

# MAGNUM

## Magnetic Insertion Flowmeter

Magnum is a magnetic flowmeter for measuring the flow of conductive fluids in pipes ranging from 3" to 120" and above.

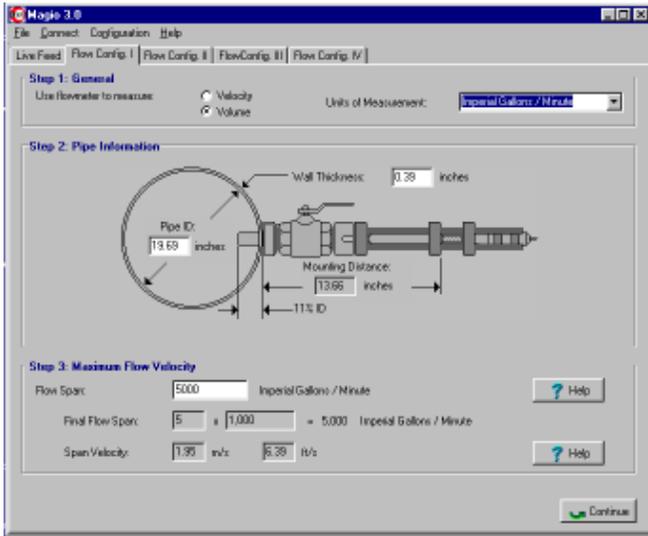


Magnum is an entirely digital instrument. All internal functions of the flowmeter are controlled by software. Setup and configuration for applications are handled by the Magio 3.0 software interface, which runs on any Windows based PCs. Setup can be done in the field on a laptop or in the office at a desktop PC.

Once the setup is completed the instrument can be installed through a 2" NPT tap. The only requirements are cabling for power in (12 VDC) and signal out (4-20mA). The Magnum also features optional hardware for data-logging.



[www.maggmeter.com](http://www.maggmeter.com)



The Magnum can measure flow in pipes of any size. Hydraulic experiments at the University of Alberta have established that the mean velocity of any liquid flowing through any pipe is to be found at 11% of the pipe's diameter. The Magnum can be inserted to that point in any pipe, because it uses a sensor and a universal mount which allow a wide range of insertion depths. All the user needs to do, is to program the new pipe size into the Magnum's computerized transmitter.

The 11% insertion depth also has another advantage. It allows the force of the flow itself to clean the electrodes of the sensor, which in conventional in-line magmeters often become coated, because they are too close to the pipe-wall, where the lowest velocities are usually found.

The Magnum should be installed a minimum distance from up or downstream flow obstacles, and not near possible air-pockets. The universal mount is a unique feature of this instrument. It is what allows the adjustable insertion depth and provides the Magnum such a wide range of application; but even more important to those who want to decrease their installation costs, limit their maintenance budget, and avoid shutdowns, the universal mount allows installation, removal and re-insertion under full pipe-pressure.

The Magnum can be installed on any existing pipe by one single person, without having to shut down the line. It can be removed for maintenance simply and safely, and is rugged enough to withstand anything you can throw at it. Chances are that the pipe will need to be replaced before the flowmeter.

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### Sensor and Mounting

01	mounting	2" NPT tap
02	insertion mechanism	anodized aluminum
03	mounting nipple	316SS or Hastelloy
04	o-rings	Buna or Viton
05	lock nut	anodized aluminum
06	position nut	anodized aluminum
07	position ring	316 SS
08	snap ring	spring steel
09	sensor type	cylindrical probe, ex-proof
10	sensor body	SS316 or Hastelloy
11	electrode type	conical protruding
12	electrode material.	Hastelloy
13	sensor tip	Kynar
14	grounding type	integral body
15	operating pressure	up to 1000 psi
16	liquid	conductive
17	max. Velocity	unlimited
18	min. velocity	.25 inch/s
19	ambient temperature	up to 45C
20	process temperature	up to 80C
21	precision	0.5% of velocity at 100% of selected range
22	line size	user selectable (3" - 50" standard model, 3" - 120" x-long model)
24	line material	all types
25	repeatability	99.5%

### Transmitter

26	transmitter	micro-processor based
27	analog output	0/4 to 20mA
28	impedance	800 ohm
29	protection	isolated
30	pulsed output	pulse/unit
31	communication	RS 232
32	indications	insertion depth reverse flow
33		engineer units
34	user selectable	pipe dimension flow rate span auto ranging digital filtering
35		
36		
37		
38		
39	power supply	12V DC (120VDC optional)



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