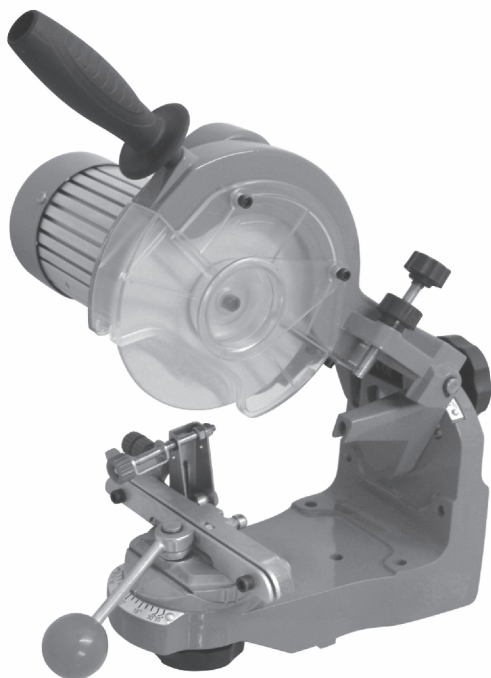




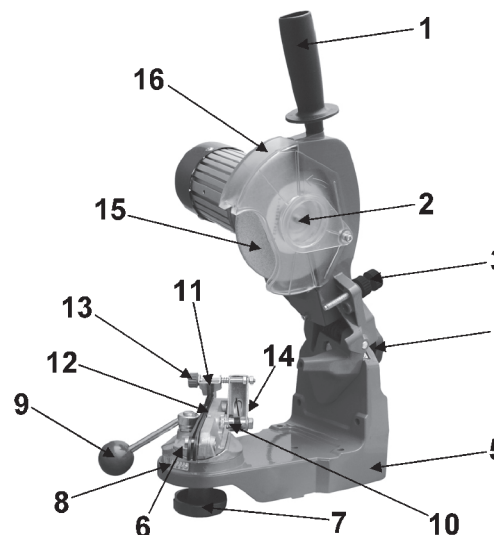
Chain Saw Sharpener

Instruction Manual

PCG-240V



Parts Description



1. handpiece
2. grinding disk lateral guard
3. depth of grind set screw
4. cutting edge angle set-up wheel
5. base
6. screw clamp cradle
7. cutting angle setting wheel
8. scale
9. clamping lever
10. mean distance set screw
11. guide flap valve
12. screw clamp
13. guide position set screw
14. setting screw
15. grinding disk
16. grinding disk protective enclosure

Technical Data

Supply voltage:	240 Volt/50 Hz
Motor input power:	230 W (P1)
Maximum speed:	3000 rpm
Protection:	IP 20
Noise level:	L _{WA} 85 dB (A)
Weight:	ca. 4.8 kg
Product No.:	

General Safety Precautions

Read the instruction manual carefully before the first use of the machine. If any doubt regarding the connection and operation of the machine arises, seek the manufacturer's assistance (servicing department)

Protect the machine from moisture, rain and dust.

FOR US TO SECURE THE HIGHEST DEGREE OF SAFETY, CONFORM TO THE FOLLOWING INSTRUCTIONS:

- Use the machine only for the scope of work it has been designed for !
- When using the saw-chain grinder outdoor, you should always use a weather resistant extension cable to connect it of a minimum diameter of 1.5 mm² with the splash-proof plug and socket.
- The noise level in the working area is above 85 dB (A). Therefore, wear ear protection – hearing loss is imminent!
- To protect your health at a grinding job, always use a dust protection mask and protective goggles!
- Always unplug the machine before any work on the machine (cleaning, grinding disk replacement etc.)
- Take care to have the saw-chain to be ground secured as appropriate for it not to slip out.
- It is your own interest to keep your machine clean at any time and after you finish a grinding job, check the machine for damage.
- Always keep your saw-chain grinding machine clean.
- Do not use any caustic to clean the plastic parts.
- Do not use the machine and do not work on it in proximity of inflammable liquids and vapours thereof.
- Unplug the machine any time you replace a part or clean the machine.
- Protect the power cable from any damage the cable may be damaged by oil or acid.
- Important notice! Observe any national safety regulations regarding installation, operation and maintenance.
- Upon having completed the job, unplug the saw-chain grinding machine from the mains.
- Protect your eyes and colleagues from jumping particle and chips.
- Working gloves will protect your fingers and skin from cutting injuries.
- Always carry the power cable to the machine from behind.
- Store the machine in a place inaccessible to children.
- Always hold the machine with both the hands when working and mind safe footing and posture.

CAUTION!

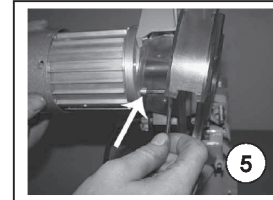
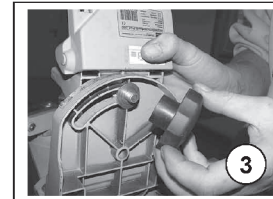
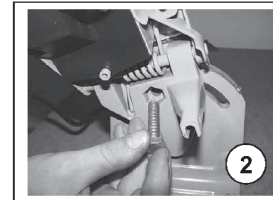
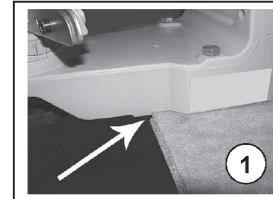
Abide by the essential safety measures of protection from electric shock, accident and fire prevention. Read all these instructions before you get down to the use of the electric machine and follow them. Keep the safety instructions at a safe place for future reference.

Safe Work

- Keep your workplace tidy.
A messy work place may cause an accident.
- Always make allowances for the environmental effects. Do not expose the electric tools to rain. Do not use them in moist or wet areas. Take care of sufficient lighting. Do not use them in proximity of flammable liquids or gases.
- Get protected from electrical shock. Avoid any bodily contact with grounded objects (such as pipes, radiators, stoves and refrigerators).
- Prevent the children from access.
Do not let other person to touch the machine or the cable. Prevent any unauthorised persons from access to the working area.
- Store the machine at a safe place. When off the use, the machine should be kept at a dry, elevated locked place out of the reach of children.
- Do not overload the machine.
Work better and in a safer manner within the scope of capacity as given.
- Use the correct machine. Do not use a machine of lower capacity for heavy jobs. Do not use the machine for any purpose it has not been intended for. Only use the machine for the purposes described in the instruction manual!
- Wear proper working clothing!
Do not wear any wide garments and jewellery that might be caught by the moving machine parts. For working outdoors, rubber gloves and non-skid shoes are recommended. If your hair is long, wear a hairnet. Use protective goggles.
- Wear a breathing mask when engaged in a dust-producing job.
- Do not use the cable for any purpose it has not been designated for.
Do not use the cable for carrying or hanging of the machine. Do not use the cable to pull out the plug from the socket. Protect the cable from excessive temperatures, oil, and sharp edges.
- Avoid any abnormal posture. Mind safe footing and keep balance at any time
- Take due care of your machine.
Abide by the maintenance and grinding disk replacement regulations.
Check the machine cable regularly and when it is found to be damaged, have it replaced by a skilled electrician. Check the extension cables regularly and replace them if damaged.
Keep the handle dry, free of any dirt, oil and grease.
- Unplug the machine, if it is out of use, prior to the maintenance and tools replacement, e.g. grinding disk.
- Remove any spanners from the machine.
Before switching on, check to see that any wrenches and adjustment tools were removed.
- Avoid an unintended switching.
Use only permitted and properly marked extension cables for working outdoors.
- Be attentive. Mind what you are doing. Get down to a job only when feeling good. Never use the machine when distracted.
- Check the machine for possible damages.
- Before using the machine, you should check any protection devices and any parts showing slight damage to see that the function intended is perfect. Check to see that the moving parts move freely, do not drag and are not damaged. Any parts should be installed properly to comply with the conditions of the machine safe operation. Damage protection devices and parts should be repaired in a recognised professional workshop and replace unless the instructions for use specify otherwise. Damaged switched should be replaced by the customer service workshop. **Do not use a machine with a defective ON/OFF switch.**

CAUTION!

Always connect the machine via fault current circuit breaker (FI). This machine is in compliance with any respective safety provisions. Any repairs shall be done by professionally qualified persons and only genuine spare parts should be used. The provision not being observed, the operator is in a risk of injury.

Assembly

The saw-chain grinding machine is delivered pre-assembled. One part consists of the base, on which the chain guide is located. The other part is a bearing arm with the motor and handgrip.

The assembly shall be performed with the machine unplugged!

The machine design provides either for a desk installation or wall mounting. When installing it on the desk, put the machine on the edge of the desk to the stop (Fig. 1) and screw it to the desk using the holes in the base.

When mounting on the wall, use the respective holes in the vertical part of the base (here, a distance from the wall should be kept or spacers should be used for the access to the rear set screw to be preserved).

After the desk top installation, fit the arm in the base inserting the pilot pin and securing it with a hexagonal screw (Fig. 2)

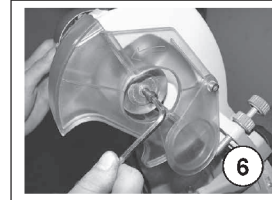
Now, it is possible to fit a washer on the rear side screw and screw the setting and screw the setting wheel on. (Fig. 3).

Screw the supporting arm control holder on the screw in the grinding disk body. Fit the grinding disk enclosure on using the supplied screws and a respective wrench (Fig. 5).

Tip:

When mounting on the wall, take care to mount the machine at a height of 120 – 130 cm from the floor to avoid working at eye height!

To be able to install the disk, it is necessary to unscrew the auxiliary flange (Fig. 6).



Grinding Disk Check

To avoid injuries and accidents only fitting grinding disks free of any defects should be used.

Check the disk you are about to fit in for damages prior to the assembly. It may be done by a simple sound test: Hold the disk so that a pencil may be put in the hole and the disk may swing freely. (Fig. P). Now, knock the disk edge with another pencil carefully.

The disk should give a clear high pitch sound!

If the disk sound damped or blank, it is defective.

It should not be used!

A deep or damped sound indicates damage by cracks Or similar. !

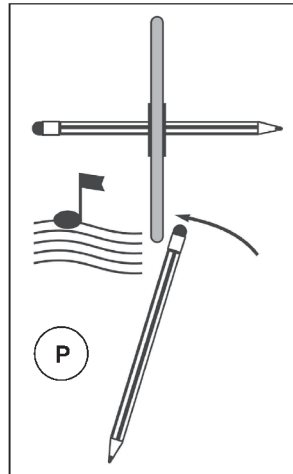
Do not fit the disk on the hub by force.

The central bore diameter should not be changed.

Only use matching disks .

The smallest grinding disk diameter should not be below 100 mm!

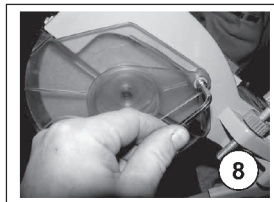
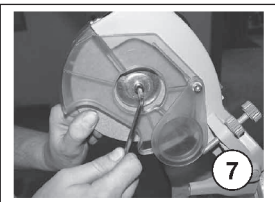
Any adjusting works should not be done unless the machine is switched off and unplugged.



No damaged disks should be used!



Grinding Disk Assembly



After you have removed the ancillary flange, you can insert the grinding disk in the body from below. See that the ancillary flange and the disk abut against each other precisely. (Fig. 7). Do not tighten the screws too much to avoid any damage to the disk.

The grinding disk on the hub torque is 7 Nm. Where practicable, use a torque spanner. No be fitted on (Fig. 8).

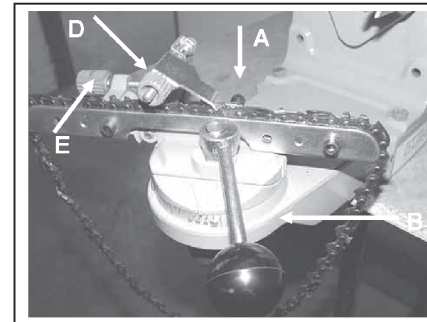
Check the correct bottoming of the disk: in should not move across and lengthwise. Now, with the grinding disk properly installed, a trial may be performed. Stand by the machine from the side and watch out for anybody dwelling in the working area.

If the grinding disk is vibrating or shows otherwise incorrect run, promptly switch off and unplug the machine before you attempt clearing the fault.

The machine has a zero voltage circuit breaker, which is disabled on outage and will prevent any restarting of the machine after the power supply is restored.

Using the sharpening stone and a clamping plate, it is possible to sharpen the disk to obtain the required profile. In this case, be careful at work.

Clamping Screw Set Up



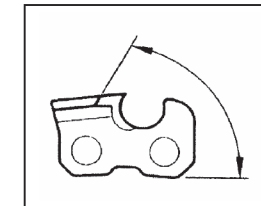
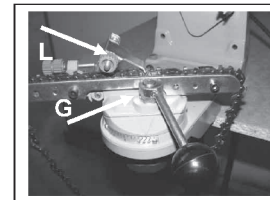
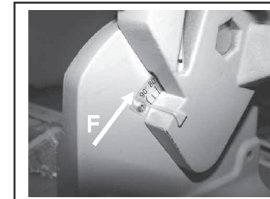
Before the start of grinding, the chain should be conducted between both the attachment guides. Now, the tooth to be sharpened first should be taken against the stop. Watch out for the sharpening angle to correspond to the guides position. The type of the chain to be sharpened should be determined using the sharpening block provided or the table p.9. There, you can find out the cutting thickness, angles and dimensions.

Set the guides to the chain width using the set screw u(A) so that it is firmly fixed in the clamping screw by clamping lever control (B).

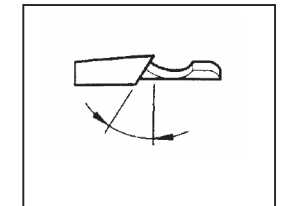
Set the feed by set screw (E).

On severely worn chains, the lateral position of the chain guide should be secured with a set screw (D).

Set the top plate angle by means of the set screw (p.3, p. 5) and it may be also read on the scale (F). The vice angle should be set up by set screw (G).

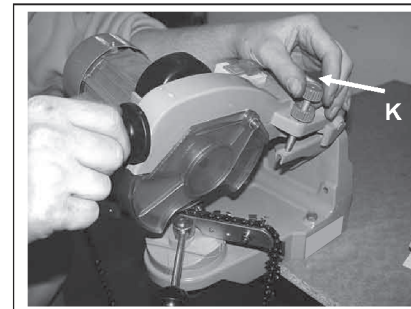


Vrcholový řezný úhel (Top Plate Angle)



Úhel ostří (Vice Angle)

Grinding



With the clamping screw adjusted and the vice angle set up (Notice: RH and LH teeth to be differentiated) and preset the top plate angle, lead the grinding disk down to the tooth by soft pushing the supporting strut. The grind depth may be set by set screw (K).

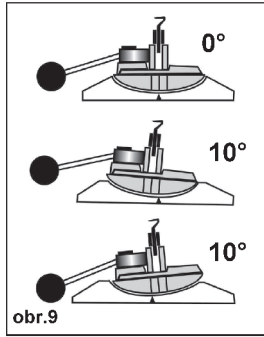
With clamping lever loosen (B), the set screw is being screwed or unscrewed (E) until the grinding disk to sharpen will touch the tooth. During the procedure, pull the chain to the guide (L) carefully. (Notice: Wear gloves when performing the job!)

Some types of saw-chains require that the clamping screw be tilted by 5° - 10° (cf. Table: space Tilt angle). Note the notches (Fig.9).

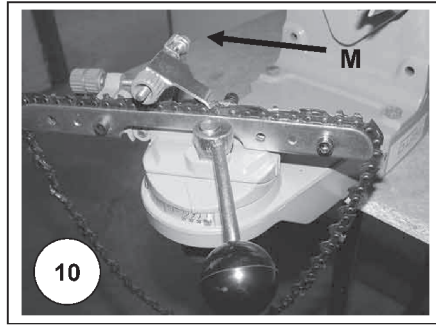
Now, the machine may be switched on and the saw-chain grinding may be started by a careful thrust on the grinding disk. Adjust the pressure as necessary. Mark the start of grinding e.g. with a piece of chalk and grind all the teeth in one direction, then turn the clamping screw (mind the angle) and grind the teeth in opposite direction.

With worn chains, the lateral guide position (Fig.10, position M) shall be set for the grinding disk not to touch the guide. Avoid any strong thrust as the teeth might collide and the chain would wear and tear too fast.

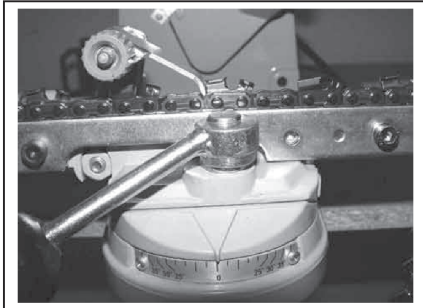
Notice : Never grind any driven parts.



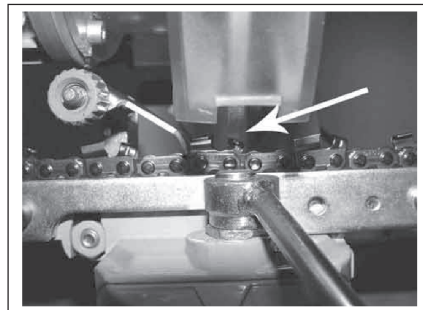
obr.9



Grinding Depth Delimiter

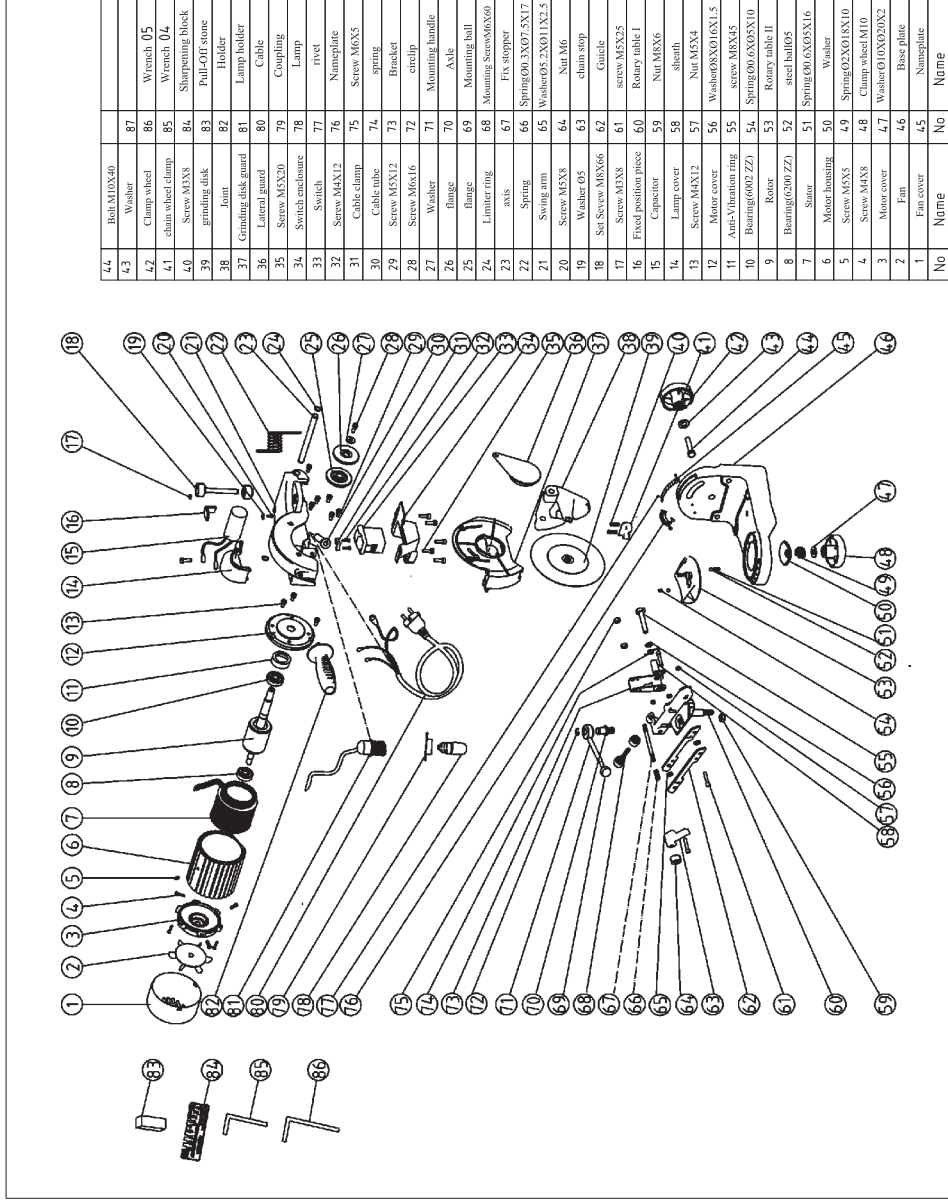


Find out in Table (p.9) what is the size of the depth delimiter back grinding.
Grinding the depth delimiter, the screw clamp position shall always be 0°.
Set the supporting strut and holder at 90° (Fig. F).
The grind depth may be set using set screw K.



Dimensions

Chain Pitch	Guage	OREGON	STIHL	SANDVIK	CARLTON	Viso Angle	Top Plate Angle	Till Angle	Wheel Width	Depth Gauge
1/4"	0.0507/1.3mm	25AP	13RM	50K		30°	60°	10°	1/8" / 3.2mm	0.025" / 0.63mm
3/8"	0.0507/1.3mm	20LP	23RS	50JLG	K1L	25°	60°	10°	1/8" / 3.2mm	0.025" / 0.63mm
3/8"	0.0587/1.5mm	21LP	25RS	58JLG	K2L	25°	60°	10°	1/8" / 3.2mm	0.025" / 0.63mm
3/8"	0.0637/1.6mm	22LP	26RS	63JLG	K3L	25°	60°	10°	1/8" / 3.2mm	0.025" / 0.63mm
3/8"	0.0637/1.6mm	20BP	23RM	50J	K1C	25°	60°	10°	1/8" / 3.2mm	0.025" / 0.63mm
3/8"	0.0687/1.7mm	21BP	25RM	56J	K2C	30°	60°	10°	1/8" / 3.2mm	0.025" / 0.63mm
3/8"	0.0687/1.7mm	22BP	26RM	63J	K3C	30°	60°	10°	1/8" / 3.2mm	0.025" / 0.63mm
3/8"	0.0687/1.7mm	95VP			K1N	30°	60°	10°	1/8" / 3.2mm	0.030" / 0.76mm
3/8"	0.0687/1.7mm	96R				5°	60°	10°	1/8" / 3.2mm	0.025" / 0.63mm
3/8"	0.0687/1.7mm	M21LP				25°	60°	10°	1/8" / 3.2mm	0.025" / 0.63mm
3/8"	0.0687/1.7mm	M22LP				25°	60°	10°	1/8" / 3.2mm	0.025" / 0.63mm
3/8"	0.0687/1.7mm	72LG	39RS	50AL	A11M	25°	60°	10°	1/8" / 3.2mm-3/16" / 4.7mm	0.025" / 0.63mm
3/8"	0.0687/1.7mm	73LG	36RS	58AL	A21M	25°	60°	10°	1/8" / 3.2mm-3/16" / 4.7mm	0.025" / 0.63mm
3/8"	0.0687/1.7mm	75LG	38RS	63AL	A31M	25°	60°	10°	1/8" / 3.2mm-3/16" / 4.7mm	0.025" / 0.63mm
3/8"	0.0687/1.7mm	72LP	35RS	50ALG	A1L	25°	60°	10°	1/8" / 3.2mm-3/16" / 4.7mm	0.025" / 0.63mm
3/8"	0.0687/1.7mm	73LP	35RS	58ALG	A2L	25°	60°	10°	1/8" / 3.2mm-3/16" / 4.7mm	0.025" / 0.63mm
3/8"	0.0687/1.7mm	75LP	36RS	63ALG	A3L	25°	60°	10°	1/8" / 3.2mm-3/16" / 4.7mm	0.025" / 0.63mm
3/8"	0.0687/1.7mm	72DP	33RMT	50AG	A1EP	35°	60°	10°	1/8" / 3.2mm-3/16" / 4.7mm	0.025" / 0.63mm
3/8"	0.0687/1.7mm	73DP	35RMT	58AG	A2EP	35°	60°	10°	1/8" / 3.2mm-3/16" / 4.7mm	0.025" / 0.63mm
3/8"	0.0687/1.7mm	75DP	38RMT	63AG	A3EP	35°	60°	10°	1/8" / 3.2mm-3/16" / 4.7mm	0.025" / 0.63mm
3/8"	0.0687/1.7mm	72RD				10°-15°	60°	10°	1/8" / 3.2mm-3/16" / 4.7mm	0.025" / 0.63mm
3/8"	0.0687/1.7mm	73RD				10°-15°	60°	10°	1/8" / 3.2mm-3/16" / 4.7mm	0.025" / 0.63mm
3/8"	0.0687/1.7mm	75RD				25°	60°	10°	1/8" / 3.2mm-3/16" / 4.7mm	0.025" / 0.63mm
3/8"	0.0687/1.7mm	M73LP				25°	60°	10°	1/8" / 3.2mm-3/16" / 4.7mm	0.025" / 0.63mm
3/8"	0.0637/1.6mm	M75LP				25°	60°	10°	1/8" / 3.2mm-3/16" / 4.7mm	0.025" / 0.63mm
3/8(90)	0.0437/1.1mm	90SG	63PMN		N4C	30°	60°	10°	0.020" / 0.50mm	0.025" / 0.63mm
3/8(91)	0.0507/1.3mm	91VS	63PM	50R	N1C	30°	60°	10°	1/8" / 3.2mm-3/16" / 4.7mm	0.025" / 0.63mm
3/8(91)	0.0507/1.3mm	91VG	63PM1	50RG	N1C-BL	30°	60°	10°	1/8" / 3.2mm-3/16" / 4.7mm	0.025" / 0.63mm
3/8(91)	0.0507/1.3mm	91R	63PMX			5°	60°	10°	1/8" / 3.2mm-3/16" / 4.7mm	0.025" / 0.63mm
3/8(91)	0.0587/1.5mm	91L				25°	60°	10°	1/8" / 3.2mm-3/16" / 4.7mm	0.025" / 0.63mm
3/8(91)	0.0587/1.5mm	91P				25°	60°	10°	1/8" / 3.2mm-3/16" / 4.7mm	0.025" / 0.63mm
3/8(91)	0.0587/1.5mm	91R				25°	60°	10°	1/8" / 3.2mm-3/16" / 4.7mm	0.025" / 0.63mm
3/8(91)	0.0587/1.5mm	91S				25°	60°	10°	1/8" / 3.2mm-3/16" / 4.7mm	0.025" / 0.63mm
3/8(91)	0.0587/1.5mm	91T				25°	60°	10°	1/8" / 3.2mm-3/16" / 4.7mm	0.025" / 0.63mm
3/8(91)	0.0587/1.5mm	91U				25°	60°	10°	1/8" / 3.2mm-3/16" / 4.7mm	0.025" / 0.63mm
3/8(91)	0.0587/1.5mm	91V				25°	60°	10°	1/8" / 3.2mm-3/16" / 4.7mm	0.025" / 0.63mm
3/8(91)	0.0587/1.5mm	91W				25°	60°	10°	1/8" / 3.2mm-3/16" / 4.7mm	0.025" / 0.63mm
3/8(91)	0.0587/1.5mm	91X				25°	60°	10°	1/8" / 3.2mm-3/16" / 4.7mm	0.025" / 0.63mm
3/8(91)	0.0587/1.5mm	91Y				25°	60°	10°	1/8" / 3.2mm-3/16" / 4.7mm	0.025" / 0.63mm
3/8(91)	0.0587/1.5mm	91Z				25°	60°	10°	1/8" / 3.2mm-3/16" / 4.7mm	0.025" / 0.63mm
3/8(91)	0.0587/1.5mm	91AA				25°	60°	10°	1/8" / 3.2mm-3/16" / 4.7mm	0.025" / 0.63mm
3/8(91)	0.0587/1.5mm	91AB				25°	60°	10°	1/8" / 3.2mm-3/16" / 4.7mm	0.025" / 0.63mm
3/8(91)	0.0587/1.5mm	91AC				25°	60°	10°	1/8" / 3.2mm-3/16" / 4.7mm	0.025" / 0.63mm
3/8(91)	0.0587/1.5mm	91AD				25°	60°	10°	1/8" / 3.2mm-3/16" / 4.7mm	0.025" / 0.63mm
3/8(91)	0.0587/1.5mm	91AE				25°	60°	10°	1/8" / 3.2mm-3/16" / 4.7mm	0.025" / 0.63mm
3/8(91)	0.0587/1.5mm	91AF				25°	60°	10°	1/8" / 3.2mm-3/16" / 4.7mm	0.025" / 0.63mm
3/8(91)	0.0587/1.5mm	91AG				25°	60°	10°	1/8" / 3.2mm-3/16" / 4.7mm	0.025" / 0.63mm
3/8(91)	0.0587/1.5mm	91AH				25°	60°	10°	1/8" / 3.2mm-3/16" / 4.7mm	0.025" / 0.63mm
3/8(91)	0.0587/1.5mm	91AI				25°	60°	10°	1/8" / 3.2mm-3/16" / 4.7mm	0.025" / 0.63mm
3/8(91)	0.0587/1.5mm	91AJ				25°	60°	10°	1/8" / 3.2mm-3/16" / 4.7mm	0.025" / 0.63mm
3/8(91)	0.0587/1.5mm	91AK				25°	60°	10°	1/8" / 3.2mm-3/16" / 4.7mm	0.025" / 0.63mm
3/8(91)	0.0587/1.5mm	91AL				25°	60°	10°	1/8" / 3.2mm-3/16" / 4.7mm	0.025" / 0.63mm
3/8(91)	0.0587/1.5mm	91AM				25°	60°	10°	1/8" / 3.2mm-3/16" / 4.7mm	0.025" / 0.63mm
3/8(91)	0.0587/1.5mm	91AN				25°	60°	10°	1/8" / 3.2mm-3/16" / 4.7mm	0.025" / 0.63mm
3/8(91)	0.0587/1.5mm	91AO				25°	60°	10°	1/8" / 3.2mm-3/16" / 4.7mm	0.025" / 0.63mm
3/8(91)	0.0587/1.5mm	91AP				25°	60°	10°	1/8" / 3.2mm-3/16" / 4.7mm	0.025" / 0.63mm
3/8(91)	0.0587/1.5mm	91AQ				25°	60°	10°	1/8" / 3.2mm-3/16" / 4.7mm	0.025" / 0.63mm
3/8(91)	0.0587/1.5mm	91AR				25°	60°	10°	1/8" / 3.2mm-3/16" / 4.7mm	0.025" / 0.63mm
3/8(91)	0.0587/1.5mm	91AS				25°	60°	10°	1/8" / 3.2mm-3/16" / 4.7mm	0.025" / 0.63mm
3/8(91)	0.0587/1.5mm	91AT				25°	60°	10°	1/8" / 3.2mm-3/16" / 4.7mm	0.025" / 0.63mm
3/8(91)	0.0587/1.5mm	91AU				25°	60°	10°	1/8" / 3.2mm-3/16" / 4.7mm	0.025" / 0.63mm
3/8(91)	0.0587/1.5mm	91AV				25°	60°	10°	1/8" / 3.2mm-3/16" / 4.7mm	0.025" / 0.63mm
3/8(91)	0.0587/1.5mm	91AW				25°	60°	10°	1/8" / 3.2mm-3/16" / 4.7mm	0.025" / 0.63mm
3/8(91)	0.0587/1.5mm	91AX				25°	60°	10°	1/8" / 3.2mm-3/16" / 4.7mm	0.025" / 0.63mm
3/8(91)	0.0587/1.5mm	91AY				25°	60°	10°	1/8" / 3.2mm-3/16" / 4.7mm	0.025" / 0.63mm
3/8(91)	0.0587/1.5mm	91AZ				25°	60°	10°	1/8" / 3.2mm-3/16" / 4.7mm	0.025" / 0.63mm
3/8(91)	0.0587/1.5mm	91BA				25°	60°	10°	1/8" / 3.2mm-3/16" / 4.7mm	0.025" / 0.63mm
3/8(91)	0.0587/1.5mm	91BB				25°	60°	10°	1/8" / 3.2mm-3/16" / 4.7mm	0.025" / 0.63mm
3/8(91)	0.0587/1.5mm	91BC				25°	60°	10°	1/8" / 3.2mm-3/16" / 4.7mm	0.025" / 0.63mm
3/8(91)	0.0587/1.5mm	91BD				25°	60°	10°	1/8" / 3.2mm-3/16" / 4.7mm	0.025" / 0.63mm
3/8(91)	0.0587/1.5mm	91BE				25°	60°	10°	1/8" / 3.2mm-3/16" / 4.7mm	0.025" / 0.63mm
3/8(91)	0.0587/1.5mm	91BF				25°	60°	10°	1/8" / 3.2mm-3/16" / 4.7mm	0.025" / 0.63mm
3/8(91)	0.0587/1.5mm	91BG				25°	60°	10°	1/8" / 3.2mm-3/16" / 4.7mm	0.025" / 0.63mm
3/8(91)	0.0587/1.5mm	91BH				25°	60°	10°	1/8" / 3.2mm-3/16" / 4.7mm	0.025" / 0.63mm
3/8(91)	0.0587/1.5mm	91BI				25°	60°	10°	1/8" / 3.2mm-3/16" / 4.7mm	0.025" / 0.63mm
3/8(91)	0.0587/1.5mm	91BJ				25°	60°	10°	1/8" / 3.2mm-3/16" / 4.7mm	0.025" / 0.63mm
3/8(91)	0.0587/1.5mm	91BK				25°	60°	10°	1/8" / 3.2mm-3/16" / 4.7mm	0.025" / 0.63mm
3/8(91)	0.0587/1.5mm	91BL				25°	60°	10°	1/8" / 3.2mm-3/16" / 4.7mm	0.025" / 0.63mm
3/8(91)	0.0587/1.5mm	91BM				25°	60°	10°	1/8" / 3.2mm-3/16" / 4.7mm	0.025" / 0.63mm
3/8(91)	0.0587/1.5mm	91BN				25°	60°	10°	1/8" / 3.2mm-3/16" / 4.7mm	0.025" / 0.63mm
3/8(91)	0.0587/1.5mm	91BO				25°	60°	10°	1/8" / 3.2mm-3/16" / 4.7mm	0.025" / 0.63mm
3/8(91)	0.0587/1.5mm	91BP				25°	60°	10°	1/8" / 3.2mm-3/16" / 4.7mm	0.025" / 0.63mm
3/8(91)	0.0587/1.5mm	91BQ				25°	60°	10°	1/8" / 3.2mm-3/16" / 4.7mm	0.025" / 0.63mm
3/8(91)	0.0587/1.5mm	91BR				25°	60°	10°	1/8" / 3.2mm-3/16" / 4.7mm	0.025" / 0.63mm
3/8(91)	0.0587/1.5mm	91BS				25°	60°	10°	1/8" / 3.2mm-3/16" / 4.7mm	0.025" / 0.63mm
3/8(91)	0.0587/1.5mm	91BT				25°	60°	10°	1/8" / 3.2mm-3/16" / 4.7mm	0.025" / 0.63mm
3/8(91)	0.0587/1.5mm	91BU				25°				



44	Back M10X40	87	
43	Washer	86	Wrench 05
42	Clamp wheel	85	Wrench 04
41	chain wheel clamp	84	Sharpening block
40	Screw M3X8	83	Pull-Off stone
39	grinding disk	82	Holder
38	Joint	81	Lamp holder
37	Grinding disk guard	80	Cable
36	Lateral guard	79	Coupling
35	Screw M5X20	78	Lamp
34	Switch enclosure	77	rivet
33	Switch	76	Nameplate
32	Screw M4X12	75	Screw M6X5
31	Cable clamp	74	spring
30	Cable tube	73	Bracket
29	Screw M5X12	72	circip
28	Screw M6X16	71	Mounting handle
27	Washer	70	Axle
26	flange	69	Mounting ball
25	flange	68	Mounting screw M6X60
24	Limiter ring	67	Fix stopper
23	axis	66	Spring 00.3X07.5X17
22	Spring	65	Washer 05.2X011X2.5
21	Swing arm	64	Nut M6
20	Screw M5X8	63	chain stop
19	Washer 05	62	Goncle
18	Set Screw M4X66	61	Rotary table 1
17	Screw M3X8	60	Rotary table 1
16	Fixed position piece	59	Nut M8X6
15	Capacitor	58	alstair
14	Lamp cover	57	Nut M5X4
13	Screw M4X12	56	Washer 08X016X1.5
12	Motor cover	55	screw M8X45
11	Anti-Vibration ring	54	Spring 00.6X05X10
10	Bearing 0602 ZZ	53	Rotary table fl.
9	Rotor	52	steel ball 05
8	Bearing 0200 ZZ	51	Spring 00.6X05X16
7	Stator	50	Washer
6	Motor housing	49	Spring 02.5X018X10
5	Screw M3X5	48	Clamp vased M10
4	Screw M4X8	47	Washer 01.0X020X2
3	Motor cover	46	Base plate
2	Fan cover	45	Nameplate
1	Fan cover	44	
No	Name	No	Name