

3500/6000 PSI high temperature

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 260°C (500 °F)
- Accuracy ±2% full scale
- Repeatability ±1%
- Special scales available
- Calibrated for 1.0 S.G.
- For 80/20 and other water/oil emulsions

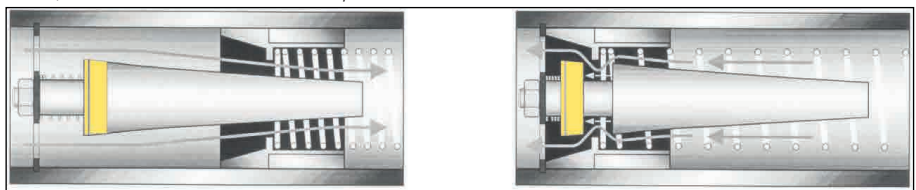
Technical data

Materials	2024 - T351 anodized aluminum body, piston and cone C360 brass body, piston and cone T303 stainless body, 2024 - T351 anodized aluminum piston and cone
Common parts	
Spider plate: T316 SS Spring: T302 SS Fasteners: T303 SS Seals: Viton® Scale support: T316 SS Guard: Cylindrical Pyrex® glass Scale: Polyimide	Retaining ring: T316 SS Retaining spring: T316 SS Indicator: Nickel-plated carbon steel Internal magnet: Teflon® coated Alnico 8 Bumper: 2011 - T3 anodized aluminum End caps: 2011 - T3 anodized aluminum
Threads	SAE J1926/1, NPTF ANSI B2.2, BSPP ISO1179, Code 62: SAE J518
Temperature range	-29 to +205 °C (-20 to +400 °F) continuous +205 to +260 °C (+400 to +500 °F) intermittent Detailed "Pressure vs. temperature" correlation information, see next page.
Pressure rating	
Aluminum / brass operating	3,500 psi/241 bar max. with a 3:1 safety factor. For high cycle applications, see page conversion information.
Stainless steel operating	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.
Pressure drop	See ordering information table, next page For detailed differential pressure charts, see page 62.
Accuracy	±2% of full scale
Repeatability	±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, which allows the fluid to flow freely in the reverse direction.

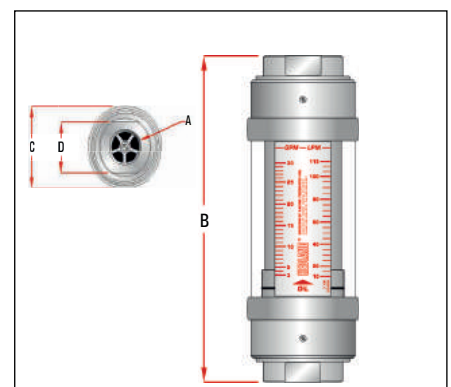


Normal flow direction

Reverse flow by-pass

Dimensions

A	B	C	D
Nominal port size	Length in (mm)	Width in (mm)	Flats in (mm)
¼ (SAE 6)	6.60 (168)	2.01 (53)	1.25 (32)
½ (SAE 10)	6.60 (168)	2.01 (53)	1.25 (32)
¾ (SAE 12)	7.20 (183)	2.48 (63)	1.50 (38)
1 (SAE 16)	7.20 (183)	2.48 (63)	1.75 (44)
1¼ (SAE 20)	12.20 (310)	4.20 (105)	2.75 (70)
1½ (SAE 24)	12.20 (310)	4.20 (105)	2.75 (70)



Note: Dimensions for 1½" Code 62 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 ^①	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	Aluminium 3500 psi	Brass 3500 psi	Stainless steel	Reverse flow
¼" SAE 6	0.1 - 1.0	0.5 - 3.75	4.0 (.28)	9.0 (.62)		H212 ☹ - 010 - HT	H213 ☹ - 010 - HT	H214 ☹ - 010 - HT	A	B	6000 psi S	Not available
	0.2 - 2.0	1.0 - 7.5	6.0 (.41)	13 (.90)		H212 ☹ - 020 - HT	H213 ☹ - 020 - HT	H214 ☹ - 020 - HT				
½" SAE 10	0.1 - 1.0	0.5 - 3.75	2.0 (.14)	2.75 (.19)	5.2 (.36)	H612 ☹ - 001 - HT	H613 ☹ - 001 - HT	H614 ☹ - 001 - HT	A	B	6000 psi S	HR
	0.2 - 2.0	1 - 7.5	2.0 (.14)	3.0 (.21)	9.6 (.66)	H612 ☹ - 002 - HT	H613 ☹ - 002 - HT	H614 ☹ - 002 - HT				
	0.5 - 5.0	2 - 19	3.0 (.21)	6.0 (.41)	4.8 (.33)	H612 ☹ - 005 - HT	H613 ☹ - 005 - HT	H614 ☹ - 005 - HT				
	1 - 10	5 - 38	4.0 (.28)	9.5 (.66)	23.0 (1.6)	H612 ☹ - 010 - HT	H613 ☹ - 010 - HT	H614 ☹ - 010 - HT				
	1 - 15	4 - 56	6.5 (.45)	18.5 (1.3)	55.2 (3.8)	H612 ☹ - 015 - HT	H613 ☹ - 015 - HT	H614 ☹ - 015 - HT				
¾" SAE 12	0.2 - 2.0	1 - 7.5	1.0 (.07)	2.0 (.14)	2.9 (.20)	H712 ☹ - 002 - HT	H713 ☹ - 002 - HT	H714 ☹ - 002 - HT	A	B	5000 psi S	HR
	0.5 - 5.0	2 - 19	2.5 (.17)	3.5 (.24)	5.3 (.37)	H712 ☹ - 005 - HT	H713 ☹ - 005 - HT	H714 ☹ - 005 - HT				
	1 - 10	5 - 38	3.5 (.24)	9.0 (.62)	8.8 (.61)	H712 ☹ - 010 - HT	H713 ☹ - 010 - HT	H714 ☹ - 010 - HT				
	2 - 20	10 - 76	4.0 (.28)	9.0 (.62)	18.0 (1.24)	H712 ☹ - 020 - HT	H713 ☹ - 020 - HT	H714 ☹ - 020 - HT				
	3 - 30	10 - 115	7.0 (.48)	16.5 (1.1)	45.1 (3.11)	H712 ☹ - 030 - HT	H713 ☹ - 030 - HT	H714 ☹ - 030 - HT				
1" SAE 16	0.2 - 2.0	1 - 7.5	1.0 (.07)	2.0 (.14)	2.9 (.20)	H782 ☹ - 002 - HT	H783 ☹ - 002 - HT	H784 ☹ - 002 - HT	A	B	5000 psi S	HR
	0.5 - 5.0	2 - 19	2.5 (.17)	3.5 (.24)	5.3 (.37)	H782 ☹ - 005 - HT	H783 ☹ - 005 - HT	H784 ☹ - 005 - HT				
	1 - 10	5 - 38	3.5 (.24)	9.0 (.62)	8.8 (.61)	H782 ☹ - 010 - HT	H783 ☹ - 010 - HT	H784 ☹ - 010 - HT				
	2 - 20	10 - 76	4.0 (.28)	9.0 (.62)	18.0 (1.24)	H782 ☹ - 020 - HT	H783 ☹ - 020 - HT	H784 ☹ - 020 - HT				
	3 - 30	10 - 115	7.0 (.48)	16.5 (1.1)	45.1 (3.11)	H782 ☹ - 030 - HT	H783 ☹ - 030 - HT	H784 ☹ - 030 - HT				
	4 - 40	15 - 150	9.0 (.62)	24.0 (1.7)	87.5 (6.04)	H782 ☹ - 040 - HT	H783 ☹ - 040 - HT	H784 ☹ - 040 - HT				
1½" SAE 20	3 - 30	10 - 110	3.0 (.21)	4.0 (.28)	4.8 (.33)	H812 ☹ - 030 - HT	H813 ☹ - 030 - HT	H814 ☹ - 030 - HT	A	B	5000 psi S	HR
	5 - 50	20 - 190	3.5 (.24)	7.0 (.48)	12.5 (.86)	H812 ☹ - 050 - HT	H813 ☹ - 050 - HT	H814 ☹ - 050 - HT				
	10 - 75	40 - 280	5.0 (.35)	10.5 (.72)	31.9 (2.2)	H812 ☹ - 075 - HT	H813 ☹ - 075 - HT	H814 ☹ - 075 - HT				
	10 - 100	50 - 380	6.5 (.45)	15.0 (1.0)	39.0 (2.7)	H812 ☹ - 100 - HT	H813 ☹ - 100 - HT	H814 ☹ - 100 - HT				
	10 - 150	50 - 560	10.5 (.72)	27.5 (1.9)	110 (7.6)	H812 ☹ - 150 - HT	H813 ☹ - 150 - HT	H814 ☹ - 150 - HT				
1½" SAE 24	3 - 30	10 - 110	3.0 (.21)	4.0 (.28)	4.8 (.33)	H882 ☹ - 030 - HT	H883 ☹ - 030 - HT	H884 ☹ - 030 - HT	A	B	5000 psi S	HR
	5 - 50	20 - 190	3.5 (.24)	7.0 (.48)	12.5 (.86)	H882 ☹ - 050 - HT	H883 ☹ - 050 - HT	H884 ☹ - 050 - HT				
	10 - 75	40 - 280	5.0 (.35)	10.5 (.72)	31.9 (2.2)	H882 ☹ - 075 - HT	H883 ☹ - 075 - HT	H884 ☹ - 075 - HT				
	10 - 100	50 - 380	6.5 (.45)	15.0 (1.0)	39.0 (2.7)	H882 ☹ - 100 - HT	H883 ☹ - 100 - HT	H884 ☹ - 100 - HT				
	10 - 150	50 - 560	10.5 (.72)	27.5 (1.9)	110 (7.6)	H882 ☹ - 150 - HT	H883 ☹ - 150 - HT	H884 ☹ - 150 - HT				
1½" Code 62	3 - 30	10 - 110	3.0 (.21)	4.0 (.28)	4.8 (.33)	H818 ☹ - 030 - HT			A	B	4000 psi S	HR
	5 - 50	20 - 190	3.5 (.24)	7.0 (.48)	12.5 (.86)	H818 ☹ - 050 - HT						
	10 - 75	40 - 280	5.0 (.35)	10.5 (.72)	31.9 (2.2)	H818 ☹ - 075 - HT						
	10 - 100	50 - 380	6.5 (.45)	15.0 (1.0)	39.0 (2.7)	H818 ☹ - 100 - HT						
	10 - 150	50 - 560	10.5 (.72)	27.5 (1.9)	110 (7.6)	H818 ☹ - 150 - HT						

① Fractional sizes apply to NPTF and BSPP.

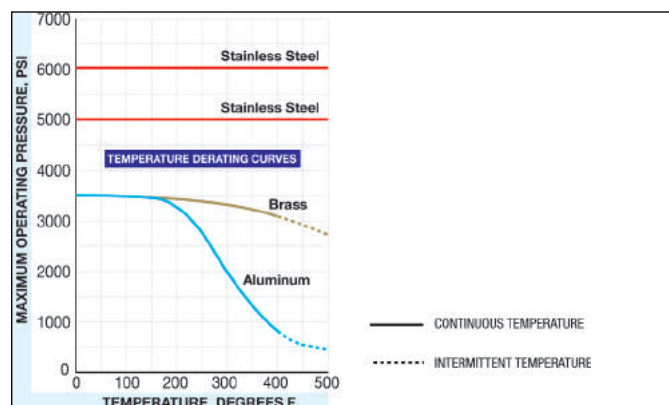
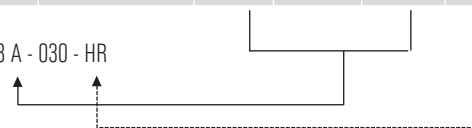
Note: HT suffix represents standard high temperature configuration. For reverse flow high temperature, replace HT with HR suffix.

Note: HR option is not available with brass flow meters.



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

Example: H 713 A - 030 - HR



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