

# FHM2-9X Manifold

# 50 PSIG Fully Automatic Changeover O2 Manifold



**WESTERN**  
a Scott Fetzer company

G A S C O N T R O L T E C H N O L O G Y

## Primary Internal Wetted Components

### Primary Regulators

Part Number: WMS-14-8(9)

Description	Material
Body/Valve/Nozzle	UNS C36000 Brass
Valve Seat	Kel-F
Valve Pin	302 SST
Filter	20-30 Micron Sintered Bronze
Valve Spring	Zinc Plated Music Wire
Seals	EPDM, Teflon
Diaphragm	Neoprene
External Fittings	UNS C37700, C36000 Brass
Regulator Body	UNS C36000 Brass

### Line Regulators

Part Numbers: 8431

Description	Material
Body/Valve/Nozzle	Aluminum ASTMB247, B211
Valve Seat	1453 Neoprene
Valve Pin	303 SST
Guide Bushing	Delrin 1505A
Valve Spring	302 SST
Seals	B702 Neoprene, 2100 Buna-N
Diaphragm	EM-6001 Neoprene

### Regulator and Manifold Relief Valves

Part Numbers: WMV-4C-75(300)

Seat	EPDM
Spring	17-7 Ph SST
Body, Poppet	UNS C36000 Brass
Washers	302 or 304 SST

### Miscellaneous Lubricants & Sealants:

Krytox 143 AC, RPI PF-5060, Fluorlube S30

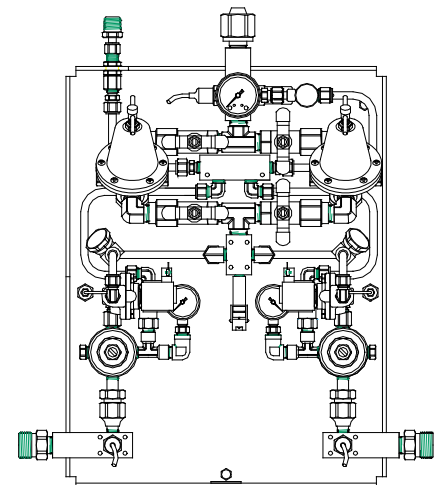
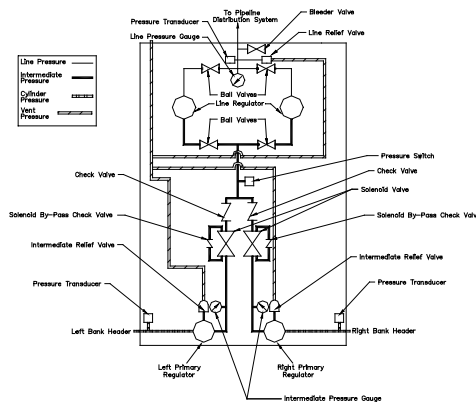
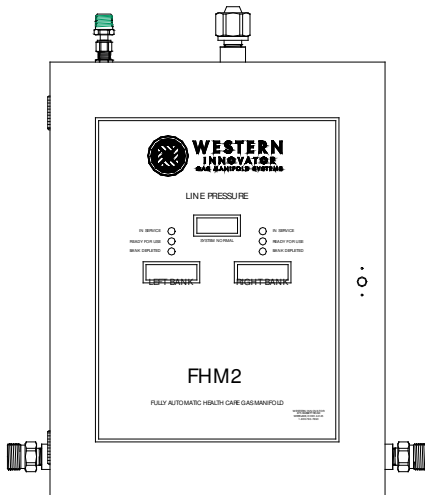
### Solenoid Valve Assembly

Part Numbers: WMS-14-6(7)

Description	Material
Fittings	UNS C37700, C36000 Brass
Tubing	UNS C12200 Copper
Check Valve Body	UNS C36000 Brass
Check Valve Poppet	UNS C48500 Brass
Check Valve Seals	Buna-N
Check Valve Spring	302 SST
Check Valve Screw	316 SST
Solenoid Body	Brass
Solenoid Seals	Viton
Solenoid Plunger	430 FR SST
Solenoid Plunger Tube	305 SST
Disc Holder	Ryton

### Miscellaneous Components

Inlet Filter	65-100 Micron Zinc Plated Bronze
Inlet Retaining Ring	302, 304 or 316 SST
Manifold Tubing	C12200 Copper
Transducers	17-4 Ph SST
Pressure Switch	Phosphor Bronze
Gauges	Copper Alloy
Ball Valve Body	Forged Bronze
Ball Valve Seals	Viton and Teflon
Bleeder Valve Seat	303 SST
Bleeder Valve Packing	UNS C26000 Brass and Teflon
Bleeder Valve Body	UNS 37700 Brass
Bleeder Lubricant/Sealant	Dow 321 (Molykote), Loctite 680
Inlet Switch Sensor	Phosphor Bronze Bellows



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Manifold**

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Manifold Type: Fully Automatic

Maximum Manifold Flow Coefficient (C<sub>v</sub>): 0.13

Rated Delivery Pressure: 50 psig  
Adjustable Delivery Pressure Range: 30 – 70 psig

Transducer \ Display Settings:  
Bank Full: 504 PSIG  
Bank Depleted: 204 PSIG  
Pressure Switch Setting: 135 – 140 PSIG  
Relief Valve Settings (Cracking Pressures):  
Line Regulator: 70 – 80 psig  
Primary Regulator: 275 - 300 psig

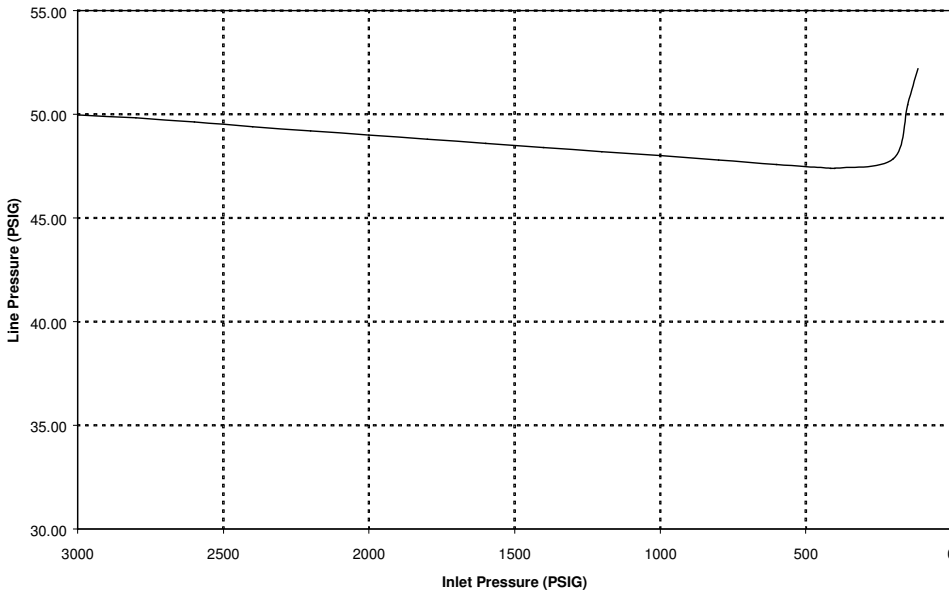
Filtration: Manifold Inlet: 65 - 100 micron  
Primary Regulator: 20 - 30 micron

Maximum inlet pressure: 3000 psig  
Operating temperature range:  
-20° F - 120°F

Relief Valve Flow Coefficient (C<sub>v</sub>):  
Line regulator: 0.9  
Primary regulator: 0.9

Shipping Weight: 65 lbs

**Pressure Regulation**



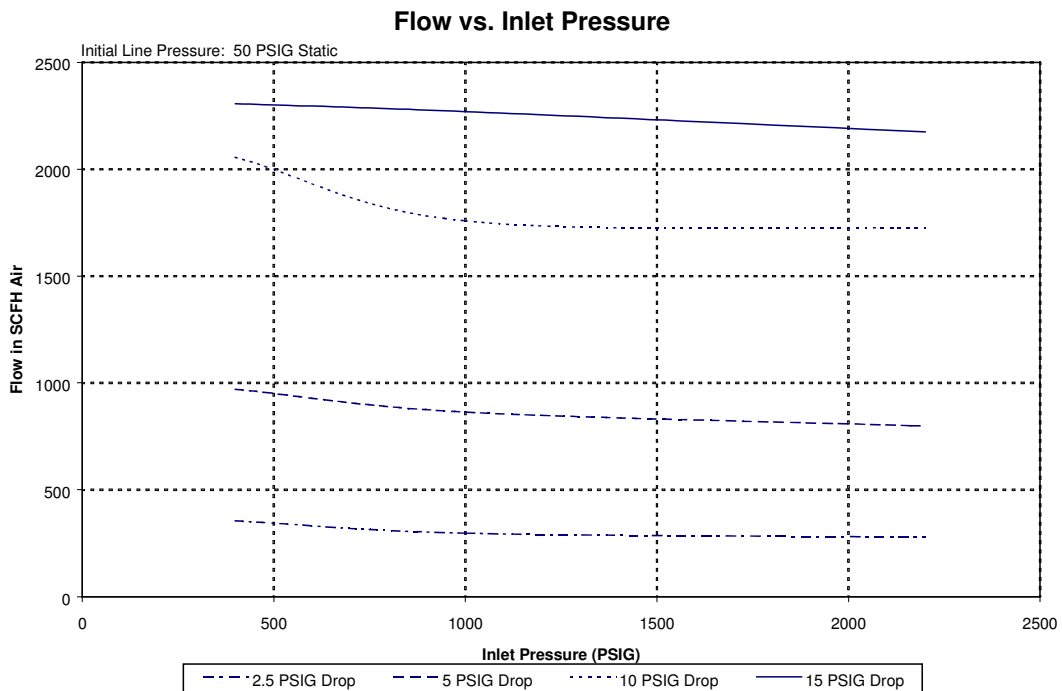
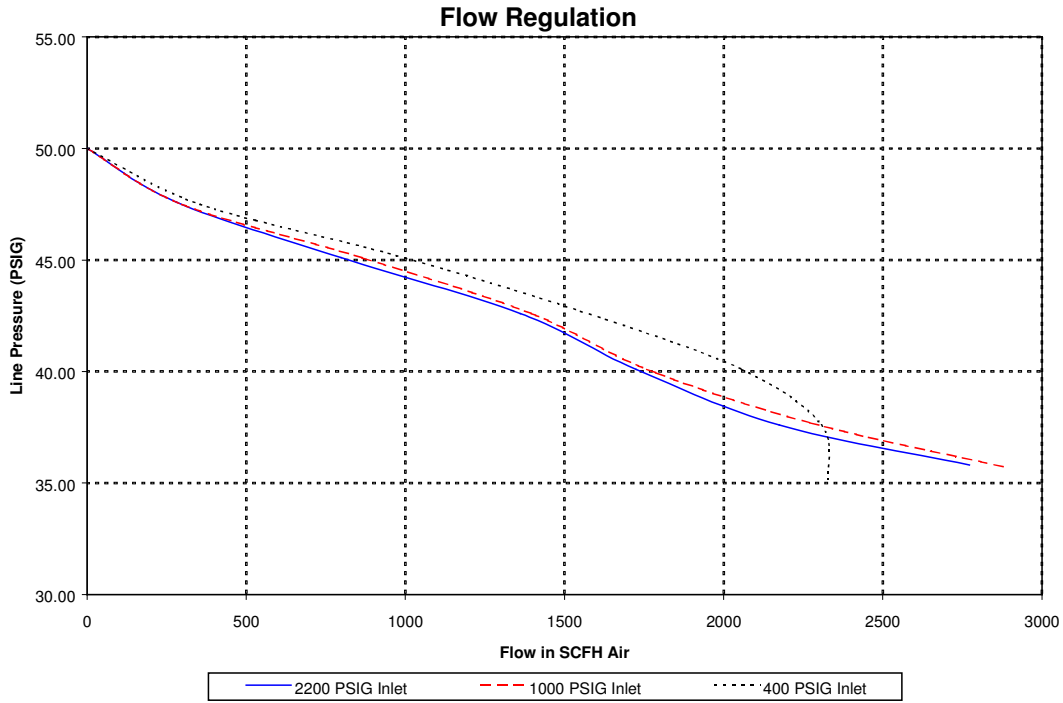
Regulator Characteristics:  
Pressure regulation coefficient (i):  
Service: 0.1

Pressure change thru changeover:  
Line Regulator:  
Service: 3.0 psig  
Primary Regulator:  
Service: 60 psig

Static Increment:  
Line Regulator: 1.5 psig  
Primary Regulator: 10.0 psig

Flow Coefficient (C<sub>v</sub>):  
Primary regulator: 0.15  
Line regulator: 0.5

Inlet Pressure (PSIG)	Service Side		Reserve Side	
	Line Pressure Drop (PSIG)	Flow in SCFH Air	Line Pressure Drop (PSIG)	Flow in SCFH Air
415	5	970	5	970
	10	2060	10	2060
	15	2310	15	2310
1000	5	860	5	860
	10	1760	10	1760
	15	2270	15	2270
2200	5	800	5	800
	10	1720	10	1720
	15	2170	15	2170



**Western reserves the right to make design changes without prior notice.**

For more technical information or assistance in ordering, please contact Western Customer Service at 1.800.783.7890 or 1.440.871.2160