

TURBINE FLOWMETERS BY **HOFFER**

Perfecting Measurement™

Wing Nut High Pressure Turbine Flowmeters For **Liquid** Service

Product Bulletin HO-WF-108K

TECHNICAL DATA SHEET



3" Flowmeter Style

Wing Nut High Pressure (15,000 PSI) Turbine Flowmeters for Liquid Service

(For Water, Liquid Carbon Dioxide and Cement Slurry*)



1"-2" Flowmeter Style

Model Number											Technical Data		
Flowmeter Size (Inches)	Wing Nut Size (Inches)			(Ref. Note 1) Linear Flow Range (US GPM)		(Ref. Note 2) Bearing Types	(Refer Note 3 for more options) Standard Magnetic Pickup Coil	Ex-Proof Coil Enclosure	Wing Nut End Fitting - Savage (-S) or FMC (-F) Nuts & Segments	Service Types	Nominal Pulses/Gallon 'K' Factor	Nominal Max. Freq. (Hz)	Length (inches)
				Min.	Max.								
Model HO	2	X	1A	-4 -8.4	-60 -84	-BP or -T	-1MX	-E2 -X	-1502-S -1502-F	-H2O -CO2 -C/S	670 650	670 910	12
Model HO	2	X	1 1/2 A	-5 -8	-175 -130	-CB or -T	-1MX	-E2 -X	-1502-S -1502-F	-H2O -CO2 -C/S	240 240	700 520	12
Model HO	2	X	2A	-42 -65	-420 -650	-CB or -T	-1MX	-E2 -X	-1502-S -1502-F	-H2O -CO2 -C/S	65 50	455 540	12
Model HO	3	X	3	-84 -105	-840 -1050	-CB or -T	-1MX	-E2 -X	-1502-S -1502-F	-H2O -CO2 -C/S	55 50	170 875	11.38

FLOW RANGE (Note 1) Ranges are standard ranges — other ranges are available. Contact Hoffer Flow Controls Engineering.

BEARING TYPE (Note 2)
 (-BP) Hybrid ceramic for 1", self-lubricating shielded ball bearings can be used on CO2 and H2O and never on Cement/Sand Slurry.
 (-CB) Hybrid ceramic, self-lubricating shielded ball bearings can be used on CO2 and H2O and never on Cement/Sand Slurry.
 (-T) Tungsten Carbide sleeve bearings can be used on H2O and C/S and never on Liquid CO2.

PICKUP COILS (Note 3)
 (-1MX) One magnetic pickup coil.
Optional
 (-2MX180) Two magnetic pickup coils @ 180°.
 (-1ISM)X Intrinsically Safe magnetic coil.
 (-2ISM)X Two Intrinsically Safe magnetic coils.
 (-1ISM-ATEX)X One ISM ATEX coil.
 (-2ISM-ATEX)X Two ISM ATEX coils.
 -_(RPM)_X Redi-Pulse magnetic pickup coil providing a user specified conditioned pulse output. See Redi-Pulse Technical Data Sheet for available options.
 -_(DMX)_X Intrinsically Safe Redi-Pulse magnetic pickup coil. See Intrinsically Safe Redi-Pulse Technical Data Sheet for available options.

RISER & EXPLOSION-PROOF COIL ENCLOSURES
 (-E2) 1" MNPT riser with E2 coil enclosure. (See chart)**
 (-X) None

SPECIAL FEATURES (add at end of Model No.)
 (-CE) CE mark required for Europe.
 (-SP) Special features that are not covered in the Model number, use -SP and a written description.
 (-X) No Special Features.

****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

FLOWMETERS ARE SUPPLIED WITH A 10-POINT CALIBRATION AND WITH 'K' FACTOR TAG ATTACHED TO METER.

*FLOWMETER LIFE IS LIMITED IN CEMENT/SAND SLURRY. CUSTOMER MUST SPECIFY MAXIMUM PARTICULATE SIZE ON CEMENT/SAND SLURRY APPLICATIONS.

GENERAL SPECIFICATIONS:

- Linearity:** $\pm 0.5\%$ of reading ($\pm 0.25\%$ typical) over tabulated linear flow range.
- Repeatability:** $\pm 0.1\%$ over tabulated useable range.
- Temperature Range:** -450° to $+450^{\circ}$ F (Standard).
- Pressure Drop Characteristics:** Request graphical data.
- Overrange:** 150% of maximum flow (intermittently).
- Construction:** Housing - 1"-2"- A286 alloy steel. 3"- 4130 high chrome alloy steel.
Internals - All stainless steel (except "T" bearings).

Wing Nut Calibrated Spare Internal Kits						
Flowmeter Size (Inches)		Linear Flow Range (US GPM)		Bearing Type		Service Types
		Min.	Max.			
Part Number Kit	HO1	-4 -8.4	-60 -84	-BP -T	-INTERNALS-W	-H2O -CO2 -C/S
Part Number Kit	HO1 ½	-5 -8	-175 -130	-CB -T	-INTERNALS-W	-H2O -CO2 -C/S
Part Number Kit (Note 1)	HO2	-42 -65	-420 -650	-CB -T	-INTERNALS-W	-H2O -CO2 -C/S
Part Number Kit (Note 2)	HO3	-84 -105	-840 -1050	-CB -T	-INTERNALS-W	-H2O -CO2 -C/S

Note: Internal Kits and rotors are calibrated and supplied with 'K' factor.

Note 1: Retainer Ring RR181 supplied with 2" kit.

Note 2: Retainer Ring RR262 supplied with 3" kit.

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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 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.

