

### Vernier Calipers

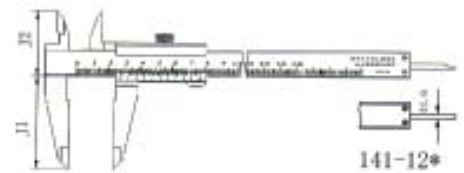


#### Features

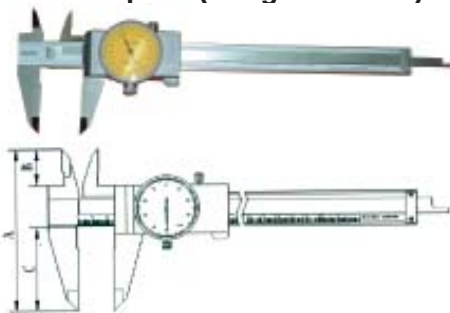
- Stainless Steel
- Mono-block vernier
- 600mm range and above are with fine adjustment

#### Technical Specifications

| Ref. No   | Model    | Range mm | Resolution mm | J1 mm | J2 mm |
|-----------|----------|----------|---------------|-------|-------|
| GL03 B00  | 1141-102 | 150      | 0.02          | 40    | 37    |
| GL03 B002 | 141-104  | 200      | 0.02          | 60    | 42    |
| GL03 B003 | 141-106  | 300      | 0.02          | 60    | 42    |
| GL03 B004 | 141-710  | 600      | 0.02          | 100   | -     |
| GL03 B005 | 141-714  | 1000     | 0.02          | 150   | -     |
| GL03 B006 | 141-716  | 1500     | 0.02          | 150   | -     |
| GL03 B007 | 141-718  | 2000     | 0.02          | 150   | -     |



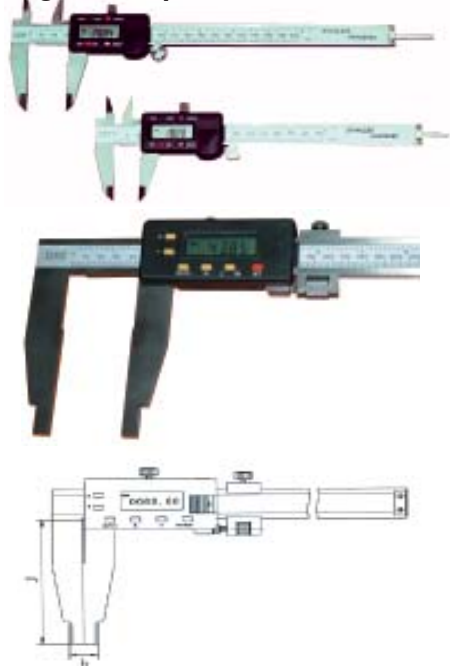
### Dial Calipers (Integrated Dial)



#### Technical Specifications

| Ref. No   | Model   | Range mm | Grad. mm | A mm | B mm | C mm |
|-----------|---------|----------|----------|------|------|------|
| GL03 C001 | 171-132 | 150      | 0.02     | 77   | 17.3 | 40   |
| GL03 C002 | 171-134 | 200      | 0.02     | 90   | 20.3 | 50   |
| GL03 C003 | 171-136 | 300      | 0.02     | 102  | 21.3 | 60   |

### Digital Calipers



#### Features

- Manual power on/off, Zero setting at any position
- Metric/Inch system interchange at any position
- Data output interface
- Display holding function
- Fast tracing function
- Zero setting at any position
- Absolute measurement and relative measurement interchange at any position
- The function of fast tracing Maximum and Minimum value during measurements
- Fine Adjustment

#### Technical Specifications

| Ref. No   | Model    | Range mm/in | Resolution mm/in | A mm | B mm | C mm |
|-----------|----------|-------------|------------------|------|------|------|
| GL03 D001 | 111-101E | 150/6       | 0.01/.0005       | 77   | 17.3 | 40   |
| GL03 D002 | 111-102E | 200/8       | 0.01/.0005       | 90   | 20.3 | 50   |
| GL03 D003 | 111-103E | 300/12      | 0.01/.0005       | 102  | 21.3 | 60   |
| Ref. No   | Model    | Range mm/in | Resolution mm    | J mm | b mm |      |
| GL03 D004 | 111-505  | 600/24      | 0.01/.0005       | 40   | 10   |      |
| GL03 D005 | 111-507  | 1000/40     | 0.01/.0005       | 40   | 10   |      |
| GL03 D006 | 111-508  | 1500/60     | 0.01/.0005       | 40   | 10   |      |
| GL03 D007 | 111-509  | 2000/80     | 0.01/.0005       | 40   | 10   |      |
| GL03 D008 | 111-510  | 2500/100    | 0.01/.0005       | 40   | 10   |      |
| GL03 D009 | 111-511  | 3000/120    | 0.01/.0005       | 40   | 10   |      |

### Vernier-Digit Calipers



#### Features

- Manual power on/off
- Zero setting at any position
- Metric/Inch system interchange at any position
- Data output interface
- Vernier Caliper and Digital Caliper Combined

#### Technical Specifications

| Ref. No   | Model   | Range mm/in | Resolution mm/in | Vernier mm/in | A mm | B mm | C mm |
|-----------|---------|-------------|------------------|---------------|------|------|------|
| GL03 D010 | 101-101 | 150/ 6      | 0.01/.0005       | 0.05          | 77   | 16   | 40   |
| GL03 D011 | 101-102 | 200/ 8      | 0.01/.0005       | 0.05          | 90   | 18.5 | 50   |
| GL03 D012 | 101-103 | 300/12      | 0.01/.0005       | 0.05          | 102  | 20.5 | 60   |

### Digital Micrometers



Ref. No : GL03 AP01  
Model : 711-101



Ref. No : GL03 AD01  
Model : 811-001

#### Features

- Auto power on/off
- Zero setting at any position
- Metric/Inch system interchange at any position
- Absolute measurement and relative measurement interchange at any position
- Data holding function
- Tolerance setting

#### Technical Specifications

| Ref. No   | Model   | Range mm/in | Resolution mm/in |
|-----------|---------|-------------|------------------|
| GL03 E001 | 211-101 | 0-25/0-1    | 0.001/0.0005     |
| GL03 E002 | 211-102 | 25-50/1-2   | 0.001/0.0005     |
| GL03 E003 | 211-103 | 50-75/2-3   | 0.001/0.0005     |
| GL03 E004 | 211-104 | 75-100/3-4  | 0.001/0.0005     |

#### Optional Accessories

##### 1) Printer (Model : 711-101)

Printouts : Measurement data, Number of measurement (N) Average ( $\bar{X}$ ), Standard deviation (S), Max. and Min. value (MAX,MIN)

Printer : Dot Matrix

##### 2) LCD Display Unit (Model : 811-001)

#### Features :

Easy to connect with a capacitive digital measuring instrument (like digital caliper, digital indicator) to fulfil the remote & bigger display of instrument's measuring value

#### Technical Specifications :

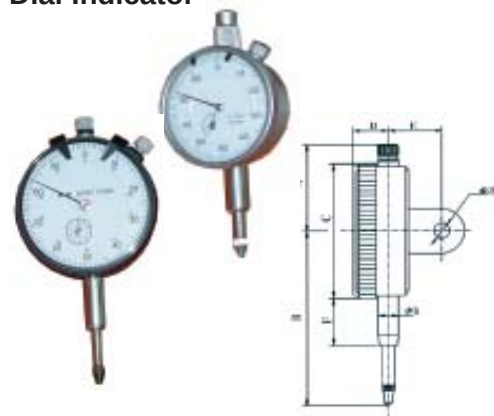
Range to display : +999.99mm, +39",  
Resolution : 0.01mm/0.0005"

##### 3) Interface cable & software

Ref. No : GL03 ASC1

Model : Win-2

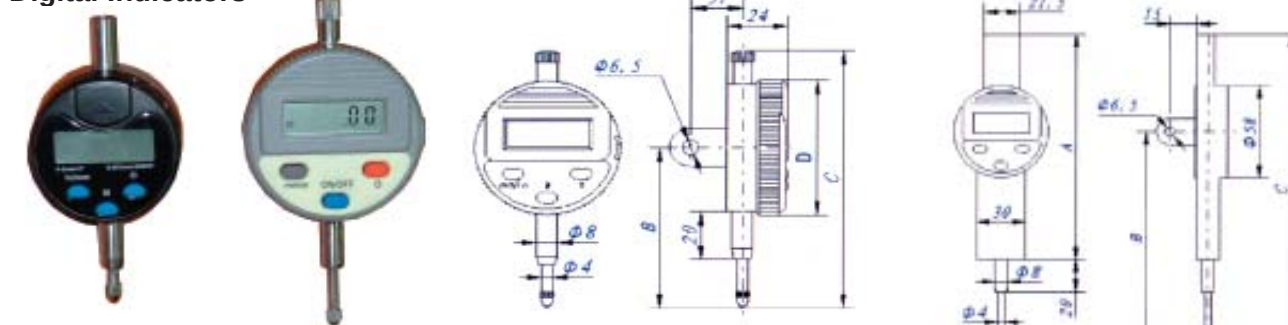
### Dial Indicator



#### Technical Specifications

| Ref. No   | Model   | Range mm | Grad mm | A mm | B mm | C mm | D mm | E mm | F mm | Öa mm | Öb mm |
|-----------|---------|----------|---------|------|------|------|------|------|------|-------|-------|
| GL03 F001 | 321-122 | 0- 3     | 0.01    | 36   | 67   | Ö55  | 15   | 16   | 19.5 | 6.35  | Ö8    |
| GL03 F002 | 321-123 | 0- 5     | 0.01    | 36   | 67   | Ö55  | 15   | 16   | 19.5 | 6.35  | Ö8    |
| GL03 F003 | 321-125 | 0-10     | 0.01    | 36   | 67   | Ö55  | 15   | 16   | 19.5 | 6.35  | Ö8    |
| GL03 F004 | 321-131 | 0-25     | 0.01    | 36   | 79   | Ö55  | 15   | 16   | 19.5 | 6.35  | Ö8    |
| GL03 F005 | 321-129 | 0-30     | 0.01    | 36   | 85   | Ö55  | 15   | 16   | 19.5 | 6.35  | Ö8    |
| GL03 F006 | 321-130 | 0-50     | 0.01    | 122  | 140  | Ö55  | 15   | 16   | 52   | 6.35  | Ö8    |

### Digital Indicators



#### Features

- Auto power on/off
- Zero setting at any position
- Data output interface
- Data holding function
- Metric/Inch system interchange at any position
- Fast tracing of Maximum or Minimum value during measurements

#### Technical Specifications

| Ref. No   | Model   | Range mm/in | Resolution mm/in | A mm | B mm | C mm | D mm |
|-----------|---------|-------------|------------------|------|------|------|------|
| GL03 G001 | 312-001 | 0-15/0.6    | 0.001/0.0005     |      | 68   | 110  | 58   |
| GL03 G002 | 312-101 | 0-10/0.4    | 0.01/0.0005      |      | 68   | 110  | 58   |
| GL03 G003 | 312-103 | 0-30/1.2    | 0.01/0.0005      | 122  | 128  | 179  | 58   |
| GL03 G004 | 312-105 | 0-50/2      | 0.01/0.0005      | 162  | 168  | 239  | 58   |

### Digital Thickness Gauge



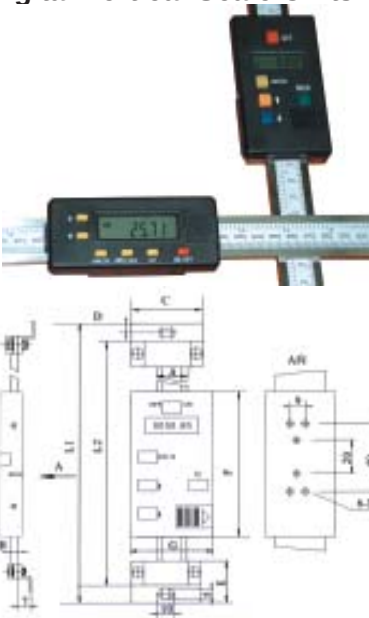
#### Features

- Auto power on/off
- Zero setting at any position
- Metric/Inch system interchange at any position
- Data output interface
- Data holding function
- Light weight
- Easy to operate
- Fast tracing of maximum or minimum value during measurements

#### Technical Specifications

| Ref. No   | Model   | Range mm/in | Resolution mm/in | Throat Depth/mm |
|-----------|---------|-------------|------------------|-----------------|
| GL03 H001 | 316-150 | 10/.4       | 0.01/.0005       | 30              |
| GL03 H002 | 316-151 | 10/.4       | 0.01/.0005       | 120             |
| GL03 H003 | 315-101 | 0-15/.6     | 0.01/.0005       |                 |
| GL03 H004 | 315-102 | 0-25/1      | 0.01/.0005       |                 |

### Digital Vertical Scale Units



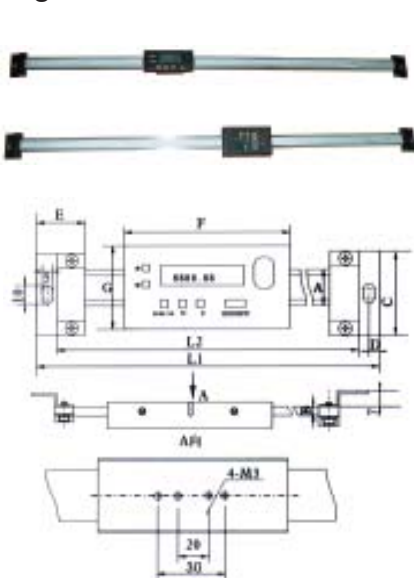
#### Features

- Manual power on/off
- Zero setting at any position
- Metric/Inch system interchange at any position
- Data output interchange
- Tolerance setting

#### Technical Specifications

| Ref. No   | Model   | Range mm/in | Resolution mm/in | A     | B     | C     | D   | E     | F     | G     | L1   | L2   |
|-----------|---------|-------------|------------------|-------|-------|-------|-----|-------|-------|-------|------|------|
| GL03 J001 | 812-200 | 100/4       | 0.01/.0005       | 20    | 4     | 40    | 6   | 24    | 70    | 40    | 244  | 220  |
| GL03 J002 | 812-201 | 150/6       | 0.01/.0005       | 20    | 4     | 40    | 6   | 24    | 70    | 40    | 294  | 270  |
| GL03 J003 | 812-202 | 200/8       | 0.01/.0005       | 20    | 4     | 40    | 6   | 24    | 70    | 40    | 344  | 320  |
| GL03 J004 | 812-203 | 300/12      | 0.01/.0005       | 20    | 4     | 40    | 6   | 24    | 70    | 40    | 444  | 420  |
| GL03 J005 | 812-204 | 400/16      | 0.01/.0005       | 20    | 4     | 40    | 6   | 24    | 70    | 40    | 594  | 570  |
| GL03 J006 | 812-205 | 500/20      | 0.01/.0005       | 20 24 | 4 5.5 | 40 45 | 6 8 | 24 32 | 70 90 | 40 51 | 682  | 650  |
| GL03 J007 | 812-206 | 600/24      | 0.01/.0005       | 20 24 | 4 5.5 | 40 45 | 6 8 | 24 32 | 70 90 | 40 51 | 782  | 750  |
| GL03 J008 | 812-207 | 750/30      | 0.01/.0005       | 24    | 5.5   | 45    | 10  | 32    | 90    | 51    | 932  | 900  |
| GL03 J009 | 812-208 | 800/32      | 0.01/.0005       | 24    | 5.5   | 45    | 10  | 32    | 90    | 51    | 982  | 950  |
| GL03 J010 | 812-210 | 1000/40     | 0.01/.0005       | 31    | 10.5  | 60    | 10  | 40    | 90    | 51    | 1240 | 1200 |
| GL03 J011 | 812-215 | 1500/60     | 0.01/.0005       | 31    | 10.5  | 60    | 10  | 40    | 90    | 51    | 1740 | 1700 |
| GL03 J012 | 812-220 | 2000/80     | 0.01/.0005       | 31    | 10.5  | 60    | 10  | 40    | 90    | 51    | 2240 | 2200 |

### Digital Horizontal Scale Units



#### Features

- Manual power on/off
- Zero setting at any position
- Metric/Inch system interchange at any position
- Fast tracing of minimum or maximum value during measurements
- Data output interchange
- Data holding function
- Tolerance setting

#### Technical Specifications

| Ref. No   | Model   | Range mm/in | Resolution mm/in | A  | B    | C  | D  | E  | F     | G  | L1   | L2   |
|-----------|---------|-------------|------------------|----|------|----|----|----|-------|----|------|------|
| GL03 J013 | 812-100 | 100/ 4      | 0.01/.0005       | 16 | 4    | 36 | 6  | 24 | 58    | 34 | 209  | 185  |
| GL03 J014 | 812-101 | 150/ 6      | 0.01/.0005       | 16 | 4    | 36 | 6  | 24 | 58    | 34 | 259  | 235  |
| GL03 J015 | 812-102 | 200/ 8      | 0.01/.0005       | 16 | 4    | 36 | 6  | 24 | 58    | 34 | 310  | 286  |
| GL03 J016 | 812-103 | 300/12      | 0.01/.0005       | 16 | 4    | 36 | 6  | 24 | 58    | 34 | 444  | 420  |
| GL03 J017 | 812-104 | 400/16      | 0.01/.0005       | 16 | 4    | 36 | 6  | 24 | 58    | 34 | 594  | 570  |
| GL03 J018 | 812-105 | 500/20      | 0.01/.0005       | 24 | 5.5  | 45 | 8  | 32 | 92    | 40 | 682  | 650  |
| GL03 J019 | 812-106 | 600/24      | 0.01/.0005       | 24 | 5.5  | 45 | 8  | 32 | 92    | 40 | 782  | 750  |
| GL03 J020 | 812-107 | 750/30      | 0.01/.0005       | 24 | 5.5  | 45 | 8  | 32 | 92    | 40 | 932  | 900  |
| GL03 J021 | 812-108 | 800/32      | 0.01/.0005       | 24 | 5.5  | 45 | 8  | 32 | 92    | 40 | 982  | 950  |
| GL03 J022 | 812-110 | 1000/40     | 0.01/.0005       | 31 | 10.5 | 60 | 10 | 40 | 124.5 | 54 | 1240 | 1200 |
| GL03 J023 | 812-115 | 1500/60     | 0.01/.0005       | 31 | 10.5 | 60 | 10 | 40 | 124.5 | 54 | 1740 | 1700 |
| GL03 J024 | 812-120 | 2000/80     | 0.01/.0005       | 31 | 10.5 | 60 | 10 | 40 | 124.5 | 54 | 2240 | 2200 |

### Digital Height Gauge



Double-column

#### Features

- Big LCD display
- ABS (absolute and relative measurement)
- Data hold
- Data output
- Tolerance presetting

#### Technical Specifications

| Ref. No   | Model   | Range mm/in |
|-----------|---------|-------------|
| GL03 K001 | 131-103 | 300/12      |
| GL03 K002 | 131-106 | 600/24      |
| GL03 K003 | 131-108 | 800/32      |
| GL03 K004 | 131-110 | 1000/40     |
| GL03 K005 | 131-115 | 1500/60     |
| GL03 K006 | 131-120 | 2000/80     |
| GL03 K007 | 132-103 | 300/12      |
| GL03 K008 | 132-106 | 600/24      |
| GL03 K009 | 132-108 | 800/32      |
| GL03 K010 | 132-110 | 1000/40     |
| GL03 K011 | 132-115 | 1500/60     |
| GL03 K012 | 132-120 | 2000/80     |

|                  |            |          |          |          |          |
|------------------|------------|----------|----------|----------|----------|
| Resolution mm/in | 0.01/.0005 |          |          |          |          |
| Range mm         | 0-20       | >200-400 | >400-600 | >600-800 | >800-100 |
| Accuracy mm      | ±0.03      | ±0.04    | ±0.05    | ±0.06    | ±0.07    |

### Gauge Block



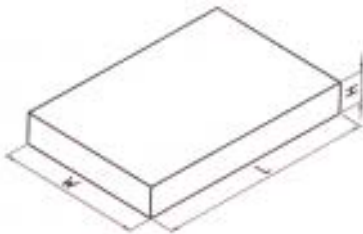
Gauge blocks are fundamental standards for linear measurement. For adjusting, checking or inspecting measuring instrument, tools and precision workpieces. Gauge blocks are used either individually or in combination of several blocks which are wrung together. They are wear resistance and heat-treated in special ways so as to stabilize their lengths.

| Ref. No   | Model    | Total blocks | Class | Nominal dimension(mm) | Steps (mm) | No. of blocks |
|-----------|----------|--------------|-------|-----------------------|------------|---------------|
|           |          |              |       | 1.0005                | -          | 1             |
| MC03 Q001 | 94600-02 | 112          | 0     | 1.001-1.009           | 0.001      | 9             |
| MC03 Q002 | 94600-04 | 112          | 1     | 1.01-1.49             | 0.01       | 49            |
| MC03 Q003 | 94600-06 | 112          | 2     | 0.5-24.5              | 0.5        | 49            |
|           |          |              |       | 25-100                | 25         | 4             |
| MC03 Q004 | 94600-12 | 103          | 0     | 1.005                 | -          | 1             |
| MC03 Q005 | 94600-14 | 103          | 1     | 1.01-1.49             | 0.01       | 49            |
| MC03 Q006 | 94600-16 | 103          | 2     | 0.5-24.5              | 0.5        | 49            |
|           |          |              |       | 25-100                | 25         | 4             |
| MC03 Q007 | 94600-22 | 87           | 0     | 1.001-1.009           | 0.001      | 9             |
| MC03 Q008 | 94600-24 | 87           | 1     | 1.01-1.49             | 0.01       | 49            |
| MC03 Q009 | 94600-26 | 87           | 2     | 0.5-9.5               | 0.5        | 19            |
|           |          |              |       | 10-100                | 10         | 10            |
|           |          |              |       | 1.005                 | -          | 1             |
| MC03 Q010 | 94600-32 | 47           | 0     | 1.01-1.09             | 0.01       | 9             |
| MC03 Q011 | 94600-34 | 47           | 1     | 1.1-1.9               | 0.1        | 9             |
| MC03 Q012 | 94600-36 | 47           | 2     | 1-24                  | 1          | 24            |
|           |          |              |       | 25-100                | 25         | 4             |
|           |          |              |       | 1.005                 | -          | 1             |
| MC03 Q013 | 94600-42 | 38           | 0     | 1.01-1.09             | 0.01       | 9             |
| MC03 Q014 | 94600-44 | 38           | 1     | 1.1-1.9               | 0.1        | 9             |
| MC03 Q015 | 94600-46 | 38           | 2     | 1-9                   | 1          | 9             |
|           |          |              |       | 10-100                | 10         | 10            |
| MC03 Q016 | 94600-52 | 8            | 0     | 125-200               | 25         | 4             |
| MC03 Q017 | 94600-54 | 8            | 1     | 300-500               | 100        | 3             |
| MC03 Q018 | 94600-56 | 8            | 2     |                       |            |               |

### Carbide Gauge Block

| Ref. No   | Model    | Total blocks | Class | Nominal dimension(mm) | Steps (mm) | No. of blocks |
|-----------|----------|--------------|-------|-----------------------|------------|---------------|
|           |          |              |       | 1.0005                | -          | 1             |
| MC03 Q019 | 94602-02 | 112          | 0     | 1.001-1.009           | 0.001      | 9             |
| MC03 Q020 | 94602-04 | 112          | 1     | 1.01-1.49             | 0.01       | 49            |
| MC03 Q021 | 94602-06 | 112          | 2     | 0.5-24.5              | 0.5        | 49            |
|           |          |              |       | 25-100                | 25         | 4             |
| MC03 Q022 | 94602-12 | 103          | 0     | 1.005                 | -          | 1             |
| MC03 Q023 | 94602-14 | 103          | 1     | 1.01-1.49             | 0.01       | 49            |
| MC03 Q024 | 94602-16 | 103          | 2     | 0.5-24.5              | 0.5        | 49            |
|           |          |              |       | 25-100                | 25         | 4             |
| MC03 Q025 | 94602-22 | 87           | 0     | 1.001-1.009           | 0.001      | 9             |
| MC03 Q026 | 94602-24 | 87           | 1     | 1.01-1.49             | 0.01       | 49            |
| MC03 Q027 | 94602-26 | 87           | 2     | 0.5-9.5               | 0.5        | 19            |
|           |          |              |       | 10-100                | 10         | 10            |

### Precision Granite Plate



Precision granite plate is made of well mixed black & precision granite. The surface is level and smooth. Suitable for correcting accurate instrument and testing extra working parts.

|           |          |      |      |     |           |         | Unit:mm |
|-----------|----------|------|------|-----|-----------|---------|---------|
| Ref. No   | Model    | L    | W    | H   | Precision | N.W     |         |
| MC03 R001 | 39380-05 | 300  | 300  | 60  | ±0.003    | 25 kg   |         |
| MC03 R002 | 39380-10 | 300  | 450  | 75  | ±0.004    | 31 kg   |         |
| MC03 R003 | 39380-15 | 450  | 450  | 75  | ±0.004    | 45 kg   |         |
| MC03 R004 | 39380-20 | 600  | 450  | 100 | ±0.005    | 80 kg   |         |
| MC03 R005 | 39380-25 | 600  | 600  | 100 | ±0.005    | 110 kg  |         |
| MC03 R006 | 39380-30 | 600  | 750  | 100 | ±0.007    | 140 kg  |         |
| MC03 R007 | 39380-35 | 600  | 900  | 130 | ±0.007    | 210 kg  |         |
| MC03 R008 | 39380-40 | 900  | 900  | 150 | ±0.008    | 380 kg  |         |
| MC03 R009 | 39380-45 | 900  | 1200 | 150 | ±0.009    | 490 kg  |         |
| MC03 R010 | 39380-50 | 1000 | 750  | 135 | ±0.011    | 380 kg  |         |
| MC03 R011 | 39380-55 | 1000 | 1000 | 150 | ±0.008    | 450 kg  |         |
| MC03 R012 | 39380-60 | 1000 | 1500 | 150 | ±0.012    | 690 kg  |         |
| MC03 R013 | 39380-65 | 1000 | 2000 | 200 | ±0.012    | 1228 kg |         |

### Precision Cast Iron Surface Plate

|           |          |      |      |     |           |        | Unit:mm |
|-----------|----------|------|------|-----|-----------|--------|---------|
| Ref. No   | Model    | L    | W    | H   | Precision | N.W    |         |
| MC03 R050 | 39381-05 | 300  | 300  | 60  | ±0.02     | 18 kg  |         |
| MC03 R051 | 39381-10 | 450  | 300  | 75  | ±0.02     | 27 kg  |         |
| MC03 R052 | 39381-15 | 450  | 450  | 85  | ±0.03     | 48 kg  |         |
| MC03 R053 | 39381-20 | 500  | 500  | 100 | ±0.03     | 50 kg  |         |
| MC03 R054 | 39381-25 | 600  | 450  | 100 | ±0.03     | 55 kg  |         |
| MC03 R055 | 39381-30 | 600  | 600  | 100 | ±0.03     | 75 kg  |         |
| MC03 R056 | 39381-35 | 600  | 750  | 110 | ±0.04     | 110 kg |         |
| MC03 R057 | 39381-40 | 600  | 900  | 110 | ±0.04     | 130 kg |         |
| MC03 R058 | 39381-45 | 900  | 900  | 125 | ±0.05     | 250 kg |         |
| MC03 R059 | 39381-50 | 900  | 1200 | 150 | ±0.05     | 380 kg |         |
| MC03 R060 | 39381-55 | 1000 | 1000 | 135 | ±0.05     | 280 kg |         |
| MC03 R061 | 39381-60 | 1000 | 1500 | 150 | ±0.05     | 540 kg |         |
| MC03 R062 | 39381-65 | 1000 | 2000 | 170 | ±0.05     | 800 kg |         |

## Measuring System

### Profile Projector



The image on the screen is in the same direction with the work pieces. It is widely used in the trade of mechanism, meter, electricity and light industry, college, research institute and the measuring checking department. This instrument can inspect all kinds of surface and outline of complicated work-pieces such as template, pressing work-pieces, Cam, Screw thread Gear, perform milling cutter etc.

#### Technical Specifications

| Ref. No                      | Model                       | RP03 S001<br>CPJ-3007Z                                                                                                                                    | RP03 S002<br>CPJ-3010Z | RP03 S003<br>CPJ-3015Z | RP03 S004<br>CPJ-3025Z                      |
|------------------------------|-----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------|------------------------|---------------------------------------------|
| Working table                | The metal table's size (mm) | 260 x 152                                                                                                                                                 | 306 x 152              | 340 x 152              | 450 x 280                                   |
|                              | The glass table's size (mm) | 125 x 100                                                                                                                                                 | 175 x 100              | 196 x 96               | 306 x 196                                   |
|                              | X-axis travel (mm)          | 75                                                                                                                                                        | 100                    | 150                    | 250                                         |
|                              | Y-axis travel (mm)          | 50                                                                                                                                                        | 50                     | 50                     | 150                                         |
|                              | Z-axis travel (mm)          | 90 (for focus)                                                                                                                                            | 90 (for focus)         | 90 (for focus)         | 100 (adjust the focus by the projector box) |
| Measuring accuracy (μm)      |                             | 3+L/75                                                                                                                                                    | 3+L/50                 | 4+L/50                 | 3+L/75                                      |
| Resolution of X-axis, Y-axis |                             | 0.001mm                                                                                                                                                   |                        |                        |                                             |
| Projection screen            | Plate size (mm)             | Ø312, used range > Ø 300 (with the meter line)                                                                                                            |                        |                        |                                             |
|                              | Plate rotary range          | 0 ~ 360°                                                                                                                                                  |                        |                        |                                             |
|                              | Rotary angle resolution     | 1' or 0.01°                                                                                                                                               |                        |                        |                                             |
| Lens                         | Magnification               | 10 X (standard)                                                                                                                                           | 20 X (option)          | 50 X (option)          | 100 X (option)                              |
|                              | Object view (mm)            | Ø30                                                                                                                                                       | Ø15                    | Ø6                     | Ø3                                          |
|                              | Working distance (mm)       | 77.7                                                                                                                                                      | 44.3                   | 24.5                   | 25.3                                        |
| Data processing system       |                             | DC-3000 multifunction data displaying system can be used to gather the data and measure the point, line, circle, distance and the angle with multi-point. |                        |                        |                                             |
| Illumination                 |                             | The illumination of transmission and reflection: 24V, 150W-halogen lamp                                                                                   |                        |                        |                                             |
| Power                        |                             | 110V/220V(AC), 50/60HZ, total power 400W                                                                                                                  |                        |                        |                                             |
| Cold                         |                             | By three fans                                                                                                                                             |                        |                        |                                             |
| Dimension                    | D X W X H (mm)              | 770 x 550 x 1100                                                                                                                                          |                        |                        | 780 x 810 x 1120                            |
| Weight                       | Unit : Kg                   | 120                                                                                                                                                       | 125                    | 130                    | 180                                         |
| Option                       |                             | Mini-printer, Edge detector, M2D software and others;                                                                                                     |                        |                        |                                             |

**CPJ-3020W Ø300mm Horizontal Projector****Technical Specifications**

**Projection screen** : Diameter: Ø300mm; Range of the angle measured: 0 ~360°;  
resolution: 1' or 0.01°

**Lens** : Magnification : 10X(option) 20X(option) 50X(option) 100X(option)  
Working distance(mm) : 77.7 44.3 38.4 25.3  
Object View(mm) : Ø30 Ø15 Ø6 Ø3  
Working table area : 400 X 150

**Working Table** : Range measured : X=200, Y=100 ; resolution : 0.001  
The range of the focus adjusted: Y=75 ;  
The indication error of coordinate is  $\leq (4+L/25) \mu\text{m}$

**Power** : 110V/220V, 50Hz/60Hz, 400W  
**Illumination** : Transmission 24v 150w. Illuminated by high and low.  
Reflection 24v 150w. Illuminated by two fibers.

**Dimension** : 1090 x 830 x 1010 (H x W x L)  
**Weight** : 160Kg

**Ref. No** : RP03 S005

**Model** : CPJ-3020W

**CPJ-4025W Ø400mm Horizontal Projector****Technical Specifications**

**Projection screen** : Diameter: Ø400mm; Range of the angle measured: 0 ~360 ° ;  
resolution: 1' or 0.01°

**Lens** : Magnification : 5x 10x 20x 50x 100x  
(option) (standard) (option) (option) (option)  
Working distance : 93.7 103.9 95.1 65.7 35.0  
Object view : Ø80 Ø40 Ø20 Ø8 Ø4

**Working table** : Working table area : 450 x 220  
Range measured : X=250, Z=150 ; resolution : 0.001  
The range of the focus adjusted: Y=100 ;  
The indication error of coordinate is  $\leq (4+L/25) \mu\text{m}$

**Power** : 110V/220V, 50Hz/60Hz, 400W  
**Illumination** : Transmission 24v 150w. Illuminated by high and low. Cooling by fan  
Reflection 24v 150w. Illuminated by two fibers, Cooling by fan

**Dimension** : 1215 x 646 x 1210 (H x W x L)  
**Weight** : 240Kg

**Ref. No** : RP03 S006

**Model** : CPJ-4025W

**DTP-1540 Tool Pre-Adjust Instrument****Features**

The instrument is a precise tool pre-adjust instrument integrating optics, mechanism and electricity. The instrument is widely used in measuring the exact coordinate position of the tools used in the digital control machine tool, processing center and soft manufacturing unit. It can also inspect the angle, round corners, the pit and so on.

**Technical Specifications**

**Measuring range** : Diameter (X-axis direction): Ø300mm  
Height (Z-axis direction): 30-400mm

**Distinguishability** : X : 0.001mm ; Z : 0.001mm

**Standard taper of tool-holders** : 7:24; Taper shank NO: 30, 40, 50; standard: BT50

**Diameter of Screen** : Ø120mm

**Magnification of Lens** : 20X

**Power** : AC 110v/220v, 50Hz/60Hz, reflective lamp: 24v 20w

**Dimension** : 940 X 520 X 870 (mm)

**Net weight** : about 180kg

**Option** : BT40, BT30

**Ref. No** : RP03 S007

**Model** : DTP-1540W

## VMS Series Video Measuring System



### Features

- 1/3" Colour CCD camera
- Sony 1/2" Colour CCD camera (A Series)
- Zoom Lens: 0.7 X -4.5 X
- America NAVITAR Zoom lens 0.7 ~ 4.5 X (A-Series)
- Fitted with electronic image detecting the edge with easy operation, so reduce the aiming error.
- 2-coordinate measuring. It can be used in the trade of mechanic, electronic and plastic etc

### Specialities features

- the digital measurement and data processing system consists of 2-coordinate table, grating scale and DC-3000 data processor.
- Data processing, data displaying, data input and output, especially the skewing function for work-pieces is very practical.
- RS232 interface, measuring software M2D used to process and output the drawing.

### Technical Specifications

| Ref. No<br>Model                                                                                                          |                             | RP03 S008<br>VMS-1510                                                                                                             | RP03 S009<br>VMS-1510A | RP03 S010<br>VMS-2515 | RP03 S011<br>VMS-2515A | RP03 S012<br>VMS-4030                                                                                                                                                                                                    | RP03 S013<br>VMS-4030A |
|---------------------------------------------------------------------------------------------------------------------------|-----------------------------|-----------------------------------------------------------------------------------------------------------------------------------|------------------------|-----------------------|------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------|
| Working<br>table                                                                                                          | The metal table's size (mm) | 354 x 228                                                                                                                         |                        | 450 x 280             |                        | 606 x 466                                                                                                                                                                                                                |                        |
|                                                                                                                           | The glass table's size (mm) | 210 x 160                                                                                                                         |                        | 306 x 196             |                        | 450 x 350                                                                                                                                                                                                                |                        |
|                                                                                                                           | Travel (mm)                 | 150 x 100                                                                                                                         |                        | 250 x 150             |                        | 400x 300                                                                                                                                                                                                                 |                        |
| Weight (kg)                                                                                                               |                             | 100                                                                                                                               |                        | 120                   |                        | 240                                                                                                                                                                                                                      |                        |
| Measuring and aiming system                                                                                               |                             | Camera: 1/3" color CCD camera<br>Total magnification: 0.7-4.5X<br>Total magnification: 40~255X /30~190X<br>Double cross generator |                        |                       |                        | Monitor: 15"color video<br>Working distance : 108mm/92mm<br>Object view : 7~1.1mm /10.6~1.6mm<br>Resolution of X-axis, Y-axis and Z-axis : 0.001mm<br>The indication error of the X-axis and Y-axis is f ≤ (3 + L/75) μm |                        |
| Z-axis up and down: 150mm                                                                                                 |                             |                                                                                                                                   |                        |                       |                        |                                                                                                                                                                                                                          |                        |
| Illumination : Surface and transmission illumination all use LED and the light is adjustable. Power: 220V(AC), 50Hz, 30W. |                             |                                                                                                                                   |                        |                       |                        |                                                                                                                                                                                                                          |                        |

### Standard and option:

| Accessories    | 1X box (option)<br>0.7X ~ 4.5X |  | 0.5 X box (option)<br>0.7X ~ 4.5X |  |                       |
|----------------|--------------------------------|--|-----------------------------------|--|-----------------------|
| Zoom lens      | Video multiple(mm)             |  | Object View(mm)                   |  | Working distance (mm) |
| Appending lens | 20X~128X                       |  | 14~2.2                            |  | 189                   |
| 5X(option)     | 40X~255X                       |  | 7~1.1                             |  | 108                   |
| Standard       | 80X~510X                       |  | 3.5~0.6                           |  | 38                    |
| 2X(option)     |                                |  |                                   |  |                       |

### Standard and option (A Series):

| Accessories    | 1X box (option)<br>0.7X ~ 4.5X |  | 0.5 X box (option)<br>0.7X ~ 4.5X |  |                       |
|----------------|--------------------------------|--|-----------------------------------|--|-----------------------|
| Zoom lens      | Video multiple                 |  | Object View (mm)                  |  | Working distance (mm) |
| Appending lens | 15X~95X                        |  | 20~3.2                            |  | 175                   |
| 0.5X(option)   | 30X~190X                       |  | 10~1.6                            |  | 92                    |
| Standard       | 60X~380X                       |  | 5~0.8                             |  | 36                    |
| 2X(option)     |                                |  |                                   |  |                       |

## M2D 2-dimension graphic measuring system

## M2D-IMG 2-dimension image measuring system

### Features

- Measure the point, line, circle, arc, and ellipse feather with multi-point.
- Rotate the coordinate and skew the coordinate makes the measuring more convenient and quick.
- Many programs makes measure the same work pieces convenient
- Save as "\*.dxf" and edit in AUTOCAD
- Image measuring

| Ref. No   | Model   |
|-----------|---------|
| RP03 AS01 | M2D     |
| RP03 AS02 | M2D-IMG |

### Universal Evaluation Meter

Militron (Analog)



Universal measuring and control instruments with electronic limit switches

Militron (Digital)



Universal measuring and control instruments with electronic limit switches and digital display

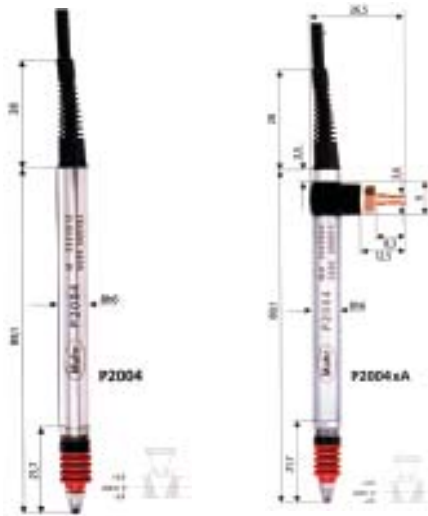
#### Technical Specifications

|                 | Analog                                | Digital                               |
|-----------------|---------------------------------------|---------------------------------------|
| Measuring Range | $\pm 3 \mu\text{m}/0.1 \mu\text{m}$   | $\pm 20 \mu\text{m}/0.01 \mu\text{m}$ |
| /Resolution     | $\pm 10 \mu\text{m}/0.2 \mu\text{m}$  | $\pm 200 \mu\text{m}/0.1 \mu\text{m}$ |
| (option)        | $\pm 30 \mu\text{m}/1 \mu\text{m}$    | $\pm 2000 \mu\text{m}/1 \mu\text{m}$  |
|                 | $\pm 100 \mu\text{m}/2 \mu\text{m}$   |                                       |
|                 | $\pm 300 \mu\text{m}/10 \mu\text{m}$  |                                       |
|                 | $\pm 1000 \mu\text{m}/20 \mu\text{m}$ |                                       |

Ref. No : MH03 TT01

Model : Militron

### Inductive Probes Millimar P2000



Ref. No : MH03 TT02

Model : MillimarProbe

### Universal Measuring Machine Universal Length Measuring Machine



#### Features

- Universal one-coordinate measuring instrument for accurate internal and external measurements.
- Most suitable for testing plug gages, ring gages, snap gages, internal and external thread gages, dial gages, spline gears etc.
- In production/manufacturing the most accurate measurement of precision components.

Ref. No : MH03 TT03

Model : 828 UN

### Formtester

Formtesters - modular and flexible

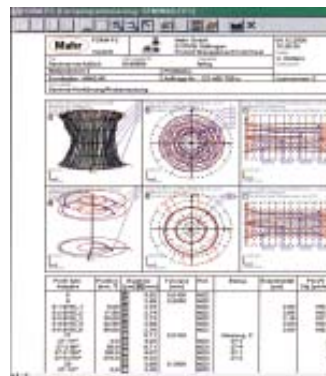


#### Features

- High-precision probe
- Motor-driven measuring axes
- Probe zero setting on the push of a button
- Virtually unaffected by vibration and temperature variations
- Fully automatic inspection with Mahr FORM-PC
- Takes roundness measurements on sections as small as  $15^\circ$
- Safety features included to protect operator, workpiece, and machine

Ref. No : MH03 TT04

Model : MMQ 44 - MMQ 44NC



## PC Universal Measuring Machines



The 828 PC offers all the equipment features required for testing plug gages, ring gages, snap gages, thread gages, and gage blocks as well as precision parts from the production line.

### Features

- Form stability through a sturdy machine base of hard granite.
- Numerical resolutions of 0.1  $\mu\text{m}$  or 0.01 $\mu\text{m}$

Ref. No : MH03 TT05

Model : 828PC

## Gear Tester

### Double Flash Gear Roll Tester



### Applications

- For small, high-precision gears and above all plastic gears.
- Adjustable radial center distance 1-80 mm. (.0394 - 3.15 in)
- Measuring uncertainty < 0.5  $\mu\text{m}$  (19.69 in)
- For measuring helical and spur gears of module 0.15 to 1.0.
- Also used for measuring worms, worm gears, internal gears and bevel gears.



### Applications

- The universal double flank gear roll tester.
- Adjustable radial center distance between centers 15-175 mm (.591 - 6.89 in)
- Single end mounting 15-275 mm (.591 - 10.83 in)
- Measuring uncertainty < 1 $\mu\text{m}$  (39.37 in)
- For measuring helical and spur gears of module 0.15 to 2.0 (3.5)
- Also used for measuring worms, worm gears, internal gears and bevel gears.

Ref. No : MH03 TT06

Model : 896

## Optical 3D Measuring Instruments

### Multiscope 250/400



Ref. No : MH03 TT07

Model : Multiscope 250/400

### Type

: Compact 3D-CMM. Z-column and machine base are made of rigid granite. All axes are guided by high precision roller bearings. Table is made of a special aluminum featuring low mass and high rigidity.

### Drive system

: DC-servo drives with precision, backlash-free center mount ball screw.

### Control Unit

: 3- to 5-axes microprocessor CNC with vectorial path control.

**Measuring system** : Linear incremental 0.5  $\mu\text{m}$  resolution scales.

### Technical Specifications

#### Multisensor-System

#### 1. Optical Sensor

High resolution CCD camera, digital image processing with grey scale evaluation, automatic subpixel edge detection, automatic filter routines, multi-window technology, high speed focus, opto-electronic 2-step zoom.

Resolution 0.5  $\mu\text{m}$   
 Accuracy 0.12  $\mu\text{m}$   
 Repeatability 0.05  $\mu\text{m}$   
 Avg. measuring time 0.1 s/point  
 (Test conditions: 20 x LWD lens)

#### 2. Laser Probe (optional)

Resolution 0.5  $\mu\text{m}$   
 Accuracy 1  $\mu\text{m}$   
 Avg. focus time 0.2 s  
 Scanning rate 500 s/point

#### 3. Touch Probe (optional)

Touch probe system TPS with Renishaw touch trigger probe TP6 and integrated automatic probe changer PAC. (Measuring range in x will be reduced by 50mm)

Additional probe systems available (optional).

Rotary tables (optional).

### PMC Series

Model - PMC 500/650/800



- Type** : Bridge type CMM with stationary table and moving bridge. Machine base, cross-beam and Z-axis are made of rigid granite. All axes have friction-free air bearings.
- Drive System** : All axes have a backlash-free, vibrationless drive system. The Z-axis has a pneumatic, adjustable counter balance.
- Control Unit** : 3- to 5-axes CNC microprocessor with Vectorial path control.
- Measuring System** : Linear incremental 0.5  $\mu\text{m}$  resolution scales.
- Probe System** : Touch probe system TPS with Renishaw touch trigger probe TP6 and integrated automatic probe changer PAC.

**Mutisensor-Head** (optional)

**Optical sensor**

**Resolution** : 2.4  $\mu\text{m}$

**Accuracy** : 0.6  $\mu\text{m}$

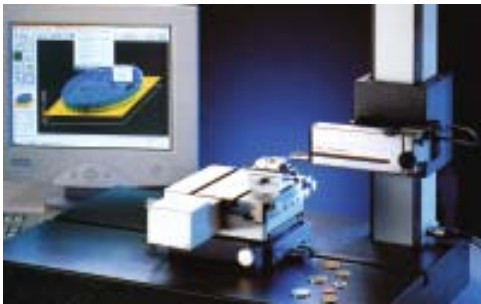
**Laser probe** (optional).

**Ref. No** : MH03 TT08

**Model** : PMC 500/650/800

## Surface Texture Measuring Station

### Surface Texture Measuring Station with Perthometer Concept Topography



Roughness and waviness measurements on small workpieces

#### Features

##### **Topography program package**

Can be combined with the Perthometer Concept Roughness and Contour Program packages

- Photo simulation
- Creation of measuring programs and automatic measuring routines for series measurements
- Continuous 3D presentation of roughness and contour profiles using photo simulation in color or black and white
- Combined presentation of topography, profile, ADC, MRC of a surface
- Determination of new 3D characteristics
- Computation of volume and 3D material ratio
- All standard characteristic curves and profile types

**Ref. No** : MH03 TT09