

# IMPACT DRILL TYPE D 16mm 2430





### **SPECIFICATION**

Model	2430
Max Power	1100W
Voltage	220-240V
Frequency	50-60Hz
Chuck Type	Keyed Chuck
Chuck Size	16mm
No Load Speed	0-1400/0-2800 RPM
Impact Rate	0-45000 BPM
Drilling Capacity (Wood, Metal, Masonry)	40 mm/ 16mm/ 26mm
Body Material	PA6+GF30
Dimensions	410mm×85mm×200mm
Net Weight	3.75Kg
Gross Weight	4.25Kg
Includes	1pc Depth gauge 1pc Wrench 1 pair Carbon brush 1pc Side handle



## PART LIST



#### **GENERAL POWER TOOL SAFETY WARNINGS**

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

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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.

#### **INTENDED USE**

The power tool is intended for impact drilling in brick, concrete and stone, as well as for drilling in wood, metal, ceramic and plastic. Tools with electronic control and right/ left rotation are also suitable for screwdriving and thread cutting.



#### 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 adapted plugs with earthed (grounded) power tools. Modified plugs and unmatching outlets will increase the 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 it away from heat, oil, sharp edges or moving parts.

- 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.

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Never touch the exposed metal surfaces on gearbox, shield, and



so on because touching metal surfaces will be interfered with the electromagnetic wave, thus causing potential injury or accidents.

#### 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 or alcohol. 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 a 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.

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

- Dress properly, say no to lose clothing or jewelry. Keep your hair, clothing away from moving parts. Loose clothes, jewelry 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.

- Do not let familiarity gained from fre quent use of tools allow you to become complacent and ignore tool safety prin ciples. A careless action can cause severe injury within a fraction of a second.

#### 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 safe rat 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 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.

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

- Maintain power tools properly. 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.

#### **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:

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

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



#### SERVICE

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.

When servicing a power tool, use only identical replacement parts. Follow instructions in the maintenance section of this operator's manual.

## SAFETY GUIDELINES DURING POWER TOOL OPERATION

- The workpiece shall be fastened. Fixed devices or vice shall be used to fasten the workpiece, which will be more secure than holding the workpiece with your hands.

- Considering that asbestos may cause cancer, asbestos containing materials shall not be processed.

- The rower tool could be put down only after the parts of power tool is completely static. Accessory on the power tool might be clamped during work, which may make it difficult for you to control the power tool.

difficult Power tool with damaged electric wires shall not be used. If electric wires of the power supply are damaged during the work, you shall not touch the damaged electric wires and shall pull out the plug immediately. Damaged electric wires will raise the risk of electric shock. difficultWhen using power tools outdoor, you must install fault current (FI) protection switch on the power tool.

- Appropriate detector shall be used to find the location of hidden power wires. Or you should obtain relevant information from local power supply unit. Drilling electric wires will cause fire and electric shock. Damaged gas pipe will cause exploration. If water pipes are punctured, damage will be caused to property.

- In case an accessory installed on the power tool is clamped, you shall shut down the power tool and stay calm. At that time, the power tool will produce extremely high reactive torque thus resulting in



return stroke. The accessory installed on the power tool are likely to be clamped, for example: hypercharge of power tool or skewing of accessory installed on the power tool during work.

- If hidden electric wires or power lines of the power tool itself might be cut off during work, you must hold the insulated handle to operate the power tool. When the power tool is in touch with a charged line, the metal parts on the power tool will conduct electricity and may cause the operator to get an electric shock.

- During work, you must tightly hold the power tool and ensure you stand firmly. You should hold the power tool with your hands.

- When operating and using the power tool, you can only hold switch position of the main handle rather than other parts.

- Avoid stopping a power tool motor when loaded.

- Never remove any chips or fragments with your power tool's motor running.

- When working, follow the position of the power supply cable. Avoid winding it around your legs or arms.

- Use only sharp drill bits without defects it will make working with the power tool easier.

- The modification of the drill bits design and the use of removable orifices and accessories not envisaged for this power tool is strictly forbidden.

- Do not apply excessive pressure when operating the power tool it can jam the drill bit and overload the engine.

- Do not allow drill bits to jam in the material processed. If this occurs, do not try to release them by means of the power tool engine. This can put the power tool out of order.

- Striking out drill bits jammed in the material processed with a hammer or other objects is strictly forbidden metal fragments can hurt both the operator and the people nearby.

- Avoid overheating your power tool, when using it for a long time.



## INSTALLATION AND REGULATION OF POWER TOOL ELEMENTS

Before carrying out any works on the power tool it must be disconnected from the mains.

Do not draw up the fastening elements too tight to avoid damaging the thread.

Mounting / dismounting / settingup of some elements is the same for all power tool models.

Side handle (Fig 1)



Loose side handle



Place side handle

in desired Position



<sup>1.3</sup> Tighten side handle

Fig 1

#### DEPTH GAUGE (SEE FIG 2,3)

- Use depth gauge to set a required drilling depth. Loose side handle as shown in fig 2.1.

- Move depth gauge (fig 3.2) to set a required drilling depth.

- Tighten side handle (see fig 2.2 and 3.2).



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Fig 2





Fig 3

Mounting / replacement of accessories

With long-term use the drill bit may become very warm; use gloves to remove it.

#### LOOSING OR TIGHTEN CHUCK (SEE FIG 4)

- Release the cams grip with drill chuck key, then rotate the gear of chuck counter-clockwise with your hand (fig 4.1) until the cams move apart at the distance allowing an accessory to be mounted/ replaced (fig 4.2).

- Mount / replace an accessory.

- Rotate the gear of chuck clock-wise with your hand in order to lock the accessory mounted. Do not allow the accessories to become distorted (fig 4.3).

- Tighten the cams of gear rim chuck with drill chuck key applying a similar torque to each of the three openings on the side surface of the chuck (fig 4.3).



Fig 4



#### MOUNTING / DISMOUNTING OF THE DRILL CHUCK (SEE FIG 5,6)

- To mount the gear rim chuck, carry out the operations in consecutive stages as it is shown in figure 5.



Fig 5

- To dismount the gear rim chuck, carry out the operations in consecutive stages as it is shown in figure 6.



Fig 6

## **ATTENTION:**

keep in mind that in the process of mounting/ dismounting of the drill chuck the screw has a left-hand thread.

#### SCREWDRIVER BIT / MAGNETIC HOLDER (SEE FIG 7)

When using the power tool as a screwdriver, use magnetic holder for reliable locking of screwdriver bits (see fig 7). A magnetic holder is not needed for extended screw driver bits (specially purposed for screw-drivers).





Fig 7

#### **INITIAL OPERATING OF THE POWER TOOL**

Always use the correct supply voltage: the power supply voltage must match the infor mation quoted on the power tool identification plate.

#### Switching the power tool on/ off

#### Short-term switching on / off

To switch on, press and hold on/ off switch, to switch off: release it. Long-term switching on / off

#### **SWITCHING ON:**

Push on/off switch and lock it in the position with lock-on button.

#### **SWITCHING OFF:**

Push and release on / off switch.

#### **DESIGN FEATURES OF THE POWER TOOL**

#### ∎IMPACT/ DRILL" SWITCH

This switch is purposed for switching between the following operation modes of the power tool:

- drilling, screwing, unscrewing drilling without impact in wood, synthetic materi als, metal. Screwing and unscrewing fas tening



components;

- impact drilling

- impact drilling in brick, concrete, natural stone.

- Drilling, screwing, unscrewing:

To switch to this operation mode, turn selector to the drilling sign coin cides with the mark on the body.



Impact drilling:

To switch to this operation mode, turn selector to the Impact drilling sign coincides with the mark on the body.

One can switch to another operation mode without stopping the power tool, simply decrease pressure applied to it to some extent.



#### STEPLESS SPEED ADJUSTMENT

Speed is controlled from 0 to maxi mum by pressing force of on / off switch. Weak pressing results in low revolutions, which enable a smooth power tool switch-on.

#### SPEED SELECTOR THUMBWHEEL

Use speed control to set required revolutions and impact frequency.



- Push on / off and lock it in the position with lock-on button.

The required speed is dependent on the ma terial and can be determined with practical trials. When operating your power tool at a low speed for a long time, it has to be cooled down for 3 minutes. To do it, set a maximum speed and leave your power tool to run idle. Step speed selector switch.

### **ATTENTION:**

one can only change the revolutions per minute range after the engine fully stops.

The first and second speed level - you can find the values of the revolutions per minute range in the technical specifications table.



#### CHANGING THE ROTATIONAL DIRECTIONS

Change the direction of rotation only & after a full stop of the mo tor, acting otherwise may cause damage to the power tool.

Rotation to the right (drilling, screwing in) - move the rotational direction switch to the right.

Rotation to the left (unscrewing) - move the rotational direction switch to the left.

## RECOMMENDATIONS ON THE POWER TOOL OPERATION

#### DRILLING (SEE FIG 8 - 11)

Grease the drill bit regularly when drilling holes in metals (except



drilling non-ferrous metals and their alloys).

When drilling hard metals, apply more force to the power tool and lower the rotation speed.

When drilling large diameter holes in metal, first drill a hole with a smaller diameter and ream it till the necessary diameter (see fig 8).



- In order to avoid splitting of the surface at an exit point of a drill bit when drilling holes in wood, follow the instructions shown in figure 9.



- In order to decrease dust production when drilling holes in walls and ceilings, take actions indicated in fig 10.



- When drilling holes in glazed ceramic tiles, in order to improve the drill centering accuracy and to save the glaze from damage, apply



adhesive tape to the presumed hole center and drill after that (see fig 11). Start drilling at lower speed increasing it as the hole deepens.



### **A** CAUTION:

drill tiles in the impact-less drilling operation mode only.

#### **∎IMPACT DRILLING**

- During the impact drilling, the result does not depend on the pressure applied to the power tool this is caused due to the peculiarities in the impact mechanism design. That is why you should not apply excessive pressure to the power tool it can jam the drill and overload the engine.

#### SCREWING THE SCREWS (SEE FIG 12)

To make fastening of screws easier and in order to prevent cracking of the work pieces, first drill a hole with a diameter equal to 2/3 of a diameter of the screw.

If you are connecting work pieces with the help of screws, in order to achieve durable joint without getting cracks, fracturing or layering, take actions shown in figure 12.





#### **POWER TOOL MAINTENANCE**

Before carrying out any works on the power tool it must be disconnected from the mains.

#### **CLEANING OF THE POWER TOOL**

An indispensable condition for a safe long-term exploitation of the power tool is to keep it clean. Regularly flush the power tool with compressed air thought the ventilation slots.



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