



**Automatic Changeover Medical Gas Manifold for High Pressure cylinders up to 3,000 psig**

**SUBMITTAL DATA SHEET**

**Automatic Changeover Medical Gas Manifold**

The automatic changeover manifold is designed to provide a reliable uninterrupted supply of gas to a hospital or clinic's medical gas pipeline system. It is designed to meet NFPA 99 type 1 facility requirements.

**Manifold Design**

The automatic changeover manifold consists of a manifold control and two supply bank headers, one service and one secondary supply to provide an uninterrupted supply of gas for the specific gas application. Nitrous oxide and carbon dioxide units include 500scfh capacity heater. The thermostatically controlled heater warms the gas before entering the primary regulator, preventing "freeze-up". The heater operates at 115 VAC and draws 4 amps. The manifold control includes the following components and features: green "system normal" and red "replace depleted cylinders" indicator lights, digital readouts for both cylinder pressure and line pressure, line pressure gauge, internal dual line assembly and line relief valve. The control unit shall automatically switch to the secondary bank when the service bank is depleted. When the depleted cylinders are replaced with full cylinders, the operator should then turn the control knob to the opposite cylinder bank. This will make the partially used "Secondary bank" the "Service" supply and the newly installed cylinders will become the "Secondary" supply. The system incorporates a *fail-safe* configuration so that the red light can only be extinguished when sufficient pressure is supplied from both banks.

Supply banks consists of a header with 24" stainless steel flexible pigtails with check valves, except oxygen which include rigid copper pigtails with check valves, individual spud check valve bushings, master shut-off valves, and union connections for attachment to the control unit. Under normal operating conditions, the gas shall leave the high pressure cylinders through the pigtails into the header bars. The pigtails shall include check valves to allow the replacement of depleted cylinders without gas pressure back-flow into the remaining depleted cylinders on that bank.

A separate power supply is furnished with the manifold to convert 120 VAC to 24 VAC output power and includes dry contacts for connecting the "Reserve in Use" alarm to the facility's master alarm panel/s. The power supply is housed in a NEMA 3R, enclosure with electrical requirements of 1.5 amp at 120 VAC, 1Ph, 50 Hz. The power supply is CSA approved.



Automatic Digital  
Changeover Manifold

**Features**

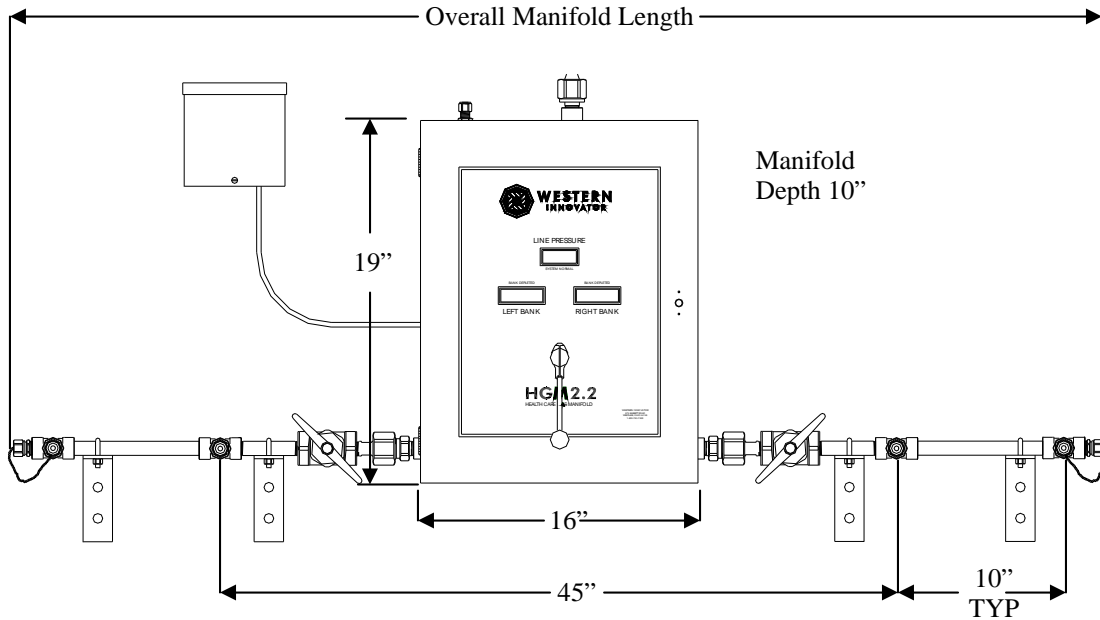
- \* 24" flexible stainless steel braided pigtails, except oxygen which include rigid copper pigtails. Vertical crossover and staggered configurations include 36" pigtails for half of the cylinders. All pigtails include a check valve.
- \* CGA connections with integral check valves at each header station.
- \* Special header configurations available upon request. (U-shaped, L-shaped, etc.) (Dimensional sketch of installation required).
- \* Built for expansion by adding header extensions.

**Installation Information**

The HGM2 manifold shall be installed in accordance with guidelines stated by the NFPA, CGA, and all applicable local codes. The carbon dioxide and nitrous oxide manifolds should not be placed in a location where the temperature will exceed 120°F (49°C) or fall below 20°F (-7°C). The manifolds for all the other gases should not be placed in a location where the temperature will exceed 120°F (49°C) or fall below -20° F (-29°C). A manifold placed in an open location should be protected against weather conditions. During the winter, protect the manifold from ice and snow. In summer, shade the manifold and cylinders from continuous exposure to direct rays of the sun.



**WESTERN  
INNOVATOR**



Total Number of Cylinders	4	6	8	10	12	14	16	18	20
Standard (10" Centers) Overall Manifold Length	5'-11"	7'-7"	9'-3"	10'-11"	12'-7"	14'-4"	15'-11"	17'-7"	19'-3"
Staggered Design (5" Centers) Overall Manifold Length	5' - 1"	5'-11"	6'-9"	7'-7"	8'-5"	9'-4"	10'-1"	10'-11"	11'-9"
Vertical Crossover (10" Centers) Overall Manifold Length	4" - 3"	N/A	5'-11"	N/A	7'-7"	N/A	9'-3"	N/A	10'-11"

**HOW TO ORDER**

Example: HGM2-9-12S represents HGM2 with oxygen gas service, staggered bank of 6 cylinders per side which is wall mounted

CONTROL TYPE (W)	GAS SERVICE (X)		NUMBER OF CYLINDERS (Y)	HEADER CONFIGURATION (Z)
HGM2 (30 - 60 psig)	(2) Medical Air	CGA 346	Indicate the total number of cylinders required.	Blank - Standard 10" on center
HGM2HL (30 - 60 psig) (For CO <sub>2</sub> and N <sub>2</sub> O - includes 500 scfh heater)	(4) Carbon Dioxide	CGA 320		S - Staggered 5" on center
	(5) Helium	CGA 580		V - Vertical Crossover 10" on center
	(7) Nitrogen	CGA 580		
	(8) Nitrous Oxide	CGA 326		
HGM2HP (100 - 200 psig)	(9) Oxygen	CGA 540		

**Warranty**

All Western manifolds are warranted against defects in materials and workmanship for the period of two years from the date of shipment. For complete information on the warranty please see the back cover of the Installation and Operations manual.

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