

Bandsaw Blades

We review nineteen
 $\frac{1}{2}$ -in. blades
to find the fastest
and smoothest cutters

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Resawing is the process of cutting a board to make it thinner. And when it comes to choosing bandsaw blades for resawing, woodworkers have no shortage of options. Almost a dozen different brands are available, and it's not unusual for each brand to offer several blades that can handle resawing tasks.

We tested a number of resaw blades in the *Fine Woodworking* shop. The test was limited to $\frac{1}{2}$ -in.-wide blades, a size well suited to resawing on a 14-in. bandsaw. The same bandsaw was used for all of the tests: a 14-in. Delta (model 28-241) with a 1½-hp motor and a 6-in. riser block.

Testing for speed, flatness, and smoothness

When it comes to resaw blades, most woodworkers have only three demands. The blade should cut reasonably fast, and the cut should be both reasonably flat and reasonably smooth.

Some woodworkers are interested mainly in speed. They allow for extra stock, so a cut that's less than perfectly flat isn't a concern: After a few passes on the jointer, the surface is flat and smooth. For other woodworkers, though, a cut that's flat and smooth is most important. That's often the case



SETTING UP THE TEST



We set the blade tension. Several manufacturers recommended a specific blade tension for each of their blades, so Begnal and White used a commercial gauge to ensure that each blade was tensioned to the correct number.



And adjusted the carriage for drift. After installing each blade, a test cut was made on a scrap block of wood to determine the angle of blade drift; then the carriage was adjusted to match the angle.



Then mounted the test blocks securely to the carriage. Each test block was screwed to the carriage before the test cuts were made.

when resawing stock to create thin sheets of veneer. And when the wood is pricey, a flat, smooth cut is even more important.

Blade life can be an issue, too. But because the typical home-shop woodworker uses a bandsaw only occasionally, blade life is likely to be measured in years rather than in hours. Therefore, our tests didn't include one for blade life, nor did we look at any carbide-tipped blades.

With all that in mind, we established three different tests. First, we looked at cutting speed, and then we measured the flatness of the cut. Last, we looked at the smoothness of the cut. The results are shown in the chart on pp. 78-79. For the tests, each blade was installed in the bandsaw using the same setup and procedure, with one notable exception: The tension we applied to the blade was based on recommendations from the blade manufacturers.

The speed test—The cutting-speed test was pretty basic: We timed how long it took for each blade to cut through a section of

9½-in.-wide soft maple. Short times equated to fast-cutting blades. It took some extra effort to ensure a level playing field for the blades, starting with the stock. To minimize any physical differences in the wood, all of the test cuts came from the same board. After milling a 10-ft.-long board to 1¾ in. thick by 9½ in. wide, we cut 10, 1-ft.-long blocks from each one. All of the blocks were knot free and relatively straight grained.

To ensure a consistent cutting force, we devised a system that included a carriage and steel weights. The carriage, mounted to the bandsaw table, rode on ball-bearing drawer slides to minimize friction. The weights hung off a pulley on the end of the saw table, connected to the front of the carriage by a heavy line. Mounting a test block was simply a matter of driving a few wood screws through the back of the carriage.

We used 7½ lb. of weight as a standard. That number was the result of hands-on experiments that showed it as a comfortable force when cutting 9½-in.-wide soft maple with a ½-in. resaw blade on a saw with a

THE TESTING PROCESS

CUTTING SPEED

With the block mounted to the carriage, and the pulley-and-weight system providing a consistent cutting force, Begnal and White needed only to look on and measure the cutting time with a stopwatch.



BARRELING

After each cut, a straightedge and feeler gauges were used to check the face of the test block for any sign of barreling.



SMOOTHNESS

After testing each blade, Begnal and White ripped a cutoff piece from each block into a narrow strip. After its initial thickness was measured, the strip was sanded until all of the sawmarks disappeared; then it was remeasured. The difference in thickness represented the relative smoothness.



1½-hp motor. In a few cases, the blade bogged down during the test cut. When that happened, we reran the test after either increasing the tension or reducing the applied weight. Only one blade, the Jet Carbon Steel, continued to stall even after we fiddled with the tension and the applied weight; a replacement blade also stalled.

After adjusting the carriage to allow for blade drift—that annoying propensity of bandsaw blades to wander from a straight cut—we used each blade to make three test cuts, for a total of 3 ft. With a stopwatch, we timed each foot-long cut; then we averaged out the three cuts.

The flatness test—Several of the blades produced cuts that weren't flat across the

width of the test block. Instead, the cut surface had a bowed shape, much like that of a barrel. Indeed, it's called a barrel cut, or barreling, and it's not uncommon when resawing wide stock. We measured the amount of barreling using a straightedge and a set of feeler gauges.

The smoothness test—Not all resaw blades make equally smooth cuts. So to

MODEL	SOURCE	PRICE
BC Saw	888-251-2236 www.bcsaw.com	\$10
Delta Platinum Pro 28-960	800-438-2486 www.deltamachinery.com	\$25
Grizzly G5188 Carbon Steel	800-523-4777 www.grizzly.com	\$12
Highland Hardware Carbon Steel	888-500-4466 www.highlandhardware.com	\$14
Highland Hardware Wood Slicer		\$30
Jet Equipment & Tools Carbon Steel	800-274-6848 www.jettools.com	\$25
Jet Equipment & Tools BandPlus		\$23
Jet Equipment & Tools Silicon Steel Flex-Back		\$28
Lenox Pro I	800-628-3030 www.lenoxsaw.com	\$14
Lenox Pro II		\$36
Olson All Pro	203-792-8622 www.olsonsaw.com	\$16
Olson MVP		\$30
Starrett Woodpecker Premium	978-249-3551 www.starrett.com	\$14.50
Starrett Woodpecker Flex-Back		\$16.50
Suffolk Machinery Timber Wolf A.S.	800-234-7297 www.suffolkmachinery.com	\$18.50
Suffolk Machinery Timber Wolf P.C.		\$17.50
SuperCut Carbon Tool Steel	800-356-9918 www.supercutbandsaw.com	\$10
SuperCut Hawc Pro		\$14.50
SuperCut Premium Gold		\$20.50

SPEED	FLATNESS	SMOOTHNESS	BLADE TYPE
Good	Excellent	Good	3 tpi, skip
Good	Excellent	Very good	4 tpi, hook
Very good	Fair	Good	3 tpi, hook
Good	Excellent	Good	3 tpi, hook
Excellent	Very good	Excellent	3-4 tpi, hook
Stalled during test	N/A	N/A	4 tpi, hook
Very good	Good	Fair	3 tpi, hook
Fair	Very good	Very good	4 tpi, hook
Fair	Excellent	Fair	3 tpi, hook
Fair	Excellent	Good	4 tpi, hook
Very good	Good	Fair	3 tpi, hook
Very good	Very good	Good	3 tpi, hook
Excellent	Good	Good	3 tpi, skip
Good	Very good	Fair	3 tpi, hook
Very good	Very good	Fair	3 tpi, hook
Very good	Fair	Fair	3 tpi, hook
Very good	Fair	Good	3 tpi, hook
Very good	Poor	Poor	3 tpi, hook
Good	Good	Fair	3 tpi, hook

find the smoothest cutters, we measured how much sanding had to be done to remove the blade marks.

Choosing the top performers

We found that most of the blades were capable of resawing 9½-in.-wide soft maple when 7½ lb. of force was used to feed the stock. But as soon as we began to think specifically about speed, flatness, and

smoothness, we began to see differences among the blades.

The fastest-cutting blades—When it came to pure speed, we found two blades that stood out: the Starrett Woodpecker Premium and the Wood Slicer from Highland Hardware. The Woodpecker Premium needed, on average, only 13.69 seconds to make the 12-in.-long cut; the Wood Slicer

did it in 15.07 seconds. Initially, the Woodpecker Premium stalled before completing the cut, and efforts to adjust the tension or applied weight didn't help. The test conclusions in the chart are based on a second Woodpecker blade we tried, one that cut considerably better.

Three other blades also performed well in terms of speed, with numbers in the teens: the Olson All Pro (18.34 seconds), the Timber Wolf P.C. (18.54 seconds), and the SuperCut Carbon Tool Steel (19.44 seconds). Blades that also did very well in the speed test were the SuperCut Hawc Pro (20.26 seconds), the Olson MVP (20.60 seconds), the Grizzly (21.43 seconds), the Timber Wolf A.S. (21.70 seconds), and the Jet BandPlus (24.18 seconds).

The flattest-cutting blades—Four of the blades—the BC Saw, the Delta Platinum Pro, the Highland Hardware Carbon Steel, and the Lenox Pro II—produced dead-flat stock when we measured for barreling. The Lenox Pro I also did very well, with only 0.002 in. of barreling. If a flat cut is especially important, you'll want to put these blades at the top of your list.

The smoothest-cutting blades—When smoothness of cut was considered, Highland Hardware's Wood Slicer was the top performer, requiring only 0.002 in. of sanding to produce a smooth surface. The Delta Platinum Pro and the Jet Silicon Steel Flex-Back also had impressive numbers, needing just 0.004 in. of sanding.

The best all-around blades—With our tests giving it a grade of excellent in both speed and smoothness, and a grade of very good in barreling, the Wood Slicer blade from Highland Hardware was our choice for the best all-around performer. A \$30 price tag makes it one of the more expensive resaw blades we tested, but anyone looking for fast and smooth cuts won't be disappointed.

The Delta Platinum Pro, which sells for \$25, also garnered strong marks in the speed (good), smoothness (very good), and flatness (excellent) tests. Anyone looking for value should consider the BC Saw carbon steel blade; its \$10 selling price won't make your wallet work too hard. □

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