Tool Rests for Bench Grinders

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Aftermarket tool rests and tool guides make grinding easier, but which of these products works best?

> BY CHRIS GOCHNOUR

wirtually all bench grinders come from the factory with a built-in tool rest. As the name suggests, the tool rest serves as a supporting surface when grinding cutting tools such as plane irons, bench chisels, and turning or carving gouges. A tool rest improves control, which results in a better grind. Plus, the added control helps make the procedure safer.

Although a few factory-made tool rests are designed better than others, I've yet to find one that didn't look to be much more than a casual afterthought by the manufacturer. In particular, tool rests tend to be small, so tool support is minimal. As a result, when it comes time to grind, the process isn't as easy as most woodworkers would

FASTTRAK

888-536-1870 www.prairieriverwoodworking.com Grinding and honing guides: \$89.99



Ideal for plane irons. Although the FasTTrak system can be used for grinding carving tools and bench chisels, it's best suited for grinding and honing (below) plane irons. The blade is clamped in the tool guide, which slides on the tool rest.

The FasTTrak sharpening system is unique in that it considers the entire sharpening process—from dressing the grinding wheel to grinding the tool to honing the ground edge. It has four main components: a track, a tool rest, a tool guide, and a blade-setting jig.

The sliding track is secured to the worksurface just below the grinding wheel. The tool rest, a 7½-in.-long piece of rigid L-shaped stock, slides in and out on the track. The 2¾-in.-wide by 6-in.-long tool guide slides along the top of the tool rest when in use. When grinding, the bevel angle is established by adjusting both the amount the blade projects from the tool guide and the distance between the guide and the grinding wheel. The blade-setting jig proved handy for adjusting the blade projection.

Blades are mounted to the tool guide using the included clamps. With the FasTTrak set to make the lightest of cuts, it's just a matter of sliding the guide back and forth along the tool rest to grind the edge. Once grinding is complete, the tool guide morphs into a honing guide simply by adding an included roller.

Although it's easy to mount a slotted plane iron to the tool guide, I found it a bit cumbersome to mount bench chisels and other cutting tools.

The tool guide also can be used for freehand grinding of carving tools and turning gouges. It worked effectively, but with one caveat: Because the tool guide is free to pivot forward, it took some extra concentration to avoid tipping the tool too aggressively into the grinding wheel.

All things considered, though, the FasTTrak system proved to be a versatile sharpening package that did a good job grinding and honing plane irons.





Roller adds honing option. Mounting the roller (top) to the tool guide converts the FasTTrak into a honing guide (bottom) to be used on benchstones.

like. Aware of those shortcomings, several companies now offer aftermarket tool rests that are designed to make the grinding process easier, mainly by adding a greater measure of control. Before using any of these products, the factory-made rest is removed and retired.

I recently looked at the four most common models on the

market: FasTTrak, Veritas, Versa-Rest, and Wolverine. Each one can be used with either a 6-in.or an 8-in.-dia. grinding wheel.

Three of these companies— FasTTrak, Veritas, and Versa-Rest—offer an optional tool guide designed to be used with the tool rest. In use, the cutting tool first is secured in the tool guide, and then the guide is placed on the tool rest. This setup allows the tool guide to slide back and forth, with the edge of the cutting tool always maintaining the same position relative to the grinding wheel. As a result, the user gets both added control and a consistent grind. Because the tool rest and tool guide commonly are teamed up to create a grinding system, my review is based on how well they performed together.

Wolverine doesn't include (or offer as an option) a tool guide to use with its tool rest. Instead, Wolverine's tool rest has a long arm with a stop on one end that is especially suitable when grinding either turning or carving gouges.

By the way, on all but the

VERITAS

800-871-8158; www.leevalley.com Tool rest, tool guide, and bevel-setting gauge: \$52







Gauge sets bevel angle. Setting the bevel angle on the Veritas is easy, thanks to a gauge (left) that comes with the tool rest.

The Veritas tool rest has a platform, a pair of slotted arms, and a base, all made of anodized aluminum. The base is bolted to the worksurface. The slotted attachment holes allow some side-to-side alignment.

Adjustable handles made it relatively easy to lock the 2⁵/₈-in. by 4-in. platform in place. Once the handles were tightened, the entire tool rest was solid and secure. Its size and sturdiness make the Veritas more than suitable for freehand grinding.

The tool rest comes with a moldedplastic gauge that can be used to set the platform to any of the four common grinding angles: 20°, 25°, 30°, and 35°. Using the gauge was just a matter of placing it on the platform, then pivoting the platform until the edge of the gauge was tangent to the grinding wheel.

Unlike any of the other tool rests, the Veritas platform has a notch in front that allows it to wrap around the grinding wheel. The notch allows access to a portion of the side of the wheel while using the rest, a useful feature when sharpening a scratch awl or creating a conical shape.

The platform also includes a lengthwise groove designed to accept the Veritas tool guide, also called a grinding jig. Any cutting tool can be held between the clamping bar and the deck of the tool guide for sharpening. A pair of knurled brass knobs provides all the clamping force needed. A brass alignment pin made it easy to register the blade of the tool at 90° (for most applications) or at 30° (for grinding skew chisels).

In use, the Veritas proved to be easy to set up and adjust. It excelled when grinding plane blades and chisels. On the downside, because the tool rest is bolted to the worksurface, it first must be unbolted and then remounted before it can be moved from one wheel to another.

Wolverine, I noticed that loose grit from the grinding wheel built up on some of the parts, adversely affecting the performance of the jig. Fortunately, I was able to remove the grit using an old, stiff toothbrush. A blast of compressed air also worked well to clean the particles off the parts.

One more point: To use any of

these tool rests, the bench grinder must be mounted to a flat, solid worksurface. The tool rest also must mount to that surface. Rather than mount directly to the worksurface, though, all of these aftermarket models, except for the Veritas, connect to an intermediate track that attaches to the worksurface. The track allows quick front-to-back adjustment and makes it easy to remove the tool rest from the worksurface.

By installing an additional track in front of the second grinding wheel, you can switch from one wheel to another in just seconds. With such a setup, you can start with, say, an 80grit wheel, then quickly move the tool rest over to a finer-grit wheel for a smoother grind, all the while maintaining the same bevel angle.

Which tool would I buy?

All four of these aftermarket tool-rest systems proved to be an improvement over the typical factory-supplied rests. But after using these systems, I discovered some differences among them.

VERSA-REST

800-345-2396 www.hartvilletool.com Tool rest and tool guide: \$44.99 Extra sliding track: \$8.99

Like the Veritas, the Versa-Rest tool rest is made of anodized aluminum, and it has a similar-size (2½-in. by 4-in.) platform. The platform can be tilted to various angles, moved up and down, or adjusted in and out. Initially, the platform wasn't perpendicular to the track. But with some judicious bending of the arms, I was able to correct the misalignment.

Plastic wing nuts lock things in place after adjustments have been made. Compared with the handles on the Veritas model, however, the wing nuts were less comfortable to use, mainly because they had to be turned with a good measure of force to

lock the platform securely. Even then, it was not quite as secure as the one on the Veritas model.

The base of the Versa-Rest is secured in a sliding track, making it easy to adjust the base either in or out. Another advantage of the sliding track is that it allows the base to be removed quickly and easily when extra room is needed for freehand grinding. You can buy a second track and mount it in front of the second wheel on

The tool guide that comes with the Versa-Rest, called the Multi-Jig, secures the cutting tool between the clamping bar and the deck. A pair of slots in the bar

the grinder.



allows the knobs to slide back and forth, a small feature but one that made it easy to adjust for blades of various widths.

The guide holds the tool steady to the grinding wheel at 90° , or 45° for a skew grind. Two holes in the deck accept an alignment pin that's supposed to help position the blade at those two angles. But with only one fixed registration point on the deck, the pin is of little value. Plus, the pin lacks a shoulder, so it regularly fell though the hole and onto the floor. A rubber shoe under the clamping bar did prove useful, though, helping to hold the tools more securely and to dampen vibration.

Two tracks allow a quick switch. Mounting a second sliding track allows you to switch the tool rest from a coarse-grit wheel to a fine-grit one without losing the bevelangle setting.



For example, the Versa-Rest (above) wasn't as easy to adjust as the others, mainly because of its wing nuts, which were difficult to tighten fully. Even when tightened, the parts didn't lock as securely as I would have liked. Also, the alignment pin proved to be more of a nuisance than a help.

The blade-setting jig provided

by FasTTrak ensured that a bevel angle could be set quickly and conveniently. Plus, the honing guide is a handy feature you won't find on the other jigs.

If you grind a lot of turning or carving gouges, you should strongly consider the Wolverine. Its V-arm design puts this model head and shoulders above any of the other tool rests I tested. Unfortunately, though, the Wolverine system doesn't come with a tool guide, so all grinding must be done freehand.

The Veritas tool rest comes with a gauge that makes it especially easy to set the bevel angle. Also, the tool rest was easy to adjust and lock into place, and it was sturdy. When grinding plane irons and chisels, the tools I most often sharpen, the Veritas system was the easiest to use. If I had to buy only one of these systems, it would be the Veritas. For these reasons, I awarded it Best Overall. And because it's the lowest priced, I named it Best Value, too.

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WOLVERINE

800-565-7288; www.oneway.ca Platform, V-arm, and two bases: \$76.50

The Wolverine comes with two sliding bases, or tracks, a tool rest, and an arm attachment. The tool rest and arm simply slide in and out of the bases.

Each sliding base mounts to the worksurface with three wood screws. Because of the height of the bases, the grinder I used had to be elevated on a ¾-in.-thick plywood pad and moved to the front edge of the worksurface. By the way, moving either the arm or the tool rest from one base to another was quick and easy. Locking either one in place was a relatively comfortable process, thanks to a jumbo-size adjustable handle.

The tool rest, which measures 3 in. by 5 in., is bigger than any of the others in the review. Made from a ¼-in.-thick steel plate, the platform is plenty beefy.

When slipped into the base, the pivot point of the platform is $5\frac{1}{2}$ in. above the worksurface, and the platform can slide in or out



Freehand is the only option. Without a tool guide in its arsenal, plane irons must be ground freehand on the Wolverine tool rest.



Great for gouge grinding. The long, adjustable arm on the Wolverine jig is perfect for grinding turning and carving gouges.

a total of about 5³/₄ in. Like the other tool rests in the review, the Wolverine can be used to grind any bevel angle simply by pivoting the platform. But because Wolverine doesn't offer a tool guide, all blades not suitable for the arm must be done freehand. If you want a system with a tool guide, you'll need to improvise.

The arm is designed for grinding turning and carving gouges, but it also can work with narrow bench chisels. It can't, however, be used to grind a plane or spokeshave blade.

In use, the end of a gouge is set into a V-shaped pocket located on one end of the arm. The bevel angle is established by sliding the V-arm either in or out of the base. Once the handle of a gouge is in the V-arm, the tool can be easily and consistently ground. The rest can slide up to about 25 in.

Among all of the tool rests I tested, the Wolverine model was the quickest and easiest to adjust. The large, smooth platform was great for freehand grinding. The arm excelled at grinding turning and carving gouges, and it did a good job grinding chisels that measured 1 in. wide or less. Overall, the Wolverine had an exceptionally stout design and a rock-solid feel.



Use a light touch. Too much pressure while grinding will cause the steel to heat up and lose hardness.



Keep the wheels dressed. Use a dressing stone to periodically resurface the grinding wheels. In addition, Gochnour finds it helpful to bevel the edges.



Start with a flat nose. Gochnour grinds a square nose at the cutting edge; then the edge is used as a visual reference while grinding the bevel.

Tips for better grinding

I've learned a few good grinding tips over the years. Even though most of them fall into the category of common sense, they all prove helpful when I'm at the grinding wheel.

• Dedicate an area in your shop to grinding. It doesn't have to be big, but always keep it clean and ready to use. By making the grinding process as convenient as possible, you'll be more likely to take the time needed to keep tools sharp.

• Grind tools when you're in the proper frame of mind. I generally grind and sharpen my tools first thing in the morning; that's when I'm fresh and not yet too distracted by the various concerns of the day. Unless absolutely necessary, I prefer not to sharpen in the middle of a work session.

• Use aluminum-oxide grinding wheels. They are more efficient for grinding because the individual grits of aluminum oxide tend to fracture easily, revealing new, sharp edges. For a faster but coarser grind, I use a 60-grit wheel. For a slower but smoother grind, I sometimes follow with a 120-grit wheel.

• Dress the wheel periodically to expose a fresh grinding surface and to keep it running straight and true. One option is to use a dressing stone freehand or mounted in a tool guide. But I prefer to use an industrial diamond set in the end of a steel rod, with the rod mounted in a tool guide. With the tool rest angled 5° below the axis to the wheel, I move the diamond point back and forth across the wheel to expose

fresh, sharp abrasive particles quickly. Another good idea, which I picked up from the FasTTrak owner's manual, is to bevel the edges of the grinding wheels. This helps minimize the chance of overheating a tool as you engage the grinding wheel from the side.

• Use a light touch to keep things cool. An aluminum-oxide wheel also can help. By applying too much force to the tool in an effort to speed up the grinding process, the tool steel may overheat and cause the cutting edge to lose hardness. When using the proper grinding technique, you should be able to grind a tool without having to cool its cutting edge in a water bath. That said, I always keep water close at hand when I'm grinding, for those occasions when I sense the edge just might be getting too hot.



Keep water within reach. For quenching a blade that gets too hot while grinding, it's a good idea to keep a water bath close at hand.

• Define the shape of the cutting edge before starting to grind. Regardless of whether the

tool has a straight, skewed, or crowned edge, I first create a small, flat, blunt nose on the edge using an abrasive sander, a coarse benchstone, or the grinder. I use the flat as a reference while grinding, working until the flat almost disappears uniformly across the cutting edge. I don't grind all the way to a feather edge because the blade is more prone to overheating, plus the reference flat is lost. The thin flat area that remains after grinding is eliminated easily during the honing phase of the sharpening process.