

# TURBINE FLOWMETERS BY HOFFER

The Turbine Flowmeter Company

## Wing Nut High Pressure Turbine Flowmeters For Gas Service

Product Bulletin HO-WG-104D

### TECHNICAL DATA SHEET



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

(typically used for oil well fracturing  
with nitrogen gas)

Model Number					Technical Data					
Flowmeter Size (Inches) Wing Nut Size (Inches)				(Refer Note 1) Blade Angle	(Refer Note 2) Bearing Type	(Refer Note 3) Standard Magnetic Pickup Coils	Wing Nut End Fitting- Savage (S) Or FMC (F) Nuts & Segments	Nominal Pulses/ACF 'K'	Nominal Max. Freq. (Hz)	Length (inches)
Model HO	2	X	1	-15 -20 -25 -30	-SB	-1MX	-1502-S -1502-F	2540 3550 4450 5660	340 470 600 755	12
Model HO	2	X	1½	-15 -20 -25 -30	-CB	-1MX	-1502-S -1502-F	950 1255 1650 2050	270 360 485 585	12
Model HO	2	X	2	-15 -20 -25 -30	-CB	-1MX	-1502-S -1502-F	480 655 920 1055	240 330 450 530	12
Model HO	3	X	3	-15 -20 -25 -30	-CB	-1MX	-1502-S -1502-F	285 320 365 500	480 550 625 670	11.38

**BLADE ANGLE** (Note 1) Blade angle determined by density; assigned by factory. Contact Hoffer Flow Controls Engineering.

**BEARING TYPE** (Note 2) (—CB) Hybrid ceramic, self-lubricating shielded ball bearings for 1½" through 3".  
(—SB) Stainless steel, self-lubricating shielded ball bearings for 1" size

**PICKUP COILS** (Note 3)  
**Optional** (—1MX) One magnetic pickup coil.  
(—2MX180) Two magnetic pickup coils @ 180°.  
(—1ISM)X Intrinsically Safe magnetic coil.  
(—2ISM)X Two Intrinsically Safe magnetic coils.  
(—1ISMNE) One ISM ATEX coil with a standard 1" coil riser less enclosure.  
(—2ISMNE) Two ISM ATEX coils with a standard 1" coil riser less enclosure.  
—(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.

**ENCLOSURES** (—3/0) 3/0 Enclosure.  
(—3B/0) 3/0 Enclosure with dome cover for style 1 signal conditioner to meet Group B.

**Special Features** (add at end of Model No.) (—CE) CE mark required for Europe.  
(—PED-CE) PED mark required for Europe.

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

# GENERAL SPECIFICATIONS:

- Linearity:  $\pm 1\%$  of reading over 10:1 flow range.  
(typically).
- Repeatability:  $\pm 0.25\%$  over tabulated useable range.
- Temperature Range:  $-450^{\circ}$  to  $+350^{\circ}$  F (Standard).
- Pressure Drop
- Characteristics: Request graphical data.
- Overrange: 150% of maximum flow (intermittently).
- Construction: Housing - 4130 high chrome alloy steel.  
Internals - All stainless steel.

<b>Wing Nut Calibrated Spare Internal Kits</b>				
Flowmeter Size (Inches)		(Refer Note 1) Blade Angle	(Refer Note 2) Bearing Type	
Part Number Kit (Note 5)	1	-15 -20 -25 -30	-CB	-internals-W
Part Number Kit	1½	-15 -20 -25	-CB	-internals-W
Part Number Kit (Note 6)	2	-15 -20 -25	-CB	-internals-W
Part Number Kit (Note 7)	3	-15 -20 -25	-CB	-internals-W

Note 5: Kit 1 internals for Model HO 2 X 1.  
Note 6: Retainer Ring RR181 supplied with 2" kit.  
Note 7: Retainer Ring RR262 supplied with 3" kit.  
Note: Internal Kits and rotors are calibrated @ 1 centistoke and supplied with calculated K-Factor for gas.

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



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