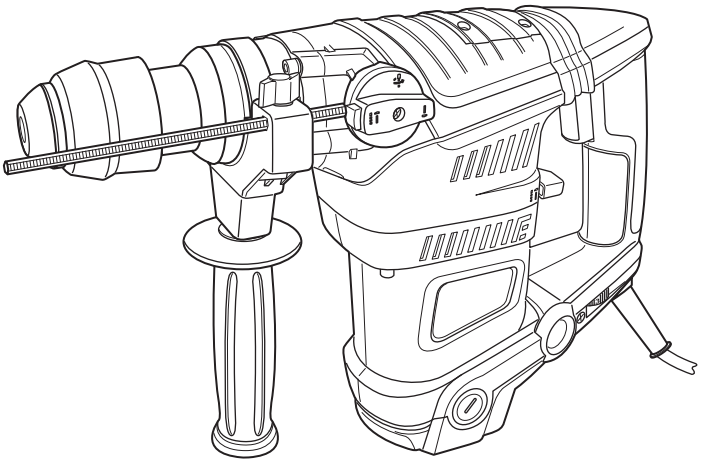
TITAN

1500W SDS Plus Rotary Hammer



TTB653SDS

Barcode: 5052931538713
Ref. No.: 6846H

WARNING: Read the instructions before using the product!

Original Instructions_TTB653SDS_GB_V3_160614

TITAN

Congratulations on your purchase of TITAN a 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 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 year. 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 chains, bars and sprockets)
- 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.

ROTARY HAMMER 1500W - TTB653SDS

EN

Let's **get started...**

These instructions are for your safety. Please read through them thoroughly before use and retain them for future reference.

Safety warnings

General power tool safety warnings

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.

CAUTION

This is a very powerful Drill.
When using this drill it is essential that the following rules for use are followed.

1. When drilling it is common that the core/ drill bit jams in the material being drilled. This will result in the drill trying to rotate around the drill bit and potentially come out of your grip. This SOS Drill has a safety clutch mechanism. This safety clutch mechanism will be activated and stop the drive to the drill bit BUT only if you resist the initial forces caused by the jamming by securely holding the drill with both hands. As this is a very powerful drill these forces aresignificant.
2. ALWAYS ensure that the front handle is firmly affixed and secure.
3. The Front and rear handle must be fi rmly held to resist any movement of the drill when the core drill or drill bit becomes jammed.
4. ALWAYS use this drill when standing on a fi rm and secure platform or the ground.

(DO NOT USE ON LADDERS OR STEPS)

5. NEVER Start the Drill with the core or drill jammed in position.
6. DO NOT stretch to hold the drill. Do not drill above shoulder height or below Knee height, as the drill cannot be securely held.
7. Never drill holes that are above the declared maximum size in the manual.
8. This drill is not designed for core drilling above the maximum drilling capacity in masonry.

Work area safety

>**Keep work area clean and well lit.** Cluttered or dark areas invite accidents.

>**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.

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

Electrical safety

>**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.

>**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.

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

Personal safety

>**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.
>**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.
>**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.

Safety warnings

>**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.

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

>**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.

>**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.

Power tool use and care

>**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.

>**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.

>**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.

>**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.

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

Service

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

Hammer safety warnings

>**Wear ear protectors.** Exposure to noise can cause hearing loss.
>**Use auxiliary handle supplied with the tool.** Loss of control can cause personal injury.
>**Hold power tool by insulated gripping surfaces, 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.
>The SDS MAX drill is not commended for core drilling. For core drilling, always select suitable core drill.
>When using this product it is essential that the following rules for use are followed:

Safety warnings

- When drilling it is common that the core / drill bit jams in the material being drilled. This will result in the product trying to rotate around the drill bit and potentially come out of your grip. This product has a safety clutch mechanism. This safety clutch mechanism will be activated and stop the drive to the drill bit BUT only if you resist the initial forces caused by the jamming by securely holding the product with both hands. As this is a very powerful product these forces are significant.
- ALWAYS ensure that the auxiliary handle is firmly affixed and secured.
- The auxiliary and main handle must be firmly held to resist any movement of the product when the core drill or drill bit becomes jammed.
- ALWAYS use this product when standing on a firm and secure platform or the ground. (DO NOT USE ON LADDERS OR STEPS.)
- NEVER start the product with the core or drill bit jammed in position.
- DO NOT stretch to hold the product. Do not work above shoulder height or below knee height, as the product cannot be securely held.

Vibration and noise reduction

To reduce the impact 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 minimise the vibration and noise exposure risks:

>Only use the product as intended by its design and these instructions.
>Ensure that the product is in good condition and well maintained.
>Use correct attachments for the product and ensure they are in good condition.
>Keep tight grip on the handles/grip surface.
>Maintain this product in accordance with these instructions and keep it well lubricated (where appropriate).
>Plan your work schedule to spread any high vibration tool use across a longer period of time.

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.

>**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.
>**Switch off and disconnect from the power supply if there are malfunctions.** Have the product checked by a qualified professional and repaired, if necessary, before you operate it 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:

>Health defects resulting from vibration emission if the product is being used over long periods of time or not adequately managed and properly maintained.

Safety warnings

>Injuries and damage to property due to broken cutting attachments or the sudden impact of hidden objects during use.
>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!

Warnings for construction dust

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 paint
- Crystalline silica from bricks and cement and other masonry products
- Arsenic and chromium from chemically treated timber

Your risk from these exposures varies, depending upon how often you do this type of work. To reduce your exposure to these chemicals:

- Work in a well-ventilated area.
- Work with approved protective equipment, such as those dust masks that are specially designed to filter microscopic particles.

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?

>Reduce the amount of cutting by using the best sizes of building products.
>Use a less powerful tool e.g. a block cutter instead of angle grinder.
>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

Symbols

On the product, the rating label and within these instructions you will find among others the following symbols and abbreviations. Familiarize yourself with them to reduce hazards like personal injuries and damage to property.

V~	Volt, (alternating voltage)	kg	Kilogram
Hz	Hertz	°C	Degree Celsius
W	Watt	dB(A)	Decibel (A-rated)
/min or min^{-1}	Per minute	m/s^2	Metres per second squared
mm	Millimetre		
	Lock / to tighten or secure.		Unlock / to loosen.
	Note / Remark.		Caution / Warning.
	Read the instruction manual.		Wear hearing protection.
	Wear eye protection.		Wear a dust mask.

Wear protective gloves.

Wear protective, slip-resistant footwear.

Utilisation en intérieur uniquement, dans un environnement sec.

Switch the product off and disconnect it from the power supply before assembly, cleaning, adjustments, maintenance, storage and transportation.

This product is of protection class II. That means it is equipped with enhanced or double insulation.

The product complies with the applicable European directives and an evaluation method of conformity for these directives was done.

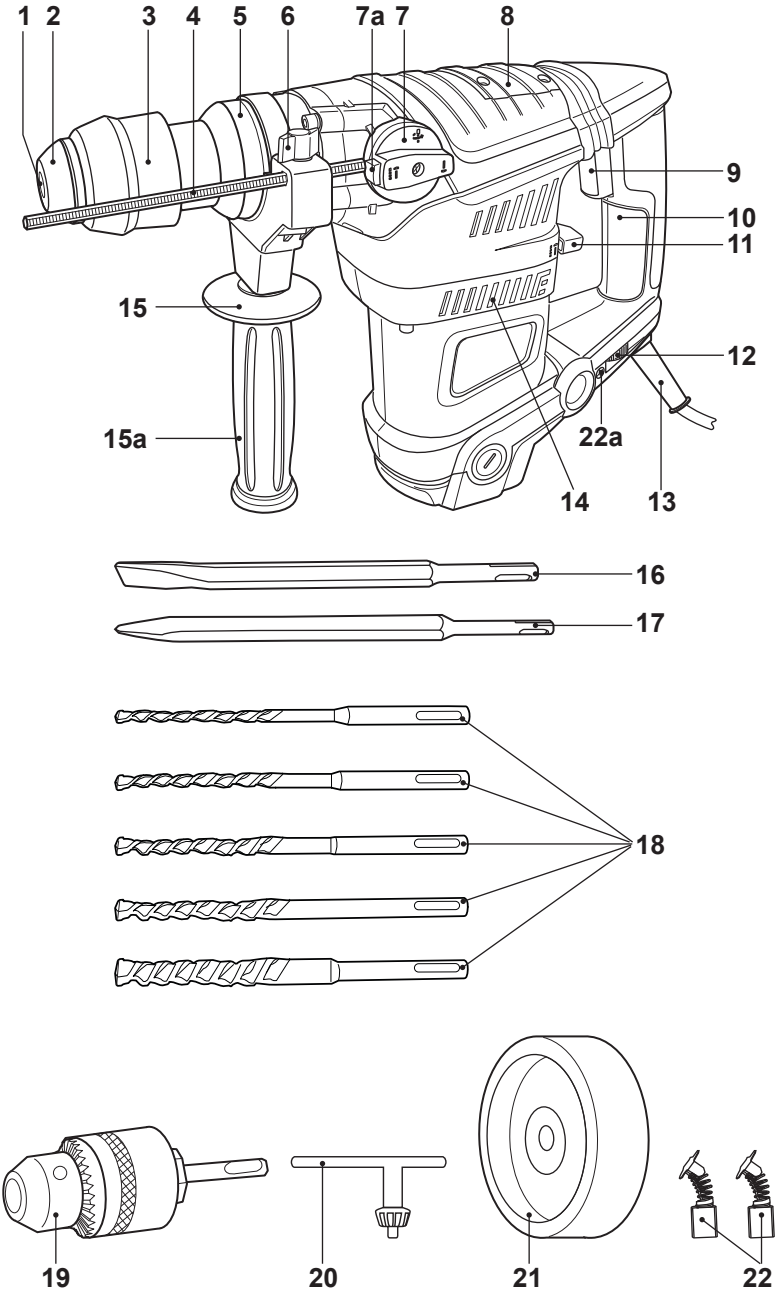
WEEE symbol. Waste electrical products should not be disposed of with household waste. Please recycle where facilities exist. Check with your Local Authority or local store for recycling advice.

yyWxx

Manufacturing date code; year of manufacturing (20yy) and week of manufacturing (Wxx)

Getting started...

Your product



1. SDS PLUS drill chuck
2. Dust protection cap
3. Chuck sleeve
4. Depth stop
5. Collar
6. Wing nut
7. Mode selector – rotation stop switch
   a. Lock-off button
8. Gearbox cover
   a. Bolt* (x 4)
9. On/off switch
10. Main handle
11. Mode selector – hammer stop switch
12. Speed dial
13. Power cord with plug
14. Air vents
15. Auxiliary handle
    a. Hand grip
16. Flat chisel
17. Point chisel
18. Ø 6/8/10/12/14 SDS drill bit
19. Keyed drill chuck with SDS adaptor
20. Chuck key
21. Dust cover
22. Carbon brush (x 2)
    a. Indicator
23. Chisel / drill bit storage box (not illustrated)
24. Transportation case (not illustrated)

NOTE: Parts marked with * are not shown in this overview. Please refer to the respective section in the instruction manual.

Technical specifications

General

> **Rated voltage, frequency**	: 230 - 240 V~, 50 Hz
> **Rated power input**	: 1500 W
> **Rated no load speed n_0**	: 200 - 750 min^{-1}
> **Impact rate**	: 3000 min^{-1}
> **Chuck type**	: SDS PLUS
> **Protection class**	: II ⧈
> **Weight**	: approx. 6 kg

Drilling capacity

> **into wood**	: 40 mm
> **into metal**	: 13 mm
> **into concrete**	: 32 mm

Technical specifications

Sound values (hammer drilling mode)
> **Sound pressure level L_{pA}** : 91.46 dB(A)
> **Sound power level L_{WA}** : 102.46 dB(A)
> **Uncertainty K_{pA}, K_{WA}** : 3 dB(A)
Sound values (chiselling mode)
> **Sound pressure level L_{pA}** : 94.54 dB(A)
> **Sound power level L_{WA}** : 105.54 dB(A)
> **Uncertainty K_{pA}, K_{WA}** : 3 dB(A)

The sound values have been determined according to noise test code given in EN 60745-1 and EN 60745-2-6, using the basic standards EN ISO 3744 and EN ISO 11203.
The sound intensity level for the operator may exceed 80 dB(A) and ear protection measures are necessary.
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:	
Hammer drilling into concrete	Vibration emission value $a_{h,HD}$ = 15.30 m/s^2
	Uncertainty K = 1.5 m/s^2
Chiselling	Vibration emission value $a_{h,Cheq}$ = 18.95 m/s^2
	Uncertainty K = 1.5 m/s^2

The declared vibration emission value should be used as a minimum level and should be used with the current guidance on vibration.
Calculating the actual period of the actual period off use can be difficult and the HSE website has further information.
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 dependant on the following examples and other variations on how the tool is used:
How the tool is used and the materials being cut or drilled.
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).Note The use of other tools will reduce the users' total working period on this tool.
Helping to minimise your vibration exposure risk. ALWAYS use sharp chisels, drills and blades Maintain this tool in accordance with these instructions and keep well lubricated (where appropriate) Avoid using tools in temperatures of 10ºC or less
Plan your work schedule to spread any high vibration tool use across a number of days.

Unpacking

> Unpack all parts and lay them on a flat, stable surface.
> Remove all packing materials and shipping devices, if applicable.
> Make sure the delivery contents are complete and free of any damage. If you find that parts are missing or show damage do not use the product but contact your dealer. Using an incomplete or damaged product represents a hazard to people and property.
> Ensure that you have all the accessories and tools needed for assembly and operation. This also includes suitable personal protective equipment.

Getting started...

Unpacking

WARNING! The product and the packaging are not children's toys! Children must not play with plastic bags, sheets and small parts! There is a danger of choking and suffocation!

You will need

(items not supplied)
Suitable personal protective equipment
Suitable drill bits (for wood and metal)
Suitable crosshead screwdriver
Grease
Cooling lubricant (for drilling into metal)

(items supplied)
Depth stop (4)
Flat chisel (16)
Point chisel (17)
Ø 6/8/10/12/14 SDS drill bit (18)
Keyed drill chuck with SDS adaptor (19)
Chuck key (20)
Dust cover (21)
Carbon brush (x 2) (22)

Setup

WARNING! The product must be fully assembled before operation! Do not use a product that is only partly assembled or assembled with damaged parts!
Follow the assembly instructions step-by-step and use the pictures provided as a visual guide to easily assemble the product!
Do not connect the product to power supply before it is completely assembled!

Drill bits + chisels

Different drill bits can be used with this product depending on the workpiece material and application required.

WARNING! Always use drill bits according to the intended use! For example, never use a drill bit intended for working on wood for working on stone or vice versa!
Observe the technical requirements of this product (see chapter “Technical specifications”) when purchasing and using drill bits!
Some drill bits are very sharp and become hot during use! Handle them carefully! Wear protective gloves when handling drill bits in order to avoid injuries like burns and cuts!

SDS drill bits and chisels

Inserting

> Clean and lightly grease the shank end of the SDS drill bit / chisel.
> Pull the chuck sleeve (3) back and hold it in position.
> Insert the SDS drill bit / chisel with a twist motion all the way to the stop into the chuck (1) (Fig. 1).

NOTE: When inserting the drill bit / chisel, take care that the dust protection cap (2) is not damaged. Have a damaged dust protection cap replaced by a qualified specialist.

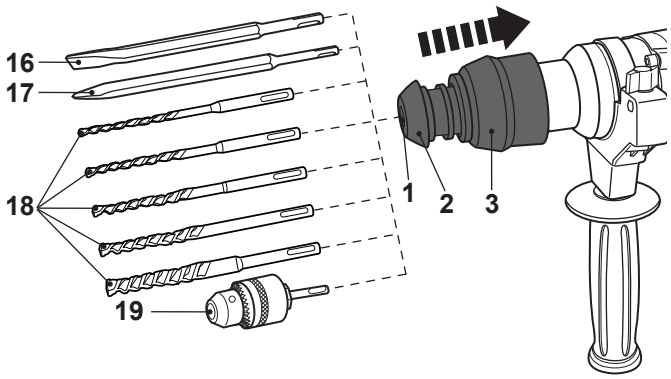


Fig. 1

> Release the chuck sleeve (3).
> Pull the SDS drill bit / chisel to verify it sits securely in the drill chuck (1).

Drill bits + chisels

Removing/Replacing

> Pull the chuck sleeve (3) backward and remove the SDS drill bit / chisel.
> Insert a new one as described above, if desired.

Wood and metal drill bits

WARNING! Do not use a keyed drill chuck for hammer drilling or chiselling applications! It is intended exclusively for drilling with drilling or drill bits for wood and metal.

Inserting

NOTE: A keyed drill chuck allows normal bits (non SDS type) to be used with the product. To fit the keyed drill chuck, grip and pull back the chuck sleeve and insert the SDS adaptor of the keyed drill chuck. Do not use hammer action with Keyed Chuck as this causes damage to the keyed chuck.

> Insert the chuck key (20) into one of the holes on the keyed drill chuck (19). Then turn the chuck key anticlockwise until the tool socket is opened wide enough to insert the drill bit (Fig. 2).
> Insert the drill bit all the way to the stop. For smaller drill bits ensure sufficient work length.
> Insert the key into one of the holes on the keyed drill chuck and turn the key clockwise. Move on to the next hole and turn the key. Repeat until the drill bit is securely fastened and centred in the keyed drill chuck. (Fig. 3).

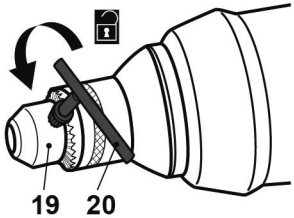


Fig. 2

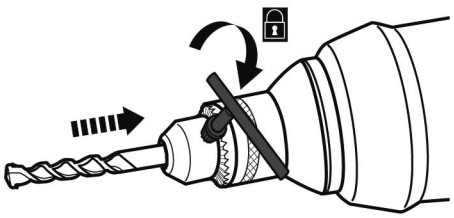


Fig. 3

WARNING! Some drill bits are very sharp and become hot during use! Handle them carefully! Wear protective gloves when handling drill bits in order to avoid injuries like burns and cuts!
After short operation, switch the product off, disconnect it from power supply and check once again that the drill bit is properly fastened! Caution, the drill bit could be hot!

Removing
Insert the chuck key into one of the holes on the keyed drill chuck. Then turn the chuck key anticlockwise until the tool socket is opened wide enough to pull out the drill bit.

Depth stop

You can set the drilling depth with the depth stop (4).
> Turn the wing nut (6) anticlockwise until the depth stop (4) can be inserted.
> Insert the depth stop (4) through the hole as indicated (Fig. 4). Adjust the auxiliary handle (15) to other position if necessary.
> Align the tip of the depth stop (4) with the drill tip. Now pull the depth stop back by the required drilling depth.
> Turn the wing nut (6) clockwise to fix the depth stop in position.

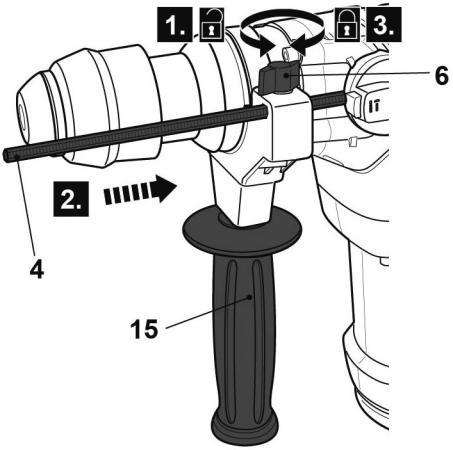


Fig. 4

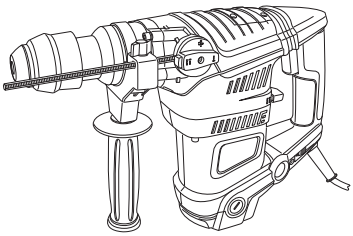
Connection to power supply

> Make sure the on/off switch (9) is not pressed.
> Connect the plug with a suitable socket.

WARNING! Check the voltage! The voltage must comply with the information on the rating label!

> Your product is now ready to be used.

In more detail...



Intended use

This product is intended for hammer drilling and chiselling work into concrete, brick and stone when equipped with bits with an SDS PLUS shank. A keyed drill chuck allows normal bits (non SDS type) to be used for drilling into wood or metal.
The product is not suitable for fine drilling operations and should not be used for working on materials that are dangerous for health.
For safety reasons it is essential to read the entire instruction manual before first operation and to observe all the instructions therein.
This product is intended for private domestic use only, not for any commercial trade use. It must not be used for any purposes other than those described.

WARNING! Always switch the product off and disconnect it from power supply before making any adjustments!

Auxiliary handle

Adjust the auxiliary handle (15) according to the desired application. It improves the control when using the product.

> Turn the hand grip (15a) clockwise to loosen the clamp.
> Adjust the auxiliary handle (15) to the desired working position so that you can hold the product safely during operation.
> Turn the hand grip (15a) anticlockwise to tighten the clamp (Fig. 5).

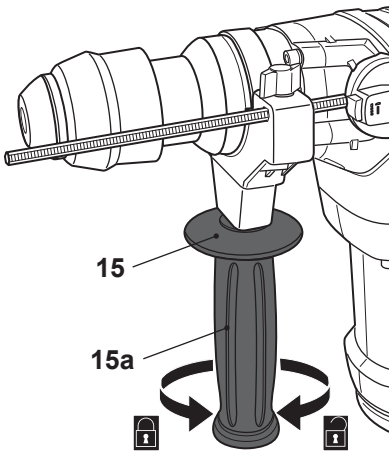


Fig. 5

In more detail...

Auxiliary handle

WARNING! Never operate the product without the auxiliary handle to avoid accidents and injury! Always ensure that the auxiliary handle is attached and secured correctly before operation! The auxiliary handle provides better control of the product in case of sudden jams during use when considerable forces are released!

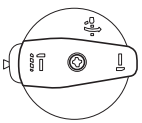
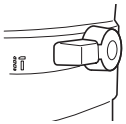
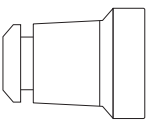
Mode selector

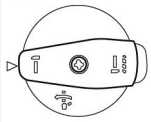
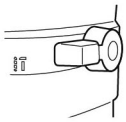
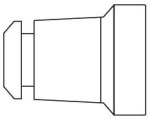
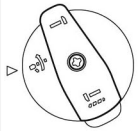
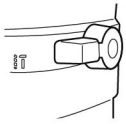
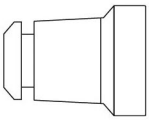
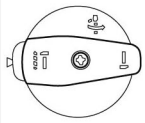
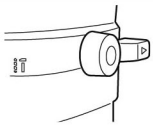
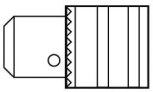
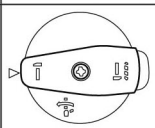
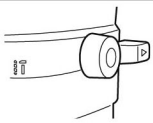
Select the operation mode with the rotation stop switch (7) and hammer stop switch (11) before operation. This product can be operated either in drilling, hammer drilling or chiselling mode.

WARNING! Only change the mode settings when the product is switched off and has come to a complete stop! Always ensure that the mode selector is adjusted to the correct position depending on the intended operation! Do not use the product with the switch in any intermediate position!

WARNING! Always set the mode selector according to the required operation! Do not attempt to use the keyed chuck for SDS hammer drilling or vice versa!

> Press the lock-off button (7a) and turn the rotation stop switch (7) in desired position.
> Make sure the lock-off button (7a) snaps in place.
> Do not use the product if one of the mode selectors (7, 11) is in any intermediate position.

Function	Rotation stop switch (7)	Hammer stop switch (11)	Drill chuck	Application
SDS hammer drilling				Hammer and drill action (brick, concrete and masonry)

Function	Rotation stop switch (7)	Hammer stop switch (11)	Drill chuck	Application
SDS chiselling				Chiselling action (bricks, concrete and masonry)
SDS chisel rotation				Adjusting the chiselling position freeing a stuck chisel
Drilling				Adjusting the chiselling position freeing a stuck chisel
Disabled			No operation, gear disengaged	

On/off switch

> Switch the product on by pressing the on/ off switch (9) (Fig. 9).
> Switch the product off by releasing the on/ off switch (9).

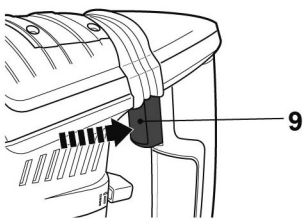


Fig. 6

Torque limiter

The product is designed with a clutch unit. The torque limiter will be activated automatically when the product reaches a certain torque. In this case, the attachment stops working as soon as the torque limiter turns on. Release the on/off switch and remove the attachment from the drill chuck to avoid wear or damage.

In more detail...

Speed dial

Limit the maximum speed using the speed dial (12). The speed is continuously adjustable with the following levels.

1|||2|||3|||4|||5|||6

WARNING! Operation at the lowest speed over a longer period of time will cause a danger of overheating on the motor! Make frequent breaks for 10 minutes to let the product cool down before using it again!

> Turn the speed dial (12) left to increase the maximum speed (Fig. 7).
> Turn the speed dial (12) right to decrease the maximum speed (Fig. 7).

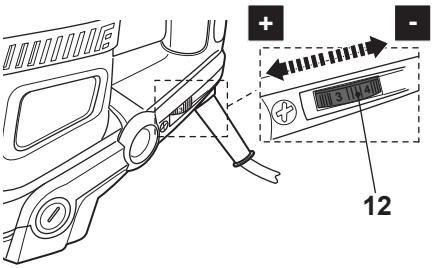


Fig. 7

Dust cover

Slide the dust cover (21) over the drill bit to protect the user and the product from dust or debris (Fig. 8).

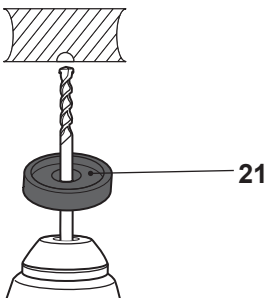


Fig. 8

General operation

> Check the product, its power cord and plug as well as accessories for damage before each use. Do not use the product if it is damaged or shows wear.
> Double check that the accessories and attachments are properly fixed.
> Always hold the product on its handles. Keep the handles dry to ensure safe support (Fig. 9).

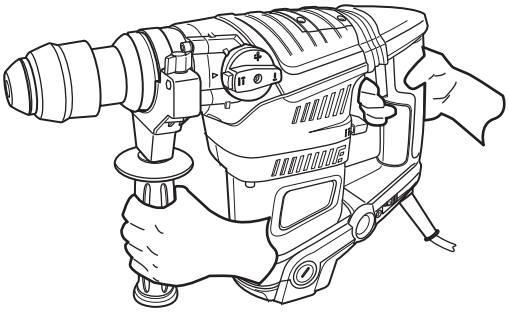


Fig. 9

> Ensure that the air vents are always unobstructed and clear. Clean them if necessary with a soft brush. Blocked air vents may lead to overheating and damage the product.
> Switch the product off immediately if you are disturbed while working by other people entering the working area. Always let the product come to complete stop before putting it down.
> Do not overwork yourself. Take regular breaks to ensure you can concentrate on the work and have full control over the product.

WARNING! Keep in mind that there are buried objects hidden in every household! Ensure that there are no gas, water or power lines hidden in the working area that may be hit before operation – danger of electrical shock and serious damage to people and property! Use a suitable detector to trace such objects in advance!

Drilling

General drilling

WARNING! During operation fine dust will be generated!
Some dusts are highly inflammable and explosive! Do not smoke during operation, keep heat sources and open flames out of the working area!
Always wear a dust mask to protect yourself against hazards resulting from fine dust!

Drilling

> Always hold the product perpendicular to the point to be drilled. Holding it at an angle may cause slipping or jamming of the drill bit.
> Always place the drill tip directly on the point to be drilled first and then switch the product on.
> Pre-drill larger holes with a small diameter drill bit first. Doing so makes drilling with larger diameter drill bits easier.

WARNING! Switch the product off, let it come to a complete stop and disconnect it from the power supply if the attachment gets stuck in the workpiece. Only then free the jammed attachment.

Hammer drilling mode

Use this function to drill holes in masonry.

NOTE: In principle, drill masonry in the hammer drilling operation mode. However, in the first few seconds of operation, the drill bit may deviate from the original desired position due to the hammer action. To avoid this, turn the hammer function off and pre-drill the hole in the drilling mode.

> Choose the SDS drill chuck and set the mode selector to the correct position.
> Insert a suitable SDS drill bit.

Drilling mode

Use this function for drilling holes into wood, wood similar materials, plastic or metal.

> Choose the keyed drill chuck and set the mode selector to the correct position.
> Insert a suitable drill bit. Punch the drilling point before operation in order to avoid slipping of the drill bit.
> Use a metal drill bit for drilling into plastic and metal. Where necessary use a cooling lubricant that is available at your specialist dealer.

Chiselling

> Choose a suitable SDS chisel for your application.
> Use shorter chisels when a big striking power is required.
> Mark the chiselling route when you plan to chisel slots. Start near the edge and then proceed towards the inside.

Chiselling mode

Use this function for chiselling applications including carving or cutting masonry.
> Choose the SDS drill chuck and set the mode selector to the correct position.
> Insert a suitable SDS chisel.

Chisel rotation mode

Use the chisel rotation mode to adjust the angle of the chisel. It is especially recommended when the chisel is stuck.
> Insert the SDS flat chisel (16).
> Set the mode selector (7) to the position “chisel rotation”. The chisel is now rotatable in the drill chuck (1) (Fig. 10).
> Hold the chisel and adjust it to the desired chiselling position according to the intended application.

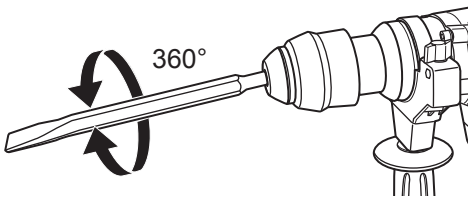


Fig. 10

> Set the mode selector to the correct position. Turn the chisel clockwise or anticlockwise have it automatically lock into a definite position.

NOTE: The chisel rotation can be set in any one of 35 positions. SDS-plus chisel will not be completely secured in the drill chuck. The chisel can be moved for approx. 10°.

After use

> Switch the product off, disconnect it from the power supply and let it cool down.
> Check, clean and store the product as described below.

In more detail...

The golden rules for care

WARNING! Always switch the product off, disconnect the product from the power supply and let the product cool down before performing inspection, maintenance and cleaning work!

> Keep the product clean. Remove debris from it after each use and before storage.
> Regular and proper cleaning will help ensure safe use and prolong the life of the product.
> Inspect the product before each use for worn and damaged parts. Do not operate it if you find broken and worn parts.

WARNING! Only perform repairs and maintenance work according to these instructions! All further works must be performed by a qualified specialist!

General cleaning

> Clean the product with a dry cloth. Use a brush for areas that are hard to reach.
> In particular clean the air vents (14) after every use with a cloth and brush.
> Remove stubborn dirt with high pressure air (max. 3 bar).

NOTE: Do not use chemical, alkaline, abrasive or other aggressive detergents or disinfectants to clean this product as they might be harmful to its surfaces.

> Check for worn or damaged parts. Replace worn parts as necessary or contact an authorised service centre for repair before using the product again.

Maintenance

Before and after each use, check the product and accessories (or attachments) for wear and damage. If required, exchange them for new ones as described in this instruction manual. Observe the technical requirements.

Lubrication

NOTE: Ensure there is sufficient grease in the gearbox before using the product. Inspect the grease / gearbox every 5 hours during operation.
Fill the gearbox with suitable grease (lithium based; for general purpose) in capacity of max. 20 g.

Regularly check the gearbox. Refill with suitable grease (not supplied) if necessary.

> Loosen the bolts (8a) with a proper crosshead screwdriver and remove them together with the gearbox cover (8) (Fig. 11).
> Fill the gear box with suitable grease.
> Fit the gearbox cover (8) back onto the product and secure it with the bolts (8a). Make sure it is properly fastened.

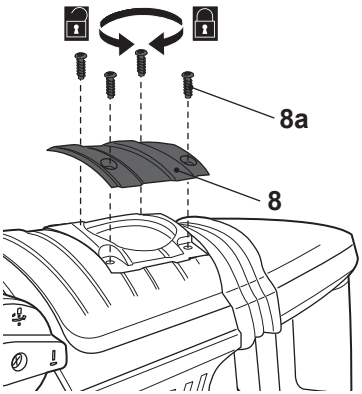


Fig. 11

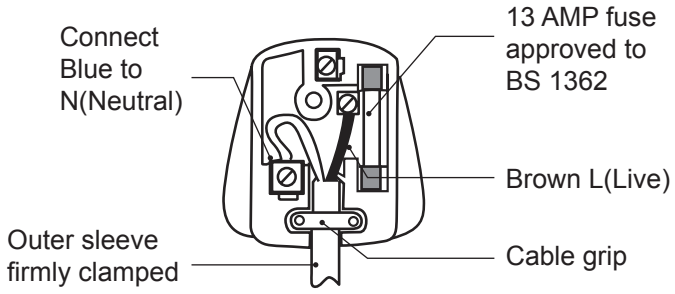
Power cord

If the power cord is damaged, it must be replaced by the manufacturer, its service agent or similarly qualified persons in order to avoid a safety hazard.

UK plug (only for UK market)

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 wire in the mains lead of this product may not correspond with the coloured marking 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 or coloured black. The wire, which is coloured brown, must be connected to the terminal, which is marked L or coloured red.

UK plug (only for UK market)



WARNING! Never connect live or neutral wires to the earth terminal of the plug, which is marked with E.

Only fit an approved 13 Amp BS 1363/A plug and the correctly rated fuse. If in doubt, consult a qualified electrician.

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.

Repair

This product does not contain any parts that can be repaired by the consumer. Contact an authorised service centre or a similarly qualified person to have it checked and repaired.

Carbon brushes

Contact a qualified specialist to have the carbon brushes checked and replaced in case they are worn.
The indicator will be lighten on when the carbon brushes is going to wear out.
The carbon brushes and commutator in the product have been engineered for many hours of dependable service.
The carbon brushes are expendable and they continue abrasion during use.
Inspect and change the carbon brushes regularly. Replace both worn carbon brushes with the new ones at the same time to avoid damage on the electrical circuit.

Only use the provided carbon brushes for replacement which are specially designed for the product.

Replacing of carbon brushes

To inspect or replace carbon brushes:

> Switch the product off and disconnect it from the power supply.
> Loosen and remove the brush caps on both sides of the motor housing with a suitable working tool (e. g. slot-head screwdriver). The brush caps are spring loaded by the carbon brush assemblies.
> Carefully pull out the carbon brushes.
> Inspect the carbon brushes for wear, if the abnormal spark shows during operation. Replace the carbon brushes accordingly, in case the contact surface is not smooth.

NOTE: During reinstall of the used carbon brushes, ensure they are installed in the same way / direction as they were pulled out. Otherwise a break-in period will occur which reduces motor performance and increase wear.

> Carefully refit the new carbon brushes into the motor housing. The two metal tabs on the carbon brush terminal shall be fitted into the same opening as the carbon brushes (Fig. 12).
> Refit the brush caps afterward and tighten them properly. Do not overtighten the caps.

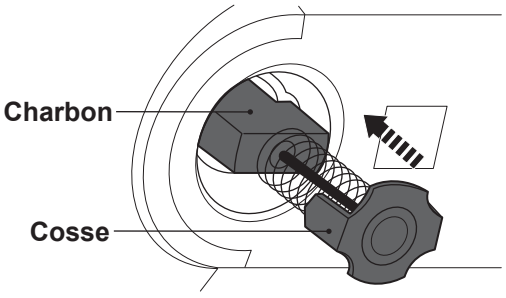


Fig. 12

Storage

> Switch the product off and disconnect it from the power supply.
> Clean the product as described above.
> Store the product and its accessories in a dark, dry, frost-free, well-ventilated place.
> Always store the product in a place that is inaccessible to children. The ideal storage temperature is between 10 and 30°C.
> We recommend using the original package for storage or covering the product with a suitable cloth or enclosure to protect it against dust.

Transportation

> Switch the product off and disconnect it from the power supply.
> Attach transportation guards, if applicable.
> Pack the product and accessories into the chisel / drill bit storage box (23) / transportation case (24) before transportation.
> Protect the product from any heavy impact or strong vibrations which may occur during transportation in vehicles.
> Secure the product to prevent it from slipping or falling over.

Troubleshooting

Suspected malfunctions are often due to causes that the users can fix themselves. Therefore check the product using this section. In most cases the problem can be solved quickly.

WARNING! Only perform the steps described within these instructions! All further inspection, maintenance and repair work must be performed by an authorised service centre or a similarly qualified specialist if you cannot solve the problem yourself!

Problem	Possible cause	Solution
1. Product does not start	1.1. Not connected to power supply 1.2. Power cord or plug is defective 1.3. Other electrical defect to the product	1.1. Connect to power supply 1.2. Check by a specialist electrician 1.3. Check by a specialist electrician
2. Product does not reach full power	2.1. Extension cord not suitable for operation with this product 2.2. Power source (e.g. generator) has too low voltage 2.3. Air vents are blocked	2.1. Use a proper extension cord 2.2. Connect to another power source 2.3. Clean the air vents
3. Unsatisfactory result	3.1. Drill bit / chisel is dull/damaged 3.2. Drill bit / chisel not suitable for work piece material	3.1. Replace with new one 3.2. Use proper drill bit / chisel

Problem	Possible cause	Solution
4. Excessive vibration or noise	4.1. Drill bit / chisel is dull/damaged 4.2. Bolts/nuts are loose	4.1. Replace with a new one 4.2. Tighten bolts/nuts
5. Weak hammer function	5.1. Grease used up 5.2. The speed dial (12) was not set at maximum speed position	5.1. Refill gearbox with suitable grease 5.2. Turn the speed dial (12) right to decrease the maximum speed

Recycling and disposal

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.

In more detail...

In more detail...

EC declaration of conformity

TITAN

Declaration of Conformity

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

Declare that the product:
Designation: ROTARY HAMMER 1500W
Model: TTB653SDS / Z1C-DW-32W4-T

Complies with the following Directives:
2014/30/EU Electromagnetic Compatibility Directive
2006/42/EC Machinery Directive
2011/65/EU Restrictions of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment

Standards and technical specifications referred to

EN 60745-1:2009+A11:2010
EN 60745-2-6:2010
EN 55014-1:2006+A1:2009+A2:2011
EN 55014-2:1997+A1:2001+A2:2008
EN 61000-3-2:2014
EN 61000-3-3:2013

Authorised Signatory and technical ile holder
Date: 14/06/2016

Signature P.C.Harris

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

CE 2016

UK

Titan Power Tools (UK)Ltd
Trade Housr,Mead Avenue,BA22 8RT