

Making Rustic Log Furniture with the **DYNA LOG PROCESSOR**



Rustic furniture conjures up images of an old hillbilly in a cabin whittling on a piece of cedar. The idea may be romantic, but there just aren't that many old hillbillies left and those that are couldn't possibly make rustic log furniture fast enough to keep up with the demand. The question is how to combine the rustic look with production that allows a small shop to make enough pieces to actually make a living. BY DAVID BOYT

As with any other aspect of woodworking, the answer to the question above lies in having the right equipment. Calvin Yoder in Summersville, Missouri, has found a combination that works for him. His 40-foot-by-40-foot shop hosts the types of power equipment that most woodworkers would be familiar with—chop saw, drill press, jointer, and drum sander—but located in the center of the shop is a machine that would leave most people scratching their heads.

The Dyna log processor is a multipurpose machine that includes a tenon cutter, mortise drill, and pneumatic drum sanders, all arranged so that the operator can take a log up to 6 inches in diameter, walk around the machine, and produce a sanded mortise-and-tenoned log ready to become a bed post, a chair leg, or a table support. All the machines are powered by one 10-horsepower, 3-phase electric motor. Calvin's rustic furniture operation centers around this machine.

Calvin moved to southern Mis-

The Dyna log processor (top left) is the center of production. The pneumatic sander, tenoner, and drill press are all powered by the 7.5-hp, 3-phase motor.

Above top: Cedar cabinets, bed frames, and chairs are ready to send out to customers.

The end result of the tenon operation is a 1½ in.-diameter round on the end of the post (above middle photo).

Calvin Yoder drills the mortise holes in a cedar post. The sliding table keeps holes aligned on the irregular pieces.

**DYNA LOG PROCESSOR
Model WP3000SMS**

Power:10-hp, 3-phase electric
Weight:2,500 lbs.
Size:7 ft. by 7 ft.
 (14 ft. required for the sliding mortising table)
Size capacity:.....3-in. to 6-in. dia. posts
Retail:.....\$15,750

Options:

- Gasoline engine power
- Chop saw in place of drum sanders
- Air clamps and feed on tenoner
- Adjustable stops on the sliding mortise table
- Variacut tenoner adaptor: adapts for blades from 1 1/4-in to 3-in. diameter tenons

Additional equipment:

Tenon cutter, drum sander, German post peeler are all sold as stand-alone units.

Manufacturer's Comments: We target the log furniture, log home, and fence market. Many home builders use it for railing. Works well on all types of wood, including hardwoods. One reason we've been successful is because it can utilize small trees that are usually trash.

Manufacturer's Contact Information:

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 6228 60th Ave.
 Evart, Michigan 49631
 Tel: 888/820-3962 or 231/734-4433
 Fax: 231/734-9174



The tenon cutter has two straight taper cutters that quickly unbolt for sharpening.

machines. I had read about Dyna before, so I knew they were around, and that's where I went. It's nice to have all three machines on one unit and just work your way around it as you process a piece of wood."

How It Works

He gave me a walk-around tour of the machine, demonstrating how he processes a cedar post into a chair leg. After starting the motor that powers all of the machines, Calvin pulled the clutch lever that engaged the sanding heads. "I don't know how you'd do it without these drums," he said. The air pressure in the drums allows the sandpaper to follow the contours in the log, retaining the natural shape of the wood. Calvin uses 60-grit paper on one drum for the initial sanding, and 80-grit on the other to finish it. The end result is that pleasing look and feel of well-worn driftwood, but it is smoother and much brighter. Areas of the heartwood showed through the sapwood, which added to the effect.

souri from Wisconsin, where he operated a circle sawmill, so he already had some woodworking experience. He worked in a cabinet shop for several years, making some rustic furniture when things were slow. He realized that the only way to make a living producing rustic furniture was to produce the furniture in quantity. In May 2005, he bought his first major piece of equipment—the Dyna log processor. "I don't know of any company that has all three of these

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The next stop was the tenoner—no more than two steps from the sander. A pneumatic clamp holds the post in place, making this a hands-off operation. A pull on the clutch to engage the cutter, and in less than five seconds he had a perfectly formed 1.5 inch tenon on the end of the post. “It can cut tenons on pieces up to 6 inches in diameter,” he explained. Lifting the cover,

he pointed out the two sets of straight cutters bolted to the spindle. “You can get them about any size, but I just use 1.5 inches on everything.” The straight cutters come out for sharpening.

The final operation on the Dyna machine was drilling the mortise holes for the chair rails. The post clamps to a carriage with a V-groove under the drill press. Since the post

rides on the carriage, the holes are perfectly aligned, even though the post itself is irregular in shape. “I drilled a 12-foot-long rail for a horse trailer with it. Once you get it clamped and lined up, just mark the holes and drill them.” The drill press is the one machine that Calvin would change. “The drill press has problems with the rough shape of the red cedar,” he says. The throat

LOG PLAYGROUNDS —Another Rustic Product



A visit to an outstanding producer of log playground equipment revealed another busy shop using log-shaping machinery made by DYNAL PRODUCTS. The handcrafted and decorative log look has found great appeal in the field of rustic furniture, but the application is not confined solely to furniture. Such items as rail fences, railings of various types, and picnic tables and benches are also popular. BY BILL GOVE

ment at the customer's site. There were a number of work stations scattered around in the buildings, and I noticed that Danny did not have one of the large post processors. I asked him why he didn't use one.

Danny explained that yes, it would normally be cheaper to purchase a multifunctional machine such as the post producer as all of the functions can then be handled by one power source and contained on one frame. I made a brief comparison on the manufacturer's price sheet, and he was right. But Danny prefers the flexibility of having a number of work locations to keep all of the workers busy when they are in the shop. And production is faster for him if the work rate is not dependent on a single machine. This situation is obviously different from a small furniture shop.

After being cut to a specified length, the log pieces are sanded and fashioned with a lineshaft tenoner to shape either a tenon or a domed end, if either is needed. Danny found that for his use he had to upgrade the clamping neck on the tenoner. The logs needing a mortise or hole are passed through the lineshaft drill. The sliding tray feed demands critical attention to make sure that the round mortise holes are not only correctly spaced but are also on the same plane.

Sanding is just as important with playground equipment as it is with rustic furniture, if not more so. The Dyna sander uses an inflatable drum or bladder system, which allows the post to impress into the soft drum, thus preventing flat spots on the wood surface. Production is faster,

Bears Playgrounds, located in a rural setting outside of Lima, New York, produces a charming and unique product fashioned from logs—their varied lines of playground fixtures are made almost entirely of white cedar log material.

A visit with owner Danny Bears and a walk through the shop, which is set up in a former barn and its at-

tached buildings, gave me a brief education in the special aspects of making playground equipment and the value of tools such as those made by Dyna Products.

Making the Components

Danny's crew of six employees is accomplished in the various steps of processing the logs, assembling the products, and erecting the equip-



Calvin Yoder and his sons gathered around one of their cedar tables. Calvin (center), and his sons Luis, Edwin, Irvin, Sylvester, and Adrian.

and they told me how to adjust it. They were always ready to do whatever they could to help," he says. The problem was a clutch that engages the spindle. Other than that, he has had no problems, even with the heavy use the machine has seen.

Lacking 3-phase service from the utility, Kelvin uses a static phase converter to run the machine, and
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and appearance is improved.

Assembling the Structure

When the various components of the playground structure have been completed, it is assembled in the shop. I noticed that the 2-inch tenons fit tightly into the holes making a strong structure. Some of the other joints and splices required a different type of fastening, in some cases a timber lock lag driven in with impact drive.

There are, of course, variations in assembly. A two-bay swing set requires a 20-foot headpiece log, fashioned by splicing two logs end to end and placing a vertical support under the joint. Once satisfactorily assembled, the structure is stained with an environmentally friendly, semitransparent stain.

If possible, the playground structure is not disassembled for delivery to the customer, but there are obviously some exceptions to that with the large items. The company crew delivers and erects the equipment on the customer's site. Material is also needed on the ground under the playground structures, and Danny makes available a wide selection. Hardwood mulch is a popular ground material and has been satisfactorily tested for "fall height." Other materials used are rubber mulch made from tires and rubber tile mats.

Since playground structures have commonly been made from material other than wood, I asked Danny Bears about the acceptance of log material in the public school systems. He explained that acceptance is growing and that there are govern-

ment safety standards for this product. Danny is a participant in the ASTM Subcommittee on Home Use Playground Equipment, and there are two certified playground safety inspectors on the company staff.

Although 75% of his customers are within a 25-mile radius, Danny has delivered playground structures as far away as California. Is he worried about competition from new producers? Not at all, he says. There is a big market out there, he says, and there is a lot to learn about making playground equipment.

But, at the same time, Danny Bears shows concern about competition from Chinese operations that are supplying large shopping outlets with playground equipment made of molded material. Danny hopes he has the answer—a unique and much more attractive product made with automation to the fullest extent possible.



Some joints and splices require special fastening, in some cases a timber lock lag driven in with impact drive.

Woodworking Machines

Woodworking machines such as the Dyna line of products lend themselves well to the home shop. Rustic furniture can be an excellent product for a talented hobbyist. Nathan Miller of Dyna Products pointed out that Dyna makes available for the hobbyist some simpler versions. For example, there is a portable aluminum tenon cutter that is light enough for re-chucking in a 5/8 in. electric or air drill. Cutter heads can be custom ordered for your own shop machine. One can even obtain a kit to build a stake pointer.

For the aspiring maker of rustic furniture, Dyna Products can provide plans for building rustic furniture, as well as full-color log furniture brochures for those who will be marketing the product.

The Wood

The most commonly used wood for these various log products is white cedar, because of its workability, beauty, splinter resistance, and rot resistance. Red cedar and pine and even hardwoods are used in some parts of the country. You may feel that a lack of cedar in your area is a roadblock to setting up a small shop for manufacturing log products. However, white cedar is not locally available for Danny Bears either, nor is it found in the home area of Calvin Yoder, the rustic furniture maker discussed in the previous article. In both cases they obtain most of their white cedar from suppliers in Michigan, a state which has an ample supply of cedar. A truckload of cedar logs delivered to the Bears

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says it has been trouble-free. To take care of the dust and shavings, he installed a Grizzly 2-horsepower blower system that has an inlet for every stationary power tool. Even the shavings have a market. "I have a customer that has horses, and they really like the cedar shavings."

For the hand-hewn look, Calvin

uses a German post peeler. "I kinda pieced this one together from parts," he explained. He said he was not sure of the manufacturer, but that Dyna does offer one, and it might have been built by Dyna. Calvin's oldest son, Luis, made several quick passes of the post over the rotary blades. It looked exactly

as though it had been hand-shaped with a drawknife.

A variety of rustic furniture pieces come out of the shop, including dressers, mirror frames, cabinets, hutches, beds, tables, chairs, and cedar chests. While he has standard pieces that he builds, he also builds to order. "I like cus-



operation will have over 1,200 logs, 5 to 6 inches in diameter.

Since the cedar log material comes to Danny Bears operation already peeled, he does not have to further shape the log surface other than with sanding. However, un-

peeled logs are generally fashioned by a machine known as a German peeler. Rustic furniture makers often use this type of machine because of the hand-peeled effect that the knives leave on the wood surface.

How to Get Started

If you think that log playground equipment is a product that you might like to consider, and want some help getting started, there is a route you can take. Danny Bears has set up the Bears Franchise Corporation and plans to expand production of his product by means of franchise

operations. His company has filed for a trademark with the U.S. Patent and Trademark Office, and they are in the process of completing franchise documentation in compliance with the FTC regulations. For more information, contact Bears Playgrounds at the address below. ■

Bill Gove is a regular contributor to Sawmill & Woodlot magazine.

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