





Dial Indicator

SERIES 2 — Standard Type, Inch Reading

SPECIFICATIONS

Inch		ANSI/AGD type						
Graduation	Order No.		Range (range/rev)	Accuracy		Repeat-ability	Dial reading	Measuring force
	w/ lug	Flat-back		First 1 Rev / 2.5 Rev / 10 Rev	Retrace			
.001"	2414S	2414SB	.5" (.1")	±.001" / ±.001" / ±.001"	.0002"	±.0002"	±0-100	1.8N or less
.001"	2415S	2415SB	.5" (.1")	±.001" / ±.001" / ±.001"	.0002"	±.0002"	0-50-0	1.8N or less
.001"	2914S	2914SB	.5" (.1")	±.001" / ±.001" / ±.001"	.0002"	±.0002"	100-0	1.8N or less
.0005"	2506S	2506SB	.125" (.05")	±.0005" / ±.0005" / —	.00016"	±.0001"	±0-50	1.8N or less
.0005"	2507S	2507SB	.125" (.05")	±.0005" / ±.0005" / —	.00016"	±.0001"	0-25-0	1.8N or less
.0005"	2514S	2514SB	.5" (.05")	±.0005" / ±.0005" / ±.0015"	.00016"	±.0001"	±0-50	1.8N or less
.0005"	2922S	2922SB	.125" (.05")	±.0005" / ±.0005" / —	.00016"	±.0001"	0-25-0	1.8N or less
.0001"	2356S-10	2356SB-10	.25" (.01")	±.0002" / ±.0002" / ±.0003" ±.0004" (First 20rev) / ±.0005" (Over 20rev)	.0001"	±.00003"	0-10	2.0N or less
.0001"	2358S-10	2358SB-10	.5" (.01")	±.0002" / ±.0002" / ±.0003" ±.0004" (First 20rev) / ±.0005" (Over 20rev)	.00015"	±.00003"	0-10	2.0N or less
.0001"	2802S-10	2802SB-10	.025" (.01")	±.0001" / ±.0001" / —	.0001"	±.00003"	0-10	2.0N or less
.0001"	2803S-10	2803SB-10	.025" (.01")	±.0001" / ±.0001" / —	.0001"	±.00003"	0-5-0	2.0N or less
.0001"	2804S-10	2804SB-10	.05" (.01")	±.0001" / ±.0001" / ±.0002"	.0001"	±.00003"	0-10	2.0N or less
.0001"	2805S-10	2805SB-10	.05" (.01")	±.0001" / ±.0001" / ±.0002"	.0001"	±.00003"	0-5-0	2.0N or less
.0001"	2905S-10	2905SB-10	.05" (.01")	±.0001" / ±.0001" / ±.0002"	.0001"	±.00003"	10-0	2.0N or less
.0001"	2923S-10	2923SB-10	.05" (.01")	±.0001" / ±.0001" / ±.0002"	.0001"	±.00003"	0-5-0	2.0N or less

FEATURES

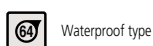
Inch								
Order No.	w/ lug	Flat-back						
							—	—
2414S	2414SB	—	—	—	—	—	—	—
2415S	2415SB	—	—	—	—	—	—	—
2914S	2914SB	—	—	✓	—	—	—	—
2506S	2506SB	—	—	—	—	—	—	—
2507S	2507SB	—	—	—	—	—	—	—
2514S	2514SB	—	—	—	—	—	—	—
2922S	2922SB	—	—	—	—	—	—	—
2356S-10	2356SB-10	—	—	—	✓	—	—	—
2358S-10	2358SB-10	—	—	—	✓	—	—	—
2802S-10	2802SB-10	✓	—	—	✓	—	—	—
2803S-10	2803SB-10	✓	—	—	✓	—	—	—
2804S-10	2804SB-10	✓	—	—	✓	—	—	—
2805S-10	2805SB-10	✓	—	—	✓	—	—	—
2905S-10	2905SB-10	✓	—	✓	✓	—	—	—
2923S-10	2923SB-10	✓	—	—	✓	—	—	—



(Refer to page VIII for details.)

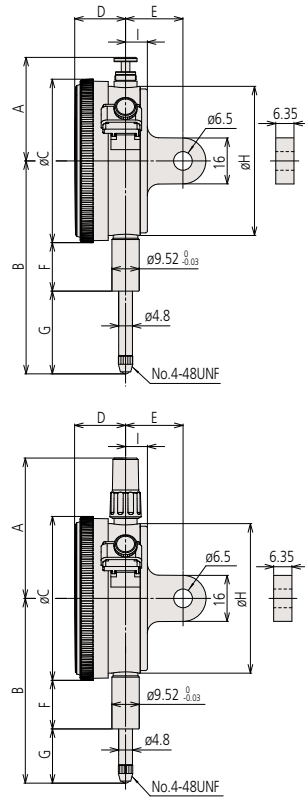
Optional Accessories

- : Backs (See page F-40.)
- : Contact points (See page F-36.)



DIMENSIONS

ANSI/AGD
Type



Unit: mm

Order No.	A	B	C	D	E	F	G	H	I
2414S	38.9	64.1	57	17.7	19	13.6	22	52	7.6
2415S	38.9	64.1	57	17.7	19	13.6	22	52	7.6
2914S	38.9	64.1	57	17.7	19	13.6	22	52	7.6
2506S	48.8	54.3	57	17.7	19	13.6	12.2	52	7.6
2507S	48.8	54.3	57	17.7	19	13.6	12.2	52	7.6
2514S	38.9	64.1	57	17.7	19	13.6	22	52	7.6
2922S	48.8	54.3	57	17.7	19	13.6	12.2	52	7.6
2356S-10	48.8	57.2	57	17.7	19	13.6	15.1	52	7.6
2358S-10	38.9	63.6	57	17.7	19	13.6	21.5	52	7.6
2802S-10	48.8	51.4	57	17.7	19	13.6	9.3	52	7.6
2803S-10	48.8	51.4	57	17.7	19	13.6	9.3	52	7.6
2804S-10	48.8	51.7	57	17.7	19	13.6	9.6	52	7.6
2805S-10	48.8	51.7	57	17.7	19	13.6	9.6	52	7.6
2905S-10	48.8	51.7	57	17.7	19	13.6	9.6	52	7.6
2923S-10	48.8	51.7	57	17.7	19	13.6	9.6	52	7.6

Special Dial Indicators

SERIES 2



Adjustable hand

Adjustable hand dial gauge

The hand position can be adjusted independently of the position of the spindle by rotating the top knob.

20485-10



Peak hold

Peak hold type dial gauge

A mechanism holds the pointer and the spindle at the position of maximum depression and hence displays the maximum value.

20465-80



(Refer to page VIII for details.)

SPECIFICATIONS

ISO/JIS type

Metric										
Graduation	Order No.		Range (range/rev)	Accuracy				Repeat-ability	Dial reading	Measuring force
	w/ lug	Flat-back		Overall	Retrace	1/10 Rev	1 Rev			
0.01mm	20485-10	20485B-10	10mm (1mm)	±15µm	5µm	8µm	±10µm	5µm	0-100	1.4N or less
0.01mm	20465-80	20465B-80	10mm (1mm)	±15µm	—	8µm	±10µm	—	0-100	5.0N or less

ANSI/AGD type

Inch										
Graduation	Order No.		Range (range/rev)	Accuracy			Repeat-ability	Dial reading	Measuring force	
	w/ lug	Flat-back		First 1 Rev / 2.5 Rev / 10 Rev	Retrace					
.001"	29155-10	29155B-10	.5" (.1")	±.001" / ±.001" / ±.001		.0002	±.0002	0-100	1.8N or less	
.001"	29185-10	29185B-10	.5" (.1")	±.001" / ±.001" / ±.001		.0002	±.0002	0-50-0	1.8N or less	

FEATURES

Metric

Order No.					—	—
w/ lug	Flat-back					
20485-10	20485B-10	✓	—	✓	—	—
20465-80	20465B-80	—	✓	—	—	—

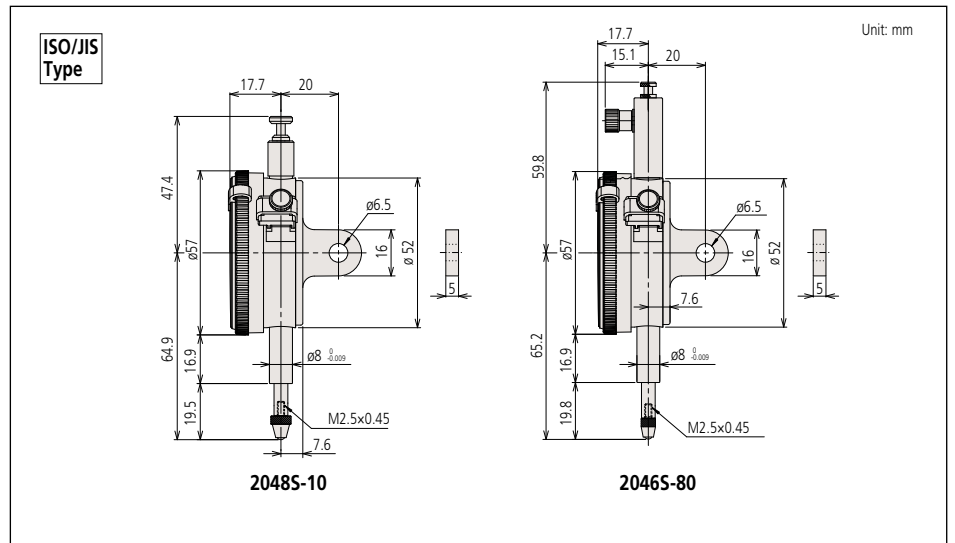
Inch

Order No.					—	—
w/ lug	Flat-back					
29155-10	29155B-10	✓	—	✓	—	—
29185-10	29185B-10	✓	—	✓	—	—

Optional Accessories

- : Backs (See page F-40.)
- : Contact points (See page F-36.)

DIMENSIONS



Dial Indicator

SERIES 2 — Standard One Revolution Type for Error-free Reading

Unlike many other dial indicators, the one-revolution dial indicator literally shows the entire spindle travel or range as one sweep of the hand, eliminating the possibility of reading errors due to miscounting multiple revolutions. With one-revolution dial indicators, "within tolerance" and "out-of-tolerance" can never be misinterpreted.

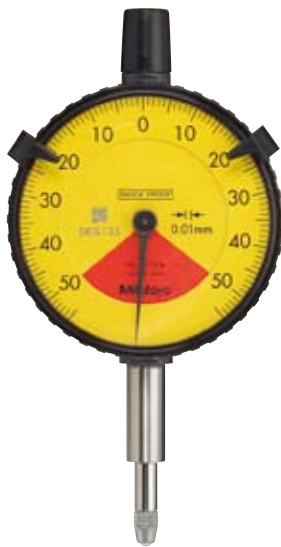
FEATURES

- A unique shock-proof mechanism is incorporated, providing improved immunity to shock due to sudden spindle retraction caused by high impact.

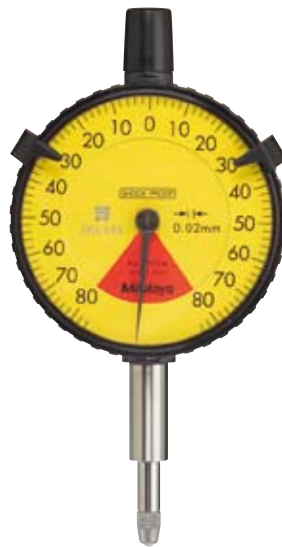
- The crystal is hard coated for durability and scratch resistance.
- Approximately 40% lighter than the conventional dial indicator.
- Provided with an improved resistance to shop floor contaminants such as water and dust.
- Due to the spindle bushing being offset from the stem, spindle movement will not be hindered or jammed when clamping along the stem.
- A pair of limit hands are provided for quick and easy tolerance judgment (GO/±NG).



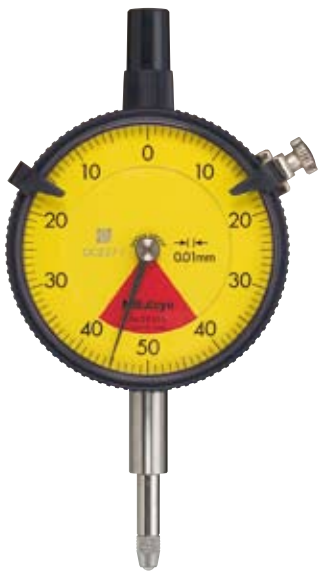
2971



2972



2973



29295



29005-10



2990



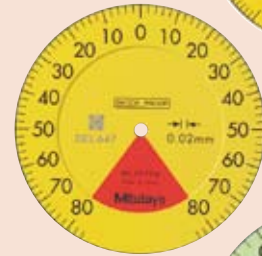
(Refer to page VIII for details.)



2971



2972



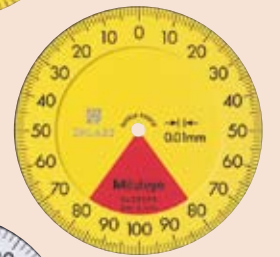
2973



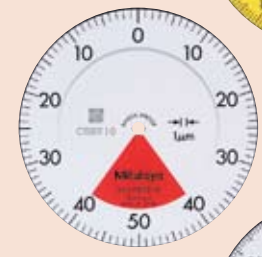
29285



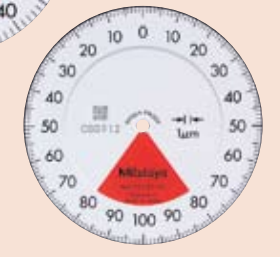
29295
29295-60
29295-62



29595



29005-10
29005-70
29005-72



29015-10



Shockproof type



Waterproof type



Dustproof type



Jeweled bearing type

FEATURES

Metric

Order No.						—	—
w/ lug	Flat-back						
2928S	2928SB	—	—	—	—	—	—
2929S	2929SB	—	—	—	—	—	—
2929S-60	2929SB-60	—	✓	—	—	—	—
2929S-62	2929SB-62	—	—	✓	—	—	—
2959S	2959SB	—	—	—	—	—	—
2900S-10	2900SB-10	—	—	—	✓	—	—
2900S-70	2900SB-70	—	✓	—	✓	—	—
2900S-72	2900SB-72	✓	—	✓	✓	—	—
2901S-10	2901SB-10	✓	—	—	✓	—	—
—	2973	—	—	—	—	—	—
—	2971	—	—	—	—	—	—
—	2972	—	—	—	—	—	—
2990*	—	—	—	—	—	—	—
—	2960F*	—	—	—	—	—	—

Inch

Order No.						—	—
w/ lug	Flat-back						
2909S-62	2909SB-62	—	—	✓	—	—	—
2910S-10	2910SB-10	✓	—	✓	✓	—	—
2910S-72	2910SB-72	✓	✓	—	✓	—	—
—	2978	—	—	—	—	—	—
—	2976	—	—	✓	—	—	—
—	2977	—	—	—	—	—	—
—	2991*	—	—	✓	—	—	—

Optional Accessories

- : Backs (See page F-40.)
- : Contact points (See page F-36.)

SPECIFICATIONS

Metric

ISO/JIS type

Graduation	Order No.		Range (range/rev)	Accuracy				Repeat-ability	Dial reading	Measuring force
	w/ lug	Flat-back		Overall	Retrace	1/10 Rev	1 Rev			
0.1mm	2928S	2928SB	4mm (5mm)	±40µm	20µm	20µm	—	20µm	2-0-2	1.4N or less
0.01mm	2929S	2929SB	0.8mm (1mm)	±9µm	5µm	6µm	—	5µm	40-0-40	1.4N or less
0.01mm	2929S-60	2929SB-60	0.8mm (1mm)	±9µm	5µm	6µm	—	5µm	40-0-40	2.0N or less
0.01mm	2929S-62	2929SB-62	0.8mm (1mm)	±9µm	5µm	6µm	—	5µm	40-0-40	2.0N or less
0.01mm	2959S	2959SB	1.6mm (2mm)	±13µm	6µm	8µm	—	5µm	80-0-80	1.4N or less
0.001mm	2900S-10	2900SB-10	0.08mm (0.1mm)	±3µm	2.5µm	2.5µm	—	0.5µm	40-0-40	1.4N or less
0.001mm	2900S-70	2900SB-70	0.08mm (0.1mm)	±3µm	2.5µm	2.5µm	—	0.5µm	40-0-40	2.0N or less
0.001mm	2900S-72	2900SB-72	0.08mm (0.1mm)	±3µm	2.5µm	2.5µm	—	0.5µm	40-0-40	2.0N or less
0.001mm	2901S-10	2901SB-10	0.16mm (0.2mm)	±4µm	3µm	3µm	—	0.5µm	80-0-80	1.4N or less
0.02mm	2973	—	1.6mm (2mm)	±16µm	6µm	8µm	—	5µm	80-0-80	1.4N or less
0.01mm	2971	—	0.5mm (0.7mm)	±10µm	5µm	7µm	—	5µm	25-0-25	1.4N or less
0.01mm	2972	—	1mm (1.4mm)	±12µm	5µm	7µm	—	5µm	50-0-50	1.4N or less
0.01mm	2990*	—	0.1mm (0.14mm)	±6.5µm	4µm	4µm	—	1µm	50-0-50	1.5N or less
0.001mm	2960F*	—	1mm (1.27mm)	±14µm	7µm	10µm	—	5µm	50-0-50	1.4N or less

*Back plunger type (see page F-34.)

Inch

ANSI/AGD type

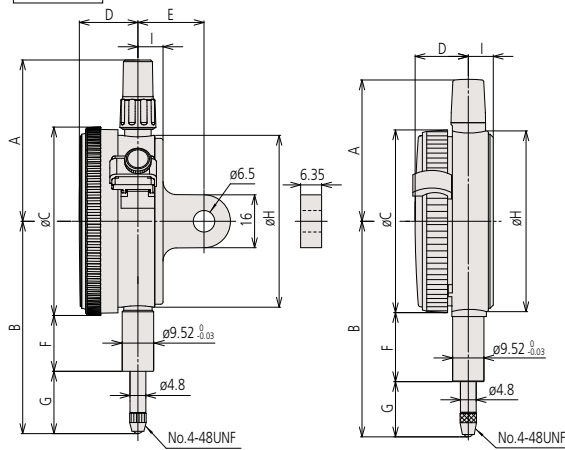
Graduation	Order No.		Range (range/rev)	Accuracy		Repeat-ability	Dial reading	Measuring force
	w/ lug	Flat-back		First 1 Rev / 2.5 Rev / 10 Rev	Retrace			
.0005"	2909S-62	2909SB-62	.04" / .05"	±.0005" / — / —	.00016"	±.0001"	20-0-20	2.5N or less
.0001"	2910S-10	2910SB-10	.008" / .01"	±.0001" / — / —	.0001"	±.00003"	4-0-4	1.8N or less
.0001"	2910S-72	2910SB-72	.008" / .01"	±.0001" / — / —	.0001"	±.00003"	4-0-4	2.5N or less
.001"	2978	—	.06" / .079"	±.001" / — / —	.0002"	±.0002"	30-0-30	1.4N or less
.0005"	2976	—	.02" / .028"	±.0005" / — / —	.00016"	±.0001"	10-0-10	1.4N or less
.0005"	2977	—	.04" / .055"	±.0005" / — / —	.00016"	±.0001"	20-0-20	1.4N or less
.0001"	2991*	—	.008" / .01"	±.0002" / — / —	.0001"	±.00005"	4-0-4	1.5N or less

*Back plunger type (see page 262.)

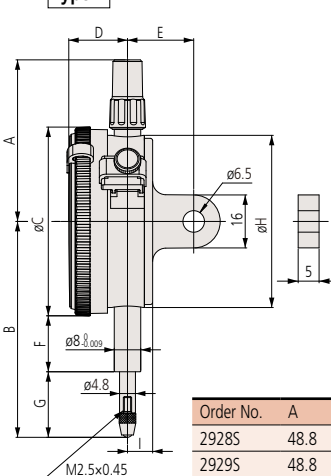
DIMENSIONS

Unit: mm

ANSI/AGD Type



ISO/JIS Type



- Note 1: Dimensions of the inch (ANSI/AGD Type) dial indicator partly differ from those of the metric (ISO/JIS Type) indicator.
- Note 2: Inch (ANSI/AGD Type) dial indicator is provided with a stem of 3/8" dia. and #4-48UNF thread mount for the contact point.

Order No.	A	B	C	D	E	F	G	H	I
2909S-62	48.8	51.9	57	17.7	19	13.6	9.8	52	7.6
2910S-10	48.8	51.2	57	17.7	19	13.6	9.1	52	7.6
2910S-72	48.8	51.2	57	17.7	19	13.6	9.1	52	7.6
2978	43.2	65.3	55.6	16.2	—	21	16.5	55	7.6
2976	43.2	64.7	55.6	16.2	—	21	15.9	55	7.6
2977	43.2	65	55.6	16.2	—	21	16.2	55	7.6

Order No.	A	B	C	D	E	F	G	H	I
2928S	48.8	65.2	57	17.7	20	16.9	19.8	52	7.6
2929S	48.8	65.2	57	17.7	20	16.9	19.8	52	7.6
2929S-60	48.8	70	57	17.7	20	12.3	29.2	52	7.6
2929S-62	48.8	65.2	57	17.7	20	16.9	19.8	52	7.6
2959S	48.8	65.2	57	17.7	20	16.9	19.8	52	7.6
2900S-10	48.8	66	57	17.7	20	16.9	20.6	52	7.6
2900S-70	48.8	67	57	17.7	20	12.3	26.2	52	7.6
2900S-72	48.8	66	57	17.7	20	16.9	20.6	52	7.6
2901S-10	48.8	66.1	57	17.7	20	16.9	20.7	52	7.6
2973	43.2	66.3	55.6	16.2	—	21	17.5	55	7.6
2971	43.2	65.6	55.6	16.2	—	21	16.8	55	7.6
2972	43.2	66.0	55.6	16.2	—	21	17.2	55	7.6

Dial Indicator

SERIES 2 — Long Stroke Type



2050S



2330S-10



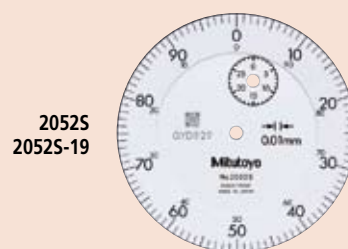
2052S



(Refer to page VIII for details.)



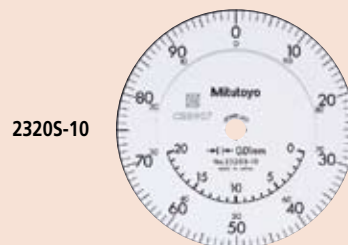
2050S-60
2050S
2050S-19



2052S
2052S-19



2330S-10



2320S-10



2952S



Shockproof type



Waterproof type



w/ damper at lowest rest point



Jeweled bearing type



w/ coaxial revolution counter



Reverse reading type

FEATURES

Metric							
Order No.	Order No.						
w/ lug	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	—	—	✓	—	—	✓

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

Optional Accessories

- : Backs (See page F-40.)
- : Contact points (See page F-36.)

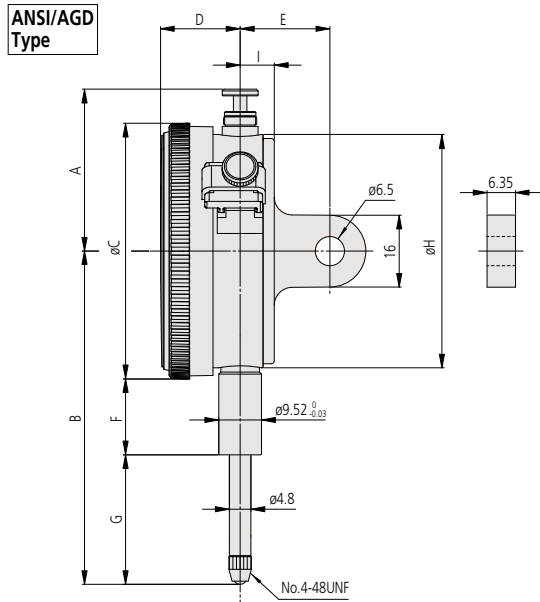
SPECIFICATIONS

Metric		ISO/JIS type									
Graduation	Order No.		Range (range/rev)	Accuracy				Repeatability	Dial reading	Measuring force	
	w/ lug	Flat-back		Overall	Retrace	1/10 Rev	1 Rev				
0.01mm	2050S	2050SB	20mm (1mm)	±20μm	7μm	10μm	±15μm	5μm	±0-100	2.0N or less	
0.01mm	2050S-60	2050SB-60	20mm (1mm)	±20μm	7μm	10μm	±15μm	5μm	±0-100	2.5N or less	
0.01mm	2050S-19	2050SB-19	20mm (1mm)	±20μm	7μm	10μm	±15μm	5μm	±0-100	2.0N or less	
0.01mm	2320S-10	2320SB-10	20mm (1mm)	±20μm	7μm	10μm	±15μm	5μm	±0-100	2.0N or less	
0.01mm	2052S	2052SB	30mm (1mm)	±25μm	7μm	14μm	±18μm	5μm	±0-100	2.5N or less	
0.01mm	2052S-19	2052SB-19	30mm (1mm)	±25μm	7μm	14μm	±18μm	5μm	±0-100	2.5N or less	
0.01mm	2330S-10	2330SB-10	30mm (1mm)	±25μm	7μm	14μm	±18μm	5μm	±0-100	2.5N or less	
0.01mm	2952S	2952SB	30mm (1mm)	±25μm	7μm	14μm	±18μm	5μm	100-0	2.5N or less	

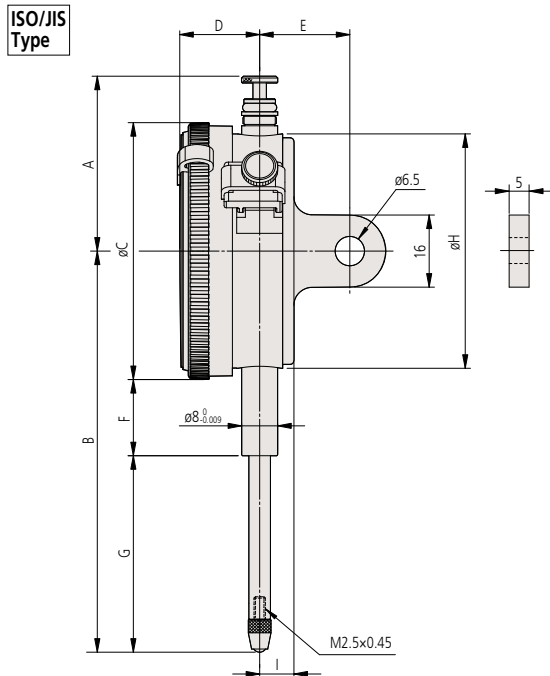
* 2050S-60 and 2050SB-60 are waterproof types that use a rubber bellows to cover the stem.
Please note that the outer diameter of the bellows (ø9.5) is larger than that of the stem (ø8).

Inch		ANSI/AGD type									
Graduation	Order No.		Range (range/rev)	Accuracy		Repeatability	Dial reading	Measuring force			
	w/ lug	Flat-back		First 1 Rev / 2.5 Rev / 10 Rev	Retrace						
.001"	2416S	2416SB	1" (.1")	±.001" / ±.001" / ±.002"	.0002"	±.0002"	±0-100	1.8N or less			
.001"	2416S-06	2416SB-06	1" (.1")	±.001" / ±.001" / ±.002"	.0002"	±.0002"	±0-100	1.8N or less			
.001"	2416S-10	2416SB-10	1" (.1")	±.001" / ±.001" / ±.002"	.0002"	±.0002"	±0-100	1.8N or less			
.001"	2417S	2417SB	1" (.1")	±.001" / ±.001" / ±.002"	.0002"	±.0002"	0-50-0	1.8N or less			
.001"	2424S-19	2424SB-19	2" (.1")	±.001" / ±.001" / ±.002" / ±.003" (First 20Rev)	.00033"	±.0002"	±0-100	2.5N or less			
.0005"	2776S	2776SB	1" (.05")	±.0005" / ±.0005" / ±.0015"	.0002"	±.0001"	±0-50	1.8N or less			
.001"	2904S	2904SB	1" (.1")	±.001" / ±.001" / ±.002"	.0002"	±.0002"	100-0	1.8N or less			

DIMENSIONS



Order No.	A	B	C	D	E	F	G	H	I
2416S	38.9	76.8	57	17.7	19	13.6	34.7	52	7.6
2416S-06	38.9	76.8	57	17.7	19	13.6	34.7	52	7.6
2416S-10	38.9	76.8	57	17.7	19	13.6	34.7	52	7.6
2417S	38.9	76.8	57	17.7	19	13.6	34.7	52	7.6
2424S-19	118	142.5	57	17.7	20.9	54.3	59.7	52	9.5
2776S	38.9	76.8	57	17.7	19	13.6	34.7	52	7.6
2904S	38.9	76.8	57	17.7	19	13.6	34.7	52	7.6



Order No.	A	B	C	D	E	F	G	H	I
2050S	38.8	75.2	57	17.7	20	16.9	29.8	52	7.6
2050S-60	59.8	87.2	57	17.7	20	12.3	46.4	52	7.6
2050S-19	38.8	75.2	57	17.7	20	16.9	29.8	52	7.6
2320S-10	38.8	75.2	57	17.7	20	16.9	29.8	52	7.6
2052S	38.8	88.7	57	17.7	20	16.9	43.3	52	7.6
2052S-19	38.8	88.7	57	17.7	20	16.9	43.3	52	7.6
2330S-10	38.8	88.7	57	17.7	20	16.9	43.3	52	7.6
2952S	38.8	88.7	57	17.7	20	16.9	43.3	52	7.6

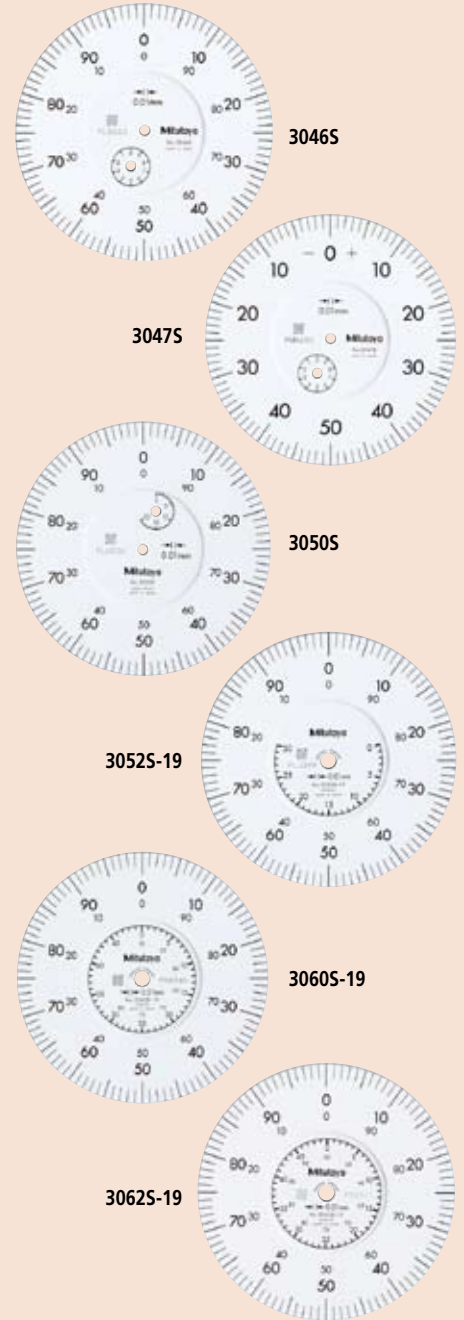
Dial Indicator

SERIES 3, 4 — Large Dial Face and Long Stroke Type

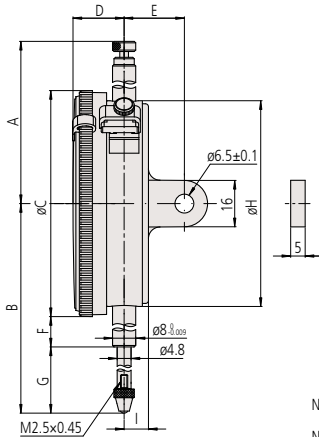
- Dial gauges with a large-diameter dial face to ease reading.
- All types come with limit pins and a bezel clamp as standard.



(Refer to page VIII for details.)



DIMENSIONS

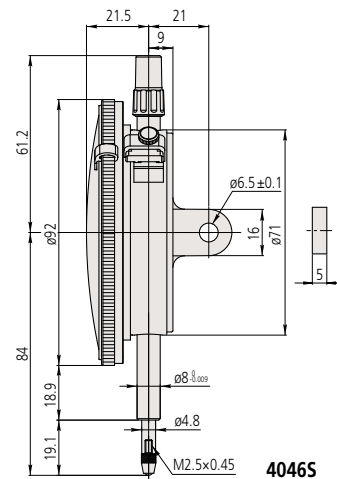


ISO/JIS Type

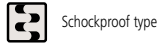
Unit: mm

Order No.	A	B	C	D
3046S	61.2	75.5	15.9	20.6
3047S	61.2	75.5	15.9	20.6
3050S	52.6	94	25.9	29.1
3052S-19	72.9	104.3	25.9	39.4
3058S-19	81.9	142.3	43.9	59.4
3060S-19	120.9	202.3	73.9	89.4
3062S-19	141.9	243.3	94.9	109.4
3109S-10	61.2	79	25.9	14.1

- Note 1: Dimensions of the inch (ANSI/AGD Type) dial indicator partly differ from those of the metric (ISO/JIS Type) indicator.
 Note 2: Inch (ANSI/AGD Type) dial indicator is provided with a stem of 3/8" dia. and #4-48UNF thread mount for the contact point.



4046S



Shockproof type



w/ damper at lowest rest point



Jeweled bearing type



w/ coaxial revolution counter

FEATURES

Metric						—	—
Order No.							
w/ lug	Flat-back						
3046S	3046SB	—	—	—	—	—	—
3047S	3047SB	—	—	—	—	—	—
3050S	3050SB	—	✓	—	—	—	—
3052S-19	3052SB-19	✓	—	✓	✓	—	—
3058S-19	3058SB-19	✓	—	✓	✓	—	—
3060S-19*	3060SB-19*	✓	—	✓	✓	—	—
3062S-19*	3062SB-19*	✓	—	✓	✓	—	—
3109S-10	3109SB-10	✓	—	✓	—	—	—
4046S	4046SB	—	—	—	—	—	—

Inch					—	—	—
Order No.							
w/ lug	Flat-back						
3414S	3414SB	—	—	—	—	—	—
3415S	3415SB	—	—	—	—	—	—
3416S	3416SB	—	—	—	—	—	—
3417S	3417SB	—	—	—	—	—	—
3424S-19	3424SB-19	✓	✓	✓	—	—	—
3426S-19	3426SB-19	✓	✓	✓	—	—	—
3428S-19	3428SB-19	✓	✓	✓	—	—	—
3802S-10	3802SB-10	✓	✓	—	—	—	—
3803S-10	3803SB-10	✓	✓	—	—	—	—
4887S-19	4887SB-19	✓	✓	✓	—	—	—

Optional Accessory

—: Contact points (See page F-36.)

SPECIFICATIONS

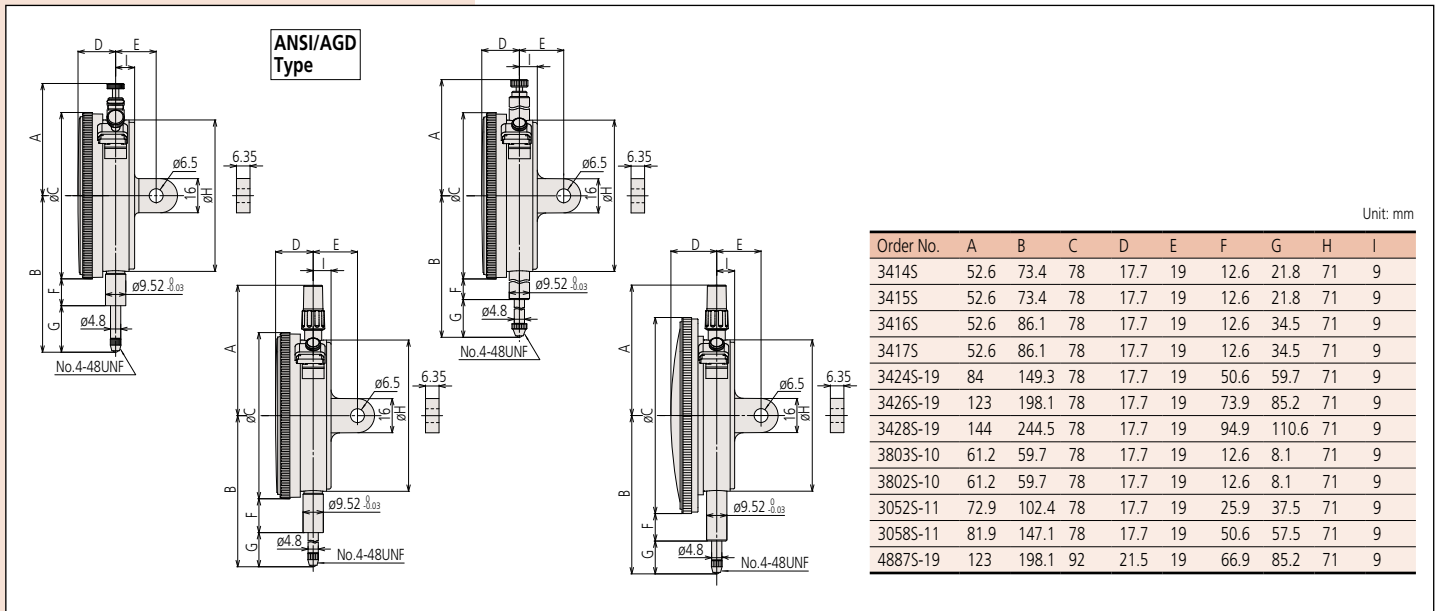
Metric		ISO/JIS type								
Graduation	Order No.		Range (range/rev)	Accuracy				Repeatability	Dial reading	Measuring force
	w/ lug	Flat-back		Overall	Retrace	1/10 Rev	1 Rev			
0.01mm	3046S	3046SB	10mm (1mm)	±15μm	5μm	8μm	±10μm	5μm	0-100	1.4N or less
0.01mm	3047S	3047SB	10mm (1mm)	±15μm	5μm	8μm	±10μm	5μm	0-50-0	1.4N or less
0.01mm	3050S	3050SB	20mm (1mm)	±20μm	7μm	10μm	±15μm	5μm	0-100	2.0N or less
0.01mm	3052S-19	3052SB-19	30mm (1mm)	±25μm	7μm	14μm	±18μm	5μm	0-100	2.5N or less
0.01mm	3058S-19	3058SB-19	50mm (1mm)	±30μm	9μm	15μm	±20μm	5μm	0-100	3.0N or less
0.01mm	3060S-19*	3060SB-19*	80mm (1mm)	±45μm	11μm	—	—	6μm	0-100	3.0N or less
0.01mm	3062S-19*	3062SB-19*	100mm (1mm)	±50μm	15μm	—	—	6μm	0-100	3.2N or less
0.001mm	3109S-10	3109SB-10	1mm (0.2mm)	±6μm	4μm	3μm	±5μm	1μm	0-100-0	1.5N or less
0.01mm	4046S	4046SB	10mm (1mm)	±15μm	6μm	8μm	±10μm	5μm	0-100	1.4N or less

*Use in a vertical position only.

Inch		ANSI/AGD type								
Graduation	Order No.		Range (range/rev)	Accuracy			Repeatability	Dial reading	Measuring force	
	w/ lug	Flat-back		First 1 Rev / 2.5 Rev / 10 Rev	Retrace	20 Rev				
.001"	3414S	3414SB	.5" (.1")	±.001" / ±.001" / ±.001"			.0002"	±.0002"	0-100	1.8N or less
.001"	3415S	3415SB	.5" (.1")	±.001" / ±.001" / ±.001"			.0002"	±.0002"	0-50-0	1.8N or less
.001"	3416S	3416SB	1" (.1")	±.001" / ±.001" / ±.002"			.0002"	±.0002"	±0-100	1.8N or less
.001"	3417S	3417SB	1" (.1")	±.001" / ±.001" / ±.002"			.0002"	±.0002"	0-50-0	1.8N or less
.001"	3424S-19	3424SB-19	2" (.1")	±.001" / ±.001" / ±.002" / ±.003" (20Rev)			.00033"	±.0002"	±0-100	3.0N or less
.001"	3426S-19*	3426SB-19*	3" (.1")	±.001" / ±.001" / ±.002" / ±.003" (20Rev) / ±.005" (Over 20Rev)			.00033"	±.0002"	±0-100	3.0N or less
.001"	3428S-19*	3428SB-19*	4" (.1")	±.001" / ±.001" / ±.002" / ±.003" (20Rev) / ±.005" (Over 20Rev)			.00033"	±.0002"	±0-100	3.2N or less
.0001"	3802S-10	3802SB-10	.025" (.01")	±.0001" / ±.0001" / —			.0001"	±.00003"	0-5-0	2.0N or less
.0001"	3803S-10	3803SB-10	.025" (.01")	±.0001" / ±.0001" / —			.0001"	±.00003"	0-10	2.0N or less
.001"	4887S-19*	4887SB-19*	3" (.1")	±.001" / ±.001" / ±.002" / ±.003" (20Rev) / ±.005" (Over 20Rev)			.00033"	±.0002"	±0-100	3.0N or less

*Use in a vertical position only.

DIMENSIONS



ANSI/AGD Type Metric Dial Indicator

with 3/8" DIA. Stem and #4-48UNF-Thread Contact Point Compatible Type

SPECIFICATIONS

Metric		Series 1		ANSI/AGD type					
Graduation	Order No.		Range (range/rev)	Accuracy		Repeat-ability	Dial reading	Measuring force	
	w/ lug	Flat-back		First 1 Rev / 2.5 Rev / 10 Rev	Retrace				
0.01mm	1230S-01	1230SB-01	2.5mm (1mm)	±10µm / ±10µm / —	3µm	±2µm	0-100	1.4N or less	
0.01mm	1231S-01	1231SB-01	2.5mm (1mm)	±10µm / ±10µm / —	3µm	±2µm	0-50-0	1.4N or less	
0.01mm	1044S-01	1044SB-01	5mm (1mm)	±10µm / ±10µm / ±13µm	3µm	±3µm	±0-100	1.4N or less	
0.01mm	1045S-01	1045SB-01	5mm (1mm)	±10µm / ±10µm / ±13µm	3µm	±3µm	0-50-0	1.4N or less	
0.002mm	1010S-11	1010SB-11	0.5mm (0.2mm)	±2µm / ±2µm / —	2µm	±1µm	0-20	1.5N or less	
0.002mm	1011S-11	1011SB-11	0.5mm (0.2mm)	±2µm / ±2µm / —	2µm	±1µm	0-10-0	1.5N or less	

Metric		Series 2		ANSI/AGD type					
Graduation	Order No.		Range (range/rev)	Accuracy		Repeat-ability	Dial reading	Measuring force	
	w/ lug	Flat-back		First 1 Rev / 2.5 Rev / 10 Rev	Retrace				
0.01mm	2230S-01	2230SB-01	2.5mm (1mm)	±10µm / ±10µm / —	3µm	±3µm	±0-100	1.4N or less	
0.01mm	2231S-01	2231SB-01	2.5mm (1mm)	±10µm / ±10µm / —	3µm	±3µm	0-50-0	1.4N or less	
0.01mm	2046S-01	2046SB-01	10mm (1mm)	±10µm / ±10µm / ±13µm	3µm	±3µm	±0-100	1.4N or less	
0.01mm	2046S-11	2046SB-11	10mm (1mm)	±10µm / ±10µm / ±13µm	3µm	±3µm	±0-100	1.4N or less	
0.01mm	2048S-11	2048SB-11	10mm (1mm)	±10µm / ±10µm / ±13µm	3µm	±3µm	±0-100	1.4N or less	
0.01mm	2047S-01	2047SB-01	10mm (1mm)	±10µm / ±10µm / ±13µm	3µm	±3µm	0-50-0	1.4N or less	
0.01mm	2047S-11	2047SB-11	10mm (1mm)	±10µm / ±10µm / ±13µm	3µm	±3µm	0-50-0	1.4N or less	
0.01mm	2902S-01	2902SB-01	10mm (1mm)	±10µm / ±10µm / ±13µm	3µm	±3µm	100-0	1.4N or less	
0.01mm	2050S-01	2050SB-01	20mm (1mm)	±10µm / ±10µm / ±15µm / ±20µm (20Rev)	4µm	±3µm	±0-100	2.0N or less	
0.01mm	2050S-11	2050SB-11	20mm (1mm)	±10µm / ±10µm / ±15µm / ±20µm (20Rev)	4µm	±3µm	±0-100	2.0N or less	
0.01mm	2056S-01	2056SB-01	25mm (1mm)	±10µm / ±10µm / ±15µm / ±20µm (20Rev) / ±25µm (Over 20Rev)	4µm	±3µm	±0-100	2.5N or less	
0.001mm	2900S-73*	2900SB-73*	0.08mm (0.1mm)	±2µm / — / —	2µm	±0.3µm	0-50-0	2.0N or less	
0.001mm	2109S-11	2109SB-11	1mm (0.2mm)	±3µm / ±3µm / ±4µm	2µm	±0.3µm	0-10-0	1.5N or less	
0.001mm	2119S-11	2119SB-11	5mm (0.2mm)	±7µm / ±7µm / ±8µm / ±10µm (20Rev) / ±10µm (Over 20Rev)	2µm	±0.3µm	0-10-0	1.5N or less	

*One revolution type

FEATURES

Metric		ANSI/AGD type						
Order No.	w/ lug	Flat-back						
1231S-01	1231SB-01	—	—	—	—	—	—	
1044S-01	1044SB-01	—	—	—	—	—	—	
1045S-01	1045SB-01	—	—	—	—	—	—	
1010S-11	1010SB-11	—	✓	—	—	✓	—	
1011S-11	1011SB-11	—	✓	—	—	✓	—	

Metric		ANSI/AGD type						
Order No.	w/ lug	Flat-back						
2231S-01	2231SB-01	—	—	—	—	—	—	
2046S-01	2046SB-01	—	—	—	—	—	—	
2046S-11	2046SB-11	—	✓	—	—	—	—	
2048S-11	2048SB-11	—	✓	✓	✓	—	—	
2047S-01	2047SB-01	—	—	—	—	—	✓	
2047S-11	2047SB-11	—	✓	—	—	—	—	
2902S-01	2902SB-01	—	—	—	—	—	—	
2050S-01	2050SB-01	—	—	—	—	—	—	
2050S-11	2050SB-11	—	✓	—	—	—	—	
2056S-01	2056SB-01	—	—	—	—	—	—	
2900S-73*	2900SB-73*	—	✓	—	—	✓	✓	
2109S-11	2109SB-11	—	✓	—	—	✓	—	
2119S-11	2119SB-11	—	✓	—	—	—	—	



(Refer to page VIII for details.)

Optional Accessories

- : Backs (See page F-40.)
- : Contact points (See page F-36.)



Waterproof type



Jeweled bearing type



Adjustable hand type



w/ coaxial revolution counter



Schockproof type



Dustproof type






Double scale spacing type

ANSI/AGD Type Metric Dial Indicator

with 3/8" DIA. Stem and #4-48UNF-Thread Contact Point Compatible Type

FEATURES

Metric

Order No.					—	—	—
w/ lug	Flat-back						
3052S-11	3052SB-11	✓	✓	—	—	—	—
3058S-11	3058SB-11	✓	✓	—	—	—	—

SPECIFICATIONS

Metric

Series 3

ANSI/AGD type

Graduation	Order No.		Range (range/rev)	Accuracy		Repeat-ability	Dial reading	Measuring force
	w/ lug	Flat-back		First 1 Rev / 2.5 Rev / 10 Rev / 20 Rev / Over 20 Rev	Retrace			
0.01mm	3052S-11	3052SB-11	30mm (1mm)	±10µm / ±10µm / ±15µm / ±20µm / ±30µm	4µm	±3µm	±0-100	2.5N or less
0.01mm	3058S-11	3058SB-11	50mm (1mm)	±15µm / ±15µm / ±20µm / ±25µm / ±40µm	5µm	±3µm	±0-100	3.0N or less



(Refer to page VIII for details.)

Optional Accessories

- : Backs (See page F-40.)
- : Contact points (See page F-36.)



Waterproof type



Jeweled bearing type



Adjustable hand type



w/ coaxial revolution counter



Schockproof type



Dustproof type



Double scale spacing type

Back Plunger Type Dial Indicator

SERIES 1 and 2

Mitutoyo's back plunger type dial indicators are built with the measuring plunger (or spindle) protruding from the back of the body instead of the side. This type of indicator offers the same precision and durability as all other Mitutoyo dial indicators, and operates very effectively with optional holding bars.

- Back plunger type dial gauges are suitable for mounting onto leveling machine tool tables or inspection jigs, and for use in small spaces where the graduations of standard dial gauges are difficult to see.
- Model No. 1960, which uses Mitutoyo's proprietary shock-proofing mechanism, has excellent durability and shock resistance.
- Model No. 2990 provides 0.001mm resolution.



(Refer to page VIII for details.)



1160



1960



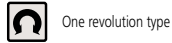
2960F



2990

Optional Accessories

- 136567:** Holding bar (ø6mm, L=81mm)
- 21AAA166:** Holding bar (ø6mm, L=42mm)
- 136568:** Holding bar (ø8mm, L=81mm)
- 21AAA168:** Holding bar (ø8mm, L=42mm)
- 124625:** Holding bar (.25" DIA, L=3.19")
- 21AAA167:** Holding bar (.25" DIA, L=1.65")



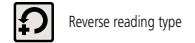
One revolution type



Shockproof type



Jeweled bearing type



Reverse reading type

FEATURES

Metric

Order No.				—	—	—
1960	✓	✓	—	—	—	—
1160	—	—	—	—	—	—
1162	—	—	✓	—	—	—

Inch

Order No.				—	—	—
1961	✓	✓	—	—	—	—
1166	—	—	—	—	—	—
1167	—	—	—	—	—	—
1168	—	—	✓	—	—	—

Metric

Order No.				—	—	—
2960F	✓	✓	—	—	—	—
2990	✓	✓	✓	—	—	—

Inch

Order No.				—	—	—
2961	✓	✓	—	—	—	—
2991	✓	✓	✓	—	—	—

SPECIFICATIONS

Metric

Series 1

ISO/JIS type

Graduation	Order No.	Range (range/rev)	Accuracy				Repeatability	Dial reading	Measuring force
			Overall	Retrace	1/10 Rev	1 Rev			
0.01mm	1960	1mm (1.27mm)	±14µm	7µm	10µm	—	5µm	50-0-50	1.4N or less
0.01mm	1160	5mm (1mm)	±16µm	7µm	10µm	±14µm	5µm	0-100	1.4N or less
0.01mm	1162	5mm (1mm)	±16µm	7µm	10µm	±14µm	5µm	100-0	1.4N or less

Inch

Series 1

ANSI/AGD type

Graduation	Order No.	Range (range/rev)	Accuracy		Repeatability	Dial reading	Measuring force
			First 1 Rev / 2.5 Rev / 10 Rev	Retrace			
.001"	1961	.04" (.05")	±.001" / — / —	.0002"	±.0002"	20-0-20	1.4N or less
.001"	1166	.2" (.05")	±.001" / ±.001" / ±.001"	.00033"	±.0002"	0-50	1.4N or less
.001"	1167	.2" (.05")	±.001" / ±.001" / ±.001"	.00033"	±.0002"	0-25-0	1.4N or less
.001"	1168	.2" (.05")	±.001" / ±.001" / ±.001"	.00033"	±.0002"	50-0	1.4N or less

Metric

Series 2

ISO/JIS type

Graduation	Order No.	Range (range/full stroke)	Accuracy				Repeatability	Dial reading	Measuring force
			Overall	Retrace	1/10 Rev	1 Rev			
0.01mm	2960F	1mm (1.27mm)	±14µm	7µm	10µm	—	5µm	50-0-50	1.4N or less
0.001mm	2990	0.1mm (0.14mm)	±6.5µm	4µm	4µm	—	1µm	50-0-50	1.5N or less

Inch

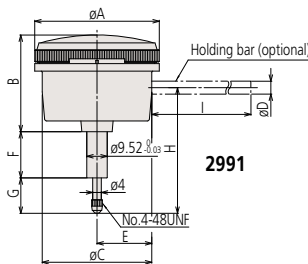
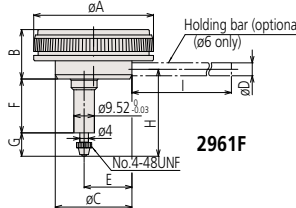
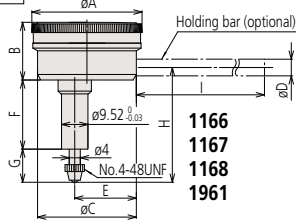
Series 2

ANSI/AGD type

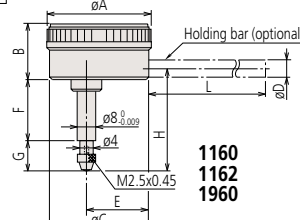
Graduation	Order No.	Range (range/full stroke)	Accuracy		Repeatability	Dial reading	Measuring force
			First 1 Rev / 2.5 Rev / 10 Rev	Retrace			
.0005"	2961F	.04" / .05"	±.0005" / — / —	.0002"	±.0001"	20-0-20	1.4N or less
.001"	2991	.008" / .01"	±.0002" / — / —	.0001"	±.00005"	4-0-4	1.5N or less

DIMENSIONS

ANSI/AGD Type

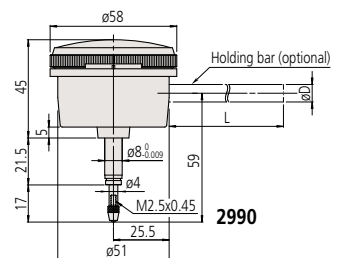
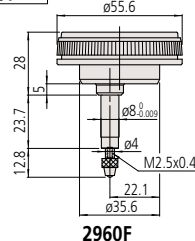


ISO/JIS Type



Order No.	A	B	C	E	F	G	H
1160	39	21.5	35	22	25	13.8	43.3
1162	39	21.5	35	22	25	13.8	43.3
1960	39	21.5	35	22	28.7	12.8	46

ISO/JIS Type



Order No.	A	B	C	D	E	F	G	H	I
1166	39.6	21.5	35	—	22	25	10.9	42	—
1167	39.6	21.5	35	—	22	25	10.9	42	—
1168	39.6	21.5	35	—	22	25	10.9	42	—
1961	39.6	21.5	35	—	22	25	10.9	40	—
2961F	55.6	23	35	—	22	25	10.9	40	—
2991	58	40	51	—	25.5	26.5	13.5	55.5	—

Note 1: Dimensions of the inch (ANSI/AGD Type) dial indicator partly differ from those of the metric (ISO/JIS Type) indicator.
 Note 2: Inch (ANSI/AGD Type) dial indicator is provided with a stem of 3/8" dia. and #4-48UNF thread mount for the contact point.

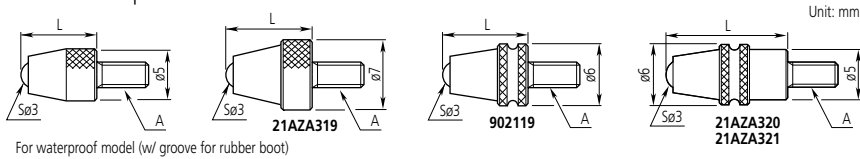
Contact Points

Optional Accessory for Digimatic and Dial Indicators and Linear Gages

SPECIFICATIONS

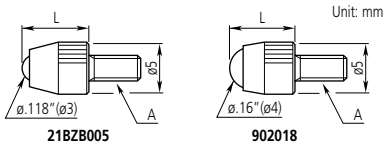
Ball Point

Standard contact point.



A: M2.5x0.45

L	Material		Ruby	Plastic
	Without groove	With groove (waterproof type)		
7.3	901312	—	120047	901994
8.3	21AZA319	902119	—	—
12.1	—	21AZA320	—	—
14	21JAA225	—	—	—
15	120049	—	120051	—
17	21JAA224	—	—	—
19.3	—	21AZA321	—	—
20	137391	—	137392	—
22	21JAA226	—	—	—
25	120053	—	120055	—
30	21AAA252	—	21AAA253	—

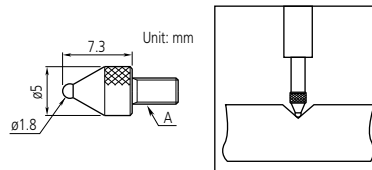


A: 4-48UNF

L	Material	
	Carbide	Plastic
1/4"	21BZB005	902018

Ball Point

Optimal for workpieces with deep indentations.

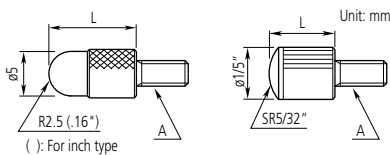


A: M2.5x0.45

SøD	ød	Order No.
1mm, carbide	5mm	21AAA349
1.5mm, carbide	5mm	21AAA350
1.8mm, steel	5mm	101122
2.5mm, carbide	5mm	21AAA351
4mm, carbide	5mm	21AAA352

Shell Type Point

Contact point with a large radius.
Optimal for use on flat surfaces.



A: M2.5x0.45

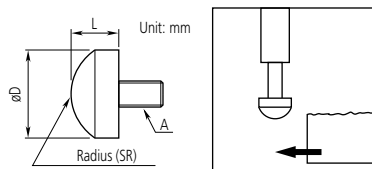
L	Order No.
5	101386
10	101118
15	137393
20	101387
25	101388
30	21AAA254

A: 4-48UNF

L	Order No.
3/32"	193697
5/32"	101184
1/4"	21AAA031
3/8"	21AAA032
1/2"	101185
5/8"	21AAA033
3/4"	101186
7/8"	21AAA034
1"	101187
1 1/4"	21AAA035
1 1/2"	21AAA036
1 3/4"	21AAA037
2"	21AAA038
2 1/4"	21AAA039
2 1/2"	21AAA040
2 3/4"	21AAA041
3"	21AAA042

Spherical Point

A large radius makes this contact point optimal for use where the workpiece needs to slide from the side.

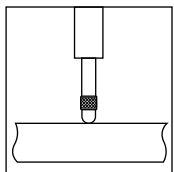


A: M2.5x0.45

D	L	SR	Order No.
5.5	3	5	111460
7.9	5	5	125258
10	5	7	101119

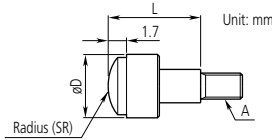
A: 4-48UNF

D	L	SR	Order No.
1/2"	1/8"	.35"	101205
3/8"	3/32"	.28"	101204



Spherical Point (Carbide)

A large radius makes this contact point optimal for use where the workpiece needs to slide from the side.

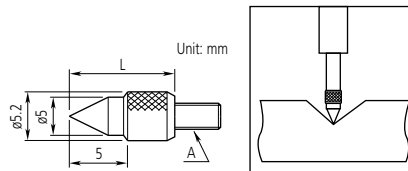


A: M2.5x0.45

D	L	SR	Order No.
5.2	5	5	120058
7.5	10	7	120059
10.5	10	10	120060

Conical Point

Used for positioning the measurement point. Since it can damage a workpiece easily, it is not suitable for use on soft materials.

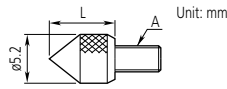


A: M2.5x0.45

Tip angle	L	Order No.
60°	10	101120

A: 4-48UNF

L	A	Order No.
1/2"	.2"	101190



A: M2.5x0.45

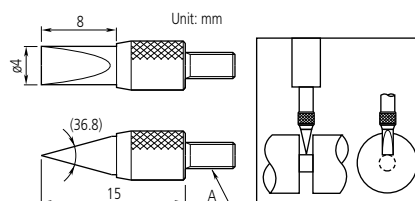
Tip angle	L	Order No.
90°	5	101385

A: 4-48UNF

D	L	Order No.
.2"	1/4"	101191

Knife Edge Point (Carbide)

Suitable for measuring narrow groove diameter, etc.

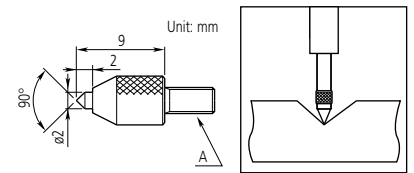


A: M2.5x0.45

Order No.
120067

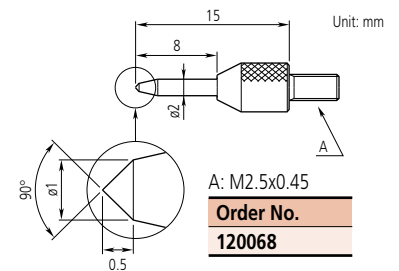
Conical Point (Carbide)

Used for positioning the measurement point. Since it can damage a workpiece easily, it is not suitable for use on soft materials.



A: M2.5x0.45

Order No.
120057

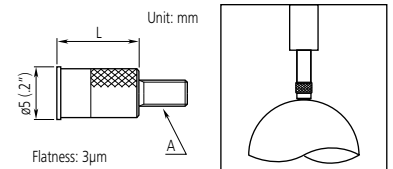


A: M2.5x0.45

Order No.
120068

Flat Point

Optimal for use on convex surfaces.

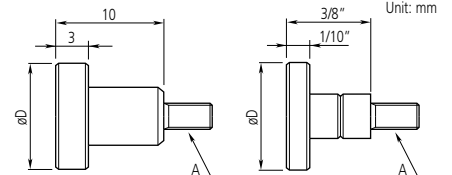


A: M2.5x0.45

L	Order No.
8	131365
10	21AAA340

A: 4-48UNF

L	Order No.
5/16"	133017
1/2"	21AAA043
3/4"	21AAA044
1"	21AAA045

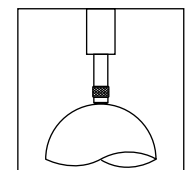


A: M2.5x0.45

D	Order No.
10	10117
15	21AAA341
20	21AAA342
25	21AAA343
30	21AAA344

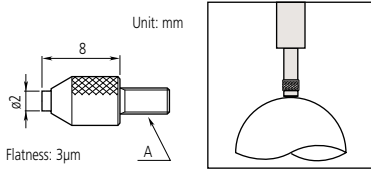
A: 4-48UNF

D	Order No.
1/2"	101188
3/8"	101189



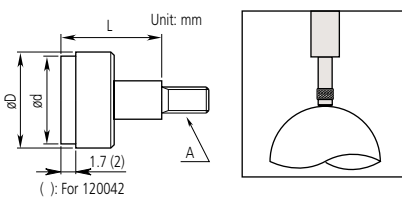
Flat Point (Carbide)

Optimal for use on convex surfaces.



A: M2.5x0.45

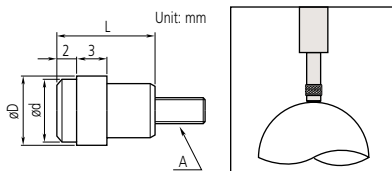
Order No.
120056



A: M2.5x0.45

D	d	L	Order No.
5.2	4.3*	5	120041
7	6.5*	10	120042
10.5	9.5*	10	120043
17	15**	10	21AAA345
22	20**	10	21AAA346
27	25**	10	21AAA347
32	30**	10	21AAA348

Flatness: *3µm, **5µm

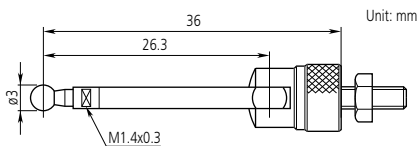


A: M2.5x0.45

D	d	L	Order No.
7	6.4	10	137255
9	8	10	137399

Lever Point

Suitable for use on perpendicular faces, such as those within mold cavities. Lever can be adjusted to the required angle.

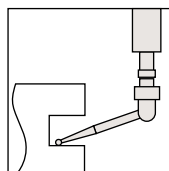


A: M2.5x0.45

Order No.
900391

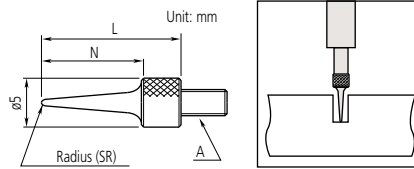
A: 4-48UNF

Order No.
900393



Needle Point

Suitable for probing the bottom of a groove or hole.



A: M2.5x0.45

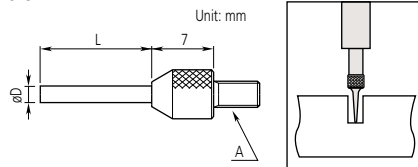
N	L	SR	Order No.
11	15	0.4	101121
13	17	0.2	137413
21	25	0.4	21AAA255
31	35	0.4	21AAA256

A: 4-48UNF

L	SR	Order No.
.6"	.016"	21AAA030
1"	.016"	21AAA046
1 1/2"	.016"	21AAA047
2"	.016"	21AAA048

Needle Point (Carbide)

Suitable for probing the bottom of a groove or hole.

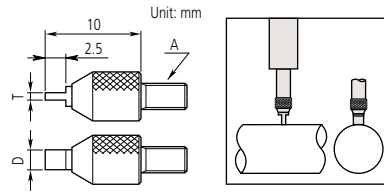


A: M2.5x0.45

D	L	Order No.
0.45	3	120066
0.45	5	21AAA329
1	3	120065
1	5	21AAA330
1	8	21AAA331
1	10	21AAA332
1.5	5	21AAA335
1.5	10	21AAA336
1.5	13	120064
1.5	20	21AAA337
1.5	40	21AAA338
2	8	137257
2	18	21AAA257
2	28	21AAA258
2	40	21AAA339

Blade Point (Carbide)

Suitable for use on convex surfaces, especially those with shallow grooves.

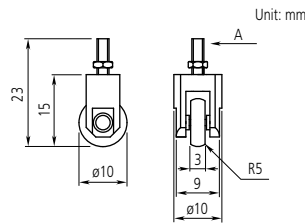


A: M2.5x0.45

T	W	Order No.
0.4	2	120061
0.6	2	120062
1	4	120063

Roller Point

Suitable for use on a moving workpiece surface, or where the workpiece needs to slide from the side.



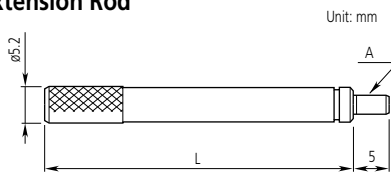
A: M2.5x0.45

Order No.
901954

A: 4-48UNF

Order No.
901991

Extension Rod



A: M2.5x0.45

L	Order No.
10	303611
15	21AAA259A
20	303612
25	21AAA259B
30	303613
35	21AAA259C
40	21AAA259D
45	21AAA259E
50	21AAA259F
55	21AAA259G
60	304146
65	21AAA259H
70	21AAA259J
75	21AAA259L
80	21AAA259M
90	304147
100	303614

A: 4-48UNF

L	Order No.
1/2"	139167
1"	301655
2"	301657
4"	301659

Interchangeable Contact Point Set

This set consists of six types of popular contact point for extending the use of an indicator to many applications.

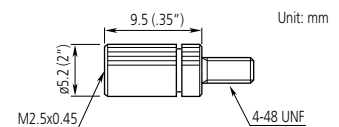


A: M2.5x0.45

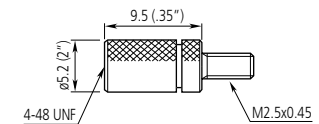
Order No.	Contact points included
7822	Flat Point (131365, ø5mm)
	Flat Point (101117, ø10mm)
	Needle Point (101121)
	Spherical Point (101119)
	Shell Type Point (101118)
	Shell Type Point (101387)

A: 4-48UNF

Order No.	Contact points included
21AZA034	Shell Type Point (101184, 5/32")
	Shell Type Point (101185, 1/2")
	Shell Type Point (101186, 3/4")
	Shell Type Point (101187, 1")
	Flat Point (101188, ø1/2")
	Flat Point (101189, ø3/8")
	Conical Point (101190, 60°)
	Conical Point (101191, 90°)
	Spherical Point (1011204, ø3/8")
	Lever Point (21AAA030, .6")



Order No.
21AAA011




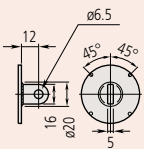



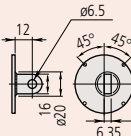

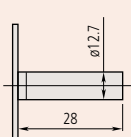

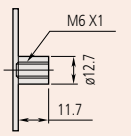

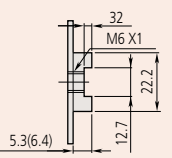
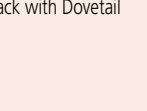
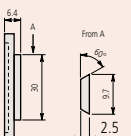

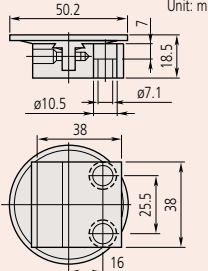


Order No.
21AAA012

Interchangeable Backs

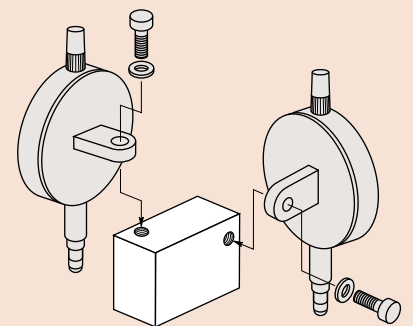
Optional Accessory for Digimatic and Dial Indicators

SPECIFICATIONS

Description		Order No.		
		Series 1 ($\phi 41$ mm)	Series 2 ($\phi 57$ mm)	Series 3, 4 ($\phi 78, 91$ mm)
Flat Back 	 Unit: mm	101211: a=2.2 136872: for water-proof type 191559: for 1911, 1913-10, 1921, 1923, 1925-10, 1927-10 137906: for 1003	101039: a=2.5 21AZB231: for water-proof of S type 192910: (F type waterproof model)	100836: a=3.0
Lug-on-Center Back 	 Unit: mm	101210: metric type 101307: inch type 190561: for 1911, 1913-10, 1921, 1923, 1925-10, 1927-10 192910: 137905: for 1003	101040: metric type 101306: inch type 21AZB230: for water-proof of S type (mm) 21BZB104: for water-proof of S type (inch)	100691: metric type 100797: inch type
Magnetic Back 	 Unit: mm	Special order	900928	900929
Back with Offset Lug 	 Unit: mm	Special order	101167	100837
Back with Post 	 Unit: mm	193172 Custom made	101169	100839
Back with Screw Mount 	 Unit: mm	193173: M6x1, Custom made 193174: #1/4-28UNF, Custom made	136023: M6x1 101170: #1/4-28UNF	136024: M6x1 100840: #1/4-28UNF
Adjustable Back 	 Unit: mm	136025: M6x1 129721: #1/4-20UNF	136026: M6x1 101168: #1/4-20UNF)	136027: M6x1 100838: #1/4-20UNF
Back with Dovetail 	 Unit: mm	—	900008	Special order
Back with Adjustable Bracket 	 Unit: mm	—	901963	—

A dial or Digimatic indicator may be held in position by clamping on either the stem or the lug on the back of the indicator. The back of the indicator may need to be interchanged with another type for special applications. A wide variety of backs are available for Mitutoyo Digimatic and dial indicators.

Application



Spindle Lifting Lever and Cable

Optional Accessories for Digimatic and Dial Indicators

Spindle Lifting Lever

- The Spindle Lifting Lever is attached to the top end of the spindle for improved inspection efficiency when using a dial indicator mounted on a stand.

902100

Use for S type Series 1 and F type Series 2 (up to 10mm/.4" range) dial indicators.



21AZB149

Use for S type Series 2, 3, and 4 dial indicators (up to 10mm/.4").



21AZB150

Use for S type Series 2 and 3 dial indicators (from 10mm/.4" up to 20mm/.8").



Spindle Lifting Cable

901975: with auto-stop function



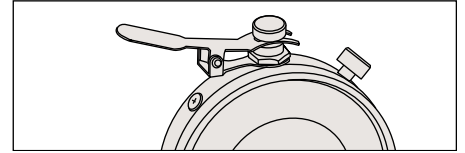
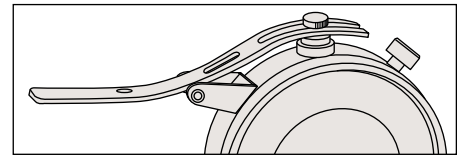
Spindle Lifting Knob

137693

Suitable for 4.8mm spindle diameter.



Application



21BZA205

Use for F type Series 1 dial indicators.



900527: Lever
101171: Screw

902011

Use for F type Series 2 dial indicators (up to 10mm/.4" range).



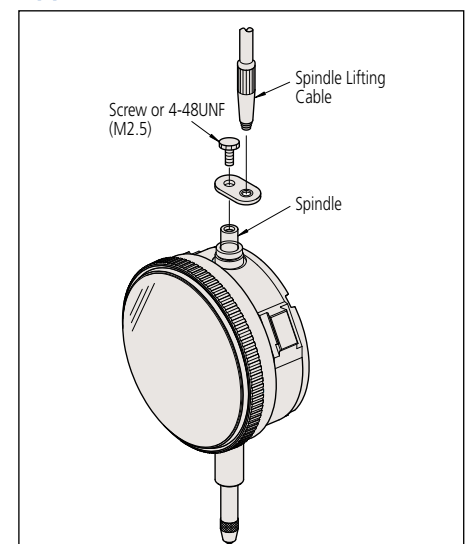
903424

Use for F type Series 2 dial indicators (up to 20mm/.8" range) and Series 3 and 4 dial indicators (up to 10mm/.4" range).



903307: Lever
192686: Screw

Application



Color-coded Spindle Caps

Optional Accessory for Digimatic and Dial Indicators

8 color-coded spindle caps are available for dial indicators with a range of 10mm or less.



SPECIFICATIONS

Color	Order No. (normal)	Order No. (water-resistant)
Black	193051	193595
White	193051W	193595W
Red	193051R	193595R
Green	193051G	193595G
Blue	193051B	193595B
Yellow	193051Y	193595Y
Orange	193051D	193595D
Pink	193051P	193595P
Dark blue	193051S	193595S

Limit Stickers

Optional Accessory for Digimatic and Dial Indicators

FEATURES

- Stuck on the dial face or crystal of a Series 2 dial indicator (55.6mm or 57mm bezel dia.) to indicate tolerance limits.



136420: Red (10-sheet/set)



136421: Green (10-sheet/set)



136422: Yellow (10-sheet/set)

Dial Indicator Repair Tool Kit

Optional Accessory for Digimatic and Dial Indicators

Set Configuration

- 901171: Grease
- 21JAA273: Reamer for pointer (ø0.5:1/20 taper)
- 21JAA313: Lubricating oil
- 21JAA314: Stick
- 901173: Screwdriver (Phillips)
- 901174: Screwdriver (Phillips/flat blade)
- 126628: Pointer removing
- 126630: Pointer removing (ø0.8)
- 126630B: Pointer removing (ø0.5)
- 126630C: Pointer removing (ø1.6)
- 129729: Tweezers
- 901175: Pin-vise
- 901176: Brush
- 901177: Brush
- 901178: Hammer
- 129730: Spindle rest
- 129731: Pin rest
- 901179: Nippers
- 901180: Pliers
- 901181: Hand remover
- 129732: Pin remover
- 129733: Punch
- 129734: Bearing adjuster
- 129735: Pinion rest
- 129736: Reamer ø1
- 193702: Reamer ø0.6
- 901182: Case
- 100699: Adjustable nut

Mitutoyo offers a tool set designed to let you perform simple repairs to your Mitutoyo dial indicator, and a device that lets you replace indicator crystals.



7823

Dial Indicator Crystal Setter

Optional Accessory for Digimatic and Dial Indicators

FEATURES

- Used for fitting a crystal on dial indicators, dial test indicators, and dial calipers.



7000

With 8 sizes of crystal setting pad