

## General Description

Series PRM reducing valves are used to regulate pressure in one area of a circuit below normal system pressure. This style valve is well suited to perform this function as it mounts directly below the directional control valve.

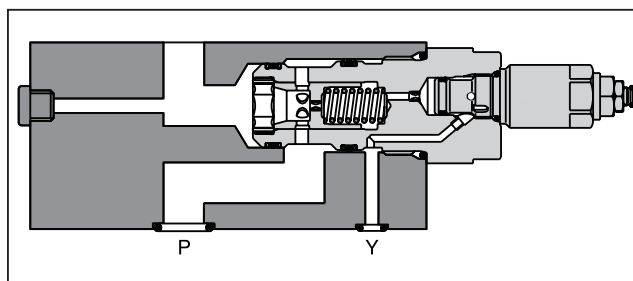
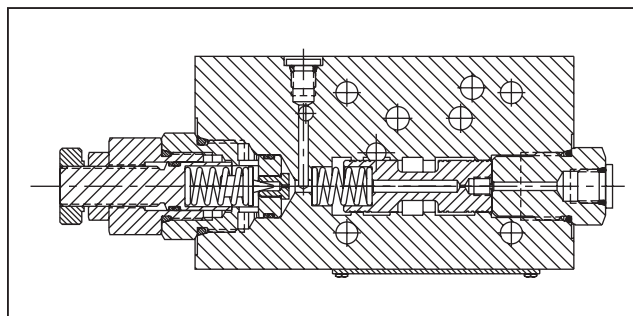
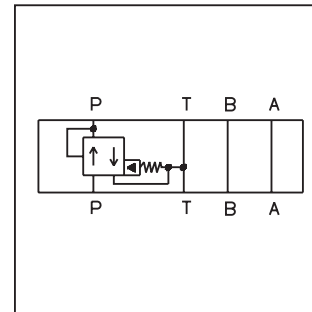
**B**

## Operation

These are "normally open" valves that allow fluid to pass through the controlled port during typical operation. When downstream pressure rises above the value set by an adjustable spring force, the control pilot opens and allows the main spool to move from a full open position. The main spool modulates to maintain the desired "reduced pressure" downstream of the valve. The PRM3 also has a relieving mode.

## Features

- PRM sandwich style pressure reducing valves allow for easy configuration of stack systems and can be used to reduce pressure on the 'P' port, the 'A' port, or the 'B' port.
- Four pressure adjustment options are available: slotted screw, hexagon socket screw (PRM4), knob and locking knob. (PRM6 only)
- Valve bodies are manufactured from steel which provide extra strength and durability for longer life. Internal hardened steel components also provide longer life.



## Specifications

	PRM3	PRM4	PRM6		PRM3 / PRM4 / PRM6
<b>Mounting Pattern</b>	NFPA D05, CETOP 5, NG 10	CETOP 07, NG 16	NFPA D08, CETOP 8, NG 25	<b>Filtration</b>	ISO 4406 (1999); 18/16/13 (meet NAS 1638:7)
<b>Minimum Pressure</b>	10 Bar (150 PSI) with rated flow, 150 SSU oil, and fluid temperature of 38°C (100°F). <sup>1</sup>			<b>Venting</b>	Connecting the vent port to tank allows the reducing valve to divert flow at minimum pressure.
<b>Maximum Pressure</b>	345 Bar (5000 PSI)	345 Bar (5000 PSI)	345 Bar (5000 PSI)	<b>Remote Control</b>	Remote control valve connected to the vent port can be used to control the pressure. <sup>2</sup>
<b>Minimum Flow</b>	3.78 LPM (1 GPM)		3.78 LPM (1 GPM)	<b>Drain Line</b>	Drain line from pilot valve is internally connected to the tank port. Tank line pressure is thus added to the valve setting. <sup>3</sup>
<b>Maximum Flow</b>	64 LPM (17 GPM)		189 LPM (50 GPM)		
<b>Pressure Range</b>	Code	Pressure Range			
	07	10 to 70 Bar (150 - 1000 PSI)			
	17	10 to 175 Bar (150-2500 PSI)			
	25	10 to 250 Bar (150 - 3500 PSI)			
	35	10 to 350 Bar (150 - 5000 PSI)			

<sup>1</sup> Change in flow, temperature or fluid (SSU) rating will affect valve minimum pressure.

<sup>2</sup> Set main valve pressure 10 Bar (150 PSI) higher than remote pilot.

<sup>3</sup> It is important that the drain line connection be taken into consideration when determining the minimum valve setting.

**WARNING:** This product can expose you to chemicals including Lead, Nickel (Metallic), or 1,3-Butadiene which are known to the State of California to cause cancer, and Lead or 1,3-Butadiene which is known to the State of California to cause birth defects and other reproductive harm. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

<b>PRM</b> Pressure Reducing Valve	Size	Pressure Reducing	Pressure Range	Adjustment	Seal	Gauge Port	Drain	Design Series NOTE: Not required when ordering.
---------------------------------------	------	-------------------	----------------	------------	------	------------	-------	--

Code	Description
3	NFFPA D05
4	NFFPA D07
6	NFFPA D08

Code	Description	Available Models		
		PRM3	PRM4	PRM6
AA	A Port Only	✓		
AP	Connection A			✓
BB	B Port Only	✓		
PA	Connection P			✓
PA	Function in P, Reduced Pressure in A		✓	
PB	Function in P, Reduced Pressure in B		✓	
PP	P Port Only	✓		
PP	Function in P, Reduced Pressure in P			✓

Code	Type
N*	Nitrile
V	Fluorocarbon

\* PRM3 only.

Code	Type
Omit*	SAE
S**	SAE
N**	NPT
M**	Metric
G†	1/4 BSPP

\* PRM4 only.  
 \*\* PRM3 only.  
 † PRM6 only.

Code	Type
K*	Turning Knob
L**	Cylinder Lock
S†	Screw Adj.

\* PRM3 and PRM6 only.  
 \*\* PRM6 only.  
 † PRM3 and PRM4 only.

Code	Type
Omit	Internal
Y*	External

\* PRM3 only.

**Unit Weight:**

PRM3 3.0 kg (6.6 lbs.)  
 PRM4 5.0 kg (11.0 lbs.)  
 PRM6 5.6 kg (12.5 lbs.)

**Bold: Designates Tier I products and options.**

**Non-Bold: Designates Tier II products and options.**  
**These products will have longer lead times.**

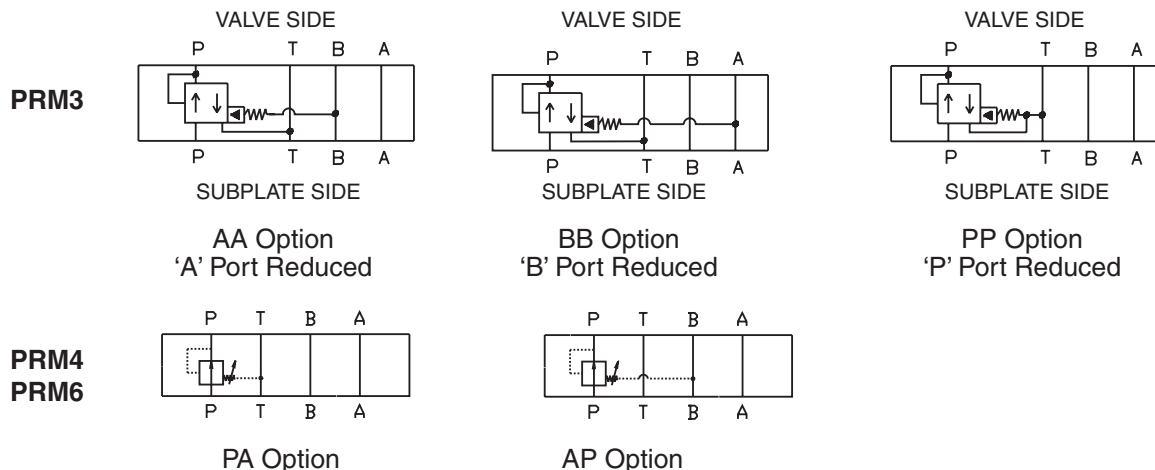
**Bolt Kits**

Size 3				Size 4				Size 6			
No. of Sandwich	Sandwich & Valve Combination	D3W-30 D3DW & D31*W*	Bolt Length mm (in)	No. of Sandwich	Sandwich & Valve Combination	Bolt Length mm	No. of Sandwich	Sandwich & Valve Combination	D3W-30 D3DW & D31*W*	Bolt Length mm (in)	
1	Sandwich & D3	BK141	88.9 (3.50)	1	Sandwich & D4	4x M10 x 140 2x M6 x 135	1	Sandwich & D6	BK121	133.4 (5.25)	
2	Sandwich & D3	BK142	139.7 (5.50)	2	Sandwich & D4	4x M10 x 220 2x M6 x 215	2	Sandwich & D6	BK122	203.2 (8.00)	
3	Sandwich & D3	BK143	190.5 (7.50)	3	Sandwich & D4	4x M10 x 300 2x M10 x 295	3	Sandwich & D6	BK123	273.1 (10.75)	
								Sandwich & D6	BK124	342.9 (13.5)	

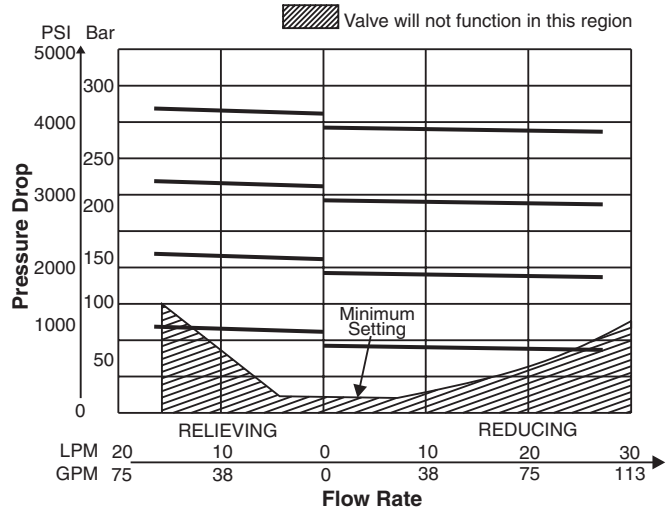
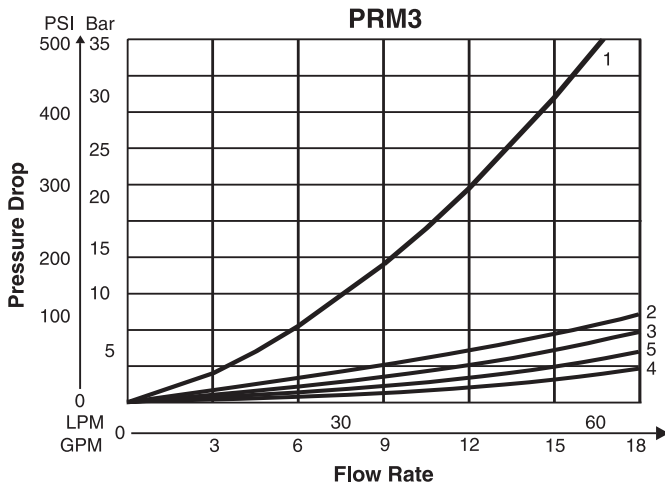
\* D31VW with internal pilot and internal drain only.

Bolt Kits must be ordered separately.

**Schematics**



**B**

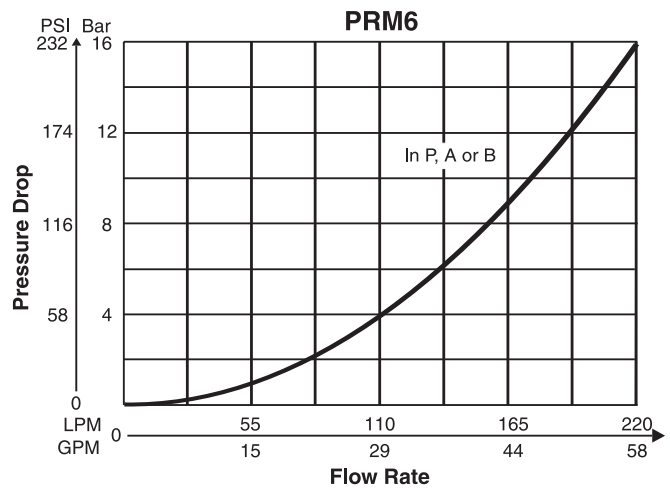
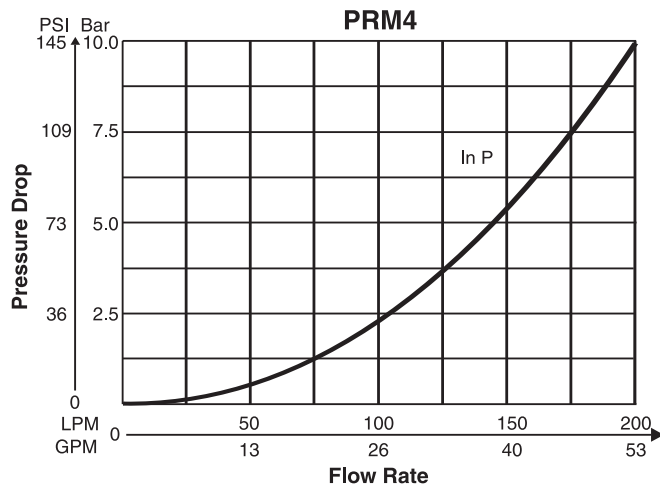


Mode	Flow Path			
	P → P	A → A	B → B	T → T
PP	1	2	3	4
AA	1	2	3	5
BB	1	2	3	5

Viscosity Correction Factor							
Viscosity (SSU)	75	150	200	250	300	350	400
% of ΔP (approx.)	93	111	119	126	132	137	141

Curves were generated using 100 SSU hydraulic oil.  
 For any other viscosity, pressure drop will change per chart.

**NOTE: Lowest pressure setting dependent upon system resistance.**

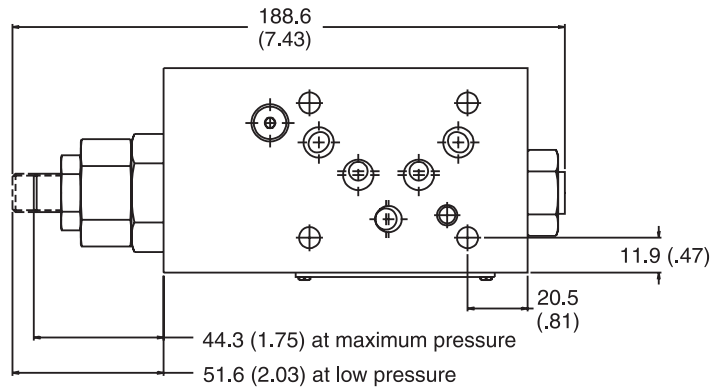


All characteristic curves measured with HLP46 at 50°C (122°F).

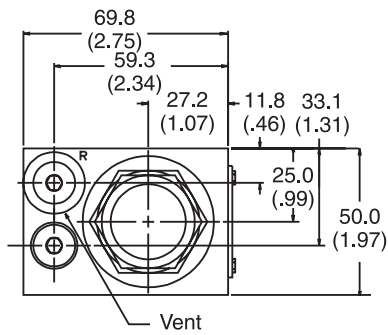
**PRM3AA**

Inch equivalents for millimeter dimensions are shown in (\*\*)

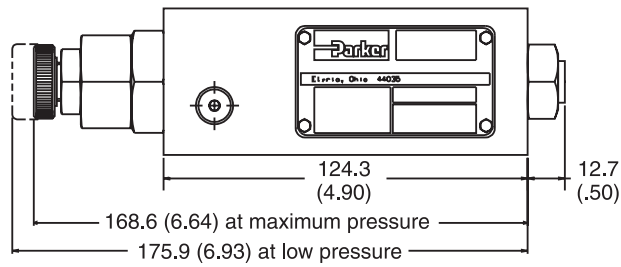
**B**



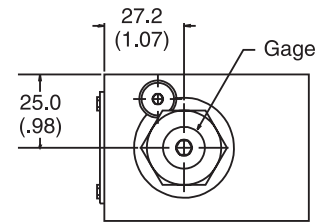
**Top View**



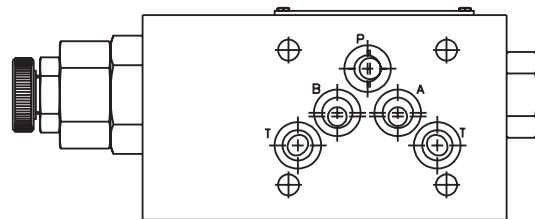
**End View**



**Face View**



**End View**



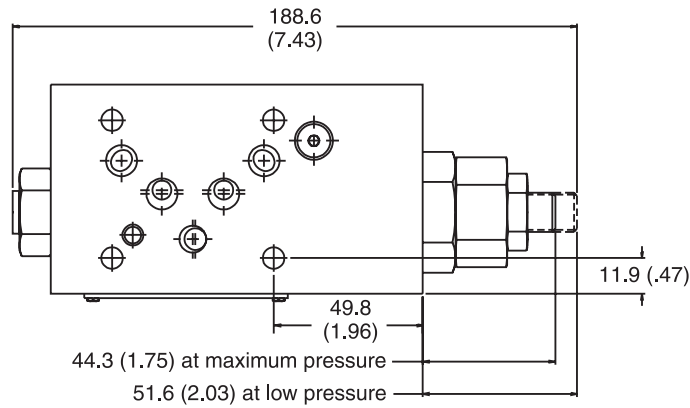
**Bottom View**



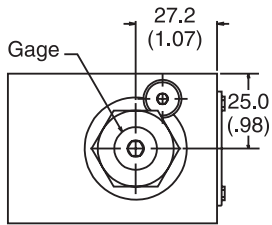
**PRM3BB**

Inch equivalents for millimeter dimensions are shown in (\*\*)

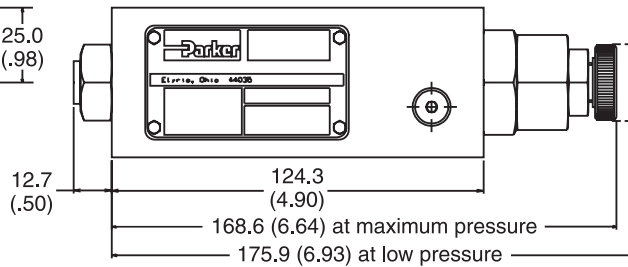
**B**



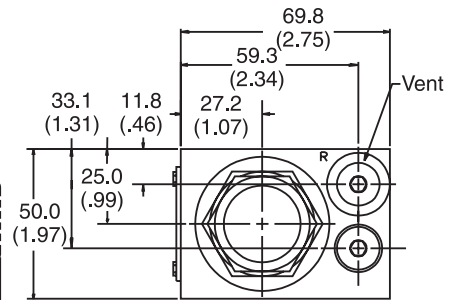
**Top View**



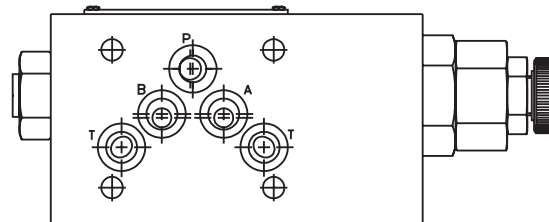
**End View**



**Face View**



**End View**



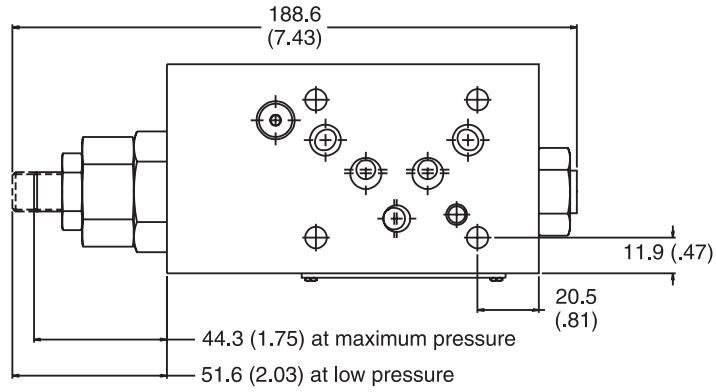
**Bottom View**



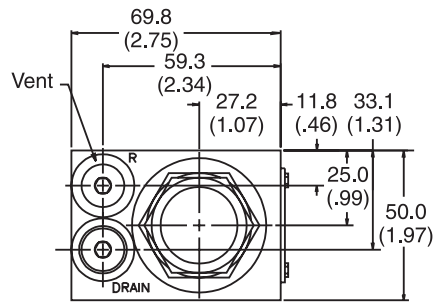
**PRM3PP**

Inch equivalents for millimeter dimensions are shown in (\*\*)

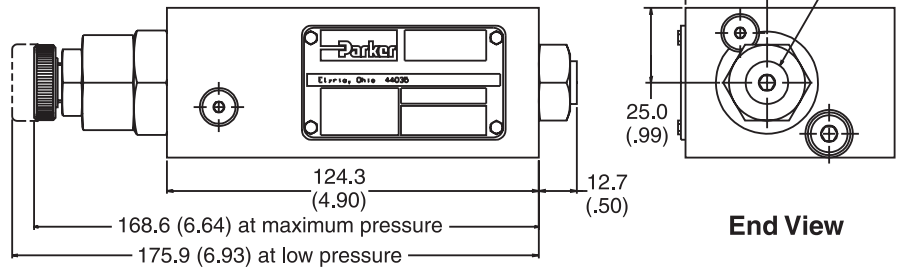
**B**



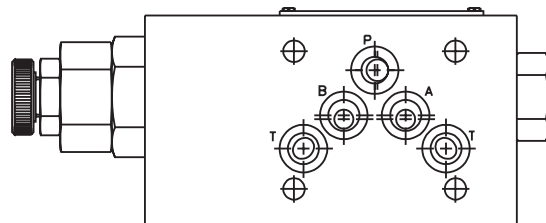
**Top View**



**End View**



**Face View**



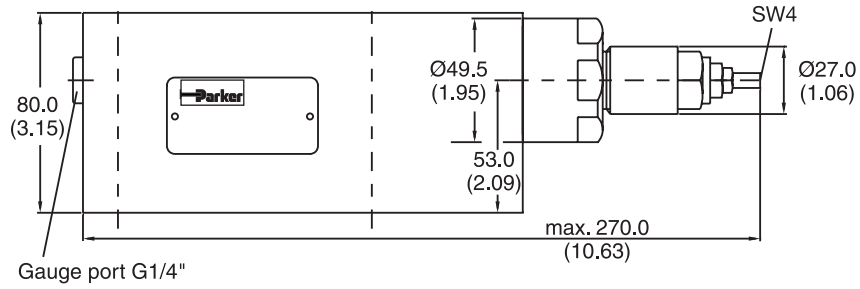
**Bottom View**



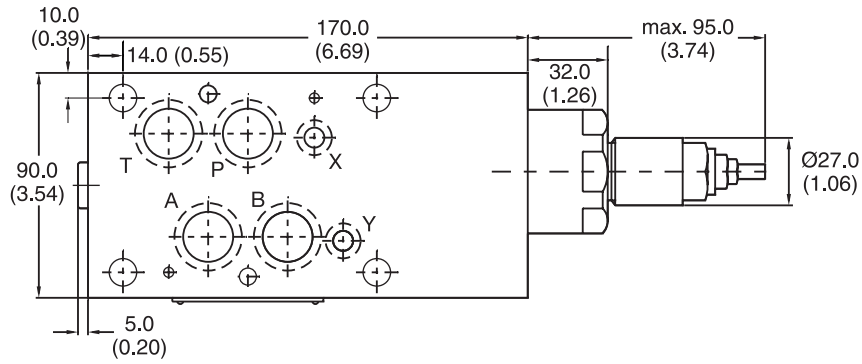
**PRM4**

Inch equivalents for millimeter dimensions are shown in (\*\*)

**B**



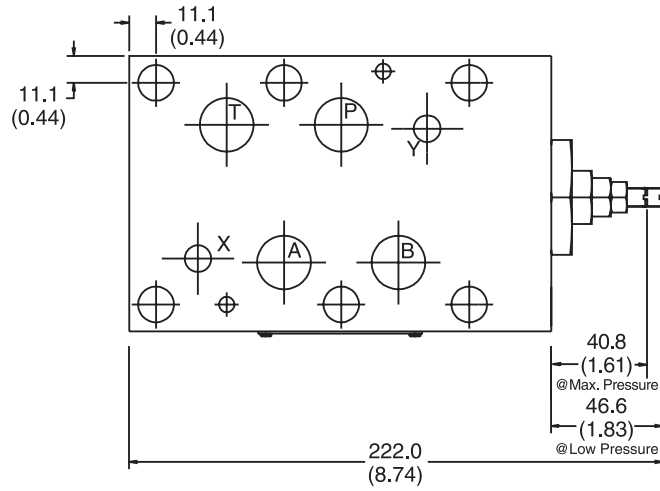
**Face View**



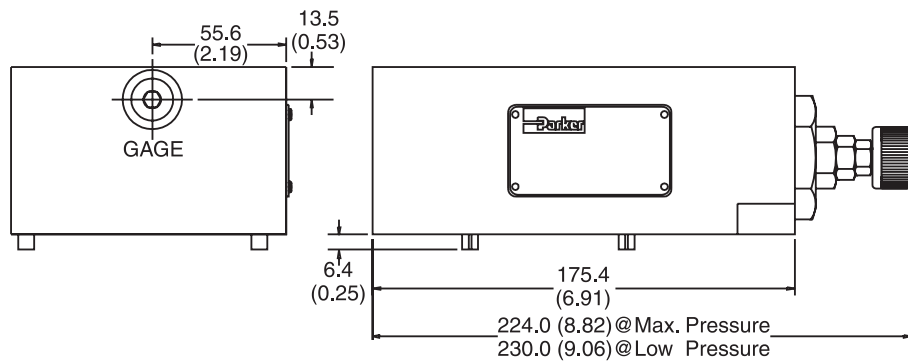
**Top View**

**PRM6**

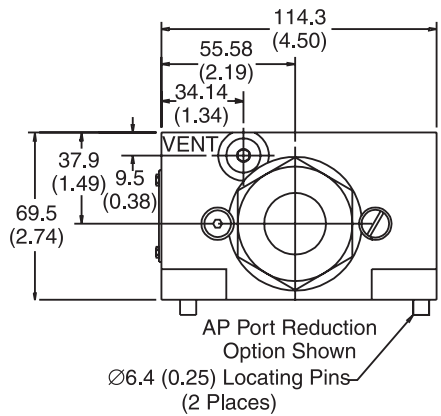
Inch equivalents for millimeter dimensions are shown in (\*\*)



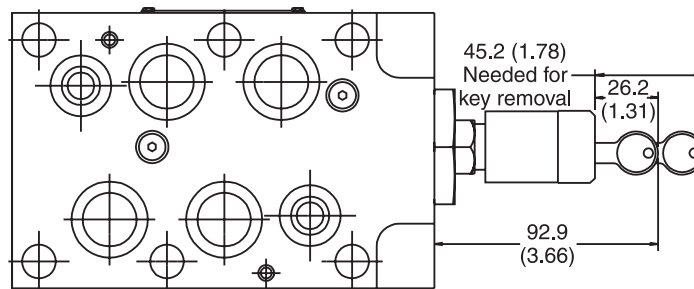
**Top View**



**Face View**



**End View**



**Bottom View**



**B**