

# SAWMILL REVIEW



*Left: Owner Dan Brink squares off a large log preparatory to producing boards.*

*Above: The Brink brothers built an attractive shed to protect their Linn mill from the elements.*

## LINN SAWMILL MODEL 190

**So you might like to have your own portable sawmill but can't work it into the budget. Or maybe can't justify that large an expense for a piece of machinery that will have only occasional use. You're certainly not alone in such a situation. But there's a possible solution that might work for you.** BY BILL GOVE

**T**here is a long list of portable sawmill manufacturers in the country now, and as you might expect, this results in a wide variety of sawmills. And with such a broad range of mill sizes and price tags available, it's not surprising that

some manufacturers seek a niche that has appeal to a smaller budget.

For example, would you consider a capable sawmill that is priced at just a little over \$5,000? Or better yet, how about purchasing the essential mill components for less than \$3,000 and building the mill your-

self? One of the manufacturers that makes this possible is Linn Lumber Mills from a town with a very appealing name, Sweet Home, Oregon.

Gary Boyd, owner of Linn Lumber, told me that the company has been building portable sawmills since 1986. They realized long ago that not everyone who would like to be a sawmiller can afford the price tag for a complete mill. Thus, for some time now, an important feature of their product line has been to offer the customer the opportunity to build a portion of the sawmill and purchase the vital components from Linn Lumber. Cash savings are obvious, in fact considerable, for those with fabrication skills.

I wanted to see the Linn mill for myself and sought out a couple of users. In a rural area along the southern edge of New York's Adirondack Mountains, a few miles north of Gloversville, brothers Dan and Paul Brink have been operating their Linn sawmill on a part-time basis for over six years. It took a little searching to find the rural location, but the visit at their mill was worth the effort.

Small, portable mills do not always receive the best of care and protection from the elements—unfortunately—but what a contrast with the Brink mill. If Dan had told me that the mill was less than a year

**LINN Sawmill Model 190**

<b>Carriage frame</b>	2 in. x 2 1/2 in. square tube
<b>Tracks</b>	20 ft., 3/8 in. x 3 in. x 3 in. angle iron
<b>Wheel diameter</b>	19 in.
<b>Wheel shaft</b>	1 7/16 in.
<b>Wheel speed</b>	900 rpm
<b>Saw speed</b>	4,500 sfpm
<b>Recommended blade</b>	1 1/4 in. 138 3/4 in. length
<b>Tensioner</b>	Hydraulic
<b>Wheel tilting</b>	Set screw adjustment
<b>Max log diameter</b>	26 in.
<b>Max log length</b>	16 ft. 6 in.
<b>Power</b>	13 hp Kohler electric start or 7 1/2 hp electric motor
<b>Price (complete mill)</b>	\$5,700—includes motor, tracks, 5 band blades, etc. Without 20 ft. track deduct \$800
<b>Options</b>	Hand crank feed system, electric raise/lower attachment, log turner, Honda 13 hp engine

**BUILD-YOUR-OWN KITS (Model 190)**

- ..... 1. Basic saw frame kit \$1,050
- ..... 2. Super saw frame kit \$1,500
- ..... 3. Complete carriage kit \$2,900

**Manufacturer**

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**Manufacturer's Comments**

The 190 is the original model we started with 16 years ago. We now have four models, one which is smaller, the M 160, and two larger mills, the M 190-A and the 1900. All four mills are offered as complete sawmills or are available as kits. Individual parts to build your own mill are also offered. Our saws are simple in design, sturdy in construction, and easy to operate.

old, I might have believed him. He has built an attractive and functional shed over the mill location and provided the care that a sawmill deserves. Probably his job as the town's road boss helped build his respect for machinery.

Though under a roof cover, the sawmill is still portable, mounted upon a homemade trailer frame.

**Features of the Model 190**

The Brink sawmill is a Linn Model 190, the most popular of the company's four models. The sawhead can handle logs up to 26 inches in diameter and has an adjustable throat opening of 22 inches. With the standard 20-foot track it can accommodate logs up to 16 1/2 feet in length. The other three models (one smaller and two larger) are of the same design and construction, varying only in throat size, saw height, and power.

Dan fabricated a trailer frame on which to mount the mill, giving him the option of going mobile should he choose to do so. The trailer frame sets down to about ground level in the shed, and thus loading the logs onto the track is not diffi-

**Linn Lumber has made some interesting choices for those on a limited budget who would like to have a sawmill and who have a little skill at fabricating.**

cult. With the basic Linn mill, the operator has to push the saw carriage manually along the track as he walks alongside the log. However, Dan had chosen to purchase and install the optional hand crank which advances the saw carriage, making for an easier and smoother cut. The hand crank is shoulder high which might be a little high for the ease of some operators, but Dan seemed comfortable with it.

Many small mill operators prefer the chore of walking along with the saw carriage, even if it does require a little more labor. It allows them to

have a better view of what the saw is doing, as well as the opportunity to better hear or feel when the saw deviates or becomes dull.

The saw height on the Linn mill is adjusted manually, but here, too, there is an option available, an electrical attachment for raising and lowering the sawhead. Dan Brink chose to include this little luxury as well.

The power on the Brink sawmill is the standard 13-hp Kohler electric-start engine. As an option, a Honda 13-hp electric-start engine or a 7 1/2-hp electric motor are available.

One of the cost-saving options offered by Linn is the opportunity to build your own track; the savings is about \$800. Dan went this route and built his own track from angle

iron on the trailer frame. Linn Lumber provides the plans for the track construction. If he did it again, Dan said, he would extend the 6-inch I beam all around the trailer frame.

The blade lube system on the mill is pressurized, but Dan also installed a lever valve on the line from the water container, which he says gives a better feed. He mixes in some pine pitch cleaner with the water, along with some windshield washer fluid in the winter.

Dan and Paul Brink are very satisfied with their Linn sawmill. As we sat on a lumber pile, drinking some lemonade that his wife had brought out, Dan extolled the joys and satisfaction of making his own lumber.

### Richard Gouge's Linn 190

Up in northern Vermont, I found another satisfied sawmill operator who owns a Linn Model 190. Richard Gouge of Marshfield has had his Linn mill for 12 years and with it has sawn the lumber for six houses and two large shops. He occasionally saws a little hardwood as well.

Gouge chose the option of not only building his own track but also of installing his own motor. The first motor was an 18-hp Onan, but it was too heavy for the saw carriage. The replacement motor, a Vanguard, is still probably overpowered at 18 hp, but it has been on the carriage for 10 years.

Gouge devised his own electric crank to raise and lower the sawhead. He told me that on a good day he can saw 1,300 board feet of spruce, working alone.

Although both of the Linn sawmills I'm reviewing appear to be working well, a comparison of the Gouge mill with the Brink mill is quite striking. The appearance of the Gouge mill definitely shows the effects of not protecting the machinery from the elements. Granted, the mill has had occasional use for 12 years, but proper protection and care of machinery still pays dividends.

Be that as it may, Richard Gouge is very satisfied with the performance of the Linn sawmill. He told me that he has never had to replace any bearings or make any major adjustments for misalignment.

Now, here's the budget saver. Linn Lumber makes it possible, even encourages you to take steps to reduce your cost even more. If you have a suitable engine or electric motor that can be used, the company will help you with installation suggestions. There is a large savings if you are handy with a welder and able to build your own track. As previously mentioned, both Dan Brink and Richard Gouge built their own tracks and saved a bundle doing so.

Another option which saves even



*Richard Gouge operating his Linn mill.*

more money is to build the mill yourself, using the parts and plans provided by Linn Lumber. One would need to weld, drill, tap, grind, and paint, but the specs are the same as for mills that are prebuilt at the Linn factory.

Here also, there are different options available. For anyone who would like to build most of the mill themselves, they can purchase just the basic saw frame assembly already built, consisting of the 19-inch band wheels, shafts and bearings, saw guides, hydraulic tensioner, driver pulley, and a saw blade. These parts make up the most difficult portion of the mill to build. This route brings a savings of \$4,650 for the 190 model over a prebuilt mill—plus the company will make available construction plans and a one-hour video.

Another option for the build-it-yourselfer is to buy the basic saw frame plus the other parts necessary for mounting the saw frame to a home-built rolling carriage. The savings still exceed \$4,000. Or finally, one could purchase the kit for the complete carriage construction.

From both of these stories, it is

clear that Linn Lumber has made some interesting choices for those on a limited budget who would like to have a sawmill and who have a little skill at fabricating. ■

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*Gouge producing construction lumber from small logs cut on property.*