

## Submittal Data Sheet

### Features

- Fully automatic – no resetting of valves or levers.
- Input power 120 VAC, 50 to 60 Hz – single point connection.
- Easy to service piping design.
- Patented single solenoid pressure differential changeover.
- 400 psig differential rated solenoid.
- May be converted from high pressure cylinder use to use with low or medium pressure liquid portable bulk vessels.
- Dual line pressure regulators.
- Optional single point relief valve vertical kit part #PX-88-1075.
- Double “Z” brackets for one man installation.
- Cabinet weight 70 lbs.

### Specification

The NFPA 99 compliant fully automatic manifold shall be a Powerex Genesys™ NPCU 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 manifolds 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 and Flow Option	
	Standard Line Regulators	High Capacity Line Regulators
Oxygen	1L	1H, 2H, 3H
	2,500 SCFH (1,180 l/min)	4,500 SCFH (2,120 l/min)
Nitrous Oxide or Carbon Dioxide		3 H
	N/A	6,000 SCFH (2,830 l/min)

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

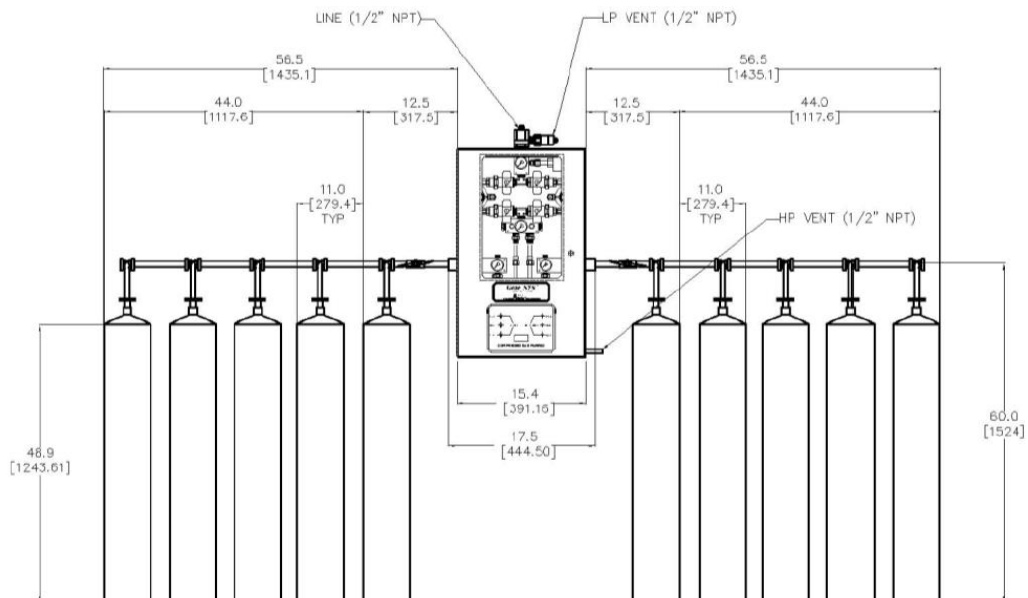
Gas Service	Delivery Pressure and Flow Option	
	Without Heaters	With Heaters
Nitrous Oxide or Carbon Dioxide	1L	1W
	40 SCFH (19 l/min)	500 SCFH (236 l/min)

## 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)			
			1L	1H	2H	3H
53	3	50	195 (92 l/min)	640 (302 l/min)		
	5	48	430 (203 l/min)	1,260 (595 l/min)		
	7	46	635 (300 l/min)	1,650 (779 l/min)		
	10	43	875 (413 l/min)	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
<b>STANDARD (10" INCH CENTERS) OVERALL MANIFOLD LENGTH</b>	5' - 3" (1.60m)	6' - 11" (2.11m)	8' - 7" (2.62m)	10' - 3" (3.12m)	11' - 11" (3.63m)	15' - 5" (4.65m)	18' - 9" (5.72m)
<b>STAGGERED DESIGN (5" CENTERS) OVERALL MANIFOLD LENGTH</b>	4' - 4" (1.32m)	5' - 2" (1.57m)	6' - 0" (1.83m)	6' - 10" (2.08m)	7' - 8" (2.34m)	9' - 4" (2.85m)	11' - 0" (3.35m)
<b>VERTICAL CROSSOVER (10" CENTERS) OVERALL MANIFOLD LENGTH</b>	3' - 7" (1.10m)	N/A	5' - 3" (1.60m)	N/A	6' - 11" (2.11m)	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 6 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**  
 L – Standard Flow    H – High Flow    W – With Heaters  
 See chart on page 2 for flow capacities

**D = Delivery Pressure**  
 1 – 50 psi    2 – 80 psi    3 – 170 psi

**G = Gas Set**

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

**L = Final Line Regulation**  
 1 – Single Line Regulator    2 – Dual Line Regulator

**T = Type of Cabinet**  
 1 – Standard

### Examples:

NPCU12OX1L = Cylinder x Cylinder Genesys™ Analog Manifold, Standard Cabinet, CGA 540 Oxygen service, Dual Line Regulators, 50 psi delivery, standard flow.