

TURBINE FLOWMETERS BY HOFFER

Perfecting Measurement™

INDUSTRIAL★STAR★SERIES
TURBINE FLOWMETERS FOR LIQUID SERVICE
Product Bulletin HO-STAR-105H

TECHNICAL DATA SHEET

INDUSTRIAL★STAR★SERIES for Liquid Flow Measurement

- ◆ Low Cost
- ◆ Reliable
- ◆ Accurate
- ◆ Rugged



Model Number										Technical Data				
Flowmeter Size (Inches) Size (Inches)				(Ref. Note 1) Linear Flow Range (US GPM)		(Ref. Note 2) Bearing Type	(Ref. Note 3) Magnetic Pickup Coils and Enclosure Option	MNPT End Fitting	IND Series	Approvals	Nominal Pulses/Gallon 'K' Factor Pulses/Gallon	Nominal Max. Frequency (Hz)	Length (inches)	Working Pressure PSI
				Min.	Max.									
Model HO	1/2	X	1/4A	-0.35	-3.5	-C -BP	-1M -1MX -XE2	-NPT	-IND	-PED-CE -SEP-CE -CE -EXP	15000	1000	2.45	6000
Model HO	1/2	X	3/8A	-0.75	-7.5	-C -BP	-1M -1MX -XE2	-NPT	-IND	-PED-CE -SEP-CE -CE -EXP	9500	1200	2.45	6000
Model HO	1/2	X	1/2A	-1.25	-9.5	-C -BP	-1M -1MX -XE2	-NPT	-IND	-PED-CE -SEP-CE -CE -EXP	5800	1000	2.45	6000
Model HO	3/4	X	5/8A	-1.75	-16	-C -BP	-1M -1MX -XE2	-NPT	-IND	-PED-CE -SEP-CE -CE -EXP	5200	1500	2.75	6000
Model HO	3/4	X	3/4	-2.5	-29	-C -BP	-1M -1MX -XE2	-NPT	-IND	-PED-CE -SEP-CE -CE -EXP	2200	1000	3.25	4400
Model HO	1	X	1	-4	-60	-C -BP	-1M -1MX -XE2	-NPT	-IND	-PED-CE -SEP-CE -CE -EXP	816	816	3.50	3850
Model HO	1 1/4	X	1 1/4	-6	-93	-C -CB	-1M -1MX -XE2	-NPT	-IND	-PED-CE -SEP-CE -CE -EXP	450	670	3.88	3850
Model HO	1 1/2	X	1 1/2	-8	-130	-C -CB	-1M -1MX -XE2	-NPT	-IND	-PED-CE -SEP-CE -CE -EXP	215	500	4.38	3500
Model HO	2	X	2	-15	-225	-C -CB	-1M -1MX -XE2	-NPT	-IND	-PED-CE -SEP-CE -CE -EXP	126	500	4.75	3000
Model HO	2 1/2 A	X	2 1/2	-25	-400	-C -CB	-1M -1MX -XE2	-NPT	-IND	-PED-CE -SEP-CE -CE -EXP	80	600	6.06	1100
Model HO	3	X	3	-40	-650	-C -CB	-1M -1MX -XE2	-NPT	-IND	-PED-CE -SEP-CE -CE -EXP	45	500	7.50	1500

FLOW RANGE (Note 1)

Ranges shown are standard ranges; other ranges are available. The linear flow ranges on 1/4" through 5/8" may be derated depending on bearing selection. Contact factory for additional information.

BEARING TYPE (Note 2)

C = Hard Carbon Composite sleeve bearing (standard).
BP = Shielded, self-lubricating hybrid ceramic ball bearing (optional 1" & below).
CB = Shielded, self-lubricating hybrid ceramic ball bearing (optional 1 1/4" to 3").

APPROVALS

PED-CE = PED-CE mark required for Europe requires the operating temperature and pressure be given and will be marked on the housing.
SEP-CE = Sound engineering practice.
CE = CE mark required for Europe.
EXP = CSA Explosion-proof Certification.

PICKUP COILS AND ENCLOSURE OPTION (Note 3)

1M = Standard magnetic pickup coil.
1MX = Magnetic pickup coil with 1" riser on meter body for mounting of enclosures and electronics.
XE2 = 1" MNPT riser with E2 enclosure (See chart)*.

*E2 EXPLOSION-PROOF/FLAME-PROOF ENCLOSURE WITH 3/4" FNPT MOUNT AND 3/4" CABLE ENTRY RATINGS:

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 EX D IIC, CLASS I, ZONE 1, IP 66
ATEX: EX II 2GD Ex d IIC, IP66/68
IEC: EX D IIC IP68

PERFORMANCE SPECIFICATIONS

***Linearity:** $\pm 1.0\%$ of reading or better.
Repeatability: $\pm 0.1\%$ of reading or better.
Temperature Range: -20°F to $+450^{\circ}\text{F}$ (Standard).
Signal Output: 10 MVRMS or greater into a 10K ohm load at minimum flow rate.

Materials of Construction:
Type 316/316L dual rated Stainless Steel (with exceptions noted below).

Rotor: 17.4 PH Stainless Steel.
Bearings: Hard Carbon Composite (Standard).
Shielded, Self-lubricating Hybrid Ceramic Ball Bearings (Optional).

**Based on K-Factor Calibration at 70°F.*

COMPANY PROFILE

HOFFER FLOW CONTROLS, INC. has been designing and manufacturing high quality turbine flowmeters since 1968.

Our ★ STAR ★ Series should be considered when cost is a primary concern.

The ★ STAR ★ Series is offered in eleven popular sizes that are readily available.

Simplicity

★ The Hoffer Turbine Flowmeter construction is simple, allowing for rugged and dependable service at low cost.

Timely Deliveries

★ Off-the-shelf delivery for ★ STAR ★ Series Industrial Turbine Flowmeters. Companion electronics are also readily available with typical deliveries of 10 to 15 days.

Accuracy

★ Outstanding accuracy at low cost, without compromise in design. Accuracy $\pm 1.0\%$ of reading or better. Repeatability $\pm 0.1\%$.

Reliability

★ Hoffer Flow Controls has been supplying turbine flowmeters to industry for over two decades. Our customers are repeat customers. Today our reputation is synonymous with high-quality, reliable flow systems.

In addition to the Industrial ★ STAR ★ Series, HOFFER offers a full line of precision turbines for liquid and gas, mini-flowmeters for low-flow liquid and gas applications, profile insertion flowmeters for liquids and gases, as well as a complete line of electronic support equipment, including flow computers and linearizers. Contact the Applications Group at HOFFER for assistance.

NOTE: Spare parts are available for the ★ STAR ★ Series to facilitate field repairs. The factory does not provide repair service on this series since it is generally more economical to replace the flowmeter.

Some industrial process applications for the ★ STAR ★ Series are listed below *but are not limited to:*

- ◆ Water Flood Secondary Recovery
- ◆ Fuel Metering Systems
- ◆ Chemicals
- ◆ Petroleum Products
- ◆ Crude Oil
- ◆ Gasoline
- ◆ Well Water
- ◆ Glycerin
- ◆ Ethylene Glycol
- ◆ Alcohol
- ◆ Benzene

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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.

The quality system covering the design, manufacture and testing of our products is certified to International Standard ISO 9001.

