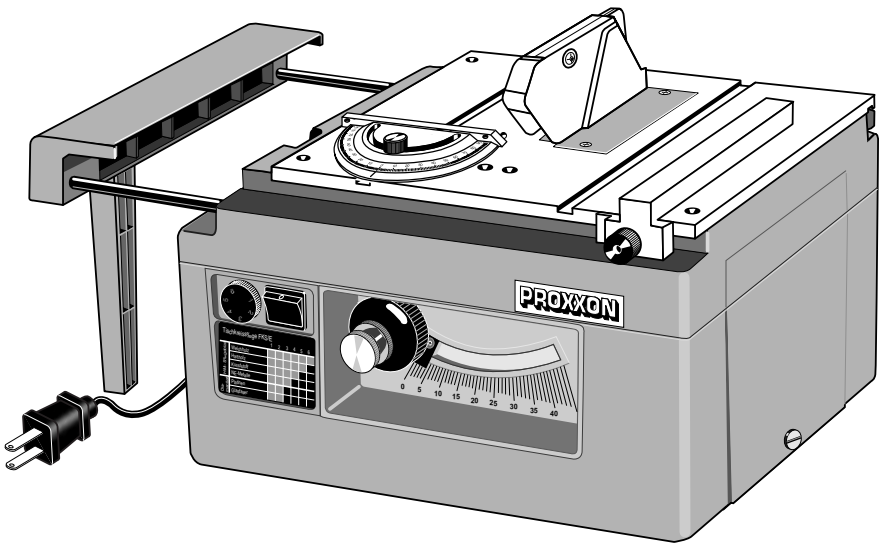


# PROXXON

FKS/E



Manual

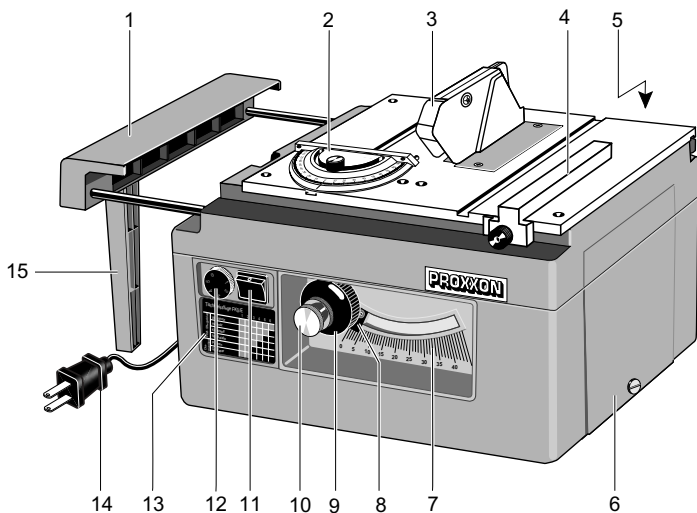


Fig. 1

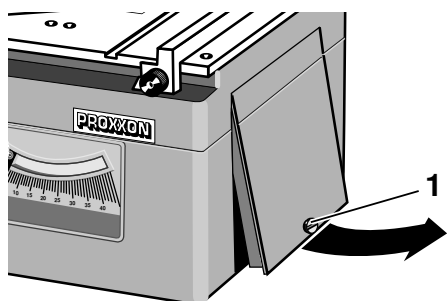


Fig. 2

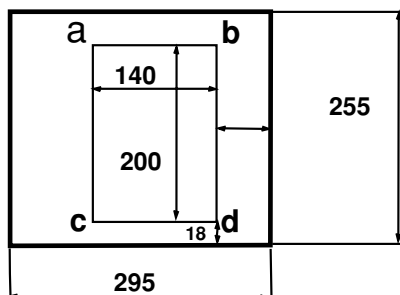


Fig. 3

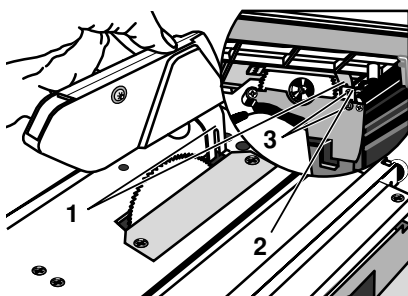


Fig. 4

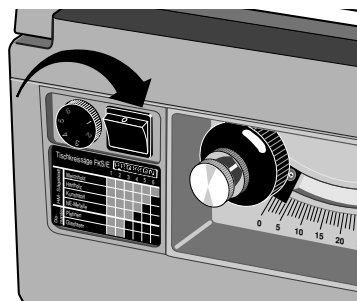


Fig. 5

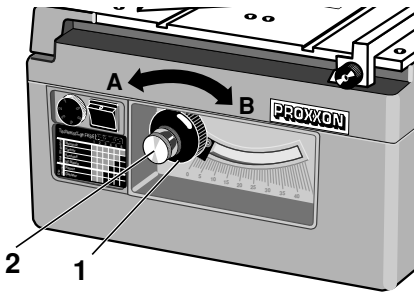


Fig. 6

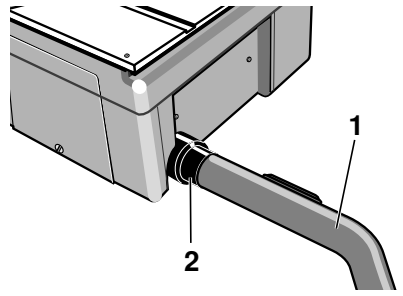


Fig. 7

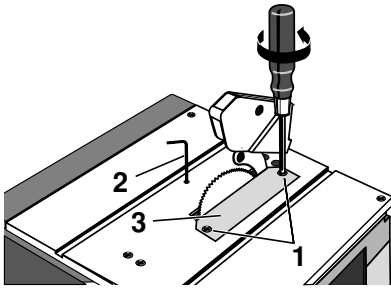


Fig. 8

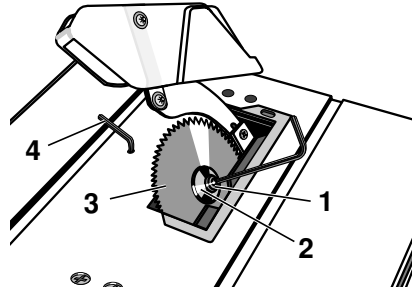


Fig. 9

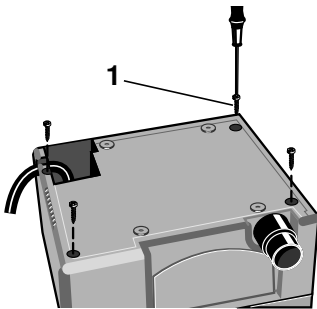


Fig. 10

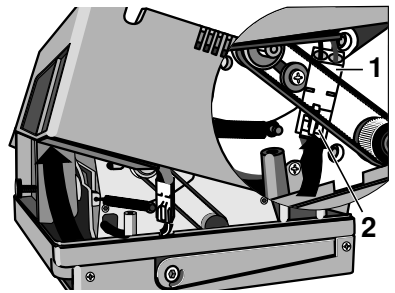


Fig. 11

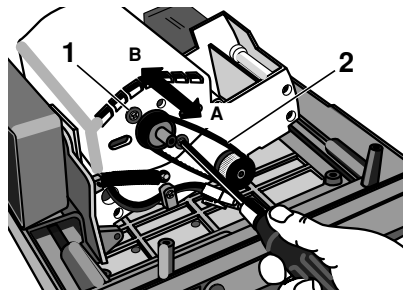


Fig. 12

# Operating Instructions

## Circular saw FKS/E

### Foreword

Dear Customer,

The PROXXON circular saw FKS/E is the ideal device for precise, even cuts in wood, plastic or non-ferrous metals. To use the saw safely and correctly, please read the attached safety regulations and control note carefully before using the device.

This instruction manual covers:

- safety regulations
- operation and maintenance
- spare parts list

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### Please read carefully!

Using this instruction manual will

- **make it easier for you** to get used to the machine
- **help prevent** faults occurring due to improper use and
- **increase** the service life of your machine.

Keep this instruction manual in an easily accessible place.

Only operate this machine if you are qualified to do so and follow the guidelines in this instruction manual.

PROXXON does not accept responsibility for the safe functioning of the machine

- if it is handled in a manner which constitutes improper use,
- if it is used for other purposes which are not specified in the instruction manual,
- if the safety regulations are not observed.

Warranty claims are invalid if

- the machine is incorrectly operated,
- the machine has not been sufficiently maintained.

In the interests of your safety, please always observe the safety regulations.

Only use genuine PROXXON spare parts.

We reserve the right to make further alterations for the purpose of technical progress.

We wish you every success with your machine.

### Safety regulations

1. KEEP GUARDS IN PLACE and in working order.
2. REMOVE ADJUSTING KEYS AND WRENCHES. Form habit of checking to see that keys and adjusting wrenches are removed from tool before turning it on.
3. KEEP WORK AREA CLEAN. Cluttered areas and benches invite accidents.
4. DON'T USE IN DANGEROUS ENVIRONMENT. Don't use power tools in damp or wet locations, or expose them to rain. Keep work area well lighted.
5. KEEP CHILDREN AWAY. All visitors should be kept in safe distance from work area.
6. MAKE WORKSHOP KID PROOF with padlocks, master switches, or by removing starter keys.
7. DON'T FORCE TOOL. It will do the job better and safer at the rate for which it was designed.
8. USE RIGHT TOOL. Don't force tool or attachment to do a job for which it was not designed.

9. **USE PROPER EXTENSION CORD.** Make sure your extension cord is in good condition. When using an extension cord, be sure to use one heavy enough to carry the current your product will draw. An undersized cord will cause a drop in line voltage resulting in loss of power and overheating. Table 1 shows the correct size to use depending on cord length and nameplate ampere rating. If in doubt, use the next heavier gage. The smaller the gage number, the heavier the cord.
10. **WEAR PROPER APPAREL.** Do not wear loose clothing, gloves, neckties, rings, bracelets, or other jewelry which may get caught in moving parts. Non-slip footwear is recommended. Wear protective hair covering to contain long hair. Exception: The reference to gloves may be omitted from the instructions for a grinder.
11. **ALWAYS USE SAFETY GLASSES.** Also use face or dust mask if cutting operation is dusty. Everyday eyeglasses only have impact resistant lenses, they are NOT safety glasses.
12. **SECURE WORK.** Use clamps or a vise to hold work when practical. It's safer than using your hand and it frees both hands to operate tool.
13. **DON'T OVERREACH.** Keep proper footing and balance at all times.
14. **MAINTAIN TOOLS WITH CARE.** Keep tools sharp and clean for best and safest performance. Follow instructions for lubricating and changing accessories.
15. **DISCONNECT TOOLS** before servicing; when changing accessories, such as blades, bits, cutters, and the like.
16. **REDUCE THE RISK OF UNINTENTIONAL STARTING.** Make sure switch is in off position before plugging in.
17. **USE RECOMMENDED ACCESSORIES.** Consult the owner's manual for recommended accessories. The use of improper accessories may cause risk of injury to persons.
18. **NEVER STAND ON TOOL.** Serious injury could occur if the tool is tipped or if the cutting tool is unintentionally contacted.
19. **CHECK DAMAGED PARTS.** Before further use of the tool, a guard or other part that is damaged should be carefully checked to determine that it will operate properly and perform its intended function - check for alignment of moving parts, binding of moving parts, breakage of parts, mounting, and any other conditions that may affect its operation. A guard or other part that is damaged should be properly repaired or replaced.
20. **DIRECTION OF FEED.** Feed work into a blade or cutter against the direction of rotation of the blade or cutter only.
21. **NEVER LEAVE TOOL RUNNING UNATTENDED. TURN POWER OFF.** Don't leave tool until it comes to a complete stop.

## **Additional safety instructions**

This machine is for indoor use only. Do not expose to rain or use in damp locations.

Use only accessories recommended for this scroll saw. Follow the instructions that accompany accessories. Use of improper accessories may cause hazards.

Do not attempt to modify this tool or create accessories not recommended for use with this tool. Any such alternation or modification is misuse and could result in hazardous condition leading to possible serious injury.

To avoid injury from unexpected starting or electrical shock, do not plug the power cord into a power source receptacle during unpacking and assembly. This cord must remain unplugged whenever you are working on the circular saw.

If any part is missing or damaged, do not plug the circular saw in until the missing or damaged part is replaced, and assembly is complete. To avoid electrical shock, use only identical replacement parts when servicing grounded tools.

For your safety, never connect the plug to the power source receptacle until the assembly and adjustment steps are completed, and you have read and understood the safety and operating instructions.

To avoid injury from accidental start, make sure the switch is in the OFF position and the plug is not connected to the power source receptacle before changing any parts or tools (i. e. saw blade).

To avoid injury from accidental start, make sure the switch is in the OFF position and the plug is not connected to the power source receptacle before making any adjustments.

For your own safety, do not plug the tool into the power source receptacle or insert the switch key, until the parts are correctly installed and adjustments have been made.

For your own safety, use only saw blades sized and recommended for this circular saw. Follow the instructions that accompany the blades.

To avoid fire or toxic reaction, never use gasoline, naphtha, acetone, lacquer thinner, or similar highly volatile solvents to clean the circular saw.

Do not allow brake fluids, gasoline, or penetrating oils to come in contact with the plastic parts. They contain chemicals that can damage or destroy plastics.

Only qualified service technicians should do all electrical or mechanical repairs.

When servicing use only PROXXON replacement parts. Use of any other parts may create a hazard or cause product damage.

Any attempt to repair or replace electrical parts on this lathe may create a hazard unless repair is done by a qualified service technician. Repair service is available at your PROXXON service center (You find the address at the back of this manual).

To reduce the risk of electric shock, this equipment has a polarized plug (one blade is wider than the other). This plug will fit in a polarized outlet only one way. If the plug does not fit fully in the outlet, reverse the plug. If it still does not fit, contact a qualified electrician to install the proper outlet. Do not change the plug in any way.

## **Additional safety instructions for table saws:**

### **WARNING!**

For Your Own Safety Read Instruction Manual Before Operating Saw!

1. Wear eye protection.
2. Use sawblade guard and spreader for every operation for which it can be used, including all through sawing.
3. Keep hands out of the line of saw blade.
4. Use a pushstick when required.
5. Know how to reduce risk of kickback
6. Do not perform any operation freehand.
7. Never reach around or over saw blade.

### **Note:**

Keep this instruction manual in an easily accessible place. Only operate this machine if you are qualified to do so and follow the guidelines in this instruction manual.

## **Description of the machine**

We recommend original PROXXON replacement saw blades.

### **Legend Fig. 1**

1. Sawing table extension
2. Stop angle
3. Saw blade protection hood
4. Stop rail
5. Mouth piece for vacuum cleaner
6. Flap
7. Scale
8. Locking button for sawing angle
9. Counter nut for saw blade height adjustment

10. Adjustment button for saw blade height adjustment
11. ON/OFF switch
12. Speed control knob
13. Speed chart
14. Mains supply cable
15. Support leg for sawing table extension

The PROXXON fine-cut table saw FKS/E cuts all types of wood, aluminum, ceramics and plastic materials when used with the appropriate saw blades. The design of the machine allows universal adjustment so that quite difficult cuts can be performed most sensitively. The saw dust can be sucked off at the rear of the machine. The sturdy table made of die cast aluminum has a machined surface for precise work. The saw blade adjustment allows miter cuts up to 45°. For larger work pieces the table can be extended. The speed adjustment knob allows infinite adjustment of rotary speeds, exactly suitable for the respective material.

### Technical data:

Rotary speed:	4,400 to 6,800 rpm
max. cutting height (in wood with blade Ø 3 <sup>5</sup> / <sub>32</sub> " , 80 mm):	1" (25 mm)
max. saw blade Ø	3 <sup>11</sup> / <sub>32</sub> " (85 mm)
Sawing angle adjustment:	up to 45°
Voltage:	115 Volt, 60 Hz
Power consumption:	approx. 1,6 Amps. 200 W
Noise level:	≤ 70 dB (A)
Intermittent operation	10/15 min (= 10 min operation, 15 min rest)

### Dimensions

Table:	11 <sup>1</sup> / <sub>2</sub> " x 9 <sup>1</sup> / <sub>2</sub> " (295 x 240 mm)
with sawing table extension:	19 <sup>5</sup> / <sub>8</sub> " (500 mm)
Weight:	11.46 lb (5.2 kg)

### Accessories available from PROXXON

For hard and soft wood, plastics:	Super cut blade, 80 teeth, 3.35" dia.	No. 28731
For hard and soft wood, plastics:	Tungsten carbide tipped blade (TCT), 12 teeth, 3.15" dia.	No. 28733
For aluminium, hard wood, laminates, plastics:	Tungsten carbide tipped blade (TCT), 24 teeth, 3.15" dia.	No. 28734
For glass, stones and tiles:	Diamond coated blade, 3.35" dia.	No. 28735

### Operation

#### Fastening the saw

Fasten the saw to the work table

#### **Attention:**

Before starting to work open the lateral cover 1 (Fig. 2) and remove the transport lock from inside the machine housing.

#### **Warning:**

The table saw must be securely fastened on a strong working table!

#### **Warning:**

The operation of non-fastened machines is strictly prohibited.

**Warning:**

The screw is spring loaded and pops slightly up.

1. Screw the locking screw 1 (Fig. 2) for the flap out until the flap can be removed.
2. Take the four fastening screws out from inside the flap.
3. Drill 4 bores of dia. 15/64" according to the sketch (Fig. 3).
4. Fasten the table saw to the work plate by screwing the screws in from underneath.

**Assembling the saw blade protection**

Always pull the mains plug out when working on the machine.

1. Open the flap (Fig. 2).
2. Push the protection carrier 1 (Fig. 4) through between motor housing and holding plate 2 (Fig. 4).
3. Tighten the fastening screws 3 (Fig. 4).

**Working with the saw**

**Warning!**

Do not work without the saw blade protection.

Always pull the mains plug out when servicing or cleaning the machine.

Do not let the machine run unattended.

**Warning!**

Use only perfect saw blades. Replace blunt, defective or deformed saw blades immediately. Danger of injury!

**Attention:**

Match the feed sensitively to the material to be cut and make sure, that the motor speed varies only slightly.

Special care must be taken when cutting into the work piece.

**Selecting the rotary speed**

**See Fig. 5**

**Warning**

Always observe the maximum speed of the used accessories!

Pos.	Material
1 and 2	Glass, ceramics, circuit boards. and fiberglass reinforced plastics (with diamond saw blade)
3	for plastics
4	for thin wood
5	for hard wood
6	for normal wood (max. speed)

**Adjusting the sawing angle**

1. Loosen the fastening knob 1 (Fig. 6 ) by turning it half a turn in direction A.
2. Swivel the saw blade to the desired angle, see scale and retighten the fastening knob 1 (Fig. 6).

**Adjusting the saw blade height**

Slacken the counter nut 2 (Fig. 6), to do so turn the nut. half a turn to direction A.

After adjusting the saw blade height correctly, fasten the counter nut again.

Adjust the saw blade height by turning the adjustment screw 10 (Fig. 1 ) accordingly.

In direction B = to raise the blade

In direction A = to lower the blade

**Adjusting the stop rail**

Slacken the clamping screw and move the stop rail 4 (Fig. 1 ) to the desired value.

Tighten the clamping screw.



## Adjusting the stop angle

1. Loosen the clamping screw 2 (Fig. 1), adjust the desired cutting angle and tighten the screw.
2. During sawing press the work piece against the stop rail. Then press the work piece with appropriate feeding speed towards the saw blade.

## Cutting long work pieces

1. Pull the saw blade extension 1 (Fig. 1) out and fold the support leg 5 down.

## Sucking the saw dust off

### **Note:**

To avoid accumulation of saw dust inside the machine housing, a vacuum cleaner should be connected.

After work or during breaks open the flap and thoroughly remove all saw dust and chips.

### **Warning!**

Do not tip the machine upside down. Danger of accident!

## Replacing the saw blade

### **Note:**

The selection of the saw blade depends on the material to be cut.

### **Warning:**

Always pull the mains plug out when working on the machine!

1. Open the Flap and take the 2 and 3 mm Allen key out from inside (Fig. 2).
2. Move the saw blade completely up.
3. Insert the 2 mm Allen key into the bore 2 (Fig. 8) to block the shaft. Turn the saw blade slightly, until the key, engages.

4. Set the sawing angle to approx. 30°, unscrew the fastening screw 1 (Fig. 8) for the cover and take the plate off (3).

### **Warning:**

Do not block the saw blade with your hand or any other object.

### **Note:**

Do not let the washer 2 (Fig. 9) fall down.

1. Unscrew the saw blade fastening screw 1 (Fig. 9) and take the screw with the washer off.
2. Take the saw blade 3 (Fig. 9) off.
3. Install the new saw blade, observe the direction of the teeth.

Before starting the machine pull the Allen key 4 (Fig. 9) out of the opening.

### **Warning!**

Before connecting the machine to the mains supply make sure that the ON/OFF switch is in OFF-position.

## Maintenance

### **Important**

Pull out the mains plug prior to commencing all maintenance and repair work.

### **Warning!**

Turn switch OFF and always remove plug from power source before making any adjustments or repairs.

If any part is missing or damaged, do not plug the tool in until the missing or damaged part is replaced, and assembly is complete. To avoid electrical shock, use only identical replacement parts when servicing grounded tools.

### **Warning!**

To avoid fire or toxic reaction, never use gasoline, naphtha, acetone, lacquer thinner, or

similar highly volatile solvents to clean the circular saw.

Do not allow brake fluids, gasoline, or penetrating oils to come in contact with the plastic parts. They contain chemicals that can damage or destroy plastics!

All electrical or mechanical repairs (except the changing of the belt) should be done only by qualified service technicians.

When servicing use only PROXXON replacement parts.

Use of any other parts may create a hazard or cause product damage.

Any attempt to repair or replace electrical parts on this tool may create a hazard unless repair is done by a qualified service technician.

Repair service is available at your PROXXON service center (You find the address at the back of this manual).

9. Let the lower part of the housing down, plug the electric connection back in (Fig.11) and tighten the fastening screws for the lower machine part (Fig. 10).

## Replacing the toothed belt

1. Pull the mains plug out, move the saw blade to highest position to lock the motor block.
2. Loosen the saw from the work table.
3. Open the flap (Fig. 2).
4. Turn the saw around and screw the four fastening screws 1 (Fig. 10) out.
5. Lift the lower part of the housing slightly up and disconnect the plug type connector 1 (Fig. 11) of the power supply for the electric motor. To do so press the lock (2) and pull the plug connector apart.
6. Loosen both motor fastening screws 1 (Fig. 12) for approx. 1 turn and move the motor in direction "A". Take the toothed belt off.
7. Install the new toothed belt 2 (Fig. 12).
8. To tighten the belt move the motor in direction "B" (Fig. 12), tighten the fastening screws (1).