

Submittal Data Sheet

Specification

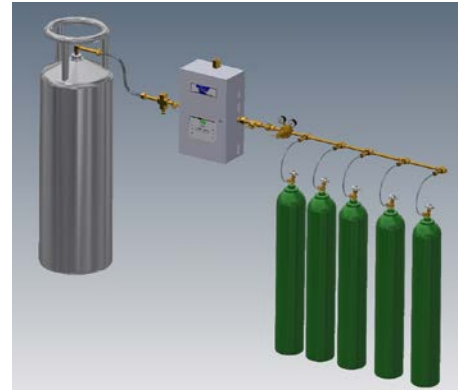
The NFPA 99 compliant digital, fully automatic manifold shall be a Tri-Tech Medical *Genesys™* PL series. No manual resetting of valves or levers shall be required. The unit shall always provide gas from the left (vapor withdrawal from portable bulk or bulk vessel) unless the pressure from the left inlet bank is depleted. 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 microprocessor.

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”. When the left bank is replenished and the left bank pressure is sufficient, the manifold will automatically resume providing gas from the left bank and designate the left bank as the “Bank in Use” and the right bank as the “Reserve” bank.

The manifold microprocessor shall also trigger the “High Line Pressure” and “Low Line Pressure” alarms without the need for additional pressure switches or transducers.

The manifold microprocessor shall also trigger the “Emergency Reserve in Use” and “Emergency Reserve Low” alarms when used with transducers supplied separately. The PL series manifold will trigger all six required NFPA 99 alarm signals when installed per manufacturer’s requirements: high line pressure, low line pressure, secondary in use, right bank (secondary) low, emergency reserve in use & emergency reserve low. Note the secondary in use alarm will be triggered if either the Left and/or Right Bank pressure drops below 95 psi (for 50 & 80 psi delivery pressure applications) or 190 psi (for 170 psi delivery pressure applications).

The control cabinet shall also incorporate economizer gas circuits for both banks. The economizer circuits will allow the head pressure of the reserve bank to be utilized instead of venting to atmosphere so long as there is sufficient system gas usage.



The microprocessor based control panel shall incorporate LED’s and an illuminated text display and shall provide electronic monitoring of circuits with up to 20 error, alarm or information messages displayed for ease of maintenance. The illuminated text display shall be readable even in poor lighting conditions. Analog gauge shall also be provided so that the line and both bank pressures may be observed in the event of a power failure.

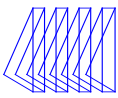
The control panel shall also incorporate a set of LED’s for each bank, green for “Bank in Use”, amber for “Ready” and red for “Empty”. All manifold regulators, piping and control switching equipment shall be cleaned for use with oxygen service and installed in a steel cabinet (weatherproof aluminum version available) to provide protection and minimize tampering.

Features and Benefits

- **Five-year parts and one-year labor limited warranty***
- Fully automatic – no resetting of valves or levers
- Input power 120 to 240 VAC, 50 to 60 Hz - single point connection
- 400 psi differential rated solenoid – can’t lock up
- Economizer circuits for maximum efficiency of gas use
- Unit of measure switching (psi, kPa, BAR).
- Includes 3/4" source or main line ball valve with copper tube extension, Ref. Tri-Tech part no. 48-0023.
- **OSHPD** Seismic tested and Certified
- Dual line pressure regulators
- Built for expansion by adding header extensions.
- Cabinet weight 70 lbs.
- May be converted from low or medium pressure liquid portable bulk vessel use to use with high pressure cylinders.
- Line pressure sensor may be mounted inside the cabinet or remotely located to eliminate the need for a high/low pressure switch for master alarm operation.
- Maximum Inlet Pressure 400 psi

* See Terms and Conditions, Document No. 99-0477, on our Website at: www.tri-techmedical.com. For complete details.

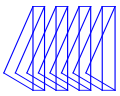
Genesys is a registered trademark of Tri-Tech Medical. Patented.



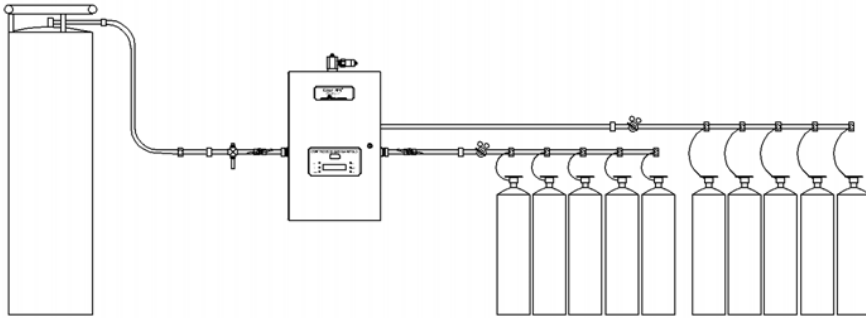
Note: External vaporizers may be required to achieve these flow rates. Typical portable bulk vessels without external vaporizers will provide 250 to 350 SCFH (consult the specifications provided by the vessel manufacturer).

Manifold Cabinet Flow Capacity

				Manifold Line Regulator Delivery Pressure and Flow Option			
<i>Vessel Head Pressure Setting PSI</i>	<i>Static Delivery Pressure Setting PSI</i>	<i>Pressure Drop</i>	<i>Pressure Flowing psi</i>	<i>Average Flow Rate in SCFH (l/min)</i>			
				1L	1H	2H	3H
150	53	3	50	335 (158 l/min)	595 (281 l/min)		
		5	48	580 (274 l/min)	1,200 (567 l/min)		
		7	46	720 (340 l/min)	1,320 (623 l/min)		
		10	43	860 (406 l/min)	1,380 (652 l/min)		
150	85	3	82			325 (153 l/min)	
		5	80			950 (449 l/min)	
		7	78			1,090 (515 l/min)	
		10	75			1,140 (538 l/min)	
150	175	10	165				N/A
		20	155				N/A
		30	145				N/A
		35	140				N/A
				Manifold Line Regulator Delivery Pressure and Flow Option			
<i>Vessel Head Pressure Setting PSI</i>	<i>Static Delivery Pressure Setting PSI</i>	<i>Pressure Drop</i>	<i>Pressure Flowing psi</i>	<i>Average Flow Rate in SCFH (l/min)</i>			
				1L	1H	2H	3H
250	53	3	50	520 (246 l/min)	690 (326 l/min)		
		5	48	890 (420 l/min)	2,160 (1,020 l/min)		
		7	46	1,115 (526 l/min)	2,280 (1,076 l/min)		
		10	43	1,330 (628 l/min)	2,340 (1,105 l/min)		
250	85	3	82			1,110 (524 l/min)	
		5	80			1,620 (765 l/min)	
		7	78			2,160 (1,020 l/min)	
		10	75			2,220 (1,048 l/min)	
250	175	10	165				1,045 (494 l/min)
		20	155				1,095 (517 l/min)
		30	145				1,170 (552 l/min)
		35	140				1,180 (557 l/min)



Dimensional Drawing



Design Lengths

Typical installation shown above
primary (left bank), secondary (right bank)
and emergency reserve bank

20" header length (Header pictured above
accommodates 2 -72" flexible pigtails for 2 portable
bulk vessels + relief valve with pipe away

TOTAL NUMBER OF CYLINDERS
Cabinet only is 17" W x 26 1/4" H x 9" D
See RWP / RSP series high pressure reserve manifold catalog page for dimensional information

* See 99-0325 Manifold Header Literature for Header Part Numbers

How to Order: Easy to use modular ordering system. Fill in the 7 blanks to specify the manifold that meets *your* needs.

P	L	U	T	L	G	G	D	F
								F = Flow and Heater Options (See Chart on Page 2 for flow capacities)
								L – Standard Flow w/o Heaters H – High Flow w/o Heaters
								W – Standard Flow with Heaters* X – High Flow with Heaters*
								(Incorporates 1L Line Regulator) (Can incorporate 1H, 2H, or 3H Line Regulators)
								(* Input voltage limited to 120 VAC for these Models)
								(Tri-Tech transformer kit Part No. 35-3004 [Sold Separately] reduces 240 VAC single phase to 120 VAC)
								D = Delivery Pressure
								1 – 50 psi 2 – 80 psi 3 – 170 psi
								G = Gas Set
								CD – Carbon Dioxide HO – Hyperbaric Oxygen NT – Nitrogen NO – Nitrous Oxide OX – Oxygen
								L = Final Line Regulation
								1 – Single Line Regulator 2 – Dual Line Regulator
								(Note: NFPA 99 compliant manifolds require dual line regulators)
								T Type of Cabinet
								1 – Standard 2 - Weatherproof
								U = Country
								U – Tri-Tech Labeled NFPA Color Code English I – Tri-Tech Labeled ISO Color Code English/French
								N – Tri-Tech Labeled NFPA Color Code English/Spanish
								Examples:
								PLU22OX1L = Genesys™ Preferential Logic Manifold, U.S.A. version, weatherproof Cabinet, CGA 540 Oxygen service, Dual Line Regulators, 50 psi delivery, standard flow.
								PLU12NT3H = Genesys™ Preferential Logic Manifold, U.S.A. version, standard non-weatherproof Cabinet, CGA 580 Nitrogen service, Dual Line Regulators, 170 psi delivery, high flow.