

# ACCESS

## Instrumentation



### A-6500 Series Liquid and Gas Inline Turbine Meters

#### Features

- Wide Range Meter of Sizes
- Continuous, On-Line flow Measurement
- High Levels of Accuracy and Repeatability
- 10:1 Flow Range
- Low Pressure Drop
- Wide Range of Applications
- Individually calibrated
- Third Party Calibration Can Be Offered
- Ease of Repair; On-Site or Work Shop

#### DESCRIPTION

When customers need a cost effective, accurate and reliable way of flow metering, Access Instrumentation Limited has the solution. Access Instrumentation Limited inline turbine flowmeters for liquid or gas are widely used in the oil and gas, petrochemical and water treatment sectors and are designed to handle tough industrial applications at a competitive price.

The turbine meter consists of a body (with flanged or threaded process connections) that contains a rotating impeller which rotates at a speed directly proportional to the flow rate. The rotor, manufactured from magnetic stainless steel, generates a pulsed output as the blades rotate through the flux field of a magnet that is contained in the pickup assembly. This feature allows the instrument to function without the need of a power supply which enables it be installed in a remote location with a battery powered totalizer if required. The flow measurement data can be read in the field via the local display or can be transmitted to a DCS. Alternatively, a 4-20mA output can go directly into the customer's own process control system.

Turbine Meters are easy to install due to their compact design, which results in minimal downtime for installation and maintenance. Most models are available with standard NPT or BSP threads or a variety of ANSI or DIN flanges.

#### SPECIFICATION

##### Flowmeter:

Linearity: (Liquids)  $\pm 0.25\%$  of reading for 2.5" meters and above  $\pm 0.5\%$  reading for 2" meters and below

Linearity: (Gases)  $\pm 1\%$  of reading

Repeatability:  $\pm 0.02\%$  to  $\pm 0.05\%$  dependent on size

Pressure drop: (Liquids) Typically 4psi (275mBar) at normal maximum flow rate in water

(Gases) Typically less than 0.4" water gauge (1 mBar) at 100% flow rate dependent on gas density

Maximum pressure: Flange meters: to flange specification.

Threaded meters: 3625psig (250 Bar)

##### Materials of construction:

Body: 316 stainless steel

Flanges: forged carbon steel or stainless steel

Sleeve bearings: tungsten carbide shaft, Stellite sleeve

Ball bearings: stainless steel ANSI 440C

##### General:

Hazardous area certification: ATEX Ex ia IIC T6 or Ex d IIC T6 (IP65)

Installation: Install in pipeline with at least 10 pipe diameters of straight length upstream and 5 diameters downstream of the flowmeter.

##### Outputs:

Standard: mV pulse typically 100mV peak-to-peak at 0.91m/s (3ft/s)

Pre-amplifiers: ISPA8700 4-20mA current modulated pulse, FI8500 Frequency to current (4-20mA) analogue convertor. **Other outputs and display options are available.**

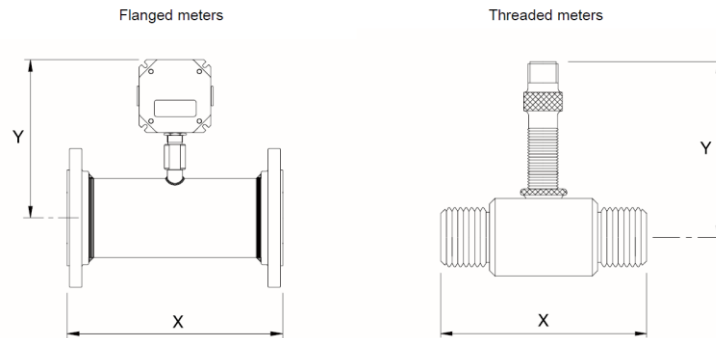
##### Electrical:

Power supply: Not required for mV pulse, 24Vdc loop for ISPA8700 and FI8500,

Termination: 2 pin Cannon as standard, Terminal block housed in conduit box, Screw terminals on pre-amplifiers,

Junction box cable entry: 0.5" NPT or M25.

## DIMENSIONS



Nominal bore size		Flanged meters				Threaded meters			
		X end to end		Y centerline to top of conduit		X end to end		Y centerline to top of pick-up	
inches	mm	inches	mm	inches	mm	inches	mm	inches	mm
1/4	6	4 1/2	114	5	127	2	51	5	127
1/2	13	5	127	5	127	2 1/2	64	5	127
5/8	16	5	127	5 1/4	133	2 1/2	64	5	127
3/4	19	5 1/2	140	5 1/2	140	3 1/4	83	5 1/4	133
1	25	6	152	5 3/4	146	3 1/2	89	5 1/2	140
1 1/2	38	7	178	6	152	4 1/2	114	6	152
2	51	7 3/4	197	6 1/2	165	5 1/4	133	6 1/2	165
2 1/2	64	10	254	7	178				
4	102	14	356	10	254				
6	152	14 1/2	368	11	279				
8	203	18	457	12 1/4	311				
10	254	18	457	13 1/4	336				
12	304	18	457	14 1/4	362				

### Meter Sizes And Flow Range

SIZE CODE & NOMINAL BORE		FLOW RANGE (LIQUID)		FLOW RANGE (GAS) ACTUAL	
SIZE CODE	NOMINAL BORE	M <sup>3</sup> /h	USGPM	M <sup>3</sup> /h	Ft <sup>3</sup> /min
C	.5" (6mm)	0.11 to 1.1	0.48 to 4.8	0.44 to 3.3	0.25 to 1.9
D	.625" (15mm)	0.22 to 2.2	0.96 to 9.6	0.88 to 6.6	0.5 to 3.8
E	.625" (15mm)	0.4 to 4	1.8 to 18	1.6 to 12	1.0 to 7.5
F	.75" (19mm)	0.8 to 8	3.6 to 36	3.2 to 24	2.0 to 15.0
G	1" (25mm)	1.6 to 16	7.0 to 70	6.4 to 48	5.0 to 30
H	1.5" (38mm)	3.4 to 34	15 to 150	10 to 100	6 to 60
J	2" (50mm)	6.8 to 68	30 to 300	20 to 200	12 to 120
K	2.5" (63mm)	13.5 to 135	60 to 600	40 to 400	24 to 240
L	4" (100mm)	27 to 270	120 to 1200	80 to 800	48 to 480
M	6" (150mm)	55 to 550	240 to 2400	160 to 1600	100 to 1000
N	8" (200mm)	110 to 1100	480 to 4800	320 to 3200	200 to 2000
P	10" (250mm)	190 to 1900	840 to 8400	500 to 5000	300 to 3000
R	12" (300mm)	270 to 2700	1200 to 12000	800 to 8000	450 to 4500
S	16" (406mm)	400 to 4000	1800 to 18000	1200 to 12000	675 to 6750

### Access Instrumentation Ltd

Unit 45, New Forest Enterprise Centre, Chapel Lane, Totton, Southampton, Hampshire, SO40 9LA, U.K.

Tel: +44(0)23 8088 5000

Email: sales@accessinstrumentation.co.uk

Web: www.accessinstrumentation.co.uk