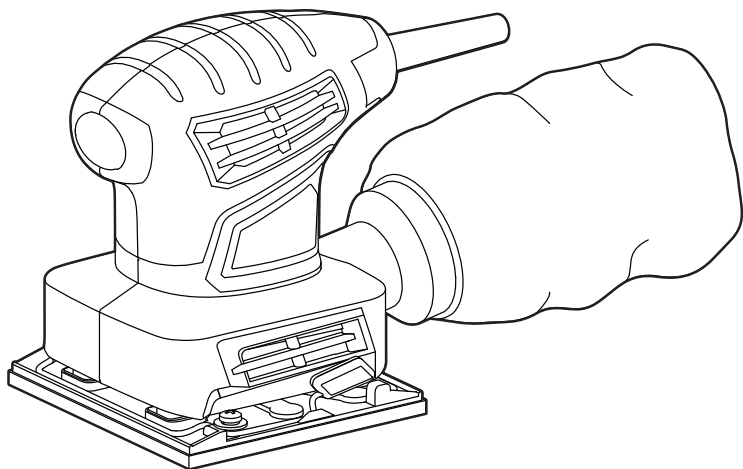


HAMMERHEAD™



2.0 AMP PALM SANDER

MODEL HAPS020



ATTACH YOUR RECEIPT HERE

Serial Number _____ Purchase Date _____



Questions, problems, missing parts? Before returning to your retailer, call our customer service department at 1-877-888-1880, 8:30 a.m. – 8:00 p.m. EST (Monday – Friday) & 10:00 a.m. – 6:00 p.m. EST (Saturday and Sunday).

TABLE OF CONTENTS

Product Specifications	3
Safety Information	3
Preparation.	8
Package Contents.	9
Operating Instructions	10
Care and Maintenance	13
Extension Cords	14
Troubleshooting	15
Warranty.	16

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, cement, and other masonry products.
 - Arsenic and chromium from chemically-treated lumber.
- Your risk from these exposures varies, depending upon how often you do this type of work. To reduce your exposure to these chemicals:
 - Work in a well-ventilated area.
 - Work with approved safety equipment, such as dust masks that are specially designed to filter out microscopic particles.
 - Avoid prolonged contact with dust from power sanding, sawing, grinding, drilling, and other construction activities. Wear protective clothing and wash exposed areas with soap and water. Allowing dust to get into your mouth or eyes or to lie on the skin may promote absorption of harmful chemicals.

SAFETY INFORMATION

PRODUCT SPECIFICATIONS

COMPONENT	SPECIFICATIONS
Power Input	120V~, 60Hz, 2.0A
No load Speed, n_0	14,000 /min
Pad size	4 1/8" x 4 1/2"
Abrasive sheet size	4 1/2" x 5 1/2" (1/4 sheet)

Please read and understand this entire manual before attempting to assemble or operate this product. If you have any questions regarding the product, please call Hammerhead customer service at 1-877-888-1880, 8:30 a.m. – 8:00 p.m. EST (Monday – Friday) & 10:00 a.m. – 6:00 p.m. EST (Saturday and Sunday).

WARNING

The operation of any power tool can result in foreign objects being thrown into your eyes, which can result in severe eye damage. Before beginning power-tool operation, always wear safety goggles or safety glasses with side shields and a full-face shield, when needed. We recommend using a wide vision safety mask over eyeglasses or standard safety glasses with shields. Always use eye protection marked to comply with ANSI Z87.1.

DANGER







People with electronic devices, such as pacemakers, should consult their physician(s) before using this product. Operation of electrical equipment in close proximity to a heart pacemaker could cause interference or failure of the pacemaker.

Know the Tool

To operate this tool, carefully read this manual and all labels affixed to the palm sander before using it. Keep this manual available for future reference.

Some of the following symbols may be used on this palm sander. Please study them and their meaning. Proper interpretation of these symbols will allow you to operate the tool better and more safely.

SAFETY INFORMATION

SYMBOL	DEFINITION	SYMBOL	DEFINITION
V	Volts	n_0	No-load Speed
A	Amps	/min	Revolutions or reciprocations per minute (rpm)
Hz	Hertz		Class II tool
W	Watts		Alternating Current
	Caution		Always wear safety goggles or safety glasses with side shields and a full face shield when operating this product.
	Read the instructions		This symbol designates that this tool is listed by the Intertek Testing Services, to United States Standards.

IMPORTANT: This tool should only be serviced only by a qualified service technician.

IMPORANT SAFETY INSTRUCTIONS

SAVE THESE INSTRUCTIONS-This manual contains important safety and operating instructions for palm sander Model HAPS020.

DANGER

To reduce the risk of fire or electric shock, carefully follow these operating instructions.

General Power Tool Safety Warnings

WARNING

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.

SAVE ALL WARNINGS AND INSTRUCTIONS FOR FUTURE REFERENCE.

The term “power tool” in the warnings refers to your mains-operated (corded) power tool or battery-operated (cordless) power tool.

Work area safety

- **Keep work area clean and well lit.** Cluttered or dark areas invite accidents.

SAFETY INFORMATION

- **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.
- **If operating a power tool in a damp location is unavoidable, use a ground fault circuit interrupter (GFCI) protected supply.** Use of a GFCI 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 operating power tools may result in serious personal injury.
- **Use personal protective equipment. Always wear eye protection.** Protective equipment such as a dust mask, non-skid safety shoes, hard hat or hearing protection used for appropriate conditions will reduce personal injuries.
- **Prevent unintentional starting. Ensure the switch is in the off-position before connecting to power source and/or battery pack, picking up or carrying the tool.** Carrying power tools with your finger on the switch or energising 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.

SAFETY INFORMATION

- **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 and clothing 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 dust collection can reduce dust-related hazards.
- **Do not let familiarity gained from frequent use of tools allow you to become complacent and ignore tool safety principles.** A careless action can cause severe injury within a fraction of a second.

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 it 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 and/or remove the battery pack, if detachable, 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.
- **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 and accessories. 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.
- **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, 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.
- **Keep handles and grasping surfaces dry, clean and free from oil and grease.** Slippery handles and grasping surfaces do not allow for safe handling and control of the tool in unexpected situations.

SAFETY INFORMATION

Service

- **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.

Additional safety warnings

- **Unplug the sander before changing accessories.** Accidental start-ups may occur if sander is plugged in while changing an accessory.
- **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.
- **Your tool is equipped with a dust canister, empty it frequently, after completion of sanding and before storing the sander.** Be extremely careful of dust disposal, materials in fine particle form may be explosive. Do not throw sanding dust on an open fire. Combustion from mixture of varnishes, lacquers, polyurethane, oil or water with dust particles can occur if there is a static discharge, spark introduced in the box, or excessive heat.
- **Always wear eye protection and a dust mask for dusty applications and when sanding overhead.** Sanding particles can be absorbed by your eyes and inhaled easily and may cause health complications.
- **Do not wet sand with this sander.** Liquids entering the motor housing is an electrical shock hazard.
- **Do not use sandpaper intended for larger sanding pads.** Larger sandpaper will extend beyond the sanding pad causing snagging, tearing of the paper or kick-back. Extra paper extending beyond the sanding pad can also cause serious lacerations.
- Keep the cord away from the spinning pad and sandpaper. The cord can become entangled with the pad.
- GFCI and personal protection devices like electrician's rubber gloves and footwear will further enhance your personal safety.
- **Do not use AC only rated tools with a DC power supply.** While the tool may appear to work, the electrical components of the AC rated tool are likely to fail and create a hazard to the operator.
- **Keep handles dry, clean and free from oil and grease.** Slippery hands cannot safely control the power tool.



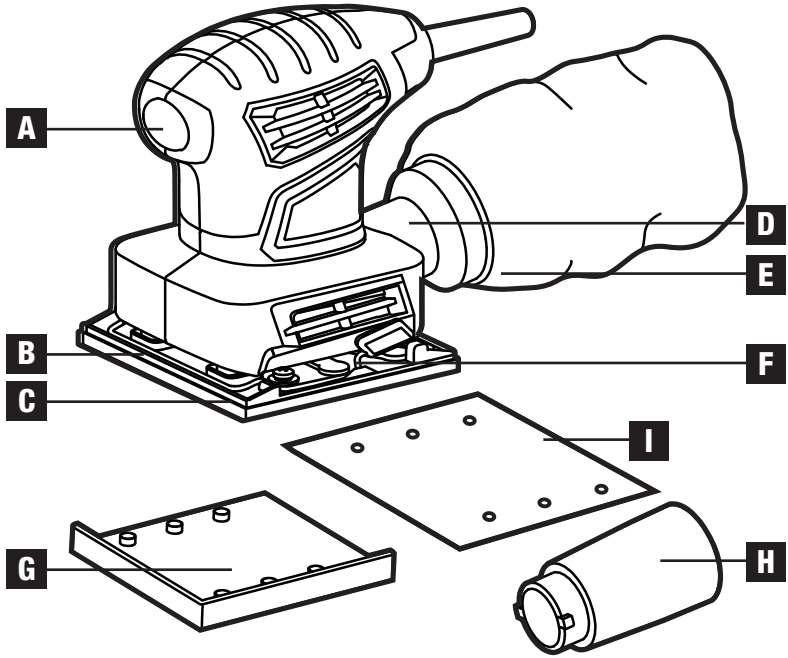
SAFETY INFORMATION

- **Develop a periodic maintenance schedule for your tool. When cleaning a tool be careful not to disassemble any portion of the tool since internal wires may be misplaced or pinched or safety guard return springs may be improperly mounted.** Certain cleaning agents such as gasoline, carbon tetrachloride, ammonia, etc. may damage plastic parts.
- Risk of injury to user. The power cord must only be serviced by a HAMMERHEAD Factory Service Center or Authorized HAMMERHEAD Service Station.

PREPARATION

Before attempting to use the palm sander, familiarize yourself with all of its operating features and safety requirements.

PACKAGE CONTENTS



PARTS	DESCRIPTION
A	ON/OFF switch
B	Clamping wire
C	Pad
D	Dust port
E	Dust extraction bag
F	Clamping lever
G	Punch plate
H	Dust extraction tube
I	Abrasive sheet (60 grits *6, 80 grits *6)

OPERATING INSTRUCTIONS

1. Selecting the right grade of sanding paper

Different grades of sanding paper can be purchased from the store where you purchased the tool. Available grades are: Coarse, Medium and Fine.

Use a coarse grit to sand down rough finishes, medium grit to smooth the work and fine grit to finish off.

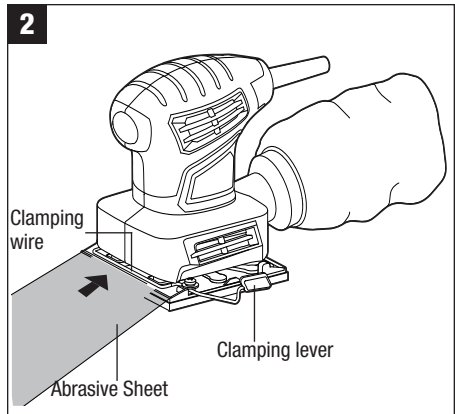
It is best to make a trial run on a scrap piece of material to determine the optimum grades of sanding paper for a particular job.

GRIT CHART		
Grit	Type	Example of use
60 or less	Very Coarse	Material removal, heavy paint removal, shaping wood
80-100	Coarse	Paint removal, rough surface preparation (eg. non-planed wood)
120-150	Medium	Surface preparation planed wood
180-220	Fine	Sanding between coats
240 or more	Very fine	Final finishing

2. Attaching Abrasive Sheet

⚠ WARNING: Always ensure the tool is switched off and the plug is removed before making any adjustments or maintenance procedures.

- To open clamping wire, lift clamping lever out of its pocket and then lower lever so it is positioned as shown.
- Place the abrasive sheet (grit side up) between the clamping wire and base plate while aligning edges of the abrasive sheet with either edge of the pad. (Pre-bending the sheet makes attachment easier.)
- After inserting the sheet, raise clamping lever and return it to its original position making sure the clamping wire is secure.
- Wrap the sheet around the length of the pad and attach free end of sheet under opposite clamp and repeat procedures a, b, & c above. The abrasive sheet must be drawn as tight as possible for efficient sanding, as a loose sheet can slip on the work surface.



OPERATING INSTRUCTIONS

To attach hook&loop type abrasive sheet

- Select the required grade of abrasive sheet.
- Remove any dust or debris from the hook and loop of the base.
- To attach hook & loop type abrasive sheet simply align the holes in the abrasive sheet with the holes in the sanding base and press firmly into place.
- To remove the abrasive sheet, peel it away from the base.

3. Punch Plate

After the paper has been installed, it will be necessary to punch holes into the paper with the use of the punch plate provided with your sander. Align sander base with punch plate and push down on sander until punch plate pierces the paper. Then remove punch plate from sander.

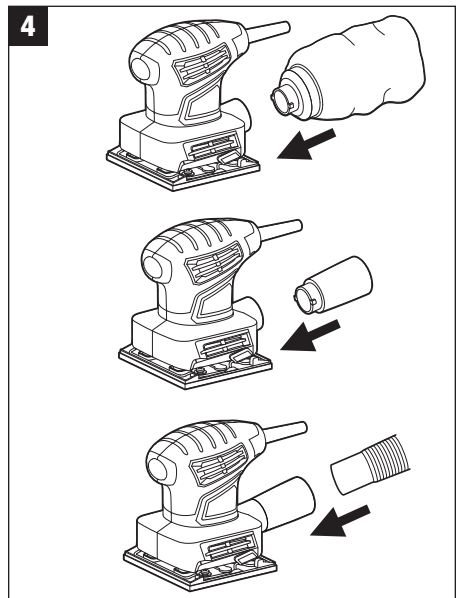
4. Dust extraction

We recommend the use of the dust extraction facility at all times.

Align the raised emboss on the dust extraction bag or tube with the groove in the extraction port and slide into the port. Then rotate the dust extraction bag or tube clockwise to lock it in place.

The dust extraction tube can be connected with a dust extraction system or a suitable vacuum cleaner.

To remove the dust extraction tube or bag, rotate it counterclockwise to unlock it, then pull away from the tool.



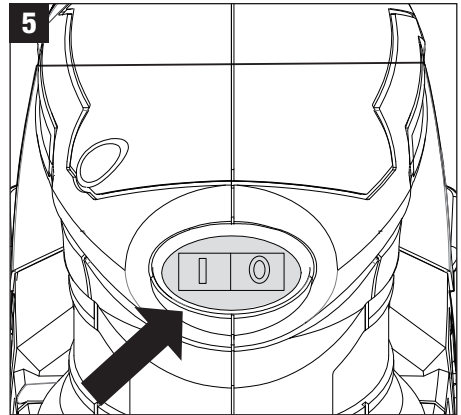
OPERATING INSTRUCTIONS

5. LED Worklight

This palm sander is equipped with a dust-sealed ON/OFF rocker switch, located on the front of the handle.

- a) Switch the sander on by pressing the “I” mark of the on/off switch.
- b) To turn off the sander, press the “O” mark of the on/off switch.

⚠ WARNING: Always lift the sander from the workpiece before switching on or switch off.



6. Sanding

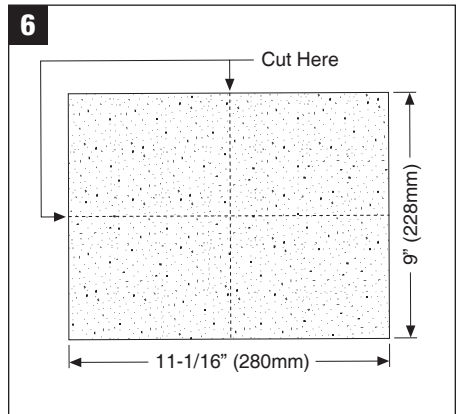
This sander has been designed for even weight distribution which virtually eliminates the use of pressure. Excessive pressure to the sander may result in an uneven sanding job and premature grit wear. Constant and excessive pressure can cause overheating and possible damage to the motor as well as premature wear out of the pad on hook and loop models.

It's usually best to work in strokes that parallel the grain, using some lateral motion so the main strokes are overlapped as much as 75%.

If the surface is rough, start sanding with a coarse grit sheet, then medium and then finish with a fine or extra fine abrasive. This procedure will vary with different types of materials and work. Continue to sand with each grit until the surface looks uniform. When going from one grit size to a finer size, do not skip more than two sizes.

To remove the greatest amount of stock, use a coarse grit and move the sander steadily over the entire surface against the grain as well as with the grain. **DO NOT REMAIN IN ONE SPOT TOO LONG.** It may remove too much material and uneven sanding will result. Sanding with the grain of the wood gives the smoothest final finish.

Additional abrasive sheets can be conveniently cut from large-size commercially available sheets (standard size: 9" x 11-1/16"; 228 x 280mm). Cut into four pieces of equal size as shown. Choose the proper grit for the job.



CARE AND MAINTENANCE



WARNING:

- Always disconnect the device before performing any adjustment or maintenance operation. If the replacement of the supply cord is necessary, this has to be done by the manufacturer or his agent in order to avoid a safety hazard.
- Disconnect from the power supply immediately if the supply cord is damaged. Take care not to expose this tool to the rain.
- If the carbon brushes need to be replaced, have this done by a qualified repair person (always replace the two brushes at the same time)

1. Cleaning

Avoid using solvents when cleaning plastic parts. Most plastic parts are susceptible to damage from various types of commercial solvents and may be damaged by their use. Use clean cloths to remove dirt, carbon dust, etc.

2. Lubrication

All the bearings in this tool are lubricated with a sufficient amount of high grade lubricant for the life of the unit under normal operating conditions, therefore no further lubrication is required.

EXTENSION CORDS

⚠ WARNING: If an extension cord is necessary, a cord with adequate size conductors that is capable of carrying the current necessary for your tool must be used. This will prevent excessive voltage drop, loss of power or overheating. Grounded tools must use 3-wire extension cords that have 3-prong plugs and receptacles.

NOTICE: The smaller the gauge number, the heavier the cord.

RECOMMENDED SIZES OF EXTENSION CORDS 120 VOLT ALTERNATING CURRENT TOOLS

Tool's Ampere Rating	Cord Size in A.W.G				Wire sizes in mm ²			
	Cord length in feet				Cord length in meters			
	25	50	100	150	15	30	60	120
3-6	18	16	16	14	0.75	0.75	1.5	2.5
6-8	18	16	14	12	0.75	1.0	2.5	4.0
8-10	18	16	14	12	0.75	1.0	2.5	4.0
10-12	16	16	14	12	1.0	2.5	4.0	-
12-16	14	12	-	-	-	-	-	-

TROUBLESHOOTING

Suspected malfunctions are often due to causes that the users can fix themselves. Therefore, check the product using this section. In most cases the problem can be solved quickly.

! **WARNING:** Only perform the steps described within these instructions! All further inspection, maintenance and repair work must be performed by an authorised service centre or a similarly qualified specialist if you cannot solve the problem yourself!

PROBLEM	POSSIBLE CAUSE	CORRECTIVE ACTION
Product does not start.	Not connected to power supply.	Connect to power supply.
	Power cord or plug is defective.	Have the tool serviced by an Authorized Service Center.
	Other electrical defect to the product.	Have the tool serviced by an Authorized Service Center.
Product does not reach full power.	Extension cord not suitable for operation with this product	Use a proper extension cord
	Power source (e.g. generator) has too low voltage	Connect to another power source
	Air vents are blocked.	Clean the air vents
Unsatisfactory result	Sanding paper is worn	Replace with a new one
	Sanding paper not suitable for workpiece material.	Use proper Sanding paper.
	Sanding sheet not suitable for work piece material.	Use suitable sanding sheet.

WARRANTY

This Palm sander is warranted to the original purchaser from the original purchase date for 24 Months, Hammerhead consumer portable power tool models will be free from defects in material or workmanship for a period of ninety days if the tool is used for professional use. Please retain your receipt.

This Palm sander is warranted to the original user to be free from defects in material and workmanship. If you believe that the Palm sander is defective at any time during the specified warranty period, call HAMMERHEAD support at 1-877-888-1880 to speak with a customer service agent. This warranty does not cover: (1) Part failure due to normal wear or tool abuse; (2) any parts have been altered or modified by anyone other than an authorized HAMMERHEAD personnel.

This warranty excludes bits, bulbs and accessories. This warranty gives you specific legal rights, and you may also have other rights that vary from state.