



For further information, specials and demonstrations at SERRA or your specialized dealer, please contact:

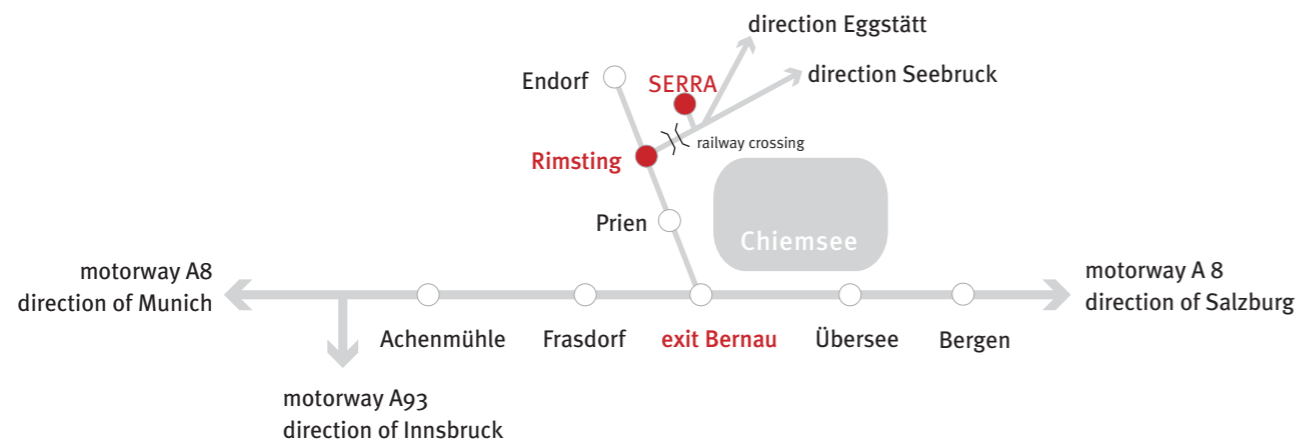


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SERRA - offers unique engineering



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Mobile and Stationary Sawmill Technology



SERRA - offers unique engineering

You have then decided on a SERRA:



... because in 1990 the first manufactured German mobile sawmill was a SERRA ... [page 4](#)



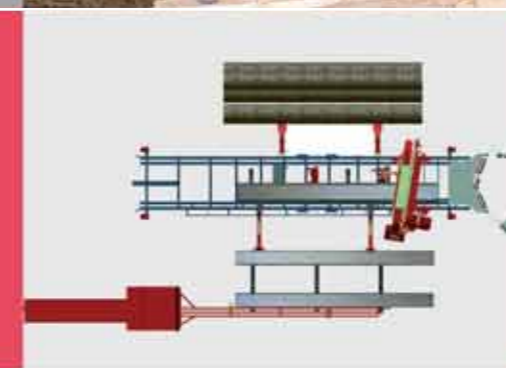
... because sawyers in 46 countries are producing boards, beams and other products with our technology ... [page 6](#)



... because our first class technology is continuously being awarded with prizes such as the KWF innovations prize ... [page 14/15](#)



... because a SERRA cuts and cuts and keeps on cutting, thanks to our first class world wide service ... [page 14/15](#)



... because we have the right sawmill for the right job: Mobile sawmills that can do any kind of job as well as complete professional mills ... [page 24/25](#)

TRADITION AND INNOVATION

Surrounded by forest and situated at the edge of the Alps in southern Germany are the company headquarters of SERRA. Here a staff of 26 now under the leadership of Mr. Johann Fritz, guarantee expert customer service. A commitment to its own tradition is evident in the new buildings: environmentally and aesthetically correct the wooden structures have been honoured with awards.



When Dreams come true ...

... then you talk of SERRA, a success story that began in the year 1987. At that time, Hans Fritz, trained in agriculture and forestry, was working his farm in Canada. While he was there, he visited an Agricultural Exhibition in Toronto, Canada, where he looked at a portable band sawmill. The innovative expert became convinced of the possibility of a mobile sawmill, which he could haul straight to the logs and then use it for processing the lumber on site. He also dreamt about sawmilling logs from his own, seven hectare forest by Lake Chiemsee in Bavaria. In the same year, this practical man presented his new achievement to the "Zentral Landwirtschaftsfest" (Central Agricultural Show) (Farm Show) in Munich. It was the Premiere Exposition in Germany and accordingly, the interest was great. Two years of expert development ensued: Precision, longevity, and performance were the criteria by which the engineers designed and fabricated a sawmill for the German market. An external certified technical testing was successfully accomplished for the first series of three mobile sawmills in 1989. It was the hour of birth for SERRA (lat.: saw) Maschinenbau GmbH on January 1, 1990.

When the Sawmill goes to the Tree ...

... the advantages of SERRA, i.e. sawmilling mobility on four wheels for any place at any time, where the logs can be processed, have become known to more and more owners of forest stands, tradesmen, hobby woodworkers, and sawmill operators. Fulfilling each customer's demand, whether it be boards, beams or slats, different sizes and price classifications, quite a few people have discovered a lucrative market niche with SERRA. Worldwide, over 1000 mobile sawmills in over 30 countries speak for themselves. In Germany itself SERRA has meanwhile sold more than 400 band sawmills and, thus, become the leading manufacturer.

When ENGINEERING and SERVICE is printed in Capital Letters ...



... each mobile sawmill is individually constructed with the most modern 3D CAD programme
... we guarantee the shortest possible delivery time without compromising quality
... your spare parts needs are looked after by our fast and courteous service



... you can personally test all sawmill models in our presentation hall by receiving expert instructions
... your sawmill will be unique. Each model is constructed to your individual price and performance demands
... our experienced professionals will personally instruct you in all the operating and maintenance aspects of the sawmill



... you can request the services of our mobile customer service department at any time
... we offer competent consultation via our own hotline
... you receive tips, stimulating ideas and exchanges of knowledge from practical experience, in our free of charge magazine for our customers

SATISFIED CUSTOMERS

When Experience has Tradition ...

...then you are a member of the successful family of Serrians. Each day our customers throughout the world are convinced of the high standard of the "Made in Germany" technology. Whether your new company branches out, you are starting your own business or developing a serious hobby. Our Customers know performance is worth more than price.



... you exchange experiences with others. A regular scheduled meeting for all SERRA members takes place once a year, e. g. in the factory at SERRA.



... world records are made: The longest board was cut on a SERRA sawmill in September 1999 where a log from the Bavarian forest measured 118 ft (36.21 m).



When Technology pays ...



„What others cannot saw, I can easily accomplish with my SERRA-sawmill. I am especially pleased when large logs don't end up as firewood but rather as a good-looking table top.”
Johann Lichtmanecker, Michelsdorf, Germany



„I have specialized in Spruce and Larch wood from Siberia for the making of window and door products. Besides, I also cut wood for buildings for people in this area. Often, I use several SERRA sawmills at one time”.
Janos Kantor, Budakeszi, Hungary



„Unfortunately, the wooden axle on our Watermill wheel broke. So we made up a new 8 sided one using an oak log. You can only do this with a SERRA”.
Günter Haschke, Rutzkau, Germany



„I live in Villarica. Over 50 market stalls complete with restaurants, other business facilities and living quarters were built with my SERRA sawmill. We managed this project in record time because I was able to deliver the desired wood measurements quickly and flexibly”.
Jorge Chodowiecki, Villarica, Chile



We have a sawmill from Finland with two circular saws and we are really successful. The only problem we had were the trees with big diameters. That is why we decided to buy the Bavaria SL130i. We use it to cut the big logs
Jan Christensen, Gjern, Denmark



„Here you see our sawmill operator Clay Norris working on spruce wood for the creation of musical instruments. With the log clamp turner from SERRA we can hold any section of a log allowing us to cut out the most valuable pieces”.
Steve McMinn, Bellingham, USA

When the Complicated is made Simple ...



Some time ago we had a small sawmill under leasing contract a team of 5 workers. Until we met SERRA. In 2002 we decided to buy two sawmills from the big SL serie and in this way we increased our productivity up to an point where we had to buy a third Bavaria SL. Today we have 98 workers and we export wood worldwide. We cut up to three thousand cubic meters (3000 m³ each month) with only with three SERRA mills. We also do all the important after cuttings with them

Wladimir Benkowsky, Firma LIRA, Kiew, Ukraine
www.lira-ukraine.com.ua



The poverty after the civil war in Angola is unbelievable. In downtown Luanda 4,5 million people live under very poor conditions. My visit to Angola besides training one of our customers using the SERRA mill, I also developed several wood houses built with modules. We built them with wood from the region and the people were really amazed at how we could built two small wood houses in one day with wood cut by a SERRA. Also the German society for technical teamwork and the German embassy were really impressed.

Hans Fritz, General Manager SERRA Maschinenbau, Rimsting on Lake Chiemsee, Germany
www.serra.de



As general sales representative from Mercedes 4 wheel drive cars, I received a request from the monks at the Saint Athos Mountain, the Vatican for the orthodox christians. The 30.000 hectare that belong to the Vatopedi monastery are covered by forest. Because the need for wood is increasing so much, the Monks started searching for a mill with a high productivity. In the meanwhile there are five SERRA sawmills working on the Athos Mountain. They will be receiving some more SERRA sawmill shortly.

Lazarus Politis, Thessaloniki, Greece



„Finally I don't have to consider the diameter of the logs I purchase for my other sawmill. With a SERRA as an additional sawmill, I can cut everything up to 51" (130 cm) diameter. Also, depending on the orders, we produce about 19,000 Bft (40-50 cubic ms) a week”.

Andrew Scott, Great Britain



The reproduction of the Göteborg II, a gigantic sailing ship which sank off the coast of Sweden 250 years ago, would not have been possible without the help of my SERRA sawmill. I have now specialized in naturally bent oak lumber for the building of wooden ships.”

Jörg Mangelsen, Struxdorf Germany



„We lost sight of this mill during the civil war in Algeria. In order to aid a self-help project, a German aid development agency ordered a sawmill in 1992. Locals along the Mediterranean Sea have built many wooden homes from native spruce with our SERRA”.

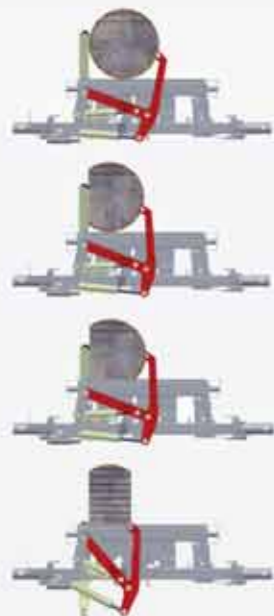
Rainer Schuler, GTZ Germany

WHEN PERFORMANCE BRINGS GAIN ...

... you are working with a SERRA sawmill

Useful:

It doesn't matter whether sawmilling lumber, veneer or specialty woods with a SERRA sawmill you can fulfil every customer's requirement with maximum output



Working procedure

1. After the positioning and securing of the log, the top cut is made. With the initial cut there is a slab of bark, with each following cut there is a sidebark, which will have to be trimmed later.
2. Then the log is turned 90° and secured again. Again, there is the bark and the sides to trim. Of course, the log can also be turned at 180°.
3. The process is repeated after renewed turning. The entire side bark can be trimmed with the sawmill or later with our mobile trimmer Duett.
4. The remaining cant can now be sawn as edged lumber or to customer dimensions.

Strong in Performance:

- ▶ High performance in cutting, up to 1500 Bft. (3 m³) of building lumber per hour. Cutting results of over 4 million Bft. (10,000 m³) per year working in three shifts.
- ▶ Whether sawmilling lumber, veneer or specialty woods, the size of the cut is easily set from 1/32" to 3/4" (1 to 870 mm).
- ▶ Assured cutting exactness. The tolerance of oak lumber ranges down to +/- 0.2 mm.
- ▶ The practical on-board-hydraulics make it possible to position the log at whatever configuration required to fulfill any special customer order as well as the lifting of the log onto the logbed, the turning and moving into the right position and the wedging of the log or cant.
- ▶ A central control console at the front of the sawmill makes for fatigue-free working by a concise control along with the joystick, seat and umbrella

Versatile:

When you are sawmilling in **mobile** mode with a SERRA ...

- ... the logs can be sawn wherever they grow.
- ... there is no need for investments in lumber yards and real estate.

When you are sawmilling with a **stationary** SERRA ...

- ... you do not require any expensive concrete foundations.
- ... you do not have to set up complicated installations.

WHEN TECHNOLOGY IS UNIQUE ...

... then it is patented.

Like our **Log Clamp Turner**



This log clamp turner is ideal for specialty cuts, wedges, conical shapes or three- and eight-sided beams respectively. Clamping, turning and positioning of the logs is very fast and effective. An entire stack of boards or planks can be turned and makes double-cutting uncomplicated and highly efficient. This turner clamp works particularly well and does not cause any visible damage – important for aesthetical construction in the building of homes.



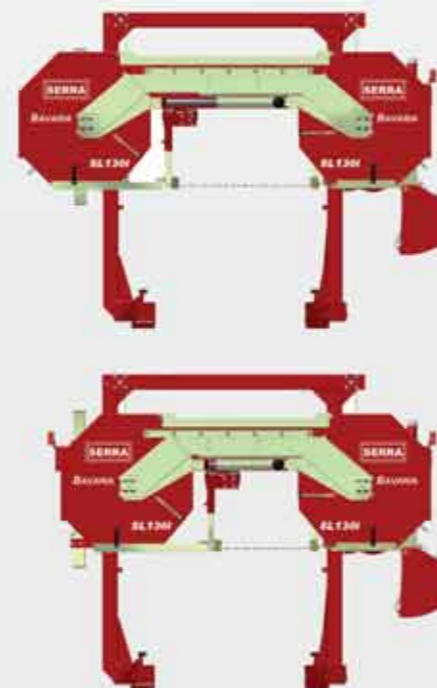
- ▶ flexible cutting possibilities: e.g. – to avoid shrinkage in certain furniture applications, quarter-sawing lumber is easy to do with a SERRA
- ▶ highest quality of engineered components
- ▶ exceptionally robust design

The hydraulic cutting engine of the **Montana MD 90**



The diesel engine does not move up and down with the sawblade. It is mounted on several shock absorbers. The sawhead does not have to carry with the weight of the diesel engine. Connection between the diesel engine and the hydraulic sawblade motor is done through hydraulic hoses avoiding vibrations on the sawblade. This guarantees an exact cutting quality

Variable Blade Length of the **Bavaria SL**



The angled SERRA sawhead with variable blade length adjustment from 0.10 m up to 1.60 m is an innovative self-developed engineering accomplishment based on years of sawmilling experience. Awarded with the KWF innovation prize 2004.

This sawhead can be adjusted to the diameter of the logs. By inserting a longer sawblade, a log up to 62" (1.6 m) in diameter can be sawn. Using a shorter sawblade, a log up to 39" (1 m) in diameter can be sawn.

Our recommendation: Logs of less than 39" (1 m) diameter should be sawn with the shorter, less expensive sawblades. Thus, the big rolls have a reduced distance and one can saw with increased speed.

HYDRAULIC EQUIPMENT MODULES AND SAWMILL OPTIONS

Each sawmill has individually designed hydraulic components to achieve higher productivity and ease of operation. Economizing results in less production. SERRA uses hydraulic hoses almost exclusively for oil flow to the various hydraulic components. These hoses are safely tucked away in the frame or special shafts and therefore easy to be changed. You can choose the hydraulic components in your own mill. Our big spare parts stock and service guarantees a long lasting life of the sawmill. At SERRA you have two years warranty on all parts (Excluding wearing parts such as bandsaw blades) Even when the customers uses our mills in a three 8 hour shift operation for a total of 24 hours. It is your choice how your mill is going to look like.



- Cabin**
- ▶ Made in aluminium and protects you from rain, wind and sun
 - ▶ Because of the plastic windshield you have a good overview on the logs you are cutting
 - ▶ All the other walls are able to be closed with zippers and if you don't need them you just roll them up



- Cabin easy to transport**
- ▶ Fixed in frame for an easy and safe transport on the sawmill.



- 10 Heated Handle**
- ▶ Automatically heated with the hydraulic oil
 - ▶ It can be shut off in the summer because of the shut of valve



- 9 Container for Sawdust**
- ▶ Can be hydraulically emptied at any time
 - ▶ No flying sawdust in windy conditions



- Hydraulic Support Legs**
- ▶ shortens set-up time of the sawmill. Recommended only for the mobile version



- 8 Debarker**
- ▶ removes bark and stones on the side where the sawblade operates
 - ▶ lengthens the working life of the sawblade
 - ▶ debarker guard prevents blade warping in case of improper control use



- 7 Log Clamp Turner (patented)**
- ▶ Turns the log on the deck in a clockwise and anti-clockwise rotation
 - ▶ Will turn a cant or boards quickly without any corner damage
 - ▶ Presses the log or cant against the back stoppers and also pulls the cant/log down on the bunk.
 - ▶ Holds the log or cant at right angles

- 1 Electric sawmotor**
- ▶ from 11 to 22 kW, depending on model and options
- Electric Drive Advantages:**
- ▶ A standard ampere meter indicates optimal cutting speed
 - ▶ Maintenance-free
 - ▶ Low in noise
 - ▶ Free of vibrations
 - ▶ Long life expectancy
 - ▶ Light-weight



- 2 Roller drum**
- ▶ moves the log forward or back, so that it can be held with as many clamps as possible
 - ▶ levels tapered logs
 - ▶ especially wide and robust design



- 3 Squaring arms**
- ▶ Prevents the log from rolling off when loading and turning
 - ▶ required for right-angled positioning of the log
 - ▶ exactly adjustable
 - ▶ Rollers at the tip makes for easier turning of large logs
 - ▶ Vertical levelling results into enormous advantages regarding the cutting of slats

- 4 Stainless Steel Bunks**
- ▶ it prevents the blue discoloration when cutting red oak
 - ▶ are rounded, so that the bark does not get in the way



- 6 Toe boards with Log Clamps**
- ▶ Levels each log individually
 - ▶ clamps the log with height-adjustable clamps
 - ▶ Pulls the log down and pulls it hard against the bunks (very important with twisted and long logs of 16 ft. (5 m) or more), so that you can obtain true-to-measure boards. (More than 50% of all logs twist and turn during the sawing process and do not lie level without clamps).
 - ▶ Two hydraulic cylinders will double the tension pull

- 5 Log Loader**
- ▶ lifts logs from the ground up to the sawmill bed
 - ▶ individually adjustable and can be installed at various locations for different log lengths
 - ▶ 1.2 ton capacity per lifter
 - ▶ provisions for up to four log lifters.

AFRICA SL 160

The biggest mobile sawmill for hardwood in very difficult terrain

— Unique in the mobile sawmill branch. Specially designed for extreme hard and heavy logs with a diameter of 1,60m. An ideal as complementary machine in Europe for processing big logs. Extreme robust and stable for the hardest conditions in the hardest terrains such as the African, Malaysian or Indonesian forest. Development based on our several years of our experience in countries like Ghana, Nigeria and Angola. Extremely strong steel for extrem heavy logs, Special wheels for difficult terrains, hydraulic easy to operate and a strong electric 22 kw Siemens engine.

Technical Data

Diameter	160 x 180 cm
Cutting length	7 m (standard version) Extendable if requested
Drive	Electric (22 kW), Option 32 kW
Output	15,200 Bft. (36 m³)/8 Hours *
Weight	5,2 t**

* dependent on diameter of log
dimension of cut, and number of helpers
** dependent on optional equipment

— The biggest mobile sawmill in working position.

Robust cockpit but still easy to be used. The electric switchbox is easy to reach. Hydraulic levers for sawhead advance, sawhead height adjustments, sawblade tensioning and adjustable sawblade guidance. Digital display allows you a better positioning of the sawhead and it guarantees you an accurate cut with the high valued African woods. Hydraulic levers for turning the heavy logs. The levers are positioned in a displacable cockpit that grants you a good overview on the log while turning it.



— Variable blade length for heavy logs. High productivity rate for big logs up to 1,60 m. The KWF Innovation prize awarded Bavaria SL 130i sawhead but bigger. The perfect machine for big logs.



— Transport position Plug in wheels. Big wheels for difficult terrain. Capacity 4 t for each wheel.



— Hydraulic options:

The strong SL160 has been effectively used without any kind of hydraulic components. A complementary machine for big sawmilling plants in order to reduce the big logs. We can manufacture this machine with all the hydraulic components of the SL serie (Bavaria SL110i and Bavaria SL130i). In the following pictures you have two different log clamp turners: a smaller one and a big one.



BAVARIA SL 110i UND BAVARIA SL 130i

The Sawmill from Professionals – for Professionals



— The ideal mobile sawmill for daily use indoors and outdoors. Successfully proven in all weather conditions: freezing temperatures, high heat conditions or shivering cold have no influence on the ability of the SERRA sawmill to function well, e.g. in North America, Russia and Scandinavia. This sawmill is simple to care for, has very little maintenance and is easy to adjust. The Bavaria SL is well suited for stationary application in a three-shift operation or as a “Primary Breakdown” and “Resaw” combination system. The angled SERRA sawhead will produce high yields with any log diameter. On request, the sawmill can be manufactured for any log length. It constitutes a multifunction sawmill without any compromise.

Technical Data

Log Diameter	up to 51" x 51" (130 x 130 cm)
Length of Cut	23 ft. (7 m) and 29 ft. (9 m) standard version Extendable if requested
Drive	electric (22 kW)
Output	14,000 Bft. (33 m ³) / 8 hrs *
Weight	3,3 ton **

* dependent on diameter of log, dimension of cut, and number of helpers
** dependent on outfitting equipment



— **Variable Blade Length Settings** with solidly installed guards around the movable bandwheel. Long sawblades for large log diameters, short sawblades for logs up to 39" (1 m) diameter. Bandwheel alignment is factory set for life, but can easily be adjusted if required, i.e. the smaller the distance between the big rolls the higher the cutting speed.



— **Hydraulic Blade Tension.** The telescopic hydraulic blade tension technology guarantees 50 cm distance between the sawblade and the upper guard. A tensioning distance of 11.8" (30 cm) results into sawblade lengths differing up to 20" (50 cm).



— **Solid Block Cut Guidance** with an in-series side adjustment, the unit itself as well as the automatically related precutter (debarker) will always ensure the correct distance to the log. You will enjoy enormous savings of time, as extra adjustments are avoided.

— **Hydraulic Height Adjustment Cylinder** for fast and superexact height positioning. Covered and protected in the right column of the saw sled, it has a low susceptibility to malfunction when compared to usually sold in the trade two speed electric motors. Blade height is read with a mounted gauge under a magnifying glass with easy to read enlarged print on the scale.



— **Exact Measured Blade Lubrication** with cleverly developed cleaning systems. The lubricating oil is stored in a 30 liter tank c/w a sight glass.



— **Joystick Control Option and PLC Computerized Networks.** Just about all the sawmill functions can be controlled with a joystick using only one hand. For an almost fully automatic sawmill, you can also buy an optional PLC computerized networks. Successfully utilized in the production of veneer wood.



MONTANA MD 90 AND MONTANA ME 90

The professional alternative for a special price

— **Unique in Germany:** Hot dipped galvanized frame and powder coated paint grants you a long lasting sawmill for logs with diameters up to 90 cm. It is important to say that its first cut is at 87 cm height. Because of its modular frame, at the assembling stage we can place the hydraulic components wherever you want. The diesel engine with a hydraulic power supply to the sawblade avoids any kind of vibration, granting you at the same time exact cutting precision.

Technical Data

Diameter	90 x 90 cm
Cutting length	7 bzw. 9 m (standard version) Extendable if requested
Drive	33 kW, (44,2 HP) Dieselenigne Elektrik motor 17 kW
Output	10,600 Bft. (25 m ³)/8 hours *
Weight	2,2 – 2,7 t **

* dependent on diameter of log,
and number of helpers
** dependent on outfitting equipment

— The first mobile sawmill with a hot dipped galvanized frame

This high protection against corrosion grants you a long lasting sawmill even under rain, snow, dirt or salty conditions.



— Quality at the engine.

It is possible to order this mill with a 17 kw electric motor or a 33 kw (44,2 HP) water-cooled 1,5 Liters Kubota turbo diesel engine. Unique hydraulic technology: The heavy diesel engine is not driven up and down with the sawhead, this is because its connection is done through two hydraulic hoses. In this way we avoid any kind of engine vibrations on the sawblade.



— New clamps, new modular frame.

In order to maintain its cutting precision one hydraulic cylinder clamps and pulls down the wood to be cut. Easy and fast operation of all its clamps with only one hydraulic control. The position and quantities of squaring arms can be defined by each customer.

— 700 mm driving wheels with a telescopic hydraulic blade tensioning. The same principle as at our SL series. 42 cm of space above the sawblade.



— Diesel tank is easy to be reached and the refore easy to fill. It saves time and its large volume (30 Liters) avoids continuously refuelling.



— **SERRA-Novelty:** First cut at 87 cm height with a maximum log diameter of 90 cm. The ascending and descending sawhead system is the same used in the big SL series with its patented hydraulic log handling for high productivity.



SERRAS - NOVELTY 2006

FILIUS

The sawmill with the optimal price and performance combination

— The mobile version in this model is one-of-a-kind in Germany. The FILIUS is extremely easy to transport, and at the work site, can quickly be put into action and even includes a log loader. With the stationary model, the logs are simply rolled from the log deck to the sawmill. During the sawmilling phase, the logs to be milled are at an ergonomically comfortable height and all other functions can be performed in an extremely back-saving manner.

Technical Data

Log Diameter	up to 26" x 26" (65 x 65 cm)
Length of Cut	17 ft. (5.2 m) standard version Extendable if requested
Drive	electric (5,5 kW) fuel engine 13 HP
Output	3,400 Bft (8 m ³) / 8 hrs *
Weight	0,6 ton **

* dependent on diameter of log
dimension of cut, and number of helpers
** dependent on optional equipment



— Plenty of clearance between the sawblade and the upper guard. Heavy beams can be sawn there without any time-consuming repositioning of a log.



— Adjustable crank for sawblade height. The scale has an exact height indication c/w with a locking system to guarantee an unwanted change of height. The distance of the markings of the holes is constantly at 1/64" (0.5 mm). One turn of the crank is 3/16" (5 mm). Experienced sawmillers use this fixed value by counting the number of crank turns to determine their next cuts. If requested the electric version comes with an electric height adjustment.



— The sawhead carriage runs on roller bearings allowing sawhead movement by hand without exerting much effort. The operator stands on the right side of the log, while the sawdust discharges on the left side of the mill.

— Easy transportation of the sawmill on its own axle. Mounting and lifting of sawmill modules or sections are completely unnecessary.



— Bandwheels are made from cast aluminum. The sawblade runs on machined faces. No rubber coating or belts which can stress the sawblade, develop vibration and cracks that cause premature blade breakage.



— Lots of power for the sawblade. Logs up to 26" (65 cm) diameter are easily cut using either a powerful electric motor or a Honda 4-stroke petrol engine.



DUETT

The ideal equipment as an addition to your sawmill operation for optimal production efficiency. Two circular sawblades trim your boards with precision accuracy. Produced in stationary and mobile versions, this machine was perfected through many years of practical experience. Many sawmill owners worldwide have come to appreciate this machine. A number of entrepreneurs lend or rent this edger to their customers and this way they then do not have to edge lumber with their sawmill.

— Easy as childs play to operate:

1. You lay the board manually on the infeed deck
2. You set the width by pushing a button
3. You push the board to the machine where it will be picked up by a conveyer and automatically be fed through the two circular sawblades
4. You set the desired conveyer speed at the mobile console
5. You remove the trimmed board plus the two leftovers from the outfeed deck



— The conveyer system consists of two air-filled rubber grip rollers. Instead of metal rollers, they guarantee the tightest grip, even with boards that are iced up or coated with sawdust. These rubber rollers prevent the production of crooked boards, and are exceptionally light as well.



— Right loading deck – Left unloading deck-and in between those decks we have developed a lot of technology that will save you many, many hours of work. All fabrications are from aluminum or zinc-coated steel and thus have an exceptionally long life that will ensure satisfaction with your DUETT for a long time.

Technical Data

Board thickness	up to 2" (50 mm)
Width of board	2,2" to 16" (55 to 400 mm)
Pass through width	39" (1 m)
Length of deck	Infeed - 16 ft. (5 m) Outfeed - 10 ft. (3.20 m)
Length of board	unlimited
Weight	290 kg, 410 kg. with axle assy
Performance	4 Electric motors 2 x 5 KW, 0.25 KW, 0.025 KW)
Plug	32 Ampere CEE plug



GENERATORS

Most SERRA sawmills with electric drive usually perform in a stationary mode or in close proximity of an electrical supply. For mill operators who have electric drive and wish to fill orders quickly and on site, i.e. in the forest, generators offer an independent solution. They assure you of a maintenance-free electrical supply for the drive components of your sawmill. As well, they guarantee milling without exhaust fumes and high noise levels as they can be easily placed a short distance from the work.

P.T.O. DRIVEN GENERATOR

In rough terrain in the forest, the sawmill will undoubtedly be towed by a unimog or a tractor. Here the generator can easily be run from the PTO shaft. Just 60 HP is enough to operate the sawmill's electrical drives.

Technical Data

Performance	40 kVA
Rev/min	1500 RPM (U/min)
Electricity	380 and 220 Volt receptacle



DIESEL GENERATOR

The diesel generator can be transported on the sawmill or on a pickup. It runs quietly and has low fuel consumption. It is important that the axle load rating is adequate if you decide to carry it on the sawmill. This is possible with 40 kVA as well as the 60 kVA.



Diesel Generator 40 kVA

Technical Data

Performance	40 kVA
Rev/min	1500 RPM (U/min)
Motor	4 cylinder, John Deere, water-cooled
Fuse protection	16 and 32 CEE plug
Weight	800 kg



Diesel Generator 60 kVA

Technical Data

Leistung	60 kVA
Rev/min	1500 RPM (U/min)
Motor	4 cylinder John Deere, water-cooled
Fuse protection	1 x 16, 1 x 32, 1 x 63 A CEE plug 2 x 220 Volt
Weight	1670 Kg

SAWBLADE MAINTENANCE

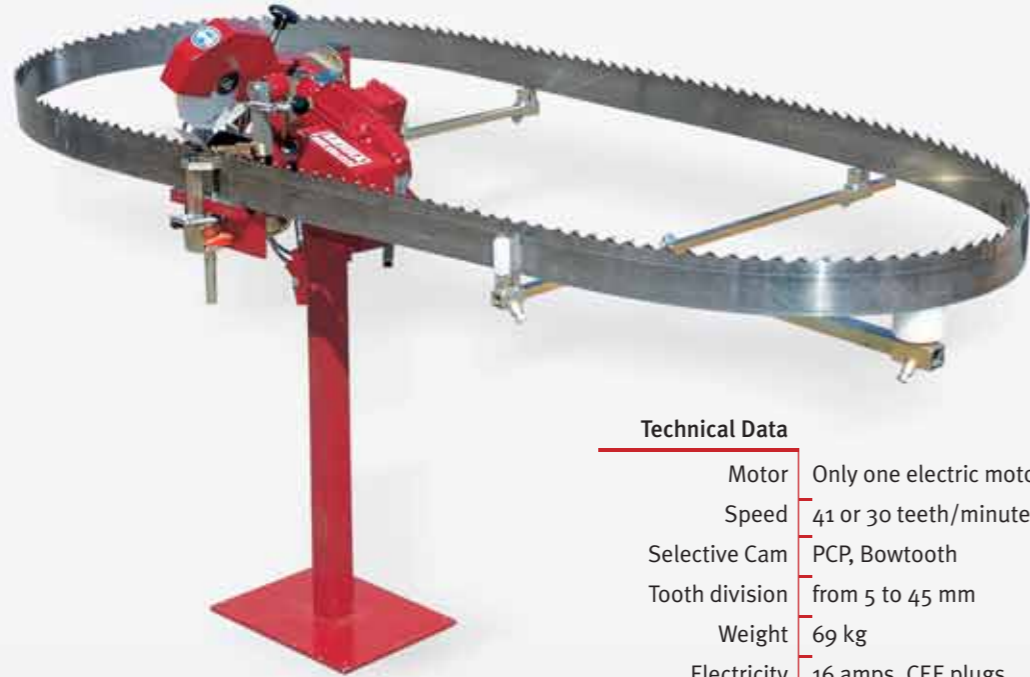
The production capacity of a sawmill is markedly increased with precision sharpened and well maintained bandsaw blades. For that reason, it is important that you can re-sharpen your bandsaw blades simply and precisely right at your work site. Because you earn your money sawing and not at sawblade maintenance, we have developed a system which makes this important job a lot easier. And, however, being able to sharpen your own blades, will ultimately be quicker and cheaper for you.



AUTOMATIC SHARPENER TYPE WR 1

A compact automatic sharpener for bandsaw blades from 10 ft. (3 m) to 23 ft. (7 m) in length and 1.18" (30 mm) to 4 1/3" (110 mm) widths.

This automatic sharpening device guarantees absolute precision comparable to a maintenance-free and user-friendly stationary device. It is easy to transport, assembles with three parts, and is put into service quickly. The WR 1 sharpens a blade automatically in about 10 minutes with a "precision" quality like that proverbial "Swiss watch."



Technical Data

Motor	Only one electric motor 400 V/0.25 kW
Speed	41 or 30 teeth/minute
Selective Cam	PCP, Bowtooth
Tooth division	from 5 to 45 mm
Weight	69 kg
Electricity	16 amps, CEE plugs

Maintenance of Wide – Band Sawblades

Wide-band sawblades (> 80 mm width) offer higher cutting speeds. We recommend the use of Stellite – tipped sawblades. The machined faces of the large bandwheels have small radiused crowns on which the sawblades maintain centre. This is necessary so that your sawblade will centre under the high sawing speeds and not slide off the bandwheel. With SERRA, a new blade is rolled and levelled at the factory so that it is in sync with the SERRA bandwheels. If required, wide-band rolling and maintenance can also be performed at a local shop in your area.



SERRA-Adjuster

At SERRA we carefully choose the amount of crown in such a way that you do not have to roll your sawblades often. Rolling is a "art" by itself and that operation is usually done on a heavy duty leveller which can be very expensive. The wideband sawmills from SERRA are manufactured with a special roll crown, which will spare you all this.

In spite of this, it can happen that you need to get your sawblade back in shape. For this, the SERRA Adjuster is the perfect tool with which you can quickly make the blade operable again without removing it from the sawmill.

AUTOMATIC SHARPENER FOR THE FILIUS BAND SAWMILLS

A mobile automatic sharpener for the narrow-band sawblades.

Our recommendation: Saw with reasonably priced, set sawblades. The maintenance of narrow-band sawblades is then reduced to setting and sharpening.



With help of the special automatic sharpener for FILIUS, your sawblades can be completely re-sharpened. The sharpener runs on 12 Volt and can be hooked up to any vehicle battery.

Valuable Experiences in the Maintenance of Wideband Sawblades

When the Stellite on the teeth tips has worn off, you have three options:

1. Swage and shape the teeth and reserve the blade for large and/or metal encased logs.
2. You grind the stellite completely away and let the blade be tipped anew with stellite. In this case the blade has to be re-rolled.
3. Throw the blade away as it has already amortized itself.

Swaging and Tooth Shaper Tools



Precision lumber cuts are achieved by oneself by using these Swiss precision tools. They are easy, quick and effortless to use. Built-in lubrication system eliminates the need for an operator to apply messy oil and chalk to each tooth. Swage time for one blade is about 30 minutes.

Setting pliers



The most reasonably priced, simplest and quickest way to re-set blades.

THE SERRA ADDITIONAL POSSIBILITIES

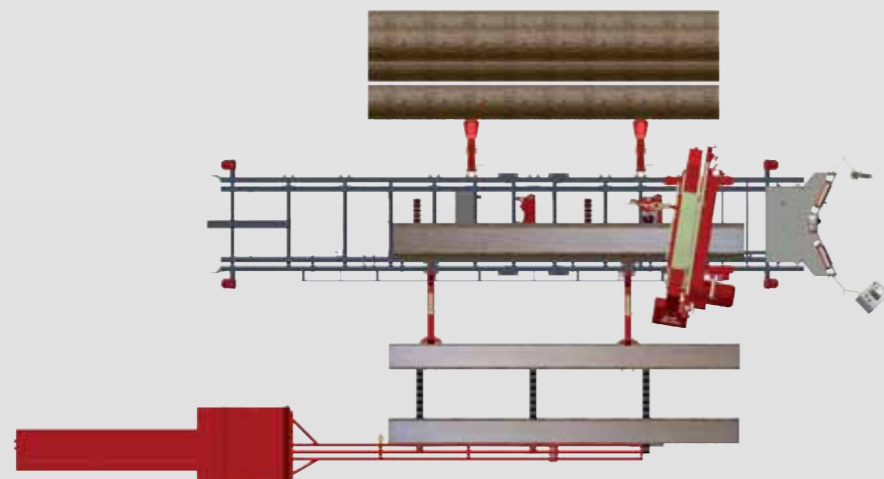
Some success stories from our customers are always a good reason for our happiness and some of them go on like this: Some of our customers are farmers and as a second business they buy a SERRA sawmill. This one works and works and works as well as their other business. After a couple of years they don't have to drive more around with the sawmill, because the customers go to the mill. They place the mill in a hall and start thinking about how can they reach a higher productivity. For such cases you can count on our experience, we can gladly assist you by planning an ideal solution for you.



Depending on the way your hall looks we recommend you for logs with diameter up to 50 cm our **pushing boards back system**. This is the ideal solution for a higher productivity of your mill. This is also available for the mobile SERRA sawmill SL series. This is done by attaching an arm to the sawhead that will push the last cut board to the back while doing a new cut or while cutting a new board. At the back of the mill a worker can receive the board and store it or push it through an edger or after resaw machine.



For a **side removing** system we have the lateral board removing system for the SL series. Two or more lateral arms on the side of the mill and with a special angle. Two or more arms in the machine, beneath the log help the boards fall onto the two lateral arms. Afterwards the boards can be removed with a fork lift from, or they can fall into an automatic board transport system (Not included) in order to be transported up to the next machine. By lifting the lateral arms two tubes will stop the logs from falling down and from there on they can be removed by hand in a total safety way.



Easy possibilities of increasing the output of your mill. Mobile systems can be equipped with our **lateral board removing system**. Two arms in the machine, beneath the log help the boards fall onto two lateral arms and from there the boards can be removed with a fork lift.

SERRA PROJECTS

What we just told you is the story of some SERRA millers, but we also know stories that happen **from day to day in the industrial area**. Together with a very strong partner the company Paul from Dürmentingen we will help you to plan and build up a complete sawmilling plant. In such cases we use for example two SERRA sawmills with two resaws from Paul, having in some cases a productivity of 60 cubic meters (25,500 Bft.) and more per working shift. This type of plant has several advantages against other bigger plants as for example:

1. You can always increase the size of your factory. You don't have to decide from the beginning what is going to be your maximum output.
2. You distribute your production on more machines. Should one of them have breakdown, you can still go on producing
3. You don't need a complicated hall
4. You can start faster producing
5. In the case of changing your plant, it is easier to sell small units separately than a complete sawmilling plant
6. You have the possibility of being more flexible cutting different diameters and cutting different measurements



The art of projecting consists in combining all the machinery in such a way that the material flows consequently without stocking or piling up at one part or stage of the factory

It cuts and cuts and cuts

This is a story we are proud of: Do you know why? Because of your practical recommendation as sawyer, everything we built it gives you and us many years of happiness.



In 1989 Mr Hans Fritz built the first SERRA mill with help of some engineers. It was the S12. S12 means it has a 12 m. cutting length. The S12 was in the beginning of the 90s the most sold mill in Germany. In 1991 it was built with a few hydraulic components and in 1994 we built it with the hydraulic blade tensioning system. Details on the sawhead and hydraulic log handling were also done. As first manufacturer SERRA built in the clamps in order to pull the log against the frame. This was the birthday for the Mammut

Today

Since 1994 The Mammut has been our most succes sawmill.

In the wide sawblade technology it is the only alternative to the Bavaria SL series and the Montana.

It is the lightest wide sawblade sawmill technology in the market.

For many years it has been proven worldwide.

All the customers that have a Mammut comment on it's excellent performance.

All our customers know why we dream about it. The Mammut is a reliable sawmill talent and is seen as the little sister of the big SL serie or as the equivalent for the Montana. Till today it is still being requested and it is still being sold. Of course we have also improved details, but its name is still the original: Mammut

SERRA – Offers unique engineering

Those days



OVERVIEW OF THE SERRA SAWMILLS

All SERRA models comply with the strict safety standards of the EUROPEAN UNION with CEE symbols

	FILIUS	MONTANA	MAMMUT	BAVARIA SL 110i	BAVARIA SL 130i	Africa SL 160
Capacities						
Log length *	from 1 m	0,5 up to 12 m	0,7 up to 16 m mobile	0,7 up to 16 m mobile	0,7 up to 16 m mobile	0,9 up to 16 m mobile
Log diameter	65 cm	90 cm	90 x 121 cm	110 x 130 cm	130 x 130 cm	160 x 180 cm
Space above the sawblade	30 cm	42 cm	40 cm	50 cm	50 cm	50 cm
Space below the sawblade	60 cm	87 cm	78 cm	87 cm	87 cm	130 cm
Width of cut	50 cm	65 cm	72 cm	80 cm	100 cm	120 cm
Performance / 8 h **	3,400 Bft. (8 m³)	10,600 Bft. (25 m³)	11,800 Bft. (28 m³)	12,700 Bft. (30 m³)	14,000 Bft. (33 m³)	15,200 Bft. (36 m³)
Main engine						
	5,5 kW electric	17 kW electric	15 kW electric	18,5 kW electric	18,5 kW electric	22 kW electric
	13 HP Fuel	33 kW (44,2 HP) Diesel	18,5 kW electric	22 kW electric	22 kW electric	32 kW (optional)
Sawblades (Millimeter)						
Width	32	32 up to 80	80 or 100	100 or 120	100 or 120	100 or 120
Thick	1,0	1,0	1,1	1,1	1,1	1,1
Lenght	3570	5100	5320	5320 up to 5720	5520 up to 6020	6020 up to 6525
Hydraulic equipments						
Log handling (Loading,Turning,Clamping...)	manual	hydraulic	hydraulic	hydraulic	hydraulic	yes
Sawhead advance	manual	hydraulic	hydraulic	hydraulic	hydraulic	hydraulic
Height adjustments	manual	hydraulic	electric	hydraulic	hydraulic	hydraulic
Sawblade guidance	manual	hydraulic	manual	hydraulic	hydraulic	hydraulic
Precutter	no	yes	yes	yes	yes	yes
Sawdust container	no	yes	yes	yes	yes	yes
Digitale Display	no	yes	yes	yes	yes	yes
Computer	no	yes	yes	yes	yes	yes
Automatic operation	no	no	no	yes	yes	yes
Transport measurements						
Height	1,9 m	2,5 m	2,5 m	2,55 m	2,55 m	3,60 m
Width	1,8 m	2,35 m	2,3 m	2,50 m	2,50 m	3,15 m
Lenght	7 m	10 or 12 m	9,7 or 11,7 m	9,7 or 11,7 m	9,7 or 11,7 m	9,70 m
Weight ***	0,6 t	2,2 up to 2,7 t	2,6 t	3,3 t	3,5 t	5,2 t

*Longer on request ** Dependent on diameter of log and board dimensions, and number of helpers ***dependent on outfitting options