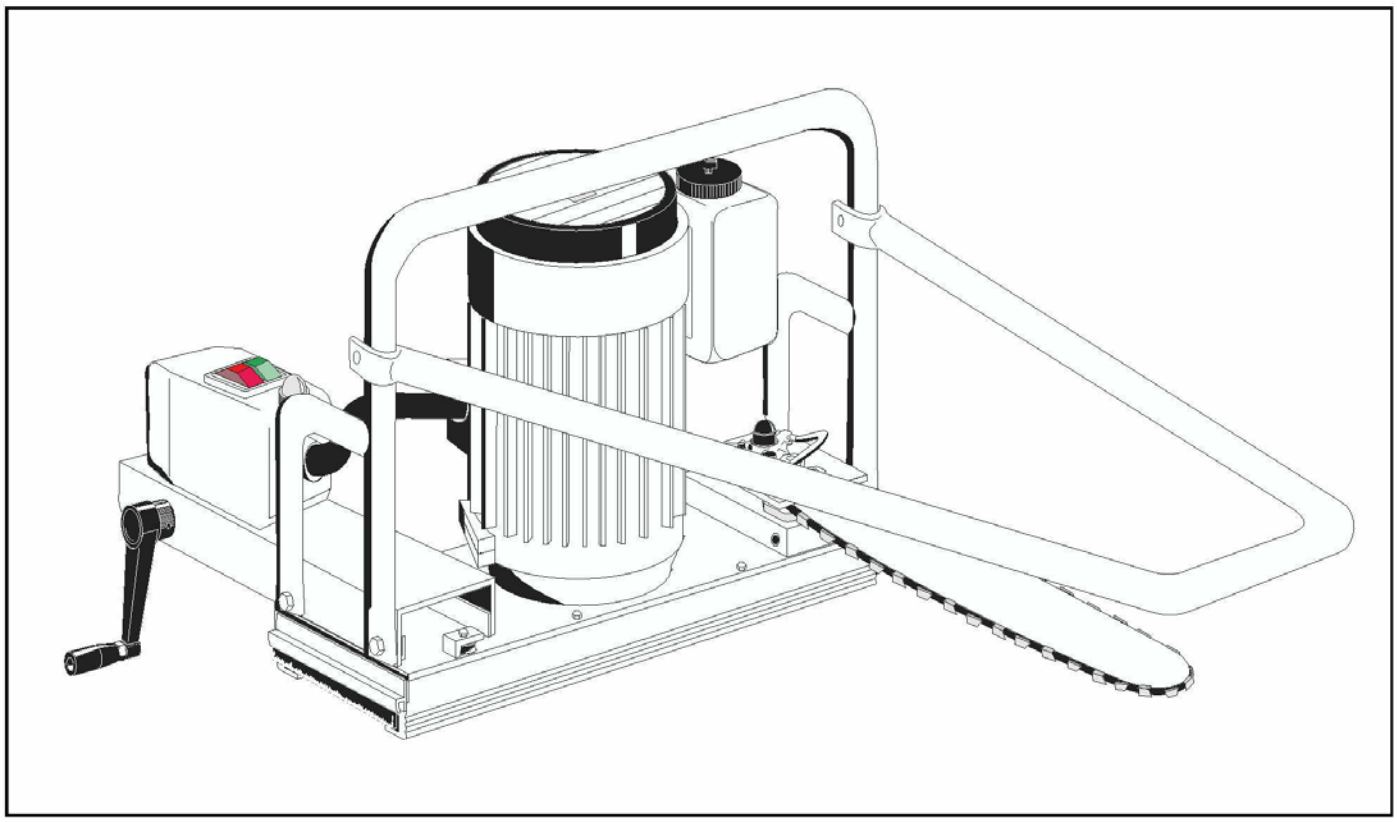
Instruction Manual

E4000 - E5000 – E6000

Three-phase electric chain saw



LOGOSOL

Thank you for choosing a LOGOSOL product.

In 1988, LOGOSOL began making the mini-sawmill, marking the beginning of a steadily developing product program for small-scale woodworking. Our broad range of machines and accessories enables you to handle the entire job yourself - from felling to the finished product, and includes such tools as chain saws, extensions for long and extra-large logs, timbering accessory, protective equipment and accessories for log handling.

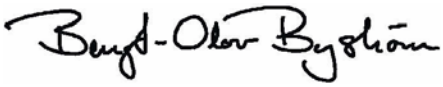
LOGOSOL even manufactures cutting equipment for larger sawmills, such as TOPPKL YVEN, a cutting device mounted over the saw blade, and MARGKL YVEN, which splits larger logs before they enter the sawmill. LOGOSOL can also custom design machinery needed to cut large units such as plastic pipes, paper bales and lumber bundles.

Other products include the SH 230, a combination plane and building saw which cuts board height and width in a single step. In addition, there is the PH 200, a larger machine designed to plane or shape three board sides simultaneously.

Call Logosol and we will send you information about our entire selection of products. If there is a particular product in which you are interested, we have video films you can watch to see our products in action.

The E 5000 is a powerful, easy-to-use electric chain saw. Do not hesitate to call us here at LOGOSOL with questions and opinions about our equipment. It is our goal that you should join the list of satisfied owners of a LOGOSOL product.

Good luck!



Bengt-Olov Bystrôm

Managing Director and Designer

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Safety rules

- The LOGOSOL E 5000 may only be used for cross cutting in combination with the LOGOSOL mini-saw mill. Incorrect use can cause severe injury. Always concentrate fully and work carefully with the sawing unit.
- Attach support legs under the saw mill guide rail before you attach the sawing unit. Otherwise the saw mill may tip over when there is no load on the log bed.
- Do not wear loose clothing, scarves and the like which can get caught in the saw.
- Always check that the saw is solidly fitted on the guide rail before plugging in the cable. In order to prevent the saw from pitching off the guide rail when started, ensure that both plastic strips attach firmly to the guide rail flange.
- Check that the electric cable runs free along the entire sawing bed. Do not step on the cable.
- Turn the saw off after each cut.
- in order to prevent unauthorized use, never leave the saw unattended when plugged in.
- Pull the plug out
  - before replacing, adjusting and cleaning the chain, or carrying out any other maintenance.
  - before touching any moving parts.
  - before removing the saw from the sawmill.

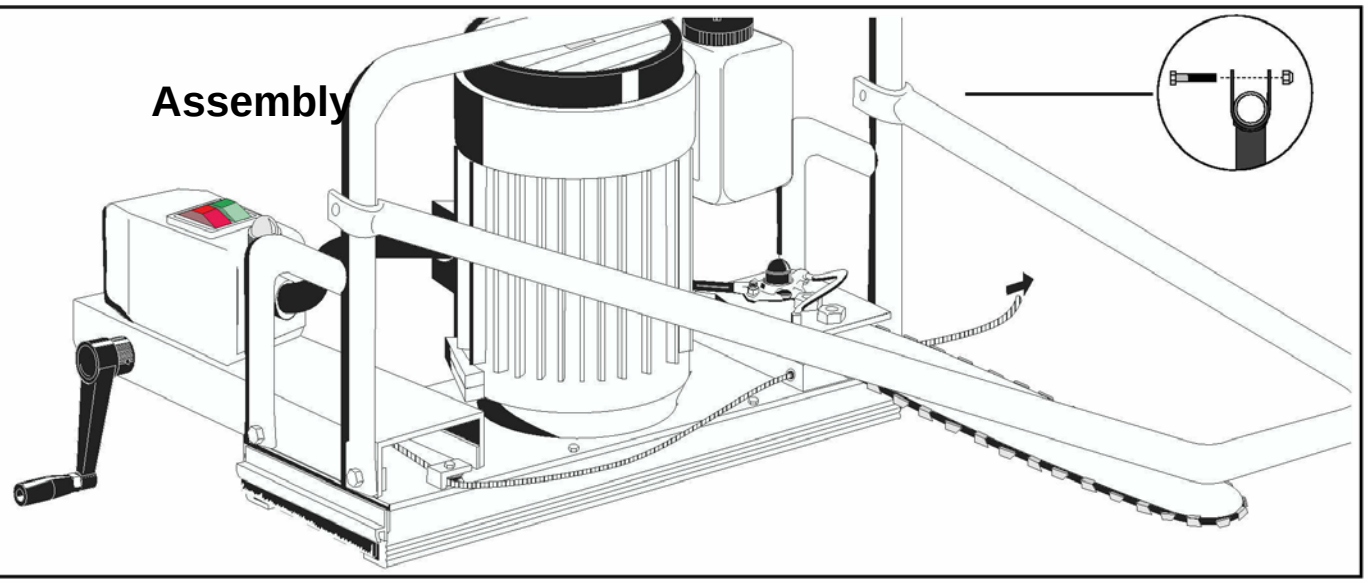
For your own safety, read ail safety precautions carefully and do not start the machine before you have understood ail of them. Do not allow persons who have not read the safety instructions to operate the machine. You should also read the instruction manuals for the LOGOSOL sawmill.

Use approved hearing protection and safety glasses. Even short exposures to high frequency sounds can damage your hearing.

Use gloves when you work with the chain, as there is a danger of cutting yourself.

Rotating saw chain: do not insert fingers under the chain protective cover or past the sawmill guide rail. Always stand behind the control arm while sawing

Assembly



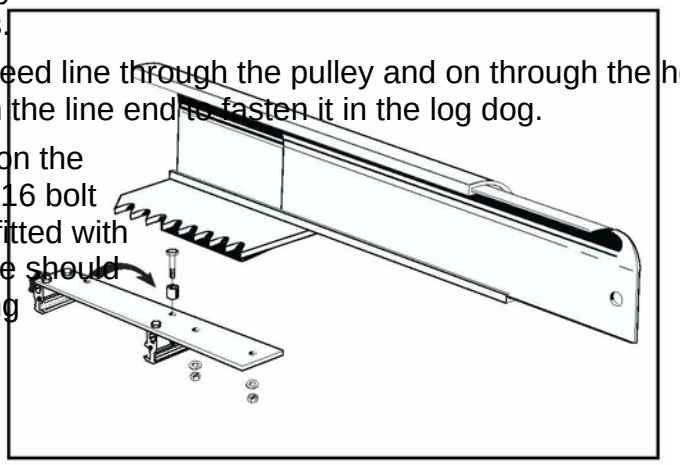
Fit the control arm to the electric saw using four M6x20 bolts and nuts. First loosen the protective yoke. Then place the control arm in position and push two bolts through the protective yoke, the control arm and its mount, tightening the nut on the inside. Use two more bolts to fasten the other side of the control arm. To tighten, use two 10 mm cap keys.

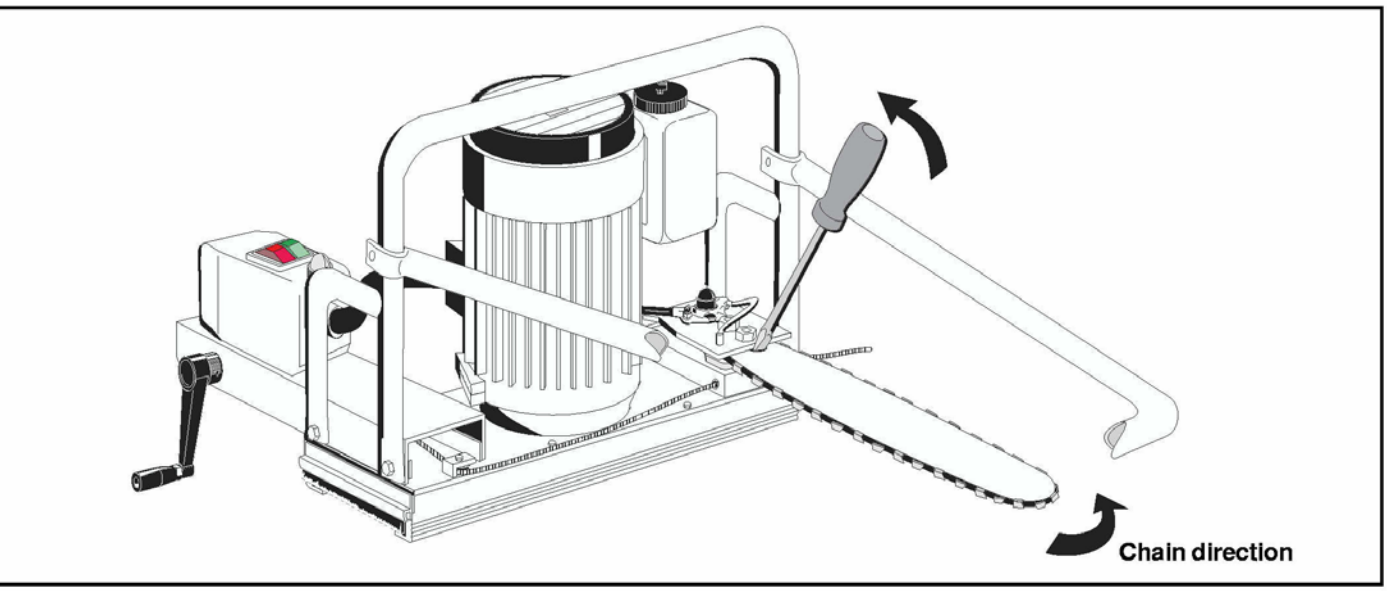
Fit the junction box at the end of the control arm, using a Phillips driver.

Fit the protective bail to the protective yoke as shown above. Use two M6x40 bolts and nuts and tighten using two 10 mm cap keys.

Starting at the line winder, thread the feed line through the pulley and on through the hole in the bearing housing. Then tie a knot in the line end to fasten it in the log dog.

Move the attachment for the feed line on the saw mililog dog. Replace the rear M6x16 bolt holding the slide with a longer M6x25 fitted with a sleeve as shown below. The feed line should run straight back to the bearing housing





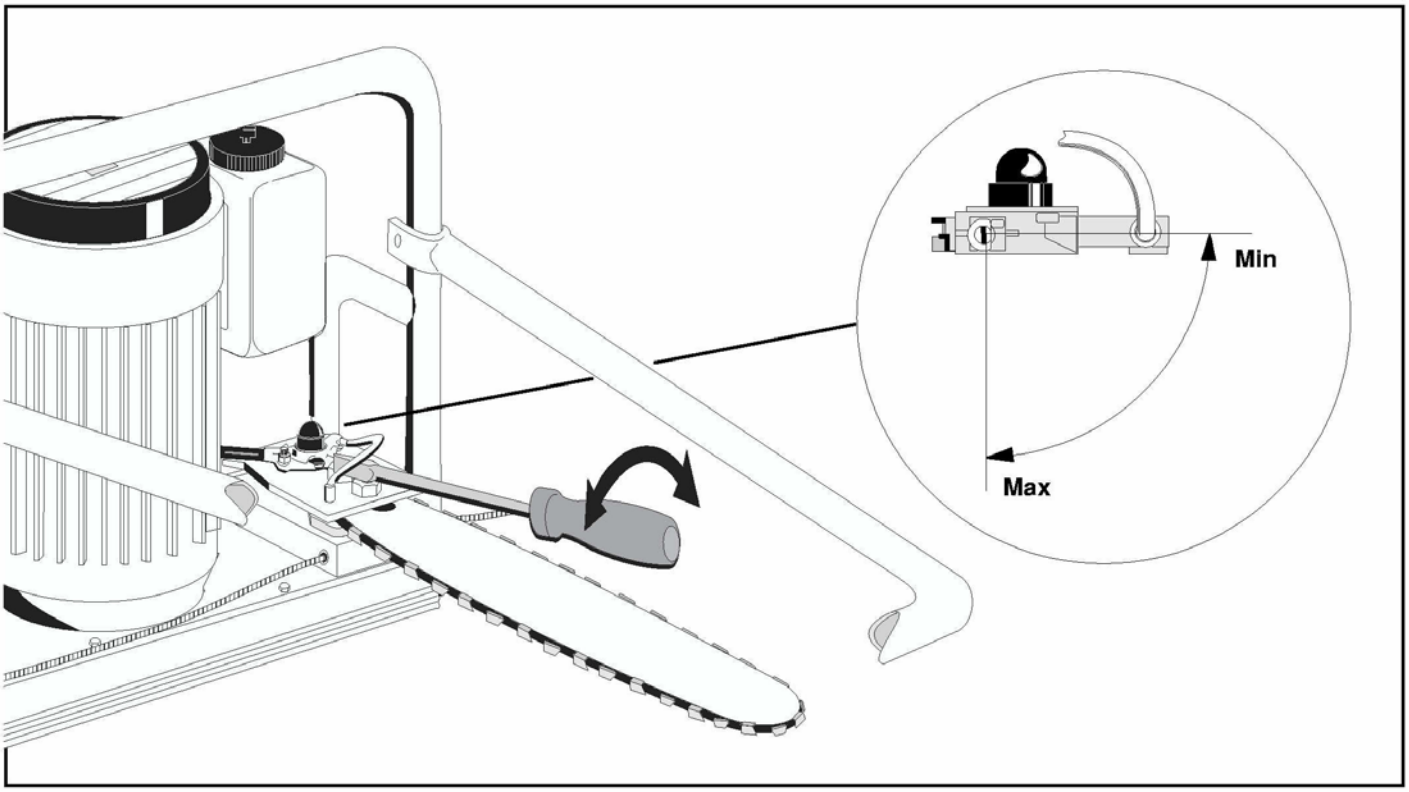
First check that the unit is unplugged. Then remove the bar nuts and the bar plate. Fit the bar and chain and return the bar plate to its place.

Check that the bar abuts the spacers and isn't caught on wood chips or the guiding flange for the pin bolts. Check also that the chain runs correctly and that it lies ail the way around the drive gear.

The chain is tensioned by pulling the bar outwards by hand as the bar bolts are tightened. If this is not enough, use a screwdriver as a lever by inserting it in the hole in the bar, levering outwards carefully as the bolts are tightened.

If it is not possible to pull a whole chain tooth out of the bar using the index finger and the thumb, the chain is too tight. A chain that is too tight will increase wear on both chain and bar.

Chain lubrication



Because of the large motor effect, the oil pump is set at maximum when the chain saw is delivered. While the oil flow can be reduced, remember that there is only a quarter turn between max. and min. settings.

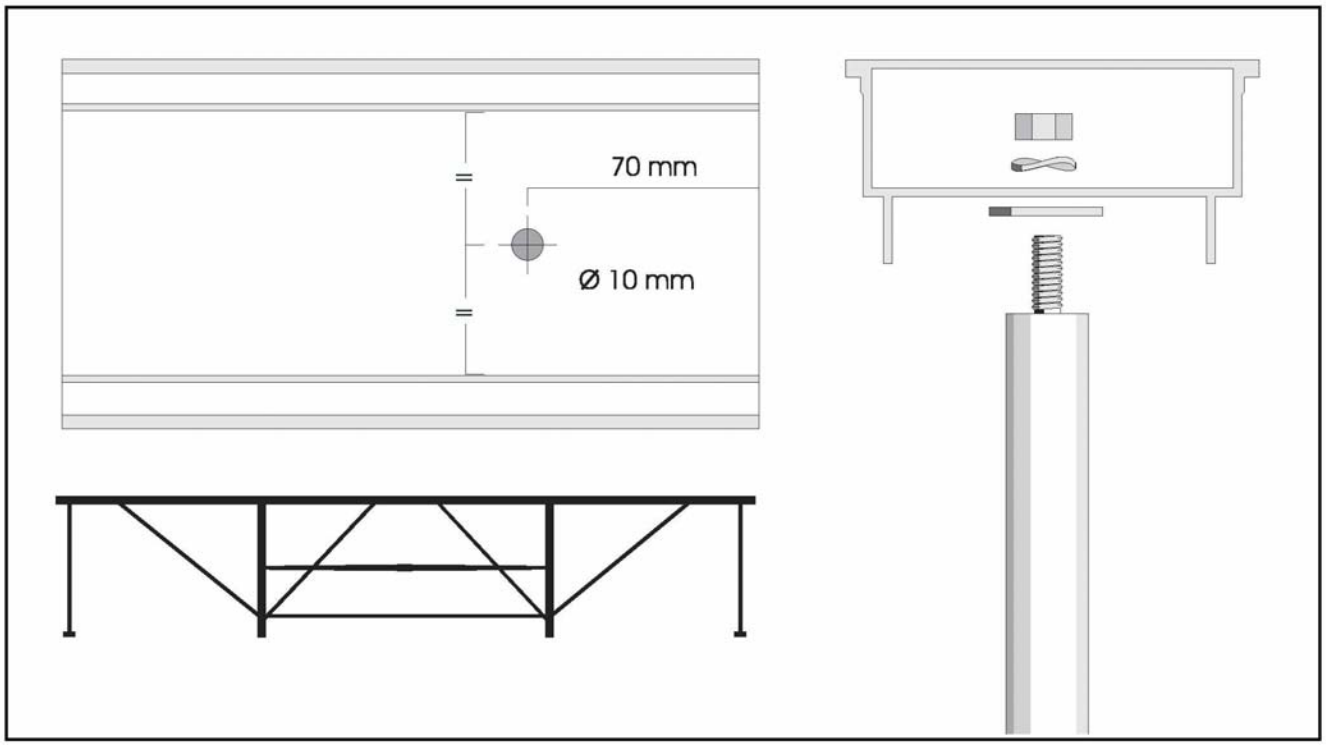
Never run the saw without chain oil. Should the oil flow be broken, the chain will soon be damaged. Once the lubrication system is empty, it takes 30 seconds before oil once more reaches the chain.

Do not allow the cutting equipment to overheat du ring operation.

After some use, the color on the bar will flake off, revealing the blue colored, induction tempered wearing surface. This is normal and not a sign of unusual wear.

It is absolutely essential that you use a high quality oil, one with excellent lubrication characteristics and good adhesion. Oil lacking the latter will tend to be thrown off at the bar tip rather than staying on the chain.

You can test the adhesion of your oil yourself by placing a drop between the index finger and the thumb, pressing them together for a few seconds and then drawing them apart slowly. At about 3-4 cm, there should be a thick web of oil threads between the fingers.



Fit the support legs to the ends of the saw mill guide rail as shown above. If the ground is loose, the saw mill and the struts ought to be attached to a wooden frame in order not to sink into the earth.

Adjust the leg length by loosening the nut in the guide rail and turning the leg. The legs should neither pull down nor push up on the guide rail, only holding it firmly in its unloaded position.

For older model saw mills you wilI have to drill the leg fastening hole yourself. (Model purchased before September 1995)

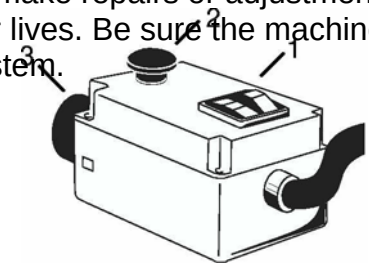
Electric system

The motor is fitted with a thermal overheating cut-off. Should the temperature in the motor winding be too high, the motor will stop and will not start again until it has cooled off.

The chain should run counter-clockwise or towards the sawing unit on the cutting side of the bar. If at delivery or after cable replacement, the motor runs in the wrong direction, reverse it by turning the phase inverter (two pins on a white plastic disk) in the saw electric connection using a large, flat screwdriver.

Always use as short a power feed cable as possible in order to avoid voltage drops. Normal cable conductor area must be at least 2.5 mm2. However, should a cable exceeding 50 m in length be required, the conductor area must be at least 4 mm2. Too low voltage can lead to diminished motor effect and damage to the electrical equipment.

Only persons with the proper credentials should make repairs or adjustments to the electrical equipment, as a wrong connection can endanger lives. Be sure the machine is unplugged before carrying out any work on the electrical system.



1	Green=ON Red= OFF
2	Black= Must be held down during operation
3	Phase inverter

Cutting equipment

Because of the high motor effect, it is essential to stop sawing if the chain gets dull. It only takes a few seconds of work with a dull chain to cause heavy wear on the bar and to overheat the chain, making it impossible to sharpen it again.

A practical step is to have several freshly filed chains on hand before beginning work. This way you can replace a dull chain as needed without dismantling the saw. An alternate method is to have a folding chain file stand available.

Remember that different chain types cause different wear on the drive gear. Using a new Picco-chain on a worn drive gear increases the risk for chain breakage. The same is true if a Picco-chain is used with a drive gear previously used with a standard chain. In order to reduce the chain breakage risk, always change drive gear when you change chain type.

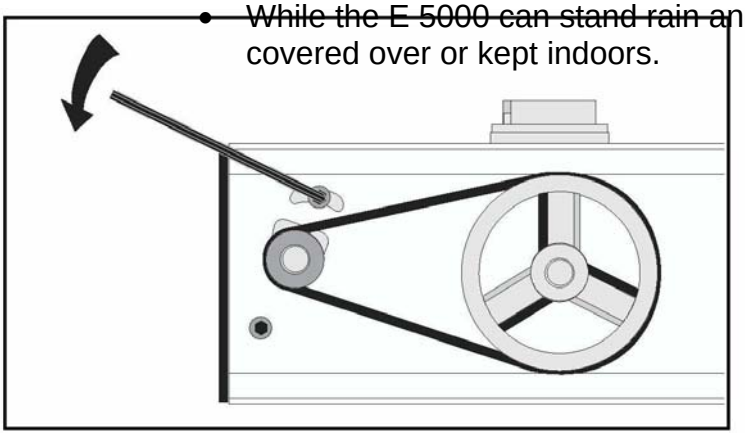
A good solution is to buy a complete cutting set consisting of a drive gear, a bar and four chains. If you then rotate the chains frequently and turn the bar each time you change chain, the whole package will wear evenly. The procedure will also ensure that the equipment will last longer.

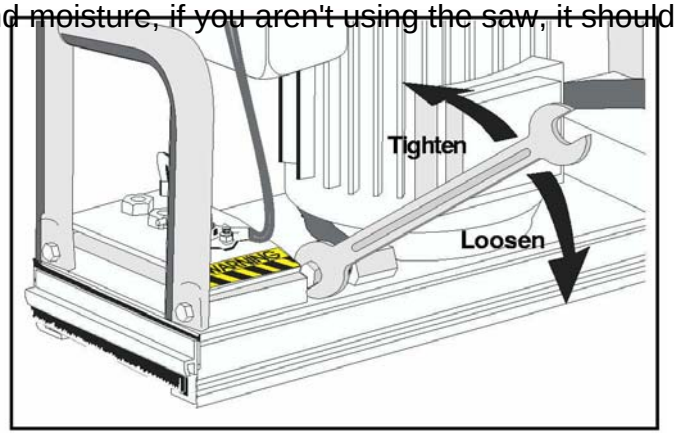
Replacing the drive gear: Remove the bar nuts. Lift off the cover plate and the cutting equipment. Remove the plastic cap on the top nut and remove it using a 17 mm cap key. Grasping the drive belt under the saw, lift out the oil pump drive gear. Do not use tools that can damage the equipment. Be sure you turn the flange on the oil pump drive gear downwards when you reassemble the saw.

Maintenance

The electric saw is simple to take care of. The maintenance required is listed below. Be sure the machine is voltage free before you take it from the guide rail or do any work in the vicinity of moving parts.

- Make sure that there is always chain oil in the container when sawing.
- Remove chips and filings that may be stuck in the chip ejector.
- Make sure there are no chips between the spacers and the bar du ring assembly.
- Check that the feed line runs correctly around the pulley and onto the line winder.
- Chips can fill the line hole at the gear housing. This can be prevented by making a simple knot in the line at the log-dog. This knot will then clean the hole out at each eut.
- It is important that the line and winder function easily so that the saw can be pulled back smoothly. Lubricate the plastic gears with silicon spray.
- Make sure the slide does not get clogged with chips. If needed, clean it out with a flat screw driver. You should also lubricate the sliding rails with silicon spray or something similar.
- While the E 5000 can stand rain and moisture, if you aren't using the saw, it should be covered over or kept indoors.

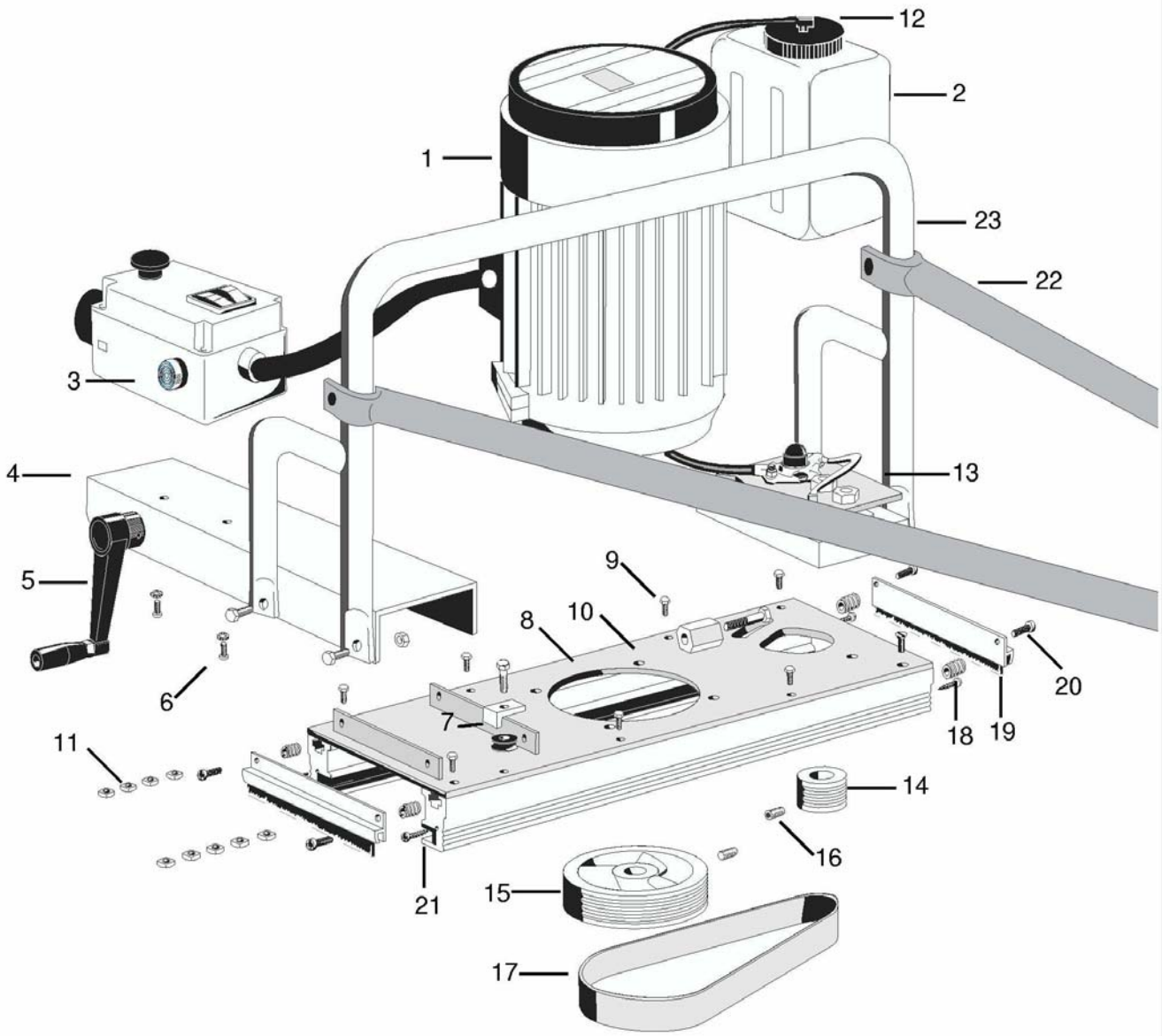




Belt tension

Under normal use, the Poly V-belt should last for may years. However, after some use, it may need to be tensioned in order to prevent slipping under use. For the longest working life possible, the belt should be tightened only until it engages.

Instructions: Tip the saw on its side and loosen the gear bolts on the underside. Use a 6 mm hex-wrench to loosen them about one turn. Then adjust the belt tension using the setting boit resting against the gear housing. Finish by retightening the gear bolts weil.

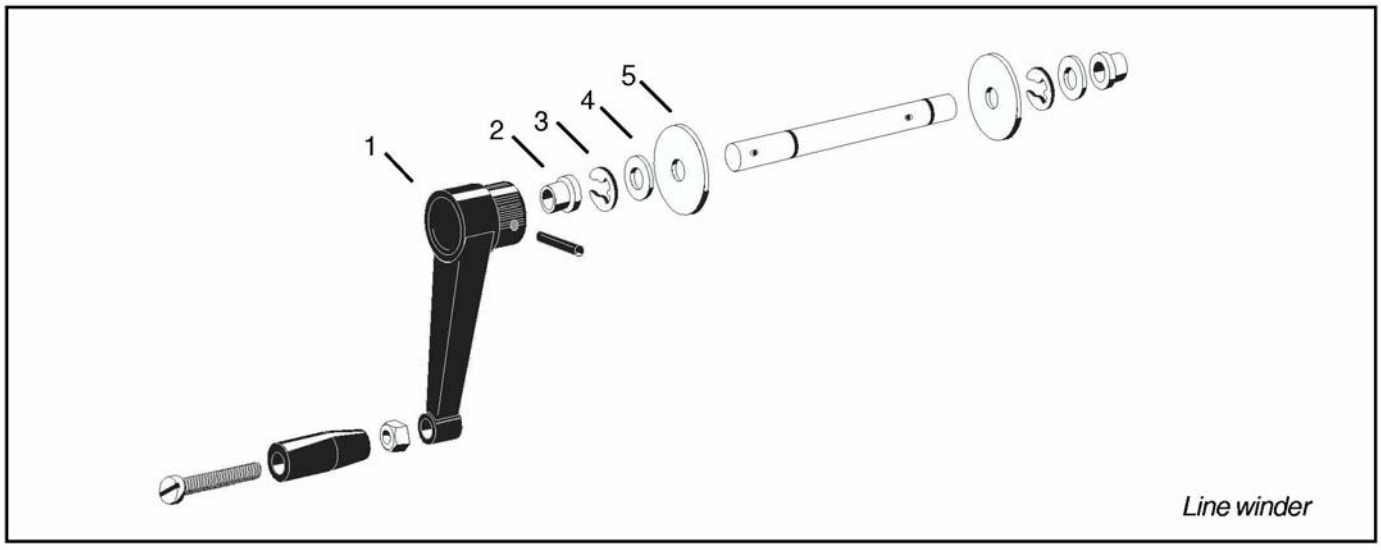


Schematic

Parts list

	Key Schematic	Art. no
1	5 kW motor	9999-000-6095
2	oil container	9999-000-6052
3	Junction box, complete, 5 kW	9999-000-6075
4	Control arm	9999-000-6070
4 1	Control lamp	9999-000-6078
5	Line winder, complete	9999-000-6071
6	Phillips bolts, M5x12	9999-000-6079
7	Line pulley	9999-000-6048
7 1	Pulley bracket	9999-000-6047
8	Bottom plate	9999-000-6058
9	Hex bolt, M6x16	9007-319-1290
10	Belt tensioner M8 x 40	9999-000-6059
11	Square nut, M6	9222-068-0900
12	oil cover with strainer	9999-000-6054
12 1	oil hose, black	9999-000-6034
13	Gear housing and bar attachment see parts schematic	
14	Belt pulley, 15/40	9999-000-6025
15	Belt pulley, 28/125	9999-000-6026
15,1	Wedge	9999-000-6027
16	Belt pulley lock screw	9999-000-6046
17	Poly V-belt	9999-000-6000
18	Lining thread, ISM M5	9999-000-6063
19	Guide rail brush	9999-000-6050
20	Phillips bolt, M5x12	9999-000-6079
21	Slide holder	9999-000-6033
21 1	Plastic glide strips	9999-000-6035
21 2	Metal screw, RXS 3.5x13	9099-021-2400
22	Protective bail	9999-000-6056
22 1	Hex bolts, M6x45	9007-319-1420
23	Protective yoke	9999-000-6055
23 1	Flange boit, M6x20	9018-346-1320
23 2	Flange lock nut, M6	9214-352-0900

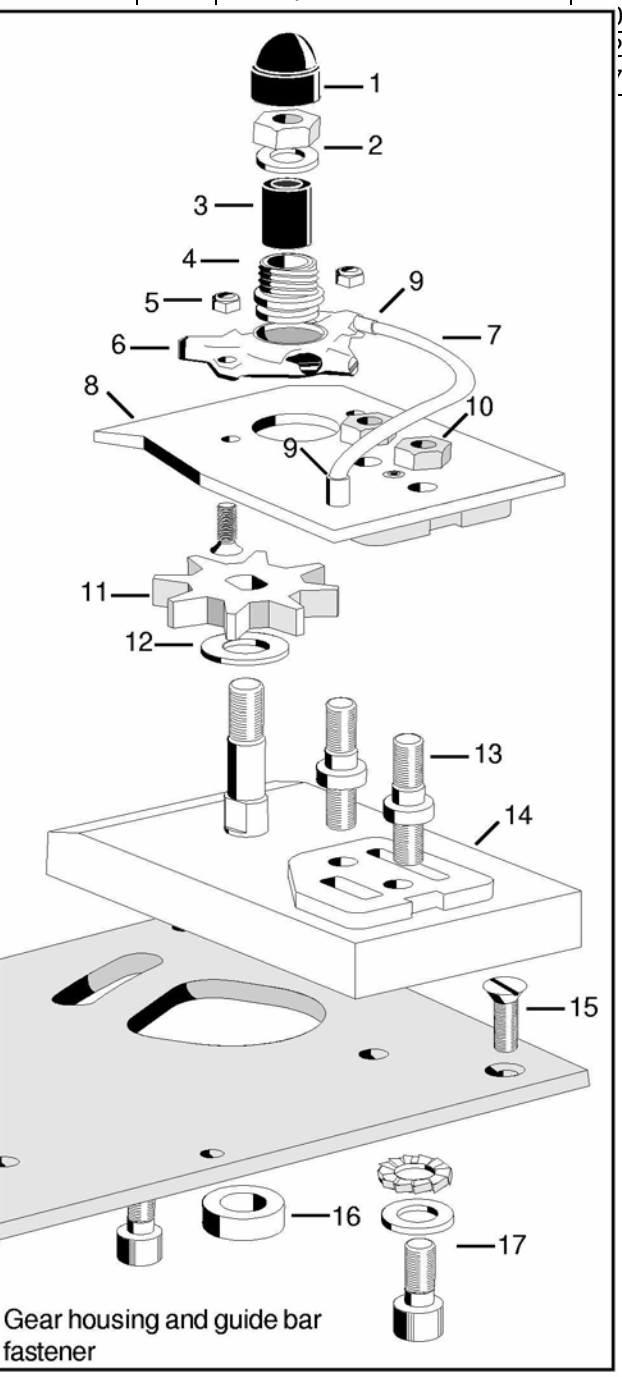
	Key Schematic	Art. no
1	Winder, compl. with axle	9999-000-6071
2	Plastic bushing	4510-723-2600
3	Lock washer	9455-621-0750
4	Cover washer	4510-723-4602
5	Nylon washer	4510-723-4603
5 1	Feed line	9999-000-6010



Line winder

Key Gear housing and bar fastener

		Art. no
1	Plastic cap	9999-000-6030
2	Lock nut, M1 0	9214-320-1305
	Flat washer	4510-723-4602
3	Rubber bushing	9999-000-6069
4	ail pump drive	9999-000-6021
5	Phillips bolt, M5x16	9999-000-)02
		?14-320-'00



Gear housing and guide bar fastener

	ail pump	9999-000-6020
7	ail pipe, transparent	9999-000-6036
8	Cover plate	9999-000-6024
	Guide bar plate, upper	9999-000-6023
9	Nipple	9999-000-6018
10	Guide bar nut	0000-955-0801
11	Chain drive	1207-642-1310
12	Shims, 0.5 mm	9999-000-6068
13	Guide bar bolt	9999-000-6040
14	Gear housing, axle, bar bolts	9999-000-6072
	Guide bar plate, lower	9999-000-6022
15	Recessed bolt, M6x16	9999-000-6062
16	Spacer ring	9999-000-6044
17	Hex bolt, M8	9045-319-1880
	Flat washer, 8 mm	9291-021-0180
	Lock nut, 8 mm	9999-000-6043

Technical specifications

Effect, E 5000			
Rated effect	5kW		
Maximum effect	app. 10 kW		
Electric equipment			
Mains feed	50 Hz 400 V 16 A, 3-phase		
Insulation class	IP 54		
Electric contact	CEE system (round), 16A, with phase inverter.		
Other	Contactor operation with help relay.		
	Temperature sensors in windings		
Power transfer	Poly V-belt		
Chain speed	22.5 m/s (Chain maker recommendation)		
Noise levels	Acoustic pressure		
	no load	97.0 dB(A)	
	under load	102.0 dB(A)	
	Acoustic power, Lw A	113.0 dB(A)	
Dimensions	Height	0.46 m	
	Length	0.55 m	
	Width	0.49 m	
	Weight	32 kg	
Accessories	25 m electric cable, 2.5 mm²		9999-000-6801
	Contact, CPE 416-6		9999-000-6090
	Extension cord socket, CPE 416-6		9999-000-6091

Circuit diagram is placed inside the electric box

Manufacturer's declaration

Product:	E4000, art. no	9999-011-0003
	E5000, art. no	9999-011-0005

Manufacturer: Logosol KB, Industrigatan 13
SE-871 53 Harnösand, Sweden
Tel: +46 (0)61118285

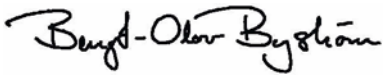
CE:

The E3000/E5000 electric chain saws may only be used together with the M5, M6 and M7 Logosol sawmills. The E4000/E5000 may not be started before the machine with which it is to be used conforms to the EU machine directive. The electric saw conforms to the requirements in the low-voltage directive 73/23/EEG and the EMC directive 89/336/EEG.

EU declaration of conformance

Product: The Logosol sawmill using E3000/E5000.
Manufacturer: Logosol KB, Industrigatan 13
SE-871 53 Harnösand, Sweden
Tel: +46 (0)61118285

The manufacturer warrants that the Logosol M5/M6/M7 sawmills are made in accordance with machine directive EU 89/392/EEC, as currently amended, and are manufactured in accordance with the following harmonized standard - EN 292. The sawmill may only be used together with Logosol's sawing units E3000, E5000 and BS320, or with a chainsaw that satisfied the requirements in machine directive EU 89/392/EEC, as currently amended., and is fitted with two guide bar bolts for fitting the saw. When used with an electric saw, the machine satisfies the requirements in the EMC directive 89/336/EEG and the low-voltage directive 73/23/EEG.



Harnösand, 1 January 1995

Bengt-Olov Bystrom, Managing Director