



# Horizontal MEMS Inclinometer System

**MEMS**  
TILT & INCLINATION  
SERIES**rst**  
INSTRUMENTS

The Horizontal MEMS Inclinometer System measures settlement or heave under embankments, dams, roadways, storage tanks, and landfills.

A local microcontroller in the probe manages the data collection, applies precision digital calibration, and transmits the data in digital format for best of class accuracy.

An Ultra-Rugged Field PC functions as the data collector, providing a high-level user interface, industry-leading memory, optional Flash™ data security, “at-the-borehole” data analysis and comparison to previous data sets, and instant USB synchronization with office computers.

## general specifications

ITEM	DESCRIPTION
Sensor Type	Uniaxial, MEMS (Micro-Electro-Mechanical Systems) Inclinometer
Memory	>1,000,000 readings
Measurement Range	±30° from Horizontal
Repeatability	±0.003°
Linearity	±0.02% F.S.
Casing Size Required	70 mm (2.75") or 85 mm (3.34")
Materials	Stainless Steel
Readout	Ultra-Rugged Field PC

## imperial system: specifications

ITEM	DESCRIPTION
Wheel Base	24 in.
Probe Diameter	1 in.
Probe Length including lifting eye	32.19 in.
Data Resolution	0.00002 ft. per 2 ft.
Displacement Error	±0.1 in. per 100 ft.
Temperature Rating	-40 to 180°F
Temperature Coefficient	0.003% F.S. per °F typical
Weight	2.4 lbs.

## imperial system: ordering info

ITEM	PART #
100 ft. Complete System with 2 ft. Probe	IC35110H
150 ft. Complete System with 2 ft. Probe	IC35115H
200 ft. Complete System with 2 ft. Probe	IC35120H
250 ft. Complete System with 2 ft. Probe	IC35125H
300 ft. Complete System with 2 ft. Probe	IC35130H
500 ft. Complete System with 2 ft. Probe	IC35150H
Digital Horizontal 2ft. Inclinometer Probe	IC35202H
Inclanalysis™ Digital Inclinometer Analysis Software with USB Key	IC35600
Pull Cable	IC7300
Pull Cable Reel	WL046617
Cable Return Pipe	EP050410
Return Pipe Coupling	EPFI429005

## additional equipment

ITEM	PART #
3.34 in./85 mm Snap Seal Inclinometer Casing Dead-end Pulley	ICA0063-1
3.34 in./85 mm Glue & Snap Inclinometer Casing Dead-end Pulley	ICA0063-2
2.75 in./70 mm Snap Seal Inclinometer Casing Dead-end Pulley	ICA0064-1
2.75 in./70 mm Glue & Snap Inclinometer Casing Dead-end Pulley	ICA0064-2

## metric system: specifications

ITEM	DESCRIPTION
Wheel Base	500 m
Probe Diameter	25.4 mm
Probe Length including lifting eye	708 mm
Data Resolution	0.005 mm per 500 mm
Displacement Error	±2 mm per 25 m
Temperature Rating	-40 to 70°C
Temperature Coefficient	0.005% F.S. per °C typical
Weight	1.091 kg

## metric system: ordering info

ITEM	PART #
30 m Complete System with 0.5 m Probe	IC35003H
50 m Complete System with 0.5 m Probe	IC35005H
60 m Complete System with 0.5 m Probe	IC35006H
75 m Complete System with 0.5 m Probe	IC35075H
100 m Complete System with 0.5 m Probe	IC35010H
150 m Complete System with 0.5 m Probe	IC38015
Digital Horizontal 0.5 m Probe	IC32205
Inclanalysis™ Digital Inclinometer Analysis Software with USB Key	IC35600
Pull Cable	IC7300
Pull Cable Reel	WL046617
Cable Return Pipe	EP050410
Return Pipe Coupling	EPFI429005

## ordering options

Longer probe lengths are available, please contact a member of our sales team at RST Instruments Ltd. to discuss your requirements.

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**ISO 9001:2000**  
REGISTERED QUALITY SYSTEM

## applications

Monitor settlement of heave under embankments, dams, roadways, storage tanks, and landfills.

Observation of ground movements caused by construction and excavation, such as those involved with tunneling.

## features

Digital precision and efficient data collection with a high-level user interface that has instant USB synchronization with office computers.

Probe may be used with RST's Vertical In-place MEMS Inclinometer System.

Probe may be purchased with or without a system.