



Decide with Confidence  
DUNS NO. : 86-917-7745



# DS-LOK

INSTRUMENTATION VALVES AND FITTINGS



## ***PROPORTIONAL RELIEF VALVES***

- Sizes: 1/4" to 1"
- Pressure Ratings: 6,000 PSI,
- NPT, ISO/BSP, Threads
- Stainless Steel (316L, 316, 304, 304L),  
Brass, Carbon Steel, Monel, Inconel

# Proportional Relief Valves

## RV, RL and RM Series

### Introduction

Relief Valve open when system pressure reaches the set pressure, allowing the medium to flow out and relieve the system pressure. The valve closes when the system pressure is down to the resealing pressure. The opening height and the system pressure are direct proportional. However, there's no limit for relieving capacity, so valves in these series should be selected carefully according to system requirements.

### Features

- Set pressure:
  - RV series: 7 color-coded springs available for a wide range of set pressure, 50 to 6000 psig @ 70°F (3.4 to 414 bar @ 20°C)
  - RL series: 10 to 225 psig @ 70°F (0.68 to 15.5 bar @ 20°C)
  - RM series: 3 color-coded springs available for a wide range of set pressure, 50 to 1500 psig @ 70°F (3.4 to 103 bar @ 20°C)
- Maximum outlet pressure:
  - RV series: 1500 psig (103 bar)
  - RL series: 225 psig (15.5 bar)
  - RM series: 1500 psig (103 bar)
- Orifice Size:
  - RV series: 0.14" (3.6 mm)
  - RL series: 0.19" (4.8 mm) and 0.25" (6.4 mm)
  - RM series: 0.25" (6.4 mm)
- Back pressure and Pre-set pressure
  - RV and RM series: Balance stem design to eliminate the effect of system back pressure
  - RL series: Pre-set pressure = Desired pressure - 0.8 × Back pressure
- Working temperature: -10°F to 300°F (-23°C to 148°C)
- Variety of end connections
- Liquid or gas service
- Adjustable bonnet cap and adjustable set pressure
- Lock wired secure cap to maintain set pressure
- Variety of seal materials
- Label identifies the set pressure range
- Manual override handle available to open the valve without changing the set pressure which pressure lower than 1500 psig

### Temperature Range of Sealing Materials

O-ring Material	Temperature Ranges °F (°C)
Fluorocarbon Rubber	25 to 250 (-4 to 121)
Buna-N Rubber	0 to 250 (-17 to 121)
Neoprene Rubber	-10 to 300 (-23 to 148)
Ethylene Propylene Rubber	30 to 250 (-1 to 121)

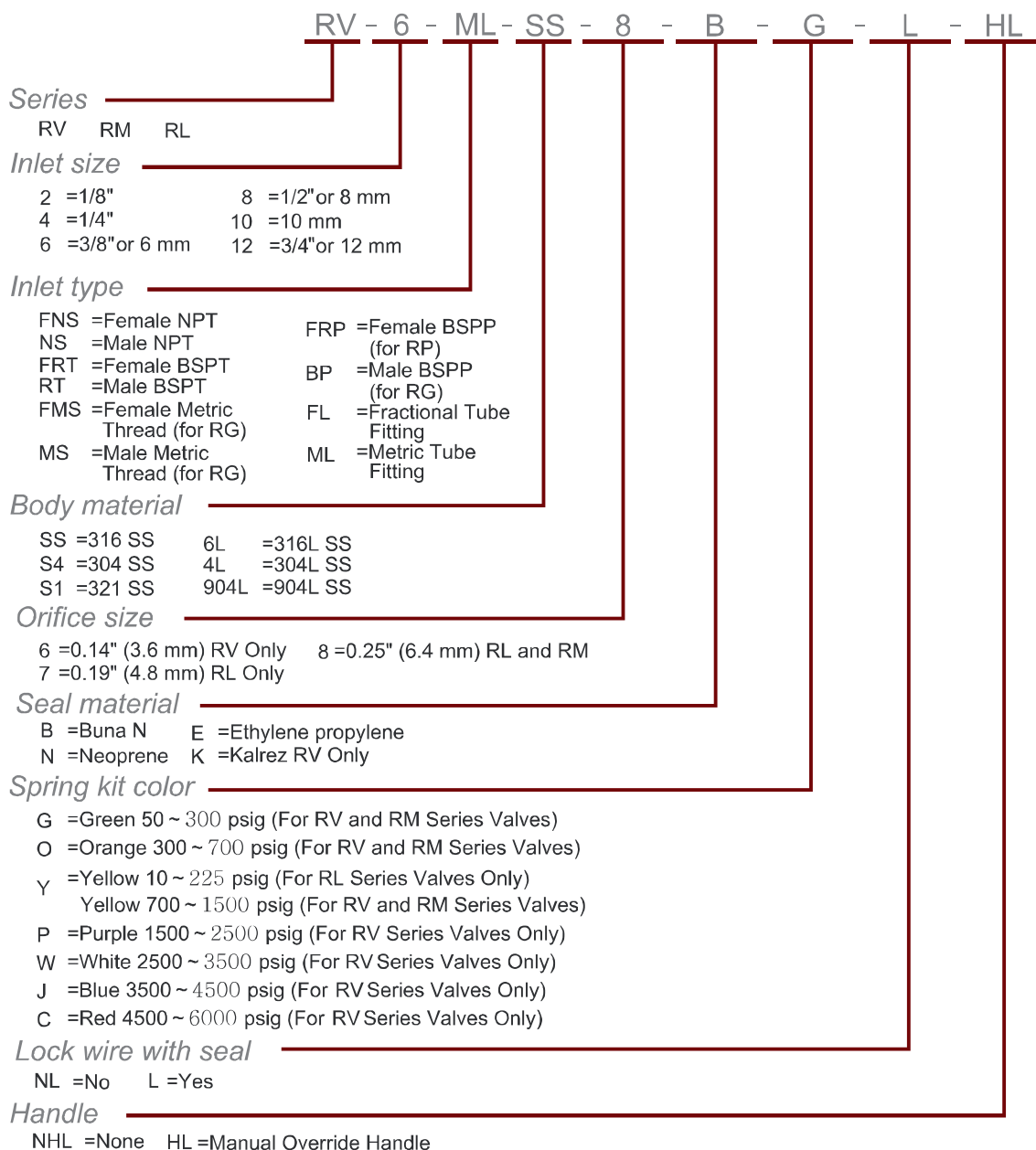


# Proportional Relief Valves

## RV, RL and RM Series

### Model Coding & Ordering Information

#### Typical Ordering Part Number

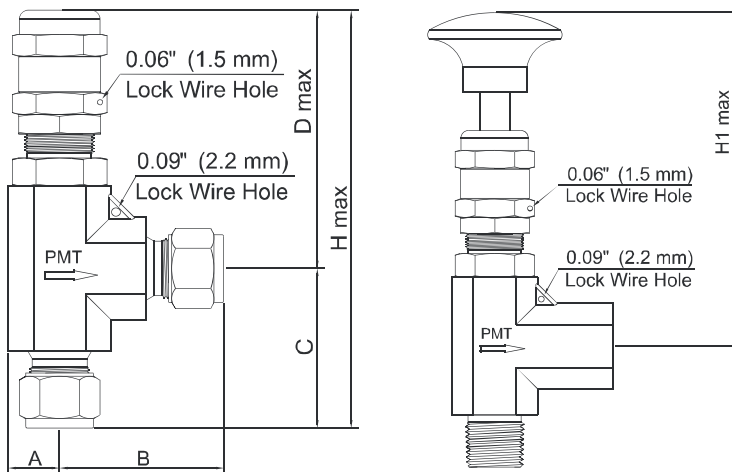
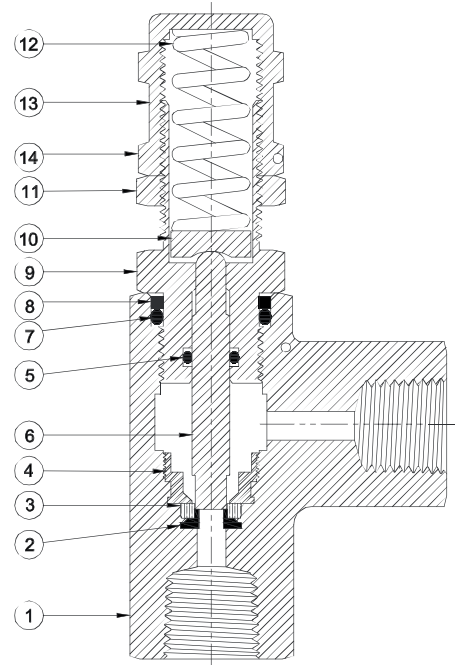


NOTE:-  
KINDLY CONTACT FACTORY FOR SPECIAL MATERIAL GRADES/ FOR CUSTOM DESIGN & OTHER DETAIL

## RV Series

### Design & Materials of Construction:

Part No.	Part Name	Material Grade
1	Body	316 SS/A182
2	Insert	316 SS/A479
3	O-ring	Fluorocarbon FKM
4	Seat Retainer	316 SS/A479
5	O-ring	Fluorocarbon FKM
6	Stem	316 SS/A479
7	O-ring	Fluorocarbon FKM
8	Seal Retainer	PTFE
9	Bonnet	316 SS/A479
10	Spring Support	316 SS/A276
11	Lock Nut	17-4PH powdered metal
12	Spring	S17700 SS/AMS 5678
13	Label	Polyester
14	Bonnet Cap	316 SS/A479

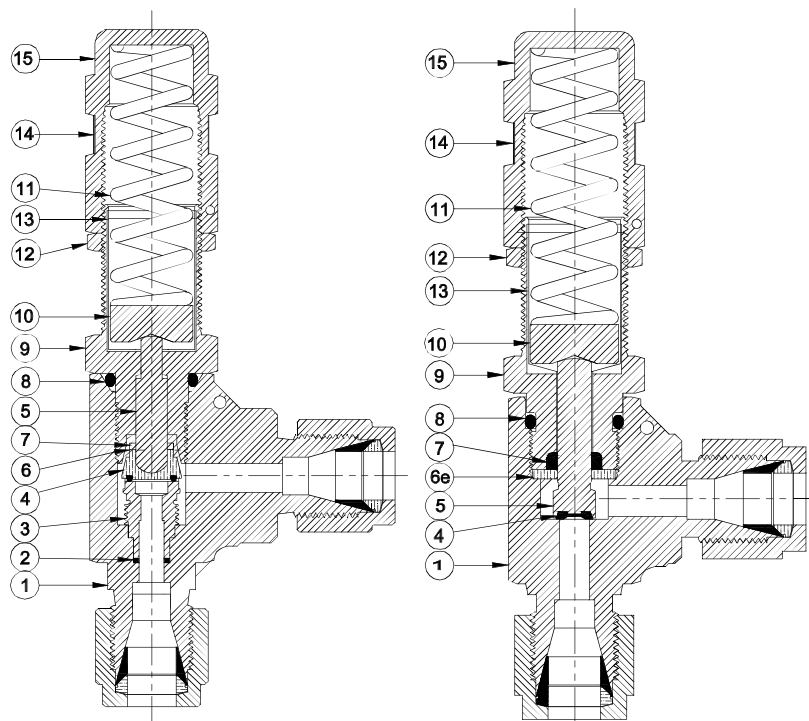
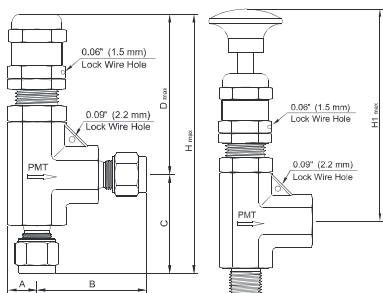


Basic Ordering Number	Connection Type and Size		Orifice in. (mm)	Dimension in. (mm)					
	Inlet	Outlet		A	B	C	Dmax	Hmax	H1max
RV-FL4-6	1/4" PMT	1/4" PMT	0.14 (3.6)	0.43 (10.9)	1.60 (40.6)	1.44 (36.6)	2.70 (68.6)	4.14 (105.2)	4.09 (103.9)
RV-FL6-6	3/8" PMT	3/8" PMT		0.50 (12.7)	1.72 (43.7)	1.72 (43.7)	4.09 (103.9)	5.81 (147.6)	5.37 (136.4)
RV-FL8-6	1/2" PMT	1/2" PMT		0.43 (10.9)	1.60 (40.6)	1.44 (36.6)	2.70 (68.6)	4.14 (105.2)	4.09 (104.9)
RV-ML6-6	6 mm PMT	6 mm PMT		0.50 (12.7)	1.83 (46.5)	1.83 (46.5)	4.09 (103.9)	5.92 (150.4)	5.37 (136.4)
RV-ML8-6	8 mm PMT	8 mm PMT		0.43 (10.9)	1.17 (29.7)	1.38 (34.9)	2.70 (68.6)	4.08 (103.5)	4.28 (108.7)
RV-ML12-6	12 mm PMT	12 mm PMT		0.43 (10.9)	1.17 (29.7)	1.19 (30.2)	2.70 (68.6)	3.89 (98.8)	4.09 (103.9)
RV-FNS4-6	1/4 Female NPT	1/4 Female NPT		0.43 (10.9)	1.17 (29.7)	1.38 (34.9)	2.70 (68.6)	4.08 (103.5)	4.28 (108.7)
RV-NS4-6	1/4 Male NPT	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 (103.9)
RV-FRT4-6	1/4 Female BSPT	1/4 Female BSPT		0.43 (10.9)	1.17 (29.7)	1.38 (34.9)	2.70 (68.6)	4.08 (103.5)	4.28 (108.7)

## RL Series

### Design & Materials of Construction:

Item No.	Part Name	Material Grade
1	Body	316 SS/A182
2	Gasket (Only 7 Orifice)	316 SS/A479
3	Seat (Only 7 Orifice)	316 SS/A479
4	Bonded disc	316 SS/A479+Fluorocarbon FKM
5	Stem	316 SS/A479
6	Retainer (Only 7 Orifice)	316 SS/A479
6e	Ring (Only 8 Orifice)	316 SS/A479
7	Quad Seal	Fluorocarbon FKM
8	O-ring	Fluorocarbon FKM
9	Bonnet	316 SS/A479
10	Spring Support	316 SS/A276
11	Spring	S17700 SS/AMS 5678
12	Lock Nut	17-4PH powdered metal
13	Sleeve	304SS/A240
14	Label	Polyester
15	Bonnet Cap	316 SS/A479



Orifice 7 in. (mm)  
0.19 (4.8)

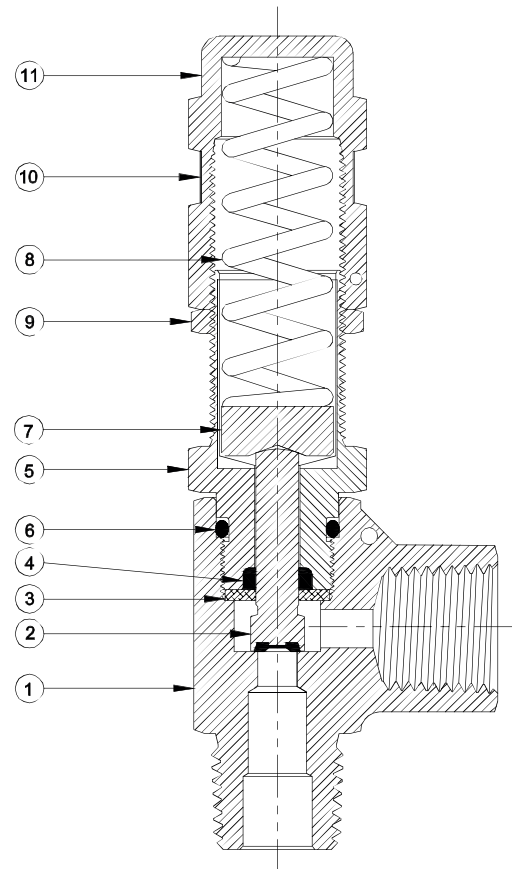
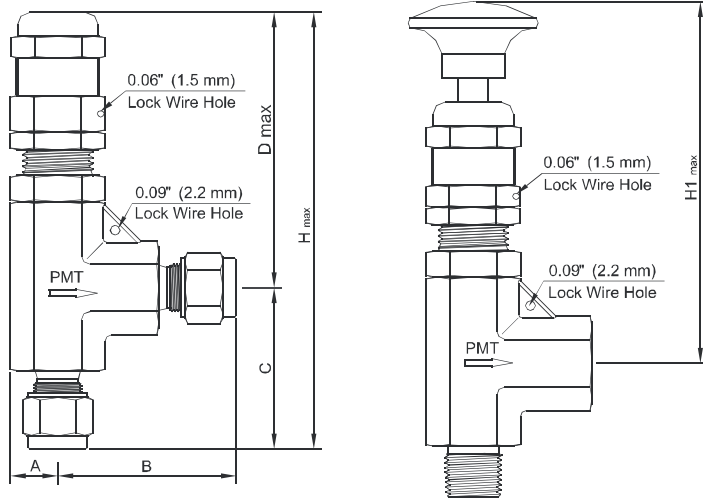
Orifice 8 in. (mm)  
0.25 (6.4)

Basic Ordering Number	Connection and Size		Orifice in. (mm)	Dimension in. (mm)					
	Inlet Size	Outlet Size		A	B	C	D	H	H1
RL-FL4-7	1/4" PMT	1/4" PMT	0.19 (4.8)	0.43 (10.9)	1.60 (40.6)	1.44 (36.6)	2.70 (68.8)	4.14 (105.0)	4.09 (104.0)
RL-ML6-7	6 mm PMT	6 mm PMT							
RL-NS4-7	1/4 Male NPT	1/4 Male NPT							
RL-RT4-7	1/4 Female BSPT	1/4 Female BSPT							
RL-FNS4-7	1/4 Female NPT	1/4 Female NPT							
RL-FRT4-7	1/4 Female BSPT	1/4 Female BSPT							
RL-FL8-8	1/2" PMT	1/2" PMT	0.25 (6.4)	0.50 (12.7)	1.83 (46.5)	1.83 (46.5)	4.09 (104.0)	5.92 (150.0)	5.37 (136.0)
RL-ML12-8	12 mm PMT	12 mm PMT							
RL-NS8-8	1/2 Male NPT	1/2 Male NPT							
RL-RT8-8	1/2 Male BSPT	1/2 Male BSPT							
RL-FNS8-8	1/2 Female NPT	1/2 Female NPT							
RL-FRT8-8	1/2 Female BSPT	1/2 Female BSPT							

## RM Series

### Design & Materials of Construction:

Item No.	Part Name	Material Grade
1	Body	316 SS/A182
2	Stem	316 SS/A479+Fluorocarbon FKM
3	Retainer	316 SS/A479
4	Seal	Fluorocarbon FKM
5	Bonnet	316 SS/A479
6	O-ring	Fluorocarbon FKM
7	Spring Support	316 SS/A276
8	Spring	S17700 SS/AMS 5678
9	Lock Nut	17-4PH powdered metal
10	Label	Polyester
11	Bonnet Cap	316 SS/A479



Basic Ordering Number	Connection and Size		Orifice in. (mm)	Dimension in. (mm)					
	Inlet Size	Outlet Size		A	B	C	D	H	H1
RM-FL8-8	1/2" PMT	1/2" PMT			1.83 (46.5)	1.83 (46.5)		5.92 (150.0)	
RM-ML12-8	12 mm PMT	12 mm PMT							
RM-NS8-8	1/2 Male NPT	1/2 Male NPT	0.25 (6.4)	0.50 (12.7)			4.09 (104.0)		5.37 (136.0)
RM-RT8-8	1/2 Male BSPT	1/2 Male BSPT			1.44 (36.6)	1.44 (36.6)		5.52 (140.0)	
RM-FNS8-8	1/2 Female NPT	1/2 Female NPT							
RM-FRT8-8	1/2 Female BSPT	1/2 Female BSPT							



# **DS-LOK**

INSTRUMENTATION VALVES AND FITTINGS



## **Valves**

- Needle Valves
- Manifold Valves
- In Line Check Valve
- Proportional Relief Valves
- Instrument Ball Valves
- Mono Flange Valves
- Integral Block & Bleed Valves
- Bleed & Purge Valves
- Thermowells
- Pressure gauge Accessories

## **Fittings**

- Tube Fittings
- Pipe Fittings
- High Pressure- Pipe Fittings
- Hydraulic Fittings  
(DIN 2353, JIC Fittings, ORFS Fittings)

## **Forged Steel Valves**

- Forged Steel Globe Valves (Cryogenic Available)
- Forged Steel Gate Valves (Cryogenic Available)
- Forged Steel Lift check Valves
- Forged Steel Ball Valves (Cryogenic Available)