

SAFETY AND OPERATING MANUAL SDS Rotary Hammer Drill RHD1050



ORIGINAL INSTRUCTIONS



TABLE OF CONTENTS

Welcome to Lumberjack!

Dear Customer, Congratulations on your purchase. Before using the

product for the first time please be sure to read these instructions for use.

They provide you with all information necessary for using the product safely and to ensure its long service life.

Closely observe all safety information in these instructions!

General Power Tool Safety Warnings	01
Symbols & Cable Rating Chart	05
Machine Details and Product Features	06
Operation	08
Maintenance and Service	09
Lumberjack Guarantee	14
Declaration of Conformity	16
Parts List	17
Parts Diagram	19



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 electric (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 grounded power tools.
 Unmodified plugs and matching outlets will reduce risk of electric shock.

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

b) If the replacement of the supply cord is necessary, this has to be done by the manufacturer or its agent in order to avoid a safety hazard.



6. Safety Warnings for Rotary Hammer

a) Wear ear protectors with rotary hammers. Exposure to noise can cause hearing loss.

b) Use auxiliary handles supplied with the tool.

Loss of control can cause personal injury.

c) Hold power tools by insulated gripping

surfaces when performing an operation where the cutting tool may contact hidden wiring or

its own cord. Contact with a "live" wire will

make exposed metal parts of the tool " live" and shock the operator.

d) Let bit cool before touching, changing or adjusting it. Bits heat up dramatically while in use, and can burn you.

e) If the drill bit jams, release the trigger immediately; drill torque can cause injury or break bit.

f) Maintain labels and nameplates on the tool.

These carry important safety information. If unreadable or missing, Contact Lumberjack Tools for a replacement.

g) Avoid unintentional starting. Prepare to begin work before turning on the tool.

h) Do not lay the tool down until it has come to a complete stop. Moving parts can grab the surface and pull the tool out of your control.

I) When using a handheld power tool, maintain a firm grip on the tool with both hands to resist starting torque.

J) Do not leave the tool unattended when it is plugged into an electrical outlet. Turn off the tool, and unplug it from its electrical outlet before leaving. k) This product is not a toy. Keep it out of reach of children.

I) People with pacemakers should consult their physician(s) before use. Electromagnetic fields in close proximity to heart pacemaker could cause pacemaker interference or pacemaker failure. In addition, people with pacemakers should:

● Avoid operating alone. ●Do not use with power switch locked on. ●Properly maintain and inspect to avoid electrical shock. ●Any power cord must be properly grounded. Ground Fault Circuit Interrupter(GFCI) should also be implemented – it prevents sustained electrical shock.

7. Safety Warnings for Drill

a)When using the electric hammer chisel only use bits that are configured with the correct slots for this chuck.

b)BEFORE STARTING the operation, jog the chisel switch to make sure the chisel bit does not wobble or vibrate.

c)DO NOT USE fly cutters or multiple-part hole cutters, as they can come apart or become unbalanced in use.

d)MAKE SURE the spindle has come to a complete stop before touching the chuck or attempting to change the chisel bit also beware that the bit will be hot, let it cool down before changing as it could burn and cause injury.

e)ALWAYS MAKE SURE THE CHISEL IS FIRMLY SEATED IN THE HEX CHUCK before starting the job in hand.

JMBER ACK

8. Safety Warnings for Vibration safety

This tool vibrates during use. Repeated or longterm exposure to vibration may cause temporary or permanent physical injury, particularly to the hands, arms and shoulders. To reduce the risk of vibration-related injury:

a) Wear suitable gloves to reduce the vibration effects on the user.

b) Use tools with the lowest vibration when there is a choice.

c) Include vibration-free periods each day of work.

d) To reduce vibration, maintain the tool as explained in this manual. If any abnormal vibration occurs, stop use immediately.

9. Using an Extension Cable.

a) If an extension cable is required, use an approved triple core extension cable suitable for the power input of the tool.

b) Grounded tools always require a three wire extension cable.

c) As the distance from the supply outlet increases you must use a heavier gauge extension cable. Using extension cables with inadequately sized wire causes a serious drop in voltage, resulting in loss of power and possible tool damage.

d) The smaller the gauge number of the wire the greater the capacity of the cord.

e) When using a cable reel, always unwind the cable completely.



SYMBOLS AND POWER RATING CHART



Danger! – Read the operating instructions to reduce the risk of injury.



Caution! Wear safety goggles.



Caution! Wear ear defenders. The impact of noise can cause damage to hearing.



Caution! Wear a dust mask.



MACHINE DETAILS AND PRODUCT FEATURES

Machine Details

Specifications:

Mains Voltage -	230V / 50Hz
Power Consumption -	1050W
No Load Speed -	0-1100rpm
Max. Impact Speed -	4600bpm
Impact Joules -	5J
Drilling Capacity –	
Max. In Steel -	13mm
Max. In Concrete -	28mm
Max. In Wood -	42mm
Chuck Type -	SDS-PLUS
Gross Weight -	5.0kg
Nett Weight -	3.5kg

Package Contents:

- -Rotary hammer -Auxiliary handle -Depth Gauge -13mm 1/2" Drill Chuck With SDS Shaft Adaptor and Chuck Key -8,10,12 X 150mm SDS Drill Bit -14 X 250mm SDS Point Chisel & SDS Flat Chisel
- -Grease Pot
- -1 Spare Set of Carbon Brushes
- -1 Gear Box Key

Intended Use

This power tool is intended to use only accessories recommended for this electric hammer chisel. Follow instructions that accompany accessories may cause injury to the operator or damage to the cordless drill. Do not use any accessory unless you have completely read the instructions or Owner's Manual for that accessory.

Product Features

- 1. Variable speed switch
- 2. On/Off Switch
- 3. Operation all mode section switch
- 4. Fuel tank cap
- 5. Replacement drill chuck
- 6. Auxiliary handle



MACHINE DETAILS AND PRODUCT FEATURES





OPERATING INSTRUCTIONS

Operating

WARNING: Always make sure the power tool is isolated from the power supply before fitting any attachment

Handle

Always make sure the fixed handle is secure before any job takes place as a loose handle could invite injuries.



FIG1

Switching the chisel on/off

The chisel has an on/off switch built in to the handle. Holding the chisel with both hands simply squeeze the trigger and the motor will start. To switch off release the trigger.



WARNING: The electric hammer chisel continues for a few seconds after the trigger has been release, be careful when putting it down.

Fitting a chisel bit into the Hex housing



FIG3 Put the bit into the hex housing

Put the bit into the hex housing and clamp the bit by turning the stop lever half a turn anti clockwise. This will lock the bit in place.



Do not use the chisel until you are satisfied the bit is secured.



Maintenance and Service

WARNING: This electric hammer chisel does not have reverse direction, so always take care not to force the chisel in case the chisel bit gets stuck. Always make sure you keep the chisel going in and out to remove debris.

This chisel does not have torque facility. It is not recommended to use any other bit other than masonry or chisels do not use metal cutting drills, this could cause serious injury

NOTE: chiselling for an extended period of time may cause the chisel motor to overheat. If the chisel gets hot, stop chiselling and allow it to cool for at least 15 minutes.

Precautions on using electric hammer chisel

1.Before using the electric hammer chisel always make sure the oil supply is to the full level and the screw is tight.

2. This electric hammer chisel has a fixed handle always make sure the screws holding the handle are secure before operation takes place. Always use both hands when using this chisel, failure to

adhere to this could invite injuries.

3.Safe operation, always make sure you have a

stable posture and safe footing before operating the electric hammer chisel.

4. When working at a high level, always make sure that no person or persons are below you, as this could invite injuries to those persons under you.

5.Before starting any job like breaking, chipping a wall, floor or ceiling, thoroughly confirm that no items such as an electric cable, water pipe or conduit are buried inside as this could cause injury or flooding.

6.Properly set the bit holder.

7. The bit can become very hot during operation exercise extreme caution as this could cause injury.

- 8. Always wear protective safety glasses.
- 9. Always wear ear defenders or earplugs.
- 10. Always wear suitable dust mask.
- 11. Always wear protective footwear.
- 12. Always wear hardhat

Hammer chisel prior to operation

1.Power source

Ensure that the power source conforms to the power requirements specified on the product nameplate.

2.Grounding

This tool should be grounded while in use to protect the operator from electric shock. The tool is equipped with a three-conductor cord and grounding type receptacle, the green(or green and yellow) conductor in the cord is the grounding wire. Never connect the green(or green and yellow) wire to a live or neutral terminal.



3.Power switch

Ensure that the power switch is in the off position before any work is carried out on the chisel. If the plug is connected to a power source while the power switch is in the on position, the power tool will start operating immediately this could invite serious injury.

4.Extension cord

When the work area is away from the power source, use an extension cord of sufficient thickness and rated capacity. The extension cord should be kept as short as practical.

How to use the electric hammer chisel

Place the bit you are going to use to do the job in hand as in FIG 3 and 4

1.Pull the trigger switch after applying the chisel bit tip to the chiseling position.

2.It may be necessary to punch the bit against the crushing position forcibly in order to begin the striking stroke. This is not due to malfunction of the tool, it means that the safe guard mechanism against no-load striking is working.

3.By utilizing the weight of the machine and by firmly holding the hammer chisel with both hands, one can effectively control the subsequent recoil motion. Proceed at a moderate work rate, the use of too much force will impair efficiency.

Caution

Sometimes the tool does not begin the striking stroke even when the motor rotates this may be because the oil has become thick Due to low temperature or has been standing idle for long period. Run the chisel for approx 5 minutes to bring the oil temperature up.

Oil feeding

Caution. Prior to oil feeding, always disconnect the plug from the power supply source. Since an oil chamber is built in this electric hammer chisel, it can be used for approximately 20 days without supplying lubrication oil, assuming that the chisel is used continuously 3-4 hours daily. Feed oil into the oil tank as described below before using the hammer chisel.



1. When the chisel is held upright look through the oil gauge window to see if oil is visible, if no oil shows oil must be installed before operating. If chisel is used without oil this could seriously damaged the chisel and forfeit any warranty given.

2.Before feeding oil, use the provided wrench to remove the oil gauge(4). Be careful not to lose the rubber packing attached below the oil gauge.

3.Check the oil level once daily, confirming that oil is filled.

4. After feeding oil, securely clamp the oil gauge.

Note: Oil for the electric hammer chisel is sold separately, use Shell oil ROTELLA 40(engine oil) or equivalent, this is sold at most shops or filling stations anywhere.



Maintenance and inspection

1.Inspecting the tool

When using dull tool bits this can cause motor malfunction and degraded efficiency. Always replace dull bits with new ones without delay when abrasion is noted.

2.Inspecting the mounting screws

Regularly inspect all mounting screws and ensure that they are properly tightened. Should any of the screws be loose, retighten them immediately. Failure to do so could result in serious injury.

3. Maintenance of the motor

The motor unit winding is the very "heart" of the power tool. Exercise due care to ensure the winding does not become damaged and/or wet with oil or water.

4.Inspecting the carbon brushes.

The motor employs carbon brushes that are consumable parts; since an excessively worn carbon brush could result in motor trouble, replace the carbon brush. Wear limiter(6) No of carbon brush(7).



Always keep carbon brushes clean and ensure that they slide freely within the brush holders.

Replacement steps

The carbon brush can be removed by removing the cap cover, cap rubber and brush cap in that order at the interior.



To replace carbon brush reverse order of removal.

Installing bits

Never hold the chuck body with one hand and use the chisel power to the chisel body to loosen or tighten bits. You may severely injure your hand.

WARNING: Have you read "Power tool safety warning" ? If not, please do it now before you operate this drill. Your safety depends on it!

Every time you use the drill you should verify the following:

1.Hex bit is secure.

2.Oil level is full.

3.Select to the function you want to do before you engage in the proposed operation.

4.All safety apparel. Safety Glasses Safety shoes. Safety gloves. Ear Defenders and Safety Hat are being worn.

Failure to adhere to these safety rules can greatly increase the chances of injury.



WARNING: Be prepared for binding and bit breakthrough. When these situations occur, the chisel bit has the tendency to grab the workpiece.

This action will kick the chisel opposite to the direction of chisel bit rotation and could cause loss

of control when breaking through material as you complete chiseling the hole. If you are not prepared,

this loss of control can result in possible serious injury.

GENERAL

When servicing, use only identical replacement parts. Use of any other part may create a hazard or cause product damage.

DO NOT use solvents when cleaning plastic parts. Most plastic are susceptible to damage from various

types of commercial solvents and may be damaged by their use. Use clean cloth to remove dirt, dust, oil, grease etc.

Do not at any time allow brake fluids, fuel, petroleum-based products, penetrating oils, etc. to come in contact with plastic parts. They contain

chemicals that can damage, weaken or destroy plastic. DO NOT abuse power tools. Abusive practices can damage the tool as well as the workpiece. Do NOT attempt to modify tools or create accessories not recommended. Any such alteration or

modification is misuse and could result in a hazardous condition leading to possible serious injury. It will also void any warranty given.



Trouble	Probable cause	Remedy
Tool will not start	 Cord not connected. No power at outlet. Tool's thermal reset breaker tripped(if equipped). Internal damage or wear.(Carbon brushes or switch, for example) 	 Check that cord is plugged in. Check power at outlet. If outlet is unpowered, turn off and check circuit breaker. If breaker is tripped, make sure circuit is right capacity for tool and circuit has no other loads. Turn off tool and allow to cool. Press reset button on tool. Have technician service tool.
Tool operates slowly	 Excess pressure applied to workpiece. Power being reduced by long or small diameter extension cord. 	 Decrease pressure, allow tool to do the work. Eliminate use of extension cord. If an extension cord is needed, use one with the proper diameter for its length and load. See Extension Cords in GROUNDING section.
Performance decreases over time	Carbon brushes worn or damaged.	Have qualified technician replace brushes.
Excessive noise or rattling	Internal damage or wear.(Carbon brushes or bearings, for example.)	Have technician service tool.
Overheating. GROUNDING section.	 Forcing tool to work too fast. Blocked motor housing vents. Motor being strained by long or small diameter extension cord. 	 Allow tool to work at its own rate. Wear ANSI-approved safety goggles and NIOSH-approved dust mask/respirator while blowing dust out of motor using compressed air. Eliminate use of extension cord. If an extension cord is needed, use one with the proper diameter for its length and load. See Extension Cords in GROUNDING section.
Tool does not grind, sand or brush effectively	 Disc accessory may be loose on Spindle. Disc accessory may be damaged, worn or wrong type for the material. 	 Be sure disc accessory arbour is correct and Outer Flange/ Arbor Nut is tight. Check condition and type of disc accessory. Use only proper type of disc accessory in good condition.



LUMBERJACK GUARANTEE

1. Guarantee

1.1 Lumberjack guarantees that for a period of12 months from the date of purchase thecomponents of qualifying products (see clauses1.2.1 to 1.2.8) will be free from defects causedby faulty construction or manufacture.

1.2. During this period Lumberjack, will repair or replace free of charge any parts which are proved to be faulty in accordance with paragraph 1.1 providing that:

1.2.1 You follow the claims procedure set out in clause 2

1.2.2 Lumberjack and its authorised dealers are given reasonable opportunity after receiving notice of the claim to examine the product

1.2.3 If asked to do so by Lumberjack or its Authorised dealer, you return the product at your own cost to Lumberjack's or supplying Authorised Dealer's premises, for the examination to take place clearly stating the Returns Material Authorisation number given by Lumberjack or an Authorised Dealer.

1.2.4 The fault in question is not caused by industrial use, accidental damage, fair wear and tear, wilful damage, neglect, incorrect electrical connection, misuse, or alteration or repair of the product without approval.

1.2.5 The product has been used in a domestic environment only

1.2.6 The fault does not relate to consumable items such as blades, bearings, drive belts, or other wearing parts which can reasonably be expected to wear at different rates depending on usage.

1.2.7 The product has not been used for hire purposes.

1.2.8 The product has been purchased by you as the guarantee is not transferable from a private sale.

2. Claims Procedure

2.1 In the first instance please contact the Authorised Dealer who supplied the product to you. In our experience many initial problems with machines that are thought to be faulty due to faulty parts are actually solved by correct setting up or adjustment of the machine. A good Authorised Dealer should be able to resolve the majority of these issues much more quickly than processing a claim under the guarantee. If a return is requested by the Authorised Dealer or Lumberjack, you will be provided with a Returns Material Authorisation number which must be clearly stated on the returned package, and any accompanying correspondence. Failure to provide a Returns Material Authorisation number may result in item being refused delivery at Authorised Dealer.

2.2 Any issues with the product resulting in a potential claim under the guarantee must be reported to the Authorised Dealer from which it was purchased within 48 hours of Receipt.

2.3 If the Authorised Dealer who supplied the product to you has been unable to satisfy your query, any claims made under this Guarantee should be made directly to Lumberjack. The Claim itself should be made in a letter setting out the date and place of purchase, giving a brief explanation of the problem which has led to the claim. This letter should be then sent with proof



LUMBERJACK GUARANTEE

of purchase to Lumberjack. If you include a contact number with this it will speed your claim up.

2.4 Please note that it is essential that the letter of claim reaches Lumberjack on the last day of this Guarantee at the latest. Late claims will not be considered.

3. Limitation of Liability

3.1 We only supply products for domestic and private use. You agree not to use the product for any commercial, business or resale purposes and we have no liability to you for any loss of profit, loss of business, business interruption or loss of business opportunity.

3.2 This Guarantee does not confer any rights other than these expressly set out above and does not cover any claims for consequential loss or damage. This Guarantee is offered as an extra benefit and does not affect your statutory rights as a consumer.

4. Notice

This Guarantee applies to all product purchased from an Authorised Dealer of Lumberjack within the United Kingdom. Terms of Guarantee may vary in other countries.



CE DECLARATION OF CONFORMITY

TOOLSAVE Unit C, Manders Ind. Est., Old Heath Road, Wolverhampton, WV1 2RP. Tel: 01902 450 470

Declares that the Rotary hammer(RHD1050) Is in compliance with the regulations included in the Directives:2006/42/EC

EC DECLARATION OF CONFORMITY

<u>Certificate for EC-type examination delivered by BV LCIE CHINA ,Building 4,No.518, xin zhuan Road,</u> <u>CaoHejing Songjiang Hight-Tech Park, Shanghai P.R.C(No.:1866AS07ZDE28863)</u> Person who declares: Bill Evans



22.12.2020

The Director





Parts List

No.	Description	No.	Description
1	Rubber head	31	Piston pin 6*23.5
2	Ring 17*1.6	32	Piston
3	Ring 19.2*26.5*2	33	Connecting rod
4	Spin sleeve	34	Bearing HK0810
5	Spring 22*1.6*5.5*40	35	Oil bearing 30*42*9
6	Ring 42	36	Left Motor House cover
7	Oil seal	37	Top cover
8	Ring 23*1.6	38	Self-tapping screw ST3.9*30
9	Bearing 61905	39	Ring 27.6*2
10	Ball 7.14	40	Oil cover
11	Sleeve	41	Self-tapping screw ST3.9*18
12	X-ring 13*1*4	42	Right Motor House cover
13	Impact Ball	43	Crankshaft
14	O-ring 14*3	44	Gear box
15	Ring 30*1.6	45	Vibration spring 10.5*1.3*5*26
16	Pin 6*6	46	Vibration cover a
17	Cylinder	47	Vibration board
18	Flat key 3*3*12	48	Vibration screw m8*35
19	Soket head caps screw M5*22	49	Slurcocks
20	Cylinder house	50	Location limiting
21	Spacer bush 32.2*36*7	51	Socket head caps screw M4*14
22	Spring 33*2*5.5*55	52	Ring 14*2
23	Spring 46.5*2*3.5*15	53	Knob shaft
24	Stop plate	54	Ring 18
25	Ring 50*1.6	55	Knob
26	Clutch	56	Self-tappings screw M4*12
27	Cone gear	57	Spring 0.6*4.5*17.5
28	Ring 28*1.5	58	Button
29	Hammer	59	Bearing 6002-2RS
30	Ring 19*3.1	60	Ring 32



Parts List

No.	Description	No.	Description
61	Ring 15	91	Coil spring
62	Clutch spring	92	Self-tapping screw ST3.9*12
63	Gear clutch	93	Brush 7*9*20
64	Gear	94	Bottom case
65	Anti-wear gasket	95	Self-tapping screw ST3.9*16
66	Inner cover Ring	96	Spring 10*1.3*5.5*25
67	Inner cover	97	Connecting base
68	Ring 8.5*1	98	Vibration cover b
69	Locating	99	Left handle cover
70	Ring 28.6*13.1*0.8	100	Cable cover
71	Ring 13.2*7.7*0.8*2.2	101	Cable
72	Tripping active board	102	Cable board
73	Ball 4	103	Inductance
74	Tripping fixed plate	104	Capacitance
75	Gear 34	105	Switch
76	Ring 10.1*14*1	106	Speeder
77	Bearing 6000-RS	107	Right handle cover
78	Gear	108	Self-tapping screw ST4.8*25
79	Bearing 6000	109	Auxiliary handle
80	Bearing plate	110	Bracket
81	Rotor	111	Spring W7.8*0.9*18
82	Ring 8.1*21*0.5	112	Bracket button
83	Bearing 608	113	T bolted m8*45
84	Fan guide	114	Нооре
85	Self-tapping screw ST3.9*65	115	Depth
86	Stator		
87	Copper buckle		
88	Self-tapping screw ST4.8*50		
89	Motor house		
90	Brush planes		



Parts Diagram



