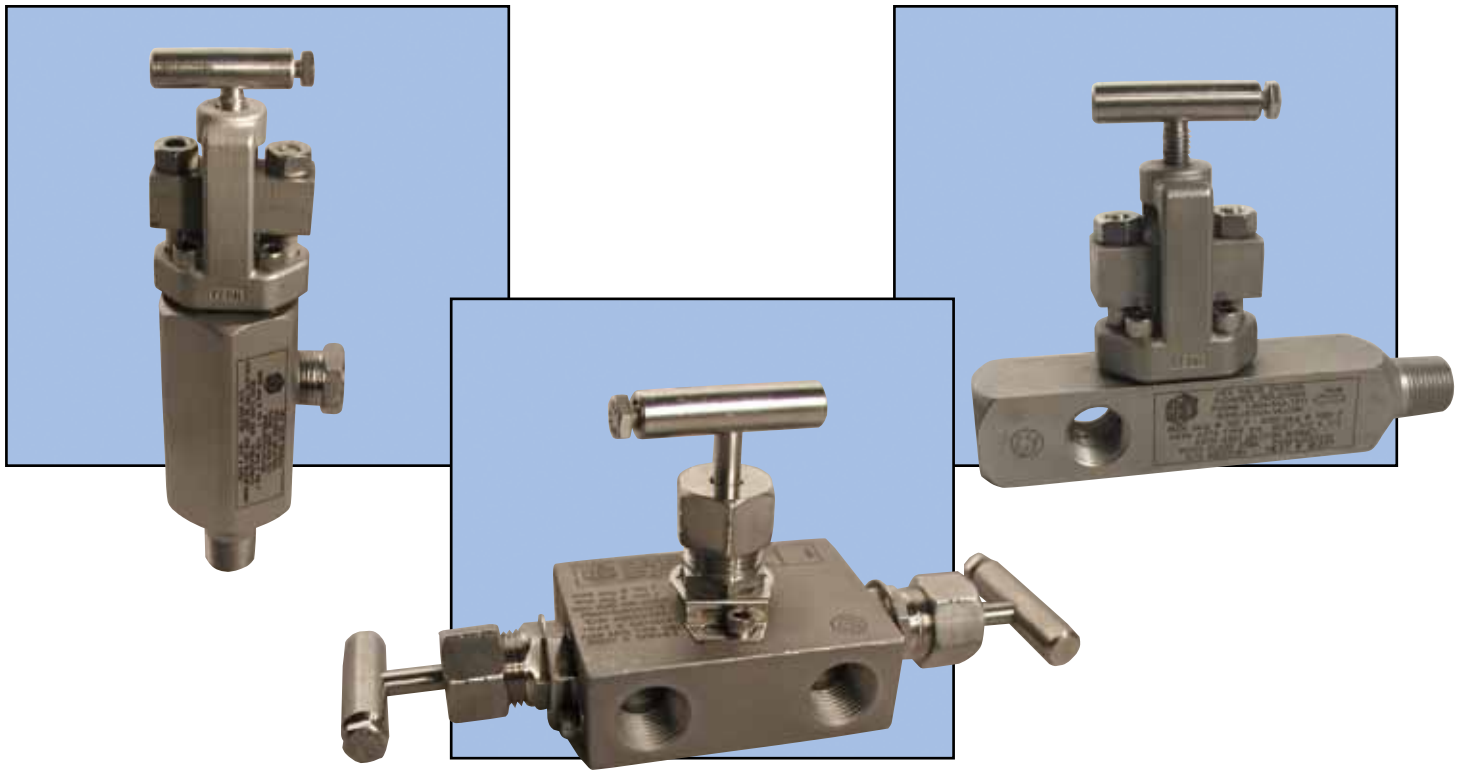


# Instrument Valves for the Power Industry



**Our power instrument valves conform to power standards ANSI B31.1 and B31.3**



A division of Richards Industries  
3170 Wasson Road • Cincinnati, OH 45209  
513-533-5600 • 800-543-7311 • 513-871-0105  
hex@richardsind.com • www.hexvalve.com

## Instrument Manifolds

### Two-Valve Static Pressure Manifolds

- The **PM50** combines a primary block valve, a bleed valve, and a secondary shutoff valve into one small unit. With the integral secondary shutoff valve and a bleed valve (not integral), the gauge and transmitter can be removed or bled without requiring additional valving. The PM50 features a threaded inlet and flanged outlet, allowing the transmitter to bolt directly to the manifold.



PM50

- The **PM59** is a line-mounted two valve manifold that functions as a shutoff and bleed valve for static pressure instrumentation. The use of the PM59 reduces the number of threaded connections, resulting in fewer potential leak points.



PM59

### Three-Valve Differential Pressure Manifolds

Hex Valve produces a complete line of three valve instrument manifolds which combines two block valves and one equalizing valve in a single compact assembly.

- **PM45/46**: for in-line, thread by thread installations
- **PM53**: single flanged for mounting to a remotely located differential pressure transmitter
- **PM54**: double flanged for direct mounting to the orifice flange or for remote transmitter locations
- **PM51**: direct mounted compact wafer valve



PM45



PM54

## Manifold Valves

### Five-Valve Differential Pressure

- The **PM75** is designed for remote mounting of differential pressure transmitters. Design includes two isolation valves, one test valve, and two test/purge valves. Manifold can be mounted via pipe stand or instrument rack. The 1/2" process connection is located on bottom of manifold and instrument connection is located on back.



- The **PM76** is similar to the PM75 but is designed for direct mounting to transmitter by unique wafer design. The compact design eliminates the requirement for additional tubing or piping from manifold to transmitter.



### Rigid Mount

- The **PM13** (3-Valve) and **PM16** (5-Valve) mount directly to the pipe stand securing the impulse lines so the transmitter can be installed or removed independently of the piping.

On new installations, all piping can be completed prior to the arrival of the instruments. Installation and removal is fast and easy, taking less time than with conventional transmitter mounting. When the transmitter is removed, tubing and manifold remain rigidly in place.



## Instrument Block, Bleed, Gauge and Needle Valves

### Orifice Block Valves

- The **PG65** block valve is designed for compact side-by-side mounting on orifice flanges and orifice settings, as well as for use with condensate chambers, mercury traps, and seal traps. The slim design enables side-by-side mounting on 2-1/8" centers without staggering the valves with unequal length nipples as required with other valves. This valve provides two outlet ports for use as impulse line connections, pressure gauge mounting or level gauge mounting.



### Needle Valves/Bleed Valves

- The **PN49** is a fully packed needle valve for high pressure and high temperature applications. Produced in a wide variety of inlet and outlet sizes.
- For critical services, the **PB59** block and bleed valve features a fully packed and backseated block valve along with a fully packed integral bleed valve.



### Gauge/Block Valves

Hex Gauge/Block Valves provide three outlet connections to facilitate the mounting of gauges and other static pressure instrumentation in a variety of positions. The design results in a compact installation with minimal leak points.

- The **PG46** features the backseated OS&Y bolted bonnet, while the **PG48** is supplied with a backseated screwed bonnet.
- The **PG47** provides a full port and unrestricted flow, which allows the use of a rod-out tool. Note: there is a pressure limitation of 1500 psi @ -20 to +100°F regardless of material.



# Product Designator

Model	Seat	Body Mat'l	Inlet Size and Type	Outlet Size and Type	Stem/Tip	Seat Mat'l	Packing
PM45	1	U	99	99	4	1	3

Model Number	
PM50	Manifold
PM59	Manifold
PM45	Manifold
PM46	Manifold
PM53	Manifold
PM54	Manifold
PM51	Manifold
PM75	Manifold
PM76	Manifold
PM13	Manifold
PM16	Manifold
PG65	Valve
PN49	Valve
PB59	Valve
PG46	Valve
PG47	Valve
PG48	Valve

Seat Configuration	
1	Integral Hard Seat
3	Integral Hard Seat - "LG" Body (valves only)
5	Integral Hard Seat - "XLG" Body (valves only)

Body Material	
P	Carbon Steel (ASTM A105)
U	Stainless Steel (ASTM A479-316)

Inlet Size and Type	
31	1/2" MNPT
32	1/2" MSW
33	1/2" FNPT (manifolds only)
41	3/4" MNPT
42	3/4" MNPT
99	Flanged (manifolds only)

Outlet Size and Type	
31	1/2" FNPT
99	Flanged (manifolds only)

Stem/Tip Material	
2	316 SS Needle
4	316 SS Non-Rotating
5	316 SS/Stellite Non-Rotating

Seat Material	
1	Integral Hard Seat
3	Stellite #6 insert (valves only)

Packing	
3	Graphite/Grafoil/Graphite

## Bolting

ASTM SA193, GR B8M, Type 316, Class 1 and ASTM SA193, GR B7

## Bonnet Feature

All screwed bonnets offer standard bonnet safety clamp

## Testing

Valves are 100% hydrotested to ANSI B31.1 specifications

# Pressure/Temperature Chart

Temperature °F (°C)	SA105 Carbon Steel psig (bar)	SA479 Type 316 Stainless Steel psig (bar)
-20 to 100 (-28,9 to 38)	6170 (425)	6000 (414)
200 (93)	5625 (388)	5160 (356)
300 (149)	5470 (377)	4660 (321)
400 (204)	5280 (364)	4280 (295)
450 (232)	5135 (354)	4130 (285)
500 (260)	4990 (344)	3980 (274)
600 (316)	4560 (314)	3760 (259)
650 (343)	4475 (308)	3700 (255)
700 (371)	4440 (306)	3620 (252)
750 (399)	4200 (290)	3560 (245)
800 (427)	3430 (236)	3520 (243)
850 (454)	—	3480 (240)
900 (482)	—	3460 (238)
950 (510)	—	3220 (222)
1000 (538)	—	3030 (209)

## Notes:

- 1 Pressure/Temperature Ratings with Graphite packing
- 2 Maximum temperature for Carbon Steel is 800°F (426,7°C)
- 3 PG47 is limited to a maximum pressure of 1500 psig
- 4 Please contact factory for additional valve material options
- 5 Valves are rated to ANSI B31.1 – Class 2500

