

# 3500/6000 PSI flow meters

## For water-based fluids (water/oil emulsions)

- Direct reading
- Install in any position
- 360° rotatable guard/scale
- Easier-to-read linear scale
- No flow straighteners or special piping required
- Relatively insensitive to shock and vibration
- Good viscosity stability
- Temperature up to 116°C (240 °F)
- Accuracy ±2% full scale
- Repeatability ±1%
- Special scales available
- Calibrated for 1.0 S.G.
- For 80/20 and other water/oil emulsions

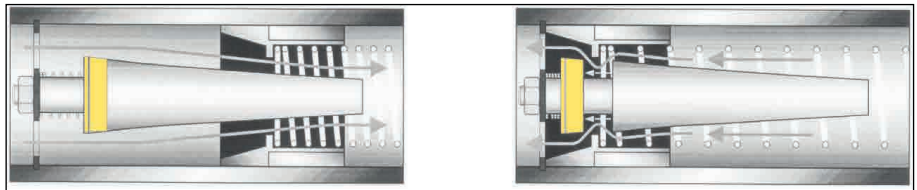


### Technical data

<b>Materials</b>	2024 - T351 Anodized aluminum body, piston and cone C360 brass body, piston and cone <sup>①</sup> T303 stainless body, 2024 - T351 anodized aluminum piston and cone
<b>Common parts</b>	
<b>Spider plate:</b> T316 SS <b>Spring:</b> T302 SS <b>Fasteners:</b> T303 SS <b>Guard seal / bumper:</b> Buna N <b>Guard:</b> Polycarbonate <b>End caps:</b> Nylon ST	<b>Retaining ring:</b> T316 SS <b>Retaining spring:</b> T316 SS <b>Indicator and internal magnet:</b> PPS / ceramic <b>Pressure seals:</b> Viton® <b>Scale support:</b> 6063 - T6 aluminum
<b>Threads</b>	SAE J1926/1, NPTF ANSI B2.2, BSPP ISO1179, Code 61 and Code 62: SAE J518
<b>Temperature range</b>	-29 to +116 °C (-20 to +240 °F), for higher temp. meters, see page 32.
<b>Pressure rating</b>	
<b>Aluminum / brass operating</b>	3,500 psi/241 bar max. (800 psi/55 bar max. for 3" series) with a 3:1 safety factor For high cycle applications, see page conversion information
<b>Stainless steel operating</b>	6,000 psi/414 bar max. (5,000 psi/345 bar max. for ¾" to 1½" series, 4000 psi for code 62) with a 3:1 safety factor. For high cycle applications, see page conversion information
<b>Pressure drop</b>	See ordering information table next page. For detailed differential pressure charts, see page 62.
<b>Accuracy</b>	±2% of full scale, ±7% of full scale for ¼" meters
<b>Repeatability</b>	±1

**Reverse flow by-pass option:** Features a two-piece cone that responds to flow in the primary flow direction in the same manner as the standard design.

Flow in the reverse direction causes the lower cone shuttle to shift, moving it below the sharp-edged piston orifice. This shift creates a gap which allows the fluid to flow freely in the reverse direction.



Normal flow direction

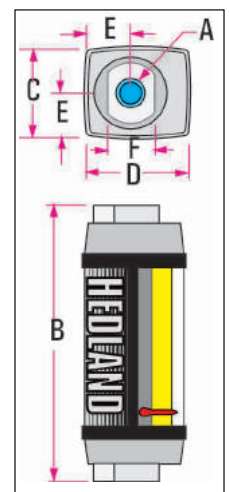
Reverse flow by-pass

### Dimensions

A	B	C	D	E	F
Nominal port size	Length in (mm)	Width in (mm)	Depth in (mm)	Offset in (mm)	Flats in (mm)
¼ (SAE 6)	4.8 (122)	1.68 (43)	1.90 (48)	.84 (21)	.88 (22)
½ (SAE 10)	6.6 (168)	2.07 (53)	2.40 (61)	1.04 (26)	1.25 (32)
¾ (SAE 12)	7.2 (183)	2.48 (63)	2.85 (72)	1.24 (32)	1.50 (38)
1 (SAE 16)	7.2 (183)	2.48 (63)	2.85 (72)	1.24 (32)	1.75 (44)
1¼ (SAE 20)	12.2 (310)	4.12 (105)	4.72 (120)	2.06 (52)	2.75 (70)
1½ (SAE 24)	12.2 (310)	4.12 (105)	4.72 (120)	2.06 (52)	2.75 (70)

<sup>①</sup>3 inch models have Celcon® piston/piston ring

**Note:** Dimensions for 1½" Code 62, 3" and 3" code 61 can be found on page 79. Weights for all sizes can be found on page 80.



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### Ordering information

Nominal port size <sup>②</sup>	Flow range		Pressure drop			Model number (see example below)			Material			Options
	gal/min	l/min	50% flow psi (bar)	100% flow psi (bar)	Reverse 100% flow psi (bar)	SAE	NPTF	BSPP <sup>③</sup>	Aluminium 3500 psi	Brass 3500 psi	Stainless steel	Reverse flow
¼" SAE 6	.02 - 0.2	0.1 - 0.75	3.5 (.24)	4.0 (.28)		H212 ☒ - 002 - ◆	H213 ☒ - 002 - ◆	H214 ☒ - 002 - ◆	A	B	6000 psi S	Not available
	.05 - 0.5	0.2 - 1.9	3.0 (.21)	5.0 (.35)		H212 ☒ - 005 - ◆	H213 ☒ - 005 - ◆	H214 ☒ - 005 - ◆				
	0.1 - 1.0	0.5 - 3.75	4.0 (.28)	9.0 (.62)		H212 ☒ - 010 - ◆	H213 ☒ - 010 - ◆	H214 ☒ - 010 - ◆				
	0.2 - 2.0	1 - 7.5	6.0 (.41)	13 (.90)		H212 ☒ - 020 - ◆	H213 ☒ - 020 - ◆	H214 ☒ - 020 - ◆				
½" SAE 10	0.1 - 1.0	0.5 - 3.75	2.0 (.14)	2.75 (.19)	5.2 (.36)	H612 ☒ - 001 - ◆	H613 ☒ - 001 - ◆	H614 ☒ - 001 - ◆	A	B	6000 psi S	RF
	0.2 - 2.0	1 - 7.5	2.0 (.14)	3.0 (.21)	9.6 (.66)	H612 ☒ - 002 - ◆	H613 ☒ - 002 - ◆	H614 ☒ - 002 - ◆				
	0.5 - 5.0	2 - 19	3.0 (.21)	6.0 (.41)	4.8 (.33)	H612 ☒ - 005 - ◆	H613 ☒ - 005 - ◆	H614 ☒ - 005 - ◆				
	1 - 10	5 - 38	4.0 (.28)	9.5 (.66)	23.0 (1.6)	H612 ☒ - 010 - ◆	H613 ☒ - 010 - ◆	H614 ☒ - 010 - ◆				
¾" SAE 12	0.2 - 2.0	1 - 7.5	1.0 (.07)	2.0 (.14)	2.9 (.20)	H712 ☒ - 002 - ◆	H713 ☒ - 002 - ◆	H714 ☒ - 002 - ◆	A	B	5000 psi S	RF
	0.5 - 5.0	2 - 19	2.5 (.17)	3.5 (.24)	5.3 (.37)	H712 ☒ - 005 - ◆	H713 ☒ - 005 - ◆	H714 ☒ - 005 - ◆				
	1 - 10	5 - 38	3.5 (.24)	9.0 (.62)	8.8 (.61)	H712 ☒ - 010 - ◆	H713 ☒ - 010 - ◆	H714 ☒ - 010 - ◆				
	2 - 20	10 - 76	4.0 (.28)	9.0 (.62)	18.0 (1.24)	H712 ☒ - 020 - ◆	H713 ☒ - 020 - ◆	H714 ☒ - 020 - ◆				
1" SAE 16	0.2 - 2.0	1 - 7.5	1.0 (.07)	2.0 (.14)	2.9 (.20)	H782 ☒ - 002 - ◆	H783 ☒ - 002 - ◆	H784 ☒ - 002 - ◆	A	B	5000 psi S	RF
	0.5 - 5.0	2 - 19	2.5 (.17)	3.5 (.24)	5.3 (.37)	H782 ☒ - 005 - ◆	H783 ☒ - 005 - ◆	H784 ☒ - 005 - ◆				
	1 - 10	5 - 38	3.5 (.24)	9.0 (.62)	8.8 (.61)	H782 ☒ - 010 - ◆	H783 ☒ - 010 - ◆	H784 ☒ - 010 - ◆				
	2 - 20	10 - 76	4.0 (.28)	9.0 (.62)	18.0 (1.24)	H782 ☒ - 020 - ◆	H783 ☒ - 020 - ◆	H784 ☒ - 020 - ◆				
1¼" SAE 20	3 - 30	10 - 110	7.0 (.48)	16.5 (1.1)	45.1 (3.11)	H712 ☒ - 030 - ◆	H713 ☒ - 030 - ◆	H714 ☒ - 030 - ◆	A	B	5000 psi S	RF
	5 - 50	20 - 190	3.5 (.24)	7.0 (.48)	12.5 (.86)	H812 ☒ - 050 - ◆	H813 ☒ - 050 - ◆	H814 ☒ - 050 - ◆				
	10 - 75	40 - 280	5.0 (.35)	10.5 (.72)	31.9 (2.2)	H812 ☒ - 075 - ◆	H813 ☒ - 075 - ◆	H814 ☒ - 075 - ◆				
	10 - 100	50 - 380	6.5 (.45)	15.0 (1.0)	39.0 (2.7)	H812 ☒ - 100 - ◆	H813 ☒ - 100 - ◆	H814 ☒ - 100 - ◆				
1½" SAE 24	3 - 30	10 - 110	3.0 (.21)	4.0 (.28)	4.8 (.33)	H882 ☒ - 030 - ◆	H883 ☒ - 030 - ◆	H884 ☒ - 030 - ◆	A	B	5000 psi S	RF
	5 - 50	20 - 190	3.5 (.24)	7.0 (.48)	12.5 (.86)	H882 ☒ - 050 - ◆	H883 ☒ - 050 - ◆	H884 ☒ - 050 - ◆				
	10 - 75	40 - 280	5.0 (.35)	10.5 (.72)	31.9 (2.2)	H882 ☒ - 075 - ◆	H883 ☒ - 075 - ◆	H884 ☒ - 075 - ◆				
	10 - 100	50 - 380	6.5 (.45)	15.0 (1.0)	39.0 (2.7)	H882 ☒ - 100 - ◆	H883 ☒ - 100 - ◆	H884 ☒ - 100 - ◆				
1½" Code 62	3 - 30	10 - 110	3.0 (.21)	4.0 (.28)	4.8 (.33)	H818 ☒ - 030 - ◆			A	B	4000 psi S	RF
	5 - 50	20 - 190	3.5 (.24)	7.0 (.48)	12.5 (.86)	H818 ☒ - 050 - ◆						
	10 - 75	40 - 280	5.0 (.35)	10.5 (.72)	31.9 (2.2)	H818 ☒ - 075 - ◆						
	10 - 100	50 - 380	6.5 (.45)	15.0 (1.0)	39.0 (2.7)	H818 ☒ - 100 - ◆						
3"	20 - 180	100 - 650	11 (.76)	17 (1.1)		Not available	H913 ☒ - 180 - ◆	H914 ☒ - 180 - ◆	A	B	800 psi	Not available
	20 - 275	100 - 1000	11 (.76)	18 (1.2)			H913 ☒ - 275 - ◆	H914 ☒ - 275 - ◆				
3" Code 61	10 - 200	50 - 750	11 (.76)	17 (1.1)		H919 ☒ - 180 - ◆			A	B	800 psi	Not available
	20 - 300	100 - 1100	11 (.76)	18 (1.2)		H919 ☒ - 275 - ◆						

② Fractional sizes apply to NPTF and BSPP.

③ 3 inch models have BSPT (BS21) threads

Note: RF option is not available with standard brass flow meters.

Example: H 713 A - 030 - RF



Caution: For emulsions with less than 20% oil, factory recommends the brass body meter.

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