

## **Dial Indicators**

Comparison measuring instruments which ensure high quality, high accuracy and reliability.

### **SERIES 2 — Standard Type, 0.01 mm Graduation**

- Standard 0.01 mm graduation dial gages having a bezel with an outside diameter of 57 mm
- The bezel clamp and lifting lever (optional) can be attached to either the right or left side. These parts can be easily installed and removed without tools.
- Watertight assembly of bezel and crystal as well as the use of an O-ring prevents water or oil penetration.
- The stem and spindle are made of high-strength quench-hardened stainless steel suitable for heavy-duty use.
- A carbide contact point is used.
- The grand gear is made of stainless steel with high resistance to wear and deformation.
- Application of an anti-reflective and hard surface coating improves scale visibility along with scratch and chemical resistance.





Graduation: 0.01 mm, Measuring range: 10 mm

C)

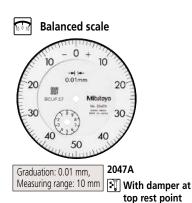
2046A

Reverse reading type. Suitable

for depth and step measurement.

With damper at top rest point

2046A-09
Shockproof



Continuous scale



Graduation: 0.01 mm, Measuring range: 10 mm

With coaxial revolution counter

**→ Jeweled bearing** 



Graduation: 0.01 mm, Measuring range: 10 mm 2902A S

With damper at top rest point





Graduation: 0.01 mm, Measuring range: 5 mm 2044A

With damper at top rest point

2044A-09

With damper at top rest point

**Shockproof** 



Graduation: 0.01 mm, Measuring range: 5 mm 2045A

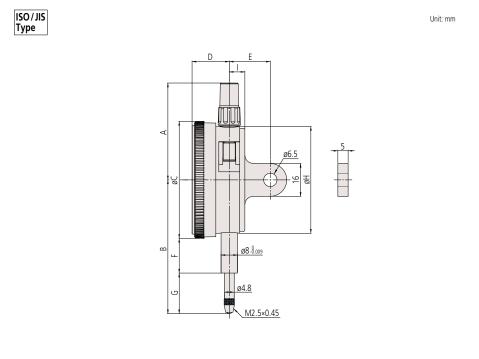
With damper at top rest point



# **Dial Indicators**

Comparison measuring instruments which ensure high quality, high accuracy and reliability.

#### **DIMENSIONS**



| Order No. | А    | В    | С  | D    | E  | F    | G    | Н  | I   | Mas<br>w/lug | ss (g)<br>Flat-back |
|-----------|------|------|----|------|----|------|------|----|-----|--------------|---------------------|
| 2046A     | 47.2 | 65.2 | 57 | 18.1 | 20 | 16.9 | 19.8 | 52 | 7.6 | 144          | 135                 |
| 2046A-09  | 47.2 | 65.2 | 57 | 18.1 | 20 | 16.9 | 19.8 | 52 | 7.6 | 146          | 137                 |
| 2047A     | 47.2 | 65.2 | 57 | 18.1 | 20 | 16.9 | 19.8 | 52 | 7.6 | 144          | 135                 |
| 2902A     | 47.2 | 65.2 | 57 | 18.1 | 20 | 16.9 | 19.8 | 52 | 7.6 | 144          | 135                 |
| 2310A-10  | 47.2 | 65.2 | 57 | 18.1 | 20 | 16.9 | 19.8 | 52 | 7.6 | 146          | 137                 |
| 2044A     | 47.2 | 65.2 | 57 | 18.1 | 20 | 16.9 | 19.8 | 52 | 7.6 | 145          | 136                 |
| 2044A-09  | 47.2 | 65.2 | 57 | 18.1 | 20 | 16.9 | 19.8 | 52 | 7.6 | 147          | 138                 |
| 2045A     | 47.2 | 65.2 | 57 | 18.1 | 20 | 16.9 | 19.8 | 52 | 7.6 | 145          | 136                 |

Note: Refer to pages F-57 to F-60 for details of contact points.

## FEATURES SPECIFICATIONS

| Metric   |           | ı       |         |   |          |    |          |   |   |
|----------|-----------|---------|---------|---|----------|----|----------|---|---|
| Orde     |           |         |         |   |          | লো |          |   |   |
| w/lug    | Flat-back | 90 0 10 | 10 0 10 | Ť | <b>S</b> | 64 | <b>~</b> |   |   |
| 2046A    | 2046AB    | ~       |         |   |          |    | ~        |   |   |
| 2046A-09 | 2046AB-09 | ~       |         |   | ~        |    |          |   |   |
| 2047A    | 2047AB    |         | ~       |   |          |    | ~        |   |   |
| 2902A    | 2902AB    |         |         | 1 |          |    | ~        |   |   |
| 2310A-10 | 2310AB-10 | ~       |         |   |          |    |          | ~ | ~ |
| 2044A    | 2044AB    | ~       |         |   |          |    | ~        |   |   |
| 2044A-09 | 2044AB-09 | ~       |         |   | ~        |    |          |   |   |
| 2045A    | 2045AB    |         | ~       |   |          |    | ~        |   |   |

| Metric      |            | LISO/JIS type      |                     |                                      |         |       |                 |             |         |              |                        |
|-------------|------------|--------------------|---------------------|--------------------------------------|---------|-------|-----------------|-------------|---------|--------------|------------------------|
| Order No.   |            | Cardination        | Range               | Maximum permissible error (MPE) (µm) |         |       |                 |             |         |              | Management             |
| w/lug Flat- | Flat-back  | Graduation<br>(mm) | (range/rev)<br>(mm) | Indication error                     |         |       |                 | Hysteresis  | Repeat- | Dial reading | Measuring<br>force (N) |
|             | I lat-back |                    |                     | 1/10 Rev                             | 1/2 Rev | 1 Rev | Measuring range | Tiysteresis | ability | reading      | TOTCE (IV)             |
| 2046A       | 2046AB     | 0.01               | 10 (1)              | 5                                    | 9       | 10    | 13              | 3           | 3       | ±0-100       | 1.4 or less            |
| 2046A-09    | 2046AB-09  | 0.01               | 10 (1)              | 5                                    | 9       | 10    | 15              | 3           | 3       | ±0-100       | 1.4 or less            |
| 2047A       | 2047AB     | 0.01               | 10 (1)              | 5                                    | 9       | 10    | 13              | 3           | 3       | 0-50-0       | 1.4 or less            |
| 2902A       | 2902AB     | 0.01               | 10 (1)              | 5                                    | 9       | 10    | 13              | 3           | 3       | 100-0        | 1.4 or less            |
| 2310A-10    | 2310AB-10  | 0.01               | 10 (1)              | 5                                    | 9       | 10    | 15              | 3           | 3       | ±0-100       | 1.4 or less            |
| 2044A       | 2044AB     | 0.01               | 5 (1)               | 5                                    | 9       | 10    | 12              | 3           | 3       | ±0-100       | 1.4 or less            |
| 2044A-09    | 2044AB-09  | 0.01               | 5 (1)               | 5                                    | 9       | 10    | 12              | 3           | 3       | ±0-100       | 1.4 or less            |
| 2045A       | 2045AB     | 0.01               | 5 (1)               | 5                                    | 9       | 10    | 12              | 3           | 3       | 0-50-0       | 1.4 or less            |

**Optional Accessories** 

• Limit hand (2 pcs.): **21AZB195** • Bezel clamp: **21AZB148** 

Note: Completed products inspection is performed in the vertical orientation (contact point downward) and the stated accuracy is guaranteed.

F-29