



FHM2 Series Product Specification

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

SUBMITTAL DATA SHEET

Fully Automatic Changeover Medical Gas Manifold

The fully 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 fully 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 "in service", yellow "ready for use", and red "bank depleted" indicator lights, digital readouts for both cylinder pressure and line pressure, internal intermediate and 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 system will automatically reset itself in preparation for the next bank change.

The only manual activity required by the FHM2 Series manifold control is the changing of the depleted cylinders.

Supply banks consists of a header with 24" stainless steel flexible pigtailed with check valves, except oxygen which include rigid copper pigtailed 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 pigtailed into the header bars. The pigtailed 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.



Fully Automatic
Changeover Manifold

Features

- * 24" flexible stainless steel braided pigtailed, except oxygen which include rigid copper pigtailed. Vertical crossover and staggered configurations include 36" pigtailed for half of the cylinders. All pigtailed 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

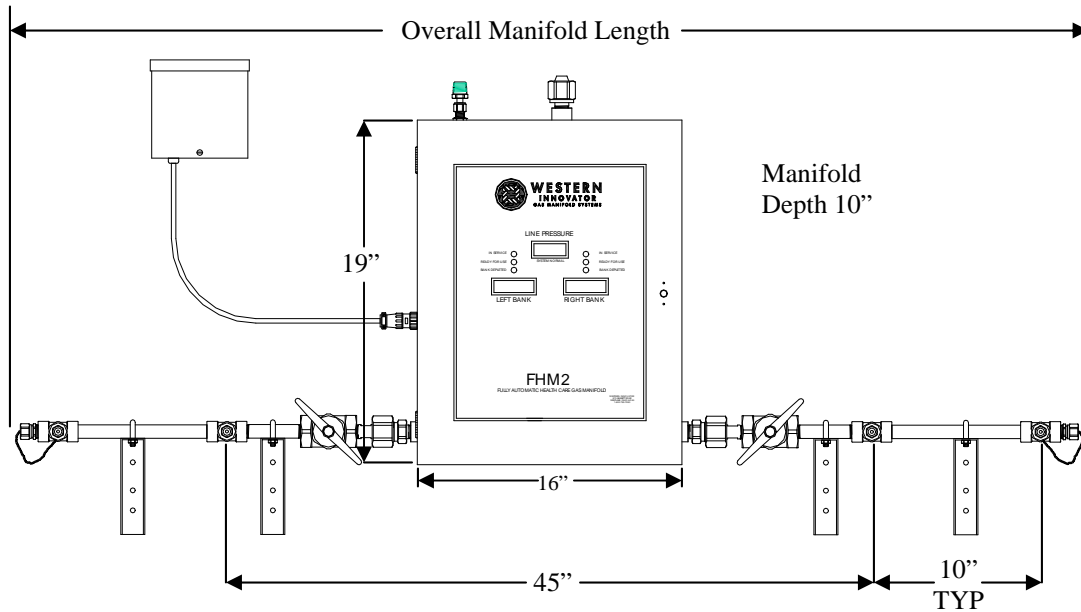
The FHM2 manifold shall be installed in accordance with guidelines stated by the NFPA, CGA, and all applicable local codes. The carbon dioxide and nitrous oxide manifolds should not be placed in a location where the temperature will exceed 120°F (49°C) or fall below 20°F (-7°C). The manifolds for all 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.



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**WESTERN
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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: FHM2-9-12S represents FHM2 with oxygen gas service, staggered bank of 6 cylinders per side which is wall mounted

CONTROL TYPE (W)	GAS SERVICE (X)		NUMBER OF CYL-INDERS (Y)	HEADER CONFIGURATION (Z)
FHM2 (30 - 70 psig)	(2) Medical Air	CGA 346	Indicate the total number of cylinders required.	Blank - Standard 10" on center
FHM2HL (30 - 70 psig) (For CO ₂ and N ₂ 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		
FHM2HP (100 - 190 psig)	(8) Nitrous Oxide	CGA 326		
	(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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