



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

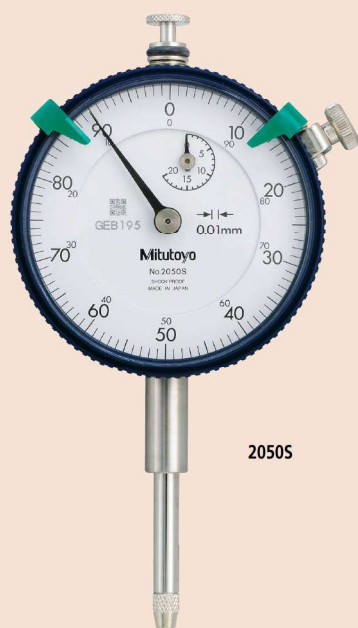
Dial Indicators

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

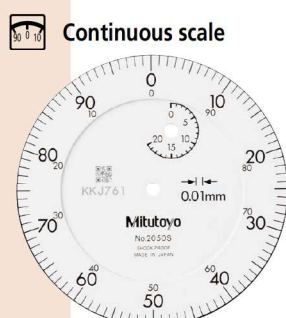
SERIES 2 — Long Stroke Type

- Long stroke dial indicators with a $\varnothing 57$ mm bezel. All the models are equipped with limit markers and a bezel clamp as standard. (inch models are exception)
- Watertight assembly of bezel and crystal as well as the use of an O-ring prevents water or oil penetration.
- The stem and the spindle are made of high-strength quench-hardened stainless steel suitable for heavy-duty use.
- A carbide contact point is employed.
- The grand gear is made of stainless steel with high resistance to wear and deformation.
- Application of a hard coating on the surface of the crystal makes the gage highly scratch- and chemical-resistant.
- The bezel clamp and lifting lever* (optional) can be attached to either the right or left side. These parts can be easily installed and removed without any tools.

* These cannot be used on waterproof models and models with a measuring range of 30 mm.

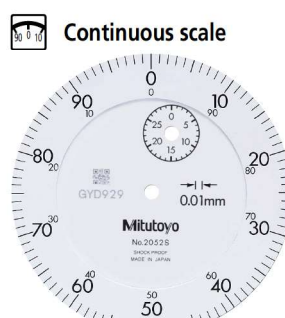


2050S



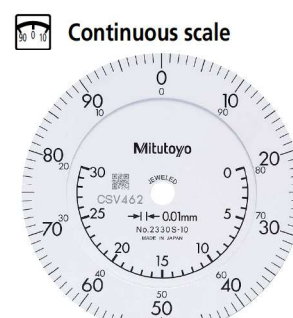
Graduation: 0.01 mm,
Measuring range: 20 mm

- 2050S**
- With damper at lowest rest point
- 2050S-19**
- Shockproof
 - Jeweled bearing
 - With damper at lowest rest point
- 2050S-60**
- Waterproof



Graduation: 0.01 mm,
Measuring range: 30 mm

- 2052S**
- With damper at lowest rest point
- 2052S-19**
- Shockproof
 - Jeweled bearing
 - With damper at lowest rest point

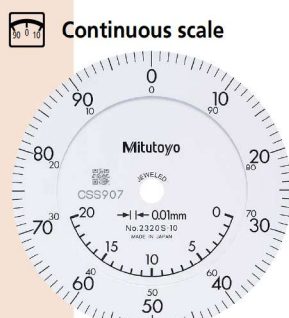


Graduation: 0.01 mm,
Measuring range: 30 mm

- 2330S-10**
- With coaxial revolution counter
 - With damper at lowest rest point
 - Jeweled bearing



2050S-60



Graduation: 0.01 mm,
Measuring range: 20 mm

- 2320S-10**
- With coaxial revolution counter
 - With damper at lowest rest point
 - Jeweled bearing



Graduation: 0.01 mm,
Measuring range: 30 mm

- 2952S**
- With damper at lowest rest point

Dial Indicators

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

FEATURES

Metric									
Order No.	Flat-back								
2050S	2050SB	✓					✓		
2050S-60	2050SB-60	✓					✓		
2050S-19	2050SB-19	✓			✓		✓	✓	
2320S-10	2320SB-10	✓					✓	✓	✓
2052S	2052SB	✓					✓		
2052S-19	2052SB-19	✓			✓		✓	✓	
2330S-10	2330SB-10	✓					✓	✓	✓
2952S	2952SB		✓				✓		

SPECIFICATIONS

Metric										ISO/JIS type	
Order No.		Graduation (mm)	Range (range/rev) (mm)	Maximum permissible error (MPE) (μm)						Dial reading	Measuring force (N)
w/lug	Flat-back			Indication error				Hysteresis	Repeat-ability		
				1/10 Rev	1/2 Rev	1 Rev	Measuring range				
2050S	2050SB	0.01	20 (1)	8	10	15	20	5	4	±0-100	2.0 or less
2050S-60*	2050SB-60*	0.01	20 (1)	8	10	15	20	5	4	±0-100	2.5 or less
2050S-19	2050SB-19	0.01	20 (1)	8	10	15	20	5	4	±0-100	2.0 or less
2320S-10	2320SB-10	0.01	20 (1)	8	10	15	20	5	4	±0-100	2.0 or less
2052S	2052SB	0.01	30 (1)	10	12	15	25	7	5	±0-100	2.5 or less
2052S-19	2052SB-19	0.01	30 (1)	10	12	15	25	7	5	±0-100	2.5 or less
2330S-10	2330SB-10	0.01	30 (1)	10	12	15	25	7	5	±0-100	2.5 or less
2952S	2952SB	0.01	30 (1)	10	12	15	25	7	5	100-0	2.5 or less

* 2050S-60 and 2050SB-60 are waterproof types that use a rubber bellows to cover the spindle.

Note that the outer diameter of the bellows (ø9.5) is larger than that of the stem (ø8).

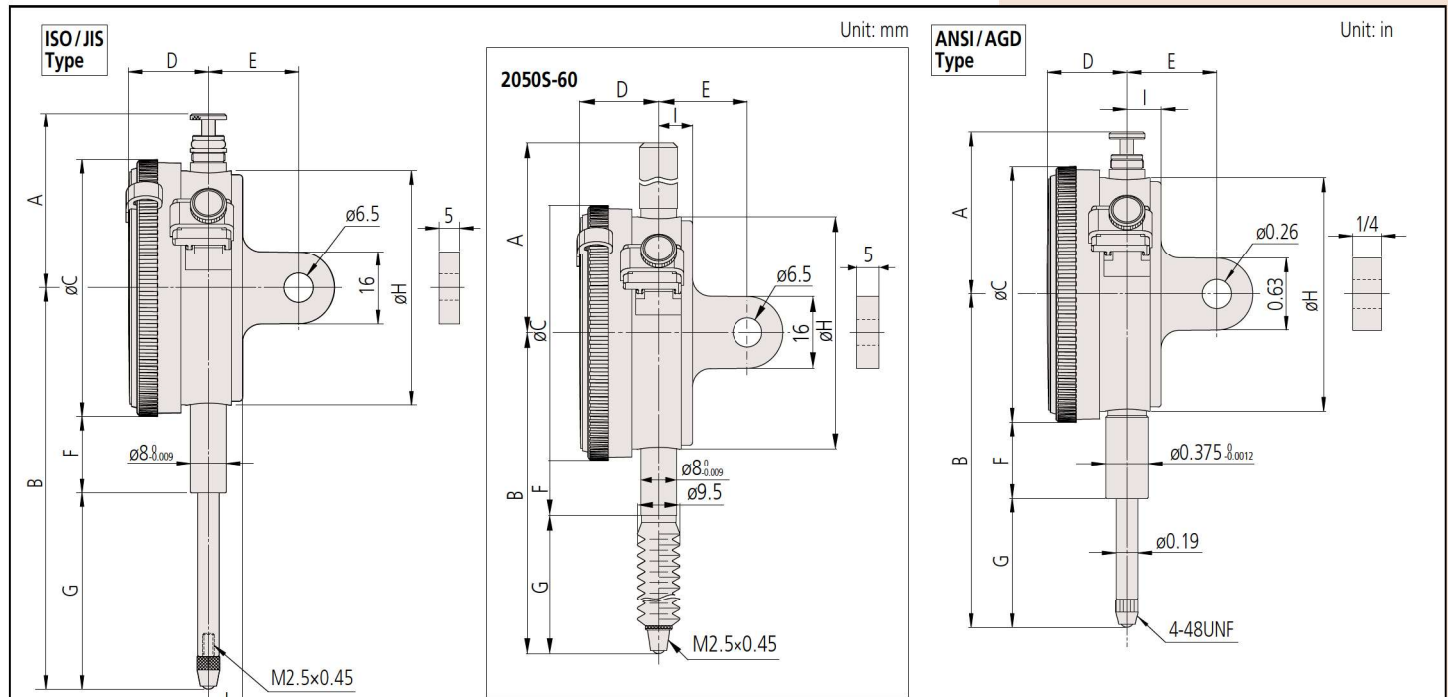
Note: Completed products inspection is performed in the vertical orientation (contact point downward) and the stated accuracy is guaranteed.

Inch									
Order No.	Flat-back								
2416S	2416SB	✓							
2416S-06	2416SB-06	✓							
2416S-10	2416SB-10	✓					✓		
2417S	2417SB		✓						
2424S-19	2424SB-19	✓		✓			✓		✓
2776S	2776SB	✓							
2904S	2904SB				✓				

Inch							ANSI/AGD type		
Order No.		Graduation (in)	Range (range/rev) (in)	Accuracy (in)		Repeat-ability (in)	Dial reading	Measuring force (N)	
w/lug	Flat-back			First 1 Rev/2.5 Rev/10 Rev					Retrace
2416S	2416SB	0.001	1 (0.1)	±0.001/±0.001/±0.002		0.0002	±0.0002	±0-100	1.8 or less
2416S-06	2416SB-06	0.001	1 (0.1)	±0.001/±0.001/±0.002		0.0002	±0.0002	±0-100	1.8 or less
2416S-10	2416SB-10	0.001	1 (0.1)	±0.001/±0.001/±0.002		0.0002	±0.0002	±0-100	1.8 or less
2417S	2417SB	0.001	1 (0.1)	±0.001/±0.001/±0.002		0.0002	±0.0002	0-50-0	1.8 or less
2424S-19	2424SB-19	0.001	2 (0.1)	±0.001/±0.001/±0.002/±0.003 (First 20 Rev)		0.00033	±0.0002	±0-100	2.5 or less
2776S	2776SB	0.0005	1 (0.05)	±0.0005/±0.0005/±0.0015/±0.002 (First 20 Rev)		0.0002	±0.0001	±0-50	2.5 or less
2904S	2904SB	0.001	1 (0.1)	±0.001/±0.001/±0.002		0.0002	±0.0002	100-0	1.8 or less

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

DIMENSIONS



Order No.	A	B	C	D	E	F	G	H	I	Mass (g)	
										w/lug	Flat-back
2050S	38.8	75.2	57	17.7	20	16.9	29.8	52	7.6	149	140
2050S-60	59.8	87.2	57	17.7	20	12.3	46.4	52	7.6	155	146
2050S-19	38.8	75.2	57	17.7	20	16.9	29.8	52	7.6	149	140
2320S-10	38.8	75.2	57	17.7	20	16.9	29.8	52	7.6	150	141
2052S	38.8	88.7	57	17.7	20	16.9	43.3	52	7.6	152	143
2052S-19	38.8	88.7	57	17.7	20	16.9	43.3	52	7.6	152	143
2330S-10	38.8	88.7	57	17.7	20	16.9	43.3	52	7.6	153	144
2952S	38.8	88.7	57	17.7	20	16.9	43.3	52	7.6	152	143

Note 1: Refer to pages F-57 to F-60 for details of contact points.

Note 2: If the contact point of the waterproof model is replaced, the water resistance cannot be guaranteed.

Order No.	A	B	C	D	E	F	G	H	I	Mass (g)	
										w/lug	Flat-back
2416S	1.53	3.02	2.24	0.70	3/4	0.54	1.37	2.05	0.30	164	139
2416S-06	1.53	3.02	2.24	0.70	3/4	0.54	1.37	2.05	0.30	164	139
2416S-10	1.53	3.02	2.24	0.70	3/4	0.54	1.37	2.05	0.30	164	139
2417S	1.53	3.02	2.24	0.70	3/4	0.54	1.37	2.05	0.30	164	139
2424S-19	4.65	5.61	2.24	0.70	5/6	2.14	2.35	2.05	0.37	248	239
2776S	1.53	3.02	2.24	0.70	3/4	0.54	1.37	2.05	0.30	164	139
2904S	1.53	3.02	2.24	0.70	3/4	0.54	1.37	2.05	0.30	164	139

Note 1: Refer to pages F-57 to F-60 for details of contact points.

Note 2: If the contact point of the waterproof model is replaced, the water resistance cannot be guaranteed.