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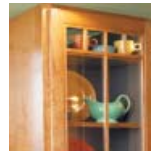
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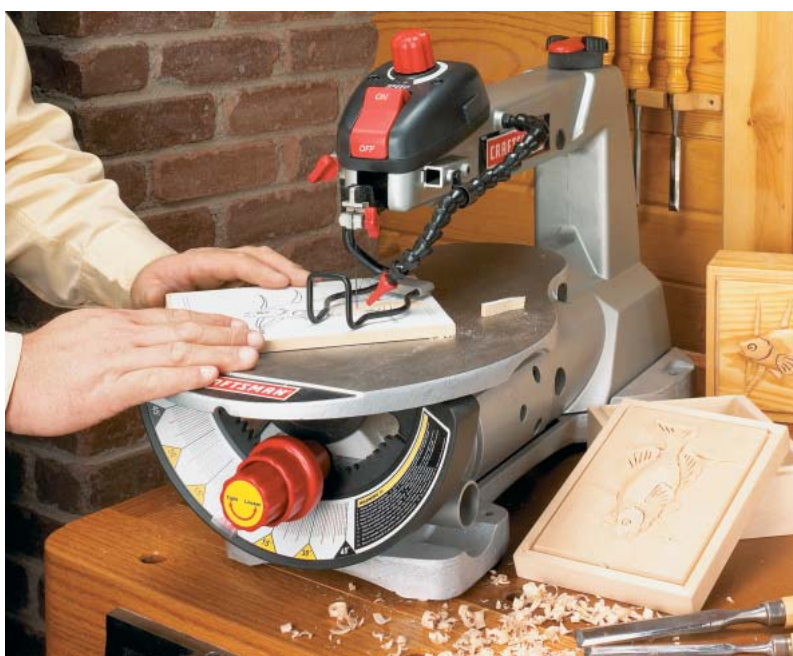
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December 2003



Tool Review

Benchtop Scroll Saws



What separates the good from the bad?
Five popular models are put to the test in this
tool review from *Workbench* magazine.

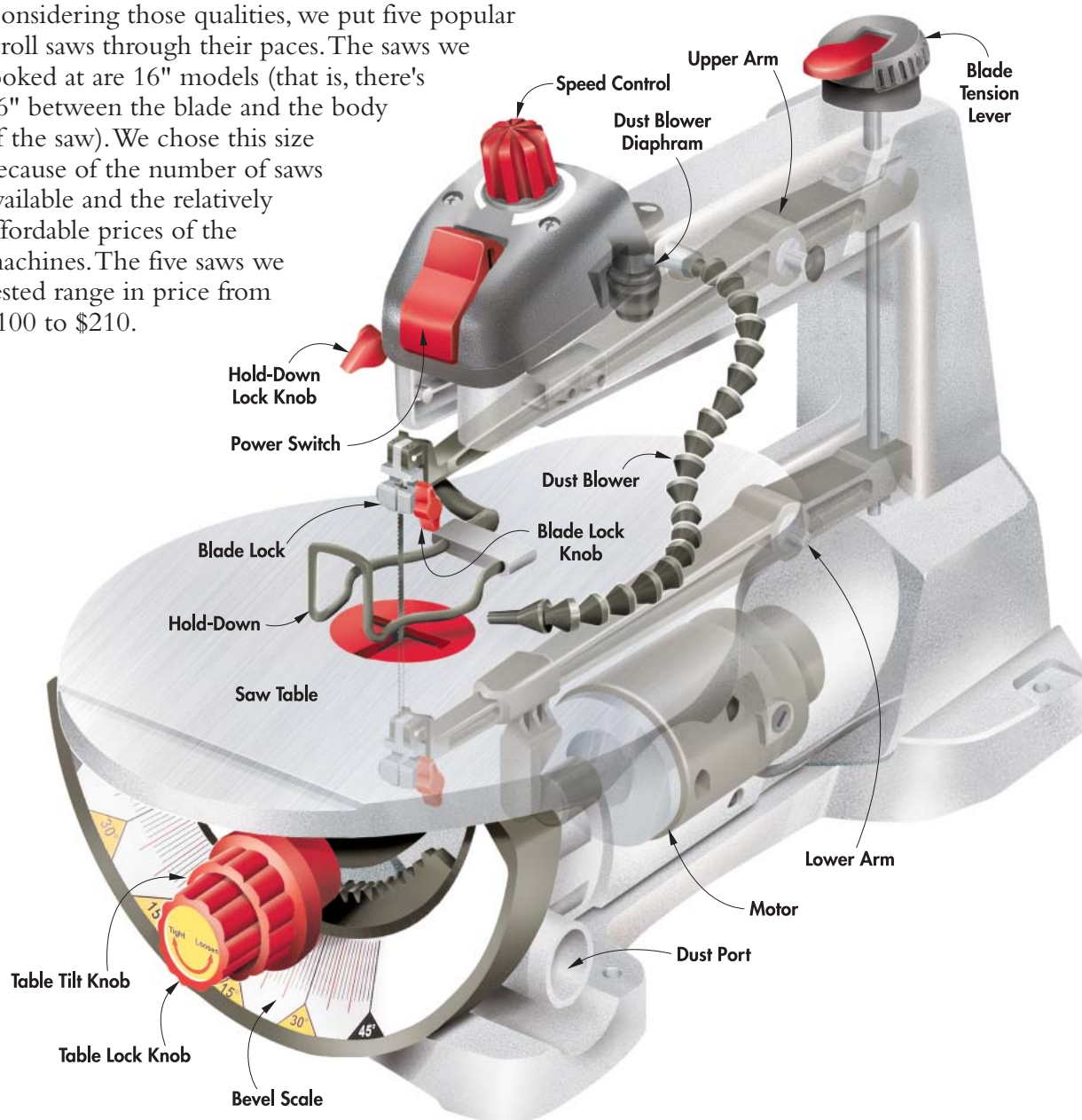
Few operations in a woodshop inspire creativity or offer instant gratification the way scroll sawing does. No matter how many times I sit down to scroll some intricate detail for a project, or even to create an entire project on the scroll saw, it never feels like production work.

In short, scroll sawing is an escape from some of the more mechanical procedures of woodworking. As such, it's important that your scroll saw be a comfortable and dependable tool that you look forward to using. It should be easy to set up and a pleasure to operate. It should also have well-placed controls that let you focus on those all-important project details.

Considering those qualities, we put five popular scroll saws through their paces. The saws we looked at are 16" models (that is, there's 16" between the blade and the body of the saw). We chose this size because of the number of saws available and the relatively affordable prices of the machines. The five saws we tested range in price from \$100 to \$210.

One of the most important test criteria was the vibration of the saws and how that impacted the quality of a cut. The pistoning action of the upper arm on a scroll saw makes for an inherently "shaky" tool. Saws that dampen the vibration make it much easier to follow the fine lines of a scroll pattern.

We also considered how easy it is to change blades, make bevel adjustments, and operate the power and speed controls without losing focus on the workpiece. Those features ultimately became the Details That Make a Difference, which are explained on the next page.



6 Details That Make A Difference

Convenient Controls

Top-mounted controls (versus under the table) are easy to locate and adjust without losing your concentration on the workpiece. They also offer a more universal “fit” for right- or left-handed users when compared to controls mounted on one side or the other.

Knuckled Air Hose

Air hoses with “knuckles” allow a wide range of adjustment, which lets you place the blower tip where it will do the most good.

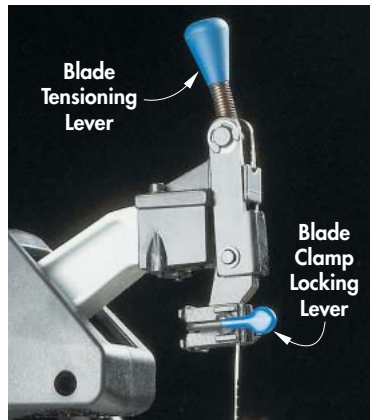
Stock Hold-Down

Hold downs should be easy to adjust (no tools required) with a full range of motion and a clear sight line.

Blade Changing

Mounting a blade in these saws was quite different from one machine to the next. So different, in fact, that we can't point to one saw and say it has the perfect system.

The type of controls, where they are located, and how much space there is to operate them all influenced our opinion of blade changing. We've explained the pros and cons of each configuration in the individual saw write-ups.



Left/Right Table Bevel

Tables that tilt left *and* right (instead of just left) offer greater flexibility in the way you make beveled cuts. But we discovered another benefit to tables that tilt both ways. Changing blades on the saws with right- and left-tilting tables was easier because, with the table tipped to the right, there's more room to access the blade clamp.

Work Light

We prefer saws that are equipped with a light, or at least have some provision for adding one as an accessory.

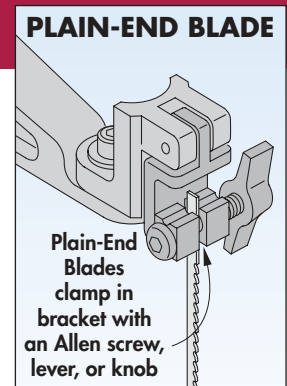
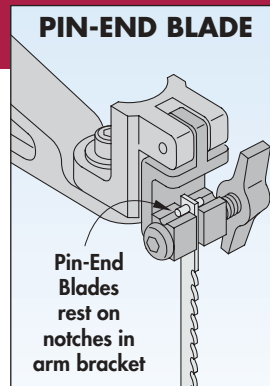
The Wilton and Dremel saws came with worklights. Ryobi offers a light as an accessory for their saw.



Pin-end vs. Plain-end

Another important factor in choosing a scroll saw is whether a saw accepts pin-end blades, plain-end blades, or both. Both is the best, naturally. But each type of blade has its merits.

Pin-end blades are popular with beginning scrollers because they're easy to install. Their downfall is that they are available in a limited variety of tooth patterns. Plain-end blades, while trickier to install, are available in a wide variety of tooth patterns. They're also better suited to pierce cuts since they have no pins to get in the way as you thread the blade through a hole in the workpiece.



Craftsman 21610



At a Glance:

Price:	\$139.99
Motor:	1.4 amp
Weight:	53 Lbs
SPM Range:	400-1,600
Blade Type:	Plain/Pin
Blade Stroke:	7/8"
Warranty:	1 year

Virtues: Top-mounted controls; L/R tilting table w/dial settings.

Vices: No worklight.

Verdict: Best of class, based on price and performance.

www.Craftsman.com
800-549-4505

The Craftsman 21610 has some of the most worthwhile features in this group of scroll saws. The power and speed control are not only located on top of the machine, which we prefer for convenience and safety to controls mounted under the table, but they're also large and easy to use.

The table bevel and lock operation is another big plus for this saw (Fig. 1). It operates with a two-stage dial. The outer collar of the dial

adjusts the table, the inner dial locks it in the desired position. This, combined with the large angle scale, make it easy to fine-tune the table to an exact setting. The bevel system also has detent stops at 0°, 15°, 30°, and 45°.

The table itself is cast steel, providing a flat, solid worksurface. The base of the saw is also cast. Together these two components contribute significantly to the solid heft of the machine, which does a great deal to dampen the vibration and make this a smooth running saw.

Changing blades on the Craftsman is relatively easy, using both plain- and pin-end blades, thanks to large tightening knobs on the blade holders. The operation could benefit from a little more space to get at the lower blade holder.

This saw also has a knuckled dust blower hose, which is good. But we found it to be even more useful when we removed the bracket that holds the blower to the upper arm housing (Fig. 2).

All in all, we found the Craftsman to have the right combination of features, performance, and price to award it our Editor's Choice.



▲ A two-stage dial adjusts and locks the bevel of the table. A large, easy-to-read scale and detents make accurate setup effortless.



▲ Large, overmolded knobs, an oversized, open hold-down, and an articulating hose are among the many stand-out features of the Craftsman saw.

At a Glance:

Price:	\$199.99
Motor:	2 amp
Weight:	60 lbs
SPM Range:	600-1,650
Blade Type:	Plain only
Blade Stroke:	3/4"
Warranty:	2 years

Virtues: Smooth running;
Quick-change blade system;

Vices: Troublesome dust bin

Verdict: Good performance,
but with a high price.

www.DeltaWoodworking.com
800-438-2486

Delta SS350



The Delta SS350 is a top-notch scroll saw with many outstanding features. But there are a couple things about this saw that had us scratching our heads.

On the upside, this is a stout machine that does a nice job of negating vibration, so it runs and cuts quite smoothly. Only at the highest speeds was it necessary to secure the saw to keep it from “walking.” Once secured to a bench, vibration became a non-issue.

This saw also has excellent blade changing manners. That’s thanks to Delta’s Quickset II Blade Chuck System, which uses quick-release

levers instead of the typical knobs. And this saw has the blade tensioning lever located right up front on the saw (Fig. 1).

We also liked the hold-down foot on this saw. It’s easy to adjust for both flat and bevel work and effective at stabilizing any size workpiece.

The knocks we have to give the Delta aren’t serious, but were enough to cost it the top spot in the test.

First is the table — it only tilts left, which limits the saw’s versatility compared to those with tables that tilt both directions.

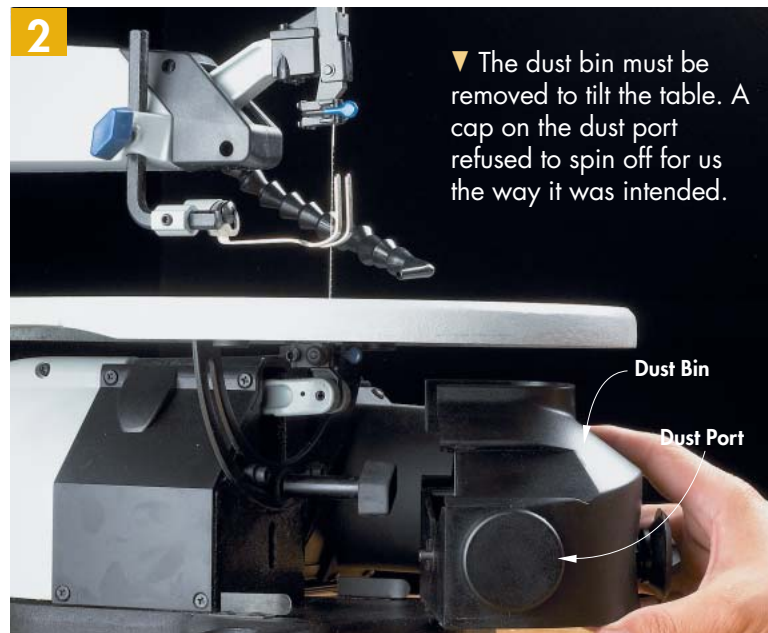
One more feature that could be improved is the dustbin (Fig. 2). The

container is effective at collecting dust, but it must be removed to tilt the table. Another oddity of the dustbin is the vacuum port. The port is supposed to twist off for attaching a hose. The cap on our saw wasn’t coming off unless we cut it off.

But overall, this saw is a top performer with great features. A few quirks and a relatively high price put it in the runner-up spot in this test.



▲ Delta’s blade tensioning and locking system uses quick release levers instead of knobs.



Dremel 1680

The Dremel 1680 offers solid performance and a number of excellent features. The high price, however, cost it a couple positions in our final ranking.

Where this saw truly distinguishes itself is in blade changing. In particular, operating the lower blade holder is especially nice because of the gen-



erous space created by tilting the table to the right and removing the storage compartment (see Photo, below right).

In terms of performance, this saw marks the middle ground. Vibration at high speeds was slightly more pronounced than in the heavier saws (Craftsman and Delta), but was tolerable with the saw fastened to a workbench. With the vibration thusly dampened, cutting was noticeably smoother.

As for details, Dremel got those all right, including top-mounted controls, an articulating hose, dual-bevel table, a worklight, a good hold-down, and it takes both blade types.

Considering all that, we'd never call the Dremel 1680 a bad investment — it's just a sizable one.

At a Glance:

Price:	\$209.99
Motor:	1.4 amp
Weight:	40 lbs
SPM Range:	500-1,600
Blade Type:	Plain/Pin
Blade Stroke:	3/4"
Warranty:	2 years

Virtues: Top-mount controls; Worklight; Hold-down foot.

Vices: Worklight is dim.

Verdict: An excellent saw, but at a premium price.

www.Dremel.com
800-437-3635



▲ Dremel's right-tilting table creates abundant space to access the lower blade holder.

Ryobi SC164VS

The Ryobi SC164VS is an affordably priced scroll saw that sacrifices some of the qualities of its more expensive counterparts, but still offers a good starting point with some growth potential.

That growth potential is evident in the fact that this saw

accepts both pin- and plain-end blades. So even if you buy it as a beginner, you won't be limited by blade choices.

The base saw can also be improved by adding Ryobi's accessory worklight. We'd prefer to have it included, but at this price, we don't mind adding it later.

Of course, there are more meaningful sacrifices. Vibration is quite pronounced in this lightweight machine. Even when bolted down, it was nearly insufferable at the highest speed setting, forcing us to moderate the speed for the smoothest possible cuts.

A fixed air hose, a table that tilts only to the left, and controls mounted below the table are a few more compromises that come with the

At a Glance:

Price:	\$99.97
Motor:	1.2 amp
Weight:	28 lbs
SPM Range:	400-1,600
Blade Type:	Plain/Pin
Blade Stroke:	7/8"
Warranty:	2 years

Virtues: Affordable price.

Vices: Tensioning knob; Fixed dust blower.

Verdict: Entry-level scroll saw at a budget price.

www.RyobiTools.com
800-525-2579



Ryobi's bargain price.

Just the same, we consider the Ryobi SC164VS a "Top Value" with a retail price that's under \$100, and a worthwhile choice for the entry-level scroller.

At a Glance:

Price:	\$109.99
Motor:	1.2 amp
Weight:	33 lbs
SPM Range:	500-1,700
Blade Type:	Pin only
Blade Stroke:	7/8"
Warranty:	2 years

Virtues: Controls; Worklight.

Vices: Fixed dust blower; Hold-down foot is too large.

Verdict: Very basic saw at a bargain price.

www.WiltonTool.com
800-519-7381

► A single knob controls the power and speed of the Wilton 99166 scroll saw.



Wilton 99166

The Wilton 99166 is a value-priced scroll saw with a mixed bag of strengths and weaknesses.

The performance is adequate, but it's essential that this lightweight saw be fixed to a workbench when running at higher speeds. Even then, we found it necessary to reduce the speed to keep vibration at a workable level so that we could stay true to the cut lines.

A couple of pluses for this saw are a fully adjustable worklight that's standard equipment and a unique power and speed control mechanism.

We don't care for the *location* of the control, but having both functions combined in a single knob is convenient (*Photo, left*).



One problem we do have with this saw is its unnecessarily tall hold-down. As far as we can tell, that extra height doesn't do anything but obstruct the view of the cut line. Other limitations include a fixed dust blower, pin-end-only blade capacity, and a table that tilts only to the left.

In general, the Wilton scroll saw is best suited to the occasional user with no plans for exploring advanced techniques requiring plain-end blades.

Fortunately, the reasonable price makes it an attractive tool for beginning scrollers.

SCROLL SAW RATINGS

Model	SET-UP				PERFORMANCE		FIT & FINISH	
	Table Tilt	Blade Change	Blower	Hold-down Foot	Vibration	Controls On/Off	Table	Base
CRAFTSMAN	A+	B	B	A	B	A	B	A
DELTA	B	B	A	A	B	B	A	A
DREMEL	A	A+	A	A	B	A	B	A
RYOBI	C	C	C	B	C	C	C	C
WILTON	C	C	C	D	C	A	C	C

Final Recommendations

Editor's Choice

CRAFTSMAN 21610

Solid construction, top-rate performance, and some excellent features earned Craftsman the top spot among these scroll saws. The remarkably fair price makes it an even more obvious choice for scrollers of any skill level.



Top Value

Ryobi SC164VS

For the truly budget-conscious woodworker, or for just occasional use, Ryobi is a good way to get an affordable start in scroll sawing while still having the versatility of using both pin-and plain-end blades.

