



# 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	Tri-Clamp™ Size (Inches)			Linear Flow Range (US GPM)		Nominal Pulses/Gallon 'K' Factor Pulses/Gallon	Nominal Max. Frequency (Hz)	Length (Inches)	Refer to Note 1	
				Min.	Max.					
* Model HO3A	1½	X	1/4A	.35	3.5	15,000	900	3.56		
Model HO3A	3/4	X	1/4A	.35	3.5	15,000	900	3.56		
* Model HO3A	1½	X	3/8A	.75	7.5	8,900	1100	3.56		
Model HO3A	3/4	X	3/8A	.75	7.5	8,900	1100	3.56		
* Model HO3A	1½	X	1/2A	1.25	9.5	5,800	900	3.56		
Model HO3A	3/4	X	1/2A	1.25	9.5	5,800	900	3.56		
* Model HO3A	1½	X	5/8A	1.75	16	5,200	1400	3.56		
Model HO3A	3/4	X	5/8A	1.75	16	5,200	1400	3.56		
* Model HO3A	1½	X	3/4A	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 Ring: 15.7 MO PH SS.

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. Contact factory for more information on installation kits.

## SANITARY TURBINE FLOWMETER MODEL NUMBERING SYSTEM

MODEL HO3A      ( 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)

**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.

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