

LOGOSOL USER MANUAL

TRANSLATION OF ORIGINAL USER MANUAL.
ARTICLE NO: 0458-395-0236



LOGOSOL TF230 LOG MOULDER



Read through the user manual carefully and make sure you understand its contents before you use the machine.



This user manual contains important safety instructions.



WARNING! Incorrect use can result in serious or fatal injuries to the operator or others.

Table of Contents

Safety Instructions	3
Mounting of Chainsaw	4
Mounting Moulding Knives	5
Carriage Plate	6
Starting the Log House Moulder	7
Shaping Logs	7
Maintenance	8
Moulding Knives	9
Planing Knives	9
Sharpening	9
Technical Data	10
Parts List	10
Circuit Diagram	10
Timbering Course	11



Be aware that accidents with dangerous machines happen most frequently when the operator e.g. is removing sawdust or is trying to correct a small disturbance. **Whenever an operational disturbance occurs, turn off the Log House Moulder immediately.** Such a stop can seldom be seen on the finished product.

Printed on chlorine-free, recyclable paper, using vegetable-oil based inks.

LOGOSOL is constantly developing its products. For that reason we reserve the right to make changes in the design and construction of our products.

Text and illustrations: Mattias Byström

Document: Log House Moulder-SE-11-05-2006

Manual, article no. 0458-395-0235

Copyright 1998 LOGOSOL, Härnösand Sweden

Safety Instructions



This applies to both the electric and the chainsaw driven milling cutter: **When used incorrectly the Log House Moulder is a very dangerous machine. Read the entire manual, and do not begin working with the machine before you have really understood how to handle it, and the risks involved.**

Logosol Log House Moulder is exclusively designed for shaping logs, firmly fitted on the Logosol Sawmill. The Log House Moulder may not be run only by hand or mounted on any other equipment. Incorrect use can cause severe bodily injury.

- The logs that are to be processed must be firmly fastened, and weigh at least 30 kg (66 lbs). Lighter work pieces, such as planks or boards, may not be processed by the Log House Moulder.
- Before pushing the Log House Moulder onto the sawmill, mount the loading ramp (9999-000-0920) at the end of the guide rail, and two support legs (6600-000-3001) under the guide rail. Otherwise there is risk of the sawmill tipping when the log bed is empty.
- Do not wear loose-fitting clothing, tie, scarf or other items that can get caught in the cutter of the Log House Moulder.
- Kickback risk! Make sure the Log House Moulder is properly fitted on the guide rail before connecting it to the power supply / starting the chainsaw.
- Chainsaw driven Log House Moulder: The chainsaw that is to be used should be of at least 45 cc, have two M8 guide bar nuts, not have a higher maximum number of revolution than 14000 rpm, and be CE approved. Never run the machine at a higher rpm than 8000 rpm.
- Always keep the work site clean from things you can trip on.
- The operator is responsible for the safe operation of the machine. Non-qualified persons may not stand closer than four metres (13 ft) during operation.

Make sure that the electric supply is disconnected (the plug is pulled out) and wait until the cutter has stopped / turn off the chainsaw and activate the chain brake before:

- opening the cover to change knives.
- servicing or cleaning the machine.
- changing belt or doing other servicing.
- removing the machine from the guide rail.

- After service, the Log House Moulder must be restored to its original condition. Only use original spare parts.
- Alterations to the Log House Moulder's electronics

may only be carried out by an authorized electrician, who also has to contact Logosol before opening the machine's electric system.

- Make sure that the cable lies in the cable channel/handle, and can run freely the whole length of the sawmill. Do not tread on the cable. For the best electrical safety, a residual current breaker must be used.
- The Log House Moulder should be turned off after each milling and when returning it back to its start position.
- Only mill against the direction that the log is fed. Do not adjust the height setting until the whole length of the log is milled.

When the machine is running the operator must ensure that no hands leave the feed crank or the enabling button / the chainsaw's throttle. Risk of serious injury! Never place your hands in front of the sawmill's guide rail while the machine is running.

- Do not leave the Log House Moulder unattended while connected to the mains. / Never leave the chainsaw idling on the Log House Moulder. Prevent non-qualified operators from starting the machine.
- The Log House Moulder may not be started without having the belt cover fitted, and the openable cover closed and locked. Covers may not be removed or altered.
- Before starting the machine, check that all knives are adjusted correctly and firmly installed. Also make sure that no tools are left in the machine.
- Never use the machine in poor visibility condition. Always work in good lighting.
- The warning signs on the machine is there for your own and others' safety. Damaged or illegible labels should be replaced.



Use approved hearing protectors and eye protectors.



Use protective gloves when handling the knives. Risk of cutting injuries. Also use protective gloves when operating the machine.



Rotating cutter. During operation, do not stick your fingers under the protective plates of the Log House Moulder or past the guide rail.



Warning! Pay extra attention when this symbol appears in the text.



This symbol is followed by an admonition or recommendation. Pay extra attention when this symbol appears in the text.

Mounting of Chainsaw



Empty the chainsaw's chain oil tank and run the chainsaw until all remaining oil has been pumped out. Fill the chainsaw's fuel tank before mounting it on the Log House Moulder (see the chainsaw's manual and safety instructions).

1. Fit the belt drum with splined axle (A), and fit the belt pulley (B) in the same way a rim sprocket normally is fitted according to the chainsaw manual.
2. Lift the chainsaw up against the fixing plate of the Log House Moulder. Adjust the chain tension so that it runs freely in the fixing plate's track (C).



The belt pulley should rest on the two support bearings(D).

3. Put 4 mm washers (E) under the bar nuts and tighten them to fasten the chainsaw. Make sure that both the support bearings rotate when you are turning the chainsaw's belt pulley.
4. Lower the fixing plate by adjusting the vibration



reducers' counter nuts. Put on the Poly-V belt over the belt pulleys. Make sure that the belt lies correctly in all grooves.

5. Tighten the belt with the four vibration reducers' counter nuts (G). Adjust all the corners of the plate to about the same height.
6. Mount the belt's protective cover (F) according to the picture above. Make sure the belt does not touch the cover.

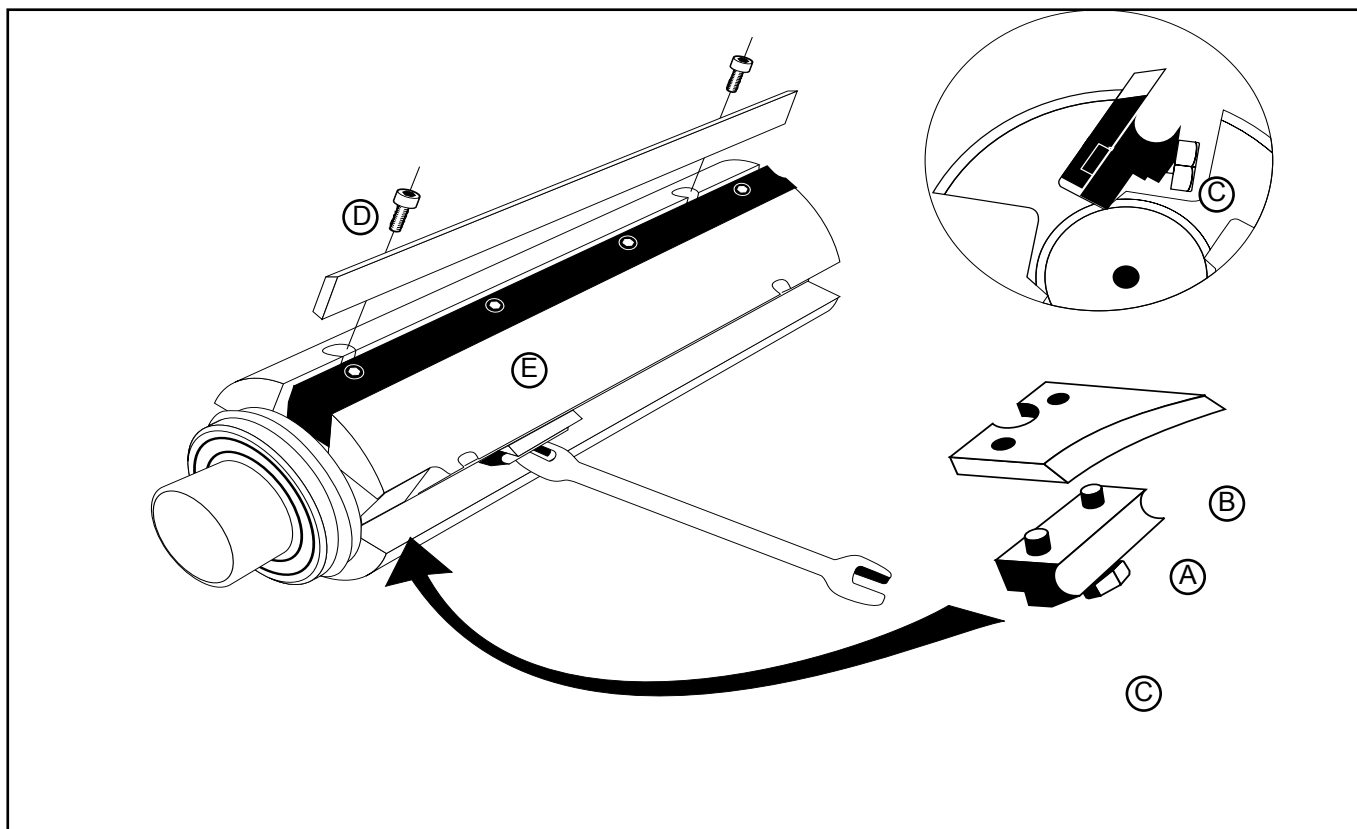
⚠ Risk of exploding knives and knife clamping gibs when over-revving, with splinter injury as a result.

⚠ Risk of the chainsaw coming loose if it is not fitted correctly.

⚠ Risk of the chainsaw being damaged if the motor has too small cylinder capacity.

❗ Chainsaw driven Log House Moulder: The chainsaw that is used should be of at least 45 cc, have two M8 bar bolts, not have higher maximum number of revolutions than 14000 rpm, and be CE-marked.

❗ Never run the chainsaw at full throttle when the cutter is unloaded or is only taking away small amounts of wood. Never let the chainsaw over-rev and reach maximum number of revolutions. Only give full throttle when this is required for keeping the motor at working rpm, i.e. approx. 8000rpm.



Mounting Moulding Knives

❗ Before opening the milling cutter's cover, make sure the electric supply is disconnected / the chainsaw is turned off and the cutter stands still.

❗ Always mount the moulding knives in pairs so they are opposite each other.

⚠ **Dull knives increase the risk of accidents.**

❗ Always use protective gloves.

Using a knife clamping gib with a short knife blank as a stop in two of the tracks in the cutter head, simplifies the lateral positioning of the knives that makes the long-groove.

Fitting:

1. Assemble knife clamping gib (A) and moulding knife (B).
2. Insert the clamping gib and the moulding knife on the side of the cutter head where the track is widened.
3. Push the knife and the clamping gib into the track and fix them by untightening the screw (C) on the back of the clamping gib using a 10 mm spanner.
4. Measure the knife's position laterally, and mount an identical knife in the same position on the opposite side of the cutter head.

⚠ **Risk of serious injury if knives and knife clamping gibs come loose.**

❗ Make sure that all screws are tightened. Check that the cutter head can rotate freely and that no tools have been left in the machine. Close and lock the cover over the cutter head.

❗ Note that the knives of the chainsaw powered Log House Moulder are mounted inversely in the cutter head.

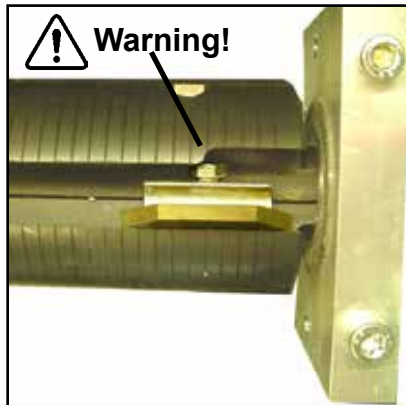


Carriage Plate

Sometimes you have to adjust the Log House Moulder's position over the log laterally to be able to mount the knives in a safe way.

⚠ Warning: Risk of knives coming loose from the cutter head.

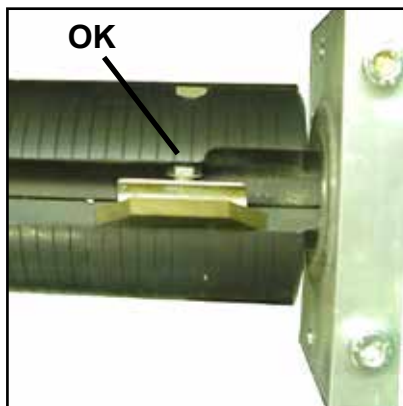
❗ The clamping gib's entire screw head should butt against the side in the knife track.



The moulding knives are locked by knife clamping gibs. The screw in the knife clamping gib should press against the opposite side in the knife track.

To avoid ending up with the screw lying partly or entirely in the wider part of the knife track, the carriage plate should be fitted under the Log House Moulder. This way, the entire milling cutter can be adjusted laterally on the guide rail (15-25 mm) and you can remount the knives so that the clamping gib screw butts against the correct contact surface.

The carriage plate also allows a 5 mm larger knife protrusion without the knives coming into contact with the log supports of the Logosol Sawmill.



Assembly (1-3 is already assembled on delivery)

1. Remove the feed crank and the aluminium slide profile from the Log House Moulder.
2. Fit the aluminium slide profiles to the carriage plate (8 countersunk screws M6x16, 8 square nuts M6)
3. Check that the carriage can move easily along the guide rail of the Logosol Sawmill.
4. Fit the Log House Moulder and the feed crank in the tracks in the carriage plate. (4 screws M6x20, 4 screws M6x16, 8 square nuts M6).



The Feed Crank

❗ If the Log House Moulder is in its outermost position on the carriage plate, your hand can hit against the carriage plate when turning the feed crank.

If you have this problem, reposition the crank's screw plate outwards and fit it with only two screws, so that room is made for your hand.

Screw two M6x20 in the holes that are not used for fitting the crank.

Starting the Electric Log House Moulder:

❶ Read the safety instructions.

Connect the Log House Moulder to the mains, press the black enabling button and the green start button at the same time. The milling cutter will stop as soon as you release the enabling button or when you press the red emergency stop button.

If the cutter does not run in the correct direction, reverse the phases in the Log House Moulder's connecting plug with a flat screwdriver. Push and turn the white plastic disc half a turn.

Log House Moulder with Automatic Feed

With electric feed and return the work with the Log House Moulder will be easier and it will go faster.

The Log House Moulder is available in a design compatible with Logosol's feeding machine E37, which also runs the cutting unit. The hand-fed electric Log House Moulder can easily be modified to be compatible with the automatic feed. Read more about this in the manual for the feeding machine.

❶ Start / stop with automatic feed: Read the manual for the feeding machine E37.

Starting the Chainsaw on the Log House Moulder

❶ Read the safety instructions for the chainsaw, and the safety instructions on page 3.

For your own safety, also pay regard to following:

⚠ **Warning!** Risk of a runaway situation!

❶ **VERY IMPORTANT!** The chainsaw's chain brake must always be activated so that the cutter is locked. Risk of a runaway situation!

❶ Always control the throttle manually. Never lock the chainsaw's throttle. Risk of a runaway situation!

❶ Make sure that you have a good and stable working position, and check that there is nothing behind you that you can hit against when pulling out the starter grip.

⚠ **Risk of personal injury and the machine being damaged if the Log House Moulder is fed in the wrong direction.**

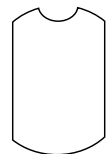
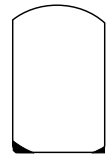
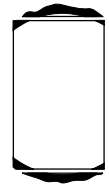
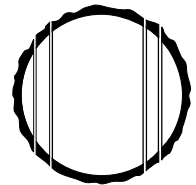
❶ The cutter head of the chainsaw powered Log House Moulder is laterally reversed. The chainsaw powered Log House Moulder should be run from left to right seen from the operator's position, i.e. in the opposite direction to the saw unit. The cutter head should always run against the feed direction.

Shaping Logs

The bottom of the Log House Moulder is fitted with sliding profiles that make it easy for the machine to be pushed along your sawmill. Due to its compact design, the Log House Moulder takes up minimal space on the guiderail. It can stay on the sawmill while cutting the block, and it need not be removed when lifting up a new log.

Step-by-step instructions:

1. Square two sides of the log. If the log allows, cut rough-edged boards from the log's sides until you reach the normal block thickness of 5 or 6 inches.
2. Cut a thin slab from the top and bottom sides of the log, saving some of the inner bark. Preferably, keep some of the log's conicity. (This step is carried out to protect the planing knives from the earth and sand that always gather on the log surface.)
3. Round off the top side of the log with the Log House Moulder, running over it twice to ensure a better result.
4. Turn the log over so the bottom side is up. Fit the knives for the long-groove in the cutter head. This is done quickly if knife clamping gibs with short knife blanks are used as stops in the cutter head. The knives can then easily be fitted in the correct position.
5. Mill the bottom side. (On the next log, begin with the bottom side.)



If the blocks are not too high, the Log House Moulder can also be used for planing the innersides of the blocks, creating a beautiful interior wall. The Log House Moulder can also be used for producing other profiles on blocks and posts. All knives for upper or lower cutters in Logosol's catalogue fit the Log House Moulder. You can also order your own custom-made profiles.



Log support with C-clamp.

Tip: if the log is crooked the long-groove will not be milled in the centre. To centre the long-groove milling, set two Versatile Log Fences (art. no. 4510-720-6104) at the same distance from the guide rail as the non-adjustable log fences on the Logosol Sawmill. Fit C-clamps over the log and the versatile log fences at the log ends. This will also give a smoother surface.

⚠ Warning! Ensure that you do not cut into the C-clamps or the log fences.

Maintenance

❗ Ensure that the electricity supply is disconnected, and the cutter head is not rotating / the chainsaw is turned off and the chain brake is activated before beginning any servicing or maintenance. Always use protective gloves.

Before operation:

- Check that all screws and nuts are properly tightened.
- Check that the electrical equipment and all cables are undamaged.

After operation:

- Clean out all wood debris in the Log House Moulder.
- Thoroughly clean the knife track in the cutter head.
- Apply a thin layer of oil on the knives and knife clamping gibs to prevent rusting.
- Make sure that the electrical equipment and all cables are undamaged.

Store the Log House Moulder in a dry place. Do not expose the machine to rain or snow, even though it is designed to stand outdoor conditions.

Changing belt

After some time of use, the belt between the motor and the cutter head has to be replaced.

❗ Ensure that the electricity supply is disconnected, and the cutter head is not rotating / the chainsaw is turned off and the chain brake is activated before beginning any servicing or maintenance. Always use protective gloves.

Open the belt cover.

1. Slacken the belt by lowering the motor / the chainsaw fixing plate. This is done by screwing the four nuts that hold the motor mount (G).
2. Replace the belt and tension it relatively loosely. Check that the motor stands straight.
3. Refit the belt cover, push the Log House Moulder onto the guide rail, and start the motor after having performed necessary safety checks. Tension the belt until it no longer squeals when the motor starts.

Changing support ball bearings on chainsaw driven Log House Moulder

The small ball bearings (D) that support the belt pulley on the chainsaw are heavily loaded, and generally they have to be replaced after some time. For that reason, you should have a couple of ball bearings in reserve.

The ball bearings are easy to replace. Place a M8 washer under the ball bearing. (Ball bearing 608zz 8x22x10 art. nr 9999-000-9999.)

Moulding Knives

Logosol has produced a wide range of moulding knives especially suitable for the Log House Moulder. They are all presented in Logosol's Moulding Knives Catalogue.

Order Logosol's Moulding Knives Catalogue.

Moulding knife sets, including knife clamping gibs, for milling log house profiles:

	Article no.
For 3" timber	7000-002-5235
For 4" timber	7000-002-5240
For 5" timber	7000-002-5210
For 6" timber	7000-002-5200
For 7" timber	7000-002-5220
For 8" timber	7000-002-5230

Planing Knives

Planing knives can be fitted in the Log House Moulder. The planing knives can be used at the same time as moulding knives are mounted in the cutter head. That way you can plane the surface between the moulding knives.

⚠ Warning! Ensure that the electricity supply is disconnected and that the cutter head is not rotating / that the chainsaw is turned off and the chain brake is activated before beginning any servicing or maintenance. Always use protective gloves.

⚠ Warning! Dull knives increase the risk of accidents.

Mounting. Before mounting the knives, you should clean knives, knife clamping gibs, and cutter head thoroughly. Place the planing knife correctly in relation to the adjusting screws (D). Note that these screws adjust the height of the knife. Place the knife clamping gib in the track, and tighten the knife using the adjusting screws. Tighten the lock screws (E) in the knife clamping gib loosely to make it possible to adjust the knife. Once the adjustment is done, tighten the lock nuts properly. Then tighten the adjusting screws carefully until they stop. If they are tightened too much the knife will crack.

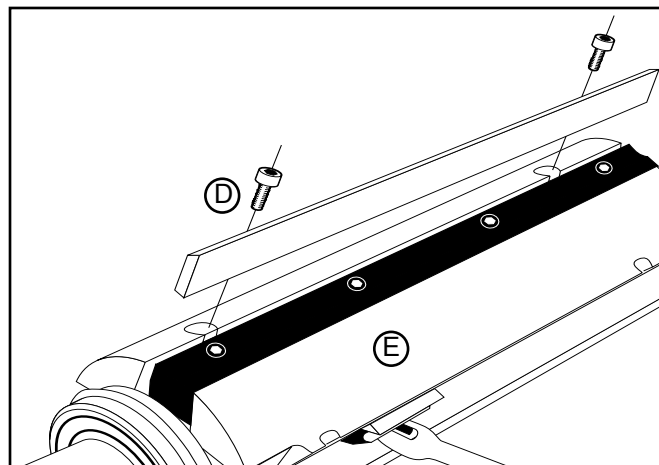
Adjustment. Both planing knives must be fitted the same way and protrude equally. Tighten the knife clamping gibs' lock screws properly once the adjustment is done. Tighten the adjusting screws fully.

❗ Check that all screws are tight. Check that the cutter head can rotate freely, and that no tools have been left in the machine. Close the cover.

Description:	Article no.
Planing knife 230mm (9"), 1 pair	7000-002-8230
Knife Clamping Gib 230mm, 1 pair	7202-001-0242

Sharpening

Applies to both moulding knives and planing knives: Always sharpen the knives in pairs to ensure that they have the same weight. Otherwise, vibration may occur in the cutter head. The grinding angle should be 40°. The sharpening should be carried out by a person with the right knowledge and equipment.



Mounting of planing knife in the cutter head.

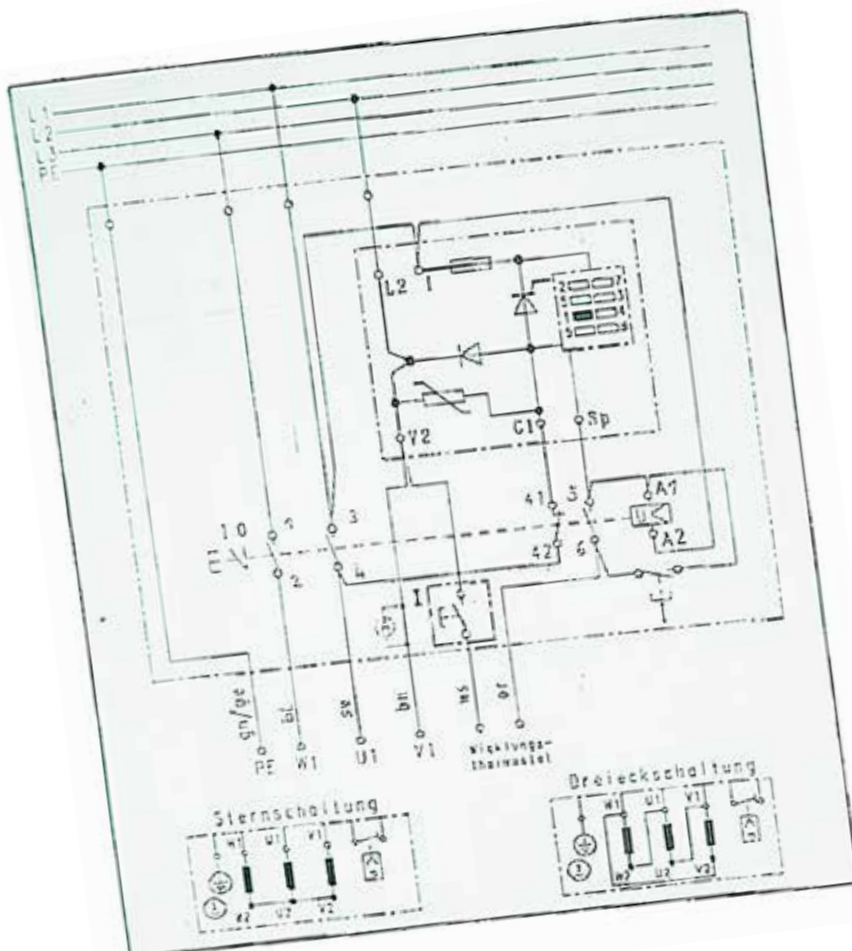
Technical Data, Electric Powered Log House Moulder:

Weight	Approx. 32 kg (70 lb)
Frame	4 mm powder-coated sheet steel
Controls	Enabling button, start button, and emergency stop button
Plug	CEE (round plug) with phase reverser
Electricity supply	50 Hz, 400 V, 16 A
Coupled enclosure, degree of protection	IP 54
Motor	3 kW
Transmission	Poly-V belt
Sound levels	Acoustic pressure 100 dB (A) Acoustic power 107 dB (A)

<u>Cutter head:</u>	4 tracks for moulding or planing knives
Width	210 mm (8")
Diameter	72 mm (2.8")
Speed of rotation	7600 rpm
Max. knife protrusion	25 mm (1")

Circuit Diagram

- ❗ Remember that only authorized electricians may open or work on the electrical equipment.
- ⚠ High voltage! Incorrect connection may lead to danger to life.
- ❗ Ensure that the electricity supply is disconnected before opening the system.



Parts List

7610-000-0230	Log House Moulder 220V 3-phase
7600-000-0230	Log House Moulder 400V 3-phase
7700-000-0230	Log House Moulder for chainsaw
7700-001-0000	Electric motor 90/2
7700-001-0005	Electric box
7700-001-0010	Belt pulley 132mm (5")
7700-001-0015	Belt pulley 50mm (2")
7700-001-0320	Belt pulley Stihl 066
7700-001-0020	Bushing 24
7700-001-0025	Bushing 28
7700-001-0030	Poly-V belt, electric moulder
7700-001-0300	Poly-V belt, chainsaw moulder
7700-001-0035	Belt cover, electric moulder
7700-001-0235	Belt cover, chainsaw moulder
7700-001-0070	Openable cover, electric moulder
7700-001-0065	Openable cover, chainsaw moulder
xxxx-xxx-xxxx	100mm (4") Chip duct
7700-001-0075	Hinge
7700-001-0080	Electric box bracket
7700-001-0085	Ball bearing 6006 2RS
7700-001-0090	Cutter head, electric motor
7700-001-0340	Cutter, chainsaw
7700-001-0095	Bearing housing
7700-001-0100	O-ring
4510-720-2800	Reel holder
9999-000-1030	Reel and crank
9999-000-1030	Carriage slide profile kit
4510-723-2002	Feed line
7700-001-0230	Mount, chainsaw.
xxxx-xxx-xxxx	Vibration reducer M8
xxxx-xxx-xxxx	Support ball bearings 8x22x10



Declaration of Conformity

The manufacturer Logosol AB, Industrigatan 13, S-871 53 Härnösand, Tel. +46 611 18285, hereby declares that Log House Moulder, with art. no. 7600-000-0230, 7610-000-0230, or 7700-000-0230, is manufactured in accordance with:

Machinery Directive 98/37/EG, EMC directive 2004/108/EG, and LVD-directive 2006/95/EG,

and that it is manufactured in accordance with the following harmonized standards: EN ISO 12100-1, -2:2003, EN 60204-1:2006, EN 51000-6-1, -3.

Härnösand 2008-02-27

Bengt-Olov Byström
Bengt-Olov Byström, MD



Logosol arranges timbering courses where you spend one week learning how to shape logs and build log houses. The scarfed corner in the photo above, is made by course participants. The courses are from Monday to Friday. For more information, contact Logosol or visit our website.





Log Turner

Perfect for turning logs, in the forest or on your sawmill.

Spares your back and makes you stronger!

Full control of the log, even when you take a new grip.



 **LOGOSOL**

Swedish Wood Processing Products

LOGOSOL SWEDEN

Fiskaregatan 2, SE-871 33 Härnösand, Sweden
Phone +46 (0)611-182 85 | Fax +46 (0)611-182 89
info@logosol.com | www.logosol.com