

MANNESMANN REXROTH	Check Valve Model S		RA 20 375/06.98
	Sizes 6 to 30	to 4600 PSI (315 bar)	to 120 GPM (450 L/min)

Replaces: 05.94

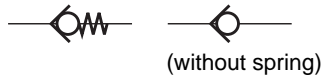
Features:

- For in-line or subplate mounting
- Leakfree closure in one direction
- Various cracking pressures (see ordering code)



F 87 016
Model S 15 A1.0/12

Symbols



Ordering code

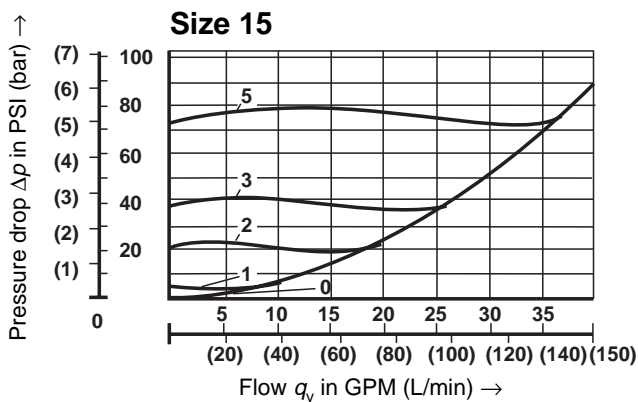
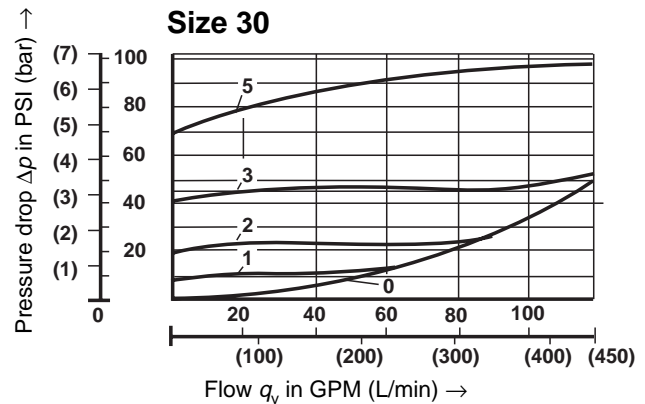
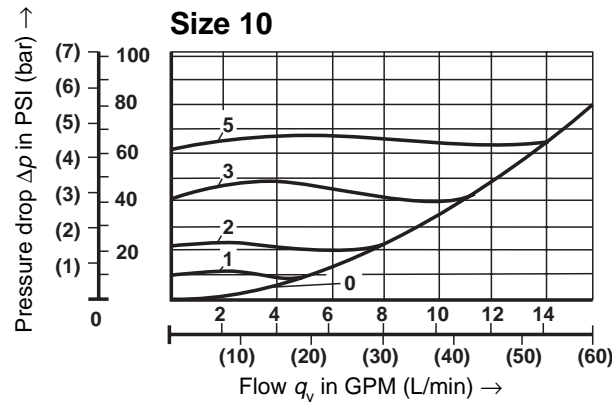
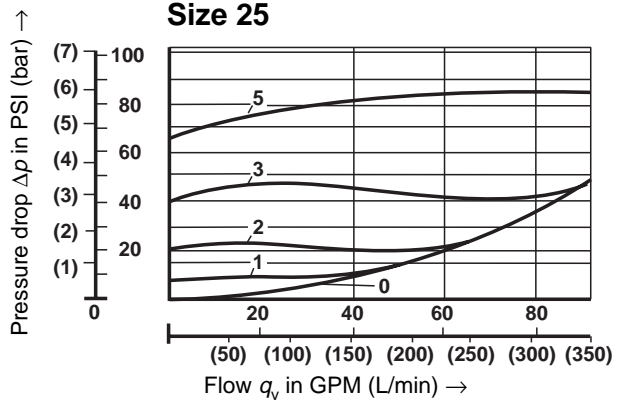
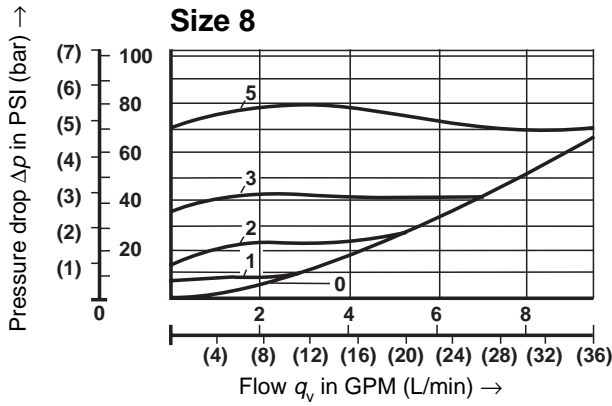
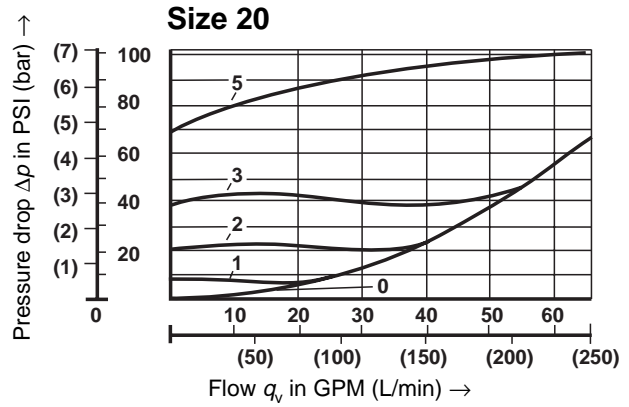
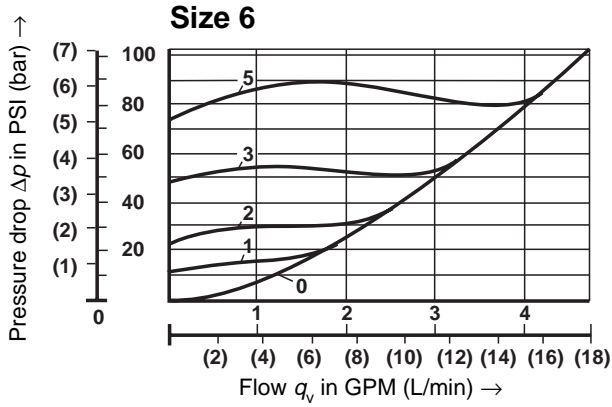
S	• 0 /	*	Further details in clear text
<i>Threaded version "A"</i>	<i>Subplate version "P"</i>	Size	<i>Threaded version</i>
1/4"	-	= 6	no code = BSP threads
3/8"	-	= 8	5 = NPT threads
1/2"	ANSI C 06	= 10	12 = SAE threads
3/4"	-	= 15	<i>Subplate version</i>
1"	ANSI C 08	= 20	no code = non-standard interface
1 1/4"	-	= 25	SO 43A-739 = NFPA/ANSI standard interface (size 30)
1 1/2"	ANSI C 09	= 30	SO 43A-740 = NFPA/ANSI standard interface (size 10)
Threaded for in-line mounting		= A	0 = Modification no.
For subplate mounting (sizes 10, 20, 30 only)		= P	0 = without spring
			1 = (standard)
			2 =
			3 =
			5 =

see operating curves page 2

Technical data (for applications outside these parameters, please consult us!)

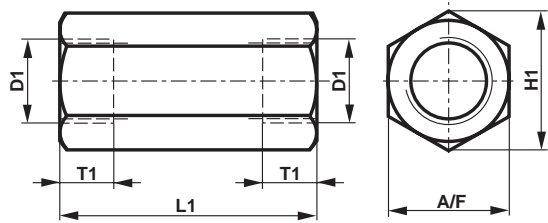
Hydraulic fluid	Petroleum oils (HM, HL, HLP) Phosphate-ester fluids (HFD-R)
Fluid temperature range °F (°C)	NBR seals: -22 to +158 (-30 to +70) FPM seals: -4 to +158 (-20 to +70)
Viscosity range SUS (mm ² /s)	35 to 2320 (2.8 to 500)
Maximum degree of fluid contamination	Class 18/15 according to ISO 4406. Therefore we recommend a filter with a retention rate of β ₁₀ ≥ 75.
Operating pressure PSI (bar)	up to 4600 (315)
Cracking pressure	see operating curves, page 2
Normal flow	see operating curves, page 2

Operating curves, measured at $v = 190$ SUS ($41 \text{ mm}^2/\text{s}$) and $t = 122 \text{ }^\circ\text{F}$ ($50 \text{ }^\circ\text{C}$)



Flow resistance Δp related to flow q_v at cracking pressure

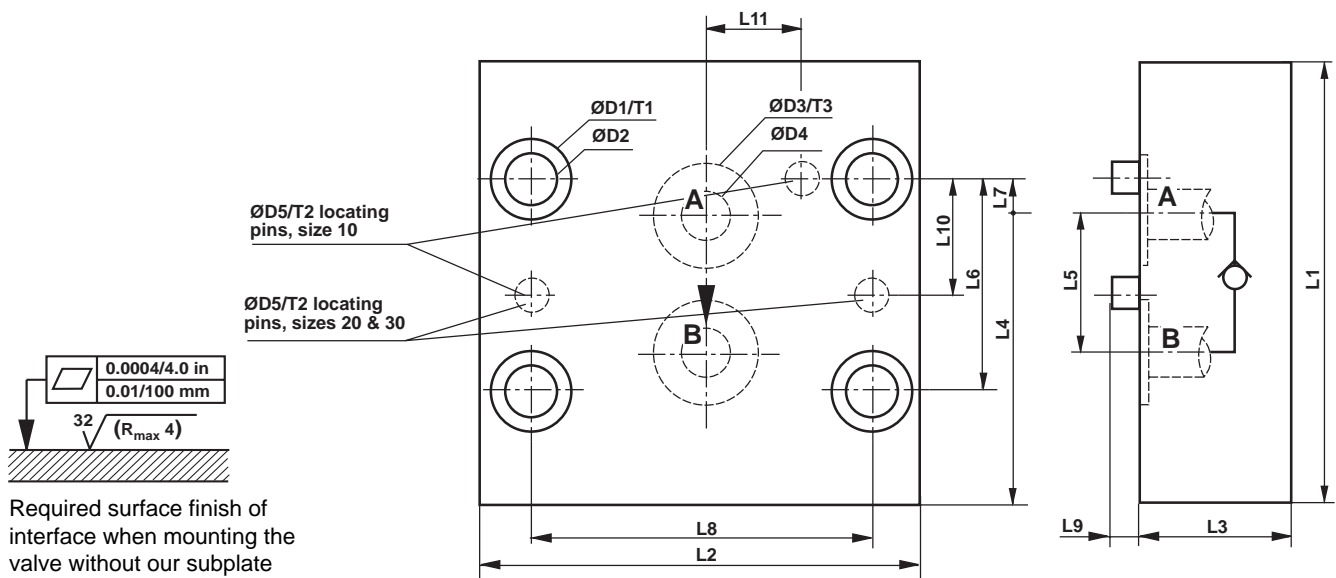
Unit dimensions, In-line Mounting (*threaded connections*): dimensions in inches (millimeters)



A/F = distance across flats

Size	6	8	10	15	20	25	30
D1	1/4"BSP 1/4"NPT -	3/8"BSP 3/8"NPT -	1/2"BSP 1/2"NPT SAE-8 3/4"-16	3/4"BSP 3/4"NPT SAE-12 1-1/16"-12	1"BSP 1"NPT SAE-16 1-5/16"-12	1-1/4"BSP 1-1/4"NPT SAE-20 1-5/8"-12	1-1/2"BSP 1-1/2"NPT SAE-24 1-7/8"-12
H1	0.87 (22)	1.1 (28)	1.36 (34.5)	1.63 (41.5)	2.09 (53)	2.72 (69)	2.95 (75)
L1	2.28 (58)	2.28 (58)	2.83 (72)	3.35 (85)	3.86 (98)	4.72 (120)	5.2 (132)
T1	0.47 (12)	0.47 (12)	0.55 (14)	0.63 (16)	0.71 (18)	0.79 (20)	0.87 (22)
A/F	0.79 (19)	0.94 (24)	1.18 (30)	1.42 (36)	1.81 (46)	2.36 (60)	2.56 (65)
Weight lbs (kg)	0.25 (0.1)	0.5 (0.2)	0.75 (0.3)	1 (0.5)	2.25 (1)	4.5 (2)	5.5 (2.5)

Unit dimensions, Subplate Mounting (*non-standard interface*): dimensions in inches (millimeters)

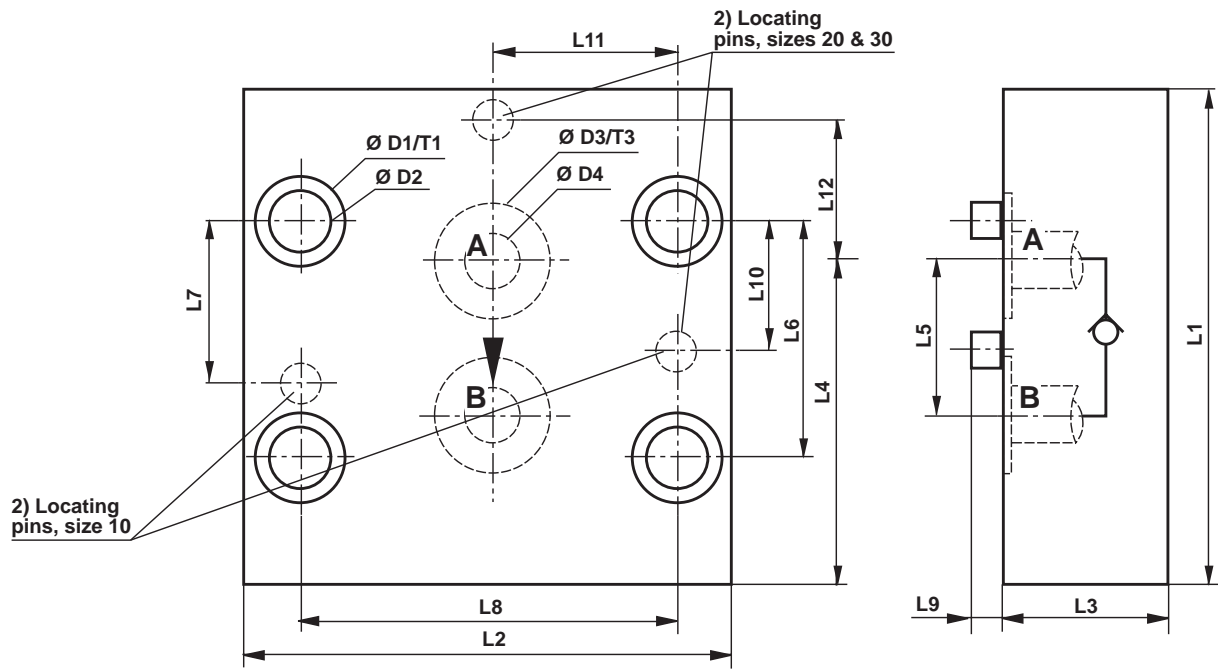


Required surface finish of interface when mounting the valve without our subplate

Size	ØD1	ØD2	ØD3	ØD4	ØD5	L1	L2	L3	L4	L5	L6	L7
10	0.69 (17.5)	0.45 (11.5)	0.827 (21)	0.39 (10)	0.236 (6)	3.54 (90)	3.43 (87)	1.18 (30)	2.333 (59.25)	1.122 (28.5)	1.693 (43)	0.285 (7.25)
20	0.94 (24)	0.63 (16)	1.181 (30)	0.79 (20)	0.236 (6)	4.53 (115)	3.54 (90)	1.46 (37)	2.992 (76)	1.811 (46)	3.189 (81)	0.866 (22)
30	1.14 (29)	0.79 (20)	1.575 (40)	1.1 (28)	0.236 (6)	5.12 (130)	5.12 (130)	1.97 (50)	3.563 (90.5)	2.008 (51)	3.622 (92)	0.807 (20.5)

Size	L8	L9	L10	L11	T1	T3	Weight (approx.) lbs (kg)	Valve mounting bolts
10	2.638 (67)	0.2 (5)	-	0.748 (19)	0.453 (11.5)	0.091 (2.3)	4.0 (1.8)	7/16-14 UNC x 1-3/8" (M10 x 35 mm)
20	2.559 (65)	0.2 (5)	1.594 (40.5)	-	0.236 (6)	0.091 (2.3)	6.2 (2.8)	5/8-11 UNC x 2-3/8" (M14 x 60 mm)
30	3.622 (92)	0.2 (5)	1.811 (46)	-	0.551 (14)	0.091 (2.3)	14.1 (6.4)	3/4-10 UNC x 2-1/2" (M18 x 65 mm)

**Unit dimensions, Subplate Mounting (SO-43A-740 NFPA/ANSI Standard Interface, size 10)
(SO-43A 739 NFPA/ANSI Standard Interface size 30) : dimensions in inches (millimeters)**



0.0004/4.0 in
0.01/100 mm

32 (R_{max} 4)

Required surface finish of interface when mounting the valve without our subplate

Size	ØD1	ØD2	ØD3	ØD4	ØD5	L1*	L2*	L3	L4	L5	L6	L7
10 (C 06)	0.69 (17.5)	0.45 (11.5)	0.827 (21)	0.39 (10)	0.236 (6)	3.06 (78)	2.56 (65)	1.48 (37.5)	2.218 (56)	1.375 (35)	2.375 (60)	1.875 (47.5)
20 (C 08)	0.94 (24)	0.63 (16)	1.181 (30)	0.79 (20)	0.236 (6)	4.53 (115)	3.54 (90)	1.46 (37)	2.938 (74.6)	1.812 (46)	3.187 (81)	-
30 (C 09)	1.14 (29)	0.79 (20)	1.575 (40)	1.1 (28)	0.236 (6)	5.12 (130)	5.12 (130)	1.97 (50)	3.563 (90.5)	2.008 (51)	3.622 (92)	-

* Overall length and width are not to NFPA/ANSI C 08

Size	L8	L9	L10	L11	L12	T1	T3	Weight (approx.) lbs (kg)	Valve mounting bolts
10 (C 06)	1.875 (45.6)	0.2 (5)	1.188 (30)	1.875 (47.5)	-	0.453 (11.5)	0.091 (2.3)	4.0 (1.8)	7/16-14 UNC x 1-3/8" (M10 x 35 mm)
20 (C 08)	2.559 (65)	0.2 (5)	1.594 (40.5)	1.281 (32.5)	1.219 (31)	0.236 (6)	0.091 (2.3)	6.2 (2.8)	5/8-11 UNC x 2-3/8" (M14 x 60 mm)
30 (C 09)	3.622 (92)	0.2 (5)	1.811 (46)	1.81 (46)	1.19 (36)	0.551 (14)	0.091 (2.3)	14.1 (6.4)	3/4-10 UNC x 2-1/2" (M18 x 65 mm)