

Digital MEMS Inclinometer System

Description

Since 2003, RST's Inclinometer systems have had the shortest overall length available for a given base length compared to competitive inclinometers.

With a minimum negotiable casing radius of 1.93 m, RST's Digital MEMS Inclinometer can still traverse a smaller radius bend than all other inclinometers available in the industry. A local microcontroller in the probe manages data collection, applies precision digital calibration, and provides a fast settling time which results in very efficient data collection.

The [RST Digital Inclinometer App](#) functions as the data collector. The app is designed for field personnel to easily configure and collect readings from the inclinometer probe.

INCLINOMETER SPECIFICATIONS

ITEM	METRIC SYSTEM	IMPERIAL SYSTEM
Wheelbase	0.5 m	24 in
Probe diameter	25.4 mm	1.00 in
Probe length (including connector)	719 mm	32.6 in
Probe weight	1.06 kg	2.45 lbs
Probe material	Stainless steel	Stainless steel
Full-scale range (other ranges available)	$\hat{\pm}30$ degrees	$\hat{\pm}30$ degrees
Data resolution	0.005 mm per 500 mm	0.00002 ft per 2 ft
Memory	>1,000,000 readings	>1,000,000 readings
Repeatability	$\hat{\pm}0.002\hat{\circ}$	$\hat{\pm}0.002\hat{\circ}$
System Accuracy	$\hat{\pm}2$ mm per 25 m	$\hat{\pm}0.1$ in. per 100 ft
Axis alignment	Digitally nulled	Digitally nulled
Temperature rating	-40 to +70 $\hat{\circ}$ C	-40 to +158 $\hat{\circ}$ F
Sensor Type	MEMS Accelerometer, Biaxial	

CABLE SPECIFICATIONS

ITEM	METRIC SYSTEM	IMPERIAL SYSTEM
Cable diameter	6.40 mm ($\hat{\pm}0.1$ mm)	0.25 in
Cable weight	2.3 kg / 50 m	3.1 lbs / 100 ft
Cable breaking strength	1.8 kN	400 lbs
Cable reinforcement	Kevlar $\hat{\circ}$ ® $\hat{\circ}$;	Kevlar $\hat{\circ}$ ® $\hat{\circ}$;

Cable jacket	Polyurethane	Polyurethane
Cable stretch (suspended in 50 m dry borehole)	7.0 mm	0.27 in

CABLE REEL SPECIFICATIONS

ITEM	METRIC SYSTEM	IMPERIAL SYSTEM
Up to 75 m cable reel diameter	310 mm	12.2 in
100 to 200 m cable reel diameter	380 mm	15 in
+225 m cable reel diameter	460 mm	18 in
Reel weight with 50 m (100 ft.) cable	4.7 kg	8.4 lbs

SPECIFICATIONS