

LOGOSOL USER MANUAL

TRANSLATION OF ORIGINAL USER MANUAL.
ARTICLE NO: 0458-395-4007



CIRCULAR RESAW KS150



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.

Logosol Circular Resaw



Welcome to Logosol! We are pleased that you have placed your trust in us by choosing the Circular Resaw, and we promise to do our best to satisfy your expectations.

Logosol began production of the Logosol Sawmill in 1988. Since then we have delivered approximately 20.000 sawmills to satisfied customers around the world.

We are just as concerned about your safety as we are about you getting the best results possible with your Circular Resaw. That is why we recommend you to read this manual from cover to cover before you begin sawing. Bear in mind that the machine itself is only a part of the value of the product. An equally valuable part is the manual, since it helps you to make full use of the machine in the most efficient way. Thus, the manual contains helpful information which we would like to pass down to you, gathered from our years of experience in sawing.

We wish you all the best with your new machine.

Bengt-Olov Byström

*Bengt-Olov Byström
Managing Director
at Logosol in Härnösand, Sweden.*

Information about this manual



Whenever this symbol appears, a tip follows that will simplify or improve the results.

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

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Safety Instructions, 2 pages



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



For your own safety, do not begin working with the machine before having read and understood the entire manual.



Incorrect use of the machine can cause life-threatening injuries. Cutting tools: Never place your hands or tools past the machine's table surface while it is running.



Use protective gloves when working with the Circular Resaw. Risk of cutting injuries when handling the saw blade. The saw blade can be hot immediately after sawing.



Use approved hearing protectors. Hearing can be impaired after only a short exposure to high-frequency sounds. Use approved, well-fitted eye protectors.



Use protective shoes or boots with steel toe and deeply patterned sole with good grip.



Never work in loose-fitting clothing, an overcoat or the like. Do not wear a scarf, tie, jewellery or other items that can get caught in the equipment.



This symbol means "PAY ATTENTION", and is always followed by an admonition or warning with great importance for safety or sawing results.



If used incorrectly, the Circular Resaw can cause serious injury.



The most important safety instructions are found on this page and the next. Additional instructions will appear in each chapter throughout the manual. All warnings, admonitions, and operating instructions must be followed to avoid serious injury.

The Operator:



Only persons who have read and understood all the instructions in this manual, who are well-rested, in good physical health, and have good eyesight are qualified to use the Circular Resaw. Persons who do not meet these requirements are not qualified operators.



Persons under the age of 18 may not use the Circular Resaw.

The Work Site:



Sawing with the Circular Resaw should only be done in good visibility conditions.



Children and animals may not be near the equipment when the machine is in operation.



Risk of the work piece being hurled out of the machine by the saw blade.



Always stand at the side of the machine during operation.

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

❗ The safety distance for persons other than the operator is 10 m (33 ft) seen from the in-feed side of the machine due to the danger of work pieces being hurled out by the saw blade. Seen from the other sides of the machine the safety distance is 4 m (13 ft) (see picture below).

⚠ Risk of being crushed between a work piece that is being fed out of the machine and a firm or heavy object.

❗ Make sure that nothing is obstructing the out-feeding of the work piece on the out-feed side of the machine. Keep a safety distance of at least 1 metre (3.3 feet).

❗ Never work alone. Make sure there are other persons within hearing distance if you should need help.

❗ **Before each work shift, make sure that...**

- ... the safety edge at the front of the machine cover's in-feed side breaks the electric current to the machine when it is pressed together.
- ... the machine cover with the height limiting plate is below the highest point of the saw blade, and that the rear flap swings back into position by its own weight.
- ... all cables to the machine and other electric equipment are in good condition.
- ... all screws are properly tightened.
- ... the saw blade is correctly mounted and can rotate freely.
- ... the riving knife is correctly mounted and in line with the saw blade.
- ... the machine stands firmly.
- ... the feeding and the saw blade run in the correct

direction, and that the feeding speed is adjusted for the work piece that is to be sawn.

❗ **Before start, make sure that...**

- ... no tools are lying on or in the machine.
- ... no person other than the operator is within the safety distance.

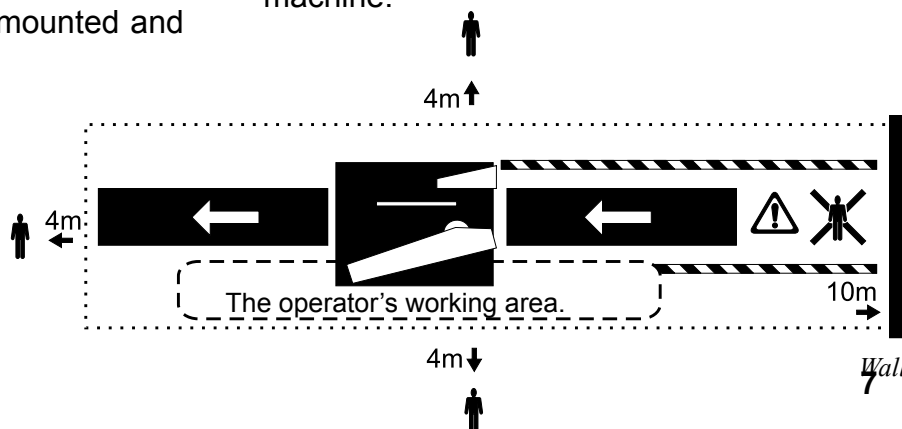
❗ **During operation:**

- Make sure at regular intervals that no other person comes within the safety distance. If this happens – stop the machine immediately.
- Do not feed this into the machine:
 - ... work pieces shorter than 1 m (3.3 ft).
 - ... work pieces lower than 20 mm (0.8”).
 - ... work pieces thinner than 20 mm.
 - ... more than one work piece at a time.

❗ **After operation:**

- Make sure that the electric supply is disconnected, and take measures to prevent unqualified operators from starting the machine.
- Clean the machine and perform stipulated maintenance.
- ❗ Make sure at regular intervals that the riving knife is in line with the saw blade.

❗ **Picture:** The safety distance for persons other than the operator measured from the saw blade. During operation the operator should be within the stipulated area. Take measures to prevent other persons from being between the machine's in-feed opening and the wall, which should be no more than 10 m (33 ft) from the machine.



Machine Description

Logosol Circular Resaw is designed for resawing squared timber. The machine is basically a chassis with a level table on the top side. A circular saw blade sticks up from the table. On one side of the saw blade there is a side fence, and on the other side there is a feed roller which presses the work piece against the fence, and feeds it through the machine. The Circular Resaw is designed to be supplemented with special roller conveyors. It should not be used without those accessories.

The machine's safety equipment consists of a fixed machine cover which prevents the operator from unintentionally coming in contact with the saw blade. At the rear edge of the machine there is a flap which closes the rear opening of the machine cover.

In the "ceiling" of the cover there is a barrier preventing the work piece from being lifted above the top of the saw blade.

The machine cover and the flap at the rear edge of the machine also reduce the sawdust emission when a chip extractor is connected to both the upper and the lower sawdust outlet.

The front edge of the machine cover limits the maximum height of the work piece. At the front there is also a safety edge which breaks the electric current to the machine if the safety edge comes in contact with something.

On the control panel there is a raised emergency stop button.

Moving the Resaw

The Circular Resaw should be lifted with a fork-lift truck or the like. The machine should stand on a Euro pallet when being transported. To lift it up on a pallet you should lay a protecting bed of wood on the truck forks, and insert them under the machine from the side according to the picture below. Strap the machine to the truck forks.

The machine weighs approx. 500 kg (1100 lb).



Protect the machine with wood pieces when lifting it.

Setting up the Resaw

Ergonomics

A lot of time can be saved by carefully planning the working site for the machine. How should the boards be moved between different stacks and the machine? Are there any aids which could facilitate the handling?

Besides the in- and out-feed tables, which should be fitted to the in- and out-feed sides, a roller conveyor can be placed at the side of the machine to bring back the work pieces that are to be sawn more than once. Make sure that the rollers are not in the way of the control panel on the Circular Resaw.

Logosol recommends that you think about the ergonomics involved in handling timber both to and from the machine. There are a lot of aids available on the market that help you to avoid heavy lifting.

In- and out-feed tables with rollers can be ordered from Logosol. Logosol also has sturdy separate rollers.

Risk of kickbacks of the work piece that is sawn.

- ❗ A long in-feed table also prevents the operator from being behind the work piece when it is fed into the machine.
- ❗ Place the machine so that the in-feed side is turned towards a firm wall (it should resist at least 50 N/mm²) that can stop a work piece if it should be hurled out of the machine. The wall should be no more than 10 m (33 ft) from the in-feed side of the machine. Use some kind of barriers so that no one can come between the machine and the wall.
- ❗ If it is not full daylight, ensure that you have adequate main lighting.
- ❗ Hang up hoses and electric cables so that the operator does not tread on or trip over them.
- ❗ Use a chip extractor with a capacity of at least 750 m³/h. Connect the extractor to both the sawdust outlets.
- ❗ Keep the work site tidy so that there is nothing you can trip over.
- ❗ The machine should not be used or stored at temperatures below 0° C, since there is risk of condensation in the motors.
- ❗ The machine should be fastened to the ground with robust bolts and nuts. The in- and out-feed tables should be fastened to the ground in the same manner. The Circular Resaw can stand on a Euro pallet, but in that case it should be fastened to the pallet, and the pallet should be attached to the ground.

Setting up the Resaw and Tables

Before starting to use the machine the in- and out-feed tables should be mounted on the in- and out-feed sides of the machine. The length of the tables should correspond to at least half the length of the work pieces that are to be sawn. However, the in-feed table should never be less than 2 m long.

- ❶ In order to make the Circular Resaw saw straight, it is important that the in- and out-feed tables have floating rollers, i.e. rollers that can move laterally.

The work piece should be fed as straight against the fence as possible, but the machine must make the last adjustment of the work piece's direction when the feed roller presses the work piece against the fence. To make this possible the work piece has to be able to move easily sideways at the in-feed side. Also at the out-feed side the rollers have to be floating so that they do not steer askew if the work piece is crooked. In brief, the in- and out-feed tables should as little as possible steer the work piece laterally. Due to this you should always use the feed tables that are designed for Logosol's Circular Resaw (article no: 9999-000-0020) and, if required, a table extension (9999-000-9999).

Mounting of In- and Out-Feed Tables

The tables are mounted in the same way at the in- and out-feed sides of the machine. Instructions for table mounting on one side of the machine:

The Machine:

1. Fit the table supports (1) to the machine chassis (four M8x20, four M8 washers).
2. Fit the roller mounts (2) to the table supports (four M8x20, four M8 washers, four M8 lock nuts).

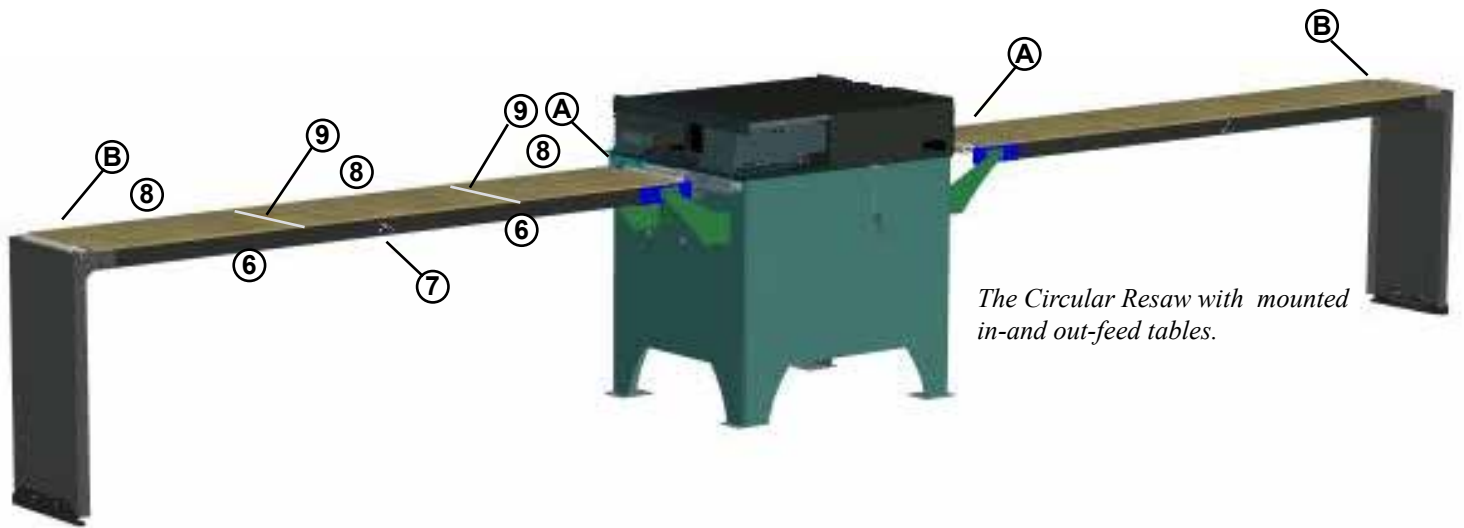
3. Thread the spindle (4) through the roller (3) using two washers and one spring in the order washer-spring-washer (5) on each side (four M16 washers).
4. Fit the roller in the roller mounts (two M6x16, two M6 washers).

The Table:

1. Assemble the 115 cm (3.8 ft) long beams (6) and the joint plates (7).
 - ❶ The high sides of the beams should be facing inwards. Measure the distance between the roller mounts and fit the beams so that they have the same distance between them. This way they will fit in the roller mounts on the machine and between the plates of the leg.
 - ❷ There are models that have a one-section wooden top. In that case, pos. 9 and point 3 below are excluded.
2. Screw the wooden tops (8) to the beams from underneath, but leave a gap of approx. 1 mm (0.04") between the wooden tops if you have a model with three sections. Work on a clean and flat surface. Place the beams on the wooden tops when screwing them together, and then turn the table over. (48 4x10mm wood screws)
3. Carefully tap down the the aluminium cover strips (9) into the gaps between the wooden tops using a wooden block.

The Leg:

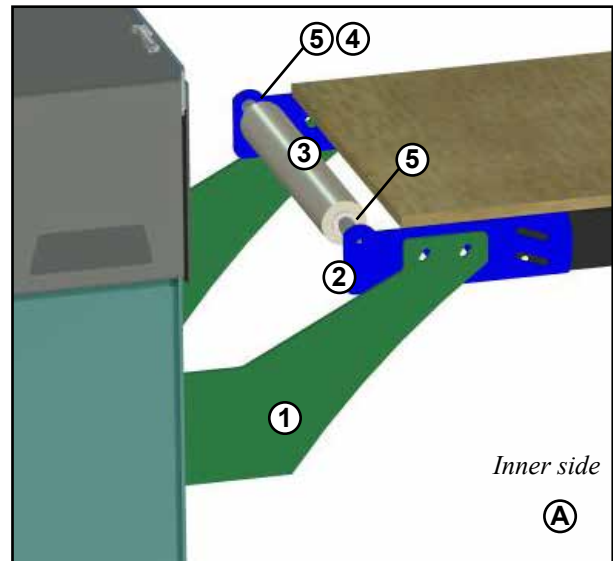
1. Screw in the height adjusting screw (10) (M6x40) into the lower edge of the leg.
2. Fit the foot to the lower part of the leg (two M8x20, two M8 washers, two M8 lock nuts).
3. Thread the spindle (4) through the roller (3) using two washers and one spring in the order washer-spring-washer (5) on each side (four M16 washers).
4. Fit the roller into the holes in the leg. The holes has three height steps (two M6x16, two M6 washers).



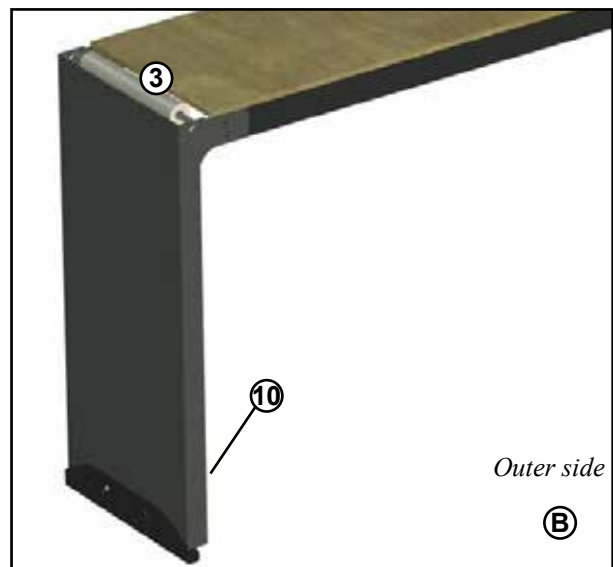
The Circular Resaw with mounted in-and out-feed tables.

Adjusting the Tables and Rollers:

1. The inner roller should be approx. 1 mm (0.04") above the machine table. Place a straight board or a spirit level on the machine table with a 1 mm thick spacer between them. Adjust the roller so that it touches the straight board by moving the roller mounts (2). Make sure that the roller is parallel with both the front edge and the top side of the machine table.
2. Adjust the height of the inner side of the feed table by pushing the table so that it moves towards or away from the machine in the roller mounts (2). The feed table should be in line with the machine table.
3. The leg should be screwed to the floor or a firm foundation. Adjust the height of the outer side of the feed table with the help of the height adjusting screw (10) on the leg. The feed table should be in line with the machine table.
4. Adjust the height of the outer roller by placing it into one of the three steps in the hole pattern in the leg. Let the roller stick up 3-5 mm (0.1-0.2") above the wooden top.



Inner side
(A)



Outer side
(B)

Electrical Connection

When the machine is set up according to the above instructions, it can be connected to the correct volatage (see *Technical Data*).

Make sure that the machine runs in the correct direction by looking at the feed roller which should feed towards the saw blade.

If the machine does not run in the correct direction the phases are connected incorrectly in the connect cable. The resaw is connected in accordance with European standard. Let a qualified electrician attend to the problem in the connect cable.

⚠ Risk of electric shock

- ❗ The electrical equipment may only be opened by a qualified electrician.
- ❗ The machine should be connected via a residual current breaker if it is used outdoors or in a facility that is not heated.

Resawing

1. Set the fence to the desired board width.
2. Set the feed roller so that it springs out 10-30 mm (0.4-1.2”).
3. Feed the work piece so that it goes straight along the fence. Stand at the side of the work piece. Feed the next work piece end to end with the first work piece. The final work piece has to be pulled by hand the last length (from the out-feed side) when it has passed the feed roller.

⚠ Risk of kickbacks.

- ❗ Only feed one work piece at a time into the resaw. Do not under any circumstances feed two or more work pieces on top of each other through the machine.
- ❗ Make sure that no one can come between the in-feed side of the machine and the

wall, which should be no more than 10m (33 ft) from the machine.

The machine is already adjusted and test run, but it may be necessary to tweak the fence angles in order to make the machine fit for your specific application.

Maintenance

Clean the machine after each work shift. Make sure there is no damp sawdust left in the sawdust box under the saw blade or under the machine cover.

Make sure that all screws are properly tightened.

Lubrication point: Bearing on blade spindle

Lubricant: SKF LGMT 3 (Lithium based)

Lubrication interval: When changing blade

Lubrication point: Transmission chain

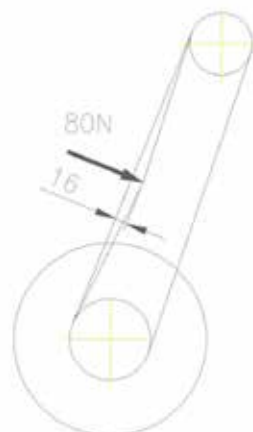
Lubricant: SKF LGMT 3 (Lithium based)

Lubrication interval: Check every week the machine has been in operation.

Belt Tensioning

Adjust the motor cradle so that it is in a position according to the picture below.

The belt is properly tensioned if it requires a force of approx. 80N (8kg) to be pressed down 15 mm (0.6”) between the belt discs.



Changing Saw Blade

⚠ Break the electric current.

1. Disconnect the plug for the circuit breaker on the safety edge. Loosen the screws in the black machine cover a couple of turns and push the cover backwards 2 cm (0.8"). Lift off the cover.
2. Dismount the fence.

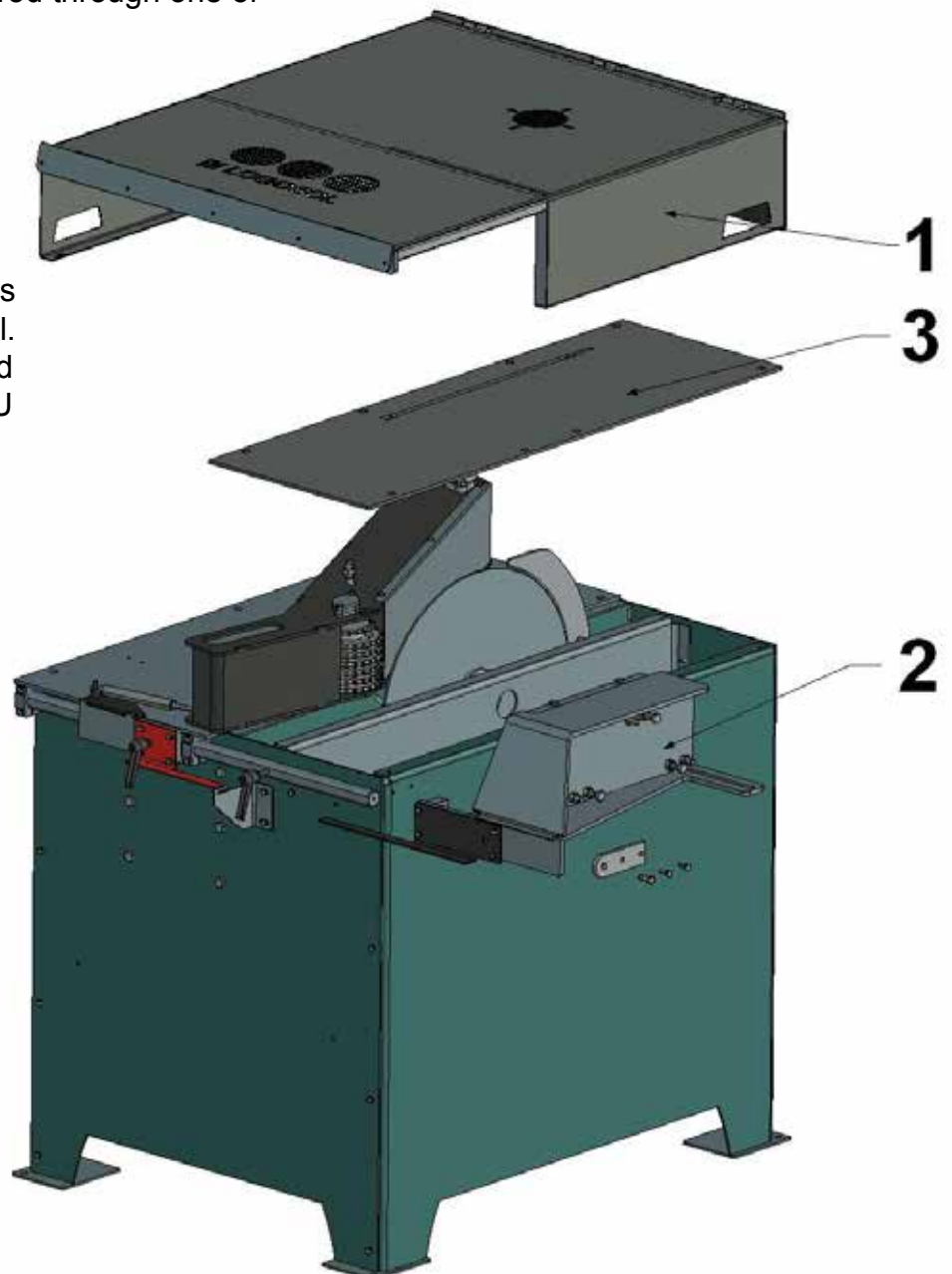
When loosening or tightening the nut that holds the saw blade, you should fixate the saw blade by sticking a rod through one of the openings in it.

3. Dismount the table leaf, which lies over the saw blade.

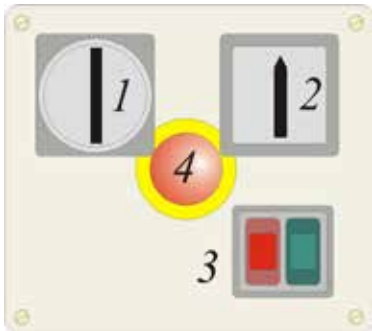
Loosen the centre screw in the spindle and change saw blade.

- ⚠ Never remove the support disc behind the saw blade, as it can become warped when it is remounted.
- ⚠ If the tooth width of the new saw blade deviates from the original one's width, the riving knife must be adjusted. Only use saw blades delivered from Logosol.

⚠ Only use saw blades delivered from Logosol. The saw blade should comply with the EU standard EN 847-1.



The Control Panel



1. Main Power Switch

2. YD-Start / Stop of the Saw Blade.

To start the saw blade, you set the control switch on "Y" and wait until the motor is at full rev. Then you set the control switch on "D", which is symbolized by a triangle (delta).

3. Start / Stop of the Feeding.

The feeding can only be started when the saw motor is running.

4. Emergency Stop Button

After an emergency stop you reset the emergency stop button by turning it. The safety edge at the in-feed opening has the same function, but it does not require resetting after having been activated.

Checking the Safety Functions:

1. Start the saw blade and the feeding. Press the red emergency stop button on the control panel. The machine should now stop.

2. Start the saw blade and the feeding. Press the safety edge on the upper side of the in-feed opening in the machine cover. The machine should now stop.

If any of these functions do not work the machine may not be taken into use.

Adjusting the Feeding

ⓘ The feeding will be damaged if the knob for adjusting feeding speed is turned when the feeding is not running.

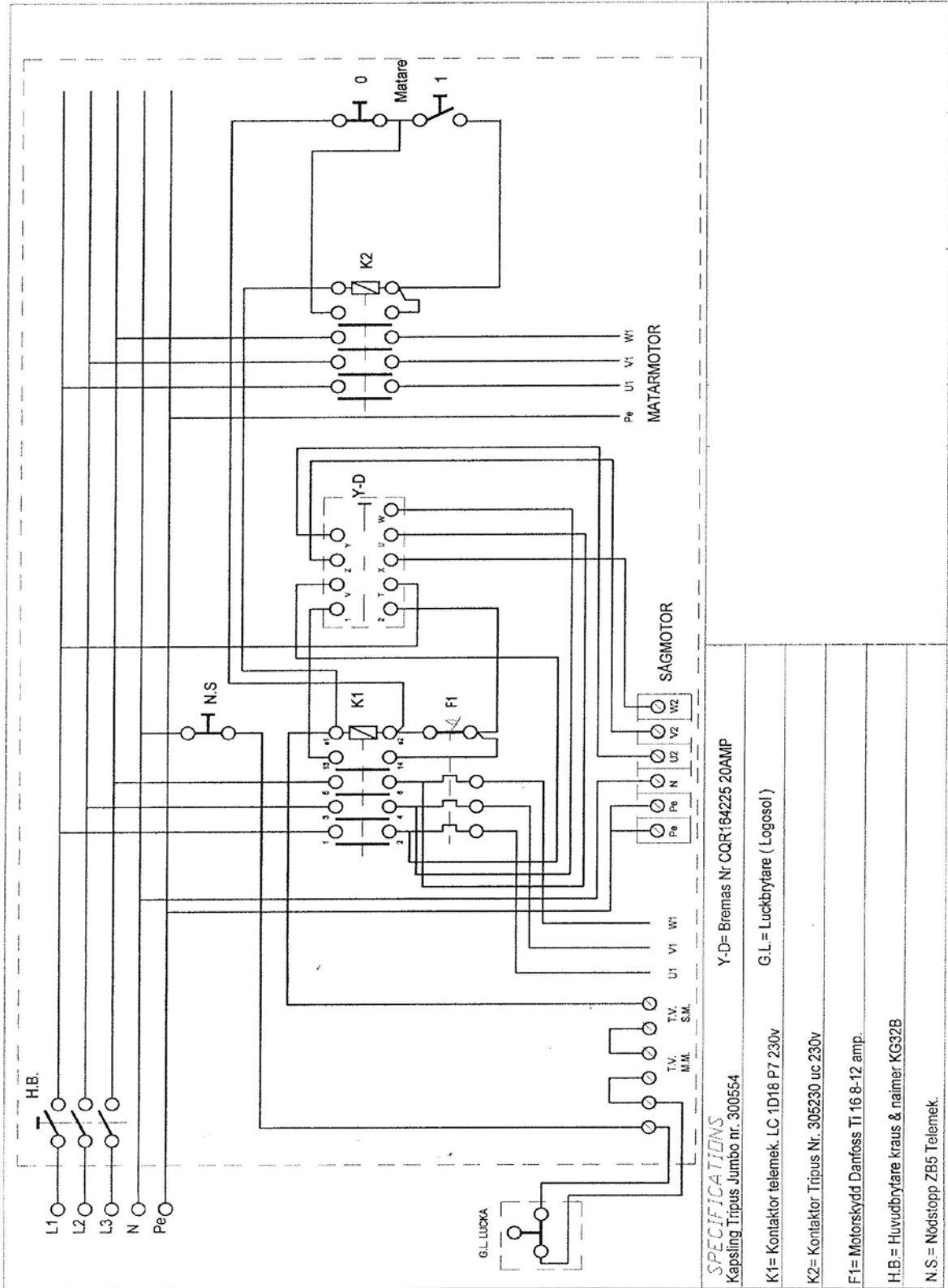


The feeding speed may only be adjusted when the feeding is running. The speed ranges from 4 to 12 m/minute (13-39 ft/min.). Lower speed gives a finer cut surface. The speed increases when the knob is turned clockwise, and decreases when the knob is turned anticlockwise.

Adjust the feeding pressure by pushing in the feed roller so that the distance between the feed roller and the fence is approx. 20-30 mm (0.8-1") less than the width of the work piece. Damp work pieces require higher feeding pressure.

If the feeding is skidding against the work piece, the reason can be that the in- and out-feed tables are set incorrectly. Make sure that the in- and out-feed tables are set at the correct height, that they are in line with the machine table, and that the rollers are slightly above the machine table (see *Adjusting the Tables and Rollers*).

Circuit Diagram



SPECIFICATIONS
 Kapsling Tripus Jumbo nr. 300554
 Y-D= Brems Nr. CQR164225 20AMP

K1= Kontaktor telemek. LC 1D18 P7 230v
 G.L.= Luckbrytare (Logosol)

K2= Kontaktor Tripus Nr. 305230 uc 230v

F1= Motorskydd Danfoss TI 16 8-12 amp.

H.B.= Huvudbrytare kraus & naimer KG32B

N.S.= Nodstopp ZB5 Telemek.

Technical Data.

Electrical System

Continuous output, Saw Motor: 7.5 kW
Continuous output, Feeding Motor: 0.25 kW
Electricity supply: 50/60 Hz, 3-phase, 230 V
Coupled enclosure, degree of protection: IP 54

Speed of Rotation

Saw Motor: 1500rpm
Feeding Motor: 1500rpm

Saw Blade

Speed of rotation: 1750rpm
Saw blade type: D450 4,4/3,0 30 Z28+4
Riving knife type: In accordance with
SS EN 1870-1

Sound Levels

Calculated sound pressure level: 103,9 dB(A)
Sound pressure level at the operator's position:
88,4 dB(A)

Dimensions

Length: 1160 mm (3.8 ft)
Width: 840 mm (2.8 ft)
Height: 915 mm (3 ft)
Weight: 500 kg



Declaration of Conformity

The manufacturer, Logosol AB, Industrigatan 13, S-871 53 Härnösand, tel. +46 (0)611 18285, hereby declares that Logosol Circular Resaw, art. no. 5210-000-1000 is manufactured in accordance with Machinery Directive 98/37/EG

Examined by: no. 0404 - SMP Swedish Machinery Testing Institute AB, Uppsala, Sweden.



EC Type Examination Certificate:
404/05/1078

Machines with art. no. 5210-000-1000 correspond with the one examined by SMP.

Härnösand 04-12-01

Bengt-Olov Byström, MD

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

Double Log Turner Art. no: 9999-000-2702

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.

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