## Dial Test Indicators

## SERIES 513 - Horizontal Dial Test Indicator

- Provides easy access to shrouded surfaces that cannot be reached with conventional dial indicators.
- No-clutch structure for automatic reversal of measuring direction.
- Resistant to water and dust thanks to the one piece bezel and 0 -ring seal for the crystal.
- The glare-free flat crystal face has a scratch resistant coating.
- High sensitivity and quick response due to low-friction jewelled bearings.


## 513-474-10E:

- Ruby contact point model.
- Higher resistance to wear.
- Non-magnetic, non-conductive tip allows use in EDM processes.


Dimensions


Features

| Metric |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Code No. | @ | +in | $\cdots$ | $\otimes$ | N |
| 513-401-10E | $\checkmark$ | - | - | $\checkmark$ | - |
| 513-404-10E | $\checkmark$ | - | - | $\checkmark$ | - |
| 513-405-10E | $\checkmark$ | - | - | $\checkmark$ | - |
| 513-414-10E | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ | - |
| 513-415-10E | $\checkmark$ | - | $\checkmark$ | $\checkmark$ | - |
| 513-424-10E | $\checkmark$ | $\checkmark$ | - | $\checkmark$ | - |
| 513-425-10E | $\checkmark$ | - | - | $\checkmark$ | $\checkmark$ |
| 513-426-10E | $\checkmark$ | $\checkmark$ | - | $\checkmark$ | $\checkmark$ |
| 513-474-10E | $\checkmark$ | - | - | $\checkmark$ | - |
| Inch |  |  |  |  |  |
| Code No. | ๑ | + | $\cdots$ | $\otimes$ | N |
| 513-402-10E | $\checkmark$ | - | - | $\checkmark$ | - |
| 513-403-10E | $\checkmark$ | - | - | $\checkmark$ | - |
| 513-412-10E | $\checkmark$ | - | $\checkmark$ | $\checkmark$ | - |
| Metric/inch |  |  |  |  |  |
| Code No. | ๑ | + | $\cdots$ | $\otimes$ | F- |
| 513-409-10T | $\checkmark$ | - | - | $\checkmark$ | - |
| Inch/metric |  |  |  |  |  |
| Code No. | ๑ | + | [- | $\otimes$ | - |
| 513-406-10T | $\checkmark$ | - | - | $\checkmark$ | - |



513-414-10E


513-424-10E


513-425-10E
ptional Accessories
Swivel clamps, holding bars, stems and styli refer to pages F-51 to F-53 for details.

Set Configuration: Metric


Set Configuration: Inch


513-908-10E

Set Configuration: Metric and Metric/Inch


Set Configuration: Inch and Inch/Metric


Specifications

| Metric |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Code No. | Graduation | Range | Accuracy | Scale | Measuring force | Price |
| Basic set |  |  |  |  |  |  |
| 513-424-10E | 0.01 mm | 0.5 mm | $5 \mu \mathrm{~m}$ | 0-25-0 | 0.3 N or less | £95.90 |
| 513-414-10E |  |  | $10 \mu \mathrm{~m}$ |  | 0.2 N or less | £105.00 |
| 513-404-10E |  | 0.8 mm | $8 \mu \mathrm{~m}$ | 0-40-0 | 0.3 N or less | £85.70 |
| 513-474-10E* |  |  |  |  |  | £100.00 |
| 513-415-10E |  | 1 mm | $10 \mu \mathrm{~m}$ | 0-50-0 | 0.2 N or less | £107.00 |
| 513-426-10E |  | 1.5 mm | $8 \mu \mathrm{~m}$ | 0-25-0 | 0.4 N or less | £98.70 |
| 513-405-10E | 0.002 mm | 0.2 mm | $3 \mu \mathrm{~m}$ | 0-100-0 | 0.3 N or less | £105.00 |
| 513-425-10E |  | 0.6 mm | $6 \mu \mathrm{~m}$ |  | 0.4 N or less | £122.00 |
| 513-401-10E | 0.001 mm | 0.14 mm | $3 \mu \mathrm{~m}$ | 0-70-0 | 0.3 N or less | £110.00 |
| Full set |  |  |  |  |  |  |
| 513-424-10T | 0.01 mm | 0.5 mm | $5 \mu \mathrm{~m}$ | 0-25-0 | 0.3 N or less | £119.00 |
| 513-414-10T |  |  | $10 \mu \mathrm{~m}$ |  | 0.2 N or less | £139.00 |
| 513-404-10T |  | 0.8 mm | $8 \mu \mathrm{~m}$ | 0-40-0 | 0.3 N or less | £105.00 |
| 513-415-10T |  | 1 mm | $10 \mu \mathrm{~m}$ | 0-50-0 | 0.2 N or less | £129.00 |
| 513-405-10T | 0.002 mm | 0.2 mm | $3 \mu \mathrm{~m}$ | 0-100-0 | 0.3 N or less | £126.00 |
| Special set |  |  |  |  |  |  |
| 513-908-10E | 0.01 mm | 0.8 mm | $8 \mu \mathrm{~m}$ | 0-40-0 | 0.3 N or less | £150.00 |
| Inch |  |  |  |  |  |  |
| Code No. | Graduation | Range | Accuracy | Scale | Measuring force | Price |
| Basic set |  |  |  |  |  |  |
| 513-402-10E | .0005" | .03" | $\pm .0005{ }^{\prime \prime}$ | 0-15-0 | 0.3 N or less | £93.00 |
| 513-412-10E |  |  |  |  | 0.2 N or less | £124.00 |
| 513-403-10E | .0001 ${ }^{11}$ | .008" | $\pm .0001{ }^{\prime \prime}$ | 0-4-0 | 0.3 N or less | £113.00 |
| Full set |  |  |  |  |  |  |
| 513-402-10T | .0005" | .03" | $\pm .000{ }^{\prime \prime}$ | 0-15-0 | 0.3 N or less | £122.00 |
| 513-412-10T |  |  |  |  | 0.2 N or less | £149.00 |
| 513-403-10T | .0001 ${ }^{11}$ | .008" | $\pm .0001{ }^{\prime \prime}$ | 0-4-0 | 0.3 N or less | £149.00 |
| Special set |  |  |  |  |  |  |
| 513-907-10E | .0005" | .03" | $\pm .0005^{\prime \prime}$ | 0-15-0 | 0.3 N or less | £150.00 |
| Metric/inch |  |  |  |  |  |  |
| Code No. | Graduation | Range | Accuracy | Scale | Measuring force | Price |
| Full set |  |  |  |  |  |  |
| 513-409-10T | $0.002 \mathrm{~mm} / .0001$ " | $0.2 \mathrm{~mm} / .0075{ }^{\prime \prime}$ | $3 \mu \mathrm{~m}$ | 0-10-0/0-3.8-0 | 0.3 N or less | £149.00 |
| Inch/metric |  |  |  |  |  |  |
| Code No. | Graduation | Range | Accuracy | Scale | Measuring force | Price |
| Full set |  |  |  |  |  |  |
| 513-406-10T | . 0005 "/ 0.01 mm | . 03 " / 0.7 mm | $\pm .0005{ }^{\prime \prime}$ | 0-15-0/0-35-0 | 0.3 N or less | £129.00 |

* Provided with a $\varnothing 2 \mathrm{~mm}$ ruby contact point as a substitute for $\varnothing 2 \mathrm{~mm}$ carbide contact point.

