

SHOP TESTED

4-Jaw Lathe Chucks

Teknatool Nova G3

Whether you turn bowls, platters, hollow vessels, or finials—maybe the cake pedestal on page 58—a 4-jaw chuck provides all the holding power you need. It's also simple to use. Once you try one, you might never go back to using a faceplate! We tested nine chucks, and found that little details make the better performers rise to the top.

4-jaw fundamentals

Mounted to the lathe spindle, this type of chuck grips by compressing its jaws around a tenon (above) or expanding them into a recess [Photo A]. Each chuck we tested comes with a set of #2 jaws

that expand from about 1½" to 3½"—depending on the model—and three chucks also include extra jaws in other sizes. You can buy additional jaws for the other chucks. Although a chuck with #2 jaws can turn most any workpiece, it's best to use the largest jaws possible for your workpiece. This maximizes the amount of surface area supported by the jaws, and minimizes vibration, especially when turning longer workpieces, such as a hollow vase.

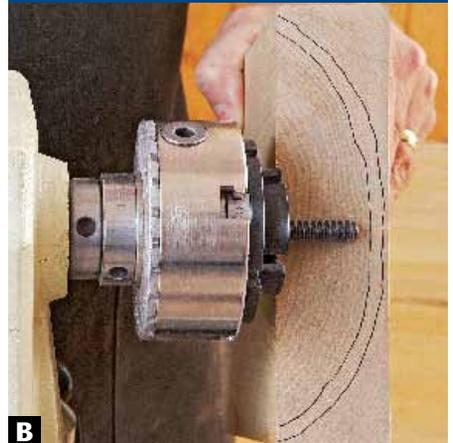
We chose to test only chucks that use a keyed wrench to operate the rack-and-pinion scroll that opens and closes the jaws. (It works just like the chuck on a drill press.) You can buy chucks that

SAVE TIME WITH A HIDDEN RECESS



A Expanding the jaws inside a recess saves you the effort of later turning away a tenon to finish the project's bottom.

TOO MUCH OF A GOOD THING



B A screw center extending more than 1" from the jaws, such as this Vicmarc, could potentially compromise the bottom of your bowl.

tighten with two levers—some virtually identical to ones we tested—but we find the keyed chucks worth the extra \$20–\$30 because they leave one hand free to support the workpiece when mounting it. That said, many lever-operated chucks have about ¼" greater diameter capacity than keyed chucks. (Find the jaw range for each chuck in the chart on the next page.)

Details make a difference

In our test, all of the chucks performed well at gripping tenons and recesses. We repeatedly forced bowl-gouge catches, and never had a piece come loose. But the following differences separate the best from the rest:

■ **Screw centers.** Each chuck comes with a screw center [Photo B] that you tighten in the jaws and use to mount a rough blank for turning the basic outer shape as well as the tenon or recess. With that done, you remove the screw center and flip the piece around, clamping its tenon or recess in the jaws.

We like a screw center that extends no more than 1" beyond the jaws. But screws on the Grizzly H6265 and Vicmarc VM100 stick out 1⅜", making them too long for use with blanks less than 2" thick. (With these models you can work around this limitation with homemade spacers.) Also, some screws held blanks tighter than others thanks to their crisp threads. Our favorites: the Oneway Talon and Teknatool's Nova G3 and SuperNova2.

■ **Mounting styles.** Five of the chucks feature dovetail-shaped jaws, with the others using straight jaws that extend perpendicular to the chuck face. Both styles gripped tenons and recesses equally well; but we found turning dovetailed tenons and recesses more tedious because they need to match the angle precisely. We like the crisp jaw tips on the Grizzly and Vicmarc chucks best when working with short tenons and shallow recesses.

Tops for turners

The Oneway Manufacturing Talon chuck, shown in **Photo A**, earns our Top Tool award for its flawless performance. But for less than half the money, Teknatool's Nova G3 chuck, shown *far left*, proved a solid performer and our Top Value.

Produced by **Bob Hunter** with **Brian Simmons**

An in-depth look at 4-jaw chucks

Chuck	#2 Jaw Capacity (Tenon; Recess)	Screw center length (from jaws)	Jaw type (straight or dovetail)	Price	Comments
Craft Supplies Apprentice 454-0200 800-551-8876 woodturnerscatalog.com	1½–3"; 2–3⅝" Included-jaw range: ⅜–4⅜"; 1⅛–5¼" No additional jaws available	1"	S	\$170	You get four sets of jaws, letting you chuck workpieces in a wide range of sizes. With a tenon-gripping range of 1½" for its #2 jaws—best in the test—this chuck holds even large turning blanks securely. The screw center installs with a double-locking system that ensures it won't come loose. We wish its rack-and-pinion mechanism turned smoother than it does.
Grizzly H6265 800-523-4777 grizzly.com	1¼–2⅝"; 1⅜–3⅜" Optional-jaw range: ⅜–4"; 1–5"	1⅜"	D	\$105	We like its crisp-tipped jaws for gripping short tenons and shallow recesses. But its long center screw can be bothersome when working with stock less than 2" thick. Nearly identical to the Vicmarc VM100, the H6265 accepts Vicmarc accessories.
Oneway Talon 800-565-7288 oneway.ca 	1½–2⅝"; 2–3⅝" Optional-jaw range: ¼–11"; ⅝–12"	¾"	S	\$230	The Talon is the only tested chuck that locks to the lathe spindle for safe reverse turning (for sanding or use from the other side of the lathe). Its stout screw center and jaws held every blank securely, and its open back makes for easy cleaning. Oneway offers nine sets of optional jaws.
Penn State Barracuda2 800-377-7297 pennstateind.com	1½–2⅝"; 2–3¼" Included-jaw range: ⅜–4⅜"; 1⅛–3⅝" Optional-jaw range: ⅜–7 9⁄16"; 1⅝–8⅜"	1"	S	\$190	The Barracuda2 comes with four sets of jaws for greater capacity, and its open-back design allows for easy cleaning of debris. But large blanks frequently worked loose from the screw-center threads, forcing us to do the minimum turning needed to form a tenon or recess so we could flip it around to mount in the jaws.
Robert Sorby Patriot 44-114-225-0700 (England) robert-sorby.co.uk	1⅝–2⅝"; 2–3⅜" Optional-jaw range: 1–5¼"; 1½–4⅜"	⅝"	D	\$220	The heaviest chuck in our test, the robust Patriot has the smoothest-operating jaws, although we found the 8"-long, T-handle ball-end wrench cumbersome. With more than a dozen accessory jaw sets and spindle adapters, there's almost no turning blank or lathe it can't work with. The chamfered jaw tips require a deeper recess than most chucks to get a good grip.
Teknatool Nova G3 866-748-3025 teknatool.com 	1⅝–2⅝"; 2¼–2⅞" Optional-jaw range: ⅝–3⅝"; ¾–4⅝"	1⅞"	D	\$120	Despite its small size and light weight, this sturdy chuck is one of our favorites. Even though it has the smallest range of jaw motion in the test, nearly a dozen optional jaw sets easily adapt it to your work. The scroll and jaws glide smoothly and grip with ease, but this New Zealand-made chuck tightens in the opposite direction from other chucks—a bit confusing until you get used to it.
Teknatool SuperNova2 866-748-3025 teknatool.com	1⅝–2⅝"; 2¼–2⅞" Optional-jaw range: ⅝–5"; ¾–5¼"	1⅞"	D	\$160	Featuring the same jaws, capacities, and screw center as the Nova G3, the SuperNova2 is essentially a heavier version of its little brother. But its closed back, meant to block dust, actually makes it more difficult to clean the debris that inevitably gets in. And you'll need to buy an optional wrench to remove this chuck from the lathe spindle.
Vicmarc VM100 61-7-3284-3103 (Australia) vicmarc.com	1¼–2⅝"; 1⅜–3⅜" Optional-jaw range: 1–16¼"; 1⅝–18⅞"	1⅜"	D	\$210	We like the crisp jaw tips on the VM100 for gripping short tenons and shallow recesses. But its scroll mechanism operated stiffer than the others, and the screw center not only extends farther than we care for, but also worked loose in the chuck multiple times during testing.
Woodline Falcon 800-472-6950 woodline.com	1½–3"; 2–3⅝" Included-jaw range: ⅜–5½"; ⅝–6¼" Optional-jaw range: 1¼–8⅝"; 2½–8⅝"	1⅞"	S	\$230	The Falcon tied with the Apprentice for greatest #2-jaw range (1½"), and its screw center holds large blanks securely. It comes with four sets of jaws and the best storage case in the test. Although one of those jaw sets has rubber tips for gripping turned bowls and vessels by the rim so you can finish the bottom, the jaws open only to 5⅝" in diameter—not all that useful if your lathe is capable of turning a 10" or 12" bowl. 🌿