# **Dial Indicator Applications**

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

# Thickness Gages SERIES 547, 7

Standard Type

- Dial thickness gages can quickly measure the thickness of thin products such as paper and felt.
- Contact point and anvil are both made of ceramic: rust-free (**547-401** is excluded.)
- Integrated molding of the bezel and crystal ensures protection against water and oil penetration via the front face.

# Usage examples Measuring paper thickness



Measuring thickness of a human hair



Unit: mm

# High Accuracy Type



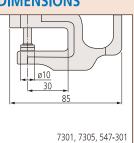
547-301

Standard Type

547-321



**DIMENSIONS** 



7321, 7323, 547-321

#### Lightweight Type (integrated molding of the bezel)



7331S



#### **Optional Accessories**

905338: SPC cable (1m) for digital models 905409: SPC cable (2m) for digital models 02AZD790F: SPC cable for U-WAVE (160mm) Digimatic Mini-Processor DP-1VR Refer to page A-13 for details.

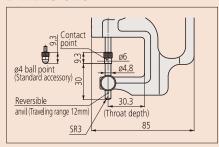
#### Input Tool

Convenient Interface Input Tools which enable the conversion of measurement data to keyboard signals and directly input them to cells in off-the-shelf spreadsheet software such as Excel.

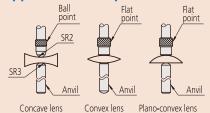
(Refer to pages A-4 to A-8 for details.)

# **DIMENSIONS**

Unit: mm



# **Application examples**

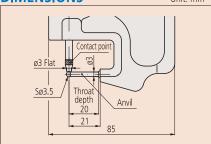


Note: Parallelism between the flat point and anvil

**547-313**: 10μm **7313**: 5μm

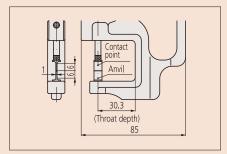
# **DIMENSIONS**

Unit: mm



## **DIMENSIONS**

Unit: mm



#### Lens thickness measurement

- Thickness of concave-convex lenses and surfaces can be measured.
- Anvils and contact points are interchangeable to enable concave surfaces to be measured.



• Provided with a ball point.



## Tube thickness measurement

• Pipe wall thickness, thickness of curved boards can be measured.





## Groove depth measurement

• Suitable for measuring narrow grooves.



• Measuring face of the contact point and anvil are blade-shaped (thickness: 1mm).





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# **Thickness Gages SERIES 547, 7**

## **SPECIFICATIONS**

| Metric    |        |                     |          |                 |                                      |
|-----------|--------|---------------------|----------|-----------------|--------------------------------------|
| Order No. | Range  | Reso <b>l</b> ution | Accuracy | Measuring force | Remarks                              |
| 547-401   | 0-12mm | 0.001mm             | ±3µm     | 3.5N or less    | High accuracy, carbide spindle anvil |
| 547-301   | 0-10mm | 0.01mm              | ±20µm    | 1.5N or less    | Standard, ceramic spindle/anvil      |
| 547-321   | 0-10mm | 0.01mm              | ±20µm    | 1.5N or less    | Deep throat, ceramic spindle/anvil   |
| 547-313   | 0-10mm | 0.01mm              | ±20µm    | 1.5N or less    | Lens thickness                       |
| 547-315   | 0-10mm | 0.01mm              | ±20µm    | 1.5N or less    | Groove depth                         |
| 547-360   | 0-10mm | 0.01mm              | ±20µm    | 1.5N or less    | Tube thickness                       |

| Inch/Metric          | ı         |                 |              |                 |                                      |
|----------------------|-----------|-----------------|--------------|-----------------|--------------------------------------|
| Order No.            | Range     | Resolution      | Accuracy     | Measuring force | Remarks                              |
| 547-400S/ -          | 047"      | .00005"/0.001mm | ±.0001"/±3µm | 3.5N or less    | High accuracy, carbide spindle anvil |
| - / 547-526S*        | 047"      | .0001"/0.001mm  | ±.0002"/±5µm | 1.5N or less    | Standard, ceramic spindle/anvil      |
| 547-300S / 547-500S* | 04"/047"* | .0005"/0.01mm   | ±.001"/±20µm | 1.5N or less    | Standard, ceramic spindle/anvil      |
| 547-3205 / 547-5205* | 04"/047"* | .0005"/0.01mm   | ±.001"/±20µm | 1.5N or less    | Deep throat, ceramic spindle/anvil   |
| 547-312S / 547-512S* | 04"/047"* | .0005"/0.01mm   | ±.001"/±20µm | 1.5N or less    | Lens thickness                       |
| 547-316S / 547-516S* | 04"/047"* | .0005"/0.01mm   | ±.001"/±20µm | 1.5N or less    | Groove depth                         |
| 547-361S / 547-561S* | 04"/047"* | .0005"/0.01mm   | ±.001"/±20µm | 1.5N or less    | Tube thickness                       |

<sup>\*</sup> using ID-SX Digimatic indicator.

| Metric    | ı      |            |          |                 |  |
|-----------|--------|------------|----------|-----------------|--|
| Order No. | Range  | Graduation | Accuracy | Measuring force | Remarks                                  |
| 7327      | 0-1mm  | 0.001mm    | ±5µm     | 1.4N or less    | Fine dial reading, ceramic spindle/anvil |
| 7301      | 0-10mm | 0.01mm     | ±15µm    | 1.4N or less    | Standard, ceramic spindle/anvil          |
| 7305      | 0-20mm | 0.01mm     | ±20µm    | 2.0N or less    | Standard, ceramic spindle/anvil          |
| 7321      | 0-10mm | 0.01mm     | ±15µm    | 1.4N or less    | Deep throat, ceramic spindle/anvil       |
| 7323      | 0-20mm | 0.01mm     | ±22µm    | 2.0N or less    | Deep throat, ceramic spindle/anvil       |
| 7313      | 0-10mm | 0.01mm     | ±15µm    | 1.4N or less    | Lens thickness                           |
| 7315      | 0-10mm | 0.01mm     | ±15µm    | 1.4N or less    | Groove depth                             |
| 7360      | 0-10mm | 0.01mm     | ±15µm    | 1.4N or less    | Tube thickness                           |

| inch      |       |            |          |                 |  |
|-----------|-------|------------|----------|-----------------|--|
| Order No. | Range | Graduation | Accuracy | Measuring force | Remarks                                  |
| 7326S     | 005"  | .0001"     | ±.0002"  | 1.4N or less    | Fine dial reading, ceramic spindle/anvil |
| 7300S     | 05"   | .001"      | ±.001"   | 1.4N or less    | Standard, ceramic spindle/anvil          |
| 7304S     | 0-1"  | .001"      | ±.002"   | 2.0N or less    | Standard, ceramic spindle/anvil          |
| 7322S     | 0-1"  | .001"      | ±.002"   | 2.0N or less    | Deep throat, ceramic spindle/anvil       |
| 7312S     | 05"   | .001"      | ±.001"   | 1.4N or less    | Lens thickness                           |
| 7316S     | 05"   | .001"      | ±.001"   | 1.4N or less    | Groove depth                             |
| 73615     | 05"   | .001"      | ±.001"   | 1.4N or less    | Tube thickness                           |

