



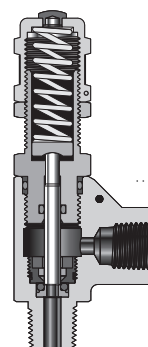
Proportional Relief Valves

RV Series

Contents

High-Pressure Proportional Relief Valves (RV1 Series)

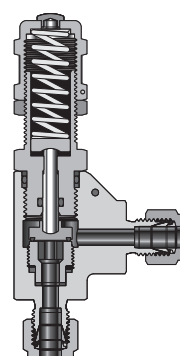
- ❖ Set pressure from 50 to 6000 psig (3.4 to 413 bar)
- ❖ Orifice size is 0.14" (3.6 mm)
- ❖ High pressure resistance and wide pressure regulation range of the valve



8-31

Low-Pressure Proportional Relief Valves (RV2 Series)

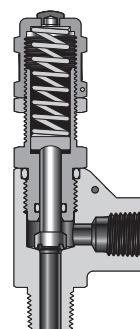
- ❖ Set pressure from 10 to 225 psig (0.68 to 15.5 bar)
- ❖ Orifice size is 0.19" (4.8 mm)
- ❖ Spring adjusts to provide desired set pressure



8-36

Medium-Pressure Proportional Relief Valves (RV3 Series)

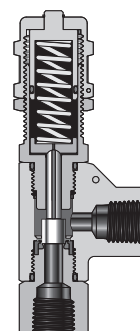
- ❖ Set pressure from 50 to 1500 psig (3.4 to 103 bar)
- ❖ Orifice size is 0.25" (6.4 mm)
- ❖ Spring adjusts to provide desired set pressure



8-40

Precision Proportional Relief Valves (RV4 Series)

- ❖ Set pressure from 5 to 550 psig (0.34 to 37.9 bar)
- ❖ Orifice size is 0.23" (5.8 mm)
- ❖ Zero friction poppets increases accuracy of cracking pressure and reseal pressure



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High-Pressure Proportional Relief Valves

RV1 Series

Features

- ❖ Liquid or gas service
- ❖ Set pressure from 50 to 6000 psig (3.4 to 413 bar)
- ❖ Maximum outlet pressure up to 1500 psig (103 bar)
- ❖ Orifice size is 0.14" (3.6 mm)
- ❖ Spring adjusts to provide desired set pressure
- ❖ The effect of system back pressure is minimized by the design of these valves.
- ❖ 7 color-coded springs available for a wide range of set pressure



Pressure-Temperature Ratings

Inlet Working Pressure	6000psig (413bar)					
Outlet Working Pressure	1500psig (0 to 103bar)					
Set Pressure Range	50 to 6000psig (3.4 to 413bar)					
Seal Material	Fluoro-carbon FKM	Buna N	Neo-prene	Ethylene propylene	Perfluoro-carbon FFKM	Fluoro-silicone Rubber
Temperature, °F (°C)	Maximum Set Pressure, psig (bar)					
-76 (-60)	—	—	—	—	—	2500 (172)
-40 (-40)						
-10 (-23)						
0 (-17)						
10 (-12)						
25 (-4)	6000 (413)	6000 (413)	6000 (413)	6000 (413)	6000 (413)	
30 (-1)						
40 (4)						
50 (10)						
70 (20)						
150 (65)	5580 (384)	5580 (384)	5580 (384)	5580 (384)	5580 (384)	
200 (93)	5160 (355)	5160 (355)	5160 (355)	5160 (355)	5160 (355)	
250 (121)	4910 (338)	4910 (338)	4910 (338)	4910 (338)	4910 (338)	—
275 (135)	—	—	—	—	2500 (172)	
300 (148)						

❖ Note: outlet pressure should not exceed inlet pressure.

Set Pressure and Resealing Pressure

- ❖ The set pressure is the upstream pressure when the fluid flows out for the first time. Initial unloading at room temperature after completion, the set pressure of each valve can be repeated within $\pm 5\%$
- ❖ The resealing pressure is the upstream pressure when no fluid flows out, and the resealing pressure is always lower than Set pressure.

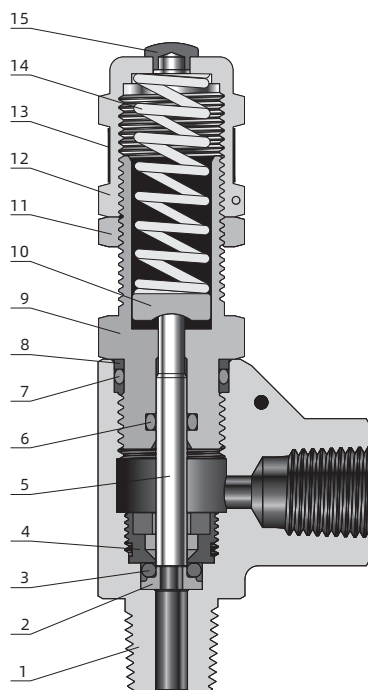
Note: For valves not actuated for a period of time, initial relief pressure may be higher than the set pressure.

Testing

❖ Every RV1 series proportional relief valve is tested for set and resealing performance.

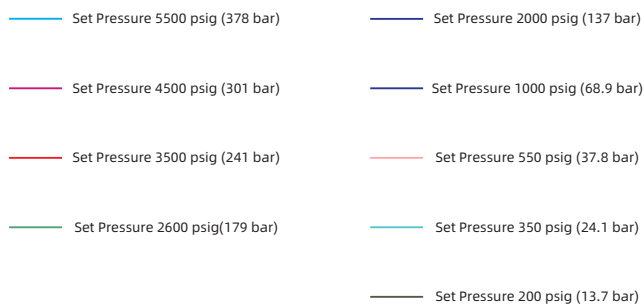
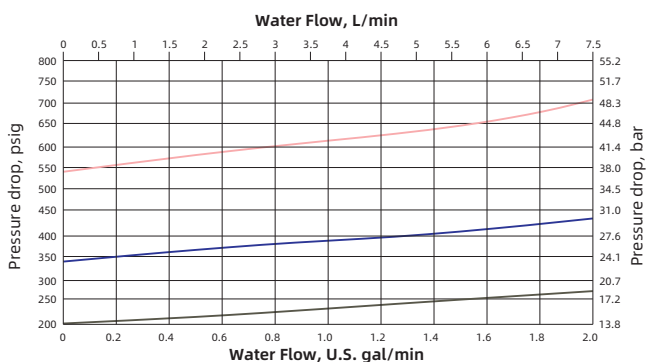
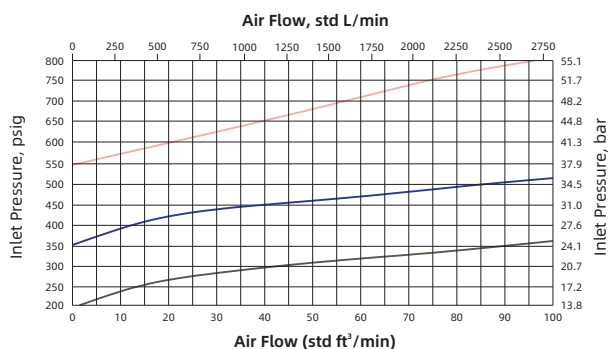
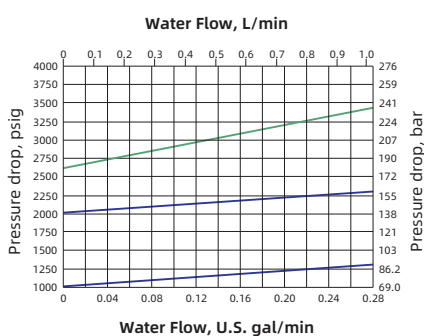
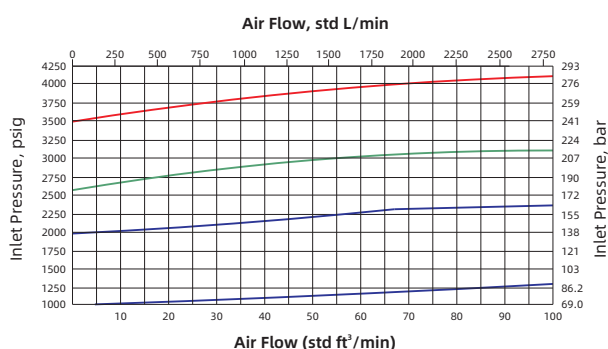
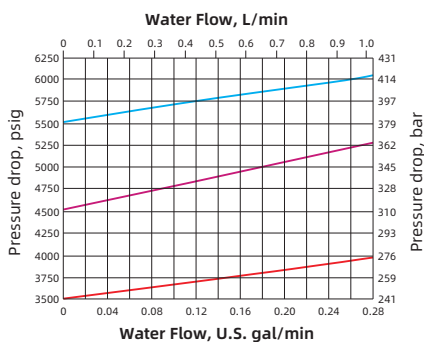
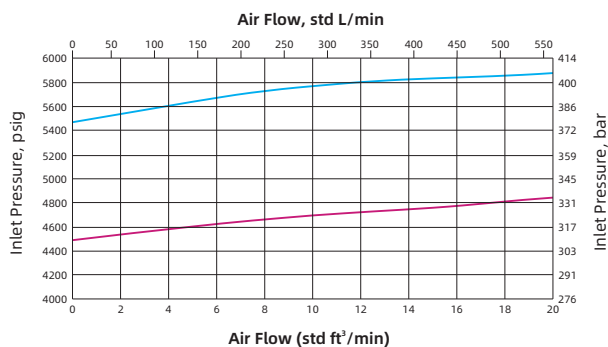
Set Pressure psig(bar)	Minimum Resealing Pressure as a Percentage of Set Pressure, %
50 to 300 (3.4 to 20.7)	70
300 to 700 (20.7 to 48.3)	75
700 to 1500 (48.3 to 103)	85
1500 to 2500 (103 to 172)	87
2500 to 3500 (172 to 241)	88
3500 to 4500 (241 to 310)	90
4500 to 6000 (310 to 413)	91

Standard Materials of Construction

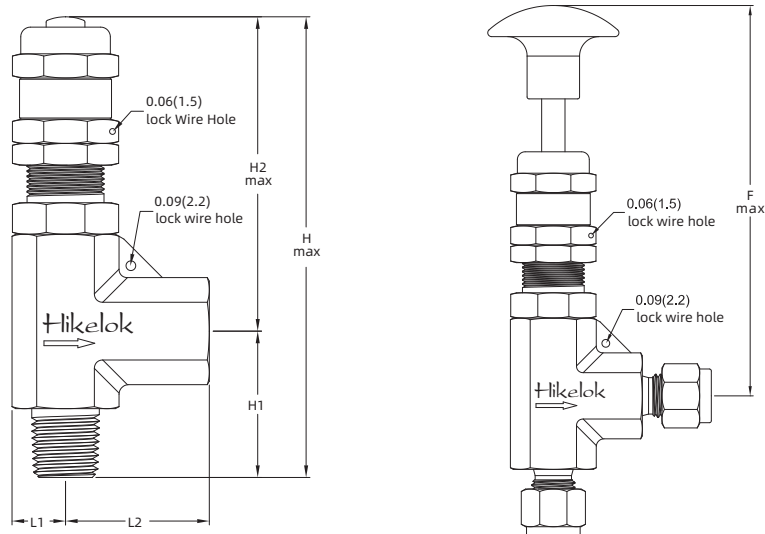


Component		Material Grade / ASTM Specification
1	Body	316 S.S. / A182
2	Insert	316 S.S. / A479
3	O-ring	Fluorocarbon FKM
4	Seat retainer	316 S.S. / A479
5	Stem	316 S.S. / A479
6	O-ring	Fluorocarbon FKM
7	O-ring	Fluorocarbon FKM
8	Back Up Ring	PTFE
9	Bonnet	316 S.S. / A479
10	Spring support	316 S.S. / A276
11	Lock nut	316 S.S. / A276
12	Cap	316 S.S. / A479
13	Label	Polyester
14	Spring	S17700 S.S. / AMS 5678
15	Plug	316 S.S. / A276

Flow Data at 70°F (20°C)



Dimensions



Basic Ordering Number	Connection Type and Size	Orifice in. (mm)	Dimension, in.(mm)					
			L1	L2	H1	H2 max	H max	F max
RV1-F4-03-	1/4" Hikelok	0.14 (3.6)	0.43 (10.9)	1.60 (40.6)	1.44 (36.6)	2.70 (68.6)	4.14 (105.2)	4.09 (104)
RV1-F6-03-	3/8" Hikelok		0.50 (12.7)	1.72 (43.7)	1.72 (43.7)	4.09 (103.9)	5.81 (147.6)	5.37 (136)
RV1-F8-03-	1/2" Hikelok		0.43 (10.9)	1.60 (40.6)	1.44 (36.6)	2.70 (68.6)	4.14 (105.2)	4.09 (104)
RV1-M6-03-	6 mm Hikelok		0.50 (12.7)	1.83 (46.5)	1.83 (46.5)	4.09 (103.9)	5.92 (150.4)	5.37 (136)
RV1-M8-03-	8 mm Hikelok		0.43 (10.9)	1.38 (34.9)	1.38 (34.9)	2.70 (68.6)	4.08 (103.5)	4.09 (104)
RV1-M12-03-	12 mm Hikelok		0.50 (12.7)	1.43 (36.3)	1.43 (36.3)	4.09 (103.9)	5.52 (140.2)	5.37 (136)
RV1-FNPT4-03-	1/4" Female NPT		0.43 (10.9)	1.17 (29.7)	1.19 (30.2)	2.70 (68.6)	3.89 (98.8)	4.09 (104)
RV1-FNPT8-03-	1/2" Female NPT		0.50 (12.7)	1.43 (36.3)	1.43 (36.3)	4.09 (103.9)	5.52 (140.2)	5.37 (136)
RV1-NPT4-03-	1/4" Male NPT		0.43 (10.9)	1.17 (29.7)	1.19 (30.2)	2.70 (68.6)	3.89 (98.8)	4.09 (104)
RV1-NPT8-03-	1/2" Male NPT		0.50 (12.7)	1.43 (36.3)	1.43 (36.3)	4.09 (103.9)	5.52 (140.2)	5.37 (136)
RV1-FBT4-03-	1/4" Female BSPT		0.43 (10.9)	1.17 (29.7)	1.19 (30.2)	2.70 (68.6)	3.89 (98.8)	4.09 (104)
RV1-FBT8-03-	1/2" Female BSPT		0.50 (12.7)	1.43 (36.3)	1.43 (36.3)	4.09 (103.9)	5.52 (140.2)	5.37 (136)

Options and Accessories

❖ The use scenario of seal kit and spring kit is replacement or repair.

Seal Kits

❖ Composition of seal Kit: O-rings, PTFE retaining ring.

O-Ring Material	Ordering Number
Fluorocarbon FKM	RV1-MK-03-V
Buna N	RV1-MK-03-B
Neoprene	RV1-MK-03-N
Ethylene Propylene	RV1-MK-03-E
Kalrez	RV1-MK-03-Z
Fluorosilicone Rubber	RV1-MK-03-S

Spring Kits

❖ Composition of spring Kit: label, lead seal, anti loosening wire and spring. Please select the order number of the spring kit according to the working pressure.

❖ Examples: **RV1-SP-03-G-177**

RV1-SP-03-O-177

Spring Designator	Spring Color	Set Pressure Rang psig (bar)	Ordering Number
G	Green	50 to 300 (3.4 to 20.7)	RV1-SP-03-G-177
O	Orange	300 to 700 (20.7 to 48.3)	RV1-SP-03-O-177
Y	Yellow	700 to 1500 (48.3 to 103)	RV1-SP-03-Y-177
P	Purple	1500 to 2500 (103 to 172)	RV1-SP-03-P-177
W	White	2500 to 3500 (172 to 241)	RV1-SP-03-W-177
J	Blue	3500 to 4500 (241 to 310)	RV1-SP-03-J-177
R	Red	4500 to 6000 (310 to 413)	RV1-SP-03-R-177



Manual Override Handles

❖ A manual override handle opens the valve without changing the set pressure.

❖ It is worth noting that:

RV1 series safety valve can only be used with G, O or Y springs

❖ Handle diameter is 1.32in. (33.7 mm)

❖ Maximum total height of valve with handle in closed position: refer to the Dimension section

❖ To order, add M after the valve order number spring

❖ Example: **RV1-F4-03V-GM-316**

How to Order

RV1	NPT8		FNPT8		03V		GM		316	
Series	Inlet Type	Inlet Size	Outlet Type	Outlet Size	Orifice	Seal Material	Spring Kit Color	Manual Override Handle	Body Material	
RV1	FNPT Female NPT	2 1/8 in.	Same as inlet type and inlet size		03 0.14 in. (3.6 mm)	V Fluorocarbon FKM	G Green 50~300 psig	None M Manual Override Handle	316 316 S.S.	
	NPT Male NPT	4 1/4 in.				B Buna N	O Orange 300~700 psig		316L 316L S.S.	
	FBT Female BSPT	6 3/8 in. or 6 mm	If outlet and inlet are the same, eliminate the outlet designator			E Ethylene propylene	Y Yellow 700~1500 psig		304 304 S.S.	
	MBT Male BSPT	8 1/2 in. or 8 mm				N Neoprene	P Purple 1500~2500 psig		304L 304L S.S.	
	FMS Female Metric	10 10 mm				Z Kalrez	W White 2500~3500 psig			
	MS Male Metric (for BG)	12 3/4 in. or 12 mm				S Fluoro-silicone Rubber	J Blue 3500~4500 psig			
	FBP Female BSPP						R Red 4500~6000 psig			
	MBP Male BSPP (for BG)									
	F Fractional Tube Fitting									
	M Metric Tube Fitting									

Low-Pressure Proportional Relief Valves

RV2 Series

Features

- ❖ Liquid or gas service
- ❖ Set pressure from 10 to 225 psig (0.68 to 15.5 bar)
- ❖ Maximum outlet pressure up to 225 psig (15.5 bar)
- ❖ Orifice size is 0.19" (4.8 mm)
- ❖ Spring adjusts to provide desired set pressure

Pressure-Temperature Ratings

Inlet Working Pressure	300psig(20.6bar)			
Outlet Working Pressure	225psig(15.5 bar)			
Set Pressure Range	10 to 225psig(0.7 to 15.5 bar)			
Seal Material	Fluoro-carbon FKM	Buna N	Neo-prene	Ethylene pro-pylene
Temperature, °F (°C)	Maximum Set Pressure, psig (bar)			
-40 (-40)	—	—	—	225 (15.5)
-30 (-34)		225 (15.5)	225 (15.5)	
-10 (-23)				
0 (-17)				
10 (-12)				
25 (-4)				
30 (-1)				
40 (4)				
50 (10)				
70 (20)				
150 (65)				
200 (93)				
250 (121)				
275 (135)				
300 (148)				

❖ **Note:** outlet pressure should not exceed inlet pressure.

Set Pressure and Resealing Pressure

- ❖ The set pressure is the upstream pressure when the fluid flows out for the first time. Initial unloading at room temperature after completion, the set pressure of each valve can be repeated within ± 5%
- ❖ The resealing pressure is the upstream pressure when no fluid flows out, and the resealing pressure is always lower than Set pressure.

Note: For valves not actuated for a period of time, initial relief pressure may be higher than the set pressure.

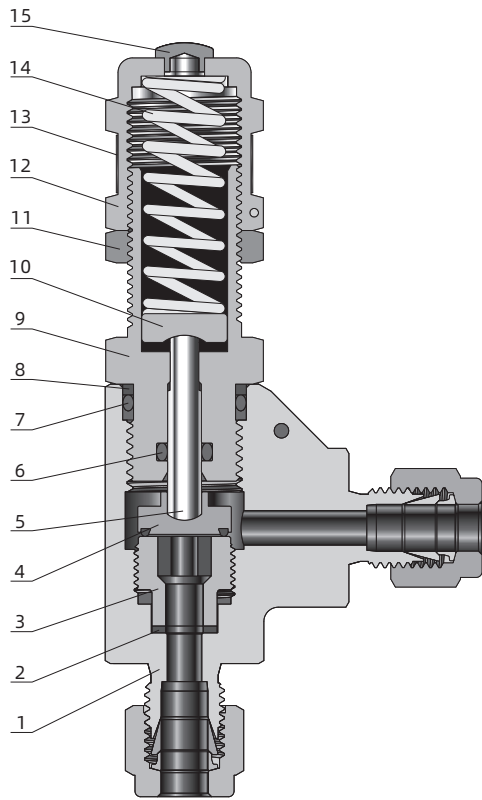


Testing

- ❖ Every RV2 series proportional relief valve is tested for set and resealing performance.

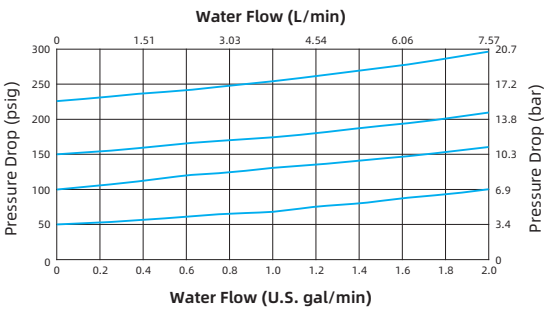
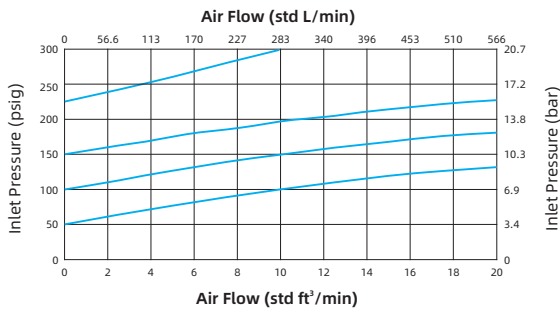
Set Pressure psig(bar)	Minimum Resealing Pressure as a Percentage of Set Pressure, %
10 to 20 (0.07 to 1.3)	50
175 to 225 (12.0 to 15.5)	91

Standard Materials of Construction

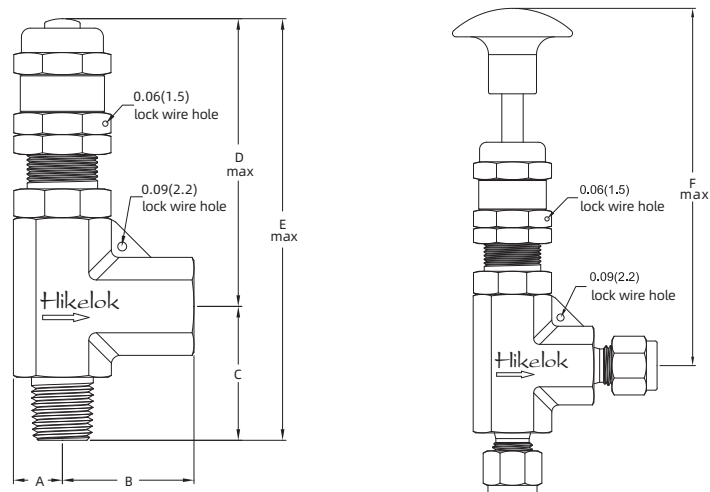


Component		Material Grade / ASTM Specification
1	Body	316 S.S. / A182
2	Gasket	PTFE coated 316 S.S. / A240
3	Seat	316 S.S. / A479
4	Bonded disc	Fluorocarbon FKM bonded 316 S.S. / A479
5	Stem	316 S.S. / A479
6	O-ring	Fluorocarbon FKM
7	O-ring	Fluorocarbon FKM
8	Back Up Ring	PTFE
9	Bonnet	316 S.S. / A479
10	Spring support	316 S.S. / A276
11	Lock nut	316 S.S. / A276
12	Cap	316 S.S. / A479
13	Label	Polyester
14	Spring	S17700 S.S. / AMS 5678
15	Plug	316 S.S. / A276

Flow Data at 70°F (20°C)



Dimensions



Basic Ordering Number	Connection Type and Size	Orifice in. (mm)	Dimension, in. (mm)					
			A	B	C	D	E	F
RV2-F4-04-	1/4" Hikelok	0.19 (4.8)	0.43 (10.9)	1.60 (40.6)	1.44 (36.6)	2.7 (68.8)	4.14 (105)	4.09 (104)
RV2-M6-04-	6 mm Hikelok			1.44 (36.6)	1.19 (30.2)		3.89 (98.8)	
RV2-NPT4-04-	1/4" Male NPT			1.17 (29.7)	1.19 (30.2)		3.89 (98.8)	
RV2-FNPT4-04-	1/4" Female NPT			1.83 (46.5)	1.83 (46.5)	4.09 (104)	5.92 (150)	5.37 (136)
RV2-F8-04-	1/2" Hikelok		0.5 (12.7)	1.44 (36.6)	1.44 (36.6)		5.52 (140)	
RV2-M12-04-	12 mm Hikelok							
RV2-NPT8-04-	1/2" Male NPT							
RV2-FNPT8-04-	1/2" Female NPT							

Options and Accessories

❖ The use scenario of seal kit and spring kit is replacement or repair.

Seal Kits

❖ Composition of seal Kit: O-rings, bonded disc and PTFE retaining ring.

O-Ring Material	Ordering Number
Fluorocarbon FKM	RV2-MK-04-V
Buna N	RV2-MK-04-B
Neoprene	RV2-MK-04-N
Ethylene Propylene	RV2-MK-04-E

Spring Kits

❖ Composition of spring Kit: label, lead seal, anti loosening wire and spring. Please select the order number of the spring kit according to the working pressure.

❖ Examples: **RV2-SP-04-G-177**

Spring Designator	Spring Color	Set Pressure Rang psig (bar)	Ordering Number
G	Green	10 to 225(0.68 to 15.5)	RV2-SP-04-G-177



Manual Override Handles

- ❖ A manual override handle opens the valve without changing the set pressure.
- ❖ Handle diameter is 1.32 in. (33.7 mm)
- ❖ Maximum total height of valve with handle in closed position: refer to the Dimension section
- ❖ To order, add M after the valve order number spring
- ❖ Example: **RV2-F4-04V-GM-316**

How to Order

RV2			FNPT8		M8		04V		GM		316	
Series	Inlet Type		Inlet Size	Outlet Type	Outlet Size	Orifice	Seal Material		Spring Kit Color	Manual Override Handle	Body Material	
RV2	FNPT	Female NPT	2 1/8 in.	Same as inlet type and inlet size		04 0.19 in. (4.8 mm)	V	Fluorocarbon FKM	G Green 10~225 psig		None	316 316 S.S.
	NPT	Male NPT	4 1/4 in.				B	Buna N		M	Manual Override Handle	316L 316L S.S.
	FBT	Female BSPT	6 3/8 in. or 6 mm	If outlet and inlet are the same, eliminate the outlet designator			E	Ethylene propylene			304 304 S.S.	
	MBT	Male BSPT	8 1/2 in. or 8 mm				N	Neoprene			304L 304L S.S.	
	FMS	Female Metric	10 10 mm									
	MS	Male Metric (for BG)	12 3/4 in. or 12 mm									
	FBP	Female BSPP										
	MBP	Male BSPP (for BG)										
	F	Fractional Tube Fitting										
	M	Metric Tube Fitting										

Medium-Pressure Proportional Relief Valves

RV3 Series

Features

- ❖ Liquid or gas service
- ❖ Set pressure from 50 to 1500 psig (3.4 to 103 bar)
- ❖ Maximum outlet pressure up to 1500psig (103bar)
- ❖ Orifice size is 0.25" (6.4 mm)
- ❖ Spring adjusts to provide desired set pressure

Pressure-Temperature Ratings

Inlet Working Pressure	6000psig(413bar)			
Outlet Working Pressure	1500psig(103 bar)			
Set Pressure Range	50 to 1500psig(3.4 to 103 bar)			
Seal Material	Fluoro-carbon FKM	Buna N	Neo-prene	Ethylene propylene
Temperature, °F (°C)	Maximum Set Pressure, psig (bar)			
-40 (-40)	—	—	—	—
-30 (-34)				
-10 (-23)				
0 (-17)				
10 (-12)				
25 (-4)	1500 (103)	1500 (103)	1500 (103)	1500 (103)
30 (-1)				
40 (4)				
50 (10)				
70 (20)				
150 (65)	700 (48)	—	700 (48)	—
200 (93)				
250 (121)				
275 (135)				
300 (148)				

❖ Note: outlet pressure should not exceed inlet pressure.



Set Pressure and Resealing Pressure

- ❖ The set pressure is the upstream pressure when the fluid flows out for the first time. Initial unloading at room temperature after completion, the set pressure of each valve can be repeated within $\pm 5\%$
- ❖ The resealing pressure is the upstream pressure when no fluid flows out, and the resealing pressure is always lower than Set pressure.

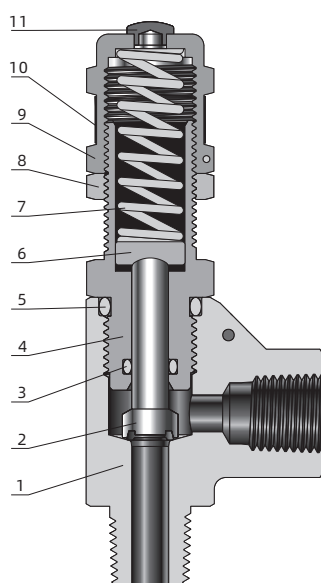
Note: For valves not actuated for a period of time, initial relief pressure may be higher than the set pressure.

Testing

- ❖ Every RV3 series proportional relief valve is tested for set and resealing performance.

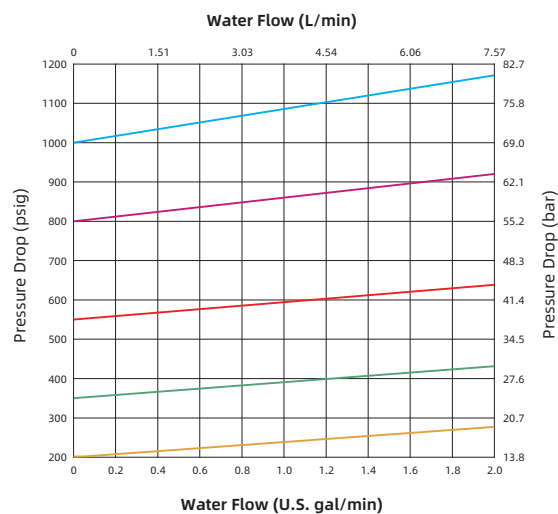
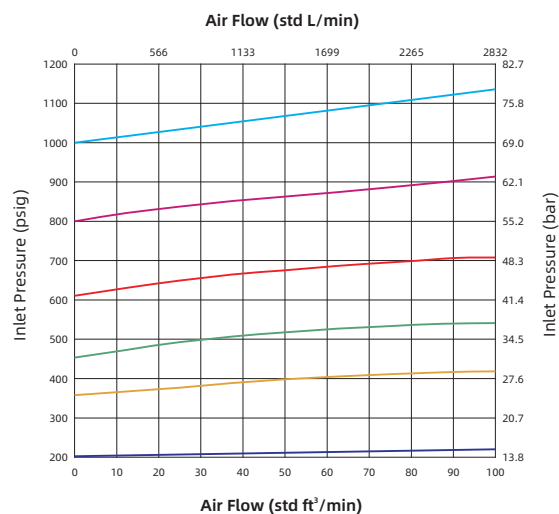
Set Pressure psig(bar)	Minimum Resealing Pressure as a Percentage of Set Pressure, %
50 to 350 (3.4 to 24.1)	85
350 to 750 (24.1 to 51.7)	91
750 to 1500 (51.7 to 103)	91

Standard Materials of Construction

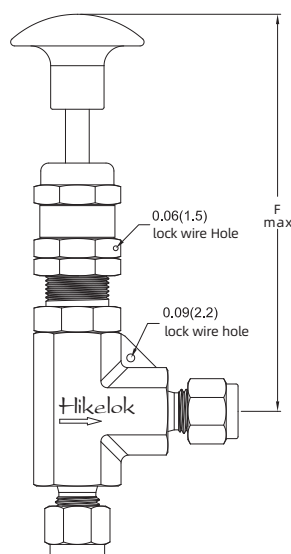
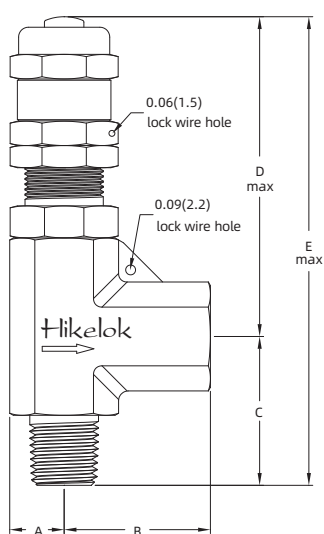


Component	Material Grade / ASTM Specification
1 Body	316 S.S. / A182
2 Stem	Fluorocarbon FKM-bonded 316 S.S. / A479
3 O-ring	Fluorocarbon FKM
4 Bonnet	316 S.S. / A479
5 O-ring	Fluorocarbon FKM
6 Spring Support	316 S.S. / A276
7 Spring	S17700 S.S. / AMS 5678
8 Lock Nut	316 S.S. / A276
9 Cap	316 S.S. / A479
10 Label	Polyester
11 Plug	316 S.S. / A276

Flow Data at 70°F (20°C)



Dimensions



Basic Ordering Number	Connection Type and Size	Orifice in. (mm)	Dimension, in. (mm)					
			A	B	C	D	E	F
RV3-F8-06-	1/2" Hikelok	0.25 (6.4)	0.5 (12.7)	1.43 (36.3)	1.83 (46.5)	4.09 (104)	5.92 (150)	5.37 (136)
RV3-M12-06-	12 mm Hikelok							
RV3-NPT8-06-	1/2" Male NPT							
RV3-MBT8-06-	1/2" Male BSPT							
RV3-FNPT8-06-	1/2" Female NPT							
RV3-FBT8-06-	1/2" Female BSPT							

Options and Accessories

❖ The use scenario of seal kit and spring kit is replacement or repair.

Seal Kits

❖ Composition of seal Kit: O-rings, bonded stem and PTFE retaining ring.

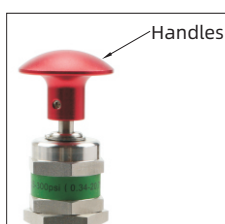
O-Ring Material	Ordering Number
Fluorocarbon FKM	RV3-MK-06-V
Buna N	RV3-MK-06-B
Neoprene	RV3-MK-06-N
Ethylene Propylene	RV3-MK-06-E

Spring Kits

❖ Composition of spring Kit: label, lead seal, anti loosening wire and spring. Please select the order number of the spring kit according to the working pressure.

❖ Examples: **RV3-SP-06-G-177**

Spring Designator	Spring Color	Set Pressure Rang psig (bar)	Ordering Number
G	Yellow	50 to 350(3.4 to 24.1)	RV3-SP-06-G-177
O	Purple	350 to 750(24.1 to 51.7)	RV3-SP-06-O-177
Y	Blue	750 to 1500(51.7 to 103)	RV3-SP-06-Y-177



Manual Override Handles

- ❖ A manual override handle opens the valve without changing the set pressure.
- ❖ Handle diameter is 1.32in. (33.7 mm)
- ❖ Maximum total height of valve with handle in closed position: refer to the Dimension section
- ❖ To order, add M after the valve order number spring
- ❖ Example: **RV3-FB-06V-GM-316**

How to Order

RV3			FNPT8		M8		06V		GM		316				
Series	Inlet Type		Inlet Size		Outlet Type	Outlet Size	Orifice	Seal Material	Spring Kit Color	Manual Override Handle	Body Material				
RV3	FNPT	Female NPT	8	1/2 in. or 8 mm	Same as inlet type and inlet size		06	0.25 in. (6.4 mm)	V	Fluorocarbon FKM	G	Green 50~350 psig	None	316	316 S.S.
	NPT	Male NPT	10	10 mm				B	Buna N	O	Orange 350~750 psig	M	Manual Override Handle	316L	316L S.S.
	FBT	Female BSPT	12	3/4 in. or 12 mm	If outlet and inlet are the same, eliminate the outlet designator	E		Ethylene propylene	Y	Yellow 750~1500 psig		304	304 S.S.		
	MBT	Male BSPT				N		Neoprene				304L	304L S.S.		
	FMS	Female Metric													
	MS	Male Metric (for BG)													
	FBP	Female BSPP													
	MBP	Male BSPP (for BG)													
	F	Fractional Tube Fitting													
	M	Metric Tube Fitting													

Precision Proportional Relief Valves

RV4 Series

Features

- ❖ Liquid or gas service
- ❖ Set pressure from 5 to 550 psig (0.34 to 37.9 bar)
- ❖ Maximum outlet pressure up to 550 psig (37.9bar)
- ❖ Orifice size is 0.23" (5.8 mm)
- ❖ Spring adjusts to provide desired set pressure
- ❖ Zero friction poppets increases accuracy of cracking pressure and reseal pressure

Pressure-Temperature Ratings

Inlet Working Pressure	2800 psig (193 bar)					
Outlet Working Pressure	550 psig (37.9 bar)					
Set Pressure Range	5 to 550 psig (0.34 to 37.9 bar)					
Seal Material	Fluoro-carbon FKM	Buna N	Neo-prene	Ethylene pro-pylene	Perfluoro-carbon FFKM	Fluoro-silicone Rubber
Temperature, °F (°C)	Maximum Set Pressure, psig (bar)					
-76 (-60)	—	—	—	—	—	—
-40 (-40)						
-10 (-23)						
0 (-17)						
10 (-12)						
25 (-4)	550 (37.9)	550 (37.9)	550 (37.9)	550 (37.9)	550 (37.9)	550 (37.9)
30 (-1)						
40 (4)						
50 (10)						
70 (20)						
150 (65)						
200 (93)						
250 (121)						
275 (135)	—	—	—	—	—	—
300 (148)						

❖ Note: outlet pressure should not exceed inlet pressure.

Set Pressure and Resealing Pressure

- ❖ The set pressure is the upstream pressure when the fluid flows out for the first time. Initial unloading at room temperature after completion, the set pressure of each valve can be repeated within $\pm 5\%$
- ❖ The resealing pressure is the upstream pressure when no fluid flows out, and the resealing pressure is always lower than Set pressure.

Note: For valves not actuated for a period of time, initial relief pressure may be higher than the set pressure.

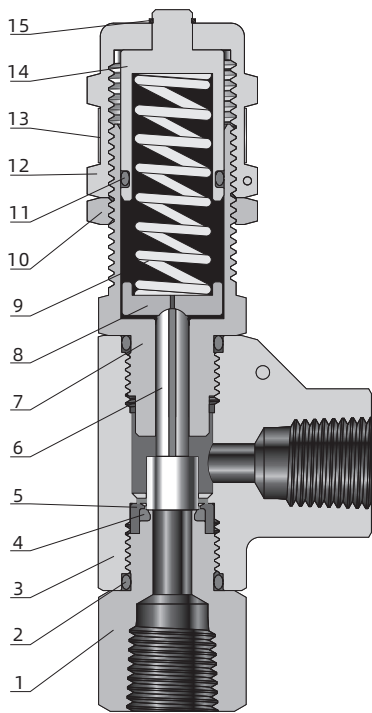
Testing

- ❖ Every RV4 series proportional relief valve is tested for set and resealing performance.

Set Pressure psig(bar)	Minimum Resealing Pressure as a Percentage of Set Pressure, %
50 to 300 (0.34 to 20.7)	65
300 to 550 (20.7 to 37.9)	78

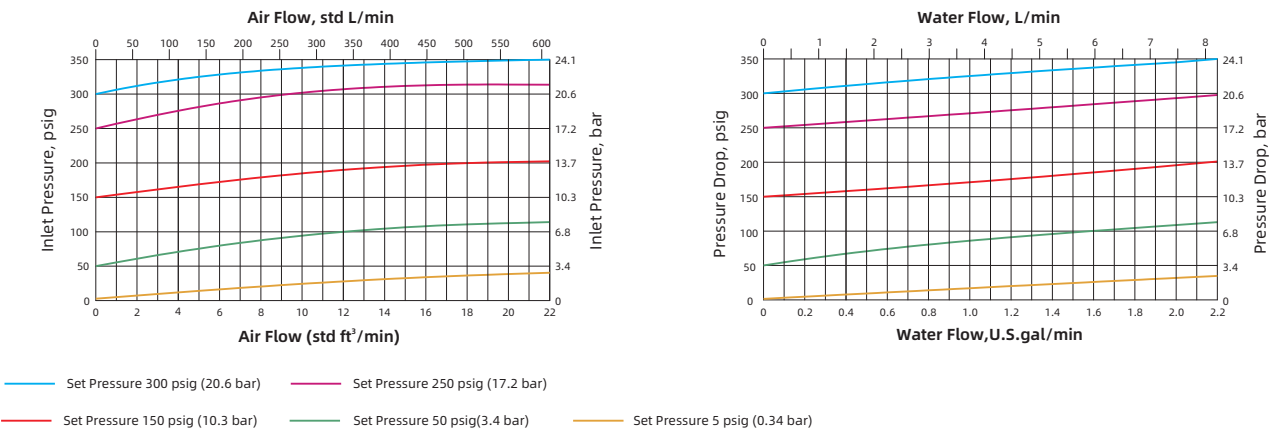


Standard Materials of Construction

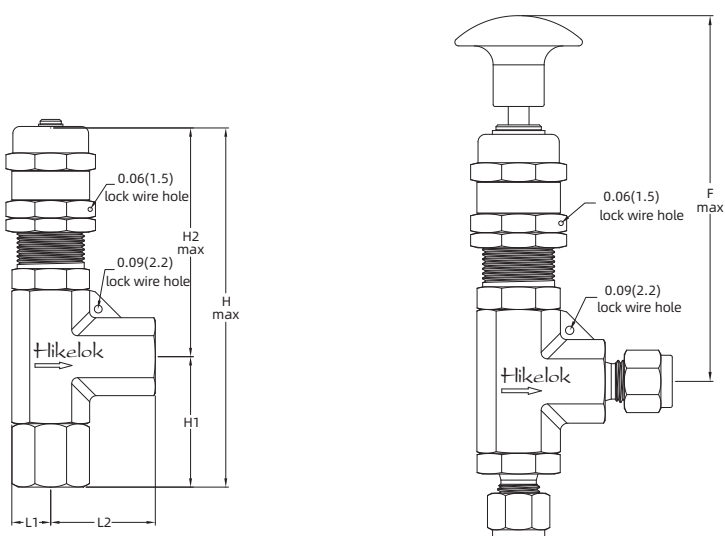


Component		Material Grade / ASTM Specification
1	Connector	316 S.S. / A479
2	O-ring	Fluorocarbon FKM
3	Body	316 S.S. / A182
4	O-ring	Fluorocarbon FKM
5	Shroud Ring	316 S.S. / A479
6	Stem	316 S.S. / A479
7	Bonnet	316 S.S. / A479
8	Spring support	316 S.S. / A276
9	Spring	S17700 S.S. / AMS 5678
10	Lock nut	316 S.S. / A276
11	O-ring	Fluorocarbon FKM
12	Cap	316 S.S. / A479
13	Label	Polyester
14	Spring Holder	316 S.S. / A276
15	Retaining Ring	304 S.S.

Flow Data at 70°F (20°C)



Dimensions



Basic Ordering Number	Connection Type and Size	Orifice in. (mm)	Dimension, in. (mm)					
			L1	L2	H1	H2	H	F
RV4-F4-05-	1/4" Hikelok	0.23 (5.8)	0.43 (10.9)	1.60 (40.6)	1.60 (40.6)	2.70 (68.6)	4.30 (109.2)	4.09 (104)
RV4-F6-05-	3/8" Hikelok		0.50 (12.7)	1.72 (43.7)	1.87 (47.7)	4.09 (103.9)	5.96 (151.6)	5.37 (136)
RV4-F8-05-	1/2" Hikelok		0.43 (10.9)	1.60 (40.6)	1.60 (40.6)	2.70 (68.6)	4.30 (109.2)	4.09 (104)
RV4-M6-05-	6 mm Hikelok		0.50 (12.7)	1.83 (46.5)	2.00 (50.5)	4.09 (103.9)	6.07 (154.4)	5.37 (136)
RV4-M8-05-	8 mm Hikelok		0.43 (10.9)	1.38 (34.9)	1.53 (38.9)	2.70 (68.6)	4.23 (107.5)	4.09 (104)
RV4-M12-05-	12 mm Hikelok		0.50 (12.7)	1.43 (36.3)	1.58 (40.3)	4.09 (103.9)	5.67 (144.2)	5.37 (136)
RV4-FNPT4-05-	1/4" Female NPT		0.43 (10.9)	1.17 (29.7)	1.34 (34.2)	2.70 (68.6)	4.04 (102.8)	4.09 (104)
RV4-FNPT8-05-	1/2" Female NPT		0.50 (12.7)	1.43 (36.3)	1.58 (40.3)	4.09 (103.9)	5.67 (144.2)	5.37 (136)
RV4-NPT4-05-	1/4" Male NPT		0.50 (12.7)	1.43 (36.3)	1.58 (40.3)	4.09 (103.9)	5.67 (144.2)	5.37 (136)
RV4-NPT8-05-	1/2" Male NPT		0.50 (12.7)	1.43 (36.3)	1.58 (40.3)	4.09 (103.9)	5.67 (144.2)	5.37 (136)

Options and Accessories

❖ The use scenario of seal kit and spring kit is replacement or repair.

Seal Kits

❖ Composition of seal Kit: O-rings, PTFE retaining ring.

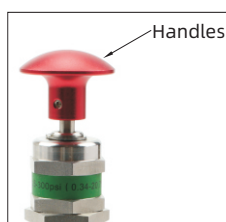
O-Ring Material	Ordering Number
Fluorocarbon FKM	RV4-MK-05-V
Buna N	RV4-MK-05-B
Neoprene	RV4-MK-05-N
Ethylene Propylene	RV4-MK-05-E
Kalrez	RV4-MK-05-Z
Fluorosilicone Rubber	RV4-MK-05-S

Spring Kits

❖ Composition of spring Kit: label, lead seal, anti loosening wire and spring. Please select the order number of the spring kit according to the working pressure.

❖ Examples: **RV4-SP-05-G-177**
RV4-SP-05-O-177

Spring Designator	Spring Color	Set Pressure Rang psig (bar)	Ordering Number
G	Orange	5 to 300 (0.34 to 20.7)	RV4-SP-05-G-177
O	Yellow	300 to 550 (20.7 to 37.9)	RV4-SP-05-O-177



Manual Override Handles

- ❖ A manual override handle opens the valve without changing the set pressure.
- ❖ Handle diameter is 1.32in. (33.7 mm)
- ❖ Maximum total height of valve with handle in closed position: refer to the Dimension section
- ❖ To order, add M after the valve order number spring
- ❖ Example: **RV4-F8-05V-GM-316**

How to Order

RV4		NPT8		FNPT8		05V		GM		316	
Series	Inlet Type	Inlet Size	Outlet Type	Outlet Size	Orifice	Seal Material	Spring Kit Color	Manual Override Handle	Body Material		
RV4	FNPT Female NPT	2 1/8 in.	Same as inlet type and inlet size		05 0.23 in. (5.8 mm)	V Fluorocarbon FKM	G Green 5~300 psig	None	316 316 S.S.		
	NPT Male NPT	4 1/4 in.				B Buna N	O Orange 300~550 psig	M Manual Override Handle	316L 316L S.S.		
	FBT Female BSPT	6 3/8 in. or 6 mm	If outlet and inlet are the same, eliminate the outlet designator			E Ethylene propylene			304 304 S.S.		
	MBT Male BSPT	8 1/2 in. or 8 mm				N Neoprene			304L 304L S.S.		
	FMS Female Metric	10 10 mm				Z Kalrez					
	MS Male Metric (for BG)	12 3/4 in. or 12 mm				S Fluoro-silicone Rubber					
	FBP Female BSPP										
	MBP Male BSPP (for BG)										
	F Fractional Tube Fitting										
	M Metric Tube Fitting										