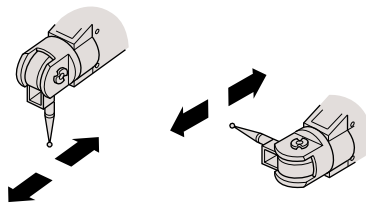


# Dial Test Indicators

## SERIES 513 — Universal Type

### 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.)



513-304GE

### SPECIFICATIONS

#### Metric



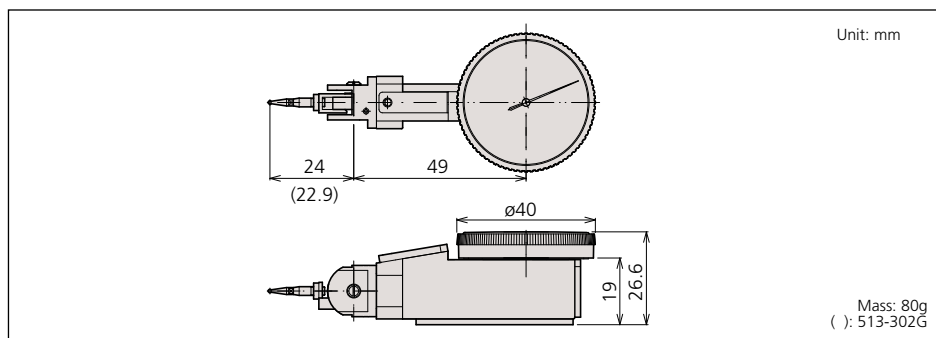
Jeweled bearing type

| Graduation | Order No. |           | Range | Accuracy | Dial reading | Measuring force |   |
|------------|-----------|-----------|-------|----------|--------------|-----------------|---|
|            | Basic set | Full set  |       |          |              |                 |   |
| 0.01mm     | 513-304GE | 513-304GT | 0.8mm | 8μm      | 0-40-0       | 0.3N or less    | ✓ |

#### Inch

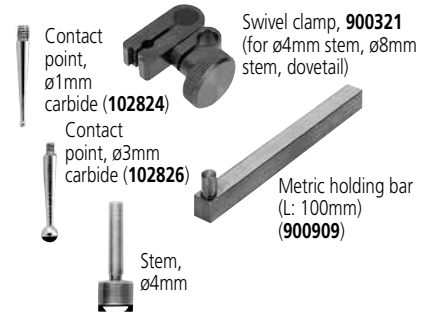
| Graduation | Order No. |           | Range | Accuracy | Dial reading | Measuring force |   |
|------------|-----------|-----------|-------|----------|--------------|-----------------|---|
|            | Basic set | Full set  |       |          |              |                 |   |
| .0005"     | 513-302G  | 513-302GT | .03"  | ±.0005"  | 0-15-0       | 0.3N or less    | ✓ |

### DIMENSIONS AND MASS

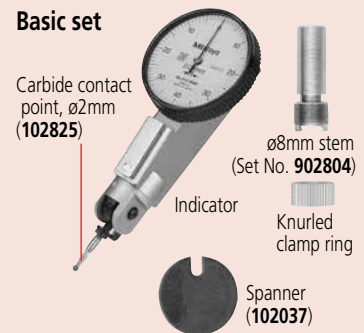


### Set Configuration: Metric

#### Full set

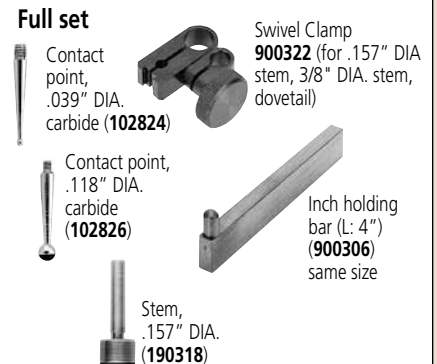


#### Basic set

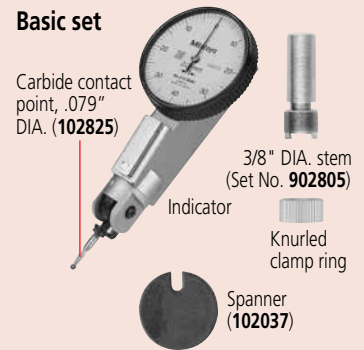


### Set Configuration: Inch

#### Full set



#### Basic set



### Optional Accessories

- : Swivel clamp
- : Holding bar
- : Stem

# Contact Points and Clamp Holders

## Optional Accessories for Dial Test Indicator

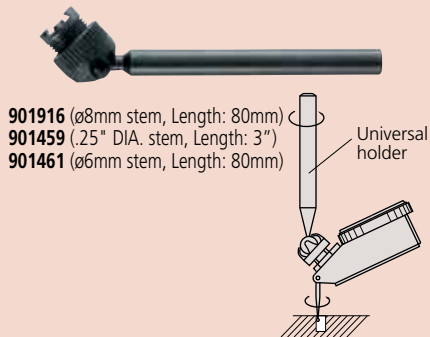
| Inch |      | Part No. |        |        | Ruby     | Test Indicator Code No.       |                                  |                                                 |
|------|------|----------|--------|--------|----------|-------------------------------|----------------------------------|-------------------------------------------------|
| ø0.5 | ø0.7 | ø1       | ø2     | ø3     |          |                               |                                  |                                                 |
| —    | —    | 136076   | 136075 | 136077 | 21CZA213 | 513-403<br>513-453            | 513-443<br>513-463               | 513-473 <sup>*3</sup><br>513-443-06             |
| —    | —    | 133196   | 133195 | 133197 | 21CZA204 | 513-402<br>513-406<br>513-452 | 513-442<br>513-442-01<br>513-462 | 513-472 <sup>*3</sup><br>513-442-06<br>513-282G |
| —    | —    | 136291   | 136290 | 136292 | 21CZA214 | 513-412<br>513-446-06         | 513-446                          | 513-479 <sup>*3</sup>                           |
| —    | —    | 131314   | 103011 | 131315 | —        | 513-504 <sup>*1</sup>         | 513-528 <sup>*1</sup>            |                                                 |
| —    | —    | 103008   | 103007 | 103009 | —        | 513-518 <sup>*1</sup>         |                                  |                                                 |
| —    | —    | 131316   | 131324 | 131317 | —        | 513-512 <sup>*1</sup>         |                                  |                                                 |

| Metric |        | Part No. |          |          | Ruby     | Test Indicator Code No.                                                  |                                                                          |                                    |
|--------|--------|----------|----------|----------|----------|--------------------------------------------------------------------------|--------------------------------------------------------------------------|------------------------------------|
| —      | —      | 21CZA044 | 21CZA036 | 21CZA045 |          |                                                                          |                                                                          |                                    |
| 190547 | 190548 | 103017   | 103010   | 103018   | 21CZA209 | 513-401E<br>513-405E<br>513-503E <sup>*1</sup><br>513-527E <sup>*1</sup> | 513-471E <sup>*3</sup><br>513-425E<br>513-455E<br>513-475E <sup>*3</sup> | 513-445E                           |
| 190549 | 190550 | 103013   | 103006   | 103014   | 21CZA201 | 513-404E<br>513-464E<br>513-284GE                                        | 513-444E<br>513-517E <sup>*1</sup>                                       | 513-454E<br>513-474E <sup>*3</sup> |
| 190654 | 190653 | 137558   | 137557   | 137559   | 21CZA210 | 513-424E<br>513-478 <sup>*3</sup>                                        | 513-426E                                                                 | 513-466E                           |
| 190656 | 190655 | 136235   | 136013   | 136236   | 21CZA211 | 513-415E                                                                 | 513-515T <sup>*1</sup>                                                   | 513-477E <sup>*3</sup>             |
| —      | —      | 137746   | 129949   | 137747   | —        | 513-414E                                                                 | 513-514E <sup>*1</sup>                                                   |                                    |
| —      | —      | 136756   | 136104   | 136758   | —        | 513-501E <sup>*1</sup>                                                   |                                                                          |                                    |
| —      | —      | 102824   | 102825   | 102826   | —        | 513-304GE <sup>*2</sup>                                                  | 513-302G <sup>*2</sup>                                                   |                                    |

\*1 Denotes Pocket Type Indicators  
 \*2 Denotes Universal Type Indicator  
 \*3 Indicator Ships with Ruby Contact

### Universal Holder

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

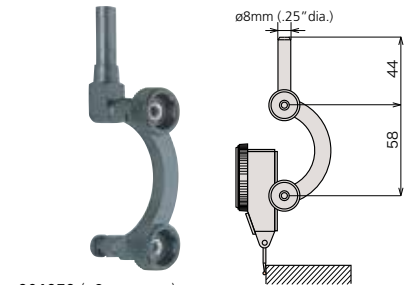


### Holding Bars



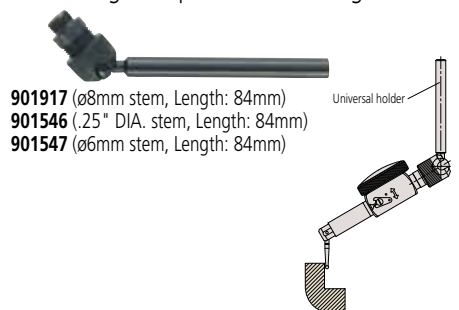
### Centering Holder

- Allows large diameter cylinders or holes to be centered.



### Universal Holder (pocket type)

- 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.



**Mitutoyo**