

Submittal Data Sheet

Features

- Fully automatic – no resetting of valves or levers.
- Input power 120 to 240VAC, 50 to 60 Hz – single point connection.
- Easy to service piping design.
- Patented single solenoid pressure differential changeover.
- 400 psi differential rated solenoid.
- May be converted from high pressure cylinder use to use with low or medium pressure liquid portable bulk vessels.
- Includes 3/4" source or main line ball valve with copper tube extension, part number PX-48-0023.
- Dual line pressure regulators.
- Optional single point relief valve vertical kit part number PX-88-1075.
- Double "Z" brackets for one man installation.
- Cabinet weight 70 lbs.
- OSHPD Seismic Certified, OSP-0380-10.

Specification

The NFPA 99 compliant fully automatic manifold shall be a Powerex NPC series. No manual resetting of valves or levers shall be required. The unit shall switch from "Bank in Use" to "Reserve" bank without fluctuation in line delivery pressure. Simultaneously, the "Reserve in Use" alarm shall be triggered by the manifold's circuit board. The manifold shall continue to provide gas, in the event of a power failure, until both banks are depleted. After the switchover, the "Reserve" bank shall then become the "Bank in Use". The manifold shall be capable of being upgraded after installation; to be used with low or

medium pressure portable bulk vessels, to upgrade to high flow line regulator(s), from single to dual line regulators and for use at higher or lower delivery pressures.

The control panel shall incorporate a set of LED's for each bank, green for "Bank in Use", amber for "Ready" and red for "Empty". Analog gauges are also provided so that line and both bank pressures may be observed.

All manifold regulators, piping and control switching equipment shall be cleaned for use with oxygen service and installed in a steel cabinet to provide protection and minimize tampering.



Line Regulators Flow Capacity

Maximum rated flow capacity of line regulators only, not the manifold cabinet, flowing to atmosphere. (Without restricting line pressure drop).

Gas Service	Delivery Pressure
Oxygen	1H, 2H, 3H
	4,500 SCFH (2,120 l/min)
Nitrous Oxide or Carbon Dioxide	3 H
	6,000 SCFH (2,830 l/min)

Maximum recommended flow due to the chill down nature of the gas.

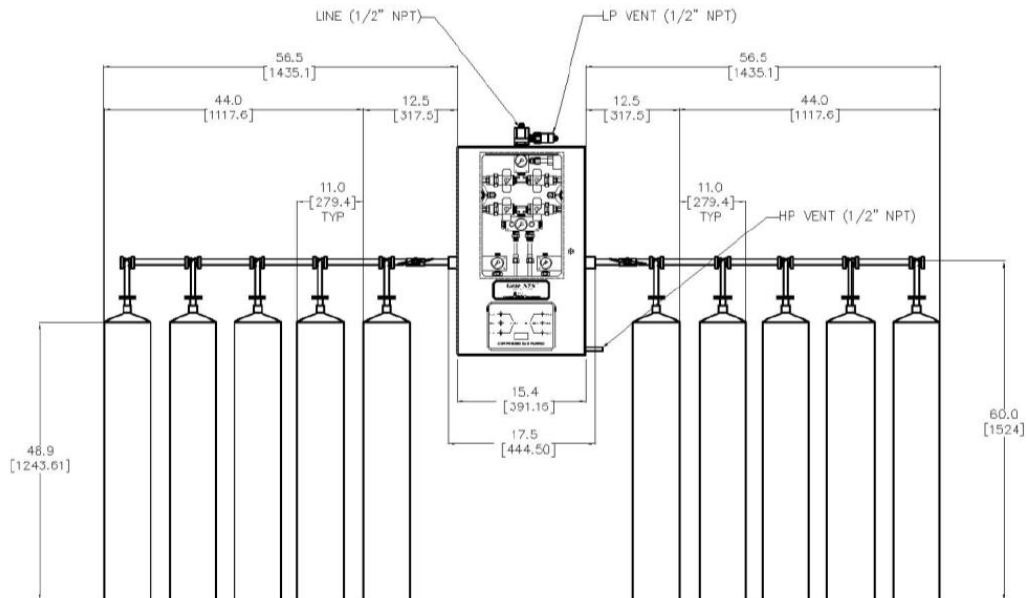
Gas Service	Delivery Pressure with Heaters
Nitrous Oxide or Carbon Dioxide	1X
	500 SCFH (236 l/min)

Manifold Cabinet Flow Capacity

Static Delivery Pressure Setting PSI	Pressure Drop	Pressure Flowing PSI	Manifold Line Regulator Delivery Pressure and Flow Option		
			Average Flow Rate in SCFH (l/min)		
			1H	2H	3H
53	3	50	640 (302 l/min)		
	5	48	1,260 (595 l/min)		
	7	46	1,650 (779 l/min)		
	10	43	2,430 (1,147 l/min)		
85	3	82		1,010 (477 l/min)	
	5	80		1,610 (760 l/min)	
	7	78		2,670 (1,261 l/min)	
	10	75		3,120 (1,473 l/min)	
175	10	165			1,230 (581 l/min)
	20	155			2,535 (1,197 l/min)
	30	145			4,140 (1,955 l/min)
	35	140			4,500 (2,125 l/min)

Flow rates shown were obtained using Nitrogen, flowing through the right primary regulator, which is considered the most restrictive flow path. (Worst case condition). Testing was performed with an average inlet pressure to the manifold cabinet at 1,425 PSI.

Dimensional Drawing



Design Lengths

Design Lengths	4	6	8	10	12	16	20
STAGGERED DESIGN (5" CENTERS) OVERALL MANIFOLD LENGTH	4'-6" (1.32m)	5'-4" (1.63m)	6'-2" (1.88m)	7'-0" (2.13m)	7'-10" (2.39m)	9'-6" (2.90m)	11'-2" (3.33m)
VERTICAL CROSSOVER (5" CENTERS) OVERALL MANIFOLD LENGTH	3'-7" (1.10m)	N/A	4'-6" (1.32m)	N/A	5'-4" (1.63m)	8'-7" (2.62m)	10'-3" (3.12m)

See Separate Manifold Header Literature for Header Part Number

Ordering Information

Easy to use modular ordering system. Fill in the blanks to specify the manifold that meets your needs.

PX-

N	P	C	U	T	L	G	G	D	F
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F = Flow & Heater Options

H – High Flow without Heaters **X** – High Flow with Heaters*
*Input voltage limited to 120 VAC for these Models
 (Transformer kit part # PX-35-3004 reduces 240 VAC single phase to 120 VAC.)

D = Delivery Pressure

1 – 50 psi **2** – 80 psi **3** – 170 psi

G = Gas Set

AI – Air/Medical Air	NT – Nitrogen	OX – Oxygen
AR – Argon	NO – Nitrous Oxide	TG – Tri-Gas
CD – Carbon Dioxide	OC – Carbogen <small>(CO2 7% max)</small>	
HO – Hyperbaric Oxygen		

L = Final Line Regulation

1 – Single Line Regulator **2** – Dual Line Regulator (required for NFPA 99 compliant manifolds)

T = Type of Cabinet

1 – Standard

Examples:

PX-NPCU12OX1H = Cylinder x Cylinder Analog Manifold, Standard Cabinet, CGA 540 Oxygen service, Dual Line Regulators, 50 psi delivery, high flow.