

A close-up photograph of a person's hands operating a Porter-Cable router on a wooden workbench. The person is wearing a plaid shirt. The workbench is equipped with several custom-built jigs and fixtures, including black metal clamps and a wooden block with a metal track. The router is a silver and black unit with a black handle. The background is dark, and the lighting is focused on the work area, highlighting the wood grain and the dust kicked up by the router.

Lee Valley

FOCUS ON: Workholding Jigs & Fixtures

**a guide to accessories
& materials**

July 2018

Workholding: Jigs & Fixtures

Workholding has always been a major component of woodworking. Effective and flexible workholding options allow objects to be restrained, located or oriented in a manner that permits the best access for or the most control over tools. This is as true of powered work as handwork. A large part of a typical woodworker's shop arsenal is devoted to workholding tools: benches, clamps, vises, jigs and fixtures.

Of course, any woodworker can choose to build their own workholding devices, and we have designed a range of parts, components and tools that enable you to adapt the concept in a manner that suits you best. The following pages show our comprehensive line of work surfaces, accessories, components, hardware and tools that make building your own workholding components straightforward.

While it is common practice to use the words "jigs" and "fixtures" interchangeably, they do mean different things, though the exact definitions can vary by industry. A woodworking jig is generally a device or tool that is used to control (guide) the location and/or motion of another tool. Common woodworking jigs include drill guides, dovetail jigs and miter boxes. A fixture is generally a tool that locates or supports work for repeatability and conformity, adding the element of controlling or referencing an operation or tool position to some feature of the work. Common woodworking fixtures are clamping fixtures and crosscut sleds.

Whether you call the device you make a jig or a fixture, it is invariably a type of workholding device that makes workshop tasks more repeatable, safe, efficient and accurate.

Variable and Fixed Elements

Our workholding accessories can be broadly split into two groups – fixed and variable elements.

Our fixed elements mount in a standard $\frac{3}{4}$ " hole, typically laid out in a precision grid. The symmetry of the grid can be useful for setting fences or stops in positions which are parallel or perpendicular to other elements.

The variable elements use inlaid track or extrusion that defines a continuous locus of possible positions for the workholding elements.

Jigs & Fixtures

Fixed Clamping



Variable Clamping



Fixed Stops



Variable Stops



Variable Positioning



Worksurface



Work Area



JIG & FIXTURE ACCESSORIES

Worksurface™	4 - 5
Fixed Clamping	6 - 7
Variable Clamping	8 - 9
Fixed Stops	10
Variable Stops	11

JIG & FIXTURE MATERIALS

Variable Positioning	12 - 13
Movement	14 - 15
Tools	16 - 19
Workholding Hardware	20 - 22
Where to Get Ideas	23



Worksurface™

In most shops, the workbench is the primary workstation. A good workbench design will accommodate the user's preferred methods of work while incorporating the flexibility to handle a variety of workholding tasks. Of course, when used for workholding, part of the bench is "consumed" by that operation, reducing the capacity of the workstation for other tasks. The Worksurface™ has been designed as a useful complement to any style of workstation. Not only does it add much-needed workholding capacity to a shop, it can have a tremendous impact on your workflow as well.

High-quality ply components produced on a CNC router ensure the precision of the 3/4" diameter hole grid. Each Worksurface has a T-slot track perimeter and is supplied with sturdy rubber feet. It is compatible with a wide range of T-slot track and 3/4" dog-hole mount accessories (which you may already own!). Optional machined ply risers are available in three sizes. Some of the benefits of using the Worksurface are:

1) It is portable.

You can't always take your bench with you. A Worksurface is highly portable and can be brought where the work is to perform some of the same functions as a bench, using many of the same accessories.

2) It can transport held work.

It can be used as a carrier, allowing held work to be moved between stations (for example, moving held work from a bench to a drill press and back).

3) It doesn't permanently "consume" bench space.

Held work can be removed from a workstation when not being worked on.

4) It can be left "set up".

When used for repetitive tasks, your Worksurface can be left configured to hold or position repetitive work.

5) It can be used at any height while workholding.

6) It can be oriented at an angle or easily rotated while workholding.

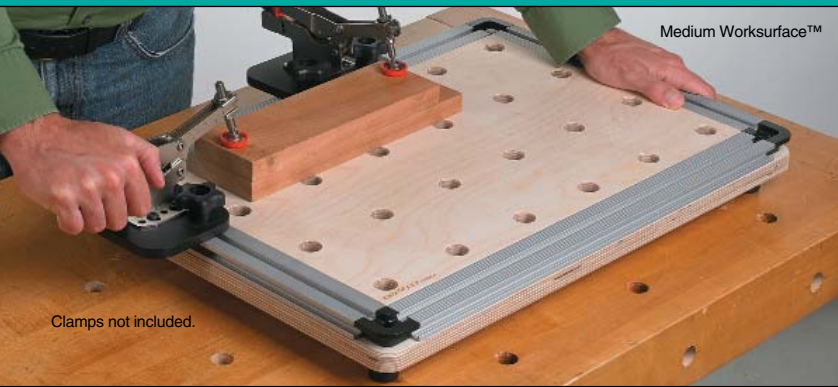
The Worksurface has the potential to change how you use your bench, for the better. It's an excellent bench accessory, and a new way of looking at how you use your shop – how you work, where you work, and how much you can work on at a time.



Large Worksurface™



Compatible with a range of T-slot track and dog-hole accessories (not included).



Medium Worksurface™

Clamps not included.



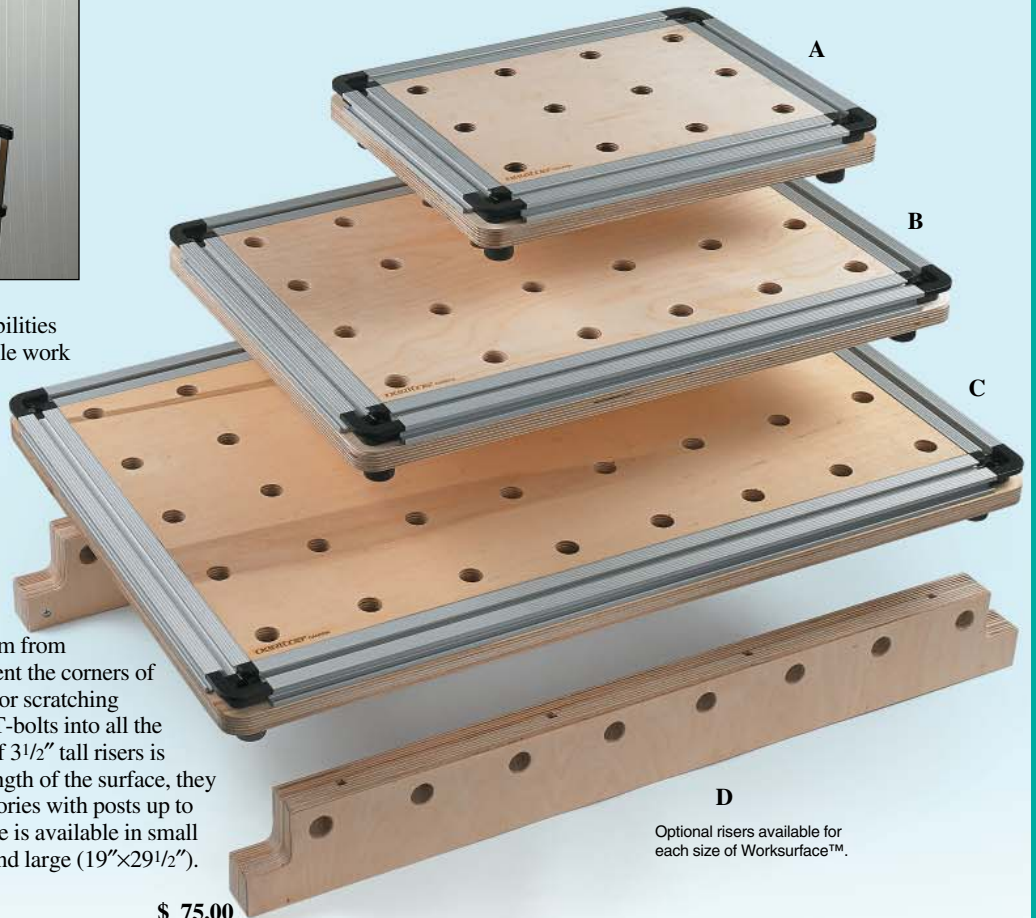
Small Worksurface™

Clamps not included.



Clamps not included.

Medium risers attached to medium Worksurface™.



D

Optional risers available for each size of Worksurface™.

Veritas® Worksurface™

Providing many of the hold-down capabilities of a traditional workbench, these portable work surfaces have an array of 3/4" diameter dog holes plus a perimeter of 1/4-20 quad T-slot tracks for securing clamps and jigs. The 1 1/2" thick platform is made from tough, stable Baltic birch plywood. Four 1" tall rubber feet provide about 2 1/2" of clearance – enough for dog-hole accessories with posts under 2 3/8" long (such as our Bench Pups® or bench blade). The rubber feet also help prevent the platform from shifting in use. Plastic corner caps prevent the corners of the T-slot tracks from snagging clothes or scratching work; keyholes in the caps let you slot T-bolts into all the tracks without removing them. A pair of 3 1/2" tall risers is available separately; running the full length of the surface, they elevate the platform so dog-hole accessories with posts up to 4 7/8" long can be used. The Worksurface is available in small (12"×15 1/2"), medium (15 1/2"×22 1/2") and large (19"×29 1/2"). Made in Canada.

- A. 13K14.01 Small Worksurface™ \$ 75.00
- B. 13K14.05 Medium Worksurface™ \$ 95.00
- C. 13K14.09 *Large Worksurface™ \$119.00
- 13K14.02 Small Risers, pr. \$ 23.50
- 13K14.06 Medium Risers, pr. \$ 31.50
- D. 13K14.10 Large Risers, pr. \$ 38.50

*A shipping surcharge of \$10 applies in addition to our regular shipping charges. For areas outside of the Continental USA, contact Customer Service for shipping rates.

Hardware for Custom Work Surface

If you want to make your own custom work surface, it can be easily constructed using two layers of 3/4" thick stock and our quad T-slot tracks (see page 13 for full description). Corner caps and rubber feet are available in sets of four to complete it.

- E. 13K10.02 2' Quad T-Slot Track, ea. 1+ 3+ \$14.10 \$12.00
- 13K10.03 3' Quad T-Slot Track, ea. \$19.10 \$16.20
- 13K10.04 4' Quad T-Slot Track, ea. \$24.10 \$20.50
- F. 13K14.13 Plastic Corner Caps (4) \$ 5.50 —
- G. 13K14.14 Rubber Feet (4) \$ 6.90 —



Fixed Clamping

A grid of holes offers convenient access points for fixed clamping elements such as hold-downs and dogs. Hole-mounted accessories are fast to set up, can exert force vertically or horizontally, and can handle curved work and irregular shapes, as many fixed clamping devices have a reach or range of motion that spans the distance between grid holes. Both of our hold-downs have optional short posts which can be screwed in place of the standard 10" long posts.



Cam lever clamps the work and wedges the post in place.

Barb-shaped ridges prevent upward movement when the post is canted.

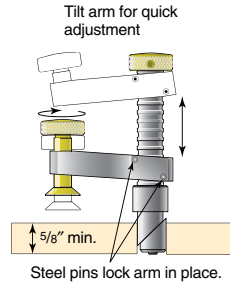
A. Veritas® Fast-Action Hold-Down 🍁
 This is an excellent hold-down clamp. Just insert the post into any 3/4" hole until the arm touches the workpiece, then throw the hardened steel cam lever to simultaneously clamp the work and wedge the post in place. Fine barb-shaped ridges prevent upward movement when the post is canted, while still allowing easy entry into a hole. To release it, you simply flip the lever back. The forged steel arm has a low-profile clamping end, allowing good access to work from all sides. To improve grip and protect the surface of the workpiece, an optional leather pad is included that can be attached to the end of the arm. The hold-down has a 5" throat depth, and the 10" post gives you 8" of clamping capacity. For use in holes where through travel is limited, a retrofit shorter hold-down post is available separately. At just 5 1/2" long, it provides about 4" of clamping capacity. Can be used vertically in the top of a bench or horizontally in a side skirt; solid wood at least 1" thick is recommended. Made in Canada.
05G47.01 Fast-Action Hold-Down **\$89.50**
05G14.02 Optional 5 1/2" Post **\$ 9.90**

B. Veritas® Hold-Down 🍁
 The Veritas hold-down can clamp workpieces to a bench or anywhere a 3/4" hole can be drilled. Exceptionally high clamping forces can be obtained with this hold-down for two reasons. First, with the arm free to pivot independently, all levered forces are exerted downward, without any losses due to horizontal slippage from the canting action of the hold-down post. Second, the fine barb-shaped grooves on the post resist upward forces, yet still allow easy entry into a hole. The long, low-profile arm, made of forged steel, is unobstructed at the clamping end, allowing good access to work from all sides. The machined steel 10" hold-down post gives you 8" of clamping capacity, matching the 8" throat capacity. For use in holes where through travel is limited, a retrofit shorter hold-down post is available separately. At just 5 1/2" long, it provides about 4" of clamping capacity. Can be used vertically in the top of a bench or horizontally in a side skirt. Clamping forces are infinitely variable by tightening the clamping knob (machined brass) to any degree.
05G14.01 Veritas® Hold-Down **\$99.00**
05G14.02 Optional 5 1/2" Post **\$ 9.90**

See page 21 for the Veritas® Bench Anchor and its associated products for use in jigs and fixtures.

C. Veritas® Surface Clamp 🍁

This fast-acting surface clamp can be used anywhere you can drill a 3/4" hole. The post has a wedging mechanism that anchors it firmly (horizontally or vertically) in material as thin as 5/8" (depending on the strength of the material), making it ideal for use in jigs and fixtures, e.g., sliding tables for saws. The clamp arm (which slides easily on the post when tilted, but locks at 90°) has a 2 1/8" throat depth and can grip anything from veneer to material up to 3 3/4" thick (3 1/8" when the post collar is used as a depth limiter). Anchor wedging is controlled by the brass knob on the post and clamping force by the knob at the arm tip. Used horizontally, the post collar acts as a material support. Used vertically, the collar is a rub ring that protects workpieces from accidental damage by the post rings. Precision machined from brass, steel and anodized aluminum, this is a versatile work support and clamp. Made in Canada. Patented.



05G19.01 Surface Clamp, 3/4" Post, ea.

\$76.50



Veritas® Wonder Dog® & Wonder Pup® 🍁

At 6 1/2" long, the versatile Wonder Dog clamp can be used anywhere you can drill a 3/4" hole. It makes it easy to clamp curved work and irregular shapes. Since the dog head has two screw holes, any shape of tip can be cut with a scroll saw and quickly attached for specialized work, giving good control without marring work.

Using a Wonder Dog in combination with a standard round bench dog, you can make a clamp of any length by drilling 3/4" holes in a 2x4, 2x6, etc.

Two pieces of plywood with 2x4s between them for spacing can be drilled in a pattern to provide clamping for curved work and an infinite variety of other shapes.

At the lowest projection, only 5/8" of the dog head is above the bench. The swivel handle lets you apply ample clamping pressure in any position. The dog is drilled and tapped at a 3° angle to ensure that work is held tight to the bench.

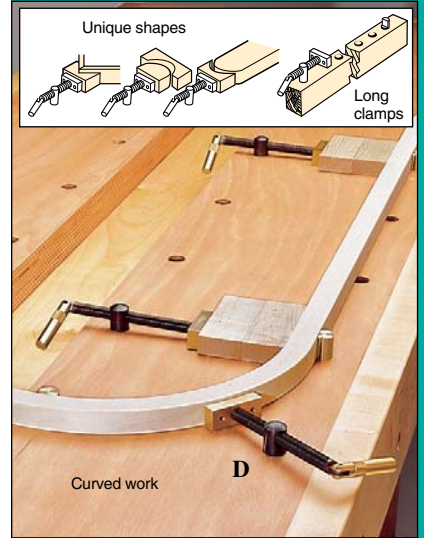
The Wonder Pup is the same as the Wonder Dog in all respects, except that the post is shorter (2 3/4" instead of 6 1/2") and has no side spring. The side spring is replaced with an O-ring for slightly elevated clamping. For use in bench fronts, drill-press jigs, etc.

D. 05G10.01 Wonder Dog®, ea.

\$39.50

E. 05G10.02 Wonder Pup®, ea.

\$36.50



F. Veritas® Quick-Release Wonder Dog® 🍁

This version of our Wonder Dog has a fast-acting cam mechanism to speed adjustments. You just slide the head against the workpiece, then throw the lever to apply clamping force. Curved and irregular shapes can also be clamped; two screw holes in the brass dog head let you attach a custom face of any shape, giving good control without marring work.

Slide into position against workpiece.
Throw lever to apply clamping force.

The low-profile head and clamp body are 5/8" and 1 1/16" thick respectively, so you can plane stock as thin as 3/4" without worrying about hitting the clamp. The 3/4" diameter, 2 3/4" long post lets you use it wherever you can drill a suitably sized hole, and is

canted to keep the clamp head against the bench top under clamping force. The dog has just over 6" of travel. The rod, post and cam lever are made of steel. Made in Canada. Patent pending.

05G10.30 Quick-Release Wonder Dog®

\$59.50



Veritas® Bench Blade 🍁

This is essentially a low-profile bench dog with a quick-release sliding jaw for holding work. Dubbed a "blade" due to its flat design, it projects just 1/4" above a work surface to permit maximum access to a workpiece. Used much like a toggle clamp, it has a thumb-operated eccentric cam lever to control the sliding jaw, so you can quickly secure or release work. With 1/4" range of travel, the jaw has limited throw, but applies up to 300 lb of clamping force. Flats on the cam provide secure stops at 1/8" and 1/4" of travel. The 1 1/2" x 1/4" jaw face has a 5° inward cant to help hold wood securely. The cam and jaw are cast steel, heat-treated for surface hardness, and the post and wedge-lock mechanism are turned steel. The standard post version is for use in a 3/4" diameter

through-hole or a blind hole that is at least 1 7/8" deep. The wedge-lock version is usable at any angle from horizontal to vertical and anchors firmly in a 3/4" diameter through-hole in material as thin as 5/8" (depending on the strength of the material) or in a blind hole a minimum of 1 3/8" deep. Made in Canada. Patented.

G. 05G22.10 Standard Bench Blade, 3/4" Post

\$19.95

H. 05G22.12 Wedge-Lock Bench Blade, 3/4" Post

\$27.50



Variable Clamping

Hold-downs and toggle clamps that incorporate T-bolts can be quickly set and repositioned at any point along a track without obstructing a tool's access to the workpiece. When choosing elements that provide variable clamping, ensure that you take the amount of force you wish to exert into consideration, as T-slot track fittings will only be as strong as the method used to mount the track. Substantial force can be exerted if the material being clamped rests between the clamp and the track the clamp rides in.

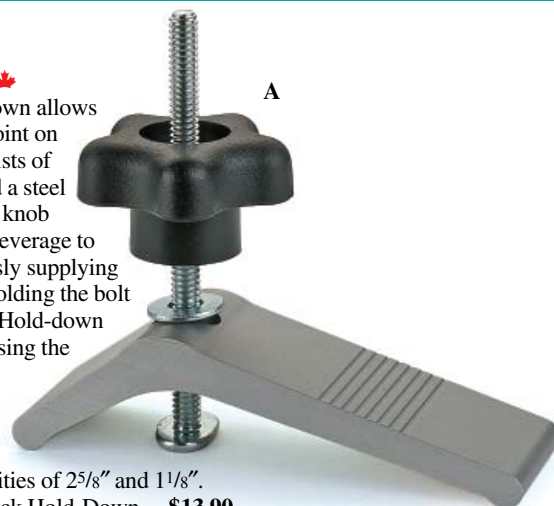


A. Veritas® T-Slot

Track Hold-Down

This versatile hold-down allows clamping from any point on a T-slot track. It consists of an aluminum arm and a steel T-bolt; tightening the knob on the screw applies leverage to the arm, simultaneously supplying clamping force and holding the bolt in place on the track. Hold-down capacity is 1" when using the long arm and 2" with the short arm; the asymmetrical shape of the clamp head provides throat capacities of 25/8" and 11/8".

13K10.12 T-Slot Track Hold-Down \$13.90

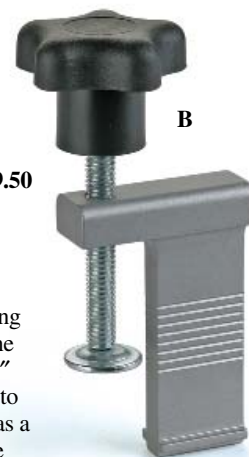


B. Veritas® T-Slot Track Clamp

This clamp slides in a T-slot track, offering a convenient means to clamp workpieces to a track or attach a track to a bench top, such as when using our quad T-slot track as a fence. The jaw has a 2" capacity. Made in Canada from aluminum with a steel screw.

13K10.14 T-Slot Track Clamp

\$19.50



C. Veritas® T-Slot Track Bench Blade

This version of our bench blade can be positioned anywhere along the length of a T-slot track. The T-bolt is secured with a hex-key, locking both the clamp and the orientation of the jaw in the desired position. The bench blade projects just 1/4" above a work surface to permit maximum access to a workpiece. Used much like a toggle clamp, it has a thumb-operated eccentric cam lever to control the sliding jaw, so you can quickly secure or release work. With a 1/4" range of travel, the jaw has limited throw, but applies up to 300 lb of clamping force. Flats on the cam provide secure stops at 1/8" and 1/4" of travel. The 1 1/2" x 1/4" jaw face has a 5° inward cant to help hold wood securely. The cam and jaw are cast steel, heat-treated for surface hardness, and the T-bolt is machined steel. Made in Canada. Patented.

13K10.20 T-Slot Track Bench Blade

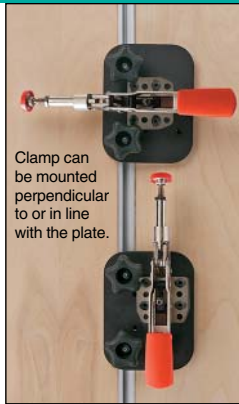
\$22.50



Bessey® Auto-Adjust Toggle Clamps

To eliminate the need for frequent adjustment, these clamps are designed to automatically accommodate material thickness changes of up to 1", without altering the clamping force. The high-profile and low-profile horizontal clamps have capacities of 2 3/4" and 2" thick respectively; the in-line clamp has a center height of 7/8" and a 1" throw. Each has a knurled screw to adjust the clamping force to a maximum of 550 lb. The clamps are 0.100" (just over 3/32") thick plated steel with generously sized handles for easy operation. The swivel feet have non-marring caps. Convenient and versatile, these clamps expedite production and jig and fixture work.

The mounting plate lets you easily position the clamp on a T-track instead of permanently attaching it to a surface. The thickness of the aluminum plate adds 3/8" to the maximum capacity of the horizontal clamps, but doesn't affect their minimum; you can still adjust the clamps to hold materials as thin as a sheet of paper against a surface. The center height of the in-line clamp is increased to 1 1/4". Bolts for mounting a clamp are included, as well as two 1/4"-20 T-bolts and clamping knobs for sliding in a T-track and securing at any point. It also has two holes for using the plate with a T-track miter-slot slider bar.

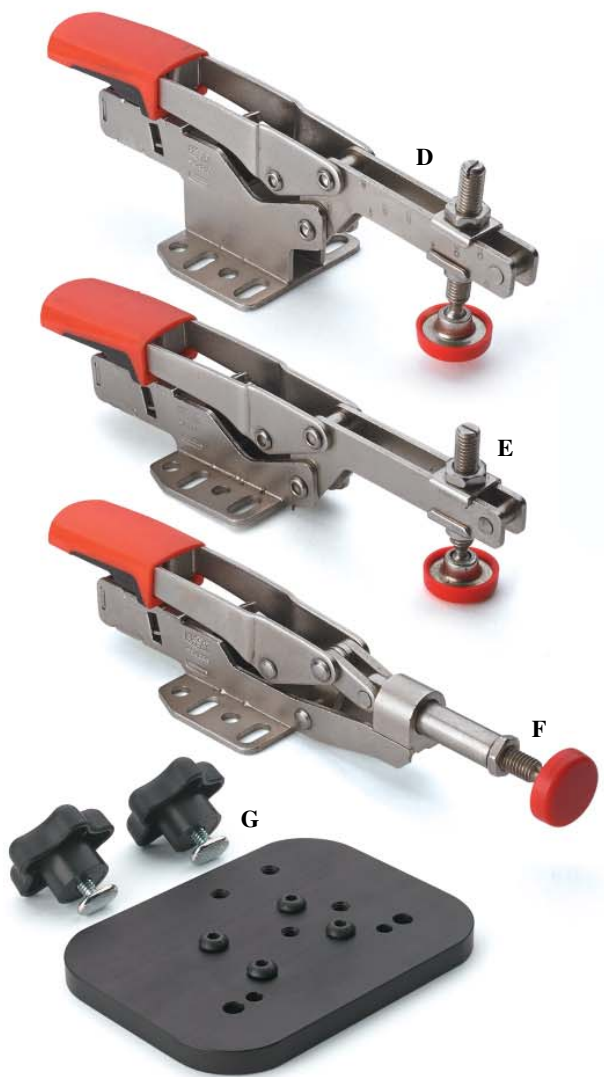


Clamp can be mounted perpendicular to or in line with the plate.



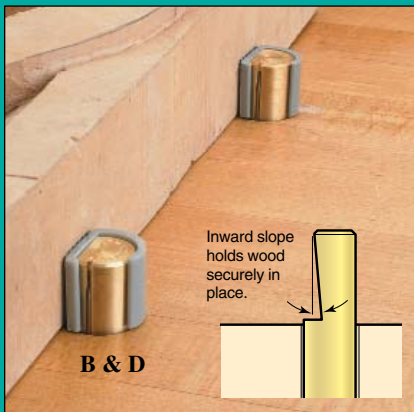
Shown with high-profile horizontal clamp.

		1+	4+
D. 17F72.02	High-Profile Horiz. Clamp, ea.	\$22.50	\$20.70
E. 17F72.01	Low-Profile Horiz. Clamp, ea.	\$22.50	\$20.70
F. 17F72.03	In-Line Clamp, ea.	\$24.50	\$22.50
G. 50F01.30	T-Track Toggle Clamp Plate	\$22.50	—
Toggle Clamp and Mounting Plate Sets			
H. 50F01.32	High-Profile Horiz. Clamp & T-Track Plate	\$40.50	—
J. 50F01.31	Low-Profile Horiz. Clamp & T-Track Plate	\$40.50	—
K. 50F01.33	In-Line Clamp & T-Track Plate	\$42.50	—



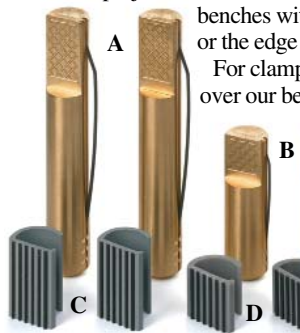
Fixed Stops

Bench (planing) stops installed in grid holes can capture the ends or edges of a workpiece to prevent it from shifting sideways or slipping as it is being worked on. Their low profile allows materials to be face planed without obstruction or interruption, since the workpiece is not obstructed by clamps. They are easy to install, expedite repositioning of the workpiece, and can be removed when they are no longer needed. Bench dogs can be used for point contact with a workpiece, or used with cauls to hold irregular shapes. Grid-hole-mounted stop elements can handle large applications of force.



Veritas® Round Bench Dogs & Muzzles

Our round bench dogs are made from solid brass rod and can be installed in any bench by drilling a $\frac{3}{4}$ " hole. Brass dogs are non-corroding and kind to your tools. The combined crosshatching and 2° inward slope of the face hold wood securely. The side spring lets the dog slide smoothly, but holds it well at any desired projection. The bench dogs (at $\frac{4}{8}$ ") are standard length. The Bench Pups® (at $\frac{2}{8}$ ") are fine for benches with tops up to 2" thick and ideal for bench sides; just drill holes in the skirt or the edge of the top. Both work well with Wonder Dog® and Wonder Pup® clamps.



For clamping a finished piece without marking it, our slip-resistant muzzles slide over our bench dogs (or Bench Pups) to give you a non-marring surface. They have hard, spring-grip plastic bodies with six face ribs. Available in two sizes: $\frac{1}{4}$ " long for bench dogs or $\frac{3}{4}$ " long for Bench Pups.

- 05G04.01** $\frac{4}{8}$ " Bench Dog, ea. **\$15.95**
- A. 05G04.02** $\frac{4}{8}$ " Bench Dogs, pr. **\$29.95**
- 05G04.03** $\frac{2}{8}$ " Bench Pup®, ea. **\$13.50**
- B. 05G04.04** $\frac{2}{8}$ " Bench Pups®, pr. **\$24.95**
- C. 05G04.10** Muzzles for Bench Dogs, pr. **\$ 3.00**
- D. 05G04.06** Muzzles for Bench Pups®, pr. **\$ 2.40**

E. Veritas® Surface Dogs, $\frac{3}{4}$ " Post

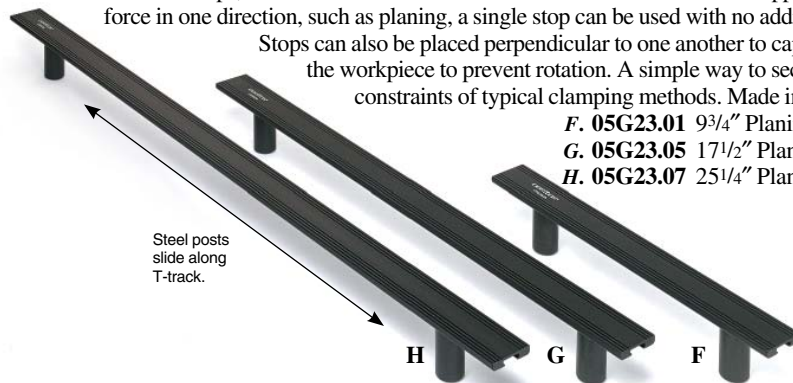
Machined from aluminum, this dog has a flat face for work registration and a rim that supports and stabilizes it on the bench surface. The post fits tightly in a $\frac{3}{4}$ " dog hole, resisting movement from horizontal forces. When used with a Veritas Worksurface™ (page 5), surface dogs let you take advantage of the precise grid layouts for fast and repeatable work positioning, and are useful for accurately aligning work in relation to the T-tracks at 90° or 45° angles. Face is $\frac{1}{16}$ " x $\frac{1}{2}$ " tall. Supplied as a pair of dogs.

- 13K12.26** Pr. Surface Dogs, $\frac{3}{4}$ " Post **\$15.50**

Veritas® Planing Stop

These low-profile work stops present a broad bearing surface. Particularly useful with thin or narrow workpieces, each $\frac{1}{4}$ " wide anodized aluminum rail projects just 0.22" above the bench top, allowing materials as thin as $\frac{1}{4}$ " to be worked or planed without obstruction. It also provides a reliable registration surface for materials too narrow to span two adjacent bench dogs. The two steel posts, sized to fit $\frac{3}{4}$ " diameter dog holes, slide along a T-track on the underside of the rail. The posts on the $\frac{9}{4}$ " stop can be spaced up to 9" apart (center to center); the posts on the $\frac{17}{2}$ " length can be spaced up to $16\frac{3}{4}$ " apart. The posts of the $\frac{25}{4}$ " stop can be spaced up to $24\frac{1}{2}$ " apart; at over two feet long, it will span the depth of most bench tops, and can be cut shorter if desired. For tasks that involve the application of horizontal force in one direction, such as planing, a single stop can be used with no additional clamping.

Stops can also be placed perpendicular to one another to capture two edges of the workpiece to prevent rotation. A simple way to secure work without the constraints of typical clamping methods. Made in Canada.

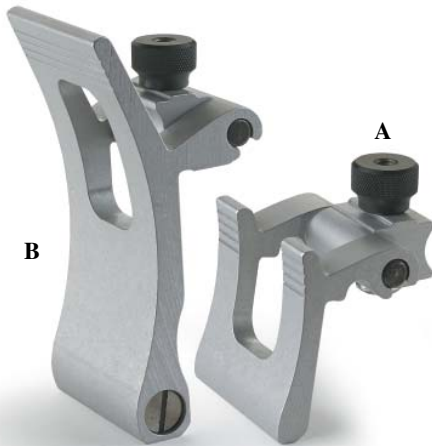


- F. 05G23.01** $\frac{9}{4}$ " Planing Stop, ea. **\$24.50**
- G. 05G23.05** $\frac{17}{2}$ " Planing Stop, ea. **\$29.50**
- H. 05G23.07** $\frac{25}{4}$ " Planing Stop, ea. **\$34.50**

Variable Stops

Variable stops can be set to create reference points and surfaces to aid in repetitive alignment and fixed positioning. Our low-profile variable stops slide along T-slot track and can be tightened at any point on the track. They provide a reliable reference point and prevent measuring and cutting errors.

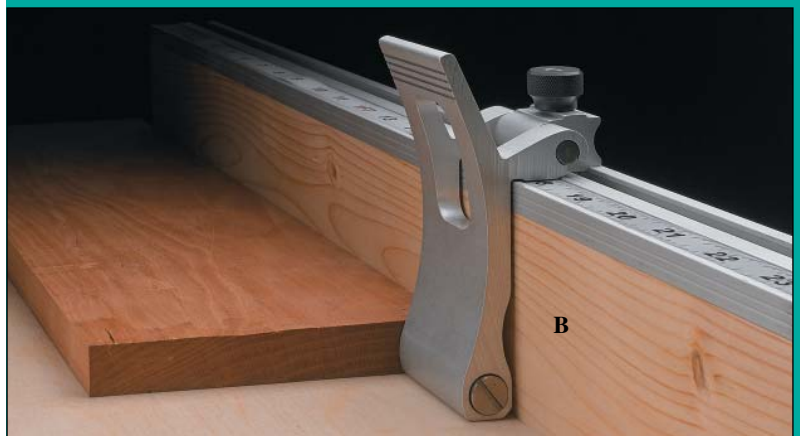
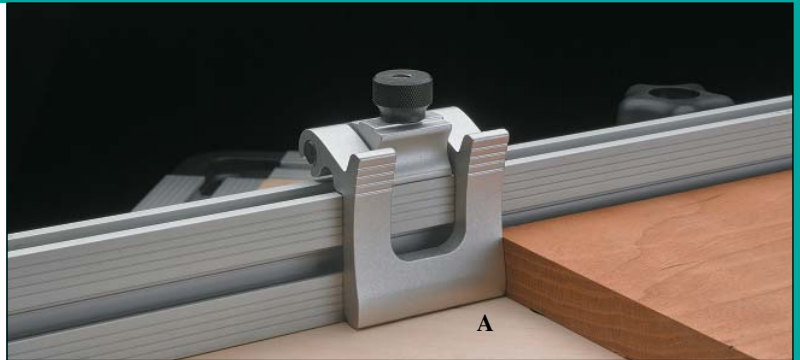
Our fence stops are used for accurately indexing a workpiece. Ganged together on a sliding fence, multiple stops can be set as needed and promptly flipped out of the way when they are not.



Veritas® Fence Flip Stops

These fence stops secure at any point on a 1/4-20 T-slot track and flip up out of the way when you don't need them. The regular fence stop can be set up to hang flush with the side of the track, or with a 3/4" offset when used with a sacrificial wooden sub-fence. The regular fence stop has a 1 1/2" long arm, sized to the height of our quad T-slot track on page 13. The large fence stop has a 2 7/8" long arm suitable for larger user-made fences; a micro-adjust screw at the tip of the arm lets you fine-tune stock positioning. The stops are anodized aluminum with stainless-steel fittings. Made in Canada.

- A. 13K12.08 Regular Fence Flip Stop** **\$26.50**
B. 13K12.09 Large Fence Flip Stop **\$36.50**



C. Veritas® Low-Profile Work Stop

With a projection of only 1/4", this low-profile stop allows thin materials to be worked without obstruction. The brass head pivots to accommodate round or irregularly shaped workpieces; its two flat faces are canted inward by 2° to help hold wood securely. Used in a 1/4-20 T-slot track, it can be secured at any point of the track. 1 3/16" in diameter overall.

- 13K10.18 Low-Profile Work Stop** **\$8.90**



Variable Positioning T-Slot Track

T-slot track is commonly used in workholding devices, as clamping and positioning components can be positioned at any point along the track, making it easy to adjust for workpieces in a range of sizes and shapes. A variety of track profiles forms the basis for surface- or edge-positioning rails, as well as allows the construction of fences. Our T-track elbow bracket allows the quad T-slot track to be mounted perpendicular to a surface, a feature useful for fence construction.

As aluminum is a non-ferrous metal, all of our T-slot track can be easily cut with a power or handsaw to the lengths you need for your project. Installing T-slot track is as easy as drilling pilot holes and counterbores and securing it in place with screws or bolts. The track can be surface mounted or recessed. T-slot tracks have a positioning groove down the center of the track to make drilling fast and simple. For multi-track extrusions, the bottom track can receive T-bolts, allowing you to slide the track into the recess and tighten the T-bolts to secure the track in place. It is always important to consider the force likely to be applied to T-slot track elements when choosing how to mount them.



A. Veritas® T-Slot Tracks 🍁

Our aluminum extrusions are among the most useful components for making jigs and fixtures. Sized to fit 1/4-20 hardware, they can be used with T-slot nuts or T-bolts. The extrusions will fit a standard 3/4" miter slot, our miter slot extrusion (on page 14), or a 3/8" x 3/4" dado. They have a central V-groove for ease of drilling, and the outside surfaces are fluted to provide a strong mechanical lock when glued.



Anodized for wear resistance and to prevent oxidation, they are available in three lengths. Patent pending. 1+ 3+

12K79.22	2' T-Slot Track, ea.	\$ 9.20	\$ 7.80
12K79.24	3' T-Slot Track, ea.	\$11.90	\$10.10
12K79.28	4' T-Slot Track, ea.	\$14.80	\$12.60

B. Veritas® Double T-Slot Tracks 🍁

Our regular T-slot extrusions (above) are perfect for most jig-making applications. They can be installed using either glue or screws, but when neither option is appropriate, our double T-slot track is the way to go. This anodized aluminum extrusion has the same inner profile as our 1/4 T-slot extrusion, but the outer profile incorporates a pair of wings designed to lock the extrusion in place. Installation simply requires undercutting a 3/8" x 3/4" dado using the undercut slotting bit. The resulting T-slot



securely holds the extrusion in place, without the need for screws or glue. Available in 2', 3' or 4' lengths. Patent pending. 1+ 3+

12K79.42	2' Double T-Slot Track, ea.	\$ 8.90	\$ 7.55
12K79.44	3' Double T-Slot Track, ea.	\$12.50	\$10.65
12K79.48	4' Double T-Slot Track, ea.	\$15.00	\$12.80

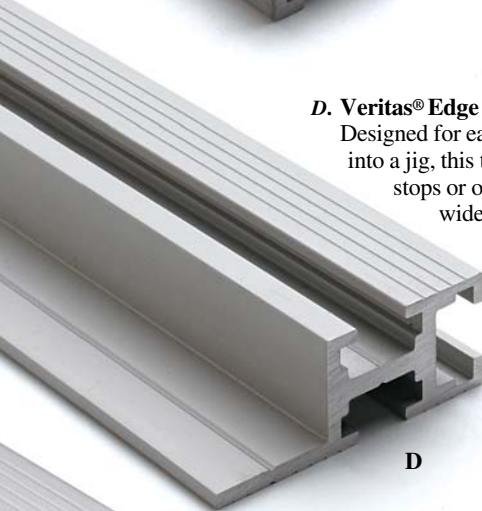


C. Veritas® Tape T-Slot Track 🍁

Intended for user-made fences, this aluminum extrusion combines a T-slot track with a recess for an adhesive measuring tape (such as our bench tapes on page 18). It attaches to the fence using either T-bolts – using the T-slot track underneath the tape recess – or screws. The T-slots accept any 1/4-20 T-nuts and T-bolts. Our flip stops (on page 11), designed for this track, extend over the measuring tape to allow direct reading.

	1+	3+
13K12.02 Tape T-Slot Track, 2'	\$14.50	\$12.35
13K12.03 Tape T-Slot Track, 3'	\$19.70	\$16.75
13K12.04 Tape T-Slot Track, 4'	\$24.80	\$21.10

C

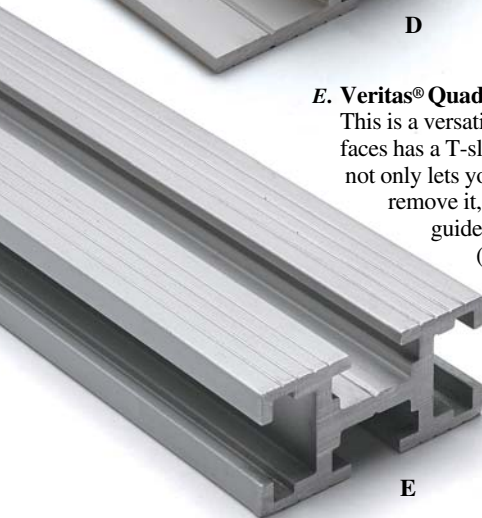
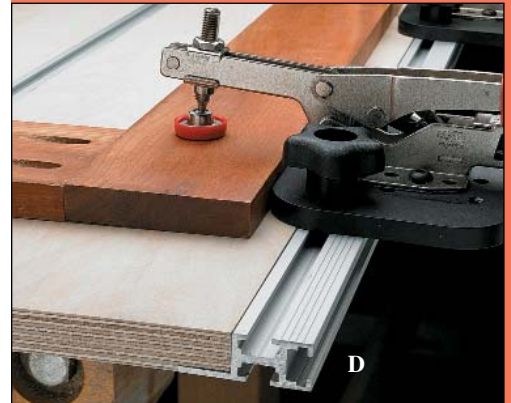


D. Veritas® Edge T-Slot Track 🍁

Designed for easy attachment whether added to a work surface or built into a jig, this track provides three T-slots for mounting clamps, work stops or other jig parts with 1/4-20 T-bolts or T-nuts. The 3/4" wide lip on one side lets you attach it with screws and has a V-groove for ease of drilling. In cross section, the track measures 1 7/8" wide and 1 1/16" thick overall. Made in Canada from anodized aluminum, it is available in three lengths.

	1+	3+
13K10.08 2' Edge T-Slot Track, ea.	\$14.60	\$12.45
13K10.09 3' Edge T-Slot Track, ea.	\$19.70	\$16.75
13K10.10 4' Edge T-Slot Track, ea.	\$26.00	\$22.10

D



E. Veritas® Quad T-Slot Track 🍁

This is a versatile rail for creating jigs and fixtures. Each of its four faces has a T-slot track that accepts 1/4-20 T-nuts and T-bolts. This not only lets you reliably mount the rail to a jig and easily adjust or remove it, but also provides multiple attachment surfaces for a guide or work stop. The rigid rail is rectangular in shape (1 1/2" wide by 1 1/16" thick) so it can be mounted flat or on edge. The center of the track on the wide side has a V-groove for ease of drilling if you choose to mount it with screws. Made in Canada from anodized aluminum, it is available in three lengths.

	1+	3+
13K10.02 2' Quad T-Slot Track	\$14.10	\$12.00
13K10.03 3' Quad T-Slot Track	\$19.10	\$16.20
13K10.04 *4' Quad T-Slot Track	\$24.10	\$20.50

E

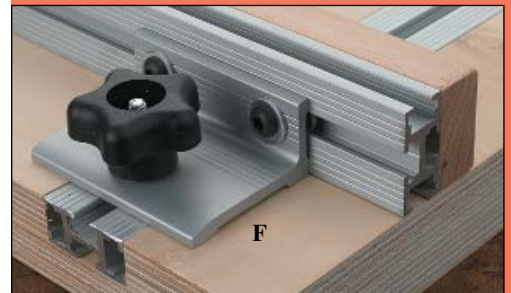


F. Veritas® T-Track Elbow Bracket 🍁

With a pair of these aluminum brackets, you can connect our quad T-slot track to a flush-mounted T-slot track, creating a convenient and easily removable fence. They can also be used anywhere else you need to attach T-slot tracks perpendicular to each other. A star-shaped knob connected to a T-bolt permits rapid repositioning on one track, while a pair of T-nuts and screws firmly fix the bracket to the other track. All mounting hardware is included. Measuring 3" long, 2 1/8" wide and 1 1/8" tall, the bracket is sized to hold an upright quad T-slot track nearly flush with the work surface.

13K12.07 T-Track Elbow Bracket, ea.	\$12.90
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F



G. Veritas® Pivoting Fence for T-Slot Tracks 🍁

This is a convenient work stop for holding round or irregular shapes. The pivoting aluminum fence (2" wide, 1 1/16" tall) has a pair of holes to let you attach a wooden extension or custom-shaped face for specialized work. Used in a 1/4-20 T-slot track, it can be secured at any point on the track by twisting the knurled post. Made in Canada.

13K12.20 Pivoting Fence for T-Slot Tracks, ea.	\$14.50
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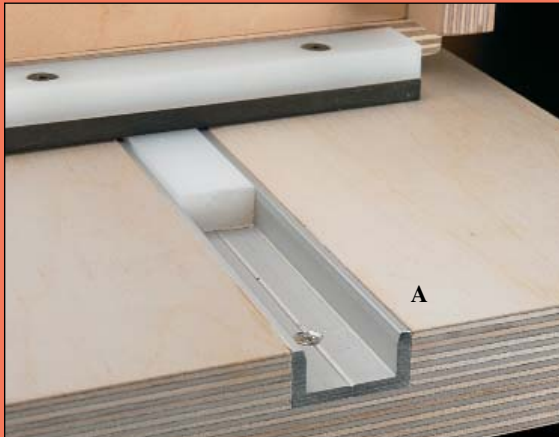
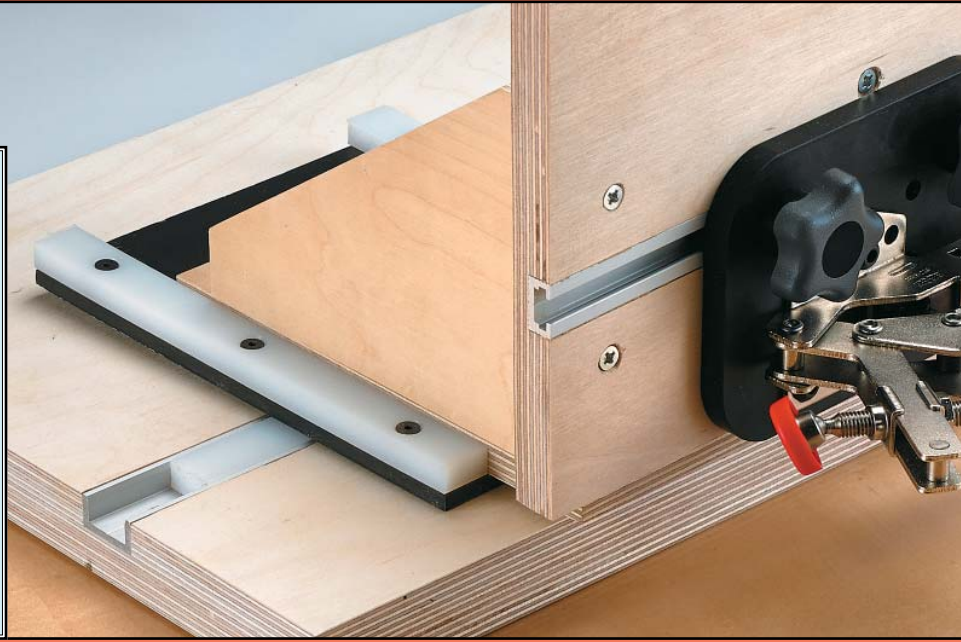
G



Clamping odd shapes.

Movement

You can use various materials to aid in increasing or reducing friction in your workholding devices. Options include attaching high-friction tape to a surface to ensure that the workpiece doesn't slip while you are working on it, or adding low-friction tape to a surface wherever you need to reduce friction. UHMW material is extremely tough and produces little friction, making it a good choice for miter-slot runners as well as guide fences. Urethane wheels can keep positive pressure on components while still allowing them to travel.



A. Veritas® Miter Slot Extrusion

The $\frac{3}{4}$ " wide slot extrusion is used primarily as a miter fence slot; it can be built into any surface by dadoing a $\frac{1}{2}$ " \times "1" groove to accept it. It is sized to allow a sliding fit with our $\frac{3}{8}$ " \times " $\frac{3}{4}$ " UHMW strips (on next page). The inside walls have a slight chamfer at the top to guide pieces into the channel. The extrusion has a central V-groove for ease of drilling. Anodized for wear

resistance and to prevent oxidation, they are available in 2', 3' or 4' lengths.

	1+	3+
12K79.06 2' \times " $\frac{3}{4}$ " Slot Extr., ea.	\$ 8.70	\$ 7.40
12K79.07 3' \times " $\frac{3}{4}$ " Slot Extr., ea.	\$11.90	\$10.10
12K79.05 4' \times " $\frac{3}{4}$ " Slot Extr., ea.	\$14.60	\$12.45

B. Inca® Miter-Slot Slider Bars

The same bars Inca uses in its miter gauges are now available separately for use as miter-slot runners in jig construction. The $1\frac{7}{8}$ " and $2\frac{5}{8}$ " bars are sized to fit nominal $\frac{3}{4}$ " slots. Positioned on top of the bars for easy access, expansion discs provide low-friction travel and remove lateral play so jigs stay square to the cutter.

Tapped holes spaced along the bar allow trouble-free mounting of jigs (with the included $\frac{1}{4}$ -20 or 10-24 machine screws) and the attachment of knobs or handles that have threaded studs. For greater stability and safety in T-track miter slots, there are T-slot nuts at either end (removable for use in a plain slot). Made of chrome-plated steel, these bars are less susceptible to humidity or temperature

changes than wooden runners. Made in USA.

86N70.40 Inca® Miter Slider, $1\frac{7}{8}$ "	\$26.50
86N70.45 Inca® Miter Slider, $2\frac{5}{8}$ "	\$37.50

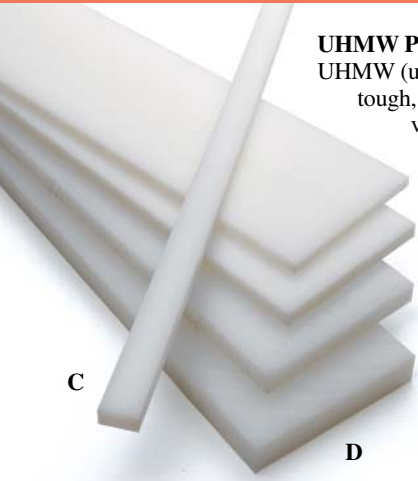
Bars fit nominal $\frac{3}{4}$ " miter slots.

Adjustable expansion disc

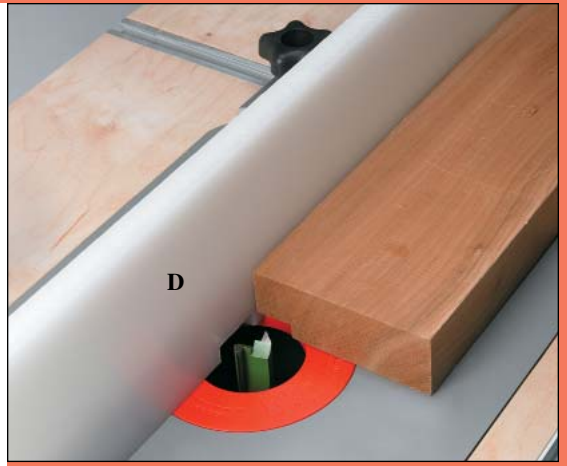
Slider bars used for crosscut jig

UHMW Polyethylene USA

UHMW (ultra-high molecular weight) polyethylene is a dense, tough, rigid plastic that is impervious to moisture and has a very low coefficient of friction. Jig bases made from it slide easily on machine tables. It is also suitable for making fences, jigsaw sub-tables, etc. The $\frac{3}{8}'' \times \frac{3}{4}''$ strips are sized to fit in table slots. The width is cut to close tolerances so that it fits well in a $\frac{3}{4}''$ slot and completely avoids the annoying galling that you get with many slot runners. It machines much like wood. It can be drilled, tapped, routed or cut with a saw blade. It even makes good bearings for low rpm use.

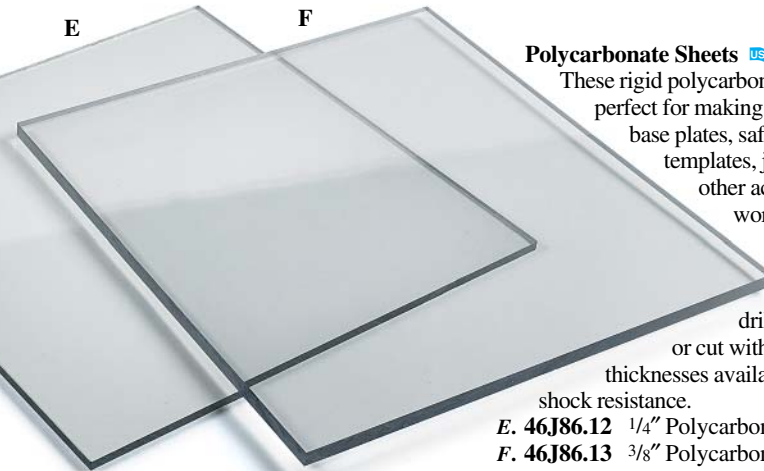


			1+	3+
C.	46J90.15	$\frac{3}{8}''$ UHMW, $\frac{3}{4}'' \times 24''$	\$ 7.20	\$ 6.10
	46J90.10	$\frac{1}{4}''$ UHMW, $4'' \times 24''$	\$12.90	\$11.00
	46J90.11	$\frac{3}{8}''$ UHMW, $4'' \times 24''$	\$18.50	\$15.75
	46J90.12	$\frac{1}{2}''$ UHMW, $4'' \times 24''$	\$26.90	\$22.90
D.	46J90.14	$\frac{3}{4}''$ UHMW, $4'' \times 24''$	\$28.90	\$24.60



Polycarbonate Sheets USA

These rigid polycarbonate sheets are perfect for making custom transparent base plates, safety shields, templates, jigs, inserts and other accessories for your workshop. Much like wood, the durable nominal $12'' \times 12''$ plates can be drilled, tapped, routed or cut with a saw blade. Two thicknesses available. Very high shock resistance.



E.	46J86.12	$\frac{1}{4}''$ Polycarbonate Sheet	\$16.40
F.	46J86.13	$\frac{3}{8}''$ Polycarbonate Sheet	\$24.50



G. Polyurethane Wheels

Originally manufactured as parts for kick scooters, these tough, smooth-rolling wheels are suitable for a range of applications, from carts and trolleys to work guides and in-line feed mechanisms. Measuring $\frac{37}{8}'' \times \frac{15}{16}''$ thick with a $\frac{5}{16}''$ inside diameter, they are compatible with standard $\frac{5}{16}$ -18 hardware*. The carbon-steel bearings conform to ABEC-5 industrial specifications, ensuring reliable operation. Resistant to grease, oil, adhesives and kerosene-based solvents, the non-marring tires are made of solid polyurethane, a durable elastomer that yields slightly to pressure, providing shock absorption and wear resistance.

12K79.85 $\frac{37}{8}''$ Wheel, ea. **\$3.70**

*Visit leevalley.com for our broad selection of robust $\frac{5}{16}$ -18 hardware components.



H. Super-High-Friction Tape

A rayon fabric with a silicone rubber coating and PSA backing, this tape has superior non-slip properties and is highly resistant to glues. Use it on a router plate to ensure the router is firmly clamped and doesn't move during operation, or on magnetic shop accessories (dust chutes, fences, shop lamp, etc.) to keep them from slipping and to prevent surface marring. Sold as a $1'' \times 12''$ strip. Made in Germany.

99K34.01 High-Friction Tape **\$5.50** **\$4.65**

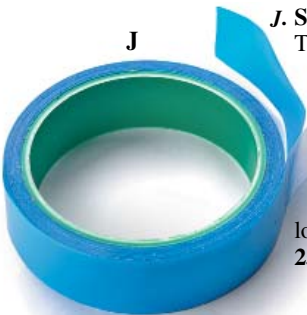


J. Slippery (Low-Friction) Tape Canada

This UHMW (ultra-high molecular weight) tape is used wherever you need to reduce friction between two surfaces, e.g., on cabinet drawers, machine fences and shop jigs such as cut-off boxes. This transparent, PSA-backed, 5 mil tape is incredibly tough. A small piece on the cross rail under a drawer will give you a silky-smooth action.

Excellent on jointer fences or under miter guides. 18' (216") long by 1" wide.

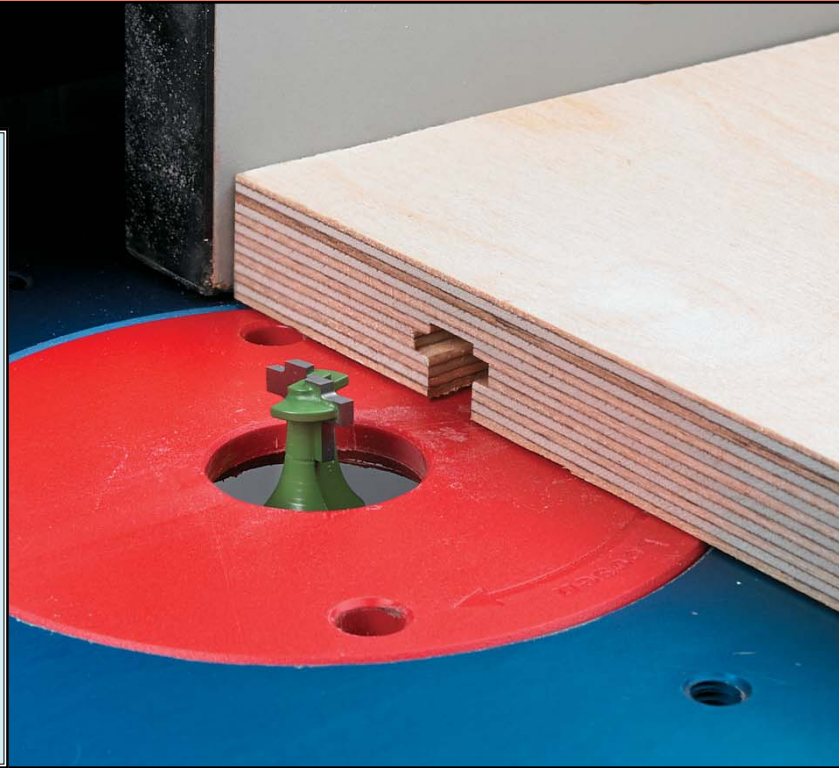
25U04.01 Slippery Tape, $1'' \times 18'$ **\$13.95**



Tools

A few specialized tools and materials can make fabricating your workholding devices easier, as well as make them more durable and accurate. We recommend using high-quality multi-ply material as the base for jigs and fixtures. It is stable and has a uniform high strength. Our 3/4" bushings and bits make it a snap to create a jig for accurate and repeatable grid-hole drilling.

The T-slot router bit can be used to create mounting slots in a variety of materials, such as wood or UHMW. Slots can be routed directly into part of a jig to provide adjustability, or a single slot can make a wooden T-slot track. Slots cut with the T-slot router bit are compatible with all our T-slot track accessories and T-nuts. The T-slot router bit can also be used to create T-slots for other types of fasteners, such as carriage bolts and hex- or square-head bolts.

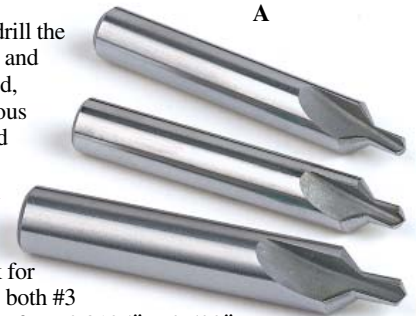


A. HSS 82° Drill/Countersinks

These HSS drill/countersinks drill the ANSI-specified clearance hole and an 82° countersink in hardwood, plastic, brass or other non-ferrous metals. The center pilot is sized for the correct shaft clearance. Ideal for fast countersinking in wood, and dressing or resizing holes in hardware.

Each size will also countersink for one size lower (e.g., #4 will do both #3 and #4 screws). Shanked to size from 0.3125" to 0.500". Sold individually, or as a set of the three smaller sizes. A super buy.

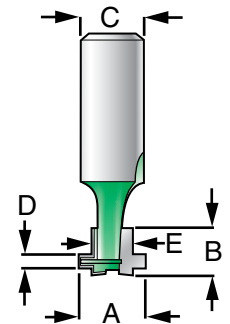
66J40.04	82° Countersink, #4*	\$ 9.20
66J40.06	82° Countersink, #6*	\$10.20
66J40.08	82° Countersink, #8*	\$12.20
66J40.10	82° Countersink, #10	\$12.70
66J40.30	Set (3) Drill/Countersinks*	\$27.50



B. T-Slot Router Bits

These bits cut a slot to fit our 1/4-20 T-slot nuts. Slots are useful for making adjustable jigs and fixtures. Double flute for a smooth cut, these professional/industrial grade bits have tungsten-carbide inserts that maintain their hardness at high temperatures and hold an edge far longer than high-carbon or high-speed steels. Each bit includes a friction-fit holder.

	A	B	C	D	E	
16J60.71	9/16"	3/8"	1/2"	1/8"	5/16"	\$22.20
16J60.72	9/16"	3/8"	1/4"	1/8"	5/16"	\$22.20



See page 21 for T-slot nuts and associated workholding hardware for use in jigs and fixtures.

Dog Hole Bushings and Bits

This 3/4" hardened steel bushing helps you make an accurate dog-hole drilling guide using any 1 1/2" thick board. Knurling on the bushing provides a mechanical lock when installed in a 1" hole, and a projecting rim ensures that it rests perpendicular to the jig's surface. If you don't already have a bit in the required size, we offer a 1" high-speed steel forstner installation bit that is 3 1/2" long overall.

For drilling the dog holes, we offer a 3/4" drill bit that is 6" long overall with 3 5/8" of fluting, enough to go through the jig and a 2" thick bench top. The lipped brad-point style scores the perimeter of the hole for clean entry and smooth sidewalls. Made from high-speed steel, the bit is long lasting and not subject to burning.



- C. 15J79.03 3/4" Bushing \$ 9.50
- D. 06J71.16 1" Forstner Bit \$13.70
- E. 07J02.48 3/4" Dog Hole Bit \$32.90



Bushings and Insert

If you've ever drilled holes in a scrap piece of wood to make your own drilling guide, you need these inserts. Just drill a 5/8" hole, drive in an insert and thread in the appropriate-sized bushing. The steel insert is ribbed on the side to hold securely in place and is just shy of 1/2" in height. The hardened bushings are 3/4" high with a knurled top for easy insertion and removal. Insert and bushings can be reused again and again. Superb for making jigs for repetitive drilling operations such as installing hinges, handles, slides and knobs. Bushings and insert sold separately. Insert fits Imperial and metric bushings.



		1+	10+	25+
F.	25K62.02 1/8" Bushing, ea.	\$2.90	\$2.45	\$2.15
	25K62.03 3/16" Bushing, ea.	\$2.90	\$2.45	\$2.15
	25K62.04 1/4" Bushing, ea.	\$2.90	\$2.45	\$2.15
	25K62.05 5/16" Bushing, ea.	\$2.90	\$2.45	\$2.15
	25K62.06 3/8" Bushing, ea.	\$2.90	\$2.45	\$2.15
	25K62.12 5mm Bushing, ea.	\$2.90	\$2.45	\$2.15
	25K62.14 7mm Bushing, ea.	\$2.90	\$2.45	\$2.15
	25K62.15 8mm Bushing, ea.	\$2.90	\$2.45	\$2.15
G.	25K62.20 Insert, ea.	\$2.90	\$2.45	\$2.15



1/4-20 Insert Nut Driver

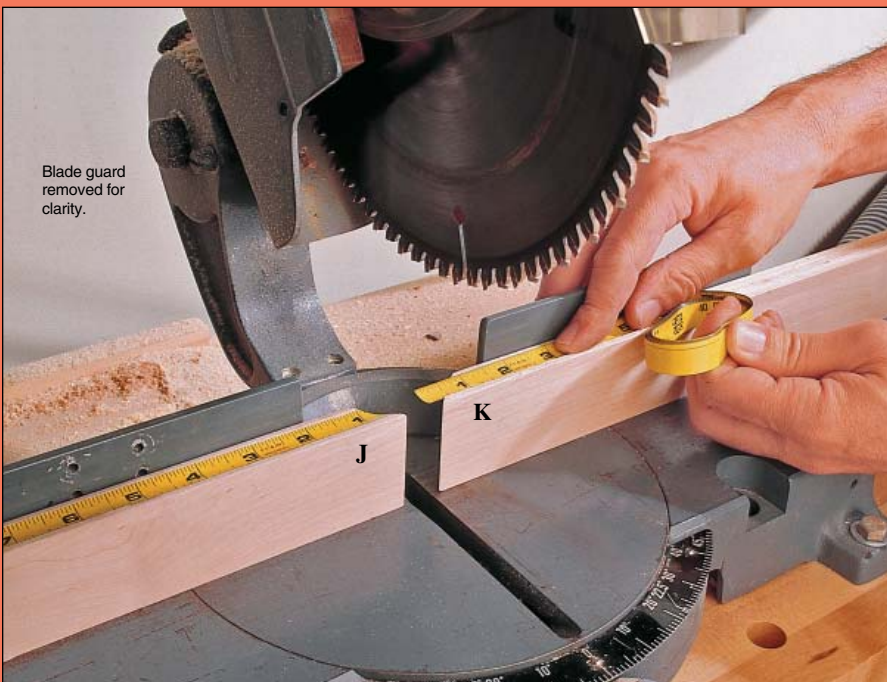
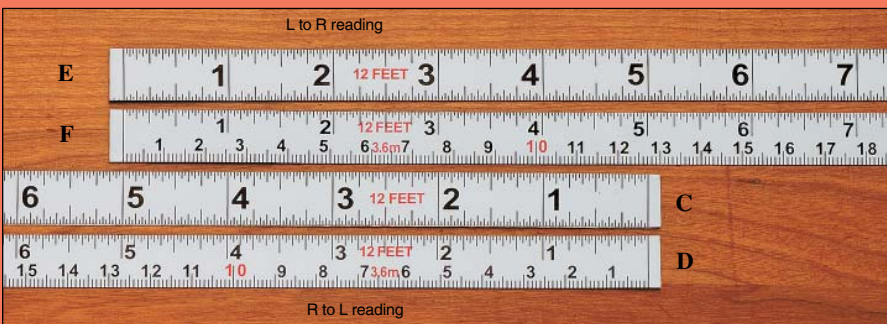
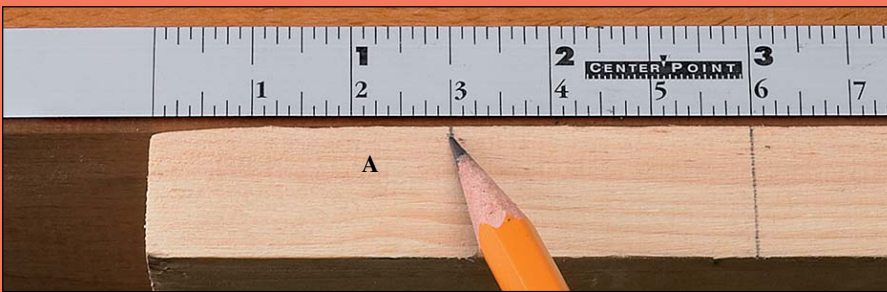
This 1/4" hex-shank driver lets you conveniently use a power drill when installing the 1/4-20 insert nuts we offer. The slotted head has a ball detent to hold the insert nut for easy handling and a shoulder that acts as a stop, contacting the work when the nut is sunk just below the surface.



- H. 50J03.51 1/4-20 Insert Nut Driver \$11.95
- J. 00M90.01 1/4-20 Insert Nuts (10) \$ 7.90 \$6.70



Tools Continued



Adhesive Bench Tapes

These tapes are made of annealed steel with a protective coating and can be mounted directly on the top or front of your bench. The center-finding tape has normal Imperial graduations on the top edge and half-scale graduations on the opposite edge. To find the center, find the identical measurement from the top scale on the lower scale. The other tapes are available in a variety of lengths, with Imperial or Imperial/metric scales, and have measurements that run right-to-left or left-to-right (standard). The adhesive backing will bond to any clean, dry surface.

- A. 25U02.40 Center-Finding Tape, 12'x1/2" \$10.90
- B. 25U02.41 R to L Imperial, 6'x1/2" \$10.90
- C. 25U02.42 R to L Imperial, 12'x1/2" \$11.90
- D. 25U02.43 R to L Imp./Metric, 12'x1/2" \$11.90
- E. 25U02.44 L to R Imperial, 12'x1/2" \$11.90
- F. 25U02.45 L to R Imp./Metric, 12'x1/2" \$11.90
- G. 25U02.46 L to R Imperial, 6'x3/4" \$12.90
- H. 25U02.47 L to R Imp./Metric, 6'x3/4" \$12.90

Steel Jig Tapes

There are many times when it is useful to have a steel tape fixed to a jig; a prime example is a chop-saw table where you want tapes reading right to left as well as left to right. We offer both at a shade under 1/2" wide. They can readily be press-fitted into a shallow, 0.47" wide groove or they can be glued into wider slots. At 10' long, they are of ample length for most purposes and, at these prices, it is relatively painless to shorten one for smaller jigs.

- J. 06K17.01 10' Jig Tape, Right-to-Left \$3.95
- K. 06K17.02 10' Jig Tape, Left-to-Right \$3.95



J

Shown actual width.

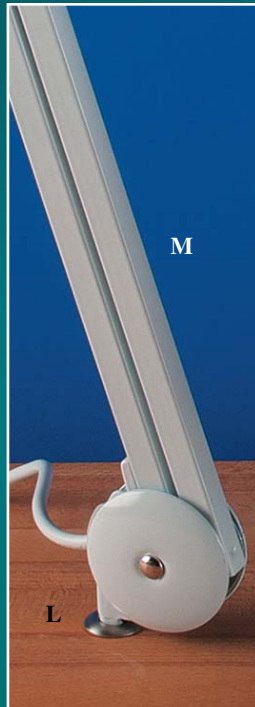


K

L. Lamp Bushing 🍁

This stainless-steel bushing has a through-bore to accept the 1/2" diameter post of common desk lamps and magnifiers, allowing you to use the lamp in a dog hole. 1 1/8" long with a 3/4" outside diameter.

05G48.01 Lamp Bushing, 3/4" \$7.50



M. Magnifying Bench Lamp

With a distortion-free optical-grade glass lens and quiet electronic ballast to eliminate bulb flicker, this lamp is ideal for detailed work. The 5" 3-diopter lens focuses at 3" to 9" and is encircled by a bright 22-watt fluorescent bulb. The arms extend up to 47" and the head is adjustable for viewing angle. It has a flip-up lens dust cover, and comes with a 2 1/2" capacity table-mounting clamp. A bushing is available separately for mounting in a dog hole. UL/CUL certified.

17J30.20 *Magnifying Bench Lamp \$54.50

*A shipping surcharge of \$10 applies in addition to our regular shipping charges. For areas outside of the Continental USA, contact Customer Service for shipping rates.

N. Veritas® Steel Plate for T-Slot Tracks 🍁

This stainless-steel plate provides a mounting point to let you use magnetic accessories (such as our magnetic dust chute 05J21.10, available on our website) on non-ferrous work surfaces.



Used in a 1/4-20 T-slot track, the 4 3/4" x 2 1/2" plate can be secured at any point on the track. Made in Canada.

13K12.24 Steel Plate for T-Slot Tracks \$9.95



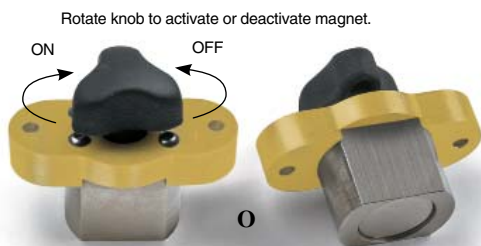
Magnetic dust chute mounted to plate

O. Mag-Jig® Magnetic Clamps

These ingenious clamps each contain two powerful rare-earth magnets. With the knob turned to the "on" position, the magnets align and cling to any ferrous surface. In the "off" position, the magnets counteract each other to release the clamp for removal or repositioning. The instant on/off toggle makes them ideal for custom jigs and fixtures. They are available with either 20mm or 30mm magnets that exert 95 lb and 155 lb of force respectively. They have aluminum bodies with rubber-coated knobs for grip. The 20mm size mounts in a 1 3/16" hole, while the 30mm jig requires a 1 5/8" hole. Both install in material 3/4" thick. An excellent alternative to traditional clamping methods.

03J75.95 20mm Mag-Jig® Clamp, ea. \$25.90

03J75.96 30mm Mag-Jig® Clamp, ea. \$37.50



Rotate knob to activate or deactivate magnet.



Workholding Hardware

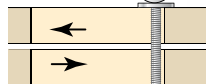
A wide range of common hardware can be used to build workholding devices. The following pages include just some of the specialized products that can make building your devices easier. Standardizing on a common thread (1/4-20) enables a broad selection of hardware to work well together.



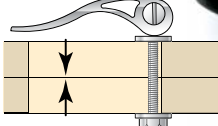
A. Cam Clamp Mechanism

One of the best jig mechanisms we offer, this cam clamp can exert as much as 400 lb of force using only a thumb and forefinger to operate the 3 1/8" long lever. The mating 1/4-20 steel cross-dowel nut can be used with any 1/4-20 fastener (e.g., a bolt or a threaded rod and nut). Two washers of different thickness are also included so you can choose lever orientation without affecting clamping force.

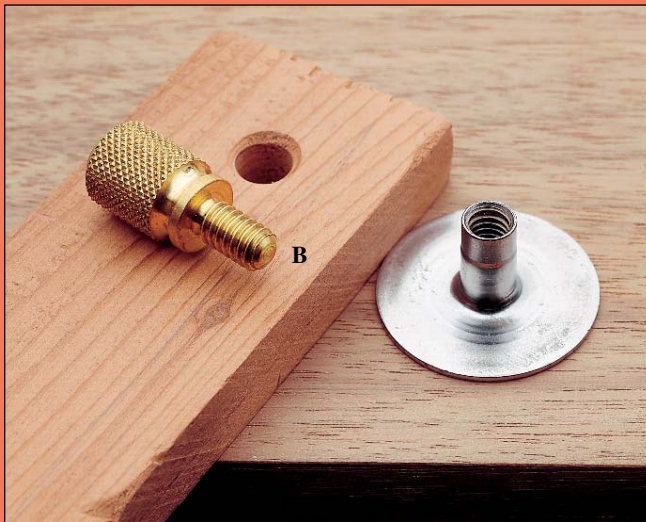
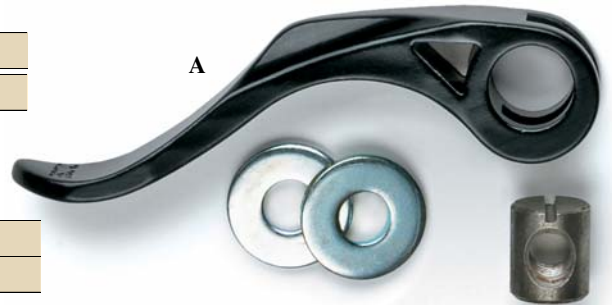
Open, the clamp remains slack for parts adjustment.



Closed, the cam action holds parts in place.



05J51.01 Cam Clamp Mech., ea. 1+ \$5.30 5+ \$4.50

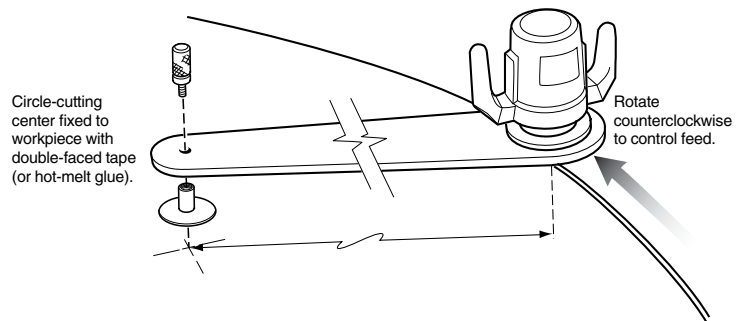


B. Veritas® Router Circle-Cutting Center

To cut and make an edge profile on a circular workpiece, this center serves as a blemish-free pivot point. Attach one end of a strip of thin plywood to the base of your router, and drill a 5/16" hole near the opposite end to rout the desired radius. Fix our circle-cutting center in the middle of your workpiece with double-faced tape (or hot-melt glue). Drop the free end of the plywood beam onto the 9/16" high pivot post, tightening the brass thumbscrew to keep the strip in place. You can now rout your circle, then remove the center without a trace.

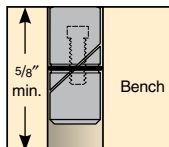
05J36.01 Router Circle-Cutting Center

\$6.50

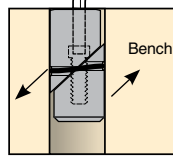


C. Veritas® Bench Anchor

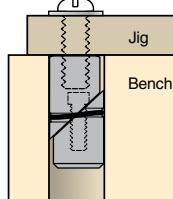
It is easiest to think of this as a barrel-shaped insert nut that secures in any 3/4" diameter hole, except this one self-anchors and is removable. Usable horizontally, vertically or at any angle in between, it accepts common 1/2-13 threaded bolts and will wedge in through-holes in material as thin as 5/8" (depending on the strength of the material) or in blind holes 1 1/4" deep. With a pull-out strength of at least 200 lb-ft* in hardwood, the anchor has a wedging mechanism controlled by an integral hex-head screw drive and an external rubber O-ring that uses friction to hold it in place during installation. With 3/8" of internal thread travel, the anchor is designed to secure materials of known thickness using a fixed-length fastener (for example, fastening 3/4" thick material with a 1" long machine screw). Ideal for fastening thin material, it is useful for fixing jigs, guides, etc. Best used with non-hex head drive fasteners, as the force applied with a wrench may overpower the anchor, loosening or dislodging it. All-steel construction. Made in Canada.



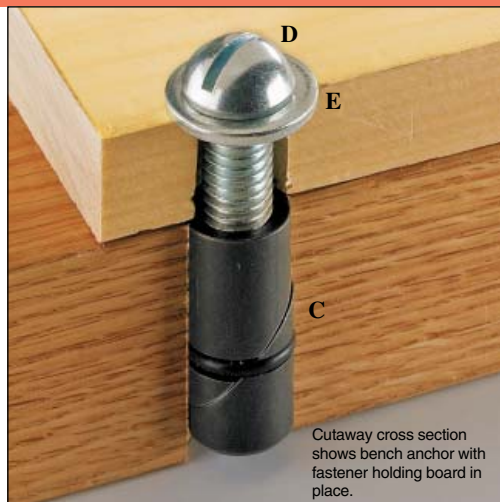
O-ring holds anchor in place during installation.



Wedge adjusts to secure anchor in dog hole.



Attach jig with fastener.



05G22.05 Bench Anchor, ea. 1+ \$23.95 5+ \$12.60

* In our tests, an anchor, fully seated in a 1 1/4" blind hole, had a pull-out strength of at least 200 lb when used in hardwood and 150 lb when used in softwood. Actual pull-out strength will vary depending on material used and torque applied.

1/2-13 Threaded Fasteners

Though any 1/2-13 threaded rod or bolt may be used with our bench anchor (above) we offer a small selection of flat-head and round-head fasteners here for convenience. The 1 1/16" dia. washer, for use with round-head fasteners, increases the surface contact area of the head, distributing clamping pressure while reducing the potential for fiber crushing. All are zinc-plated steel.



D. Round Head

44Z10.10	1" Fastener, ea.	1+ \$.70	5+ \$.63
44Z10.12	1 1/4" Fastener, ea.	\$.70	\$.63
44Z10.14	1 1/2" Fastener, ea.	\$.70	\$.63
44Z10.18	2" Fastener, ea.	\$1.00	\$.90

E. 44Z10.01

1 1/16" Washer, ea. 1+ \$.30 5+ \$.27

F. Flat Head

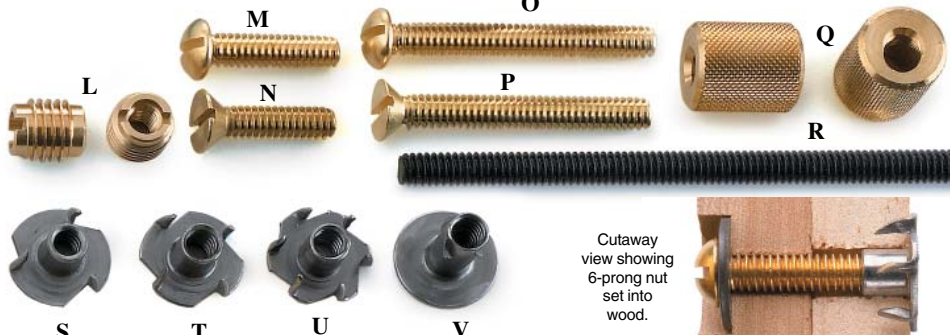
44Z10.50	1" Fastener, ea.	1+ \$.70	5+ \$.63
44Z10.52	1 1/4" Fastener, ea.	\$.70	\$.63
44Z10.54	1 1/2" Fastener, ea.	\$.70	\$.63
44Z10.58	2" Fastener, ea.	\$1.00	\$.90

1/4-20 Brass Nuts, Screws & Inserts

Machine screws and threaded inserts are ideal for projects where you want brass hardware, but still want knock-down convenience. The insert nuts are sized to fit a 3/8" hole and have knife-edge threads for a secure hold. The slot-head machine screws are available with either a round (RH) or a flat (FH) head. The speed nuts are cross drilled to move along a threaded rod without turning them; their threads do not engage until they meet the end, then they can be tightened. The threaded rod is 24" long.

1/4-20 T-Nuts & Propell Nuts

The T-nuts all have 3/4" dia. flanges with a 5/16" barrel height. Available with 3, 4 or 6 prongs (7/32" high), each with its own advantages. Generally, 3-prong nuts are used for plywood, 4-prong nuts for hard or soft wood and 6-prong nuts for softer materials and composites. Propell nuts excel in applications where there is a danger of splitting, either due to material hardness or material thickness. Also good for end-grain applications, such as leveller feet. The Propell nuts have a 3/4" flange, with a 9/16" barrel height. All nuts have a recommended 5/16" pre-drill. Sold in bags of 10 or bags of 100.



Veritas® T-Slot Hardware

All hardware is offered in packages of 10. T-bolts are available in five lengths.

G. 05J21.15	1/4-20 T-Slot Nuts (10)	\$6.30
H. 12K79.70	1/4-20x1" T-Bolts (10)	\$3.60
12K79.71	1/4-20x1 1/2" T-Bolts (10)	\$3.90
J. 12K79.72	1/4-20x2" T-Bolts (10)	\$4.20
12K79.73	1/4-20x2 1/2" T-Bolts (10)	\$4.90
12K79.74	1/4-20x3" T-Bolts (10)	\$5.40
12K79.75	1/4-20x3 1/2" T-Bolts (10)	\$5.90
K. 12K79.80	Hex Bolt Washers (10)	\$3.00

1/4-20 Brass Nuts, Screws and Inserts		Price	
	Item #	1+	5+
L.	Insert Nuts (10)	00M90.01	\$ 7.90 \$6.70
M.	1" RH Screws (10)	44Z08.03	\$ 3.80 \$3.25
N.	1" FH Screws (10)	44Z08.04	\$ 3.80 \$3.25
O.	2" RH Screws (10)	44Z09.03	\$ 5.50 \$4.65
P.	2" FH Screws (10)	44Z09.04	\$ 5.50 \$4.65
Q.	Speed Nuts (4)	05F01.03	\$10.50 —
R.	24" Rod, ea.	05F01.04	\$ 2.20 \$1.85

1/4-20 T-Nuts and Propell Nuts		Price	
	Item #	Price	
S.	3-Prong T-Nuts (10)	00N22.03	\$ 1.25
	3-Prong T-Nuts (100)	00N22.13	\$ 5.60
T.	4-Prong T-Nuts (10)	00N22.04	\$ 1.25
	4-Prong T-Nuts (100)	00N22.14	\$ 5.60
U.	6-Prong T-Nuts (10)	00N22.06	\$ 1.35
	6-Prong T-Nuts (100)	00N22.16	\$ 6.10
V.	Propell Nuts (10)	00N23.01	\$ 2.25
	Propell Nuts (100)	00N23.11	\$13.50

Workholding Hardware

Continued

Capscrews, Knobs & Washers

For a custom thumbscrew, press-fit (vise assisted) the socket head of the capscrew into one of the three available knobs: rose, knurled or T-knob. Use the 1/4" nylon washers as spacers or when you have to apply pressure right at the capscrew head. In some instances, you will want to combine a T-nut or threaded insert in your mechanism. All of these parts can be combined with nuts, threaded inserts or machine bolts.



Socket head of capscrew press-fits into knob.

Snap-Lock Knobs

These knobs have 1/4-20 threads and instantly convert any standard 1/4" hex-head nut or bolt into a clamp knob. They are particularly handy when you need a knob with a specific stud length to suit an application. Polypropylene with a textured surface for sure grip, the knobs have a hex-shaped recess with grooved walls to hold a nut or bolt head snugly. Available in three styles. Nuts and bolts not included. Sizes listed are diameter by height.



Hardware drops in and snaps into hex hole.

Nuts and bolts not included.

1/4-20 snap-lock knobs

1/4-20 Capscrews, Knobs and Washers		Item #	Price	
			1+	5+
A.	1 1/2" Rose Knob, ea.	00M40.01	\$1.20	\$1.00
B.	3/4" Knurled Knobs (4)	00M40.02	\$1.70	\$1.45
C.	1 1/4" T-Knobs (4)	00M40.03	\$1.80	\$1.55
D.	Nylon Washers (10)	00M40.23	\$1.90	\$1.60
E.	3/4" Capscrews (10)	00M40.11	\$2.50	\$2.10
	1" Capscrews (10)	00M40.12	\$2.90	\$2.45
	1 1/2" Capscrews (10)	00M40.13	\$3.50	\$3.00
	2" Capscrews (10)	00M40.14	\$4.20	\$3.55
	2 1/2" Capscrews (10)	00M40.15	\$4.90	\$4.15

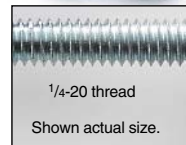
1/4-20 Snap-Lock Knobs		Item #	Price	
			1+	10+
F.	1 3/8" x 1 1/8" Star Knob, ea.	00M50.10	\$1.40	\$1.20
G.	1 3/4" x 1" Star Knob, ea.	00M50.20	\$1.50	\$1.25
H.	2" x 1 1/8" 3-Point Knob, ea.	00M50.30	\$1.60	\$1.35

1/4-20 Knobs, Handles and Thumbscrews		Item #	Price	
			1+	5+
J.	1" dia. Ball Head Knob (F), ea.	00M55.01	\$2.10	\$1.80
K.	1 1/4" dia. Ball Head Knob (M), ea.	00M55.05	\$3.20	\$2.70
L.	3/8" Taper Handle (F), ea.	00M53.01	\$4.50	\$3.80
M.	3/8" Taper Handle (M), ea.	00M53.02	\$7.00	\$5.95
N.	1" Clamping Knob (F), ea.	00M56.20	\$2.30	\$1.95
O.	1" Clamping Knob (M), ea.	00M56.21	\$2.30	\$1.95
P.	1 3/4" Clamping Knob (F), ea.	00M56.10	\$2.60	\$2.20
Q.	1 3/4" Clamping Knob (M), ea.	00M56.11	\$2.60	\$2.20
R.	1 1/2" Sure-Grip (F), ea.	00M55.20	\$2.30	\$1.95
S.	1 1/2" Sure-Grip (M), ea.	00M55.21	\$2.30	\$1.95
T.	1 1/2" Four-Arm Knob (F), ea.	00M55.30	\$3.20	\$2.70
U.	1 1/2" Four-Arm Knob (M), ea.	00M55.31	\$2.30	\$1.95
V.	1 1/8" Wing Knob (F), ea.	00M51.01	\$2.00	\$1.70
W.	1 1/8" Wing Knob (M), ea.	00M51.02	\$2.00	\$1.70
X.	2" Wing Knob (F), ea.	00M52.01	\$2.80	\$2.40
Y.	2" Wing Knob (M), ea.	00M52.02	\$2.80	\$2.40
Z.	2" Bar Knob (F), ea.	00M55.10	\$2.70	\$2.30
AA.	2" Bar Knob (M), ea.	00M55.11	\$2.70	\$2.30
BB.	2" Four-Arm Knob (F), ea.	00M55.40	\$2.70	\$2.30
CC.	2 1/4" Pentagon Knob (F), ea.	00M50.01	\$1.90	\$1.60
DD.	Wing Nut, ea.	00M54.01	\$2.60	\$2.20



Knobs & Handles

Made from durable plastics, the taper handle and the ball, clamping, sure-grip, 1 1/2" four-arm, wing and bar knobs are available in both male and female configurations; all have 1/4-20 thread and a 1" stud (except 00M55.05, which has a 1 1/2" stud). The 2" four-arm and 2 1/4" pentagon knobs are female only. The wing nuts are made from malleable iron for extended service.



1/4-20 thread

Shown actual size.

EE. 149-Piece 1/4-20 Jig & Fixture Parts Kit

A bargain on a popular 149-piece assortment of 1/4-20 jig and fixture hardware, this kit is conveniently organized in a storage box. The price of the components purchased individually would add up to more than \$110, and the parts count isn't "padded" with inexpensive parts – the kit is well balanced with a broad assortment of pieces in rational proportions. It contains 60 T-bolts (20 each of 1" and 1 1/2" sizes, and 10 each of 2 1/2" and 3 1/2" sizes); 16 T-nuts (4 prong); 16 threaded inserts; 10 round insert knobs (1"); six each of 2" T-insert knobs, four-arm insert knobs and four-arm bolt knobs; four each of five-arm insert knobs and five-arm bolt knobs; and 20 washers. The tough polypropylene case measures 13 1/4" x 8 3/4" and has 2" deep compartments with moveable dividers.

12K79.90 1/4-20 Parts Kit, 149 pcs.

\$56.50

EE



Where to Get Ideas

Many project plans will include the specific jigs and fixtures required to complete a project; however, there are many books and magazines that provide tried-and-true solutions to workshop problems.

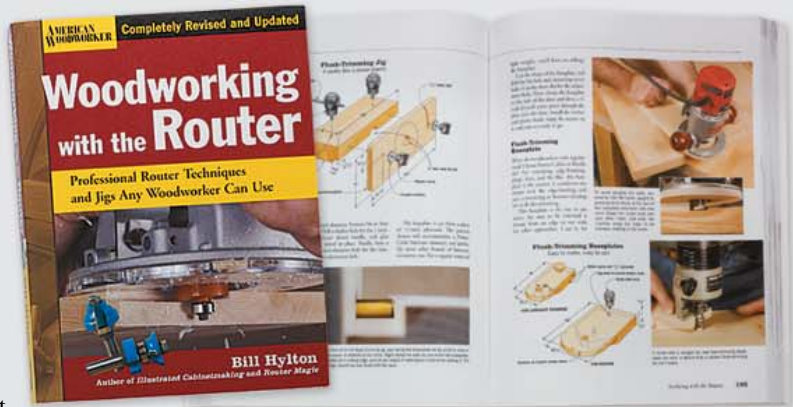


Woodworking with the Router

by Bill Hylton

This revised workshop classic includes information on router types, assorted bits, maintenance and principles of use. The author also covers router table design, fences, templates and custom-made jigs and fixtures. With hundreds of color photographs and drawings, a wealth of tips and techniques are clearly and fully explained. Well organized, with a full index, this is both a full course in router use and a fine reference book. Softcover, 8 1/2" x 11", 376 pages, 2006.

49L50.35 Woodworking with the Router **\$20.50**

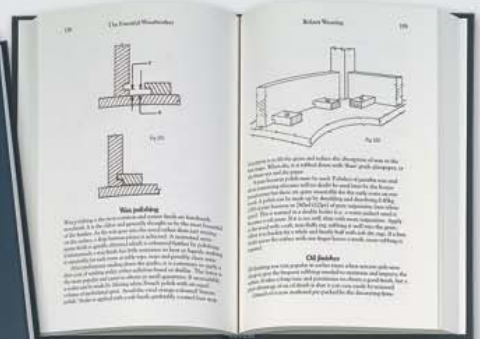
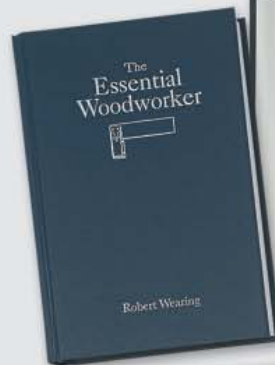


The Essential Woodworker

by Robert Wearing

A revised edition of Wearing's acclaimed 1988 text, this book is an invaluable reminder of many hand-tool basics that are often overlooked. It covers a wide range of fundamental skills, techniques and woodworking wisdom, with chapters on making tables and stools, carcasses and drawers, as well as handles and boxes. Appendices provide detailed instructions for making several jigs and fixtures for use with hand tools. With over 500 black-and-white drawings and photos that complement the text, the book is filled with information essential to anyone who uses hand tools, both beginners and experienced woodworkers. Hardcover, 6" x 9", 253 pages. Reprinted in 2010.

20L03.15 The Essential Woodworker **\$27.00**



Best Workbenches

The workbench is the heart of any workshop, and this compilation by the editors of *Fine Woodworking* presents advice to help you build a bench suited to your needs and keep it well tuned to ensure a lifetime of service.

It includes an illustrated review of workstations ranging from Roman times to the present and an overview of bench accessories to prompt design ideas. It examines the pros and cons of six ready-made workbenches, along with photographs and exploded drawings you can use as a guide to design your own fully outfitted traditional bench, a simple plywood bench and a special-use workbench. In addition to reviews of 13 bench vises, it presents instructions on installing a cast-iron vise and building a portable carving station, a clamping station, versatile bench hooks and various jigs to expand your workbench's capability. Softcover, 8 1/2" x 11", 171 pages, 2012.

73L91.82 Best Workbenches **\$17.50**



Router Joinery – DVD


with Gary Rogowski

Rogowski, a woodworker of 20 years, clearly shows quick and accurate joinery methods using one of the most versatile and adaptable power tools in the shop. He covers rabbets, dadoes, grooves and sliding dovetails in carcass work, as well as dovetails using Keller and Universal jigs. He also demonstrates several approaches to mortise and tenon joinery in frame-and-panel construction, including the use of shop-made jigs for angled mortises and loose tenons in chair making. The DVD format allows quick and easy reference to each of the illustrated methods. Length: 75 minutes.


73L10.16 Router Joinery – DVD **\$19.90**




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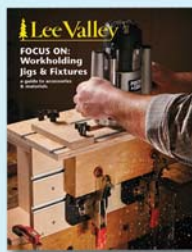
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