

Air Handling Systems

by Manufacturers Service Co., Inc.

RESIDENTIAL CENTRAL VACUUM SYSTEM

Question: Can I pipe my house for a central vacuum system with my dust collector ?

Answer: There are two different types of dust collection, high velocity vacuums and conventional dust collectors.

A dust collector works by moving larger volumes of air at lower suction pressure than vacuum cleaners. A dust collector is not designed to be used as a high-suction vacuum cleaner.

High velocity vacuums move low CFM (example 50 CFM, 75 CFM, etc.), but at a terrific velocity or air speed (normally 8,000 FPM). A high velocity vacuum uses small diameter pipes and hoses (i.e. 1", 2"). It is designed to lift dirt from carpets, etc.

Conventional dust collectors move a lot of air in larger pipes and hoses (4", 5", 6", etc.) at a velocity sufficient to keep material flowing to the dust collector (normally at 4,000 FPM). This type of dust collector moves large quantities of air necessary to evacuate dust hoods on machinery.

Summary:

If you try to pull vacuum through a 1 1/2" diameter hose on a conventional dust collector, it will be like sucking a milk shake through a cocktail straw.

If you attach 2" hose from a high velocity vacuum to a planer hood with a 5" outlet, you will not evacuate the hood.

The two sciences do not overlap. They must be treated separately.