



## SERIES 2 — Standard Type, 0.01 mm Graduation

- This model is the most popular Mitutoyo indicator with excellent accuracy and durability. Standard 0.01 mm graduation dial indicators have a bezel with an outside diameter of 57 mm.
- The indicator is highly durable thanks to its oil- and water-tight design, quenched hardened stainless-steel, carbide contact point, and a grand gear made of wear- and deformation-resistant material.
- Application of an anti-reflective and hard surface coating improves scale visibility along with scratch and chemical resistance.



2046A

## SPECIFICATIONS

Metric		ISO/JIS type									
Code 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				
2046A	2046AB	0.01	10 (1)	5	9	10	13	3	3	±0-100	1.4 or less
2046A-09	2046AB-09	0.01	10 (1)	5	9	10	15	3	3	±0-100	1.4 or less
2047A	2047AB	0.01	10 (1)	5	9	10	13	3	3	0-50-0	1.4 or less
2902A	2902AB	0.01	10 (1)	5	9	10	13	3	3	100-0	1.4 or less
2310A-10	2310AB-10	0.01	10 (1)	5	9	10	15	3	3	±0-100	1.4 or less
2044A	2044AB	0.01	5 (1)	5	9	10	12	3	3	±0-100	1.4 or less
2044A-09	2044AB-09	0.01	5 (1)	5	9	10	12	3	3	±0-100	1.4 or less
2045A	2045AB	0.01	5 (1)	5	9	10	12	3	3	0-50-0	1.4 or less

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

## DIMENSIONS

ISO/JIS  
Type

Unit: mm

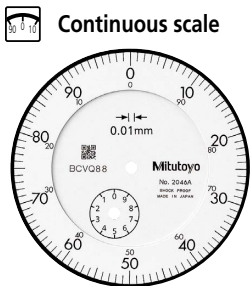
Technical drawing of a dial indicator showing dimensions A through I and contact point details. The drawing includes a side view and a detail view of the contact point. Dimensions are labeled as follows: A (total height), B (height to the start of the dial), C (dial diameter), D (dial thickness), E (height to the start of the spindle), F (height to the start of the contact point), G (height to the bottom of the contact point), H (height to the top of the contact point), and I (height to the top of the spindle). The contact point is a ball with a diameter of 6.5 mm. The spindle has a diameter of 8 mm and a thread of M2.5x0.45. The contact point has a diameter of 4.8 mm. The detail view shows a cross-section of the contact point with a diameter of 5 mm.

Code No.	A	B	C	D	E	F	G	H	I	Mass (g)	
										w/lug	Flat-back
2046A	47.2	65.2	57	18.1	20	16.9	19.8	52	7.6	144	135
2046A-09	47.2	65.2	57	18.1	20	16.9	19.8	52	7.6	146	137
2047A	47.2	65.2	57	18.1	20	16.9	19.8	52	7.6	144	135
2902A	47.2	65.2	57	18.1	20	16.9	19.8	52	7.6	144	135
2310A-10	47.2	65.2	57	18.1	20	16.9	19.8	52	7.6	146	137
2044A	47.2	65.2	57	18.1	20	16.9	19.8	52	7.6	145	136
2044A-09	47.2	65.2	57	18.1	20	16.9	19.8	52	7.6	147	138
2045A	47.2	65.2	57	18.1	20	16.9	19.8	52	7.6	145	136

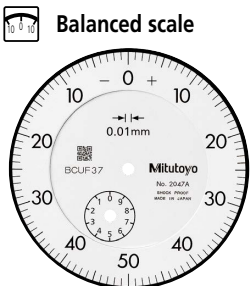
Note: Refer to pages 07-63 to 07-68 for details of contact points.

Dial Indicators

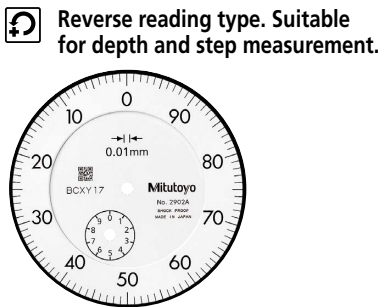
SERIES 2 — Standard Type, 0.01 mm Graduation



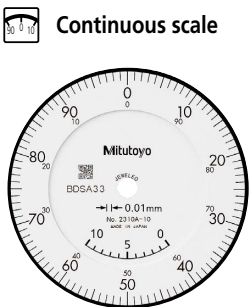
2046A  
Graduation: 0.01 mm,  
Measuring range: 10 mm  
With damper at top rest point  
Shockproof



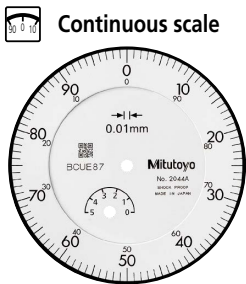
2047A  
Graduation: 0.01 mm,  
Measuring range: 10 mm  
With damper at top rest point



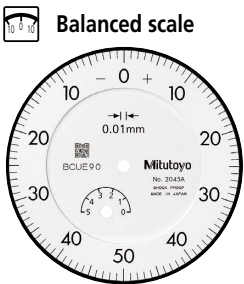
2902A  
Graduation: 0.01 mm,  
Measuring range: 10 mm  
With damper at top rest point



2310A-10  
Graduation: 0.01 mm,  
Measuring range: 10 mm  
With coaxial revolution counter  
Jeweled bearing



2044A  
Graduation: 0.01 mm,  
Measuring range: 5 mm  
With damper at top rest point  
With damper at top rest point  
Shockproof



2045A  
Graduation: 0.01 mm,  
Measuring range: 5 mm  
With damper at top rest point

Optional Accessories

- Limit hand (2 pcs.): 21AZB195



- Bezel clamp: 21AZB148



FEATURES

Metric		ISO/JIS type									
Code No.		0.01 mm	0.02 mm	0.05 mm	0.1 mm	0.2 mm	0.5 mm	1 mm	2 mm	5 mm	10 mm
2046A	2046AB	✓									
2046A-09	2046AB-09	✓			✓						
2047A	2047AB		✓								
2902A	2902AB			✓							
2310A-10	2310AB-10	✓							✓	✓	
2044A	2044AB	✓							✓		
2044A-09	2044AB-09	✓			✓						
2045A	2045AB		✓						✓		