

# **Instruction Manual**

# **Circular Saw**

# Model FSC2000



FEIDER FRANCE 32, rue Aristide Bergès-ZI 31270 Cugnaux, France MADE IN PRC



Warning: Please read the manual carefully before using the unit!





Fig. 1

Fig. 2







Fig. 3

Fig. 4

Fig. 5



Fig. 6



Fig.7



Fig. 8

#### 1. SAFETY INSTRUCTIONS

#### General power tool safety warnings

WARNING Read all safety warnings, instructions, illustrations and specifications provided with this power tool. Failure to follow all instructions listed below may result in electric shock, fire and/or serious injury.

#### Save all warnings and instructions for future reference.

The term "power tool" in the warnings refers to your mains-operated (corded) power tool or battery-operated (cordless) power tool.

#### 1) Work area safety

a) Keep work area clean and well lit. Cluttered or dark areas invite accidents.

b) Do not operate power tools in explosive atmospheres, such as in the presence of flammable liquids, gases or dust. Power tools create sparks which may ignite the dust or fumes.

c) Keep children and bystanders away while operating a power tool. Distractions can cause you to lose control.

2) Electrical safety

a) Power tool plugs must match the outlet. Never modify the plug in any way. Do not use any adapter plugs with earthed (grounded) power tools. Unmodified plugs and matching outlets will reduce risk of electric shock.

b) Avoid body contact with earthed or grounded surfaces, such as pipes, radiators, ranges and refrigerators. There is an increased risk of electric shock if your body is earthed or grounded.

c) **Do not expose power tools to rain or wet conditions.** *Water entering a power tool will increase the risk of electric shock.* 

d) Do not abuse the cord. Never use the cord for carrying, pulling or unplugging the power tool. Keep cord away from heat, oil, sharp edges or moving parts. *Damaged or entangled cords increase the risk of electric shock.* 

e) When operating a power tool outdoors, use an extension cord suitable for outdoor use. Use of a cord suitable for outdoor use reduces the risk of electric shock.

f) If operating a power tool in a damp location is unavoidable, use a residual current device (RCD) protected supply. Use of an RCD reduces the risk of electric shock.

NOTE The term "residual current device (RCD)" can be replaced by the term "ground fault circuit interrupter (GFCI)" or "earth leakage circuit breaker (ELCB)".

#### 3) Personal safety

a) Stay alert, watch what you are doing and use common sense when operating a power tool. Do not use a power tool while you are tired or under the influence of drugs, alcohol or medication. A moment of inattention while operating power tools may result in serious personal injury.

b) **Use personal protective equipment. Always wear eye protection.** *Protective equipment such as a dust mask, non-skid safety shoes, hard hat or hearing protection used for appropriate conditions will reduce personal injuries.* 

c) **Prevent unintentional starting. Ensure the switch is in the off-position before connecting to power source and/or battery pack, picking up or carrying the tool.** *Carrying power tools with your finger on the switch or energising power tools that have the switch on invites accidents.* 

d) **Remove any adjusting key or wrench before turning the power tool on.** A wrench or a key left attached to a rotating part of the power tool may result in personal injury.

e) **Do not overreach. Keep proper footing and balance at all times.** *This enables better control of the power tool in unexpected situations.* 

f) Dress properly. Do not wear loose clothing or jewellery. Keep your hair and clothing away from moving parts. Loose clothes, jewellery or long hair can be caught in moving parts.

g) If devices are provided for the connection of dust extraction and collection facilities, ensure these are connected and properly used. Use of dust collection can reduce dust-related hazards.

h) **Do not let familiarity gained from frequent use of tools allow you to become complacent and ignore tool safety principles.** A careless action can cause severe injury within a fraction of a second.

4) Power tool use and care

a) **Do not force the power tool. Use the correct power tool for your application.** *The correct power tool will do the job better and safer at the rate for which it was designed.* 

b) **Do not use the power tool if the switch does not turn it on and off.** *Any power tool that cannot be controlled with the switch is dangerous and must be repaired.* 

c) Disconnect the plug from the power source and/or remove the battery pack, if detachable, from the power tool before making any adjustments, changing accessories, or storing power tools. Such preventive safety measures reduce the risk of starting the power tool accidentally.

d) Store idle power tools out of the reach of children and do not allow persons unfamiliar with the power tool or these instructions to operate the power tool. *Power tools are dangerous in the hands of untrained users.* 

e) Maintain power tools and accessories. Check for misalignment or binding of moving parts, breakage of parts and any other condition that may affect the power tool's operation. If damaged, have the power tool repaired before use. *Many accidents are caused by poorly maintained power tools.* 

f) **Keep cutting tools sharp and clean.** *Properly maintained cutting tools with sharp cutting edges are less likely to bind and are easier to control.* 

g) Use the power tool, accessories and tool bits etc. in accordance with these instructions, taking into account the working conditions and the work to be performed. Use of the power tool for operations different from those intended could result in a hazardous situation.

h) **Keep handles and grasping surfaces dry, clean and free from oil and grease.** Slippery handles and grasping surfaces do not allow for safe handling and control of the tool in unexpected situations.

5) Service

a) Have your power tool serviced by a qualified repair person using only identical replacement parts. This will ensure that the safety of the power tool is maintained.

#### Safety instructions for all saws

#### Cutting procedures

a) DANGER: Keep hands away from cutting area and the blade. Keep your second hand on auxiliary handle, or motor housing. If both hands are holding the saw, they cannot be cut by the blade.

NOTE For **circular saws** with a maximum blade diameter of 140 mm or smaller, the words "Keep your second hand on auxiliary handle, or motor housing" do not apply.

b) **Do not reach underneath the workpiece.** *The guard cannot protect you from the blade below the workpiece.* 

c) Adjust the cutting depth to the thickness of the workpiece. Less than a full tooth of the blade teeth should be visible below the workpiece.

d) Never hold the workpiece in your hands or across your leg while cutting. Secure the workpiece to a stable platform. It is important to support the work properly to minimise body exposure, blade binding, or loss of control.

e) Hold the power tool by insulated gripping surfaces, when performing an operation where the cutting tool may contact hidden wiring or its own cord. *Contact with a "live" wire will* 

also make exposed metal parts of the power tool "live" and could give the operator an electric shock.

f) When ripping, always use a rip fence or straight edge guide. This improves the accuracy of cut and reduces the chance of blade binding.

g) Always use blades with correct size and shape (diamond versus round) of arbour holes. Blades that do not match the mounting hardware of the saw will run off-centre, causing loss of control.

h) **Never use damaged or incorrect blade washers or bolt.** The blade washers and bolt were specially designed for your saw, for optimum performance and safety of operation.

## Further safety instructions for all saws

#### Kickback causes and related warnings

 kickback is a sudden reaction to a pinched, jammed or misaligned saw blade, causing an uncontrolled saw to lift up and out of the workpiece toward the operator;

 when the blade is pinched or jammed tightly by the kerf closing down, the blade stalls and the motor reaction drives the unit rapidly back toward the operator;

- if the blade becomes twisted or misaligned in the cut, the teeth at the back edge of the blade can dig into the top surface of the wood causing the blade to climb out of the kerf and jump back toward the operator.

Kickback is the result of saw misuse and/or incorrect operating procedures or conditions and can be avoided by taking proper precautions as given below.

a) Maintain a firm grip with both hands on the saw and position your arms to resist kickback forces. Position your body to either side of the blade, but not in line with the blade. *Kickback could cause the saw to jump backwards, but kickback forces can be controlled by the operator, if proper precautions are taken.* 

NOTE For circular saws with a maximum blade diameter of 140 mm or smaller, the words "with both hands" do not apply.

b) When blade is binding, or when interrupting a cut for any reason, release the trigger and hold the saw motionless in the material until the blade comes to a complete stop. Never attempt to remove the saw from the work or pull the saw backward while the blade is in motion or kickback may occur. Investigate and take corrective actions to eliminate the cause of blade binding.

c) When restarting a saw in the workpiece, centre the saw blade in the kerf so that the saw teeth are not engaged into the material. If a saw blade binds, it may walk up or kickback from the workpiece as the saw is restarted.

d) **Support large panels to minimise the risk of blade pinching and kickback.** *Large panels tend to sag under their own weight. Supports must be placed under the panel on both sides, near the line of cut and near the edge of the panel.* 

e) **Do not use dull or damaged blades.** Unsharpened or improperly set blades produce narrow kerf causing excessive friction, blade binding and kickback.

f) Blade depth and bevel adjusting locking levers must be tight and secure before making the cut. If blade adjustment shifts while cutting, it may cause binding and kickback.

g) **Use extra caution when sawing into existing walls or other blind areas.** *The protruding blade may cut objects that can cause kickback.* 

Safety instructions for saws with pendulum guard and saws with tow guard Lower guard function

a) Check the lower guard for proper closing before each use. Do not operate the saw if the lower guard does not move freely and close instantly. Never clamp or tie the lower guard into the open position. If the saw is accidentally dropped, the lower guard may be bent. Raise the lower guard with the retracting handle and make sure it moves freely and does not touch the blade or any other part, in all angles and depths of cut.

NOTE Alternate wording for "retracting handle" is possible.

b) Check the operation of the lower guard spring. If the guard and the spring are not operating properly, they must be serviced before use. Lower guard may operate sluggishly due to damaged parts, gummy deposits, or a build-up of debris.

c) The lower guard may be retracted manually only for special cuts such as "plunge cuts" and "compound cuts". Raise the lower guard by the retracting handle and as soon as the blade enters the material, the lower guard must be released. For all other sawing, the lower guard should operate automatically.

NOTE Alternate wording for "retracting handle" is possible.

d) Always observe that the lower guard is covering the blade before placing the saw down on bench or floor. An unprotected, coasting blade will cause the saw to walk backwards, cutting whatever is in its path. Be aware of the time it takes for the blade to stop after switch is released.

Warning: Keep hands away from the cutting area and blade. NEVER place your hands behind the saw blade since kickback could cause the saw to jump backwards over your hand. Keep your body positioned to either side of the saw blade.

1. Check the lower guard for proper closing before each use. If the saw is accidentally dropped, the lower guard may be bent. Raise the lower guard with the lower guard lever

and make sure it can move freely and does not touch the blade or any other parts in all angles and depths of cutting. Do not operate the saw if the lower guard does not move and close freely. Never clamp or tie the lower guard into the open position.

- 2. Adjust the cutting depth to the thickness of the workpiece. Less than a full tooth of the blade teeth should be visible below the workpiece.
- 3. Never hold piece being cut in your hands or across your leg. Secure the workpiece to a stable platform. It is important to support the work properly to minimize body exposure, blade binding, or loss of control.
- 4. Hold tool by insulated gripping surfaces when performing an operation where the cutting tool may contact hidden wiring or its own cord. Contact with a "live" wire will make exposed metal parts of the tool "live" and shock the operator.
- 5. Always observe the lower guard to see if it covers the entire blade before placing the saw on the bench or floor. Please pay attention to the time it needs to take for the blade to stop after released the switch.
- 6. When operating the saw, keep the cord away from the cutting area and position so that it might be caught by the work piece during the cutting operation.
- Keep your second hand on the motor housing or auxiliary handle, not close to the blade. Do not reach underneath the work or attempt to remove the cutting material when the blade is still moving.
- It is important to support the work properly and to hold the saw firmly to prevent from loss of control, which might cause personal injury. NEVER hold the pieces for cutting in your hands or across your legs.
- 9. Making a "Pocket Cut" into existing walls or other blind area is dangerous. the protruding blade may cut "live wires" or objects that may cause kickback.
- 10. When cutting is interrupted or the blade bound, please release the trigger immediately and hold the saw firmly in the material until the blade comes to a complete stop. Never attempt to remove the saw from the work or pull the saw backward while the blade is in motion, otherwise, kickback might happen.
- 11. Use a rip fence or straight edge guide when ripping.
- 12. Avoid cutting nails, inspect the material that is being cut to see if there are nails in it and remove before cutting.
- 13. Do not run the saw while carrying it at your side.
- 14. Make sure the depth and bevel adjusting locking levers are tight and secure before making a cut.
- 15. Do not use damaged or dull blades. Because unshaped or improperly set blades will

produce narrow kerfs which may cause excessive friction, blade binding or kickback etc.

- 16. Always use blades with correct size arbor holes, never use defective or incorrect blade washers or bolts.Do not use abrasive discs in place of the saw blades specified in this manual.
- 17. Make sure to use a blade adapted to the material to be cut. Read and compare the information in this manual with the information on the saw blade.
- 18. Use only blades that are marked with a speed equal to or greater than the speed on the tool.
- 19. Double check to make sure that accessories (including blade protection) and attachments are properly attached. Run a no-load test for one minute to detect any problems.
- 20. Fix the piece to be cut. The workpiece is secured more securely if it is held by a clamp or vice rather than by hand.
- 21. If the blade gets stuck, turn off the tool immediately and get ready: a high reaction torque may cause a rebound. The blade gets stuck when the tool is overloaded or stuck in the room.
- 22. When using, always use a dust collection system.
- 23. Avoid overheating the ends of the blades.
- 24. Do not use abrasive wheels
- 25. Use only blade diameter(s) in accordance with the markings;
- 26. Identify the correct saw blade to be used for the material to be cut;
- 27. Use only saw blades that are marked with a speed equal or higher than the speed marked on the tool.
- 28. Use only saw blades recommended by the manufacturer, which conform to EN 847-1, if intended for wood and analogous materials.
- 29. Wear dust mask protection

#### Laser safety warnings

1. Protect yourself and your environment against risk of accident through appropriate precautions!

2. Do not stare directly into the laser beam without eye protection. A laser beam hitting the eye can cause permanent damage to the retina.

3. Do not stare directly into the laser with other optical instruments, e.g. a magnifier.

4. Do not direct the laser beam at persons or animals or onto reflecting surfaces. Persons and animals can become blinded or irritated. Even a low power laser can damage the eye.

5. Caution - when executing processes different from those described here, this can lead to a

## 2. Explanation of symbols

CE	Conforms to relevant safety standards
	To reduce the risk of injury, the user must read and understand this manual before using this product.
	Wear hearing protection
	Wear ocular protection
$\bigcirc$	Wear dust mask
X	Do not dispose of old appliances with domestic rubbish
	Double insulation



LASER RADIATION - DO NOT STARE INTO THE BEAM - CLASSE 2

# LASER PRODUCT

## 3. Technical Specification:

Model	FSC2000
Rated voltage /frequency	230-240V~ 50 Hz
Rated power (W)	2000W
No load speed (/min)	5000/min
Dia. of sawblade (mm)	Ø235
	Sound power level L <sub>wA</sub> =104.4dB(A) K=3.0dB(A)
Noise emission vaule	Sound pressure level L <sub>PA</sub> =93.4 dB(A)

	Uncertainties K=3.0dB(A)				
	Main handle: a <sub>h.w</sub> :4.732m/s <sup>2</sup>				
Vibration emission vaule	Auxiliary handle: a <sub>h.w</sub> :4.447m/s <sup>2</sup>				
(cutting wood)	Uncertainties K=1.5 m/s <sup>2</sup>				
Max cutting donth (mm)	90°	85mm			
	45 <sup>°</sup>	56mm			
Standard accessories	wrench1pc parallel guide1pc Wood-cutting saw				
These and other accessories are available through your authorized dealer.					
When buying accessories always consider the technical requirements of this					
product. If you are not certain, ask a qualified technician for advice.					

#### Information:

The declared vibration total value has been measured in accordance with a standard test method and may be used for comparing one tool with another;

The declared vibration total value may also be used in a preliminary assessment of exposure. <u>Warning:</u>

that the vibration emission during actual use of the power tool can differ from the declared total value depending on the ways in which the tool is used; and

of the need to identify safety measures to protect the operator that are based on an estimation of exposure in the actual conditions of use (taking account of all parts of the operating cycle such as the times when the tool is switched off and when it is running idle in addition to the trigger time).

Wear hearing protection.

#### 4. Intended use

This tool is designed for cutting wood that will fit in machine.

It is not suitable for cutting timber for fuel. Only use saw blades diameter are suitable for machine and do not use cutting discs.

#### 5. Functional Description (Fig. 1&2)

1. Lever of lower guard	12. Parallel guide		
2. Dust extraction outlet	13. Outer flange		
3. Saw blade	14. Blade clamp bolt		
4. Laser generator switch	15. Lower guard		
5. Power-on indicator	16. Spindle lock button		
6. Auxiliary handle	17. ON/OFF switch		
7. Laser generator	18. Lock-off button		
8. Miter scale	19.Main handle		
9. Lock knob for angle adjustment	20. Depth of cut scale		
10. Lock knob for parallel guide	21.Lock lever for depth		
11. Baseplate	adjustment		

## 6. ASSEMBLY

# Important: Prior to any assembly and adjustment always unplug the tool. Changing the blade (Fig. 1&3&4)

**Warning**: Always disconnect the plug from the power mains before making any adjustment or attaching any accessories.

- 1) Place this circular saw on its side on a flat surface. Advice you bring the base plate down as a minimum depth cut then it is ease to change the blade.
- 2) Push the spindle lock button (16) toward motor housing as the arrow shows in fig. 3 and firmly hold it.
- 3) Turn the blade clamp bolt (14) anti-clockwise by using the wrench that supplied with the tool.
- 4) Remove the blade clamp bolt (14)and outer flange (13).
- 5) Raise the lower guard (15) by using the lever for lower guard (1), and then remove the saw blade.
- 6) Clean the saw blade flanges, then mount the new saw blade onto the output spindle and against the inner flange.
- Make sure the saw teeth and arrow on the blade is to be the same direction as the arrow on the lower guard.
- 8) Reinstall the outer flange, and tighten the blade clamp bolt.
- 9) Make sure that the saw blade runs freely by turning the blade by hand.

#### Depth adjustment (Fig. 5)

- 1) Loosen the lock lever for depth adjustment (21).
- 2) Hold the baseplate flat against the edge of the work piece and lift the body of the saw

until the blade is at the right depth determined by the depth of cut scale (20) (align the scale line).

3) Tighten the lock lever for depth adjustment.

# Angle adjustment (Fig. 6)

- 1) Loosen the Lock knob for angle adjustment (9).
- 2) Adjust the shoe to the desired angle between 0°to 45°. [See miter scale (8)].
- 3) Tighten the lock knob for angle adjustment.

# Switching on and off(Fig.7)

Before engage the ON/OFF switch, check that the saw blade is properly fitted and run smoothly, the blade clamp bolt is well tightened.

- 1) Connect the plug to the power supply, the power-on indicator (5) is illumed until the tool disconnect from the power mains.
- 2) To switch on the circular saw, press the lock-off button (18) and pull the ON/OFF switch trigger (17).
- 3) When you release the switch trigger (17), the tool turns off.

# Parallel cut adjustment(Fig.8)

- 1) Loosen the lock knob of edge guide (10).
- 2) Slide the parallel guide (12) through the slots in the shoe to the desired width.
- 3) Tighten the lock bolt to fit it in the position.
- 4) Ensure that the edge guide rests against the wood along its entire length to give a consistent parallel cuts.

# Laser line generator (Fig. 7),

**Warnings:** Do not stare directly at the laser beam, do not deliberately aim the beam at personnel and ensure that it is not directed towards the eye of a person for longer than 0.25s. When you make the line of the cut on the work piece, the laser line generator can help you get better alignment.

Turn on: Press the laser generator switch (4), the laser generator (7) works.

Turn off: Press the switch again.

- 1) Make sure line of the cut on the work piece.
- 2) Adjust the angle of cut as required
- 3) Plug in the machine and start the motor
- 4) When the blade is at its maximum speed (approximately 2 seconds), place the saw on the work-piece.
- 5) Switch on the laser generator from the laser aperture using the laser generator switch (4).

- 6) Align the beam with the mark on the work-piece and slowly push the saw forward using both hands, keeping the red light beam on the mark.
- 7) Switch off the laser beam when completion of the cut.

# 7. OPERATION

# General cutting

- 1) When starting, always hold the saw handle with one hand and the auxiliary handle (6) with the other hand. Never force the saw but maintain a light and continuous pressure after completing the cut allow the saw to come to a complete stop. When cutting is interrupted, resume cutting by allowing the blade to reach full speed and then reentering the cut slowly.
- 2) When cutting across the grain, the fibers of the wood have a tendency to lift and tear, moving the saw slowly minimizes this effect.

# Pocket cutting

1. Disconnect the plug from the power supply before making any adjustments. Set the depth adjustment based on the thickness of the line drawing for the cut .raise the lower guard by using the lift lever.

2. With the blade barely above the material to be cut, start the saw and allow the blade to come to full speed. Gradually lower the blade unto the material to be cut using the front end of the shoe as a pivot point. When the blade starts cutting, release the lower guard. When the shoe is resting flat on the surface being cut, proceed cutting in a forward direction to the end of the cut. Allow the blade to come to a full stop before removing it from the cut. Never pull the saw backward since the blade will climb out of the cut and kickback will occur. Turn the saw around and finish the cut in a normal manner, sawing forward. Use a jigsaw or a hand saw to finish the cut in the corners, if required.

# **Cutting Large Sheets**

- Large sheet or boards require support to prevent bends or sags. If you attempt to cut without leveling and properly supporting the work piece, the blade will tend to bind, causing kickback.
- 2) Support the panel or board close to the cut. Be sure to set the blade adjustment so that you can cut through the material without cutting into the table or workbench. Suggestion: use two by fours to support the board or panel to be cut. If the piece is too large for the workbench, use the floor with the two-by fours supporting the wood.

# 8. Maintenance

1) To prevent accidents, always unplug the saw from the power source before cleaning

or performing any maintenance the saw may be cleaned most effectively using compressed air. Always wear safety goggles when using compressed air. If compressed air is not available, use a brush to remove dust and chips from the saw.

- 2) Motor ventilation vents and switch levers must be kept clean and free of foreign matter. Do not attempt to clean by inserting pointed objects through openings.
- 3) Never use any caustic agents to clean plastic parts. Such as: gasoline, carbon tetrachloride, chlorinated cleaning solvents, ammonia and household cleaners containing ammonia. Do not use any of these to clean the saw.
- 4) Have an authorized service center examine and/or replace the worn carbon brushes in the event of excessive parking.
- 5) Blades become dull even when cutting regular lumber, a sure sign of a dull blade is the need to force the saw forward instead of guiding it while making a cut. Take the blade to a service center for sharpening.
- 6) Keep the machine clean all the time.
- If you discover any damage, consult the exploded drawing and parts list to determine exactly which replacement part you need to order from our customer service department.
- 8) Clean the housing only with a damp cloth. Do not use any solvents! Dry thoroughly afterwards .In order to maintain battery capacity ,we recommend the battery to be completely discharged every one month and fully recharged again .Only store with a fully charged battery and top-up the charge from time to time if stored for a long time. Store in a dry and frost-free place, the ambient temperature should not exceed 40°C.
- If the supply cord of this power tool is damaged, it must be replaced by a similar cord available through the service organization or a qualified authoritative technician.
- 10) For safety reasons, the machine automatically switches off if the carbon brushes are so worn out that they no longer have contact with the motor. In that case, the carbon brushes must be replaced by a pair similar carbon brush available through the after-sales service organization or qualified professional person.

**CAUTION:** The brushes must always be replaced in pairs.

**CAUTION:** Always disconnect the machine from the power supply before removing any electrical covers.



Electrical products should not be discarded with household products. According to the European Directive 2012/19/EU on waste electrical and electronic equipment and its implementation into national law, electrical products used must be collected separately and disposed of at collection points provided for this purpose. Talk with your local authorities or dealer for advice on recycling.



# CE

32, rue Aristide Bergès –Z1 31270 Cugnaux - France Tel: +33 (0)5.34.508.508 Fax: +33 (0)5.34.508.509

Declare that the below machine:

**CIRCULAR SAW** 

#### FSC2000

Serial number:

Is in conformity with the following Directives: ROHS Directive 2011/65/EU

MACHINE Directive 2006/42/EC

EMC Directive 2014/30/UE

Also in conformity with the following standards:

EN62841-1:2015, EN62841-2-5:2014,

EN55014-1:2017, EN55014-2:2015, EN61000-3-2:2014, EN61000-3-3:2013

Responsible of technical file: M Olivier Patriarca

Cugnaux, 01/11/2018

Philippe MARIE / PDG