



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



AN ISO 9001:2015 COMPANY

PMT ENGINEERS

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

A Trusted Name in

Instrumentation Valves, Fittings & Accessories

Catalogue No.:- PMT-RFV

www.pmtvalvesfittings.com

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

RV - 6 - ML - SS - 8 - B - G - L - HL

Series

RV RM RL

Inlet size

2 =1/8" 8 =1/2" or 8 mm
4 =1/4" 10 =10 mm
6 =3/8" or 6 mm 12 =3/4" or 12 mm

Inlet type

FNS =Female NPT	FRP =Female BSPP (for RP)
NS =Male NPT	BP =Male BSPP (for RG)
FRT =Female BSPT	FL =Fractional Tube Fitting
RT =Male BSPT	ML =Metric Tube Fitting
FMS =Female Metric Thread (for RG)	
MS =Male Metric Thread (for RG)	

Body material

SS =316 SS 6L =316L SS
S4 =304 SS 4L =304L SS
S1 =321 SS 904L =904L SS

Orifice size

6 =0.14" (3.6 mm) RV Only 8 =0.25" (6.4 mm) RL and RM
7 =0.19" (4.8 mm) RL Only

Seal material

B =Buna N E =Ethylene propylene
N =Neoprene K =Kalrez RV Only

Spring kit color

G =Green 50 ~ 300 psig (For RV and RM Series Valves)
O =Orange 300 ~ 700 psig (For RV and RM Series Valves)
Y =Yellow 10 ~ 225 psig (For RL Series Valves Only)
 Yellow 700 ~ 1500 psig (For RV and RM Series Valves)
P =Purple 1500 ~ 2500 psig (For RV Series Valves Only)
W =White 2500 ~ 3500 psig (For RV Series Valves Only)
J =Blue 3500 ~ 4500 psig (For RV Series Valves Only)
C =Red 4500 ~ 6000 psig (For RV Series Valves Only)

Lock wire with seal

NL =No L =Yes

Handle

NHL =None HL =Manual Override Handle

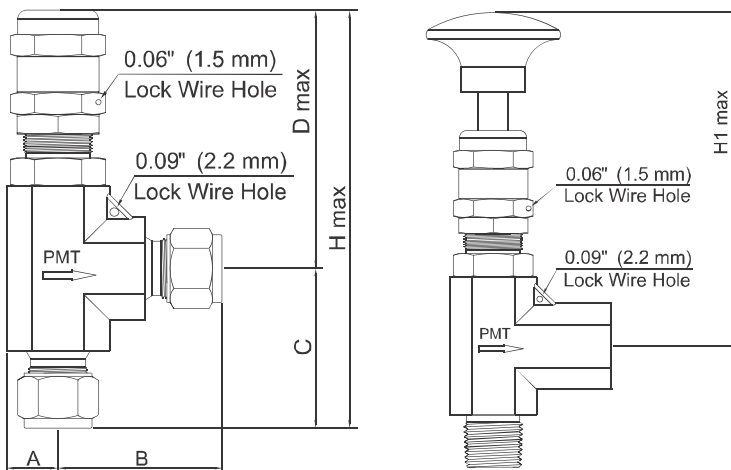
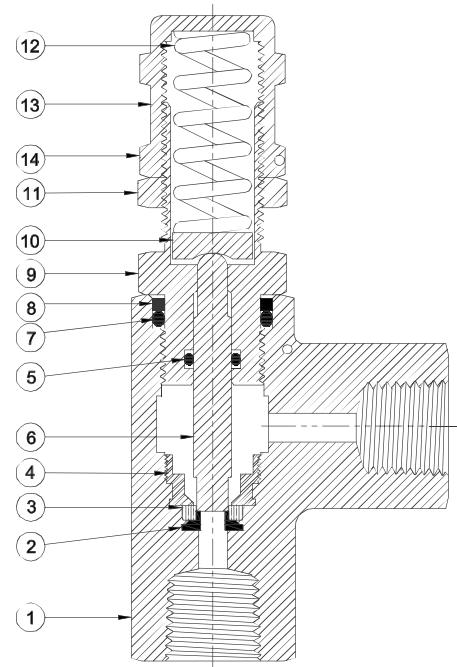
NOTE:-

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



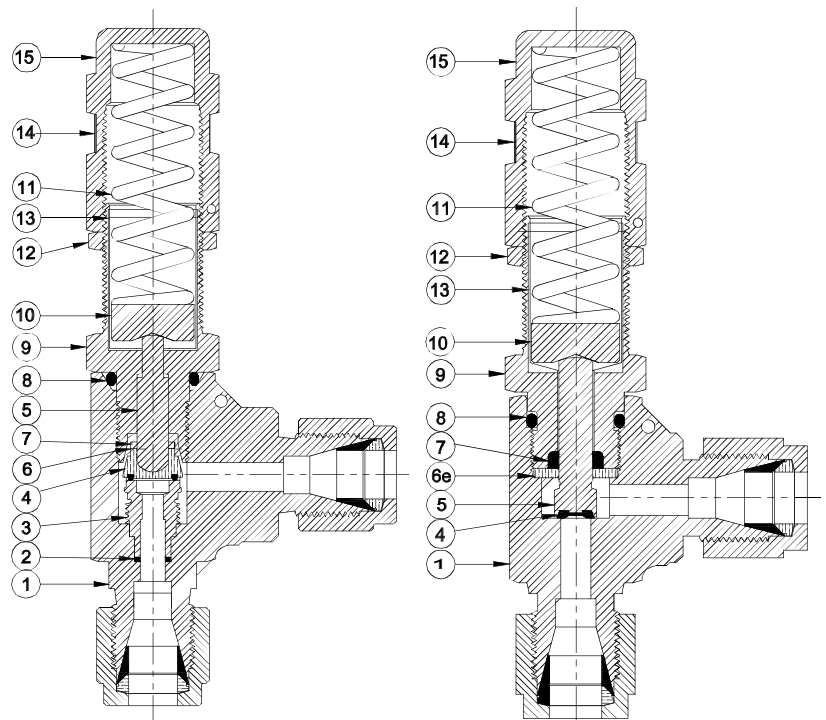
Basic Ordering Number	Connection Type and Size		Orifice in. (mm)	Dimension in. (mm)					
	Inlet	Outlet		A	B	C	Dmax	Hmax	H1max
RV-FL4-6	1/4" PMT	1/4" PMT	0.14 (3.6)	0.43 (10.9)	1.60 (40.6)	1.44 (36.6)	2.70 (68.6)	4.14 (105.2)	4.09 (103.9)
RV-FL6-6	3/8" PMT	3/8" PMT		0.50 (12.7)	1.72 (43.7)	1.72 (43.7)	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)	1.38 (34.9)	2.70 (68.6)	4.08 (103.5)	4.28 (108.7)
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)

Dimensions are for reference only and are subjected to change.

RL Series

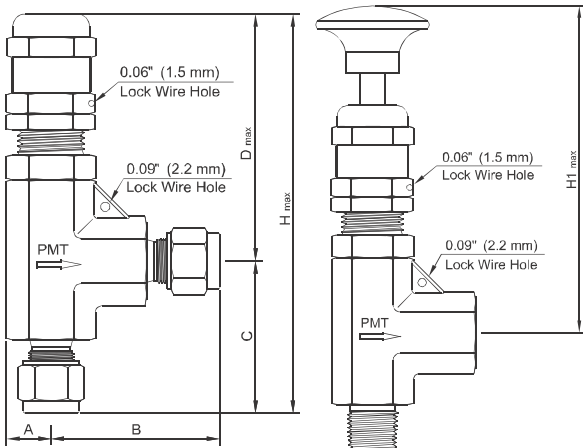
Design & Materials of Construction:

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)



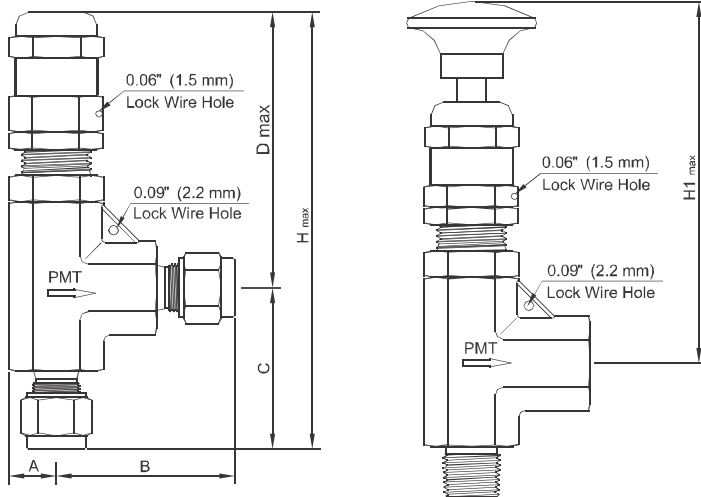
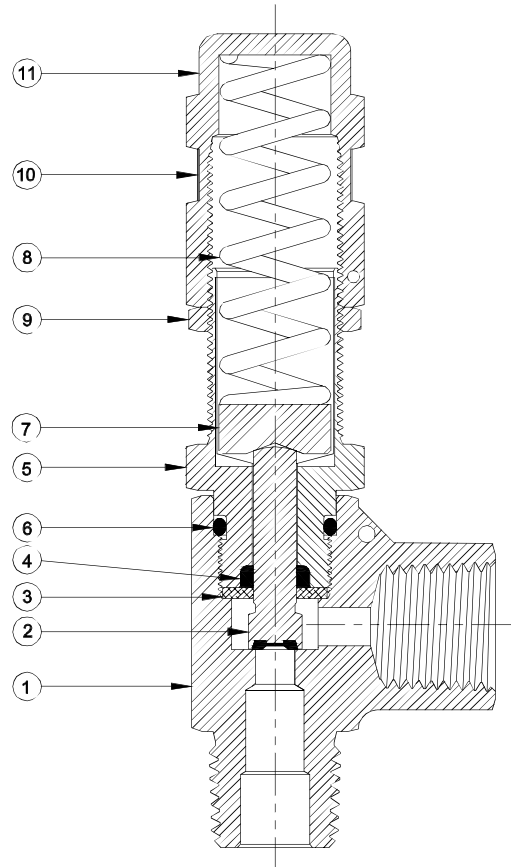
Basic Ordering Number	Connection and Size		Orifice in. (mm)	Dimension in. (mm)					
	Inlet Size	Outlet Size		A	B	C	D	H	H1
RL-FL4-7	1/4" PMT	1/4" PMT	0.19 (4.8)	0.43 (10.9)	1.60 (40.6)	1.44 (36.6)	2.70 (68.8)	4.14 (105.0)	4.09 (104.0)
RL-ML6-7	6 mm PMT	6 mm PMT			1.44 (36.6)	1.19 (30.2)		3.89 (98.8)	
RL-NS4-7	1/4 Male NPT	1/4 Male NPT			1.17 (29.7)	1.38 (34.9)		4.08 (103.5)	
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			1.44 (36.6)	1.44 (36.6)		5.52 (140.0)	
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							

Dimensions are for reference only and are subjected to change.

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	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)
RM-ML12-8	12 mm PMT	12 mm PMT							
RM-NS8-8	1/2 Male NPT	1/2 Male NPT			1.44 (36.6)	1.44 (36.6)	5.52 (140.0)		
RM-RT8-8	1/2 Male BSPT	1/2 Male BSPT							
RM-FNS8-8	1/2 Female NPT	1/2 Female NPT							
RM-FRT8-8	1/2 Female BSPT	1/2 Female BSPT							

CATALOGUE CATEGORY

PMT ENGINEERS
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MANIFOLDS VALVE

- 1/2" to 2" Dia. 100 to 2000 PSI
- 1/2" to 2" Dia. 100 to 2000 PSI
- 1/2" to 2" Dia. 100 to 2000 PSI
- 1/2" to 2" Dia. 100 to 2000 PSI
- 1/2" to 2" Dia. 100 to 2000 PSI

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Catalogue No. - PMT-MV
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NEEDLE VALVE

- 1/8" to 1/2" Dia.
- 100 to 2000 PSI
- 1/2" to 2" Dia. 100 to 2000 PSI
- 1/2" to 2" Dia. 100 to 2000 PSI

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BALL VALVES

- 1/2" to 2" Dia.
- 100 to 2000 PSI
- 1/2" to 2" Dia. 100 to 2000 PSI
- 1/2" to 2" Dia. 100 to 2000 PSI

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PROPORTIONAL RELIEF VALVES

- 1/2" to 2" Dia.
- 100 to 2000 PSI
- 1/2" to 2" Dia. 100 to 2000 PSI
- 1/2" to 2" Dia. 100 to 2000 PSI

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CHECK VALVE

- 1/2" to 2" Dia.
- 100 to 2000 PSI
- 1/2" to 2" Dia. 100 to 2000 PSI
- 1/2" to 2" Dia. 100 to 2000 PSI

A Trusted Name in Instrumentation Valves, Fittings & Accessories
Catalogue No. - PMT-CV
www.pmtvalvesfittings.com

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INTEGRAL BLOCK & BLEED VALVE

MONO FLANGE VALVE

- 1/2" to 2" Dia.
- 100 to 2000 PSI
- 1/2" to 2" Dia. 100 to 2000 PSI
- 1/2" to 2" Dia. 100 to 2000 PSI

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Tube Fittings

- 1/2" to 2" Dia.
- 100 to 2000 PSI
- 1/2" to 2" Dia. 100 to 2000 PSI
- 1/2" to 2" Dia. 100 to 2000 PSI

A Trusted Name in Instrumentation Valves, Fittings & Accessories
Catalogue No. - PMT-TF
www.pmtvalvesfittings.com

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Pipe Fittings

- 1/2" to 2" Dia.
- 100 to 2000 PSI
- 1/2" to 2" Dia. 100 to 2000 PSI
- 1/2" to 2" Dia. 100 to 2000 PSI

A Trusted Name in Instrumentation Valves, Fittings & Accessories
Catalogue No. - PMT-PF
www.pmtvalvesfittings.com

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BLEED AND PURGE VALVE

- 1/2" to 2" Dia.
- 100 to 2000 PSI
- 1/2" to 2" Dia. 100 to 2000 PSI
- 1/2" to 2" Dia. 100 to 2000 PSI

A Trusted Name in Instrumentation Valves, Fittings & Accessories
Catalogue No. - PMT-BPV
www.pmtvalvesfittings.com

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THERMOWELLS

- 1/2" to 2" Dia.
- 100 to 2000 PSI
- 1/2" to 2" Dia. 100 to 2000 PSI
- 1/2" to 2" Dia. 100 to 2000 PSI

A Trusted Name in Instrumentation Valves, Fittings & Accessories
Catalogue No. - PMT-TW
www.pmtvalvesfittings.com

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PRESSURE REGULATOR

- 1/2" to 2" Dia.
- 100 to 2000 PSI
- 1/2" to 2" Dia. 100 to 2000 PSI
- 1/2" to 2" Dia. 100 to 2000 PSI

A Trusted Name in Instrumentation Valves, Fittings & Accessories
Catalogue No. - PMT-PR
www.pmtvalvesfittings.com

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PRESSURE GAUGE

- 1/2" to 2" Dia.
- 100 to 2000 PSI
- 1/2" to 2" Dia. 100 to 2000 PSI
- 1/2" to 2" Dia. 100 to 2000 PSI

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Catalogue No. - PMT-PG
www.pmtvalvesfittings.com

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Sample Cylinders

- 1/2" to 2" Dia.
- 100 to 2000 PSI
- 1/2" to 2" Dia. 100 to 2000 PSI
- 1/2" to 2" Dia. 100 to 2000 PSI

A Trusted Name in Instrumentation Valves, Fittings & Accessories
Catalogue No. - PMT-SC
www.pmtvalvesfittings.com

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CONDENSATE POTS

- 1/2" to 2" Dia.
- 100 to 2000 PSI
- 1/2" to 2" Dia. 100 to 2000 PSI
- 1/2" to 2" Dia. 100 to 2000 PSI

A Trusted Name in Instrumentation Valves, Fittings & Accessories
Catalogue No. - PMT-CP
www.pmtvalvesfittings.com

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ORIFICE PLATE ASSEMBLY

- 1/2" to 2" Dia.
- 100 to 2000 PSI
- 1/2" to 2" Dia. 100 to 2000 PSI
- 1/2" to 2" Dia. 100 to 2000 PSI

A Trusted Name in Instrumentation Valves, Fittings & Accessories
Catalogue No. - PMT-OPA
www.pmtvalvesfittings.com

PMT ENGINEERS
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MEDIUM & HIGH PRESSURE VALVES & FITTINGS

- 1/2" to 2" Dia.
- 100 to 2000 PSI
- 1/2" to 2" Dia. 100 to 2000 PSI
- 1/2" to 2" Dia. 100 to 2000 PSI

A Trusted Name in Instrumentation Valves, Fittings & Accessories
Catalogue No. - PMT-MHV
www.pmtvalvesfittings.com

Valves

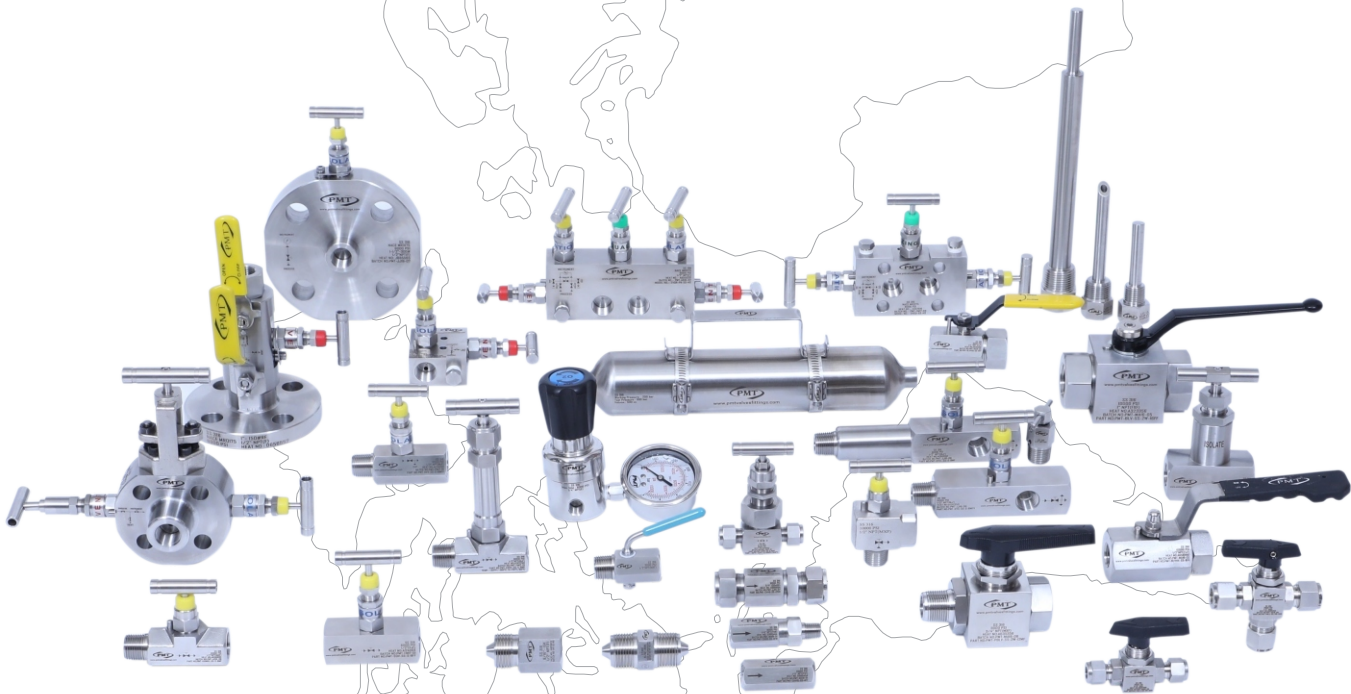
- Needle Valves
- Manifold Valves
- In Line Check Valve
- Proportional Relief Valves
- Instrument Ball Valves
- Mono Flange Valves
- Integral Block & Bleed Valves
- Bleed & Purge Valves
- Thermowells
- Pressure gauge Accessories

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)

Fittings

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



AN ISO 9001:2015 COMPANY

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