



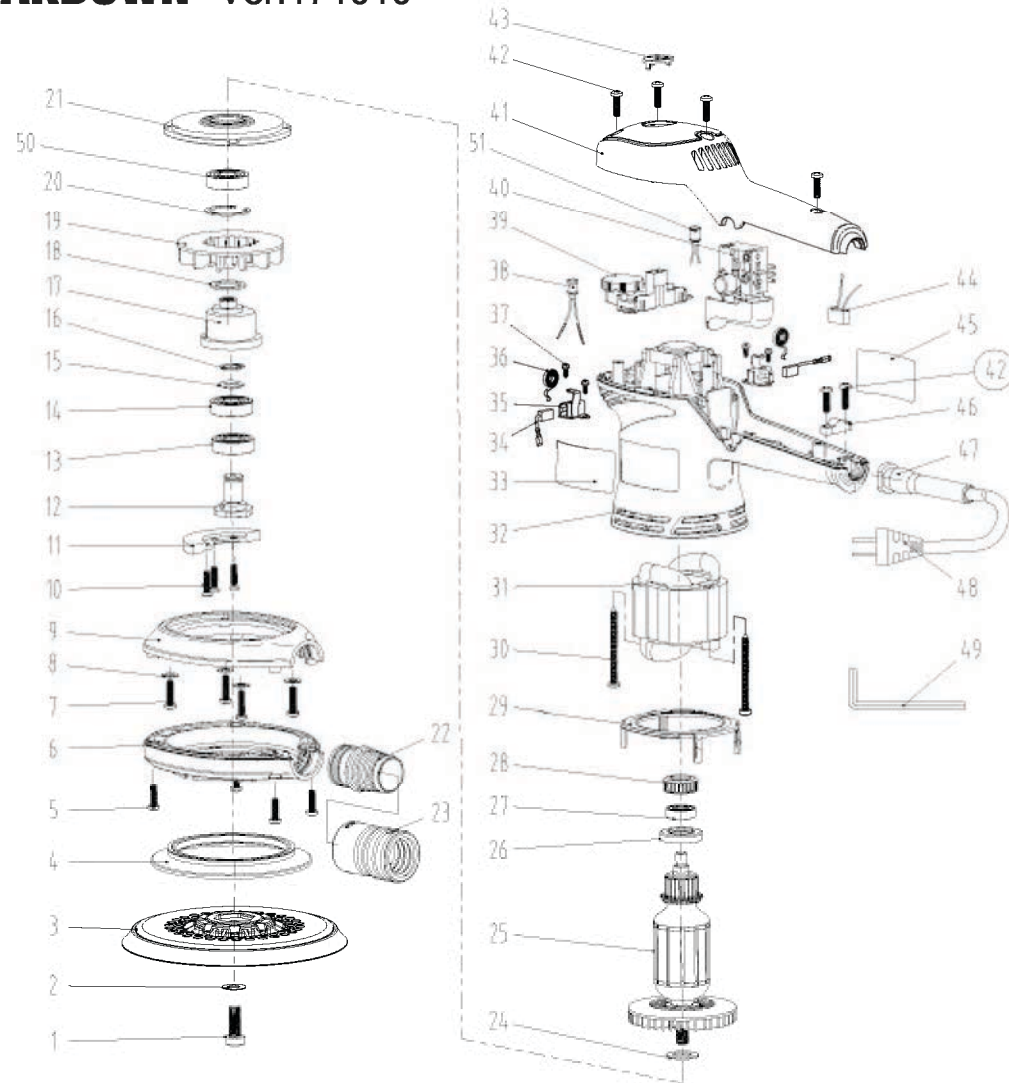
Model:

# ES516

Product Type:

RANDOM ORBITAL ELECTRIC SANDER  
400W 4000-10000/MIN

## PARTS BREAKDOWN Ver.171010



No.	Description	Qty	No.	Description	Qty	No.	Description	Qty
1	Screw M8x16	1	18	Felt Washer	1	35	Carbon Brush Holder	2
2	Wave Washer 8	1	19	Dust Exhausting Fun	1	36	Coil Spring	2
3	Backing Plate	1	20	Circlips for holes 28	1	37	Self-tapping Screw ST3x10	4
4	Rubber Ring	1	21	Intermedia Plate	1	38	Inductor(long-wire)	1
5	Self-tapping Screw ST4.2x12	4	22	Dust Exhaust Adaptor	1	39	Controller Assembly	1
6	Dust Guard(down)	1	23	Hose Adaptor D25	1	40	Switch	1
7	Self-tapping Screw ST4.2x22	4	24	Bearing Retainer	1	41	Upper Cover	1
8	Flat Washer 4	4	25	Armature	1	42	Self-tapping Screw ST4.2x14	6
9	Dust Guard(up)	1	26	Magnetic Ring	1	43	Orbit Size Indicator	1
10	Screw M4x16	4	27	Bearing 607-2RS	1	44	Capacitor	1
11	Counterweight	1	28	Rubber Bearing Seat 607	1	45	Data Label	1
12	Shaft	1	29	Wind Baffle	1	46	Cord Clamp	1
13	Ball bearing 6001-2RS W/ Washer	1	30	Self-tapping Screw ST4x45	2	47	Cord Jacket	1
14	Ball bearing 6001-2Z	1	31	Field Coil	1	48	Power Supply Cord	1
15	Wave Washer 12	1	32	Field Coil Case	1	49	Allen Wrench 6#	1
16	Circlip for shaft 12	2	33	Brand Label	1	50	Ball bearing 6001-2RS	1
17	Eccentric Block	1	34	Carbon Brush	2	51	Inductor (short-wire)	1



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## RANDOM ORBITAL ELECTRIC SANDER

### ⚠ WARNING ⚠

Study, understand and follow all instructions provided with this product. Read these instructions carefully before installing, operating, servicing or repairing this tool. Keep these instructions in a safe accessible place.

### INTENDED USE OF THE TOOL

This tool is designed to be used as a sander. Read all the warnings, instructions, indications provided on drawings and specifications supplied with this tool. This tool is not intended to be used for brushing, polishing or cutting operations. The use of this tool for unintended applications may cause hazards and injuries to people.

### ⚠ WARNING ⚠

#### Caution: To help prevent personal injury

- Normal use of this product is likely to expose the user to dust and/or microscopic particles containing chemicals to cause cancer, birth defects or other reproductive harm. Always wear appropriate safety equipment and clothing when using this product. Study, understand and follow all instructions provided with this product. Failure to read and follow all warnings and operating instructions may result in damages and serious injury or death.
- Always wear safety approved goggles when using this product. (Users and Bystanders).
- Never use this tool for any application other than for which it was designed.
- Only use accessories designed for this tool.
- Never alter or modify this tool in any way.
- Improper operation and/or maintenance of the tool, modification of the tool, or use of the tool with accessories not designed for it could result in serious injury or death.
- Always select the correct accessories of the correct size and design for the job that you are attempting to perform.
- Always work in a clean, safe, well-lit, organized and adequately equipped area.
- Do not begin repairs without assurance that vehicle is in secure position, and will not move during repair.

### Unpacking

When unpacking, check the parts diagram and part number listing on page 4 to make sure all parts are included. If any parts are missing or damaged, please call your distributor.

### PRODUCT INFORMATION:

- Professionally manufactured for the automotive refinishing and industrial sanding applications
- Less vibration, reduce fatigue in long term operation. (suggested to work with specified ShineMate accessories)
- Constant Speed: machine keeps stable output speed even under heavy load
- Soft-start feature for a smooth and safe start

### SPECIFICATIONS

Item No.:	ES516-6/3 Backing Plate 6"(148mm) Orbit Diameter 3mm
Item No.:	ES516-6/5 Backing Plate 6"(148mm) Orbit Diameter 5mm
Item No.:	ES516-6/7 Backing Plate 6"(148mm) Orbit Diameter 7mm
Voltage & Frequency:	220-240V~ 50/60Hz (CE/CN/SAA) 100-120V~ 50/60Hz (US/JP)
Power Consumption:	Rated 400W
Free Speed:	No 4000-10000/min
Weight:	3-1/2lbs (1.6kg)



MADE IN CHINA

DO NOT DISCARD - GIVE TO USER



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## GENERAL SAFETY RULES

**WARNING:** Read all instruction. Failure to follow all instructions listed below may result in electric shock, fire and/ or serious injury. The term "power tool" in all of the warnings listed below refers to your mains operated (corded) power tool or battery operated (cordless) power tool.

### WORK AREA

- Keep work area clean and well lit, cluttered or dark areas invite accidents.
- 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.
- Keep children and bystanders away while operating a power tool. Distractions can cause you to lose control.

### ELECTRICAL SAFETY

- Power tool plugs must match the outlet. Never modify the plug in any way. Do not use any adapter plugs with earthed (grounded) power tools. Unmodified plugs and matching outlets will reduce risk of electric shock.
- Avoid body contact with earthed or grounded surfaces such as pipes, radiators, ranges and refrigerators. There is an increased risk of electric shock if your body is earthed or grounded.
- Do not expose power tools to rain or wet conditions. Water entering a power tool will increase the risk of electric shock.
- Do not abuse the cord. Never use the cord for carrying, pulling or unplugging the power tool. Keep cord away from heat, oil, sharp edges or moving parts. Damaged or entangled cords increase the risk of electric shock.
- When operating a power tool outdoors, use an extension cord suitable for outdoor use. Use of a cord suitable for outdoor use reduces the risk of electric shock.

### PERSONAL SAFETY

- Stay alert, watch what you are doing and use common sense when operating a power tool. Do not use a power tool while you are tired or under the influence of drugs, alcohol or medication. A moment of inattention while operation power tools may result in serious personal injury.
- Use safety equipment. Always wear eye protection. Safety equipment such as dust mask, non-skid safety shoes, hard hat, or hearing protection used for appropriate conditions will reduce personal injuries.
- Avoid accidental starting. Ensure the switch is in the off position before plugging in. Carrying power tools with your finger on the switch or plugging in power tools that have the switch on invites accidents.
- Remove any adjusting key or wrench before turning the power tool on. A wrench or a key left attached to a rotating part of the power tool may result in personal injury.
- Do not overreach. Keep proper footing and balance at all times. This enables better control of the power tool in unexpected situations.
- Dress properly. Do not wear loose clothing or jewellery. Keep your hair, clothing and gloves away from moving parts. Loose clothes, jewellery or long hair can be caught in moving parts.
- If devices are provided for the connection of dust extraction and collection facilities, ensure these are connected and properly used. Use of these devices can reduce dust related hazards.

### POWER TOOL USE AND CARE

- Do not force the power tool. Use the correct power tool for your application. The correct power tool will do the job better and safer at the rate for which it was designed.
- Do not use the power tool if the switch does not turn on and off. Any power tool that cannot be controlled with the switch is dangerous and must be repaired.
- Disconnect the plug from the power source before making any adjustments, changing accessories, or storing power tools. Such preventive safety measures reduce the risk of starting the power tool accidentally.

- Store idle power tools out of the reach of children and do not allow persons unfamiliar with the power tool or these instructions to operate the power tool. Power tools are dangerous in the hands of untrained users.
- Maintain power tools. Check for misalignment or binding of moving parts, breakage of parts and any other condition that may affect the power tools operation. If damaged, have the power tool repaired before use. Many accidents are caused by poorly maintained power tools.
- Keep cutting tools sharp and clean. Properly maintained cutting tools with sharp cutting edges are less likely to bind and are easier to control.
- Use the power tool, accessories and tool bits etc., in accordance with these instructions and in the manner intended for the particular type of power tool, taking into account the working conditions and the work to be performed. Use of the power tool for operations different from intended could result in a hazardous situation.

### SERVICE

- Have your power tool serviced by a qualified repair person using only identical replacements parts. This will ensure that the safety of the power tool is maintained.

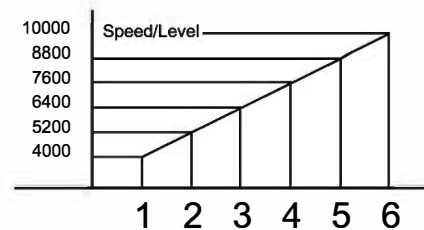
## INSTRUCTIONS FOR SANDING OPERATIONS

### INSTALL AND REMOVE ACCESSORIES

1. To instal the backing plate, unplug the tool and place it on tool rest with spindle upright.
2. Attach hook and loop backing plate to the spindle, make sure the slot align into the recessed slot on the backing plate adaptor.
3. Lock the backing plate with the bolt supplied with the tool, use allen wrench.
4. Align the backing plate with the sanding disc's velcro area, attach the sanding disc to the backing plate, and make sure the backing plate fastens the sanding disc and centered.
5. To remove, "peel" off the sanding disc. Use allen wrench to lock the bolt.

### STARTING, STOPPING AND CONTROLLING SPEED

The sander features a dial speed control, which controls the sander's maximum rotations per minute. The speed will remain variable to the chosen dial setting by use of the trigger switch. Dial settings range from 1 through 6. Lower numbers correspond to lower speeds and higher numbers correspond to higher speeds. Generally, lower speeds are recommended for tight work areas and higher speeds are ideal for large surface areas. Use the setting that best suits your job. To control the speed, set the dial to the desired number. To start the tool, pull the trigger. To stop the tool, release the trigger. For continuous operation, press the switch lock button to lock the trigger, pull the trigger again to stop the tool.



### PREPARE THE SURFACE

For best results, the surface should be clean and dry, remove the stubborn dirt such as road tar, grease, and bug stains. Select the correct grit number of sanding disc as per work requirements. Higher grit number makes finer result, and low grit number makes coarse result.



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### SANDING

While holding the sander firmly against the surface, turn on the sander to begin on speed 1. Always start and stop the sander on or against the surface being sanded. Begin by sanding larger flat surfaces, such as hood, trunk and roof. Do not press down on the surface with the sander. Move the sander back and forth in long, sweeping strokes. Too much pressure, the wrong angle or improper motion may cause severe marks or burning.

### DUST COLLECTION

The sander is equipped with a multi-hole backing plate. To make dust-free sanding, the user should use the sanding disc with holes. Align the holes on sanding disc to that on backing plate in order to make dust-free sanding.

The sander has self-vacumn function, connect to a dust-collection bag(can be ordered separately) can help to collect the dust.

A rubber adaptor is provided with the sander, it can be connected to a 25mm diameter hose(can be ordered separately), then connect the hose to the vacuum cleaner for a better dust-free operation.



## WARNING

To reduce the risk of injury, keep the cord set away from the path of the sander. Otherwise the sanding disc or backing plate may cut through the cord and expose live wires.

Use very light pressure and keep the sander moving constantly, especially when working near edge or where there are abrupt changes in the contour of the work surface.

### PREVENTING SNAGGING

Snagging occurs when sanding pads get caught on rough edges of a work surface. Snagging can cause the tool to suddenly "kick back" and it may cause the damage of pad. To reduce the risk of snagging, use the sander at low speeds when sanding rough surfaces. For tricky areas such as near trim or between a mirror and window on a car, do not take chances with a sander. Sand these surfaces by hand. Or use the "coast-down" technique to avoid snagging. To coast-down, turn the motor ON for a few seconds, then turn it OFF and apply the sanding pad to the surface. This way, when the pad touches the work surface, it will be rotating more slowly than it is when the motor is ON. Use coast-down when working in areas where crevices or pockets are present.

### MAINTAINING TOOLS

Keep your tool in good repair by adopting a regular maintenance program. Before use, examine the general condition of your tool. Inspect switches, tool cord set and extension cord for damage. Check for loose screws, misalignment, binding of moving parts, improper mounting, broken parts and any other condition that may affect its safe operation. If abnormal noise or vibration occurs, turn the tool off immediately and have the problem corrected before further use. Do not use a damaged tool. Tag damaged

tools "DO NOT USE" until repaired. Under normal conditions, re-lubrication is not necessary until the motor brushes need to be replaced. After six months to one year, depending on use, return your tool to the nearest service facility for the following:

- Lubrication
- Brush inspection and replacement
- Mechanical inspection and cleaning (gears, spindles, bearings, housing, etc.)
- Electrical inspection (switch, cord, armature, etc.)
- Testing to assure proper mechanical and electrical operation

## WARNING

To reduce the risk of injury, always unplug your tool before performing any maintenance. Never disassemble the tool or try to do any rewiring on the tool's electrical system.

### CLEANING

Clean dust and debris from vents. Keep the tool handles clean, dry and free of oil or grease. Use only mild soap and a damp cloth to clean your tool since certain cleaning agents and solvents are harmful to plastics and other insulated parts. Some of these include: gasoline, turpentine, and lacquer thinner, paint thinner, chlorinated cleaning solvents, ammonia and household detergents containing ammonia. Never use flammable or combustible solvents around tools.

## WARNING

To reduce the risk of injury, electric shock and damage to the tool, never immerse your tool in liquid or allow a liquid to flow inside the tool.

### REPAIRS

If your tool is damaged, return the entire tool to the nearest service center.

## CAUTIONS FOR USE

- 1) Only use the backing plate as recommended by the manufacturer.
- 2) It is forbidden to use the grinding wheels and cut-off wheels on this tool.
- 3) Ensure the max. operating speed of the pad is higher than the rated speed of the power tool.
- 4) Always wear safety approved ear protection and safety glasses when using this tool. Gloves and protective clothing are recommended.
- 5) Personal protection and dust collection devices shall be chosen according to the material been worked upon. Please consult provider of such devices.
- 6) Release the start and stop device in case of failure of energy supply.
- 7) Only use the CARBON BRUSH and LUBRICANT recommended by the manufacturer.