TOOL TEST

Step Up to a Serious

A powerful, solid saw with big cutting capacity is more affordable than ever

BY ROLAND JOHNSON

Bandsaw

Benefits of a bigger saw

Even though you can boost a 14-in. bandsaw's resaw capacity to 12 in. with a riser block, a bigger saw will still outperform it in a number of key areas.

BIGGER WHEELS

The bigger wheels not only provide greater throat capacity, but they also have more inertia for smoother operation and less bogging down. The larger diameters also mean you can use bigger, thicker blades.

BEEFIER GUIDES

Larger roller guides and Laguna's ceramic guides provide more surface area and better control for larger blades.

LARGER TABLE

Tables are larger, generally about twice as big as the table found on a 14-in. machine. This means better support for all kinds of cutting tasks.

STRONGER FRAME

A sturdier frame is especially valuable for ripping large stock and resawing. All the machines tested weigh close to 400 lb. or more, which is twice as much as an ordinary 14-in. machine.

MORE POWER

All the saws in the test have large motors rated between 1¾ and 3 hp, compared to the ¾ hp or 1 hp motors found on most 14-in. saws.

I'm sure you had great expectations when you added a riser block to your 14-in. bandsaw, but a riser block doesn't provide additional power for big resaw cuts, or stiffen the saw's frame, or help with an undersize table. Fortunately, I discovered several steel-frame bandsaws priced under $1,600 with 12 in. of resaw capacity while researching my new book on bandsaw techniques and maintenance (*Taunton's Complete Illustrated Guide to Bandsaws*, on sale in November 2010).

With these new, bigger machines, you can realize your dreams of making big book-matches and large veneers. And once you have one, you'll wonder how you ever got by without it. In fact, one of these extra-capacity machines will likely be the last bandsaw you'll ever need.

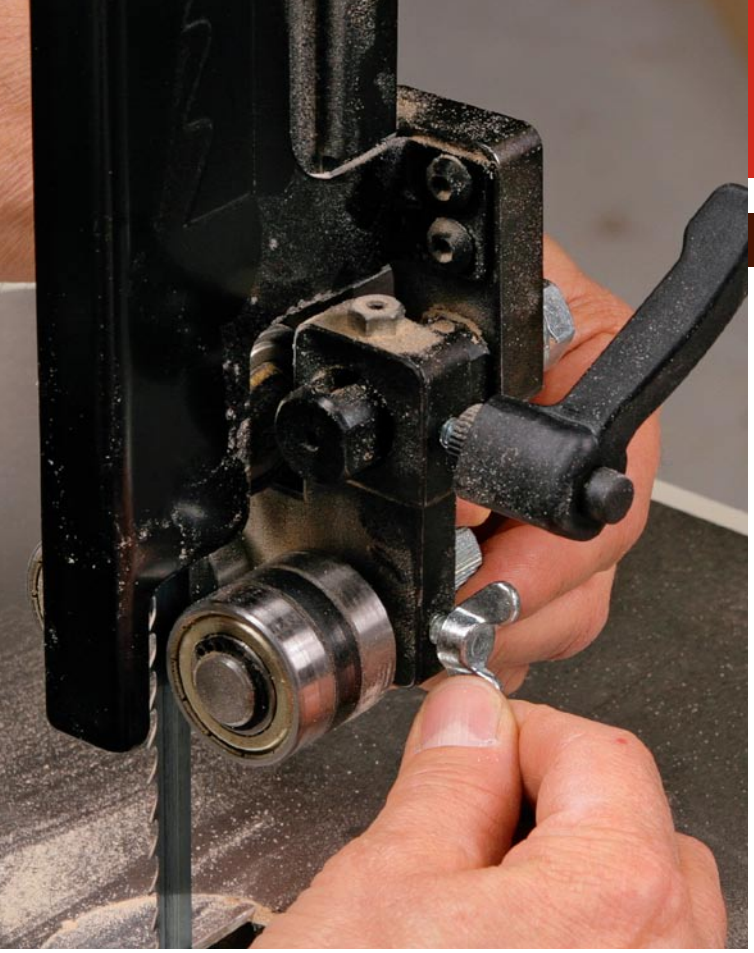
Resawing 12 in. requires plenty of power, so we chose eight models with at least 1¾ hp. I put them through a series of tests to judge their power, cutting ability, and build quality.

Sturdy guide post equals a straight cut

The first thing I check when evaluating a bandsaw, particularly one with big resaw capacity, is the rigidity of the upper guide

Photos, except where noted: Patrick McCombe; facing page: Michael Pekovich

Big saws: The important things



Tool-free is faster. *Jet's easily adjustable roller guides move without tools and stay put when locked down.*

GUIDES

Some guards get in the way. *Blade guards on the Grizzly and Shop Fox saws partially obscure the thrust bearing, making it more difficult to set the right gap.*

A little pinch. *Designed to run with slight pressure on the blade, Laguna's ceramic side guides are easy to set and give excellent blade support.*

TABLES

Crank it up. *About 20 percent larger than its closest competitor, the 19-in. by 27-in. table on the larger Grizzly saw is easy to tilt thanks to a rack-and-pinion mechanism.*

post. If the guide post flexes, the blade will twist and bind, resulting in a wandering cut. Other than a dull blade, this is the number one cause of bad bandsaw cuts.

To measure guide-post flex, I placed the guides 9 in. above the table to simulate an average resaw height. Then I applied 6 lb. of force to the blade and measured the deflection. While zero deflection is the goal, I've found that a sharp blade and a moderate feed rate can compensate for about 0.005 in. of flex.

Straight post is important, too—For good blade support, the upper guides should always be kept close to the workpiece. But if the upper guide post isn't parallel to the blade, the guides will have to be readjusted every time the guide post moves up or down. So, after checking the guide posts for flex, I used a dial indicator to measure the position of the guides at the top and bottom of their adjustment, both front to back and side to side.

It should be easy to adjust blade guides and fences

With the exception of the Laguna's ceramic guides, all the saws in the group have heavy-duty roller guides. I like that Laguna's ceramic guides can be in direct contact with the blade, making setup easy and quick. Roller guides need to be a couple thousandths of an inch away from the blade to keep the rollers from constantly spinning. On the downside, the upper Laguna thrust guide requires a wrench for adjustment and you need two different wrenches to adjust the lower guides.

The Jet's guides are a favorite too, because they can be adjusted without tools and they stay in position as you tighten their mounts. Grizzly's guides adjust with a single wrench and stay put during tightening. Unfortunately, both the Grizzly and Shop Fox saws partially obscure the upper thrust guide behind the blade guard.

FENCES

Back to basics. *Jet's fence is sturdy but low-tech: Truing and drift adjustments require a wrench, but the fence stays put and slides easily.*

Get my drift? *With star knobs holding a thick bar that turns on a pivot, both Grizzly machines make it easy to angle the fence to correct for drift.*

Steel City's blade guard makes it tough to see the thrust and the side guides. Last, I found the Rikon, Shop Fox, and Steel City guides tedious to set because they move as they're tightened.

With an easy adjustment for drift and a two-position auxiliary fence mounted to a cast-iron primary fence, Grizzly's two models easily have the best fence setup. I also liked Laguna's two-position fence. Rikon has a two-position fence too, but even in the tall position it's too short (2½ in.) for resawing.

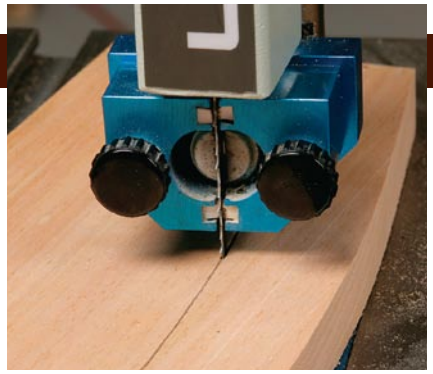
All offer plenty of power and control

To gauge the power of these machines, we resawed 8-in.-wide by 2-ft.-long maple blanks into ⅛-in.-thick veneers. To level the playing field, we equipped all of the saws with SuperCut ¾-in.-wide, 0.032-in.-thick, 3-tpi hook-tooth blades (supercutbandsaw.com). All the saws handled this task with ease. Even the 1¾-hp Jet did a good job, despite my overly aggressive feed rate.

To test the saws' ability to cut curves and the performance of their side blade guides, we switched to SuperCut ¼-in., 6-tpi hook-tooth blades and made a series of long, sweeping cuts and tight S-curves. All of the saws and guides handled the task with ease, but the blade guards on the Jet saws, the Rikon, and the Steel City slightly obscure the cut line with the guides set close to the workpiece. Steel City and Rikon tried to improve cut-line visibility through their guard with little plastic windows, but distortion and

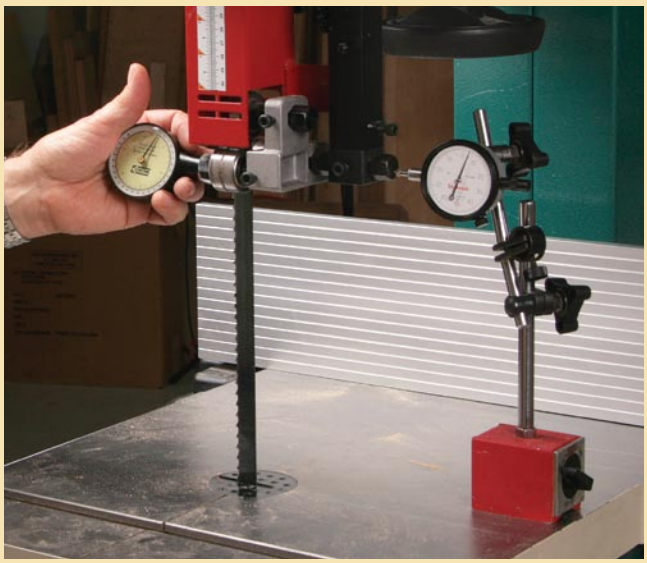
CUTTING

Great resaw cuts all around. *All the saws had no problem splitting 8-in. blocks of 8/4 soft maple into perfect ⅛-in. slices of veneer. Before cutting, Johnson aligned the blade and guides properly, and trued the fences by setting them parallel to the blade.*



Where's the line? *Compared to the wide-open view on the Laguna saw (top), visibility of the cut line is hampered on the Steel City saw (bottom), despite the acrylic window that is meant to help. The Jet and Rikon saws had similar problems.*

ONE LAST TOUGH TEST



Push on the post. *Johnson used a push-pull gauge to apply 6 lb. of force to the upper guide post and measured the deflection with a dial indicator. All the saws passed the test, which is probably why they handle big resaw cuts so well.*

dust make them tough to see through. Laguna, Grizzly, and Shop Fox provide a wide open view of the cut line.

Brakes and tension scales are nice perks

Bandsaw brakes are a good idea, because big bandsaws can take the better part of a minute to come to a stop. Both Grizzly saws have electronic motor brakes that stop the blade within 2 seconds. The Laguna and Steel City saws have mechanical brakes actuated by a foot pedal. Laguna's foot brake also has a switch that kills the motor. The Jet, Rikon, and Shop Fox saws don't have brakes.

The Jet, Rikon, and Steel City saws have blade-tension gauges that show the right setting for specific blade sizes, and they proved accurate. The Grizzly saws, the Laguna, and the Shop Fox have a graph that doesn't directly relate to blade size, but it does provide a way to record the settings after you've worked them out.

The saws I like best

While all of the saws are capable machines, I pick the Grizzly G0514X2B as best overall. It has good power, a huge table with sturdy trunnions, a great fence, and an electronic brake. I also really like the Jet saws with their smooth power, easily adjustable blade guides, and rigid frames. If you don't have 240-volt power, the 1¾-hp Jet is an excellent choice. The Laguna is also a capable saw with great guides, but given its 14-in. wheels, it doesn't have the throat capacity of the other larger saws.

The best value was an easier choice. The Grizzly G0513X2B has the same features as its big brother, except a smaller table and throat width and a motor that's 2 hp instead of 3 hp. I think the motor size is a non-issue. For $1,100, it's a whole lot of saw. □

Roland Johnson is a contributing editor.

AUTHOR'S BEST OVERALL CHOICE

GRIZZLY G0514X2B

The big Grizzly has a powerful motor, a huge table, and an electronic motor brake. The guides are also very good and its two-position fence is the best of the bunch. It would be nice if the tires were white or yellow to aid blade tracking without opening the door, but that's nitpicking.

Street price: $1,495
Motor: 3 hp, 240v
Fence: Two-position, 6 in. / ½ in. tall
Wheel size: 19 in.
Table size: 19 in. by 27 in.
Guide-post flex: 0.004 in.
Source: grizzly.com

AUTHOR'S BEST VALUE CHOICE

GRIZZLY G0513X2B

The 17-in. Grizzly is a very good value. It has a smaller motor, table, and wheel size than its bigger brother, but the saw works well and has the same great fence as the larger Grizzly.

Street price: $1,100
Motor: 2 hp, 240v
Fence: Two-position, 6 in. / ½ in. tall
Wheel size: 17 in.
Table size: 17½ in. by 24 in.
Guide-post flex: 0.004 in.
Source: grizzly.com

JET JWBS 18QT

Jet's saws have excellent tool-free roller guides and sturdy frames. But there's no brake, which will slow you down between cuts and setups. This is the only 120-volt machine in the test and it performed just fine, even when resawing.

Street price: $1,500
Motor: 1¾ hp, 120v
Wheel size: 18 in.
Fence: Single-position, 3½ in. tall
Table size: 19 in. by 19 in.
Guide-post flex: 0.003 in.
Source: jettools.com

JET JWBS 18QT3

Jet's 18QT3 is nearly identical to the 18QT, but it has a 3-hp motor and an illuminated power switch. All the other features and specs are the same. This is one of the two most expensive machines in the test.

Street price: $1,600
Motor: 3hp, 240v
Wheel size: 18 in.
Fence: Single-position, 3½ in. tall
Table size: 19 in. by 19 in.
Guide-post flex: 0.005 in.
Source: jettools.com

LAGUNA LT14 SUV

This is the only 14-in. machine in the test, and its small footprint would be an advantage in smaller shops. The saw cuts well, and has the only motor-connected foot brake in the group. The guides are Johnson's favorite. It also includes a mobility kit.

Street price: $1,495
Motor: 3 hp, 240v
Wheel size: 14 in.
Fence: Two-position, 3⅛ in. / ½ in. tall
Table size: 16 in. by 20 in.
Guide-post flex: 0.002 in.
Source: lagunatools.com

RIKON 10-345

This machine has yellow tires for easier blade tracking, and good-looking metal handwheels for guide-post and tension adjustments. Drawbacks include a short fence and blade guides that are a little finicky to adjust.

Street price: $1,400
Motor: 2½ hp, 240v
Fence: Two-position, 2½ in. / ½ in. tall
Wheel size: 18 in.
Table size: 19 in. by 21 in.
Guide-post flex: 0.007 in.
Source: rikontools.com

SHOP FOX W1707

This saw shares a strong resemblance and many features and parts with the smaller Grizzly. But it doesn't have a brake or Grizzly's excellent rip fence, and the table wouldn't hold its position when bumped with a big board.

Street price: $1,065
Motor: 2 hp, 240v
Fence: Single-position, 4 in. tall
Wheel size: 17 in.
Table size: 17½ in. by 24 in.
Guide-post flex: 0.003 in.
Source: woodstockint.com

STEEL CITY 50250

The Steel City is a capable basic machine. Unfortunately, it has a short rip fence and the table tilts when it's banged with a large board. It is one of the two most expensive machines in the test.

Street price: $1,600
Motor: 2 hp, 240v
Fence: Single-position, 2½ in. tall
Wheel size: 18 in.
Table size: 20 in. by 20 in.
Guide-post flex: 0.008 in.
Source: steelcitytoolworks.com