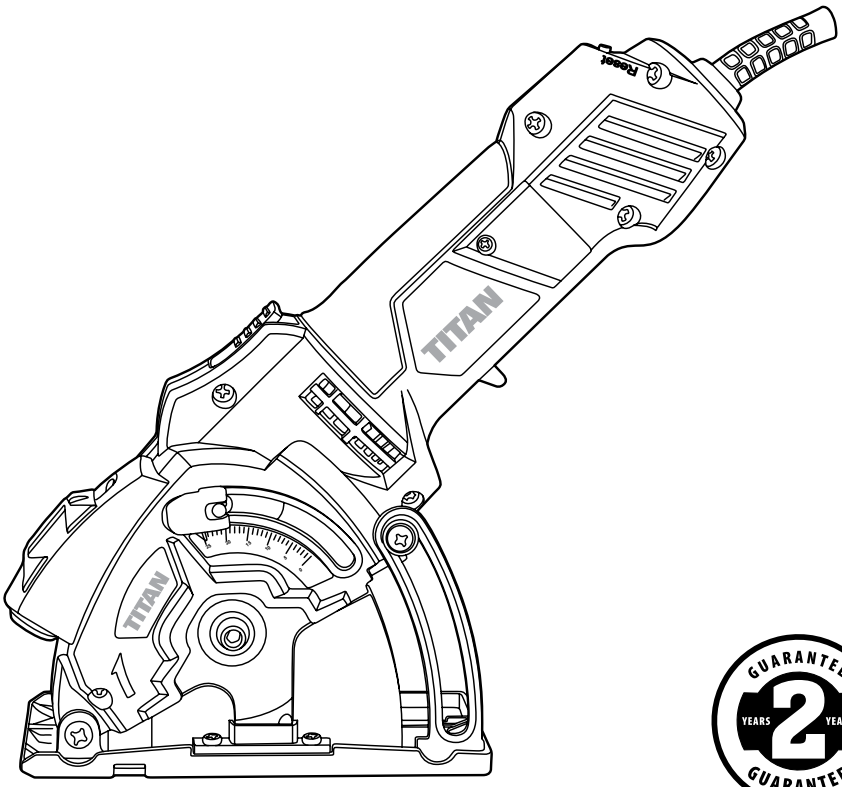
TITAN



GUARANTEE 2 YEARS 2 YEARS GUARANTEE

SAFETY AND OPERATING MANUAL

Original Instructions V5.0

MINI CIRCULAR SAW 500W TTB689CSW

TITAN

Congratulations on your purchase of a TITAN. power tool from Titan Power Tools (UK) Ltd. We want you to continue getting the best performance from it so this handbook includes information on safety, handling and care. Please retain this handbook in case of you need to refer to any of the information in the future.

Your TITAN. power tool comes with a 2 year guarantee, so should it develop a fault within this period contact your retailer.

GUARANTEE

This TITAN. product carries a guarantee of 2 years. If your product develops a fault within this period, you should in the first instance contact the retailer where the item was purchased.
This guarantee specifically excludes losses caused due to:
- Fair wear and tear
- Misuse or abuse
- Lack of routine maintenance
- Failure of consumable items (such as batteries)
- Accidental damage
- Cosmetic damage
- Failure to follow manufacturer's guidelines
- Loss of use of the goods

This guarantee does not affect your statutory rights. This guarantee is only valid in the UK.

For any enquiries relating to the guarantee please refer to your retailer.

GENERAL SAFETY INSTRUCTIONS

 **WARNING Read all safety warnings and all instructions.** Failure to follow the warnings and instructions 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 shoc
   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 (RC D) protected supply.** Use of an RCD reduces the risk of electric shock.

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 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, clothing and gloves 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.

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 the battery pack 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. 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.

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.

MACHINE SPECIFIC SAFETY WARNINGS 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.
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 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.
e) Hold the power tool by insulated gripping surfaces only, 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 eccentrically, 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.

Kickback and related warnings
Kickback is a sudden reaction to a pinched or snagged rotating wheel. Pinching or snagging causes rapid stalling of the rotating wheel which in turn causes the uncontrolled power tool to be forced in the direction opposite of the wheel’s rotation at the point of the binding.

For example, if an abrasive wheel is snagged or pinched by the workpiece, the edge of the wheel that is entering into the pinch point can dig into the surface of the material causing the wheel to climb out or kick out. The wheel may either jump toward or away from the operator, depending on direction of the wheel’s movement at the point of pinching. Abrasive wheels may also break under these conditions.

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

a)Maintain a firm grip on the power tool and position your body and arm to allow you to resist kickback forces. Always use auxiliary handle, if provided, for maximum control over kickback or torque reaction during start-up. The operator can control

torque reactions or kickback forces, if proper precautions are taken.
b) Never place your hand near the rotating accessory. Accessory may kickback over your hand.
c)Do not position your body in line with the rotating wheel. Kickback will propel the tool in direction opposite to the wheel's movement at the point of snagging.
d) Use special care when working corners, sharp edges etc. Avoid bouncing and snagging the accessory. Corners, sharp edges or bouncing have a tendency to snag the rotating accessory and cause loss of control or kickback.
e)Do not attach a saw chain, woodcarving blade, segmented diamond wheel with a peripheral gap greater than 10 mm or toothed saw blade. Such blades create frequent kickback and loss of control.
f) Do not "jam" the wheel or apply excessive pressure. Do not attempt to make an excessive depth of cut. Overstressing the wheel increases the loading and susceptibility to twisting or binding of the wheel in the cut and the possibility of kickback or wheel breakage.
g) When wheel is binding or when interrupting a cut for any reason, switch off the power tool and hold the power tool motionless until the wheel comes to a complete stop. Never attempt to remove the wheel from the cut while the wheel is in motion otherwise kickback may occur. Investigate and take corrective action to eliminate the cause of wheel binding.
h) Do not restart the cutting operation in the workpiece. Let the wheel reach full speed and carefully re-enter the cut. The wheel may bind, walk up or kickback if the power tool is restarted in the workpiece.
i) Support panels or any oversized workpiece to minimize the risk of wheel pinching and kickback. Large workpieces tend to sag under their own weight. Supports must be placed under the workpiece near the line of cut and near the edge of the workpiece on both sides of the wheel.
j) Use extra caution when making a "pocket cut" into existing walls or other blind areas. The protruding wheel may cut gas or water pipes, electrical wiring or objects that can cause kickback.

Guard function

a) Check guard for proper closing before each use. Do not operate the saw if guard does not move freely and enclose the blade instantly. Never clamp or tie the guard so that the blade is exposed. If saw is accidentally dropped, guard may be bent. Check to make sure that guard moves freely and does not touch the blade or any other part, in all angles and depths of cut.
b) Check the operation and condition of the guard return spring. If the guard and the spring are not operating properly, they must be serviced before use. Guard may operate sluggishly due to damaged parts, gummy deposits, or a build-up of debris.
c) Assure that the base plate of the saw will not shift while performing the "plunge cut" when the blade bevel setting is not at 90°. Blade shifting sideways will cause binding and likely kick back.
d) Always observe that the guard is covering the blade before placing 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.

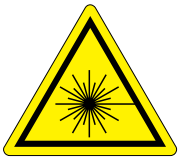
Safety instructions for abrasive cutting-off operations

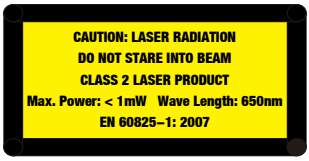
Cut-off machine safety warnings

a) The guard provided with the tool must be securely attached to the power tool and positioned for maximum safety, so the least amount of wheel is exposed towards the operator. Position yourself and bystanders away from the plane of the rotating wheel. The guard helps to protect operator from broken wheel fragments and accidental contact with wheel.
b) Use only bonded reinforced or diamond cut-off wheels for your power tool. Just because an accessory can be attached to your power tool, it does not assure safe operation.
c) The rated speed of the accessory must be at least equal to the maximum speed marked on the power tool. Accessories running faster than their rated speed can break and fly apart.
d) Wheels must be used only for recommended applications. For example: do not grind with the side of cut-off wheel. Abrasive cut-off wheels are intended for peripheral grinding, side forces applied to these wheels may cause them to shatter.
e) Always use undamaged wheel flanges that are of correct diameter for your selected wheel. Proper wheel flanges support the wheel thus reducing the possibility of wheel breakage.
f) Do not use worn down reinforced wheels from larger power tools. Wheels intended for a larger power tool are not suitable for the higher speed of a smaller tool and may burst.
g) The outside diameter and the thickness of your accessory must be within the capacity rating of your power tool. Incorrectly sized accessories cannot be adequately guarded or controlled.
h) The arbour size of wheels and flanges must properly fit the spindle of the power tool. Wheels and flanges with arbour holes that do not match the mounting hardware of the power tool will run out of balance, vibrate excessively and may cause loss of control.
i) Do not use damaged wheels. Before each use, inspect the wheels for chips and cracks. If power tool or wheel is dropped, inspect for damage or install an undamaged wheel. After inspecting and installing the wheel, position yourself and bystanders away from the plane of the rotating wheel and run the power tool at maximum no load speed for one minute. Damaged wheels will normally break apart during this test time.
j) Wear personal protective equipment. Depending on application, use face shield, safety goggles or safety glasses. As appropriate, wear dust mask, hearing protectors, gloves and shop apron capable of stopping small abrasive or workpiece fragments. The eye protection must be capable of stopping flying debris generated by various operations. The dust mask or respirator must be capable of filtrating particles generated by your operation. Prolonged exposure to high intensity noise may cause hearing loss.

k) Keep bystanders a safe distance away from work area. Anyone entering the work area must wear personal protective equipment. Fragments of workpiece or of a broken wheel may fly away and cause injury beyond immediate area of operation.
l) Hold the power tool by insulated gripping surfaces only, when performing an operation where the cutting accessory may contact hidden wiring or its own cord. Cutting accessory contacting a “live” wire may make exposed metal parts of the power tool “live” and could give the operator an electric shock.
m) Position the cord clear of the spinning accessory. If you lose control, the cord may be cut or snagged and your hand or arm may be pulled into the spinning wheel.
n) Never lay the power tool down until the accessory has come to a complete stop. The spinning wheel may grab the surface and pull the power tool out of your control.
o) Do not run the power tool while carrying it at your side. Accidental contact with the spinning accessory could snag your clothing, pulling the accessory into your body.
p) Regularly clean the power tool’s air vents. The motor’s fan will draw the dust inside the housing and excessive accumulation of powdered metal may cause electrical hazards.
q) Do not operate the power tool near flammable materials. Sparks could ignite these materials.
r) Do not use accessories that require liquid coolants. Using water or other liquid coolants may result in electrocution or shock.

GENERAL SAFETY WARNINGS FOR LASER





a) Do not stare directly at the laser beam. A hazard may exist if you deliberately stare into the beam.
b) The laser shall be used and maintained in accordance with the manufacturer’s instructions.
c) Never aim the beam at any person or an object other than the work piece.
d) The laser beam shall not be deliberately aimed at another person and shall be prevented from being directed towards the eye of a person for longer than 0.25 seconds.
e) Always ensure the laser beam is aimed at a sturdy work piece without reflective surfaces, e.g wood or rough coated surfaces are acceptable. Bright shiny reflective sheet steel or similar is not suitable for laser applications as the reflective surface may direct the laser beam back at the operator.
f) Do not change the laser device with a different type. Repairs must be carried out by the manufacturer or an authorized agent.
g) CAUTION: Use of controls or adjustments other than those specified herein may result in hazardous radiation exposure.

GENERAL SAFETY WARNINGS FOR BATTERIES

a) CAUTION! Danger of explosion if batteries are incorrectly replaced. Replace only with the same or equivalent type. Observe correct polarity.
b) Batteries (battery pack or batteries installed) shall not be exposed to excessive heat such as sunshine, fire or the like. Protect from mechanical shock. Keep dry and clean. Keep away from children.
c) Do not open, dismantle, shred or short-circuit batteries. Do not mix old and new batteries.
d) Dispose of properly. Pay attention to environmental aspects of battery disposal. Do not dispose of in household waste.
e) Refer to safety and other instructions on the battery or its packaging.
f) In case of battery leakage, remove the batteries and clean the battery compartment thoroughly. Avoid contact with skin and eyes.

ADDITIONAL SAFETY WARNING FOR CONSTRUCTION DUST

The updated Control of Substances Hazardous to Health Regulations 1st October 2012 now also targets to reduce the risks associated with silica, wood and gypsum dusts. Construction workers are one of the at-risk groups within this because of the dust that they breathe: silica dust is not just a nuisance; it is a real risk to your lungs!

Silica is a natural mineral present in large amounts in things like sand, sandstone and granite. It is also commonly found in many construction materials such as concrete and mortar. The silica is broken into very fine dust (also known as Respirable Crystalline Silica or RCS) during many common tasks such as cutting, drilling and grinding.
Breathing in very fine particles of crystalline silica can lead to the development of:
Lung cancer
Silicosis
Chronic Obstructive Pulmonary Disorder (Chronic obstructive pulmonary disease (COPD))

And breathing in fine particles of wood dust can lead to the development of Asthma

The risk of lung disease is linked to people who regularly breathe construction dust over a period of time, not on the odd occasion.
To protect the lung, the COSHH Regulations sets a limit on the amount of these dusts that you can breathe (called a Workplace Exposure Limit or WEL) when averaged over a normal working day. These limits are not a large amount of dust: when compared to a penny it is tiny – like a small pinch of salt:
This limit is the legal maximum; the most you can breathe after the right controls have been used.

How to reduce the amount of dust?

1 Reduce the amount of cutting by using the best sizes of building products.
2 Use a less powerful tool e.g. a block cutter instead of angle grinder.
3 Using a different method of work altogether – e.g. using a nail gun to direct fasten cable trays instead of drilling holes first.

Please always work with approved safety equipment, such as those dust masks that specially designed to filter out microscopic particles and use the dust extraction facility at all time.
For more information please see the HSE website: http://www.hse.gov.uk/construction or http://www.hse.gov.uk/pubns/cis69.pdf

WARNING!
Some dust created by power sanding, sawing, grinding, drilling, and other construction activities contains
Chemicals. Known to cause cancer, birth defects or other reproductive harm. Some examples of these chemicals are:
- Lead from lead-based paints,
- Crystalline silica from bricks and cement and other masonry products,
- Arsenic and chromium from chemically-treated lumber.

Your risk from these exposures varies, depending on how often you do this type of work. To reduce your exposure to these chemicals:
- Work in a well-ventilated area.
- work with approved safety equipment, such as those dust masks that are specially designed to filter out microscopic particles.

NOISE INFORMATION

Wear hearing protection!

Measured sound values determined according to EN 60745.
The noise figures quoted are emission levels and are not necessarily safe working levels. Whilst there is a correlation between the emission and exposure levels, this cannot be used reliably to determine whether or not further precautions are required. Factors that influence the actual level of exposure of work-force include the characteristics of the work room, the other sources of noise, etc. i.e. the number of machines and other adjacent processes, and the length of time for which an operator is exposed to the noise. Also the permissible exposure level can vary from country. This information, however, will enable the user of the machine to make a better evaluation of the hazard and risk.

VIBRATION

The European Physical Agents (Vibration) Directive has been brought in to help reduce hand arm vibration syndrome injuries to power tool users. The directive requires power tool manufacturers and suppliers to provide indicative vibration test results to enable users to make informed decisions as to the period of time a power tool can be used safely on a daily basis and the choice of tool.
Further advice can be found at www.hse.gov.uk

Vibration total values (triax vector sum) determined according to EN 60745:	
cutting wood	Level of vibration $a_{h,W}$ = 2.54 m / s²
	Uncertainty K = 1.5 m/s²
cutting metal	Level of vibration $a_{h,m}$ = 2.37 m / s²
	Uncertainty K = 1.5 m/s²
cutting ceramic	Level of vibration a_h=2.88 m/s²
	Uncertainty K = 1.5 m/s²

The declared vibration emission value should be used as a minimum level and should be used with the current guidance on vibration.

The declared vibration emission been measured in accordance with a standardised test stated above and may be used to compare one tool with another tool. The declared vibration emission value may also be used in a preliminary assessment of exposure.

WARNING!

The vibration emission value during actual use of the power tool can differ from the declared value depending on the ways in which the tool is used dependent on the following examples and other variations on how the tool is used:

How the tool is being used and the materials being sanding.
The tool being in good condition and well maintained.
The use the correct accessory for the tool and ensuring it is sharp and in good condition.
The tightness of the grip on the handles.
And the tool is being used as intended by its design and these instructions.

While working with this power tool, hand/arm vibrations occur. Adopt the correct working practices in order to reduce the exposure to vibration.

This tool may cause hand-arm vibration syndrome if its use is not adequately managed.

WARNING!

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).

Vibration and noise reduction

To reduce the sanding of noise and vibration emission, limit the time of operation, use low-vibration and low-noise operating modes as well as wear personal protective equipment. Take the following points into account to minimize the vibration and noise exposure risks:

1. Only use the product as intended by its design and these instructions.
2. Ensure that the product is in good condition and well maintained.
3. Use correct application tools for the product and ensure they in good condition.
4. Keep tight grip on the handles/grip surface.
5. Maintain this product in accordance with these instructions and keep it well lubricated (where appropriate).
6. Plan your work schedule to spread any high vibration tool use across a number of days.

Emergency

Familiarise yourself with the use of this product by means of this instruction manual. Memorise the safety directions and follow them to the letter. This will help to prevent risks and hazards.
1.Always be alert when using this product, so that you can recognise and handle risks early. Fast intervention can prevent serious injury and damage to property.
2.Switch off and disconnect from the power supply if there is any malfunction. Have the product checked by a qualified specialist and repaired, if necessary, before you put it into operation again.

Residual risks

Even if you are operating this product in accordance with all the safety requirements,

potential risks of injury and damage remain. The following dangers can arise in connection with the structure and design of this product:

1. Health defects resulting from vibration emission if the product is being used over long periods of time or not adequately managed and properly maintained.
2. Injuries and damage to property due to broken application tools or the sudden impact of hidden objects during use.
3. Danger of injury and property damage caused by flying objects.

WARNING!

This product produces an electromagnetic field during operation! This field may under some circumstances interfere with active or passive medical implants! To reduce the risk of serious or fatal injury, we recommend persons with medical implants to consult their doctor and the medical implant manufacturer before operating this product!

Health Surveillance

All employees should be part of an employer's health surveillance scheme to help identity any vibration related diseases at an early stage, prevent disease progression and help employees stay in work.

Double insulation 

The tool is double insulated. This means that all the external metal parts are electrically insulated from the mains power supply. This is done by placing insulation barriers between the electrical and mechanical components making it unnecessary for the tool to be earthed.

Important note

Be sure the supply is the same as the voltage given on the rating plate. Remove the mains plug before carrying out any adjustment or servicing.

SYMBOLS

The symbols shown on the product has great significance for the safe use of the product.


WARNING - To reduce the risk of injury, user must read the instruction manual


Wear ear protection


Wear eye protection


Wear respiratory protection


Wear safety gloves


Warning


Double insulation Class II

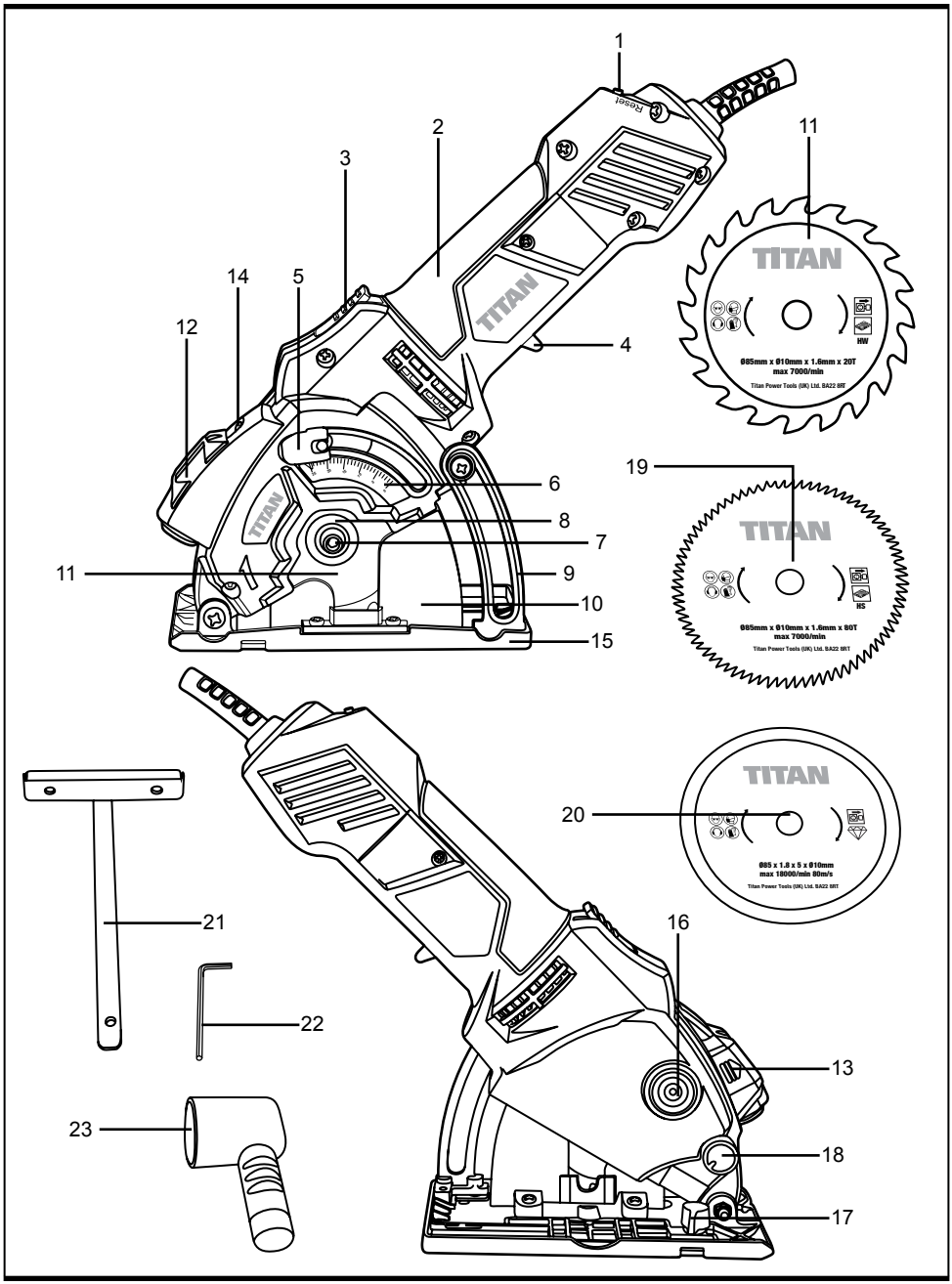

Laser radiation


Do not stare into beam


Conforms to all relevant safety standards.


Waste electrical products should not be disposed of with household waste. Please recycle where facilities exist. Check with your Local Authority or local store for recycling advice.

yyWxx Manufacturing date code: Year of manufacturing (20yy) and week of manufacturing (Wxx);



MINI CIRCULAR SAW 500W TTB689CSW

1. Reset button
2. Main handle
3. Safety lock switch
4. On / Off switch
5. Depth clamping knob
6. Cutting depth scale
7. Hex nut
8. Saw blade clamp flange
9. Cutting depth guide rail
10. Saw blade safety guard
11. TCT blade
12. Laser
13. Laser battery compartment
14. Laser On / Off switch
15. Base plate
16. Spindle lock button
17. Parallel guide clamping knob
18. Dust extraction port
19. HSS blade
20. Diamond blade
21. Parallel guide
22. Hex key
23. Dust adaptor

TECHNICAL DATA

Model	**TTB689CSW**
Rated voltage	**230-240V~ 50Hz**
Rated power	**500W**
No load speed	**7000min^{-1}**
Blade size	**Ø 85mm**
Bore size	**10mm**
Max. cutting depth	**25mm**
Weight	**1.98kg**

LASER INFORMATION

Laser class	**Class 2**
Wavelength	**650nm**
Output power	**≤1mW**
Energy source	**CR2032 x 1**

NOISE DATA

Sound pressure level :	**L_{pA} = 90 dB(A)**	**K=3dB(A)**
Sound power level :	**L_{wA} =101 dB(A)**	**K=3dB(A)**

Wear ear protection when sound pressure is over 80dB(A)

ACCESSOIRES

The Mini circular saw is supplied with the following accessories:

- 1pc Parallel guide
- 1pc Hex key 5mm
- 3pcs Saw blade: Ø 85x10mm HSS,TCT, Diamond
- 1pc Dust adaptor

OPERATING INSTRUCTIONS

Note: Before using the tool, read the instruction manual carefully.

Intended use

The tool is designed for longitudinal cutting of solid wood, wood-like materials and plastics when equipped with appropriate saw blades, or - when connected to a suitable dust extraction system - for dry cutting of mineral materials, e.g., masonry. The tool is not intended for commercial use.
Any other use or modification to the tool is considered as improper use. The producer is not responsible for any damage or injuries that may result of it.

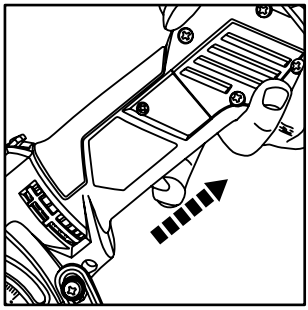


Fig.1

1. On/Off switch (Fig.1-2)

1. Check the correct function of the base plate before plugging in the power cord.
2. Choose a corresponding saw blade and check its condition and sharpness.
3. Make sure you keep the ventilation slots clear when holding the tool.
4. Pull the On / Off switch and wait, until the saw blade has reached maximum speed.
   Press the safety lock switch and slowly push the tool forward through the safely fixed workpiece.
5. Make sure the base plate always rests evenly on the workpiece.
6. To switch off the tool, release the on / off switch.

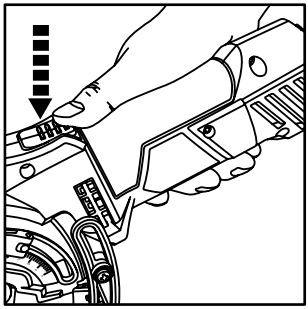


Fig.2

Caution! Do not overheat the blade tips of the saw blade.

Always hold the machine by both hands.
Never start the machine with the blade in contact with the workpiece. Start cutting only after the motor reached its full speed. And always remove the machine from the workpiece before switching it off.

Always carry out a test run before starting work and af-

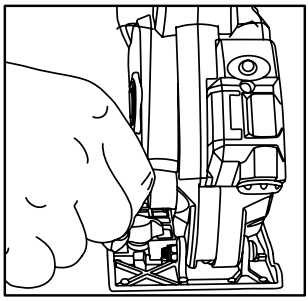


Fig.3

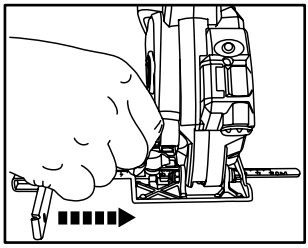


Fig.4

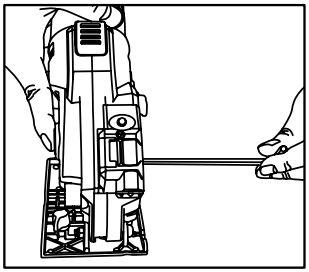


Fig.5

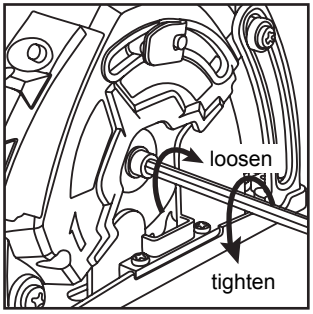


Fig.6

ter every tool change! Always ensure that the tools are in good condition, correctly mounted and able to turn freely. The trial run should be at last 30 sec.

2. Using the Parallel Guide Fence (Fig.3-4)

The parallel guide can be used for making cuts parallet to a work piece edge at a chosen distance.

To set the cutting width, slide the guide arm through the slot and rotate the knob to the required width. Then lock the guide in place.

Note: If the distance between the side of the work piece and the cutting position is too wide, or the side of the work piece is not straight, firmly clamp a straight board to the work piece and use this as a guide.

3. Changing blade (Fig.5,6,7)

The mounting hole of blade must fit with the mounting flange.
Do not use reducers or adapters.
The direction-of-rotation arrow on blade and machine (see direction-of-rotation arrow on the machine enclosure) should be same.
To change the blade, switch off and unplug form power supply.
Press the spindle-lock button in deep and hold it in this position continuously, insert the Hex key provided into the blade bolt, turn the spindle slightly with the free hand until it locks into position, remove the blade bolt, washer ,outer flange and blade form spindle.
Put new blade between two parts of flange, place the washer and screw in position and then tighten blade blot with hex key provided.

CAUTION!
Never use blade whose diameter is larger than that indicated.
The maximum rotation speed of blade must be greater than the idling speed of the machine.

Blade teeth are very sharp and wear gloves. For best cutting results ensure you use a saw blade suited to the

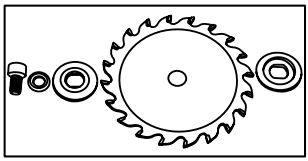


Fig.7

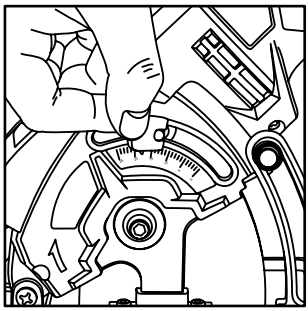


Fig.8

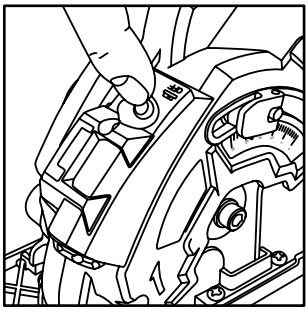


Fig.9

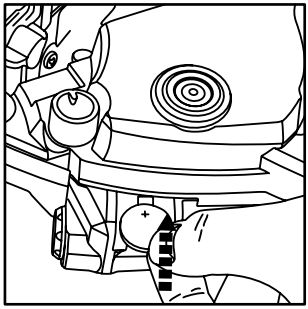


Fig.10

material and cut quality you need.

Check the blade regularly during use. If it has been jammed or is deformed, replace it!

4. Adjusting the cutting depth (Fig.8)

For optimal quality of cutting, the saw blade should not extend more than 3 mm below the workpiece.

To adjust the cutting depth (0-25mm), please follow below steps:

1. Loosen the depth locking lever by hand.
2. Raise/lower the locking lever and set the blade to the required depth - as shown on the cutting depth scale.
3. Tighten the depth locking lever.

CAUTION!
Always check the locking lever before working. A loose locking lever may cause serious injury.

5. LASER GUIDE (Fig.9)

Make the line of cut on the workpiece first. Adjust the depth of cut as required and rest the front edge of the base on the workpiece. Only turn the laser on when you are ready to start cutting. Switch on the laser beam by pressing the laser switch button. Align the laser beam with the line on the workpiece. Start you cut carefully. Keep the laser beam aligning with the market cut line.

Always turn the laser off when not cutting.
Warning: Caution! Never stare directly into the laser beam and do not point it at anybody.

6. Install the battery of laser (Fig.10-11)

Insert a button cell battery CR2032 as indicated, Put "+" upwards. Afterwards close the laser battery compartment with the lid.

Remove the battery after each use.

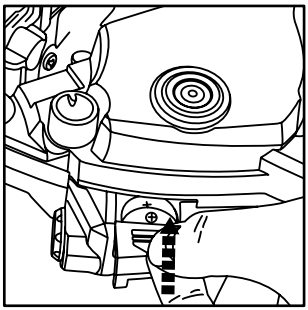


Fig.11

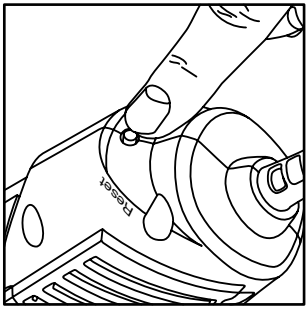


Fig.12

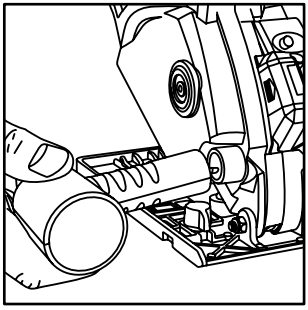


Fig.13

7. RESET (Fig.12)

The saw has overloading-protect function, will switch off automatically if overloading. Press reset button 9 to continue.

8. Dust collecting (Fig.13)

Use of dust collection can reduce dust-related hazards.
To prevent personal injuries, make sure to connect a suitable vacuum cleaner to the dust extraction port by means of the dust collecting system adaptor.

To connect a dust collection system, fit the dust adaptor to the dust extraction port.
Connect the vacuum cleaner (using a 35mm tube) to the dust extraction port with adaptor provided. The dust will be collected by the vacuum.

TROUBLE SHOOTING

Although your new mini circular saw is really very simple to operate, if you do experience problems, please check the following:

1. If your saw will not operate check the power at the main plug.
2. If your saw blade wobbles or vibrates, check that blade bolt is tight, check that the saw blade is correctly located on the flange plate.
3. If there is any evidence that the blade is damaged do not use as the damaged blade may disintegrate, remove it and replace with a new blade. Dispose of old blade sensibly.
4. If laser will not working, check and change a new battery.
5. If your saw switch off automatically, allow your saw cool down for minutes and press reset button to continue.

TERMS OF USE

When all precautions have been taken and the previous operations were done, you can start working.
The stress on the machine should not be such that the speed is reduced by more than 25% for significant periods.When overloaded happened, run the machine empty for 3 to 5 minutes to cool the engine.
Do not use the saw with a cracked, blunt or damaged blade.
Do not attempt to cut objects thicker than the maximum cutting depth of the blade or when there is not enough space under the object for the blade.
The saw blades have different types for different materials. Please select it carefully and make sure it fits with the machine and your purpose before use.

CARE AND MAINTENANCE

- Always keep the tool clean, dry and free of oil or grease.
- Wear safety glasses to protect your eyes whilst cleaning.
- For safe and proper working, always keep the machine and ventilation slots clean.

- Regularly check to see if any dust or foreign matter has entered the grills near the mobrush to remove any accumulated dust.
- If the body of the tool needs cleaning, wipe it with a soft damp cloth. A mild detergent can be used but nothing like alcohol, petrol or other cleaning agent.
- Never use caustic agents to clean plastic parts.
- Lubricate all moving parts at regular intervals.
- Periodically clean the laser generator from sawdust.
- Periodically check all fixings. These could become loose with time due to vibration.
- In case of excessive sparking the carbon brushes should be checked by a qualified electrician. Important: The carbon brushes shall only be removed or replaced by a qualified electrician.

STORING

Store the machine, operating instructions and where necessary the accessories in the original packaging. In this way you will always have all the information and parts ready to hand.

Pack the device well or use the original packaging in order to avoid transit damage.

Always keep the machine in dry place.

ENVIRONMENTAL PROTECTION

This product is marked with the selective sorting symbol on waste electrical and electronic equipment. This means that this product should not be disposed of with household waste but must be supported by a collection system in accordance with Directive 2012/19/EU. It will then be recycled or dismantled to minimize impacts on the environment, electrical and electronic products are potentially hazardous to the environment and human health due to the presence of hazardous substances.

PLUG REPLACEMENT (UK & IRELAND ONLY)

If you need to replace the fitted plug then follow the instructions below.

IMPORTANT

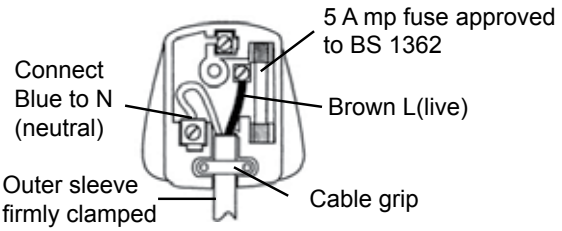
The wires in the mains lead are coloured in accordance with the following code:

BLUE =NEUTRAL
Brown = Live

As the colours of the wires in the mains lead of this appliance may not correspond with the coloured markings identifying the terminals in your plug, proceed as follows. The wire which is coloured blue must be connected to the terminal which is marked with N. The wire which is coloured brown must be connected to the terminal which is marked with L.

Warning:

Never connect live or neutral wires to the earth terminal of the plug. **Only fit an approved 13AMP BS1363/A plug and the correct rated fuse.**
Note: If a moulded plug is fitted and has to be removed take great care in disposing of the plug and severed cable, it must be destroyed to prevent engaging into a socket.



TITAN

Declaration of Conformity

We, Importer
Titan Power Tools (UK) Ltd
Trade House, Mead Avenue, BA22 8RT

Declare that the product:
Designation: MINI CIRCULAR SAW 500W
Model: TTB689CSW

Complies with the following Directives:
2014/30/EU Electromagnetic Compatibility Directive
2006/42/EC Machinery Directive
2014/35/EU Low Voltage Directive
2011/65/EU Restrictions of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment
2012/19/EU Waste Electrical and Electronic Equipment (WEEE)

Standards and technical specifications referred to：

EN 55014-1:2006+A1:2009+A2:2011
EN 55014-2:2015
EN 61000-3-2:2014
EN 61000-3-3:2013
EN 60745-1:2009+A11:2010
EN 60745-2-5:2010
EN 60745-2-22:2011+A11:2013
EN 60825-1:2007

Authorised Signatory and technical file holder
Date : 10/11/2016

Signature:_____

CE

Name / title: John Fretwell / Quality Assurance Manager
Titan Power Tools (UK) Ltd. Trade House, Mead Avenue, BA22 8RT