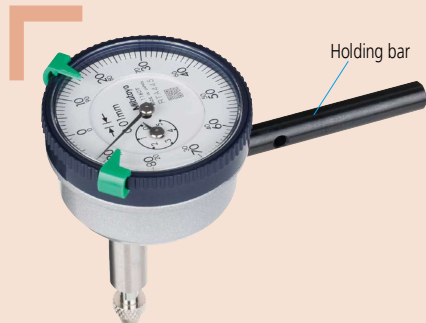




An inspection certificate is supplied as standard. Refer to page U-11 for details.



Holding bar (optional)

Order No.	øD (mm)	L (mm)
21AAA166	ø6	42
136567	ø6	81
124625	ø6.35	81
21AAA167	ø6.35	42
21AAA168	ø8	42
136568	ø8	81

Note: øD and L: detail shown in drawing below.

DIMENSIONS

ANSI/AGD Type

Unit: in

ISO/JIS Type

Unit: mm

Order No.	A	B	C	E	F	G	H	Mass (g) (Bar excluded)
1166T	1.57	0.87	1.40	7/8	0.98	0.43	1.65	80
1167T	1.57	0.87	1.40	7/8	0.98	0.43	1.65	80
1168T	1.57	0.87	1.40	7/8	0.98	0.43	1.65	80
1961T	1.57	0.87	1.40	7/8	0.98	0.43	1.57	80

Order No.	A	B	C	E	F	G	H	Mass (g) (Bar excluded)
1160T	40	22.1	35.6	22.2	25	13.8	43.3	80
1162T	40	22.1	35.6	22.2	25	13.8	43.3	80
1960T	40	22.1	35.6	22.2	28.7	12.8	46	80

Note 1: Contact point (standard accessory) for all products in this page has a role as a top dead point stopper. For this reason, if you need to install an optional contact point with an outside diameter smaller than 7 mm, use a washer (with outside diameter of at least 7 mm, inside diameter of 3 mm, and thickness of approx. 0.5 mm) placed between the contact point and the spindle.

Note 2: Refer to pages F-57 to F-60 for details of contact points.

FEATURES

Order No.	15°/15'	15°/15'	Reverse reading	Shockproof	Back Plunger
1960T	✓	✓	✓	✓	✓
1160T	✓				✓
1162T					✓

Order No.	15°/15'	15°/15'	Reverse reading	Shockproof	Back Plunger
1961T	✓	✓	✓		✓
1166T	✓				✓
1167T		✓			✓
1168T					✓

Back Plunger Type Dial Indicators SERIES 1

- Back Plunger type dial indicators are suitable for mounting onto leveling machine tool tables or inspection jigs, and for use in situations where standard dial indicators are difficult to read.
- Model **1960T** and **1961T**, which uses Mitutoyo's proprietary shock-proofing mechanism, has excellent durability and shock resistance.



Continuous scale

Graduation: 0.01 mm, Measuring range: 5 mm

1160T

Back Plunger

Reverse reading

Graduation: 0.01 mm, Measuring range: 5 mm

1162T

Back Plunger

Balanced scale

Graduation: 0.01 mm, Measuring range: 1 mm

1960T

One revolution
Shockproof
Back Plunger

SPECIFICATIONS

Order No.	Graduation (mm)	Range (range/rev) (mm)	Maximum permissible error (MPE) (μm)					Dial reading	Measuring force (N)	
			Indication error			Hysteresis	Repeat-ability			
			1/10 Rev	1/2 Rev	1 Rev					
1960T	0.01	1 (1.27)	8	—	—	14	4	3	50-0-50	1.4 or less
1160T	0.01	5 (1)	8	12	14	16	4	3	±0-100	1.4 or less
1162T	0.01	5 (1)	8	12	14	16	4	3	100-0	1.4 or less

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

Order No.	Graduation (in)	Range (range/rev) (in)	Accuracy (in)			Repeatability (in)	Dial reading	Measuring force (N)
			First 1 Rev/2.5 Rev/10 Rev		Retrace			
			First 1 Rev	2.5 Rev				
1961T	0.001	0.04 (0.05)	±0.001/—/—		0.0002	±0.0002	20-0-20	1.4 or less
1166T	0.001	0.2 (0.05)	±0.001±0.001±0.001		0.00033	±0.0002	±0-50	1.4 or less
1167T	0.001	0.2 (0.05)	±0.001±0.001±0.001		0.00033	±0.0002	0-25-0	1.4 or less
1168T	0.001	0.2 (0.05)	±0.001±0.001±0.001		0.00033	±0.0002	50-0	1.4 or less

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