



## GO-ANYWHERE DUST COLLECTION

No matter how many hoses or ducts you have running from your main dust collector, you need a shop vacuum. Compact and mobile, they can go anywhere you can tote a power tool. Many tools, especially sanders, actually work better with a vac attached, and today's HEPA filters mean you can toss your dust mask.

Photos: Michael Pekovich

# Shop Vacuums

With better filters and features, new vacs are must-have companions for power tools

BY ASA CHRISTIANA

As part of our research for “A Revolution in Dust Collection” (pp. 52-59), *FWW* shop manager Bill Peck and I brought in the best shop vacuums we could find. We used them in our filter testing, and planned to show just a few as part of a whole-shop guide to dust management. But somewhere along the line, one of us realized, “Duh, we’ve got a full tool test of shop vacs on our hands.” So here is your guide to the most effective and user-friendly shop vacuums on the market.

## Three indispensable features

We selected only the vacs that come standard with HEPA filters, the finest available. Simply put, anything less is less safe, allowing the finest, most dangerous dust into your shop air and your airways. Where there was more than one similar model and the only difference was capacity, we went with the smaller model to save you some money. We did allow in one vac that

doesn’t offer HEPA as a standard item—the 12-gal. DeWalt D27904—because it has a self-cleaning feature (shared only by the Bosch Airsweep), and we ordered the accessory HEPA replacement filter for it.

Two features that have become state-of-the-art for shop vacuums are variable suction and an onboard power outlet. These features are related: If you have a tool plugged into the vacuum, the combined amp draw might trip your breaker. So it’s nice to be able to dial back the suction a bit to draw less power. Also, with some sanders, full suction will pull the tool against the wood, making it harder to move it.

And of course, onboard power is a wonderful thing. You just plug in your router, sander, or whatever, and when you turn it on, it triggers the vac too. One less switch to hit, and one less extension cord to drag around. And the vacuum keeps running for a few seconds after you switch off the tool, grabbing the last few chips.

All but one of the vacs we tested—the Dustless Technologies HEPA Vacuum—include these user-friendly features.

## The problem with filter bags

Because of their HEPA filters, all of these vacs also have some kind of bag inside as a pre-filter, which keeps the superfine filters from clogging and cutting suction in half.

The bags do their jobs well, keeping airflow close to its initial high, but most woodworkers probably won’t use them in the long run. They reduce the capacity of the vac canister—drastically in most cases—and they fill quickly. Unfortunately, they can’t be emptied and re-used, and at an average of \$5 each, we don’t think you’ll go on replacing them for long. Without them, however, the HEPA filter clogs quickly. At that point, for most of the vacuums, you’ll have two choices. You can bang them out over a trash can, filling your head with a cloud of the very dust you are



# Friendly features

You'll appreciate these every time you plug a power tool into your vacuum. In fact, we consider them to be essential for woodworkers.



## Tool-activated startup

*All but one of the models we tested have an onboard tool outlet that starts the vac when you turn on the tool, and runs for a few extra seconds when you are done. That makes one less cord to drag around, and one less switch to hit.*

## HEPA filtration

*You need very fine filtration to keep the tiniest, most dangerous dust out of your nose and lungs. HEPA filters are the best choice, and all but one of the vacs we tested make it a standard item.*



trying to avoid, or you can add a dust separator (see “Best of the separators,” p. 58). The best will catch 99% of the chips and dust, keeping your HEPA filter remarkably clean. But a separator is another expense, and another thing to drag around at the end of the vacuum hose.

## Bosch is the exception

Two of the vacuums, the Bosch Airsweep and the DeWalt D27904, have automatic filter shakers, designed to unpack the pleats and get the air flowing freely again. So in theory at least, you should be able to run both of these vacs without a separator. But in our tests, one filter-cleaning system worked much better than the other.

With the Bosch, when you turn off a tool that is plugged into the onboard power outlet, the vac automatically shuts off after 7 extra seconds of run time, and then the cleaner switches on, shaking the dust off the filter. If you don't have a tool plugged in, you can activate the cleaning function with a push-button. The DeWalt filter vibrator turns on much more often: once every 15 seconds while the vac is running.

Of the two, the Bosch Airsweep worked best in our tests, restoring the airflow almost to full power so you don't need to attach a separator to the vacuum or shake its filter over a trash can. Its working airflow was the highest in the group, no matter how much dust we fed into it. It also has the second-highest canister capacity. So the Bosch was an easy choice for Best Overall.

## Adjustable power



*All but one of the vacs has a power dial. These are handy when you have a powerful tool plugged into the vac, and the combined amp draw could trip a circuit breaker.*

# 3 ways to keep the filter clean

HEPA filters clog more quickly than the standard filters in shop vacuums, which can cut suction power almost in half. So it is essential to keep them clean.

## 1. USE THE BAGS

All of the vacs we tested employ a disposable bag as a pre-filter, and these work well if you are willing to replace them frequently (see below).

### Why you'll probably ditch the bags



**Small, pricey, and not reusable.** Dust bags reduce a canister's capacity, and they fill quickly in a woodworking shop. Unfortunately, they aren't easily emptied and re-used. And being sophisticated filters themselves, they cost \$4 to \$6 each, meaning replacement costs will mount up quickly.

## 2. ADD A SEPARATOR

In our article on whole-shop dust collection (see p. 52), we found separators to be extremely effective in keeping shop-vacuum filters unclogged and working efficiently.



**BEFORE**



**AFTER**

## 3. OR BUY THE BOSCH

The Bosch's filter shaker turns on automatically when you have a tool plugged in, and you can activate it manually when you don't. The DeWalt D27904 has a filter cleaner too, but it wasn't as effective in our tests.



**Unclogged in seconds.** In our airflow tests, the Bosch system brought suction close to full strength again, no matter how clogged the filter had been.

# Shop vacuums for woodworkers



**BOSCH AIRSWEEP 3931A**



**DeWALT D27904**



**DeWALT D27905H**

The Bosch has two small drawbacks: It is the noisiest vacuum in the group, so wear ear protection (which you should be doing with power tools anyway). And it has one of the narrowest hoses. This didn't hurt its airflow much, and it's fine for collecting chips and dust from a power tool, but it will be more prone to clogging if you use your vacuum to sweep big shavings off the shop floor. (I used to do that, but then I discovered Rockler's Dust Right accessories, which let me use my powerful, full-size dust collector as a big vacuum for general cleanup. For a review, see *FWW* #203, p. 22.)

Dustless Technologies looks like the bargain of the lot, but it lacks an on-board tool outlet and you'll need to buy either a pile of bags or a dust separator to keep its HEPA filter clean and flowing freely, and then it won't be any cheaper than the Bosch. So we went in a different direction with our Best Value award. Based on our testing, the least expensive way to get a shop vacuum with good filtration and powerful airflow is to keep the vacuum you have and add an after-market HEPA filter and a separator. □

*Asa Christiana is editor of Fine Woodworking; Shop manager Bill Peck handled the testing.*

## BY THE NUMBERS

The "working airflow" number represents the cubic feet per minute of airflow without the bags in place, after filling the canister twice but not cleaning the filter. We did activate the Bosch's self-cleaning feature, however, and the DeWalt D27904's ran on its own. We also list each vacuum's initial airflow for comparison.



### MODEL/SOURCE



**Bosch Airsweep 3931A**  
boschtools.com

**DeWalt D27904**  
dewalt.com

**DeWalt D27905H**  
dewalt.com

**Dustless Technologies  
HEPA Vacuum**  
dustlesstechnologies.com

**Fein HEPA Turbo III**  
fein.com

**Festool Cleantex CT 26**  
festoolusa.com



**DUSTLESS TECHNOLOGIES  
HEPA VACUUM**



**FEIN HEPA TURBO III**



**FESTOOL CLEANTEX CT 26**

STREET PRICE	POWER	CANISTER CAPACITY	BAG CAPACITY	NOISE	INITIAL AIRFLOW	WORKING AIRFLOW
\$550	11 amps	13 gal.	8 gal.	91 db	86 cfm	77 cfm
\$500*	9 amps	12 gal.	6 gal.	85 db	77 cfm	58 cfm
\$550	9 amps	10 gal.	3 gal.	72 db	68 cfm	27 cfm
\$450	10.6 amps	16 gal.	6 gal.	78 db	79 cfm	60 cfm
\$550	11 amps	15 gal.	4 gal.	74 db	90 cfm	59 cfm
\$550	10 amps	7 gal.	6 gal.	73 db	61 cfm	31 cfm

\* plus \$115 HEPA accessory filter



**Best Value is the vac you already own.**  
Outfit it with an aftermarket HEPA filter and a dust separator, and you'll have a safer, more powerful shop vacuum for under \$100.