

PrimeProbe[®] 2 - Compact

Insertion Flowmeter - Specification

Technical Note IXD-600-TN Issue 2

PrimeProbe[®] 2 is a bi-directional insertion flowmeter for use in water distribution networks.

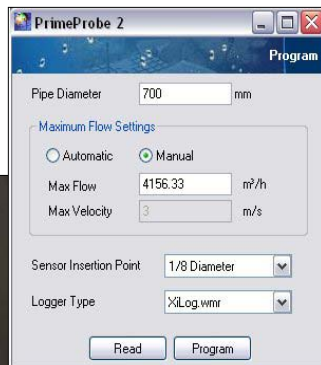
Compact version

PrimeProbe2 - Compact version has an integral converter, is fully submersible to IP68 and is powered from internal batteries for up to six years (dependant upon sampling regime).

Application

PrimeProbe2 provides an accurate measurement of water velocity at the sensor location. If flow profile is fully developed volume flow is determined (ISO 7145-1982 refers).

PrimeProbe2 is installed in water pipes by means of a small tapping. It may be installed at the point of maximum velocity (the pipe centre-line) or at the point of the mean velocity ($1/8$ x pipe diameter or $7/8$ x pipe diameter). Centre-line installation is often preferred as it allows for a greater margin of error if not installed exactly on the centre-line. $1/8$ pipe is generally used if the probe is not long enough to reach the centre-line. For best accuracy it is recommended to measure the pipe internal bore.



Easy programming

Programming is carried out via the PrimeWorks software operating on PC or PDA platforms. In *Basic* mode (see sample display above) only the following parameters are needed:

- Maximum flow-rate
- Pipe diameter
- Position of probe

In *Advanced* mode all probe parameters can be set such as response time, scaling, diagnostics, etc.

Transport Case is available for PrimeProbe2 - Compact version together with optional Gauging Rod

PrimeProbe2 - Compact; length dimensions

Model	Insertion length	Overall length	Use in pipe size (operation on pipe centre line)	Use in pipe size (at 1/8 pipe diameter)
Size 1	300 mm	737 mm	≤ 600 mm	≤ 2400 mm
Size 2	500 mm	937 mm	≤ 1000 mm	≤ 4000 mm
Size 3	700 mm	1137 mm	≤ 1400 mm	≤ 5600 mm
Size 4	1000 mm	1437 mm	≤ 2000 mm	≤ 8000 mm

Technical specification

Parameter	Specification
Minimum / maximum pipe nominal bore	80mm to 8000mm (at 1/8 pipe diameter installation)
Measurement range	Bi-directional from 0.01m/s to 5m/sec (maximum may be lower dependant upon insertion length and position in pipe)
Accuracy Point velocity Flow	± 2mm/sec or ± 2% whichever is the greater. Refer to ISO 7145-1982
Repeatability	± 0.5% of velocity
Flow determination	Assumes fully developed flow profile; ISO 7145-1982 refers
Measurement sampling	Continuous or programmable 1 – 90 seconds Default set to 15 seconds
Minimum fluid conductivity	5µS/cm
Process connection	1 inch (25mm) BSP - valve included
Pipeline Pressure rating	16 Bar
Sensor material	PTFE
Body material	SS304
Electrode materials	SS316
Liquid temperature range	-20 to +150 deg C (assumes non-freezing conditions)
Safety	Probe fitted with anti-bounce chain
Pressure tapping	Female quick-release connector
Adjustment method	5mm Allen key (supplied) fits all screws
Protection	IP68
Power	Lithium batteries; life ≤6 years (dependant on sampling period), or External supply; 10-35Vdc
Electrical output Signal Units Connection	Pulses proportional to velocity/flow-rate - max frequency 32 Hz User selectable MIL-Spec connector
Communications	USB

PrimeProbe2 - Compact; part numbers

PrimeProbe2 Compact; length 300mm	RXG 810
PrimeProbe2 Compact; length 500mm	RXG 811
PrimeProbe2 Compact; length 700mm	RXG 812
PrimeProbe2 Compact; length 1000mm	RXG 813
PrimeProbe2 Compact; communications cable	RXG 820
PrimeProbe2 Compact; output cable to PrimeLog / XiLog logger	RXG 921
PrimeProbe2 Compact; output cable to bare wires (connection to other devices)	RXG 826
Gauging Rod - 25mm BSP connection; length 500mm	TXG 101/3
Gauging Rod - 25mm BSP connection; length 1000mm	TXG 101/6
Transport Case – for PrimeProbe2 Compact; 300mm insertion length	RXG 822
Transport Case – for PrimeProbe2 Compact; 500mm insertion length	RXG 823
Transport Case – for PrimeProbe2 Compact; 700mm insertion length	RXG 827