

TURBINE FLOWMETERS BY HOFFER

Perfecting Measurement™



HO SERIES AUTOCLAVE®
Turbine Flowmeters
for Gas Service

Product Bulletin HA-G-001D

TECHNICAL DATA SHEET

OUTSTANDING FEATURES

- Maximum working pressure of 10,000, 15,000 and 20,000 psi dependent upon line size.
- Outstanding accuracy.
- Provides wide flow ranges (10:1 to 100:1 turndown ranges available).
- Autoclave® end connections.



GAS SIZE SELECTOR CHART FOR STANDARD HO SERIES TURBINE FLOWMETERS

Flowmeter Size Diameter (inches)	Repeatable Range** Based on a Gas Density of 1#/Ft ³		Repeatable Range** Based on a Gas Density of .25#/Ft ³	
	Magnetic Coil (ACF/M)	MCP Coil (ACF/M)	Magnetic Coil (ACF/M)	MCP Coil (ACF/M)
1/4	N/A	.15 – 3.5	N/A	.3 – 3.5
3/8	N/A	.3 – 5	N/A	.6 – 5
5/8	N/A	.5 – 10	N/A	1 – 10
3/4	N/A	.6 – 20	N/A	1.2 – 20

This chart is for quick reference only and not for final size. Calculate using actual service conditions.

**Lower limit of flow range is dependent on user's operating density.

SPECIFICATIONS

Ovrange: 150% of maximum flow (intermittently).

Linearity: ±2.00% of reading with water calibration. ±1.00% with gas calibration. Linearity is density dependent for a given meter. Consult factory for details.

Repeatability: ±0.25% over tabulated repeatable range.

Note: Performance enhancement techniques are routinely applied to produce wider linear and useable flow ranges. This technique is also used to improve linearity and repeatability. Consult the applications group at Hoffer with your requirements.

Available Turn Down Range: 10:1 to 100:1.

Available Temperature Range: -450°F to +300°F Standard. Refer to various flowmeter configurations for pressure ratings, outline dimensions and available sizes.

Pressure Drop Characteristics: 4 to 5 PSI at maximum linear flow rate.

End Fittings: 3/4" & 1" Autoclave® male thread.

Bearing Styles: Self-lubricating, ceramic hybrid ball bearings.

Materials: 316/316L dual rated stainless steel standard. Consult with applications group for corrosive applications. Broad material list available.

PRESSURE RATINGS:

Turbine Size	Autoclave® Fitting Size	Pressure Ratings PSIG/BARG*
1/4	3/4	15,000/1034
3/8	3/4	15,000/1034
1/4	1	20,000/1380
3/8	1	20,000/1380
5/8	1	10,000/689
3/4	1	10,000/689

*Pressure ratings based on max/min working temperature of 400°F.

AUTOCLAVE® GAS TURBINE FLOWMETER MODEL NUMBERING SYSTEM

MODEL HO (A) X (B) - (C) - (D) - (E / F / G) - (H) - (I)

A. End Fitting Size

B. Flowmeter Size

C. Blade Angle Assigned by the Gas Sizing Program

D. Bearing Type

(BP) Ceramic Hybrid Ball Bearing, Self-Lubricating.

E. Pickup Coils

(1M) One Magnetic Coil
(2M) Two Magnetic Coils

(1MC3PA) One RF Coil
(2MC3PA) Two RF Coils

(1ISM) Intrinsically Safe Mag Coil (FM/UL)
(2ISM) Two Intrinsically Safe Mag Coils (FM/UL)

_(RP___) Redi-Pulse Coil (See Redi-Pulse Technical Data Sheet RP-XXX)
_(_____) Intrinsically Safe Redi-Pulse Coil (See I.S. Redi-Pulse Technical Data Sheet IRP-XXX)

(P) Pigtail or Flying Leads, Add-P and the Length of leads after any coil except the high temperature coils.

(-ATEX) Add after ISM coil part no. when ATEX rating is required.

F. Coil Spacing, Mechanical Degrees Apart

() Factory Assigned. Spacing required when meter has two pickup coils.

G. Explosion-Proof Coil Enclosures

(X) 1" MNPT riser, welded to body.
(X-ATEX) 3/4" MNPT riser, welded to body.
(XE2) 1" MNPT riser with E2 Enclosure. Includes 1"x3/4" adapter.*
(X-ATEX)E2 3/4" MNPT riser with E2 Enclosure.*
(X8S) 8" Long S/S 1" MNPT for fluid temperatures below-40°F(-40°C) or above +140°F (+60°C)
(X8S-ATEX) 8" Long S/S 3/4" MNPT for fluid temperatures below-40°F(-40°C) or above +140°F(+60°C)

***Notes:** Explosion-proof/Flame-proof enclosure with 3/4" FNPT mount and 3/4" cable entry.
FM: CLASS I, DIV. 1, GR. ABCD, CLASS II/III, DIV. 1, GR. EFG, TYPE 4X
CSA: CLASS I, DIV. 1, GR. ABCD, CLASS II, DIV 1, GR. EFG, CLASS III, TYPE 4X
ATEX: EX II 2GD Ex d Td iic, ip66/68
IEC: EX D IIC IP68

FOR UL LISTED ENCLOSURE, CONTACT FACTORY.

H. End Fitting Types

(AC/3/4") 3/4" Autoclave® P/N SF750CX Male Threaded End
(AC/1") 1" Autoclave® P/N SF1000CX Male Threaded End

I. Special Features

(CE) CE Mark - Required for Europe
(PED-CE) PED Mark- Required for Europe
(SEP-CE) Sound Engineering Practice
(PT) 1/4" Pressure Tap (AGA Compliant)
(SP) Any special features that are not covered in the model number, use -SP and a written description.
(X) No Special Features

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The specifications contained herein are subject to change without notice and any user of said specifications should verify from the manufacturer that the specifications are currently in effect. Otherwise, the manufacturer assumes no responsibility for the use of specifications which may have been changed and are no longer in effect.

