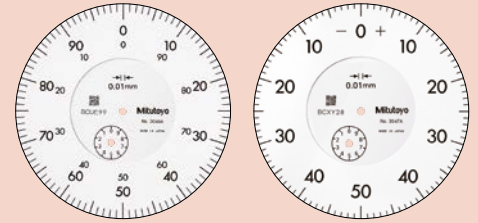# Dial Indicators

SERIES 3 – Large Dial Indicators

- Dial indicators with a large-diameter dial face for easy reading.
- Models with longer measuring ranges are also available.
- All types are supplied with limit markers and a bezel clamp as standard.
- The stem and spindle are made of high-strength quench-hardened stainless steel suitable for heavy-duty use.
- A carbide contact point is used.
- The bezel clamp and lifting lever*[1] (optional) can be attached to either the right or left side. These parts can be easily installed and removed without tools.

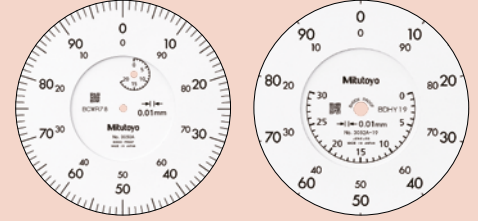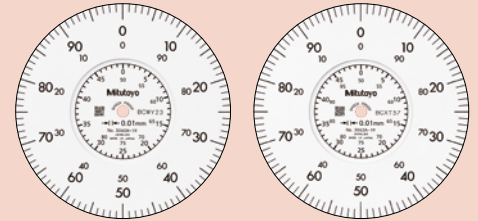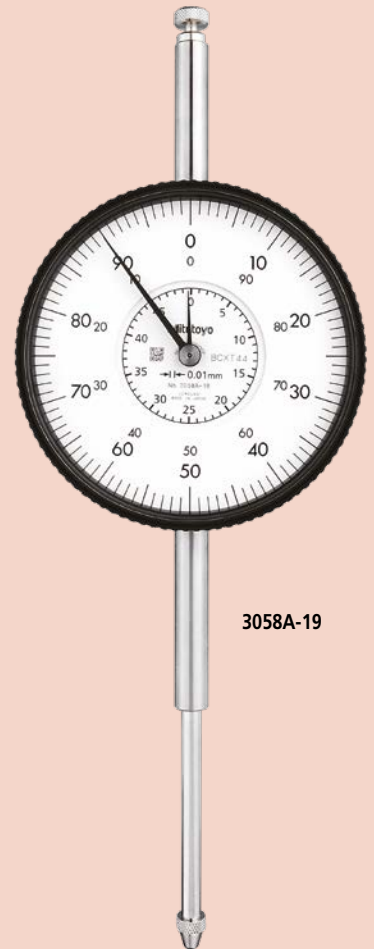*[1] Can be attached only to **3046A**, **3047A**, **3050A**, and **3109A-10**.

3046A

3047A

3050A

3052A-19

3060A-19

3062A-19

3109A-10

3058A-19

Specifications

Metric

Code No.	Range (range/rev)	Max. permissible error				Hysteresis	Repeat-ability	Scale	Measuring force	
		Indication error								
		1/10 rev	1/2 rev	1 rev	Overall					
Graduation: 0.01 mm										
3046A	10 mm (1 mm)	5 µm	9 µm	10 µm	15 µm	3 µm	3 µm	±0-100	1.4 N or less	
3047A								0-50-0		
3050A	20 mm (1 mm)	8 µm	10 µm		20 µm	5 µm	4 µm	±0-100	2.0 N or less	
3052A-19	30 mm (1 mm)	10 µm	12 µm	15 µm	25 µm	7 µm	5 µm		2.5 N or less	
3058A-19	50 mm (1 mm)				30 µm	8 µm			3.0 N or less	
3060A-19*[2]	80 mm (1 mm)	12 µm	17 µm	20 µm	45 µm	9 µm				
3062A-19*[2]	100 mm (1 mm)				50 µm				3.2 N or less	
Graduation: 0.001 mm										
3109A-10	1 mm (0.2 mm)	2 µm	3.5 µm	4 µm	5 µm	2 µm	0.5 µm	0-100-0	1.5 N or less	

Inch

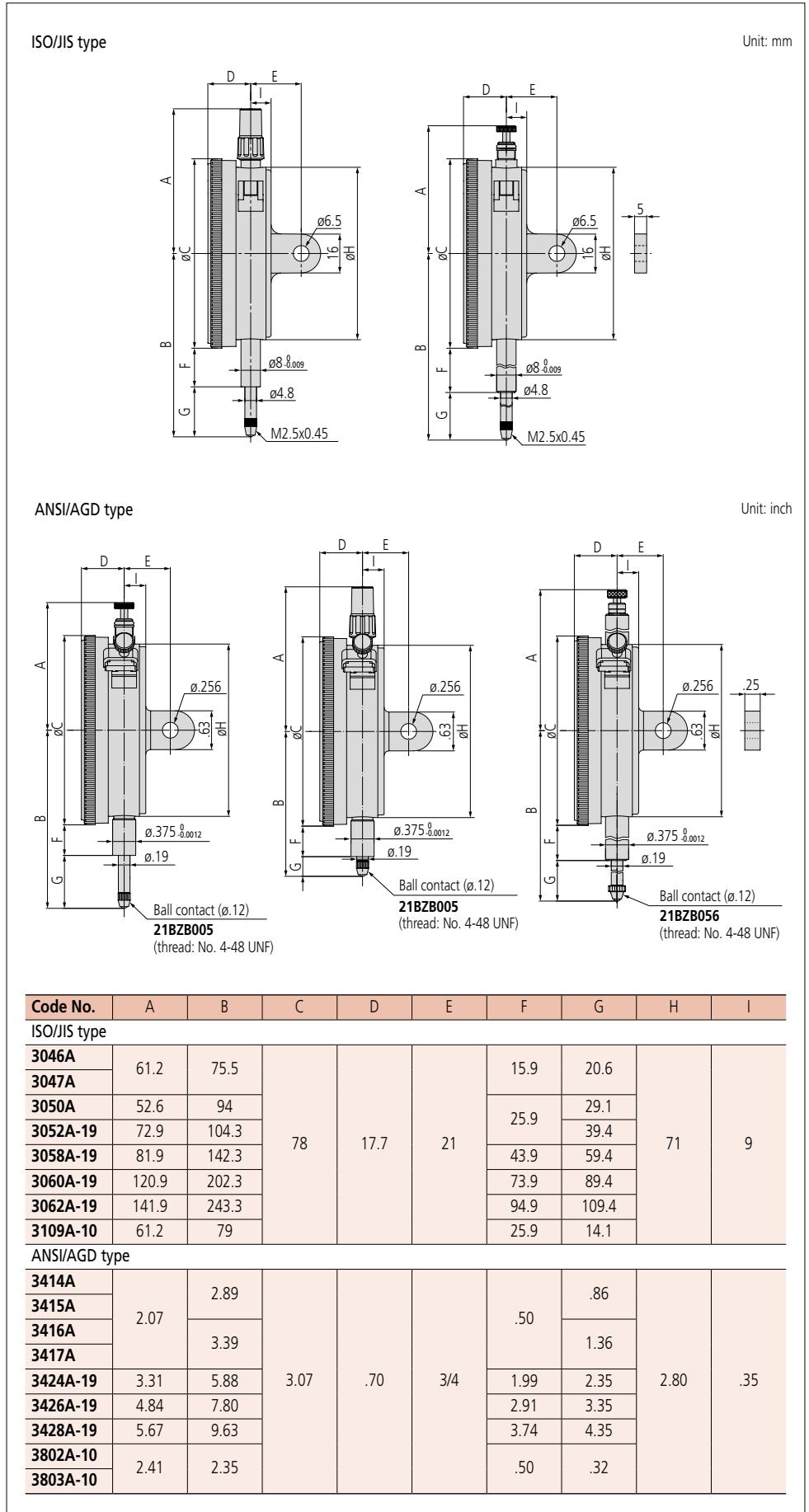| Code No. | Range (range/rev) | Accuracy*[3] | | | Scale | Measuring force | |
		First rev/2.5 rev/10 rev	Retrace	Repeatability			
Graduation: .001"							
3414A	.5" (.1")	±.001"/±.001"/±.001"	.0002"	±.0002"	±0-100	1.8 N or less	
3415A					0-50-0		
3416A	1" (.1")	±.001"/±.001"/±.002"			±0-100		
3417A					0-50-0		
3424A-19	2" (.1")	±.001"/±.001"/±.002"/±.003" (20 rev)	.00033"		±0-100	3.0 N or less	
3426A-19*[2]	3" (.1")	±.001"/±.001"/±.002"/±.003" (20 rev)/±.005" (over 20 rev)					
3428A-19*[2]	4" (.1")					3.2 N or less	
Graduation: .0001"							
3802A-10	.025" (.01")	±.0001"/±.0001"/—	.0001"	±.00003"	0-10	2.0 N or less	
3803A-10					0-5-0		

*[2] Use in a vertical orientation only (contact point downward).
*[3] Completed products inspection is performed in the vertical orientation (contact point downward) and the stated accuracy is guaranteed.

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Features

Metric

Code No.	⌒	⌒	⧓	⧓	◇	⤼
3046A	✓	—	—	—	—	—
3047A	—	✓	—	—	—	—
3050A	✓	—	—	✓	—	—
3052A-19	✓	—	✓	—	✓	✓
3058A-19	✓	—	✓	—	✓	✓
3060A-19	✓	—	✓	—	✓	✓
3062A-19	✓	—	✓	—	✓	✓
3109A-10	—	✓	✓	—	✓	—

Inch

Code No.	⌒	⌒	⧓	⧓	◇	⤼
3414A	✓	—	—	—	—	—
3415A	—	✓	—	—	—	—
3416A	✓	—	—	—	—	—
3417A	—	✓	—	—	—	—
3424A-19	✓	—	✓	—	✓	✓
3426A-19	✓	—	✓	—	✓	✓
3428A-19	✓	—	✓	—	✓	✓
3802A-10	✓	—	✓	—	✓	—
3803A-10	—	✓	✓	—	✓	—

Optional Accessories

Code No.	Description	
21AZB148	Bezel clamp (for metric models)	
21AZB195	Limit hand (2 pcs.)	
21RZA065	Bezel clamp (for inch models)	

Contact points for Mitutoyo's dial indicators refer to pages F-35 to F-38 for details.
Interchangeable backs refer to page F-39 for details.
Plunger lifting aids refer to page F-40 for details.
Measuring stands refer to pages F-67 to F-72 for details.

Dial Indicators

SERIES 3 – Large Dial Indicators

Dimensions

ISO/JIS type   Unit: mm

ANSI/AGD type   Unit: inch

21BZB005 (thread: No. 4-48 UNF)
21BZB005 (thread: No. 4-48 UNF)
21BZB056 (thread: No. 4-48 UNF)

Code No.	A	B	C	D	E	F	G	H	I
ISO/JIS type									
3046A	61.2	75.5	78	17.7	21	15.9	20.6	71	9
3047A	61.2	75.5	78	17.7	21	15.9	20.6	71	9
3050A	52.6	94	78	17.7	21	25.9	29.1	71	9
3052A-19	72.9	104.3	78	17.7	21	25.9	39.4	71	9
3058A-19	81.9	142.3	78	17.7	21	43.9	59.4	71	9
3060A-19	120.9	202.3	78	17.7	21	73.9	89.4	71	9
3062A-19	141.9	243.3	78	17.7	21	94.9	109.4	71	9
3109A-10	61.2	79	78	17.7	21	25.9	14.1	71	9
ANSI/AGD type									
3414A	2.07	2.89	3.07	.70	3/4	.50	.86	2.80	.35
3415A	2.07	2.89	3.07	.70	3/4	.50	.86	2.80	.35
3416A	2.07	3.39	3.07	.70	3/4	.50	1.36	2.80	.35
3417A	2.07	3.39	3.07	.70	3/4	.50	1.36	2.80	.35
3424A-19	3.31	5.88	3.07	.70	3/4	1.99	2.35	2.80	.35
3426A-19	4.84	7.80	3.07	.70	3/4	2.91	3.35	2.80	.35
3428A-19	5.67	9.63	3.07	.70	3/4	3.74	4.35	2.80	.35
3802A-10	2.41	2.35	3.07	.70	3/4	.50	.32	2.80	.35
3803A-10	2.41	2.35	3.07	.70	3/4	.50	.32	2.80	.35

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