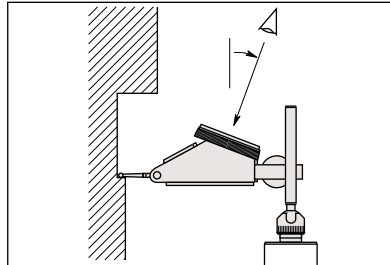


Optional Accessories

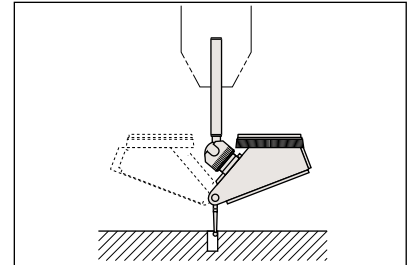
- : Swivel clamps (See page F-69)
- : Holding bars (See page F-69)
- : Stems (See page F-69)
- : Styli (See page F-69)

Dial Test Indicator SERIES 513 — Horizontal (20° Tilted Face), Vertical, and Parallel Types

- Specially designed for easy viewing of dial.



- The dial face obliquely faces upward, allowing users to read the graduations from the user's side. It is convenient when probing on the side of a large workpiece and the workbench is high.

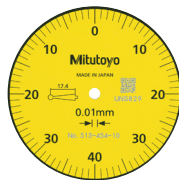


- Using the universal holder allows easy hole centering. The dial face always faces upward when the indicator is rotated, which makes reading easy.



513-454-10E/513-454-10A/
513-454-10T

Contact point No. 103006



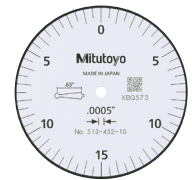
Graduation: 0.01 mm
Range: 0.8 mm

- Carbide contact point (Slightly magnetic)



513-452-10E/513-452-10T

Contact point No. 133195



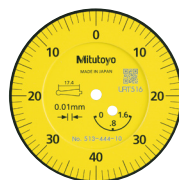
Graduation: 0.0005 in
Range: 0.03 in

- Carbide contact point (Slightly magnetic)



513-444-10E/513-444-10A/
513-444-10T

Contact point No. 103006



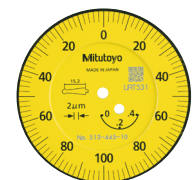
Graduation: 0.01 mm
Range: 1.6 mm

- With revolution counter
- Carbide contact point (Slightly magnetic)



513-445-10E/513-445-10A/
513-445-10T

Contact point No. 103011



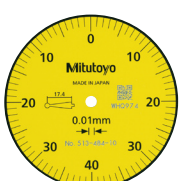
Graduation: 0.002 mm
Range: 0.4 mm

- With revolution counter
- Carbide contact point (Slightly magnetic)



513-484-10E/513-484-10A/
513-484-10T

Contact point No. 103006



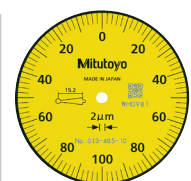
Graduation: 0.01 mm
Range: 0.8 mm

- Carbide contact point (Slightly magnetic)



513-485-10E

Contact point No. 103011



Graduation: 0.002 mm
Range: 0.2 mm

- Carbide contact point (Slightly magnetic)

Dial Test Indicators

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



With revolution counter



Long stylus



Carbide contact point
(Slightly magnetic)

SPECIFICATIONS

Metric			Horizontal (20° tilted face) type												
Order No.			Graduation	Range	Dial reading	Accuracy				Mass	Measuring force	With revolution counter	Long stylus	Carbide contact point (Slightly magnetic)	Remarks
Basic set	Plus set	Full set				Measuring range	One rev.	10 scale divisions	Hysteresis						
513-444-10E	513-444-10A	513-444-10T	0.01 mm	1.6 mm	0-40-0	16 μm	10 μm	5 μm	3 μm	48 g	0.3 N or less	✓	✓	✓	
513-445-10E	513-445-10A	513-445-10T	0.002 mm	0.4 mm	0-100-0	6 μm	5 μm	2 μm	1 μm						

Inch			Horizontal (20° tilted face) type												
Order No.			Graduation	Range	Dial reading	Accuracy				Mass	Measuring force	With revolution counter	Long stylus	Carbide contact point (Slightly magnetic)	Remarks
Basic set	Plus set	Full set				One rev.	First 2.5 rev.	Hysteresis	Repeatability						
—	513-442-10A	513-442-10T	0.0005 in	0.06 in	0-15-0	±0.0005 in	±0.0005 in	0.0002 in	±0.0002 in	48 g	0.3 N or less	✓	✓	✓	Black dial
—	513-442-16A	513-442-16T													
—	513-446-10A	513-446-10T	0.0001 in	0.016 in	0-4-0	±0.0002 in	±0.0002 in	0.0001 in	±0.00004 in	48 g	0.3 N or less	✓	✓	✓	Black dial
—	513-443-10A	513-443-10T													
—	513-443-16A	513-443-16T													Black dial

Metric			Vertical type												
Order No.			Graduation	Range	Dial reading	Accuracy				Mass	Measuring force	With revolution counter	Long stylus	Carbide contact point (Slightly magnetic)	Remarks
Basic set	Plus set	Full set				Measuring range	One rev.	10 scale divisions	Hysteresis						
513-456-10E	513-454-10A	—	0.01 mm	0.5 mm	0-25-0	6 μm	—	5 μm	4 μm	3 μm	46 g	0.3 N or less	✓	✓	✓
513-454-10E	513-454-10A	513-454-10T													
513-455-10E	513-455-10A	513-455-10T	0.002 mm	0.2 mm	0-100-0	4 μm	—	2 μm	3 μm	1 μm	46 g	0.3 N or less	✓	✓	✓

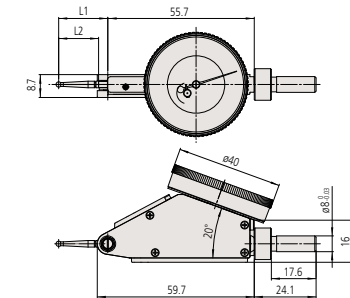
Inch			Vertical type												
Order No.			Graduation	Range	Dial reading	Accuracy				Mass	Measuring force	With revolution counter	Long stylus	Carbide contact point (Slightly magnetic)	Remarks
Basic set	Plus set	Full set				One rev.	First 2.5 rev.	Hysteresis	Repeatability						
513-452-10E	—	513-452-10T	0.0005 in	0.03 in	0-15-0	±0.0005 in	—	0.0002 in	±0.0002 in	46 g	0.3 N or less	✓	✓	✓	
513-453-10E	—	513-453-10T	0.0001 in	0.008 in	0-4-0	±0.0001 in	—	0.0001 in	±0.00004 in	46 g	0.3 N or less	✓	✓	✓	

Metric			Parallel Type												
Order No.			Graduation	Range	Dial reading	Accuracy				Mass	Measuring force	With revolution counter	Long stylus	Carbide contact point (Slightly magnetic)	Remarks
Basic set	Plus set	Full set				Measuring range	One rev.	10 scale divisions	Hysteresis						
513-486-10E	—	—	0.01 mm	0.5 mm	0-25-0	6 μm	—	5 μm	4 μm	3 μm	53 g	0.3 N or less	✓	✓	✓
513-484-10E	513-484-10A	513-484-10T													
513-485-10E	—	—	0.002 mm	0.2 mm	0-100-0	4 μm	—	2 μm	3 μm	1 μm	53 g	0.3 N or less	✓	✓	✓

Inch			Parallel Type												
Order No.			Graduation	Range	Dial reading	Accuracy				Mass	Measuring force	With revolution counter	Long stylus	Carbide contact point (Slightly magnetic)	Remarks
Basic set	Plus set	Full set				One rev.	First 2.5 rev.	Hysteresis	Repeatability						
—	513-482-10A	513-482-10T	0.0005 in	0.03 in	0-15-0	±0.0005 in	—	0.0002 in	±0.0002 in	53 g	0.3 N or less	✓	✓	✓	

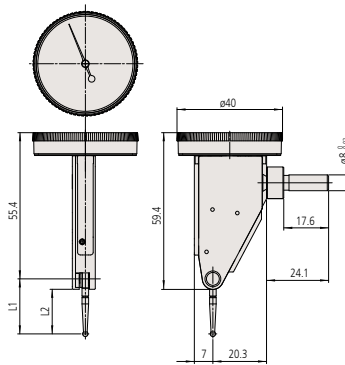
DIMENSIONS

Horizontal (20° Tilted Face) Type



Order No.	L1	L2
513-445-10E	18.7	15.2
513-444-10E	20.9	17.4

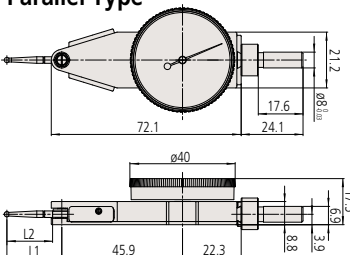
Vertical Type



Order No.	L1	L2
513-484-10E	20.9	17.4
513-485-10E	18.7	15.2
513-486-10E	22.2	18.7

Order No.	L1	L2
513-454-10E	20.9	17.4
513-455-10E	18.7	15.2
513-456-10E	22.2	18.7

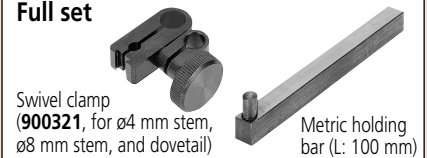
Parallel Type



Note: A slight difference may occur depending on the center of the contact point, graduation plate, and stem fixing position, etc.

Set Configuration: Metric

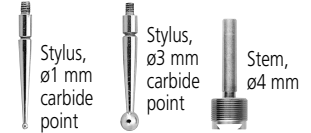
Full set



Swivel clamp
(900321, for ø4 mm stem,
ø8 mm stem, and dovetail)

Metric holding bar
(L: 100 mm)

Plus set

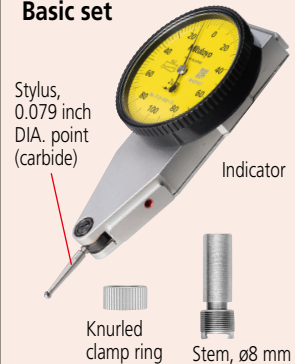


Stylus,
ø1 mm
carbide
point

Stylus,
ø3 mm
carbide
point

Stem,
ø4 mm

Basic set



Stylus,
0.079 inch
DIA. point
(carbide)

Indicator

Knurled
clamp ring

Stem, ø8 mm

Set Configuration: Inch

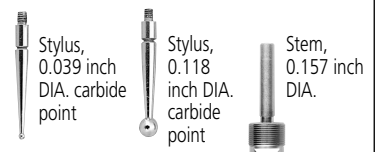
Full set



Swivel clamp
(900322, for .157
inch DIA. stem, 3/8 inch
DIA. stem, and dovetail)

Inch
holding bar
(L: 4 inch)

Plus set

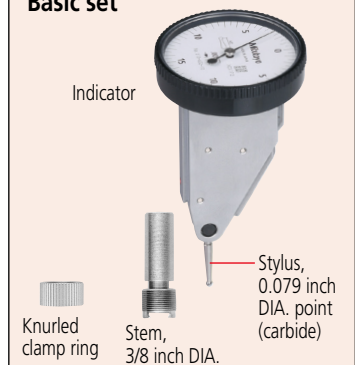


Stylus,
0.039 inch
DIA. carbide
point

Stylus,
0.118
inch DIA.
carbide
point

Stem,
0.157 inch
DIA.

Basic set



Indicator

Knurled
clamp ring

Stem,
3/8 inch
DIA.

Stylus,
0.079 inch
DIA. point
(carbide)