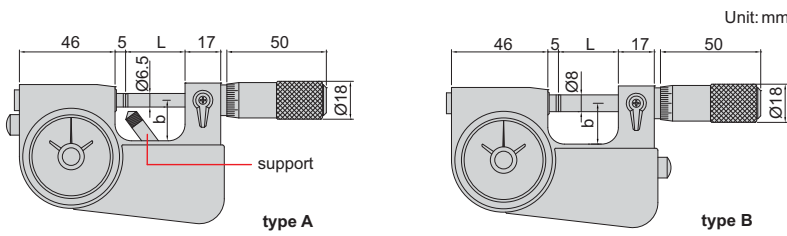


**ATTENTION: SETTING STANDARDS ARE NOT INCLUDED**

## INDICATING MICROMETERS



3332-25



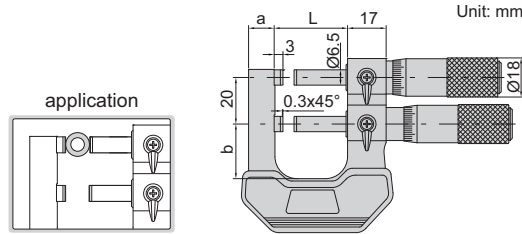
3332-25B

- Meet DIN863-3
- Micrometer head graduation: 0.002mm
- Dial indicator: range  $\pm 0.04$ mm, graduation 0.001mm, accuracy 0.001mm
- Carbide measuring faces
- Optional accessory: gage blocks grade 0 (4101-A series), for zero setting

Code	Micrometer head range	Micrometer head accuracy	Type	L	b	Remark
3332-25	0-25mm	4 $\mu$ m	A	28.5	19	with support
3332-50	25-50mm	4 $\mu$ m	A	53.5	30	with support
3332-75	50-75mm	5 $\mu$ m	A	78.5	45	without support
3332-100	75-100mm	5 $\mu$ m	A	103.5	57	without support
3332-25B	0-25mm	4 $\mu$ m	B	28.5	19	without support

## LIMIT MICROMETERS

- Used as Go/No-Go gage by setting upper and lower limits
- Graduation 0.002mm
- Carbide measuring faces
- Supplied with setting standard (except 0-25mm)



3235-25A

Code	Range	Accuracy	L	a	b
3235-25A	0-25mm	4 $\mu$ m	32mm	12mm	24mm
3235-50A	25-50mm	4 $\mu$ m	57mm	15mm	32mm

**ATTENTION: NOT SUITABLE FOR 0.001MM DIAL INDICATORS**

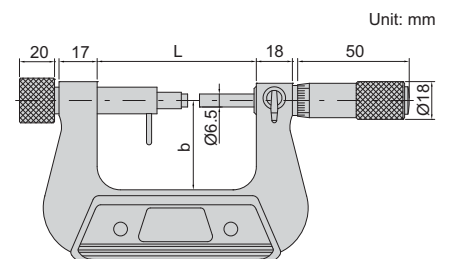
## MICROMETERS WITH DIAL INDICATOR

- Meet DIN863-3
- Micrometer head graduation 0.01mm
- Anvil retracting range: 8mm
- Carbide measuring faces
- Supplied with setting standards (except 0-25mm)
- Optional accessory: dial indicators (graduation 0.01mm), digital indicators (resolution 0.01mm/0.0005")



3331-25A

Code	Micrometer head range	Micrometer head accuracy	L	b
3331-25A	0-25mm	4 $\mu$ m	67mm	38mm
3331-50A	25-50mm	4 $\mu$ m	92.4mm	50mm
3331-75A	50-75mm	5 $\mu$ m	117.6mm	62mm
3331-100A	75-100mm	5 $\mu$ m	143mm	70mm
3331-125A	100-125mm	6 $\mu$ m	168.2mm	82mm
3331-150A	125-150mm	6 $\mu$ m	192mm	94.5mm
3331-175A	150-175mm	7 $\mu$ m	217mm	107mm



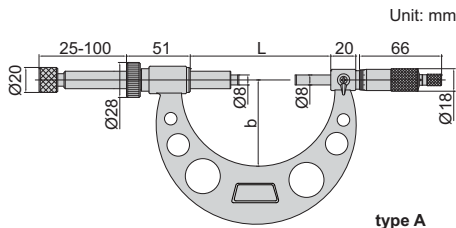
# MICROMETERS WITH DIAL INDICATOR

ATTENTION: NOT SUITABLE FOR 0.001MM DIAL INDICATORS



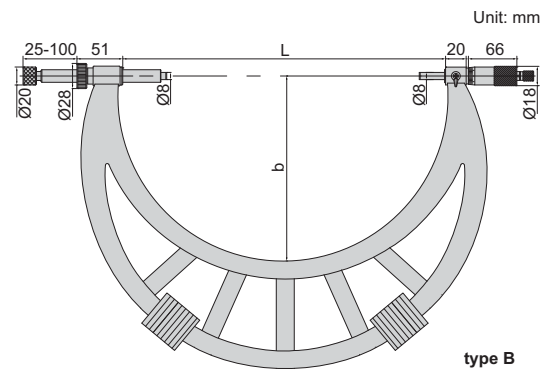
dial indicator is optional

3296-100A



dial indicator is optional

3296-400A



Code	Range	Type	Accuracy	L	b
3296-100A	0-100mm	A	6μm	115	68
3296-200A	100-200mm	A	7μm	215	120
3296-300A	200-300mm	A	8μm	315	170
3296-400A	300-400mm	B	9μm	415	225
3296-500A	400-500mm	B	10μm	515	275
3296-600A	500-600mm	B	11μm	615	325
3296-700A	600-700mm	B	12μm	715	375
3296-800A	700-800mm	B	13μm	815	430
3296-900A	800-900mm	B	14μm	915	480
3296-1000A	900-1000mm	B	15μm	1015	530

- Meet DIN863-3
- Graduation 0.01mm
- Ratchet stop
- Carbide measuring faces
- Supplied with setting standards
- Optional accessory: dial indicators (graduation 0.01mm) digital indicators (resolution 0.01mm/0.0005")

# GROOVE MICROMETERS

- Measure width of grooves inside bores
- Graduation 0.01mm
- Two graduations for inside and outside measurements
- Non-rotating spindle



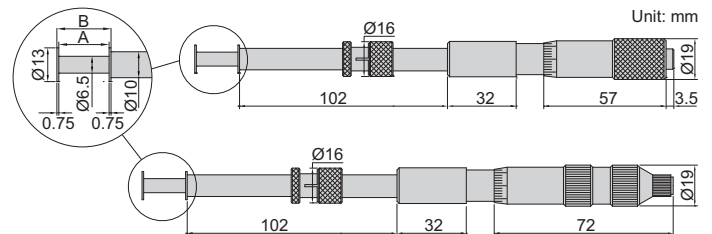
3287-25A



3287-50B

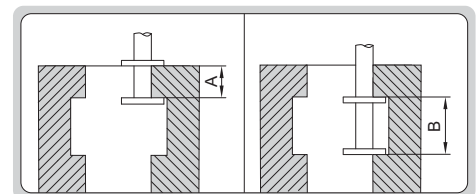
### No ratchet stop

Code	Range (outside A)	Range (inside B)	Accuracy
3287-25A	0-25mm	1.6-26.5mm	10μm
3287-50A	25-50mm	26.5-51.5mm	10μm
3287-75A	50-75mm	51.5-76.5mm	10μm
3287-100A	75-100mm	76.5-101.5mm	10μm



### Two-directional ratchet stop

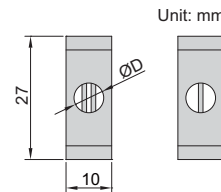
Code	Range (outside A)	Range (inside B)	Accuracy
3287-25B	0-25mm	1.6-26.5mm	10μm
3287-50B	25-50mm	26.5-51.5mm	10μm
3287-75B	50-75mm	51.5-76.5mm	10μm
3287-100B	75-100mm	76.5-101.5mm	10μm




**INSPECTION CERTIFICATE**

- 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**


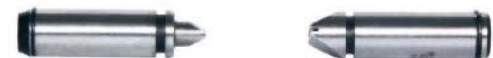
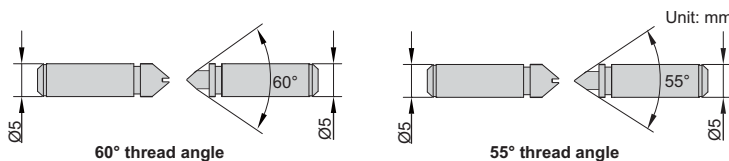
application


**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**

**7381-T13**
**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

**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