

**TECHNICAL DATA SHEET**

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

(for water, Liquid Carbon Dioxide and Cement Slurry\*)



| Model Number            |                        |   |     |  |               |                                |   |   |   | Technical Data       |  |                               |                    |
|-------------------------|------------------------|---|-----|--|---------------|--------------------------------|---|---|---|----------------------|--|-------------------------------|--------------------|
| Flowmeter Size (Inches) | Wing Nut Size (Inches) |   |     | (Ref. Note 1)<br>Linear Flow Range<br>(US GPM) |               | (Ref. Note 2)<br>Bearing Types | (Refer Note 3<br>for more options)<br><br>Standard<br>Magnetic<br>Pickup Coil | (Refer Note 4)<br><br>Ex-Proof<br>Coil<br>Enclosure | Wing Nut End<br>Fitting -<br>Savage (-S)<br>or FMC (-F)<br><br>Nuts &<br>Segments | Service<br>Types     | Nominal<br>Pulses/<br>Gallon 'K'<br>Factor | Nominal<br>Max.<br>Freq. (Hz) | Length<br>(inches) |
|                         |                        |   |     | Min.   | Max.          |                                |   |   |   |                      |  |                               |                    |
| Model HO                | 2                      | X | 1   | -4<br>-8.4                                     | -60<br>-84    | -BP or -T                      | -1MX  | -E2<br>-X   | -1502-S<br>-1502-F  | -H20<br>-CO2<br>-C/S | 670<br>650                                 | 670<br>910                    | 12                 |
| Model HO                | 2                      | X | 1 ½ | -5<br>-8                                       | -175<br>-130  | -CB or -T                      | -1MX  | -E2<br>-X   | -1502-S<br>-1502-F  | -H20<br>-CO2<br>-C/S | 240<br>240                                 | 700<br>520                    | 12                 |
| Model HO                | 2                      | X | 2   | -42<br>-65                                     | -420<br>-650  | -CB or -T                      | -1MX  | -E2<br>-X   | -1502-S<br>-1502-F  | -H20<br>-CO2<br>-C/S | 65<br>50                                   | 455<br>540                    | 12                 |
| Model HO                | 3                      | X | 3   | -84<br>-105                                    | -840<br>-1050 | -CB or -T                      | -1MX  | -E2<br>-X   | -1502-S<br>-1502-F  | -H20<br>-CO2<br>-C/S | 55<br>50                                   | 170<br>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) One ISM ATEX coil.  
 (–2ISM-ATEX) 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.

# 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:**  $-450^{\circ}$  to  $+450^{\circ}$ 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 (except "T" bearings).

| <b>Wing Nut Calibrated Spare Internal Kits</b>                                     |       |  |               |                               |              |                      |
|--|-------|--|---------------|-------------------------------|--------------|----------------------|
| Flowmeter Size (Inches)  |       | (Ref. Note 1)<br>Linear Flow Range<br>(US GPM) |               | (Ref. Note 2)<br>Bearing Type |              | Service Types        |
|  |       | Min.   | Max.          |                               |              |                      |
| Part Number Kit (Note 4)   | HO1   | -4<br>-8.4                                     | -60<br>-84    | -BP<br>-T                     | -internals-W | -H2O<br>-CO2<br>-C/S |
| Part Number Kit  | HO1 ½ | -5<br>-8                                       | -175<br>-130  | -CB<br>-T                     | -internals-W | -H2O<br>-CO2<br>-C/S |
| Part Number Kit (Note 5)   | HO2   | -42<br>-65                                     | -420<br>-650  | -CB<br>-T                     | -internals-W | -H2O<br>-CO2<br>-C/S |
| Part Number Kit (Note 6)   | HO3   | -84<br>-105                                    | -840<br>-1050 | -CB<br>-T                     | -internals-W | -H2O<br>-CO2<br>-C/S |
| <b>Note: Internal Kits and rotors are calibrated and supplied with 'K' factor.</b> |       |  |               |                               |              |                      |

**Note 4:** Kit 1 internals for Model HO 2 X 1.

**Note 5:** Retainer Ring RR181 supplied with 2" kit.

**Note 6:** Retainer Ring RR262 supplied with 3" kit.

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