

TURBINE FLOWMETERS BY HOFFER

The Turbine Flowmeter Company



Sanitary Turbine Flowmeters
Product Bulletin HO-SA-107G

TECHNICAL DATA SHEET

SANITARY TURBINE FLOWMETER WITH 3-A LABEL FOR PROCESS LIQUID MEASUREMENT

The Hoffer Sanitary Design Turbine flowmeter is accepted as meeting 3-A Sanitary Standard No. 28-03 for measurement of process liquids where high sanitary standards are required. Available in 11 sizes, 1/4" to 3" with standard Tri-Clamp™ fittings, covering flow rates for 0.35 to 650 GPM.



Note: Turbine meter must be installed with pickup coil pointing down to ensure proper cleanability according to the 3A standard.

Technical Data									
Flowmeter Size				Linear Flow Range (US GPM) Refer to Note 1		Nominal Pulses/Gallon 'K' Factor Pulses/Gallon	Nominal Max. Frequency (Hz)	Length (Inches)	
Tri-Clamp™ Size (Inches)				Min.	Max.				
* Model HO3A	1½	X	¼A	.35	3.5	15,000	900	3.56	
Model HO3A	¾	X	¼A	.35	3.5	15,000	900	3.56	
* Model HO3A	1½	X	⅜A	.75	7.5	8,900	1100	3.56	
Model HO3A	¾	X	⅜A	.75	7.5	8,900	1100	3.56	
* Model HO3A	1½	X	½A	1.25	9.5	5,800	900	3.56	
Model HO3A	¾	X	½A	1.25	9.5	5,800	900	3.56	
* Model HO3A	1½	X	⅝A	1.75	16	5,200	1400	3.56	
Model HO3A	¾	X	⅝A	1.75	16	5,200	1400	3.56	
* Model HO3A	1½	X	¾A	2.5	29	2,200	1065	3.25	
Model HO3A	1½	X	1A	4	60	660	660	3.56	
Model HO3A	1½	X	1¼A	6	93	400	620	4.59	
Model HO3A	1½	X	1½A	8	130	230	500	4.59	
Model HO3A	2	X	2A	15	225	120	450	6.06	
* Model HO3A	3	X	2½A	25	400	97	650	10.00	
* Model HO3A	4	X	3A	40	650	45	500	10.00	

™ Ladish Tri-Clover Div.

(Note 1) Ranges shown are standard ranges; other ranges are available. Contact factory.

*(Note 2) These sizes require the use of an installation kit to meet "3A" Standard 28-03 specifications. Other sizes are optional.

OPTIONAL ACCESSORIES

Signal Conditioners/Converters

CAT Series (Refer to CAT Technical Data Sheets).

Meter Mounted Totalizer/Rate Indicators

Model HIT-2A Totalizer/Rate Indicator (Refer to Technical Data Sheet HIT-2A-XXX).

Micro Processor Based Flow Computers

Flowstar™ and Nova-Flow Series

(Refer Flowstar Series and Nova-Flow Series Technical Data Sheets).

PERFORMANCE SPECIFICATIONS

****Accuracy & Linearity:** ±0.5% of reading or better.

****Repeatability:** ±0.1% of reading or better.

Temperature Range:

-450°F to +450°F, process fluid with Std. Magnetic pickup coil. -450°F to +850°F, process fluid with high temperature magnetic pickup coil. +1000°F intermittently.

Signal Output: 10 MVRMS or greater into a 10K ohm load at minimum flow rate.

Materials of Construction:

316/316L Dual Rated Stainless Steel

(with exceptions noted below):

Rotor: 17.4 PH SS.

Retaining Rings: 15.7 MO PH SS when required.

Bearings: Hard Carbon Composite.

****Based on 12 point water calibration at 70°F.**

INSTALLATION KITS FOR HOFFER SANITARY TURBINE FLOWMETER

To achieve optimum performance of the Sanitary Turbine Flowmeter, a minimum of 10 pipe diameters upstream and 5 pipe diameters downstream of meter size pipe must be used.

In addition, certain combinations of nominal meter sizes and tri-clamp sizes, as indicated on the sizing chart, require the use of adaptor piping to meet the latest "3A" 28-03 specifications.

To meet these requirements Hoffer offers sanitary installation kits. Please see the sanitary installation kit brochure for complete details.

SANITARY TURBINE FLOWMETER MODEL NUMBERING SYSTEM

MODEL H03A (A) X (B) - (C) - (D) - (E) - (F / G) - (TRI) - (H)

A. Tri-Clamp Size

B. Flowmeter Size

C. Minimum Operating Flow

D. Maximum Operating Flow

E. Bearing Type

(C9) Hard Carbon Composite Sleeve Bearing. M-199 Grade. For use in food with a pH of 6 and above.

(C1) Hard Carbon Composite Sleeve Bearing. M-100 Grade.
Acceptable for use in food with a pH less than 6 such as wine, vinegar or fruit juice (acidic).

Note: Both bearings are approved by the Food and Drug Administration.

F. Pickup Coils

(1M) One Magnetic Coil
(2M) Two Magnetic Coils
(1MC3PA) One RF Coil (Not recommended in 4" and larger)
(2MC3PA) Two RF Coils
(1MC2PAHT) One High Temp 6" Pigtail RF coil
(2MC2PAHT) Two High Temp 6" Pigtail RF coils
(1HTM) High Temperature Magnetic Coil (+450 to +850°F)
(2HTM) Two High Temperature Magnetic Coils
(1ISM) Intrinsically Safe Mag Coil
(2ISM) Two Intrinsically Safe Mag Coils
_ (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 coil part no. when using ATEX enclosure mounted on meter.

G. Explosion-Proof Coil Enclosure (Rated Class I, Groups C & D)

(X) 1" MNPT riser, welded to body. Required for all types of enclosures.
(X3/0) 1" riser with enclosure and without signal conditioner.
(X3H/0) 1" riser with enclosure and dome cover for Style 1 signal conditioner.
(X3B/0) Same as (X3/0) with BASEEFA, FM and CENELEC-EEExd approvals.
(X4H/0) 1" riser with dome cover for ACC22 and ACC96.
(3B/0) 1" riser with dome cover for Style 1 signal conditioners to meet Group B.
(4/0) 1" riser with flat cover for Style 2 signal conditioners to meet Groups C & D.
(4B/0) 1" riser with dome cover for Style 2 signal conditioners to meet Group B.
(X8S) Add 8S after X riser for a 8" long S/S riser for hot and cold media applications.
(3B/0-ATEX) Same as 3B/0 except meets ATEX.

End Fitting Types

(TRI) Tri-Clover Sanitary End Fitting

H. Special Features

(CE) CE Mark - Required for Europe
(PED-CE) PED Mark - Required for Europe
(SP) Any special features that are not covered in the model number, use -SP and a written description.

H **OFFER FLOW CONTROLS, INC.**
107 Kitty Hawk Lane, P. O. Box 2145, Elizabeth City, NC 27906-2145
800-628-4584 252-331-1997 FAX 252-331-2886
www.hofferflow.com email: Info@hofferflow.com

The specifications contained herein are subject to change without notice and any user of said specifications should verify from the manufacturer that the specification 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.



ISO9001
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