SAWMILL REVIEW BY JANNE NÄSSTRÖM



The Laks frame saw is not a complete sawmill, but it is one of the largest accessories for all types of small-scale sawmills on the market.

ven if the principle is old, the Logosol Laks frame saw is a new sawmill concept in the North American market. However, in Europe it is a different story. The first sawmill like this was manufactured in 1990 in Jarvso, Sweden. The inventor, Kalle Laks, built this sawmill primarily for customers in Sweden and neighboring countries as an accessory for band and circular sawmills. (For more on the interesting history see http:// en.wikipedia.org/wiki/Saw pit.) Logosol, known for its small chain saw-operated sawmills, realized that instead of losing a customer who might be outgrowing their Logosol sawmill, they could suggest that they buy a Laks. The cooperation worked so well that Logosol became the distributor for Laks outside of Sweden.

At that time, the Laks was only available in 3-phase electric-powered models. Before its introduction to the U.S., Logosol wanted a gas-powered version. The company recently reconstructed all three sawmills for North America—at the same time the sawmill got the Logosol brand, a new design and color scheme. The result, according to Logosol, is the first modern small-scale frame saw with a combustion engine.

Slow but Fast

The Laks is not a complete sawmill. Two slabs have to be removed before it can be set to work. This preparation can be done

with any small-scale sawmill on the market. But once this has been accomplished, the Laks is incredibly fast thanks to the frame saw principle. The smallest Laks model can have up to 16 blades and the largest up to 20. Two cants can be sawn at the same time, one on top of the other. Maximum cant size is from 7 inches x 13 inches (Laks 330) to 8 inches x 19 inches (Laks 500). The cants are automatically fed through the frame. The speed is not impressive at 6.5 feet per minute at its fastest. But if you multiply that by 20 cuts in two cants at the same time, the result is up to 3,940 linear feet per hour.

Top main photo: Marc Petitroulet welded a rigid steel frame and put wheels on it. The first mobile frame saw? **Inset:** The inventor of the Laks Logosol frame saw, Kalle Laks, (left) with Logosol owner Bengt-Olof Bystrom and the first Logosol Laks 330 with a combustion engine.



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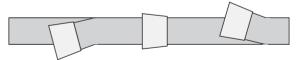
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Profile view of the RazorTip blade showing the set of the blade.

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SPECS

Experiences from France

Marc Petitroulet lives and works north of the city of Grenoble at the foot of the French Alps. There is a lot of forest in the region, most growing on steep slopes and impossible to harvest with machines. The worst slope is Mont Blanc, the roof of Europe, at a height of 4,803 meters or three miles. "Most of the forest is national parks and hence protected by law," says Petitroulet. "We have to get permission from



the government to harvest individual trees." Obviously this is a region

made for small-scale sawmilling.

As a forest worker, Marc started with a chain saw, but soon realized there was an increasing need for more sawmilling capacity and bought a German band saw, a Serra, on wheels and capable of handling logs 4 feet wide. The local species are mostly softwood, spruce and pine, but with a mobile sawmill there is market potential for sawing bigger hardwoods like walnut in the flat land west of the mountain region.

Replaced Employee

In France the cost of unskilled workers is higher than in North America and it is harder to fire them. Marc says, "The Serra is a good sawmill, but to get capacity you need someone to help you." He had been unhappy with his employee, so instead of hiring somebody else, he looked for a way to keep up production of approximately 70,000 cubic feet per year, without employees.

"In 2005 the Laks was on display at the Elmia Wood trade fair in Sweden. What I saw was a machine that would work on its own while I am working with something else," says Marc.

Unfortunately the Laks is not

Logosol-Laks		DI MUD
MODEL	330	500
Dimensional accuracy	+/- 1/32 in. (0.5 mm)	+/- 1/32 in. (0.5 mm)
Feeding speed	2 ft., 3 ft./min.	1.6 ft., 2ft., 2.3 ft./min
Max number of blades	12	20
Min distance between saw blades	7/16 in.	11/16 in.
Max production/hr.	900 BF	1,440 BF
Frame motions	7 1/8 in.	10 1/4 in.
Weight	1,654 lbs.	2,425 lbs.
Serviceable time before sharpening	8–10 hrs.	8–10 hrs.
Machine length	21.6 ft.	29.5 ft.
Machine width	3.9 ft.	3.9 ft.
Machine height	5.4 ft.	7.2 ft.
Electric motor	11 kW 15 hp	11 kW 15 hp
Gasoline motor	23 hp	23 hp
Power connection	40 A	40 A
Sharpening machine for blades	Included	Included
Price—electric	\$25,400	\$28,999
Price—gas	\$24,900	\$28,999
Additional blades	\$66 ea.	\$66 ea.
Blade holders	\$125 ea.	\$125 ea.

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MANUFACTURER'S COMMENTS:

Logosol has taken to heart Marc's advice about a bigger motor, and for the American market have installed a 23-hp gasoline motor on the Laks. Logosol is about to extend the history of this "old technology" as the first releases of these new Laks frame saws are installed in the U.S.

portable—a minor problem for Marc. He ordered the largest machine, the Laks 500 Plus, welded a rigid steel frame and put wheels on it. The mobile frame saw was born.

Marc's equipment on the road is a kind of traveling circus. It includes a band saw, a frame saw, an edge trimmer, and a gasoline generator in case there is no electric power on the site. It is not easy to move all this, especially in the winter. "Last winter it was too cold and too snowy to work outdoors," says Marc.

This summer he is moving to a

permanent site and will have both sawmills indoors. He bought a truck to get the timber and deliver lumber. This way he can better organize the work and potentially get higher production on his own than he did with an employee. "My goal is to maximize production and offer more services to my customers while just working on my own," says Marc.

Like an Old Tractor

After the removal of two slabs, the mill eats through the wood without supervision. While that is taking place, Marc can prepare new cants



Mattias Bystrom of Logosol during the first test of the prototype Laks 330 with combustion engine.

or work with larger hardwood timber. He sells the hardwood to joiners who want thicker lumber with wane. So there is a division of labor between the two sawmills, and thanks to the way the Laks works, Marc can operate both without help.

What does he think of the Laks frame saw after three years? Marc

says it is a fairly uncomplicated machine, basically a frame moving up and down, driven by a heavy flywheel. It reminds him of an old farm tractor that gets a lot of power from a small motor thanks to the flywheel. The motor on the biggest mill is only 15 horsepower. "The motor could be a bit bigger," he says. "You saw two blocks, the



The secret behind the capacity of the Laks sawmill is a frame with up to 20 blades sawing one or two cants.

drive belt for the frame can skid if vou have more then 15 blades. Apart from that I have no complaints. It is easy to set up, the precision is fantastic, the measurements on the lumber are better than you get on any other sawmill I have seen, and it is quiet."

Janne Näsström is a freelance journalist specializing in forestry and wood processing. He also works at the business school in Jonkoping, Sweden, conducting research and development projects on small and midsized enterprises. In the summertime, Janne is a professional magician.

