SDS4-800 HAMMER DRILL

Instruction Manual

Read instructions before operating this tool.

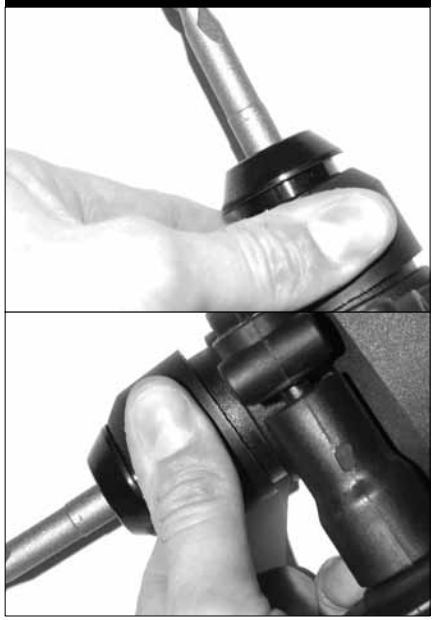
10.11.10_V3

FIG 1

FIG 2

FIG 3

FIG 4



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EC - DECLARATION OF CONFORMITY GB

We, the importer
Evolution Power Tools Ltd.
Venture One
Longacre Close
Sheffield
S20 3FR

Declare that the product
Part numbers: ZIC-SD6A-20
Evolution: SDS4, SDS4-800
SDS 4 Function Hammer Drill

Complies with the essential requirements of the following European Directives:
2006/42/EC – Machine Directive
2006/95/EC – Low Voltage Directive
2004/108/EC – EMC Directive
2002/95/EC – Restriction of the use of Certain Hazardous Substances in Electrical and Electric Equipment

Standards and Technical specifications referred to:-
EN55014-1 : 2006
EN55014-2 : 2001+A1
EN61000-3-2 : 2000
EN61000-3-3 : 2005+A2
EN60745-1 : 2006
EN60745-2-6 : 2007+A11

All documentation is held on file at the above address and is available, on request for review.

Authorized Signatory
Date: 01/9/2010
Name: Mr Matthew J Gavins
Position: Managing Director
Year of Manufacture: 2010

CE

IMPORTANT GB

Please read these operating and safety instructions carefully and completely. For your own safety, before using this equipment check that the voltage is correct and that all handles and parts are firmly secured. If you are uncertain about any aspect of using this equipment, please contact our Technical Helpline.

Technical Helpline UK 0870 609 2297
Technical Helpline USA 1-866-EVO-TOOL

SDS HAMMER DRILL
Congratulations on your purchase of an Evolution Power Tools SDS 4 Function Hammer Drill. Please complete your product registration on line to validate your machine's warranty period and ensure prompt service if needed. We sincerely thank you for selecting a product from Evolution Power Tools.

WARRANTY GB

12 MONTH LIMITED WARRANTY. Evolution power tools reserves the right to make improvements and modifications to design without prior notice.

Evolution Power Tools will, within twelve (12) months from the original date of purchase, repair or replace any goods found to be defective in materials or workmanship. This warranty is void if the tool being returned has been used to drill / chisel materials beyond the recommendations in the Instruction Manual or if the drill has been damaged by accident, neglect, or improper service. This warranty does not apply to machines and / or components which have been altered, changed, or modified in any way, or subjected to use beyond recommended capacities and specifications. Electrical components are subject to respective manufacturers' warranties. All goods returned defective shall be returned prepaid freight to Evolution Power Tools. Evolution Power Tools reserves the right to optionally repair or replace it with the same or equivalent item. There is no warranty – written or verbal – for chisel / drill bits. In no event shall Evolution Power Tools be liable for loss or damage resulting directly or indirectly from the use of our merchandise or from any other cause. Evolution Power Tools is not liable for any costs incurred on such goods or consequential damages. No officer, employee or agent of Evolution Power Tools is authorized to make oral representations of fitness or to waive any of the foregoing terms of sale and none shall be binding on Evolution Power Tools. Questions relating to this limited warranty should be directed to the company's head office, or call the appropriate Helpline number.

IMPORTANT SAFETY INSTRUCTIONS GB

To reduce the risk of electric shock, this equipment is fitted with an approved cord and plug for its intended country of use. Do not change the cord or plug in any way.

GENERAL SAFETY RULES GB

Read and understand all instructions before operating this product. Failure to follow all instructions listed below, may result in electric shock, fire and / or serious personal injury.
SAVE THESE INSTRUCTIONS FOR FUTURE REFERENCE.

WARNING! When using electric tools basic safety precautions should always be followed to reduce the risk of fire, electric shock and personal injury including the following:

Read all these instructions before attempting to operate this product and save these instructions.

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 machine. When using this drill it is essential that the following rules are followed.

1. When drilling it is common that the drill bit jams in the material being drilled. This will result in the drill trying to rotate around the drill bit and potentially to come out of your grip. This SDS drill has a safety clutch mechanism. This safety clutch mechanism will be activated and stop the drive to the drill, BUT only if you resist the initial forces caused by the jamming, by securely holding the drill with BOTH hands.
As this is a powerful machine, these forces are significant.
2. ALWAYS ensure that the front handle is firmly fixed in place and secure.
3. The front and rear handles must be firmly held to resist any movement of the drill when the drill or drill bit becomes jammed.
4. ALWAYS use the drill when standing on a firm and secure platform or on the ground. (DO NOT USE ON LADDERS OR STEPS)
5. NEVER start the drill with the drill bit 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. This machine is not suitable for use with TCT core drill bits, diamond core drill bits, and diamond drill bits.

GENERAL SAFETY RULES

When using electric tools, basic safety precautions should always be followed to reduce the risk of fire, electric shock and personal injury.

Please read all of these instructions before attempting to operate this machine. Save this manual for future reference.
1. Keep work area clear. Cluttered work areas invite accidents.
2. Consider work area environment. Do not expose tools to rain. Do not use tools in damp or wet locations. Keep work area well lit. Never use tools near flammable liquids or gases.
3. Protect yourself against electric shock. Avoid body contact with earthed or grounded surfaces.
4. Keep other people away. Do not let others, especially children, come close to the work, and touch the tool or the extension lead. Keep them away from the work area.
5. Store idle tools. When not in use, tools should be stored in a dry locked-up place, out of children's reach.
6. Never force the tools. Your tools will be more efficient and safer when used at the rate for which they were intended.
7. Use the right tool. Do not force small tools to do the job of a heavy duty tool. Do not use tools for purposes not intended; for example do not use circular saws to cut tree limbs or logs.
8. Dress properly. Do not wear loose clothing or jewellery which may get caught in moving parts. Non-skid footwear is recommended when working outdoors. If you have long hair, tie it back and wear protective hair covering.
9. Use protective equipment. Use safety glasses.
Use face or dust mask if cutting operations create dust.
10. Connect dust extraction equipment. If the machines have a connection for dust extraction equipment, ensure these are connected and properly used.
11. Do not damage the cable. Never pull the power cable to disconnect the machine. Keep the cable away from heat, oil and sharp edges.
12. Secure workpiece. Where possible, use clamps or a vice to hold the workpiece. It's much safer than using your hands.
13. Don't over reach. Keep proper footing and balance at all times.
14. Maintain tools in good working condition.
Keep cutting tools sharp and clean for better performance and optimum safety. Follow instructions for lubricating and changing accessories. Inspect power cables regularly and, if damaged, have them replaced by an authorised service centre. Inspect extension cables regularly and replace immediately if damaged. Keep handles dry, clean and free from oil and grease at all times.
15. Disconnect tools. Disconnect tools from the power supply when not in use, before any maintenance operation and when changing accessories such as blades, bits, cutters, etc.
16. Remove adjusting keys and spanners. Get into the habit of checking that adjusting keys and spanners have been removed from the machine before turning it on.
17. Avoid unintentional starting. Ensure switch is in "off" position before plugging in the machine.
18. Use proper extension leads. When the tool is used outdoors, use only extension leads intended for outdoor use and labelled as such.
19. Stay alert. Concentrate on what you are doing, use common sense and do not operate the tool when you are tired.
20. Check that no part is damaged. Before using a tool, make sure that it is in good working order. Check the alignment and condition of moving parts, mounting and any other aspect that may affect its operation. A guard or other part that is damaged should be properly repaired or replaced by an authorised service centre unless otherwise indicated in this instruction manual. Do not use the tool if the switch does not turn on and off.
21. Warning. The use of any accessory or attachment other than one recommended in this instruction manual may present a risk of personal injury.
22. Have your tool repaired at an authorised service centre. This electric tool complies with current safety rules. Repairs should only be carried out by an authorised service centre using original spare parts. Failing this, the user could expose themselves to considerable danger.

HEALTH ADVICE GB

WARNING! When drilling, sanding, sawing or grinding, dust particles will be produced. In some instances, depending on the materials you are working with, this dust can be particularly harmful to you (e.g. lead from old gloss paint).You are advised to consider the risks associated with the materials you are working with and to reduce the risk of exposure.
You should:
-Work in a well-ventilated area.
-Work with approved safety equipment, such as dust masks that are specially designed to filter microscopic particles.

LABELS & SYMBOLS GB

WARNING! Do not operate machine if warning and / or instruction labels are missing or damaged. Contact Evolution Power Tools for replacement labels.

Symbol	Description
V	Volts
A	Amperes
Hz	Hertz
Min^{-1}	Revolutions, strokes, surface speed, orbits etc. per minute
~	Alternating Current
n_0	No Load Speed
	Double Insulated
	Wear Safety Goggles
	Wear Ear Protection
	Do Not Touch
	Wear Dust Protection
	Restriction of Hazardous Substances Directive
CE	CE certification
	Waste electrical and electronic equipment

To obtain an additional copy of your manual, please contact Evolution Power Tools at :

UK	0870 609 2297
USA	1-866-EVO-TOOL
WEB	www.evolutionpowertools.com

ADDITIONAL SPECIFIC SAFETY RULES GB

Do not let familiarity with this product (gained from repeated use) replace strict adherence to hammer drill safety rules. If you use this tool incorrectly you could suffer serious personal injury.

1. Hold tools by the 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.
2. Always be sure you have a firm footing. Be sure no one is below you when using the tool in high locations.
3. Hold the tool firmly with both hands. Always use the side grip.
4. Keep hands away from rotating parts.
5. Do not leave the tool running. Operate the tool only when hand-held.
6. Do not touch the bit or the workpiece immediately after operation; they may be extremely hot and could burn your skin.
7. Some materials contain chemicals which may be toxic. Take caution to prevent dust inhalation and skin contact. Follow material supplier safety data.

CAUTION! Always unplug drill from the mains supply before changing the drill bit, servicing, cleaning or adjusting the drill.

SPECIFICATIONS GB

Evolution SDS4-800

Motor (230/110v – 50/60 Hz)	650W
Impact Energy:	1.6J
Speed Range:	0-1100min^{-1}
Machine Weight:	2.8 kg
Product Dimensions (HxWxD)	210mm x 320mm x 85mm
Recommended Maximum Duty Cycle:	30 mins
Max. Drill Diameter (Steel):	13mm
Max. Drill Diameter (Concrete):	20mm
Max. Drill Diameter (Wood):	30mm
Sound Pressure Level (Under Load):	Lpa =88.6dB (A)
	Lwa =99.6dB (A)
	K = 3dB (A)
Vibration:	^{a}h 14.015 m/s^2
	K 1.5 m/s^2

The declared vibration total value has been measured in accordance with a standard test method and may be used for comparing one tool with another.
The declared vibration total value may also be used in a preliminary assessment of exposure.

WARNING: The vibration emission during actual use of the power tool can differ from the declared total value depending on the ways in which the tool is used. The need to identify safety measures and to protect the operator 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 the tool is switched off, when it is running idle, in addition to trigger time).

ASSEMBLY GB

Your Evolution Power Tools saw is shipped complete. Remove all contents from the box and inspect to ensure no damage was incurred during shipping, and that the items listed below are included.

Description	Quantity
Instruction Manual	1
Side Handle	1
Depth Gauge	1
SDS Drills	1 x 6mm x 160mm 1 x 8mm x 160mm 1 x 10mm x 160mm
SDS Chisels	1 x 25mm x 250mm 1 x Point x 250mm
Carry Case	1

GETTING STARTED GB

CAUTION! ALWAYS DISCONNECT THE DRILL FROM POWER SOURCE BEFORE MAKING ADJUSTMENTS.

Refer to the "Service Parts List Drawing".

FUNCTIONAL DESCRIPTION GB

CAUTION! Always be sure that the tool is switched off and unplugged before adjusting or checking a function on the tool.

Switch action (see FIG 1)
CAUTION!
• Before plugging in the tool, always check to see that the switch trigger actuates properly and returns to the 'OFF' position when released.
• The switch can be locked in the 'ON' position for ease of operator comfort during extended use. Apply caution when locking the tool in the 'ON' position and maintain a firm grip on the tool.

To start the tool, simply pull the switch trigger. Tool speed is increased by increasing pressure on the switch trigger. Release the switch trigger to stop the drill.
For continuous operation, pull the switch trigger and then push in the lock button.
To stop the tool from the locked position, pull the switch trigger fully, then release it.
A speed control screw is provided so that the maximum tool speed can be limited (variable). Turn the speed control screw clockwise for higher speed, and counterclockwise for lower speed.

Reversing switch action (see FIG 1)
This drill has a reversing switch to change the direction of rotation. Move the reversing switch lever to the required position (clockwise or counterclockwise rotation) as indicated by the arrows on the drill body.

CAUTION!
• Always check the direction of rotation before operation.
• Use the reversing switch only after the tool comes to a complete stop. Changing the direction of rotation before the tool stops may damage the tool.

Selecting the action mode (see FIG 2)
This tool has a 4 position action mode selecting switch. Push in the locking button on the switch lever and rotate the switch to the desired position. Release the locking button and ensure that the button has locked the switch in the required position.
The 4 positions are:
• Drill
• Hammer Drill
• Chisel (unlocked)
• Chisel (locked)

Installing the side handle (see FIG 3)
CAUTION! Always be sure that the tool is switched off and unplugged before carrying out any work on the tool.

Always use the side grip handle to ensure operating safety. Install the side grip handle onto the drill collar and secure in place by tightening the handle. Note that the handle may be swung through 360°. Ensure that the side handle is pushed fully home against the drill body before tightening.

Depth Gauge (see FIG 3)
The depth gauge is convenient for drilling holes of uniform depth. To install, loosen the side grip handle and insert the depth gauge into the hexagonal hole. Adjust to suit and tighten the side grip handle to lock both the handle and depth gauge into the desired position.

Installing or removing a drill bit or chisel (see FIG 4)
CAUTION! Always be sure that the tool is switched of and unplugged before carrying out any work on the tool.
Carefully insert the SDS chisel or bit into the SDS chuck. Gently pull the bit into the chuck whilst rotating the bit slowly. Pull back on the chuck collar and continue pulling the bit gently until positive location is felt and the bit slides fully home into the chuck.

Only remove the bit when operations have finished and the bit has completely cooled down.
To remove the bit, slide the chuck collar rearward and carefully pull the bit out of the chuck

OPERATION GB

Standard Drilling Operation
Ensure that the action mode selecting switch is set on the standard drill mode. **See FIG 2**

CAUTION!
• Using excessive force on the tool will not speed up the drilling. Excessive pressure will only serve to damage the tip of the bit, decrease the tool performance and shorten the service life of the tool.
• There is tremendous force exerted on the tool / bit at the time of hole break-through. Hold the tool firmly and take care when the bit begins to break through the workpiece.
• Always secure small workpieces in a vice or other hold down device.

Drilling Wood
When drilling wood the best results will be obtained by using dedicated wood bits equipped with a guide screw. The guide screw makes drilling easier by pulling the bit into the workpiece.

Drilling Metal
When drilling metal the best results will be obtained by using a dedicated twist drill designed for metal drilling. To prevent the bit from slipping when starting a hole, make an indentation with a centre-punch and hammer at the point to be drilled. Place the point of the bit into the indentation and begin drilling. Use an appropriate lubricant for the material being drilled with the exception of iron and brass which should be drilled dry.

Hammer Drilling Operation
Select the hammer drill function on the mode selection switch. **See FIG 2**

CAUTION! There is a sudden twisting force exerted on the tool / bit at the time of hole break-through, when the hole becomes clogged with chips and particles, or when striking reinforcing rods embedded in concrete. Always use the side grip handle and firmly hold the tool by both the side handle and the switch handle during hammer drilling operations. Failure to do so could result in loss of control of the tool and potential injury to the operator.

Be sure to use a dedicated tungsten-carbide tipped drill bit. Position the bit at the desired location for the hole, then pull the switch trigger. Do not force the tool. Consistent light pressure gives the best results. Keep the tool in position and prevent it from slipping away from the hole.
Do not apply extra pressure if the hole becomes clogged with chips or particles. Instead allow the tool to run at idle and then partially remove the bit from the hole. By repeating this several times the hole will be cleaned out and normal drilling may be resumed.

Chiselling Operations
Set the mode selection switch to the preferred operator position, either chisel (locked) or chisel (unlocked). **See FIG 2**

CAUTION! When using the tool for chiselling operations it is very important that the operator wears all the appropriate safety equipment. Safety glasses and dust masks are essential and other apparel such as gloves, safety shoes, ear protectors etc should be worn as necessary.

Ensure that all marking out is completed before any chiselling is attempted.
Insert the required chisel into the SDS chuck and ensure positive location. Offer the chisel up to the worksurface and holding the tool firmly with both hands begin the chiselling operation. Switch on the tool and begin to cut.
Do not force the tool. Gentle consistent pressure works best. Do not try to remove too much material in one pass. Several repeat passes may be needed to achieve the required results.

MAINTENANCE GB

Note: Any maintenance must be carried out with the machine switched off and disconnected from the mains/ battery power supply.

Check that all safety features and guards are operating correctly on a regular basis. Only use this machine if all guards/safety features are fully operational.

All motor bearings in this machine are lubricated for life. No further lubrication is required.

Use a clean, slightly damp cloth to clean the plastic parts of the machine. Do not use solvents or similar products which could damage the plastic parts.

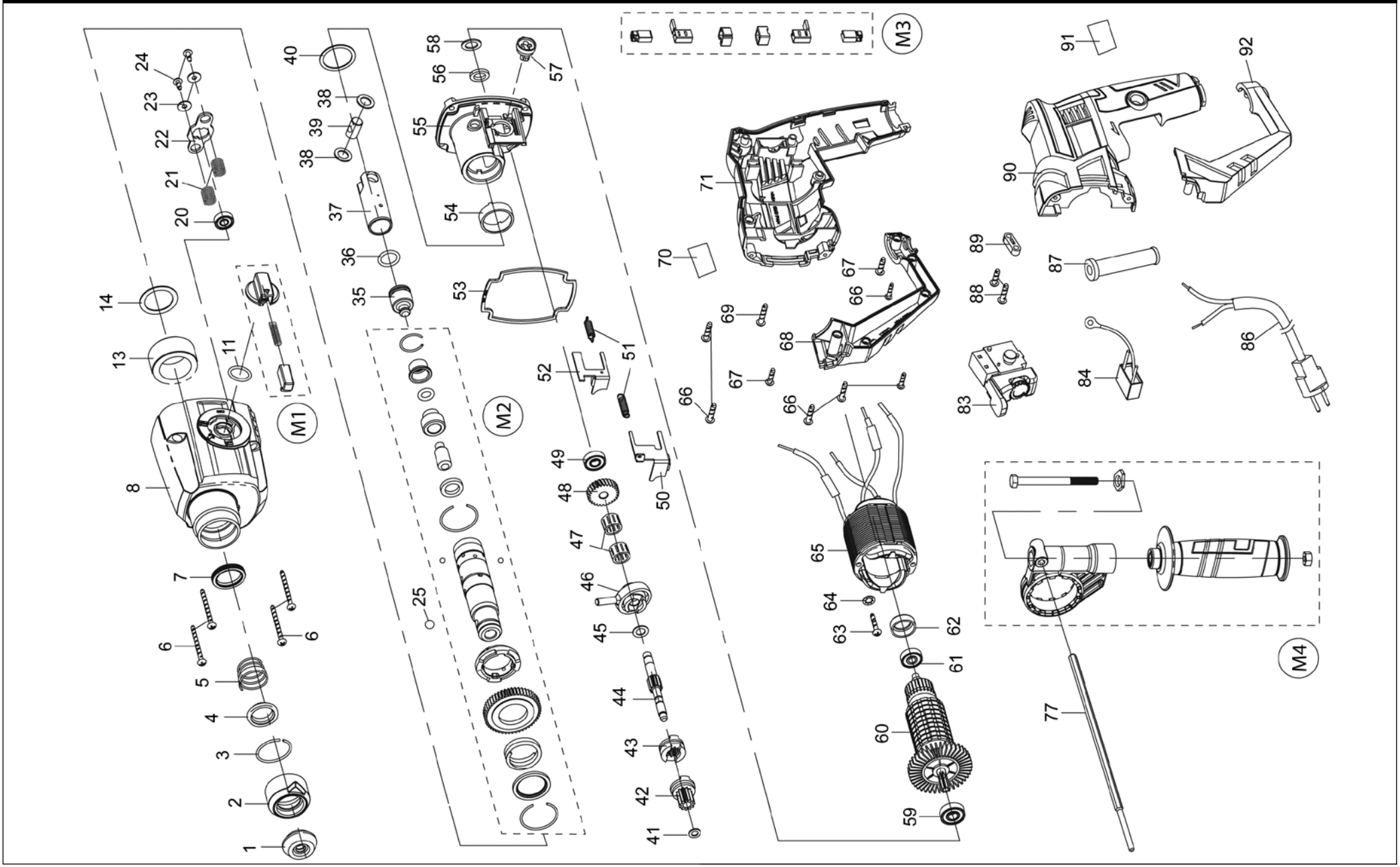
WARNING! Do not attempt to clean by inserting pointed objects through openings in the machines casings etc. The machines air vents should be cleaned using compressed dry air.

Excessive sparking may indicate the presence of dirt in the motor or worn out carbon brushes. If this is suspected have the machine serviced and the brushes replaced at an authorized service centre.

ENVIRONMENTAL PROTECTION GB

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

SERVICE PARTS LIST DRAWING



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www.evolutionbuild.com