OPERATION INSTRUCTION

3D Tester

Range: 1.5mm
Graduation: 0.01mm

1-Shank (Ø12mm)
2-Zero
3-Pointer
4-0.01mm scale
5-Measuring unit
6-Adjustable screws (4 pcs.)
7-Bezel
8-1 mm scale
9-Breaking point
10-Probe
11-Carbide measuring ball
12-Long probe (optional)

Adjusting the radial runout:

--- Clamp the 3D tester into a tool holder, move dial gage to probe sphere to find the highest and lowest measuring point (fig.1).
--- Adjust 3D tester to the centre position by adjusting the adjusting screw (fig.2).
--- Repeat the produce until the desired runout is achieved (fig.3).
--- Ensure that 4 adjusting screws are tightened with maximum torque of 2N.m.

fig.1

fig.2

fig.3

Radial probing:

--- Insert the 3D Tester into the spindle. Cut off the coolant supply and turn off the spindle.
--- Please make sure that probing is exactly perpendicular.
--- Move the 3D Tester carefully to the edge of the workpiece until the long pointer starts moving. Continue until both pointers (long and short) show exactly 0 (Both pointers should point to 0 clockwise. Please don't rotate pointers counterclockwise to 0).
--- In this position, the symmetry axis of the spindle is exactly positioned to the workpiece edge.

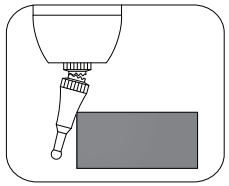
Axial probing:

--- Determine the 3D Tester reference length with a pre-setting device. Please note that 1.5mm must be subtracted from this length.
--- Insert the 3D Tester into the spindle. Cut off the coolant supply and turn off the spindle.
--- Please make sure that probing is exactly perpendicular.
--- Move the 3D Tester carefully towards the work piece surface until the long pointer starts moving. Continue until both pointers (long and short) show exactly 0.
--- Now, the spindle is located at the height of the determined reference length above the workpiece.

Copyright © INSIZE CO., LTD. All Rights Reserved

Note:

It is not a problem to overpass the edge of the workpiece up to 1.5 mm (short pointer in the red area). After 1.5 mm, there are mechanical limit stops which lead to the probe halting at the predetermined breaking point to protect the 3D Tester.



Measurement:

During measurement, ensure that the pointer points the zero when the pointer is in free state. if there is deviation (fig.4), rotate bezel to set zero (fig.5), and then used to measure (fig.6).

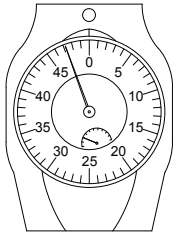


fig.4

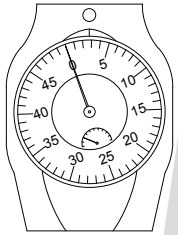


fig.5

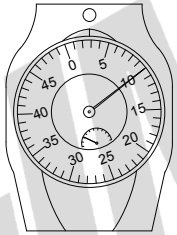


fig.6

Replace probe:

--- Unscrew the probe manually (fig.7). If needed, the probe can be released easily with a small plier.
--- Screw in the new probe and tighten manually (fig.8).
--- Please check run-out after probe replacement.

fig.7

fig.8

Copyright © INSIZE CO., LTD. All Rights Reserved