

# Small-scale dust

**D**ust collection is essential to keeping your shop and lungs clean, but not every shop has the space, nor every craftsman the budget, for a large dust collector. Most shop vacuums can be had for under \$150, substantially less than many dust collectors.

Although a shop vacuum can't substitute for a whole-shop dust collector (it's limited by its capacity, power, and filtration), it excels at capturing dust from a single tool. In fact, for portable power tools requiring a small-diameter hose, a shop vacuum might be your only dust-collection option. Plus, it's highly mobile, so it scoots easily around a small shop.

When selecting a vacuum, consider the size you'll need. You can find models in sizes as large as 22 gallons or as small as 1½ gallons. Although larger, more powerful vacuums work with even the small-

est tools, they may prove unwieldy in some situations—such as when sanding a panel with a random-orbit sander—whereas a smaller vacuum can be easily carried or placed atop a workbench. Here, we show how to use a vac in three different dust-collection situations, plus some of our favorite accessories.

## For chip-making machines

A large-volume vac can service a router table or portable planer. One with a 2½"-diameter hose reduces clogs, works well for general cleanup, hooks to benchtop and stationary machines, and can handle large wood chips.

► On the hunt for a shop vacuum? Start here. [woodmagazine.com/shopvacreviews](http://woodmagazine.com/shopvacreviews)



Ridgid 14-gallon vacuum, no. WD1450, \$100, 800-466-3337, [homedepot.com](http://homedepot.com)

# collection



Dust Right Dust Separator, no. 45556, \$80,  
800-279-4441, rockler.com

## Recommended accessory: Chip separator

A separator traps heavier dust and chips in a secondary container, allowing only the finest dust to reach the vacuum. This means your filters stay cleaner for a longer time, ensuring maximum air flow, and reduces the frequency of vacuum-bag changes (saving money). Place a separator in line with a tool that generates lots of chips, such as a router table or portable planer.



## Capture coarse sawdust

Connect tools generating dust of smaller size than that of a planer or router table to a smaller vacuum and smaller-diameter hose. However, a long run of flexible vacuum hose (*above*) creates more air resistance your vacuum must overcome to draw air through it. Corrugated hose is already more likely to become plugged up by chips and shavings than straight-walled pipe, or 6" hoses found on larger dust collectors. Short runs of corrugated hose offer their own advantages, though: They can be coiled up tightly, and their flexibility makes them ideally suited for mobile tools.

Craftsman 5-gallon vacuum, no. 16825,  
\$120, 800-349-4358, craftsman.com



### Recommended accessory: Auto-switch

To make turning the vac on and off completely automatic, consider a tool-triggered switch. The vacuum fires up when you turn on the connected tool, then runs a few extra seconds after the tool is turned off to clear the hose of dust and chips.

Above left: i-socket 110m tool and vacuum switch, no. 20890, \$40, 800-279-4441, rockler.com.

Above right: iVAC automated shop vacuum switch, no. 149950, \$55, 800-225-1153, woodcraft.com





Dust Right Universal Small Port Hose Kit, no. 48212, \$40, 800-279-4441, rockler.com

## Recommended accessory: Port adapters

With no industry standard for hose diameters (you'll find 2½", 1⅞", 1½", and 1¼" diameters), it's no surprise that there are no universal standards for dust-collection ports on small tools, either. An adapter, such as this one, connects mismatched hoses and ports.

## Best for fine dust

Tiny dust, such as that generated by sanders, moves easily through hoses and requires little airflow. A small vacuum with a 1¼" hose will do the job, cost less, and take less space.



Shop-Vac 2.5-gallon vacuum, no. 549704, \$35, 800-445-6937, lowes.com

► HEPA stands for "high-efficiency particulate arrestance."



HEPA filter

Cloth filter bag



Disposable collection bag

Vac intake port

## Recommended accessory: Finer filter

To improve the dust collection of your shop vacuum, replace the factory air filter with a HEPA filter. These use a superfine mesh to trap even the smallest airborne particulates. Many manufacturers carry HEPA filter replacements on their websites.

A disposable collection/filtration bag (above) mounts to the vacuum's intake port and wraps around the filter to trap most of the debris. Using one, or a cloth filter bag (left), in tandem with a fine filter greatly reduces the amount of dust particles returned to the air. 🌳

► Dust will cake on a filter's pleats over time—this actually helps improve filtration. It's still a good idea to periodically clean off loose dust when it builds up, but don't bother to shake out every crack and crevice.