Truelok®

[THE MEASURABLE DIFFERENCE]

Relief Valves

(RVL/RVH Series)

RVL/RVH SERIES

Maximum Working Pressure:

- RVL Series: 300 psig (20.6 bar) @ 100°F (37°C)
- RVH Series: 6000psig (420 bar) @ 100°F (37°C)

Working Temperature Range: 10°F (-12°C) to 300°F (148°C)

Set Pressure:

- RVLSeries: 10 psig (0.68 bar) to 225 psig (15.5 bar)
- RVH Series: 50 psig (3.4 bar) to 6000 psig (413 bar)

Connections: 1/4'' and 1/2"

FEATURES:

RVL Series (Low-Pressure Valves)

- Service up to 300 psig (20.6 bar)
- Installed spring is for the full set pressure range

RVH Series (High-Pressure Valves)

- Service up to 6000 psig (413 bar)
- Multiple springs for a selection of set pressure ranges. Refer to set pressure rating and symbols below

TECHNICAL DATA:

Temperature - Working Pressure Rating

Series	RVH1	RVH2	RVL1 and RVL2
Working Pressure at 70°F (20°C)	6000 psig (413 bar)	6000 psig (413 bar)	300 psig (20.6 bar)
Set Pressure	50 to 6000 psig (3.4 to 413 bar)	50 to 1500 psig (3.4 to 103 bar)	10 to 225 psig (0.68 to 15.5 bar)
Outlet Pressure	1500 psig (103 bar)	2500 psig (172 bar)	225 psig (15.5 bar)
Seal Material	FKM	FKM	FKM
Temperature, F (C)	Maximum Set Pressure, psig, (bar)		
10 (-12)			225 (15.5)
25 (-4)	6000 (413)	1500 (103)	
30 (-1)			
50 (10)			
150 (65)	5580 (384)		
200 (93)	5160 (355)		
250 (121)	4910 (338)		
275 (135)			
300 (148)			

***Outlet pressure should not exceed inlet pressure**

Set Pressure Rating

- To obtain good pressure settings over the entire pressure range, the entire pressure range is sub divided into 8 pressure ratings. A pressure rating corresponds to a certain spring, which can be used for setting a maximum pressure, is referred below.

Spring Designator		Set Pressure		
No.	Spring Color	psig	bar	Mpa
A	Blue	50 to 350	3.4 to 24.1	0.34 to 2.41
B	Yellow	350 to 750	24.1 to 51.7	2.41 to 5.17
C	Purple	750 to 1500	51.7 to 103	5.17 to 10.3
D	Orange	1500 to 2250	103 to 155	10.3 to 15.5
E	Brown	2250 to 3000	155 to 206	15.5 to 20.6
F	White	3000 to 4000	206 to 275	20.6 to 27.5
G	Red	4000 to 5000	275 to 344	27.5 to 34.4
H	Green	5000 to 6000	340 to 413	34.4 to 41.3

Set Pressure and Resealing Pressure

- Set pressure is the upstream pressure at which the first indication of flow occurs. Set pressure of each valve after initial relief is repeatable within
  - o ± 3.0 psig (0.20 bar) or ± 5 % (whichever is greater) of the initial set pressure at 60 to 80°F (15 to 26°C)
  - o ± 6.0 psig (0.40 bar) or ± 20 % (whichever is greater) of the initial set pressure below 60°F (15°C) and above 80°F (26°C).
- Resealing pressure is the upstream pressure at which there is no indication of flow. Resealing pressure is always lower than set pressure.

Testing

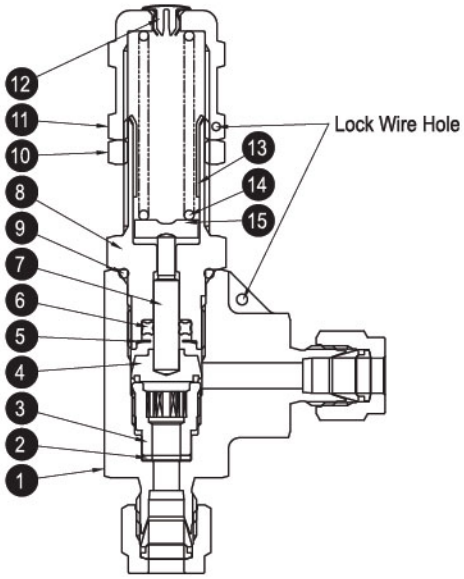
- Every valve is factory tested for functionality at the relevant cracking and resealing performance.

Cleaning and Packaging

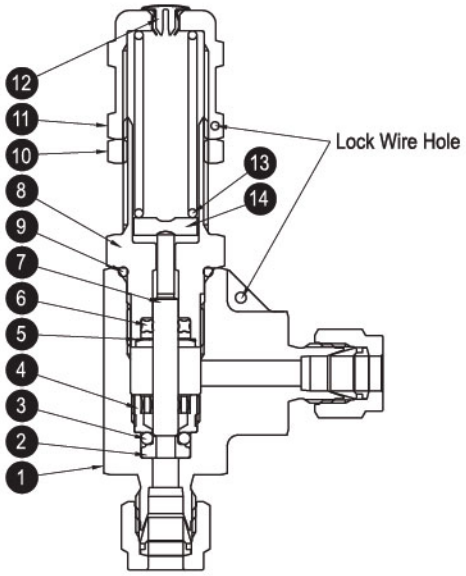
- Every valve is cleaned and packaged in accordance with Truelok standard specifications of cleaning and packaging procedures, P1004 & P1007.

MATERIALS:

RVL Series (Low-Pressure Valves):



RVH Series (High-Pressure Valves):



RVL Series (Low-Pressure Valves):

No.	Material Grade/ ASTM Specification			No.	Material Grade/ ASTM Specification	
	Description	Material			Description	Material
1	Body	316SS/A182		8	Bonnet	316SS/A479
2	Gasket	316SS/A240		9	O-Ring	FKM
3	Seat	316SS/A479		10	Lock Nut	316SS/A276
4	Disc Ass'y	316SS/AA479+FKM		11	Cap	316SS/A479
5	Retainer	RVL1 Series	304SS/A666	12	Plug	Nylon6
		RVL2 Series	316SS/A479	13	Sleeve	304SS/A479
6	X-Ring	FKM		14	Spring	S177000ss/AMS 5678
7	Stern	316SS/A479		15	Spring Support	316SS/A276

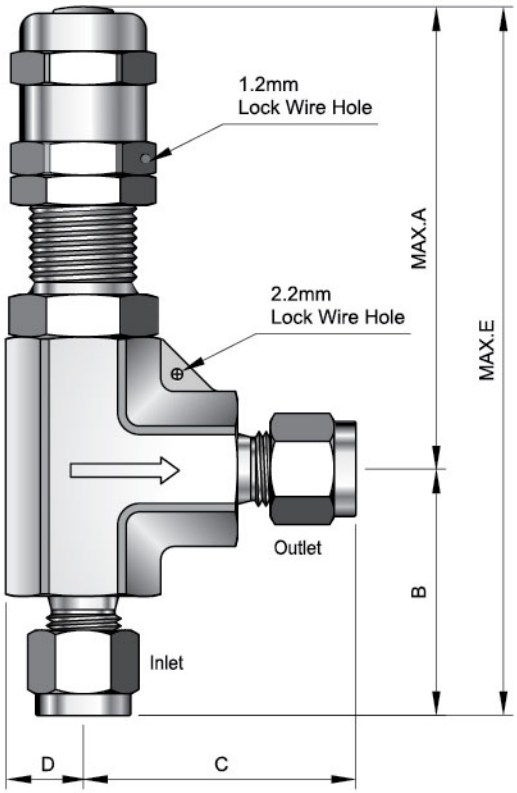
RVH Series (High-Pressure Valves):

No.	Material Grade/ ASTM Specification			No.	Material Grade/ ASTM Specification	
	Description	Material			Description	Material
1	Body	316SS/A182		8	Bonnet	316SS/A479
2	Insert	316SS/A479		9	O-Ring	FKM
3	O-Ring	FKM		10	Lock Nut	316SS/A276
4	Seat Retainer	316SS/AA479		11	Cap	316SS/A479
5	Retainer	RVH1 Series	304SS/A666	12	Plug	Nylon6
		RVH2 Series	316SS/A479			
6	X-Ring	FKM		13	Spring	S177000ss/AMS 5678
7	Stern	316SS/A479		14	Spring Support	316SS/A276

Adjustment of Pressure Relief Valve

- Make sure there is no pressure in the system and purge the installed relief valve before performing the maintenance.
- Break and remove the pressure tag wire
- Unscrew the lock nut and remove the cap from the bonnet
- Remove the included spring and spring support
- Check that all parts are celan
- Insert the spring support from the top of the bonnet
- Mount proper spring for the desired pressure range
- Remove the label from the cap and affix a new one, Make sure the desired pressure falls within the range shown on the table
- Screw in the cap to the bonnet by the "No of times to turn the cap "shown in the table below. Then tighten the lock nut and test the set pressure.
- To adjust the set pressure, remove the pressure from the system and loosen the lock nut. Then, make adjustment while checking the blowout pressure until the desired level is reached.
- Tighten the lock nut by the torque of 11.3N-m
- After final adjustment of the pressure, lock the cap and body with wire

DIMENSIONS



RVL Series (Low-Pressure Valves):

Ordering Number			Orifice Inches	End Connection		Dimensions Inches				
Series	Part No.			Inlet	Outlet	A	B	C	D	E
RVL1	4TF		0.189	1/4" TF		2.74	1.44	1.6	0.45	4.18
	4MN	4TF		1/4" Male NPT	1/4" TF		1.19			3.89
	4MN	4NF		1/4" Male NPT	1/4" Female NPT			1.17		
RVL2	8TF		0.252	1/2"TF		4.09	1.83	1.83	0.52	5.92
	8MN	8TF		1/2" Male NPT	1/2" TF		1.43			5.52
	8MN	8FN		1/2" Male NPT	1/2" Female NPT			1.43		

RVH Series (High-Pressure Valves):

Ordering Number			Orifice Inches	End Connection		Dimensions Inches				
Series	Part No.			Inlet	Outlet	A	B	C	D	E
RVH1	4TF		0.142	1/4" TF		2.74	1.44	1.6	0.45	4.18
	4MN	4TF		1/4" Male NPT	1/4" TF		1.19			3.89
	4MN	4NF		1/4" Male NPT	1/4" Female NPT			1.17		
RVH2	8TF		0.252	1/2"TF		4.09	1.83	1.83	0.52	5.92
	8MN	8TF		1/2" Male NPT	1/2" TF		1.43			5.52
	8MN	8FN		1/2" Male NPT	1/2" Female NPT			1.43		

Application Notes:

- Truelok pressure relief valves are not certified to ASME boiler and pressure vessels code safety relief devices or any other ASME code.
- Pressure relief valves open when pressurized vessel or system pressure reaches beyond the set pressure and close when system pressure falls below the set pressure.
- For valves not actuated for a period of time, initial relief pressure may be higher than the set pressure.

ORDERING INFORMATION:

RVH1-S-4TF-A

RVH1 = Relief Valve RVH1 Series, S = SS 316L Body Material, 4TF = ¼" Tube Fitting, A = Set Pressure Range 50-350psi

Valve Series (Orifice Size)	Material	Connection Size	Connection Type	Spring Specifications		
				Set Pressure Range	Spring Color	Designator
RVL1: 0.189"	S=Stainless	8=1/2"	TF=Tube Fitting	50 to 350psi	Blue	A
RVH1 : 0.142"	Steel 316	4=1/4"	MN=Male NPT	350 to 750psi	Yellow	B
RVL2 & RVH2: 0.25"			FN=Female NPT	750 to 1500psi	Purple	C
				1500 to 2250 psi	Orange	D
				2250 to 3000psi	Brown	E
				3000 to 4000psi	White	F
				4000 to 5000psi	Red	G
				5000 to 6000psi	Green	H

***No spring /set pressure designator is required for RVL, low pressure series**

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