



Private Railway carry the Logs from the forest

Bo Malmberg has built his dream!

Bo Malmberg in Motala, Sweden, has spent his entire adult life fulfilling a dream. His private railway is 2.3 kilometres (1.4 miles) long, and Bo uses it to carry logs from the forest to his Logosol Sawmill. The result is an unusually rational and enjoyable sawing spot. But how do you come up with the idea of building your private railway?
"It all started with Märklin trains," Bo replies.



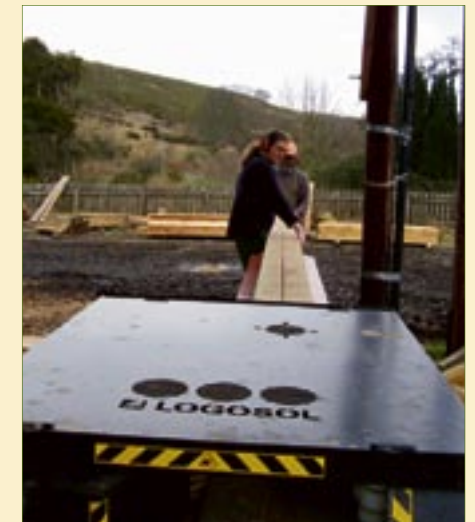
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On mission in Nantwich

Richard Dunmore and his Logosol Big Mill had a tough job in Nantwich. Read and learn!

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"There are few planers/moulders that are as spread over the world and used under as varying conditions as the PH260. It has proved itself to be durable and easy to service and maintain," says the constructor Bo Mårtensson.

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Test! Logosol Circular Resaw

William Dobie at Logosol UK is testing the Logosol KS150 Circular Resaw with good result!

Last autumn we decided it was time to try out the Logosol KS150 Circular Resaw for ourselves. It had been in Logosol's programme for a few years but never sold in the UK.

By William Dobie

It duly arrived, like all Logosol's industrial machines, safe and secure in its plywood box but with some assembly work to complete before it could be put to use. Bengt-Olov Bystrom, Logosol's MD, was over from Sweden at the time and he and I spent the best part of a day assembling it and putting it through its paces. First impressions? Well the first piece, a block of hard, dry, knotty Sitka Spruce stalled

the machine dead. But the second attempt with the feed speed slowed down a bit produced perfectly dimensioned boards with a strikingly smooth sawn surface despite the poor quality of the timber.

Since then we have put the KS150 to a variety of different tasks. We already have an excellent band resaw in our woodyard, so the original plan was only to test the Logosol machine. But the KS150 has proved to have sufficient advantages over the bandsaw to earn a permanent place in our operations.

No woodyard should be without an efficient resaw. For us it means that we can reduce the amount of sawn timber we hold in stock to a few larger sizes from which we can resaw our customers requirements at short notice.

FACTS/LOGOSOL KS150

- It is very quick and easy to set to the correct dimension, making it very suitable for the many one-off and special orders that we get.
- Blade maintenance is so much simpler compared with a bandsaw. The TCT blade will stay sharp and saw accurately for weeks
- The infeed and outfeed tables give excellent support. Resawing long and heavy sections used to be a problem but isn't now.
- It is significantly safer as the blade is completely enclosed and the feed is power assisted.
- More sawdust is generated compared with a bandsaw, but the sawn surface is so smooth and dimensions so accurate that for many purposes no further machining is necessary.

FRESH CUT!

Editor: Sara Boström

Translations: Anna Olsgren

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Hello friends of Logosol!

Here at Logosol UK we have had a most encouraging start to the year. Ruth has been flat out dispatching Timberjigs, Big Mills, LSGs and MS660 chainsaws mainly to the woodworking community. It seems that few of life's experiences can beat the satisfaction of starting with a tree trunk and ending with a piece of beautiful furniture.

Over the next few months we will be concentrating on the other end of our product spectrum by promoting the stackcutter, circular resaw and planers to established wood processing businesses.

The last ten years or so have been difficult for British timber businesses. It has felt as if the rest of the world dumps its surplus timber on us at prices we cannot compete with. But now prospects are better than at any time I can remember. Imported timber is in short supply, prices are rising sharply and wood's credentials as a renewable resource are unchallenged.

So now is the time to invest in machinery to make new products and to increase efficiency and safety – and we at Logosol have much to offer.

William Dobie,
Logosol UK

Sharpens the Chain Perfectly and Completely Automatically

Every sawyer dreams of a chain that is always sharp. Logosol's sharpening robot is as close to that as you can get. It is an automatic sharpening machine that does the job while you are doing something else.

Within large-scale forestry they have automatic sharpening machines to sharpen the chains of the harvesters.

These are well-functioning machines that ensure that the chains become sharper than new ones. But the price has not been reasonable for the self-employed forest owner and small-scale sawyers.

Logosol's sharpening robot is based on the same technique as the professional sharpening machines, and is developed in cooperation with Markusson Development, whose large sharpening machine is used in the forestry business.

The price is considerably lower than the prices of professional machines, but the result is just as good.

"Without having any scientific evidence, we think that the edges of the saw teeth feel sharper than on a new chain, and you also notice this when you are sawing," says Mattias Byström, in charge of product design and development at Logosol.

For cross cutting and rip sawing

The chain sharpening robot automatically sharpens the most common types of chains, such as 1.3 picco, 1.6 3/8", and 0.325 chains. Both tooth angle and cutting angle are adjustable, so that you can sharpen both cross cutting and rip sawing chains.

"It takes half a minute to set and start the sharpening machine. After this, it automatically sharpens ten teeth per minute," Mattias says.

The difference, when compared to professional machines, is that the sharpening head does not automatically reset itself. Instead you have to turn the sharpening head manually when one side of the chain is

sharpened. This little extra work has made it possible to reduce the price substantially.

Sharpen in the forest

The sharpening machine is run by 12 V direct current. The power from a small car battery is enough to sharpen several hundred chains.

Bring it with you out in the forest and let the machine work while you continue cutting trees. Place it by the sawmill, and let the green robot sharpen while you are sawing. At home, you use a 12 V adaptor, e.g. a car battery charger of the type that is available at a low price in stores selling car accessories.

"We have waited a long time for this. The convenience factor is just as high as when it comes to the Logosol Sawmill's automatic feeding," says Mattias.

The sharpening robot is not only convenient; it also sharpens with higher precision than most people can manage to do by hand. This means that it becomes easier to saw with better results. With an automatic sharpening machine, you can also help neighbours and friends with chain sharpening. You do not, however, have to tell them how you do it. Sharpening a chain manually as perfectly as Logosol's sharpening robot does, is a great art...



New Water Cooling!

Logosol's bandsaw has always been water cooled. But now it will be equipped with better, automatic water cooling, which will reduce the water consumption. This is now standard equipment on new bandsaw units, but it can also be mounted on older models.

At the end of last year, Logosol introduced water cooling for the electric saw units. It has quickly become a sought-after and much appreciated product.

You can make your own water cooling using a plastic can for the water, a hose and a nipple.

"But we want to offer our customers something extra," says Jonas Höglund, product developer at Logosol.

This extra is a new holder for both the oil can and the water can, which is placed at the back of the motor where the cans are not in the way when replacing the chain or the guide bar. But the best feature is a solenoid valve that automatically shuts off the water flow



The new water cooling with automatic shut-off: Now also on Logosol's bandsaw.

when the saw is not running. This radically reduces the water consumption.

A must in bandsaws

Logosol's bandsaw has always had water cooling. This is something all bandsaws have, and the water usually flows freely without au-

tomatic shut-off. Now, the new water cooling is standard equipment on Logosol's bandsaw. Owners of older models can easily upgrade their water cooling to the new, automatic version.

The advantage of having the new cooling on the bandsaw is even greater than having it on a chainsaw. When overheating, the tooth tip tempering is lost as well as the sharpness, and by this the saw unit also loses its ability to cut straight. The fact is, that a bandsaw can only cut straight if the blade is as sharp as a new or newly sharpened one. With the new water cooling, you do not run the risk of forgetting to turn on the water. This will turn on automatically, provided that there is water in the cans, that is.

On a chainsaw the water cooling serves another purpose. When the chain gets really hot, the oil film, which is a barrier between the chain and the bar, will break. This results in steel running on steel, which leads to damage to both the chain and the bar. By keeping down the temperature of the cutting equipment, many problems can be avoided.



From log to the finished pile boards!

Slabbing in Nantwich

...with 'just a chainsaw'!

One of the most common ways I pick up my business is from Tree Surgeons removing timber for their customers. Very often the tree surgeons are faced with the question of how a customer might use the timber rather than just firewood it. This is exactly what happened when I was called to Nantwich by a company of tree surgeons.

By Richard Dunmore



Thanks to Richard Dunmore and the Logosol Big Mill this log will be a part of a new kitchen, insted of firewood.

The guys from TreeMedic put my name forward to a customer when he said he would like to use the timber for the worktops in his new kitchen. The pros, cons and associated challenges of this are another article in their own right however my main challenge here was that the slabs had to be extracted in the widest possible widths. As the butt had a maximum diameter of 3 feet which is beyond the maximum cut width of the bandsaw, it was agreed the timber should be milled using the chainsaw mill.

Consistent thickness

Another good reason not to use the bandsaw was that it physically would not fit into the garden! One of my immediate concerns was to ensure that I get consistent thickness and maximum number of boards possible. Therefore, it was agreed to aim for 2 and a half inch boards. This would give an allowance for processing down to the required thickness should any wind or warp develop in the slabs during drying.

As the two main sections of butt were lying end to end where they were felled the first job was to move one of them out of the way to give me space to set up the mill. This can be some challenge with a large piece of timber however, it is always made much easier by using two cant hooks. Its funny that I always think of what the Egyptians achieved without the help of machines when I am trying move a large timber with no mechanical assistance!

Give me a long enough lever etc.....

Once there was clear access to the main timber I was then able to clean it up by removing any projections and cut the ends of the timber flat ready to receive the Logosol 'Big Mill' chainsaw mill. You usually have to do this as the end of the butt will still have the 'sink' on it placed there by the tree surgeon when felling the tree.

I use a string line to sight the position of the first cut through the tree which allows me to visualise the cut position relative to the main butt. This is particularly helpful if the tree has significant 'flare' at the butt end. The flare throws the eye out considerably. Once the first cut position is set the 'Big Mill' can be bolted to the end of the butt. For

this job I have used the Big Mill extension kit which facilitates the processing of larger timbers. As you will see the ends of the butt have already been painted which saves painting each slab when it is released, This prevents the end of the slabs drying quicker than the centre section. If this happens the ends of the slabs would crack, potentially wasting timber or in this case making the whole slab unusable.

For this job I used the Husky 120cc machine with the 4 foot bar which ensured I could cut through the whole log even at its widest point. With this configuration there are considerable forces on the mill so correct propping and support of the mill is essential. The weight of the long bar and chain cause the tip of the bar to sag however as long as the bar remains parallel to the last cut this is not an issue.

Popular for amateurs

Once the first cut is made the height of the guide track is dropped by the same number of increments at each end and the next cut made. Unfortunately on the last cut we cut through a rather large nail which managed to produce a wedge shaped slab! Fortunately we had already realised more than sufficient timber for the project and the wedge shaped slab was one of the narrower ones! As they say "hits happen".

Overall the slabs were beautiful and were ready for the next stage when I left that afternoon. I left the customer thinking about the problem of where he was going to find a 3 foot thicknesser and a kiln. He was very happy with his timber, its consistent thickness and good surface finish that was achieved with 'just a chainsaw'!

As chainsaw milling is becoming more popular for amateurs and professional alike I have started to run short courses for those wishing to start from scratch or those wishing to move onto advanced milling. I am also able to offer courses on any other type of mill. As I will be moving to the North West in the near future they can be based there or at your own premises. Just let me know your requirements and I'll try to help out.

Staffordshire Sawing Services **Phone:** 07724 700859

Email: richard@mobilesawing.co.uk **Web:** www.mobilesawing.co.uk

Besides the usefulness of the gun stock, it provides an opportunity for the artist, as well. Sid Poor carved this ram's head.



Sid Poor's 45 caliber rifle. He estimates that he spent over 120 hours just on the wood carving of this one.



Dave Boyt of Neosho, Missouri shows off a gun stock blank. This one was cut from a walnut tree that had blown down three years before he got it. He sanded down and moistened the surface to show the grain. Boyt sells the blanks in the rough cut form and lets the buyer decide how to cut the gun stock from it.

Cutting Gunstocks with Logosol sawmill

Imagine walking through the woods and—with the landowners permission—piling \$100 bills into your pickup truck. That's pretty much how I feel when I come in behind a walnut logging job to salvage the "scraps". Loggers here in southwest Missouri are so focused on the big logs, they ignore the potential for smaller pieces are left on the ground as "too much trouble to pick up." Landowners are usually glad to get rid of them, and charge a minimum, or even give them away.

By David Boyt

Walnut is known as the "king of the hardwoods" (any nominations for "queen"?) because of its beauty, dimensional stability, and durability. These characteristics, along with its light weight and shock absorben- cy make walnut the preferred wood for the best gun stocks. If you hear of a walnut timber sale in your area, get there as soon as possible, or you may find the best scrap has already been cut for firewood.

As a band saw owner, I have spent hours trying to clamp down 2' long walnut forks to make gun stock blanks. The problem is, the band mill was never designed for this kind of cutting. The short, odd-shaped pieces are hard to clamp down, and often move and twist as they are being cut. The result is often a crooked cut, and occasionally a ruined blade, when the log breaks loose from its clamps.

I had the chance to see the Logosol M7 mill at the 2003 Portable Sawmill Shoot-out in Bangor, ME. Here, nestled in among band mills of all size was Rob Bjorklund slicing his logs with a chain saw. It took a few years for the idea of actually buying one for cutting gun stocks and other odd-shaped pieces to hit me.

Support the log

The M7 mill is ideally suited to this kind of cutting. The log deck is high enough to make it easy to turn and clamp down the log. I use a flat 2x10 board to support the log, with an assortment of blocks and wedges to position it. I use long deck screws to hold the log in place, and keep a cordless drill and extra batteries handy to drive them in and remove them.

The value of a gun stock is closely tied to the shape of the grain. The most desirable grain is a "feather" that comes from cutting crosswise through a fork in the log. Getting that feather grain on both sides of the gun stock requires careful alignment. The log must be turned and tipped so that the saw slices evenly above and below the center. The ability to set the height of the log supports independently make this easy on the M7 mill. The M7 also makes it possible to precisely de- termine both the entry point and the exit point of the saw blade. Even 1/2" can make a big difference on the end product.

Some of my sawyer friends dismiss the chain saw mill as too slow. They measure success by the number of board feet produced in a day. I might spend half an hour cutting a gun stock (I often spend more time positioning it and clamping it than actually cutting it), and may end up with less than five board feet. The 3" thick blank will spend the next two years drying before it is ready to use. The price of dry walnut blanks range from \$50 to \$800 and up, depending on the grain pattern. Even at the low end, that's a pretty good return on invest- ment. Check on Ebay, if you want an idea of what is selling. I've had the most success dealing with gunsmiths directly. They usually like to come by and take a look at what I've got available. After a little friendly bargaining (and maybe bartering) we both end the transaction with a smile on our face.

Cherry, maple and oak

Gun stock blanks are only part of the salvage potential. I have come across walnut logs over 3' diameter by 3' to 5' long left out in the woods. Too short for the mills to use, but definitely worth bringing home, if you can get it in the truck. Wood containing burls and other "defects" are also out there, so keep your eyes sharp and your mind open. And don't just focus on walnut. Depending on your location, you'll find cherry, maple and other valuable wood left behind. Even oak and hickory scraps are worth taking a closer look at. Furniture makers and wood turners are always looking for something unusual, and will pay a premium for it.

So the loggers can keep right on cutting the big logs, and I'll keep coming in behind them, picking up the scraps. Be patient, and keep your eyes open!

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Hello Logosol!

I've had great fun learning to use your Timberjig and although I've learnt a lot I'm sure there is plenty more to learn.

I'm going to put a shed (you can never have too many) where the logs are when I've cleared the space and the double story green house, to house my growing collection of citrus and olive trees is going on the other side of the garden. The new super deluxe composting loo will probably go behind the bamboos. I used no other toilet for the first 18 month on this site until I put in the drains and I can highly recommend them - the shrubs enjoyed it as well!

Just a piece of advice for others who might be following this extremely economi- cal route to obtain sawn timber - cheap screws give grief.

Yours sincerely
Heather Muddiman

The Logs Go on Private Railway *to the Sawmill*

Bo Malmberg is probably the only Logosol-Sawmill owner in the world who carries logs from the forest to the sawmill on his own personal railway. The line is 2.3 kilometres (1.4 miles) long, and is found in Tiveden in Sweden.

By Janne Näsström
Translation: Anna Olsgren

The plans for building a railway had already started to develop in 1969, when Bo Malmberg's parents bought a small forest property at lake Örkagen. To provide capital for the purchase they harvested trees on the property, but some logs were left on the other side of a bog.

"I considered making an aerial ropeway, and also other methods to carry home the logs," says Bo.

Most of all, he wanted to build a railway, inspired by the Märklin trains of his childhood. But how would he, as a private person, be able to build a full-scale railway? During his military service, five years later, he found the solution by a roadside outside the town Tibro.

Railway from a peat bog

"There was a pile of rails from a closed-down peat litter factory. I bought the rails and financed the purchase and the transport by selling half of the rails to a scrap dealer. I kept all the switches and axles."

The width of the track is 600 mm (24"), the standard for small industrial railways. In Sweden, this type of railway has mostly been used on peat bogs. The trains have been replaced by vehicles with balloon tyres, which has resulted in a supply of rails, axles, wagons and engines that you can buy at reasonable prices. The laying of the rails started immediately, but when the goal was reached, all the left logs had been used up for making the sleepers of the railway.

Since then, the railway has been improved and extended successively, and today it is 2.3 kilometres (1.4 miles) long.

The first board hangs on the wall

With their own forest, railway and a constant need for timber, for hobbies and renovations of the buildings on the property, it was only

a matter of time before a sawmill was acquired. Today, the Logosol Sawmill has its natural place by the railway.

"The first sawn board hangs on the wall in the bedroom," says Bo's wife Elisabeth, who is accustomed after many years of railway building.

"At my first visit to my then future parents-in-law, we spent two days painting railway wagons."

The combination "railway and Logosol Sawmill" is both entertaining and useful. In civilian life, Bo is a production technology manager at Electrolux's stove factory in Motala, and at work he organizes streamlined productions. In the case of the railway, he has also succeeded in this.

Safe lifting in the forest

Örkaggen Railway, as the line is called, has several technical solutions that other Logosol Sawmill owners should consider copying. Especially when it comes to log handling.

"In the forest we pull the logs to the tracks with the help of an iron horse, and load them on the wagon using a gantry crane," says Bo.

The gantry crane is easy to take down and bring with you out into the forest. It straddles the wagon, and the logs are lifted by an ordinary chain hoist which can be pushed backwards and forwards on the crane beam. This results in safe lifting, even when handling heavy logs.

The Logosol Sawmill stands beside a double track under a big gantry crane, which extends over the two tracks and the sawmill. The wagons loaded with logs stands on the track furthest away from the sawmill. With the help of the gantry crane the logs are lifted over to the sawmill. The processed timber is then placed on another railway wagon on the track closest to the Logosol Sawmill.

Even more enjoyable

The most dangerous operation, when it comes to all types of sawmills, is handling of heavy logs. Many people have a hoist fastened to the ceiling above the Logosol Sawmill, but what do you do when there is no ceiling? Well, you build yourself a gantry crane. The example from Örkaggen Railway shows that it can be used both in the forest and by the sawmill.

"Building a gantry crane is not so complicated. I welded together rails in triangles to be used as legs, and used a part from an industrial conveyor belt as crane beam enabling the hoist to be moved. But you can just as well use an I-beam," Bo states.

It can also be worth laying rails next to the Logosol Sawmill and obtain a couple of wheel axles, to build a movable log table. Carrying logs on rails only takes a fractional part of the effort, compared to using rubber wheels on the ground. Furthermore, there is no denying that wagons and a gantry crane make the sawing even more enjoyable.

More about Örkaggen Railway is found on the Internet, www.hypatia.se/okj *



Bo Malmberg recommends using a gantry crane for lifting logs. He himself has two, and this one is portable.



Bo Malmberg works as a production technology manager at Electrolux in Motala. Due to this, it is not surprising that the logistics around the sawmill is well thought out. The logs arrive on the track to the right. Then, they are lifted onto the Logosol Sawmill with the help of the electric gantry crane, and finally boards and planks are placed on the wagon to the left and transported to be seasoned.



Also small railways require a turntable. Behind you can see the line's engine depot. The engines and the wagons Bo has built himself.



Örkaggen Station is situated by the lake at the family's swimming place. The train comes here, even on New Year's Eve when the snow is deep and has to be shovelled away.





- PH260 is a professional machine, only it is smaller," says the constructor Bo Mårtensson.



PH260 is celebrating its tenth anniversary!



10-year anniversary of the best four-cutter planer/moulder!



This year, Logosol's four-cutter planer/moulder PH260 celebrates its 10-year anniversary. It has been a roaring success, and today it is sold all over the world.

"There are few planers/moulders that are as spread over the world and used in as varying conditions as the PH260. It has proved itself to be durable and easy to service and maintain," says the constructor Bo Mårtensson.

The development of PH260 started in 1993. Bengt-Olov Byström, founder of Logosol, was in the process of drawing up the outlines of a planer/moulder that would have the low price of the SH230, be easy to use and give high-class results. He met Bo Mårtensson at a trade fair, and their cooperation resulted in a small, innovative four-sided planer/moulder.

"PH260 is better than industrial planers/moulders when it comes to small-scale wood processing," Bo Mårtensson states.

Logosol launched PH260 in 1997. Consequently, this year the machine is celebrating its tenth anniversary.

"Logosol's Panel planer/moulder is especially developed for small scale wood processing. It is economical, and in most cases it is better suited for a small business than is a big-size, second-hand industrial planer. An investment in a PH260 often leads to a dramatic increase in profitability for companies that try to make a living from sawing on a small scale," says Bengt-Olov Byström.

There are few four-cutter planers/moulders that are as spread over the world as PH260. Today, it is mass-produced in Östersund in Sweden.



New! Bar Nose Steering for Petrol Chainsaws

Now, the bar nose steering is also available for petrol powered chainsaws. The customers who have tried the version for electric saws are very satisfied.

Steering of the bar nose has two advantages: it increases the sawing precision as well as it improves the safety. Guide bars are pliable, and long bars can hang down a couple of millimetres. Due to this you need to adjust the bar to make the cut come parallel with the log beds. The bar nose steering holds the bar in position, which enables you to adjust it perfectly. The bar is held in position by a magnet, and thanks to this, replacing the bar and the chain is still easy. The bar nose steering for



Bar nose steering for petrol chainsaws

electric saws was introduced last autumn, and customers who have tried it are very satisfied. They think that the steering gives them better control over the sawing. Now, Logosol also

launches a version for petrol powered saws. It is easily mounted on the protective bail.

The safety is improved as the protective bail now gets an important function. Many people think that it is in the way, and do not bother to mount it. They do not think that the protection bail serves any purpose. With the bar nose steering, the protection bail gets an essential function.

The magnet holder makes it easier to handle the saw and replace chains when the electric saw is still mounted on the sawmill.

The bar nose steering is a good investment in higher precision and safety at a reasonable price. It will serve its purpose on every Logosol Sawmill.

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