

**ROUGHNECK**

# CHAIN SAW SHARPENER OWNER'S MANUAL



**⚠ WARNING:** Read carefully and understand all **INSTRUCTIONS** before operating. Failure to follow the safety rules and other basic safety precautions may result in serious personal injury.

Item # 42595

M841401A

Thank you very much for choosing a Roughneck product! For future reference, please complete the owner's record below:

Model: 42595 Purchase Date: \_\_\_\_\_

Save the receipt, warranty and these instructions. It is important that you read the entire manual to become familiar with this product before you begin using it.

This sharpener is designed for certain applications only. The distributor cannot be responsible for issues arising from modification. We strongly recommend this sharpener not be modified and/or used for any application other than that for which it was designed. If you have any questions relative to a particular application, DO NOT use the sharpener until you have first contacted the distributor to determine if it can or should be performed on the product.

For technical questions please call **1-800-222-5381**.

## GENERAL SAFETY RULES

 **WARNING:** Read and understand all instructions. Failure to follow all instructions listed below may result in serious injury.

 **CAUTION:** Do not allow persons to operate or assemble this sharpener until they have read this manual and have developed a thorough understanding of how the sharpener works.

 **WARNING:** The warnings, cautions, and instructions discussed in this instruction manual cannot cover all possible conditions or situations that could occur. It must be understood by the operator that common sense and caution are factors that cannot be built into this product, but must be supplied by the operator.

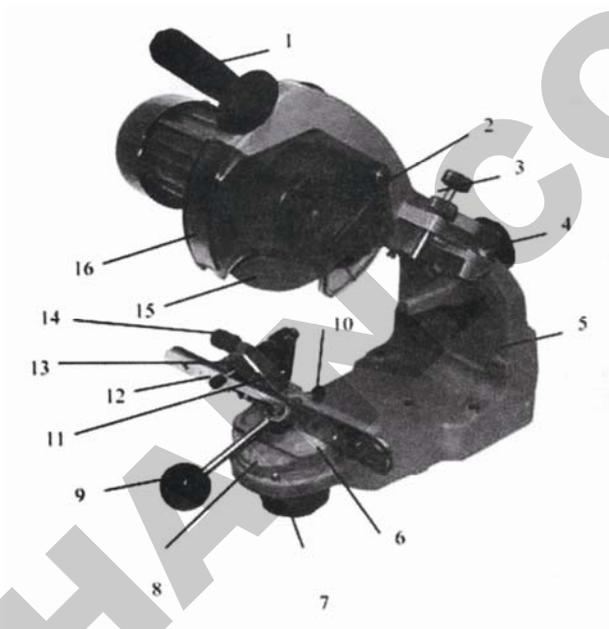
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### 1. Parts Description

1. Handle
2. Grinding disc lateral guard
3. Set screw for depth
4. Cutting edge angle setup wheel
5. Base
6. Screw clamp cradle
7. Cutting angle setting wheel
8. Scale
9. Clamping lever
10. Mean distance set screw
11. Guide position set screw
12. Screw clamp
13. Guide position set screw1
14. Set screw
15. Grinding disc
16. Grinding disc protective enclosure



### 2. Technical Data

Supply voltage:	110Volt/60Hz
Motor input power:	2.1Amps
Maximum speed:	3580 RPM
Noise level:	±70dB(A)
Weight:	17.2lbs.
Product No.:	42595

### 3. General Safety Precautions

Read the instruction manual carefully before using this sharpener. If you have any question regarding the connection and operation of the machine, see the manufacturer's service department.

- Protect the machine from moisture, rain and dust.
- Use the machine only for the scope of work for which it has been designed.

- When using the saw-chain grinder outdoors, always use a weather-resistant extension cord with a splash-proof plug and socket.
- Wear hearing protection- the noise level in the work area can be above 70dB.
- Protect your eyes from flying chips and debris with protective safety goggles.
- Always wear a dust-protection mask.
- Wear work gloves to protect your fingers and hands from cutting injuries.
- Always unplug the machine before doing any work on the machine(cleaning, disc replacement, etc.)
- Ensure that the chain being sharpened is properly secured so it doesn't slip out.
- Keep the machine clean, especially after grinding, and check for any damage.
- Do not use a caustic solution to clean plastic parts.
- Do not use the machine in the proximity of flammable liquids and vapors.
- Protect the power cord from damage by oil or acid.
- IMPORTANT: Observe all national safety regulations regarding installation, operation and maintenance.
- After completing a job, unplug the machine from its power source.
- Store the machine in a place inaccessible to children.
- Always hold the machine with both hands when working, keeping in mind safe footing and good posture.
- CAUTION! Abide by the essential safety measures protecting you from electric shock, accident and fire. Read all instructions before using this machine and follow them. Keep this manual in a safe place for future reference.

#### WORKPLACE SAFETY

- Keep your workplace tidy — a messy workplace may cause an accident.
- Always make allowances for the environmental effects. Do not expose electric tools to rain or use them in moist or wet areas. Do not use them in proximity of flammable gases or liquids. Be sure you have sufficient lighting.
- Protect yourself from electrical shock. Avoid any bodily contact with grounded objects such as pipes, radiators, stoves and refrigerators.
- Prevent any unauthorized persons from entering the work area. Keep children from having access to the machine.
- Store the machine in a safe place. When not in use, the machine should be kept in a dry, locked place out of the reach of children.
- Do not overload the machine- work in a safe manner within the scope of the machine's capacity.
- Use the correct machine. Do not use a machine of lower capacity for heavy jobs. Do not use the machine for any purpose for which it is not intended. Use the machine only for the purposes described in this instruction manual.
- Wear proper working clothing. Do not wear any loose garments and jewelry that might be caught by moving machine parts. When working outdoors, rubber gloves and

nonskid shoes are recommended, especially if working in damp areas. Keep long hair out of the way with a cap or hairnet. Wear protective goggles or safety glasses approved for the job.

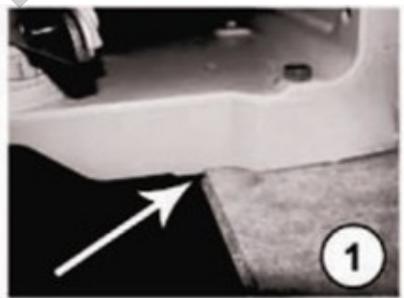
- Do not use the power cord for carrying or hanging the machine. Do not use the cord to pull out the plug from the outlet. Protect the cord from excessive temperatures, oil, corrosive solutions and sharp edges.
- When working outdoors, use extension cords designated for outdoor use.
- Check the machine cord regularly; if it is damaged, have it replaced by a skilled electrician. Check the extension cords as well and replace them if damaged.
- Avoid any abnormal posture. Mind safe footing and keep your balance at all times.
- Keep the handle dry and free of dirt, oil and grease.
- Unplug the machine when not in use or before performing maintenance of disc replacement.
- Before turning on the machine, check to see that any wrenches and adjustment tools have been removed.
- Avoid turning the machine on unintentionally.
- Be attentive. Mind what you are doing. Start a job only when you feel good. Never use this machine when distracted.
- Before using the machine, check protective devices and parts for any damage that may not allow them to function as intended. Check to see that moving parts move freely, do not drag and are not damaged. All parts should be installed properly to ensure the machine's safe operation. Damaged protective devices and parts should be repaired by a qualified professional, or replaced. Damaged switches should be replaced by an authorized service center. Do not use a machine with a defective ON/OFF switch.
- NOTE: This machine is in compliance with any respective safety provisions. Professionally qualified technicians must do any repairs and only genuine spare parts should be used. If these provisions are not observed, the user is in risk of injury.

#### 4. Assembly

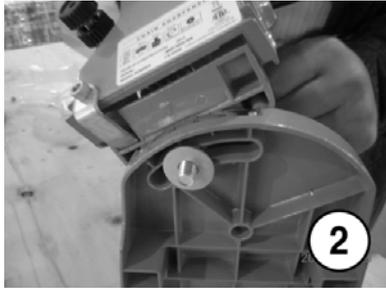
The saw-chain grinding machine is delivered partly assembled. One part consists of the base on which the chain guide is located. The other part is a bearing arm with the motor and handgrip.

**Assembly must be performed with the machine unplugged!**

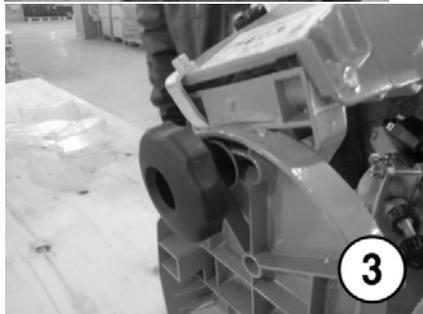
The machine design provides for either a bench-or wall-mount installation.



When installing it on a bench, put the machine on the edge of the bench 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. NOTE: Install sharpener with some distance from the wall (use spacers) in order to retain access to the rear set screw.



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

Now, fit a washer (included) on the rear side screw and screw on the setting wheel (Fig.3).

Screw the hand piece onto the bolt in the grinding disc body (Fig.4).



Secure the grinding disc guard using the supplied screws and a wrench (Fig.5).

Tip:

When mounting on the wall, take care to mount the machine at a height of about 50 inches to avoid working at eye level.

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

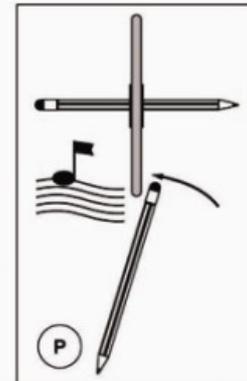


### 5. Grinding Disk Check

To avoid injury and accidents, only use grinding discs free of defects.

Check the disc you are about to use for damages prior to installation.

Insert a pencil horizontally through the hole and allow the disc to swing freely. Carefully tap the disc edge with another pencil. The disc should give a clear, high-pitched sound. If the sound is dampened or blank, the disc is defective and should not be used! A



dull or dampened sound indicates damage in the disc.

Do not fit the disc on the hub by force.

The central bore diameter should not be changed.

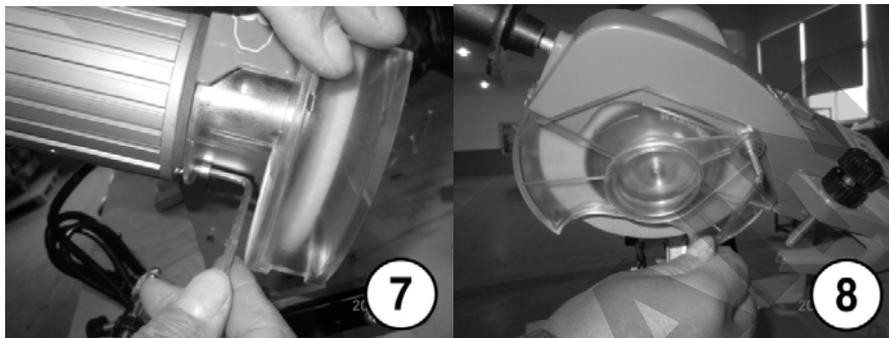
Only use matching discs.

The smallest grinding disc diameter should not be less than 4".

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

No damaged discs should ever be used!

## 6. Grinding Disk Assembly



After you have removed the ancillary flange, you can insert the grinding disc in the body from below. See that the ancillary flange and the disc abut against each other (Fig.7).

To avoid damage to the disc, do not over tighten screws.

The grinding disc on the hub torque is 7 Nm. Use a torque wrench. Now, the grinding disc guard should be secured (Fig.8).

After installing the disc, run the machine and make sure the disc is not vibrating or spinning incorrectly. If it is, promptly turn off the machine and unplug the power cord before attempting to correct the fault.

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

Using the sharpening stone and clamping plate, sharpen the disc to obtain the required profile.

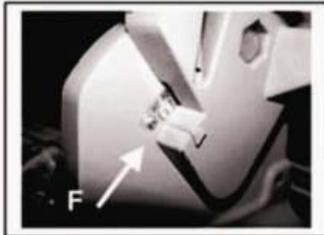
As always, be careful while working.

## 7. Clamping the Screw Set Up

Before grinding begins, the chain should be secured between the guides. The tooth to be sharpened first should be placed against the stop. Watch that the sharpening angle corresponds to the guide position. The type of chain to be sharpened should be determined using the sharpening block (if provided) or the table on page 9, where you can find the cutting thickness, angle and dimensions.



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

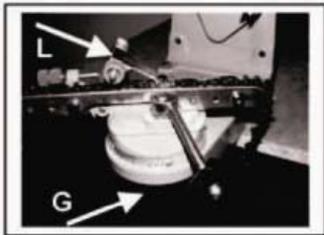


Set the feed by adjusting set screw (E).

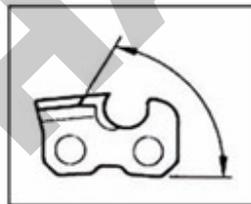
On severely worn chains, the lateral position of the chain guide should be secured with a set screw (D).

Set the top plate angle by adjusting the set screw (pg. 3, pg5) corresponding to the readout scale (F).

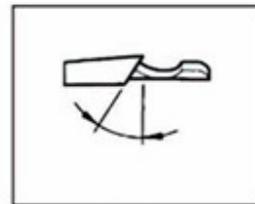
The Vise Angle should be set up by adjusting the set screw(G).



## 8.Grinding



Top Plate Angle



Vise Angle

With the clamping screw adjusted, the vise angle set up (Note: RH and LH teeth to be differentiated)

and the top plate angle preset, lower the grinding disc to the tooth. The grinding depth may be set by adjusting the set screw (K).

Some types of chains require that the clamping screw be tilted by 5°-10° (ref. Tilt Angle in Table on page 9) .

Now, the machine may be switched on and the chain grinding may be started by gently pressing the disc on the chain, Adjust the pressure as necessary. Mark the start of grinding 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 the opposite direction.

With worm chains, the lateral guide position (Fig.10, Position M) should be set so the grinding disc doesn't touch the guide.

Avoid any strong thrusts as the teeth might collide and could cause damage to the chain.

Notice: Never grind driven parts.

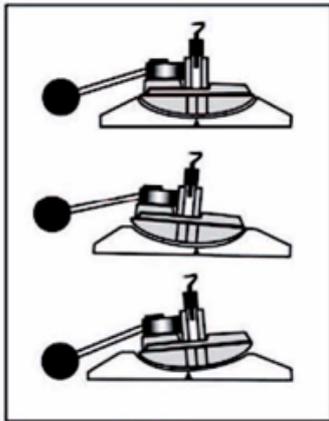
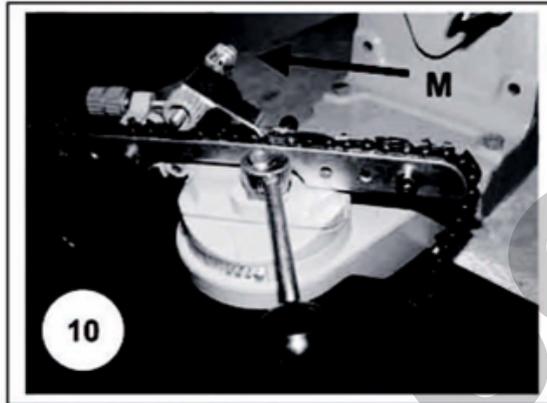
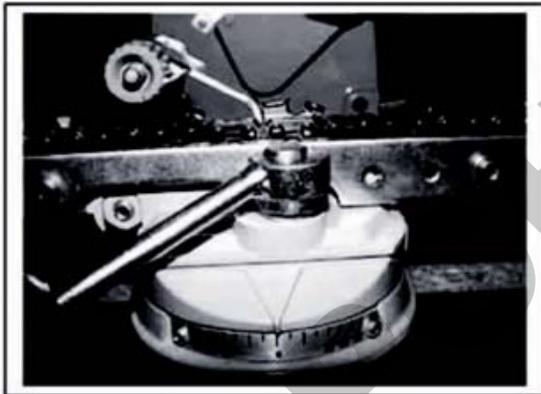


Fig. 9



### 9.Grinding Depth Delimiter

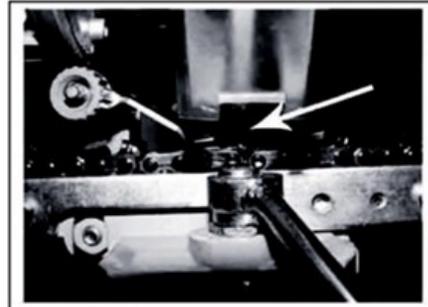


See table to determine the Depth Gauge (depth delimiter).

Grinding the depth delimiter, the screw clamp position should always be  $0^\circ$ .

Set the supporting strut and holder at  $90^\circ$ (Fig F, Pg. 7).

The grind depth may be set using the set screw



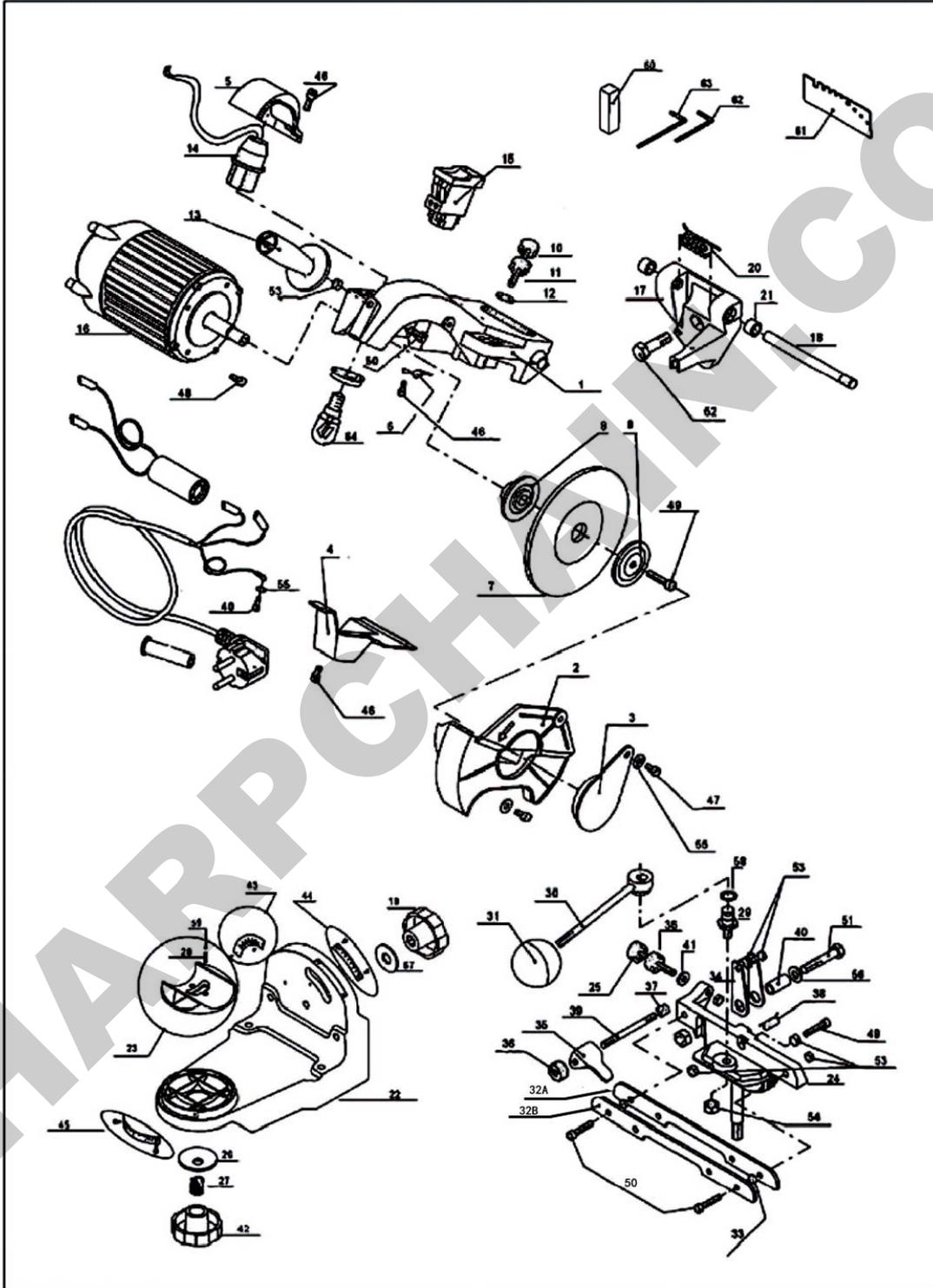
(K, Pg.7)

## 10. Dimensions

Chain Pitch	Gauge	OREGON	STIHL	SANDVIK	CARLTON	Viso Angle	Top Plate Angle	Tilt Angle	Wheel Width	Depth Gauge
1/4"	0.050/1.3mm	25AP	13RM	50K		30°	60°	10°	1/8" / 3.2mm	0.025" / 0.63mm
0.325"	0.050/1.3mm	20LP	23RS	50JLG	K1L	25°	60°	10°	1/8" / 3.2mm	0.025" / 0.63mm
0.325"	0.058/1.5mm	21LP	25RS	58JLG	K2L	25°	60°	10°	1/8" / 3.2mm	0.025" / 0.63mm
0.325"	0.063/1.6mm	22LP	26RS	63JLG	K3L	25°	60°	10°	1/8" / 3.2mm	0.025" / 0.63mm
0.325"	0.050/1.3mm	20BP	23RM	50J	K1C	30°	60°	10°	1/8" / 3.2mm	0.025" / 0.63mm
0.325"	0.058/1.5mm	21BP	25RM	58J	K2C	30°	60°	10°	1/8" / 3.2mm	0.025" / 0.63mm
0.325"	0.063/1.6mm	22BP	26RM	63J	K3C	30°	60°	10°	1/8" / 3.2mm	0.025" / 0.63mm
0.325"	0.050/1.3mm	95VP			K1N	30°	60°	10°	1/8" / 3.2mm	0.025" / 0.63mm
0.325"	0.050/1.3mm	95R				5°	50°	10°	1/8" / 3.2mm	0.030" / 0.76mm
0.325"	0.058/1.5mm	M21LP				25°	60°	10°	1/8" / 3.2mm	0.025" / 0.63mm
0.325"	0.063/1.6mm	M22LP				25°	60°	10°	1/8" / 3.2mm	0.025" / 0.63mm
3/8"	0.050/1.3mm	72LG	33RS	50AL	A1LM	25°	60°	10°	1/8" / 3.2mm - 3/16" / 4.7mm	0.025" / 0.63mm
3/8"	0.058/1.5mm	73LG	35RS	58AL	A2LM	25°	60°	10°	1/8" / 3.2mm - 3/16" / 4.7mm	0.025" / 0.63mm
3/8"	0.063/1.6mm	75LG	36RS	63AL	A3LM	25°	60°	10°	1/8" / 3.2mm - 3/16" / 4.7mm	0.025" / 0.63mm
3/8"	0.050/1.3mm	72LP	33RS	50ALG	A1L	25°	60°	10°	1/8" / 3.2mm - 3/16" / 4.7mm	0.025" / 0.63mm
3/8"	0.058/1.5mm	73LP	35RS	58ALG	A2L	25°	60°	10°	1/8" / 3.2mm - 3/16" / 4.7mm	0.025" / 0.63mm
3/8"	0.063/1.6mm	75LP	36RS	63ALG	A3L	25°	60°	10°	1/8" / 3.2mm - 3/16" / 4.7mm	0.025" / 0.63mm
3/8"	0.050/1.3mm	72DP	33RM1	50AG	A1EP	35°	60°	0°	1/8" / 3.2mm - 3/16" / 4.7mm	0.025" / 0.63mm
3/8"	0.058/1.5mm	73DP	35RM1	58AG	A2EP	35°	60°	0°	1/8" / 3.2mm - 3/16" / 4.7mm	0.025" / 0.63mm
3/8"	0.063/1.6mm	75DP	36RM1	63AG	A3EP	35°	60°	0°	1/8" / 3.2mm - 3/16" / 4.7mm	0.025" / 0.63mm
3/8"	0.050/1.3mm	72RD				10°-15°	50°	10°	1/8" / 3.2mm - 3/16" / 4.7mm	0.025" / 0.63mm
3/8"	0.058/1.5mm	73RD				10°-15°	50°	10°	1/8" / 3.2mm - 3/16" / 4.7mm	0.025" / 0.63mm
3/8"	0.063/1.6mm	75RD	36RMX			25°	60°	10°	1/8" / 3.2mm - 3/16" / 4.7mm	0.025" / 0.63mm
3/8"	0.058/1.5mm	M73LP				25°	60°	10°	1/8" / 3.2mm - 3/16" / 4.7mm	0.025" / 0.63mm
3/8"	0.063/1.6mm	M75LP				25°	60°	10°	1/8" / 3.2mm - 3/16" / 4.7mm	0.025" / 0.63mm
3/8(90)	0.043/1.1mm	90SG	63PMN		N4C	30°	50°	0°	1/8" / 3.2mm - 3/16" / 4.7mm	0.020" / 0.50mm
3/8(91)	0.050/1.3mm	91VS	63PM	50R	N1C	30°	60°	0°	1/8" / 3.2mm - 3/16" / 4.7mm	0.025" / 0.63mm
3/8(91)	0.050/1.3mm	91VG	63PM1	50RG	NIC-BL	30°	60°	0°	1/8" / 3.2mm - 3/16" / 4.7mm	0.025" / 0.63mm
3/8(91)	0.050/1.3mm	91R	63PMX			5°	60°	0°	1/8" / 3.2mm - 3/16" / 4.7mm	0.025" / 0.63mm
0.404"	0.058/1.5mm	58L			B2LM	25°	60°	10°	3/16" / 4.7mm	0.025" / 0.63mm
0.404"	0.063/1.6mm	59L			B3LM	25°	60°	10°	3/16" / 4.7mm	0.025" / 0.63mm
0.404"	0.058/1.5mm	26/P		58B	B2EP	35°	60°	10°	3/16" / 4.7mm	0.030" / 0.76mm
0.404"	0.063/1.6mm	27/P	46RSF	63B	B3EP	35°	60°	10°	3/16" / 4.7mm	0.030" / 0.76mm
0.404"	0.063/1.6mm	59AC	46RM	63BC	B3S	35°	60°	0°	3/16" / 4.7mm	0.030" / 0.76mm
0.404"	0.063/1.6mm	27R	46RMX	63BR	B3RM10	10°-15°	50°	0°	3/16" / 4.7mm	0.030" / 0.76mm
0.404"	0.063/1.6mm	16H	46RMH	HC	B3M	35°	60°	10°	3/16" / 4.7mm	0.050" / 1.27mm
0.404"	0.080/2.0mm	18H	49RMH	2HC	B5M	35°	60°	10°	3/16" / 4.7mm	0.050" / 1.27mm
3/4"	0.122/3.1mm	11H			G7S	35°	60°	10°	1/4" / 6mm	0.070" / 1.77mm

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**11. Assembly Drawing**



12. List of Spare Parts

Spare Part No.		Description	Qty	Spare Part No.		Description	Qty
Product No.	Position			Product No.	Position		
42595	001	Swing arm	1	42595	035	Chain drive	1
42595	002	Grinding disk enclosure body	1	42595	036	Counter nut	2
42595	003	Lateral guard	1	42595	037	Limiting spring	1
42595	004	Switch enclosure	1	42595	038	Spring	1
42595	005	Enclosure	1	42595	039	Threaded pin	1
42595	006	Limiter	1	42595	040	Case	1
42595	007	Grinding disk	3	42595	041	Plastic ring	1
42595	008	Flange	1	42595	042	Hand wheel	1
42595	009	Flange	1	42595	043	Scale	1
42595	010	Set screw	1	42595	044	Scale	1
42595	011	Counter-nut	1	42595	045	Scale	1
42595	013	Holder	1	42595	046	Screw M5X10	7
42595	014	Coupling	1	42595	047	Screw M5X12	2
42595	015	Switch	1	42595	048	Screw M5X12	3
42595	016	Motor	1	42595	049	Screw M6X25	2
42595	017	Joint	1	42595	050	Screw M6X30	2
42595	018	Axis	1	42595	051	Screw M8X45	1
42595	019	Clamping wheel	1	42595	052	Screw M10X40	1
42595	020	Spring	1	42595	053	Nut M6	6
42595	021	Case	2	42595	054	Nut M8	2
42595	022	Base plate	1	42595	055	Washer c5X14	2
42595	023	Swing support	1	42595	056	Washer c8	1
42595	024	Clamping rod	1	42595	057	Wide washer c10	1
42595	025	Set screw	1	42595	058	Plastic ring c12	1
42595	026	Wide washer	1	42595	059	Cone c5	2
42595	027	Spring	1	42595	060	Pull-off stone	1
42595	028	Small thrust spring	2	42595	061	Sharpening block	1
42595	029	Axial bolt	1	42595	062	Wrench M5	1
42595	030	Clamping lever rod	1	42595	063	Wrench M6	1
42595	031	Ball holder	1	42595	064	Lamp 120V E12 15W	1
42595	032A	Chain support	1	42595	065	Condenser	1
42595	032B	Chain support	1	42595	066	Cable	1
42595	033	Case	2	42595	067	Column action protection	1
42595	034	Connecting catch driver	1				

For replacement parts and technical questions, please call **1-800-222-5381**.

## WARRANTY

1-year limited warranty

### ● **WARNING**

Some dust created by power sanding, sawing, grinding, drilling, and other construction activities contains chemicals known to the State of California to cause cancer, birth defects or other reproductive harm. Some examples of these chemicals are:

- lead from lead-based paints,
- crystalline silica from bricks and cement and other masonry products, and
- arsenic and chromium from chemically treated lumber.

Your risk from these exposures varies, depending on how often you do this type of work. To reduce your exposure to these chemicals: work in a well-ventilated area, and work with approved safety equipment, such as those dust masks that are specially designed to filter out microscopic particles.



**ROUGHNECK**

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