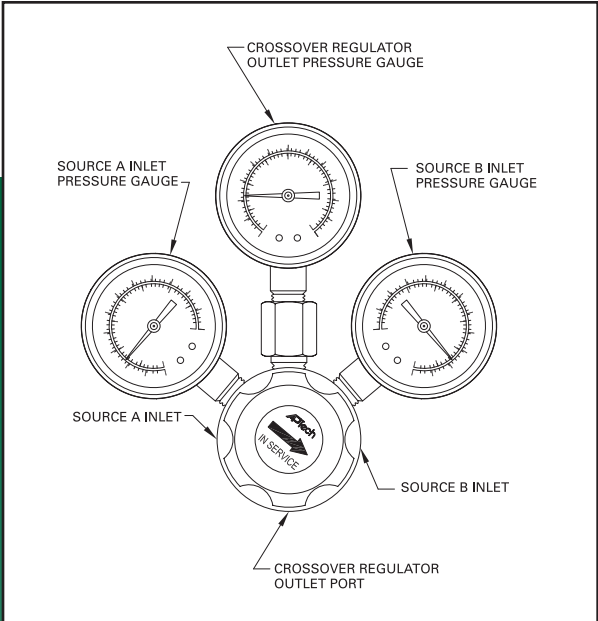


# SERIES AK M60 CROSSOVER MANIFOLD ASSURES CONTINUOUS GAS SUPPLY

- ◆ Automatically switches from one cylinder to another when the primary cylinder empties
- ◆ Allows changing of cylinders during operation
- ◆ Simple, worry free, pressure based system
- ◆ Vacuum to 3,500 psig (241 bar) inlet, 250 psig (17 bar) outlet
- ◆ Flow capacity\* to 50 slpm (1.8 scfm)
- ◆ Stainless Steel or Brass construction
- ◆ Diffusion resistant 316 SS diaphragm
- ◆ Hastelloy® C-22 Internals option, 'SH' for added corrosion resistance
- ◆ Designed for ease of operation
- ◆ Cleaned for O2 service
- ◆ Installation and operating instructions available at [www.aptech-online.com](http://www.aptech-online.com) in the Tech Briefs section



### ENGINEERING DATA

#### Operating Parameters

Source pressure	Vacuum to 3,500 psig (241 bar)
Delivery pressure (approximate)	M60 10 – 85 to 115 psig (5.8 to 7.9 bar) M60 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	4,500 psig (310 bar)
Burst pressure	10,000 psig (690 bar)

#### Other Parameters

Inlet /outlet ports	1/4" NPT
Flow coefficient, Cv	0.09
Operating temperature	-40 to +160F (-40 to +71C)
Leak rate	1 x 10 <sup>-9</sup> sccs
Delivery pressure rise	0.25 psig per 100 psig source pressure drop

### MATERIALS OF CONSTRUCTION

	<b>AK M60 B</b>	<b>AK M60 S</b>	<b>AK M60 SH</b>
Body	brass	SS 316	SS 316
Poppet and diaphragm	SS 316	SS 316	Hastelloy C-22
Seat	PCTFE**	PCTFE**	PCTFE**
Bonnet	SS 303	SS 303	SS 303

\* Flow rate based upon N2 with inlet pressure at nominal delivery pressure; varying gas type and or inlet/outlet pressures may effect rating.  
\*\* Optional seat materials available, Vespel® and PEEK.

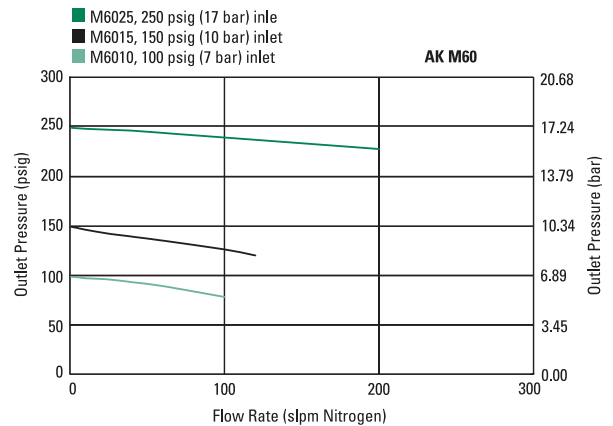
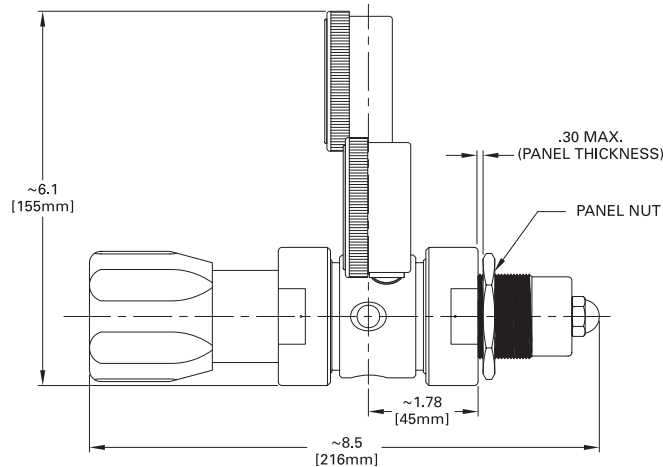
All specifications subject to change without notice.  
Hastelloy C-22® Haynes  
Vespel® DuPont

# M60 ASSURES PEACE OF MIND THROUGH CONSTANT GAS DELIVERY

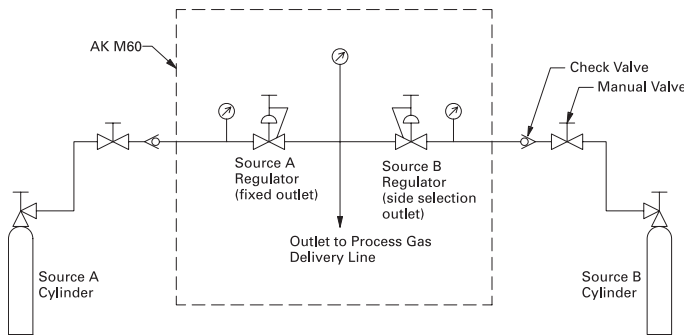
## Operations Overview

The M60 crossover manifold system is 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.



All dimensions in inches (mm). Metric dimensions are for reference only.



**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

Series AK M60 10	S Material	40 Inlet Gauges	VS Options
AK M60 10 = 85 - 115 psig (5.8 to 7.9 bar) AK M60 15 = 135 - 165 psig (9.3 to 11.4 bar) AK M60 25 = 225 - 275 psig (15.5 to 19.0 bar)	S = Stainless steel 316 (SS) SH = SS with Hastelloy internals B = Brass	0 = No gauges 4 = 0-400 psig K = 0-600 psig 10 = 0-1,000 psig 20 = 0-2,000 psig 30 = 0-3,000 psig 40 = 0-4,000 psig	PK = PEEK seat VS = Vespel seat P = Panel installation*
		Outlet Gauge, will be supplied to match outlet range, do not specify in part number	*Panel hole 1.42 inch diameter.