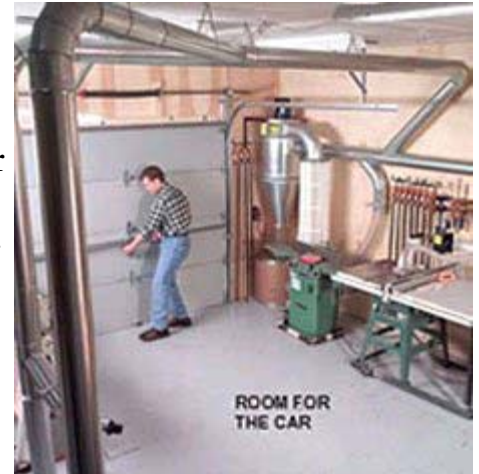


Central Dust Collection

From: Woodcraft

Small, one-person shops don't need complicated dust-collection systems. We'll show you how to get powerful collection at the lowest possible price without ever having to use a calculator. Even if your shop is shoehorned into a corner of your basement or garage, you can still enjoy the benefits of central dust collection. We turned to the experts at Oneida Air Systems (see Sources, page 101) for both the design and materials for our fully featured, small-shop dust-collection system. Our shop fits in one stall of a two-car garage, where the machines have to be moved against the walls to accommodate a car (rats!)



Cost

The total cost for our system (excluding the dust collector) was about \$800. Expect to spend about a day putting in the system. I know what you're thinking, "Wow, I can't afford that!" However, don't forget, we built a deluxe system with floor sweeps and ductwork running to each machine (Fig. A, page 58). You could cut the cost of our system in half simply by doing what I do in my shop at home: sharing. It takes about five seconds to pull the flex hose off one machine and hook it up to another. For example, the 4-in. flex hose to the table-saw (Fig. A) could easily be shared with the bandsaw and the lathe. That would eliminate the run to the bandsaw, plus a bunch of expensive flex-hose, blast gates and fittings. In addition, we could have stopped the wall run at the chop saw instead of going all the way to the workbench.

Small Shop Systems Are Simpler Than You Think

Designing a central dust-collection system for a small shop is really straightforward. Complex calculations involving cubic feet per minute, air velocity and static pressure are important for large industrial systems with long runs to big machines all running at the same time. A small, one-person shop is much simpler. The runs are short (our longest run was about 25 ft.) and only one machine runs at a time. The amount of air needed for good dust collection is relatively small. A system needs to pull about 500 cubic feet per minute (cfm) at the farthest machine to offer effective dust collection. A typical 1-1/2- or 2-hp dust collector with a 5- or 6-in. inlet and a 12-in. impeller is capable of delivering enough air in a small system to collect from tools like a 10-in. table saw, a 15-in. planer, a 16-in. bandsaw or an 8-in. jointer. You have a central dust-collection system. Just because your shop is small, it doesn't mean a central system isn't practical. We built our system in a single stall of a double garage. The ductwork goes along the wall and ceiling and all the tools are on mobile bases.