

# LOGOSOL USER MANUAL

TRANSLATION OF USER MANUAL IN ORIGINAL FORMAT.  
ARTICLE NO: 0458-395-2605



## LOGOSOL SH410



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.

## Thanks for choosing a Logosol machine!

Welcome! We are very pleased that you have demonstrated your confidence in us by purchasing this machine and we will do our utmost to meet your expectations.

Logosol has been manufacturing wood processing machinery since 1988, and in that time we have supplied approximately 30,000 machines to satisfied customers all around the world.

We are concerned with your safety and ensuring that you achieve the best possible results with your planer. We therefore recommend that you take the time to carefully read this manual, from cover to cover in peace and quiet, before you begin sawing. Remember that the machine itself is just a part of the value of the product. Much of the value is also to be found in the expertise we pass on to you in the user manuals. It would be a pity if that were not utilised.

We hope you get a lot of satisfaction from the use of your new machine.



**Bengt-Olov Byström**

Founder and chairman,  
Logosol in Härnösand, Sweden



LOGOSOL continuously develops its products. For this reason, we must reserve the right to modify the configuration and design of our products.

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Document: Logosol SH410 Manual

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## Table of contents

Safety rules	4
Safe distances	5
Required tools	6
Description of machine	6
Shavings handling	7
Summary	8
Electrical system	10
Wiring diagram	11
Cuts using planing knives, moulding knives and circular sawblade	12
Planing knives	13
Moulding knives	14
Replacing circular sawblade	14
Maintenance	15
Feed	16
Installing feed tables	17
Four functions	20
Planing tips	20
Good to know	21
Safety regulations for moulding knives	23
Starter package SH410: moulding knives & examples of combinations	24
Technical data	27
EC DECLARATION	31

## SAFETY INSTRUCTIONS

### KEY TO SYMBOLS



For your own safety, read through the user manual carefully and do not start the machine before you have understood everything. Do not let persons who have not read the manual, use the machine.



Risk of cut injuries. Use protective gloves when you handle knives and circular sawblades. It is particularly important to wear gloves when opening or tightening the knives' locking screws (the tool can easily slip).



Use approved ear protectors. Hearing can be damaged by just short exposures to high frequency noise. Use approved protective eyewear. Splinters and wood pieces can be thrown out with great force during processing.



Warning for cutting tools. Never place your hands or tools above or below the planing table or in the the shavings ejector when in operation.



This symbol means 'WARNING!'. Pay particular attention where this symbol appears in the manual text.



A warning comes after this symbol. Pay particular attention where this symbol appears in the manual text.



**WARNING!** The planer can cause serious body injuries where incorrectly operated. Make sure you are therefore fully concentrated on the operation of the unit and are very careful when you use the machine.

**Never stand in the path of a board.** The board can be thrown backwards and out of the machine. Branches, splinters or pieces of metal can also be thrown out at great speed. Always stand beside the in-feed table.

**Only one work piece at a time is to be fed through the machine.**

Make sure that the machine is set so that the feeder rollers (5\*) grip the workpiece. Do not feed in work-

pieces which are so conical that there is a risk that the feeder rollers can lose their grip. Never place your hands or tools above or below the table when the machine is running.

Before the machine is started:

- Check that the cutter can rotate freely and that no tools or loose components have been left in the machine.
- Check that the cover is properly closed and that the cover's two locking screws have been tightened
- Check that all knobs, bolts, nuts, stops, shavings guides, cutters, knives, circular sawblade protective covers, in-feed and out-feed tables etc. are properly tightened, that the shavings hoses are fitted and that the chip extractor is switched on.

**'Shut off the power'** means that the cable with the CCE contact, which supplies the machine with power, is disconnected from the machine and is placed in such a way that no unauthorised persons can re-connect it. The cable is to also be placed so that there is no risk that it can be treaded upon or tripped over.

Shut off the power by pulling out the contact and waiting until the cutter has stopped:

- before you open the cover to replace knives, replace circular sawblade,
- clean or carry out other work on the unit, above or below the surface of the table.
- before you replace belts or carry out other service or cleaning work.
- before the machine is moved.
- if the machine is to be left unattended.

The shavings hose and chip extractor are to be connected to the shavings ducts and are to be securely fastened such as by using hose clips.

Do not wear loosely hanging clothes or anything else which can get caught up in the machine's moving parts. Fasten long hair up in a secure (and nice) way.

Never use the machine under poor visibility conditions. Always work under good lighting. Do not use the machine if you are under the influence of alcohol or other narcotics or medicines.

Keep the workplace clean and tidy. Do not place anything on the ground which you can later trip over.

Never place your hands or any tools on the planing table when the machine is running.

Do not climb onto the machine.

Do not tread on the machine's electric cable.

Make sure that the machine is positioned in such a way that access to the emergency stop is not blocked.

For greatest electrical safety, use a **residual current device**.

The machine is not to be modified and is not to be added to. Only use original parts supplied by Logosol which are designed for the purpose. **After service, the machine should be in its original condition.**

The machine's warning markings are there for your own and other's safety. Damaged or illegible labels are to be replaced.

Blunt circular sawblades or knives increase the risk of accidents.



**WARNING!** Risk of rebound.



The minimum permitted workpiece length: 300 mm. Make sure that you are familiar with all functions and settings options before you begin using the machine.

**External environment:** The motors and the electrical system can be damaged if the machine is stored or is used at temperatures below zero degrees C or if it is stored in damp unheated environments. Water can condense and collect in the motors and the electrical system's housing, i.e. the control panel (this applies to most sealed motors). There is a drain plug on each motor which can be removed to check that the motor is dry inside. Also check that water has not collected in the control panel. This check should be carried out regularly where there is a risk of condensation.



**WARNING!** The circular sawblade has only two positions on the blade shaft. The locking screw is to always be fully tightened in one of the shaft's two countersinks.



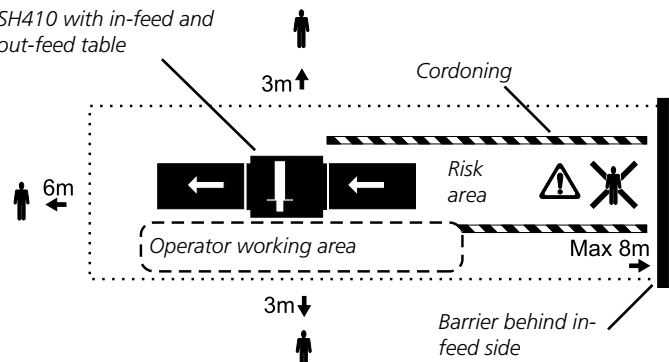
**WARNING!** The circular sawblade is to only be used on workpieces of thicknesses of less than 77 mm.

## SAFE DISTANCES



No-one other than the operator is to be present within 3 metres of the sides of the machine or 6 m from the out-feed side when in operation. There is to be a wall or other barrier on the in-feed side, which stops any thrown-out materials. The wall or barrier is to be maximum 8m from the machine, but ideally closer if short work pieces are processed. Set up a form of cordoning which prevents persons unintentionally entering the risk area between the machine and the barrier on the in-feed side.

SH410 with in-feed and out-feed table



## REQUIRED TOOLS

- 10 mm spanner
- Allen key 3 mm
- Allen key 4 mm
- Allen key 6 mm
- Ring spanner 13 mm
- Ring spanner 10 mm
- Adjustable spanner
- Setting block for planing knives
- Callipers
- Guide rail 30-50 cm



**TIP!** Make a tool board for the tools you need and set it up alongside the planer, so that you can easily see it. Look at tool board before you start the machine to check whether any tools are missing. They could have been left in the machine!

## DESCRIPTION OF MACHINE

The SH410 Solo planer/moulder is a wood dimensioning machine which can process two sides of a workpiece or, in some cases, three sides.

The machine is designed around a solid rack and a plane table of steel plate. The table is suspended in the rack by twin parallel stays, which allow the table to be safely raised and lowered using a lever.

The workpiece is fed horizontally onto the plane table and through the machine by two feeder rollers. The feeder rollers are spring mounted and fitted to the rack. The workpiece is steered laterally by an adjustable stop and a sprung press roller.

Pieces are processed by a cutter and a circular sawblade. The cutter and the circular sawblade counter rotate and are driven by a powerful electric motor which transfers drive by a poly-v-belt transmission.

The cutter and feeder rollers are covered by a retractable protective hood. A safety switch prevents the machine from being started if the hood is not locked.

The machine is fitted with throw-out protection on the in-feed side.

### Siting



Check the Solo planer/moulder on receipt. Any transport damage is to be immediately reported to the transport company.

Most of the planer is rust protected and therefore can withstand being placed in cold spaces. Additional maintenance in the form of the lubrication of the components without rust protection is however required. Refer to the 'Maintenance' and 'lubrication points' sections.

- There is to be an open space below the machine, so that shavings cannot collect around the motor. Also screw the planer into place through the holes in the rack's underside.
- Make sure that there is sufficient unrestricted space for the longest boards which are to be planed on the in-feed and out-feed side and that there is space for service and wood storage.
- Hang planer electrical cables from the roof or protect them in other ways. Never tread on the cable. The machine should be connected via a residual current device.
- Make sure that there is very good lighting. There is to be good general lighting. Also set up a powerful lamp right above the machine. Make sure that there is no risk of being blinded by the light.

## In-feed and out-feed table

Logosol can supply in-feed and out-feed tables. You can also build your own in-feed and out-feed table yourself. It is very important that the in-feed table, planer table and out-feed table are precisely in-line, so that the cutter does not leave marks on the ends of the workpieces.

## SHAVINGS HANDLING

The Solo planer/moulder is to be connected to a chip extractor which has a capacity of minimum 1000 m<sup>3</sup>/h. Logosol has a very suitable 240V 2-phase, 1.5kW fan.

The fire risk and dust emissions (releases) associated with shavings collection must be taken into consideration.



**WARNING!** Fire risk and dust emissions associated with shavings handling.



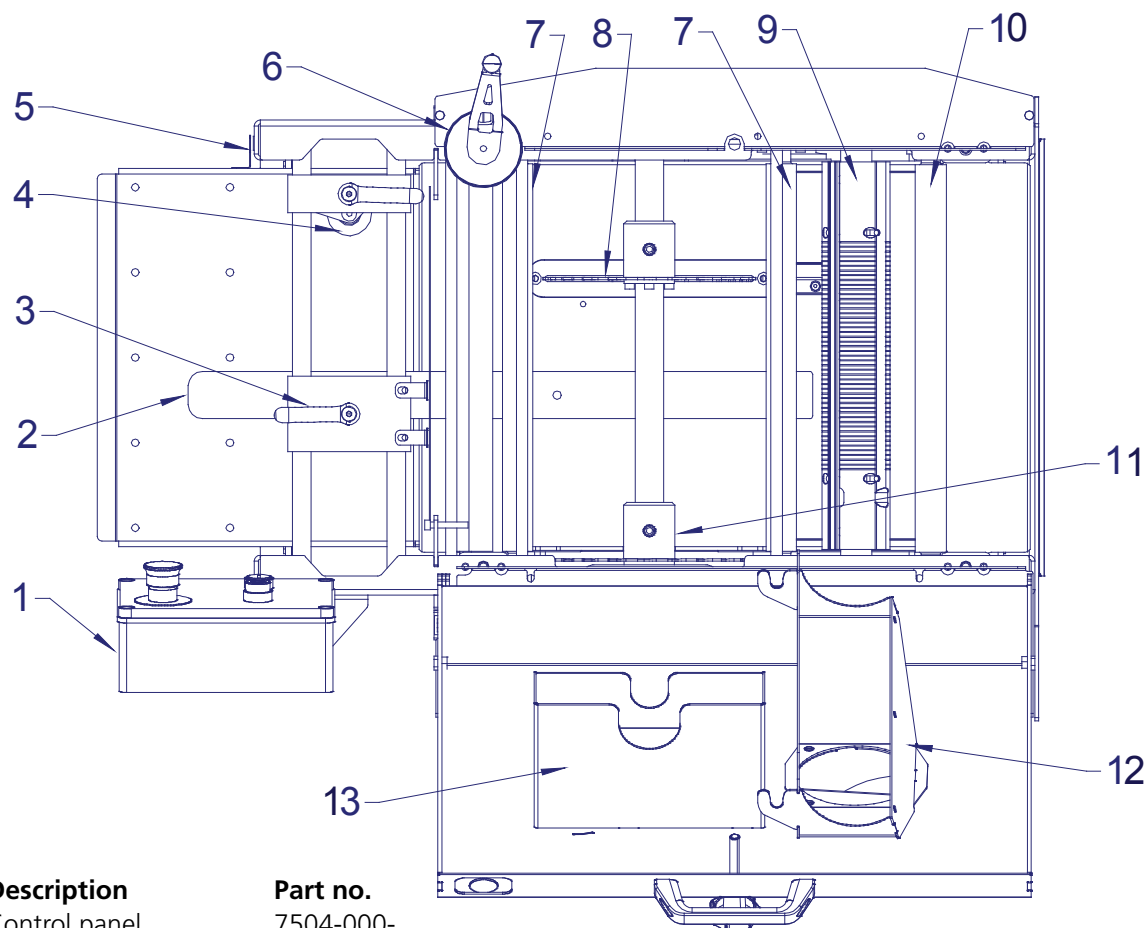
Contact the local authorities for advice on the regulations which apply in your area.

- Connect the shavings hose and attach it, using hose clamps, to both the planer and the chip extractor. Use Flexislang from Logosol (L:3m, part. no: 7000-000-1015) which has a smooth inside and which improves flow.
- If you want to transport the shavings across a longer distance:  
Use the shortest hoses possible and transport the shavings in sheet steel pipes which generate less resistance to air flow.
- The shavings duct on the cover can be unscrewed, removed and turned so that hose connection is to the right or left.



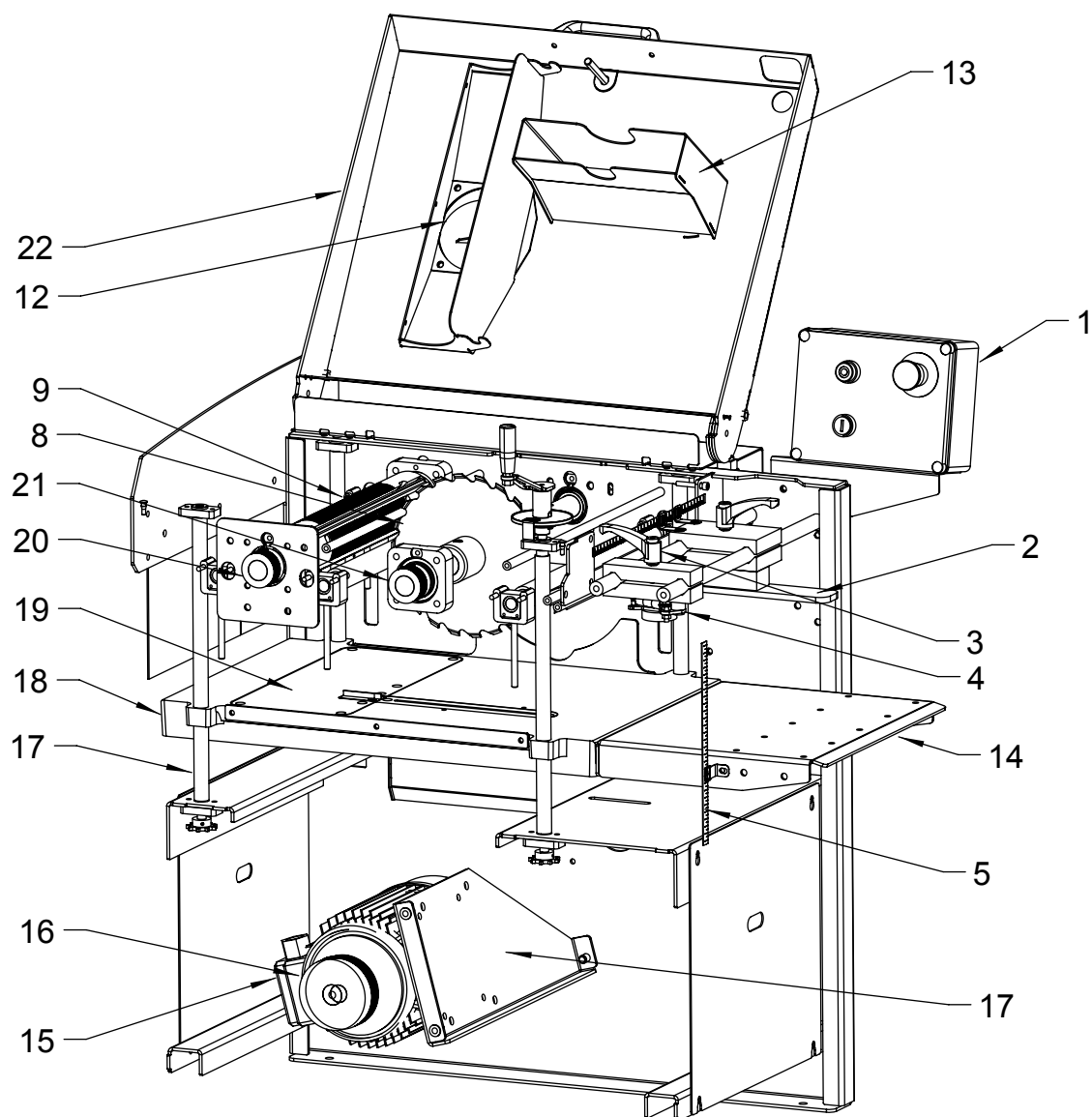
Position the chip extractor so that its switch is easily accessible.

## SUMMARY

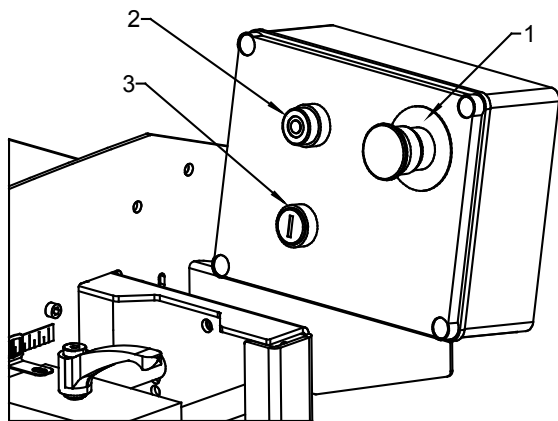


Pos.	Description	Part no.
1	Control panel	7504-000-
2	Stop	7504-000-
3	Locking of stop	7504-000-
4	Press roller cpl	7504-000-
5	Height scale	7504-000-
6	Crank	7504-000-
7	Ribbed feeder roller	7504-000-
8	Blade	7504-000-
10	Out-feed roller PU	7504-000-
12	Duct, planer cutter	7504-000-
13	Duct, blade	7504-000-
14	In-feed table	7504-000-
15	Spindle motor	7504-000-
16	Motor pulley	7504-000-
	Poly-v-belt	7504-000-
17	Motor stand	7504-000-
	Hoist spindle	7504-000-
	Hoist spindle crank	7504-000-
18	Table	7504-000-
19	Plastic lining	7504-000-
20	Pulley cutter	7504-000-
21	Pulley blade	7504-000-
22	Protective cover	7504-000-





## THE ELECTRICAL SYSTEM



**⚠ WARNING!** Lethal voltage. Do not, at any point in time, open the machine's electrical system unless you are authorised to do so.

**!** The black button starts the machine, pos 3.

**!** The red button stops the machine, pos 2.

**!** The red emergency stop button is only to be used to stop the machine in an emergency situation, pos 1. Access to this switch must not be blocked.

**!** Carry out the 'Before the machine is started' check, refer to the safety instructions.

**!** Check that cables and contacts are in good condition and that the voltage, frequency and fuse are correct.

**⚠ WARNING!** Make sure that the machine is connected to the correct voltage. Check that the machine runs in the right direction. Lower the table to its lowest position so that you can see the circular sawblade from the in-feed side. If it runs in the wrong direction, remove the plug from the machine. Switch the two phases around.

**!** The machine has zero voltage switches. Automatic re-start after loss of power is prevented.

**!** If the machine does not start, this can be due to the following:

- that the cover is not correctly closed and the cover's limit switch is therefore tripped.
- that the emergency stop button is depressed
- that the neutral conductor is not correctly connected
- that a motor still is too hot

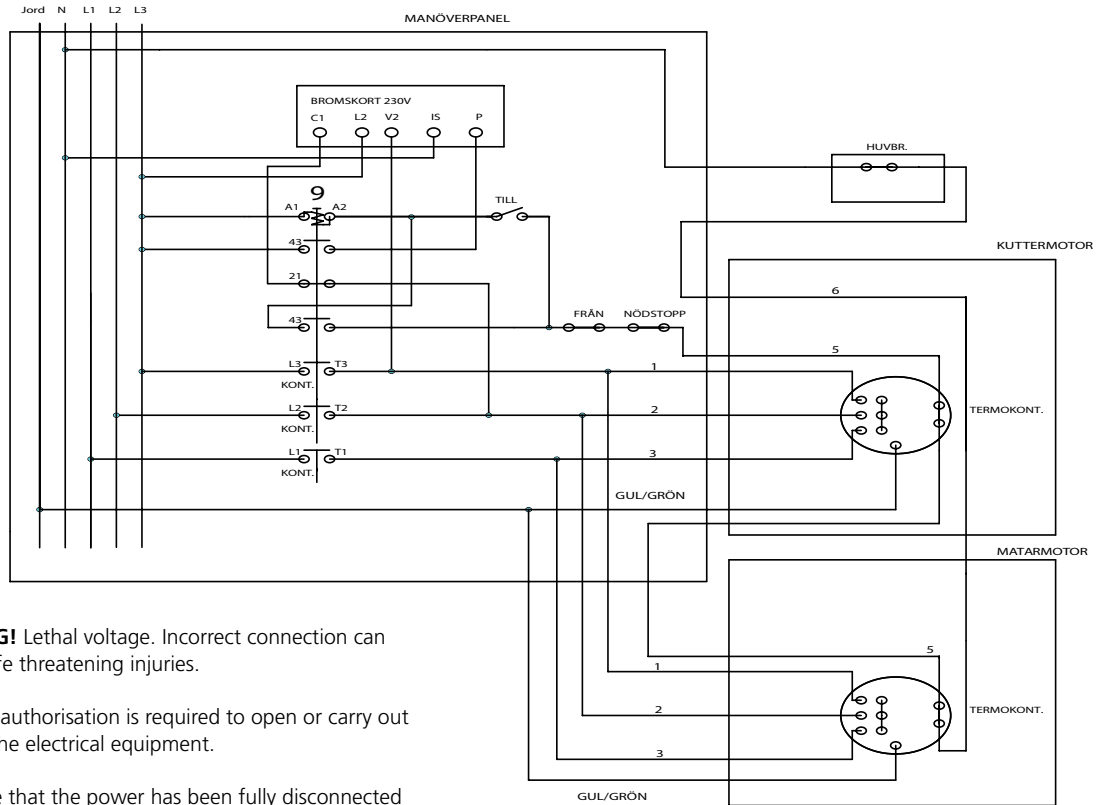
### BRAKE CARD

The machine has a brake card to stop the unit within 10 seconds. The card buzzes for a few seconds immediately after a stop. Never restart the machine before the buzzing has stopped.

If the brake stops working, then the fuse on the card may have 'blown'.

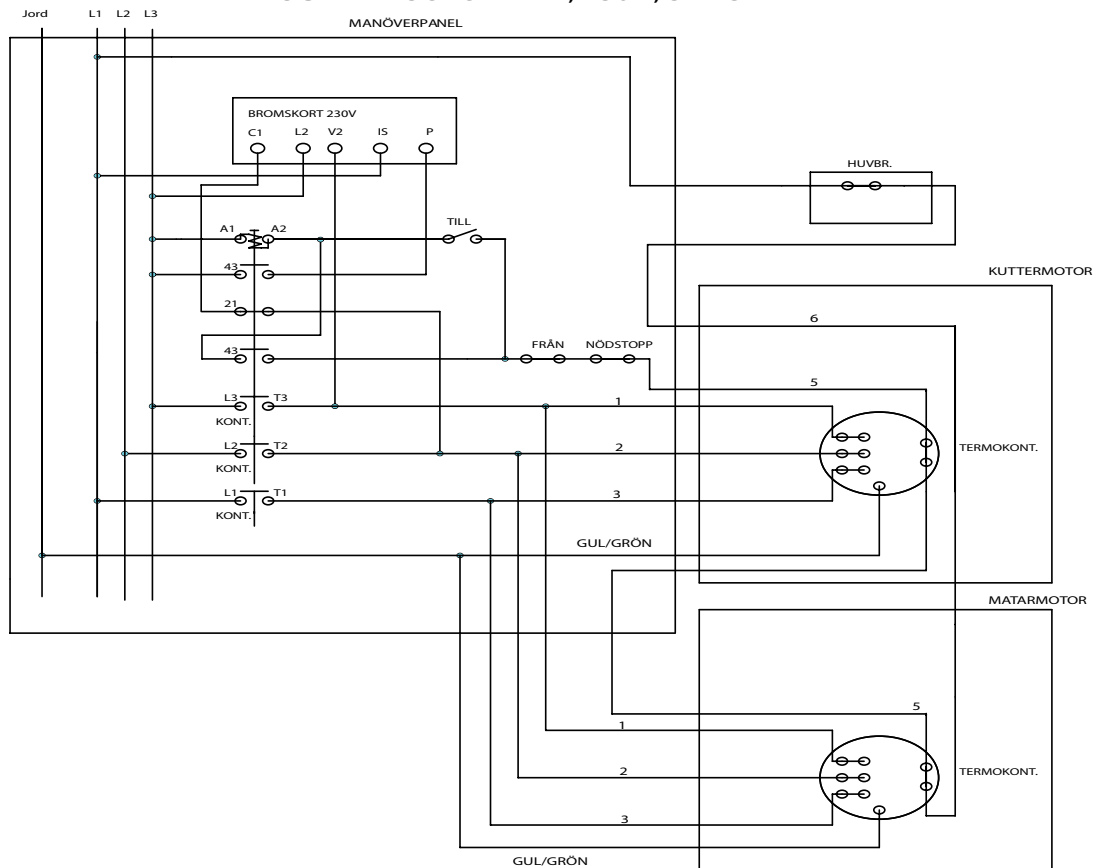
## WIRING DIAGRAM

ELSCHEMA SOLOHYVEL, 400 V, 3-FAS

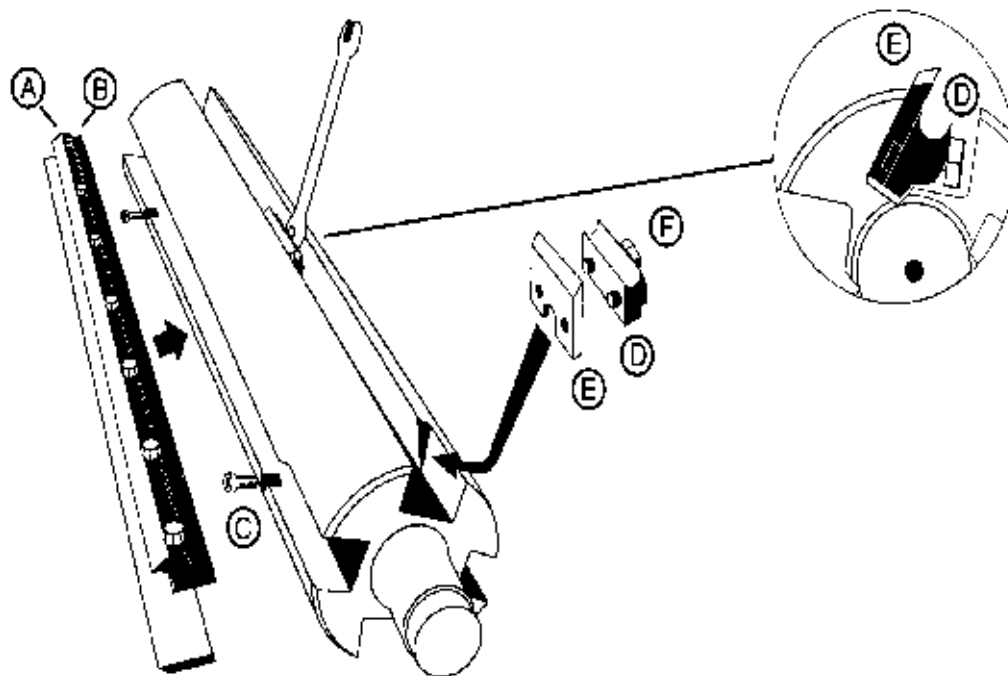


- ⚠ WARNING!** Lethal voltage. Incorrect connection can result in life threatening injuries.
- !** Note that authorisation is required to open or carry out work on the electrical equipment.
- !** Make sure that the power has been fully disconnected before you open the system.

ELSCHEMA SOLOHYVEL, 230 V, 3-FAS



## CUTTER WITH PLANING KNIVES, MOULDING KNIVES & SAWBLADE



❗ Make sure that the power is fully disconnected and that the cutter is not rotating before you open the cover to service or replace knives. Use protective gloves, particularly when loosening screws which are tight or when tightening screws (refer to 'Safety regulations'). Watch out for the planing knives. It is very easy to cut yourself on these, even when lightly touched.

A short wedge is available as an accessory for the installing moulding knives. The moulding knives' projection is set by adjusting the planing knives' removal rate. Short wedges for moulding knives which are adjustable in the height direction, are also available.

**After replacement of moulding knives, planing knives or circular sawblade:**

❗ Check that no tools have been left in the machine.

❗ Check that the cutter can rotate freely when the cover has been closed. This is checked, when power has been disconnected, by rotating the pulley on the motor. You reach the underside of the pulley by extending your hand under the belt's protective plate.

Panel planer thickness is set using the plane table crank, (6). The thickness that has been set can be read on the scale on the machine rack. The scale can be calibrated. Loosen the stop screw under the scale and turn to the correct position. Run a board through and measure using a calliper. Then adjust tenths and hundredths using the scale on the crank. Shavings thickness up to 8 mm.

⚠ **WARNING!** Bluntness increases the risk of an accidents.

## PLANING KNIVES

**!** Refer to the section 'Cutting using planing knives, moulding knives and circular sawblade'

Planing knives which are in the machine are set, i.e. set for use on delivery. The knives must however be regularly ground to ensure that the machine functions well.

### DISMANTLING

Loosen the locking screws (B) and press the shavings breaker down (A). Screw up the planing knife using the adjustment screws (C).

### GRINDING

Always ground the knives in pairs so that they have the same width, min 15 mm. Vibrations can otherwise arise in the cutter. The grounding angle is to be 40 degrees.

### ASSEMBLY

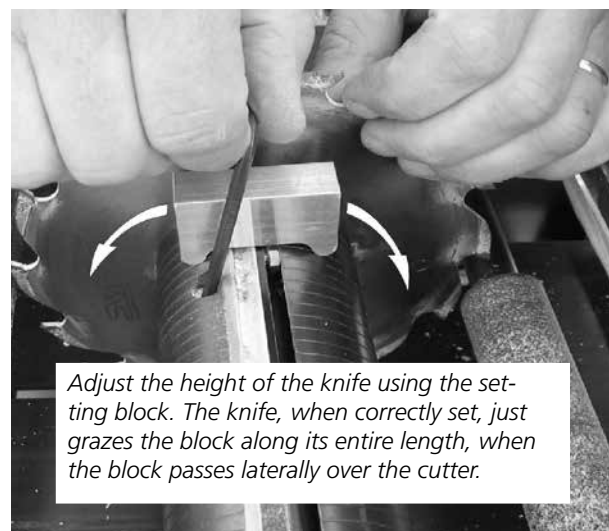
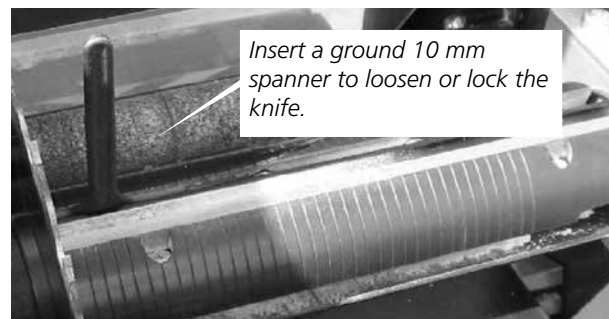
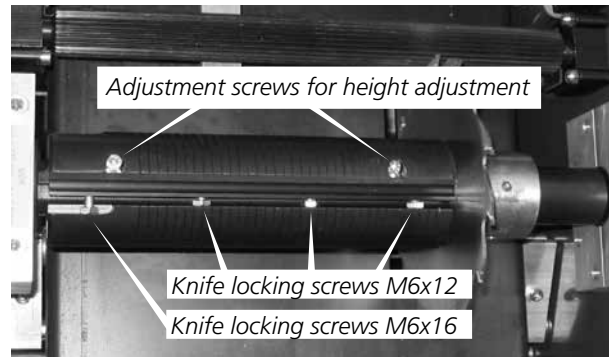
The knives, shavings breaker and cutter are to be cleaned carefully before knives are fitted. Retract the shavings breaker down into the track. Place the planing knife straight in relation to the adjustment screws, so that the adjustment screw heads are in the recess in the side of the knife and screw the knife down using the adjustment screws.

**!** The knife's locking screws are in the shavings breaker.

Undo the locking screws in the shavings breaker, to allow the knife height to then be adjusted. When adjustment has been completed, the locking screws are tightened a little at a time until all are fully tightened.

**Rough setting of height:** Set the height of the knife using the adjustment screws, so that the rear edge of the knife is in line with the cutter body.

**Fine tuning:** Guide the adjustment block (part.no. 7500-000-1020) laterally over the cutter. The knife should just graze the block when passing over the knife, when the right height is set. Use this method to measure on both sides and in the middle of the knife.



**!** Tighten the shavings breaker's locking screws fully when adjustment has been completed. Finally, screw the adjustment screws carefully down, until they are tight. The knife will crack if these are tightened too hard.

## MOULDING KNIVES

**⚠ WARNING!** Cutter imbalance creates vibrations which can damage the machine and cause personal injury.

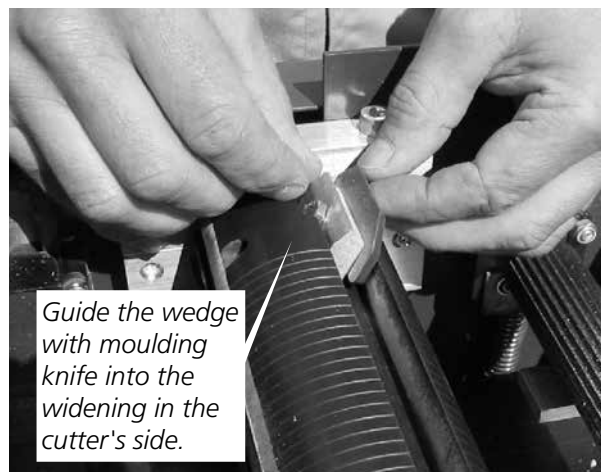
**!** Moulding knives must always be fitted in pairs, so that the cutter remains well balanced.

### ASSEMBLY:

- Assemble wedge (D) and moulding knife (E).
- Guide the wedge and moulding knife down the side of the cutter where the wedge groove is expanded.
- Push the knife and wedge into the track and attach through screwing out the screw on the rear of the wedge.

**!** The locking screw is not to be above the groove of the wedge track.

- Measure the knife's lateral position and fit an identical knife exactly on the cutter's opposite side.



## REPLACING CIRCULAR SAWBLADE

### DISMANTLING:

Remove the protective cover for the belt transmission and the rear protective cover for the chain transmission.

Loosen the belt tensioner and bend the belt off the spindle pulleys.

Remove the saw spindle through loosening the two stop screws on each ball bearing inner ring. The spindle can now be pushed out towards the pulley. Push out the spindle one decimetre. The four screws on the blade centre can now be loosened and the blade can be replaced.

### ASSEMBLY:

Clean the bearing and spindle carefully. Fit the circular sawblade onto the spindle.

Only circular sawblades supplied by Logosol are to be used.

Fit the protective covers.

## MAINTENANCE



**WARNING!** Risk of serious damage if maintenance is neglected.

The Solo planer is easy to maintain. Required maintenance is specified below.



Make sure that all power has been disconnected from the machine before you open the cover or dismantle protective covers.

A good procedure is to ensure that compressed air is available to blast the machine clean each time you open the cover. The entire machine should be cleaned of resin and shavings at the end of each working day. Take extra care with the feeder rollers' sprung bearings, the feeder rollers, the out-feed rollers and the cutter. Use alcohol as solvent. Check for belt stretching (under the protective cover). Check also that cables, connectors and contacts are in good condition.



Shavings can be packed under the feeder roller's and the out-feeder roller's sprung bearings (4 pcs) which impairs feeding and increases the risk of rebound.



Check that the teeth of the rebound protection are clean and fall under their own weight.

Make sure that the following components are well lubricated. Use the appropriate Superflow (part.no. 9999-000-5115).

- Feeder roller bearings. Lower the table to the lowest position.
- The chain which drives the feeder rollers (under the protective cover).

When you use the machine, regularly clean the table and treat with low viscosity oil, such as paraffin oil.

Regularly check that the motor compartment has not been filled with shavings. This can otherwise lead to inadequate motor cooling.

### If the machine is not used for a longer period of time:

- All power is to be disconnected and the machine is to be thoroughly cleaned.
- Repair any damage to paint; wash with alcohol, scrape off rust and fill the damage with automotive paint. This is to prevent creeping rust which can increase the damage.
- Then coat the table surface and the components specified above with universal oil (part.no. 9999-000-5105).
- Also coat the moulding knives, planing knives and circular sawblade with oil. The machine should ideally be stored in a heated space. If this is not possible, make sure that the machine is carefully covered and not in direct contact with the ground.

## FEED

The feeder rollers are driven by a separate motor and chain transmission.

The feeder rollers must be kept clean of resin and shavings to ensure they function well. Use Snickarent (part.no. 7500-001-5000).

The feeder rollers are spring mounted and fitted in the rack. You can experiment by re-setting the feed pressure using the nuts under the rollers which the springs are against.

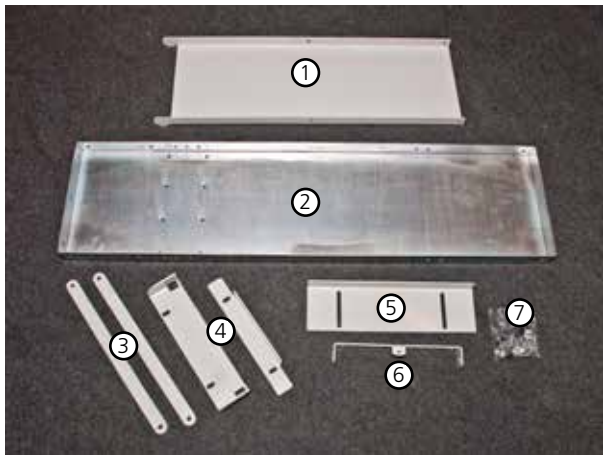


The rollers are to balance directly above the workpiece.

If a narrow workpiece is processed and the springs are equally tensioned on the right and left side, then the feeder rollers can tilt, which gives poorer results.

Note the basic setting before you begin to adjust, so that you can easily return to the original settings if incorrect. The springs are normally tightened harder on the circular sawblade side, particularly if narrow workpieces are to be planed. To check roller pressure: Disconnect the power, lower the table, place a workpiece under the cutter, raise the table so that the feeder roller is pressed up. Both sides of the feeder roller are to then be sprung upwards equally.

## INSTALLING FEED TABLES



### Feed table SH410 (accessory)

#### Included

1. Support plate
2. Feed table
3. Link arms
4. Mounting plates, top mount (only used for PH260 and DH410)
5. Lower mounting plate
6. Angle adjustment plate
7. Bolt bag



1. Remove the original in-feed table. Note that the bolts will be reused.





1. Fit the lower mounting plate to the frame using the original bolts.



2. Fit the angle adjustment plate with two M8x20 incl. washers and locknuts.



3. Attach the support plate with a sleeve nut, (angle adjustment plate), M10 washer, (support plate), sleeve spacer, M8 washer and M8x10 bolt.



1. Fit the link arms outside the support plate using sleeve nuts, (link arm), M10 washer, (support plate), sleeve spacer, M8 washer and M8x10 bolt.



2. Fit the feed table directly to the cast iron table in the machine using the original bolts.



3. Fit the link arms to the feed table using sleeve nuts, (feed table), M10 washer, (link arm) sleeve spacer, M8 washer and M8x10 bolt.



1. Adjust the angle of the table. Place something between the bolt and the machine to avoid damaging the coating. When the plate is adjusted to the correct angle you tighten the M8 bolts and loosen the adjustment bolt a couple of turns.

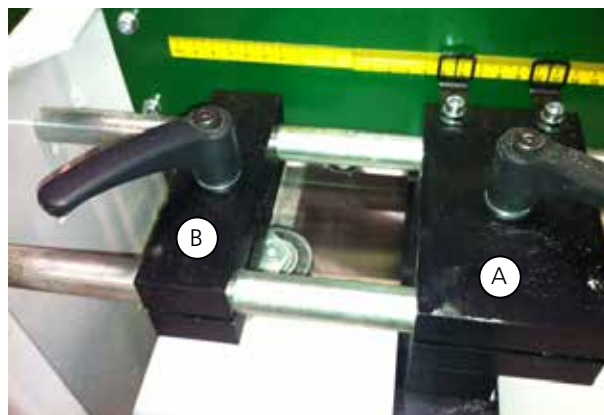


9. Install the original pointer for the height scale using a spacer and two M6x10 hex bolts.

## FOUR FUNCTIONS

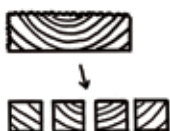
### DIMENSION PLANING:

Set stop (A) to the required width using the scale on the top of the planer and lock using the locking wheel. When dimension planing, it is the right scale and the left tip on the double gauge which shows the width of the board. Adjust the sprung stop (B) so that the working pressure presses against the stop and lock using the locking wheel. Set the table to the required board thickness using the table lever and the scale. Lock using both locking knobs. Also adjust the height of the in-feed and out-feed table. Loosen the locking knob on the machine's sides, adjust using the lever on the left side. Tighten the locking knob again.



### RIP SAWING:

Set the stop (A) to the required width using the scale and lock using the locking wheel. Adjust the sprung stop (B) so that the working pressure presses against the stop and lock using the locking wheel. Set the table to the same height as the working piece using the table lever and lock using both locking knobs. If several identical lathe or moulding workpieces are to be produced, then the stop and the sprung counterhold should be switched around. The left scale will then correspond to the right point on the double gauge.



### PLANING:

Loosen the the allen head bolts in the circular sawblade's locking sleeve and move it to the countersinks in the shaft by the side of the table.



### MOULDING:

Dimension planing of moulding workpieces to suitable measurements. Then fit the moulding knives and the locking heels to the cutter. Loosen the top cover/the shavings duct on the cover and set (alternatively remove completely) the adjustable shavings breaker. Test run and adjust the moulding knives if required.



Always check that the cutter can rotate freely and that no tool or loose screws are left in the machine.

### PLANING TIPS!

- If you have a board which has been very poorly sawed or if you for any other reason want to remove a lot of wood, set the planer so that it only takes away as much as it is capable of removing. Run the board through the planer several times until you can set the correct dimension.
- Try to avoid timber that is too crooked. It will not become any straighter because you have planed it.
- Dimension plane a board and measure its exact width. Then calibrate the double gauge on the stop, against this. Loosen the screw which holds the gauge on the side of the table, fine tune and tighten.
- When you have finished planing a moulding which you know you will plane again, feed in a ca 1m long board and shut off the machine when the end is just in front of the table edge. Lower the table and take out the board. Next time the moulding is to be set, the board can be used as a template for both cutter and stop.
- If the knives in the top cutter are set out too much, the last feeder roller does not grip. The projection is to be 1 mm.
- If a lot of wood of the same dimension is to be planed, a stop can be set on the in-feed table, so that you quickly can direct in the boards in the lateral direction before you feed them into the machine. Logosol has magnetic stops which attach to the in-feed table. (An alternative can be to draw a mark on the table, if you have a crooked work piece.)

## GOOD TO KNOW

### WHICH STEEL QUALITY FOR WHICH PLANING?

**VS,** Tool steel also called carbon steel. Hardened through heating and cooling. TS is used when only a smaller amount is to be planed. It is cheap but can begin to lose sharpness already after around 300 running metres. It is the heat which is generated when planing which makes the knife blunt. TS can withstand 300 degrees before it is damaged. The cheap steels which can be found in catalogues and at ironmongers is TS and can not be compared with HSS.

**HSS,** High speed steel or cobalt steel. This is the steel quality we recommend in most cases. It is around twice as expensive as TS, but remains sharp for around 2000 metres, which is a much better financial solution in the long term. HSS withstands 700 degrees without being damaged.

**HM,** Hard metal, also called cormant, is the most wear resistant steel quality. The hardness of the hard metal makes the knife as brittle as glass. It is therefore not possible to ground the edge to an angle that is as sharp as HSS and TS, which means that it does not cut as well in some materials. HM costs 8-10 times more than TS, but remains sharp for up to 6000 running metres. HM withstands 1000 degrees without being damaged. Keep in mind that HM steel must be handled carefully so that it does not crack. Always place the cutter on a soft surface.

**Some special cases:** Pine: Use HSS or tool steel. HM gives a poorer surface. MDF board: Only use HM. Hardwood: TS cannot be used for planing hardwood. Use ideally also a 4-insert cutter.

### THE CUTTER

The Solo planer is supplied with HSS planing knives in the cutter. These are also available in HM. Above and below the cutter, holders can also be fitted for replaceable thinner steel, so called Reversible knives of HSS or HM.

Moulding knives can be fitted in the cutter with the planing knives, which means that the machine planes and moulds in one operation. There is a large range of 40 mm moulding knives which can be combined to achieve the required moulding. Special steel can be ordered from Logosol. Also

these can be combined to be able to produce more mouldings using just a few moulding knives.

### MOULDING PLANING AND STRAIGHT PLANING

A moulding planer, such as SH230, is not to be used to straighten boards. It is to only be used to dimension and mould work pieces. The machine's processing part is to therefore to be built as short as possible, to avoid the straightening effect. Panels and mouldings are normally not straightened.

A jointer/planer makes the workpiece's sides straight but does not dimension. A jointer/planer is to have a long table which steers the work piece straight over the cutter. The board must then be run through a planer, dimension planer or moulding planer to achieve the correct width and height measurements. Normally only shorter pieces are straightened, for example for joinery or window production.

These two planer types are not to be confused. They have separate functions, each being important.

### WOOD

Wood shrinks when it dries. The largest shrinkage takes place when the wood dries from 25% humidity to 10%. To achieve a good surface, you should not plane wood which has higher humidity than 20% and is as dry as wood can be through outdoor drying. Ideally the wood is to also be stored indoors before it is planed.

Wood shrinks very little along the board, along the fibres. You do not, in most cases, need to take this into consideration. Wood shrinks along annual rings by around 8% and across annual rings by around 5%. Vertical annual rings are also better in boards.

Boards warp and crack over time. In most cases, the wood should be turned so that the heartwood side is the visible surface, to avoid problems with the wood to the greatest extent possible.

If you are using lock panel, the top boards should be turned with the heartwood side outwards and the inner boards with the heartwood side inwards, to achieve a wall that is as tight as possible.

## RESULT

Hard materials provide better surfaces than soft. Small depressions and light small flames affect the shavings which accumulate around the edge and is pressed down into the wood. This phenomena increases when the steel loses sharpness.

Noticeable cutter impacts in the planed wood are usually due either to the knives not being adjusted to the same height or that the workpiece is not pressed hard enough against the table or stop during processing. A feed speed that is far too high can also can give visible cutter impact.









Keep feeder rollers clean of shavings. The out-feed roller is particularly important, as shavings which stick to this otherwise can make marks on the planed surface.

Boards that are too warped and crooked, should be straightened in a jointer/planer or dimension planed before final processing is carried out.



## SAFETY REGULATIONS FOR MOULDING KNIVES

**Applies to all moulding knives which have larger moulding depths than 12 mm**

-  **WARNING!** When these knives are used, the risks increase significantly. Be therefore particularly careful and attentive.
-  **Life threatening!** Risk that moulding knives hit the table during operation. Steel fragments can be thrown out of the machine.
-  Check that the cutter can rotate. Moulding knives easily touch the plastic insert in the table, but not more than that the cutter can be turned by hand.
-  **WARNING!** Remove the setting crank from the machine after setting.
-  Replace the plastic insert in the table if damage or scores of more than 1 mm are found.
-  **Life threatening!** High risk that planed wood mouldings are thrown out of the machine.
-  **Respect the safe distances.** Set up the cordoning specified on page 5. Never stand in front of the in-feed side when in operation. Make sure that no children are in the vicinity .
-  **Before SH410 is started with these moulding knives:** Check that the cutter can rotate freely and read the machine's safety instructions.



*Some of the above mouldings are, when processed, completely undamaged where the cutter cuts through the wood piece.*

# SOLOHYVEL SH410 Knives

## Carefully selected knives – plane and mould for your project!

Starter package with knives for the SH410

The package includes: 9 pairs of moulding knives of HSS, 3 pairs of gibs and one pair of position holders.

Look at the examples of knife combinations to the right. Let the examples inspire you, but you can do a lot more with the starter package!

Starter package with knives and gibs for the SH410

TB90-010

5.390,-

### Handrails, T&G and much more

The wood profiles on this page are just examples of what you can do with the knife package.



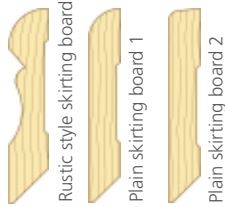
Brush-painted wooden details add a genuine and homely touch!



### Example of wood profiles you can make with the knives in the starter package

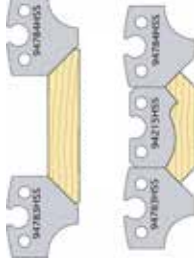
#### SKIRTING BOARDS

Included in the starter package!



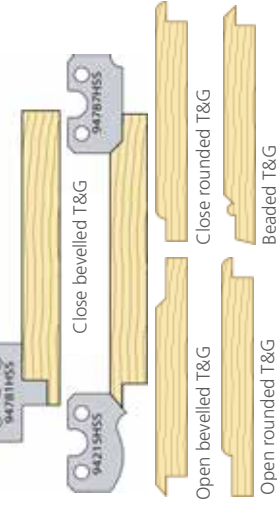
#### CORNICES

Included in the starter package!



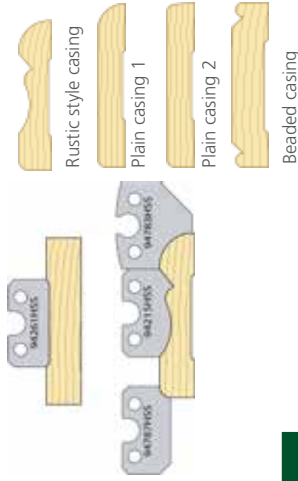
#### PANELLING

Included in the starter package!



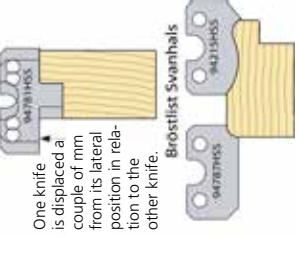
#### CASINGS

Included in the starter package!



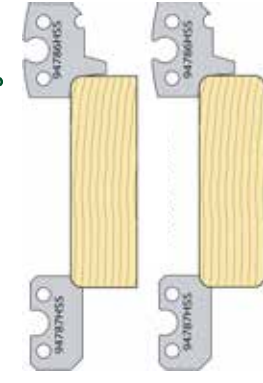
#### WAINSCOT MOULDINGS

Included in the starter package!



#### JOISTS & DECKING

Included in the starter package!



Joists, 5 mm radius.





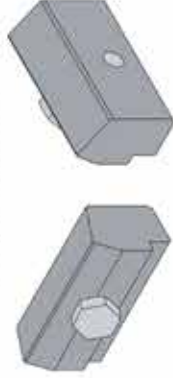
BASIC PACKAGE SH410 ITEM NO: TB90-010

6 pairs of moulding knives of HSS + 3 pairs of knife gibs  
+ 1 pair of position holders for making:

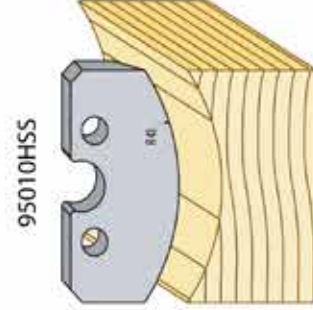
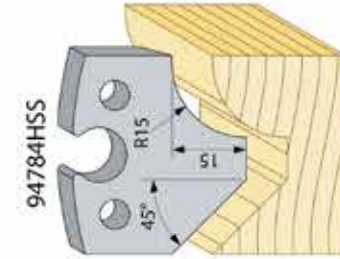
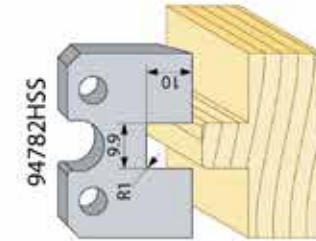
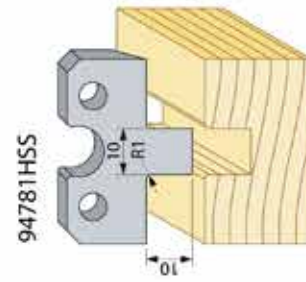
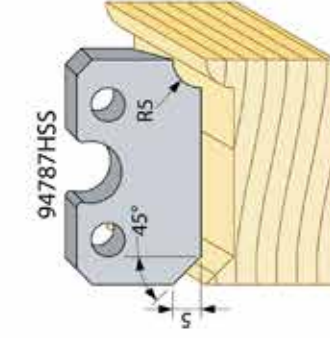
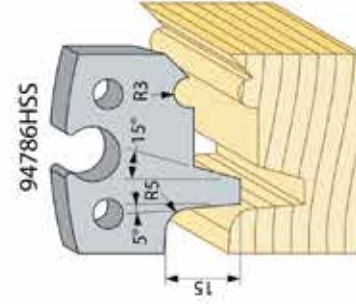
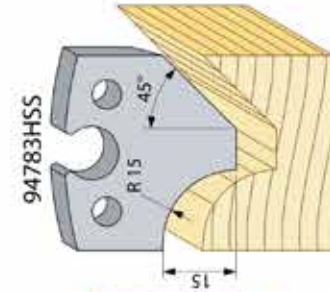
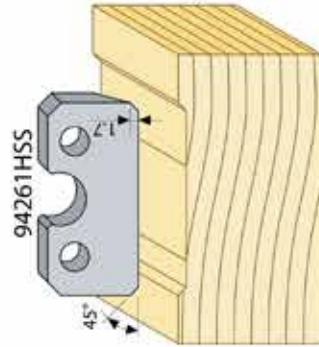
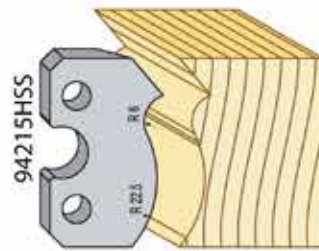
Casing  
Rounded panelling  
Bevelled panelling  
Wainscot moulding

Cornice  
Skirting board  
Joists & Decking

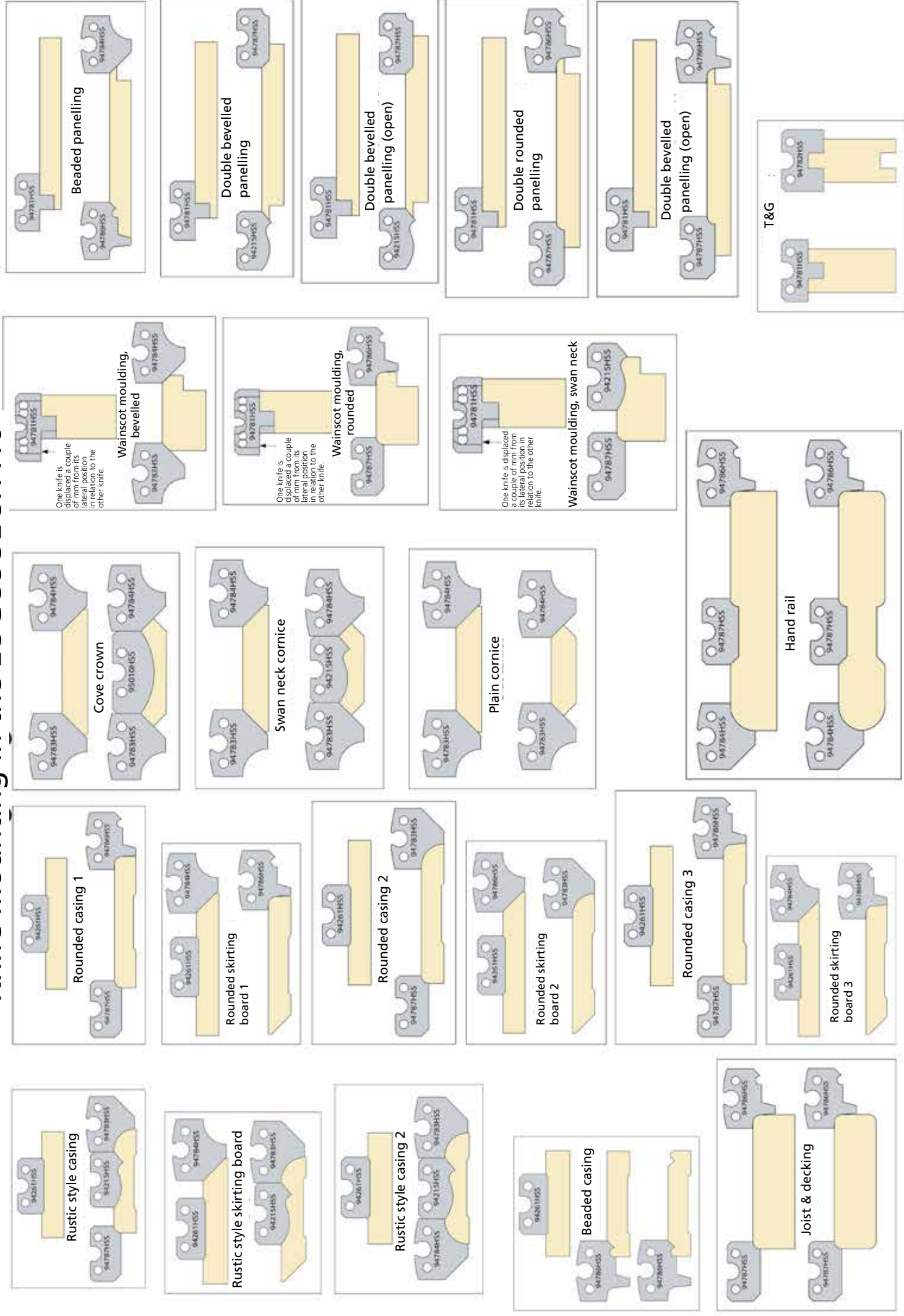
POSITION HOLDERS X1



KNIFE GIBS -038 X3



# Knife mounting in the LOGOSOL SH410



## TECHNICAL DATA SH410

<b>PROCESSING MEASUREMENT</b>	
Max material width	410 mm
Max panel planer width	410 mm
Max panel planer height	260 mm
Min planer height	6 mm
Max splitting	80 mm
<b>CUTTING EQUIPMENT</b>	
Cutter diameter	72 mm
Planing knives	2 x 410mm HSS
Shavings thickness	4 mm
Circular sawblade	ø 225 mm
Rotational speed	5400 rpm
Stop time for cutter	ca: 7 sec
<b>SHAVINGS HANDLING</b>	
Shavings duct diameter	125+100+50 mm
Required chip extractor capacity	1500 m <sup>2</sup> /h
<b>POWER SUPPLY</b>	
Feed rate	ca: 6 m/min
Number of rollers	3
<b>DIMENSIONS</b>	
Length	1100 mm
Width	700 mm
Height	1050 mm
Weight	ca. 200 kg
<b>ELECTRICAL SYSTEM</b>	
Power supply	CCA16 A, 400 V 50 Hz three phase, or 25 A 230 V 50 Hz three phase
Protection rating	IP54
Rated power, main motor	3kW
Rated power, feed motor	0.18 kW
Main breaker	The contact for power supply is disconnected.
<b>NOISE LEVELS</b>	
Sound pressure level	100.4 dB(A)
Noise effect value	107.6 dB(A)







**Declaration of conformity**

Manufacturer  
MORETENS AB,  
Nifsåsvägen 11  
S-831 52  
Östersund, Sweden  
Tel. +46 63 121890,

hereby confirms that SH 410,  
with part. no. 245-000  
has been manufactured in conformity with:  
Machinery Directive 98/37/EC, EMC Directive  
2004/108/EC  
and LVD directive 2006/95/EC,  
and in accordance with  
the following harmonized standards:  
EN ISO 12100-1, -2:2003, EN 60204-1:2006,  
EN 61000-6-1, -3.

Östersund, Sweden, 1 November 2011  
MD Bo Mårtensson



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