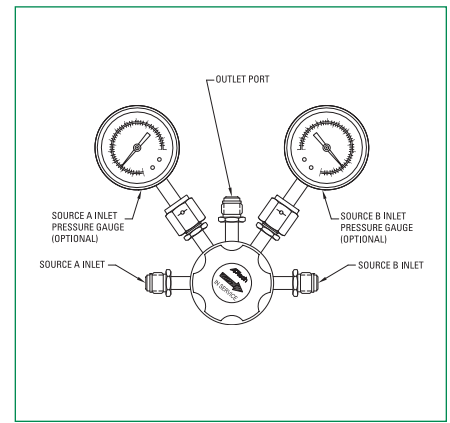


# SERIES AP M60 & M66

## CROSSOVER MANIFOLDS

Assures continuous gas supply



- Automatically switches from one cylinder to another when the primary cylinder empties
- Allows changing of cylinder during operation
- Simple, worry free, pressure based system
- Vacuum to 3,500 psig (241 bar) inlet,
- Nominal outlet  
100 psig (7 bar)  
150 psig (10 bar)  
250 psig (17 bar)
- M60 – free poppet  
M66 – tied diaphragm
- Flow capacity\* to 50 slpm (1.8 scfm)
- SS 316L VAR construction
- Installation and operating instructions available at [www.aptech-online.com](http://www.aptech-online.com)

\*Flow rate based upon N<sub>2</sub> with inlet pressure at nominal delivery pressure; varying gas type and or inlet/outlet pressures may effect rating.

### Operating Parameters

Source pressure	vacuum to 3,500 psig (241 bar)
Delivery pressure	M60 & M66 10 85 to 115 psig (5.8 to 7.9 bar)
	M60 & M66 15 135 to 165 psig (9.3 to 11.4 bar)
	M60 25 225 to 275 psig (15.5 to 19.0 bar)
Proof pressure	150% of operating pressures
Burst pressure	300% of operating pressures

### Other Parameters

Inlet/outlet connectors	1/4 inch face seal or tube weld**
Flow coefficient (Cv)**	0.09
Operating temperature	-40° to +160°F (-40° to +71°C)***
Surface finish	15 µin Ra max / 10 µin. Ra avg. (0.4/0.25 µm) standard; 10 µin (0.25 µm); 7 µin (0.18 µm); and 5 µin (0.13 µm) Ra max optional Optional surface finishes meet or exceed 5 µin Ra average
Supply pressure effect	0.25 psig per 100 psig source pressure change

\*\*Tube weld not available with M60 25.

\*\*\*VS option 14° to 194°F (-10° to + 90°C).

‡A pressure regulator Cv is a nominal value which indicates the point of choked flow. Please refer to a flow curve or a recommendation guide for usable flow range.

### Operations Overview

The M60 and M66 crossover manifold systems are comprised of two separate regulators housed in a common body. The two regulators are each attached to separate source cylinders. One of the regulators has an adjustment knob that rotates 270 degrees to enable source side selection. The other is preset to an appropriate setting for the system outlet range. The source selection knob adjusts the outlet pressure to be either above or below the preset side. An arrow on the selection knob points to the cylinder side delivering gas and away from the standby cylinder. The outlet pressure of the delivery side is approximately 15-30 psig (1-2 bar) higher than the standby side. Rotating the knob to point to the standby side, changes the pressure differential such that the standby side now becomes the delivery side.

As the delivery side cylinder becomes empty and the pressure drops below the pressure of the standby side, gas begins to flow from the standby side. The source selection knob is then turned to what was the standby side and the empty cylinder may now be replaced without interrupting process flow.

### Materials

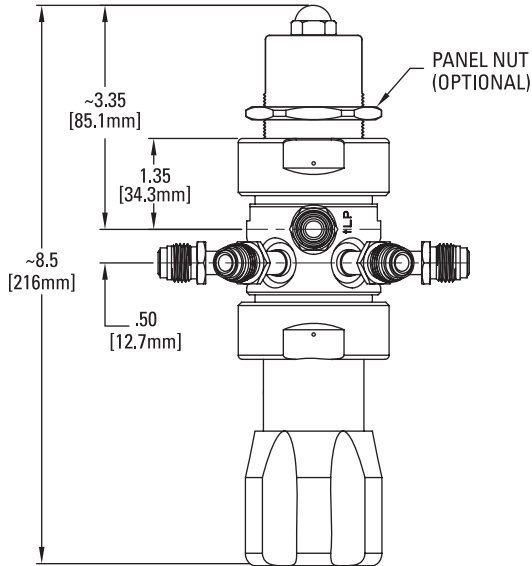
	Series AP M60 & M66 S Noncorrosive	Series AP M60 & M66 SH Corrosive (SHP option)†
Type of Service		
Wetted Parts		
Body	SS 316L secondary remelt	SS 316 secondary remelt
Poppet and diaphragm	SS 316	Ni-Cr-Mo alloy / UNS N06022
Finish	electropolished and passivated	electropolished and passivated
Seat	PCTFE (Polyimide optional)	PCTFE

†SHP option Ni-Cr-Mo alloy poppet and diaphragm only.

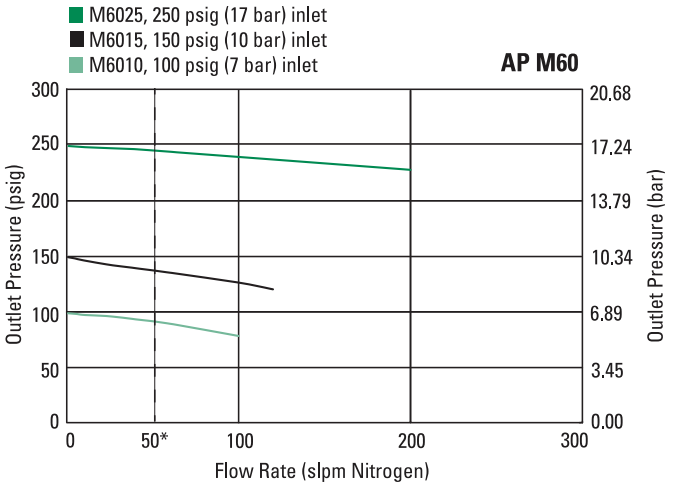
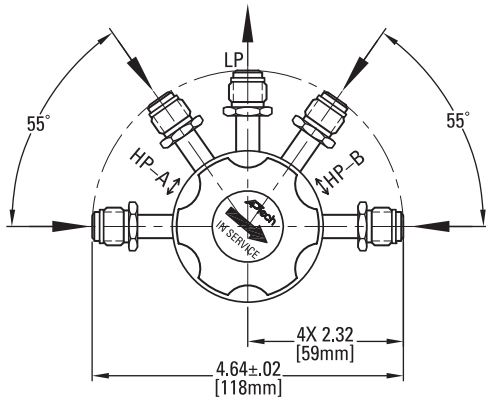
All specifications subject to change without notice.

# M60 ASSURES PEACE OF MIND THROUGH CONSTANT GAS DELIVERY

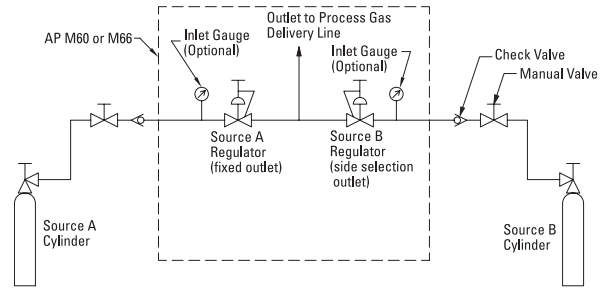
## DIMENSIONAL INFORMATION



## PORTING CONFIGURATIONS



**\*CAUTION: Exceeding 50 slpm N2 may cause gas to be drawn from both A & B sides at the same time.**



**CAUTION: Product selection is the sole responsibility of the user, regardless of any recommendations or suggestions made by the factory. The user shall make selections based upon their own analysis and testing with regard to function, material compatibility and product ratings. Proper installation, operation and maintenance are also required to assure safe, trouble free performance.**

## ORDERING INFORMATION

Sample Order Number **AP M60 10SM MV4 MV4 40**

### AP M60 10 | Series

Free Poppet  
 AP M60 10 = 85-115 psig (5.8 to 7.9 bar)  
 AP M60 15 = 135-165 psig (9.3 to 11.4 bar)  
 AP M60 25 = 225-275 psig (15.5 to 19.0 bar)

Tied Diaphragm  
 AP M66 10 = 85-115 psig (5.8 to 7.9 bar)  
 AP M66 15 = 135-165 psig (9.3 to 11.4 bar)

### s | Material

S = Stainless steel (SS)  
 SH = SS/Ni-Cr-Mo alloy internals  
 SHP = SS/Ni-Cr-Mo alloy poppet and diaphragm

### M | Surface Finish Options

M = 10 μin. Ra max  
 V = 7 μin. Ra max  
 X = 5 μin. Ra max

### MV4 MV4 | Connections Inlet / Outlet

FV4 = 1/4 inch face seal female  
 MV4 = 1/4 inch face seal male

### 40 | Inlet Gauges

0 = No gauge  
 4 = 0-400 psig  
 6 = 0-600 psig  
 10 = 0-1,000 psig  
 20 = 0-2,000 psig  
 30 = 0-3,000 psig  
 40 = 0-4,000 psig

There is no outlet gauge port.

### | Options

P = Panel installation\*  
 VS = Polyimide seat

\* Panel hole 1.43" diameter.

**AP Tech has product options and variations which are not documented in data sheets. If you have a model number that is not defined by the ordering information, please consult the factory or your local representative.**