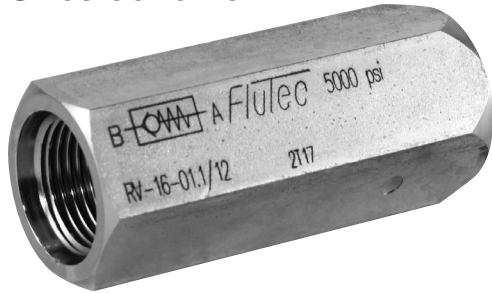


FLOW CONTROL VALVES

RV & RVP Series

Check Valves

Sizes 06 to 40



RV Series
Inline Mounting



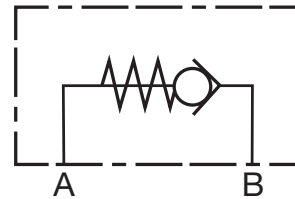
RVP Series
Manifold Mounting

Hydraulic Symbols

RV



RVP



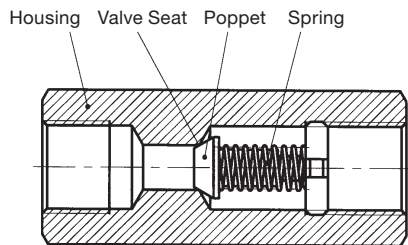
Up to 160 gpm (600 l/min)
Up to 5000 psi (350 bar)

Features

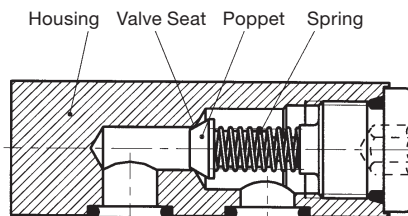
- Check valves for mounting directly inline and directly onto control manifolds
- Choice of nine sizes ensures best possible adaptability to the system
- Leak-free poppet design for complete shut-off
- 3 cracking pressures 7psi (*standard*), 25psi and 65psi (*optional*)
- RV Series (*Zinc plated housing*)
- except RV-30 & 40 NPT, RV-40 SAE (*Phosphated housing*)
- RVP Series (*Phosphated housing*)

Function

RV



RVP



RV and RVP are check valves which allow flow in one direction (port B → port A) while the other direction is shut off. The shut-off function is provided by the spring-loaded cone poppet. The standard cracking pressure is 7 psi (0.5 bar).

Technical Specifications

Operating pressure:	max. 5000 psi (350 bar)
Nominal flow:	
RV / RVP06	max. 5 gpm (20 l/min)
RV / RVP08	max. 11 gpm (40 l/min)
RV / RVP10	max. 18 gpm (70 l/min)
RV / RVP12	max. 42 gpm (160 l/min)
RV / RVP16	max. 53 gpm (200 l/min)
RV / RVP20	max. 92 gpm (350 l/min)
RV / RVP25	max. 145 gpm (550 l/min)
RV / RVP30	max. 160 gpm (600 l/min)
RV / RVP40	max. 160 gpm (600 l/min)
Cracking Pressure	7 psi (<i>standard</i>) (0.5 bar)
Media Operating Temp. Range:	-4°F to 212°F (-20°C to 80°C)
Ambient Temp Range:	-4°F to 212°F (-20°C to 80°C)
Operating fluid:	Hydraulic oil to DIN 51524 Part 1 & 2
Viscosity range:	min. 2.8 mm ² /s to max. 800 mm ² /s
Filtration:	Class 21/19/16 according to ISO 4406 or cleaner
Installation:	No orientation restrictions
Materials:	
Valve Body:	Steel
Piston:	Hardened and ground steel
Seals:	FKM (<i>standard</i>)
Weight:	
RV 06 = 0.2 lbs (0.1 kg)	RVP 06 = 0.4 lbs (0.2 kg)
RV 08 = 0.4 lbs (0.2 kg)	RVP 08 = 0.9 lbs (0.4 kg)
RV 10 = 0.4 lbs (0.2 kg)	RVP 10 = 1.1 lbs (0.5 kg)
RV 12 = 0.7 lbs (0.3 kg)	RVP 12 = 2.2 lbs (1.0 kg)
RV 16 = 1.1 lbs (0.5 kg)	RVP 16 = 4.6 lbs (2.1 kg)
RV 20 = 2.4 lbs (1.1 kg)	RVP 20 = 7.3 lbs (5.8 kg)
RV 25 = 4.0 lbs (1.8 kg)	RVP 25 = 12.8 lbs (3.3 kg)
RV 30 = 5.7 lbs (2.6 kg)	RVP 30 = 22.7 lbs (10.3 kg)
RV 40 = 9.7 lbs (4.4 kg)	RVP 40 = 39.4 lbs (17.9 kg)

Model Code

RVP - 08 - 01 . X / 0 - 1 BAR

Check Valve

- RV = Inline Mounting
- RVP = Manifold Mounting

Sizes

06, 08, 10, 12, 16, 20, 25, 30, 40

Type

- 01 = standard (RV = housing phosphated)
(RV = housing zinc-plated)
- 30 = housing in stainless steel (for RV only)
(BSP only)

Other types on request

Series

(determined by manufacturer)

Threaded Connection (RV only)

- 0 = BSP thread, Form X to DIN 3852 Part 2
- 5 = NPT thread
- 12 = UNF thread

Specific Cracking Pressure

(on request)

Standard Models

Type	Code	Plating	Part No.
1/8"NPT	RV-06-01.X/5	Zinc	705827
1/4"NPT	RV-08-01.X/5	Zinc	705830
3/8"NPT	RV-10-01.X/5	Zinc	705833
1/2"NPT	RV-12-01.X/5	Zinc	705836
3/4"NPT	RV-16-01.X/5	Zinc	705839
1"NPT	RV-20-01.X/5	Zinc	705842
1-1/4"NPT	RV-25-01.X/5	Zinc	705845
1-1/2"NPT	RV-30-01.X/5	Phos	2057126
2"NPT	RV-40-01.X/5	Phos	2055684
-2SAE	RV-06-01.X/12	Zinc	705828
-4SAE	RV-08-01.X/12	Zinc	705831
-6SAE	RV-10-01.X/12	Zinc	705834
-8SAE	RV-12-01.X/12	Zinc	705837
-12SAE	RV-16-01.X/12	Zinc	705840
-16SAE	RV-20-01.X/12	Zinc	705843
-20SAE	RV-25-01.X/12	Zinc	705846
-24SAE	RV-30-01.X/12	Zinc	2064132
-32SAE	RV-40-01.X/12	Phos	2055686
1/4"BSP	RV-08-01.X/0	Zinc	705829
3/8"BSP	RV-10-01.X/0	Zinc	705832
1/2"BSP	RV-12-01.X/0	Zinc	705835
3/4"BSP	RV-16-01.X/0	Zinc	705838
1"BSP	RV-20-01.X/0	Zinc	705841
1-1/4"BSP	RV-25-01.X/0	Zinc	705844
DN12	RVP-12-01.X	Phos	705933
DN16	RVP-16-01.X	Phos	705935
DN25	RVP-25-01.X	Phos	705939
DN30	RVP-30-01.X	Phos	705941

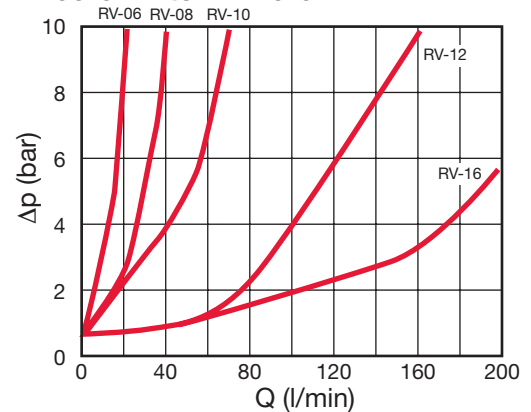
Other models on request

Performance

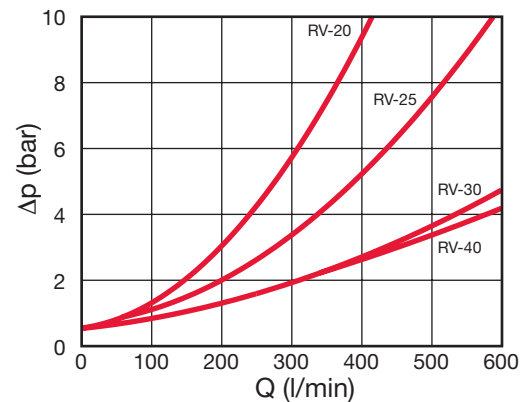
Pressure drops, dependent on flow rate

RV = Flow direction B → A, measured at $v = 72 \text{ mm}^2/\text{s}$ and $T_{\text{oil}} = 30^\circ\text{C}$
 RVP = Flow direction B → A, measured at $v = 38 \text{ mm}^2/\text{s}$ and $T_{\text{oil}} = 43^\circ\text{C}$
 Pressure differential Δp against flow rate Q

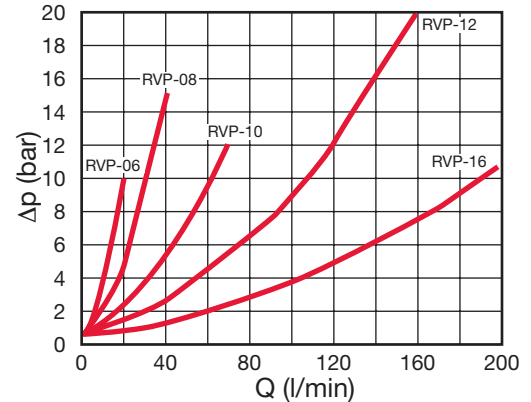
RV-06-01.X to RV-16-01.X



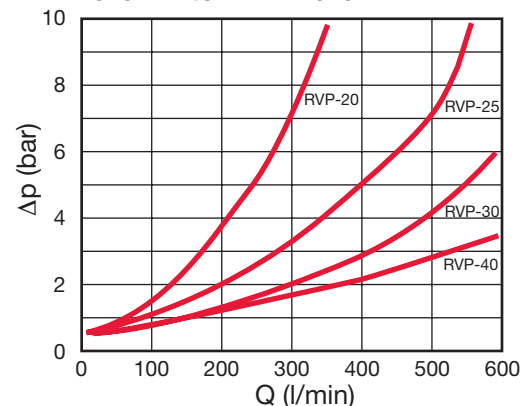
RV-20-01.X to RV-40-01.X



RVP-06-01.X to RVP-16-01.X

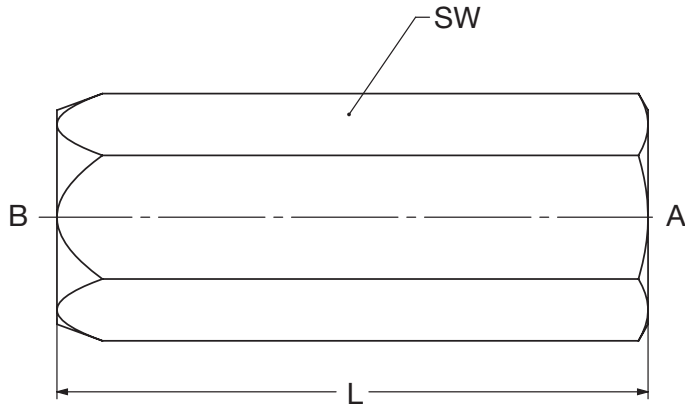


RVP-20-01.X to RVP-40-01.X



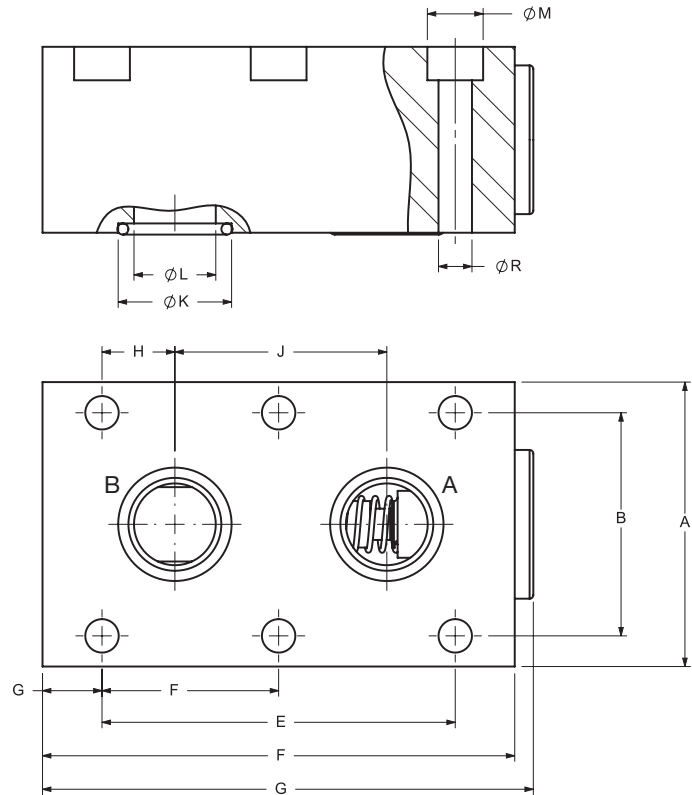
FLOW CONTROL VALVES

Dimensions RV Inline Check Valves



Size	Threaded Connection			SW	L	Wt.
	NPT	SAE	BSP			
06	1/8"	-2 (5/16"-24)	G1/8"	0.67 (17)	1.77 (45)	0.2 (0.1)
08	1/4"	-4 (7/16"-20)	G1/4"	0.75 (19)	2.17 (55)	0.4 (0.2)
10	3/8"	-6 (9/16"-18)	G3/8"	0.94 (24)	2.56 (65)	0.4 (0.2)
12	1/2"	-8 (3/4"-16)	G1/2"	1.18 (30)	2.87 (73)	0.7 (0.3)
16	3/4"	-12 (1-1/6"-16)	G3/4"	1.42 (36)	3.46 (88)	1.1 (0.5)
20	1"	-16 (1-5/16"-12)	G1"	1.81 (46)	5.0 (127)	2.4 (1.1)
25	1-1/4"	-20 (1-5/8"-12)	G1-1/4"	2.36 (60)	5.63 (143)	4.0 (1.8)
30	1-1/2"	-24 (1-7/8"-12)	G1-1/2"	2.56 (65)	5.63 (143)	5.7 (2.6)
40	2"	-32 (2-1/2"-12)	G2"	3.15 (80)	6.50 (165)	9.7 (4.4)

Dimensions RVP Manifold Mounted Check Valves



Size	A	B	C	D	E	F*	G	H
06	1.63 (41.5)	1.12 (28.5)	1.81 (46)	1.63 (41.5)	0.75 (19)	-	0.25 (6.4)	0.06 (1.6)
08	1.81 (46)	1.32 (33.5)	2.64 (67)	2.50 (63.5)	1.38 (35)	-	0.56 (14.2)	0.19 (4.8)
10	2.01 (51)	1.50 (38)	2.91 (74)	2.76 (70)	1.32 (33.5)	-	0.71 (18)	0.16 (4)
12	2.26 (57.5)	1.75 (44.5)	3.33 (84.5)	3.15 (80)	1.50 (38)	-	0.83 (21)	0.16 (4)
16	2.76 (70)	2.13 (54)	4.31 (109.5)	4.09 (104)	2.99 (76)	1.50 (38)	0.55 (14)	0.43 (11)
20	3.01 (76.5)	2.36 (60)	5.24 (133)	5.0 (127)	3.74 (95)	1.87 (47.5)	0.63 (16)	0.75 (19)
25	3.94 (100)	2.99 (76)	6.77 (172)	6.5 (165)	4.74 (120.5)	2.36 (60)	0.59 (15)	0.81 (20.6)
30	4.53 (115)	3.62 (92)	7.72 (196)	7.32 (186)	5.63 (143)	2.81 (71.5)	0.59 (15)	0.94 (23.8)
40	5.51 (140)	4.37 (111)	7.91 (201)	7.56 (192)	5.26 (133.5)	2.64 (67)	0.63 (16)	1.0 (25.5)

Size	J	ØK	ØL	ØM	N	O	ØR	Wt.
06	0.63 (16)	0.38 (9.7)	0.20 (5)	0.43 (11)	0.35 (9)	0.63 (16)	0.26 (6.6)	0.4 (0.2)
08	1.0 (25.5)	0.50 (12.7)	0.28 (7)	0.43 (11)	0.51 (13)	0.79 (20)	0.26 (6.6)	0.9 (0.4)
10	1.00 (25.5)	0.61 (15.6)	0.39 (10)	0.43 (11)	0.71 (18)	0.98 (25)	0.26 (6.6)	1.1 (0.5)
12	1.18 (30)	0.73 (18.6)	0.51 (13)	0.43 (11)	0.98 (25)	1.26 (32)	0.26 (6.6)	2.2 (1)
16	2.13 (54)	0.96 (24.5)	0.67 (17)	0.55 (14)	1.42 (36)	1.77 (45)	0.35 (9)	4.6 (2.1)
20	2.24 (57)	1.20 (30.5)	0.87 (22)	0.55 (14)	1.61 (41)	1.97 (50)	0.35 (9)	7.3 (3.3)
25	3.13 (79.5)	1.47 (37.4)	1.12 (28.5)	0.71 (18)	1.73 (44)	2.17 (55)	0.45 (11.5)	12.8 (5.8)
30	3.74 (95)	1.71 (43.4)	1.38 (35)	0.79 (20)	2.44 (62)	2.95 (75)	0.55 (14)	22.7 (10.3)
40	3.50 (89)	2.25 (57.2)	1.85 (47)	0.79 (20)	3.43 (87)	3.94 (100)	0.55 (14)	39.4 (17.9)

Notes:

- Dimensions are in inches (mm) and lbs (kg).
- Dimensions are for general information only, all critical dimensions should be verified by requesting a certified print.