

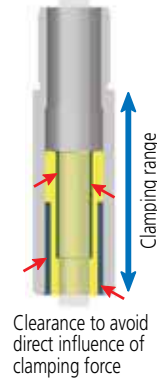
# Dial Indicators

## Description of Icon

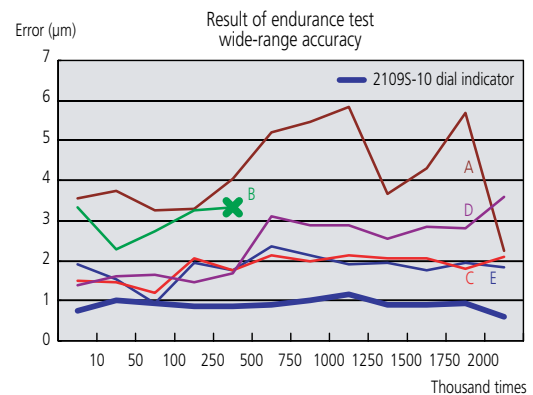
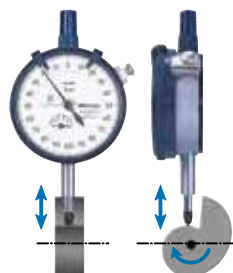
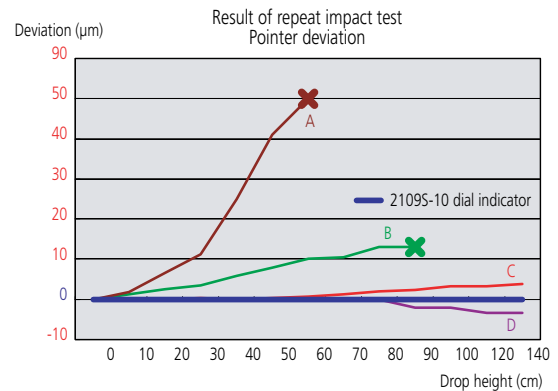
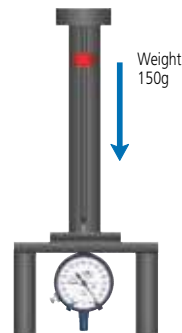
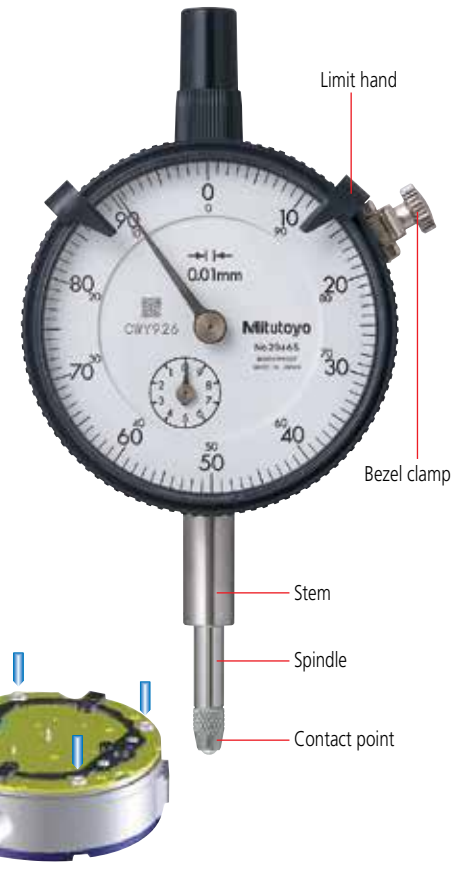
| Icon | Description                                                  |
|------|--------------------------------------------------------------|
|      | Reverse reading type suitable for depth and step measurement |
|      | One revolution type for easy and error-free reading          |
|      | Double scale spacing type, easy to read                      |
|      | Shockproof                                                   |
|      | Waterproof                                                   |
|      | With damper at lowest rest point                             |
|      | Jeweled bearing                                              |
|      | Peak retaining                                               |
|      | Long stem                                                    |
|      | Dustproof                                                    |
|      | With coaxial revolution counter                              |
|      | Back plunger                                                 |
|      | Adjustable hand                                              |
|      | Double-face type                                             |

## FEATURES: S Series

- Revolutionary stem-bush design for trouble-free stem clamping (longer clamping range).
- No through screw hole on the frame for high dust-resistance.



- Involute curved lifting lever for smooth movement of spindle and dovetail joint for tool-less connection.
- Grater rigidity in the bearing plate for reducing the retracing error (20%) and 4-screw mounting for increasing impact resistance.



# Dial Indicators

## SERIES 0 - Compact type



1911T-10

 **Balanced scale**



1911T-10  
 **Jeweled bearing**

 **Balanced scale**



1913T-10  
 **Jeweled bearing**

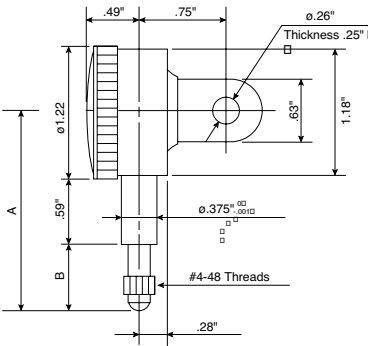
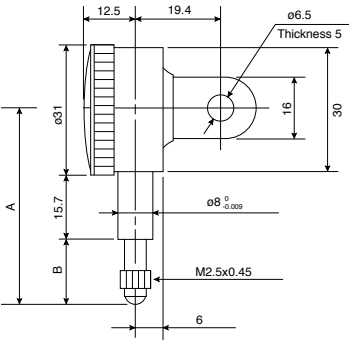
### SPECIFICATIONS

| Inch                             |       |           |              |           |           |               |                  |                 |                                                                                   |
|----------------------------------|-------|-----------|--------------|-----------|-----------|---------------|------------------|-----------------|-----------------------------------------------------------------------------------|
| Stem dia. 3/8", #4-48 UNF Thread |       |           |              |           |           |               |                  |                 |                                                                                   |
| ANSI/AGD type                    |       |           |              |           |           |               |                  |                 |                                                                                   |
| Graduation                       | Range | Range/rev | Dial reading | Order No. |           | Accuracy      |                  | Measuring force |  |
|                                  |       |           |              | w/ lug    | Flat-back | First 2.5 Rev | Overall Accuracy |                 |                                                                                   |
| .0001"                           | .025" | .01"      | 0-5-0        | 1925T-10  | 1925TB-10 | ±.0002"       | ±.0002"          | 0.3 - 1.8N      | ✓                                                                                 |
| .0005"                           | .05"  | .02"      | 0-10-0       | 1923T-10  | 1923TB-10 | ±.0005"       | ±.0005"          | 0.3 - 1.8N      | ✓                                                                                 |
| .001"                            | .1"   | .04"      | 0-20-0       | 1921T-10  | 1921TB-10 | ±.001"        | ±.001"           | 0.3 - 1.8N      | ✓                                                                                 |

| Metric                         |       |           |              |           |           |          |                  |                 |                                                                                     |
|--------------------------------|-------|-----------|--------------|-----------|-----------|----------|------------------|-----------------|-------------------------------------------------------------------------------------|
| Stem ø 8mm, M2.5 x 0.45 Thread |       |           |              |           |           |          |                  |                 |                                                                                     |
| ISO/JIS type                   |       |           |              |           |           |          |                  |                 |                                                                                     |
| Graduation                     | Range | Range/Rev | Dial reading | Order No. |           | Accuracy |                  | Measuring force |  |
|                                |       |           |              | w/ lug    | Flat-back | Any Rev  | Overall Accuracy |                 |                                                                                     |
| 0.002mm                        | 0.5mm | 0.2mm     | 0-100-0      | 1913T-10  | 1913TB-10 | ±5µm     | ±6µm             | 0.3 - 1.8N      | ✓                                                                                   |
| 0.01mm                         | 2.5mm | 1mm       | 0-50-0       | 1911T-10  | 1911TB-10 | ±10µm    | ±12µm            | 0.3 - 1.8N      | ✓                                                                                   |

 Jeweled bearing

### DIMENSIONS

| Inch Model                                                                          |       |      | Metric Model                                                                        |      |      |
|-------------------------------------------------------------------------------------|-------|------|-------------------------------------------------------------------------------------|------|------|
| Unit: Inch                                                                          |       |      | Unit: mm                                                                            |      |      |
|  |       |      |  |      |      |
| Order Number                                                                        | A     | B    | Order Number                                                                        | A    | B    |
| 1925T-10                                                                            | 1.48" | .28" | 1911T-10                                                                            | 42   | 11.5 |
| 1923T-10                                                                            | 1.51" | .31" | 1913T-10                                                                            | 39.5 | 9    |
| 1921T-10                                                                            | 1.58" | .37" |                                                                                     |      |      |

## SERIES 1

## Inch

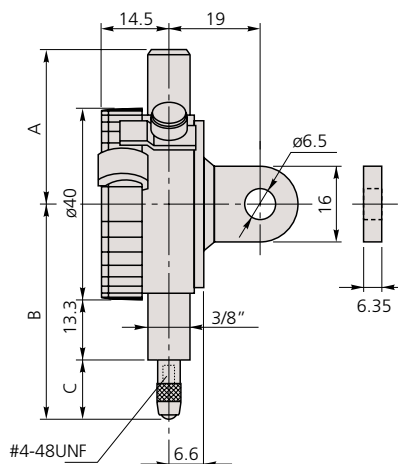
☐ ANSI/AGD type



Metric

 ANSI/AGD type

## DIMENSIONS



| Order No.   | A    | B    | C    |
|-------------|------|------|------|
| 1802S(B)-10 | 32.5 | 43.4 | 9.6  |
| 1803S(B)-10 | 32.5 | 43.4 | 9.6  |
| 1670S(B)    | 32.5 | 44.2 | 10.4 |
| 1671S(B)    | 32.5 | 44.2 | 10.4 |
| 1506S(B)    | 32.5 | 45.2 | 11.4 |
| 1507S(B)    | 32.5 | 45.2 | 11.4 |
| 1780S(B)    | 32.5 | 45.2 | 11.4 |
| 1781S(B)    | 32.5 | 45.2 | 11.4 |
| 1410S(B)    | 32.5 | 48.7 | 14.9 |
| 1410S(B)-10 | 32.5 | 48.7 | 14.9 |
| 1411S(B)    | 32.5 | 48.7 | 14.9 |
| 1230S(B)-01 | 32.5 | 44.2 | 10.4 |
| 1231S(B)-01 | 32.5 | 44.2 | 10.4 |
| 1044S(B)-01 | 32.5 | 46.7 | 12.9 |
| 1045S(B)-01 | 32.5 | 46.7 | 12.9 |

# Dial Indicators

## SERIES 1



1040S



1013S



1045S



1109S-10

**Metric** Stem  $\varnothing$  8mm M2.5 X 0.45 Thread   ISO/JIS type

| Graduation | Range | Range / Rev | Dial reading | Order No.       |                  | Accuracy       |                  | Measuring force |   |   |   |
|------------|-------|-------------|--------------|-----------------|------------------|----------------|------------------|-----------------|---|---|---|
|            |       |             |              | (W/Lug)         | (Flat-back)      | First 2.5 Rev  | Overall Accuracy |                 |   |   |   |
| 0.001mm    | 1mm   | 0.2mm       | 0-100-0      | <b>1109S-10</b> | <b>1109SB-10</b> | $\pm 0.001$ mm | $\pm 0.007$ mm   | 1.5N or less    | ✓ |   | ✓ |
| 0.002mm    | 1mm   | 0.2mm       | 0-100-0      | <b>1013S-10</b> | <b>1013SB-10</b> | $\pm 0.002$ mm | $\pm 0.01$ mm    | 1.5N or less    | ✓ |   | ✓ |
| 0.005mm    | 3.5mm | 0.5mm       | 0-50         | <b>1124S</b>    | <b>1124SB</b>    | $\pm 0.005$ mm | $\pm 0.013$ mm   | 1.4N or less    |   |   | ✓ |
| 0.01mm     | 3.5mm | 0.5mm       | 0-50         | <b>1040S</b>    | <b>1040SB</b>    | $\pm 0.01$ mm  | $\pm 0.013$ mm   | 1.5N or less    |   |   |   |
| 0.01mm     | 3.5mm | 0.5mm       | 0-25-0       | <b>1041S</b>    | <b>1041SB</b>    | $\pm 0.01$ mm  | $\pm 0.013$ mm   | 1.5N or less    |   |   |   |
| 0.01mm     | 4mm   | 1mm         | 0-50-0       | <b>1003T</b>    | <b>1003TB</b>    | $\pm 0.01$ mm  | $\pm 0.013$ mm   | 0.3 - 1.4N      |   |   |   |
| 0.01mm     | 5mm   | 1mm         | 0-100        | <b>1044S</b>    | <b>1044SB</b>    | $\pm 0.01$ mm  | $\pm 0.013$ mm   | 1.5N or less    |   |   |   |
| 0.01mm     | 5mm   | 1mm         | 0-100        | <b>1044S-60</b> | <b>1044SB-60</b> | $\pm 0.01$ mm  | $\pm 0.013$ mm   | 2N or less      |   | ✓ |   |
| 0.01mm     | 5mm   | 1mm         | 0-100        | <b>1044S-15</b> | <b>1044SB-15</b> | $\pm 0.01$ mm  | $\pm 0.013$ mm   | 1.4N or less    | ✓ |   |   |
| 0.01mm     | 5mm   | 1mm         | 0-50-0       | <b>1045S</b>    | <b>1045SB</b>    | $\pm 0.01$ mm  | $\pm 0.013$ mm   | 1.4N or less    |   |   |   |



Shockproof

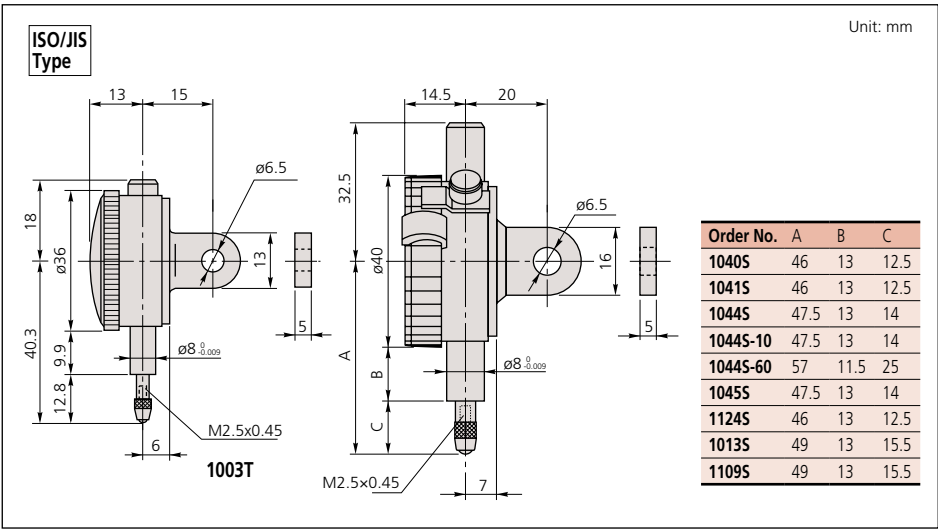


Waterproof



Jeweled bearing

## DIMENSIONS



1044S

### Optional Accessories

- Backs (See page F-33.)
- Contact points (See page F-34.)



# Dial Indicators

## SERIES 1 — Compact One Revolution Type for Error-free Reading



One revolution type



1929S  
1929S-62



1900S-10  
1900S-72



1929S

Unlike many other dial indicators, the one-revolution dial indicator 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't be misinterpreted. Unique shock-proof mechanism provides improved immunity to shock due to sudden spindle retraction caused by high impact.



Shockproof type



Dustproof type



Waterproof type



Jeweled bearing type

### SPECIFICATIONS

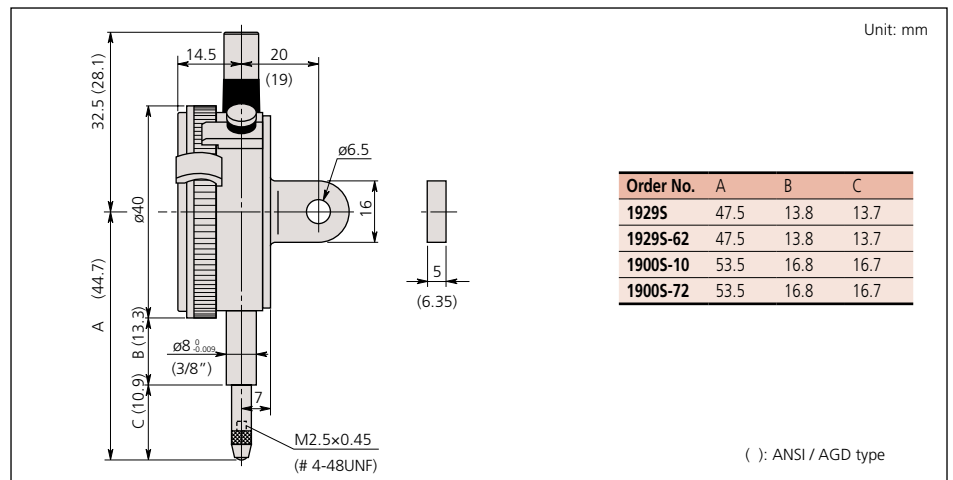
| Inch       |                           | Stem dia. 3/8", #4-48 UNF Thread |           |           |          | ANSI/AGD type   |                                                                                       |                                                                                       |   |   |
|------------|---------------------------|----------------------------------|-----------|-----------|----------|-----------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---|---|
| Graduation | Range (range/full stroke) | Dial reading                     | Order No. |           | Accuracy | Measuring force |    |    | — | — |
|            |                           |                                  | w/lug     | Flat-back |          |                 |                                                                                       |                                                                                       |   |   |
| .0001"     | .006" / .0079"            | 3-0-3                            | 1910S-72  | 1910SB-72 | ±.0001"  | 1.4N or less    |    |    | — | — |
| .0005"     | .04" / .055"              | 20-0-20                          | 1909S-62  | 1909SB-62 | ±.0005"  | 1.4N or less    |  |  | — | — |

| Metric     |                              | Stem ø 8mm, M2.5 x 0.45 Thread |           |           |          | ISO/JIS type       |                                                                                       |                                                                                       |                                                                                       |                                                                                       |
|------------|------------------------------|--------------------------------|-----------|-----------|----------|--------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
| Graduation | Range<br>(range/full stroke) | Dial reading                   | Order No. |           | Accuracy | Measuring<br>force |  |  |  |  |
|            |                              |                                | w/lug     | Flat-back |          |                    |                                                                                       |                                                                                       |                                                                                       |                                                                                       |
| 0.001mm    | 0.1mm / 0.14mm               | 50-0-50                        | 1900S-10  | 1900SB-10 | ±0.005mm | 1.5N or less       | ✓                                                                                     | —                                                                                     | —                                                                                     | ✓                                                                                     |
| 0.001mm    | 0.1mm / 0.14mm               | 50-0-50                        | 1900S-72  | 1900SB-72 | ±0.006mm | 1.5N or less       | ✓                                                                                     | ✓                                                                                     | —                                                                                     | ✓                                                                                     |
| 0.01mm     | 1mm / 1.4mm                  | 50-0-50                        | 1929S     | 1929SB    | ±0.011mm | 1.4N or less       | ✓                                                                                     | —                                                                                     | —                                                                                     | —                                                                                     |
| 0.01mm     | 1mm / 1.4mm                  | 50-0-50                        | 1929S-62  | 1929SB-62 | ±0.011mm | 1.4N or less       | ✓                                                                                     | ✓                                                                                     | —                                                                                     | —                                                                                     |

### Optional Accessories

- Backs (See page F-33.)
- Contact points (See page F-34.)

### DIMENSIONS



# Dial Indicators

## SERIES 2 — Standard One Revolution Type for Error-free Reading



One revolution type.



Shockproof type



Waterproof type



Dustproof type



Jeweled bearing type

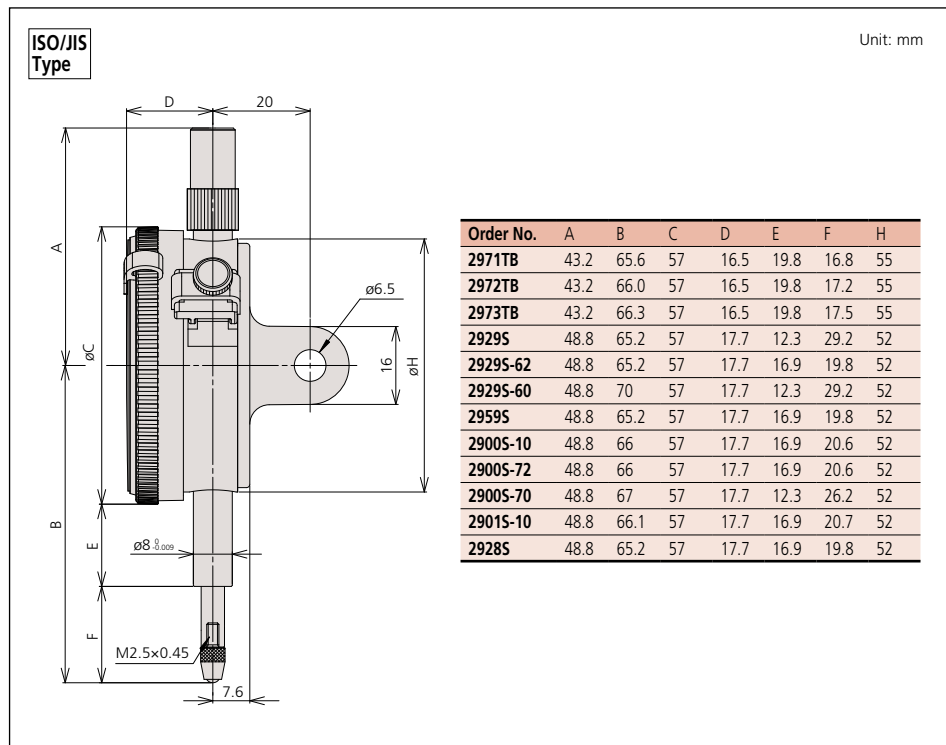
### SPECIFICATIONS

**Metric** Stem  $\varnothing$  8mm, M2.5 x 0.45 Thread ISO/JIS type

| Graduation | Range (range/full stroke) | Dial reading | Order No.       |                  | Accuracy       | Measuring force |   |   |   |   |
|------------|---------------------------|--------------|-----------------|------------------|----------------|-----------------|---|---|---|---|
|            |                           |              | w/ lug          | Flat-back        |                |                 |   |   |   |   |
| 0.001mm    | 0.08mm / 0.1mm            | 40-0-40      | <b>2900S-10</b> | <b>2900SB-10</b> | $\pm 0.003$ mm | 1.4N or less    | ✓ | — | — | ✓ |
| 0.001mm    | 0.08mm / 0.1mm            | 40-0-40      | <b>2900S-70</b> | <b>2900SB-70</b> | $\pm 0.003$ mm | 2.0N or less    | ✓ | ✓ | — | ✓ |
| 0.001mm    | 0.08mm / 0.1mm            | 40-0-40      | <b>2900S-72</b> | <b>2900SB-72</b> | $\pm 0.003$ mm | 2.0N or less    | ✓ | — | ✓ | ✓ |
| 0.001mm    | 0.16mm / 0.2mm            | 80-0-80      | <b>2901S-10</b> | <b>2901SB-10</b> | $\pm 0.004$ mm | 1.4N or less    | ✓ | — | — | ✓ |
| 0.01mm     | 0.8mm / 1mm               | 40-0-40      | <b>2929S</b>    | <b>2929SB</b>    | $\pm 0.009$ mm | 2.0N or less    | ✓ | — | — | — |
| 0.01mm     | 0.8mm / 1mm               | 40-0-40      | <b>2929S-60</b> | <b>2929SB-60</b> | $\pm 0.009$ mm | 2.0N or less    | ✓ | ✓ | — | — |
| 0.01mm     | 0.8mm / 1mm               | 40-0-40      | <b>2929S-62</b> | <b>2929SB-62</b> | $\pm 0.009$ mm | 2.0N or less    | ✓ | — | ✓ | — |
| 0.01mm     | 1.6mm / 2mm               | 80-0-80      | <b>2959S</b>    | <b>2959SB</b>    | $\pm 0.013$ mm | 1.4N or less    | ✓ | — | — | — |
| 0.01mm     | 0.5mm / 0.7mm             | 25-0-25      | —               | <b>2971TB*</b>   | $\pm 0.008$ mm | 0.4 - 1.4N      | ✓ | — | ✓ | — |
| 0.01mm     | 1mm / 1.4mm               | 50-0-50      | —               | <b>2972TB*</b>   | $\pm 0.008$ mm | 0.4 - 1.4N      | ✓ | — | ✓ | — |
| 0.02mm     | 1.6mm / 2mm               | 80-0-80      | —               | <b>2973TB*</b>   | $\pm 0.016$ mm | 0.4 - 1.4N      | ✓ | — | ✓ | — |
| 0.1mm      | 4mm / 10mm                | 2-0-2        | <b>2928S</b>    | <b>2928SB</b>    | $\pm 0.040$ mm | 1.4N or less    | ✓ | — | — | — |

\* Flat-back type only. (Lug-on-center back is not available.)

### DIMENSIONS



2900S-10



2929S  
2929S-60  
2929S-62



2959S



2900S-10  
2900S-70  
2900S-72



2901S-10

### Optional Accessories

- : Backs (See page F-33.)
- : Contact points (See page F-34.)



# Dial Indicators

## SERIES 2 — Standard One Revolution Type for Error-free Reading

### FEATURES

- Unique shock-proof mechanism provides improved immunity to shock due to sudden spindle retraction caused by high impact.
- The crystal is hard coated for durability and scratch resistance.
- Approximately 40% lighter than conventional dial indicator.
- Improved resistance to shop-floor contaminants such as water and dust.
- Due to the spindle bushing being offset from the stem, spindle movement will not be hindered or jammed when clamping along the stem.
- A pair of limit hands are provided for quick and easy tolerance judgment (go/no-go).



One revolution type.

### SPECIFICATIONS

**Inch** Stem 3/8" dia. , #4-48 UNF Thread

ANSI/AGD type

| Graduation | Range | Range/full stroke | Dial reading | Order No.       |                  | Accuracy | Measuring force |   |   |   |
|------------|-------|-------------------|--------------|-----------------|------------------|----------|-----------------|---|---|---|
|            |       |                   |              | w/ lug          | Flat-back        |          |                 |   |   |   |
| .0001"     | .008" | .01"              | 4-0-4        | <b>2910S-10</b> | <b>2910SB-10</b> | ±.0001"  | 1.8N or less    | ✓ | ✓ | ✓ |
| .0001"     | .008" | .01"              | 4-0-4        | <b>2910S-72</b> | <b>2910SB-72</b> | ±.0001"  | 2.5N or less    | ✓ | ✓ | ✓ |
| .0005"     | .04"  | .05"              | 20-0-20      | <b>2909S-62</b> | <b>2909SB-62</b> | ±.0005"  | 2.5N or less    | ✓ | ✓ | ✓ |
| .0005"     | .02"  | .028"             | 10-0-10      | —               | <b>2976TB*</b>   | ±.0005"  | 0.4 - 1.4N      | ✓ | ✓ | ✓ |
| .0005"     | .04"  | .055"             | 20-0-20      | —               | <b>2977TB*</b>   | ±.0005"  | 0.4 - 1.4N      | ✓ | ✓ | ✓ |
| .001"      | .06"  | .079"             | 30-0-30      | —               | <b>2978TB*</b>   | ±.001"   | 0.4 - 1.4N      | ✓ | ✓ | ✓ |

\*Flat-back type only. (Lug-on-center back is not available.)

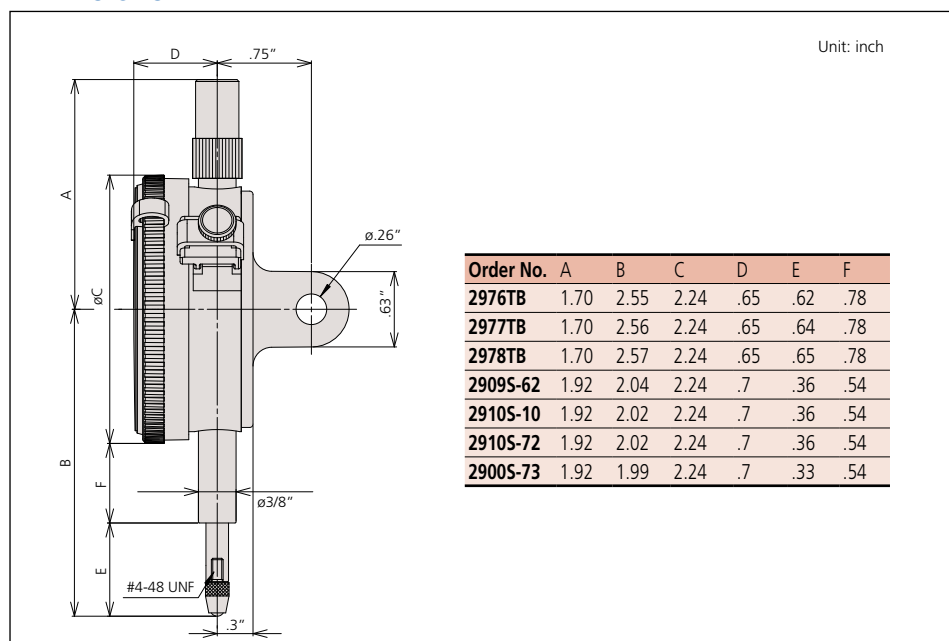
**Metric** Stem 3/8" dia. , #4-48 UNF Thread Yellow Dial Face

ANSI/AGD type

| Graduation | Range  | Range/full stroke | Dial reading | Order No.       |                  | Accuracy | Measuring force |   |   |   |
|------------|--------|-------------------|--------------|-----------------|------------------|----------|-----------------|---|---|---|
|            |        |                   |              | w/ lug          | Flat-back        |          |                 |   |   |   |
| 0.001mm    | 0.08mm | 0.1mm             | 40-0-40      | <b>2900S-73</b> | <b>2900SB-73</b> | ±0.003mm | 2.0N or less    | ✓ | ✓ | ✓ |

\*Flat-back type only. (Lug-on-center back is not available.)

### DIMENSIONS



### Optional Accessories

- : Backs (See page F-33.)
- : Contact points (See page F-34.)



2909S-62



2978TB

# Special Dial Indicators

## SERIES 2



Adjustable hand



20485-10

### Adjustable hand dial gage

The hand position can be adjusted independently of the vertical movement of the spindle by rotating the top knob.



Peak hold



20465-80

### Peak hold dial gage

A mechanism that stops the pointer and the spindle at the depressed position where the spindle is depressed makes the pointer stop and display the maximum value.



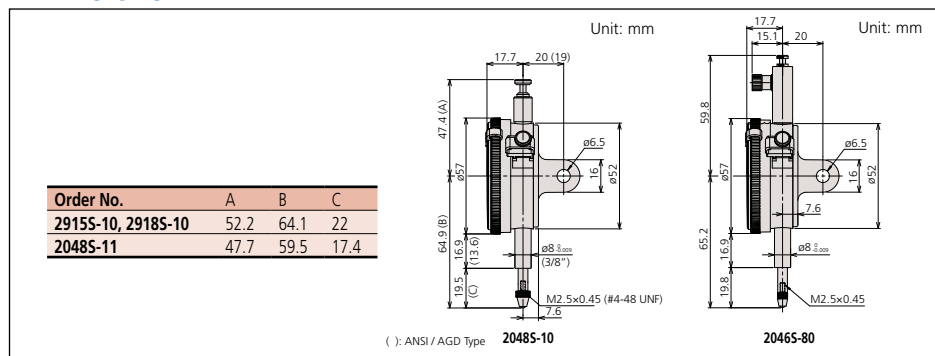
## SPECIFICATIONS

| Inch Stem dia. 3/8" #4-48 UNF Thread |       |            |              |           |           |               |                  |                 |   | ANSI/AGD type |   |  |
|--------------------------------------|-------|------------|--------------|-----------|-----------|---------------|------------------|-----------------|---|---------------|---|--|
| Graduation                           | Range | Range /rev | Dial reading | Order No. |           | Accuracy      |                  | Measuring force |   |               |   |  |
|                                      |       |            |              | w/lug     | Flat-back | First 2.5 Rev | Overall Accuracy |                 |   |               |   |  |
| .001"                                | .5"   | .1"        | 0-100        | 29155-10  | 29155B-10 | ±.001"        | ±.001"           | 1.8N or less    | ✓ | ✓             | ✓ |  |
| .001"                                | .5"   | .1"        | 0-50-0       | 29185-10  | 29185B-10 | ±.001"        | ±.001"           | 1.8N or less    | ✓ | ✓             | ✓ |  |

| Metric Stem dia. 3/8" #4-48 UNF Thread, Yellow Dial Face |       |            |              |           |           |               |          |                 |   | ANSI/AGD type |   |  |
|----------------------------------------------------------|-------|------------|--------------|-----------|-----------|---------------|----------|-----------------|---|---------------|---|--|
| Graduation                                               | Range | Range /rev | Dial reading | Order No. |           | Accuracy      |          | Measuring force |   |               |   |  |
|                                                          |       |            |              | w/lug     | Flat-back | First 2.5 Rev | Overall  |                 |   |               |   |  |
| 0.01mm                                                   | 10mm  | 1mm        | 0-100        | 20485-11  | 20485B-11 | ±13μm         | ±0.013mm | 1.4N or less    | ✓ | ✓             | ✓ |  |

| Metric Stem ø 8mm, M2.5 x 0.45 Thread |       |            |              |           |           |          |                 |   |   | ISO/JIS type |   |  |
|---------------------------------------|-------|------------|--------------|-----------|-----------|----------|-----------------|---|---|--------------|---|--|
| Graduation                            | Range | Range /rev | Dial reading | Order No. |           | Accuracy | Measuring force |   |   |              |   |  |
|                                       |       |            |              | w/lug     | Flat-back |          |                 |   |   |              |   |  |
| 0.01mm                                | 10mm  | 1mm        | 0-100        | 20485-10  | 20485B-10 | ±0.015mm | 1.4N or less    | ✓ | ✓ | ✓            |   |  |
| 0.01mm                                | 10mm  | 1mm        | 0-100        | 20465-80  | 20465B-80 | ±0.015mm | 5.0N or less    |   |   |              | ✓ |  |

## DIMENSIONS





# Dial Indicators

## SERIES 2 — Standard Type, Inch Reading

### Optional Accessories

- : Backs (See page F-33.)
- : Contact points (See page F-34.)



2416S



2803S-10

### SPECIFICATIONS

| Inch       |       | Stem 3/8" dia. #4-48 UNF Thread |              |           |            |               |         |                 |            | ANSI/AGD type   |                 |
|------------|-------|---------------------------------|--------------|-----------|------------|---------------|---------|-----------------|------------|-----------------|-----------------|
| Graduation | Range | Range /Rev                      | Dial Reading | Order No. |            | Accuracy      |         | Measuring force | Shockproof | Reverse reading | Jeweled bearing |
|            |       |                                 |              | w/lug     | Flat-back  | First 2.5 Rev | Overall |                 |            |                 |                 |
| .0001"     | .025" | .01"                            | 0-10         | 2802S-10  | 2802SB-10  | ±.0001"       | ±.0001" | 2.5N or less    | ✓          |                 | ✓               |
| .0001"     | .025" | .01"                            | 0-5-0        | 2803S-10  | 2803SB-10  | ±.0001"       | ±.0001" | 2.5N or less    | ✓          |                 | ✓               |
| .0001"     | .05"  | .01"                            | 0-10         | 2804S-10  | 2804SB-10  | ±.0001"       | ±.0002" | 2.0N or less    | ✓          |                 | ✓               |
| .0001"     | .05"  | .01"                            | 0-5-0        | 2805S-10  | 2805SB-10  | ±.0001"       | ±.0002" | 2.0N or less    | ✓          |                 | ✓               |
| .0001"     | .05"  | .01"                            | 10-0         | 2905S-10  | 2905SB-10  | ±.0001"       | ±.0002" | 2.0N or less    | ✓          | ✓               | ✓               |
| .0001"     | .05"  | .01"                            | 0-5-0        | 2923S-10  | 2923SB-10  | ±.0001"       | ±.0002" | 2.0N or less    | ✓          | ✓               | ✓               |
| .0001"     | .25"  | .01"                            | 0-10         | 2356S-10  | 2356SB-10  | ±.0001"       | ±.0005" | 2.0N or less    |            |                 | ✓               |
| .0001"     | .5"   | .01"                            | 0-10         | 2358S-10  | 2358SB-10  | ±.0001"       | ±.0008" | 2.0N or less    |            |                 | ✓               |
| .0005"     | .125" | .05"                            | 0-50         | 2506S     | 2506SB     | ±.0005"       | ±.0005" | 1.8N or less    |            |                 |                 |
| .0005"     | .125" | .05"                            | 0-25-0       | 2507S     | 2507SB     | ±.0005"       | ±.0005" | 1.8N or less    |            |                 |                 |
| .0005"     | .125" | .05"                            | 0-25-0       | 2922S     | 2922SB     | ±.0005"       | ±.0005" | 1.8N or less    |            | ✓               |                 |
| .0005"     | .5"   | .05"                            | 0-50         | 2514S     | 2514SB     | ±.0005"       | ±.0015" | 1.8N or less    |            |                 |                 |
| .0005"     | 1"    | .05"                            | 0-50         | 2776S     | 2776SB     | ±.0005"       | ±.002"  | 2.5N or less    |            |                 |                 |
| .001"      | .5"   | .1"                             | 0-100        | 2414S     | 2414SB     | ±.001"        | ±.001"  | 1.8N or less    |            |                 |                 |
| .001"      | .5"   | .1"                             | 100-0        | 2914S     | 2914SB     | ±.001"        | ±.001"  | 0.4-1.8N        |            | ✓               |                 |
| .001"      | .5"   | .1"                             | 0-50-0       | 2415S     | 2415SB     | ±.001"        | ±.001"  | 1.8N or less    |            |                 |                 |
| .001"      | 1"    | .1"                             | 0-100        | 2416S     | 2416SB     | ±.001"        | ±.002"  | 1.8N or less    |            |                 |                 |
| .001"      | 1"    | .1"                             | 0-100        | 2416S-06* | 2416SB-06* | ±.001"        | ±.002"  | 1.8N or less    |            |                 |                 |
| .001"      | 1"    | .1"                             | 0-100        | 2416S-10  | 2416SB-10  | ±.001"        | ±.002"  | 1.8N or less    |            |                 | ✓               |
| .001"      | 1"    | .1"                             | 0-50-0       | 2417S     | 2417SB     | ±.001"        | ±.002"  | 1.8N or less    |            |                 |                 |
| .001"      | 1"    | .1"                             | 100-0        | 2904S     | 2904SB     | ±.001"        | ±.002"  | 1.8N or less    |            | ✓               |                 |
| .001"      | 2"    | 1"                              | 0-100        | 2424S-19  | 2424SB-19  | ±.001"        | ±.003"  | 2.5N or less    | ✓          |                 | ✓               |

\* Black Face



Shockproof type



Reverse reading type



Jeweled bearing type

# Dial Indicators

## SERIES 2 — Standard Type, Inch Reading



2506S

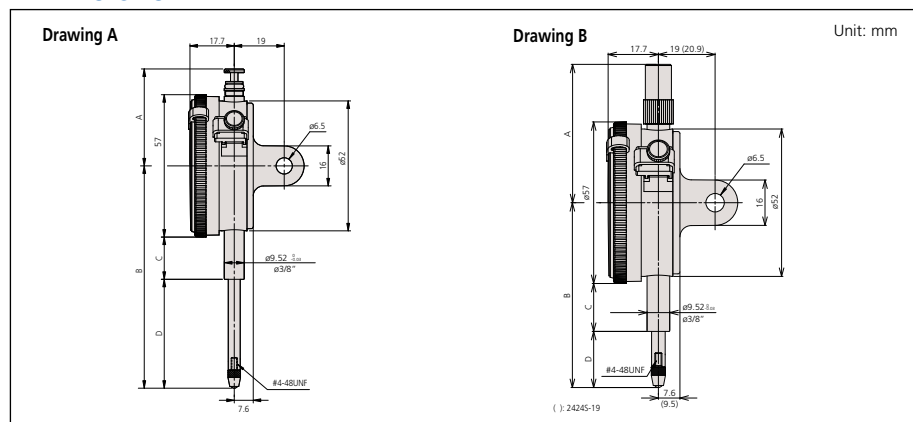


2923S-10



2424S-19

## DIMENSIONS



## 2 Group Inch

| Order No.   | A     | B     | C    | D    | Drawing |
|-------------|-------|-------|------|------|---------|
| 2356S(B)-10 | 48.8  | 57.2  | 13.6 | 15.1 | B       |
| 2358S(B)-10 | 38.9  | 63.6  | 13.6 | 21.5 | A       |
| 2414S(B)    | 38.9  | 64.1  | 13.6 | 22   | A       |
| 2415S(B)    | 38.9  | 64.1  | 13.6 | 22   | A       |
| 2416S(B)    | 38.9  | 76.8  | 13.6 | 34.7 | A       |
| 2416S(B)-06 | 38.9  | 76.8  | 13.6 | 34.7 | A       |
| 2416S(B)-10 | 38.9  | 76.8  | 13.6 | 34.7 | A       |
| 2417S(B)    | 38.9  | 76.8  | 13.6 | 34.7 | A       |
| 2424S(B)-19 | 118.5 | 142.5 | 54.3 | 59.7 | B       |
| 2506S(B)    | 48.8  | 54.3  | 13.6 | 12.2 | B       |
| 2507S(B)    | 48.8  | 54.3  | 13.6 | 12.2 | B       |
| 2514S(B)    | 38.9  | 64.1  | 13.6 | 22   | A       |

| Order No.   | A    | B    | C    | D    | Drawing |
|-------------|------|------|------|------|---------|
| 2776S(B)    | 38.9 | 76.8 | 13.6 | 34.7 | A       |
| 2802S(B)-10 | 48.8 | 51.4 | 13.6 | 9.3  | B       |
| 2803S(B)-10 | 48.8 | 51.4 | 13.6 | 9.3  | B       |
| 2804S(B)-10 | 48.8 | 51.7 | 13.6 | 9.6  | B       |
| 2805S(B)-10 | 48.8 | 51.7 | 13.6 | 9.6  | B       |
| 2904S(B)    | 38.9 | 76.8 | 13.6 | 34.7 | A       |
| 2905S(B)-10 | 48.8 | 51.7 | 13.6 | 9.6  | B       |
| 2914S(B)    | 38.9 | 64.1 | 13.6 | 22   | A       |
| 2915S(B)-10 | 52.2 | 63.3 | 13.6 | 21.2 | A       |
| 2918S(B)-10 | 52.2 | 63.3 | 13.6 | 21.2 | A       |
| 2922S(B)    | 48.8 | 54.3 | 13.6 | 12.2 | B       |
| 2923S(B)-10 | 48.8 | 51.7 | 13.6 | 9.6  | B       |

# Dial Indicators

## SERIES 2 — Metric Standard Type

Series 2 dial indicators are Mitutoyo's most popular and have the widest application.

### FEATURES

- Standard 0.01mm graduation dial gages having an outer frame with an outside diameter of 57mm. All types come with limit pins and an outer-frame clamp as standard.
- The outer 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.
- Secured adhesion between the outer frame and crystal, as well as the use of an O-ring, protect against water and oil permeation via the front face.
- The stem spindle is made of high-strength quench-hardened stainless steel for longevity.
- A carbide contact point is used.
- The grand gear uses stainless steel that is resistant to wear and deformation.
- Application of a hard coating on the surface of the crystal makes the gage highly scratch- and chemical-resistant.



### SPECIFICATIONS

| Metric     |       | Stem dia. ø8mm M2.5 x 0.45 Thread |              | ISO/JIS type |           |          |                 |            |            |           |                 |              |                 |                 |        |
|------------|-------|-----------------------------------|--------------|--------------|-----------|----------|-----------------|------------|------------|-----------|-----------------|--------------|-----------------|-----------------|--------|
| Graduation | Range | Range / Rev                       | Dial reading | Order No.    |           | Accuracy | Measuring Force | Shockproof | Waterproof | Long stem | Jeweled bearing | Double scale | Coaxial counter | Reverse reading | Damper |
|            |       |                                   |              | w/ lug       | Flat-back |          |                 |            |            |           |                 |              |                 |                 |        |
| 0.001mm    | 1mm   | (0.1mm)                           | 0-100        | 2110S-10     | 2110SB-10 | ±0.005mm | 1.5N or less    | ✓          |            |           | ✓               | ✓            |                 |                 |        |
| 0.001mm    | 1mm   | (0.1mm)                           | 0-100        | 2110S-70     | 2110SB-70 | ±0.005mm | 2.0N or less    | ✓          | ✓          |           | ✓               | ✓            |                 |                 |        |
| 0.001mm    | 1mm   | (0.2mm)                           | 0-100-0      | 2109S-10     | 2109SB-10 | ±0.005mm | 1.5N or less    | ✓          |            |           | ✓               |              |                 |                 |        |
| 0.001mm    | 1mm   | (0.2mm)                           | 0-100-0      | 2109S-70     | 2109SB-70 | ±0.005mm | 2.0N or less    | ✓          | ✓          |           | ✓               |              |                 |                 |        |
| 0.001mm    | 2mm   | (0.2mm)                           | 0-100-0      | 2113S-10     | 2113SB-10 | ±0.007mm | 1.5N or less    | ✓          |            |           | ✓               |              |                 |                 |        |
| 0.001mm    | 5mm   | (0.2mm)                           | 0-100-100    | 2118S-10     | 2118SB-10 | ±0.010mm | 1.5N or less    |            |            |           | ✓               |              |                 |                 |        |
| 0.001mm    | 5mm   | (0.2mm)                           | 0-100-0      | 2119S-10     | 2119SB-10 | ±0.010mm | 1.5N or less    |            |            |           | ✓               |              |                 |                 |        |
| 0.005mm    | 5mm   | (0.5mm)                           | 0-50         | 2124S-10     | 2124SB-10 | ±0.012mm | 1.5N or less    |            |            |           | ✓               |              |                 |                 |        |
| 0.01mm     | 5mm   | (1mm)                             | 0-100        | 2044S        | 2044SB    | ±0.012mm | 1.4N or less    |            |            |           |                 |              |                 |                 |        |
| 0.01mm     | 5mm   | (1mm)                             | 0-100        | 2044S-09     | 2044SB-09 | ±0.013mm | 1.4N or less    | ✓          |            |           |                 |              |                 |                 |        |
| 0.01mm     | 5mm   | (1mm)                             | 0-100        | 2044S-60     | 2044SB-60 | ±0.012mm | 2.5N or less    |            | ✓          |           |                 |              |                 |                 |        |
| 0.01mm     | 5mm   | (1mm)                             | 0-50-0       | 2045S        | 2045SB    | ±0.012mm | 1.4N or less    |            |            |           |                 |              |                 | ✓               |        |
| 0.01mm     | 10mm  | (1mm)                             | 0-100        | 2046S        | 2046SB    | ±0.013mm | 1.4N or less    |            |            |           |                 |              |                 |                 |        |
| 0.01mm     | 10mm  | (1mm)                             | 0-100        | 2046S-09     | 2046SB-09 | ±0.015mm | 1.4N or less    | ✓          |            |           |                 |              |                 |                 |        |
| 0.01mm     | 10mm  | (1mm)                             | 0-100        | 2046S-60     | 2046SB-60 | ±0.013mm | 2.5N or less    |            | ✓          |           |                 |              |                 |                 |        |
| 0.01mm     | 10mm  | (1mm)                             | 0-100        | 2310S-10     | 2310SB-10 | ±0.015mm | 1.4N or less    |            |            |           | ✓               |              | ✓               |                 |        |
| 0.01mm     | 10mm  | (1mm)                             | 100-0        | 2902S        | 2902SB    | ±0.013mm | 1.4N or less    |            |            |           |                 |              |                 | ✓               |        |
| 0.01mm     | 10mm  | (1mm)                             | 0-50-0       | 2047S        | 2047SB    | ±0.013mm | 1.4N or less    |            |            |           |                 |              |                 |                 |        |
| 0.01mm     | 20mm  | (1mm)                             | 0-100        | 2050S        | 2050SB    | ±0.020mm | 2.0N or less    |            |            |           |                 |              |                 |                 | ✓      |
| 0.01mm     | 20mm  | (1mm)                             | 0-100        | 2050S-60     | 2050SB-60 | ±0.020mm | 2.5N or less    |            | ✓          |           |                 |              |                 |                 |        |
| 0.01mm     | 20mm  | (1mm)                             | 0-100        | 2050S-19     | 2050SB-19 | ±0.020mm | 2.0N or less    | ✓          |            |           | ✓               |              |                 |                 | ✓      |
| 0.01mm     | 20mm  | (1mm)                             | 0-100        | 2320S-10     | 2320SB-10 | ±0.020mm | 2.0N or less    |            |            |           | ✓               |              | ✓               |                 | ✓      |
| 0.01mm     | 30mm  | (1mm)                             | 0-100        | 2052S        | 2052SB    | ±0.025mm | 2.5N or less    |            |            |           |                 |              |                 |                 | ✓      |
| 0.01mm     | 30mm  | (1mm)                             | 0-100        | 2052S-19     | 2052SB-19 | ±0.025mm | 2.5N or less    | ✓          |            |           | ✓               |              |                 |                 | ✓      |
| 0.01mm     | 30mm  | (1mm)                             | 0-100        | 2330S-10     | 2330SB-10 | ±0.025mm | 2.5N or less    |            |            |           | ✓               |              | ✓               |                 | ✓      |
| 0.01mm     | 30mm  | (1mm)                             | 100-0        | 2952S        | 2952SB    | ±0.025mm | 2.5N or less    |            |            |           |                 |              |                 | ✓               | ✓      |

\*Use in a vertical position only (contact point downward).



2046S  
2046S-09



2046S-60



2047S

## SERIES 2 — Metric Standard Type

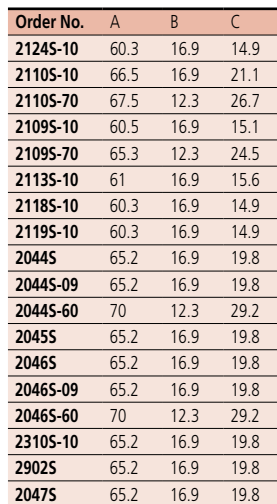


Mitutoyo guarantees the product quality.

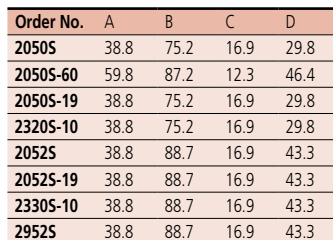
**PROPRIETARY  
INSPECTION  
CERTIFICATE**

Mitutoyo guarantees the product quality.

Unit: mm



Unit: mm



—: Backs (See page F-33.)  
—: Contact points (See page F-34.)

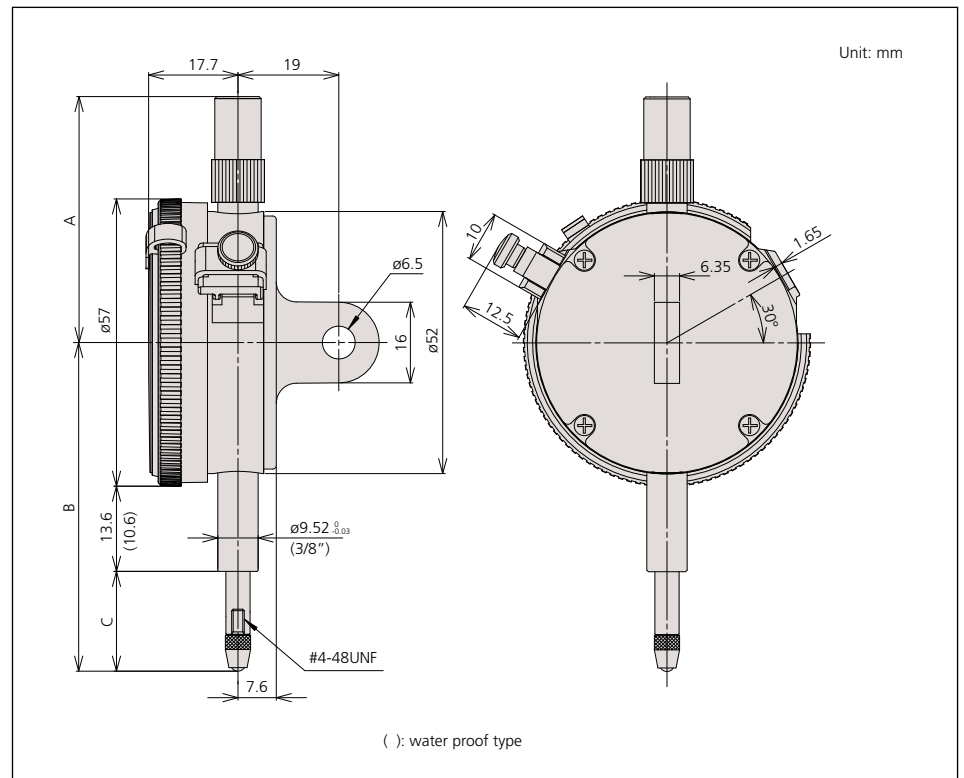
# Dial Indicators

## SERIES 2 — ANSI / AGD Type Metric Dial Indicator

### SPECIFICATIONS

| Metric     |       |             |              | Stem dia. 3/8", #4-48 UNF Thread Yellow Dial Face |           |               |          | <div></div> ANSI/AGD type |                                                                                     |                                                                                     |
|------------|-------|-------------|--------------|---------------------------------------------------|-----------|---------------|----------|---------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Graduation | Range | Range / Rev | Dial reading | Order No.                                         |           | Accuracy      |          | Measuring force           |  |  |
|            |       |             |              | w/ lug                                            | Flat-back | First 2.5 Rev | Overall  |                           |                                                                                     |                                                                                     |
| 0.001mm    | 1mm   | 0.2mm       | 0-100-0      | 2109S-11                                          | 2109SB-11 | ±0.003mm      | ±0.004mm | 1.5N or less              | ✓                                                                                   | ✓                                                                                   |
| 0.001mm    | 5mm   | 0.2mm       | 0-100-0      | 2119S-11                                          | 2119SB-11 | ±0.007mm      | ±0.01mm  | 1.5N or less              | ✓                                                                                   |                                                                                     |
| 0.01mm     | 2.5mm | 1mm         | 0-100        | 2230S-01                                          | 2230SB-01 | ±0.01mm       | ±0.01mm  | 1.4N or less              |                                                                                     |                                                                                     |
| 0.01mm     | 2.5mm | 1mm         | 0-50-0       | 2231S-01                                          | 2231SB-01 | ±0.01mm       | ±0.01mm  | 1.4N or less              |                                                                                     |                                                                                     |
| 0.01mm     | 10mm  | 1mm         | 0-100        | 2046S-01                                          | 2046SB-01 | ±0.01mm       | ±0.013mm | 1.4N or less              |                                                                                     |                                                                                     |
| 0.01mm     | 10mm  | 1mm         | 0-100        | 2046S-11                                          | 2046SB-11 | ±0.01mm       | ±0.013mm | 1.4N or less              | ✓                                                                                   |                                                                                     |
| 0.01mm     | 10mm  | 1mm         | 0-50-0       | 2047S-01                                          | 2047SB-01 | ±0.01mm       | ±0.013mm | 1.4N or less              |                                                                                     |                                                                                     |
| 0.01mm     | 10mm  | 1mm         | 0-50-0       | 2047S-11                                          | 2047SB-11 | ±0.01mm       | ±0.013mm | 1.4N or less              | ✓                                                                                   |                                                                                     |
| 0.01mm     | 10mm  | 1mm         | 100-0        | 2902S-01                                          | 2902SB-01 | ±0.01mm       | ±0.013mm | 1.4N or less              |                                                                                     |                                                                                     |
| 0.01mm     | 20mm  | 1mm         | 0-100        | 2050S-01                                          | 2050SB-01 | ±0.01mm       | ±0.02mm  | 2.0N or less              |                                                                                     |                                                                                     |
| 0.01mm     | 20mm  | 1mm         | 0-100        | 2050S-11                                          | 2050SB-11 | ±0.01mm       | ±0.02mm  | 2.0N or less              | ✓                                                                                   |                                                                                     |
| 0.01mm     | 25mm  | 1mm         | 0-100        | 2056S-01                                          | 2056SB-01 | ±0.01mm       | ±0.025mm | 2.5N or less              |                                                                                     |                                                                                     |

### DIMENSIONS



### Optional Accessories

- Backs (See page F-33.)
- Contact points (See page F-34.)

# Dial Indicators

## SERIES 3 — Large Dial Face and Long Stroke

- Dial gages with a large-diameter (78mm / 3.07") graduation face for easy reading.



3109S-10



3416S



3058S-19



3046S



3047S



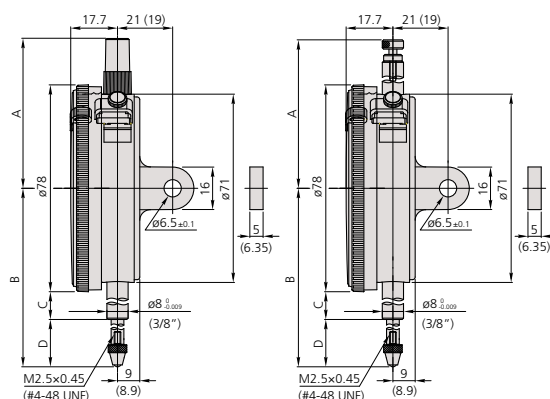
3050S



3052S-19

## DIMENSIONS

Unit: mm



( ): ANSI / AGD Type

| Order No.   | A     | B     | C    | D     |
|-------------|-------|-------|------|-------|
| 3052S(B)-11 | 72.9  | 102.4 | 25.9 | 37.5  |
| 3058S(B)-11 | 81.9  | 147.1 | 50.6 | 57.5  |
| 3414S(B)    | 51.3  | 73.4  | 12.6 | 21.8  |
| 3415S(B)    | 51.3  | 73.4  | 12.6 | 21.8  |
| 3416S(B)    | 51.3  | 86.1  | 12.6 | 34.5  |
| 3417S(B)    | 51.3  | 86.1  | 12.6 | 34.5  |
| 3424S(B)-19 | 84    | 149.3 | 50.6 | 59.7  |
| 3426S(B)-19 | 120.9 | 198.1 | 73.9 | 85.2  |
| 3428S(B)-19 | 141.9 | 243.9 | 94.9 | 110.0 |
| 3802S(B)-10 | 61.2  | 59.7  | 12.6 | 8.1   |
| 3803S(B)-10 | 61.2  | 59.7  | 12.6 | 8.1   |
| 3046S(B)    | 61.2  | 75.5  | 15.9 | 20.6  |
| 3047S(B)    | 61.2  | 75.5  | 15.9 | 20.6  |
| 3050S(B)    | 52.6  | 94.0  | 25.9 | 29.1  |
| 3052S(B)-19 | 72.9  | 104.3 | 25.9 | 39.4  |
| 3060S(B)-19 | 120.9 | 202.3 | 73.9 | 89.4  |
| 3062S(B)-19 | 141.9 | 243.3 | 94.9 | 109.4 |
| 3109S(B)-10 | 61.2  | 79.3  | 25.9 | 14.1  |

# Dial Indicators

## SERIES 3 — Large Dial Face

### SPECIFICATIONS

| Inch       |       | Stem 3/8" DIA. #4-48 UNF Thread |              |                 |                  |               |                  |                 |                                                                                     |                                                                                     |                                                                                     | ANSI/AGD type                                                                       |                                                                                     |                                                                                     |
|------------|-------|---------------------------------|--------------|-----------------|------------------|---------------|------------------|-----------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Graduation | Range | Range /rev                      | Dial reading | Order No.       |                  | Accuracy      |                  | Measuring Force |  |  |  |  |  |  |
|            |       |                                 |              | W/ lug          | Flat-back        | First 2.5 Rev | Overall Accuracy |                 |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| .0001"     | .025" | .01"                            | 0-10         | <b>3802S-10</b> | <b>3802SB-10</b> | ±.0001"       | ±.0001"          | 2.0N or less    | ✓                                                                                   | ✓                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| .0001"     | .025" | .01"                            | 0-5-0        | <b>3803S-10</b> | <b>3803SB-10</b> | ±.0001"       | ±.0001"          | 2.0N or less    | ✓                                                                                   | ✓                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| .001"      | .5"   | .1"                             | ±0-100       | <b>3414S</b>    | <b>3414SB</b>    | ±.001"        | ±.001"           | 1.8N or less    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| .001"      | .5"   | .1"                             | 0-50-0       | <b>3415S</b>    | <b>3415SB</b>    | ±.001"        | ±.001"           | 1.8N or less    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| .001"      | 1"    | .1"                             | ±0-100       | <b>3416S</b>    | <b>3416SB</b>    | ±.001"        | ±.002"           | 1.8N or less    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| .001"      | 1"    | .1"                             | 0-50-0       | <b>3417S</b>    | <b>3417SB</b>    | ±.001"        | ±.002"           | 1.8N or less    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| .001"      | 2"    | .1"                             | ±0-100       | <b>3424S-19</b> | <b>3424SB-19</b> | ±.001"        | ±.003"           | 3.0N or less    | ✓                                                                                   | ✓                                                                                   | ✓                                                                                   |                                                                                     |                                                                                     |                                                                                     |
| .001"      | 3"    | .1"                             | ±0-100       | <b>3426S-19</b> | <b>3426SB-19</b> | ±.001"        | ±.005"           | 3.0N or less    | ✓                                                                                   | ✓                                                                                   | ✓                                                                                   |                                                                                     |                                                                                     |                                                                                     |
| .001"      | 4"    | .1"                             | ±0-100       | <b>3428S-19</b> | <b>3428SB-19</b> | ±.001"        | ±.005"           | 3.2N or less    | ✓                                                                                   | ✓                                                                                   | ✓                                                                                   |                                                                                     |                                                                                     |                                                                                     |

| Metric     |       | Stem 3/8" DIA. #4-48 UNF Thread, Yellow dial face |              |                 |                  |               |                  |                 |                                                                                     |                                                                                     |                                                                                     | ANSI/AGD type                                                                       |                                                                                     |                                                                                     |
|------------|-------|---------------------------------------------------|--------------|-----------------|------------------|---------------|------------------|-----------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Graduation | Range | Range /rev                                        | Dial reading | Order No.       |                  | Accuracy      |                  | Measuring Force |  |  |  |  |  |  |
|            |       |                                                   |              | W/ lug          | Flat-back        | First 2.5 Rev | Overall Accuracy |                 |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| 0.01mm     | 30mm  | 1mm                                               | ±0-100       | <b>3052S-11</b> | <b>3052SB-11</b> | ±0.01mm       | ±0.03mm          | 2.5N or less    | ✓                                                                                   | ✓                                                                                   | ✓                                                                                   |                                                                                     |                                                                                     |                                                                                     |
| 0.01mm     | 50mm  | 1mm                                               | ±0-100       | <b>3058S-11</b> | <b>3058SB-11</b> | ±0.01mm       | ±0.04mm          | 3.0N or less    | ✓                                                                                   | ✓                                                                                   | ✓                                                                                   |                                                                                     |                                                                                     |                                                                                     |

| Metric     |       | Stem ø 8mm M2.5x0.45 Thread |              |                  |                   |          |                 |                                                                                     |                                                                                     |                                                                                     |                                                                                     | ISO/JIS type                                                                        |                                                                                     |                                                                                     |
|------------|-------|-----------------------------|--------------|------------------|-------------------|----------|-----------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Graduation | Range | Range /rev                  | Dial reading | Order No.        |                   | Accuracy | Measuring Force |  |  |  |  |  |  |  |
|            |       |                             |              | W/ lug           | Flat-back         |          |                 |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| 0.001mm    | 1mm   | 0.2mm                       | 0-10-0       | <b>3109S-10</b>  | <b>3109SB-10</b>  | ±0.005mm | 1.5N or less    | ✓                                                                                   | ✓                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| 0.01mm     | 10mm  | 1mm                         | 0-100        | <b>3046S</b>     | <b>3046SB</b>     | ±0.015mm | 1.4N or less    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| 0.01mm     | 10mm  | 1mm                         | 0-50-0       | <b>3047S</b>     | <b>3047SB</b>     | ±0.015mm | 1.4N or less    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| 0.01mm     | 20mm  | 1mm                         | 0-100        | <b>3050S</b>     | <b>3050SB</b>     | ±0.020mm | 2.0N or less    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     | ✓                                                                                   |
| 0.01mm     | 30mm  | 1mm                         | 0-100        | <b>3052S-19</b>  | <b>3052SB-19</b>  | ±0.025mm | 2.5N or less    | ✓                                                                                   | ✓                                                                                   | ✓                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| 0.01mm     | 50mm  | 1mm                         | 0-100        | <b>3058S-19</b>  | <b>3058SB-19</b>  | ±0.035mm | 3.0N or less    | ✓                                                                                   | ✓                                                                                   | ✓                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| 0.01mm     | 80mm  | 1mm                         | 0-100        | <b>3060S-19*</b> | <b>3060SB-19*</b> | ±0.045mm | 3.0N or less    | ✓                                                                                   | ✓                                                                                   | ✓                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| 0.01mm     | 100mm | 1mm                         | 0-100        | <b>3062S-19*</b> | <b>3062SB-19*</b> | ±0.050mm | 3.2N or less    | ✓                                                                                   | ✓                                                                                   | ✓                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |

\*use in a vertical position only



Shockproof type



w/ coaxial revolution counter



w/ damper at lowest rest point



Jeweled bearing type

### Optional Accessories

- : Backs (See page F-33.)
- : Contact points (See page F-34.)

# Dial Indicators

## SERIES 4 — Large Dial Face

- Dial gages with a large-diameter (92mm / 3.62") graduation face for easy reading.
- All types come standard with limit pins and an outer frame clamp.



4046S



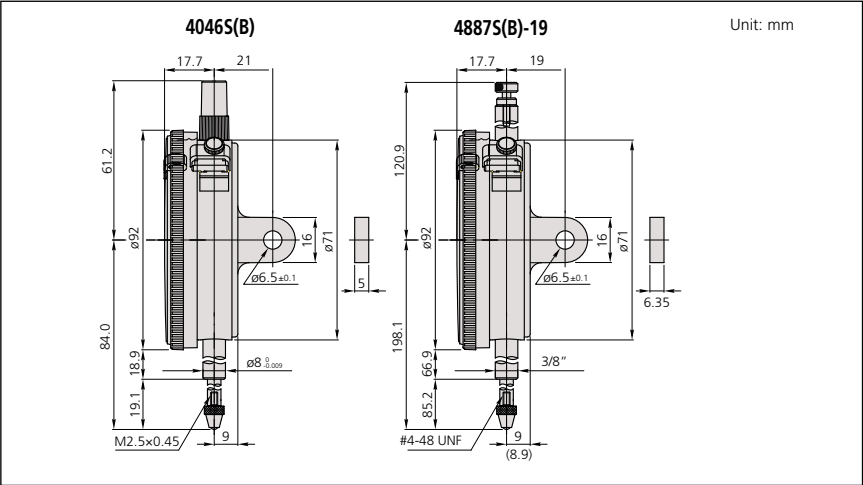
4887S-19

### SPECIFICATIONS

| Inch       |       |            | Stem 3/8" DIA. #4-48 UNF Thread |           |           |               |                  | ANSI/AGD type   |                                                                                   |                                                                                   |                                                                                   |
|------------|-------|------------|---------------------------------|-----------|-----------|---------------|------------------|-----------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|
| Graduation | Range | Range /rev | Dial reading                    | Order No. |           | Accuracy      |                  | Measuring Force |  |  |  |
|            |       |            |                                 | W/ lug    | Flat-back | First 2.5 Rev | Overall accuracy |                 |                                                                                   |                                                                                   |                                                                                   |
| .001"      | 3"    | .1"        | ±0-100                          | 4887S-19  | 4887SB-19 | ±.001"        | ±.005"           | 3.0N or less    | ✓                                                                                 | ✓                                                                                 | ✓                                                                                 |

| Metric     |       | Stem ø 8mm M2.5x0.45 Thread |              |           |           |               |                  | ISO/JIS type    |                                                                                     |                                                                                     |
|------------|-------|-----------------------------|--------------|-----------|-----------|---------------|------------------|-----------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Graduation | Range | Range /rev                  | Dial reading | Order No. |           | Accuracy      |                  | Measuring Force |  |  |
|            |       |                             |              | W/ lug    | Flat-back | First 2.5 Rev | Overall accuracy |                 |                                                                                     |                                                                                     |
| 0.01mm     | 10mm  | 1mm                         | 0-100        | 4046S     | 4046SB    | ± 0.01mm      | ± 0.015mm        | 1.4N or less    | ✓                                                                                   | ✓                                                                                   |

### DIMENSIONS



- Optional Accessories**
- : Backs (See page F-33.)
  - : Contact points (See page F-34.)

# Back Plunger Dial Indicators

## SERIES 1 and 2



Mitutoyo's back-plunger dial indicators are built with the measuring spindles on the back of the units. This type of indicator offers the same precision and durability as all other Mitutoyo dial indicators, and operates effectively with optional holding bars.

- Back-plunger dial gages are suitable for mounting onto leveling machine tool tables or inspection jigs, and for use in small spaces where the graduations of standard dial gages are difficult to see.
- Model No. 1960T, which uses Mitutoyo's proprietary shock-proofing mechanism, has excellent durability and shock resistance.



One revolution type



Shockproof type



Jeweled bearing type

## SPECIFICATIONS

**Inch** Series 1 Stem 3/8" dia. , #4-48 UNF Thread ANSI/AGD type

| Graduation | Range | Range / Rev | Dial reading | Order No.    | Accuracy | Measuring Force |   |   |   |
|------------|-------|-------------|--------------|--------------|----------|-----------------|---|---|---|
| .001"      | .04"  | .05"*       | 20-0-20      | <b>1961T</b> | ±.001"   | 0.4 - 1.4N      | ✓ | ✓ |   |
| .001"      | .2"   | .05"        | 0-50         | <b>1166T</b> | ±.001"   | 0.4 - 1.4N      |   |   |   |
| .001"      | .2"   | .05"        | 0-25-0       | <b>1167T</b> | ±.001"   | 0.4 - 1.4N      |   |   |   |
| .001"      | .2"   | .05"        | 50-0         | <b>1168T</b> | ±.001"   | 0.4 - 1.4N      |   |   | ✓ |

\*Full stroke

### Optional Accessories

- 136567:** Holding bar (ø6mm, L=81mm)  
**136568:** Holding bar (ø8mm, L=81mm)  
**124625:** Holding bar (.25" DIA, L=3.19")

- : Backs (See page F-31.)  
 —: Contact points (See page F-34.)

**Metric** Series 1 Stem ø8mm, M2.5x0.45 Thread ISO/JIS type

| Graduation | Range | Range / Rev | Dial reading | Order No.    | Accuracy | Measuring Force |   |   |   | Remarks |
|------------|-------|-------------|--------------|--------------|----------|-----------------|---|---|---|---------|
| 0.01mm     | 1mm   | 1.27mm*     | 50-0-50      | <b>1960T</b> | ±0.014mm | 0.4 - 1.4N      | ✓ | ✓ |   | —       |
| 0.01mm     | 5mm   | 1mm         | 0-100        | <b>1160T</b> | ±0.016mm | 0.4 - 1.4N      |   |   |   | —       |
| 0.01mm     | 5mm   | 1mm         | 100-0        | <b>1162T</b> | ±0.016mm | 0.4 - 1.4N      |   |   | ✓ | —       |

\*Full stroke

**Inch** Series 2 Stem 3/8" dia. , #4-48 UNF Thread ANSI/AGD type

| Graduation | Range | Range/full stroke | Dial reading | Order No.       | Accuracy | Measuring Force |   |   |   |
|------------|-------|-------------------|--------------|-----------------|----------|-----------------|---|---|---|
| .0001"     | .008" | .01"              | 4-0-4        | <b>2991T-10</b> | ±.0002"  | 0.4 - 1.5N      | ✓ | ✓ | ✓ |
| .0005"     | .04"  | .05"              | 20-0-20      | <b>2961T</b>    | ±.0005"  | 0.4 - 1.4N      | ✓ | ✓ |   |

**Metric** Series 2 Stem ø8mm, M2.5x0.45 Thread ISO/JIS type

| Graduation | Range | Range/full stroke | Dial reading | Order No.       | Accuracy | Measuring Force |   |   |   |
|------------|-------|-------------------|--------------|-----------------|----------|-----------------|---|---|---|
| 0.001mm    | 0.1mm | 0.14mm            | 50-0-50      | <b>2990T-10</b> | ±0.005mm | 0.4 - 1.5N      | ✓ | ✓ | ✓ |
| 0.01mm     | 1mm   | 1.27mm            | 50-0-50      | <b>2960T</b>    | ±0.014mm | 0.4 - 1.4N      | ✓ | ✓ |   |

# Back Plunger Dial Indicators

## SERIES 1 and 2



2960T



Balanced scale



Graduation: 0.01mm,  
Measuring range: 1mm

2960T

One revolution

Shockproof

Back plunger



2990T-10



Balanced scale



Graduation: 0.01mm,  
Measuring range: 1mm

2990T-10

One revolution

Shockproof

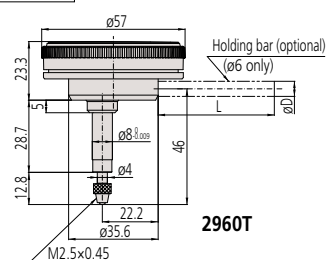
Back plunger

Jeweled bearing

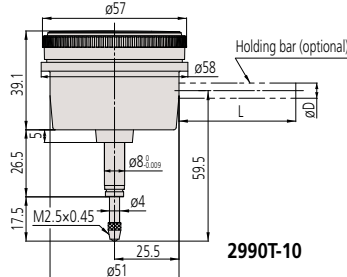
## DIMENSIONS

Unit: mm

ISO/JIS  
Type

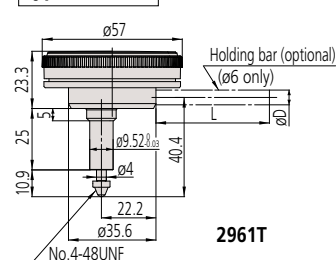


2960T

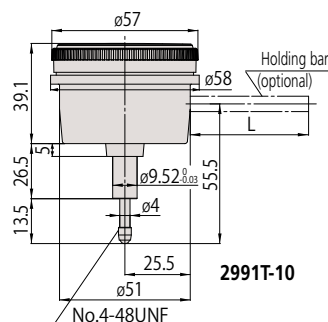


2990T-10

ANSI/AGD  
Type



2961T

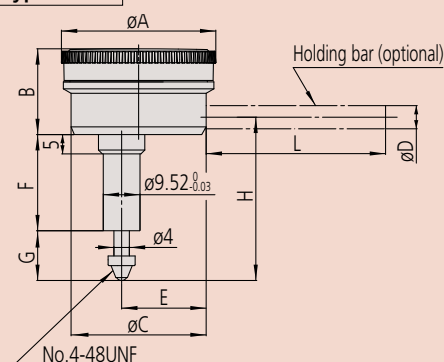


2991T-10

## DIMENSIONS

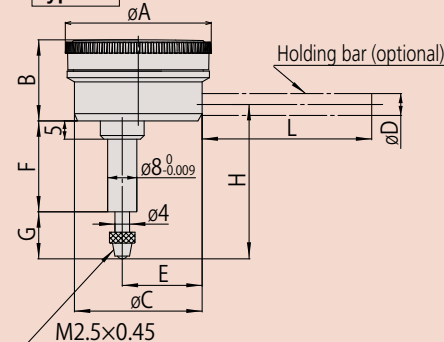
Unit: mm

ANSI/AGD  
Type



| Order No. | A  | B    | C    | E    | F  | G    | H  |
|-----------|----|------|------|------|----|------|----|
| 1166T     | 40 | 22.1 | 35.6 | 22.2 | 25 | 10.9 | 42 |
| 1167T     | 40 | 22.1 | 35.6 | 22.2 | 25 | 10.9 | 42 |
| 1168T     | 40 | 22.1 | 35.6 | 22.2 | 25 | 10.9 | 42 |
| 1961T     | 40 | 22.1 | 35.6 | 22.2 | 25 | 10.9 | 40 |

ISO/JIS  
Type



| Order No. | A  | B    | C    | E    | F    | G    | H    |
|-----------|----|------|------|------|------|------|------|
| 1160T     | 40 | 22.1 | 35.6 | 22.2 | 25   | 13.8 | 43.3 |
| 1162T     | 40 | 22.1 | 35.6 | 22.2 | 25   | 13.8 | 43.3 |
| 1960T     | 40 | 22.1 | 35.6 | 22.2 | 28.7 | 12.8 | 46   |

Note 1: Refer to pages F-34 to F-35 for contact point details.  
Note 2: Dimensions of the inch (ANSI/AGD Type) dial indicator partly differ from those of the metric (ISO/JIS Type) indicator.

Note 3: Inch (ANSI/AGD Type) dial indicators are provided with a stem of 3/8" dia. and #4-48UNF thread mount for the contact point.

## Holding bar (optional)

| Order No. | øD      | L    |
|-----------|---------|------|
| 21AAA166  | ø6mm    | 42mm |
| 136567    | ø6mm    | 81mm |
| 124625    | ø6.35mm | 81mm |
| 21AAA167  | ø6.35mm | 42mm |
| 21AAA168  | ø8mm    | 42mm |
| 136568    | ø8mm    | 81mm |

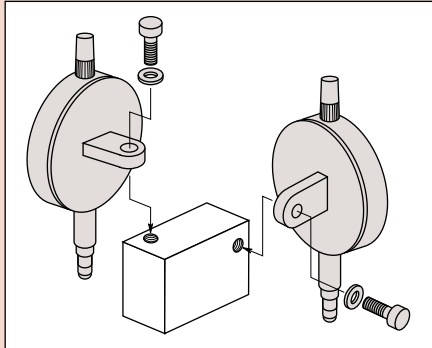
\* øD and L: detail shown in drawing below.

# Backs

## Optional Accessory for Digimatic and Dial Indicators

There are two ways to support Digimatic and dial indicators--by either holding the stem or the lug on the back of the indicator. The back of the indicator may need to be replaced for special applications. A variety of backs are available for Mitutoyo Digimatic and dial indicators.

### Application



### ID-S (543-6xx only)\*1

- 02ACB420:** Lug-on-center back for ISO/JIS type
- 02ACB430:** Lug-on-center back for AGD type
- 02ACB440:** Flat back
- 02ACB610:** Back with post
- 02ACB620:** Adjustable back for AGD type
- 02ACB630:** Adjustable back (ISO/JIS type)
- 02ACB640:** Back with offset lug
- 02ACB650:** Magnetic back
- 02ACB660:** Back with screw mount for AGD type
- 02ACB670:** Back with screw mount (ISO/JIS type)
- 02ACB680:** Back with adjustable bracket

\*1 Includes the required adapter.



### SPECIFICATIONS

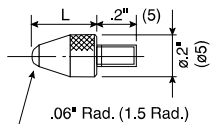
| Description                  |          | Order No.                                                                                  |                                                                                                        |                                                                                                           |                                                        |
|------------------------------|----------|--------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|--------------------------------------------------------|
|                              |          | Series 0<br>(ø31mm)<br>1003<br>(ø36mm)                                                     | Series 1<br>(ø41mm)                                                                                    | Series 2<br>ID-C (all types),<br>ID-F, ID-H<br>ID-S (excludes 543-6xx)<br>(ø57mm)                         | Series 3, 4<br>(ø77, 91mm)                             |
| Flat Back                    | Unit: mm | <b>191559:</b><br>a=1.0<br><b>137906:</b><br>for 1003<br>a=1.0                             | <b>101211:</b> a=2.2<br><b>136872:</b> for water-<br>proof type<br><b>191559:</b> for 1911,<br>1913-10 | <b>101039:</b> a=2.5<br><b>21AZB231:</b> for<br>waterproof of S<br>type                                   | <b>100836:</b> a=3.0                                   |
| Lug-on-Center Back           | Unit: mm | <b>190561:</b><br>Metric type<br><b>190139:</b><br>Inch type<br><b>137905:</b><br>for 1003 | <b>101210:</b> metric type<br><b>101307:</b> inch type<br><b>190561:</b> for 1911,<br>1913-10          | <b>101040:</b> metric type<br><b>101306:</b> inch type<br><b>21AZB230:</b> for<br>waterproof of S<br>type | <b>100691:</b> metric type<br><b>100797:</b> inch type |
| Magnetic Back                | Unit: mm | —                                                                                          | <b>Special order</b>                                                                                   | <b>900928</b>                                                                                             | <b>900929</b>                                          |
| Back with Offset Lug         | Unit: mm | —                                                                                          | <b>Special order</b>                                                                                   | <b>101167</b>                                                                                             | <b>100837</b>                                          |
| Back with Post               | Unit: mm | —                                                                                          | <b>193172</b>                                                                                          | <b>101169</b>                                                                                             | <b>100839</b>                                          |
| Back with Screw Mount        | Unit: mm | —                                                                                          | <b>193173:</b> M6x1,<br><b>193174:</b> #1/4-28UNF,                                                     | <b>136023:</b> M6x1<br><b>101170:</b> #1/4-28UNF                                                          | <b>136024:</b> M6x1<br><b>100840:</b> #1/4-28UNF       |
| Adjustable Back              | Unit: mm | —                                                                                          | <b>136025:</b> M6x1<br><b>129721:</b> #1/4-20UNC                                                       | <b>136026:</b> M6x1<br><b>101168:</b> #1/4-20UNC                                                          | <b>136027:</b> M6x1<br><b>100838:</b> #1/4-20UNC       |
| Back with Adjustable Bracket | Unit: mm | —                                                                                          | —                                                                                                      | <b>129902:</b><br>Dovetail<br>Rack Back<br><b>901964:</b><br>Dovetail bracket<br>for rack back            | —                                                      |

( ) : ANSI / AGD Type

# Contact Points

## Optional Accessories for Digimatic and Dial Indicators and Linear Gages

### ø.118" (ø3mm) Ball point



#### 4-48UNF

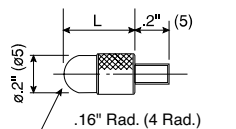
| L    | Carbide   | Sapphire | Ruby   | Plastic |
|------|-----------|----------|--------|---------|
| .25" | 21BZB005* | —        | —      | —       |
| .28" | —         | —        | —      | 902018  |
| .3"  | 131262    | 131263   | 131264 | —       |
| .6"  | 131265    | 131266   | 131267 | —       |
| 1"   | 131268    | 131269   | 131270 | —       |

#### M2.5 x 0.45mm

| L     | Carbide | Sapphire | Ruby   | Plastic |
|-------|---------|----------|--------|---------|
| 7.3mm | 901312* | —        | —      | 901994  |
| 8mm   | 120045  | 120046   | 120047 | —       |
| 15mm  | 120049  | 120050   | 120051 | —       |
| 25mm  | 120053  | 120054   | 120055 | —       |

\*Furnished with standard metric dial indicators.

### Shell point



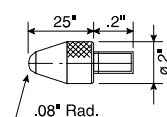
#### 4-48UNF

| L              | Order No. |
|----------------|-----------|
| 3/32" (.094")  | 193697    |
| 5/32" (.156")  | 101184    |
| 1/4" (.25")    | 21AAA031  |
| 3/8" (.375")   | 21AAA032  |
| 1/2" (.5")     | 101185    |
| 5/8" (.625")   | 21AAA033  |
| 3/4" (.75")    | 101186    |
| 7/8" (.875")   | 21AAA034  |
| 1"             | 101187    |
| 1 1/4" (1.25") | 21AAA035  |
| 1 1/2" (1.5")  | 21AAA036  |
| 1 3/4" (1.75") | 21AAA037  |
| 2"             | 21AAA038  |
| 2 1/4" (2.25") | 21AAA039  |
| 2 1/2" (2.5")  | 21AAA040  |
| 2 3/4" (2.75") | 21AAA041  |
| 3"             | 21AAA042  |

#### M2.5 x 0.45mm

| L    | Order No. |
|------|-----------|
| 5mm  | 101386    |
| 10mm | 101118    |
| 15mm | 137393    |
| 20mm | 101387    |
| 25mm | 101388    |
| 30mm | 21AAA254  |

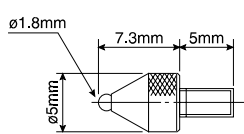
### ø.16 Ball Point



#### 4-48UNF

| Order No. |
|-----------|
| 21BZB005  |

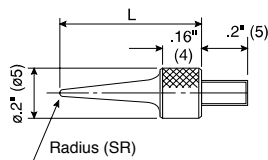
### ø1.8mm Ball Point



#### M2.5 x 0.45mm

| Order No. |
|-----------|
| 101122    |

### Needle point



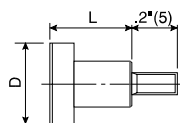
#### 4-48UNF

| L      | Order No. | SR    |
|--------|-----------|-------|
| .6"    | 21AAA030  | .016" |
| 1"     | 21AAA046  | .016" |
| 1 1/2" | 21AAA047  | .016" |
| 2"     | 21AAA048  | .016" |

#### M2.5 x 0.45mm

| L    | Order No. | SR  |
|------|-----------|-----|
| 15mm | 101121    | 0.4 |
| 17mm | 137413    | 0.2 |

### Flat point



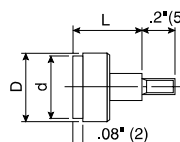
#### 4-48UNF

| D     | L    | Order No. |
|-------|------|-----------|
| ø1/2" | 3/8" | 101188    |
| ø3/8" | 3/8" | 101189    |

#### M2.5 x 0.45mm

| D     | L    | Order No. |
|-------|------|-----------|
| ø10mm | 10mm | 101117    |

### Flat-point, Carbide tip



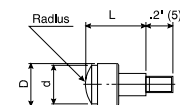
#### 4-48UNF

| D     | d     | L   | Order No. |
|-------|-------|-----|-----------|
| ø.2"  | ø.17" | .2" | 131259    |
| ø.27" | ø.25" | .4" | 131260    |
| ø.41" | ø.37" | .4" | 131261    |

#### M2.5 x 0.45mm

| D       | d      | L    | Order No. |
|---------|--------|------|-----------|
| ø5.2mm  | ø4.3mm | 5mm  | 120041    |
| ø7mm    | ø6.5mm | 10mm | 120042    |
| ø10.5mm | ø9.5mm | 10mm | 120043    |

### Spherical-point, Carbide tip



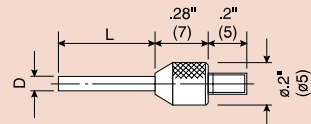
#### 4-48UNF

| D     | d     | Radius | L   | Order No. |
|-------|-------|--------|-----|-----------|
| ø.2"  | ø.17" | .2"    | .2" | 131273    |
| ø.27" | ø.16" | .16"   | .4" | 131274    |
| ø.41" | ø.37" | .4"    | .4" | 131275    |

#### M2.5 x 0.45mm

| D       | d      | Radius | L    | Order No. |
|---------|--------|--------|------|-----------|
| ø5.2mm  | ø4.3mm | 5mm    | 5mm  | 120058    |
| ø7mm    | ø6.5mm | 7mm    | 10mm | 120059    |
| ø10.5mm | ø9.5mm | 10mm   | 10mm | 120060    |

### Needle point, Carbide tipped



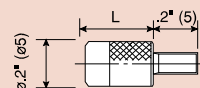
#### 4-48UNF

| D      | L    | Order No. |
|--------|------|-----------|
| ø.018" | .12" | 131281    |
| ø.04"  | .12" | 131280    |
| ø.06"  | .5"  | 131279    |
| ø.078" | .04" | 131271    |

#### M2.5 x 0.45mm

| D       | L     | Order No. |
|---------|-------|-----------|
| ø0.45mm | 2.5mm | 120066    |
| ø1mm    | 2.5mm | 120065    |
| ø1.5mm  | 13mm  | 120064    |
| ø2mm    | 1mm   | 120056    |
| ø2mm    | 8mm   | 137257    |

### ø.2" (ø5mm) Flat point



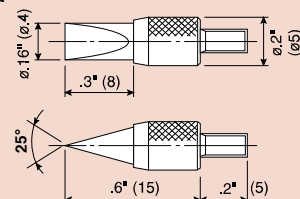
#### 4-48UNF

| L     | Order No. |
|-------|-----------|
| 5/16" | 133017    |
| 1/2"  | 21AAA043  |
| 3/4"  | 21AAA044  |
| 1"    | 21AAA045  |

#### M2.5 x 0.45mm

| L   | Order No. |
|-----|-----------|
| 8mm | 131365    |

### Knife-edge point, Carbide tipped



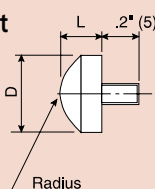
#### 4-48UNF

| Order No. |
|-----------|
| 131282    |

#### M2.5 x 0.45mm

| Order No. |
|-----------|
| 120067    |

### Spherical point



#### 4-48UNF

| D      | L       | Radius | Order No. |
|--------|---------|--------|-----------|
| ø.5"   | .125"   | .28"   | 101205    |
| ø.375" | .09375" | .35"   | 101204    |

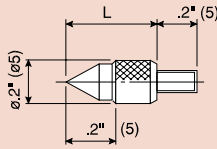
#### M2.5 x 0.45mm

| D     | L   | Radius | Order No. |
|-------|-----|--------|-----------|
| ø10mm | 5mm | 7mm    | 101119    |

# Contact Points

Optional Accessories for Digimatic and Dial Indicators and Linear Gages

## 60° Conical point



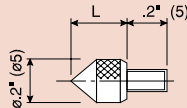
### 4-48UNF

| L    | Order No. |
|------|-----------|
| 1/2" | 101190    |

### M2.5 x 0.45mm

| L    | Order No. |
|------|-----------|
| 10mm | 101120    |

## 90° Conical point



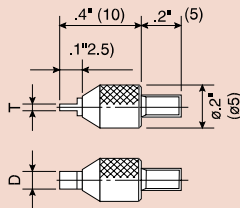
### 4-48UNF

| L    | Order No. |
|------|-----------|
| 1/4" | 101191    |

### M2.5 x 0.45mm

| L   | Order No. |
|-----|-----------|
| 5mm | 101385    |

## Blade point, Carbide tip



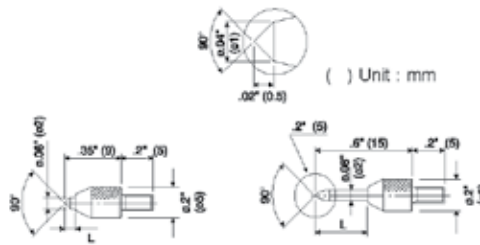
### 4-48UNF

| D    | T     | Order No. |
|------|-------|-----------|
| .08" | .016" | 131276    |
| .08" | .024" | 131277    |
| .16" | .04"  | 131278    |

### M2.5 x 0.45mm

| D   | T     | Order No. |
|-----|-------|-----------|
| 2mm | 0.4mm | 120061    |
| 2mm | 0.6mm | 120062    |
| 4mm | 1mm   | 120063    |

## 90° Conical point, Carbide tipped



### 4-48UNF

| L    | Order No. |
|------|-----------|
| .08" | 131272    |

### 4-48UNF

| L   | Order No. |
|-----|-----------|
| .3" | 131283    |

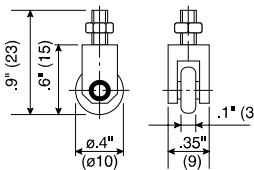
### M2.5 x 0.45mm

| L   | Order No. |
|-----|-----------|
| 2mm | 120057    |

### M2.5 x 0.45mm

| L   | Order No. |
|-----|-----------|
| 8mm | 120068    |

## Roller Point



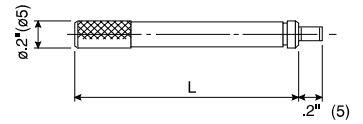
### 4-48UNF

| Order No. |
|-----------|
| 901991    |

### M2.5 x 0.45mm

| Order No. |
|-----------|
| 901954    |

## Extension Rod



### 4-48UNF

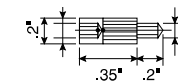
| L    | Order No. |
|------|-----------|
| 1/2" | 139167    |
| 1"   | 301655    |
| 2"   | 301657    |
| 4"   | 301659    |

### M2.5 x 0.45mm

| L     | Order No. |
|-------|-----------|
| 10mm  | 303611    |
| 15mm  | 21AAA259A |
| 20mm  | 303612    |
| 25mm  | 21AAA259B |
| 30mm  | 303613    |
| 35mm  | 21AAA259C |
| 40mm  | 21AAA259D |
| 45mm  | 21AAA259E |
| 50mm  | 21AAA259F |
| 55mm  | 21AAA259G |
| 60mm  | 304146    |
| 65mm  | 21AAA259H |
| 70mm  | 21AAA259J |
| 75mm  | 21AAA259L |
| 80mm  | 21AAA259M |
| 90mm  | 304147    |
| 100mm | 303614    |

## Point Conversion

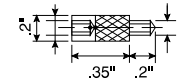
M2.5 x 0.45mm 4-48 UNFI



Order No.

21AAA011

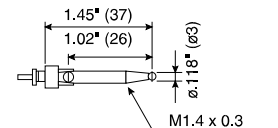
4-48 UNFI M2.5 x 0.45mm



Order No.

21AAA012

## Lever Point



### 4-48UNF

| Order No. |
|-----------|
| 900393    |

### M2.5 x 0.45mm

| Order No. |
|-----------|
| 900391    |

## Interchangeable Contact Point Set (M2.5x0.45)

Set Order No. 7822



| Individual No. | Description        |
|----------------|--------------------|
| 131365         | Flat Point (ø5mm)  |
| 101117         | Flat Point (ø10mm) |
| 101121         | Needle Point       |
| 101119         | Spherical Point    |
| 101118         | Shell Type Point   |
| 101387         | Shell Type Point   |

# Spindle Lifting Lever and Cable

## Optional Accessories for Digimatic and Dial Indicators

### Spindle Lifting Lever

- The Spindle Lifting Lever is attached to the top end of the spindle for improved inspection efficiency when using a dial indicator mounted on a stand.

Use for Series 1 Dial Indicators (up to 5mm / .25")

| Set Order No. | Lever  | Screw  | Screw Thread |
|---------------|--------|--------|--------------|
| 21BZA610      | 900527 | 101047 | 4-48 UNF     |
| 21BZA205      | 900527 | 101171 | M2.5 x 0.45  |



Use for Series 2 Dial Indicators (up to 10mm/.4")

| Set Order No. | Lever  | Screw  | Screw Thread |
|---------------|--------|--------|--------------|
| 902794        | 900525 | 101047 | 4-48 UNF     |
| 902011        | 900525 | 101171 | M2.5 x 0.45  |



Use for Series 2 Dial Indicators (up to 10mm/.4") and 1 Group S-Type

| Set Order No. | Lever    | Screw  | Screw Thread |
|---------------|----------|--------|--------------|
| 21BZA613      | 21BZA612 | 101047 | 4-48 UNF     |
| 902100        | 21BZA612 | 101171 | M2.5 x 0.45  |



Use for Series 2 Dial Indicators (up to 20mm/.8")

and Series 3 and 4 Dial Indicators (up to 10mm/.4")

| Set Order No. | Lever  | Screw  | Screw Thread |
|---------------|--------|--------|--------------|
| 903425        | 903307 | 192753 | 4-48 UNF     |
| 903424        | 903307 | 192686 | M2.5 x 0.45  |

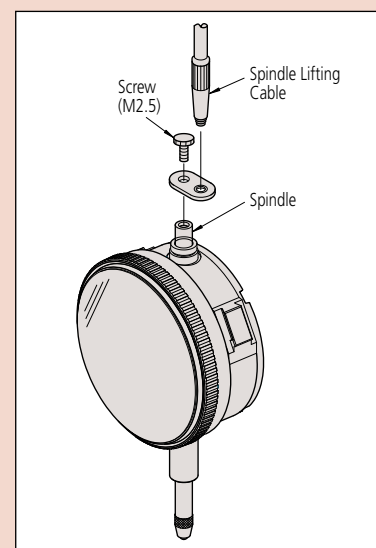
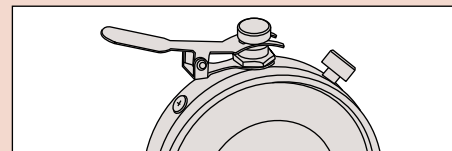
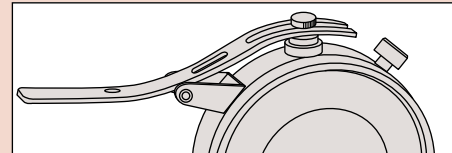


### Spindle Lifting Knob

| Set Order No. | Range        |
|---------------|--------------|
| 21EZA197      | For 1" range |
| 21EZA200      | For 2" range |



### Application



Applicable S-Type Thickness and Depth Gages

| Order No. | Description                  |
|-----------|------------------------------|
| 21AZB149  | Depth gages up to 12.7mm/.5" |
| 21AZB150  | Depth gages up to 25mm/1"    |
| 21AZB151  | S-Type thickness gage        |



Dove Tail Type Lever Assembly

| Order No. | Lever up to  | Screw  | Screw Thread |
|-----------|--------------|--------|--------------|
|           | .5" / 12.7mm |        |              |
| 21EZA198  | 21AZB149     | 101171 | M2.5         |
| 21EZA199  | 21AZB149     | 101047 | 4/48 UNF     |



ANSI Screw 101047  
JIS Screw 101171

### Spindle Lifting Cable

901975: with auto-stop function

540774: without auto-stop function

971753: With release-speed control

Lifting range: 1" / 25.4mm

Cable length: 300mm



### Spindle Lifting Pick

137693

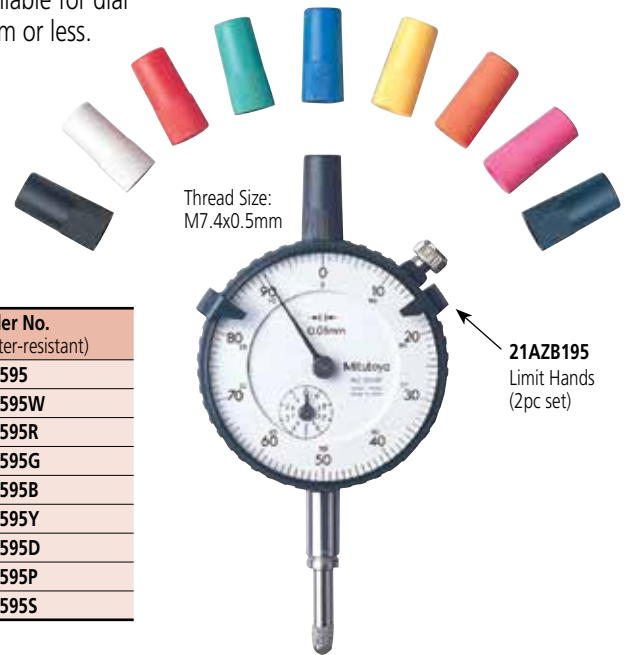
Applicable spindle diameter; 4.8mm



# Color Spindle Caps

## Optional Accessories for Digimatic and Dial Indicators

8 colors of spindle caps are available for dial indicators with a range of 10mm or less.



### SPECIFICATIONS

| Color     | Order No.<br>(normal) | Order No.<br>(water-resistant) |
|-----------|-----------------------|--------------------------------|
| Black     | 193051                | 193595                         |
| White     | 193051W               | 193595W                        |
| Red       | 193051R               | 193595R                        |
| Green     | 193051G               | 193595G                        |
| Blue      | 193051B               | 193595B                        |
| Yellow    | 193051Y               | 193595Y                        |
| Orange    | 193051D               | 193595D                        |
| Pink      | 193051P               | 193595P                        |
| Dark blue | 193051S               | 193595S                        |

# Limit Stickers

## Optional Accessories for Digimatic and Dial Indicators

### FEATURES

- Stuck on the dial face or crystal of a Series 2 dial indicator (55.6mm or 57mm bezel dia.) to indicate tolerance limits.



136420: Red (10-sheet/set)



136421: Green (10-sheet/set)



136422: Yellow (10-sheet/set)