

Original instruction

GENERAL SAFETY INSTRUCTIONS

WARNING Read all instructions. Failure to follow all instructions listed below may result in electric shock, fire and /or serious injury. The term "power tool" in all of the warnings listed below refers to your mains operated power tool.

SAVE THESE INSTRUCTIONS.

1) WORK AREA

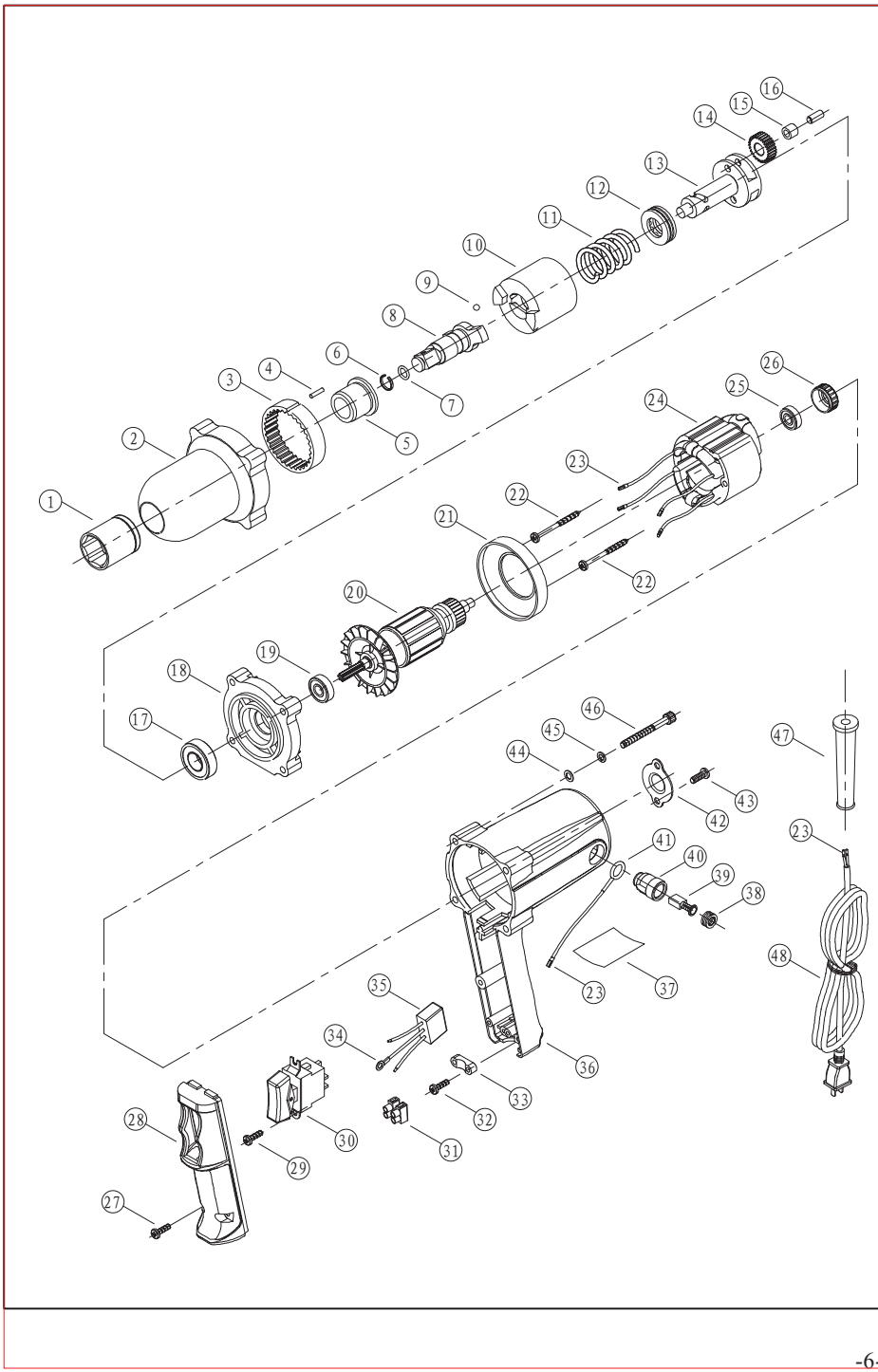
- a) Keep work area clean and well lit. Cluttered and dark areas invite accidents.
- b) Do not operate power tools in explosive atmospheres, such as in the presence of flammable liquids, gases or dust. Power tools create sparks which may ignite the dust or fumes.
- c) Keep children and bystanders away 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 plugs in any way. Do not use any adapter plugs with earthed power tools. Unmodified plugs and matching outlets will reduce risk of electric shock.
- b) Avoid body contact with earthed or grounded surfaces such as pipes, radiators, ranges and refrigerators. There is an increased risk of electric shock if your body is earthed or grounded.
- c) Do not expose power tools to rain or wet conditions. Water entering a power tool will increase the risk of electric shock.
- d) Do not abuse the cord. Never use the cord for carrying, pulling or unplugging the power tool. Keep cord away from heat, oil, sharp edges or moving parts. Damaged or entangled cords increase the risk of electric shock.
- e) When operating a power tool outdoors, use an extension cord suitable for outdoor use. Use of a cord suitable for outdoor use reduces the risk of electric shock.
- f) If operating a power tool in a damp location is unavoidable, use a residual current device (RCD) protected supply. Use of an RCD reduces the risk of electric shock.

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 safety equipment. Always wear eye protection. Safety equipment such as dust mask, no-skid safety shoes, hard hat, or hearing protection used for appropriate conditions will reduce personal injuries.
- c) Avoid accidental starting. Ensure the switch is in the off position before plugging in. Carrying power tools with your finger on the switch or plugging in power tools that have the switch on invites accidents. 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 jeweler. Keep your hair, clothing and gloves away from moving parts. Loose clothes, jeweler 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 these devices can reduce dust related hazards.



PARTS LIST of the Mod.6416 Impact Wrench

No.	Code	Name	Remark	No.	Code	Name	Remark
1	110255	Socket	24mm	26	331029	Bearing sleeve	
2	162074	Gear box		27	221048	Screw	ST4. 2×16
3	136091	Big gear		28	314127	Handle cover	
4	275009	Pin	φ 3	29	221046	Screw	ST4. 2×12
5	143050	Sleeve		30	445093	Switch	
6	253013	Retainer		31	437001	Terminal block	
7	333064	O ring		32	221047	Screw	ST4. 2×14
8	133086	Spindle		33	318001	Cord clamp	
9	271010	Steel ball	φ 5	34	436023	Terminal patch	
10	130001	Impact table		35	443014	Capacitor	
11	151081	Spring		36	164026	Motor housing	
12	216001	Bearing		37			
13	130002	Impact shaft		38	433036	Brush cap	
14	136092	Small gear		39	431068	Carbon brush	
15	212001	Needle bearing		40	432044	Brush holder	
16	275010	Pin	φ 6	41	435003	Spring	
17	211035	Bearing	6002	42	116030	Bearing cover	
18	163040	Mediat plate		43	221077	Screw	ST4. 8×12
19	211020	Bearing		44	242017	Washer	φ 5
20	442128	Rotor		45	241002	Spring washer	φ 5
21	321064	Baffle		46	232003	Hex screw	M5×50
22	221076	Screw	ST4. 2×50	47	332006	Cord sleeve	
23	436022	Terminal patch		48	411002	Power cord	
24	441127	Stator					
25	211009	Bearing	607Z				

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 before making any adjustment, 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 tools 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 and in the manner intended for particular type of power tool, taking into account the working conditions and the work to be performed. Use the power tool for operations different from those intended could result in a hazardous situation.
- h) **Save all warnings and instructions for future reference.**
- i) Recommendation: The tool always be supplied via residual current device with a rated residual currentof 30 mA or less.

5) 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.

Dear Customer,

Thank you for buying a KEN power tool. Should you have any questions, vagueness or second thoughts about our products, we recommend you to contact our experts in Sales and Service Departments, who will advise you and help you find the right answers to the set questions. Please contact our local distributors or dealers directly.

SAFETY

Read these instructions before operating this power tool. They contain information which will enable you to use the tool safely and help protect those around you. A copy of this instruction leaflet should be kept with the tool so that you can refer to it quickly when undertaking work. Another copy should be made and safely away.

- Please check the drill bit fix at right place before operating.
- Ensure that drill bit don't touch with workpieces and others before starting tools.
- It is necessary for long hair user to wear a calotte,and don't touch rotating parts with fingers and gloves when operating the tools in order to avoid enlacing.
- When drilling wall, floor board or other similar parts,should avoid gas pipe、water pipe and cable,and avoid to touch with steel parts.
- Please keep away touching with electric wire and drill bit when operating the tools.
- Don't lay down the rotating tools,to switch off before putting down the tools.
- Don't touch the drill chuck or other parts around drill chuck immediately after using the tools because the parts with high temperature will harm your skin.
- Use the same specified and double-insulation cable when prolonging electric wire.

■ OPERATION INSTRUCTIONS

◆ Installing or removing socket

⚠CAUTION:

Always be sure that the tool is switched off and unplugged before installing or removing socket. Fist be sure the square hole of socket is same as the dimension of anvil neck.

Always use the correct size socket will result in inaccurate and inconsistent fastening torque and/or damage to the bolts or nut.

To install the socket,push it onto the anvil of the tool until it lock into place. To remove the socker,pull simply it off.(picture 1)

socket

Picture 1

◆ Switch action

⚠CAUTION:

◆Before plugging in the tool,lalways check to see that the switch trigger actuates proerly and returns to the "OFF"position when released. Change the direction of rotation only when the tool comes to a complete stop.Changing it before the tool stops may damage the tool.

The switch is reversible, providing either clockwise or counterclockwise rotation.To start the tool,simply pull the lower part of the switch trigger for clockwise or the upper part for counterclockwise.Release the switch trigger to stop.(picture 2)

Trigger

Picture 2

◆ Replacing carbon brushes.

Remove and check the carbon brushes regularly. Replace when the tool occur obvious sparks or wear down to the limit mark. Both carbon brushes should be replaced at the same time.Use only KEN brushes provided. Use a screwdriver to remove the brush holder caps.Take out the worn carbon brushes, insert the new ones and secure the brush holder caps (picture 3)

Screw driver

Brush cap

Picture 3

■ Effective and safe for operation

- ◆ After starting. Detect the socket rotation direction if same as the desired tighten or loosen bolt or not, ifnot, please stop the tool to adjust the direction you needed then restart the tool.
- ◆ Don't give excessive pressure in on the axis of the tool.Only hold the tool firmly with both hands.
- ◆ Don't exceed 5s for impact function continually when operating this tool.

■ MAINTENANCE AND CARE

- Unplug the tool from the socket before performing any works on the tool!
- Tool requires no special maintenance, but after some time you must control the parts that are submitted to wear-and-tear under normal operating conditions. This includes the control and replacement of carbon brushes and grease in reducing gear housing. Take the tool to an authorized service centre.
- Keep the tool and supply cord clean. Keep ventilation slots clean and open. Wipe the surface of the tool with a soft cloth!
- It is not allowed to use household cleaning agents that contain petrol, trichloroethylene, ammonia and chlorides. These substances corrode and damage plastic parts of the tool.
- Excessive sparking generally indicates the presence of dirt in the motor or abnormal wear on the carbons.
- In case of electric or mechanical failure, send the tool to a KEN authorized service centre for repair.

■ SERVICING AND REPAIRS

If servicing is required, contact one of our listed service centers. It is not allowed and dangerous to perform any individual work on the tool.

- ◆ Have the tool repaired by authorized persons.

- ◆ Any repairs of the tool in unauthorized service centers is performed at own responsibility.
- ◆ The owner of the tool is responsible for all works on the tool that were not performed in authorized service center, and therefore he losses the claim for guarantee.

■ WASTE DISPOSAL AND ENVIRONMENT PROTECTION

The machine, accessories and packing should be sorted for environmental-friendly recycling. Only for EC countries:
◆ Do not dispose of power tools into household waste!
According to the European Guideline 2002/96/EC for Waste Electrical and Electronic Equipment and its implementation into national right, power tools that are no longer usable must be collected separately and disposed of in an environmentally correct manner.

■ TECHNICAL DATA

Type	PIB-SH01-16	6416
Socket Diameter	16mm	
Current Source	220-240V ~	50/60Hz
Rated Input Power	350W	
Idling Rotation Speed	1800/min	
Impact per minute	2000/min	
Weight	2.5kg	
Standard Spare Parts	Carbon brush Operating Handbook Service book	2PCS 1PC 1PC



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Impact wrench



6416