InFLOW, INC.

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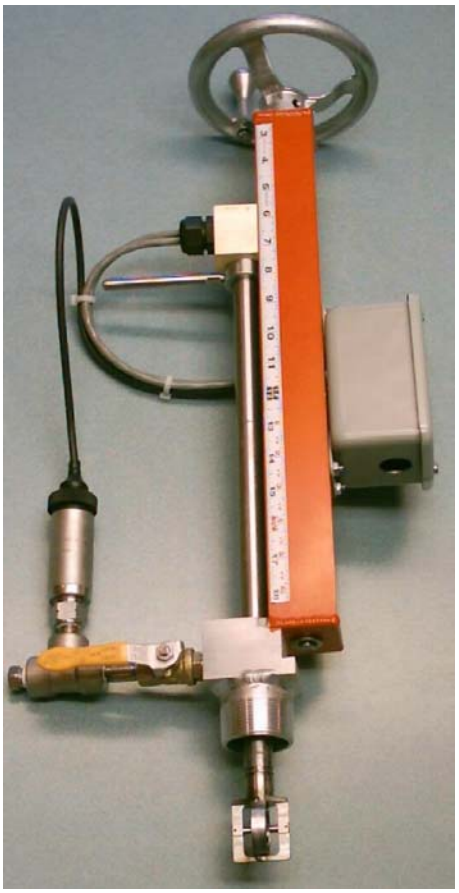
INSERTION TURBINE METER

Model ITM100

InFLOW, INC. announces the availability of its new line of Hot Tappable Insertion style Turbine Flow Meters. Ideal for HVAC and general industrial applications, now there is a cost effective solution for metering larger pipe lines. Three models are available for liquids, gases, and steam. In addition, the ITM100 offers options for onboard computer performance enhancement, pressure &/or temperature compensation, and industry standard interface.



FEATURES:

Cost effective design for liquid, gas, and steam
Light weight turbine for enhanced performance
Carbide/jewel bearings for low friction and long life
Standard "Hot Tap" design fits in 1½" pipe fitting
Wide variety of electronic enhancements
All units are factory wet calibrated
Made in USA

APPLICATIONS:

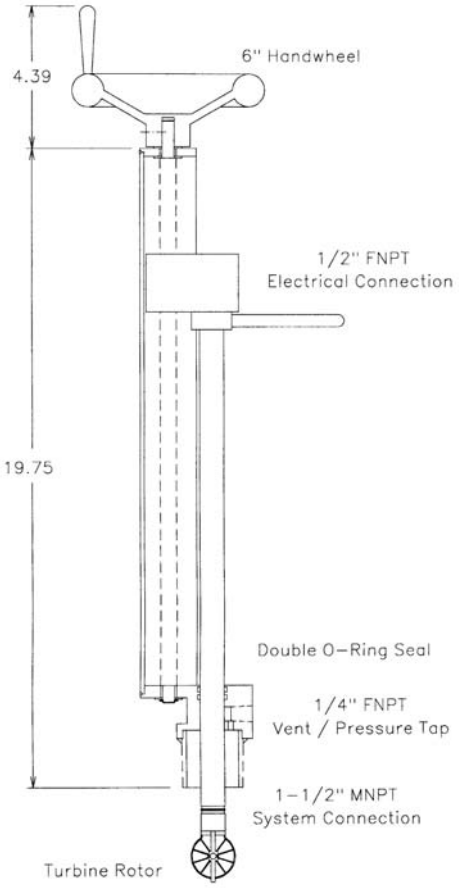
Liquids such as chilled / hot water, brine, glycol to 500 psiG
Gases such as natural gas, propane, nitrogen, air, and
Steam to 250 psiG / 400 F
1½" to 46" and larger line sizes

The ***Model ITM100*** includes a stainless steel jack screw to insert and remove the turbine sensor with up to 14" (356mm) of total travel. The standard retractor housing is from aluminum with an all SS version available. Bronze bushings are used to minimize lubrication requirements. Double o-ring seals are used for positive sealing. A vent valve is included for pressure release if the unit is to be removed. The unit comes with a system mounting kit, which includes a threaded 1½" weld fitting and approved ball valve.

The stainless steel turbine sensor uses the latest manufacturing technology to achieve light weight with precision geometry. A number of blade angles are available to cover a wide range of flow rates. A variety of bearing types are used to handle liquid, gas, and steam services.

Pressure and temperature sensor options are available to allow "one hole" measurement of these parameters in addition to flow rate. Onboard electronics is available with such features as; enhanced performance range, pressure &/or temperature compensation, rate & total display, and industry interface. All outputs can be ordered in a NEMA weatherproof, NEMA 4X, or NEMA XP enclosures.

GENERAL SPECIFICATIONS:



Fluids: Clean liquids (<5cP), gases, steam compatible with SS	
Liquid performance (line velocity):	
Typical Flow range:	0.6-22.5 Ft/sec (0.2-6.9 M/sec)
Maximum allowable:	20% intermittent over range
Linearity:	Preamp output dependent, CF for details
Gas / Steam performance (line velocity):	
Typical flow range:	Code -4: 2.6-32.3 Ft/sec (0.8-9.8 M/sec) Code -3: 3.0-46.9 Ft/sec (0.9-14.3 M/sec) Code -2: 5.3-74.3 Ft/sec (1.6-22.6 M/sec) Code –15: 6.8-101.0 Ft/sec (2.1-30.8 M/sec) Code -1: 9.0-153.5 Ft/sec (2.7-46.8 M/sec)
Minimum useable:	Dependent on gas density, CF
Maximum allowable:	20% intermittent over range
Linearity:	Preamp output dependent, CF for details
Repeatability, all:	+/-0.25% Reading typical
Bearings:	Liquid: WC / sapphire journal Gas: WC / sapphire vee jewel Steam: WC / WC vee jewel
Sensor materials:	SS, WC, sapphire
Retractor materials:	Standard build: AL, Brass/bronze, Zn, SS, elastomer (service dependent), PVC, TFE SS build: SS, Brass/bronze, Zn, elastomer (service dependent), PVC, TFE
System pressure:	Standard build: to 250 psiG (17 BarG) SS build: to 500 psiG (34 BarG), CF
System temperature:	Standard build: 225 F (121 C) SS build: to 400 F (204 C) optional
Ambient temperature:	-40 to 140 F (60 C)
Retractor travel:	14" (356mm)
Insertion depth:	To 6" (152mm) with standard valve
Mounting:	1½" CS threaded weld fitting
Line Size:	1½" to 46" with standard mounting kit
Straight run requirements:	10D upstream / 5D downstream typical, application dependent
Base output:	TTL compatible pulse
Output options:	Linearized pulse, engineered pulse, analog, industry standard serial interface, rate / totalizer display
Enclosure:	NEMA 4 standard, 4X, XP available

DESCRIPTION:

Flow meter shall be an InFLOW, INC. model ***ITM100*** or equivalent. Meter shall be insertion type turbine with integral retractor assembly, which can be installed using the hot tap procedure. The meter shall require no larger than a 1½" system opening for installation. The meter shall utilize a light weight (low mass style) turbine element for flow rate sensing. Turbine element parts shall be from stainless steel, tungsten carbide, or man made jewels. Meter shall be constructed such that minimal pressure drop is realized even at maximum flow rates. Each individual unit shall be wet calibrated to assure performance. Where required by the application, integral pressure &/or temperature sensors shall utilize the same mounting point. Where required by the application electronic outputs shall include; TTL compatible pulse, analog, and industry standard interface.