



KEPNER PRODUCTS COMPANY

ESTABLISHED IN 1948

TIPS #2

Kep-O-seal® Inline Check Valves - Gas Flow

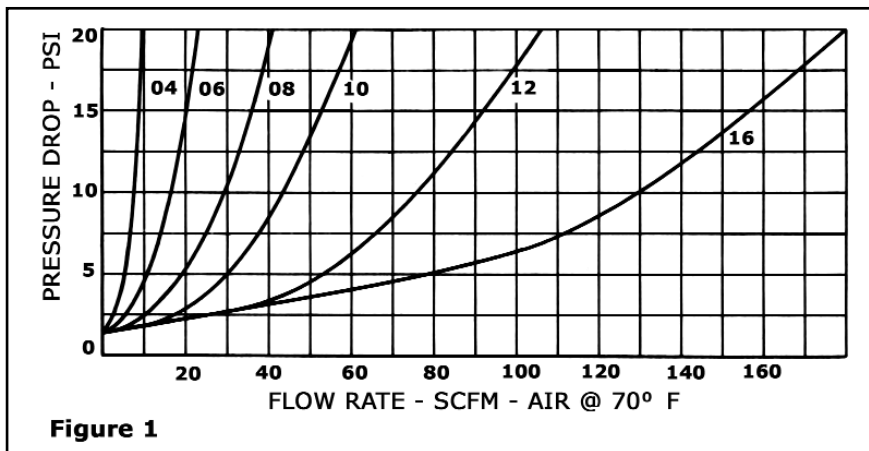


Figure 1 shows approximate airflow data for the Kep-O-seal® check valves. Airflow is plotted as standard cubic feet per minute, (SCFM), against pressure drop across the valve. This data is for low pressure conditions with the valve or flowmeter vented to atmosphere.

When dealing with a closed air system, (not vented to atmosphere), as is most often the case, the system pressure or upstream pressure is higher than atmospheric pressure thus increasing air density. In this case, the free air flow will be greater (for the same pressure drop across the valve).

Figure 2 is a correction factor curve plotted against system pressure to correct the data of Figure 1 for higher pressures. For example, with an upstream pressure of 100 psi the factor is approximately 2, which means the airflow in SCFM will be 2 times the low pressure curve data.

Figure 3: For gases other than air, the flow in SCFM will vary inversely as the ratio of gas density to air density and the flow may be approximated from the airflow rate.

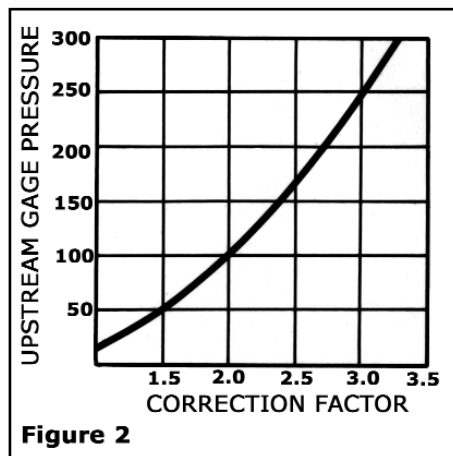


Figure 2

GAS (at standard conditions)	MULTIPLY AIRFLOW BY
Hydrogen	14
Helium	7.1
Ammonia	1.7
Nitrogen	1.04
Oxygen	.91
Propane	.64

Figure 3

This data has been presented to provide reasonable estimates of the gas flow characteristics of Kep-O-seal valves. The results will not be exact and should not be used in lieu of actual tests where exact data is required. The results will, however, be entirely adequate for valve sizing in a system.

Valve performance is dependent on proper selection, application, installation and maintenance. Consult Factory.