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Polymak®

# ELECTRIC SCISSOR

## PM2.5ES

### INSTRUCTION MANUAL

**Read and follow all safety precautions in instruction manual.**

## SPECIFICATIONS:

| Model | PM2.5ES |
|---|---|
| Rated voltage/Frequency | 220V~240V/50HZ~60HZ |
| Input Power | 500W |
| Strokes per minute | 1800/min |
| Max. cutting capacities | 2.5mm(Mild steel) |
| Gross /Net weight | |
| Accessories | Carbon brush 2pcs Hex Wrench 2Pc; gauge 1pc<br>Operation Manual 1pc service book 1pc |

. Manufacturer reserves the right to change specifications without notice.

. Specifications may differ from country to country.

## GENERAL SAFETY RULES

**(For All Tools)**

**WARNING:**

**Read and understand all instructions. Failure to follow all instructions listed below, may result in electric shock, fire and / or serious personal injury.**

**SAVE THESE INSTRUCTIONS**

**Work Area**

1. **keep your work area clean and well it.** Cluttered benches and dark areas invite accidents.
2. **Do not operate power tools in explosive atmospheres, such as in the presence of flammable liquids、gases, or dust.** Power tools create sparks which may ignite the dust or fumes.
3. **Keep bystanders、children、and visitors away while operating a power tool.** Distractions can cause you to lose control.

**ELECTRICAL SAFETY**

4. **Power tool plugs must match the outlet. Never modify the plugs in any way. Do not use any adapter plugs with earthed power tools. Unmodified plugs and matching outlets will reduce risk of electric shock.** Do not change the plug in any way. Double insulation eliminates the need for the three wire grounded power cord and grounded power supply system.
5. **Avoid body contact with grounded surfaces such as pipes, radiators, ranges and refrigerators.** These is a increased risk of electric shock if your body is grounded.
6. **Do not expose power tools to rain or wet conditions.** Water entering a power tool will increase the risk of electric shock.
7. **Do not abuse the cord. Never use the cord to carry the tools or pull the plug from an outlet.** Keep cord away from heat, oil, sharp edges or moving parts. Replace damaged cords immediately. Damaged cord increase the risk of electric shock.
8. **When operating a power tool outside, use an outdoor extension cord marked "W-A" or "W".** These cords are rated for outdoor use and reduce the risk of electric shock.

**PERSONAL SAFETY**

9. **Stay alert, watch what you are doing and use common sense when operating a power tool.** Do not use tool while tired or under the influence of drugs, alcohol, or medication. A moment of inattention while operating power tools may result in serious personal injury.
10. **Dress properly. Do not wear loose clothing or jewelry. Contain long hair. Keep your hair, clothing, and gloves away from moving parts.** Loose clothes , jewelry, or long hair can be caught in moving parts.
11. **Avoid accidental starting. Be sure switch is off before plugging in.** Carrying tools with your finger on the switch or plugging in tools that have the switch on invites accidents.
12. **Remove adjusting keys or wrenches before turning the tool on.** A wrench or a key that is left attached to a rotating part of the tool may result in personal injury.
13. **Do not overreach. Keep proper footing and balance at all times.** Proper footing and balance enables better control of the tool in unexpected situations.
14. **Use safety equipment. Always wear eye protection. Dust mask, non-skid safety shoes, hard hat, or hearing protection must be used for appropriate conditions.** Ordinary eye or sun glasses are NOT eye protection.

**TOOL USE AND CARE**

15. **Use clamps or other practical way to secure and support the workpiece to a stable platform.** Holding the work by hand or against your body is unstable and may lead to loss of control.
16. **Do not force tool. Use the correct tool for your application.** The correct tool will do the job better and safer at the rate for which it is designed.
17. **Do not use tool if switch does not turn it on or off.** Any tool that cannot be controlled with the switch is dangerous and must be repaired.
18. **Disconnect the plug from the power source before making any adjustments, changing accessories, or storing the tool.** Such preventive safety measures reduce the risk of starting the tool accidentally.
19. **Store idle tools out of reach of children and other untrained persons.** Tools are dangerous in the hands of untrained users.
20. **Maintain tools with care. Keep cutting tools sharp and clean.** Properly maintained tools with sharp cutting edges are less likely to bind and are easier to control.
21. **Check for misalignment or binding of moving parts, breakage of parts, and any other condition that may affect the tools operation**. If damaged, have the tool serviced before using. Many accidents are caused by poorly maintained tools.
22. **Use only accessories that are recommended by the manufacturer for your model.** Accessories that may be suitable for one tool, may become hazardous when used on another tool.

SERVICE

23. **Tool service must be performed only by qualified repair personnel. Service or maintenance performed by unqualified personnel could result in a risk of injury.**
24. **When servicing a tool, use only identical replacement parts.** Follow instructions in the Maintenance section of the manual. Use of unauthorized parts or failure to follow Maintenance instructions may create a risk of electric shock or injury.

## SPECIFIC SAFTETY RULES

**DO NOT let comfort or familiarity with product (gained from repeated use ) replace strict adherence to scissors safety rules. If you use this tool unsafely or incorrectly, you can suffer serious personal injury.**

1. **Hold the tool firmly before operating.**
2. **Must be sure that the tool is unplugged avoiding cause accidental injury when the tool is switched on carelessly.**
3. **Don't use this tool being fitted with fixture or table clamper.**
4. **Don't put down this tool before stopping run absolutely.**

5. **Hold tool by insulated gripping surfaces when performing and 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.
6. **Always be sure the power supplied cord away from the work area when the tool performing and operation. Avoid being wrapped or broken by this tool.**
7. **Please double check the tool's blade、body if broken、damaged、deformed or not after the tool be dropped .**
8. **Please use the cord same as double insulation supplied by manufacturer if you want to use extension cord.**
9. **Edges and chips of the workpiece are sharp. Wear gloves. It is also recommended that you put on thickly bottomed shoes to prevent injury.**
10. **Do not put the tool on the chips of the workpiece. Otherwise it can cause damage and trouble on the tool.**
11. **Do not leave the tool running. Operate the tool only when hand-held.**
12. **Always be sure you have a firm footing. Be sure no one is below when using the tool in high locations. and could burn your skin.**
13. **Do not touch the blade or the workpiece immediately after operation; they may be extremely hot**
14. **Avoid cutting electrical wires. It can cause serious accident by electric shock.**

**SAVE THESE INSTRUCTIONS**

**WARNING:**

**MISUSE or failure to follow the safety rules stated in this instruction manual may cause serious personal injury.**

## SYMBOLS

The following show the symbols used for the tool.

V----------voltage

A----------ampere

Hz----------hertz

$n_o$ ---------- no load speed.

--/min---------- revolutions or reciprocation per minute

⧈ --------class II construction

## FUNCTIONAL DESCRIPTION

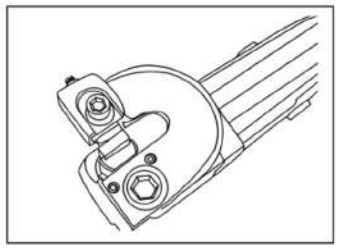


Fig1

### ■ Operation instructions

**◆ Adjusting the gap for blade (Fig1)**

**△Caution:**

Always be sure that the tool is unplugged before installing or removing and adjusting blade.

1. Have to adjust the horizontal gap between the both blades after making sure the thickness of shearing material.



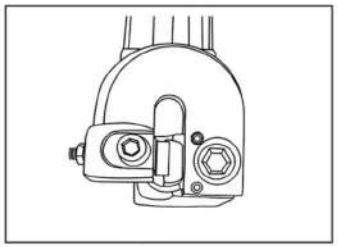


Fig2

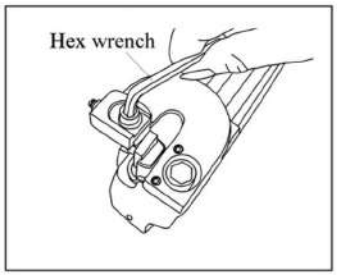



Fig3

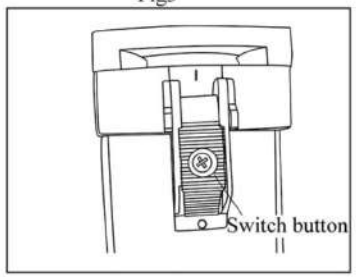



Fig4

The horizontal gap of blades should be adjusted as 20%~40% as the thickness of material to be sheared. For example, if shear 1mm thickness material, gap should be adjusted to 0.2mm.(Fig1)

**◆ Adjusting blades method(Fig2)**

Use the hex wrench provided to loosen the hex bolt and tight screw, choose the appropriate gauge and insert it into between both blades so that contact well each other, and then tighten hex bolt and tight screw.

**◆ changing new blade**

Use the hex wrench provided to loosen the hex bolt and take out the old blade, and then install new one according to installation process.(Fig3)

**Switch action**

△Caution:

Always be sure that the tool is switched off as Fig4 shown before plugging the power.

To start the tool, slide the front of switch button down the "I(ON)" position and can continue to run.

To stop the tool, slide the rear of switch button down "0(OFF)" position. The button of switch come back the original position and then the tool stop slowly. (Fig4)

**◆ Effective and safe for shearing operation.**

1. Please check to see the tool moving parts if run normally or not when unloading running 1minute and lubricate the reciprocator parts before operation.
2. Stay within the specified maximum cutting width is 40mm.
3. Keep the shear moving parallel with the material.
4. Secure the workpiece firmly. Move the tool forward keeping the side blades flush with the workpiece surface. Don't force much more on the tool when you operating. Should reduce the push force immediately when speed lower suddenly. Otherwise overload will cause the tool damaged.

## ■ Maintenance and daily care

**⚠Warning:**

Always be sure that the tool is switched off and unplugging before attempting to perform inspection and maintenance.

1. Tool requires no special maintenance, but after some time you must control the parts that are submitted to wear-and-tear under normal operating conditions. This includes the control and replacement of carbon brushes and grease in reducing gear housing. Take the tool to an authorized service centre.
2. Keep the tool and supply cord clean. Keep ventilation slots clean and open. Wipe the surface of the tool with a soft cloth!
3. It is not allowed to use household cleaning agents that contain petrol, trichloroethylene, ammonia and chlorides. These substances corrode and damage plastic parts of the tool.
4. Excessive sparking generally indicates the presence of dirt in the motor or abnormal wear on the carbons.
5. In case of electric or mechanical failure, send the tool to a BODA authorized service centre for repair

## ◆ Replacing carbon brushes.

1. Remove and check the carbon brushes regularly. Replace when the tool occur obvious sparks or wear down to the limit mark.
2. Both carbon brushes should be replaced at the same time. Use only BODA brushes provided.
3. Use a screwdriver to remove the brush holder caps. Take out the worn carbon brushes, insert the new ones and secure the brush holder caps (Fig5)

⚠CAUTION:

Be sure to re-install the knob after inserting new carbon brush.

After replacing brushes, plug in the tool and break in brushes by running tool with no load for about 10 minutes. Then check the tool while running, when releasing the switch trigger. If the tool is not working well , ask your local BODA service center for repair.

To maintain product SAFETY and RELIABILITY, repairs, any other maintenance or adjustment should be performed by BODA Authorized or Factory service centers, always using BODA replacement parts.

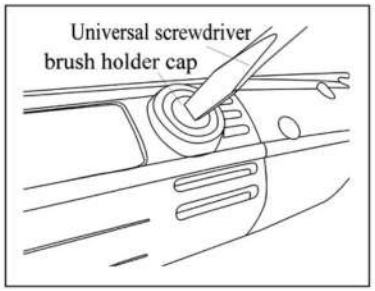
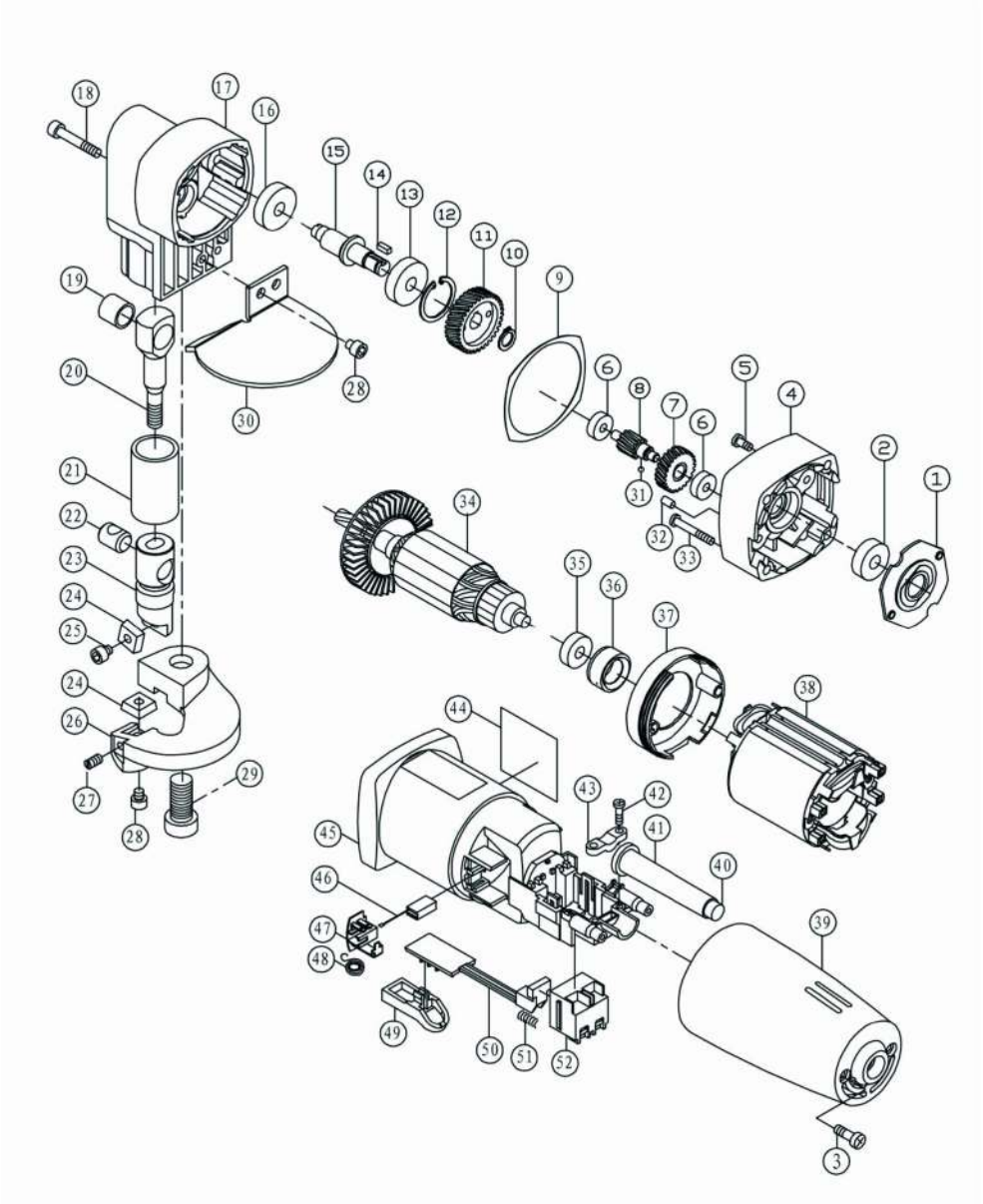



Fig5





# PM2.5ES SPARE PARTS LIST

| No | Parts Name | Pcs | Seri No | INR |
|---|---|---|---|---|
| 1 | Retaining Bearing Cover | 1 | | |
| 2 | Ball Bearing | 1 | | |
| 3 | Cross Tapping Screw | 2 | | |
| 4 | Middle Cover | 1 | | |
| 5 | P.h Screw | 2 | | |
| 6 | Bearing 625-2z | 2 | | |
| 7 | Small Gear | 1 | | |
| 8 | Gear Shaft | 1 | | |
| 9 | Paper Washer For Sealing Oil | 1 | | |
| 10 | Retaining Ring For Spindle | 1 | | |
| 11 | Big Gear | 1 | | |
| 12 | Inner Retaining Ring Ø26 | 1 | | |
| 13 | Ball Bearing 6000-2rs | 1 | | |
| 14 | Flat Key | 1 | | |
| 15 | Crank Shaft | 1 | | |
| 16 | Ball Bearing 609-2rs | 1 | | |
| 17 | Head Case | 1 | | |
| 18 | Hex Socket Screw | 2 | | |
| 19 | Needle Bearing | 1 | | |
| 20 | Connecting Rod | 1 | | |
| 21 | Steel Sleeve | 1 | | |
| 22 | Connecting Rod Pin | 1 | | |
| 23 | Reciprocating Rod | 1 | | |
| 24 | Blade | 2 | | |
| 25 | Hex Socket Screw | 1 | | |
| 26 | Blade Stand | 1 | | |
| 27 | Hex Socket Clamping Screw | 2 | | |
| 28 | Hex Socket Screw | 2 | | |
| 29 | Hex Socket Screw | 1 | | |
| 30 | Protection Plate | 1 | | |
| 31 | Steel Ball | 1 | | |
| 32 | Cylindric Pin | 1 | | |
| 33 | Cross Tapping Head Screw | 4 | | |
| 34 | Rotor | 1 | | |
| 35 | Ball Bearing 607-2z | 1 | | |
| 36 | Labyrinth Rubber Ring | 1 | | |
| 37 | Baffle Plate | 1 | | |

| No | Parts Name | Pcs | Seri No | INR |
|---|---|---|---|---|
| 38 | Stator | 1 | | |
| 39 | Rear Cover | 1 | | |
| 40 | Cord | 1 | | |
| 41 | Cord Guard | 1 | | |
| 42 | Tapping Screw | 2 | | |
| 43 | Strain Relief | 1 | | |
| 44 | Nameplate | 1 | | |
| 45 | Motor Housing | 1 | | |
| 46 | Carbon Brush | 2 | | |
| 47 | Brush Holder(copper) | 2 | | |
| 48 | Spiral Spring | 2 | | |
| 49* | Switch Button | 1 | | |
| 50 | Switch Bar | 1 | | |
| 51 | Switch Spring | 1 | | |
| 52 | Switch | 1 | | |