

13" Portable PLANERS

We test 7 premium machines to find out
which one belongs in your shop.

Photo by Al Parrish

Since our last review of portable planers in 2001, several manufacturers have introduced 13"-wide machines, and a couple even have two feeding speeds. So it was clear that it was time to take another look.

The two most significant changes are from Craftsman and DeWalt. Craftsman has added powered height adjustment that raises or lowers the cutterhead with the push of a lever. Also, a new internal dust-collection fan pulls chips away from the cutterhead and into a garbage can without a dust collector.

DeWalt also added an internal dust-collection fan, plus two feed speeds, similar to the Delta. But DeWalt went further, adding a three-knife cutterhead – all the others have two. The three blades significantly increase the opportunity for a fine finish.

DeWalt also upgraded its physical design. (The traditionally designed DW733 is now available in an upgraded DW734 version that is a 12½" disposable three-blade model. Disposable blades are used twice – once on each side – and are then thrown away. They can't be resharpened.) The new DeWalt has a short, wide design that has some advantages we will discuss later in this article.

Another significant change on the DeWalt is its lack of a head lock. All the other 13" models offer a manual head lock, which fixes the moveable head in place and reduces snipe. DeWalt eliminates snipe by adding strong springs to remove the "backlash" tendency of the head (one of the causes of snipe). The result is a glass-like finish with virtually no snipe and no head lock to engage.

by David Thiel

Comments or questions? Contact David at 513-531-2690 ext. 1255 or david.thiel@fwpubs.com.

Even with these changes, the DeWalt may not be the planer you need. It's pricey (\$479) and may be more machine than required. We've listed our individual comments on each of the test models on the following pages.

Putting Them to the Test

Our tests were based on real-world use. We tested how much amperage the motor needed, both while free-spinning and while making a 1/16" cut on a 6"-wide white oak board. We also tested the revolutions per minute on each machine (both with and without lumber being planed) indicating how the feed rate and cuts per inch changed under load. The best planers kept up their rpm without drawing huge amounts of additional amperage.

We also evaluated how easy the blades are to change. All of the test models use double-sided, disposable blades – a good economic option over resharpenable blades. And they all allow you to

drop them into a ready-to-use position without having to be set or adjusted. Check out "Three Blade Systems" below for additional information.

Understanding the Chart

We should mention the significance of some of the test categories. Feed speeds that are listed in the chart on page 61 are as stated by the manufacturers. A slower feed speed usually will improve the quality of your board's finish because each knife can take a smaller bite of wood, so there are more cuts per inch.

But you also have to take into consideration the cutterhead speed. An increase in rpm also increases the cuts per inch, and this should improve the cut quality. This means that a machine with a fast feed rate and a fast cutterhead may have the same number of cuts per inch as a machine with a slower feed rate.

Then there's the whole problem of whether the motor can

handle the higher cutterhead speed and feed speed under load. As we noted in the chart, some manufacturers have listed a different maximum depth of cut when you are planing a 6" or 13" board. This tends to indicate the motor won't perform at peak performance on a full-width board at a full-depth cut.

Feature Attractions

Other features that deserve comment are the depth stops and the material-removal gauges. Depth stops let you set the machine to plane a certain thickness time and again. Some of the machines offer several adjustable stops within a certain range. Two offer a single stop with infinite adjustment. Your methods of work will dictate the better system for you.

There also are two styles of material-removal gauges. These let you see how much of a bite you're going to take before you feed the wood through. Most offer a scale with graduations in 1/32"

up to 1/8". Delta's machine employs an indicator that snaps back into the housing when the material is contacted, but it doesn't have a scale. Again, personal preference will help you choose your favorite scale or gauge.

The Bottom Line

We got to test a number of nice machines. The Ryobi is a decent tool for a pretty low price, but only if you're an occasional woodworker. The Ridgid and Craftsman models both have advantages, but each is hampered by either price or the competition.

Ultimately the DeWalt planer walks away with our highest praise and Editor's Choice award. Its strong innovations and user-friendly design are only icing on the very impressive quality finish left on the material.

Of course, you could save \$80 and buy the Delta, which also has a very good quality of cut and two speeds. And so we award the Delta our Best Value prize. PW

THREE BLADE SYSTEMS: EASY, EASIER AND SUPERB

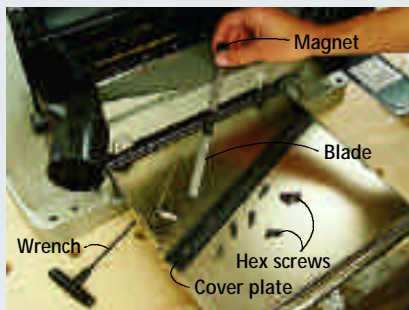
Five of the planers we tested use a good blade hold-down system that made it simple to adjust or change the knives. Pictured (below left) is what we call the "Screw-and-plate" system. You remove the hex-socket machine screws and a cover plate to remove the blade. When provided with the proper tools (a T-handle wrench and magnetic pickups) it's a user-friendly method.

Two better methods also were found in this test. The first, on the Delta, is a variation on the

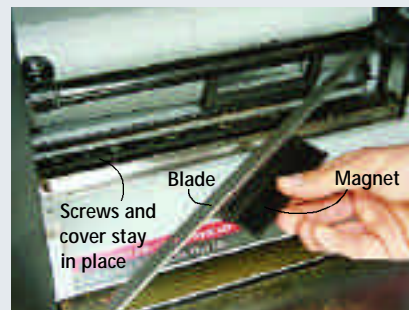
Screw-and-plate system. We call it the "Fixed Screw-and-plate" (below middle). You don't have to remove the screws and the cover plate; the screws need only to be backed out enough to lift the blade over the setting pins. This is achieved with reasonable ease using the magnetic tool provided. With this system, there's little chance of losing screws.

The last method is found on the Ridgid, and we call it the "Fixed Nut-and-plate" (below

right). Similar to the Delta, the cover plate doesn't need to be removed to adjust or change the blade, only backed off. Using square nuts rather than socket-hex screws is an advantage. It has been our experience that the socket-hex screws are easy to strip (especially when they're machine-tightened from the factory – see the Shop Fox review) and the square nuts are more reliable. In fact, we'd rather see a square or hex bolt on all of the "Screw-and-plate" models.



Screw-and-plate



Fixed Screw-and-plate



Fixed Nut-and-plate

CRAFTSMAN 21743



This is a pretty good planer with nice features, but it also has a couple of things that curb our enthusiasm. The powered height-adjustment feature lets you quickly raise or lower the head without making yourself dizzy turning a handle. It's nice, but not really necessary. The built-in dust-collection fan, however, is functional, necessary and pretty darn cool. It might sound gimmicky, until you consider that this machine doesn't need to be hooked up to a dust collector to remove the chips. You just saved \$150 and some floor space. This also is the only machine with fold-up extension tables that allow you to close the outfeed table with the dust collection device still in place.

The motor is sort of a good story/bad story. Running at the slowest speed in the test

(8,000 rpm, which is bad for cut quality), it actually appears to be an efficient motor when looking at the amperage spike during operation. Closely related to the rpm is the cut quality. The Craftsman is tied for the lowest cuts per inch (50) in the test. Happily, the finish is within an acceptable level. The blade change is acceptably easy, though there are springs under the cover plate that were a nasty surprise, popping loose and heading toward the interior of the planer. The height scale is located horizontally across the top of the infeed side, an unusual location. It is in both English and metric, and is difficult to read. As the second-highest-priced model in the test, the Craftsman had a couple of good points, but not enough to warrant the price compared to the competition. (craftsman.com)

DELTA 22-580



One of the "old guard" in the test, the Delta performed admirably against the youngsters. Priced in the middle of the pack, the two feed speeds provided a quality finish. The amperage draw also was in the middle of the pack, and well below a 15-amp circuit concern. Snipe with the head lock in place was less than .001" – good enough for us. The head-lock lever is mounted on the right side and is easier to access and engage than others in the test. The full-height depth stop is a nice feature, but we're a little conflicted about whether having the ability to set only one stop at a time is a limitation. It will probably depend on your woodworking habits.

While the Delta has what can be called a wood-removal gauge, it's more of a contact indicator rather than a scale and does not tell you

how much material will be removed in a pass. As with most of the dust diverters in the test (available as an accessory on the Delta), this one impedes the outfeed table closure. The blade-changing system on this model is one of the best. The pop-top access is an excellent feature, offering lots of room and light. The head can be turned to the correct position from the exterior of the machine by using a tool, so there's less chance of getting nicked. Not having to take out the cutter-head screws is a strong plus in our book. The height scale is graduated in $\frac{1}{32}$ " and is fairly easy to read. When we ended up tallying the numbers, the Delta's cut quality (owing to the two feed speeds), motor performance and price were impressive enough to give this planer our Best Value award. (deltawoodworking.com)

DEWALT DW735



The DeWalt is the leader of the pack. It's the most expensive, but only by \$50 and we think that's justified. It stands out for a number of reasons, the obvious one being visible. The motor and head are mounted side-by-side rather than on top of one another. There are no standard infeed or outfeed tables, but the $19\frac{1}{2}$ " table is larger than the more-standard 9" - to 13" -deep beds. Most importantly, it uses a three-knife cutterhead that, in conjunction with the two feed speeds, offers an excellent finished surface. Because of the extra knife, each is working less, extending the life of the blades. Also an important part of the "finish" process is the lack of a head lock. Rather than being immobilized, the DeWalt's head is under constant pressure to counteract the movement that causes snipe. It's always on and it really works.

Other features include a wood-removal gauge (running the full width, not just measuring at one

point as with the other machines in the test) and a clear height scale graduated in $\frac{1}{32}$ ". The height adjustment moves smoothly, and the integral dust-collection fan leads to a snap-in port with two sizes (4" and $2\frac{1}{2}$ ") for hose hook-up or attachment to an optional garbage-can hood accessory. Access to the blades is excellent, with the whole top coming off via four screws that stay attached to the hood. Inside there are bright red, easy-to-reach finger bolts to release the head cover. The rest is pretty simple, but it's still the same cover with hex-head screws that have to be fully removed. On most of the planers it is noticeably harder to raise the height of the head than to lower it. But this is fluid in either direction. Amperage spike during operation was decent, but we did notice higher amperage draws in general, so make sure it's on a 20-amp breaker for best performance. This is a well-engineered and thought-out machine. (dewalt.com)

RIDGID TP1300LS



In the 13" category, the Ridgid is better outfitted with features than the average planer. It's a mid-priced machine with a dust diverter (which blocks outfeed table closure but also offers deflection to either side by switching the diverter cap location), a cord wrap, on-board tool storage in a clever side-mounted tool box, and very convenient access to the cutterhead (as with the Delta, the whole top pops off). One feature on the Ridgid that is unique in the test is the blade-change mechanism, using a "Fixed Nut-and-plate" configuration (see "Three Blade Systems" on page 58). There's no need to remove the nuts to release the blades; just back the nuts off a few turns.

The blade alignment on the TP1300LS is

slightly different than on the rest of the planers in the test. Still efficient and offering lateral adjustment, the blades align via hooks on the ends rather than the common pins on the competitors. The height scale, graduated in inches (by $\frac{1}{32}$ ") and millimeters, is reasonably easy to read. The TP1300LS also comes with an extra set of knives and a stand, in case you want it to be less mobile. During operation the amperage draw was low enough for a 15-amp circuit and indicated a reasonably efficient motor. The finished cut was reasonably good with less than .001" snipe with the head lock engaged. The Ridgid put in a good performance in the test, but it was ultimately beaten out by the more feature-laden three-knife DeWalt. (ridgid.com)

RYOBI AP1300



Priced \$109 less than the next model in line, we didn't expect amazing results from the Ryobi. But we did find a planer with a number of quality features that turned in an OK performance in regards to the final finish. The graphics on all the controls indicate that the machine is geared towards first-time users. Unlike most machines in the test, the cord is stored in a cloth bag attached to the underside of the outfeed table. It's a little easier to access and put away, but this is not a huge benefit. The head lock is a large lever that very obviously lets you know when it's engaged. It's not a huge benefit, but it's nice for the novice.

As with most models, the dust diverter impedes the closing of the outfeed table. The top of the machine offers a handy little tool box, but

they forgot a tool that should be included – magnets. Most of the machines in our test offer magnets to handle the blade covers and the blades themselves. While the Ryobi does have "finger lifts" on the standard "Screw-and-plate" blade cover, you still end up handling the blades with your flesh – not preferred. The height scale is graduated in inches (by $\frac{1}{16}$ ") and millimeters and has clear, understandable graphics. The motor is of average efficiency, but the finish cut fell short with the poorest example of snipe in the test. This machine is priced well for someone who is likely to use it occasionally and won't have unrealistic expectations about performance. But if you want a planer for the long haul, we can't recommend this one. (www.ryobitools.com)

SHOP FOX W1675



The Shop Fox typifies the average planer for this category. Its features include a wood-removal gauge, head lock, tables with rollers and a dust diverter that blocks the outfeed table from closing fully. It has an infinitely adjustable depth stop that functions between $\frac{1}{8}$ " and 2", but it can only be set to one height, unlike the "preset" stops found on other planers in our test. This model also uses the "Screw-and-plate" blade cover, but the screws were overtightened at the factory, and we stripped two screw heads (and even stripped the tip off the hex wrench)

when we tried to change the blades. If you choose the Shop Fox, we suggest that when you take the blades out for

the first time, take it slow and then replace the screws with better-quality screws.

During the test, the motor showed a very high amperage spike and pushed over a comfortable 15-amp breaker level. The board finish was reasonably clean and smooth with good snipe performance at less than .001". This machine is sadly the only one in the test that doesn't offer lateral adjustment for the knives to compensate for nicks – that's an oversight. When adjusting the cutterhead height we felt it was rougher to move than expected. Even with the reasonable performance, the lack of features and the difficulties in operation don't justify the price of this machine. (woodstockinternational.com)

WOODTEK 115-946



We're just going to call the Woodtek the "Craftsman Light" planer. These two models are the only ones in the test offering 8,000-rpm motors (providing the least cuts per inch, which is going to adversely affect the quality of the cut). There are significant structural similarities between the two machines, but the Woodtek is missing the dust-collection fan, the auto-height feature and the chain-drive mechanism; it uses a plastic transverse tooth drive. It does have a head lock, a wood-removal scale and the "Screw-and-plate" blade cover with the tools (even the magnetic holders) stored on the machine. The height scale is graduated in inches (by 1/16") and millimeters. It's adequate for the task, but we prefer a 1/32" gradua-

tion. The manufacturer has also thrown in an extra set of knives.

During testing we found that the Woodtek has the highest amperage spike while under load and the recorded amperage draw may cause problems if your shop is equipped with only 15-amp breakers. Conversely, the rpm loss on the Woodtek was the lowest in the category, so perhaps the amp spike is useful for performance. The snipe test measured out at about .002", which isn't terrible but also not the best. Priced at the same level as the Delta and Ridgid, the Woodtek should offer more features or equal cut quality, but it doesn't. If you're looking to spend \$380 on a benchtop planer, make it an even \$400 and buy the Delta. (woodworker.com) **PW**

13" PORTABLE PLANERS

	Craftsman 21743	Delta 22-580	DeWalt DW735	Ridgid TP1300LS	Ryobi AP1300	Shop Fox W1675	Woodtek 115-946
PRICE	\$440	396	479	397	270	399	379
MOTOR SPEED (RPM)	8,000	10,000	10,000	9,500	9,900	10,500	8,000
CUTS PER INCH	50	60/90	96/179	66	66	67	50
FEET PER MIN.	26	20/30	14/26	26	25	26	26
CUT CAPACITY (MAX)	13" x 6"	13" x 6 1/2"	13" X 6"	13" x 6"	13" x 6"	13" x 6"	13" x 6 1/8"
MAX DEPTH OF CUT *	3/32"	1/8", 1/16"	1/8", 1/16"	1/8"	1/8"	1/8", 1/16"	1/8"
TABLE LENGTH & TYPE **	12" F/R	12 1/2" F	N/A	12" C	11" C	12" F/R	12" F/R
CORD LENGTH & TYPE ***	6' P	8' P	10' RB	10' P	8' P	8' P	8' P
DEPTH STOPS (#/LOC.) †	6 1/8" - 1 1/4"	IN/1/8" - 6 1/2"	6 1/8" - 1 1/4"	8 1/8" - 1 3/4"	8/0" - 1 3/4"	IN/1/8" - 2"	6 1/8" - 1 1/4"
WEIGHT (LBS)	97	97	92	85	77	93	77
AMPS/NO LOAD	8.7	6.8	10.8	7.4	7.68	7.12	6.83
AMPS/UNDER LOAD	12.5	12	15.2	13.8	14.2	16	16.5
AMPERAGE SPIKE	44%	76%	41%	86%	85%	125%	142%
RPM/NO LOAD	8,000	9,600	9,300	9,500	9,760	10,500	8,000
RPM/UNDER LOAD	5,750	6,700 ††	8,000	6,600	7,500	7,000	7,500
RPM LOSS	28%	30%/27%	14%	31%	23%	33%	6%
DECIBELS	94	89	94	90	92	91	92
BLADE †††	2D	2D	3D	2D	2D	2D	2D
BLADE SIZE (INCHES)	.056 X 1 5/32	.058 X 1 5/32	.060 X 7/8	.070 X 3/4	.060 X 1 5/32	N/A	.056 X 7/8
KNIFE CHANGE/EASE ‡	SP/3	FSP/5	SP/4	FNP/5	SP/3	SP/2	SP/4
SNIPE (W/LOCK)	.002	<.001"	.002	<.001"	.007"	<.001"	.002"
DUST COLLECTION ††	IF	DNI	IF	DI	DI	DI	DI

* When two numbers shown, manufacturer has specified different maximum cut for full-width boards

** C = Corrugated, F = Flat, R = With rollers

*** P = Plastic, RB = Rubber

† IN = Infinite settings

†† rpm is 7,000 on fine setting

††† All blades are double-edged

‡ FNP = Fixed Nut-and-plate, FSP = Fixed Screw-and-plate, SP = Screw-and-plate; 5 is best, 1 is worst

‡‡ DI = Diverter included, DNI = Diverter not included, IF = Integral fan