Simpson Strong-Tie Timber Drive Structural Screw Fastening System

BY IAN SCHWANDT

Carpenters who are employed by design-build remodelers often do things that they've never done before by virtue of working with an in-house design team. This is the case at TDS Custom Construction, where our carpenters and project managers are encouraged to give the design team input on what materials are specified and how assemblies go together. For example, a recent screen-porch project called for exposed rafters with tongue-and-groove beadboard showing between them. After consulting with the team, we suggested sheathing the roof in 2x6 T&G material over Doug fir rafters. This provided a good opportunity not only to try out a new roof-sheathing approach but also to test Simpson Strong-Tie's Timber Drive structural screw fastening system.

The Timber Drive allows the user to drive structural screws ranging in length from 3 to 6¼ inches from a standing position. It's driven by corded or cordless drills fitted with Simpson's Quik Drive adapters, with the screws loaded one at a time into a tube on the side of the tool. Because the screws are gravity fed to the bottom of the tool, it's capable of fastening downward only. A removable nose plate exposes a cone-shaped tip that can act as a positive placement tip for fastening metal connector straps. The screen porch had a 3/12-pitch roof, and—judging by how the tool operated on that project—I would expect that it can drive screws on any walkable roof slope.

Simpson's website states that the Timber Drive is designed for "wood-to-wood or engineered-wood applications such as on wharfs, docks, walkways, mass-timber spline connections, multi-ply truss, and any application where stand-up driving of structural fasteners is required." Stand-up driving of large structural screws en masse is also more comfortable—though not necessarily faster—than bending over and using an impact driver. Two of our 20-something carpenters were confident they could screw down the 2x6 T&G material faster by crawling around with impact drivers, but tools like the Timber Drive that allow tradespeople to work from the correct ergonomic position are a crucial part of maximizing the length of a tradesperson's career.

In use, the Timber Drive is compatible with more than a dozen of Simpson's structural screw offerings, with a variety of head types and applications. The tool has several adjustment settings, including two for screw length (one at the feed mechanism and one at the drive tip), a knob for setting the screw diameter (#10 to #12, #14 to 0.315 inch, and 0.316 to 0.394 inch), and a countersink-depth adjustment knob at the connection point to the Quik Drive–equipped drill motor. After dropping the screw tip into the loading tube, the user pushes the tool's nose into the work surface to set the screw into place within the machine before attempting to drive it. We found that getting this rhythm correct was challenging and required focus to achieve. I would expect, though, that this rhythm would develop with continued use.

At $875 for the Timber Drive with a storage case but without a driver, this qualifies as a specialist tool in my book. The driver motors are compatible with other Quik Drive tools, adding some versatility to the kit, and I expect our production crew will find additional uses for the Timber Drive as their familiarity with it grows and as they become increasingly focused on performing their tasks in an ergonomically sound manner. strongtie.com

Ian Schwandt is the production manager for TDS Custom Construction in Madison, Wis.

Simpson Strong-Tie's Timber Drive is designed to be used vertically **(1)**. The tool can be used with SST structural screws ranging in size from #10 to #14 and from 3 to 6¼ inches long **(2)**. Fasteners load one at a time into a feeder tube **(3)**.

Photos: 1, Jeff Bush; 2, 3, Ethan Butler

Weigh In!
Want to test a new tool or share a tool-related testimonial, gripe, or technique? Contact us at jlctools@zondahome.com.

Upgrading Your Metal Brake

BY ARON JONES

I regularly use a metal brake for bending flashing and trim. Over the past year or so, I've been using several accessories from InnovaTools—including a two-way cutter and a pair of Anvil extensions—on a Tapco Max-i-mum XL brake. Installing the Anvil extensions was simple and, once installed, they can be easily adjusted using an Allen key to ensure perfect alignment with the brake rails. After adding the two-way cutting tool to the brake and spending a few minutes fine-tuning my setup and making a few cuts, I was impressed with how much smoother they made the cutting process and how they solved several problems commonly experienced when a metal brake is used.

For example, when cutting metal stock to size on a 10-foot 6-inch brake, I typically want to rip it in 10-foot lengths. To start the rip, a cut-off tool generally takes up the first 4 to 6 1/2 inches of the right side of the brake. That doesn't leave enough brake for the cut-off tool to finish a 10-foot cut while still in contact with the anvil rail, requiring extra support to prevent camming on the rail. This makes it hard to rip long stock down with any efficiency and creates extra wear.

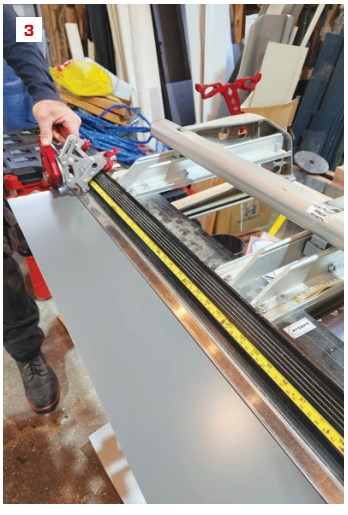
The Anvil extensions ($97 per pair) are a simple but elegant solution to this problem, improving the cutting capacity and efficiency of the brake by allowing for the use of the entire brake length. With the extensions, I was able to start and end cutting material outside of the brake itself, eliminating the cam or twist that can occur on the cut-off tool as a cut is finished. And as a bonus, the built-in stop on the extensions prevents the cut-off tool from running off the end of the brake.

As the name implies, the two-way cutter ($525) can cut in both directions. When I first saw this tool, I thought that it looked like a fancy high-tech—but not particularly useful—gadget compared with other cut-off tools I have seen or used in the past. However, now that I have used it, my opinion has changed. I have one word to describe this tool now: efficiency.

I encountered a bit of a learning curve when I first started out with the cut-off tool, mostly because of muscle memory and having done tasks a certain way for so long. But after using it for a little while, I could operate it easily with no issues and found that it reduced the number of steps I had to take to rip stock. For example, with more traditional cutters, I can rip stock only from right to left on the brake because of how the cutters are set up. With the two-way cutter, I can cut from either direction, which eliminates the steps wasted walking back to the right side of the brake to reposition the cutter and start a new cut.

The two-way cutter offers a couple of other benefits. One is that the cutter is set up with a 1-inch offset, which makes calculating the rip width easy when I'm laying out cuts. Second, the two-way cutter can be flipped up and out of the way, allowing it to remain on the brake while I'm bending stock, a feature that is not standard with traditional cutters. The InnovaTools Anvil extensions and two-way cutter are an excellent duo that will make anyone's metal brake work more efficient. innovatools.ca

Aron Jones is co-founder and site supervisor of Big Dog Construction on Grand Manan Island, New Brunswick. Follow him on Instagram at @bigdogconstruction.gm.



Made from CNC-machined aluminum, InnovaTools' bidirectional cut-off tool **(1)** works on most Tapco and Van Mark brakes. The Anvil extensions add 6 inches to both sides of the brake, and have built-in stops **(2)** that prevent the cutter from coming off the rail **(3)**.

Photos: Aron Jones