

## Test indicator

### Move to other products

- 1 SPC
- 2 Caliper
- 3 Depth gage
- 4 Height gage
- 5 Micrometer
- 6 Inside micrometer
- 7 Micrometer head
- 8 Indicator
- Test indicator
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- 11 Gauge Block
- 12 Reference gage
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- 19 Contracer
- 20 Surftest
- 21 Formtracer
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- 23 Hardness tester
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## List of products

Dial Test Indicators  
SERIES 513



Dial Test Indicators  
SERIES 513



Dial Test Indicator  
SERIES 513 — Universal Type



Accessories  
for Dial Test Indicators



Pocket Type Dial Test Indicators  
SERIES 513



Accessories  
for Pocket Type Dial Test Indicators



勝特力材料 886-3-5753170  
 勝特力电子(上海) 86-21-34970699  
 勝特力电子(深圳) 86-755-83298787  
[Http://www.100y.com.tw](http://www.100y.com.tw)

# Dial Test Indicators

## SERIES 513 — Horizontal Type



513-404E



513-464E



513-424E  
513-414E  
513-466E



513-404E  
513-464E



513-415E



513-414E



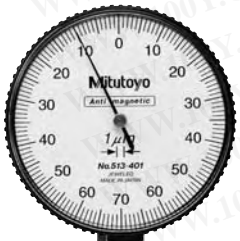
513-426E



513-405E  
513-465E



513-425E



513-401E



513-405E

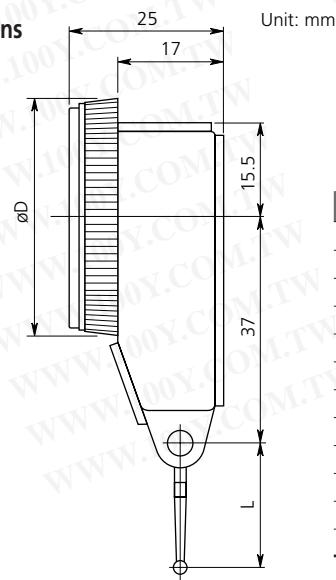


513-401E



513-409

### Dimensions



Unit: mm

Order No.	D	L
513-424E	39	22.3
513-414E	39	36.8
513-466E	28	22.3
513-404E	39	20.9
513-464E	28	20.9
513-415E	39	44.5
513-426E	39	22.3
513-405E	39	14.7
513-465E	28	14.7
513-425E	39	14.7
513-401E	39	12.8
513-409	39	14.7

### 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.
- Resistant to water and dust thanks to the one-piece bezel and "crystal" design with O-ring.
- The glare-free flat crystal face has a scratch-resistant coating.
- High-sensitivity and quick-response because of jeweled bearings.
- A carbide contact point is provided as standard.



High Precision Type



Doubled Scale Spacing



Long Contact Point



Revolution Counter



Compact Type



Dustproof



Jeweled



Anti-Magnetic



Water resistance

## SPECIFICATIONS

Metric								
Graduation	Range	Order No. Basic unit	Order No. Basic set	Order No. Full set	Dial reading	Accuracy	Measuring force	Remarks
0.01mm	0.5mm	513-424E	513-424A	513-424T	0-25-0	5μm	0.3N or less	
		513-414E	513-414A	513-414T	0-25-0	10μm	0.2N or less	
		513-466E	—	—	0-25-0	5μm	0.3N or less	
	0.8mm	513-404E	513-404A	513-404T	0-40-0	8μm	0.3N or less	
		513-464E	—	—	0-40-0	8μm	0.3N or less	
	1mm	513-415E	513-415A	513-415T	0-50-0	10μm	0.2N or less	
1.5mm	513-426E	513-426A	—	0-25-0	8μm	0.4N or less		
0.002mm	0.2mm	513-405E	513-405A	513-405T	0-100-0	3μm	0.3N or less	
		513-465E	—	—	0-100-0	3μm	0.3N or less	
0.001mm	0.14mm	513-425E	513-425A	—	0-100-0	6μm	0.4N or less	
		513-401E	—	—	0-70-0	3μm	0.3N or less	

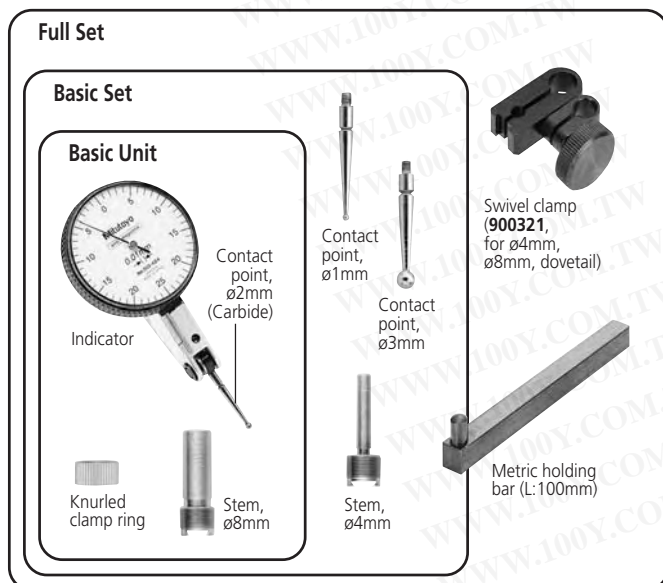
Inch								
Graduation	Range	Order No. Basic unit	Order No. Basic set	Order No. Full set	Dial reading	Accuracy	Measuring force	Remarks
.0005"	.03"	513-402	—	513-402T	0-15-0	±.0005"	0.3N or less	
		513-412	—	513-412T	0-15-0	±.0005"	0.2N or less	
		513-462	—	—	0-15-0	±.0005"	0.3N or less	
.0001"	.008"	513-403	—	513-403T	0-4-0	±.0001"	0.3N or less	
		513-463	—	—	0-4-0	±.0001"	0.3N or less	

Metric/Inch								
Graduation	Range	Order No. Basic unit	Order No. Basic set	Order No. Full set	Dial reading	Accuracy	Measuring force	Remarks
0.002mm/.0001"	0.2mm/.0075"	513-409	—	513-409T	0-10-0/0-38-0	3μm	0.3N or less	

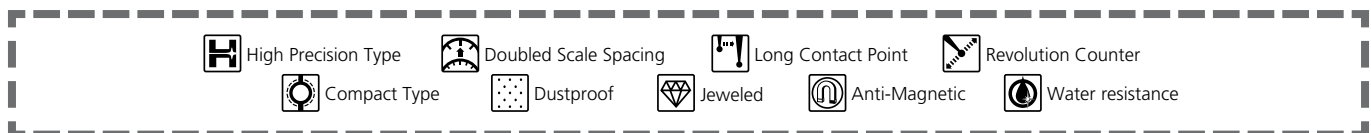
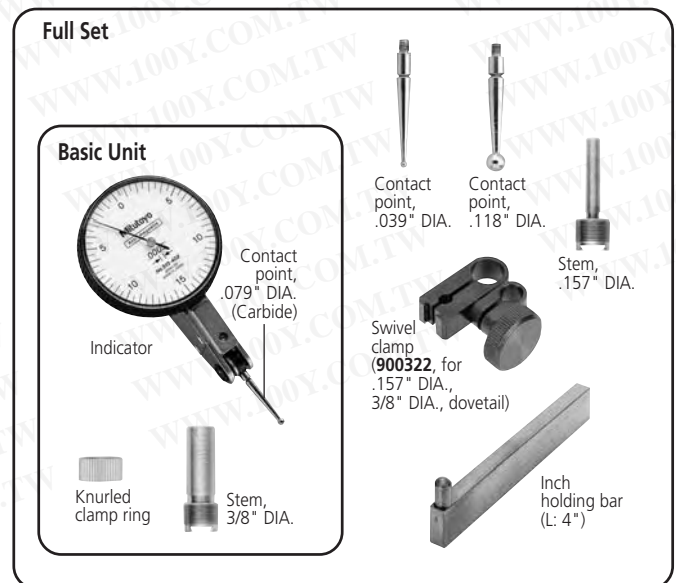
Inch/Metric								
Graduation	Range	Order No. Basic unit	Order No. Basic set	Order No. Full set	Dial reading	Accuracy	Measuring force	Remarks
.0005"/0.01mm	.03"/0.7mm	513-406	—	513-406T	0-15-0/0-35-0	±.0005"	0.3N or less	

## Set Configurations

### Metric (Metric/Inch)



### Inch (Inch/Metric)



DIAL TEST INDICATORS



# Dial Test Indicators

## SERIES 513 — Horizontal (20° Tilted Face), Vertical, and Parallel Types



513-444E

513-445E



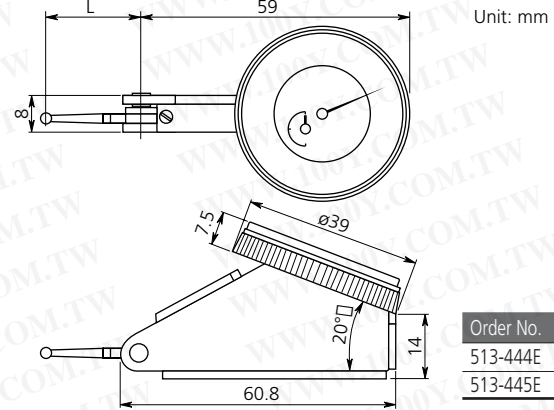
513-454E

513-455E

513-284E

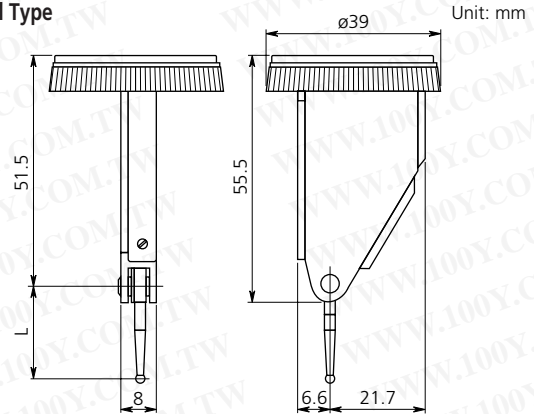
### Dimensions

#### Horizontal (20° Tilted Face) Type



Order No.	L
513-444E	20.9
513-445E	14.7

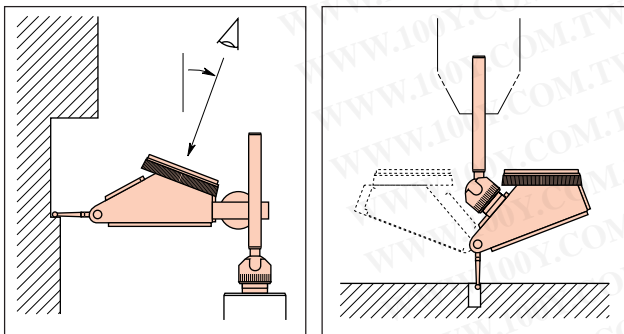
#### Vertical Type



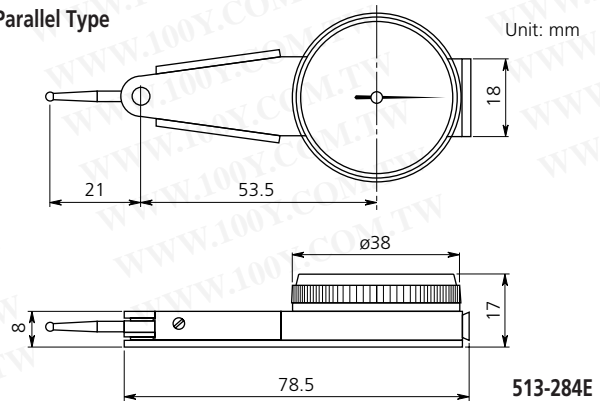
Order No.	L	a
513-454E	20.9	72
513-455E	14.7	66

### FEATURES

- Specially designed for easy viewing of measurements.



#### Parallel Type

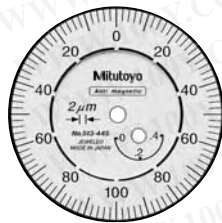


513-284E

- High Precision Type
- Doubled Scale Spacing
- Long Contact Point
- Revolution Counter
- Compact Type
- Dustproof
- Jeweled
- Anti-Magnetic
- Water resistance



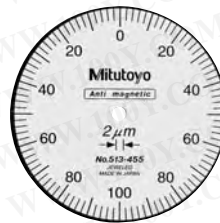
513-444E



513-445E



513-454E  
513-284FE



513-455E

## SPECIFICATIONS

### Metric Horizontal (20° Tilted Face) Type Dial Test Indicators

Graduation	Range	Order No. Basic unit	Order No. Basic set	Order No. Full set	Dial reading	Accuracy	Measuring force	Remarks
0.01mm	1.6mm	513-444E	513-444A	513-444T	0-40-0	10µm	0.3N or less	
0.002mm	0.4mm	513-445E	513-445A	513-445T	0-100-0	3µm	0.3N or less	

### Inch Horizontal (20° Tilted Face) Type Dial Test Indicators

Graduation	Range	Order No. Basic unit	Order No. Full set	Dial reading	Accuracy	Measuring force	Remarks
.0005"	.06"	513-442	513-442T	0-15-0	±.0005"	0.3N or less	
		513-442-01	513-442T-01	0-15-0	±.0005"	0.3N or less	(Blue)
		513-442-06	513-442T-06	0-15-0	±.0005"	0.3N or less	(Black)
		513-446	513-446T	0-15-0	±.0005"	0.2N or less	
.0001"	.016"	513-446-06	513-446T-06	0-15-0	±.0005"	0.2N or less	(Black)
		513-443	513-443T	0-4-0	±.0002"	0.3N or less	
		513-443-06	513-443T-06	0-4-0	±.0002"	0.3N or less	(Black)

Note: See page 221 for set configurations.

### Metric Vertical Type Dial Test Indicators

Graduation	Range	Order No. Basic unit	Order No. Basic set	Order No. Full set	Dial reading	Accuracy	Measuring force	Remarks
0.01mm	0.8mm	513-454E	513-454A	513-454T	0-40-0	8µm	0.3N or less	
0.002mm	0.2mm	513-455E	513-455A	513-455T	0-100-0	3µm	0.3N or less	

### Inch Vertical Type Dial Test Indicators

Graduation	Range	Order No. Basic unit	Order No. Full set	Dial reading	Accuracy	Measuring force	Remarks
.0005"	.03"	513-452	513-452T	0-15-0	±.0005"	0.3N or less	
.0001"	.008"	513-453	513-453T	0-4-0	±.0001"	0.3N or less	

Note: See page 221 for set configurations.

### Metric Parallel Type Dial Test Indicator

Graduation	Range	Order No. Basic unit	Order No. Basic set	Order No. Full set	Dial reading	Accuracy	Measuring force	Remarks
0.01mm	0.8mm	513-284FE	513-284FA	513-984F	0-40-0	8µm	0.3N or less	

### Inch Parallel Type Dial Test Indicator

Graduation	Range	Order No. Basic unit	Order No. Full set	Dial reading	Accuracy	Measuring force	Remarks
.0005"	.03"	513-282F	513-982F	0-15-0	±.0005"	0.3N or less	

Note: See page 221 for set configurations.

High Precision Type	Doubled Scale Spacing	Long Contact Point	Revolution Counter
Compact Type	Dustproof	Jeweled	Anti-Magnetic
		Water resistance	

DIAL TEST INDICATORS



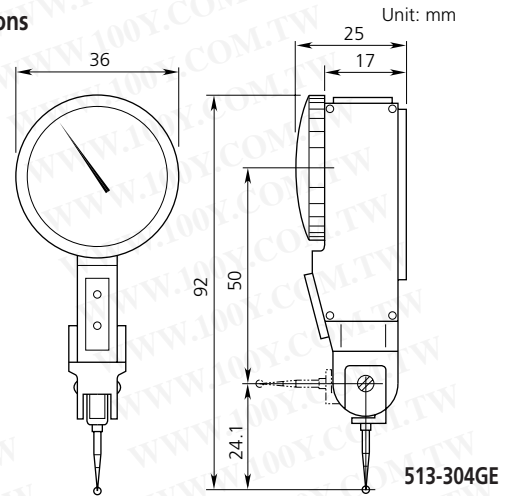
# Dial Test Indicator

## SERIES 513 — Universal Type



513-304GE

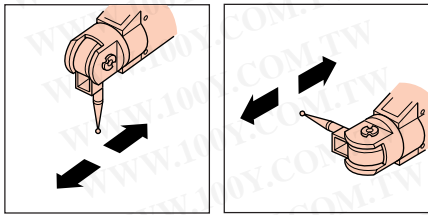
### Dimensions



513-304GE

### FEATURES

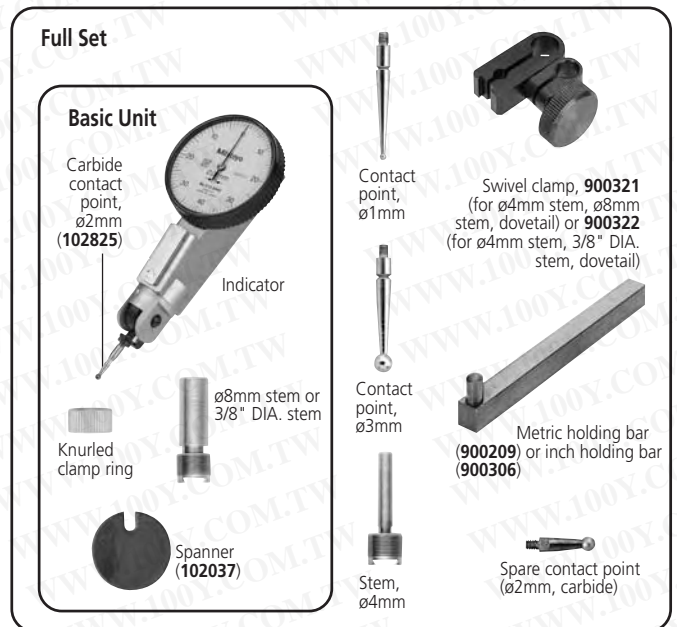
- Universal application to all directions. (Not only the direction of the measuring point, but also the direction of measurement itself can be adjusted 360 degrees without moving the indicator.)



### OPTIONAL ACCESSORIES

Order No.	Description
102824	Contact point, $\varnothing 1\text{mm}$ ball (Steel)
102832	Contact point, $\varnothing 2\text{mm}$ ball (Steel)
102826	Contact point, $\varnothing 3\text{mm}$ ball (Steel)

### Set Configurations



### SPECIFICATIONS

Metric							
Graduation	Range	Order No. Basic unit	Order No. Full set	Dial reading	Accuracy	Measuring force	Remarks
0.01mm	0.8mm	513-304GE	513-304GT	0-40-0	$8\mu\text{m}$	0.3N or less	

Inch							
Graduation	Range	Order No. Basic unit	Order No. Full set	Dial reading	Accuracy	Measuring force	Remarks
.0005"	0.3"	513-302G	513-302GT	0-15-0	.0005"	0.3N or less	

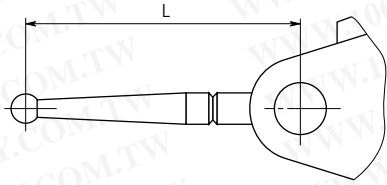


# Accessories for Dial Test Indicators

## Contact Points (for Metric Model Only\*)

\*Except for universal type dial test indicator (513-304 and 513-944).

- Use a contact point with the proper length for accurate measurement.



ø0.5mm ball



- 190547 (L=14.7mm)
- 190549 (L=20.9mm)
- 190654 (L=22.3mm)
- 190656 (L=44.5mm)

ø0.7mm ball



- 190548 (L=14.7mm)
- 190550 (L=20.9mm)
- 190653 (L=22.3mm)
- 190655 (L=44.5mm)

ø1mm ball



- 21CZA044 (L=12.8mm)
- 103017 (L=14.7mm)
- 103013 (L=20.9mm)
- 137558 (L=22.3mm)
- 137746 (L=36.8mm)
- 136235 (L=44.5mm)

ø2mm ball (Carbide)



- 21CZA036 (L=12.8mm)
- 103010 (L=14.7mm)
- 103006 (L=20.9mm)
- 137557 (L=22.3mm)
- 129949 (L=36.8mm)
- 136013 (L=44.5mm)

ø2mm ball



- 103016 (L=14.7mm)
- 103012 (L=20.9mm)

ø3mm ball



- 21CZA045 (L=12.8mm)
- 103018 (L=14.7mm)
- 103014 (L=20.9mm)
- 137559 (L=22.3mm)
- 137747 (L=36.8mm)
- 136236 (L=44.5mm)

## Stems with Knurled Clamp Ring

ø4mm (.157" DIA.)



902802

ø8mm



902804

3/8" DIA.



902805

ø4mm and ø8mm



902806

.157" DIA. and 3/8" DIA.



902808

## Swivel Clamps

- Can be used with Holding Bars.

For ø4mm stem, ø8mm stem, and dovetail



900321

For .157" DIA. stem, 3/8" DIA. stem, and dovetail



900322

## Holding Bars



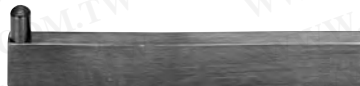
9x9mm

- 953638 (Length: 50mm)
- 900209 (Length: 100mm)



ø8mm

- 900211 (Length: 115mm)



.25"x.5"

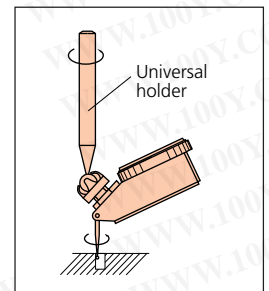
- 953639 (Length: 2")
- 900306 (Length: 4")

## Universal Holder

- Allows the indicator to be set at a desired position.



- 901916 (ø8mm stem)
- 901459 (.25" DIA. stem)

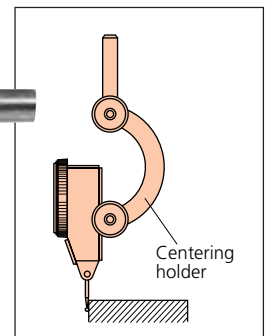


## Centering Holder

- Allows large diameter cylinders or holes to be centered.



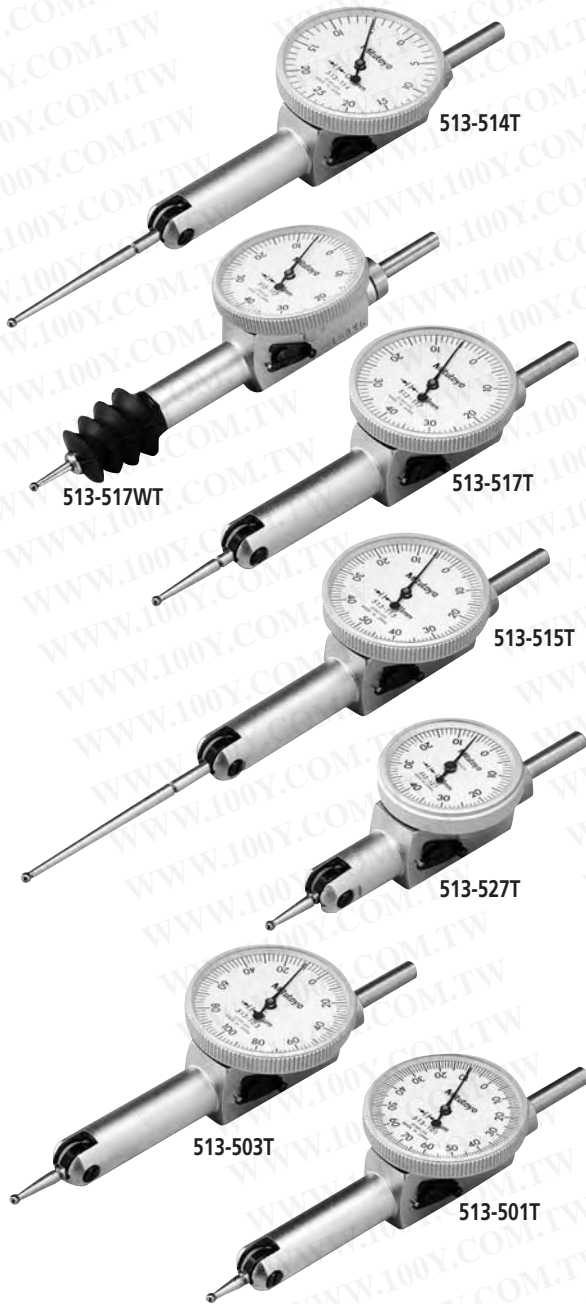
- 901959 (ø8mm stem)
- 901997 (.25" DIA. stem)



# Pocket Type Dial Test Indicators

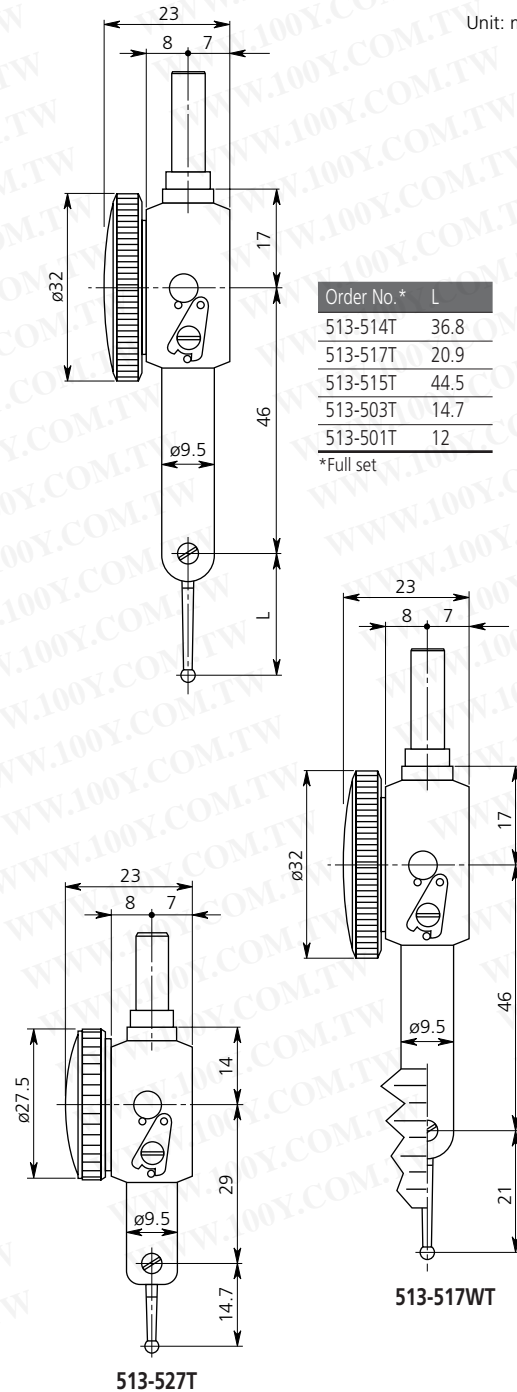
## SERIES 513

DIAL TEST INDICATORS



### Dimensions

Unit: mm



Order No.*	L
513-514T	36.8
513-517T	20.9
513-515T	44.5
513-503T	14.7
513-501T	12

\*Full set

### FEATURES

- Jeweled bearings assure higher sensitivity and accuracy.
- Reversible measuring direction.
- Two holding bars are supplied. (Full sets only.)
- Fully adjustable bezel/dial face.
- Contact point is adjustable within 220°.

- High Precision Type
- Doubled Scale Spacing
- Long Contact Point
- Revolution Counter
- Compact Type
- Dustproof
- Jeweled
- Anti-Magnetic
- Water resistance





513-514E/T



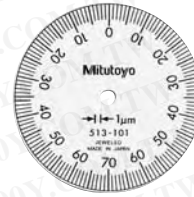
513-517E/T  
513-517WE/WT  
513-527E/T



513-515T



513-503E/T



513-501E/T

## SPECIFICATIONS

### Metric

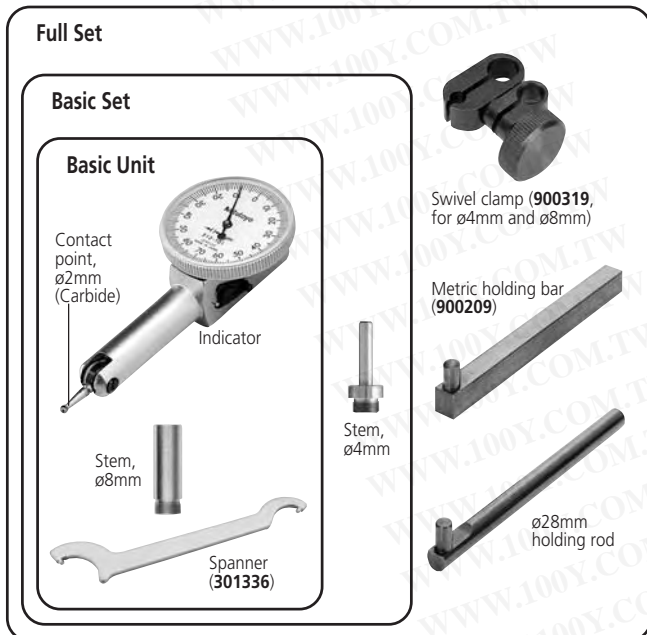
Graduation	Range	Order No. Basic unit	Order No. Full set	Dial reading	Accuracy	Measuring force	Remarks
0.01mm	0.5mm	513-514E	513-514T	0-25-0	10μm	0.3N or less	
	0.8mm	513-517E	513-517T	0-40-0	8μm	0.3N or less	
		513-517WE	513-517WT	0-40-0	8μm	0.3N or less	
	1mm	—	513-515T	0-50-0	10μm	0.3N or less	
0.002mm	0.2mm	513-503E	513-503T	0-100-0	3μm	0.3N or less	
0.001mm	0.14mm	513-501E	513-501T	0-70-0	3μm	0.3N or less	

### Inch

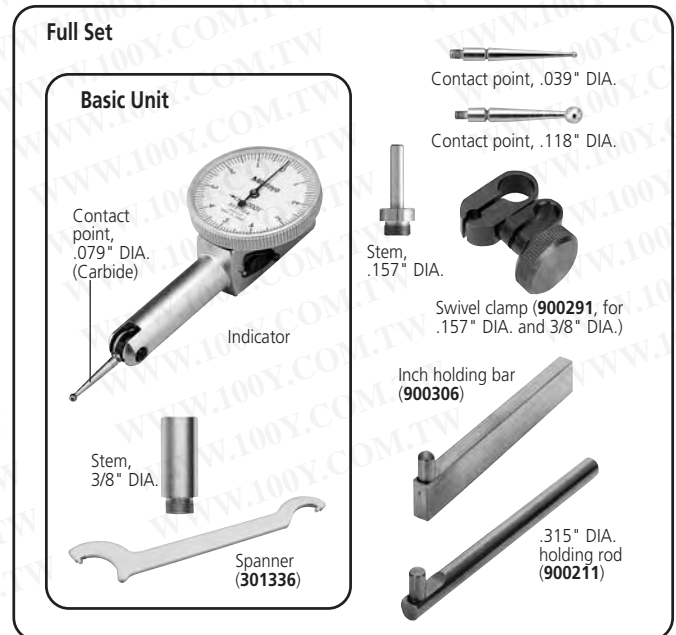
Graduation	Range	Order No. Basic unit	Order No. Full set	Dial reading	Accuracy	Measuring force	Remarks
.001"	.04"	513-518	2513-518T	0-20-0	±.001"	0.3N or less	
		513-528	513-528T	0-20-0	±.001"	0.3N or less	
.0005"	.02"	513-512	513-512T	0-10-0	±.0005"	0.3N or less	
.0001"	.01"	513-504	513-504T	0-5-0	±.0002"	0.3N or less	

## Set Configurations

### Metric



### Inch



- High Precision Type
- Doubled Scale Spacing
- Long Contact Point
- Revolution Counter
- Compact Type
- Dustproof
- Jeweled
- Anti-Magnetic
- Water resistance

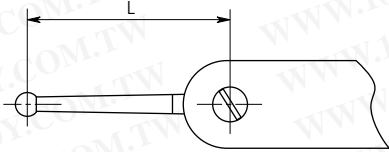


# Accessories

## for Pocket Type Dial Test Indicators

### Contact Points (for Metric Model Only)

- Use a contact point with the proper length for accurate measurement.



ø0.5mm ball



190547 (L=14.7mm)  
 190549 (L=20.9mm)  
 190656 (L=44.5mm)

ø0.7mm ball



190548 (L=14.7mm)  
 190550 (L=20.9mm)  
 190655 (L=44.5mm)

ø1mm ball



136756 (L=12.1mm)  
 103017 (L=14.7mm)  
 103013 (L=20.9mm)  
 136235 (L=44.5mm)

ø2mm ball (Carbide)



136104 (L=12.1mm)  
 103010 (L=14.7mm)  
 103006 (L=20.9mm)  
 136013 (L=44.5mm)

ø2mm ball



136757 (L=12.1mm)  
 103016 (L=14.7mm)  
 103012 (L=20.9mm)

ø3mm ball



136758 (L=12.1mm)  
 103018 (L=14.7mm)  
 103014 (L=20.9mm)  
 136236 (L=44.5mm)

### Stems

ø4mm (.157" DIA.)



102036

ø8mm



102822

3/8" DIA.



102081

### Swivel Clamps

- Can be used with Holding Bars.

For ø4mm stem and ø8mm stem



900319

For .157" DIA. stem and 3/8" DIA. stem



900291

### Holding Bars



9x9mm

953638 (Length: 50mm)  
 900209 (Length: 100mm)



ø8mm

900211 (Length: 115mm)



.25"x.5"

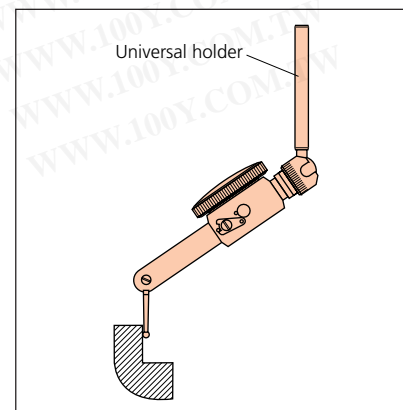
953639 (Length: 2")  
 900306 (Length: 4")

### Universal Holder

- Since the Dial Test Indicator can be swiveled to a desired angle, the holder is useful for centering workpieces and installing workpieces on a milling machine.



901917 (ø8mm stem)  
 901546 (.25" DIA. stem)



Universal holder