


# HydrINS 2



**KEY BENEFITS**

- Highly cost effective bi-directional flow measurement.
- "Hot tap" installation with no interruption to supply.
- Easily deployed and moved.
- Long battery life (4-10 years depending on set-up options used).
- Versatile – can be deployed over a large range of pipe diameters.
- High quality digital signal processing gives accurate measurement of low velocities (to 2cm/s at 2mm/s accuracy).
- Optional display unit which can be deployed up to 200m away giving flow and alarm readings.
- Robust and watertight (IP68) with easy maintenance and calibration to ensure long term accuracy.
- Many measurement options.
- Velocity profiling to validate accuracy of measurement point.
- Night flow measurements easily obtained for network improvements.
- Fitting includes a push fit connector for pressure measurements.
- Communication via watertight military specification connector.

## *Electromagnetic Insertion Probe with optional Display Panel*

HydrINS is an easily deployed and cost effective flow meter providing highly accurate bi-directional measurement for water distribution and raw water pipelines. Robust, watertight and compact, it features a highly accurate electromagnetic sensor and an integral transmitter enabling multiple telemetry options or simple totaliser.

The highly versatile unit is widely used throughout the world and available in various lengths to suit pipe diameters from 100mm to over 2000mm. It is equally well deployed for permanent or portable applications, inserted through standard under pressure tapping, with no interruption to supply. BSP and NST threads are available.

HydrINS can be used throughout the water distribution network, metering at resevoirs, treatment works, pumping stations, irrigation, water pipes, zoning and DMA implementation, night flow monitoring and meter testing. Winfluid software (PC or PDA) provides easy programming, download and analysis of data. The unit uses stainless steel electrodes to enhance measurement accuracy and a re-enforced stem with an anti-ejection chain, locking nut and insertion point clamp to ensure correct and safe installation.

The new HydrINS 2 can be supplied with a large LCD display unit giving instant readouts of all measurements. It is powered by long life lithium batteries (up to 10 years), or alternatively via external DC power. It has alarm and pulse outputs with 2 4-20mA outputs available as an option.



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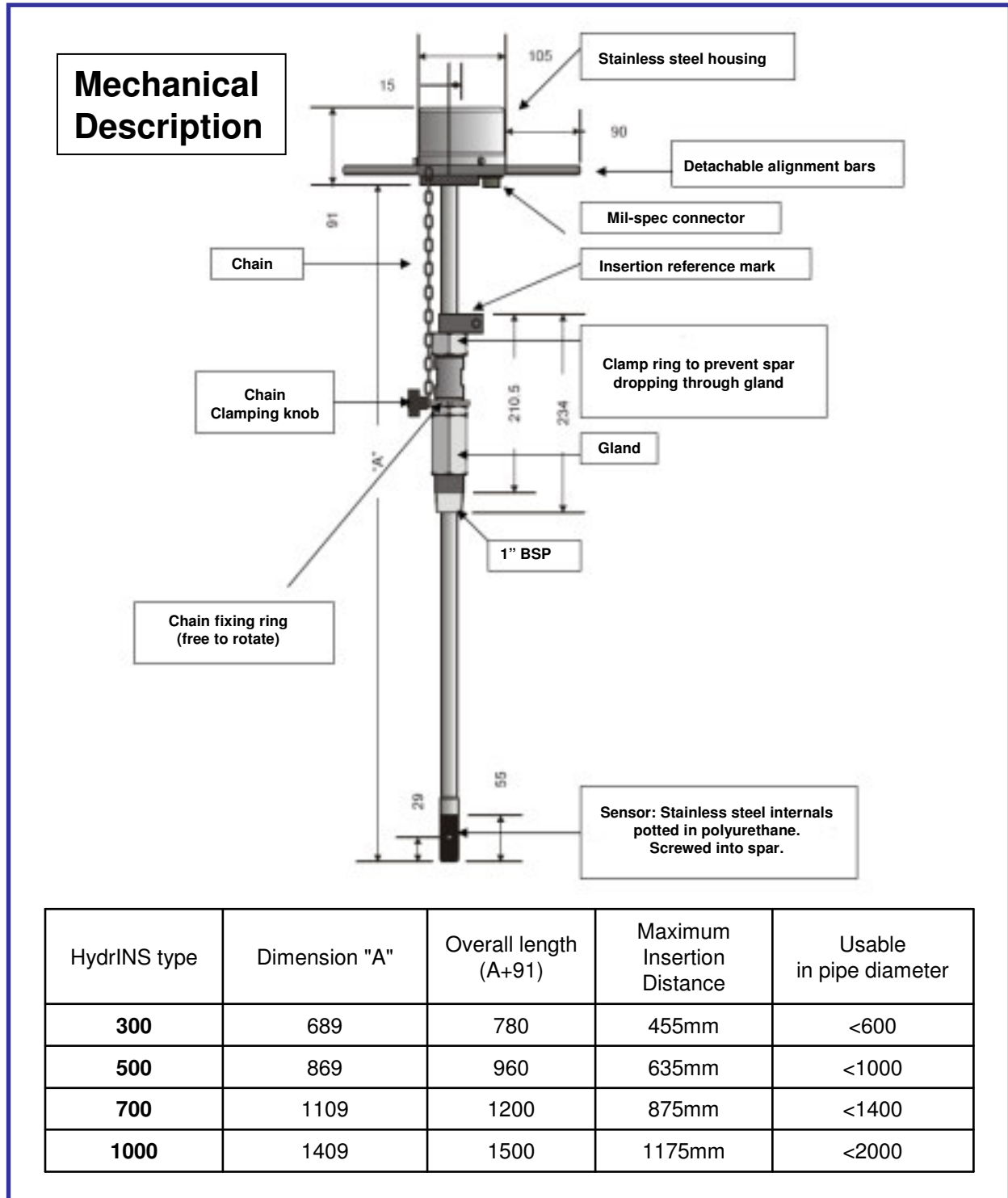
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## Deployment Modes



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## Electromagnetic Insertion Probe with optional Display Panel

Measurement range	Bi-directional from 0.02 m/s to 5m/s, limited only by the stability of the probe in the flow. Fluid conductivity needs to be minimum of 20is/cm
Accuracy	Point velocity: Averaged/smoothed flow: $\pm 2\text{mm/sec}$ or $\pm 2\%$ of value whichever is the greater.
Units	Selectable: mm, metres, feet; litres, Megalitre, m3, ft3, ImpGal, USGal, MegaImpGal, MegaUSGal; seconds, minutes, hours, days
Power	9-29 VDC. Internal lithium batteries giving 4 years optional
Sensor Information	Calibration, serial no, date of calibration, measurement file history
Internal logging	Negative volume / Positive Volume / Cumulative
Outputs	RS232. Programmable spot velocity, average velocity, instantaneous flow, totalised volume, signal quality
	2 pulse outputs, isolated open collector. Can be 1 channel positive flow and 1 channel negative flow or 1 channel volume and 2 directional. Maximum frequency 50Hz
Connector	IP68 Watertight 10 way mil spec connector
Software	Winfluid
Temperature Range	Electronics $-20^{\circ}$ to $+60^{\circ}\text{C}$ ( $-4^{\circ}\text{F}$ to $140^{\circ}\text{F}$ ) Insertion element: non frozen water up to $+60^{\circ}\text{C}$ ( $140^{\circ}\text{F}$ )
Max deploy pressure	20 bar. Integral to BSP quick fit pressure connector
Ingress Rating	IP68/NEMA6 for immersion to 10m (with connectors secured)
Installation	Connection on a 1 inch hot tap BSP (25 mm). Safety chain
Insertion lengths	300mm (11.81"), 500mm (19.69"), 700mm (27.56") and 1000mm (39.37")
Dimensions	Sensor diameter 22mm (0.87"), stem diameter 19mm (0.75"), head diameter 106 x 80mm high (4.17" x 3.15")
Weight	<3.5kg (<7.7lb)
Construction	Insertion components: Stainless Steel 316. PVC No WRAS 0307509. Nitrile joints No 0470NBRFD WRAS approved. External components: Stainless Steel 316. Bronze C2121
Warranty	24 months
Certification	Calibrated to reference meters to COFRAC procedures and traceability.
Gauge	Internal pipe measuring gauges available. 1" diameter in either 880/1040 or 1250mm lengths, 1.5" diameter in 1250mm length or 2" diameter in 1250mm length
<b>Optional Display Panel</b>	
LCD	Backlit 16 characters, 2 lines Push button control displaying average velocity, next time flow, +ri flow, -ri flow, net flow, alarms, totaliser
Power	9-28 VDC or 3.6 VDC 4.4-28. Integral lithium batteries giving 4-10 years life dependent on set-up options External battery option
Output	RS232. 2 pulse. Optional 24-20mA passive or active
Alarms	2 dry contacts software programmable via RS232. No water, sensor fault, low battery, low or high flow, power failure
Interconnectivity	10m display to probe supplied as standard. Maximum availability 200m
Communications	Probe and display programming via RS232. Optional blue tooth
Ingress Rating	IP68 to 2m submersion
Weight	1 kg (2.2lb)