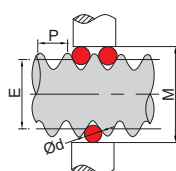




- Used with standard outside micrometers to measure pitch diameter of screw threads
- Diameter accuracy:  $\pm 0.5\mu\text{m}$
- Cylindricity:  $1\mu\text{m}$
- Hardness: HRC60
- Supplied with manufacturer inspection certificate



**Formula of pitch diameter E**

$E = M - 3d + 0.866025P$

**M**=measured value of the micrometer

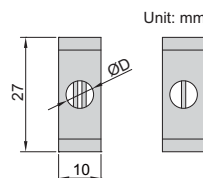
**d**=diameter of the pin gage (choose diameter of pin gage according to pitch:  $d = 0.577P$ )

**P**=screw thread pitch

**The formula is suitable for 60° screw**



7382-19



Unit: mm

application



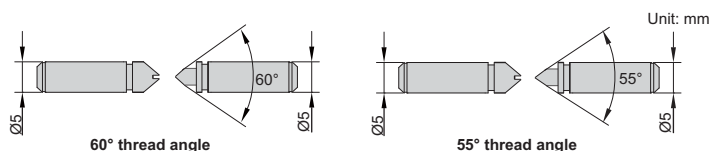
### For outside micrometers with spindle Ø6.35mm (ØD)

| Code     | Pin gage diameter (Ød)                    | Applicable pitch     |
|----------|-------------------------------------------|----------------------|
| 7382-11  | 0.170mm                                   | 0.2mm, 0.25mm, 0.3mm |
| 7382-12  | 0.195mm                                   | 0.35mm               |
| 7382-13  | 0.220mm                                   | 0.4mm                |
| 7382-14  | 0.250mm                                   | 0.45mm               |
| 7382-15  | 0.290mm                                   | 0.5mm                |
| 7382-16  | 0.335mm                                   | 0.6mm                |
| 7382-17  | 0.390mm                                   | 0.7mm                |
| 7382-18  | 0.455mm                                   | 0.75mm, 0.8mm        |
| 7382-19  | 0.530mm                                   | 0.9mm                |
| 7382-110 | 0.620mm                                   | 1.0mm                |
| 7382-111 | 0.725mm                                   | 1.25mm               |
| 7382-112 | 0.895mm                                   | 1.5mm                |
| 7382-113 | 1.100mm                                   | 1.75mm, 2.0mm        |
| 7382-114 | 1.350mm                                   | 2.5mm                |
| 7382-115 | 1.650mm                                   | 3.0mm                |
| 7382-116 | 2.050mm                                   | 3.5mm                |
| 7382-117 | 2.550mm                                   | 4mm, 4.5mm           |
| 7382-118 | 3.200mm                                   | 5mm, 5.5mm, 6mm      |
| 7382-1S  | 18 pairs/set, including all above 3-wires |                      |

### For outside micrometers with spindle Ø6.50mm (ØD)

| Code     | Pin gage diameter (Ød)                    | Applicable pitch     |
|----------|-------------------------------------------|----------------------|
| 7382-21  | 0.170mm                                   | 0.2mm, 0.25mm, 0.3mm |
| 7382-22  | 0.195mm                                   | 0.35mm               |
| 7382-23  | 0.220mm                                   | 0.4mm                |
| 7382-24  | 0.250mm                                   | 0.45mm               |
| 7382-25  | 0.290mm                                   | 0.5mm                |
| 7382-26  | 0.335mm                                   | 0.6mm                |
| 7382-27  | 0.390mm                                   | 0.7mm                |
| 7382-28  | 0.455mm                                   | 0.75mm, 0.8mm        |
| 7382-29  | 0.530mm                                   | 0.9mm                |
| 7382-210 | 0.620mm                                   | 1.0mm                |
| 7382-211 | 0.725mm                                   | 1.25mm               |
| 7382-212 | 0.895mm                                   | 1.5mm                |
| 7382-213 | 1.100mm                                   | 1.75mm, 2.0mm        |
| 7382-214 | 1.350mm                                   | 2.5mm                |
| 7382-215 | 1.650mm                                   | 3.0mm                |
| 7382-216 | 2.050mm                                   | 3.5mm                |
| 7382-217 | 2.550mm                                   | 4mm, 4.5mm           |
| 7382-218 | 3.200mm                                   | 5mm, 5.5mm, 6mm      |
| 7382-2S  | 18 pairs/set, including all above 3-wires |                      |

## MEASURING TIPS FOR SCREW THREAD MICROMETERS



### Metric and unified thread (60° thread angle)

| Code     | Pitch                                 |
|----------|---------------------------------------|
| 7381-T11 | 0.4-0.5mm/ 64-48TPI                   |
| 7381-T12 | 0.6-0.9mm/ 44-28TPI                   |
| 7381-T13 | 1-1.75mm/ 24-14TPI                    |
| 7381-T14 | 2-3mm/ 13-9TPI                        |
| 7381-T15 | 3.5-5mm/ 8-5TPI                       |
| 7381-T16 | 5.5-7mm/ 4.5-3.5TPI                   |
| 7381-TS  | 6 pairs/set, including all above tips |

- Supplied in pair
- Suitable for 3281, 3581 series micrometers



7381-T13

### Whitworth thread (55° thread angle)

| Code      | Pitch                                  |
|-----------|----------------------------------------|
| 7381-T21  | 60-48TPI                               |
| 7381-T22  | 48-40TPI                               |
| 7381-T23  | 40-32TPI                               |
| 7381-T24  | 32-24TPI                               |
| 7381-T25  | 24-18TPI                               |
| 7381-T26  | 18-14TPI                               |
| 7381-T27  | 14-10TPI                               |
| 7381-T28  | 10-7TPI                                |
| 7381-T29  | 7-4.5TPI                               |
| 7381-T210 | 4.5-3.5TPI                             |
| 7381-T2S  | 10 pairs/set, including all above tips |

## SCREW THREAD MICROMETERS

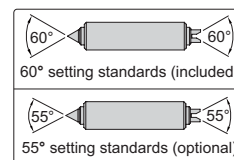
- Measure pitch diameter of screw threads
- Graduation 0.01mm
- Non-rotating spindle
- Ratchet stop
- Supplied with 60° setting standards
- Optional accessory: 55° setting standards, measuring tips (code **7381**)

measuring tips are optional

NON-ROTATING SPINDLE

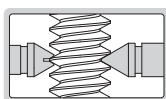
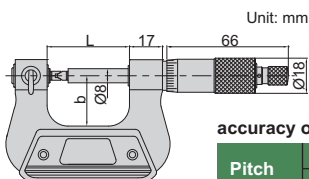


3281-25A



(mm)

| Code      | Range     | L     | b    | 55° setting standard (optional) |
|-----------|-----------|-------|------|---------------------------------|
| 3281-25A  | 0-25mm    | 42    | 26   | —                               |
| 3281-50A  | 25-50mm   | 67    | 38   | 3281-SP1                        |
| 3281-75A  | 50-75mm   | 92    | 50   | 3281-SP2                        |
| 3281-100A | 75-100mm  | 117.6 | 62   | 3281-SP3                        |
| 3281-125A | 100-125mm | 143   | 70   | 3281-SP4                        |
| 3281-150A | 125-150mm | 168.2 | 82   | 3281-SP5                        |
| 3281-175A | 150-175mm | 192   | 94.5 | 3281-SP6                        |
| 3281-200A | 175-200mm | 217   | 107  | 3281-SP7                        |



accuracy of micrometers with tips

(mm)

| Pitch   | Range  |        |        |        |         |         |
|---------|--------|--------|--------|--------|---------|---------|
|         | 0-25   | 25-50  | 50-75  | 75-100 | 100-125 | 125-200 |
| 0.4~0.5 | ±0.01  | -      | -      | -      | -       | -       |
| 0.6~0.8 | ±0.01  | ±0.013 | -      | -      | -       | -       |
| 1~1.25  | ±0.012 | ±0.015 | ±0.017 | ±0.017 | -       | -       |
| 1.5~2.0 | ±0.014 | ±0.017 | ±0.019 | ±0.019 | ±0.020  | ±0.023  |
| 2.5~3.5 | ±0.016 | ±0.019 | ±0.021 | ±0.021 | ±0.023  | ±0.025  |
| 4.0~7.0 | -      | ±0.021 | ±0.023 | ±0.023 | ±0.025  | ±0.028  |

## DIGITAL SCREW THREAD MICROMETERS

- Measure pitch diameter of screw threads
- Resolution 0.001mm/0.00005"
- Button function: on/off, set, mm/inch, ABS/INC
- Data output
- LR44 battery, automatic power off
- Non-rotating spindle
- Ratchet stop
- Supplied with 60° setting standards
- Optional accessory: 55° setting standards, measuring tips (code **7381**), data output cable (code **7315-**, **7302-**, **7305-**)

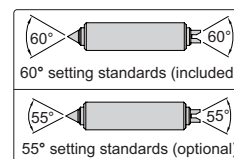
measuring tips are optional

DATA OUTPUT

NON-ROTATING SPINDLE

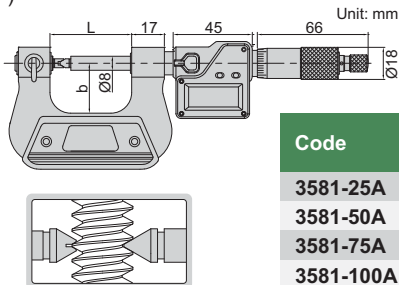


3581-25A



accuracy of micrometers with tips (mm)

| Pitch   | Range  |        |        |        |
|---------|--------|--------|--------|--------|
|         | 0-25   | 25-50  | 50-75  | 75-100 |
| 0.4~0.5 | ±0.01  | -      | -      | -      |
| 0.6~0.8 | ±0.01  | ±0.013 | -      | -      |
| 1~1.25  | ±0.012 | ±0.015 | ±0.017 | ±0.017 |
| 1.5~2.0 | ±0.014 | ±0.017 | ±0.019 | ±0.019 |
| 2.5~3.5 | ±0.016 | ±0.019 | ±0.021 | ±0.021 |
| 4.0~7.0 | -      | ±0.021 | ±0.023 | ±0.023 |



(mm)

| Code      | Range         | L     | b  | 55° setting standard (optional) |
|-----------|---------------|-------|----|---------------------------------|
| 3581-25A  | 0-25mm/0-1"   | 42    | 26 | —                               |
| 3581-50A  | 25-50mm/1-2"  | 67    | 38 | 3281-SP1                        |
| 3581-75A  | 50-75mm/2-3"  | 92    | 50 | 3281-SP2                        |
| 3581-100A | 75-100mm/3-4" | 117.6 | 62 | 3281-SP3                        |

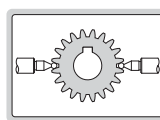
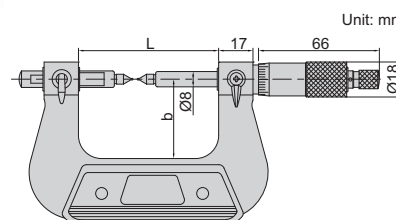
## GEAR TOOTH MICROMETERS

- Meet DIN863-3
- Measure over-pin diameter of gears
- Graduation 0.01mm
- Ratchet stop
- Supplied with setting standards (except 0-25mm)
- Optional accessory: ball tips (code **7391**)

ball tips are optional



3291-25



| Code     | Range     | Accuracy | L     | b    |
|----------|-----------|----------|-------|------|
| 3291-25  | 0-25mm    | 4μm      | 67    | 38   |
| 3291-50  | 25-50mm   | 4μm      | 92.4  | 50   |
| 3291-75  | 50-75mm   | 5μm      | 117.6 | 62   |
| 3291-100 | 75-100mm  | 5μm      | 143   | 70   |
| 3291-125 | 100-125mm | 6μm      | 168.2 | 82   |
| 3291-150 | 125-150mm | 6μm      | 192   | 94.5 |
| 3291-175 | 150-175mm | 7μm      | 217   | 107  |