power                    | 4 x 1.5V AAA                          |
| Dimension                | 165*62*26mm                           |
| Weight(Battery Excluded) | 119g                                  |
| Length of the Pin        | 10.5mm                                |
| Diameter of Pin          | 1.9mm                                 |



PORTABLE TESTING INSTRUMENTS BORN IN ITALY, RAISED BY THE WORLD

DIGITAL MEASURING WHEEL



- 4 \* AAA battery
- Large LCD for easy reading
- Large measuring range
- Mainly used in the industrial of construction, architecture, highway, land surveying, site investigation,athletic field,etc

|            |            |
|------------|------------|
| Code       | 1032-0060  |
| Range      | 999,999.9M |
| Resolution | 0.1m       |

DIGITAL SMART MEASURING TAPE



- Data record
- Measure lenth and circumference
- Data track in weekly/monthly/yearly
- Bluetooth connection to APP

|          |             |
|----------|-------------|
| Code     | 1804-1057   |
| Range    | 1500mm/60"  |
| Accuracy | 2%          |
| Unit     | Metric/Inch |
| Battery  | Cr2032      |

DIGITAL DISPLAY ROLLER RULER



- On/Zero
- Metric/Inch
- With Rechargeable battery(Type C-USB)
- Ip40 protective rating
- Metal marking scriber included
- Auto shut-off after 30 minutes

|                       |                                                    |
|-----------------------|----------------------------------------------------|
| Code                  | 1804-1056                                          |
| Range                 | 0-199.99m                                          |
| Measuring range       | 0 -10m/32.8"                                       |
| Resolution            | 0.001m/0.01"                                       |
| Accuracy              | ±0.1% of calculated value                          |
| Measuring speed       | 6m/second                                          |
| Four measurement mode | linear, rectangle area,cube and diameter of circle |
| Working temperature   | 0 -40° C                                           |
| Battery               | Cr2032                                             |

6 DIGITAL RATCHET COUNTER



- Totate back to set Zero
- Accumulate and record the number of mechnical movements

|                  |            |
|------------------|------------|
| Code             | 1032-0170  |
| Number of Digits | 6          |
| Range            | 0-999999   |
| Size             | 92*48*32mm |

BENCH TYPE TESTING MACHINE

BORN IN ITALY, RAISED BY THE WORLD

02-12 BENCH TYPE HARDNESS TESTING MACHINE



13-20 BENCH TYPE OPTICAL MEASURING MACHINE



21-23 OTHER BENCH TYPE MEASURING MACHINES



ROCKWELL HARDNESS TESTER

This hardness tester is used for determining Rockwell hardness of hard alloys, quenched and unquenched steels.



- The high quality casting and fine craftsmanship ensure accurate, consistent readings
- Manual testing process, no need for electric controlling

|                                     |                                   |
|-------------------------------------|-----------------------------------|
| Code                                | 6720-1005                         |
| Maximum load                        | 150 kg (1471N)                    |
| Load range                          | 60 100 150kg(588.4N,980.7N,1471N) |
| Initial range load                  | 10 kg (98.07N)                    |
| Maximum test height                 | 170mm (6-3/4")                    |
| Depth of throat                     | 130mm (5-1/4")                    |
| Maximum depth of spindle below base | 50mm (2")                         |
| Size of base                        | 240x465mm (7"-18")                |
| Machine height                      | 630mm (24-1/2")                   |
| Weight (approx)                     | 75kg (200lbs)                     |

|                                    |   |
|------------------------------------|---|
| STANDARD ACCESSORIES               |   |
| Large testing tableφ150m/m(5-3/4") | 1 |
| Small testing tableφ62m/m(2-3/8")  | 1 |
| V-block anvilφ58(2-3/16")          | 1 |
| Diamond penetrator 120"            | 1 |
| Steel ball penetrator 1/16"        | 1 |
| Replacement steel ball 1/16"       | 5 |
| Rockwell A standard test block     | 1 |
| Rockwell B standard test block     | 1 |
| Rockwell C standard test block     | 1 |
| Rockwell C standard test block     | 1 |
| Rockwell C standard test block     | 1 |
| Screwdrivers                       | 2 |
| Level adjusting leg                | 3 |
| Accessory box                      | 1 |
| Dustproof plastic cover            | 1 |
| Operation manual                   | 1 |

DIGITAL ROCKWELL HARDNESS TESTER



- Strictly made in accordance with ISO 6508
- Tolerance testing
- Convert to other Rockwell scales, HV OR HB
- Memory of testing values
- Calibration function compensates the testing value for high accuracy
- Set testing times to get average value, and the difference of max. and min. value

|                       |                                                              |
|-----------------------|--------------------------------------------------------------|
| SPPECIFICATION        |                                                              |
| Code                  | 1807-1020                                                    |
| Hardness scale        | HRA,HRB, HRC_HRD                                             |
|                       | HRF,HRG (with standard indenters)                            |
| Resolution            | 0.1HR                                                        |
| Test force            | 588.4N, 980.7N, 1471N (60, 100, 150kgf)                      |
| Measuring range       | 20-88HRA, 20-100HRBW, 20-70HRC                               |
| Dimension             | 220x510x694mm                                                |
| Weight                | 90kg                                                         |
| Power supply          | 220V, 50Hz                                                   |
| Max. workpiece height | 210mm                                                        |
| Max. testing width    | 165mm (from the center of indenter to the wall of main body) |

|                                 |      |
|---------------------------------|------|
| STANDARD DELIVERY               |      |
| Main unit                       | 1 pc |
| 60mm flat anvil                 | 1 pc |
| 150mm flat anvil                | 1 pc |
| V-type anvil                    | 1 pc |
| Diamond indenter                | 1 pc |
| φ1.5875mm carbide ball indenter | 1 pc |
| Hardness test block HRA80-88    | 1 pc |
| Hardness test block HRB85-95    | 1 pc |
| Hardness test block HRC20-30    | 1 pc |
| Hardness test block HRC35-75    | 1 pc |
| Hardness test block HRC60-70    | 1 pc |

|                    |  |
|--------------------|--|
| OPTIONAL ACCESSORY |  |
| Printer            |  |

MOTORIZED ROCKWELL  
HARDNESS TESTER



- Easy, fast and high sensitivity in operation
- Made of high-quality casting one-stage processing, ensure high stability
- Adopts the frictionless spindle, for high accuracy of the test force
- Motorized control of loading test force, eliminates the error caused by manual operation

|                  |                                       |
|------------------|---------------------------------------|
| Code             | 6720-1010                             |
| Max.Load         | 150Kg(1471N)                          |
| Load Range       | 60kg/100Kg/150kg(588.4N/980.7N/1471N) |
| Max. Test Height | 210mm                                 |
| Depth of Throat  | 165mm                                 |
| Resolution       | 0.5HR                                 |
| Power Supply     | AC220V,50Hz                           |
| Dimension        | 510*220*694mm                         |
| Weight           | 90Kg                                  |

STANDARD ACCESSORIES

|                                |   |
|--------------------------------|---|
| Main Unit                      | 1 |
| Large Test Table               | 1 |
| Small Test Table               | 1 |
| V Test Table                   | 1 |
| 120° Diamond Indenter          | 1 |
| φ1.588 Steel Ball Indenter     | 1 |
| Rockwell A Standard Test Block | 1 |
| Rockwell B Standard Test Block | 1 |
| Rockwell C Standard Test Block | 1 |
| Rockwell C Standard Test Block | 1 |
| Rockwell C Standard Test Block | 1 |
| Screwdrivers                   | 2 |
| Level Adjusting Leg            | 3 |
| Dustproof Cover                | 1 |

BRINELL/ROCKWELL/VICKERS  
HARDNESS TESTER

Electric Brinell/Rockwell/Vickers Hardness Tester is suitable for hardening steel, surface hardening steel, cemented carbide steel, cast iron, nonferrous metal, various quenched and tempered and annealed steel, hardened thin steel plate, soft metal, surface heat treatment and chemical heat treatment, etc. It is a common hardness testing machine for industrial and mining enterprises



- It has three test methods: Brinell, Rockwell and Vickers.
- Multi-purpose and multi-function hardness tester with Seven-level test force can meet the requirements of users for various hardness tests.
- Rockwell hardness reading dial pointer display, Brinell and Vickers look-up table
- Test force exertion, loading and unloading are automatically completed
- Wide range of application and easy operation

|                                            |                                                        |
|--------------------------------------------|--------------------------------------------------------|
| Code                                       | 1804-3610                                              |
| Initial force                              | 98.07N(10kg) Tolerance:±2.0%                           |
| Total force                                | 98.07N(10kg)-1839N(187.5kg) Tolerance:±1.0%            |
| Brinell test force                         | 31.25kgf(306.5N),62.5kgf(612.9N),187.5kgf(1839N)       |
| Brinell scale                              | HBW2.5/31.25,HBW2.5/62.5,HBW2.5/187.5,HBW5/62.5        |
| Specification of diamond indenter          | Diamond Rockwell indenter and Diamond Vickers indenter |
| Specification of steel ball indenter       | φ1.5875mm,φ2.5mm,φ5mm Steel ball indenter              |
| Rockwell test force                        | 60kgf(588N),100kgf(980.7N),150kgf(1471N)               |
| Rockwell scale                             | HRA HRB HRC HRD HRE HRF HRG HRK HRH                    |
| Vickers test force                         | 30kgf(294.2N) 100kgf(980.7N)                           |
| Vickers scale                              | HV30 HV100                                             |
| Minimum unit of measurement                | Brinell:0.004mm Vickers:0.002mm                        |
| Amplification of Microscope                | 37.5x,75x                                              |
| Rockwell maximum test height               | 260mm                                                  |
| Maximum test height of Brinell and Vickers | 200mm                                                  |
| Duration time                              | 2-60s                                                  |
| Rockwell hardness test range               | 20HR-100HR                                             |
| Vickers hardness test range                | 8HV-2900HV                                             |
| Brinell hardness test range                | 8HBW-650HBW                                            |
| Power supply                               | AC220±5%,50-60Hz                                       |
| Shape size(mm)                             | 540×230×820mm                                          |
| Host weight                                | 80kg                                                   |

|                                          |             |
|------------------------------------------|-------------|
| Standard delivery                        |             |
| Rockwell indenter                        | 1           |
| Vickers indenter                         | 1           |
| Measuring microscope                     | 1           |
| Hardness block                           | 5           |
| Power cord                               | 1           |
| Objective lense                          | 2           |
| φ1.5875, 2.5, 5mmCemented carbide ball   | One of each |
| Fuse 2A                                  | 2           |
| Floodlight                               | 1           |
| Large, medium and V-shaped test-platform | one of each |
| Sliding test bench                       | 1           |
| Product Description                      | 1           |

DIGITAL BRINELL/ROCKWELL/VICKERS  
HARDNESS TESTER

Digital Brinell/Vickers/Rockwell Hardness Tester applies to hardened steel,surface-hardened steel, hard alloy steel,cast iron,nonferrous metal,various tempering steel,hardened thin steel,and even including softer metal,surface-heat-treatment metal,chemical-heat-treatment metal etc,commonly used in industrial mining enterprises and scientific research institutions.



- Three measuring modes:Brinell/Rockwell/Vickers
- A multipurpose and multifunctional hardness with seven grade load can meet the requirements of various hardness measuring
- Digital readout of Brinell/Rockwell/Vickers hardness on LCD
- Automatic loading,load holding and unloading
- Wide range of use and easy operation

|                                 |                                                            |
|---------------------------------|------------------------------------------------------------|
| Code                            | 1804-3611-A                                                |
| Preload                         | 98.07N(10kg)                                               |
| Load                            | 98.07N(10kg)-1839N(187.5kg)                                |
| Brinell load                    | 31.25kgf(306.5N),62.5kgf(612.9N),187.5kgf(1839N)           |
| Brinell scale                   | HBW2.5/31.25,HBW2.5/62.5, HBW2.5/187.5,HBW5/62.5           |
| Diamond indenter                | Diamond Rockwell indenter,Diamond Vickers indenter         |
| Ball indenter size              | φ1.5875mm,φ2.5mm,φ5mm                                      |
| Rockwell load                   | 60kgf(588N) 100kgf(980.7N)150kgf(1471N)                    |
| Rockwell scale                  | HRA HRB HRC HRD HRE HRF HRG HRK H RH                       |
| Vickers load                    | 30kgf(294.2N) 100kgf(980.7N)                               |
| Vickers scale                   | HV30 HV100                                                 |
| Minimum                         | Brinell:0.004mm Vickers:0.002mm                            |
| Magnification                   | 37.5x,75x                                                  |
| Rockwell max test height        | 260mm                                                      |
| Brinell/Vickers max test height | 200mm                                                      |
| Load holding time               | 2-60s                                                      |
| Rockwell hardness range         | 20HR-100HR Accuracy:±0.1HR,repeatability: 0.5HR            |
| Vickers hardness range          | 8HV-2900HV Accuracy(δ/%) :±2,repeatability(Hcf/%) :≤2.5    |
| Brinell hardness range          | 8HBW-650HBW Accuracy(δ/%) :±2.5,repeatability(Hcf/%) :≤3.0 |
| Power supply                    | AC220±5%,50-60Hz                                           |
| Outline size(mm)                | 540×230×820mm(720*500*1020)                                |
| Total weight                    | 125kg                                                      |

|                                      |   |
|--------------------------------------|---|
| Standard delivery                    |   |
| Diamond Rockwell indenter            | 1 |
| Diamond Vickers indenter             | 1 |
| Microscope                           | 1 |
| Hardness block                       | 5 |
| Power cord                           | 1 |
| Objective lens                       | 2 |
| φ1.5875, 2.5, 5mm carbide steel ball | 3 |
| Fuse 2A                              | 2 |
| Light                                | 1 |
| Large, Mid, V-shaped bench           | 3 |
| Slip bench                           | 1 |
| Product manual                       | 1 |

MOTORIZED DIGITAL ROCKWELL/SUPERFICIAL  
ROCKWELL HARDNESS TESTERS



- Tolerance testing
- LCD touch screen, easy operation
- Force loading by electric motor (without weights)
- The test force is selected automatically according to hardness scale
- Automatic testing, the preliminary and main test force are loaded automatically
- Convert to other Rockwell scales, HV or HB automatically
- Insert USB flash disk, save the testing results as Excel
- Self-correcting the hardness value for curved workpieces
- According to ISO 6508

SPECIFICATION

| Code                    | 1807-1000                                                    | 1807-1005                                                     | 1807-1010                                                                                                  |
|-------------------------|--------------------------------------------------------------|---------------------------------------------------------------|------------------------------------------------------------------------------------------------------------|
| Type                    | Rockwell                                                     | Superficial Rockwell                                          | Rockwell and Superficial Rockwell                                                                          |
| Hardness scale          | HRA, HRB, HRC, HRD, HRF, HRG                                 | HR15N, HR30N, HR45N, HR15T, HR30T, HR45T                      | HRA, HRB, HRC, HRD, HRF, HRG, HR15N, HR30N, HR45N, HR15T, HR30T, HR45T                                     |
| with standard indenters |                                                              |                                                               |                                                                                                            |
| with optional indenter  | HRE, HRH, HRK, HRL, HRM, HRP, HRR, HRS, HRV                  | HR15W, HR30W, HR45W, HR15X, HR30X, HR45X, HR15Y, HR30Y, HR45Y | HRE, HRH, HRK, HRL, HRM, HRP, HRR, HRS, HRV, HR15W, HR30W, HR45W, HR15X, HR30X, HR45X, HR15Y, HR30Y, HR45Y |
| Preliminary test force  | 98N(10kgf) for Rockwell                                      | 29.4N(3kgf) for Superficial Rockwell                          | 98N(10kgf) for Rockwell<br>29.4N(3kgf) for Superficial Rockwell                                            |
| Test force              | 588N (60kg), 980N (100kg), 1471N (150kg)                     | 147.1N (15kg), 294.2N (30kg), 441.3N (45kg)                   | 147.1N (15kg), 294.2N (30kg), 441.3N (45kg), 588N (60kg), 980N (100kg), 1471N (150kg)                      |
| Stage elevation         | Manual                                                       | automatic (load/dwell/unload)                                 |                                                                                                            |
| Load control            |                                                              |                                                               |                                                                                                            |
| Load dwell time         | 0-60 second                                                  |                                                               |                                                                                                            |
| Resolution              | 0.1HR                                                        |                                                               |                                                                                                            |
| Output                  | USB                                                          |                                                               |                                                                                                            |
| Max. workpiece height   | 220mm                                                        |                                                               |                                                                                                            |
| Max. testing width      | 200mm (from the center of indenter to the wall of main body) |                                                               |                                                                                                            |
| Power supply            | 220V, 50/60Hz                                                |                                                               |                                                                                                            |
| Dimension               | 510×280×780mm                                                |                                                               |                                                                                                            |
| Weight                  | 70kg                                                         |                                                               |                                                                                                            |

STANDARD DELIVERY

| Code                            |      |      |      |
|---------------------------------|------|------|------|
| Main unit                       | 1 pc | 1 pc | 1 pc |
| φ63mm flat anvil                | 3 pc | 1 pc | 1 pc |
| φ150mm flat anvil               | 1 pc | 1 pc | 1 pc |
| V-type anvil                    | 1 pc | 1 pc | 1 pc |
| Diamond indenter                | 1 pc | 1 pc | 1 pc |
| φ1.5875mm carbide ball indenter | 1 pc | 1 pc | 1 pc |
| Hardness test block HRCB8-95    | 1 pc | —    | 1 pc |
| Hardness test block HRC60-65    | 1 pc | —    | 1 pc |
| Hardness test block HRC20-30    | 1 pc | —    | 1 pc |
| Hardness test block V1-25HRC10N | —    | 1 pc | 1 pc |
| Hardness test block 95-73HRC10N | —    | 1 pc | 1 pc |
| Hardness test block 97-69HRC10T | 1 pc | 1 pc | 1 pc |
| USB flash disk (32G)            | 1 pc | 1 pc | 1 pc |
| Level                           | 1 pc | 1 pc | 1 pc |
| Touch pen                       | 1 pc | 1 pc | 1 pc |
| Anti-dust cover                 | 1 pc | 1 pc | 1 pc |

DIGITAL MOTORIZED BRINELL  
HARDNESS TESTER



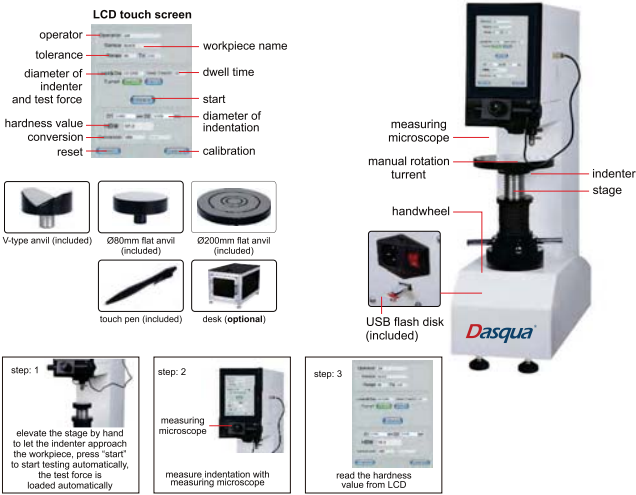
- Motorized control of loading test force, eliminates the error caused by manual operation.
- Ten level testing force, a wider testing range, and higher accuracy
- Made of high-quality casting one-stage processing, ensure high stability
- Used for testing the hardness cast iron, steel, non-ferrous metals, soft alloys, etc
- It can also be used for hardness testing of some non-metallic materials such as hard plastics

|                        |                                                                                                                                                |
|------------------------|------------------------------------------------------------------------------------------------------------------------------------------------|
| Code                   | 6720-2005                                                                                                                                      |
| Brinell Scales         | HBW2.5/62.5, HBW2.5/187.5, HBW5/125, HBW5/750, HBW10/100, HBW10/500, HBW10/3000, HBW10/250, HBW10/500, HBW10/1000                              |
| Brinell Test Load      | 62.5kgf/100kgf/125kgf/187.5kgf/250kgf/500kgf/750kgf/1000kgf/1500kgf/3000kgf<br>612.9N/980.7N/1226N/1839N/2452N/4903N/7355N/8907N/14710N/29420N |
| Brinell Hardness Range | 8-650HBW                                                                                                                                       |
| Min. Testing           | 0.01mm                                                                                                                                         |
| Max. Test Height       | 280mm                                                                                                                                          |
| Depth of Throat        | 150mm                                                                                                                                          |
| Total Magnification    | 20x                                                                                                                                            |
| Power Supply           | AC220V, 50-60Hz                                                                                                                                |
| Dimension              | 230*600*920mm                                                                                                                                  |
| Weight                 | 123Kg                                                                                                                                          |

STANDARD ACCESSORIES

|                                         |   |
|-----------------------------------------|---|
| Main Unit                               | 1 |
| Large Test Table                        | 1 |
| Small Test Table                        | 1 |
| V Test Table                            | 1 |
| φ10 Diamond Indenter                    | 1 |
| φ5 Diamond Indenter                     | 1 |
| φ2.5 Diamond Indenter                   | 1 |
| Standard Brinell Test Block (200±50HBW) | 1 |
| Standard Brinell Test Block (100±25HBW) | 1 |
| Microscope                              | 1 |
| Screwdrivers                            | 2 |
| Level Adjusting Leg                     | 3 |
| Dustproof Cover                         | 1 |

MOTORIZED DIGITAL BRINELL HARDNESS TESTERS



|                                                 |                                                  |
|-------------------------------------------------|--------------------------------------------------|
| AUTOMATIC TESTING, AUTOMATIC TEST FORCE LOADING | FORCE LOADING BY ELECTRIC MOTOR (WITHOUT WEIGHT) |
|-------------------------------------------------|--------------------------------------------------|

SPECIFICATION

|                       |                                                              |           |
|-----------------------|--------------------------------------------------------------|-----------|
| Code                  | 1807-2000                                                    | 1807-2005 |
| Turret rotation       | manual                                                       | automatic |
| Range                 | 8-650HBW                                                     |           |
| Reading mode          | directly read from LCD                                       |           |
| Test force            | 62.5, 100, 125, 187.5, 250, 500, 750, 1000, 1500, 3000kgf    |           |
| Max. workpiece height | 200mm                                                        |           |
| Max. testing width    | 156mm (from the center of indenter to the wall of main body) |           |
| Stage elevation       | manual                                                       |           |
| Load control          | automatic (load/dwell/unload)                                |           |
| Load dwell time       | 5-60 second                                                  |           |
| Measuring microscope  | magnification 20X<br>resolution 0.625μm                      |           |
| Power supply          | 220V, 50/60Hz                                                |           |
| Dimension             | 550x210x750mm                                                |           |
| Weight                | 110kg                                                        |           |

STANDARD DELIVERY

|                                         |      |
|-----------------------------------------|------|
| Main unit                               | 1 pc |
| Ø80mm flat anvil                        | 1 pc |
| Ø200mm flat anvil                       | 1 pc |
| V-type anvil                            | 1 pc |
| Ø2.5mm carbide ball indenter            | 1 pc |
| Ø5mm carbide ball indenter              | 1 pc |
| Ø10mm carbide ball indenter             | 1 pc |
| Hardness test block 150-250HBW2.5/187.5 | 1 pc |
| Hardness test block 75-125HBW10/1000    | 1 pc |
| Hardness test block 175-250HBW10/3000   | 1 pc |
| USB flash disk (8G)                     | 1 pc |
| Touch pen                               | 1 pc |
| Anti-dust cover                         | 1 pc |

OPTIONAL ACCESSORY

|                                         |  |
|-----------------------------------------|--|
| Hardness test block 200-300HBW2.5/187.5 |  |
| Hardness test block 90-200HBW10/1000    |  |
| Hardness test block 200-300HBW10/3000   |  |
| Brinell indentation measuring system    |  |
| Desk                                    |  |

- Tolerance testing
- Automatic testing automatic test force loading LCD touch screen, easy operation
- Measure indentation by measuring microscope then read the hardness value from LCD
- Converted to HRA HRB HRC HRD HRF HV HB HR15N HR30N HR45N HR15T HR30T HR45T
- Insert USB flash disk, save the test results as Excel
- Force loading by electric motor, without weights
- According to Iso 6506

MICRO VICKERS HARDNESS TESTER



- Preset test force
- Adjustable measuring light source
- Mainly used for measuring the hardness for small or thin workpieces
- High magnification optical measurement system for more accurate measurements
- Can measure the micro Vickers hardness of brittle materials such as agate, glass, ceramics, etc

|                          |                                                                                               |
|--------------------------|-----------------------------------------------------------------------------------------------|
| Code                     | 6720-3005                                                                                     |
| Test Force               | 10gf,25gf,50gf,100gf,200gf,300gf,500gf,1000gf0.098N,0.246N, 0.49N,0.98N,1.96N,2.94N,4.9N,9.8N |
| Measuring Range          | 5HV-3000HV                                                                                    |
| Resolution               | 0.1HV                                                                                         |
| Load of Test Force       | Automatic                                                                                     |
| Shift of Lens & Indenter | Automatic                                                                                     |
| Scales                   | HRA/HRB/HRC/HRD/HRF/HV/HK/HBW/HBS/HR15N/HR30N/ HR45N/HR15T/HR30T/HR45T                        |
| Objective Lens           | 10X & 40X                                                                                     |
| Microscope               | 10X                                                                                           |
| Total Magnification      | 100x, 400x                                                                                    |
| Duration Time            | 1~60s                                                                                         |
| Lighting                 | Halogen type light source                                                                     |
| X*Y size                 | 100*100mm                                                                                     |
| Travel                   | 25*25mm                                                                                       |
| Max. Test Height         | 100mm                                                                                         |
| Depth of Throat          | 110mm                                                                                         |
| Power Supplier           | AC 220V/50Hz                                                                                  |
| Dimension                | 500*250*560mm                                                                                 |
| Weight                   | 50Kg                                                                                          |

MAIN STANDARD ACCESSORIES

|                 |         |         |
|-----------------|---------|---------|
| Main Unit       | 1       |         |
| Cylinder Holder | 1       |         |
| Vice Holder     | 1       |         |
| Slide Holder    | 1       |         |
| Test Block      | 2       |         |
| Objective Lens  | 10X * 1 | 40X * 1 |
| Microscope      | 1       |         |
| Dustproof Cover | 1       |         |
| Level           | 1       |         |
| Fuse            | 2       |         |

MACRO VICKERS HARDNESS TESTER



- Mainly sued for measuring the hardness for small or thin workpieces
- Can measure the micro Vickers hardness of brittle materials such as agate, glass, ceramics, etc
- Larger measuring range and More Application
- LCD display screen, more convenient in use
- The indentation imaging is more clearer, make the measurement is more accurate
- Adopting a closed-loop loading control system for higher accuracy and stability

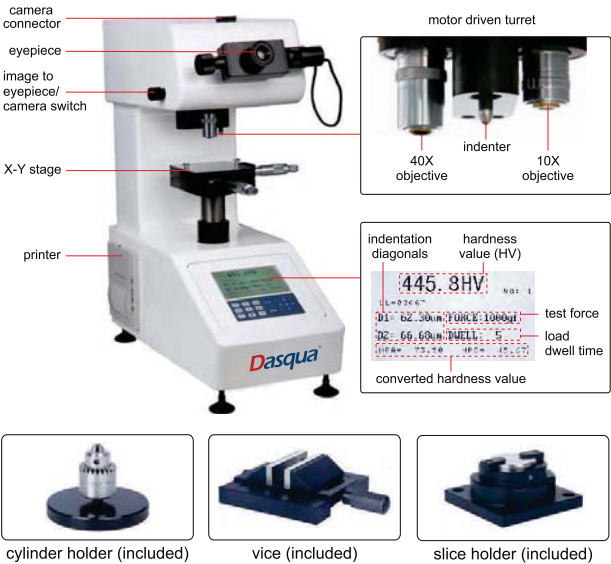
|                          |                                                                       |                                                               |                                                            |
|--------------------------|-----------------------------------------------------------------------|---------------------------------------------------------------|------------------------------------------------------------|
| Code                     | 6720-3010                                                             | 6720-3015                                                     | 6720-3020                                                  |
| Test Force               | 0.1Kgf,0.2Kgf,0.3Kgf,0.5Kgf, 1Kgf,2Kgf,2.5Kgf,3Kgf,5Kgf               | 0.1Kgf,0.2Kgf,0.3Kgf,0.5Kgf, 1Kgf,2Kgf,2.5Kgf,3Kgf,5Kgf,10Kgf | 0.5Kgf,1Kgf,2Kgf,2.5Kgf,3Kgf, 5Kgf,10Kgf,20Kgf,30Kgf,50Kgf |
| Measuring Range          | 5HV-3000HV                                                            |                                                               |                                                            |
| Resolution               | 0.1HV                                                                 |                                                               |                                                            |
| Load of Test Force       | Automatic                                                             |                                                               |                                                            |
| Shift of Lens & Indenter | Automatic                                                             |                                                               |                                                            |
| Scales                   | HRA/HRB/HRC/HRD/HRF/HV/HK/HBW/HBS/HR15N/HR30N/HR45N/HR15T/HR30T/HR45T |                                                               |                                                            |
| Objective Lens           | 10X & 40X                                                             | 10X & 20X                                                     | 10X & 20X                                                  |
| Microscope               | 10X                                                                   |                                                               |                                                            |
| Total Magnification      | 100x, 400x                                                            |                                                               |                                                            |
| Duration Time            | 1~60s                                                                 |                                                               |                                                            |
| Lighting                 | Halogen type light source                                             |                                                               |                                                            |
| Max. Test Height         | 175mm                                                                 |                                                               |                                                            |
| Depth of Throat          | 125mm                                                                 |                                                               |                                                            |
| Power Supplier           | AC 220V/50Hz                                                          |                                                               |                                                            |
| Dimension                | 320*580*650mm                                                         |                                                               |                                                            |
| Weight                   | 55Kg                                                                  | 60Kg                                                          | 70Kg                                                       |

STANDARD ACCESSORIES

|                    |         |         |         |         |         |         |
|--------------------|---------|---------|---------|---------|---------|---------|
| Main Unit          | 1       |         |         |         | 1       |         |
| Large Test Table   | 1       |         |         |         | 1       |         |
| Small Test Table   | 1       |         |         |         | 1       |         |
| V Test Table       | 1       |         |         |         | 1       |         |
| Vickers Indenter   | 1       |         |         |         | 1       |         |
| Vickers Test Block | 2       |         |         |         | 2       |         |
| Objective Lens     | 10X * 1 | 40X * 1 | 10X * 1 | 20X * 1 | 10X * 1 | 20X * 1 |
| Microscope         | 10x *1  |         | 10x *1  |         | 10x *1  |         |
| Fuse               | 2       |         | 2       |         | 2       |         |
| Level              | 1       |         | 1       |         | 1       |         |
| Dustproof Cover    | 1       |         | 1       |         | 1       |         |



DIGITAL MICRO-VICKERS HARDNESS TESTER (ADVANCED TYPE)



- Measure hardness of thin or small workpieces
- Based on Vickers (HV), can be converted to Rockwell (HRA HRB and HRC)
- According to ISO 6507

| SPECIFICATION         |                                                                      |
|-----------------------|----------------------------------------------------------------------|
| Code                  | 1807-3000                                                            |
| Test force            | 0.01, 0.025, 0.05, 0.1, 0.2, 0.3, 0.5, 1kgf                          |
| Vickers scales        | HV0.01, HV0.025, HV0.05, HV0.1, HV0.2, HV0.3, HV0.5, HV1             |
| Stage elevation       | manual                                                               |
| Load control          | automatic (load/dwell/unload)                                        |
| Load dwell time       | 5-60 second (5 second increment)                                     |
| Objective             | 10X, 40X                                                             |
| Eyepiece              | 15X                                                                  |
| Total magnification   | 150X (for observation)<br>600X (for measurement)                     |
| Max. workpiece height | 85mm                                                                 |
| Max. testing width    | 85mm (from the center of indenter to the wall of main body)          |
| X-Y stage             | dimensions: 100×100mm<br>travel range: 25×25mm<br>graduation: 0.01mm |
| Data output           | RS232C                                                               |
| Power supply          | 110/220V, 50Hz                                                       |
| Dimension             | 540×500×640mm                                                        |
| Weight                | 50kg                                                                 |

| STANDARD DELIVERY                |              |
|----------------------------------|--------------|
| Main unit                        | 1 pc         |
| 10X, 40X objective               | 1 pc of each |
| Micro Vickers indenter           | 1 pc         |
| Hardness test block 400-500HV0.2 | 1 pc         |
| Hardness test block 700-800HV1   | 1 pc         |
| Slice holder                     | 1 pc         |
| Vice                             | 1 pc         |
| Cylinder holder                  | 1 pc         |
| Level                            | 1 pc         |
| Anti-dust cover                  | 1 pc         |

| OPTIONAL ACCESSORY               |  |
|----------------------------------|--|
| 20X objective                    |  |
| Hardness test block 400-500HV0.2 |  |
| Hardness test block 700-750HV1   |  |
| Measuring system                 |  |
| Camera adapter                   |  |

HIGH ACCURACY MANUAL VISION MEASURING MACHINE

| STANDARD DELIVERY:                |                               |
|-----------------------------------|-------------------------------|
| Description                       | Description                   |
| Measuring Software                | Operation Manual,Packing List |
| LED parallel contour illumination | Data Cable                    |
| Surface 4R/8D LED Illumination    | Controller                    |
| Power Cable                       | 0.5um Linear Scale            |
| Click Zoom Lens                   | Calibration Block             |
| 1/2.9" Digital Camera             | Video Cable                   |
| Anti-dust Cover                   | Fuse                          |
| 3mm Hex Key Wrench                | Warranty Card                 |
| Dongle                            | Product Certification         |

- High definitive detented zoom lens and high resolution digital camera, to ensure clear image without distortion
- High accuracy A grade optical linear scale with precision working stage, to ensure the accuracy is within 2.0÷L/200um
- High precision marble base and pillar, to ensure high stability and accuracy
- High precision toothless rod and fast moving locking device, to ensure repeatability error less than 2um
- With programmable surface 4-ring 8-division LED Cold Illumination and contour LED parallel illumination and internal intelligent light adjustment,it can automatic control the brightness in the 4-ring 8-division
- Powerful function iMeasuring2.1 measuring software highly enhance the quality control situation

| Code                                      | 1804-7007                                                                                                                                     | 1804-7008 | 1804-7009 |
|-------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------|-----------|-----------|
| X/Y-axis Travel                           | 400x300mm                                                                                                                                     | 100x100mm | 200x100mm |
| Z-axis Travel                             | 200mm                                                                                                                                         | 100mm     | 200mm     |
| X/Y/Z-axis Travel                         | 0.5 um                                                                                                                                        |           |           |
| X/Y-axis Accuracy                         | ≤2.0÷L/200(um)                                                                                                                                |           |           |
| Repeatability                             | ±2um                                                                                                                                          |           |           |
| Base and Pillar                           | High Accuracy Marble                                                                                                                          |           |           |
| Illumination System (Software Adjustment) | Surface: Stepless Adjustable 4-ring 8-division LED Cold Illumination<br>Contour: LED Parallel Illumination<br>LED Laser Navigation Lights     |           |           |
| CCD Camera                                | High Resolution Digital Camera                                                                                                                |           |           |
| Zoom lens                                 | 6.5X High Resolution Detented Zoom Lens<br>Magnification:0.7X-4.5X;Video Magnification:26X-172X<br>Temperature :20°c±1C, change range < 1C/hr |           |           |
| Working Environment                       | Humidity:30%%-800RH<br>Vibration<0.002g,<15Hz                                                                                                 |           |           |
| Measuring Software                        | iMeasuring 2.1                                                                                                                                |           |           |
| Operation System                          | Support XP, WINT, WIN8.1, WIN 10, 32/64 operating system                                                                                      |           |           |
| Language                                  | English, Simplified Chinese, Traditional Chinese, other language versions can be added                                                        |           |           |
| Net Weight                                | 350Kg                                                                                                                                         |           |           |



VISION MACHINE SYSTEM (SEMI-AUTOMATIC)

- High definitive detented zoom lens and high resolution digital camera, to ensure clear image without distortion
- High accuracy a grade optical linear scale with precision working stage to ensure the accuracy is within 2.0+/200um
- High precision marble base and pillar, to ensure high stability and accuracy
- High precision toothless rod and fast moving locking device, to ensure repeatability error less than 2um.
- With programmable surface 4-ring 8-division led cold illumination and contour led parallel illumination and internal intelligent light adjustment, it can automatic control the brightness in the 4-ring 8-division
- Powerful function "measuring 2.1" measuring software highly enhance the quality control situation



| Code                | 1804-7030                       | 1804-7035 |
|---------------------|---------------------------------|-----------|
| X/Y Travel          | 200x100                         | 300x200   |
| Z Travel            | 200mm                           |           |
| X/Y/Z Resolution    | 0.5um                           |           |
| Drive Model         | X/Y: Manual Z: Automatic        |           |
| Accuracy            | <2.0+L/200(um)                  |           |
| Camera              | 1/3" Color CCD Camera           |           |
| Zoom Lens           | 0.7X-4.5X                       |           |
| Total Magnification | 26.6X-172X                      |           |
| Filed View          | 8.1-1.3mm                       |           |
| Power               | AC 100-240V 50/60Hz             |           |
| Working Temperature | 20°C ±1°C                       |           |
| Humidity            | <80%RH                          |           |
| Operation System    | Win7, Win8, Win10, 32/64 system |           |
| Weight              | 350Kg                           |           |

2.5D VISION MACHINE SYSTEM-AUTOMATIC

- X/Y/Z three-axis CNC fully automatic precision control, precise positioning
- Adopting marble base and columns, with high stability
- Precise linear guides, ball screws, and servo motors ensure the accuracy and stability of the system
- With 0.5 μm high-precision grating ruler ensures the high accuracy of system positioning and measurement
- High definition digital cameras for clear observation and precise measurement
- 6.5X high definition optical lens, precise zoom
- Programmable 5-ring 8-zone LED light and parallel LED contour light system, provides 256 levels brightness adjustment intelligently
- Fully automatic measuring software is powerful and easy to operate

|                     |                                                 |  |
|---------------------|-------------------------------------------------|--|
| Code                | 1804-7025                                       |  |
| X/Y Travel          | 300*200 mm                                      |  |
| Z Travel            | 200mm                                           |  |
| X/Y/Z Resolution    | linear encoder: 0.5um                           |  |
| Accuracy            | X/Y: <2.5+L/200(um) Z: <5.0+L/200(um)           |  |
| Repeatability       | ±2um                                            |  |
| Digital Camera      | 1/2.9" High definition digital camera           |  |
| Zoom Lens           | 0.7x-4.5x Lens                                  |  |
| Total Magnification | 26X-172X                                        |  |
| Light-Contour       | Parallel Contour Light                          |  |
| Light-Surface       | 5-Ring 8 Division, 0-255 level adjustable Light |  |
| Soft                | Fully automatic image measuring system          |  |
| Load Capacity       | 25Kg-50Kg                                       |  |
| Work Condition      | Temperature: 20°C ±2°C, Humidity: <80%RH        |  |
| Power Supply        | 220V/50Hz/10A                                   |  |
| Dimension           | 789*636*1520mm                                  |  |
| Weight              | 200Kg                                           |  |



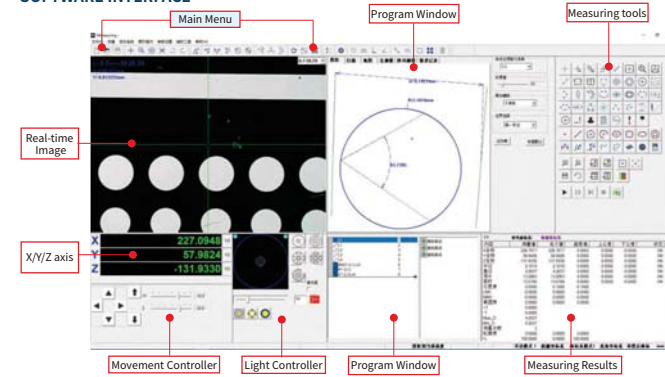
## HIGH ACCURACY AUTOMATIC VISION MEASURING MACHINE

- XYZ three-axis CNC automatic precision control, precise positioning
- Granite base and pillar, good stability
- Precision linear guides, grinding-grade ball screws and AC servo motors, etc., ensure the accuracy and stability of the motion system
- 0.5μm high-precision grating ruler to ensure the positioning accuracy and measurement accuracy of the system
- High-resolution digital camera to meet the needs of clear observation and precise measurement
- 6.5X high-definition optical lens, accurate zoom, one-time pixel correction
- Program-controlled 5-ring 8-area LED surface illumination and parallel LED contour illumination system intelligently realize 256-level brightness adjustment
- Vimeasoft series automatic Vision measurement software, powerful and easy to operate

| Code                      | 1804-7019                                                                                                                                                                                                                                                                                          | 1804-7020                           | 1804-7021                           | 1804-7022     | 1804-7023      |
|---------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------|-------------------------------------|---------------|----------------|
| X/Y Axis Travel           | 220*120                                                                                                                                                                                                                                                                                            | 300*200                             | 400*300                             | 500*400       | 600*500        |
| Z Axis Travel             | 150mm                                                                                                                                                                                                                                                                                              |                                     | 200                                 |               |                |
| X/Y/Z-3 Axis Linear Scale | Glass grating ruler, resolution: 0.5um                                                                                                                                                                                                                                                             |                                     |                                     |               |                |
| Accuracy                  | XY Axis: ≤2.5+L/200(um) Z Axis: ≤5.0+L/200(um)                                                                                                                                                                                                                                                     |                                     |                                     |               |                |
| Repeatability             | 2um                                                                                                                                                                                                                                                                                                |                                     |                                     |               |                |
| Operation Mode            | Joystick controller, Mouse operation, automatic detection program.                                                                                                                                                                                                                                 |                                     |                                     |               |                |
| Video System              | 1/2" CCD Digital Color Camera                                                                                                                                                                                                                                                                      | 1/3" High Resolution Digital Camera | 1/2" High Resolution Digital Camera |               |                |
| Operation System          | 6.5X Manual Zoom Lens, Optical Magnification: 0.7X-4.5X, Video Magnification: 26.6X-171X                                                                                                                                                                                                           |                                     |                                     |               |                |
| Power Supply              | win7、win10、win11                                                                                                                                                                                                                                                                                   |                                     |                                     |               |                |
| Load Capacity             | 220V/50Hz/10A                                                                                                                                                                                                                                                                                      |                                     |                                     |               |                |
| Dimension(WxDxH)          | 20kg                                                                                                                                                                                                                                                                                               | 25Kg-50Kg                           |                                     |               |                |
| Net Weight                | 760*600*900                                                                                                                                                                                                                                                                                        | 1132*720*1665                       | 1280*840*1688                       | 1257*920*1640 | 1600*1050*1650 |
| Note                      | 146kg                                                                                                                                                                                                                                                                                              | 380kg                               | 450kg                               | 600kg         | 1380kg         |
|                           | L is measured length(mm), the mechanical accuracy of Z-axis and focus accuracy is greatly related to the surface of the workpiece. Magnification is approximate value, it is related to the dimension of monitor and resolution. 0.5X or 2X objective is optional available according to the needs |                                     |                                     |               |                |



### SOFTWARE INTERFACE



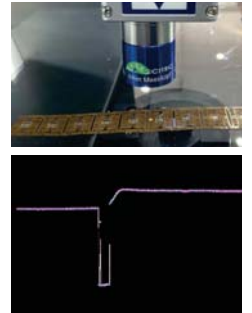
### PROBE

The software supports to add contact probe for 3d measuring



### LASER MEASURING

Powerful laser measurement function, easy to achieve high-speed measurement of flatness, subtle concave points, convex points, V-shaped angles and high-precision surface scanning, and objects that cannot be measured by probes



### MEASURING TOOLS INTRODUCTION:

To realize the measuring of point, line, circle, arc, ring, rectangle, ellipse, curve, etc.



Support measuring of multiple different points



Support multiple different curve, ring and slot measuring tools, also include vision measuring height, profile scanning



Support multiple different line and circle measuring tools



Support multiple different arc, ellipse and rectangle measuring tools



Construct measuring tools



AUTOMATIC VISION MACHINE SYSTEM

Widely used in the field of machinery, electronics, instrument and plastic CNC video measuring system is used in two dimension measurement, especially in non-contact measuring, quick batch measuring, and measuring of sophisticated workpiece.

- Automatic focusing, automatic edge detection, powerful programming and automatic measuring function
- Sub pixel subdivision technology helps improve edge resolution
- The machine can be operated by either the joystick or the software programming
- SPC data processing contributes to fixture measurement in large scale
- Servo motor control in X, Y, and Z axis leads to quick and high precision positioning and stable operation
- Independently developed embedded module control system ensures more stable operation by integrating the sophisticated control system within the instrument
- The five- ring-eight-section surface cold light source is suitable for measuring sophisticated workpiece
- The laser indicator can quickly locate the position of the workpiece



|                          |                                          |
|--------------------------|------------------------------------------|
| Code                     | 1804-7005                                |
| Metal worktable size(mm) | 500x330                                  |
| Glass worktable size(mm) | 350x250                                  |
| Travel(mm)               | 270x170                                  |
| XY, Z axis resolution    | 0.5μm                                    |
| Accuracy(μm)             | E1XY=(2.5+L/100)μm                       |
| Weight (kg)              | 168                                      |
| Z axis travel (mm)       | 150                                      |
| Camera                   | 1/2" color CCD camera                    |
| Zoom lens                | 0.7X-4.5X                                |
| Total magnification:     | 20X-128X                                 |
| Object view              | 11.1mm-1.7mm                             |
| Power                    | AC 100-240V 50/60Hz                      |
| Spare parts              | 0.5X lens cone (standard)                |
| Optional                 | Auto zoom lens, laser shifter, MCP probe |

VERTICAL PROFILE PROJECTORS



- Projector is a precision optical measuring instrument widely used in the automotive industry, plastic & rubber industry, machinery manufacturing industry, electronics industry, watch industry, aviation industry,etc
- The lifting system adopts ball cross guide rail structure and precision screw drive, making the lifting transmission stable
- Adopting coating process reflector, the image is clear and dust-proof,convenience in measurement
- Uses aspherical condenser provides the bright vision, reduce the error and ensuer high accuracy
- Use imported high-brightness, long-life led light to meet measurement needs
- The axial flow fan dissipates heat in both directions, providing heat dissipation efficiency and extending servicelife

|                              |                                                          |
|------------------------------|----------------------------------------------------------|
| Code                         | 1804-7205                                                |
| Work Tabel Size(mm)          | 350*202                                                  |
| X-Y Travel(mm)               | 150*100                                                  |
| Resolution(mm)               | 0.001                                                    |
| Focus Range(mm)              | 0-90                                                     |
| Accuracy(mm)                 | 3+L/75μm(L is the measuring length)                      |
| Max.Load Capacity(Kg)        | 5                                                        |
| Projector Screen(mm)         | φ300                                                     |
| Projector Screen Rotating(°) | 0-360                                                    |
| Working Environment          | Room Temperature:20°C±5°C<br>Relative Humidity:40%-70%RH |
| Power Supply                 | 220V/50Hz                                                |
| Gross/Net weight(Kg)         | 135                                                      |
| Dimension (mm)               | 380*694*1058                                             |
| Objective Lens               |                                                          |
| Magnification                | 10x(Standard)                                            |
| View Field                   | φ30mm                                                    |
| Working Distance             | 75mm                                                     |

|                |       |      |
|----------------|-------|------|
| 20x(Optional)  | φ15mm | 69mm |
| 50x(Optional)  | φ6mm  | 44mm |
| 100x(Optional) | φ3mm  | 26mm |

AUTOMATIC FLASH IMAGE MEASURING EQUIPMENT

- HIGH EFFICIENT PRECISE SIMPLE FAST OUTPUT
- Automatic focus adjustment: "automatic focus" can automatically adjust the z-axis height, so that the measured object is in a clear state
  - Measurement at 99+ different characteristics of the workpiece at same time
  - Automatic measurement: The self-developed automatic measurement operator realizes the simultaneous measurement of width, hole, ring, angle and other elements. It is easy to use and fast to measure
  - Measurement results are automatically saved, export to statistical forms
  - Measure 100+ workpiece at one time

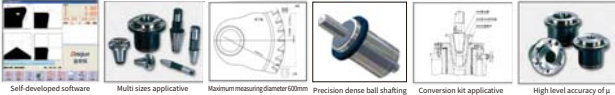
| Item no.                      |                          | 1805-2000                                                                                         | 1805-2010                                                                                          |
|-------------------------------|--------------------------|---------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------|
| Measuring range(mm)           | wide field               | ø100×80                                                                                           | 200×200                                                                                            |
|                               | small field              | /                                                                                                 | 130×130                                                                                            |
| Accuracy (μm)                 | Without splicing         | ±3                                                                                                | ±3                                                                                                 |
|                               | With splicing            | /                                                                                                 | ±1                                                                                                 |
|                               | Without splicing         | /                                                                                                 | ± (5+0.02L)                                                                                        |
|                               | With splicing            | /                                                                                                 | ± (3+0.02L)                                                                                        |
| repeated accuracy (μm)        | Without splicing         | ±1                                                                                                | ±1                                                                                                 |
|                               | With splicing            | /                                                                                                 | ±0.5                                                                                               |
|                               | Without splicing         | /                                                                                                 | ±2                                                                                                 |
|                               | With splicing            | /                                                                                                 | ±1.5                                                                                               |
| Travel(mm)                    |                          | Z axis:75                                                                                         | X axis:120,Y axis:125, Z axis:75                                                                   |
| Dimension of glass plate (mm) |                          | 150×150                                                                                           | 249×229                                                                                            |
| Optical System                | Lens                     | Φ100mm Bi-telecentric lens                                                                        | Φ100mm Double field, Bi-telecentric lens                                                           |
|                               | Surface light (electric) | 4-zone medium and low angle ring lighting (white light), ring(directional) lighting (green light) | 4-zone medium and low angle ring lighting (white light), ring (directional) lighting (green light) |
|                               | Transmission light       | Telecentric Parallel Illumination (Green Light)                                                   | Telecentric Parallel Illumination (Green Light)                                                    |
| Dimension (mm)                |                          | 580×235×790                                                                                       | 580×430×790                                                                                        |
| Weight(kg)                    |                          | ≈40                                                                                               | ≈55                                                                                                |
| Capacity(kg)                  |                          | 5                                                                                                 |                                                                                                    |
| Measuring results             |                          | 2D measurement                                                                                    |                                                                                                    |
| Data output                   |                          | Data transmission and statistics                                                                  |                                                                                                    |
| Power requirement             |                          | 220V~, 50Hz, 600W                                                                                 |                                                                                                    |
| Operating Environment         |                          | Temperature: +20±2°C, Humidity: 30%-80%, Vibration: <0.002g, <15Hz                                |                                                                                                    |

| Standard Configuration | Optional Configuration     |                           |
|------------------------|----------------------------|---------------------------|
| Machines               | Coaxial light              | Network card              |
| Computer               | Pedal                      | CAD import function       |
| encryption system      | Data transmission software | MES transmission function |
| Software               | Remote control function    | Customization             |



DIGITAL TOOL PRESETTER

- The guide rail of the instrument is a mixed structure of rolling and sliding (plastic paste). The X direction is a sliding (plastic-coated) guide rail with good rigidity and stable precision, driven by a ball screw. The Z direction is THK precision rolling guide imported from Japan. Flexible operation, high precision, long life, no crawling
- The Z direction of the instrument is equipped with a fast and micro-movement mechanism
- The tool locking adopts vacuum locking, which has strong versatility (The instrument comes with a vacuum pump)
- The instrument adopts CCD optical non-contact measurement system. The display part is a 17" color LCD screen
- The instrument is equipped with image processing software, which has the functions of automatic tracking and recognition of the full-screen winter shape of the cutting edge and automatic and accurate measurement of the radius and length of the cutting tool
- The instrument can automatically track and measure the angle and arc R of the tool
- The instrument has a center preset function, which can accurately adjust the boring and milling tools to the required size
- The instrument is equipped with a precision grating system, which has the functions of metric and imperial conversion and diameter and radius conversion
- The instrument is controlled by PC, which can exchange data with the host very well, and can store the information of 10,000 cutting tools
- The instrument can be equipped with a variety of general-purpose printers (optional).11. The instrument can choose ISO/BT50, 40, 30, HSK, VDI, and other spindle forms and can be equipped with various diameter reducing devices (optional).The instrument adopts a fully enclosed, electrostatically sprayed shell. Marble top, floor base. It is suitable for on-site use in modern large-scale workshops



| Dasqua Code                       |                              | 1805-1000                    | 1805-1005 |
|-----------------------------------|------------------------------|------------------------------|-----------|
| Measuring Range                   | Radial (X) Measuring Range R | 300(Φ600)                    | 300(Φ600) |
|                                   | Axial (Z) Measuring Range L  | 600                          | 700       |
| Resolution                        |                              | 0.001mm                      |           |
| Display System                    | Objective Lens Magnification | 2X                           |           |
|                                   | Total Magnification          | 70X                          |           |
|                                   | Display Screen               | 17" LCD                      |           |
|                                   | Light Source                 | LED cold light               |           |
| Spindle Parameters                | Spindle Runout               | Radial circular runout ≤ 5μm |           |
|                                   | Spindle Taper                | 7:24                         |           |
|                                   | Drive Mode                   | Manual                       |           |
| Repeated Positioning              | X                            | ±0.002mm                     |           |
| Accuracy                          | Y                            | ±0.002mm                     |           |
| Computer                          |                              | Standard Configuration       |           |
| Instrument Dimensions: (LxWxH) mm |                              | 1300x650x1950                |           |

| Code      | ACCESSORY                  | REMARK         |
|-----------|----------------------------|----------------|
| 1805-0065 | The Vacuum Clamping Device | For ISO30/BT30 |
| 1805-0050 | Spindle Adapter            | BT50-BT30      |
| 1805-0070 | Spindle Adapter            | BT50-BT40      |
| 1805-0075 | Spindle Adapter            | BT50-HSK32     |
| 1805-0080 | Spindle Adapter            | BT50-HSK40     |
| 1805-0085 | Spindle Adapter            | BT50-HSK50     |
| 1805-0090 | Spindle Adapter            | BT50-HSK63     |
| 1805-0095 | Spindle Adapter            | BT50-HSK80     |
| 1805-0100 | Spindle Adapter            | BT50-HSK100    |

- Note:
- The Vacuum clamping device is a must when order HSK Type Spindle Adapter
  - Working table is not included for Manual type and Semi-Automatic type

DIGITAL TOOL PRESETTER

- Provide comprehensive tool measurement and detection functions, which can measure tool diameter, height, angle, runout, deviation calculation, straight line and vertical distance, edge shape difference, etc
- Can measure all kinds of boring cutters, milling cutters, non-standard customized tools, etc
- Adjustable column is used to facilitate the precision adjustment and restoration of the body and prolong the service life
- Mechanical drive design, no need air source, no consumable parts
- Universal computerized design, no need for professional motherboard, low maintenance cost
- The base and column are made of high-quality steel materials, which have the same thermal expansion coefficient as the guide rail material, and can be used directly in the workshop environment
- High-precision digital imaging system, 50 times magnification
- Key components such as the spindle, grating, imaging, and guide rails are designed with double seals
- Standard fine adjustment system for micron-level measurement
- Automatic tracking of dynamic crosshairs, automatic recognition of blade shape, graphical interface, one-button measurement
- Multiple languages are available

| Code                                      |                                                                                       | 1805-0020 | 1805-3000 | 1805-3005 | 1805-3010 | 1805-3015 | 1805-3020 | 1805-3025 | 1805-3030 |
|-------------------------------------------|---------------------------------------------------------------------------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| Measuring Range                           | X Axis (mm)                                                                           | 300       | 300       | 400       | 400       | 400       | 500       | 500       | 600       |
|                                           | Z Axis (mm)                                                                           | 400       | 500       | 500       | 600       | 700       | 600       | 700       | 700       |
| Spindle Holder                            | ISO50, ISO40 (optional)                                                               |           |           |           |           |           |           |           |           |
| Spindle accuracy                          | 0.001mm                                                                               |           |           |           |           |           |           |           |           |
| Bearing weight of spindle                 | 100KG                                                                                 |           |           |           |           |           |           |           |           |
| Accuracy of displaying                    | 1um                                                                                   |           |           |           |           |           |           |           |           |
| Negative direction through spindle center | 50mm                                                                                  |           |           |           |           |           |           |           |           |
| Fine adjustment magnifications            | Wireless fine adjustment system for micron-level measurement<br>50times               |           |           |           |           |           |           |           |           |
| Drive model                               | Manual both X and Y axis                                                              |           |           |           |           |           |           |           |           |
| Display system                            | Digital Industrial Imaging System USB High Speed Connection                           |           |           |           |           |           |           |           |           |
| Weight                                    | Above 100KG (different depends on different sizes)                                    |           |           |           |           |           |           |           |           |
| Dimension                                 | 900mm×400mm×1000mm (different depends on different sizes)                             |           |           |           |           |           |           |           |           |
| Power supply                              | 220V±10% AC 50Hz                                                                      |           |           |           |           |           |           |           |           |
| Applicable Temperature                    | -10℃-50℃                                                                              |           |           |           |           |           |           |           |           |
| Applicable Humidity                       | <90%                                                                                  |           |           |           |           |           |           |           |           |
| Computer                                  | 4G memory, 3.0G dual-core, 500G hard disk<br>Windows system, 6 USB ports, RS232 port. |           |           |           |           |           |           |           |           |
| Display                                   | 21 Inch LCD screen                                                                    |           |           |           |           |           |           |           |           |



AUTOMATIC DIGITAL TOOL PRESETTER

- Provide comprehensive tool measurement and detection functions, which can measure tool diameter, height, angle, runout, deviation calculation, straight line and vertical distance, edge shape difference, etc
- Can measure all kinds of boring cutters, milling cutters, non-standard customized tools, etc
- Adjustable column is used to facilitate the precision adjustment and restoration of the body and prolong the service life
- Mechanical drive design, no need air source, no consumable parts
- Universal computerized design, no need for professional motherboard, low maintenance cost
- The base and column are made of high-quality steel materials, which have the same thermal expansion coefficient as the guide rail material, and can be used directly in the workshop environment
- High-precision digital imaging system, 50 times magnification
- Key components such as the spindle, grating, imaging, and guide rails are designed with double seals
- Standard fine adjustment system for micron-level measurement
- Automatic tracking of dynamic crosshairs, automatic recognition of blade shape, graphical interface, one-button measurement
- Multiple languages are available

| Code                                      |                                                                                       | 1805-4000 | 1805-4005 | 1805-4010 | 1805-4015 | 1805-4025 | 1805-4020 | 1805-4025 | 1805-4030 |
|-------------------------------------------|---------------------------------------------------------------------------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| Measuring Range                           | X Axis (mm)                                                                           | 300       | 300       | 400       | 400       | 400       | 500       | 500       | 600       |
|                                           | Z Axis (mm)                                                                           | 400       | 500       | 500       | 600       | 700       | 600       | 700       | 700       |
| Spindle Holder                            | ISO50, ISO40 (optional)                                                               |           |           |           |           |           |           |           |           |
| Spindle accuracy                          | 0.001mm                                                                               |           |           |           |           |           |           |           |           |
| Bearing weight of spindle                 | 100KG                                                                                 |           |           |           |           |           |           |           |           |
| Accuracy of displaying                    | 1um                                                                                   |           |           |           |           |           |           |           |           |
| Negative direction through spindle center | 50mm                                                                                  |           |           |           |           |           |           |           |           |
| Fine adjustment magnifications            | Wireless fine adjustment system for micron-level measurement<br>50times               |           |           |           |           |           |           |           |           |
| Drive model                               | Automatic both X and Y axis                                                           |           |           |           |           |           |           |           |           |
| Display system                            | Digital Industrial Imaging System USB High Speed Connection                           |           |           |           |           |           |           |           |           |
| Weight                                    | Above 100KG (different depends on different sizes)                                    |           |           |           |           |           |           |           |           |
| Dimension                                 | 900mm×400mm×1000mm (different depends on different sizes)                             |           |           |           |           |           |           |           |           |
| Power supply                              | 220V±10% AC 50Hz                                                                      |           |           |           |           |           |           |           |           |
| Applicable Temperature                    | -10℃-50℃                                                                              |           |           |           |           |           |           |           |           |
| Applicable Humidity                       | <90%                                                                                  |           |           |           |           |           |           |           |           |
| Computer                                  | 4G memory, 3.0G dual-core, 500G hard disk<br>Windows system, 6 USB ports, RS232 port. |           |           |           |           |           |           |           |           |
| Display                                   | 21 Inch LCD screen                                                                    |           |           |           |           |           |           |           |           |

