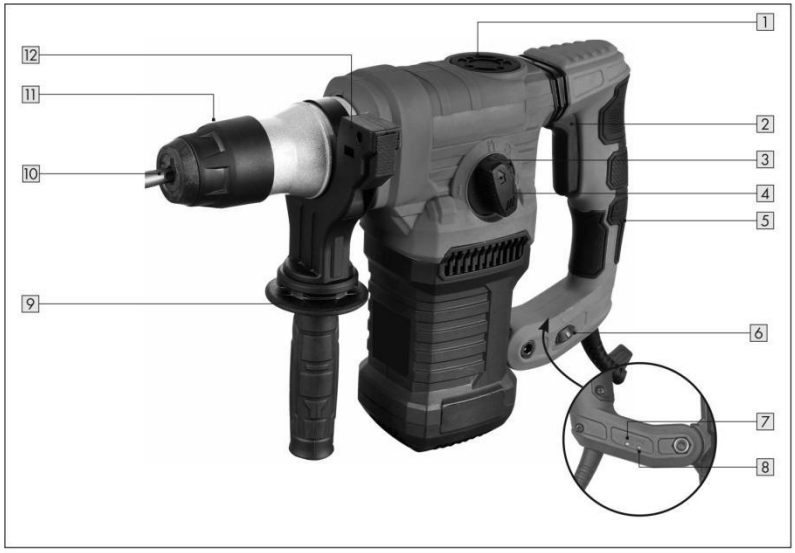
ROTARY HAMMER

WARNING:To reduce risk of injury ,user must read and understand instruction mamual.

WARNING : Cancer and Reproductive Harm -www.P65Warnings.ca.gov.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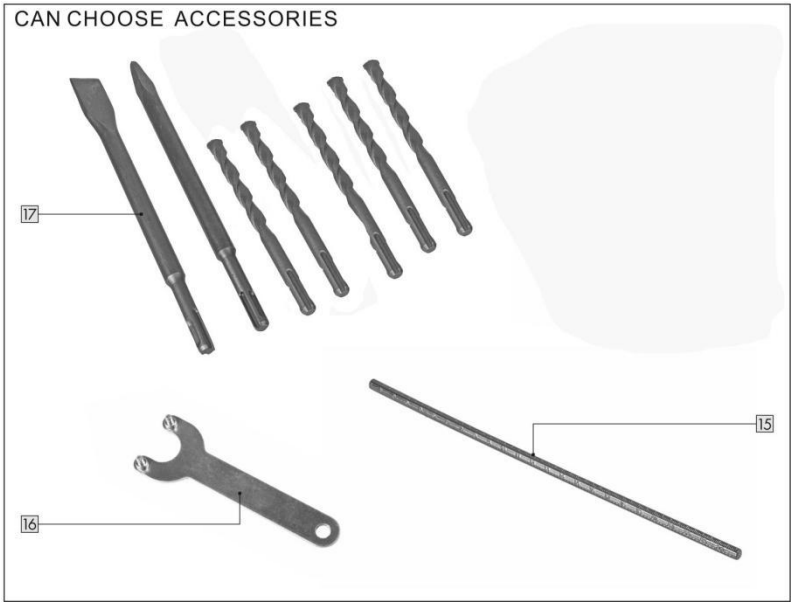
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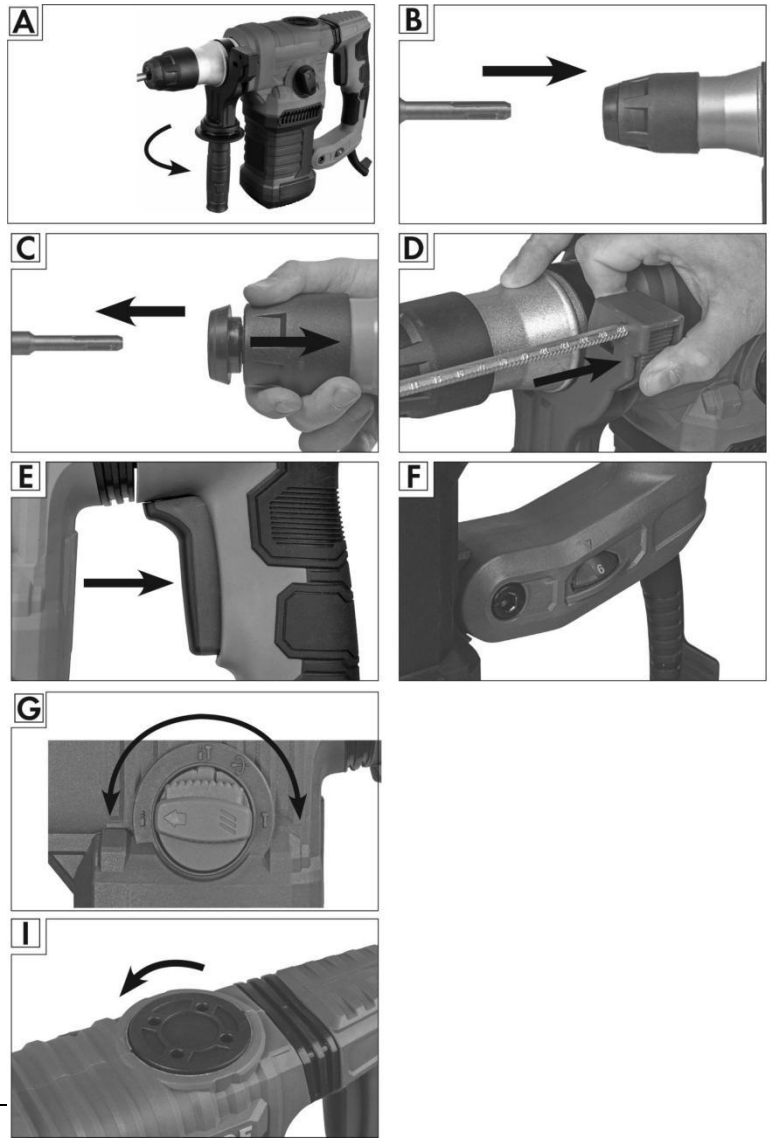
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1. Introduction

Congratulations on the purchase of your new product. You have chosen a high quality quality product with this purchase. These operating instructions form an integral part of this Hammer Drill (hereafter referred to only as the „drill“). It contains important instructions on safety, use and disposal of the product. Please familiarise yourself with all operating and safety instructions before using the product. Only use the product as described and for the stated purpose. If the product is passed on to a third party, please provide all documents to the third partytogether with the product.

Symbols used

The following symbols and key words are used in this operating manual, on the hammer drill or on the packaging.

WARNING!

Indicates a hazard that, if not avoided, could result in death or serious injury.

CAUTION!

Signals a hazard that can cause injuries when ignored.

NOTE!

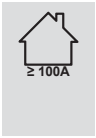
Warns against possible damages.

Read the operating manual.

Protection category 2

Mains plug is inserted (green indicator).

Carbon brushes worn out (red indicator).



The hammer drill is intended for use only in places that have a continuous current rating of ≥ 100 A per phase and are supplied with a rated voltage of 120 V by the distribution network.

Scope of delivery / parts list

1 Housing cover for lubrication
2 ON / OFF Switch
3 Function selector switch
4 Unlocking mechanism for drilling / hammer drilling / chiselling
5 Anti- vibration handle
6 Speed control
7 GREEN LED Indicator
8 RED LED indicator
9 Additional handle
10 Tool holder
11 Locking sleeve
12 Depth stop locking latch
13
14
15 Depth stop
16 Key for lubrication of the housing cover
17 Accessories (suitable for use with SDS+ system)

- 1 pointed chisel
- 1 flat chisel
- 3 drill bits (6.8, 10,12 & 14 mm)

2. Safety

Proper use

This drill is exclusively designed for private use and for hobby and DIY projects for the following purposes:

Drilling:

- Drilling metal, wood and plastic.

Hammer drilling:

- Drilling concrete, stone, granite, brickwork and similar materials.

Chiselling:

- Chiselling brickwork and masonry.

The hammer drill has to be used properly as specified. Any other use is forbidden. The manufacturer cannot be held responsible for damage or injury caused by use the machine for other than its intended purpose.

Only accessories which are suitable for the drill may be used. Non-observance of the safety, assembly and operating instructions while operating the appliance counts as misuse. Anyone who operates or services the drill must be familiar with these instructions and must be aware of possible dangers. Any applicable health and safety regulations must also be followed.

Any other applicable local and national legislation must also be followed. The drill may not be modified. The manufacturer can accept no responsibility for damage or injury caused by modifications to the drill.

The drill has not been designed for professional, trade or industrial use, but for private users in the hobby and DIY sector.

Any other use of the product is expressly forbidden and is considered as misuse.

Residual risks

Residual risks cannot be completely ruled out even in case of proper use. Due to the nature of the drill, the following dangers may arise:

- Burns from coming into contact with hot parts of the hammer drill or workpiece.
- Harmful emissions of dust in poorly ventilated spaces or inadequate extraction in closed rooms.
- Injury and property damage caused by parts flung out or tool attachment breakage.

General safety instructions for power tools

⚠ WARNING!

Read all safety information, instructions, illustrations and technical data supplied with the electric power tool. *FAILURE to follow these INSTRUCTIONS may RESULT in electric shock, fire and/or SERIOUS INJURIES.*

Retain all the warnings and safety instructions for future reference.

The term „power tool" in the safety INSTRUCTIONS refers to YOUR mains-operated (with power cord) power tool or battery-operated (WITHOUT power cord) power tool.

1) Work area safety

a) **Keep your work area clean and well lit.** *Disorderly or INADEQUATELY lit work areas can lead to accidents.*

b) Do not work with the power tool in potentially explosive atmospheres containing flammable liquids, gases or dusts. *Power tools generate sparks which may ignite the DUST or FUMES.*

c) **Keep children and other people out of the area when operating the power tool.** *Distractions can CAUSE YOU to lose control of the power tool.*

2) Electrical safety

a) The power tool's mains plug has to fit the socket. The plug should not be modified in any way. Do not use any adapter plugs with the earthed

(grounded) power tools. *Unmodified PLUGS and matching sockets will REDUCE risk of electric shock.*

b) **Avoid bodily contact with earthed objects such as pipes, radiators, ovens and refrigerators.** *There is an increased risk of electric shock if YOUR body is earthed or GROUNDED.*

c) **Keep power tools out of rain and wet environments.** *Water entering a power tool will increase the risk of electric shock.*

d) **Do not use the power cord for purposes for which it is not intended, such as carrying or hanging up the power tool, and do not pull the cord to disconnect the tool from the mains. Keep the power cord away from heat, oil, sharp edges or moving parts.** *Damaged or entangled power cords increase the risk of electric shock.*

e) **When operating the power tool outdoors, use only extension cords suitable for outdoor use.** *Using an extension cord SUITABLE for OUTDOOR USE REDUCES the risk of electric shock.*

f) **If you need to use the power tool in a damp environment, use a residual current protection device.** *Using a RESIDUAL CURRENT protection device 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 INJURY.*

b) **Wear personal protective equipment and always use safety goggles.** *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 start-up. Ensure that the switch is in the off-position before connecting to the power source and/ or battery pack, picking up or carrying the tool. *Carrying power tools with YOUR finger on the switch or connecting it to the mains with the switch in on-position, may RESULT in accidents.*

d) **Remove any adjusting tools or keys before you switch the power tool on.** *A tool or a key left in a rotating part of the power tool may RESULT in INJURIES.*

e) **Avoid working with your body in an unusual position. Ensure proper footing and balance at all times.** *This enables better control of the power tool in UNEXPECTED SITUATIONS.*

f) **Wear sensible clothing. Do not wear loose clothing or jewellery. Keep your hair and clothing away from moving parts.** *Loose clothes, jewellery or long hair can be CAUGHT in moving parts.*

g) **If dust extraction and collection units can be installed, they have to be connected and used properly.** *Use of DUST collector can REDUCE DUST-RELATED hazards.*

h) Never assume that you are safe enough and disregard the safety rules for electric power tools, even if you are familiar with the electric power tool after using it many times. *Carelessness may lead to SERIOUS INJURY within a fraction of a second.*

4) Power tool use and care

a) **Do not overload the power tool. Use power tools that are intended for your work.** *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 is faulty.** *A power tool which can no longer be switched on and off is DANGEROUS and has to be repaired.*

c) **Disconnect the plug from the socket and/or remove the battery before making any adjustments, changing tool bits or accessories or putting the power tool away.** *SUCH preventive safety MEASURES REDUCE the risk of starting the power tool accidentally.*

d) Store power tools out of the reach of children when not in use. 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 inexperienced USERS.*

e) **Maintain the power tools and tool bits carefully. Ensure the moving parts are functioning correctly and do not getting stuck. Check if parts are broken or so badly damaged that that the power tool's functions are impaired. Get damaged parts repaired before using the power tool.** *Many accidents are CAUSED by poorly maintained power tools.*

f) **Keep cutting tools sharp and clean.** *Properly maintained tools with sharp CUTTING edges are less likely to get STUCK and are easier to control.*

g) Use your power tool, accessories and bits etc. according to these instructions. Consider your working environment and the type of job you wish to do. *Using power tools for applications other than those intended can lead to DANGEROUS SITUATIONS.*

h) **Keep the handles and gripping surfaces dry, clean and free of oil and grease.** *Slippery handles and gripping SURFACES prevent safe operation and control of the power tool in UNEXPECTED SITUATIONS.*

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Safety instructions for hammers

1) **Wear ear protection.** *Noise can CAUSE loss of hearing.*

2) **Use the auxiliary handles supplied with the machine** *Loss of control over the machine can lead to INJURY.*

3) **Hold the tool by its insulated gripping surfaces only when performing an operation where the drill bit 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 shock the operator.*

Additional safety instructions for hammers

1) Wear a suitable dust mask.

2) Massive torque can be exerted on the drill bit at hole breakthrough and especially if the drill bit jams or seizes in the hole. *Always grip the machine with two hands and to maintain a SECURE stance.*

3) Consider the possibility that the bit could snap or that the workpiece could slip or move suddenly; adopt a stance such that it does not lead to injury.

4) **Dill bits become extremely hot during operation.** *Avoid TOUCHING the bit and make SURE that the drill is left in a safe place after finishing work.*

5) Ensure that there are no power lines, water pipes or waste pipes under the surface before drilling a wall, floor or ceiling.

3. Before Use

⚠ WARNING!

Disconnect the machine from the mains before performing any maintenance or adjustments.

Checking the drill and pack contents

- Take the drill and accessories out of the packaging.
- Check if the delivery is complete (see section "SCOPE OF DELIVERY / DESCRIPTION OF PARTS").
- Check if the drill or the accessories are damaged.
- Do not use the drill if it is damaged or parts are missing. Contact the manufacturer via the service centre.

Mounting the additional handle (Fig. A)

⚠ WARNING!

Only use the drill with the additional handle. *The additional handle* 9 *gives YOU more control when GUIDING the drill.*

- Slide the additional handle with the round opening over the chuck on the clamping neck of the hammer drill.
- Position the handle by rotating it around the clamping neck, so you can work comfortably.
- Tighten the additional handle by rotating the lower part of the handle in clockwise direction.
- To loosen the additional handle again, or to change the position, proceed in reverse order.

Inserting the tools (Fig. B, C)

⚠ NOTE!

Ensure that the tool shaft and the tool holder are free from dust and lightly grease the shaft before inserting it into the chuck. This extends the lifetime of the chuck and the machine.

Mounting the depth stop (Fig. D)

- Press and hold the depth stop locking latch 12 on the additional handle 9
- Insert the depth stop 15 into the hexagonal opening provided on the additional handle above the locking latch.
- Push the depth stop in the direction of the hammer drill till the desired depth is reached.
- Release the locking latch of the depth stop.
- Check the locking mechanism by gently pulling the inserted depth stop.
- To readjust the depth stop or to remove it, proceed in same order.

4. Usage

Mains connection

The hammer drill is designed for use with single- phase AC 120 V ~ / 60 Hz and has protective insulation. Check whether the mains voltage of the socket corresponds with the mains voltage indicated on the drill's rating label. Use an extension cable if the work area is not close to the mains outlet. Ensure an extension cable with sufficient conductor diameter (min. 1.5 mm²) is used. If necessary, ask the dealer for advice when purchasing. The extension cable used should be as short as possible. Ensure the mains cable does not pose a tripping hazard.

Mains cables may only be replaced by the manufacturer, an authorised service centre or a qualified person.

The hammer drill is intended for use only in places that have a continuous current rating of ≥ 100 A per phase and are supplied with a rated voltage of 120V by the distribution network. If necessary, please consult your electricity supplier to ensure that the continuous current rating of the network is adequate for connecting the hammer drill at the point where it is connected to the power supply network.

Switching on and off (Fig. E)

Switching on:

- Press the On/Off switch 2 .

Switching off:

- Release the On/ Off switch.

Speed adjustment (Fig. F)

- The speed can be adjusted using the speed regulator 6 according to the requirements. This can be done when the machine is being operated, with 1 being the lowest and 6 being the highest speed.

LED display

The hammer drill is provided with an LED status indicator at the bottom of the vibration-proof handle 5 .

The two LEDs indicate the following status:

- If the power cord is inserted, the GREEN LED indicator starts to glow 7 . The hammer drill is ready for use
- If the carbon brushes are qorn out, the RED LED indicator starts to glow 8 . Stop the work and contact the manufacturer's customer service department.

Function selection (Fig. G)

⚠ **NOTE!**

The selector switch should only be used when the motor has stopped completely.
Never work with chisel in inserted (hammer) drilling position or with the drill inserted in the chisel position.

- Unlock the function selector switc 3using the unlocking latch 4and hold it pressed.
- Turn the function selector switch so that the arrow marking points at the desired operation symbol.
  - Drilling. For drilling wood, steel and similar materials.
  - Hammer drilling. For hammer drilling of concrete, granite and similar materials.
  - Rotation stop. Adjusting the chisel position. For continuous adjustment of the axis. Then rotate the function selector switch back to the Chiselling position.
  - Chiselling. For light chiselling or chipping.
- Release the unlock latch.
- Check if the function selector switch is locked in place by trying to rotate it without pressing the unlocking latch.

Drilling and chiselling

⚠ **WARNING!**

Do not apply excessive force on the hammer drill. *Excessive PRESSURE may damage the drill, chisel or the hammer drill and increases the risk of accident.*
For this reason is it important to always grip the drill firmly with two hands and maintain a stable posture. *The greater the diameter of the drill bit, the greater is the force on YOUR arm.*
Always secure your workpiece in a vice or in any other clamping device. Secure particularly large workpieces against sliding or support them properly.

Drilling

- Choose a drill bit appropriate for the application and insert it into the tool as described in chapter ‚Inserting the tools'.
- Insert the drill bit properly at the desired location.
- Press the On / Off switch 2to start drilling.

Selecting the appropriate drill bit

For drilling concrete and stone:	Carbide tipped masonry drill bit
For Metal	HSS drill bit
For wood	Twist drill bits for wood

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Chiselling

- Choose a chisel appropriate for the material and insert it into the tool as described in chapter ‚Fitting and changing tools'.
- Position the the chisel using the rotation stop position if necessary as described in „Function selection" .
- Insert the chisel properly at the desired location.
- Press the On / Off switch 2 to start chiselling.

5. Maintenance, cleaning, storage and transport

⚠ WARNING!

Disconnect the machine from the mains before performing any maintenance or adjustments.

Maintenance

The hammer drill is practically maintenance-free. Only use spare parts / accessories from the manufacturer or authorised and qualified workshops.

Repairs should only be carried out by qualified technicians or by an authorised service centre. Qualified technicians must have relevant training and experience, be familiar with the design and construction requirements of the product and understand and follow the safety regulations.

Keep your tool bits always sharp. Sharpen them always using a suitable tool as recommended by the tool bit manufacturer.

Refilling the lubricating grease (Fig. I)

In order to avoid ingression of dust and leakage of grease, the pneumatic part of the hammer drill is sealed. Refill grease after 50 operating hours or when the impact power decreases.

- Open the housing cover for lubrication 1 using the supplied spanner 16.
- Refill with the supplied grease and close the cover in reverse order. Refill with gear grease for central lubrication.
- Spray a small amount of MOS2 oil into the tool holder if you do not intend to use the drill for a longer period of time. This prevents the impact piston from seizing.

Replacing the carbon brushes

The carbon brushes may only be replaced by an authorised specialist workshop or by qualified skilled personnel.

Replacing the mains cable

Damaged mains cables may only be replaced with genuine replacement cables available from the manufacturer.

The power cord should only be replaced by an authorised specialist workshop or by qualified skilled personnel.

Cleaning

⚠ CAUTION!

Make sure that liquids do not get inside the hammer drill.

- Clean the hammer drill regularly with a dry cloth. Never use strong and / or abrasive cleaning agents or solvents. Allow all the parts to dry completely.
- Ensure that the ventilation slots are not blocked and clean the housing of the hammer drill regularly with a soft cloth.

Storage

- Clean the hammer drill before storage.
- Keep the hammer drill in a safe, cool, dry and well-ventilated place, out of the reach of children when not in use.
- Store the hammer drill at an ambient temperature of 0 - 40 ° C.

Transport

- Use the original packaging and secure the hammer drill in place during transport.
- Always carry the hammer drill using the handle provided for this purpose.

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6. Troubleshooting

Problem	Possible cause	Rectification
The drill does not start.	Damaged cable.	Have the cable replaced by a service center.
	Fuse tripped.	Check the household fuse box
	Carbon brushes worn out.	Have the carbon brushes checked by customer service
	Trigger defective	Have the trigger switch checked by customer service
Poor drilling performance.	Drill bit is blunt.	Sharpen or replace the drill bit.
Chuck turns or does not turn.	Function selector switch in the wrong position.	Check if the function selector switch is in the position suitable for your application.
Hammer mode on or off	Function selector switch in the wrong position.	Check if the function selector switch is in the position suitable for your application.

7. Technical data

Model No.:	ZSRH-009
Mains connection	120 V ~ / 60 Hz
Rated power	12.5 A
No-load speed	0 - 800 rpm
Max. Impact Rate:	0 - 39000 bpm
Impact energy	5.0 Joule
Chuck	Chuck suitable for use with SDS+ system
Keyed chuck	1.5 -13 mm
Max drilling capacity	32 mm (concrete) 32 mm (brickwork) 13 mm (steel) 40 mm (wood)
Protection class	II

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8. Noise and vibrations levels

Noise emission levels

Tested according to EN 60745. The noise level at the workplace may exceed 80 dB (A); safety precautions are required for the operator in this case (wear suitable hearing protection device).

Sound pressure level Impact drilling: L_{pA}
93.2 dB(A)

Sound pressure level Chiselling: L_{pA}
82.6 dB(A)

Sound power level Impact drilling: L_{wA}
104.2 dB(A)

Sound power level Chiselling: L_{wA}
93.6 dB(A)

Uncertainty: K_{pA} / K_{wA}
3 dB

Vibration details

Hammer drilling: $a_{h,HD}$
17.353 m/s² (vibration-proof handle)
11.585 m/s² (additional handle)

Chiselling: $a_{h,CHeq}$
15.692 m/s² (vibration-proof handle)
11.767 m/s² (additional handle)

Uncertainty: K
1.5 m/s²

CAUTION:
The overall vibration values and the noise emission values specified have been measured according to a standardized test method and can be used to compare one power tool with another.

The overall vibration values and the noise emission values specified can also be used for a preliminary estimation of the load.

⚠ WARNING!

The vibration and noise emissions during the actual use of the power tool may differ from the specified values, depending on the manner in which the power tool is used, especially, the type of workpiece being machined

Safety measures may be required to protect the operator that are based on an estimate of the vibration load during actual usage conditions (in this case all the parts of the operating cycle have to be considered, such as times when the power tool is turned off, and those where, the tool is turned on, but is running without load).

9. Recycling

Disposal of packaging

Dispose of packaging separately. Dispose of card and paper in waste paper, plastic at collection points.

Disposing of the drill

This symbol indicates that this product may not be disposed of together with domestic waste in compliance with the (2012/19/EC) directive pertaining to waste electrical and electronic devices (WEEE). This product must be handed in at an designated collection point. This can occur, for example, by returning it when a similar product is purchased or by handing it in at an authorised collecting point for the recycling of waste electrical and electronic equipment. Owing to potentially hazardous substances that are frequently contained in waste electronic equipment, incorrect handling of waste equipment may have a negative impact on the environment and on the health of human beings. By disposing of this product correctly, you are also contributing towards an efficient use of natural resources. Information on collecting points for waste equipment can be obtained from your local authority, the public waste disposal authority, an authorised institution for the disposal of waste electrical and electronic equipment or the waste collection services. Dispose of device and packaging in an environmentally friendly manner.

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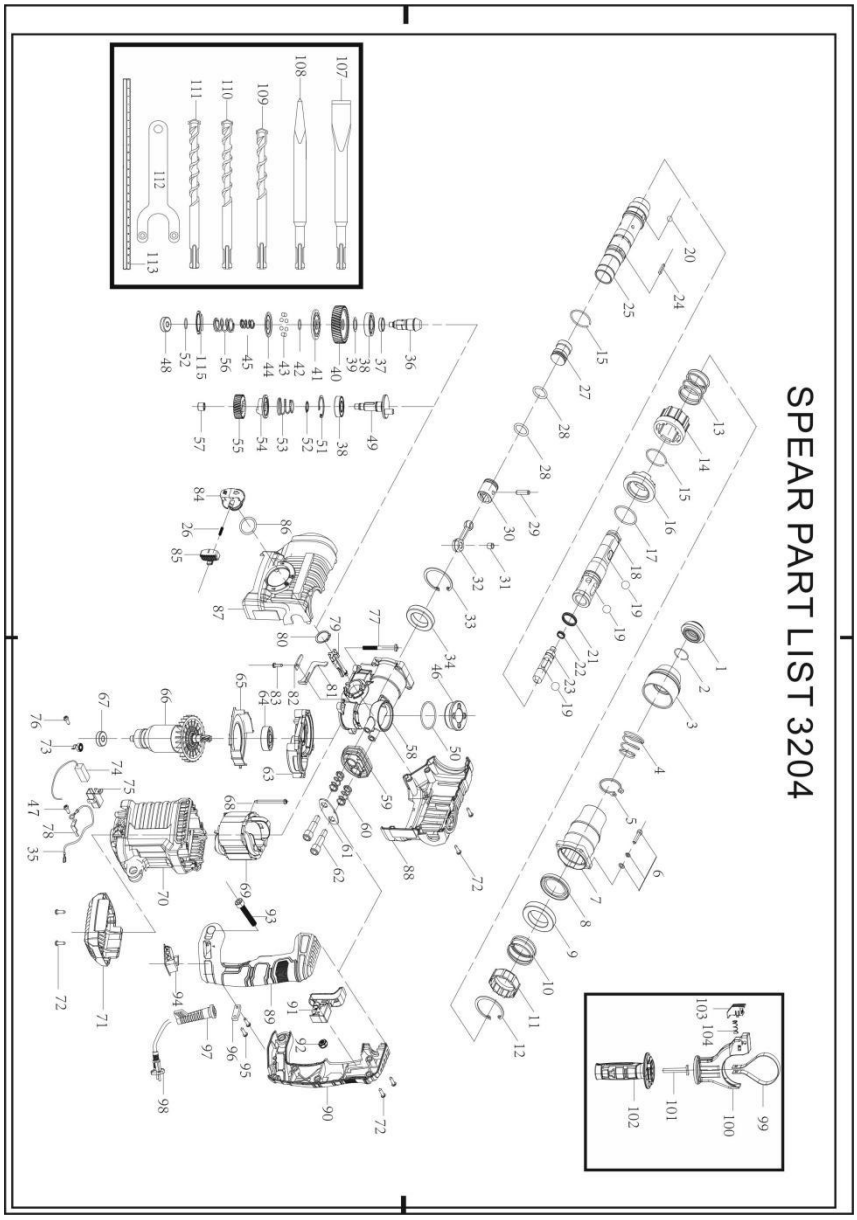

No.	NAME	QTY	No.	NAME	QTY
1	front cap	1	59	damping set	1
2	steel check ring	1	60	spring	2
3	bit lock set	1	61	damping board	2
4	spring	1	62	damping screw	1
5	circlip 30	1	63	middle cover	1
6	screw	4	64	bearing 6001	1
7	cylinder house	1	65	lead wind ring	1
8	oil seal	1	66	rotor	1
9	bearing906	1	67	bearing 608	1
10	spring	1	68	screw	2
11	lock steeve	1	69	stator	1
12	circlip	1	70	motor house	1
13	cluth spring	1	71	bottom cover	1
14	cluth	1	72	screw 16	14
15	steel check ring	1	73	screw6	3
16	gear 34	1	74	coil spring	2
17	o-ring 28*1.8	1	75	brush	2
18	cylinder	1	76	brush holder	2
19	steel ball 5.5	3	77	screw	4
20	steel ball 7.14	3	78	function axle	1
21	X-ring22.5	1	79	fork	1
22	x-ring13	1	80	steel check ring22	1
23	punch hammer	1	81	fork	1
24	pin	2	82	hold fork	1
25	telefiex	1	83	screw 6	1
26	steel check ring	1	84	function switch	1
27	hammer	1	85	konb lock	1
28	0-ring 19	2	86	spring	1
29	piston pin	1	87	gear box cover	1
30	pison	1	88	gear box cover	1
31	connecting rod bearing	1	89	handle	1
32	connecting rod		90	handle	1
33	steel check ring47	1	91	switch	1
34	oil bearing 30*47*9	1	92	screw 8	1
35	line	1	93	screw 40	1
36	gear	1	94	speed switch	1
37	adjusting washer	1	95	screw	2
38	bearing 6002	1	96	electric cable	1
39	adjusting washer	2	97	cable sheath	1
40	gear 39	1	98	cable	1
41	hold board	1	99	hoop	1
42	steel check ring12.5	1	100	bracket	1
43	steel ball 5	8	101	T-screw	1
44	move board	1	102	hand shank	1
45	spring	1	103	ruler knob	1
46	oil cover		104	spring	1
47	screw	2	105		1
48	bearing 627		106		1
49	eccentric shaft	1	107	flat chisel	1
50	o-ring	1	108	point chisel	1
51	steel check ring32	1	109	drill 12x150mm	1
52	steel check ring15		110	drill 10x150mm	1
53	spring	1	111	Drill8x150mm	1
54	cluth	1	112	oil cover key	1
55	gear	1	113	rule	1
56	steel check ring8.8	1	114		1
57	bearing	1	115	spring washer	1
58	gear house	1			