

Gx Turbine Flowmeters

The Gx range of Turbine Flowmeters are suitable for the measurement of dry gases (inert and flammable) and are designed to operate at line pressures down to 15 mbar .

They comprise of one cartridge assembly, fitted inside a stainless steel body (locked with an internal circlip) , which has a magnetic pick up fitted and come in a range of threaded , flanged or wafer (designed for between flange installations) styles .

The Rotor (fitted with low inertia , precision bearings) is turned by the kinetic energy of the flowing gas at an angular velocity , which in the linear range of the Flowmeter is proportional to the mean axial velocity of the gas .

The Rotor blades sweep out the full bore of the meter except for a small tip clearance space . As the blade tips pass the magnetic pick up they initiate a pulse . Flow rate is determined by the frequency of the pulses and Totalised Flow is obtained by summing the pulses .

“ 101 “ Totalisers , which sum the pulses automatically and display Flow Rate and Total Flow instantly on the readout can be mounted on the Turbine or fitted remotely .

GENERAL SPECIFICATIONS

Materials

Body	: 316 Stainless Steel .
Rotor Support	: 316 Stainless Steel .
Ball Race Bearings	: 440C Stainless Steel .
Rotor	: ANC1A Stainless Steel .
Rotor Shaft	: 316 Stainless Steel .



Performance

Linearity	: +/- 2.0 % (better than 0.5 % when used with “ 101” Totaliser) .
Repeatability	: +/- 0.2 % .
Temperature	: - 30 °C to + 120 °C .
Pressure Drop	: 12 mbar at maximum quoted Flow rate (based on test pressure of 1 bar)

Style

BSP	: BSPP Male Threaded .	NPT	: NPT Male Threaded .
FL1	: ANSI 150 Flanged .	FL2	: ANSI 300 Flanged .
FL3	: BS 4504 (DIN) PN16 .	FL4	: BS 4504 (DIN) PN25 .
WAF	: Wafer .		



Option

IS : Intrinsically Safe Pick Up

Gx Turbines fitted with the intrinsically safe pick up (IS option) are suitable for Hazardous Installations (Eex ia IIC T4) .

BSP & NPT Style **Maximum Pressure : 250 Bar**

Style Size	Connection	Flow Range (m ³ / h)	Length (mm)
3/8 "	1/2" BSP or NPT	0.3 – 4.2	70
1/2"	1/2" BSP or NPT	0.5 – 7	70
5/8 "	3/4" BSP or NPT	1 – 14	76
3/4"	3/4" BSP or NPT	2.5 – 35	76
1"	1" BSP or NPT	5 – 70	88
1 1/2"	1 1/2" BSP or NPT	10 – 140	114
2 "	2 "BSP or NPT	18 - 252	133

FL1 Style **Maximum Pressure : 19 Bar** **FL2 Style** **Maximum Pressure : 29 Bar****FL3 Style** **Maximum Pressure : 16 Bar** **FL4 Style** **Maximum Pressure : 25 Bar**

Style Size	Connection	Flow Range (m ³ / h)	Length (mm)
3/4"	3/4 FL1 , FL2 , FL3 or FL4	2.5 - 35	140
1 "	1 " FL1 , FL2 , FL3 or FL4	5 – 70	152
1 1/2"	1 1/2" FL1 , FL2 , FL3 or FL4	10 - 140	165
2 "	2 " FL1 , FL2 , FL3 or FL4	18 - 252	165
3 "	3 " FL1 , FL2 , FL3 or FL4	35 - 490	165
4 "	4 " FL1 , FL2 , FL3 or FL4	70 – 980	210
6 "	6 " FL1 , FL2 , FL3 or FL4	140 - 1960	240

WAF Style **Maximum Pressure : 100 Bar**

Style Size	Connection	Flow Range (m ³ / h)	Length (mm)
3/4"	43 mm R.F. Diameter	2.5 - 35	50
1 "	52 mm R.F. Diameter	5 – 70	50
1 1/2"	73 mm R.F. Diameter	10 - 140	64
2 "	92 mm R.F. Diameter	18 - 252	76
3 "	127 mm R.F. Diameter	35 - 490	100

Order code : Gx / Style / Size / (Option)

e.g. : Gx / NPT / 3/4 " / IS

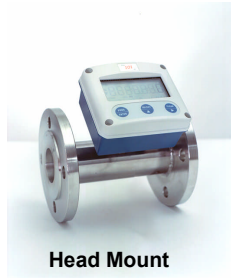
Internals Kit 's (calibrated) can be supplied , which are very easy to retrofit in to an existing Body on location , (eliminating the need to return the Turbine) .

Gx Internals Kit Order code : Gx / Style / Size

e.g. : Gx / FL1 / 3

Gx Turbines can be “ custom made to your requirements “

101 Totalisers



Head Mount

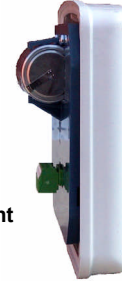


Remote Mount

GENERAL SPECIFICATIONS

Display	: Large LCD 40mm x 90mm , with seven 17mm and eleven 8mm digits .
Control Buttons	: Three touch buttons on U.V. resistant polyester key pad .
Casing	: High Impact , U.V. resistant , flameproof ABS – IP 66 case .
Dimensions	: 130mm x 114mm x 71mm (L x H x D) .
Operating Temperature	: - 20 ° C to +70 ° C .
Configuration	: Configuration is done at SET UP level .
Password	: All settings can be password protected .
Data Protection	: EEPROM back up of all settings . Accumulated Total backed up every minute .
Input Frequency	: 0.01 Hz to 10 kHz .
Selectable Units	: TOTAL : L , GAL , bbl (barrels) , m ³ , kg , lb or no unit in 0.67 " digits . : FLOWRATE : L , GAL , bbl (barrels) , cf , m ³ , kg , lb or no unit in 0.32 " digits : TIME UNITS : / second , / minute , / hour or / day .
Tag Number	: A seven digit identification number can be entered for Screen notification .
Environment	: EMC compliant ref : EN50081 and EN50082 .

Panel Mount



MODELS

101 Totaliser and Flow Rate Indicator

Features	: Totaliser and Flow Rate indication with Linearisation .
Power	: 3 V Lithium Battery (average life 5 years) , although an 8 – 28 V D.C. supply can be connected .
Information	: Total , Flow Rate , Accumulated Total and measurement units . # Total can be reset to zero . Accumulated Total is not resettable .

101 I Suitable for Hazardous Area Installation . Eex ia IIC T4 .

101 a Totaliser and Flow Rate Indicator with Analogue and Pulse output

Features	: Totaliser and Flow Rate indication with Linearisation . 4 – 20 mA output in relation to Flowrate . Pulse output in relation to Accumulated Total .
Power	: 3 V Lithium Battery (average life 5 years) , although an 8 – 28 V A.C. / D.C. supply or 4 – 20 mA loop (28 V max) can be connected .
Information	: Total , Flow Rate , Accumulated Total and measurement units . # Total can be reset to zero . Accumulated Total is not resettable .

101 ai Suitable for Hazardous Area Installation . Eex ia IIB T4 .

101 b Totaliser and Batch Controller with Pulse output

This Batch Controller is a straight forward device offering exactly what is required for the majority of applications . The operator can enter a preset batch value easily or execute repeated batches . During the batch run , the preset batch value is displayed as well as the batched quantity and units of measurement . An overrun correction ensures an accurate batch quantity . The running batch quantity (0.67 " digits) can be set to count up or down . Two transistor outputs are available for either 1) pulse output and one stage batch control or 2) two stage batch control .

- Features : Preset Batch Value indication .
Overrun correction .
Pulse output mirroring count on display .
One or Two stage batch control .
- Power : 3 V Lithium Battery (average life 5 years) , although an 8 – 28 V A.C. / D.C. supply can be connected .
- Information : Preset Batch Value , Quantity Batched , Total , Accumulated Total and measurement units .
Total can be reset to zero . Accumulated Total is not resettable .

101 bi Suitable for Hazardous Area Installation . Eex ia IIB T4 .

101 c Totaliser and Flow Rate Indicator with Critical Alarm output

- Features : Totaliser and Flow Rate indication .
High and Low Alarm Flowrate Monitoring .
Two Alarm Outputs .
4 – 20 mA output in relation to Flowrate .
- Power : 3 V Lithium Battery (average life 5 years) , although an 8 – 28 V A.C. / D.C. supply can be connected .
- Information : Total , Flow Rate , Accumulated Total , Alarm Points and measurement units .
Total can be reset to zero . Accumulated Total is not resettable .

101 ci Suitable for Hazardous Area Installation . Eex ia IIB T4 .

101 d Totaliser , Flow Rate and Direction of Flow Indicator

- Features : Totaliser and Flow Rate indication .
Quadrature input for bi – directional measurement .
4 – 20 mA output in relation to Flowrate .
Pulse output in relation to Accumulated Total .
Flow Direction output .
- Power : 3 V Lithium Battery (average life 5 years) , although an 8 – 28 V A.C. / D.C. supply can be connected .
- Information : Total , Flow Rate , Accumulated Total , Flow Direction and measurement units .
Total can be reset to zero . Accumulated Total is not resettable .

101 di Suitable for Hazardous Area Installation . Eex ia IIB T4 .

Options (available on models a , b , c and d)

PS : 80 – 230 V A.C. Power Supply

MC : Modbus Communication RS 485

Order code : Model / (Option)

e.g. : 101a / PS