

Manifolds

HGM2 SERIES — AUTOMATIC MANIFOLD

Features

- NFPA 99-2002
- Permanently attached end connections on pigtails
- Copper pigtails for Oxygen service
- Internal dual-line regulator assembly
- 2 year limited warranty
- Automatic change-over system
- Mounting brackets for easy installations and assembly
- 3000 psig maximum inlet
- Manifold and relief valve outlets 1/2 NPT male
- Headers with master valve incorporate CGA check valve bushings at each inlet port
- Digital read-outs can be displayed in psig, KPa, and Bar
- 7 day lead time for standard product
- Max flow:

HGM2	1200 SCFH
HGM2HL	500 SCFH
HGM2HP	1200 SCFH

BENEFITS OF HGM2

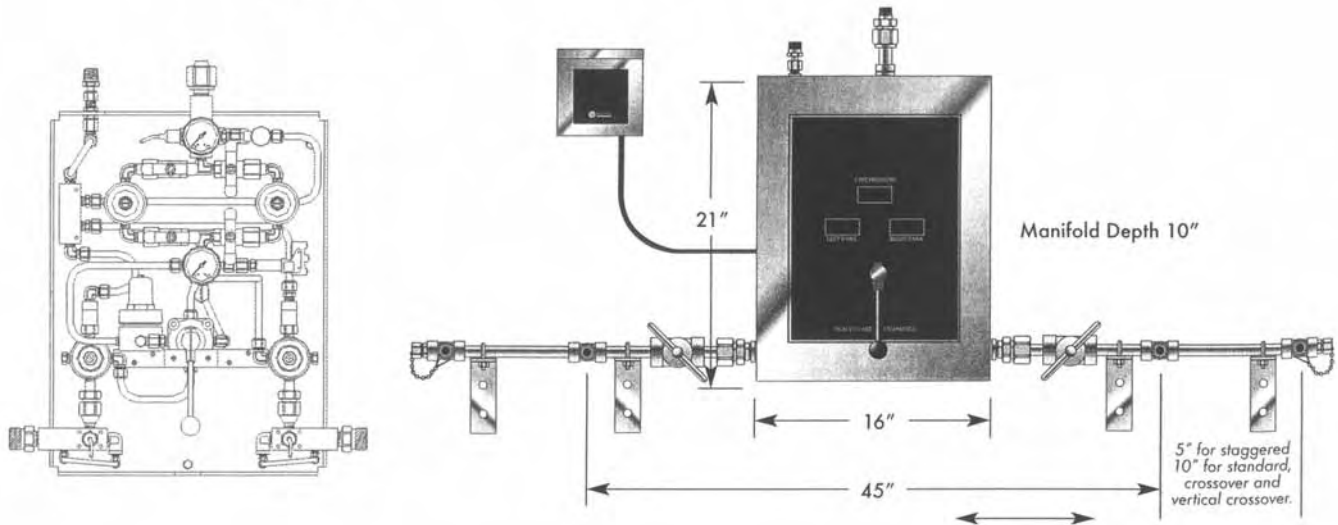
- Digital Display
- NFPA 99-2002 compliant
- Easy installation
- Trained service and technical representatives
- Available for most medical gases
- 2 year limited warranty

PRODUCT PERFORMANCE

- Enhanced display resolution
- Rapid power-up
- Improved calibration accuracy
- Greater performance and easier maintenance
- Additional upgrades provide overall value



Example: #34-HGM2 - 9 - 4 - Oxygen (9=CGA-540) Manifold for 4 Cylinders



Manifolds

FHM2 SERIES — FULLY AUTOMATIC MANIFOLD

Features

- NFPA 99-2002
- Permanently attached end connections on pigtails
- Copper pigtails for Oxygen service
- Internal dual-line regulator assembly
- 2 year limited warranty
- Fully automatic change-over system
- Mounting brackets for easy installations and assembly
- 3000 psig maximum inlet
- Manifold and relief valve outlets 1/2 NPT male
- Headers with master valve incorporate CGA check valve bushings at each inlet port
- Digital read-outs can be displayed in psig, KPa, and Bar
- 7 day lead time for standard product
- Max flow:

FHM2	2000 SCFH
FHM2HL	500 SCFH
FHM2HP	2500 SCFH

BENEFITS OF FHM2

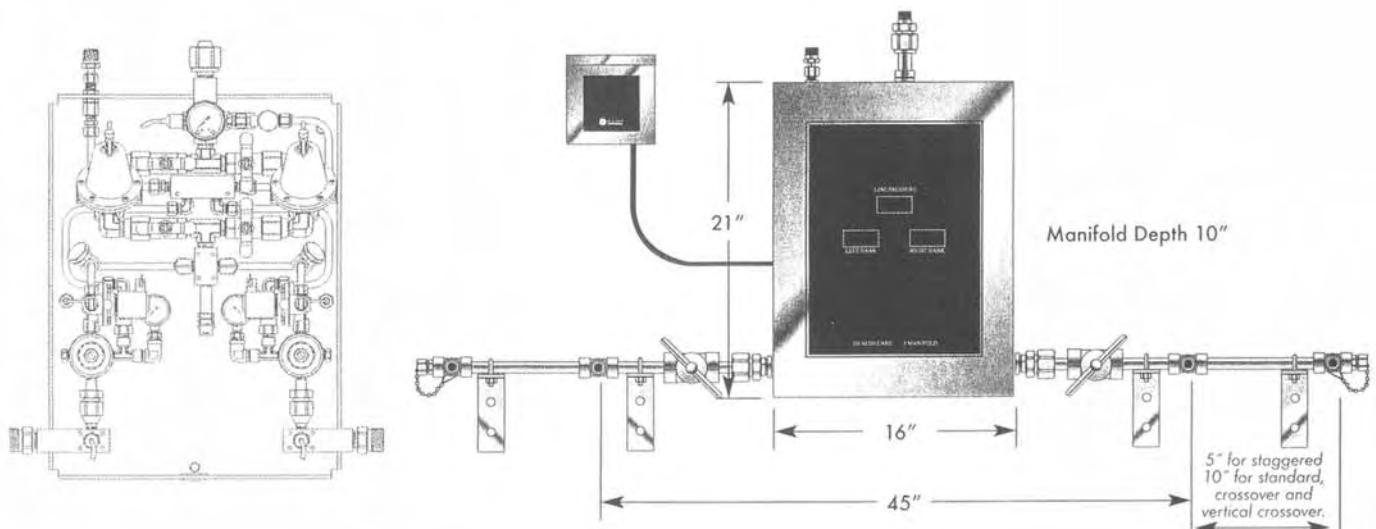
- Digital Display
- NFPA 99-2002 compliant
- Easy installation
- Trained service and technical representatives
- Available for most medical gases
- 2 year limited warranty

PRODUCT PERFORMANCE

- Enhanced display resolution
- Rapid power-up
- Improved calibration accuracy
- Greater performance and easier maintenance
- Additional upgrades provide overall value

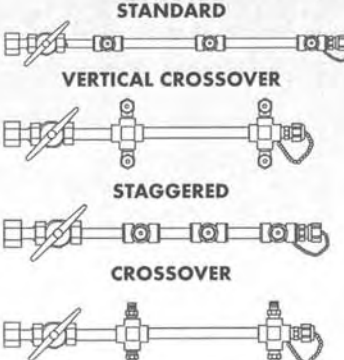


Example: #34-FHM2 - 9 - 4 - Oxygen (9=CGA-540) Manifold for 4 Cylinders



Manifolds

CREATING A PART NUMBER

CONTROL TYPE (V)	GAS SERVICE (W)	# OF CYL (X)
FHM2 (30 to 70 psig) HGM2 (30 to 55 psig) FHM2HL (30 to 70 psig) <i>(For CO₂ and N₂O includes 500 scfh heater)</i> HGM2HL (30 to 55 psig) <i>(For CO₂ and N₂O includes 500 scfh heater)</i> FHM2HP (100 to 190 psig) HGM2HP (50 to 200 psig)	(2) Breathing Air CGA-346 (4) Carbon Dioxide CGA-320 (7) Nitrogen CGA-580 (8) Nitrous Oxide CGA-326 (9) Oxygen CGA-540	INDICATE THE TOTAL NUMBER OF CYLINDERS FOR MANIFOLD SYSTEM ON ORDER
HEADER CONFIGURATION (Y)		MOUNTING (Z)
<p>STANDARD - Standard 10 inches on center</p> <p>V - Vertical crossover 10 inches on center</p> <p>S - Staggered 5 inches on center</p> <p>C - Crossover 10 inches on center</p> <p>U-Shaped* L-Shaped*</p> <p><small>* Available with drawing Special configurations not available on MLC manifold.</small></p>	 <p>The diagrams show four types of manifold headers: STANDARD (a straight line with four cylinders), VERTICAL CROSSOVER (a line with two cylinders, one above the other), STAGGERED (a line with four cylinders, alternating high and low), and CROSSOVER (a line with two cylinders, one above the other, with a crossover valve between them).</p>	<p>STANDARD - WALL MOUNT</p> <p>F - FLOOR STAND REQUIRED</p> <p>Note: Crossover requires a floor stand.</p>

HOW TO ORDER

CONTROL TYPE (V) - **GAS SERVICE (W)** - **# OF CYLINDERS (X)** **HEADER CONFIGURATION (Y)** **MOUNTING (Z)**

Example: #34-FHM2 - 9 -12 V F

Represents a fully automatic manifold for 12 oxygen cylinders with vertical crossover headers and floor stands.

Example: #34-HGM2HP - 7 - 6

Represents an automatic manifold for delivery between 50 and 200 psig for 6 nitrogen cylinders wall mounted.

EXAMPLE* OF COMPLETE NFPA99 - 2002 HEALTHCARE LIQUID SYSTEM

MLC - 9 - 4	Liquid manifold for 4 oxygen dewars with 235 psig relief valves that is wall mounted.
MCLA - 9 - 6	High pressure reserve manifold for 6 oxygen cylinders that is wall mounted.
DLA - 4	Represents a dual-line regulator assembly to provide uninterrupted delivery.
WME - 4 - 14	Reserve in use pressure switch.
WME - 4 - 15	High/Low pressure switch.
WME - 4 - 9	Reserve low pressure switch.
CVF - 8F	Check valves to prevent back flow. (Qty. 2 needed)

Relief Valves

Item Number	Description
#32-86-53-1001	Relief valve line in 200 PSIG H.P. nitrogen manifolds
#32-86-53-1002	Pipe away adapter for relief valve #32-86-53-1001/3
#32-86-53-1003	1/2 inch relief valve

1500 & 2500 Series Manifolds Accessories

Item Number	Description
#32-86-53-1011	Heated header bar kit N ₂ O 300 CFH
#32-86-53-1012	Heated header bar kit N ₂ O 600 CFH
#32-86-53-1013	Heated header bar kit N ₂ O 1000 CFH
#32-86-55-1011	Heated header bar kit CO ₂ 300 CFH
#32-86-55-1012	Heated header bar kit CO ₂ 600 CFH
#32-86-55-1013	Heated header bar kit CO ₂ 1000 CFH
#32-86-58-0031*	Manifold bypass valve oxygen
#32-86-58-0033*	Manifold bypass valve nitrous oxide
#32-86-58-0034*	Manifold bypass valve medical air
#32-86-58-0035*	Manifold bypass valve carbon dioxide
#32-86-58-0036*	Manifold bypass valve nitrous oxide
#32-86-58-0037*	Manifold bypass valve O ₂ /CO ₂ less than 7%
#32-86-58-0038	Floor mount control unit stand
#32-86-58-0039	Floor mount header support (Qty, 2)
#32-86-58-0041	Bypass kit regulator, O ₂ for use with #32-86-58-0031
#32-86-58-0043	Bypass kit regulator, N ₂ O for use with #32-86-58-0033
#32-86-58-0044	Bypass kit regulator, medical air for use with #32-86-58-0034
#32-86-58-0045	Bypass kit regulator, CO ₂ for use with #32-86-58-0035
#32-86-58-0046	Bypass kit regulator, N ₂ for use with #32-86-58-0036
#32-86-58-0047	Bypass kit regulator, O ₂ /CO ₂ less than 7% for use with #32-86-58-0037

***Must be used with corresponding bypass regulator.**

Manifolds/Gas

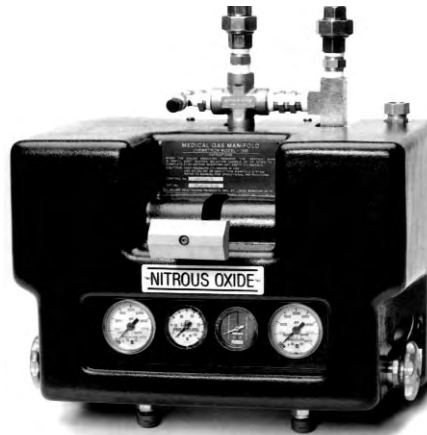
MANIFOLDS, 1500 SERIES

1500 Series Manifolds include check valves, regulators, gas specific cooper pigtails and header bars, gauges and pressure switch for remote alarm per NFPA 99C requirements. Automatic switch to reserve function and control unit status, indicator are standard.

- #32-86-□-XXXX
- 41 - Oxygen
- 43 - Nitrous Oxide
- 44 - Medical air
- 46 - Nitrogen

Ordering Information

- #32-86-□-2101 1500 Series Control unit only
- #32-86-□-2102 1 x 1 cylinder connection
- #32-86-□-2104 2 x 2 cylinder connection
- #32-86-□-2106 3 x 3 cylinder connection
- #32-86-□-2108 4 x 4 cylinder connection
- #32-86-□-2110 5 x 5 cylinder connection
- #32-86-□-2112 6 x 6 cylinder connection
- #32-86-□-2114 7 x 7 cylinder connection
- #32-86-□-2116 8 x 8 cylinder connection
- #32-86-□-2118 9 x 9 cylinder connection
- #32-86-□-2120 10 x 10 cylinder connection

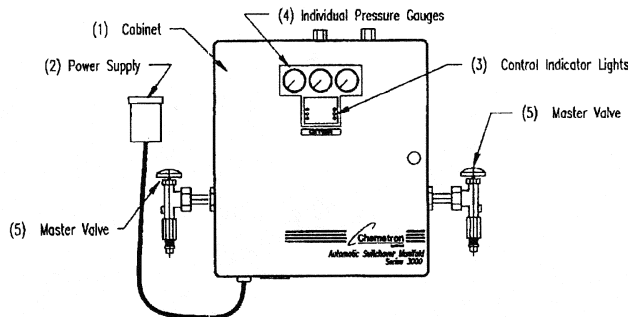


Ordering Information

- #32-86-□-XXXX
- 45 - Carbon Dioxide (CO₂)
- 47 - O₂/CO₂ with CO₂ less than 7%
- #32-86-□-2102 1 x 1 cylinder connection
- #32-86-□-2104 2 x 2 cylinder connection
- #32-86-□-2106 3 x 3 cylinder connection

MANIFOLDS, 3000 SERIES

- Fully automatic shifting to reserve bank without fluctuating line pressure to the system.
- High flow capacity for hospital or any medical gas installation.
- Weather resistant case protects the internal components.
- Easy-to-read LED lights to indicate the status of the manifold.
- Audible alarm to indicate when the manifold shifts to the reserve bank of cylinders.
- Gas continues to flow if primary power is interrupted; manifold returns to its previous stage when power is restored.
- Primary power design accepts 115 or 220 AC volt.
- Complies with NFPA 99 requirements.



Number of Cylinders	Oxygen	Nitrous Oxide	Medical Air	Carbon Dioxide	Nitrogen	O ₂ /CO ₂ <7%
Control Unit	#32-86-61-2100	#32-86-63-2100	#32-86-64-2100	#32-86-65-2100	#32-86-66-2100	#32-86-67-2100
2 X 2	#32-86-61-2104	#32-86-63-2104	#32-86-64-2104	#32-86-65-2104	#32-86-66-2104	#32-86-67-2104
3 X 3	#32-86-61-2106	#32-86-63-2106	#32-86-64-2106	#32-86-65-2106	#32-86-66-2106	#32-86-67-2106
4 X 4	#32-86-61-2108	#32-86-63-2108	#32-86-64-2108	#32-86-65-2108	#32-86-66-2108	#32-86-67-2108
5 X 5	#32-86-61-2110	#32-86-63-2110	#32-86-64-2110	#32-86-65-2110	#32-86-66-2110	#32-86-67-2110
6 X 6	#32-86-61-2112	#32-86-63-2112	#32-86-64-2112	#32-86-65-2112	#32-86-66-2112	#32-86-67-2112
7 X 7	#32-86-61-2114	#32-86-63-2114	#32-86-64-2114	#32-86-65-2114	#32-86-66-2114	#32-86-67-2114
8 X 8	#32-86-61-2116	#32-86-63-2116	#32-86-64-2116	#32-86-65-2116	#32-86-66-2116	#32-86-67-2116
9 X 9	#32-86-61-2118	#32-86-63-2118	#32-86-64-2118	#32-86-65-2118	#32-86-66-2118	#32-86-67-2118
10 X 10	#32-86-61-2120	#32-86-63-2120	#32-86-64-2120	#32-86-65-2120	#32-86-66-2120	#32-86-67-2120