

# Manual E37 Friction

Feeding range: 7.5 m (25 ft)



Read this manual before starting to use this equipment.



This manual contains safety instructions.



Warning! Failure to follow the instructions can cause serious injury.



## Description:

E37 Friction has several integrated functions.

- Forward and backward feeding with adjustable, stepless power.
- Control panel for the electric saw unit or the log house moulder.
- Loading ramp makes it easy to push the cutting unit onto the guide rail.
- Stable support leg.

A great advantage of the friction clutch is that you indirectly regulate the speed of the cutting unit by adjusting the **feeding pressure**. This makes the speed self-adjusting. The cutting unit will accelerate or decelerate depending on the dimension and quality of the log. This makes the feeding machine very easy to operate.

Also, there will be less stress on the cutting device, since the speed is immediately adjusted when sawing through a knot or swelling in the log.

This could be compared to feeding machines that have adjustable **speed**, where the cutting device is exposed to very high stress when the cutting unit meets with temporary resistance that the operator does not manage to deflect.

With E37 Friction the guide bar and the chains will last longer and it is easy to keep optimum sawing speed.

 **LOGOSOL**

[www.logosol.se](http://www.logosol.se)

## Safety Instructions

In this text E37 Friction is called *the feeding machine*.

E5000, E4000, E6000, and Logosol's log house moulder are all called *cutting units*.

The cutting unit together with the feeding machine is called *the machinery*.



"WARNING!" Always pay extra attention when this symbol appears. Incorrect use of the equipment may result in fatal injury.



For your own safety, read through this whole manual carefully. Do not operate the machine before you have understood all the instructions. Also read the manual and safety instructions for the cutting unit.



Rotating tools: Always keep your right hand on the power adjusting lever, and your left hand on the black enabling pushbutton while the machine is running.



Use protective gloves when you work with the feeding machine. Risk of cutting and crushing injuries.



Use the protective clothing and equipment stipulated for the cutting unit that is connected to the feeding machine.



Use approved protective jacket and protective trousers. Never work in loose-fitting clothes, overcoats or the like. Do not wear a scarf, tie, jewellery or other items that can get caught in the moving parts of the machinery.



This symbol means: "ATTENTION". Pay extra attention when this symbol appears in the text. After this symbol an admonition or a warning will follow.

⚠ When used incorrectly the feeding machine may 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.

❗ Qualified operator: Only persons over 18 years of age who have read and understood all of the instructions in the manual for the feeding machine and the manuals for the cutting units that will be operated are qualified operators. In addition, the operator must be well-rested, in good physical health, and have good eyesight. Persons that do not meet these requirements are not qualified operators.

❗ The safety distance for persons other than the operator must be according to the safety instructions of the cutting unit. However, the safety distance must never be less than 5 m (16 ft). Disconnect the machine from the mains whenever a person other than you as an operator comes within the safety distance.

❗ Children and animals may not be near the equipment while the machine is running.

❗ Never leave the machinery unattended when plugged in. Make sure that no unqualified person is able to plug in the machinery.

❗ All work with the machinery must be conducted in good visibility conditions.

❗ Be sure that there are other persons within earshot in case of needing help.

⚠ Risk of crushing injuries at the feed line.

❗ Never touch the feed line when the machine is connected to the electrical current. The feed line is particularly dangerous at the pulley and where the line goes into the feeding machine.

**❗ Before plugging in the machine, always check that:**

- the feeding machine is correctly mounted on the sawmill and accurately connected to the cutting unit.
- the cutting unit is correctly positioned on the guide rail of the Logosol saw- mill.
- the cutting equipment of the cutting unit is correctly installed: the saw chain is turned in the right direction and properly tensioned, and the guide bar correctly fastened in the bar attachment / the moulding knives in the log house moulder are correctly mounted, and the cutter can rotate freely along the guide rail.
- no one is standing within the safety distance stipulated above.
- no cable runs the risk of coming in contact with the feed line.

**❗ Before starting, always check that:**

- the power adjusting lever is in its lowest position so that the feeding is disengaged.
- nothing is lying on the loading ramp.

**❗ The position of your hands is important in order to avoid injury:**

When driving the machine forwards, your right hand shall be on the power adjusting lever (5) and your left hand on the black enabling pushbutton (B5).

When driving the machine backwards, your right hand shall be on the power adjusting lever (5) and your left hand on the start button of the feeding machine (B4).

The power adjusting lever shall always be in the disengaged mode before you release your hold of it. (Exception: see tensioning of the feed line.)

⚠ Risk of crushing and cutting injuries when the cutting unit comes in over the loading ramp.

❗ Do not reverse the cutting unit all the way up against the feeding machine. Stop 0.2 m (8") before you reach the end of the guide rail. If the cutting unit is to be reversed more than that, the feeding machine must be disengaged (the power adjusting lever in disengaged mode) and the cutting unit be pulled by hand the last length of the guide rail. Besides the risk that you get injured, there is also a risk that the feeding machine will be damaged.



**Be aware that accidents on dangerous machines often occur when the operator e.g. is going to remove sawdust or splinters that have got stuck, or is going to adjust something else that causes operational disturbance. Shut down the machinery immediately if any operational disturbance occurs. A shutdown rarely shows on the finished product. Always switch off the current before performing any form of service or maintenance of the machinery.**

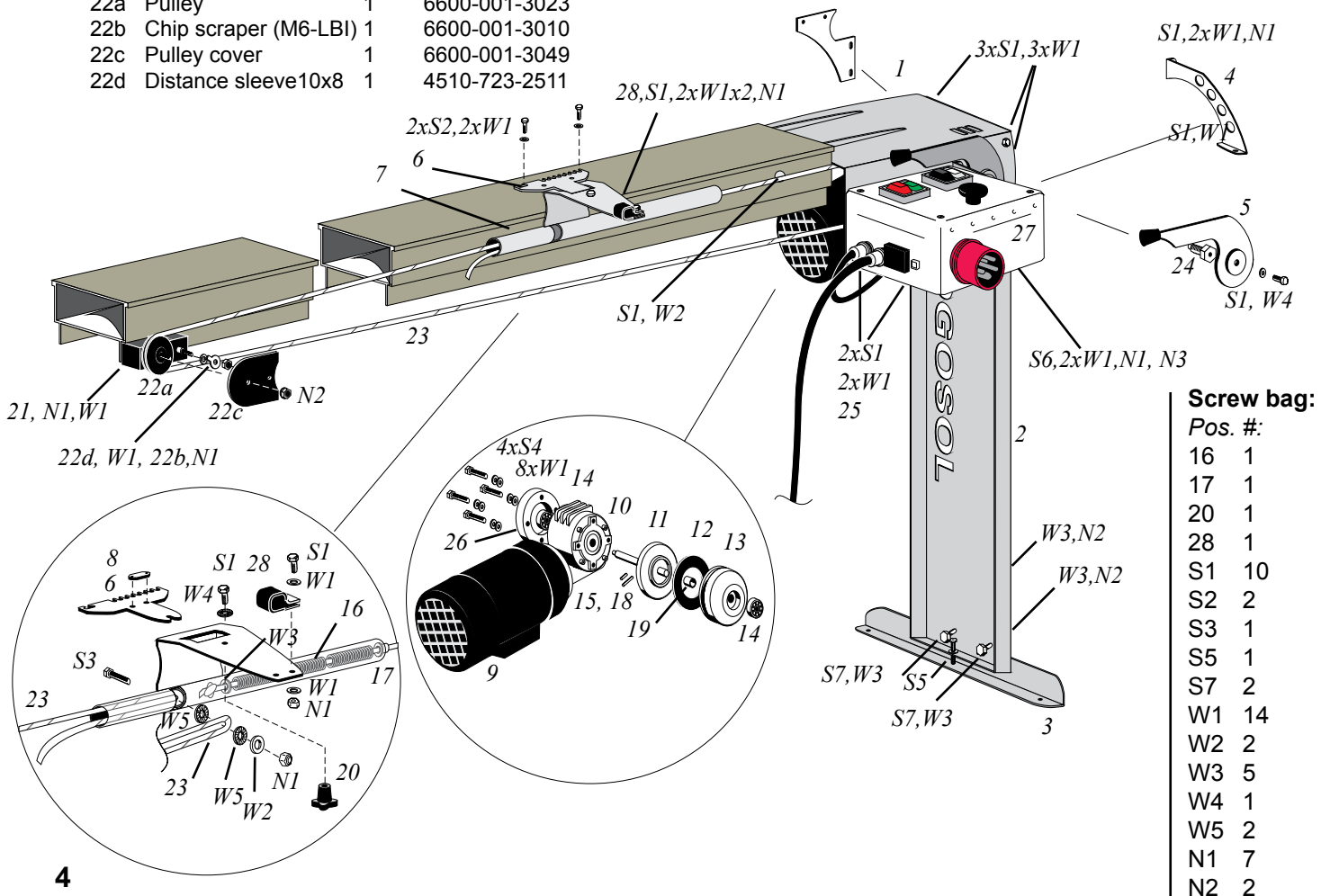
## Article List

Pos.	Description	#	Article Number
1	Loading ramp	1	6600-001-3000
2	Leg	1	6600-001-3001
2b	Corner brace, Leg	1	6600-001-xxxx
3	Foot	1	6600-001-3002
4	Electric box support	1	6600-001-3003
5	Power adjusting lever	1	6600-001-3004
	Plastic lever knob	1	6600-001-3005
6	Elk	1	6600-001-3006
7	Line tensioner	1	6600-001-3007
8	Spacer T:5	1	6600-001-3041
9	Electric motor		
	63/0.37kW	1	6600-001-3012
10	Worm gear I=30	1	6600-001-3013
11	Primary clutch disc	1	6600-001-3014
12	Friction disc	1	6600-001-3015
13	Secondary clutch disc	1	6600-001-3016
14	Angular contact ball bearing 7200	2	6600-001-3017
15	Hardened dowel pin 30 mm	1	6600-001-3018
16	Spring L:210mm	1	6600-001-3062
17	Plastic bush	1	4510-723-2600
18	Hard. dowel pin 16mm	1	6600-001-3020
19	Bearing 14x16x15	1	6600-001-3021
20	Star-knob nut M6	1	6600-001-3022
21	Pulley attachment	1	6600-001-3009
22a	Pulley	1	6600-001-3023
22b	Chip scraper (M6-LBI)	1	6600-001-3010
22c	Pulley cover	1	6600-001-3049
22d	Distance sleeve 10x8	1	4510-723-2511

23	Feed line D6 15.5m	1	6600-001-3063
24	Press screw M16/M6	1	6600-001-3025
25	Cable clamp D:10	2	6600-001-3064
26	Distance collar	1	6600-001-3011
27	Electric box		
	SE 380V+cable	1	6600-001-3027
27	Electric box		
	NO 230V+cable	1	6600-001-3050
28	Cable clamp D:13	1	6600-000-3026

*Washers are to be placed under every nut and screw when such instructions are given.*

S1	Screw M6 16	15	9007-319-1290
S2	Screw M6 20	7	9008-319-1349
S3	Screw M6 25		
	long thread	1	9008-319-4351
S4	Screw M6 30	4	9008-319-1352
S5	Screw M6 40		
	long thread	1	9008-319-1419
S6	Allen screw M6x55	1	9045-319-1710
S7	Screw M8x20	2	9007-319-1820
W1	Washer 12x6 (M6)	28	9291-021-0140
W2	Washer 18x6 (M6)	2	9291-021-0145
W3	Washer 16x8 (M8)	5	9291-021-0180
W4	Serrated lock washer M6	2	9999-000-6068
W5	Serrated lock washer M8	2	9999-000-6043
N1	Lock nut M6	8	9214-320-0900
N2	Lock nut M8	3	9214-320-1100
N3	Nut M6	1	9210-260-0900



## Assembly:

1. Make sure that the sawmill stands firmly and is fastened to the ground, and that the guide rail is straight. If the sawmill does not stand on a firm ground (also read the M7 manual), dig a sturdy wooden beam into the ground, or make an equivalent stable base, for the foot of the feeding machine.

2. Fit the feeding machine into the front end of the guide rail and fasten it with a screw in the hole on the side of the guide rail (1 S1, 1 W2).

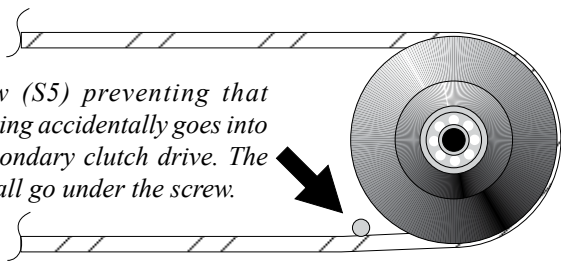
3. Mount the cutting unit on the loading ramp and push it onto the guide rail of the sawmill. Attach the elk (6) and the line tensioner (7) onto the cutting unit according to fig. on p12. Replace two of the screws holding the aluminium slide profiles with M6x20 in order to attach the elk. When exchanging the screws, be careful that the nuts lying in the aluminium slide profile do not disappear sideways.

4. Thread the feed line through the plastic bush (17), the spring (16) and the washer (W3) and tie a knot according to fig. to the right. Unscrew the M6-screw (S3) and pull the line through the line tensioner starting from the front hole, and continue passing it through until you can see the plastic bearing coming out through the rear hole. Screw the M6-screw back again.

5. Attach the pulley (21, 22) to the rear of the guide rail flange.

6. Pass the feed line from the line tensioner over and around the secondary clutch disc\*, around the pulley at the other end of the guide rail, and fasten the line loosely in the line tensioner. The line is fastened by letting it go around the screw (S3) and out through the front hole again. Fix the line with the lock nut (N1).

*\*Screw (S5) preventing that something accidentally goes into the secondary clutch drive. The line shall go under the screw.*



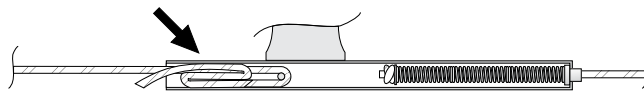
7. Assemble the leg (2) and the foot (3) of the feeding machine.

8. Use the adjusting screw (S5) and press the foot down until it weighs on the wooden beam, and until the guide rail is not affected by the weight of the feeding machine.

9. Tension the line by loosening the lock nut and pulling the loose end of the string until the spring is completely pressed down. The cutting unit shall be positioned as close to the feeding machine as possible and the power adjusting lever shall be in the operating mode in order to prevent the secondary clutch disc from rotating as the line is being tensioned. Screw the lock nut tight while the line is still tensioned.

**Useful tip:** Mark the line clearly with a felt-tip pen 150 mm from the knot before pulling the spring through the line tensioner. The line is properly tensioned when the mark is visible. Coil the line round a piece of wood (ca 25x25x120mm) in order to get a better hold of the line when tensioning it.

10. Coil up the remaining line and push it into the front hole of the line tensioner. If the line is too long, cut it so that you have ca 0.4 m extra line. Burn the cut end of the line in order to prevent it from fraying



11. Connect the cutting unit to the electric cable. Make sure that the cutting unit goes in the right direction. The feeding machine shall rotate clockwise, seen from the power adjusting lever, when only the start button of the feeding machine (B4) is pushed down. If the feeding machine rotates the wrong way, change the direction by rotating the white plastic disc in the plug of the feeding machine (C5) with a flat screwdriver. If the cutting unit still is rotating the wrong way, change the position of the phases in the circuit enclosure of the cutting unit's motor (see p10).

⚠ Press one start button at a time. If the green button and the white button (B2+B4) are pressed down at the same time, the feeding machine will short-circuit and your fuse will blow.

### Connection of E6000 with forced cooling:

A separate 230 V earth cable shall be connected to the forced cooling. It shall be connected to the socket (B6) on the side of the control panel.

⚠ Do not use the socket (B6) for anything but the forced cooling on E 6000. Too high output level on one phase in this socket will impose more load on the two other phases which can lead to an increased heat generation in the motors and a risk that your fuse blows.

## Adjustment of the neutral mode of the feeding:

**⚠ Risk of serious injury.**

**❗ The cutting unit shall not move when the feeding motor is running and the power adjusting lever is in neutral mode (in its lowest position).**

Follow the instruction below in order to adjust the neutral mode of the feeding:

1. Push the cutting unit to the middle of the guide rail.
2. Pull the power adjusting lever (5) to its lowest position, the neutral mode.
3. Dismount the lever by loosening the screw in the centre of the lever.
4. Loosen the press screw (24) until the friction clutch is completely free from pressure.
5. Start the feeding motor in the reverse mode by pressing only the start button of the feeding machine (B4).
6. Screw in the press screw (24) by hand until the cutting unit starts to back slowly, then you loosen the screw (turn it a few degrees) until the cutting unit stops again.
7. Turn off the feeding motor and remount the power adjusting lever so that it is in its lowest position.
8. Tighten the screw in the centre of the lever.
9. After the adjustment is performed: Check that the cutting unit does not move when the feeding motor is running and the power adjusting lever is in neutral mode.

## Application:

Read also the manuals and safety rules of the cutting unit and the sawmill before using the machinery. Use the stipulated protective equipment and follow all the safety rules.

### Forward processing:

Disengage the feeding, and pull the cutting unit back to the starting position.

Place the material that is to be sawn or planed on the sawmill in accordance with the manual of the Logosol Sawmill. Use the log grip at the end of the log and brake it with its locking handle.

Run necessary checks before connecting the feeding machine to an electricity supply, and before starting it.

Start the motor of the cutting unit and then the motor of the feeding machine (see p.8, control panel)

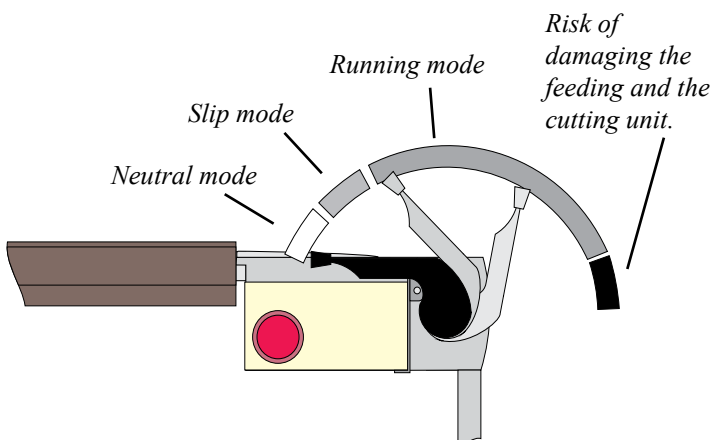
Carefully lift the power adjusting lever to the slip mode, and the cutting unit will begin moving forward.

When the cutting unit starts to process the material you slowly lift the power adjusting lever to running mode until optimum feeding pressure is attained.

Lower the feeding pressure (pull the lever to slip mode) when the cutting unit starts approaching the end of the material.

When the cutting unit has sawn through the material: immediately let go of the enabling push button and disengage the feeding at the same time (neutral mode). This should preferably be performed before the guide bar has completely passed the end of the log if a sawing unit is used.

**❗ Risk of the motors overheating. Avoid using the machinery in direct sunlight if temperatures are over 20 degrees (68°F).**



## Optimum feeding pressure:

The clutch shall always slip (except when reversing the feeding). The primary clutch disc (11) shall rotate faster than the secondary clutch disc (13). This can be seen through the grating on the upper side of the loading ramp. If both discs rotate at the same speed when you are sawing or milling, the clutch is tensioned too much which can lead to the bearing and the gear being damaged, or the line is too loosely tensioned and is slipping in the pulley.

If the line slackens and hangs down behind the cutting unit, the line is too loosely tensioned, or the feeding pressure is too high.

Listen to the sounds of the cutting unit in order to prevent it from being overstrained.

- ❗ If the cutting unit or the feeding machine stops - immediately let go of the enabling push button. The coils of the electric motors are damaged already after a couple of seconds.
- ❗ Switch off the current at regular intervals, and carefully touch the motor of the feeding machine to see whether it is too hot. You should be able to hold your hand on the motor without burning yourself.

## Back feeding:

1. Start the feeding machine only (B4).
2. Increase the feeding pressure carefully until the cutting unit reaches maximum backward speed.

If the sawing unit is used: Let the sawn board (max. 2") remain lying on the sawmill. When the guide bar reaches the middle of the board, the board will be escorted by the bar which pushes it all the way on to the operator.

### ⚠ Risk of crushing injuries.

- ❗ Do not pull the cutting unit so far that it goes past the end of the guide rail.
3. Lower the feeding pressure so that the cutting unit reduces the speed ca 1 m from the end of the guide rail, let go of the enabling push button and disengage the feeding at least 0.2 m from the end of the guide rail. Pull the cutting unit by hand the last 0.2 m if you need to use maximum sawing length.

## Using Logosol's Log House Moulder and the feeding machine:

**When the log house moulder is connected to the feeding machine, its motor brake cannot be used.**

### ⚠ Risk of serious injury

- ❗ Tension the belt on the log house moulder so tight that the cutter stops within 9 sec. after the current is switched off (even when the belt is warmed up).
- ❗ Always wait 15 seconds before the cover of the log house moulder is opened, in order to be sure that the cutter has stopped.

For the log house moulder a cable with an additional 6-pole plug is used, which is fitted over the cover of the log house moulder. The cover cannot be opened before the plug is taken apart, which prevents unintentional starts of the machine when mounting the knives.

**Conversion kit** for converting a manually fed log house moulder to an automatically fed, can be ordered from Logosol.

Besides the cable a special elk is used, and the mount to which the electric box is attached on the manually fed variant, is replaced by one with a hole for the additional 6-pole plug.



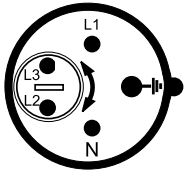
*The log house moulder's cable with an additional plug as a safety breaker positioned over the cover.*

The Norwegian variant (3x220V) do not have N but is otherwise coupled the same way. The 230V electricity supply is connected according to the inset.

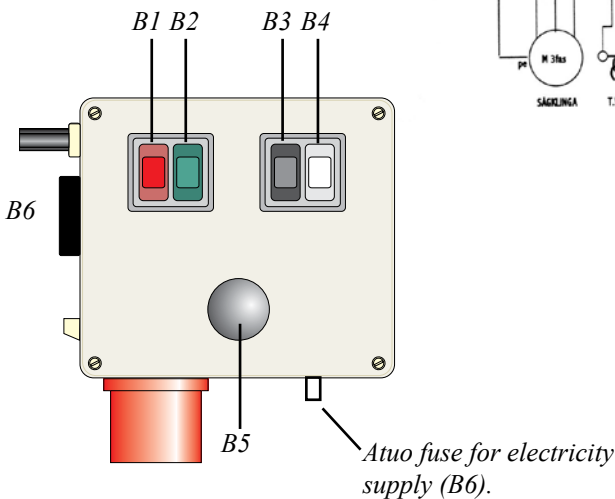
## Circuit diagram

⚠ Risk of electric shock.

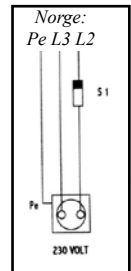
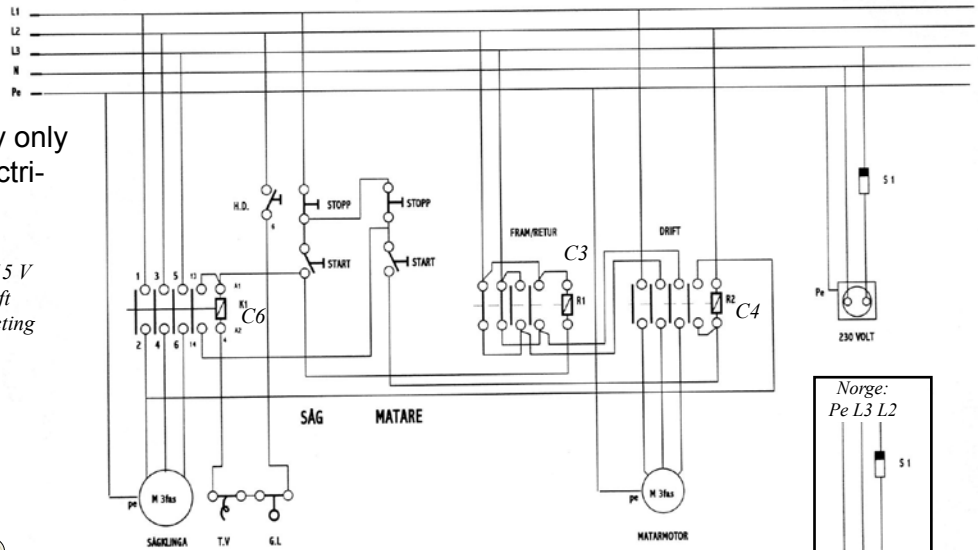
The electrical equipment may only be opened by a qualified electrician.



220/380 V to 240/415 V  
The picture to the left concerns the connecting plug of the electric feedintg.



Atuo fuse for electricity supply (B6).



## Control panel

- B1 Red: Cutting unit Stop
- B2 Green: Cutting unit Start
- B3 Black: Feeding Stop
- B4 White: Feeding Start
- B5 Black round: Enabling push button
- B6 230 V Max. 300W. Only for cooling blower.

The power adjusting lever shall always be in neutral mode before any motor is started. To saw/mill with forward feeding: Hold down "B5" and then press B2, and then B4. To reverse: Only press B4.

## List of electrical components: 400V.

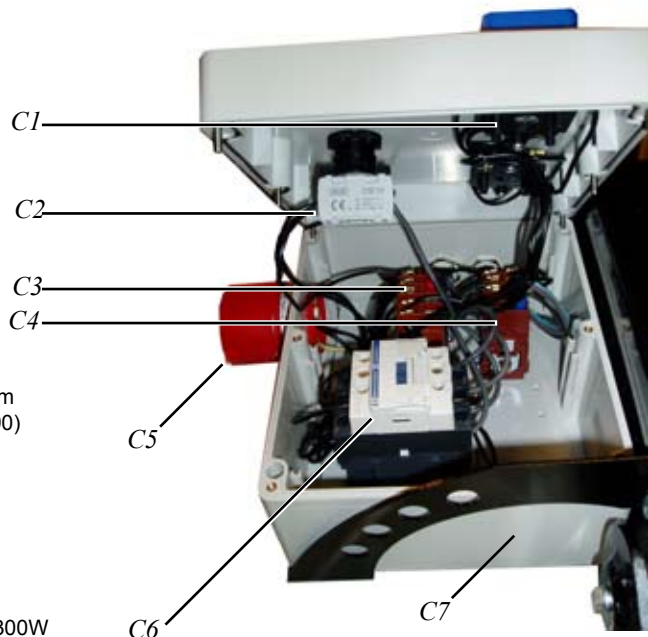
(The components are numbered. Always check that the numbers are right when changing them.)

Pos: Description:

- C1 Red/green contact  
Black/white contact
- C2 Enabling push button C23 AD 03 23E10
- C3 Relay 400V-305402 / Norway: 305232
- C4 Contactor 400V-305400 / Norway: 305230
- C5 Plug, Intake with phase reverser
- C6 Contactor 400V-LC1 D12 V7 / Norway: LC1 D18 P7
- C7 Electric box 204123

## Technical data: E37 Friction

Feeding motor	DPIG63C-2PC 0,37 kW / 2800 rpm
Transmission	Worm gear I=30 (F.IEC 63 B14C90)
Feeding speed	0 m/s - 0,48 m/s
Feeding pressure	0 N - ca 500 N
Feeding for cutting unit:	5 kW, anslutning för värmeskydd.
Electricity supply	50 Hz 400 V 16 A
Coupled enclosure degree of protection	IP 54
Plug	CEE system16A, fasvändare.
Socket 230V	3A automatsäkr. Max effektuttag 300W



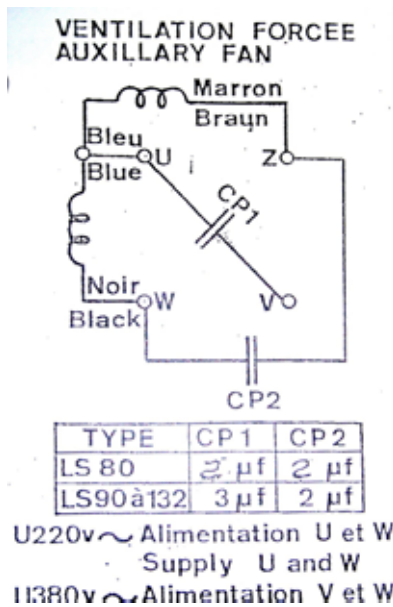
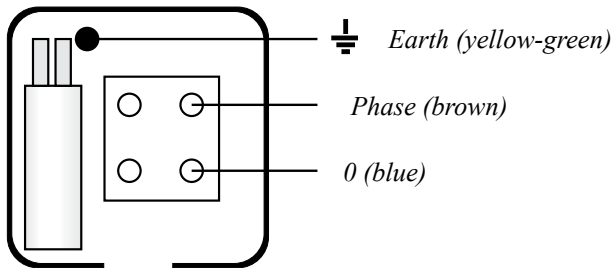
⚠ Risk of electric shock. The electrical equipment may only be opened by a qualified electrician.  
Always check that the current is switched off before the equipment is opened.

### Forced cooling

The blower is to be connected to a regular 240 V earth cable that fits the black socket on the feeding. The cable to the blower shall be relieved by a cable clamp on the motor and be hanged on the line tensioner (7) to prevent it from getting caught in the cranks of the sawmill. The earth cable shall be 7 cm longer than phase and neutral in the circuit enclosure. The earth screw is in the bottom of the circuit enclosure.

#### Connection of black forced cooling (LS).

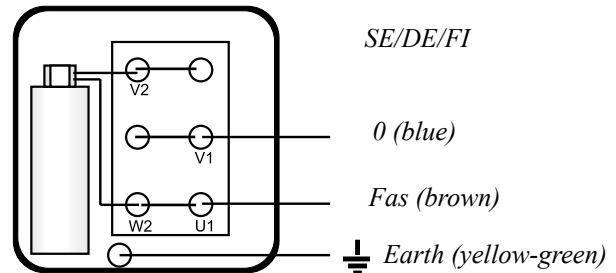
SE/DE/FI



The phase is coupled to the same connection as the blue cable, and the neutral to the same connection as the black cable in the circuit enclosure of the cooling blower.

#### Connection of grey forced cooling (ABB).

SE/DE/FI



❗ The wiring diagram is moulded in the cover lid of the circuit enclosure of the blower. Primarily this moulded-in diagram shall be used.

⚠ Risk of electric shock. The electrical equipment may only be opened by a qualified electrician. Always check that the current is switched off before the equipment is opened.

## Connection of cutting unit

❗ The order of the phases (1, 2, 3) may vary. Normally, the phases shall be connected in the order that they appear below. We have, however, seen that the order of the phases can vary between the motors, which affects the direction of rotation.

3, 2 and 1 are phases and are connected in the order that they appear in the picture. (The reason for the internal order of the phases is that with this order it is more likely that the cutting unit goes in the right direction in relation to the feeding motor.)

Yellow/Green is connected to the earth screw in the bottom of the circuit enclosure.

Cable 5 and 6 are together the holding circuit of the contactor and are connected in series with the overheating protection of the motor (the thin cables).

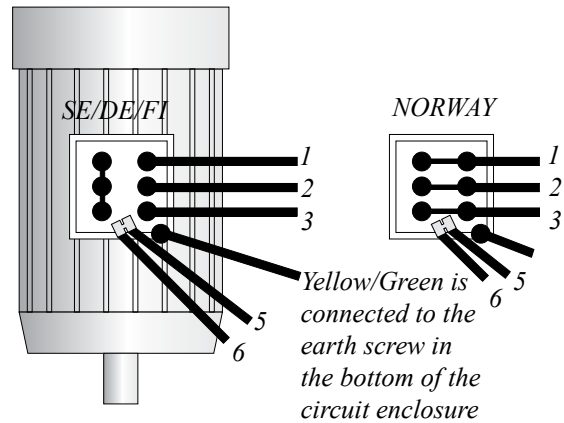
**Check the direction of rotation.** When only the white button (B4) is pressed down, the feeding is to rotate clockwise, seen from the power adjusting lever. (The feeding will then rotate anticlockwise).

The upper line shall go in the same direction as the cutting unit when the cutting unit and the feeding machine are running at the same time. (The feeding will then rotate anticlockwise).

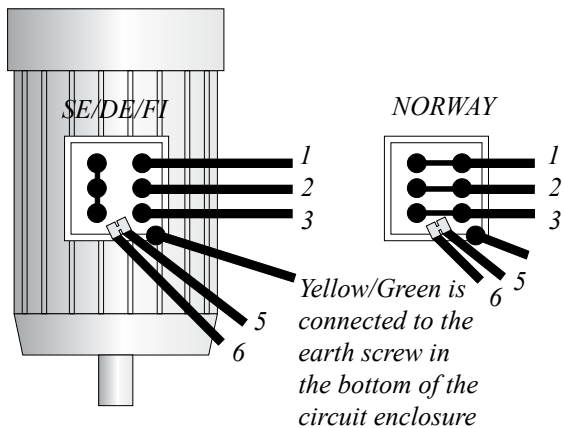
If both the feeding and the cutting unit rotate in the wrong direction: reverse the phases with the phase reverser (C5).

❗ If only one of the motors goes in the right direction: Change the position of cable no. 1 and 3 in the circuit enclosure of the cutting unit; then change the direction of rotation with the phase reverser, if necessary (must only be performed by a qualified electrician).

## Connection E3000/ E4000/E5000/E6000

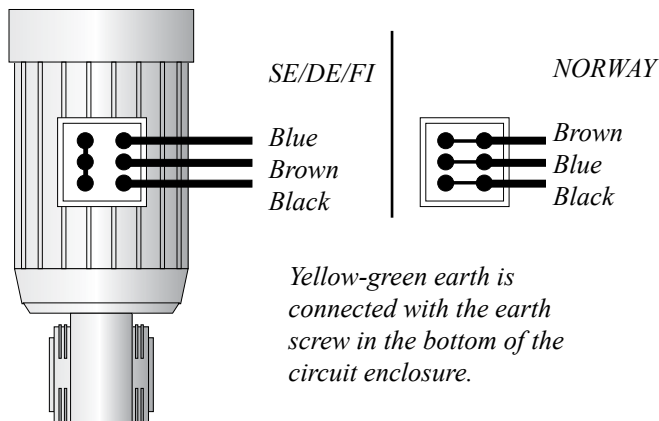


## Connection Log House Moulder



⚠ Risk of electric shock. The electrical equipment may only be opened by a qualified electrician. Always check that the current is switched off before the equipment is opened.

### Connection Feeding Motor



⚠ **Risk of electric shock if any of the electric cables comes into contact with the feeding line.**

❗ The rubber cover on the cable can quickly be worn off if the electric cable comes into contact with the feeding line. **Ensure that none of the cables runs the risk of coming into contact with the feeding line.**

❗ For the short cable that is connected to the cutting unit, a male contact and a bulkhead housing with lever is used. The female contact is connected to the long cable on the feeding machine.

❗ Lubricate the rubber gasket of the 6-pole plug with silicone, and replace it if it breaks.

### 6-pole plug

The female contact shall be connected to the long feeding cable, and the male contact to the short cable on the sawing unit. In the 6-pole plug cable no. 1-3, which are the phases, shall always be connected in the hole with the same number. Earth is connected with the earth screw.

The two remaining cables are connected in the holes closest to their respective numbers:

Normal case:

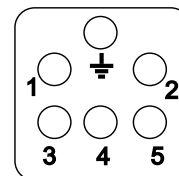
Cable 5 in hole 5

Cable 6 in hole 4

Cable no. 4 can be found on older models and will then replace no. 5 or 6.

Normally, cable no. 4 is cut away or insulated.

*Sketch seen from the back of the plug.*



*The 6-pole plug is available both in aluminium and plastic. Both variants fit together.*

⚠ Risk of electric shock. The electrical equipment may only be opened by a qualified electrician. Always check that the current is switched off before the equipment is opened.



Put the elk in the rectangular hole in the line tensioner. Put together the 6-pole plug with the lever and then tighten the star nob nut underneath the line tensioner.

Note that the cables for the electric saw and the log house moulder differs from each other. The cable for the log house moulder has, for safety reasons, an additional plug.

❗ The feeding can behave strangely during the first running hours. The line has to be tensioned a couple of times before it becomes really extended, and it takes a while for the friction disc to be worn into the discs before full feeding pressure is attained. The feeding power may also pulsate a little, but this will decline in the course of time.

❗ Normally, the power adjusting lever has to be adjusted a couple of times during the first working day.

## Maintenance

❗ Regularly check that there are no sawdust building up in the pulley or the clutch disc. Be extra attentive when it rains, or when extremely wet or resinous timber is sawn. If this is overlooked there is risk that the line wriggles off. Clean the pulleys with a thin piece of rigid plastic, or something similar. Do not use tools of steel.

### Lubrication points:

Press grease into the ball bearing of the clutch. Remove the press screw on the lever side in order to get at the bearing in the secondary clutch disc. Check that the ball bearings always are well greased. Also put grease on the spindle of the clutch (11), the sides of the worm gear, and the ball bearing of the pulley (22) to protect them from corrosion. Use a thin brush.

The grease should comply with standard SS 155434/SS 155470 and be at least 45% degradable. Example: SKF LGGB 2, Agrol Universal Grease EP-2 Bio, Cargo Bio Natur 2, GreaseWay Bio Lix 400.

Regularly lubricate the friction disc on both sides with a motor oil of the type SAE 10W-40, or the like, to prevent rust, and to make the feeding run more evenly. This can be achieved by loosening the press screw approx. 5 mm (0.2") and parting the clutch.

Lubricate the square-shaped rubber gasket of the 6-pole plug with a silicone lubricant. This should be done daily if several machines are used on the same feeding, with an increased wear and tear on the gasket as a result. Check that the gasket is not worn out and replace it if it breaks (art. no: 9999P000P9999).

❗ **Important:** After approx. 100 hours of operation, the clutch needs to be disassembled to be cleaned. This must also be performed if the equipment has been stored in a facility that is not heated, due to the risk of corrosion.

If you do not do this, the feeding will start to feed jerkily. Perform the following steps:

1. Completely unscrew the press screw, and then loosen the four M6 screws which hold the gear.

2. Keep in mind that the secondary clutch disc is loose when you lift out the motor and the gear. Make sure that it does not fall down and get damaged. Best is if you have somebody to help you hold the motor while it is lifted out.

3. Polish both clutch discs' wearing surfaces with fine sandpaper or steel wool. Ruffle the friction disc with a coarser sandpaper. Lubricate the friction disc on both sides with motor oil.

❗ **When re-assembling:** Make sure that you have two washers on each screw that holds the gear. Do not tighten the screws too much; the thread in the aluminium casting is not so durable.

### Additionally:

Cover the feeding machine and the cutting unit when you do not use the equipment.

Long-term storage: Clean the feeding machine and lubricate the ball bearings. Store the feeding machine in a heated facility to prevent condensation due to variations in temperature.

When removing the paint on the top side of the loading ramp: Rub off rust and paint flakes, wipe off with ethyl alcohol, and paint with black paint in order to keep the feeding machine nice and clean.

Make sure the transfer on the top side of the loading ramp is intact and legible. If not, order a new transfer.

## Troubleshooting:

**Always stop the machine if you suspect that something is wrong.**

### Check:

1. Line tension
2. The groove in the clutch disc
3. The dowel pins in the spindle
4. The orientation of the gear relative to the press screw
5. Also check the cutting unit and the cutting equipment. Deficient feeding may be due to the equipment not cutting as it is supposed to.

### The feeding machine does not pull:

- The feed line is not tensioned enough; the spring should be completely pressed down.
- Sawdust has get caught in the line groove of the clutch disc.
- The primary clutch disc has come loose from the spindle because the dowel pin (15) has fallen out.

### The feeding machine pulls jerkily:

- If the feeding machine has worked well, and after some time starts to be hypersensitive to the setting of the adjusting lever, and pulls jerkily: Clean the friction disc and the friction surfaces of the clutch discs (see **Maintenance** on p.13).

**The feeding pressure pulsates at the same pace as the rotation of the secondary clutch disc:**

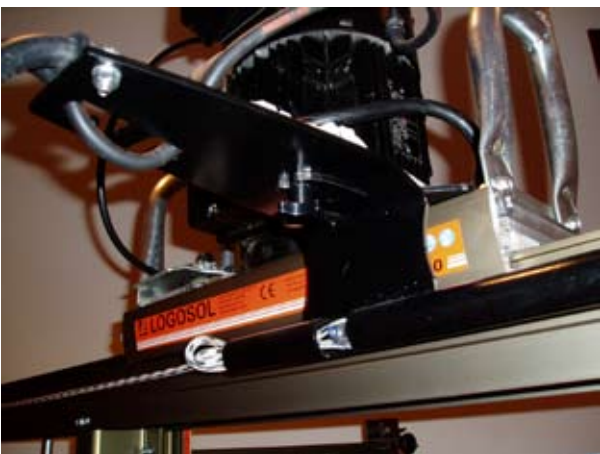
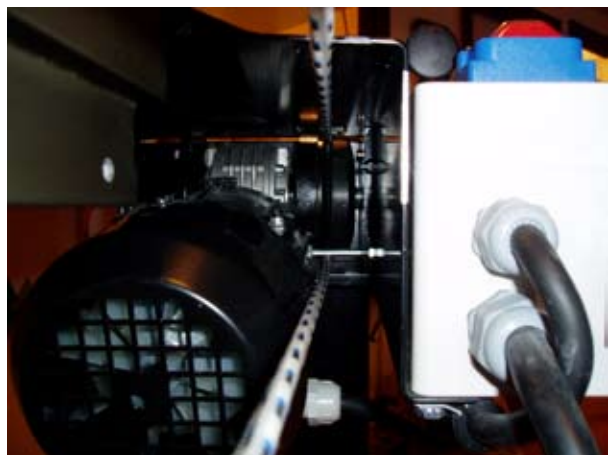
- The feeding is new and has to be run in.
- The dowel pin (15) which locks the primary clutch disc is about to fall out. It should go straight through the spindle and give support on both sides of the primary disc.
- The orientation of the gear is not level with the press screw and you have to put thin strips of metal sheeting under the gear.

In this case, perform following steps:

1. Loosen the line tension.
2. Unscrew the press screw (24) completely.
3. Press the secondary clutch disc against the primary clutch disc and look through the threaded hole in the press screw. The ball bearing of the secondary clutch disc should be centred. If that is not the case:
4. Loosen the screws (4xS4) a couple of turns, and place thin strips of metal sheeting (e.g. thin strips of brass or strips from an aluminium soda can) between the gear fitting under the loading ramp (1) and the distance collar (26) until the ball bearing of the secondary clutch disc is centred to the threaded hole in the press screw when the screws (4xS4) are tightened.

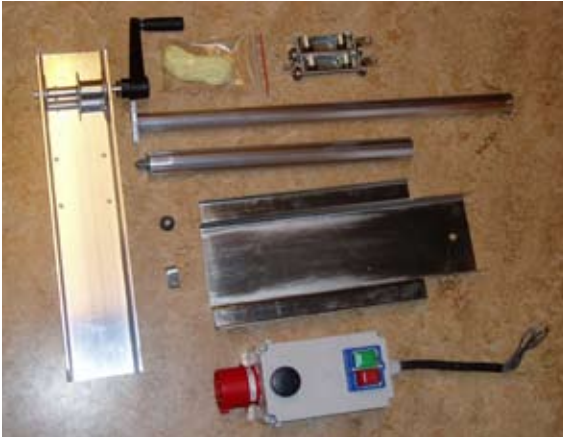
⚠ Do not tighten the screws too much; the thread in the aluminium casting is not so durable.

**Contact Logosol for counselling if you cannot fix the fault yourself.**



## Assembly description

⚠ Risk of electric shock. The electrical equipment may only be opened by a qualified electrician. Always check that the current is switched off before the equipment is opened.



Electric box E4-5-6000	9999-000-6009
Pulley	9999-000-6048
Line steering	9999-000-6047
Feeding line	9999-000-6010
Control arm C	9999-000-6110
Loading ramp	9999-000-0920
Support leg	4510-720-6800
Wheel kit	9999-000-0496

These components are dismantled from E5000 Comfort when a Friction feeding machine is used. The wheel kit can be left on to decrease the wear and tear on the plastic glide profiles on the electric saw, but the saw will run more uniformly if it is taken away.

### Important operations when mounting the electric feeding E37

Mount the support for the electric box (4).

Pass the dowel pin (15) through the spindle. Put grease on the spindle of the primary clutch disc, and pass it through the gear. Ensure that no grease gets on the friction surfaces.

Make sure that the ball bearing (14) has the bevelling turned outwards, i.e. the thin flange of the inner ring is turned away from the gear. Put some grease on the spindle before pressing on the ball bearing.

Place the motor on the blower cover, close to the edge of your worktable, with the circuit enclosure turned away from the table edge.

Position the friction disc and the secondary clutch disc (12, 13).

Place the distance collar (26) on the flange of the gear and lower the loading ramp (1) over the motor.

Attach the gear with *one* screw (M6x30 with double washers).

Put grease on the point of the press screw and tighten it firmly in the bearing of the secondary clutch disc.

Attach the gear with the remaining 3 M6x30 with double washers. Do not screw them unnecessarily tight. Unscrew the press screw and make sure that the ball bearing of the secondary clutch disc is centred to the threaded hole in the press screw. If that is not the case: Place thin strips of metal sheeting between the gear fitting under the loading ramp and the distance collar.

Fit the safety Allen screw (S6) in front of the the clutch disc.

Attach the power adjusting lever with a serrated lock washer.

### Check the following after installation:

- ❗ The secondary clutch disc shall be able to rotate effortlessly when the lever is in its lowest position, and shall slow down when the lever is pulled up.
- ❗ Check that the safety Allen screw (S6) is screwed in.
- ❗ Check that no cables can come into contact with the feeding line.
- ❗ The sticker shall be undamaged and placed in front of the electric box.
- ❗ The manual shall be easily accessible to the operator.
- ❗ Check that all screws are tightened.









## Declaration of Conformity

The manufacturer, Logosol AB, Industrigatan 13, S-871 53 Härnösand, Sweden, tel. +46 611 18285, hereby declares that E37 Friction, with art. no. 6600-000-3015, is manufactured in accordance with:

Machinery Directive 98/37/EG, EMCdirective 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 61000-6-1, -3.

The feeding machines Logosol E37 Friction are intended to be used together with the Logosol sawmill combined with Logosol's products E3000 / E4000 / E5000 / E8000 / Log House Moulder 3kW. E37 Friction may not be taken into use before the Logosol sawmill and the machinery conform to the EU machine directive, which is the case if all the safety rules and instructions that come with the respective included components are followed.

Härnösand 2008-02-27

Bengt-Olov Byström, MD



[www.logosol.se](http://www.logosol.se)