



TRU/MAG™ ELECTROMAGNETIC WATER METER

SIZES: 4", 6", 8", and 10"



The TRU/MAG™ Meter Family.

APPLICATION

With rising water demands and Non-Revenue Water (NRW), utilities are seeking an advanced water meter technology to increase water revenue while reducing the operating and maintenance costs that are associated with mechanical water meters.

The TRU/MAG™ battery-powered electromagnetic water meter measures wide flow ranges at 100% ± 1.0% accuracy. All TRU/MAG meters meet or exceed the performance requirements of AWWA C701 Standard and are approved for use in water utility billing, municipal water/wastewater, and well usage reporting.

OPERATION

The TRU/MAG uses Faraday's law to measure the flow of a conductive fluid through a magnetic field. The magnetic field is generated by a current passing through a pair of coils in the meter assembly. As the fluid flows through the meter, a voltage directly proportional to the velocity of the fluid is generated. The voltage is detected by two electrodes. The register amplifies, filters, and measures the voltage. This measured voltage is then converted into units of flow and totalized registration.

WARRANTY

The TRU/MAG electromagnetic water meter is designed to measure potable water service usage through a single water line. Neptune provides a limited warranty with respect to its TRU/MAG electromagnetic water meter for performance, materials, and workmanship. When required, battery replacement is easily accomplished in the field.

FEATURES

- The TRU/MAG is a battery-powered electromagnetic water meter for use in 4" to 10" installations in municipal water, wastewater, and water utility billing applications where mechanical meters have typically been used in the past.
- Advanced technology and accurate flow measurement.
- The two lithium 3.6V "D" batteries are replaceable with an expected 5-year life under continuous use.
- The TRU/MAG has no moving parts and requires virtually no maintenance in applications where debris would impede mechanical-type meters.
- Minimal straight pipe requirements allow the TRU/MAG to be used in piping configurations where straight pipe diameters are minimal.
- Rate and total indication are standard.
- No programming or set-up is required.
- Units of measure are customer-selected and factory-set.
- An optional input/output cable for external DC power and pulse output can be installed post-factory.
- Four pulse frequency rates are available for use with the Neptune SmartTrol®, SCADA systems, and telemetry applications.
- An internal data logger is standard for secure data logging.
- 8-digit high resolution absolute encoder remote reading is available when connected to Neptune's R900® or R450™ RF MIU.

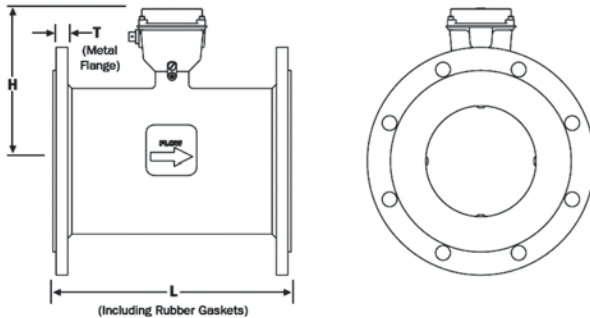
CONSTRUCTION

- Epoxy-coated, welded steel body
- Powder-coated, die-cast NEMA 4X electronics enclosure
- Dual Durometer rubber liner
- 316 stainless steel measuring electrodes
- 316 stainless steel grounding electrodes

OPERATING CHARACTERISTICS

Meter Size	Normal Operating Range 100% accuracy +/-1.0%	AWWA C701 Standard
4"	6 to 1000 gpm 1.35 to 14.2 m ³ /hr	15 to 630 gpm 3.4 to 141.8 m ³ /hr
6"	16 to 2500 gpm 3.6 to 562.5 m ³ /hr	30 to 1400 gpm 6.75 to 315 m ³ /hr
8"	30 to 4400 gpm 6.75 to 990 m ³ /hr	50 to 2400 gpm 11.3 to 540 m ³ /hr
10"	48 to 7000 gpm 10.8 to 1575 m ³ /hr	75 to 3800 gpm 16.9 to 855 m ³ /hr

DIMENSIONS



Meter Size	Length (L)		Height (H)		Thickness (T)		Shipping Weight	
	inch	mm	inch	mm	inch	mm	pounds	kg
4"	10.24	260	7.0	178	0.82	20.9	32	14.5
6"	12.27	312	8.1	206	0.92	23.3	47	21.3
8"	14.24	362	9.1	231	0.92	23.3	71	32.2
10"	18.18	257	10.1	257	0.92	23.3	95	43.1
Flanges	Standard ANSI Class 150 lb. drilling						Cable (1 lb.)	

COMPATIBILITY

All TRU/MAG electromagnetic water meters are guaranteed compatible with Neptune's R900 and R450 MIUs and Neptune meter reading systems without removing the meter from service.

REGISTRATION

The TRU/MAG features a fully electronic register with programmable registration (U.S. gallons, imperial gallons, cubic feet, cubic metres). E-Coder 8-digit encoder output and pulse outputs are available.

KEY FEATURES

- Simple and economical as a mechanical meter
- No moving parts
- Built-in pulse output
- Minimal straight pipe required
- Continuous battery or external power
- Empty pipe detection
- Low battery warning
- Built-in data logger
- Telemetry-ready
- Solar-compatible
- E-Coder® absolute encoder output
- Wide operating range
- 100 +/-1.0% accuracy

SPECIFICATIONS

- Application: cold water measurement of flow in one direction
- Maximum operating pressure: 175 psi (1206 kPa)
- Register: direct reading, 6-digit rate, and 8-digit totalizer
- Measuring element: electromagnetic
- Flanges: round flanged ends per ANSI Class 150 lb.
- NSF/ANSI 61 pending

OPTIONS

- Sizes: 4", 6", 8", and 10"
- Units of measure: U.S. gallons, imperial gallons, cubic feet, cubic metres
- Register types:
 - E-Coder 8-digit encoder output for AMR/AMI Systems
 - Direct visual readout
- Remote reading systems: R900 AMR and R450 AMI Systems

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