

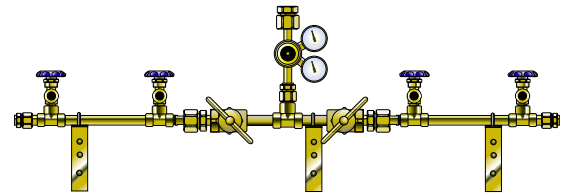
MD, MS Manual Manifold Systems

Manual manifolds are designed to regulate compressed gases in high pressure cylinders (up to 3,000 psig) and are ideal for manifold applications not requiring automatic changeover from the service to the secondary bank. The MD Series duplex manifold is designed for manual

changeover of 2 banks of cylinders. The MS series simplex manifold system allows manifolding of an unlimited number of cylinders in a single bank. This system is often used as a high pressure reserve for bulk, portable bulk and gas generator systems.

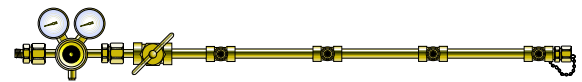
specifications

- Manual Systems
- Maximum working pressure: 3000 psig
- Manifold Outlet: 1/2" NPT male
- 24" flexible stainless steel braided pigtails with check valves. Check valve is at header end of pigtail for all gases except Oxygen. Note: Helium and Hydrogen manifolds shipped with synthetic fiber braided pigtails
- Individual header valves at each cylinder location (units with 4 cylinders or larger—all gases except Oxygen)
- Headers constructed of 1/2" brass pipe and tees
- Acetylene manifolds shipped complete with dry flashback arrestor, relief valve and connecting piping. Hydraulic Flashback arrestors are available as an option for an additional charge
- Optional safety kits, flash arrestor and relief valve available for Liquefied Fuel gases
- Heater Kits available for Carbon Dioxide and Nitrous Oxide gases
- Model RM regulator included for most gas services. Note: RDM Series used for Oxygen
- An alarm can be added to non fuel gas MD systems to signal changeover from service to reserve banks by adding items WME-4-9 pressure switch, WMS-1-97 adaptor, WMS-9-25C power source and BIA-3 remote A/V alarm.



MD-4-4

Example: MD-4-4 = CO₂ (4=CGA-320)
Manifold for 4 Cylinders



MS-9-4

Example: MS-9-4 = Oxygen (9=CGA-540)
Manifold for 4 cylinders

HOW TO ORDER

Specify: Control Type (V)–Service (W)–Number of Cylinders (X)		
Example 1: MD-9-12V represents MD with oxygen gas service and a vent Example 2: MSHP-7-6 represents MSHP with nitrogen gas service with a safety		
CONTROL TYPE (V)	GAS SERVICE (W)	# OF CYL'S (X)
MD / MS Most gases: 20–160 psig Acetylene: (0–15 psig) LPG: (0–45 psig) MDHP / MSHP (only available for non-fuel gas services) Most gases: 140–300 psig Oxygen: 140–450 psig	(1) Acetylene (POL)	CGA-510
	(1A) Acetylene (Commercial)	CGA-300
	(2) Compressed Air	CGA-346
	(3) Argon	CGA-580
	(4) Carbon Dioxide	CGA-320
	(5) Helium	CGA-580
	(6) Hydrogen	CGA-350
	(6A) Argon/Methane Mixtures	CGA-350
	(7) Nitrogen	CGA-580
	(7A) Industrial Air/Nitrogen OP	CGA-590
(8) Nitrous Oxide	CGA-326	
(9) Oxygen	CGA-540	
(10) Liquefied Fuel Gases (LPG)	CGA-510	

Note: Different regulators may be substituted to achieve higher delivery pressures on all control types.

MD, MS series

Design Lengths

TOTAL NO. OF CYLINDERS	2	3	4	5	6	7	8
MS- Standard (10" Centers) Overall Manifold Length	2'-9" (.84m)	3'-7" (1.09m)	4'-5" (1.35m)	5'-3" (1.60m)	6'-1" (1.85m)	7'-0" (2.13m)	7'-10" (2.39m)
MS- Staggered Design (5" Centers) Overall Manifold Length	2'-4" (.74m)	2'-9" (.84m)	3'-2" (.97m)	3'-7" (1.09m)	4'-0" (1.22m)	4'-5" (1.35m)	4'-10" (1.47m)
MS- Vertical Crossover and Crossover (10" Centers) Overall Manifold Length	1'-11" (.58m)	N/A	2'-9" (.84m)	N/A	3'-7" (1.09m)	N/A	4'-5" (1.35m)
MS- Standard (13" Centers) Overall Manifold Length	3'-0" (.91m)	4'-1" (1.22m)	5'-2" (1.57m)	6'-3" (1.91m)	7'-4" (2.24m)	8'-5" (2.57m)	9'-6" (2.90m)
MS- Staggered Design (6.5" Centers) Overall Manifold Length	2'-5.5" (.75m)	3'-0" (.91m)	3'-6.5" (1.08m)	4'-1" (1.25m)	4'-7.5" (1.41m)	5'-2" (1.57m)	5'-8.5" (1.74m)
MS- Vertical Crossover and Crossover (13" Centers) Overall Manifold Length	1'-11" (.58m)	N/A	3'-0" (.91m)	N/A	4'-1" (1.25m)	N/A	5'-2" (1.57m)
TOTAL NO. OF CYLINDER	2	4	6	8	10	12	14
MD- Standard (10" Centers) Overall Manifold Length	2'-4" (.71m)	4'-4" (1.32m)	6'-0" (1.83m)	7'-8" (2.34m)	9'-4" (2.85m)	11'-0" (3.35m)	12'-8" (3.86m)
MD- Staggered Design (5" Centers) Overall Manifold Length	2'-4" (.71m)	3'-6" (1.07m)	4'-4" (1.32m)	5'-2" (1.57m)	6'-0" (1.83m)	6'-10" (2.08m)	7'-8" (2.34m)
MD- Vertical Crossover and Crossover (10" Centers) Overall Manifold Length	N/A	2'-8" (.81m)	N/A	4'-4" (1.32m)	N/A	6'-0" (1.83m)	N/A
MD- Standard (13" Centers) Overall Manifold Length	2'-4" (.71m)	4'-9" (1.471m)	7'-0" (2.13m)	9'-2" (2.79m)	11'-4" (3.45m)	13'-6" (4.11m)	15'-8" (4.77m)
MD- Staggered Design (6.5" Centers) Overall Manifold Length	2'-4" (.71m)	3'-9" (1.14m)	4'-10" (1.47m)	5'-11" (1.80m)	7'-0" (2.13m)	8'-1" (2.46m)	9'-2" (2.79m)
MD- Vertical Crossover and Crossover (13" Centers) Overall Manifold Length	N/A	2'-8" (.81m)	N/A	4'-10" (1.47m)	N/A	7'-0" (2.13m)	N/A



Cylinders (X)-Header Configuration (Y)-Mounting (Z)

*Vertical crossover bank of 6 cylinders per side which is mounted on the wall.
Standard header configuration of 6 cylinders which is mounted on the wall.*

	HEADER CONFIGURATION (Y)	MOUNTING (Z)
	BLANK -Standard 10" on Center 13" on Center for Acetylene & LPG S -Staggered 5" on Center 6.5" on Center for Acetylene & LPG V -Vertical Crossover 10" on Center or 13" on Center for Acetylene & LPG C -Crossover (Floor Mount Only) 10" on Center or 13" on Center for Acetylene & LPG	BLANK = Wall mount F = Floor mounted