

# 3500/6000 PSI Test Kits

## 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 240 °F
- Accuracy  $\pm 2\%$  full scale
- Repeatability  $\pm 1\%$
- Special scales available
- Calibrated for 1.0 S.G.
- For 80/20 and other water/oil emulsions

### SPECIFICATIONS:

#### 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

<b>COMMON PARTS:</b>	<b>Retaining Ring:</b> T316 SS
<b>Spider Plate:</b> T316 SS	<b>Retaining Spring:</b> T316 SS
<b>Spring:</b> T302 SS	<b>Indicator and Internal Magnet:</b> PPS / Ceramic
<b>Fasteners:</b> T303 SS	<b>Guard Seal / Bumper:</b> Buna N
<b>Pressure Seals:</b> Viton®	<b>Scale Support:</b> 6063 - T6 Aluminum
<b>Guard:</b> Polycarbonate	<b>End Caps:</b> Nylon ST

**THREADS:** SAE J1926/1, NPTF ANSI B2.2, BSPP ISO1179

**TEMPERATURE RANGE:** -20 to +240 °F (-29 to +116 °C)

#### PRESSURE RATING:

**Aluminum / Brass Operating:** 3,500 psi/241 bar max. with a 3:1 safety factor.

**For High Cycle Applications:** See page 7

**Stainless Steel Operating:** 6,000 psi/414 bar max. (5,000 psi/345 bar max. for 3/4" to 1-1/2" series) with a 3:1 safety factor.

**For High Cycle Applications:** See page 7

**PRESSURE DROP:** See Ordering Information Table, page 24.

For detailed differential pressure charts, see page 57.

**ACCURACY:**  $\pm 2\%$  of full scale

**REPEATABILITY:**  $\pm 1\%$

**PRESSURE GAUGE:** Glycerin dampened, 0 - 3,500 psi / 0 - 240 bar pressure range available on aluminum and brass test kits.

Glycerin dampened, 0 - 6,000 psi / 0 - 400 bar pressure range available on stainless steel test kits.

**LOAD VALVE:** 1/2", 3/4" and 1" series - needle valve;

1-1/4" and 1-1/2" series - ball valve.

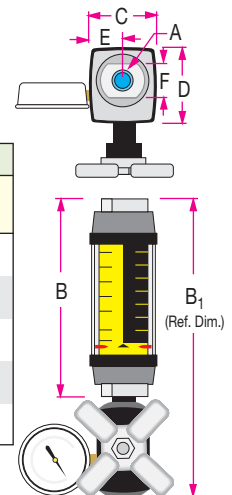
Produce  $\Delta P$  up to 3,500 psi/241 bar PSID and 6,000 psi/414 bar PSID.

### DIMENSIONS:

A	B	B <sub>1</sub>	C	D	E	F
NOMINAL PORT SIZE	LENGTH in (mm)	LENGTH in (mm)	WIDTH in (mm)	DEPTH in (mm)	OFFSET in (mm)	FLATS in (mm)
1/2 (SAE 10)	6.6 (168)	10.3 (262)	2.07 (53)	2.40 (61)	1.04 (26)	1.25 (32)
3/4 (SAE 12)	7.2 (183)	11.3 (287)	2.48 (63)	2.85 (72)	1.24 (32)	1.50 (38)
1 (SAE 16)	7.2 (183)	11.3 (287)	2.48 (63)	2.85 (72)	1.24 (32)	1.75 (44)
1-1/4 (SAE 20)	12.2 (310)	20.5 (521)	4.12 (105)	4.72 (120)	2.06 (52)	2.75 (70)
1-1/2 (SAE 24)	12.2 (310)	20.5 (521)	4.12 (105)	4.72 (120)	2.06 (52)	2.75 (70)

**NOTE:** Weights for all sizes can be found on page 73.

SAE and BSPP Test Kits include inlet adapter.



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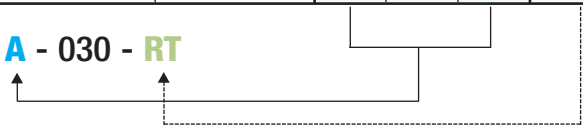
## For Water-based Fluids (Water/Oil Emulsions)

### ORDERING INFORMATION:

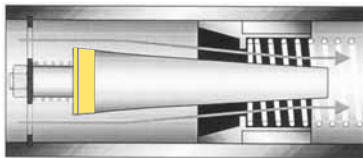
NOMINAL PORT SIZE <sup>①</sup>	FLOW RANGE		PRESSURE DROP			MODEL NUMBER <i>(see example below)</i>			MATERIAL			OPTIONS
	GPM	LPM	50% FLOW PSI (BAR)	100% FLOW PSI (BAR)	REVERSE 100% FLOW PSI (BAR)	SAE	NPTF	BSPP	ALUMINUM 3500 PSI	BRASS 3500 PSI	STAINLESS	REVERSE FLOW
1/2" SAE 10	0.1 - 1.0	0.5 - 3.75	3.0 (.21)	4.75 (.33)	7.2 (.50)	H612 * - 001 - TK	H613 * - 001 - TK	H614 * - 001 - TK	A	B	S	RT
	0.2 - 2.0	1 - 7.5	5.0 (.34)	9.0 (.62)	15.6 (1.1)	H612 * - 002 - TK	H613 * - 002 - TK	H614 * - 002 - TK				
	0.5 - 5.0	2 - 19	10.0 (.69)	26.0 (1.8)	24.8 (1.7)	H612 * - 005 - TK	H613 * - 005 - TK	H614 * - 005 - TK				
	1 - 10	5 - 38	24.0 (1.7)	71.5 (4.9)	85.0 (5.9)	H612 * - 010 - TK	H613 * - 010 - TK	H614 * - 010 - TK				
	1 - 15	4 - 56	39.0 (2.7)	155 (10.7)	210 (14.5)	H612 * - 015 - TK	H613 * - 015 - TK	H614 * - 015 - TK				
3/4" SAE 12	0.2 - 2.0	1 - 7.5	1.5 (.10)	3.0 (.21)	3.9 (.27)	H712 * - 002 - TK	H713 * - 002 - TK	H714 * - 002 - TK	A	B	S	RT
	0.5 - 5.0	2 - 19	4.0 (.28)	6.5 (.45)	8.3 (.57)	H712 * - 005 - TK	H713 * - 005 - TK	H714 * - 005 - TK				
	1 - 10	5 - 38	6.5 (.45)	16.0 (1.1)	15.8 (1.1)	H712 * - 010 - TK	H713 * - 010 - TK	H714 * - 010 - TK				
	2 - 20	10 - 76	11.0 (.76)	26.0 (1.8)	35.0 (2.4)	H712 * - 020 - TK	H713 * - 020 - TK	H714 * - 020 - TK				
	3 - 30	10 - 115	18.0 (1.2)	47.5 (3.3)	76.1 (5.2)	H712 * - 030 - TK	H713 * - 030 - TK	H714 * - 030 - TK				
1" SAE 16	0.2 - 2.0	1 - 7.5	1.5 (.10)	3.0 (.21)	3.9 (.27)	H782 * - 002 - TK	H783 * - 002 - TK	H784 * - 002 - TK	A	B	S	RT
	0.5 - 5.0	2 - 19	4.0 (.28)	6.5 (.45)	8.3 (.57)	H782 * - 005 - TK	H783 * - 005 - TK	H784 * - 005 - TK				
	1 - 10	5 - 38	6.5 (.45)	16.0 (1.1)	15.8 (1.1)	H782 * - 010 - TK	H783 * - 010 - TK	H784 * - 010 - TK				
	2 - 20	10 - 76	11.0 (.76)	26.0 (1.8)	35.0 (2.4)	H782 * - 020 - TK	H783 * - 020 - TK	H784 * - 020 - TK				
	3 - 30	10 - 115	18.0 (1.2)	47.5 (3.3)	76.1 (5.2)	H782 * - 030 - TK	H783 * - 030 - TK	H784 * - 030 - TK				
	4 - 40	15 - 150	26.0 (1.8)	75.0 (5.2)	139 (9.6)	H782 * - 040 - TK	H783 * - 040 - TK	H784 * - 040 - TK				
5 - 50	20 - 190	63.5 (4.4)	114 (7.9)	230 (15.9)	H782 * - 050 - TK	H783 * - 050 - TK	H784 * - 050 - TK					
1-1/4" SAE 20	3 - 30	10 - 110	3.4 (.23)	7.8 (.54)	5.6 (.39)	H812 * - 030 - TK	H813 * - 030 - TK	H814 * - 030 - TK	A	B	S	RT
	5 - 50	20 - 190	4.3 (.30)	8.8 (6.1)	14.3 (.99)	H812 * - 050 - TK	H813 * - 050 - TK	H814 * - 050 - TK				
	10 - 75	40 - 280	6.3 (.43)	14.3 (9.9)	35.7 (2.5)	H812 * - 075 - TK	H813 * - 075 - TK	H814 * - 075 - TK				
	10 - 100	50 - 380	8.3 (.57)	21.3 (1.5)	45.3 (3.1)	H812 * - 100 - TK	H813 * - 100 - TK	H814 * - 100 - TK				
	10 - 150	50 - 560	14.3 (.99)	41.3 (2.8)	124 (8.6)	H812 * - 150 - TK	H813 * - 150 - TK	H814 * - 150 - TK				
1-1/2" SAE 24	3 - 30	10 - 110	3.4 (.23)	7.8 (.54)	5.6 (.39)	H882 * - 030 - TK	H883 * - 030 - TK	H884 * - 030 - TK	A	B	S	RT
	5 - 50	20 - 190	4.3 (.30)	8.8 (6.1)	14.3 (.99)	H882 * - 050 - TK	H883 * - 050 - TK	H884 * - 050 - TK				
	10 - 75	40 - 280	6.3 (.43)	14.3 (9.9)	35.7 (2.5)	H882 * - 075 - TK	H883 * - 075 - TK	H884 * - 075 - TK				
	10 - 100	50 - 380	8.3 (.57)	21.3 (1.5)	45.3 (3.1)	H882 * - 100 - TK	H883 * - 100 - TK	H884 * - 100 - TK				
	10 - 150	50 - 560	14.3 (.99)	41.3 (2.8)	124 (8.6)	H882 * - 150 - TK	H883 * - 150 - TK	H884 * - 150 - TK				

① Fractional sizes apply to NPTF and BSPP.

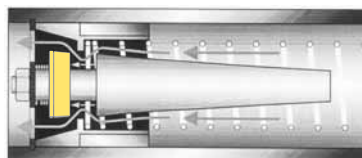
(example) H 713 A - 030 - RT



**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

**NOTE:** TK suffix represents standard test kit configuration. For reverse flow by-pass test kit, replace TK suffix with RT suffix.

**NOTE:** RT option is not available with standard brass flow meters.

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

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FLOW-ALERT FLOW SWITCHES  
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FLOW TRANSMITTERS  
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