

ORBOT MICRO



TWIN-HEAD ORBITAL
STAIR & UPHOLSTERY TOOL

WARRANTY

All ORBOT equipment has been carefully tested and inspected at our USA factory. ORBOT MICRO machines are guaranteed for 30 days from the date of original purchase against defects or workmanship made during manufacture. Within the guarantee period we undertake at our discretion, to repair or replace any part found to be defective, free of charge to the purchaser **with subject to the following conditions:**

Claims made under the terms of the guarantee must be supported by the original invoice issued at the time of sale along with the machine serial number.

For claims under this guarantee contact the supplier from whom you've purchased the product who will arrange the appropriate action. Do not initially return the product as this could lead to transit damage.

Neither ORBOT nor its distributors will be held responsible for any incidental or consequential loss.

This guarantee does not cover:

- Periodic maintenance, repair or replacement of parts due to normal wear and tear.
- Damage caused by accident, misuse or neglect, fire or the fitting of other than genuine ORBOT parts.
- Defects in other than genuine ORBOT parts, repairs, modifications or adjustments made by other than an ORBOT service engineer or authorized service dealer.
- Costs and risks of transport relating directly or indirectly to the guarantee of this product.
- Consumable items such as brushes, drivers, velcro discs, gliders, pads and so forth. ORBOT has a policy of continual product development and we reserve the right to alter specifications without prior notice.

MACHINE DATA

Model: _____
Serial: _____
Date of Purchase: _____
Dealer: _____
Address: _____
Phone Number: _____
Sales Representative: _____

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SAFETY INSTRUCTIONS

This instruction manual is furnished with each ORBOT MICRO. The entire manual should be read carefully before using the ORBOT MICRO and retained for future reference.

GENERAL SAFETY RULES

WARNING

Read all instructions. Failure to follow all instructions listed below may result in electric shock, fire and/or serious injury. The term “power tool” in all the warnings listed below refers to your ORBOT MICRO.



▲ WARNING
Read and understand tool manual before work starts to reduce risk of injury to operator, visitors, and tool.



▲ WARNING
Practice safety requirements. Work alert, have proper attire, and do not operate tools under the influence of alcohol or drugs.



▲ WARNING
Eye protection must be worn at all times. Eye protection to conform to ANSI Z87.1.



▲ WARNING
Ear protection to be worn when exposure to sound exceeds the limits of applicable federal, state, or local statutes ordinances and/or regulations.



▲ WARNING
Respiratory protection to be used when exposed to contaminants that exceed the applicable threshold limit values required by law.



▲ WARNING
To avoid accidental starting, unplug the cord when the tool is not being used, when changing accessories, and when adjusting or cleaning tools.

SAVE THESE INSTRUCTIONS

Work Area

- Keep work area clean and well lit. Cluttered and dark areas invite accidents.
- Do not operate power tools in explosive atmospheres, such as in the presence of flammable liquids, gasses or dust. Power tools create sparks which may ignite the dust or fumes.
- Keep children and others away while operating 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.
- 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.
- Guard against electrical shock. Recommended using tool on GFI (Ground Fault Interrupter) or RCD (Residual Current Device) protected circuit (rated residual current of 30 mA or less).

Personal Safety

- Stay alert, pay attention 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 operating power tools may result in serious personal injury.

- k) 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.
- l) 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.
- m) Remove any adjusting key or wrench before turning the power tool on. A wrench or key left attached to a rotating part of the power tool may result in personal injury.
- n) Do not overreach. Keep proper footing and balance at all times. This enables better control of the power tool in unexpected situations.
- o) Dress properly. Do not wear loose clothing or jewelry. Keep your hair, clothing and gloves away from moving parts. Loose clothes, jewelry or long hair can be caught in moving parts.
- p) If devices are provided for the connection of dust extraction and collection facilities, ensure connections and properly used. Use of these devices can reduce dust-related hazards.

Power Tool Use and Care

- q) 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.
- r) Do not use the power tool if the switch does not turn it on and off. Any power tool that cannot be controlled with the switch is dangerous and must be repaired.
- s) Disconnect the plug from the power source and/or the battery pack from the power tool before making any adjustments, changing accessories, or storing power tools. Such preventive safety measures reduce the risk of starting the power tool accidentally.
- t) 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.
- u) Maintain power tools. Check for misalignment or binding of moving parts, breakage of parts and any other condition that may affect the power tool's operation. If damaged, have the power tool repaired before use. Many accidents are caused by poorly maintained power tools.
- v) Keep cutting tools sharp and clean. Properly maintained cutting tools with sharp cutting edges are less likely to bind and are easier to control.
- w) 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 those intended could result in a hazardous situation.

Service

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



Safety Warnings

- y) Read all safety warnings, instructions, illustrations and specifications provided with this power tool. Failure to follow all instructions listed below may result in electric shock, fire and/or serious injury.
- z) Operations for which the power tool was not designed may create a hazard and cause personal injury.
- aa) Do not use accessories which are not designed and recommended by the tool manufacturer. Just because the accessory can be attached to your power tool, it does not assure safe operation.



Safety Warnings

- bb) The rated speed of the accessory must be at least equal to the maximum speed marked on the power tool. Accessories running faster than their rated speed can break and fly apart.
- cc) The outside diameter and the thickness of your accessory must be within the capacity rating of your power tool. Incorrectly sized accessories cannot be adequately guarded or controlled.
- dd) The arbor size of wheels, flanges, backing pads or any other accessory must properly fit the spindle of the power tool. Accessories with arbor holes that do not match the mounting hardware of the power tool will run out of balance, vibrate excessively and may cause loss of control.
- ee) Do not use a damaged accessory. Before each use inspect the accessory such as backing pad for cracks, tear or excess wear. If power tool or accessory is dropped, inspect for damage to install an undamaged accessory. After inspecting and installing an accessory, position yourself and bystanders away from the plane of the rotating accessory and run the power tool at maximum no-load speed for one minute. Damaged accessories will normally break apart during this test time.
- ff) Wear personal protective equipment. Depending on application, use a face shield, safety goggles or safety glasses. As appropriate, wear dust mask, hearing protectors, gloves and workshop apron capable of stopping small abrasive or workpiece fragments. The eye protection must be capable of stopping flying debris generated by various operations. The dust mask or respirator must be capable of filtrating particles generated by your operation. Prolonged exposure to high intensity noise may cause hearing loss.
- gg) Keep bystanders a safe distance away from work area. Anyone entering the work area must wear personal protective equipment. Fragments of workpiece or of a broken accessory may fly away and cause injury beyond immediate area of operation.
- hh) Position the cord clear of the spinning accessory. If you lose control, the cord may be cut or snagged and your hand or arm may be pulled into the spinning accessory.
- ii) Never lay the power tool down until the accessory has come to a complete stop. The spinning accessory may grab the surface and pull the power tool out of your control.
- jj) Do not run the power tool while carrying it at your side. Accidental contact with the spinning accessory could snag your clothing, pulling the accessory into your body.
- kk) Regularly clean the power tool's air vents. The motor's fan will draw the dust inside the housing and excessive accumulation of powdered metal may cause electrical hazards.

Kickback and Related Warnings

Kickback is the result of power tool misuse and/or incorrect operating procedures or conditions and can be avoided by taking proper precautions as given below.

- ll) Maintain a firm grip on the power tool and position your body and arm to allow you to resist kickback forces. Always use auxiliary handle, if provided, for maximum control over kickback or torque reaction during start up. The operator can control torque reactions or kickback forces, if proper precautions are taken.
- mm) Keep hands away from rotating accessory. Accessory may kickback over your hand.
- nn) Do not position your body in the area where power tool will move if kickback occurs. Kickback will propel the tool in a direction opposite to the wheel's movement at the point of snagging.
- oo) Use special care when working corners, sharp edges etc. Avoid bounding and snagging the accessory. Corners, sharp edges or bounding have a tendency to snag the rotating accessory and cause loss of control or kickback.

WARNING

When using electric tools, basic safety precautions should always be followed to reduce the risk of fire, electric shock, and personal injury, including but not limited to the following:

Grounding Instructions

- pp) The ORBOT MICRO should **always** be electrically grounded while in use to protect the operator from electric shock. This tool is equipped with an approved three-conductor cord and three-prong grounding type plug to fit the proper grounding type receptacle. The green or green/yellow conductor wire in the cord is the grounding wire. **Never connect Green or Green/Yellow wire to live terminal.** If any doubt as to whether the wall receptacle is properly grounded, you should have it checked by a qualified electrician.

WARNING

DO NOT CUT OR REMOVE THE THIRD (GROUND) PRONG FROM THE POWER CORD PLUG.

Extension Cord

- qq) With the ORBOT MICRO, use only three-wire extension cords that have three-prong grounding type plugs and three-pole receptacles that accept the tool's plug. Replace or repair damaged cords. When using this tool at a distance from the power source, a three conductor grounding type extension cord of ADEQUATE SIZE must be used for safety and to prevent the loss of power and overheating.

Extension Cord Length: 0-100 feet (0-30 m), 101-250 feet (30-76 m)

Size of Wire in Cord: 18 AWG (0.75mm2), 16 AWG (1.0 mm2)

Motor

- rr) Your ORBOT MICRO is powered by a sturdy motor. Be certain your power supply agrees with that shown on the name plate (a.c. means alternating current). Variance in your power supply's voltage may result in loss of power and overheating. This tool is factory tested. If it will not operate, check electric supply for blown fuses; check plug and electrical receptacle for proper contact.

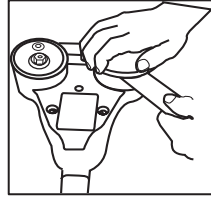
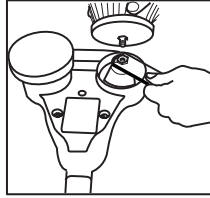
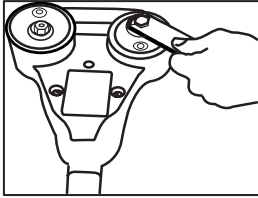
Additional Safety Instructions:

- ss) **Do not Abuse Cord.** Do not force sharp bend in cord, especially where it exits the handle and particularly when curling cord for storage.
- tt) **Maintain Tool with Care.** Keep tool clean for better and safer performance. Follow lubricating and changing accessories instructions. Inspect cord periodically and, if damaged, have repaired necessary. Inspect extension cords periodically and replace if damaged. Keep handles dry, clean, and free from oil and grease. Using compressed air, blow dry the bearings under the heads or pads. Blow out dirt or lint inside the motor case. Only perform with the power cord disconnected and with proper eye protection.
- uu) **Keep Work Area Clean.** Cluttered areas and benches invite injuries.
- vv) **Use the Right Tool.** Do not force a small tool to do the job of a heavy-duty tool.
- ww) **Use Proper Support.** Ensure you provided proper support for the work piece. A loose work piece may be propelled by the tool if not supported or fixed in place.
- xx) **Check Damaged Parts.** Before use, check guard carefully for damage to determine if it operates properly. Check alignment and binding of moving parts, breakage, mounting, etc. that may affect operation. Do not use tool if switch does not turn tool on and off.
- yy) **Use only Orbot Micro Recommended Products.** Use only recommended accessories or attachments within these instructions to present a risk of personal injury.
- zz) **Recommend Using Residual Current Device.** Use residual current device (rated residual current of 30 mA or less. In US and Canada, a residual current device is also known as a ground fault circuit interrupter (GFCI), ground fault interrupter (GFI) or an appliance leakage current interrupter (ALCI). In Australia, sometimes known as "safety switches" or simply "RCD" and in UK they can be referred to as "trips" or "trip switches."

ORBOT MICRO SET-UP

Attaching Velcro Driver Plates and Scrub Brushes

- Lay the ORBOT MICRO upside-down on your lap, bench or flat surface.
- Fit the flat wrench around the hex nut-like adapter part of the counterweight.
- Hold the counterweight nut with the flat wrench (see left hand in diagram). Thread attachment clockwise into the counterweight nut (see right hand in diagram).
- Do not over-tighten. Use a firm grip for hand tightening. Repeat the installation procedure for the other side.



GUIDE TO GENUINE ORBOT MICRO ACCESSORIES

Genuine Velcro Driver Plates

- Velcro driver plate (VDP) specifically designed for ORBOT. This unique velcro system makes the pads stick to the driver. Velcro needs replacing (generally at about 200+ hours). Simply take off the velcro driver plate and replace with a new one.



Genuine ORBOT MICRO SuperZorb Pads

- Our exclusive ORBOT MICRO SuperZorb Pads are one of the primary components that help to extract an essential amount of soil from the carpet fibers. They also play an important role to achieve fast dry times. Designed to fit perfectly on the ORBOT MICRO, SuperZorb Pads are washable and can be reused hundreds of times.



Genuine ORBOT MICRO AkwaStrip Pads

- The AkwaStrip Pad is a chemical-free stripping pad used to achieve excellent results with just water. Used for deep cleaning and to remove wax off of vinyl, VCT, linoleum, wood, safety tiles, and more. An AkwaStrip Pad, used on both sides, cleans an approximate area of 1000-2000 sq. ft (100 to 200m²), depending on floor type and the level of wax and soil. Make sure to thoroughly rinse with clean water after each use.



Genuine ORBOT MICRO Scrub Brush Selection Guide

Their action mimics the motion of hand-scrubbing. Simply attach two brushes so you can clean carpet, upholstery, boat decks, tile, grout and more. The orbital motion combined with the brushes' high quality bristling safely cleans leather, fabric, upholstery and carpets. Each brush kneads and scrubs vibrating loose any soil or debris. The brushes **do not spin**, which could damage fabrics and carpet. Brushes available in 4 varieties. Each made of durable nylon bristles modified for specific applications. Use Environ HP, our exclusive "green" encapsulation carpet cleaner to remove the tough stains.

d) Gray Ultra Soft Upholstery Brush

(Upholstery, Fine Carpets, Fine Interiors)

- Flexible bristles, flagged (ends) for softness and water-carrying capacity.
- Recommended applications: Ideal for use on headliners, leather, and other fragile upholstery
- Natural fiber fine carpets



GUIDE TO GENUINE ORBOT MICRO ACCESSORIES

e) Aqua Soft Carpet Brush

(Fine, Durable Carpets, Auto & RV Carpets & Upholstery)

i. Recommended applications: Perfect for most carpets

f) White Standard Carpet Brush

(Auto & RV Carpets & Interiors, Tile & Grout, Durable Carpets)

i. Recommended applications: The white brush is designed for more vigorous cleaning of floor mats; more durable carpets



g) Black Scrub Brush

(Tile & Grout, Truck Bed Liners, Heavy Scrubbing)

i. Recommended applications: cleaning tile and stone floors, pick-up truck bed liners



MACHINE OPERATING INSTRUCTIONS

ORBOT MICRO has two heads rather than the single head common on other orbital-motion tools. As soon as the ORBOT MICRO is placed on a working surface and powered on, orbital “hand-rubbing” action takes place. Each sides reactive forces from its polishing or scrubbing is counteracted by the opposite side. Therein lies the secret of the tool’s ability to do many different types of jobs that could not be done with a single head orbital or a rotary tool. The two heads move in a circular motion without forced spinning and are timed and weighted to balance away vibration forces. All the energy from the motor is directed to the polishing or scrubbing action, and none returned to vibrating the user.

IMPORTANT OPERATION INFORMATION: EXCESSIVE PRESSURE DOES NOT IMPROVE PERFORMANCE AND MAY DAMAGE THE TRANSMISSION.

The hand-like action of the polisher’s heads prevents surface damage regardless of the pressure applied. Move the machine slowly. You need not be afraid of burning, gouging, or swirling the surface.

Pad Care Instruction

Cleaning your pads well, before they dry, will extend their life. Use a mild detergent and warm water. **DO NOT WASH PADS IN GASOLINE OR SOLVENTS.** For maximum life, be sure to clean pads after each use. To clean, spray mild detergent on the pad face, work in, and let soak in a container of water-diluted detergent. After soaking, rinse out and squeeze dry (do not twist or wring). Then allow to air dry. Do not allow compounds to dry in pads.

Superzorb Pad Instructions

- Disconnect from power source. Lay the machine with heads facing up on your lap, a bench or flat surface. You can use the insert removed from inside the box to support and hold in place.
- Center the pads onto the velcro driver plates.
- Stretch pad’s elastic ring over driver plate. Make sure plate is completely covered. The elastic band should be placed so as to not come in contact with each other when running.
- Rotate each head to ensure that pads do not contact each other. If pads contact each other, smooth out pads to remove any wrinkles and ensure elastic bands do not make contact.
- Refer to General Cleaning Instructions

MACHINE OPERATING INSTRUCTIONS

General Cleaning Instructions

- a) Begin by vacuuming the loose debris and materials from the area to be cleaned.
- b) Pre-treat area with Environ HP, our exclusive "green" encapsulation carpet cleaner (optional).
- c) With accessory installed on the ORBOT MICRO machine, connect the tool to the power supply.

For additional information on the installation of velcro driver plates or scrub brushes, please refer to the ORBOT MICRO SET-UP section of this document.

- d) Place the Orbot Micro machine, pad / brush side down on the surface.
- e) Turn on the tool and move it back and forth and side to side in a latticed pattern.
- f) Grip both handles of the machine, and using only light or moderate pressure - letting the action and the weight of the tool do the work - move the pads / brushes across the area at a comfortable speed.
- g) When you have finished, you can wipe down the treated areas with an absorbent towel. If you have an extractor or wet vacuum, lightly wet the area and extract the water.
- h) As the pads / brushes become impregnated with loose fibers, they should be removed, and cleaned. Brushes should be combed out act.
- e) Refer to General Cleaning Instructions.

USER MAINTENANCE & TROUBLESHOOTING

Instructions below on care and maintenance of your ORBOT MICRO. You can also visit our website at www.orbotusa.com for tutorials and video instructions on proper tool care and maintenance.

How To Maintain Your ORBOT MICRO

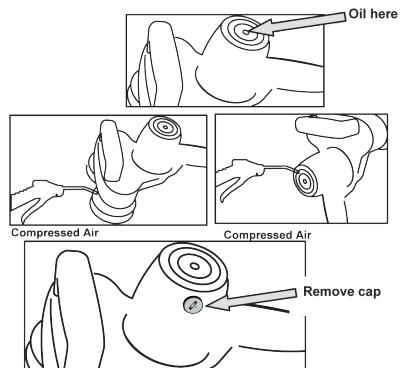
Ensure machine is disconnected from electrical supply before inspection or maintenance is performed.

1) **Lubricate the upper motor bearing.** After every eight hours of use, lubricate the upper motor bearing by placing 3 drops of light machine oil (e.g. 3-in-1 oil) in the center of the bronze bushing found at the top of the motor housing.

2) **Clean tool of dirt, fiber, and other debris by blowing out with compressed air.** Every eight hours of use, or as conditions warrant, blow out the motor housing with compressed air to clean out any accumulated dust or dirt. If the tool is being used to clean carpets, be sure to blow out the motor housing after every use. If tool should get wet, be sure to blow dry the underside of the tool.

3) **Inspect your carbon brushes.** Every forty hours of use, or as conditions warrant. The carbon brushes in your ORBOT MICRO are wear items and periodically will need replacing (after 50 to 150 hour of use). The carbon brushes that are used will shut off the machine when needing to be replaced.

Refer to images shown for examples of good and worn parts. Since brushes are wear items, we recommend you keep a spare set of brushes.



If Your Orbot Micro Fails to Run

Be sure the machine is disconnected from the electrical supply before any inspection or maintenance is performed. The motor is only for the voltage specified on the nameplate. Voltage should not vary more than 10% over or under the voltage shown on the nameplate. Although the ORBOT MICRO is built to last a lifetime, it can encounter problems from heavy wear and tear. All problems are repairable, and can most often be repaired by a mechanically inclined technician or user.

- 1) **If your Orbot Micro fails to run, unplug it from the outlet or power source.**
 - a) Check power cord plug for bent prongs that could be preventing proper contact with the outlet.
 - b) Check power cord for worn or cracked insulation. If these are noted, **DO NOT CONTINUE TO OPERATE** tool. **IMMEDIATELY** contact your dealer to have tool repaired and serviced.
 - c) Check power source for blown fuses or open circuit breakers. Also verify that power source is providing adequate voltage and current to safely operate your tool. Use a volt meter if able.
- 2) **If your Orbot Micro starts to arc, experiences a loss in torque, runs hot to the touch or has stopped during operation:**
 - a) Turn off and **DO NOT CONTINUE TO OPERATE** the tool. Continuing to use your tool may cause further damage by creating a short circuit in the motor windings. Unplug the machine from the outlet or power source, and proceed through the following steps or contact your dealer to have your tool repaired and serviced:
- 3) **Clean tool of dirt, fiber, and other debris by blowing it out with compressed air.**
 - a) This is recommended maintenance for every 8 hours of operation or as conditions warrant. Pay attention to area around the carbon brushes' contact with the motor, just inside the top of motor cover. If used on carpets or with wool pads/bonnets, it is recommended to blow out your tool after every use. If the tool should get wet, also blow out the underside of the tool. If the tool has gotten wet, you may need to allow the tool to completely dry before you are able to completely blow out all the fibers and other debris.
- 4) **Check the carbon brushes, brush holder and brush holder caps.**

- a) The carbon brushes are wear items and periodically will need replacing (after 50 to 150 hour of use). Carbon brushes will shut off the machine when needing replacing. Never operate with chipped or cracked brush holder caps. Refer to the images shown for good and worn parts. Since brushes are wear items, we recommend that you keep a spare set of brushes. Please note some specialty tools are required for replacing the brush holders. Recommend to have your dealer perform this service.



Good Brush Holder Cap



Bad Brush Holder Cap

5) Inspection of the brush holder caps.

- a) **WARNING:** Never operate machine with chipped or otherwise damaged brush holder caps.
- b) Be sure power cord is disconnected. Use a screwdriver to remove damaged brush holder cap, carbon brush and spring. Wipe threads with a cotton Q-tip on inside of brush holder cleaning any foreign matter. Replace carbon brush, spring and screw on a new brush cap.

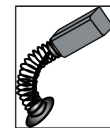
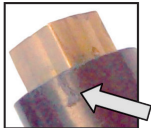
VISUAL INSPECTION OF THE CARBON BRUSH HOLDERS AND CARBON BRUSHES



Good Brush Holder



Bad Brush Holder (photos and illustration) – Look for scarring or marking on the surface of the carbon brush too short to use holder. These may be electrical shorts.



New Carbon Brush



Worn/Bad Brush –

- 6) If problems still exist, please return your ORBOT MICRO to your dealer for a complete diagnosis **ANY OTHER SERVICING SHOULD BE PERFORMED BY THE FACTORY OR AN AUTHORIZED ORBOT USA SERVICE CENTER.**

ADDITIONAL MAINTENANCE & SERVICE INFORMATION

Lubrication: This tool was properly lubricated at the factory and is ready to use. The gears should be inspected after approximately 400 hours of use. If necessary, re-lubricate with Texaco Multifax #2 or equivalent.

Timing: The secret of the operation of your ORBOT MICRO lies in the fact that the two heads are timed exactly 1/2 turn apart. This is necessary for the balanced operation of the tool. If the machine is disassembled, use the following procedures to insure proper timing of the heads.



- 1) Turn the tool's main case upside down, with the motor case, cover plate, and idler gear removed. Move the two heads together as close as possible. Then, put a heavy rubber band around the side of the two heads to keep them together.
- 2) Turn the tool right side up and carefully replace the idler gear without moving the drive gears. Now, pack the recessed well in back of the idler gear with lubricant. Also, lubricate the metal shafts in the center of each gear.
- 3) Reassemble the cover plate and motor case and remove the rubber band.

Bearings: The bearings in the counterweights will loosen slightly with continued long use. This actually improves the action of the tool by allowing the heads to tilt slightly and follow a contoured surface better. These bearings should not be considered defective until they become objectionably noisy at which time the entire machine should be sent to an authorized ORBOT MICRO service center for repair.

Helpful Tips for Storing Your Orbot Micro

Save Your Box: Your ORBOT MICRO was sent to you in a special container designed for safe storage. We recommend that you keep this box for storing your ORBOT MICRO. You will also want to use this box in case you need to send your machine back to the factory for service.

Cord Wrapping: Do not wrap the cord around the rear handle of the machine. Sharp bends in the cord will damage it.

DISPOSAL & RECYCLING INFORMATION

EU countries only: Do not dispose of electric power tools in the household waste! In accordance with the European Directive 2002/96/EG on Waste Electrical and Electronic Equipment and transposition into national law, used electric power tools must be collected separately and recycled in an environmentally friendly manner.

USA and other non-EU countries: Do not dispose of electric power tools in the household waste! You may return your used ORBOT MICRO to ORBOT USA to be recycled in an environmentally friendly manner.

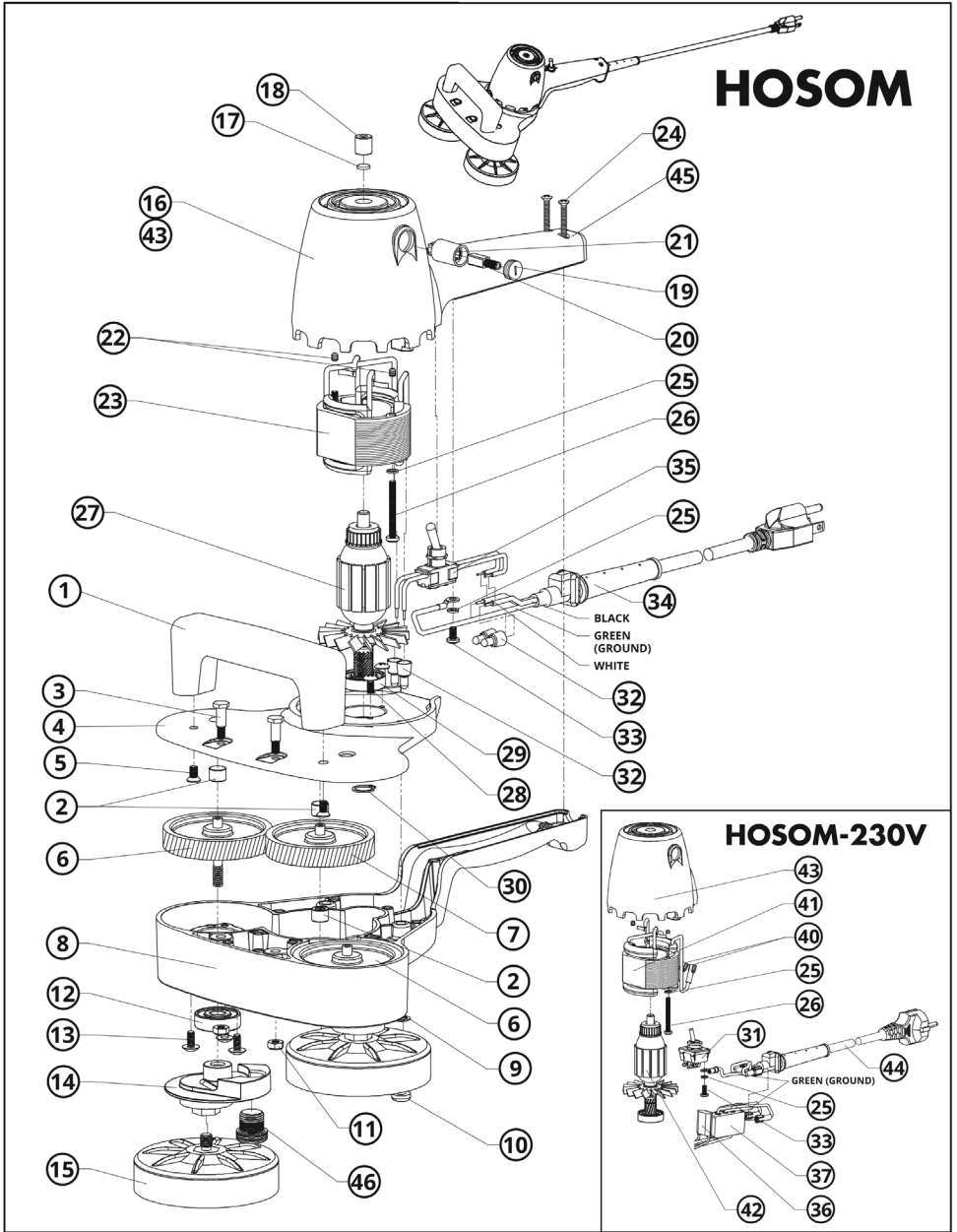
APPEARANCE OF YOUR ORBOT MICRO

Every ORBOT MICRO is hand crafted with the same superior level of quality and workmanship. As all handmade items will vary slightly, we cannot guarantee that each polisher will be identical with every other one of our polishers. You may notice light sanding or buffing marks in the hand-finished aluminum castings. These are all marks of an authentic ORBOT MICRO. Naturally, ORBOT will replace or repair material or workmanship defects. Refer to the ORBOT WARRANTY POLICY for further information.

TECHNICAL SPECIFICATIONS HOSOM & HOSOM-230V

	Power Supply	Nominal Current	Output
HOSOM:	115 V a.c., 60 Hz,	2.0A	.35 h.p. (.23kW)
HOSOM-230V:	30 V a.c., 50 Hz	1.0A	.35 h.p. (.23kW)
HOSOM:	2800 to 3200 RPM		
HOSOM-230V:	n0 = 3200/min		
Weight:	6.5 lbs (2.9 kg)		
Pad or Bonnet Capacity:	2 x 4" (2 x 100 mm) diameter		
Motor:	Alternating current, Universal, Semi-Enclosed 24-bar commutator		
Electric Cord:	HOSOM - 9.5' long, Non-Marking 16 AWG/3 SJTOW HOSOM-230V - 2.5 m long, Non-Marking, 1mm ² – 1.5 mm ²		
Housing:	Heavy-duty cast aluminum		
Orbital Stroke Length:	5/16 in. (8 mm)		
Sound Pressure (LpA):	82.5 dBA (uncertainty 0.57 dBA)		
Sound Power (Lw):	94.1 dBA (uncertainty 0.57 dBA)		
Hand-Arm Vibration:	1.27 m/sec ² (uncertainty 0.17 m/sec ²)		
Testing Labs:	Intertek ETL SEMKO for CE EMC and Safety (per EN 60745-1, -2,-3) and S&V Solutions for noise (ISO 15744 and EN 0745) and hand-arm vibration (ISO 20643 and EN/ISO 28927)		

ORBOT MICRO PARTS DIAGRAMS

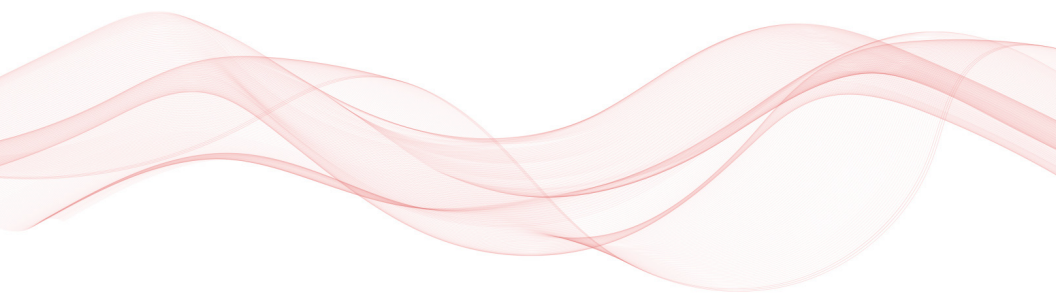


Please Note: Above 2 diagrams only are different due to the motor.

Diagram #	Part #	Description
1	HOSOM-01	Handle, Plastic Front, Polisher
2	HOSOM-02	Needle Bearing
3	HOSOM-03	Short Shoulder Bolt for Retaining Cover Plate
4	HOSOM-04	Metal Cover Plate
5	HOSOM-05	Screw, Handle Retaining
6	HOSOM-06	Nylon Drive Gear (Connects to Counterweight)
7	HOSOM-07	Nylon Idler Gear (Center Gear)
8	HOSOM-08	Main Gear Case
9	HOSOM-08	Washer, Lock, Star
10	HOSOM-10	Screw, Metal Housing Retaining
11	HOSOM-11	Nut For Front Shoulder Bolt
12	HOSOM-12	Bearing, Main Drive Gear
13	HOSOM-13	Screw, Main Bearing Retaining
14	HOSOM-14	VES™ Counterweight Assembly (with bearing)
15	HOSOM-15	Head Assembly (Connects to 60-035-A Counterweight Assembly)
16	HOSOM-16	Motor Case
17	HOSOM-17	Oiler Felt for Bronze Bearing
18	HOSOM-18	Bronze Bushing
19	HOSOM-19	Brush Holder Caps
20	HOSOM-20	Carbon Brush, Contoured Spring & Dead Stop
21	HOSOM-21	Carbon Brush Holder
22	HOSOM-22	Screw, Brush Holder Retaining
23	HOSOM-23	Field 115V, 60Hz
24	HOSOM-24	Screw, Rear Handle
25	HOSOM-25	Split Lock Washer For Field Retaining Screw
26	HOSOM-26	Screw, Field Retaining
27	HOSOM-27	Armature, 115V, 60Hz
28	HOSOM-28	Screw, Motor Bearing Hold
29	HOSOM-29	Bearing, Lower Motor
30	HOSOM-30	Lock Ring for Pinion Gear
31	HOSOM-31	Switch, Speed Controller for Variable Speed Tool, 230V, 4A
32	HOSOM-32	Crimp-on Wire Connector
33	HOSOM-33	Screw, Grounding
34	HOSOM-34	Power Cord Assembly (U.S.A. Standard)
35	HOSOM-35	Switch, Speed Controller for Variable Speed Tool, 115V, 2A
36	HOSOM-36	Noise Suppression Capacitor
37	HOSOM-37	RFI Power Line Filter
38	HOSOM-38	Terminal, Nylon Female Quick Disconnect
39	HOSOM-39	Male Connector
40	HOSOM-40	Female Connector
41	HOSOM-41	Field, 230V - 50Hz,
42	HOSOM-42	Armature, 230V - 50Hz
43	HOSOM-43	Motor Case, 230V
44	HOSOM-44	Power Cord Assembly (European CE Standard)
45	HOSOM-45	Shrink Wrap, Rear Handle, Black (6")
46	HOSOM-46	VES™ Weighted Insert

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