

# Dial Test Indicators

## SERIES 513 — Horizontal Type

### FEATURES

- Performs easy and accurate measurement of narrow or recessed areas, plus inside and outside diameters that dial indicators cannot access.
- No-clutch structure for automatic reversal of measuring direction.
- One-piece bezel and crystal design with O-ring provide resistance to water and dust.
- The glare-free flat crystal face has a scratch-resistant coating.
- High sensitivity and quick response because of jeweled bearings.
- Standard carbide contact point provide.



513-424-10E



513-414-10E

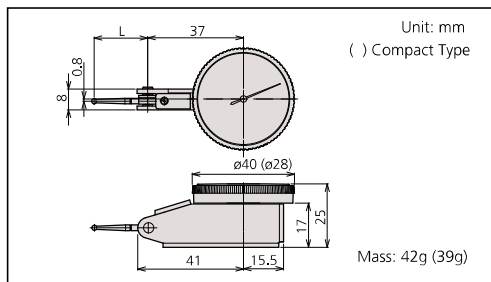


513-404-10E



513-402-10E

### DIMENSIONS AND MASS



### Optional Accessories

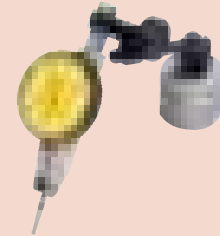
- : Swivel clamp
- : Holding bar
- : Stem
- : Contact points

### Special Set: No. 513-908-10E (mm)

- 513-404-10E: Dial test indicator
- 7014-10E: Mini magnetic stand

### No. 513-907-10E (inch)

- 513-402-10E: Dial test indicator
- 7014E-10: Mini magnetic stand



### Description of Icon

Icon	Description
	With revolution counter
	Long contact point
	Jeweled bearing
	Double scale spacing, easy to read
	Compact
	Dustproof
	Anti-magnetic

## Set Configuration: Test Indicators

### Inch

**Full set**

Contact point, .039" DIA. carbide

Contact point, .118" DIA. carbide

Stem, .157" DIA. (21CAB106)

Swivel clamp (900322, for .157" DIA., 3/8" DIA., dovetail)

Inch holding bar (L: 4") (900306)

**Basic set**

Contact point, .079" DIA. (Carbide)

Indicator

Knurled clamp ring

Stem, 3/8" DIA. (Set No. 21CZB130)

### Metric

**Full set**

Swivel clamp (900321, for ø4mm, ø8mm, dovetail)

Metric holding bar (L: 100mm) (900209)

**Plus set**

Contact point, ø1mm carbide

Contact point, ø3mm carbide

Stem, ø4mm (21CAB106)

**Basic set**

Contact point, ø2mm (Carbide)

Indicator

Knurled clamp ring

Stem, ø8mm (Set No. 21CZB129)

- Anti-magnet type
- Double scale spacing type
- Long contact point type
- Jeweled bearing type
- Compact type
- With revolution counter type



## SPECIFICATIONS

Graduation	Order No.		Range	Accuracy	Dial reading	Measuring force	L (mm)									
	Basic set	Full set												—	—	
.0005"	513-407-10E	513-407-10T	.008"	±.0001"	0-4-0	0.3N or less	19	✓	—	✓	—	—	—	—	—	—
.0005"	513-402-10E	513-402-10T	.03"	±.0005"	0-15-0	0.3N or less	19.9	✓	—	✓	—	—	—	—	—	—
.0005"	513-472-10E*	—	.03"	±.0005"	0-15-0	0.3N or less	19.9	✓	—	✓	—	—	—	—	—	—
.0005"	513-412-10E	513-412-10T	.03"	±.0005"	0-15-0	0.2N or less	33.9	✓	✓	✓	—	—	—	—	—	—
.0005"	513-479-10E*	—	.03"	±.0005"	0-15-0	0.2N or less	33.9	✓	✓	✓	—	—	—	—	—	—
.0005"	513-462-10E	—	.03"	±.0005"	0-15-0	0.3N or less	19.9	✓	—	✓	✓	—	—	—	—	—
.0001"	513-403-10E	513-403-10T	.008"	±.0001"	0-4-0	0.3N or less	19	✓	—	✓	—	—	—	—	—	—
.0001"	513-473-10E*	—	.008"	±.0001"	0-4-0	0.3N or less	19	✓	—	✓	—	—	—	—	—	—
.0001"	513-463-10E	—	.008"	±.0001"	0-4-0	0.3N or less	15	✓	—	✓	✓	—	—	—	—	—

\*Provided with a ø2mm ruby contact point as a substitute for ø2mm carbide contact point.

Graduation	Order No.		Range	Accuracy	Dial reading	Measuring force	L (mm)									
	Basic set	Full set												—	—	
0.01mm	513-424-10E	513-424-10T	0.5mm	5µm	0-25-0	0.3N or less	22.3	✓	✓	—	✓	—	—	—	—	—
0.01mm	513-414-10E	513-414-10T	0.5mm	10µm	0-25-0	0.2N or less	36.8	✓	✓	✓	✓	—	—	—	—	—
0.01mm	513-466-10E	—	0.5mm	5µm	0-25-0	0.3N or less	22.3	✓	✓	—	✓	—	—	—	—	—
0.01mm	513-478-10E*	—	0.5mm	5µm	0-25-0	0.3N or less	22.3	✓	—	—	✓	—	—	—	—	—
0.01mm	513-404-10E	513-404-10T	0.8mm	8µm	0-40-0	0.3N or less	20.9	✓	—	—	✓	—	—	—	—	—
0.01mm	513-474-10E*	—	0.8mm	8µm	0-40-0	0.3N or less	20.9	✓	—	—	✓	—	—	—	—	—
0.01mm	513-464-10E	—	0.8mm	8µm	0-40-0	0.3N or less	20.9	✓	—	—	✓	✓	—	—	—	—
0.01mm	513-415-10E	513-415-10T	1mm	10µm	0-50-0	0.2N or less	44.5	✓	—	✓	✓	—	—	—	—	—
0.01mm	513-477-10E*	—	1mm	10µm	0-50-0	0.2N or less	44.5	✓	—	✓	✓	—	—	—	—	—
0.01mm	513-426-10E	—	1.5mm	16µm	0-25-0	0.4N or less	22.3	✓	✓	—	✓	—	—	—	—	—
0.002mm	513-405-10E	513-405-10T	0.2mm	4µm	0-100-0	0.3N or less	14.7	✓	—	—	✓	—	—	—	—	—
0.002mm	513-465-10E	—	0.2mm	4µm	0-100-0	0.3N or less	14.7	✓	—	—	✓	—	—	—	—	—
0.002mm	513-475-10H*	—	0.2mm	4µm	0-100-0	0.3N or less	18.7	✓	—	—	✓	—	—	—	—	—
0.002mm	513-425-10E	—	0.6mm	7µm	0-100-0	0.4N or less	14.7	✓	—	—	✓	—	—	—	—	—
0.001mm	513-401-10E	—	0.14mm	4µm	0-70-0	0.3N or less	12.8	✓	—	—	✓	—	—	—	—	—
0.001mm	513-471-10E*	—	0.14mm	4µm	0-70-0	0.3N or less	12.8	✓	—	—	✓	—	—	—	—	—

\*Provided with a ø2mm ruby contact point as a substitute for ø2mm carbide contact point.

Graduation	Order No.		Range	Accuracy	Dial reading	Measuring force	L (mm)								
	Basic set	Full set								—	—	—	—		
0.002mm, .0001"	513-409-10E	513-409-10T	0.2mm, .0075"	3µm	0-10-0, 0-38-0	0.3N or less	14.7	✓	✓	—	—	—	—	—	—

Graduation	Order No.		Range	Accuracy	Dial reading	Measuring force	L (mm)								
	Basic set	Full set								—	—	—	—		
.0005", 0.01mm	513-406-10E	513-406-10T	.03", 0.7mm	±.0005"	0-15-0, 0-35-0	0.3N or less	19.9	✓	✓	—	—	—	—	—	—