

Centro

Haimer USA, LLC.
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User's Guide

The Centro is a highly precise measuring instrument for centering drill holes or shafts and for checking the perpendicularity of surfaces.

Technical details

centering accuracy	$\pm 0,003 \text{ mm}$
max. rotation speed	150 rpm
measuring range	
drill hole	6 - 125 mm
(with standard probe tip, diam. 5 mm)	
shaft	0- 125 mm
(with bended probe tip)	

1 Centering Drill Holes or Shafts (Fig. 3)

- Insert telescope bar with joint foot in drill hole on the backside of the case
- Clamp Centro into spindle (concentricity error has no influence on measuring accuracy)
- Set spindle over searched axis by eye
- Align the telescope bar in such a way that the dial face can be observed by the operator
- Set the change-over switch: "B" for drill hole, "W" for shaft (Fig. 2)
- Press the change-over switch into the case and hold it: the sensing ball is fixed in center position
- Press sensing ball by hand on wall of drill hole or shaft.
For this purpose the probe tip can be swiveled in the mount
- Turn spindle with slow rotation speed (approx. 80 rpm) or by hand. The hands of the dial are deflected.
- At first reduce deflection of small hand by carefully moving the X and Y axis (coarse adjustment)
- Then reduce deflection of big hand in the same way (fine adjustment)
As soon as the big hand is at rest, the spindle axis is exactly over the searched axis. Max. deviation: $\pm 0,003 \text{ mm}$

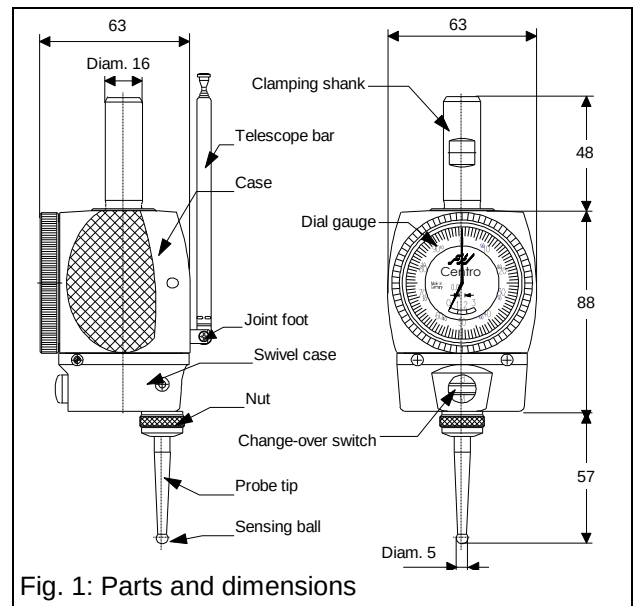


Fig. 1: Parts and dimensions

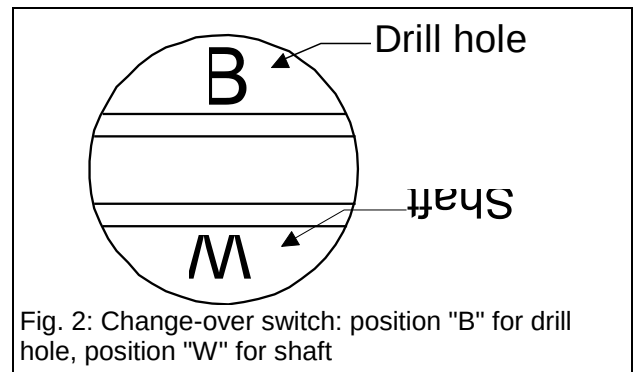


Fig. 2: Change-over switch: position "B" for drill hole, position "W" for shaft

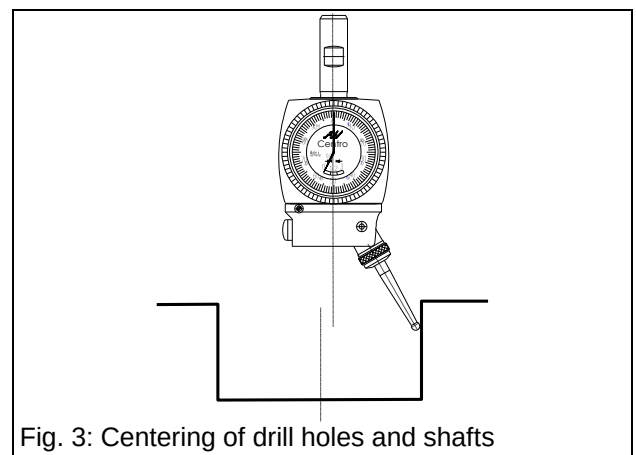
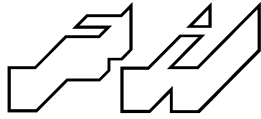


Fig. 3: Centering of drill holes and shafts



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2 Checking the perpendicularity of a surface (Fig. 4)

- Clamp in Centro as described under 3
- Swivel probe tip sidewise (Fig. 4)
- Move Centro over surface to be tested
- Set change-over switch to „W“
- Press change-over switch and hold
- Press sensing ball by hand on plane surface
- Release change-over switch
Now the sensing ball is pressed onto the surface by spring power.
- Test perpendicularity by:
turning spindle by hand or by spindle drive
proceeding in X- or Y-direction
- Dial gauge indicates perpendicularity of surface
- Even small surfaces can be tested.

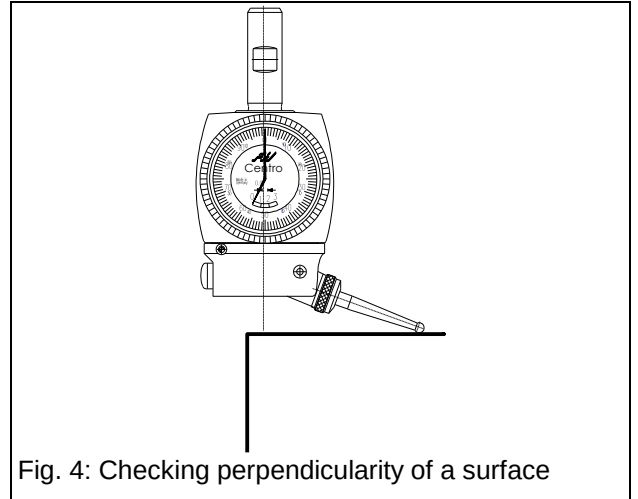


Fig. 4: Checking perpendicularity of a surface

3 Replace Probe Tip

- Loosen nut
- Replace probe tip
- Tighten nut by hand
(care for clean contact surface)

4 Included in Delivery:

- Centro with shank diam. 16 mm
- Probe tip straight with sensing ball diam. 5 mm
- Telescope bar

5 Special Accessories

- Probe tip bended with sensing ball diam. 5 mm
- Probe tip straight with sensing ball diam. 2 mm