



DIMENSION SAW

PF 300L PF 300LE

PF 350 PF 350E

Service instructions manual

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ROJEK

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Introduction

This manual was conceived at the manufacturer and is an indivisible part of the delivery enclosed with the machine. It contains basic information for qualified operating staff and describes the surroundings and using ways of the machine for those it is intended.

It contains also all necessary information for a correct and safe operating.

The machine is equipped with various safety equipment protecting operator and machine as well at usual technological using. These regulations, however, cannot sheet all other safety aspects. That is why operator must peruse and make sense of this manual before starting of machine use. Installation and operation mistakes will be foreclosed herewith.

Do not try to start the machine before having read all instructions manual delivered with the machine and understood every function and technique.

Some information or drawings need not be intended especially for by yours bought type, for this manual contains all information of other this type variants we produce. By comparing of competent manual part with your machine - you will learn whether they correspond.

The producer reserves himself the right for particular variants in frames of a fluent technical development of the machine.

To better stress the importance of some basic passages, they are printed in heavy letters and marked by some preceding symbols - Appeal recommending to follow entirely following regulation:



Appeal recommending to act entirely according to following safety regulation. Disobservance of this regulation can be very **dangerous** and cause a killing or grave health exposure of operating personnel.



Warning from improper techniques or way of machine use that can endanger human health, machine functions, environment or cause economic loss. Breach of these regulation may cause a killing or a grave health exposure of the operator



Caution is an appeal to a due care for practising following operations. Non-performing of this caution may cause a human injury or damage at the machine.

Regard the instructions explicit on shields herewith the machine is equipped. In case of its damage contact the producer and renew the shield in any way.

Caution

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1.0 Machine use

This machine is designed as a dimension circular saw with hand shifting of workpiece. The sliding table fays to the saw blade with a scorer. The saw blade is adjustable in height and with tilting. The machine is intended above all to larger cabinet making workshops for accurate sawing of wood and laminboards from wood and those on wood based ones with a maximal sawing width of 1050 (800; 1500) mm.

The machine is intended to be operated only by one single person. Any manipulating with the machine by children or youth is forbidden !

1.1 Qualification of workers

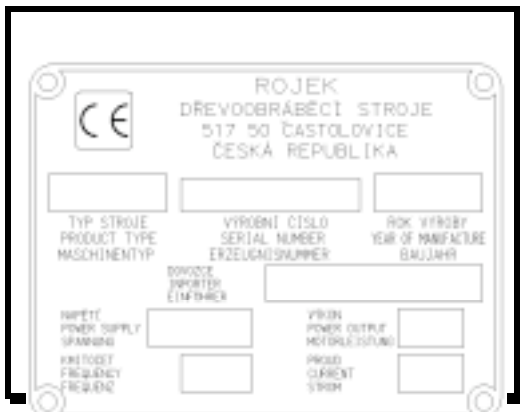
Only a man or woman trained in woodworking branche or instructed and schooled by such a specialist can operate the machine. Machine operator is obliged to learn this manual and abide with all safety regulations, rules and appointments, valid in a country in question.

1.2 Working surroundings

The machine must operate in workshop surroundings of temperature range + 5°C - +40°C, relative air humidity 30% - 95% non condensing and altitude 1000 m above the sea in surrounding classified : fire danger of combustive dusts (BE2N2).

2.0 Machine signification

Machine type can be identified at the production shield on machine frame.



Machine type can be identified at the production shield on machine frame.

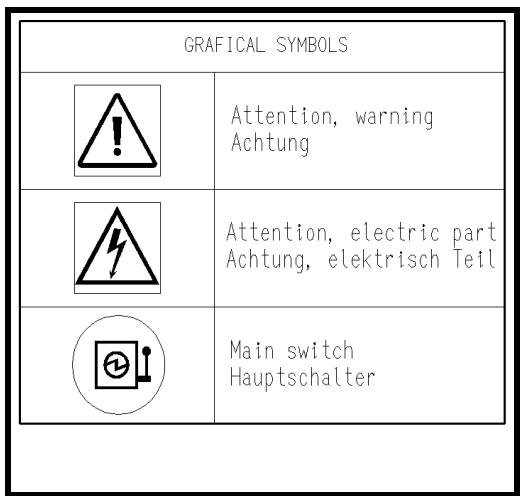
type of machine :

PF 300L - dimension saw

PF 300LE-dimension saw with electrically lifted and tilted blades

PF 350 - dimension saw

PF 350E-dimension saw with electrically lifted and tilted blades



Informative shields and shields warning against dangers are placed at the machine frame.

Technical data of sawing machine :		PF 300 L	PF 300 LE	PF 350	PF 350 E
Motor power	kW	3 (4; 5,5)			
Motor revolutions (1speed motor)	/min	2 880 (3 456 at 60 Hz)			
Motor revolutions (2 speeds motor)	/min	1 460/975 (1 750 / 1 170 at 60 Hz)			
Saw blade - max. diameter	mm	315		350	
Saw blade with scorer - max.diameter	mm	315		315	
Spindle diameter	mm inch	30 1"			
Saw spindle revolutions (1speed mot.)	/min	2 370			
Saw spindle revolutions (2speeds m.)	/min	5 000 / 3 350			
Offcut - max. (in vertical)	mm	100 (70 at 45°)		115 (80 at 45°)	
Width of sawing	mm	1050 (800;1 500)			
Saw blades' tilting motor power	kW		0,18		0,18
offcut-setting motor power	kW		0,18		0,18
Saw blades tilting	°	0°- 45°			
Scoring saw blade (scorer)					
Motor power	kW	0,5			
Scorer saw blade diameter	mm	100			
Spindle diameter	mm	20 (3/4")			
Spindle revolutions	/min	8 530 (10 236 at 60Hz)			
Sawing machine dimensions					
Length	mm	3 125 with CV3 3 000 mm 2 725 with CV3 2 600 mm 2 390 with CV3 2 000 mm 3 375 with CV330 3200 mm			
Width	mm	4355 (800) 4605 (1050) 5055(1500)			
Height	mm	1 130			
Table height	mm	892			
Table dimensions	mm	1 185 x 500			
Exhausting hose diameter	mm	100 - lower / 60 (100) - upper exhaustion nozzl.			
Dimensions in packing - in folio	mm	3140x1000x1150 CV3 3 000 2740x1000x1150 CV3 2 600 2400x1000x1150 CV3 2 000 - box 3390x1000x1150 CV330 3 200 3250x1120x1111 CV3 3 000 2850x1120x1111 CV3 2 600 2250x1120x1111 CV3 2 000 3500x1120x1111 CV330 3200			
Weight brutto	kg	600	650	680	730
Weight netto	kg	590	640	670	720

Sliding table			
Table dimensions	mm	CV3 CV 330	2 000 (2 600; 3 000) x 285 2 000 (2 600; 3 200) x 330
Supporting frame dimensions	mm	1 400 x 630	
Length of sawing cut	mm	2 000 (2 600; 3 000, 3 200)	
Other parameters			
Voltage / frequency	V / Hz	3f + PE + N ; 400(230) V/ 50(60) Hz	
Electric lead safeguarding	A	16 (25)	

3.1 Possible machine variants

electric motor power	- 3 ; 4 ; 5,5 or 5,5 / 4 (2 speeds motor) kW
saw blade revolutions	- 4 370 or 5 000 / 3 300 (2 speeds motor)
saw blade spindle diameter	- 30 mm or 1" or 5/8" ["~ inch]
scorer spindle diameter	- 20 mm or 3/4"
saw blades tilting	- by a hand wheel or by an electric motor
offcut height setting	- by a hand wheel or by an electric motor
max. width of sawing	- 1 050 or 800 mm or 1500 mm
sliding table length	- 2 000; 2 600; 3 000 mm; 3 200 mm
operation voltage	- 3 x 400 V, 3 x 230 V
frequency of mains	- 50 or 60 Hz
control pannel	- lower or upper

3.2 data of machine operation nois value (EN 1870-1:2000; ISO 7960:1995)

			PF 300 L; LE	PF 350; E
value of acoustic pressure	L _{pf}	idle run	L _{pf} = 81,8 dB	L _{pf} = 81,8 dB
		working	L _{pf} = 85,3 dB	L _{pf} = 85,3 dB
value of acoustic power ISO 3744 K _{2A} = 0 dB	L _{WA}	idle run	L _{WA} = 98,6 dB	L _{WA} = 98,6 dB
		Working;	L _{WA} = 102,1 dB	L _{WA} = 102,1dB

Above stated values are those of emissions and need not represent the safe working values. Although there exists a correlation between emissions values and levels of exposition, these values cannot be used for a reliable statement whether other precautions are necessary or not. Agents, influencing a real exposure of workers, include other working space attributes, other sources of nois, etc., e.g. the number of machines and other from neigh-bourhood influencing processes. The most permissible exposition levels can differ accord-ing to country in question, too. This information will serve for machine user to a better astimation of risks.

3.3 List of used documents :

directive of the E. C. nr. 98/37 stating technical demand on machinery equipment :

Machine part

EN 292-1 : 1994 (EN 292-1 : 1991)

Machinery safety. Basic terms, general fundamentals for projecting, part 1 : basic terminology, methodology.

EN 292-2+A1:200 (EN 292-2/A1 : 1995)

Machinery safety. Basic terms, general fundamentals for projecting, part 2 : Technical fundamentals and specifications.

EN 1870-1 : 2000 (EN 1870-1 : 1999)

Safety of woodworking machines. Saw benches (with and without sliding table) and dimension saws

EN 294 : 1992

Machinery safety. Safe distances to avoid a hand touching of dangerous places.

EN 953 : 1998 (EN 953 : 1997)

Machinery safety. Protective coverings. General demand on constructing and production of unmoved and movable protecting coverings.

EN 1088: 1999 (EN 1088 : 1995)

Machinery safety. Blocking devices connected with protecting coverings. Fundamentals for designing and choice.

EN 954 : 1998 (EN 954-1 : 1996)

Machinery safety. Safety parts of controlling systems.

Part 1: General fundamentals for construction.

EN 1050 : 2001 (EN 1050 1996)

Machinery safety. Fundamentals for determination of risks.

EN 349 : 1994 (EN 349)

Machinery safety. Least spaces for avoiding compression of human body parts.

EN ISO 7000 : 1996 (ISO 7000 : 1989)

Graphical signs substituting letterings on appliances.

Electrotechnical equipment

EN 602041 : 2000 (EN 60204-1 : 1998)

Machinery safety. Electrical equipment of machines. Part 1 : General demand.

EN 418 : 1994 (EN 418 : 1992)

Machinery safety. Emergency stop-unit. Aspects of functioning. Construction fundamentals.

EN 60073 : 1996

Basic safety fundamentals, Electrotechnical regulations. Encoding of conveyers and controllers by help of collors and supplementary means.

EN 55011 : 1998

Limit and measurement methods of characteristics of electromagnetic interference from industrial, scientific and medical (PLV) appliances.

4.0 Safety instructions

4.1 in general

This machine is provided with various safety equipment protecting the operator and the machine as well. This, however, cannot involve all safety aspects. Therefore the operator must read through and understand this chapter. He must moreover respect also other aspects of danger, referring to surroundings conditions and processed materials.

This manual takes in 3 categories of instructive safety symbols :



Appeal recommending to proceed entirely according to following instruction(s). A dispatch or operator's heavy injury impends in case of non-performing this regulation.



Warning against improper techniques or machine using ways, those can endanger human health, machine functioning, environment or cause economic worses.



Caution is an appeal to appropriate care during practising of following activities. Non-performance of this caution can cause a small sized injury or machine damage.

Follow instructions stated on shields, fixed on the machine. Do not remove nor damage the shields. In any case of a shield damaging - always contact the producer !

4.2 Basic safety requirements



Never touch the low voltage system on the electric control pannel, transformers, motors and terminal boards. Every of mentioned unit is indicated with a shield.

- Before connecting machine to mains: Make sure that all safety parts are in active position and check up their functioning. In case of necessary removing doors or protecting coverings – switch off main switch and lock it or disconnect by towing plug from mains socket.
- Catchers of eventual back throw must be freely movable and its functioning controled regularly several times a day.
- When door or protecting covering are apart - Do not connect the machine to the mains.



To avoid incorrect operating – learn positions of switches before machine starting.
Remember position (location) of emergency switch to be able to use it at once any time.

- Avoid touching some switch(es) by chance on running machine.
- Never touch rotating tool by hands or somewhat else.
- When you will not work on at the machine – switch it off by control pannel switch and disconnect it from the mains.
- Before cleaning : Switch off the machine and lock the main switch or tow plug off socket.
- Before doing maintenance inside machine : Always switch it off and lock main switch or disconnect plug from mains socket.
- When more workers operate the machine – do not begin another work not having in-formed other worker about your intention how you will run on.
- Do not do up the machine in any way able to endanger its safe operating.
- In doubts about correctness of technique – contact a responsible person.



Do not neglect practising of regular inspections in tune with service manual instructions.

Check up and make sure that nothing troublesome occurs on the machine.

- After finishing of work adjust the machine so as to be ready for following operations.
- In case of mains outage – switch off immediately main switch or tow plug out from socket.
- Do not overpaint, wear, damage, do up nor get off safety shields. If they get unreadable or lost – contact production plant and renew them.

4.3 Working dress and personal safety



Experience shows that various personally worn objects e.g. finger rings, watches, wristbands and the like used to cause injuries. Hence put them away before beginning of work, fasten sleeves, remove tie – those could be caught by various parts of working machines. Brace your hair so as

not to fly free and wear suitable shoes recommended or rated by working safety rules of a country in question.

- Wear safety outfit (glasses, apron, safety footwear and the like).
- In case of obstacles above your head in working space – wear a helmet.
- Wear always a protecting mask during planing material – source of dust (when planed).
- Never wear free working dress.
- Never work on the machine under influence of drugs or spirit drinks.
- If you suffer from stuggers, fade or swoon – do not work on the machine.

4.4 Safety regulations for machine operator



Do not start up the machine before having got up the content of this manual.

- Check up whether electric cables are not damaged so as an electric current fading would not cause an injury (electric shock).
- Check up regularly whether safety coverings are properly mounted and if they are undamaged. Damaged coverings repair immediately or replace with other ones.
- Do not start the machine with removed protecting covering.
- Never use deformed or cracked tools.
- Replace blunt tools as soon as possible, for blunt tools often cause injuries or damages .
- Never use tools at higher speed than recommended by its producer.
- Stop all machine functions before replacing of tools.
- Do not remove nor in any else interfere to safety elements like coverings, limit switches, nor practise its mutual blockage.
- Require an assistance for manipulation with parts exceeding your abilities.
- At a storm we recommend : Do **NOT** operate at the machine !

4.5 Safety regulations for maintenance

Get up manual instruction for machine maintenance men in all points before starting any maintenance work.



- Before beginning with maintenance works: Switch off always the main switch and lock it or disconnect the machine by towing off the plug from socket. Herewith you avoid an occasional starting of machine by chance by another else person.



- A qualified person must practise maintenance works on electric parts.
- The machine is not disconnected from voltage when it gets stopped. Switch off always the main switch and lock it or disconnect the machine by towing off the plug from socket.
- Do not clean the machine or its peripheral system if machine is completely out of run as long as the main switch is not switched off or the plug towed out from the mains socket.
- Keep your fingers distant from belts and belts pulleys and from chains and chain wheels. Before exchange of machine electric parts – switch off the main switch, lock it or disconnect the machine by towing off the plug from the socket. For replacing of defected products use those consistent with specification of originals.
- Do not remove or do up blocking of limit switches or other safety components.
- Keep always tidy the space for maintenance including your working place.



- Maintenance works must be practised by qualified personnel in tune with producer's instructions.
- Read through all the instructions manual for maintenance men patiently.
- For an exchange of parts and needy subjects – ensure in advance equal ones with the original type or corresponding with the norms.
- Use only specified brands of lubricant (oil or grease) or with these equal ones.
- Do not use compressed air for machine cleaning or removing of wood chips.
- Control results of maintenance in presence of a responsible person.

4.6 Safety regulations for working place



- Ensure always sufficient working space and free access to the machine and its peripheral device.
- Place the tools and other obstacles at a place for this intended and remote from the machine.
- Ensure sufficient lighting in working space that will not throw shadows or cause a stroboscopic effect. Hygienic norms indicate 500 lx for minimal lighting for safe and quality work.
- Never lay tools or other subjects onto working tables or coverings.

5.0 Transport and storage

5.1 Transport and storage

Be especially careful during transport and manipulation and commit it to qualified personnel especially trained for this kind of action.



by a crane or a high-lift !

You must secure that no person nor subject could be folded by the machine during loading and unloading it !

Never enter the space under the machine lifted up

The machine must be protected against excessive vibrations and moisture during transport. It must be stored indoor in temperature range (minus) – 25°C to + 55°C.

The machine is modularly wrapped in shrinkable folio when transported.

On customer's wish the machine can be packed in a carton or a resistant wooden box.

The machine is delivered partly disassembled. Detached parts are packed and stored at the machine table.

5.2 Machine lifting

The machine or its separate parts can be lifted only with an approved lifting appliance of certified carrying capacity. We recommend you to use :

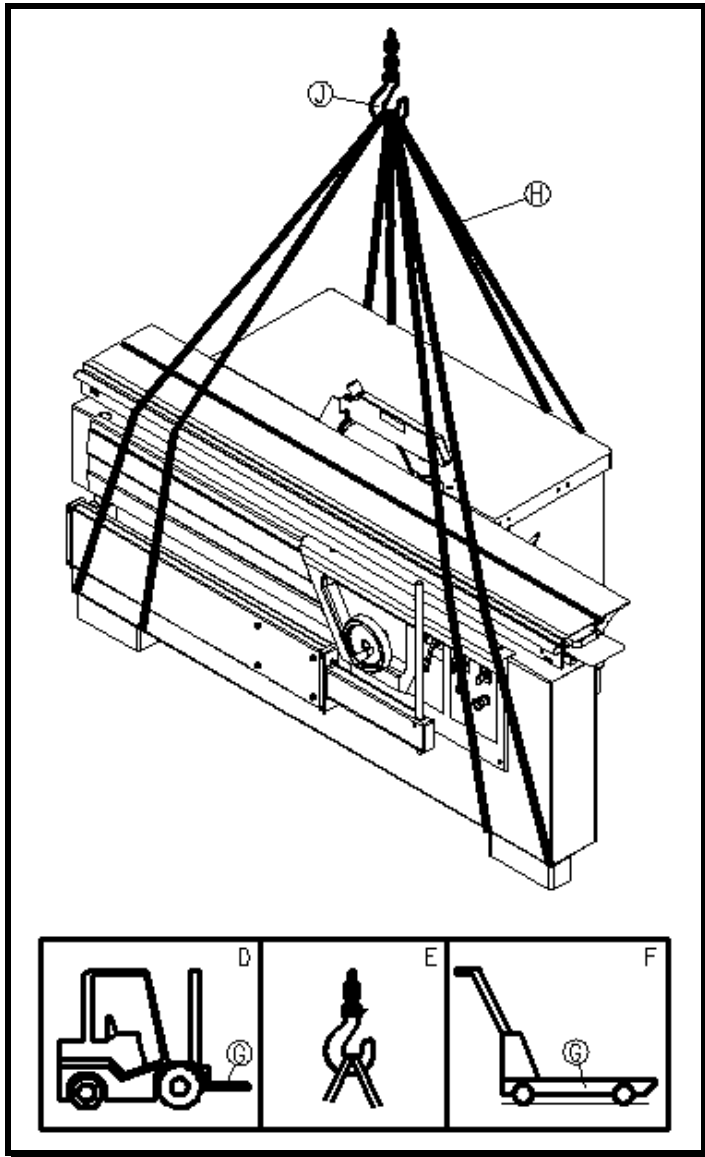
D – high-lift

E – crane or other lifting appliance

F – manual lifting carriage



Use a high-lift of sufficient forks length !



Prepare a high-lift (D) of sufficient forks carrying capacity

- shift forks (G) under the machine, acc. to picture.

When using a crane (E) or a similar lifting mechanism, proceed followingly : - prepare 4 lifting belts (H) of sufficient lifting capacity or endlessly connected steal ropes of minimal length 4 m,

- bend belts onto crane(of needy lift-ing capacity) hook(J) and under machine stand,

- use fillers and rope braces so that ropes would not damage plastic parts

and the sliding table CV3,

- check up the stability of machine hang at a moderate lifting up eventually change the placing of fillers and of rope braces,

- lift the machine carefully and slowly and then relocate it without sudden moving changings to chosen place.

Sawing machine weight :

PF 300L	600 kg
PF 300LE	650 kg
PF 350	680 kg.
PF 350E	730 kg

6.0 Machine

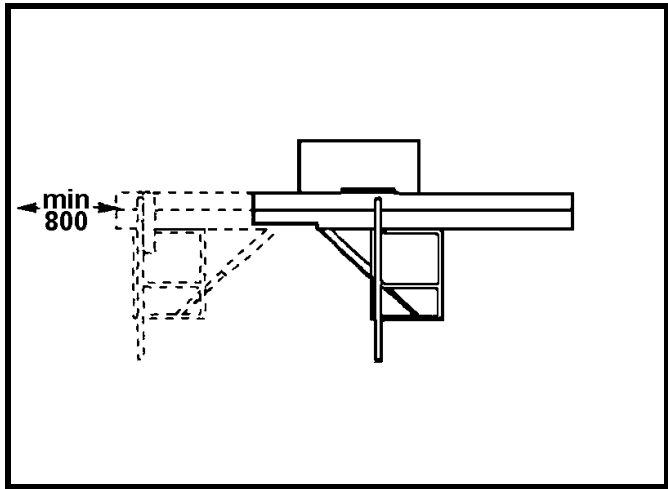
positioning

Remove protecting coat from table and other machine parts with a solvent. Do not use petrol or kindred solvents for this action. They can cut down resistance against corrosion of some machine parts.

The working space extent depends on machine dimensions, intended working operations and dimensions of processed material.

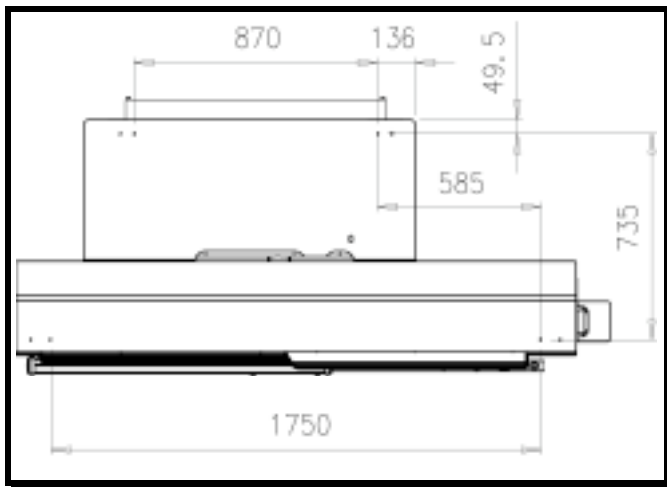
Do not forget to let free a big enough space for installment of a sufficiently effective exhausting unit or hoses connecting with the central exhausting system.

6.1 Working space



It is important to keep a free space of at least 0,8 m, requested as working space surrounding the machine. If a long piece is planed, it is necessary to have a sufficient space in front of and behind the machine in places of material in - and output.

6.2 Machine levelling and fixing



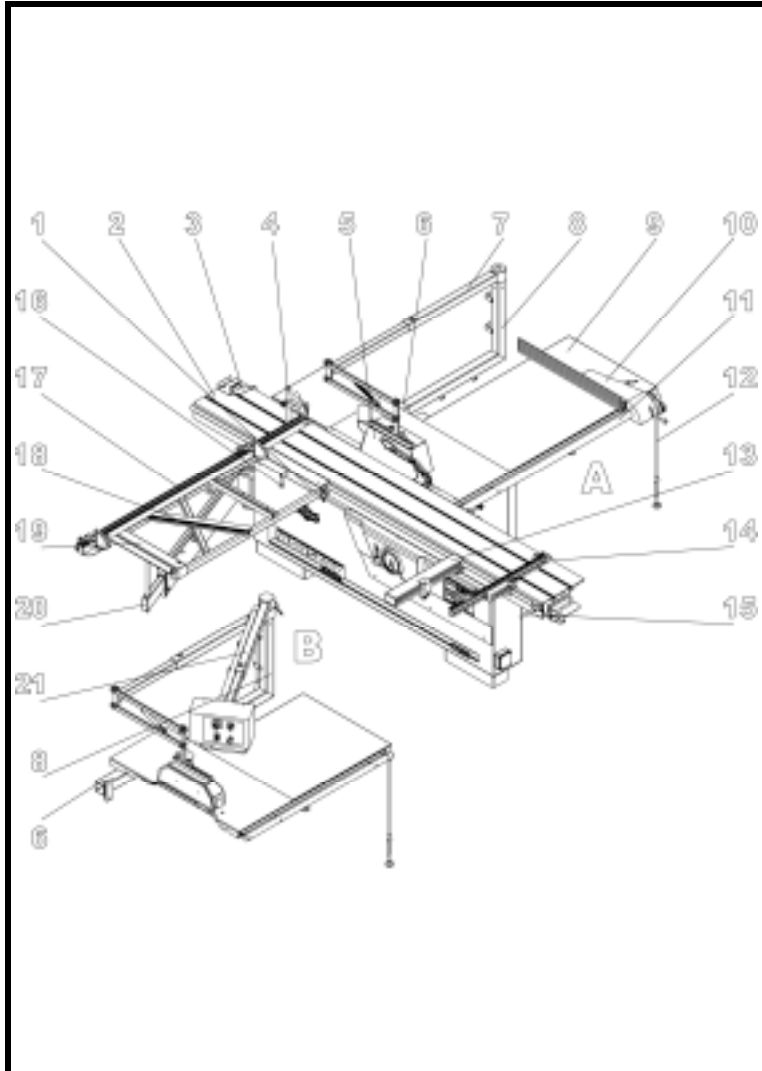
If you are sure that the placing of the machine is good, level the machine by help of forcing-off screws in machine feet. Use steel washers (part of delivery) under levelling screws and balance the machine in a plane with the clearance limit 1 mm/1metre and screw down machine feet into the bottom (anchor the machine).

Attached drawing shows a lay-out of anchoring openings on the machine.

6.3 Installment of demountable parts

Do not mount dismantled parts onto the machine before having read all service instructions manual and learned about the machine thoroughly.

6.3.1 Saw blade guard on the arm R



Mount supporting frame 19 onto sliding table 2, secure it with clips 1 against unhooking on both sides and with arresting axcenter 16 against shifting; frame must be spared with a supporting arm 20

- mount the cross sliding ruler 17 onto the frame 19; mount the fastener 4 into the slot of sliding table 2

- if needed : mount the supporting frame profile 18

- if needed:mount foot stop 3
- put the auxilliary supporting table 13, angular ruler 14 and pusher of sliding table onto the bar of sliding table

- mount the guiding bar 11 of the ruler 10 with the ribbon of a measure onto the table

- mount the table extension 9
- pull on the holder of lengthwise ruler with the ruler over the the right end of guiding bar 11

- according to machine made use supporting foot 12 (saw-ing width 1050; 1500 mm)

according to the made of machine :

picture A - machine with the

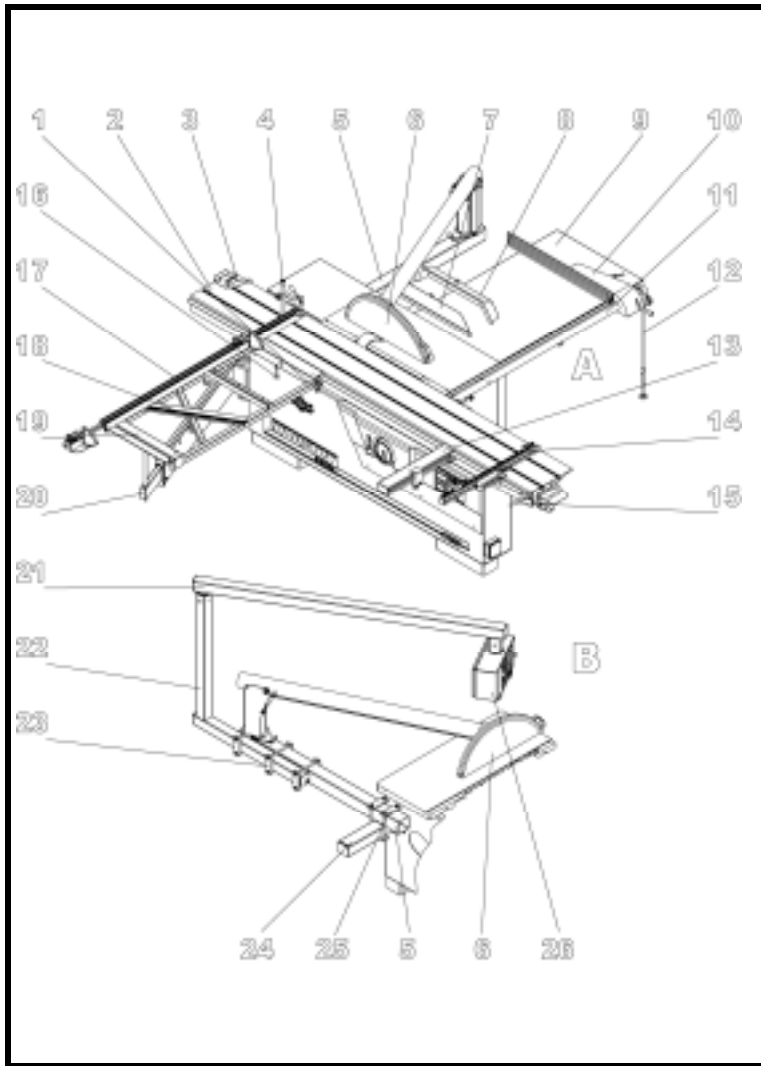
lower controlling :

- mount the arm holder 6 onto the machine frame
- put the lower part of arm 8 into the arm holder 6 and lock it with screws in position of saw-ing width (1050, 1500; 800 mm)
- put the arm 7 with saw blade guard 5 onto the lower arm and fix the position with a screw at the articulation of arms 7 and 8; set the correct position related to saw blade by help of extensile part of frame of saw blades' guard and lock the position with a screw

- picture B - machine with the **upper** controlling :

- the same technique as according to picture A
- put the arm with conrol panel 21 into the articulation of lower arm 8 and saw blades' arm 7 and fix it with the arresting handle of hinge - so as the articulation stays turnable; adjust the length of the arm with the extensile part and lock it with a screw.

6.3.2 Saw blade guard on the arm CPS



Mount supporting frame (19) onto sliding table (2), secure it with clips 1 against unhooking on both sides and with arresting axcenter 16 against shifting; frame must be spared with a supporting arm 20

- mount the cross-sliding ruler 17 onto frame 19 and mount the fastener 4 into the slot 2 of the sliding table
- if needed: mount supporting profile 18 of the frame
- if needed: mount footstop 3
- put an auxiliary supporting table 13, an angular ruler 14 and a pusher of sliding table onto the bar of sliding table
 - mount the guiding bar 11 of the ruler 10 with a ribbon of a measure onto the table
- mount a table extension 9
- pull on a holder of lengthwise ruler with the ruler over the the right end of a guid-ing bar 11
- in accord. with the made of the machine use a supporting foot 12 (for sawing width 1050; 1500 mm)

according to the made of the machine :
picture **A** - machine with a

lower controlling :

- mount the brace 24 of the arm onto the machine frame
- fasten the lower carrying profile 5 of frame with saw blades guard 6; there is possible :
 - to put an auxiliary narrow back guard onto saw blades guard for sawing in vertical
 - or to put an auxiliary extended back guard 8 for sawing with a tilted saw blade

picture **B** - machine with an **upper** controlling :

- the same technique as according to picture A
- fasten the staedy arm 22 and the turnable arm 21 of the control panel 26 onto the lower cyrrying profile by help of clips; the rotary arm 21 can be fixed in the staedy arm by setting screws with locking nuts; the control panel 26 can be fixed in the turnable arm by setting screws with locking nuts; the resistance against their turning motion freedom can be suited by tightening force of screws with locking nuts

7.0 Exhausting connection

An exhausting unit of a minimum volumetric capacity $570 \text{ m}^3\text{h}^{-1}$ and a minimum air stream speed in the hose 20 ms^{-1} for dry particals, and $790 \text{ m}^3\text{h}^{-1}$, at a minimal air stream speed in the hose of 28 ms^{-1} for wet particals, is necessary for a proper functioning of the machine.



**Always operate machine only with running exhausting !
Start the machine and the exhausting unit all at once !**

Use a flexible exhausting hose of diameter 100 mm for connecting to the lower exhaustion outlet branch. For the upper exhausting outlet branch in accordance with the machine made:

- Use a hose of $\varnothing 40 \text{ mm}$ (only for PF 300L; PF 300LE)
- Use a hose of $\varnothing 60 \text{ mm}$ for the saw blades guard on the arm R.
- Use a hose of $\varnothing 100 \text{ mm}$ for the saw blades guard on the arm CPS.

exhaustion capacity (m^3/hour)							
lower exhausting			upper exhausting			in all (m^3/hour)	
hose \varnothing	20m/s	28m/s	hose \varnothing	20m/s	28m/s	20m/s	28m/s
$\varnothing 100$	565	790	$\varnothing 40$	90	127	655	917
			$\varnothing 60$	204	285	769	1075
			$\varnothing 100$	565	790	1130	1580

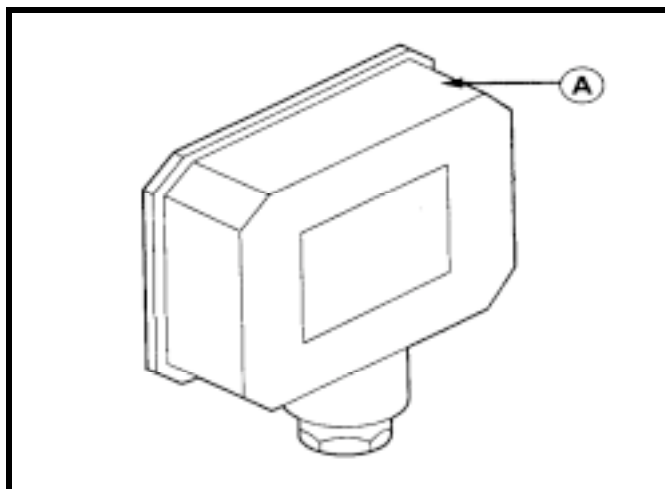
The wooden waste must be liquidated eco-friendly - not to worsen the environment.

8.0 Connecting to mains



Only an electrotechnically qualified person, cognizant of rated norms, can connect the machine to the mains.

8.1 Connection to mains



Make sure that no voltage is at the supply lead before connecting. Unscrew the cover of the terminal board (A), put the connecting cable through - into the box with the terminal board and connect individual phase conductors with corresponding clamps. Connect the protective conductor (yellow-green) to the clamp PE and the central conductor (pale blue) to the clamp N, if required. Cross-sections of phase conductors and of the protective conductor must be conformable with legal standard norms. Check up accuracy of connecting and fasten the terminal cover with screws again.

8.2 Safety of operation



Damaged supplying lead must be replaced immediately by a competent specialist. Machine run with damaged supply cables is dangerous to life and therefore forbidden.

Before establishing the machine to the run make sure that the voltage and frequency stated on the machine rating plate answer to those of supplying mains.



Herewith you avoid

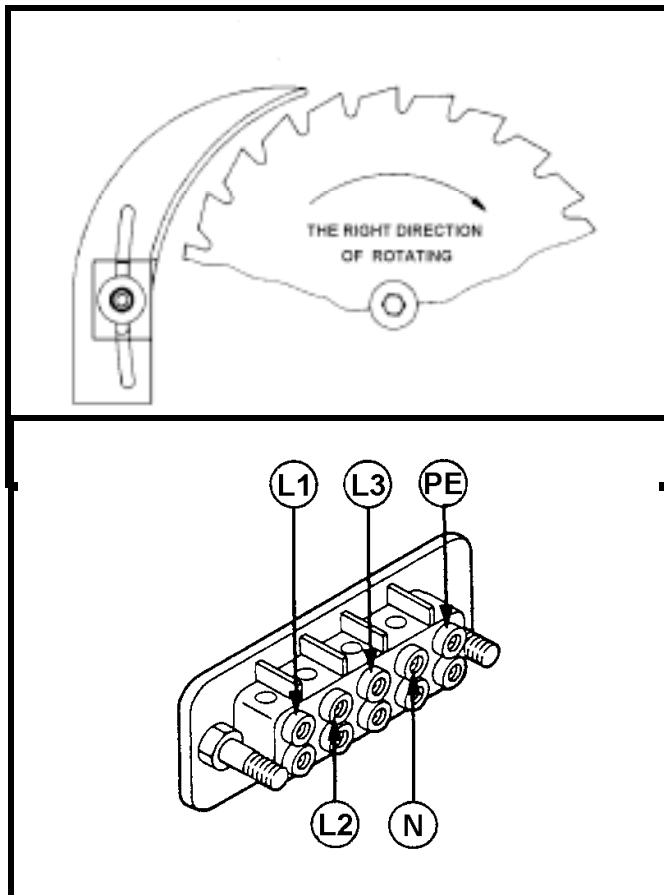
Always switch off the main switch and lock it or disconnect the machine by towing the plug from the socket before tools adjusting and replace and all adjusting, treatment and maintenance works.

an unfought starting of machine by an else person.

8.3 Rotating direction



An injury danger menaces at an improper rotating direction of cutterblock !



When standing at the place of machine operator - the main saw blade must rotate clockwise (= to the right), and the scoring saw blade, if installed, must rotate anti-clockwise (= to the left).

8.4 Changing of saw blade rotating direction

It is possible to change rotating direction of 3-phases motors by exchanging (switch-over) of conductors one instead of another (between 2 black ones or a brown and a black one) on supplying plug or at terminal board. Attention ! Avoid of mistaken changing the yellow-green wire with the phase !

Entirely a specialist qualified in electrotechnics is allowed to make this change and to realize the connecting !



**Start the machine for a flash so as to learn its rotating direction, if possible without tool.
An injury danger menaces at an incorrect rotating direction of saw blade.**

8.5 Protection of electric parts

The electric motor of the saw is equipped with an electric brake, able to stop the spindle in a required time (within 10 s).

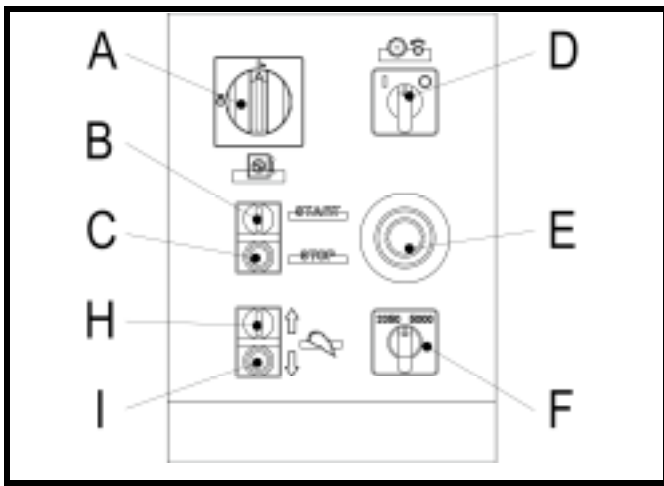
If the electric brake does not work well (the spindle run out is more than 10 s) it is forbidden to work on the machine !

The protection against a dangerous contact of inanimate parts is assured with a self acting disconnecting from the mains according to the norm EN 60 204-1 and IEC 60 364-4-41.

8.6 Machine control

8.6.1 Lower machine control (PF 300L; PF 350)

connecting of the machine to and disconnecting from the mains :



The machine gets connected or disconnected from the mains by switching on/off the lockable main switch **A**.

The machine cannot be started before being connected. The main switch can be locked with a pad lock against an unfought starting of the machine.

The **saw motor** gets started by pushing the green knob **B** at the trigger switch of the main control panel.

The **scorer motor** gets started by a handler **D**.

Until the saw motor is out of run - the scorer motor cannot be started.

Stopping the machine : The machine gets stopped by pushing the red controller **C** at the trigger switch of machine main control panel.

In case of a mains failure the machine is switched off by a tapped coil, means that after the voltage restoring the machine must be switched on again.

The inbuilt breaker will switch off the machine in case of motor overloading. Check up the machine (motor function, blunt tools and the like) if the breaker switches it off several times in a sequence.

Emergency stopping controller : The emergency switch **E** will stay secured in the position OFF after being used and it is necessary to release it by turning of the "mushroom" head. Without this releasing the machine cannot be started again.

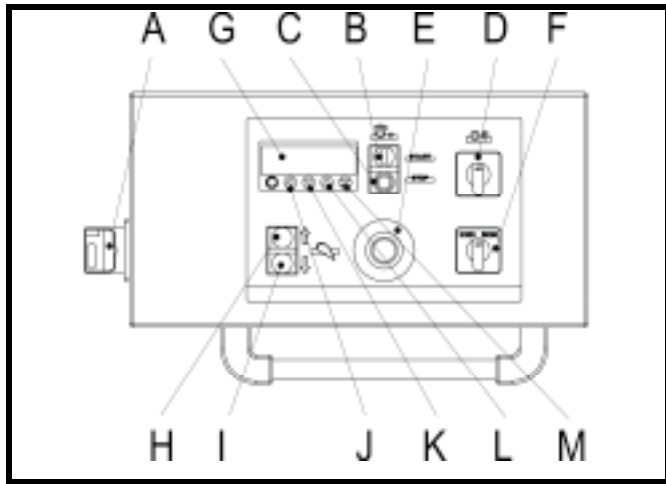
Rotation speed choice : At a machine with a 2-speeds electric motor - the saw blade rotating speed is chosen by the overswitch **F**.

Adjusting of sawing height

Sawing height gets adjusted upward by pusher **H** and downward by pusher **I** always during its being hold pushed. Both limit values of setting are secured by limit switches.

8.6.2 Upper machine control

8.6.2.1 Controllers



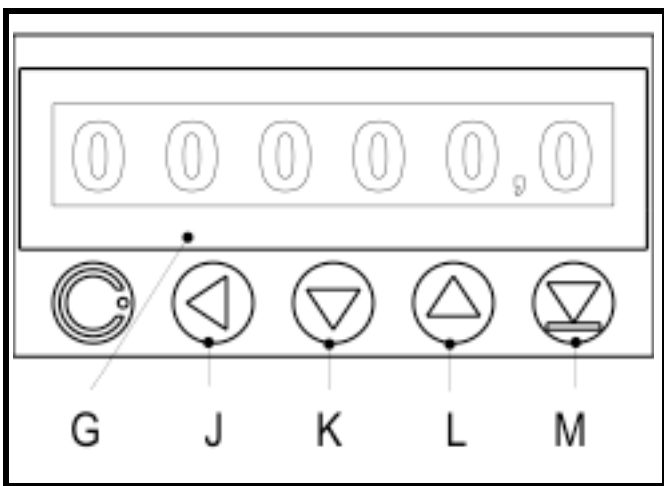
- A main switch
- B green pusher of starter
- C red pusher of starter
- D controller of scoring saw blade
- E controller of emergency stopping
- F controller - rotation speed choice
- G position scaler
- H pusher of saw blade lifting
- I pusher of saw blade letting down

These controllers [except of G], described in chapter 8.6.1, have the same function as those at the low machine control.

8.6.2.2 Saw blades tilting

Tilted position of saw blades is displayed at the display of the position scaler **G** and a change can be done by 2 means :

a) by help of pushers



- Pushing the knob **L** (arrow aimed upward) drives tilting of blades directed from 0° to 45°.
- Pushing the knob **K** (arrow aimed downward) drives tilting blades directed from 45° to 0°.

The tilting of saw blades is being displaced during holding pushed the relevant pusher K; L.

A slow move starts by pushing it going to be overswitched onto a faster move after 3 s. Both limit values of setting are secured by limit switches.

b) by reaching a set up value

Pushing the knob **J** (arrowed to the left) displays the last value of tilted position; it is changed by pushers L (arr. upward) and K (arr. d-rd.); the pusher J (arr. to the left) enables to change the place of decimal point (to change decimal order from tenths to ones, tens, ...). The pusher, with an **arrow upward**, shifts the decimal point **to the left**; the pusher with an **arrow downward**, shifts the decimal point **to the right**.

an example of a setting up :

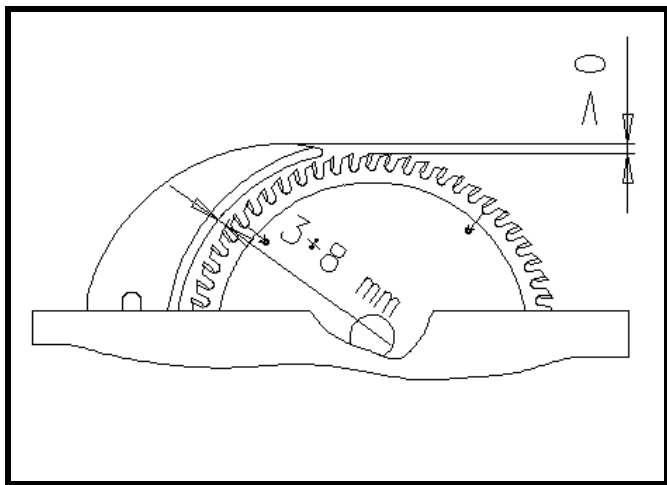
- needed value 22,5°
- last set up value 30°
- (1x) 30 displays and zero (blinks);
- (5x) 35 gets displayed;
- (1x) 3 blinks;
- (1x) 25 gets displayed;
- (1x) 025 displays and zero blinks;
- (2x) 225 displays;
- (4x) 000225 displays and decimal point blinks;
- (1x) decimal point is shifting to the left and needed 00022,5 displays.

- By pushing the pusher M (arrow underlined) the drive of tilting starts a move to a newly input position, that is reached always from one side (from 0° to 45°).
- The blade-tilting-drive can be stopped (during setting the blades' position) by pusher M (underlined arrow).
- A coeval pushing the pusher M (underlined arrow) and L (arrow upward) zeroizes the position scaler, eventually.
- In case of inputting a value besides tilting range (0°- 45°) - the drive stops at one of limit positions by help of limit switches. It is necessary to stop a searching for this wrong input value by a pusher with underlined arrow.
- After inputting a correct value and after pushing the pusher of drive (underlined arrow) - you reach this needed value.

Notice : Do not manipulate with unscribed pushers nor with a mutual combination of them.

9.0 Machine operating and adjusting

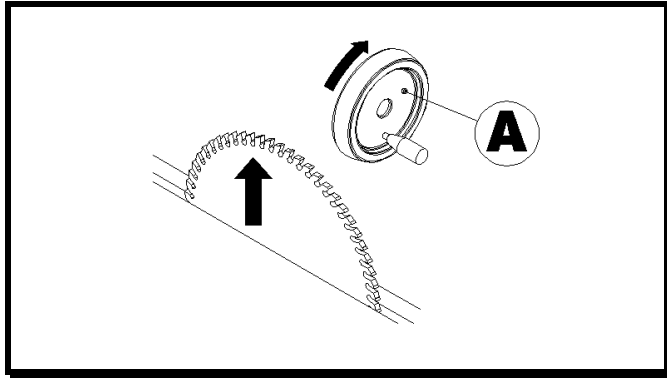
9.1 Riving knife and fender unit adjustment



The riving knife prevents eventual workpiece enclosure behind the saw disk and its claps during sawing. This could come about a back cling. The riving knife must be mounted permanently. It is adjusted by scrolling so that its horizontal distance from the saw disk should be 3- 8 mm and vertically 2 - 3 mm.

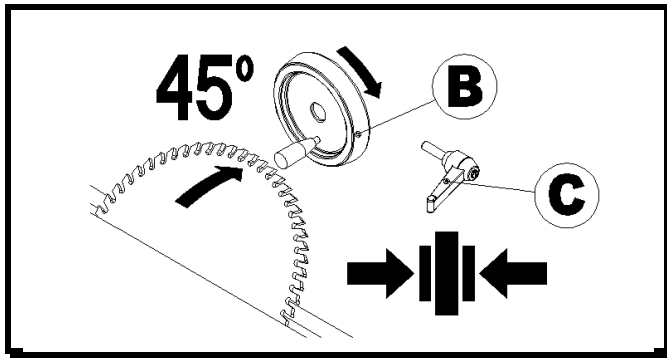
The fender is mounted above onto the riving knife into an "L" shaped groove.

9.2 Height adjustment of main saw blade
9.2.1 by a hand wheel



Height of the main saw blade is adjustable by the hand wheel (A) with the arresting screw
 clockwise = blade height +
 anticlockwise = blade height -
 The height of cut gets always adjusted "from below" that enables to adjust eventual allowance.
 The cut height is usually set so that the jags project from the workpiece.

9.2.2 motor driven adjusting - see ch. 8.6.2 Upper machine control.



9.3 Tilting of blades
9.3.1 by hand wheel

After sinking of scorer saw blade to lower position and releasing of fixing lever (C) at operating wheel (B) - you can tilt the saw blade (by turning with this wheel) within 45°.

Turning to the left = 45° - 90°
 Turning to the right = 90° - 45°.

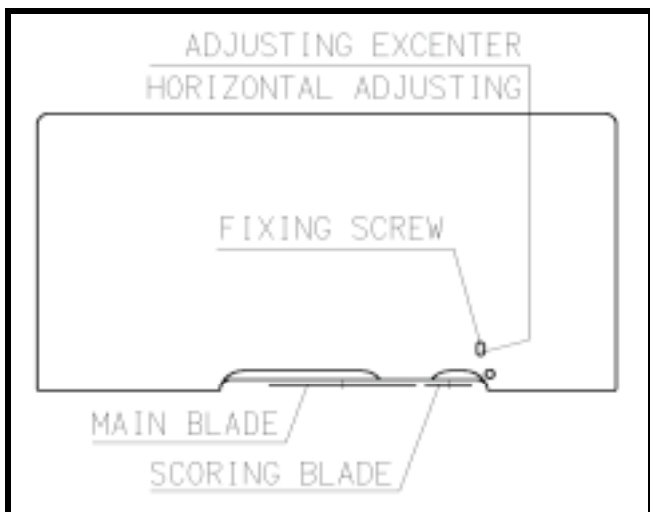
The **indicator** at a scale under the adjusting wheel of saw blade height setting **is decisive** hereat.

After adjusting, tighten the fixing lever again and eject the scoring saw blade. (You avoid a possible collision

between the scorer spindle and the sliding table by tilting the saw blade with a sunk scorer).

Practise the adjusting only when the saw is in a stillstand !

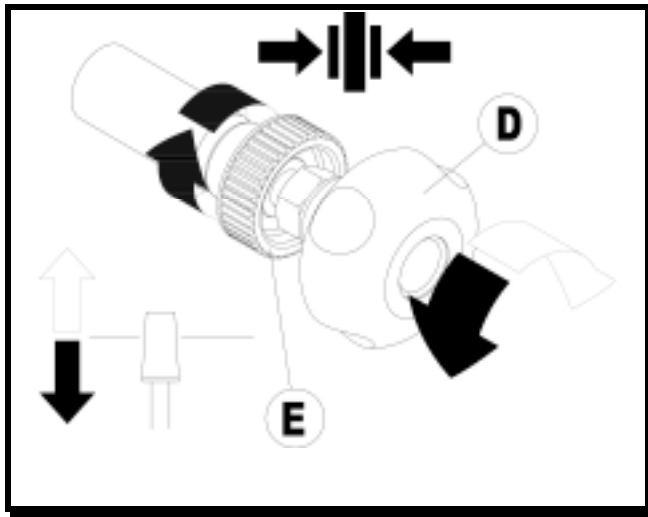
9.3.2 Motor driven adjusting - see ch. 8.6.2 Upper machine control.



9.4 Adjusting of scoring saw blade

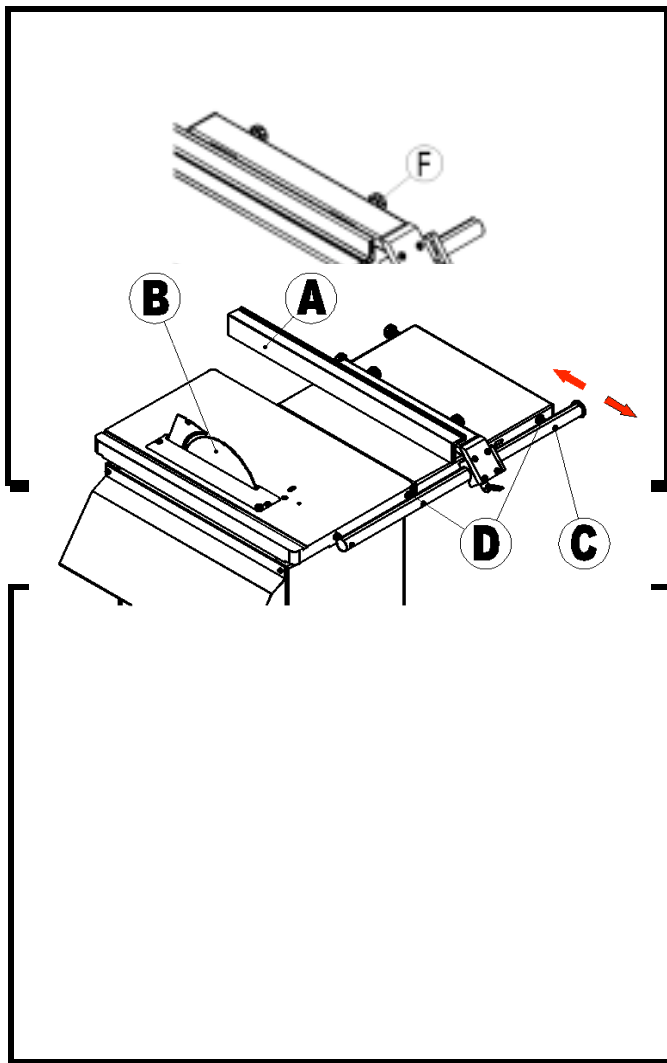
The scoring blade must be aligned with the main blade precisely.

Adjustment is performed by means of an Allen key No. 5 through holes in the table. Release the fixing screw and turn the regulating eccentric piece slowly till the scoring disc is perfectly aligned with the main saw disc. When the adjustment is completed, tighten the screw.



The height of scoring saw blade is adjustable by help of a screw with a hand star (D) and with the arresting nut (E). After releasing of the arresting nut (E) - the scorer lifts up when turning the hand star (D) with the screw to the right and vice versa. Tighten up the arresting nut (E) after setting the required height of the scorer.

A maximal height of blade jags overreaching must not exceed 3 mm!



9.5 Adjusting of lengthwise rule

Required width of cut gets adjusted by sliding of lengthwise rule (A) alongside the leading rod (B). The position is secured with the tightening lever (C). For a more accurate adjusting you can use a fine shifting by help of yoke with a nut (D) and an arresting screw with manual star (E). The rule (A) can be ejected after releasing of arresting screws (F). The L profile can be wound when sawing narrow parts. The width of cut is showed at the measure. Supporting square can be laterally moved after releasing of fixing screws. The measure can be so adjusted to a correct worth related to jags expansion of used saw blade.

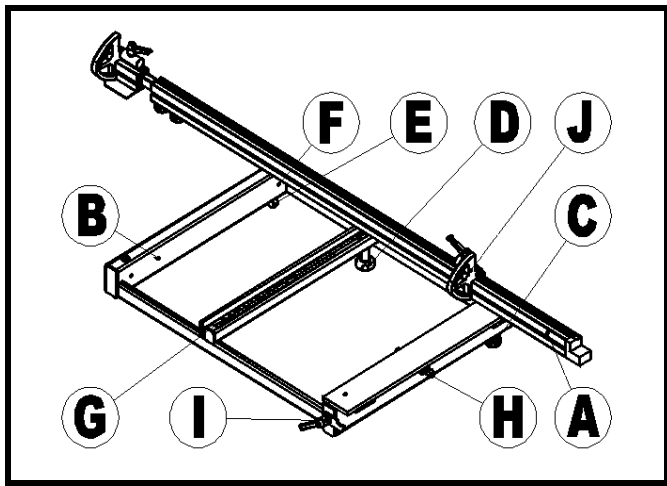
Parallellity adjusting

Parallellity of lengthwise rule (A) with saw blade (B) gets adjusted by a position changing of the rule leading rod by release or insertion of carrying spacers (D) in place of fixing the rule to cast iron table. After release of screws (C) and that of safety nuts you can rotate with the spacer. Screw it in or out to a new dimension of distance. The new position of rod must be fixed by two nuts in the edging of table

extension in place of attachment of rule to table extension.

The rule divergence, set by producer, is c. 0,1÷ 0,2 mm/ 1m.

9.6 Adjusting of cross-rule



Adjustment of perpendicularity :

Cross ruler (A) is placed on supporting frame (B) and its perpendicularity in relation to the saw disc is adjusted by turning eccentric backstop with centring sprung pin (E) after arresting stars (C and D) and arresting screw (F) have been released. Do not forget to tighten the arresting components again after the position of the ruler has been adjusted.

Setting of cutting angle: After arresting stars (C and D) have been released and the centring sprung pin (E) has been pulled to the lower position (it will remain in this position after being turned slightly), the cross ruler may be

adjusted under the angle $0^{\circ} \pm 45^{\circ}$ according to scale (G). Do not forget to tighten the arresting components again after the position has been adjusted.

Setting of backstops: Backstops of cutting width (J) are adjustable after the arresting lever has been released by being shifted in a groove of the cross ruler profile (A) while the value of the width is being read on the scale. Do not forget to tighten the arresting components again after the position has been adjusted.!

Adjustment of the zero position: In the perpendicular direction of cross ruler (A) to the saw disc its position is secured with sprung centring pin (E). If the cutting width set by the backstop does not correspond to the reality (e.g. due to a change in the saw disc width), the adjustment may be altered after releasing two arresting screws on the shim in the ruler profile groove in the place of the sprung centring pin. Do not forget to tighten the arresting components again after the position has been adjusted.

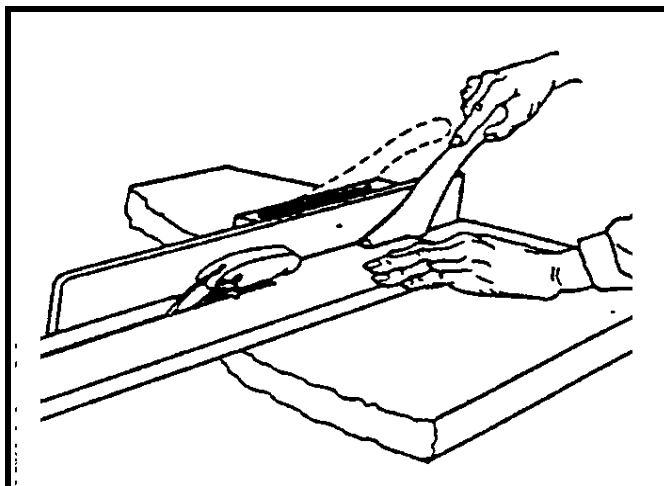
Supporting frame position: Supporting frame (B) with cross ruler (A) may be shifted along the supporting bar of the machine after arresting lever (H) has been released. Securing callipers (I) prevent supporting frame (B) from falling off the supporting rod.

The position of cross ruler (A) may also be altered by its being moved to the other side of frame (B).

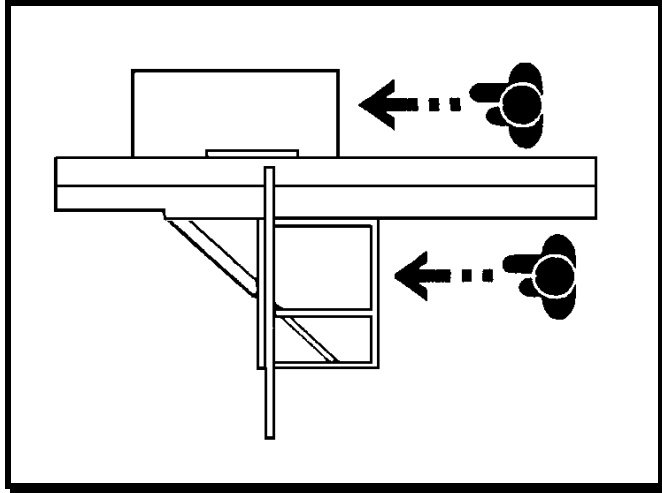
9.7 Fixtures and feeders

A pusher (the machine delivery basic accessories) must be used for pushing (at longitudinal sawing) of workpieces narrower than 120 mm.

We recommend you to make a special fixture for cutting of the wedges :
the minimum fixture length - 300 mm
width - 170 mm.



9.8 Working places



Picture shows the position of working place at the machine.

9.9 Safety instruments

When working on the saw bench you are obliged to wear short strengthened apron and safety goggles protecting eyes. It is advisable to use an adequate protection of hearing and recommended working footwear. It is forbidden to use working mantles.

9.10 Forbidden manipulations

It is forbidden on the machine



- to make any treatments of machine safety elements not approved by the producer,
- to make any manipulations in contrary with this manual safety instructions (chp. 3.0),

- to touch or interfere rotating saw blade or its near surroundings and other moving parts,
- to saw other material than wood or those on its base,
- to overload the machine by sawing of too large workpieces,
- to remove shavings from tools surroundings by hand or any thing at a running machine,
- to use other saw blades than recommended by the machine producer !!

10.0 Tools

10.1 Recommended tools



Using of saw blades from HSS steel is forbidden for its high risk to get broken !

Saw blades have to be marked with the manufacturer's name or logo (marking) and with the max. admissible rotation speed. Proper tools for this machine are saw blades :

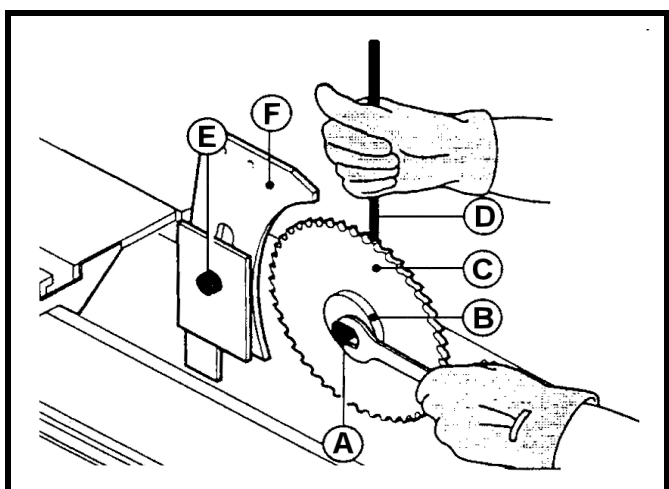
for **PF 300L** and **PF 300LE**

the main saw blade $\varnothing 300 \times 3,2/2,2 \times 30$ - 96 jags (jags' number can be chosen according to cut up workpiece material attributes) and scoring saw blade $\varnothing 100$ with clamping bore $\varnothing 20$ mm and width 2,8 up to 3,6 mm (adjustable 2-piece scoring blade).

for **PF 350** and **PF 350E**

the main saw blade $\varnothing 350 \times 3,6/2,5 \times 30$ - 108 jags (jags' number can be chosen according to cut up workpiece material attributes) and scoring saw blade $\varnothing 100$ with clamping bore $\varnothing 20$ mm and width 2,8 up to 3,6 mm (adjustable 2-piece scoring blade).

10.2 Saw blades exchange



Slide out the sawing unit by the hand wheel to the highest plumb position. Shift the sliding table to the back- stop position, remove the transport securing screw, lock off and tilt out the saw blades protecting cover and insert the fixing lever (D-from the accessories) into the opening of the main spindle, so that it cannot rotate. Unscrew the nut (A) by turning it in clockwise direction (left thread), take away the flange (B) and the old saw blade (C).

Before setting the new saw blade, make sure that it is perfectly clean and without bulging. Tighten the saw blade, check up - and eventually arrange - adjusting of riving knife (F) with screws, tilt back the protecting

cover of saw blades, placed under the sliding table (E), and fix it with a screw. When exchanging the scoring saw blade, proceed likewise.

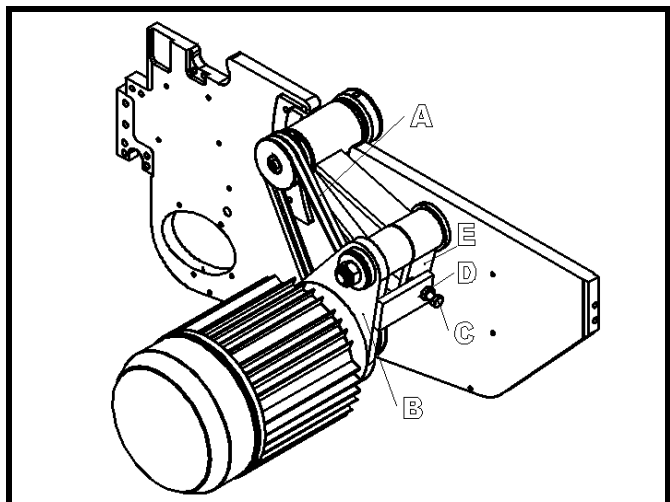
WARNING: The **scorer spindle** has **right** thread (the scorer gets released anticlockwise) !

11.0 Maintenance and repairs



Always disconnect the machine from the network before any maintenance or repair. Switch off the machine and lock up the main switch ! So you avoid an occasional starting of the machine by somebody else.

11.1 Tightening of saw bench V-belt



Dismount the rear machine covering and release the fixing nut D. By help of a forcing-off screw (C) between motor holder (B) and spindle body (E) you can change the inter-pulleys distance and so tighten the belts (A). When you push by hand to a middle of a properly tight V-belt by a force of 20 N (2 kg) - it should sag of nearby 10 mm. After tightening it is needed to tighten the fixing nut again and to mount the machine rear covering.

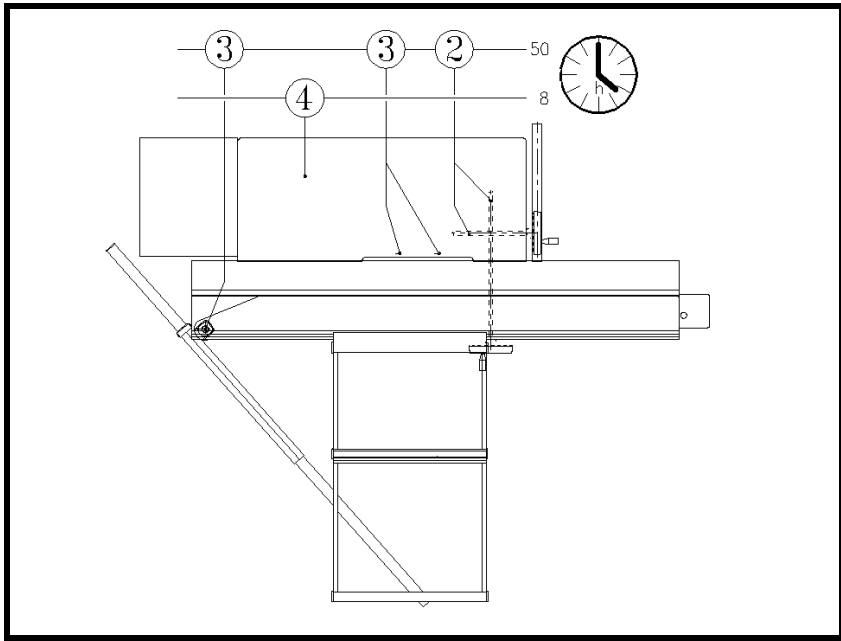
11.2 Cleaning and lubricating

Clean the machine regularly. Oil the bars, gudgeons, screw bars and other parts amenable fret. The oiling frequency depends on the way of working, but apply it minimally once a month. Bearings of electric motors and shafts have a permanent grease filling and are sealed (closed). For this reason - do not grease them. Clean the tables from resin with suitable solvent - for example by turpentine or petroleum, or by other suitable solvent according to your need. Take care that the belts are not fouled (dirty) with oil or grease. In case it happens, clean the belts only with paper or dry them up. Clean the machine from dust with a vacuum cleaner. Do this regularly once a week.

Lubrication points - surway table

	spindle bearings	motion screws	yokes, shoes pivots of tilting and the like	table plate	spindles and flanges (distance rings)
lubrication point	1	2	3	4	5
needed act period	(hour)	(hours)	(hrs.)	(hrs.)	(hrs.)
permanent grease filling	at exchange				
to spread		50			
lubricate by oil can			50	8	without tools /out of machine run
plastic lubricant/ oil	LV-2-3	LV-2-3	OL-B5	OL-B5	OL-B5
equivalent	ISO-L-XCBEA 3		ISO – LAN 68		

Lubrication points - scheme to the table of periods



11.3 Remedy of faults

No defect should arise if you operate the machine properly and practise suitable maintenance regularly. In case that the sawdust sticks onto saw blade or the exhausting hose is filled up - switch off the electric motor before beginning of a repair, otherwise it could get damaged. Switch off the electric motor immediately, if the machine is getting jammed with the workpiece. The blunt saw blade is often a cause of the motor overheating. If the machine embodies increased vibrations, check its placing, fixing, or fixing and balance of tools.

The machine does not work:

Check the electric installation and the connection to the mains.

Machine output is insufficient:

Tools are blunt.

a too big chip (too big speed~force of feeding) - It is necessary to consider the workpiece cross-section and the hardness of wood and feed the workpiece more slowly.

Driving belts are not tight enough.

The electric motor does not give a full output. - Consult a specialist.

The machine vibrates:

Tools are unbalanced - not clear clamping flats of tool(s).

Tools are blunt.

The machine is installed at an uneven surface.

Workpiece strikes the riving knife :

Badly chosen or mounted riving knife.

12.0 Machine delivery extent

A complete machine,
accessories (below listed),
service instructions manual of the machine,
special accessories (if ordered).

12.1 Accessories

title		pcs.	note
wrench 13 x 16		2	
wrench 18 x 24		1	
wrench 27 x 30		1	
wrench 3		1	
wrench 4		1	
wrench 5		1	
wrench 6		1	
wrench 10		1	
holding lever		1	for saw blade changing
washer		4	under levelling screws
plastic pusher		1	
cartoon box	200x400x160	1	for added packing
zipped PE bag	250 x 350 mm	2	for manual brochure + added packing

13.0 Special accessories

Big protractor with a ruler,
extension of sliding table,
auxiliary supporting table,
frame roller,
supporting profile of the frame,
auxiliary backstops of the frame ruler,
digital metering of lengthwise ruler setting,
digital metering of supporting frame cross ruler setting.

14.0 Spare parts

When ordering spare parts : Mention always the machine production number, type and year (from the machine rating plate) and the part position number in the spare parts drawing. If an enclosure with listed spare parts is a part of this manual, it is available to state the numbers and names of spare parts according to this list.

15.0 Guarantee

Works and operations, not mentioned here, involve a written agreement of the ROJEK Co., Masarykova 16, 5170 50 Castolovice, the Czech Republic, Europe. Every machine and equipment is provided with a guarantee certificate. It is important to fill the guarantee certificate just during purchasing it with a respect of possibility to set up an eventual guarantee claim and for the sake of products safety. If the machine is not installed in a proper way, it may cause a damage on it own or an injury to the operator. In this case we do not bear any responsibility. Possible guarantee claims have to be asserted at the machine seller. When the guarantee period expires, you can get the machine repaired at any specialized repair shop.

16.0 Dealing with packings and machine service life expiry

16.1 Dealing with packing

Our products are transported in packing from cartoon or PE folio. Producers of these packings issued a legal declaration about their product. They concluded a contract about filling duties of taking back and usage of the vaste from packings with an authorized company. One of duties of these companies is also to inform the clients how taking it back is assured.

16.2 Dealing with machine

The service life of this machine depends particularly on the way of use, working engagement intensity, frequency and kind of applied maintenance. The producer is responsible to the machine user for evident losses, caused by the machine, for ten years.

The machine user is obliged to guarantee an eco-friendly machine liquidation accord-ing to the country's in question laws about leavings not to endanger the environment.

We recommend to run on as follows :

- 1) Demount all plastic parts and consign it to relevant accumulating containers.
- 2) Separate resting iron from non-iron parts and commit it to a specialized company for a separate liquidation.

**LIST OF ELECTROTECHNICAL PARTS
PF 300L, PF 300LE, PF 350, PF 350E**

marking	function	type, technical data	3,0 kW pcs.	4,0 kW pcs.	5,5 kW pcs.	supplier	substitute	note
ELECTRIC MOTORS								
M1	saw drive	CEG M100 – 2 3,0 kW 3x400/230V 6,55/11,3A 50/60Hz 2830/min B14	1	-	-	CEG Italy		
		CEG M100L-2 4,0 kW 3x400/230 V 9,1/15,7A 50,60 Hz 2850 /min IM B14	-	1	-			
		CEG M90L-2 5,5 kW 3x400/230 V 12,2 / 21A 50,60 Hz 2840 /min IM B14	-	-	1			
M2	scorer drive	CEG M71b 0,5 kW 3x400/230V 1,33/2,3A 50/60Hz 2800/min B14	1	1	1	CEG Italy		
M3	lifting drive	Systém fi.RONY Hronov	1	1	1	RONY Hronov		
M4	tilting drive	Systém fi.RONY Hronov	1	1	1	RONY Hronov		
SWITCHES								
	distributor	acc. to machine variant	1	1	1	BaK Systémy		
CONDUCTORS								
W1-10	controlling circuits	H05VV-K1X1	according to machine variant				CYSY 2A x 1mm ²	
W11-20 W31-40	power circuits	H05VV-K3G2,5	acc. to m. v.				CYSY 3Bx2,5mm ²	
		H05VV-K4G2,5	acc. to m. v.				CYSY 4Bx2,5mm ²	
		H05VV-K4G1,5	acc. to m. v.				CYSY 4Bx1,5mm ²	
		H05VV-K5G1,5	acc. to m. v.				CYSY 4Bx1,5mm ²	
		H05VV-K7G1,5	acc. to m. v.				CYSY 5Bx1,5mm ²	
W21-30	protecting circuits	H05V-K1G1,5	acc. to m. v.				CYA 1,5 mm ²	
XT1	terminal	terminal box	1	1	1	GEWISS		

Note : The producer reserves himself the right for a change of part(s) and of its supplier.