Data sheet

TS27R tool setting probe

Specification

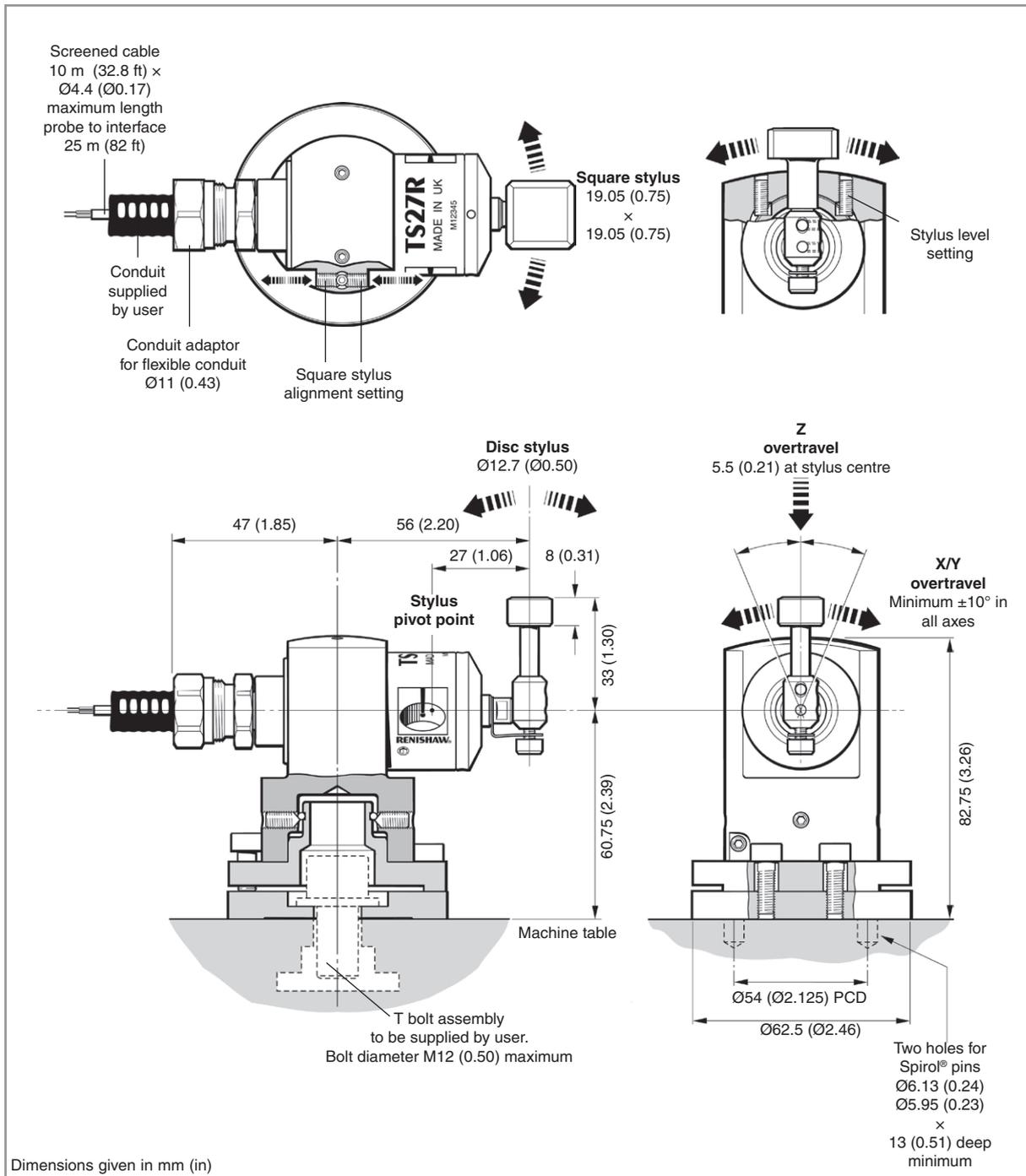|		
Principal application		Tool measuring and broken tool detection on all sizes of vertical and horizontal machining centres and all gantry machining centres.
Transmission type		Hard-wired transmission
Compatible interfaces		MI 8-4, HSI or HSI-C
Recommended styli		Disc stylus (tungsten carbide, 75 Rockwell C) or Square tip stylus (ceramic tip, 75 Rockwell C)
Weight with disc stylus		1055 g (37.21 oz)
Cable (to interface)	**Specification**	Ø4.4 mm (0.17 in), 4-core screened cable, each core 7 × 0.2 mm
	Length	10 m (32.8 ft)
	Electrical Connection	Cable on the end of unit
Sense directions		±X, ±Y, +Z
Unidirectional repeatability		1.00 µm (40 µin) 2σ (see note 1)
Stylus trigger force (see notes 2 and 3)		1.30 N to 2.40 N, 133 gf to 245 gf (4.68 ozf to 8.63 ozf) depending on sense direction
Sealing		IPX8, BS EN 60529:1992+A2:2013 (IEC 60529:1989+A1:1999+A2:2013)
Mounting		M12 (1/2 in) T bolt (not supplied) Optional Spirol pins to allow accurate remounting
Operating temperature		+5 °C to +60 °C (+41 °F to 140 °F)

Note 1   Performance specification is tested at a standard test velocity of 480 mm/min (18.9 in/min) with a 35 mm stylus. Significantly higher velocity is possible depending on application requirements.

Note 2   Trigger force, which is critical in some applications, is the force exerted on the component by the stylus when the probe triggers. The maximum force applied will occur after the trigger point (overtravel). The force value depends on related variables including measuring speed and machine deceleration.

Note 3   These are the factory settings; manual adjustment is not possible.

For further information, and the best possible application and performance support, please contact Renishaw or visit **www.renishaw.com/ts27r**

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TS27R dimensions

Screened cable
10 m (32.8 ft) ×
Ø4.4 (Ø0.17)
maximum length
probe to interface
25 m (82 ft)

Conduit
supplied
by user

Conduit adaptor
for flexible conduit
Ø11 (0.43)

Square stylus
alignment setting

Square stylus
19.05 (0.75)
×
19.05 (0.75)

Stylus level
setting

Disc stylus
Ø12.7 (Ø0.50)

47 (1.85)   56 (2.20)

27 (1.06)   8 (0.31)

**Stylus
pivot point**

33 (1.30)

60.75 (2.39)

Machine table

T bolt assembly
to be supplied by user.
Bolt diameter M12 (0.50) maximum

**Z
overtravel**
5.5 (0.21) at stylus centre

**X/Y
overtravel**
Minimum ±10° in
all axes

82.75 (3.26)

Ø54 (Ø2.125) PCD

Ø62.5 (Ø2.46)

Two holes for
Spirol® pins
Ø6.13 (0.24)
Ø5.95 (0.23)
×
13 (0.51) deep
minimum

Dimensions given in mm (in)

Spare parts and accessories

A full range of spare parts and accessories is available.

Please contact Renishaw for a full list.

For worldwide contact details, visit www.renishaw.com/contact

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