



PDSM350 Series Pressure Differential Switchover Manifolds for Liquid Cylinders - Brass Construction

**Brass
Construction**

Key Features

Automatic Switchover

Uninterrupted flow of gas

Pressure differential technology

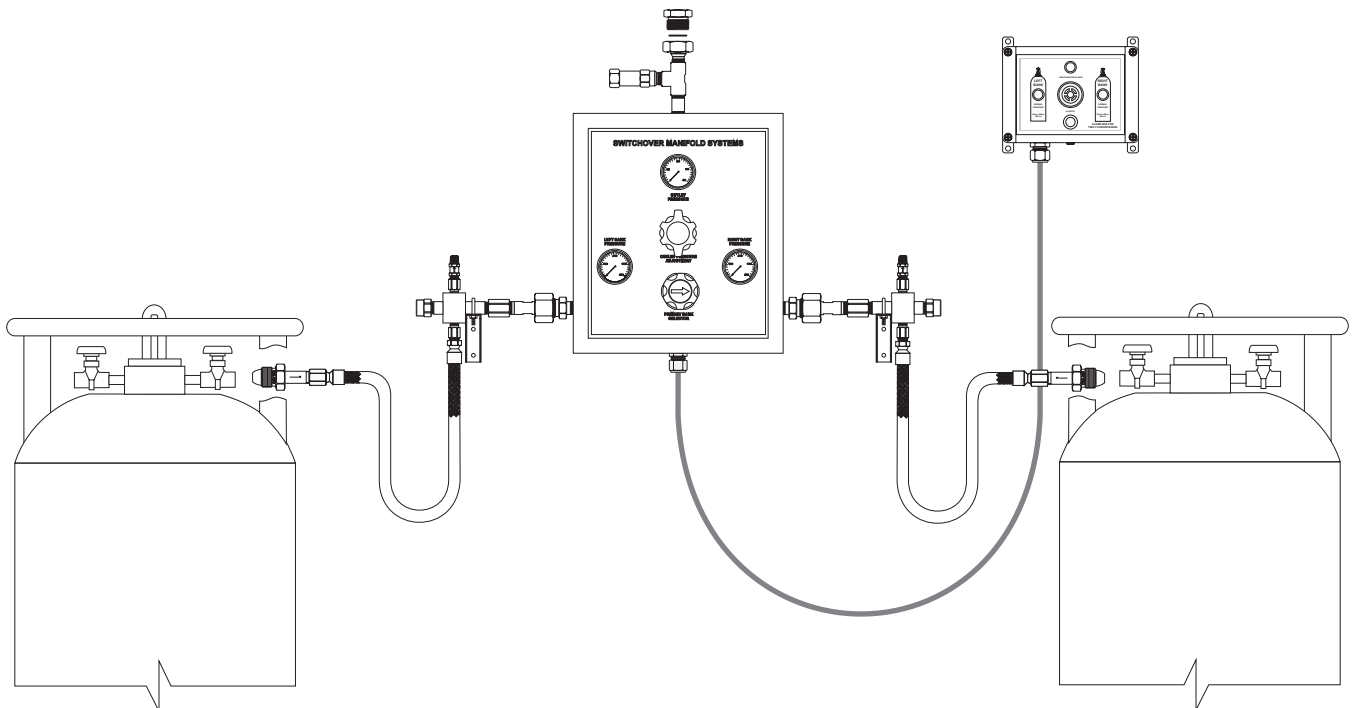
Priority bank knob rotation resets the system

Designed for High pressure cylinders

Cylinder pressure: 3000 PSIG each bank

Heavy duty regulators

Rugged construction for reliable supply



Pressure Differential Switchover Manifolds for Liquid Cylinders - Brass Construction

Description

The PDSM350B Series automatic switchover manifolds are designed to supply an uninterrupted flow of high purity gases from liquid cylinders (gaseous withdrawal). The system automatically changes from the supply bank to the reserve bank without an interruption in gas supply. A simple rotation of the primary bank selector knob resets the unit. All functional components are enclosed in a tamper resistant metal cabinet.

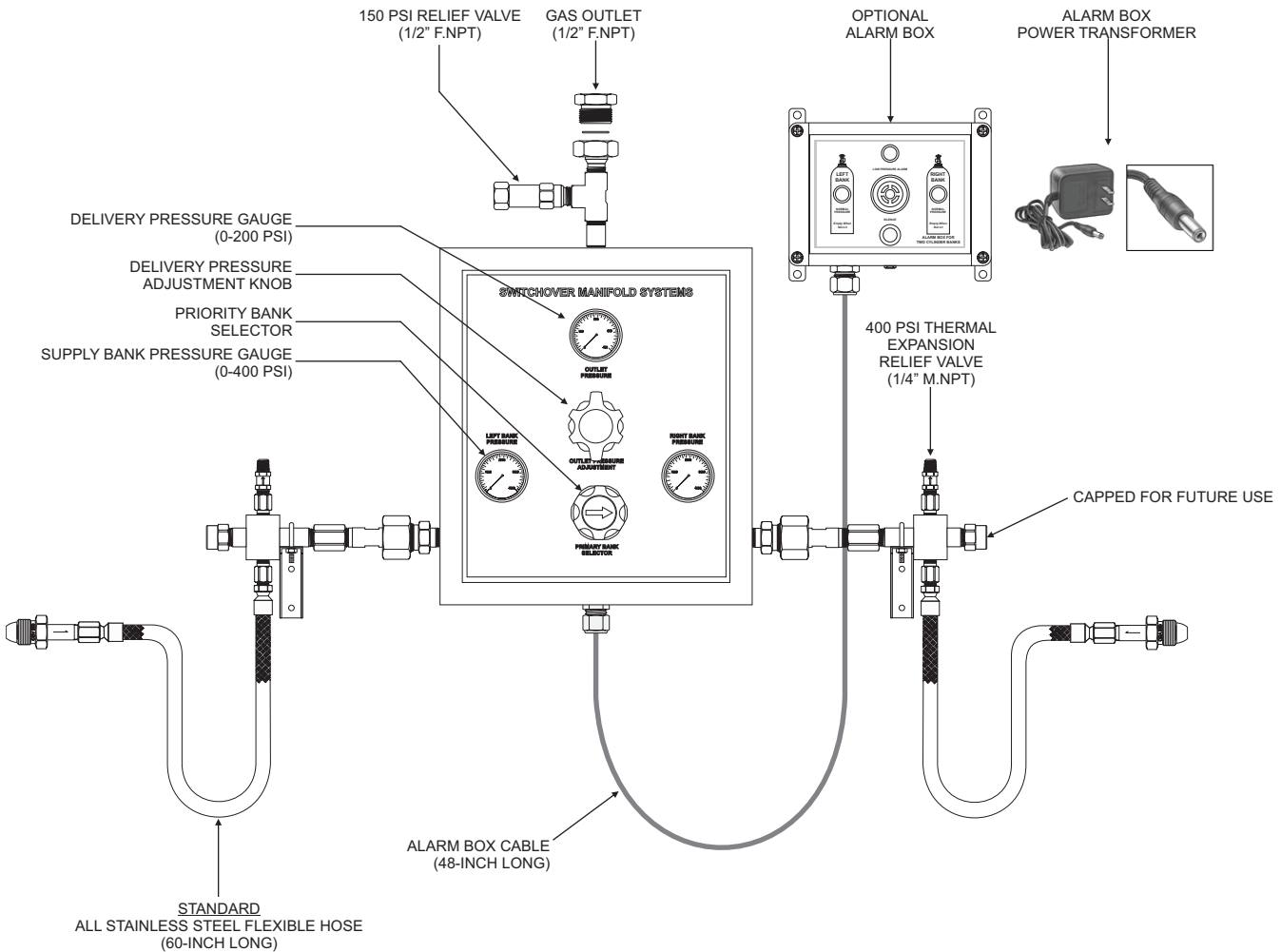
Built-In Economizer Circuit

The built-in economizer circuit utilizes accumulated pressure from the secondary (reserve) bank to prevent from exhausting to atmosphere (through liquid cylinder relief valves) useful gas.

Optional Remote Alarm

Internal pressure switches, low bank pressure lights and a buzzer indicate low bank pressure and the need to change out the depleted cylinders.

Equipment Overview



*Our policy is one of continuous research and development.
We reserve the right to modify without notice the specifications given in this document.*

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Materials

Enclosure	Material: Steel - Paint: Powder Coated - Color: Light Gray
Headers	Brass ASTM B16 - CDA377
Tubing	Copper ASTM B280
Fittings	Brass ASTM B16
Hoses	Thermoplastic Hoses: Innercore: Nylon - Fittings: Steel - Specs: SAE J517 100R8 - Color: Black Teflon Hose: Innercore: Teflon - Fittings: Brass - Braiding: Stainless Steel Stainless Steel Hoses: Core: Stainless Steel - Braiding: Stainless Steel - Fittings: Stainless Steel
Header Valves	Body: brass UNS 37700 - bonnet: brass UNS 36000 - lower plug: Teflon/brass 48500 - lower plug seat: Zytel 101 - "O"-ring: nitrite - packing: virgin Teflon
Relief Valve	Body, seat retainer: brass ASTM B16 - adjusting screw, springs: stainless steel 316 - Disc: PTFE
Regulators	Body, bonnet: brass - diaphragm: stainless steel - seal and seat: PTFE - Filter: Sintered Bronze - Seat Return Spring: PH 17-7 Stainless Steel Body: forged brass - bonnet: nickel plated aluminium - diaphragm: nitrile with PTFE liner - springs: stainless steel - seat & "O"-rings: viton (EPDM seat disc & "O"-rings for carbon dioxide)
Pressure Switches	Piston: stainless steel - "O"-ring: Buna-N - connection: brass

Options & Other Important Information

About The Economizer

The economizer's purpose is to minimize product loss on the reserve bank. When the liquid cylinder on the reserve bank reaches 200 PSI, the economizer opens and the gas bypasses the primary regulators and feeds directly the line regulator directly until the pressure drops below 200 PSI.

Ultra High Purity Applications (Option Uhp)

PDSM Series Manifolds are cleaned for oxygen service as a standard feature. For Ultra High Purity Applications, all manifold components are acid cleaned, rinsed with de-ionized water and purged with UHP nitrogen. For UHP applications, it is strongly recommended to use the all stainless steel flexible hoses.

Alarm Option Retrofit To An Existing Manifold

The PDSM350 Series Automatic Switchover Manifolds must be ordered upfront with or without the alarm option. You cannot add an alarm box in the field. The alarm feature can be added to an existing unit ONLY if it is returned to the factory. Additional charges will apply.

Outside Installation (Option 3R)

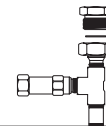
PDSM Series Manifolds are designed for indoor installations. Should you require to install your manifold outside, by selecting the option 3R, the alarm box will come in a NEMA 4X enclosure. Please be aware that the PDSM enclosure, even with option 3R, will rust over time as it is made out of steel.

About Liquid Cylinder Vaporizing Capacity

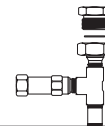
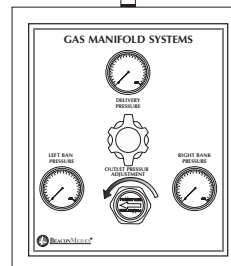
Standard liquid cylinders are capable of vaporizing around 9 m³ (around 320 scf) of liquid per hour. To avoid injuries and equipment damages, please verify your flow requirements. Additional liquid cylinders or the installation of an external ambient vaporizer may be required.

Specifications

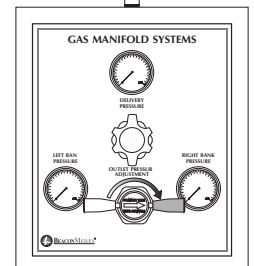
Gas	Refer to part number matrix
Maximum Inlet Pressure	350 PSIG
Outlet Pressure Range	10-125 PSIG
Flow	Limited by liquid cylinder
Operating Temperature	-40°F to +100°F
Pressure Gauge Size	2-1/2" - dial
Pressure Relief Valve	150 PSIG
Inlet Connections	Gas Specific CGA fittings
Outlet Connection	1/2" M.NPT
Audible & Visible Alarm	Optional
Header	1/2" NPS, silver brazed
Power Requirement	110 VAC (for the alarm box)
Flexible Hose Length	60 Inches



Priority: Left Bank
Rotate the lever counter-clock wise to draw gas from the left side first. The gas will come from that side first until the cylinder is depleted. The gas will then come from the right side even if the lever is still pointing to the left. Rotate the lever to the right side to make it the side you want to draw gas from first.

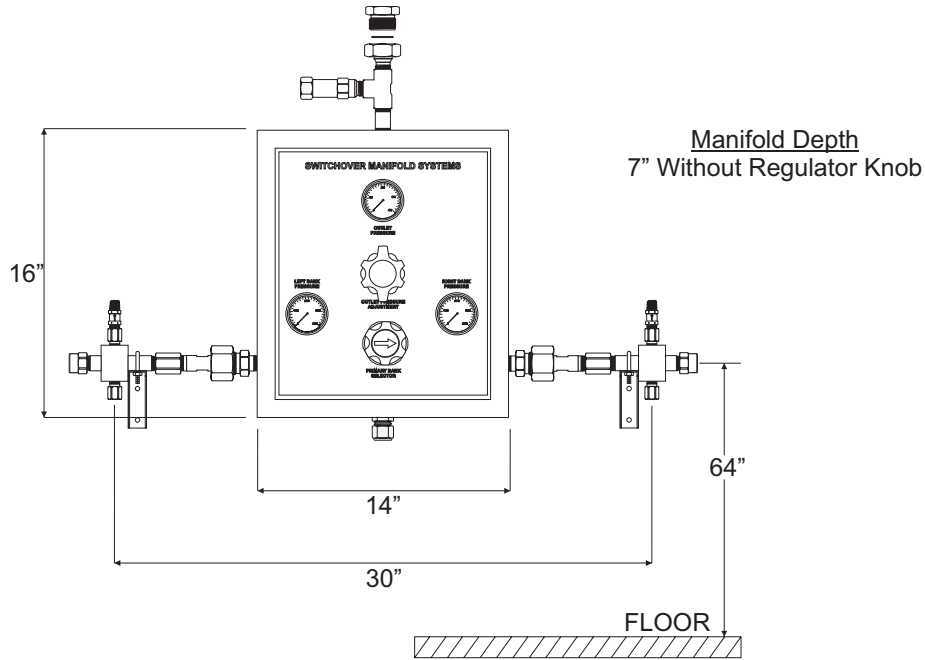


Priority: Right Bank
When the lever is pointing to the right, the gas will come from the right bank until the cylinder is depleted.



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Dimensions



Ordering Information



Gas	Inscribe
Argon	CGA 580
Carbon Dioxide	CGA 320
Nitrogen	CGA 580
Oxygen	CGA 540

No. of Cylinders	Inscribe
Must be an even number to have the same quantity of cylinders per side (2 cyl. each side = 4)	

Alarm Box	Inscribe
Manifold with alarm box	AB
Manifold without alarm box	Leave Blank

Options	Inscribe
Outside Installation	3R
Ultra High Purity Cleaning	UHP

Installation Hardware	Inscribe
Wall mount bracket	WM
Floor Stand	FS

Hoses & Pigtails	Inscribe
All Stainless Steel Hose	SSH