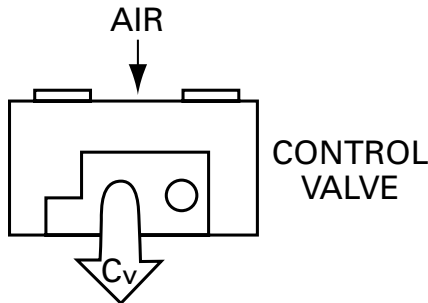


C_v to scfm Conversion



Q: What does “C_v” mean?

A: C_v is defined as the coefficient of velocity. The C_v value is generally used to compare flows of valves. The higher the C_v, the greater the flow.

It is sometimes helpful to convert C_v into scfm (standard cubic feet per minute) and conversely, scfm into C_v. Although C_v represents flow capacity at all pressures, scfm represents flow at a specific air pressure. Therefore, the following chart relates C_v to scfm at a group of pressures.

To obtain scfm output at a particular pressure, divide the valve C_v by the appropriate factor shown below.

C_v to scfm Conversion Factor Table

psi of Air Pressure	40	50	60	70	80	90	100
Factor	0.0370	0.0312	0.0270	0.0238	0.0212	0.0192	0.0177

Example: What is the output in scfm of a valve with a C_v of 0.48 when operated at 100 psi?

$$\frac{0.48 (C_v)}{0.0177 (\text{Factor})} = 27 \text{ scfm}$$

To convert scfm into C_v, simply reverse the process and multiply the scfm times the factor.

$$27 (\text{scfm}) \cdot 0.0177 (\text{Factor}) = 0.48 C_v$$