

# IC-LTM TURBINE SERIES

## Axial Turbine Flow Meters for Accurate Measurement of Liquids and Gases

The IC-LTM series of industrial in-line turbine flow meters provide a high standard of accuracy and reliability in a large number of volumetric flow measurement applications.

- Wide range of line sizes
- Accurate measurement with excellent linearity & repeatability
- Rugged stainless steel construction
- Versatile, adaptable design with custom options
- High pressure rating up to 1000 bar
- High temperature option up to 350°C
- Selection of flow instruments & displays for compact or remote installation
- Choice of outputs including pulse, 4-20 mA
- ATEX rated option

Rugged  
Compact or Remote  
Adaptable Versatile  
Repeatable Accurate



SPECIFICATION details	
Nominal size	DN6, DN15, DN20, DN25, DN40, DN50, DN80, DN100, DN150 (other sizes on request)
Process connection	BSPP (parallel) & BSPT (taper) female thread, DIN & ANSI flanged; other on request eg PNXX, tri-clamp, NPT, RJT, Weco, BSP 60° cone fitting to ISO 8434-6 (BS 5220)
Flange rating	PN 16, 40, 100 (BS EN 1092-1); ANSI 150, 300, 600 RF (ANSI B16.5) Slip on and Butt Weld type BSP fittings
Compatibility	Solids free and partially contaminated liquids including water, chemicals, hydrocarbons, mineral oils, alcohols
Flow range	0.028 to 550 m <sup>3</sup> /hr (0.5 to 9166 l/min), various ranges
Operating temperature	Standard: -40 to 230°C High: -40 to 350°C (excludes ATEX)
Max operating pressure	All threaded bodies: Standard design 15-80mm up to 250 bar (1000 Bar Optional) Flanged bodies: Depends on flange rating operating temperature range
Frequency range	50-2500 Hz
Pressure drop	Typically less than 250 mbar at maximum flow rate (standard ranges without flow restrictor)
Linearity	< ± 0.25% of reading (selected range) < +/- 0.5% of reading (linear range) over 1-5 cSt
Repeatability	0.02 to 0.05% over stated conditions at operating viscosity range
Materials	Body: 316 (std); other materials available e.g. Incoloy Rotor: 431 stainless steel others materials available e.g. 17-4PH, Super Duplex Rotor shaft: 316 stainless steel; Tungsten Carbide Bearings: Tungsten Carbide, Stainless steel ball race, Jewel.
Output/display	Variable reluctance coil only (mV); pulse / analogue output modules; flow transmitter
Installation	Horizontal or vertical flow rising, full pipe only

# VERSATILE CONFIGURATIONS

## Ordering information for the IC-LTM Turbine Flow Meter

IC-LTM	Nominal size, flow range (based on H <sub>2</sub> O at 20°C)				
	Standard flow range		Extended flow range*		
	Bore dia. (conn.)	m <sup>3</sup> /hr	l/min	m <sup>3</sup> /hr	Imp GPM
006B	6 mm (3/8")		0.4 - 10		
012A	12 mm (1/2"), 0.11 - 1.1		1.8 - 20	0.5 - 1.1	0.16 - 4
016A	16 mm (5/8"), 0.22 - 2.2		3.6 - 36	0.088 - 2.2	0.35 - 8
016B	16 mm (5/8"), 0.4 - 4		6.6 - 66	0.16 - 4	0.6 - 15
020A	20 mm (3/4"), 0.8 - 8		13 - 133	0.32 - 8	1.2 - 30
025A	25 mm (1"), 1.6 - 16		26 - 266	0.64 - 16	2.4 - 60
040A	40 mm (1.5"), 3.4 - 34		56 - 566	1.15 - 34	4.2 - 125
050A	50 mm (2"), 6.8 - 68		113 - 1133	2.3 - 68	8.5 - 250
080A	80 mm (3"), 13.5 - 135	13.5-135m <sup>3</sup> /hr		4.5 - 135	17 - 500
100A	100 mm (4"), 27 - 270	27 - 270m <sup>3</sup> /hr		9 - 270	33 - 990
150A	150 mm (6"), 55 - 550	55 - 550 m <sup>3</sup> /hr		18 - 550	66 - 2000
020Z	Other sizes and flow rates on request				

Flow range: standard/extended (see above for values)

S	Standard
E	Extended

Flow direction

S	Single
B	Bi-directional

Process connection

A	BSPP (parallel) male
B	BSPT (taper) male
C	PN16
D	PN40
E	PN100
F	ANSI 150 RF
G	ANSI 300 RF
H	ANSI 600 RF
Z	Other on request (eg. PNXX, tri-clamp, NPT, RJT etc)

Bearings

B	Ball Race
T	Journal

Max operating temperature

S	Standard: -40 to 230°C
H	High: -40 to 350°C

Approvals

0	General purpose
1	ATEX

Output/display

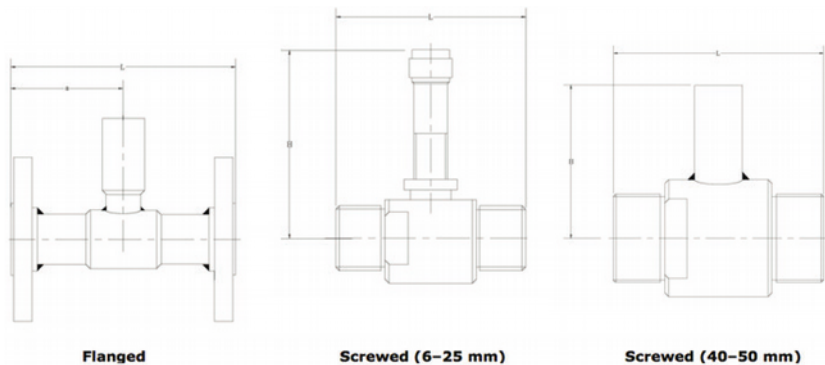
0	Coil only
P	IC-MV-PO pulsed output module
A	IC-MV-AN analogue output module
D	Flow transmitter / display (specify separately)

Mounting of instrument

0	No instrument
C	Compact (locally mounted on flow sensor)
R	Wall mounted, incl. bracket (up to 3m from sensor, please specify)

Options

0	None
1	Specify options



Contact us for dimensions of display fitting.

## Dimensions

Nominal Size (Bore)	Flanged		Screwed	
	L mm	H mm	L mm	H mm
6 mm (1/4")	114		51	92
12 mm (1/2")	127	69	63.5	94
16 mm (5/8")	127	69	63.5	94
20 mm (3/4")	140	72	83	96
25 mm (1")	152	75	89	98
40 mm (1.5")	178	78	114	82.5
50 mm (2")	197	78	134	92
80 mm (3")	254	92	200	
100 mm (4")	356	110		
150 mm (6")	368			

## Instrument Options available

Type	Coil only	IC-MV-PO pulse output module	IC-MV-AN analogue output module	FI110/FI210/F220 battery/powered Flow transmitter	E & F Series ATEX
Input	-	20-200mV peak to peak	20-200 mV peak to peak	mV/Pulse/4-20 mA	mV/Pulse/4-20 mA
Frequency range	50-2500 Hz	30-1000 Hz	25-2500 Hz	0-10000 Hz	0-60 Hz (E Series) 0-500 Hz (F Series)
Supply voltage	-	5-24 Vdc	24 Vdc	Battery/24 Vdc 110/240VAC	24 Vdc 110/240VAC
Outputs	mV	Open collector PNP/NPN selectable	4-20 mA, 2 wire current loop	Open collector pulse, 4-20 mA, relay/external loop power	Open collector pulse, 4-20 mA relay, Hart & Modbus
Operating temp	-	-10 to 55°C	-10 to 55°C	-10 to 55°C	-40 to 70°C
Rating	IP65, ATEX* (optional)	IP65	IP65	FI110:IP67 FI210:IP67, ATEX (consult factory)	IP67

\* ATEX rating optional

Calibration certificates are available for entire LTM product range

## Order code example

