

**TECHNICAL DATA SHEET**

**Grooved Turbine Flowmeters for**

- Water
- Water/Sand
- Liquid Carbon Dioxide
- Cement Slurry.



Flow Range and Model Information						Technical Data				
Flowmeter Size (Inches)				(Refer to Note 1 below) Linear Flow Range (US GPM)		Nominal Pulses/Gallon 'K' Factor	Nominal Max. Frequency (Hz)	Length (inches)	Working Pressure (PSI) Victaulic® Clamp	
Victaulic® Size (Inches)									Min.	Max.
Model HO	1	X	1	-4	-60	670	670	4.0	500	1000
Model HO	1 ½	X	1 ½	-8	-130	220	500	6.0	500	1000
Model HO	2	X	2	-15	-225	126	500	6.0	500	1000
Model HO	2 ½	X	2 ½	-25	-400	75	500	10.0	500	1000
Model HO	3	X	3	-40	-650	45	500	12.5	500	1000
Model HO	4	X	4	-75	-1250	20	400	12.0	400	1000
Model HO	6	X	6	-200	-2900	8	400	12.0	400	1000
Model HO	8	X	8	-330	-5200	3	250	12.0	350	800
Model HO	10	X	10CB*	-650	-8000	1.11	150	16.0	N/A	800
Model HO	12	X	12CB*	-1400	-12000	.69	140	22.0	N/A	800

\*Add -CB for CB Bearing Only.

**FOR COMPLETE MODEL NUMBER INFORMATION, PLEASE SEE REVERSE SIDE.**

**Flow Range (Note 1)**

Ranges shown are standard ranges — other ranges are available. Contact Hoffer Flow Controls Applications Group.

**Bearing Selection:**

Hybrid Ceramic, Self-lubricating shielded ball bearings must be used on CO2, may be used on H2O and never on H2O/Sand or CS. Hard Carbon Composite Sleeve bearings. For use on H2O only.

Tungsten Carbide Sleeve bearings must be used on H2O/Sand and CS, may be used on H2O and never used on CO2.

**Please Note: Flowmeter service life is reduced when flows contain particulate.**

**GENERAL SPECIFICATIONS**

<b>Linearity:</b>	±0.5% of reading (±0.25% typical) over tabulated linear flow range.	<b>Pressure Drop Characteristics:</b>	Request graphical data.
<b>Repeatability:</b>	±0.1% over tabulated useable range.	<b>Overrange:</b>	150% of maximum flow (intermittently).
<b>Temperature Range:</b>	-450°F to +450°F (Standard).	<b>Construction:</b>	All stainless steel.

Flowmeters are calibrated and supplied with "K" Factor Tag.

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# GROOVED TURBINE FLOWMETER MODEL NUMBERING SYSTEM

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

**A. End Fitting Size**

**B. Flowmeter Size**

**C. Minimum Operating Flow**

**D. Maximum Operating Flow**

**E. Bearing Type**

- (BP) Self-Lubricating, Ceramic Hybrid Ball Bearing for 1".
- (CB) Self-Lubricating, Ceramic Hybrid Ball Bearing for 1 1/2" thru 4".
- (C) Hard Carbon Composite Sleeve Bearing
- (T) Tungsten Carbide Sleeve Bearing

**F. Pickup Coils**

- (1M) One Magnetic Coil
- (2M) Two Magnetic Coils
- (1MC3PA) One RF Coil
- (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
- (1ISM-ATEX) One ISM ATEX Coil
- (2ISM) Two Intrinsically Safe Mag Coils
- (2ISM-ATEX) Two ISM ATEX 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.

**G. Coil Spacing, Mechanical Degrees Apart**

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

**H. Riser and Explosion-Proof Coil Enclosures**

- (X) 1" MNPT riser, welded to body. Required for all types of enclosures.
- (X-ATEX) 3/4" MNPT riser, welded to the body.
- (XE2) 1" MNPT riser with E2 enclosure. (See Chart)\*
- (X-ATEX)E2 3/4" MNPT riser with E2 enclosure. (See Chart)\*
- (X8S) 8" Long S/S 1" MNPT riser. (For fluid temperatures below -40°F (-40°C) or above +140°F +60°C)
- (X8S-ATEX) 8" Long S/S 3/4" MNPT riser. (For fluid temperatures below -40°F (-40°C) or above +140°F +60°C)

**\*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 tD IIC, IP66/68

IEC: EX D IIC IP68

**I. End Fitting Types**

- (VIC) Grooved End Fittings

**J. Service Type**

- (L) Clean Liquid
- (S) Slurry
- (SP) Special

**K. Special Features**

- (CE) CE Mark - Required for Europe
- (PED-CE) PED Mark- Required for Europe
- (SEP-CE) Sound Engineering Practice
- (SP) Any special features that are not covered in the model number, use -SP and a written description
- (EXP) CSA Explosion-Proof Certification (See Chart)\*\*
- (X) No Special Features

\*\* CLASS I, DIV. 1, GR. ABCD; CLASS I, DIV. 2, GR. ABCD; CLASS II, DIV. 1, GROUPS EFG  
CANADA: CLASS I, ZONE 1 & 2, Ex d II C  
USA: CLASS I, ZONE 1 & 2, AEx d II C



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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.

