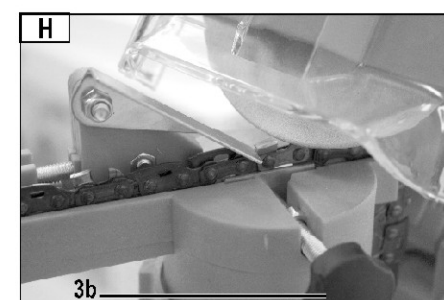
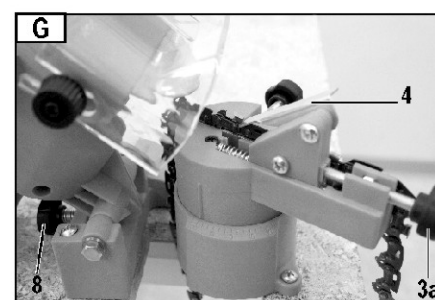
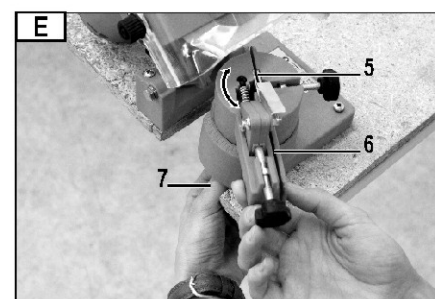
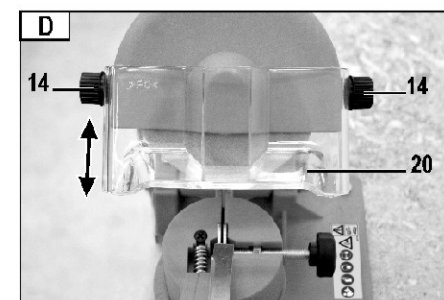
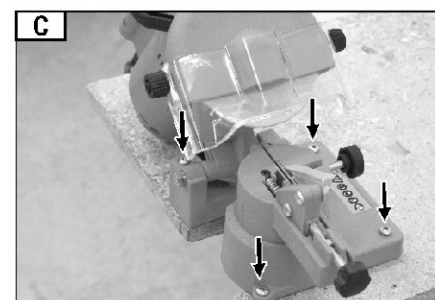
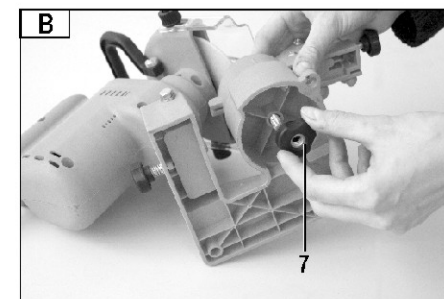
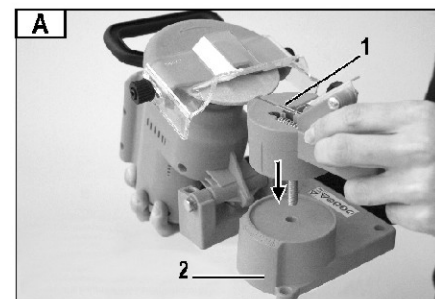
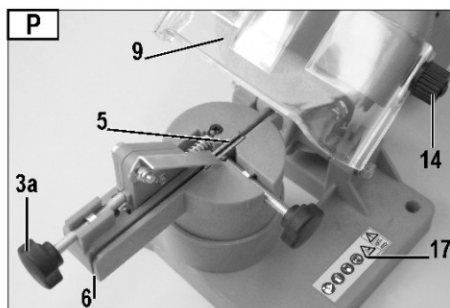
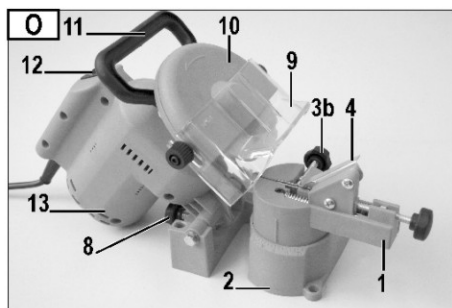
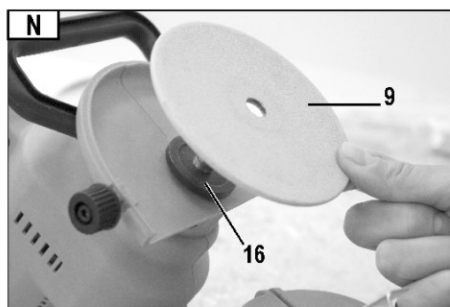
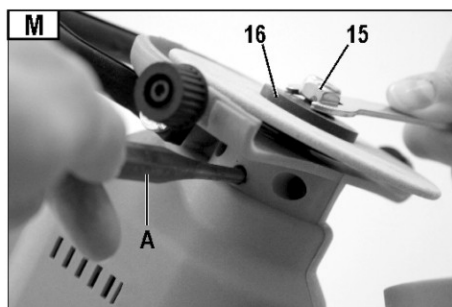
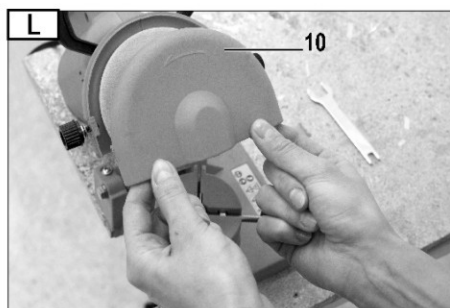
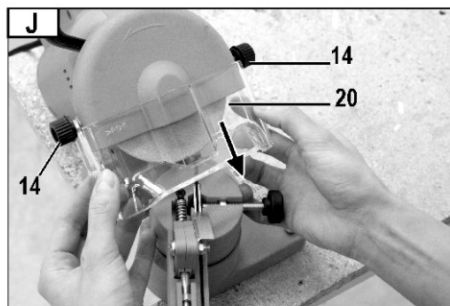
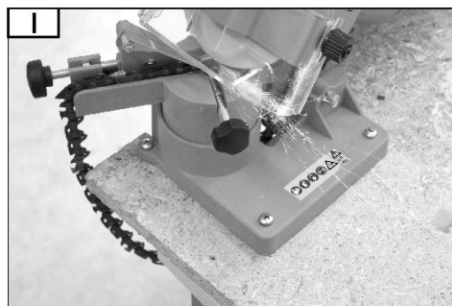


Chain Saw Sharpener

Instruction Manual





Do not operate machine before having read the operating instructions, understood all the notes and assembly the machine as described here.

Keep the instructions in a safe place for future use.

Contents

EC Declaration of conformity
Characteristic noise values
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EC Declaration of Conformity

according to EC Directive 2006/42/EC

the product

is conform with the above mentioned EC directives as well as with the provisions of the guidelines below:
2004/108/EG und 2006/95/EG.

Following harmonized standards have been applied:
EN 61029-1:2009; EN 61029-1:2000+A11:2003+A12:2003;
EN 55014-1:2006+A1:2009;
EN 55014-2:1997+A1:2001+A2:2008;
EN 61000-3-3:2008; EN 61000-3-2:2006+A1:2009+A2:2009

Characteristic noise values

DIN EN ISO 3744; 11/95, DIN EN 11201

Application of the machine as chain sharpener with standard grinding wheel.

Noise power level	Sound pressure level at the workplace
$L_{WA} = 91 \text{ dB (A)}$	$L_{PA} = 78 \text{ dB (A)}$

The values given are emission values and must therefore not simultaneously represent safe workplace values too. Although there is a relationship between emission and immersion levels, it can be reliably deduced whether additional precautionary measures are necessary or not. Factors, which can influence the immersion level currently existing at the workplace include the duration of the effects, the special type of the workroom, other noise sources, etc. e.g. the number of machines and other adjacent processes. The permissible workplace values can also vary from country to country. This information should however enable an improved assessment of the danger and risk to be carried out.

Vibrations

Vibration level: $= 3.52 \text{ m/s}^2$

Measuring uncertainty: $K=1.5$

The indicated vibration emission level has been measured according to a standardised test method and can be used to compare power tools.

It can also be used for an initial estimate of exposure.

Warning!

The vibration emission level can differ from the indicated value during actual use of the power tool depending on the manner of usage.

It is necessary to define safety measures to protect the operator that are based on an estimate of exposure at the actual conditions of usage (for this, all parts of the operation cycle have to be considered, e.g. times during which the power tool is cut off and times during which it is switched on but runs in no-load mode).

Extent of delivery

- Chain sharpener
- Rotary table, complete
- Chain stop
- Mounting nut
- 1 operating manual

After unpacking, check the contents of the box

- That it is complete
- Check for possible transport damage

Report any damage or missing items to your dealer, supplier or the manufacturer immediately. Complaints made at a later date will not be acknowledged.

Symbols machine



Carefully read operator's manual before handling the machine. Observe instructions and safety rules when operating.



Shut off engine and remove power cord before performing cleaning, maintenance or repair work.



Attention! Risk of cutting! Do not hold hands into the rotating disc!



Wear protection gloves.



Wear dust protection.



Wear eye and ear protection.



Electrical devices do not go into the domestic rubbish. Give devices, accessories and packaging to an ecofriendly recycling. According to the European Directive 2002/96/EC on electrical and electronic scrap, electrical devices that are no longer serviceable must be separately collected and brought to a facility for an environmentally compatible recycling.

Symbols Operating instructions



Threatened hazard or hazardous situation. Not observing this instruction can lead to injuries or cause damage to property.



Important information on proper handling. Not observing this instruction can lead to faults in the machine.



User information. This information helps you to use all the functions optimally.



Assembly, operation and servicing. Here you are explained exactly what to do.

Proper use

- The chain sharpener is only intended to be used in the do-it-yourself and craft area. In the standard version with mounted grinding wheel (100 x 3.2 x 10 mm, 63 m/s), the chain sharpener is only intended to sharpen chains used in hobby applications (6.35 mm (1/4"), 9.52 mm (3/8") hobby and 8.255 mm (0.325") chains). An optional grinding wheel (100 x 4.5 x 10 mm) is available for professional cutting chains.
- The device may not be used to sharpen other objects. Otherwise, there is a risk of injury.
- Use only grinding wheels suitable for the machine.
- Only chains may be worked that can be put down and guided securely.

- The intended usage also includes **compliance** with the **operating, servicing and repair conditions** prescribed by the manufacturer and following the **safety instructions** included in the instructions.
- The relevant accident prevention regulations for the operation as well as the other generally acknowledged occupational medicine and safety rules must be complied with.
- Any other use is deemed not to be use as prescribed. The manufacturer is not liable for any type of damage resulting from this: the user bears the sole risk.
- Arbitrary modifications of the chain sharpener void the liability of the manufacturer for damages of all kinds resulting from them.
- Only persons familiar with the chain sharpener and instructed about possible risks are allowed to **prepare, operate and service** this device. Repair work may only be performed by us or authorized service agencies.
- The machine may not be used in a potentially explosive environment or be exposed to the rain.

Residual risks

Even if used properly, **residual risks** can exist even if the relevant safety regulations are complied with due to the design determined by the intended purpose.

Residual risks can be minimised if the "Safety information" and the "Intended usage" as well as the whole of the operating instructions are observed.

Observing these instructions, and taking proper care, will reduce the risk of personal injury or damage to the equipment.

- Risk of injury to fingers and hands by touching the running grinding wheel.
- Risk of injury to fingers and hands by touching the grinding wheel in areas not covered.
- Risk of injury by flying sparks.
- Inhalation of grinding dust.
- Danger resulting from electric current, if improper connecting wires are used.
- Touching live parts of opened electrical components.
- Impairment of hearing when working on the machine for longer periods of time without ear protection.

In addition, in spite of all the precautionary measures taken, non-obvious residual risks can still exist.

Safety instructions

Chain sharpeners can be dangerous when used improperly. The use of electrical tools requires the observation of basic safety precautions to eliminate risk of fire, electrical shock and personal injuries.

Before commissioning this product, read and keep to the following advice. Also observe the preventive regulations of your professional association and the safety provisions applicable in the respective country, in order to protect yourself and others from possible injury.

- Pass the safety instructions on to all persons who work with the machine.

- Keep these safety instructions in a safe place.

- Make yourself familiar with the equipment before using it, by reading and understanding the operating instructions.
- Do not use the machine for unsuitable purposes (see "Normal intended use").
- Mount the machine on a non-skid and level ground.
- Avoid abnormal posture. Ensure that you have stand in a secure standing position and maintain your balance at all times.
- Be attentive. Be careful what you do. Behave sensibly when working. Do not use the device when you are tired or under the influence of drugs, alcohol or medicaments. One moment of carelessness when using the device can result in serious injuries.
- Wear suitable work clothes!
 - do not wear loose-fitting clothes or jewellery; they can catch in moving parts.
 - Gloves and slip-proof shoes
 - wear a hair-net if your hair is long
- Wear protective clothing:
 - safety goggles**
 - ear protection** (Sound intensity level at workplace can exceed 85 dB (A))
 - dust mask**
- Keep your **workplace** in an **orderly condition**! Untidiness can result in accidents.
- Take into consideration **environmental influences**:
 - Do not use the device in moist or wet ambience.
 - Do not expose the chain sharpener to **rain**.
 - Do only work with sufficient visibility conditions. Provide for good **illumination**.
- Never leave the operational machine unattended.**
- Persons under the age of 18 must not operate the device.
- Keep other persons away.** Do not allow other persons, especially **children**, to **touch the tool or cable**. Keep them away from your working area.
- Do not overload the machine! You work better and safer in the **given performance range**.
- Only operate the machine with complete and correctly attached **safety equipment** and do not alter anything on the machine that could impair the safety.
- Do not use any grinding wheels which do not comply with the indicated characteristics of this instruction manual.
 - The use of other tools and other accessories may present a risk of injury to you.
- Worn and defective grinding wheels (cracks, imbalance, chipping, etc.) must be replaced immediately.
- Ensure a firm seat of the grinding wheel.
- Switch the machine off and remove the **mains plug from the socket** when
 - carrying out repair works
 - maintenance and cleaning
 - Elimination of failures (including freeing a blocked grinding wheel)
 - Storage

- Leaving the chain sharpener (even in case of short-term interruptions)
- Caution! Grinding wheel runs after!** Do not brake the grinding wheel by hand or using lateral pressure.
- Maintain your chain sharpener with care:**
 - Keep the device free of oil and grease.
 - Follow the **maintenance instructions** and the instructions for tool exchange.
- Check the machine for possible **damage**:
 - Before continuing to use the machine, the **protective devices** must be inspected to ensure that they work perfectly and with their intended function.
 - Check whether the **movable parts** function perfectly and do not stick or whether the parts are damaged. All parts must be properly mounted and all conditions met to ensure the flawless operation of the chain sharpener.
 - Unless otherwise indicated in the operating instructions, **damaged safety devices and parts** must be properly repaired or replaced by an authorised workshop (or by the manufacturer).
 - Damaged or illegible safety warning labels should be replaced immediately.
- Do not allow any tool key to be plugged in! Before switching on, check always that wrenches and adjusting tools are removed.
- Store **unused equipment** in a dry, locked place out of the reach of children.

Electrical safety

- Design of the **connection cable** according to IEC 60245 (H 07 RN-F) with a core cross-profile section of at least
 - 1.5 mm² for cable lengths up to 25 m
- Long and thin connection lines result in a potential drop. The motor does not reach any longer its maximal power; the function of the device is reduced.
- Plugs and coupler outlets** on connection cables must be made of rubber, non-rigid PVC or other thermoplastic material of same mechanical stability or be covered with this material.
- The connector of the connection cable must be **splash-proof**.
- When running the **connection line** observe that it does not interfere, is not squeezed, bended and the plug connection does not get wet.
- Wind off completely the cable when using a cable drum.
- Do not use the cable for purposes for which it is not meant. **Protect the cable against heat, oil and sharp edges.** Do not use the cable to pull the plug from the socket.
- Protect yourself against **electric shocks**. Avoid touching earthed parts with your body (e.g. pipes, heating apparatus, cookers, fridges etc.).
- Regularly check the **extension cables** and replace them if they are damaged.
- Do not use any **defective connection cables**.
- Do not set up any **provisional electrical connections**.
- Never bypass** protective devices or deactivate them.

⚠ The electrical connection or repairs to electrical parts of the machine must be carried out by a **certified** electrician or one of our customer service points. Local regulations – especially regarding protective measures – must be observed.

⚠ Repairs to other parts of the machine must be carried out by the **manufacturer** or one of his customer service points.

⚠ Use only original spare parts, accessories and special accessory parts. Accidents can arise for the user through the **use of other spare parts**. The manufacturer is not liable for any damage or injury resulting from such action.

Preparing for commissioning

ⓘ To achieve perfect function of the machine, follow the notes given in these instructions

You must still do the following:

- Mount the rotary table
- Set up the device securely

Assembling the rotary table

1. **A** Place the rotary table (1) onto the supporting table (2).
2. **B** Thread the mounting nut (7) on the locking screw.

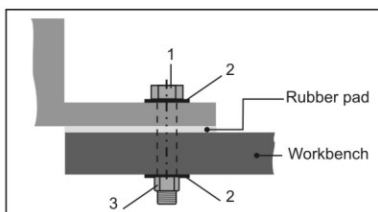
Mounting the chain sharpener on a workbench

C For secure handling, the device must be mounted along the edge of a workbench or table. Use all three fixing points if possible. But make sure that the recess for the saw chain remains free and the locking nut remains accessible.

Hint: We recommend the additional placement of a rubber pad to reduce noise and vibration (not included in scope of delivery).

The small parts required for mounting are not included in the scope of delivery. Use the following for this purpose:

Position	Description
1.	Hexagonal screw M 8
2.	Washer Ø 8mm
3.	Hexagon nut M 8, self-locking



- Place the device at a location that meets the following conditions:
 - secured against slipping
 - free of vibrations
 - even
 - clean and dry
 - free of tripping hazards
 - adequate light

Commissioning

Mains connection

Compare the voltage listed on the device type plate, e.g. 230 V, with the mains voltage and connect the chain sharpener to the corresponding and properly grounded socket.

ⓘ Alternating current motor: Use a shockproof plug, mains voltage 230 V with residual current circuit breaker and 10 A inert fuses.

- Use connection cable or extension cable respectively with a cross section of at least 1,5 mm².

Switching on

Do not use any device where the switch can not be switched on and off. Damaged switches must be repaired or replaced immediately by the customer service.

ⓘ Press "I" of the ON-OFF switch.

Switching off

ⓘ To turn off the device, press "0" of the ON-OFF switch.

Working instructions

⚠ Before commencing work, ensure the following:

- Workplace tidied?
- Has the chain sharpener been permanently mounted on a workbench?
- You may not start to operate the machine until you have read these operating instructions, observed all the instructions given and installed the machine as described!

Working with the chain sharpener

⚠ **D** The protective cover (20) must cover the grinding wheel as much as possible. For this loosen the two screw caps (14) and adjust the protective cover appropriately.

⚠ Always keep your hands at a safe distance to the rotating grinding wheel.

- Use the factory-installed grinding wheel only to sharpen chains used in hobby applications (1/4, 3/8 hobby and 0.325 chains). (An optional grinding wheel 100 x 4.5 x 10 mm, item no. 363718, is available for professional cutting chains).
- Do not use any damaged grinding wheels or such that have changed their shape.
- Start working only after the grinding wheel has reached its maximum speed.
- Only chains may be worked that can be put down and guided securely.

⚠ Ensure that you always comply with the safety instructions given on p. 11

Working with the chain sharpener

Sharpening chains



Before making any settings to the device:

- switch off the device
- wait for the shutdown of the grinding wheel
- pull out main plug

Grinding all cutting links

To grind the cutting edge of a cutting link, proceed as follows:

1. Setting the grinding angle: Loosen the locking nut (7) to turn the rotary plate to approx. 30° and retighten the locking nut.

ⓘ The cutting edges of the cutting links are normally ground at an angle between 30 and 35°.

2. **E** Loosen the mounting screw (3b) and place the cutting chain in the guide rail (6) between the guide plates (5).
3. **F** Fold the chain stop (4) down and pull the chain toward the back until the cutting link to be ground rests against the stop.
4. **G** Pull the grinding head (13) against the cutting link for exact alignment. Set the distance with the help of the mounting screw (3a) so that the grinding wheel touches the cutting link. In addition, adjust the grinding depth with the setting screw (8).
5. **H** Tighten the mounting screw (3b) chain is fixed in place.
6. Carefully grind the cutting edge of the cutting link.

⚠ To avoid damages to the chain, grind as briefly as possible and do not remove more material than necessary.

7. Grind every second cutting edge by performing steps 5 and 6.

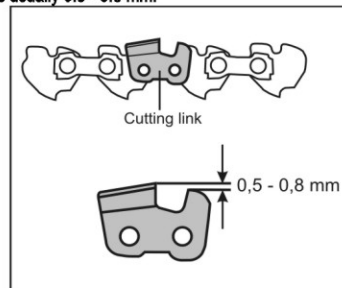
ⓘ Mark the first cutting link by a chalk mark or the like. This will help you avoid grinding cutting links twice.

8. **I** Turn the rotary table to 30° of the other side and grind the remaining cutting edges as described above.

Setting the depth limit distance

Once all cutting edges of the cutting links have been sharpened, your chain will be sharp but may possibly not cut.

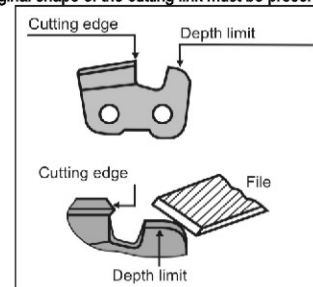
For this reason, a depth limit distance must always be observed (= distance between depth limit and cutting edge). This is usually 0.5 - 0.8 mm.



⚠ A depth limit distance that is too great represents a risk of kickback.

For this purpose, you must check the distance according to the specifications of your chain and file it off with a file if necessary.

⚠ Be sure to chamfer the leading edge of your depth limiter. The original shape of the cutting link must be preserved.



Maintenance and Care



Before each maintenance and cleaning work:

- switch off device
- wait for the shutdown of the grinding wheel
- pull out main plug

Replacing the grinding wheel

- Do not use any damaged grinding wheels or such that have changed their shape.
- Do not use any grinding wheels which do not comply with the indicated characteristics of this instruction manual.



Replacing the grinding wheel

1. **J** Loosen the screw caps (14) and remove the protective cover (20).
2. **K**, **L** Loosen the nut (21) on both sides of the cover (10). Remove the cover.
3. To lock the grinding wheel, insert a screw driver or mandrel (4 mm dia.) in the hole provided.
4. Loosen the nut (15).
5. **M**, **N** Remove the nut, the front flange (16), the grinding wheel (9) and the rear flange (16).
6. **ⓘ** Clean the flanges.
7. Reassembly is done in the opposite sequence.

For maintaining and cleaning, removed security devices must unconditionally be mounted properly and proved again. Use only original parts. Other parts can result in unexpected damages and injuries.

ⓘ Note the following to keep your chain sharpener functioning:

- Clean and oil all moving parts **regularly** (except for the drive system).

- Remove dust and dirt with a cloth or a brush.
- Clean the vent slots after each use.
- Clean the machine only dry.
- Do not use solvents for the synthetic parts (petrol, alcohol, etc.) as these can damage the synthetic parts.

 **Never use any grease!**

 Use environmentally acceptable spray oil.

Storage



pull out main plug

- Store unused equipment in a dry, locked place out of the reach of children.
- Before extended storage**, please observe the following to increase the service life of the device and to ensure smooth operation:
 - thoroughly clean the device

Technical data

Type	
Model	
Motor rating P ₁	220 W
Cutting speed v	~ 40 m/s
Mains voltage / Mains frequency	230 V~ / 50 Hz
Hand-arm vibration a _{hw}	3,52 m/s ²
Grinding wheel	
Ø x thickness x hole Ø	Ø100 x 3,2 x Ø 10 mm (Ø 100 x 4,5 x Ø 10 mm)
Weight	appr. 2 kg

O, P Description of device / spare parts

Position	Denomination
1.	Rotary table, complete
2.	Supporting table
3a/3b.	Mounting screw (with spring)
4.	Chain stop
5.	Guide plate
6.	Guide rail
7.	Locking nut
8.	Setting screw (for grinding depth)
9.	Grinding wheel (100 x 3.2 x 10 mm)
10.	Cover
11.	Handle
12.	ON-OFF Switch
13.	Grinding head
14.	Screw cap
15.	Nut M8, self-locking
16.	Flange
17.	Safety label
18.	1 pair of carbon brushes (not shown)
19.	Grinding wheel (100 x 4.5 x 10 mm)
20.	Protective cover
21.	Nut

Possible faults



Before each fault clearance

- switch off device
- wait for the shutdown of the grinding wheel
- pull out main plug

 After each fault clearance, put into operation and recheck all security installations.

Fault	Possible cause	Remedy
Chain sharpener does not operate.	<ul style="list-style-type: none"> no power Extension cable defect Main plug, motor or switch defect 	<ul style="list-style-type: none"> Check power supply, power socket and fuse protection Check extension cable, exchange defect cable immediately Have motor or switch checked by an approved electrician or replaced by original spare parts
Chain sharpener grinds with interruptions	<ul style="list-style-type: none"> Extension cable defect Internal fault. ON/OFF button defective. 	<ul style="list-style-type: none"> Check extension cable, exchange defect cable immediately Please contact the after sales service. Please contact the after sales service.
Grinding wheel becomes hot	<ul style="list-style-type: none"> Grinding wheel is dull or defective 	<ul style="list-style-type: none"> Replace grinding wheel
Motor is humming, grinding wheel stops	<ul style="list-style-type: none"> Grinding wheel is blocked 	<ul style="list-style-type: none"> Remove object
Unusual vibrations	<ul style="list-style-type: none"> Grinding wheel is defective 	<ul style="list-style-type: none"> Replace grinding wheel