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Random-Orbit Sanders VS. Orbital Finishing Sanders



What's the difference? One saves you time, the other saves you money.

Orbital finishing sanders use either a quarter, third, or half of a full 9×11" sandpaper sheet, and random-orbit sanders take either 5"- or 6"-diameter discs. For this article, we'll focus on the most popular classes of both types: 5" random-orbit and quarter-sheet orbital finishing sanders. Both

PUNCH THE PAPER TO MATCH THE PAD



Most orbital finishing sanders come with a punch pad, for poking dust-collection holes in your own sheet abrasives to match the sander's pad.

styles of sander smooth, and occasionally flatten, wood in preparation for a stain or other finish, and you can easily control these smaller, affordable tools with just one hand.

The pad of a typical orbital finishing sander moves in a 1/16" elliptical orbit at 12,000–14,000 orbits per minute. As you move the tool across a workpiece, the orbiting motion of the abrasive creates a consistent swirl pattern on the wood surface. And by working through a series of finer abrasives, the swirl patterns eventually blend together so well they disappear.

On the other hand, a random-orbit sander pad orbits about 1/8" while *at the same time* spinning up to 12,000 times a minute. This dual-mode efficient, blending swirl marks quickly as you work through the abrasive sequence.

In our experience, both types of sander can produce flawless surfaces when sanding through a sequential series of abrasives, but the random-orbit sanders do so quicker. So what else should you consider before buying? Check out the pros and cons of each type on the *next page*.

COLLECT MORE DUST WITH A RANDOM-ORBIT SANDER



A random-orbit sander sucked up nearly all the dust into its dust bag when sanding away the melamine coating from this particleboard.



Few orbital finishing sanders collect dust well, as evidenced by this test board when we sanded away the melamine coating.

Random-Orbit Sander

Pros:

- Prepunched hook-and-loop abrasive discs are widely available and make for quick, easy changes [Photo A].
- When using equal abrasives, a random-orbit sander removes material about one-third faster than an orbiter.
- With eight $\frac{3}{8}$ " holes in most pads and abrasive discs, these tools collect dust better than orbital finishing sanders. The dust ports on most prove easier to connect to a vacuum hose [Photos C and D].
- Variable-speed motors (on models so equipped) let you adjust the aggressiveness for different materials, either to avoid clogging the abrasive or to better control the sanding action.

Con:

- The hook-and-loop pads wear out over time and will need to be replaced, a cost about one-quarter to one-third of the sander's cost.

Orbital Finishing Sander

Pros:

- Low cost, typically about 20 percent less than a comparable 5" random-orbit sander.
- Whether you buy presized sheets or cut your own from full sheets, abrasives generally cost 20–30 percent less than manufactured random-orbit sander discs.
- With firm, rubbery sanding pads, these sanders contour to curved shapes better than random-orbit sanders without damaging the pads or leaving unusual scratch patterns.

Cons:

- More vibration and a single orbit speed lead to greater hand and arm tingling and fatigue.
- The clamping mechanisms on most of these sanders prove clumsy to use [Photo B].

HOOK-AND-LOOP PADS MAKE ABRASIVE CHANGES EASIER



A With random-orbit sanders, you quickly and easily apply hook-and-loop discs to the pad. This makes sequential-grit sanding a breeze.



B Orbital finishing sanders use cam-action clamps to hold sanding sheets in place, but the sheets can be awkward to install.

CONNECTING TO A SHOP VACUUM? SOME ADAPT BETTER THAN OTHERS



C Although sized differently from brand to brand, round dust ports on most random-orbit sanders adapt relatively easily to a shop-vacuum hose.

More Resources

- ▶ Read *WOOD*® editor and reader reviews of random-orbit sanders and orbital finishing sanders, as well as other types of sanders and other tools, at toolreviews.woodmagazine.com. 🌳



D The square or rectangular ports on most orbital sanders fit their provided collection bags or canisters, but are tricky to adapt to shop vacuums.

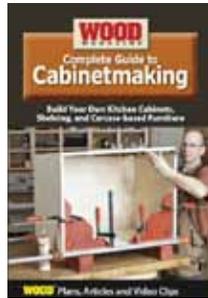
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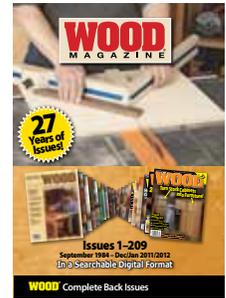
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