

DRE Automatic

Analog Gas Manifold

Submittal Data Sheet

Project
Information

Project Number _____ Approval _____



SPECIFICATIONS

The fully automatic manifold shall be a TMC 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.

FEATURES

- › 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.
- › 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
- › Dual line pressure regulators
- › Optional single point relief valve vertical kit
- › Double “Z” brackets for one man installation.
- › Cabinet weight 70 lbs

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

<i>Gas Service</i>		<i>Standard Line Regulators</i>	<i>High Capacity Line Regulators</i>
Oxygen or Medical Air	<i>Delivery Pressure and Flow Option</i>	1L	1H, 2H, 3H
		2,500 SCFH (1,180 l/min)	4,500 SCFH (2,120 l/min)
Nitrogen	<i>Delivery Pressure and Flow Option</i>		3H
		N/A	6,000 SCFH (2,830 l/min)

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

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

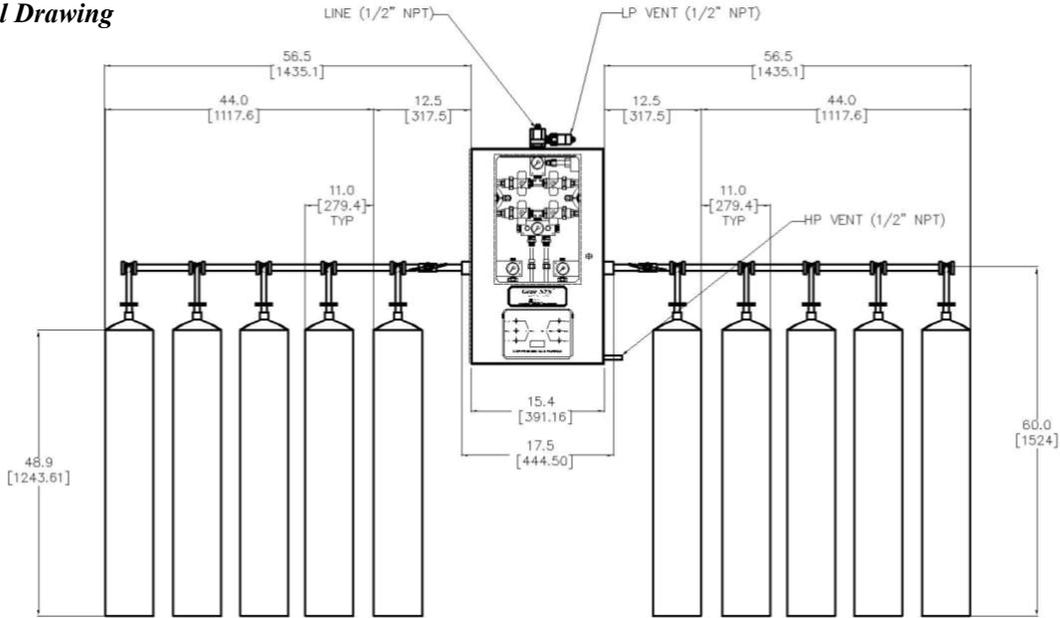
Note:
1W – Models incorporate **1L** Line Regulators
1X – Models incorporate **1H** Line Regulators

Manifold Cabinet Flow Capacity

<i>Static Delivery Pressure Setting PSI</i>	<i>Pressure Drop</i>	<i>Pressure Flowing psi</i>	<i>Manifold Line Regulator Delivery Pressure and Flow Option</i>			
			<i>Average Flow Rate in SCFH (l/min)</i>			
			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



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