HEIDENHAIN

Product Information

TS 642

Workpiece Touch Probe
with Shank Switch

October 2008

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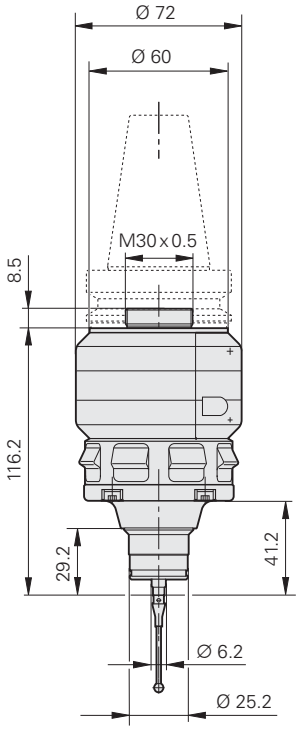

Dimensions in mm

Tolerancing ISO 8015
ISO 2768 - m H
< 6 mm: ±0.2 mm

Workpiece Touch Probe	**TS 642**
Probe accuracy	≤ ± 5 µm when using a standard stylus
Probe repeatability Repeated probing from one direction	2 σ ≤ 1 µm at a probing velocity of 1 m/min *Typical values:* 2 σ ≤ 1 µm at a probing velocity of 3 m/min 2 σ ≤ 4 µm at a probing velocity of 5 m/min
Deflection of probe contact	≤ 5 mm in all directions (with stylus length L= 40 mm)
Deflection force (approx.)	Axial: 8 N Radial: 1 N
Probe velocity	≤ 5 m/min
Protection EN 60529	IP 67
Operating temperature **Storage temperature**	10 °C to 40 °C –20 °C to 70 °C
Weight without taper shank	Approx. 1.1 kg
Taper shank*	With taper shank (see brochure *Touch Probes)*
Signal transmission	Infrared transmission with 360° range
Transmission angle of infrared signal*	0° or +30°
Transmitter/receiver unit*	SE 540 or SE 640 (see brochure *Touch Probes)*
TS switch-on/off	Via switch in taper shank
Power supply	2 batteries (rechargeable or non-rechargeable), size C, 1 V to 4 V each
Operating time	Typically 800 hours of continuous duty with lithium batteries[1)] 3.6 V/6000 mAh

***** Please indicate when ordering
[1)] Included in delivery

Differences—TS 640 and TS 642

The TS 642 shares the essential electrical and mechanical properties of the TS 640. These include:
- High repeatability of 2 σ ≤ 1 µm
- Large infrared range of up to 7 m
- Long operating periods up to 800 h
- Use of standard size-C batteries, rechargeable or not
- Workpiece cleaning air blower/coolant flusher

The only difference between the TS 640 and TS 642 lies in the type of activation: The **TS 640** is activated from the PLC by switch-on command—the start signal R. The **TS 642** is activated by a microswitch integrated in the taper shank: when the touch probe is inserted in the machine spindle it automatically switches on the TS 642, which immediately reports readiness over the familiar ready signal B to the control.

The use of the TS 642 is especially warranted
- as a replacement for the TS 632
- for retrofitting on a TNC 4xx
- on controls for which the switch-on routine over the switch signal is very costly to realize.

Due to its integrated switch, the TS 642 is always supplied with the shank built on.

For more information
- Brochure: *Touch Probes*

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