

Power-Vee™

Operating Instructions

For 1-1/4" through 3" lines
(30mm – 75mm)



General
PIPE CLEANERS

Your Power-Vee is designed to give you years of trouble-free, profitable service. However, no machine is better than its operator. We therefore suggest you read these instructions through carefully before using your machine on the job. This will enable you to operate the Power-Vee more efficiently and more profitably. Failure to follow these instructions may cause personal injury to operator or damage to equipment.

SAVE THESE INSTRUCTIONS

GENERAL SAFETY RULES

⚠ 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 area clean and well lit. 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.
4. Do not let visitors contact the tool or extension cord. Such preventative measures reduce the risk of injury.

Electrical Safety

1. Grounded tools must be plugged into an outlet properly installed and grounded in accordance with all codes and ordinances. Never remove the grounding prong or modify the plug in any way. Do not use any adapter plugs. Check with a qualified electrician if you are in doubt as to whether the outlet is properly grounded. If the tools should electrically malfunction or break down, grounding provides a low resistance path to carry electricity away from the user.
2. Double insulated tools are equipped with a polarized plug (one blade is wider than the other.) This plug will fit a polarized outlet only one way. If the plug does not fit fully in the outlet, reverse the plug. If it still does not fit, contact a qualified electrician to install a polarized outlet. 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.

3. Avoid body contact with grounded surfaces such as pipes, radiators, ranges and refrigerators. There is an increased risk of electric shock if your body is grounded.
4. Don't expose power tools to rain or wet conditions. Water entering a power tool will increase the risk of electric shock.
5. Do not abuse the cord. Never use the cord to carry the tools or pull from an outlet. Keep cord away from heat, oil, sharp edges or moving parts. Replace damaged cords immediately. Damaged cords increase the risk of electric shock.
6. 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

1. 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.
2. 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.
3. 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.
4. Remove adjusting keys or switches 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.
5. Do not overreach. Keep proper footing and balance at all times. Proper footing and balance enables better control of the tool in unexpected situations.
6. Use safety equipment. Always wear eye protection. Dust mask, non-skid safety shoes, hard hat, or hearing protection must be used for appropriate conditions.

Symbol	Name	Symbol	Name
V	volts	→	action direction of arrow
A	amperes	~	alternating current
Hz	hertz	□	designates double insulated
n _o	no load speed	UL	designates this tool is listed by Underwriters Laboratories
.../min	revolutions per minute	CSA	designates this tool is listed by Canadian Standards Association

Tool Use and care

1. Use clamps or other practical way to secure and support the work piece to a stable platform. Holding the work by hand or against your body is unstable and may lead to loss of control.
2. 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.
3. 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.
4. Disconnect the plug from the power source before making any adjustments, changing accessories, or storing the tool. Such preventative safety measures reduce the risk of starting the tool accidentally.
5. Store idle tools out of reach of children and other untrained persons. Tools are dangerous in the hands of untrained users.
6. 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.
7. Check for misalignment or binding of moving parts, breakage of parts, and any other condition that may affect the tool's operation. If damaged, have the tool serviced before using. Many accidents are caused by poorly maintained tools.
8. 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.
9. Inspect tool and extension cords periodically and replace if damaged. Damaged cords increase the risk of electrical shock.
10. Keep handles dry and clean; free from oil and grease. Allows for better control of the tool.
11. Store tools in dry place. Such measures reduce the risk of electrical shock.

Service

1. Only qualified repair personnel must perform tool service. Service or maintenance performed by unqualified personnel could result in a risk of injury.
2. When servicing a tool, use only identical replacement parts. Follow instructions in the Maintenance section of this manual. Use of unauthorized parts or failure to follow Maintenance Instructions may create a risk of electric shock or injury.

Specific Safety Information

1. Be sure that the unit is plugged into properly grounded and polarized outlet. If in doubt, check outlet before plugging in machine. Check power cord to see that there are no cuts or frays.
2. The Skil drive unit used in the Drain-Rooter PH is double insulated and, therefore, has no grounding wire. To reduce the risk of electric shock, this equipment has a polarized plug (one blade is wider than the other). The plug will fit in a polarized outlet only one way. If the plug does not fit fully in the outlet, reverse the plug. If the plug still does not fit, contact a qualified electrician to install the proper outlet. Do not change the plug in any way.
3. If the power cord is not long enough, be sure to use a minimum 16 gauge heavy duty extension cord no more than 50 ft. long and in good condition. Use of lighter cords can result in severe power loss and overheating.
4. Wear rubber boots and rubber glove inserts when work area is wet. Do not operate machine if operator is standing in water.
5. The equipment is designed to be used by a single operator only.
6. Wear safety glasses when operating machine.
7. Wear leather gloves only, not cloth gloves, when handling the cable while it's rotating.
8. Neutralize or remove corrosive drain cleaners from drain before starting. Exposure to these chemicals can cause injury to operator and damage cable.
9. Never take hold of a rotating cable. Pull the cable out of or push it back into the container by hand only when the motor is stopped. When the motor is turning, always have one hand controlling the power cable feed and the other hand around the guide tube.
10. The Drain-Rooter PH must be operated within one foot of drain opening. If you can't get the guide tube this close to the drain opening, run the cable through metal tubing or conduit to prevent cable whipping and kinking.
11. Before starting each job, check that the cable in the container is not broken or kinked, by pulling the cable out and checking for wear or breakage. Always replace worn out (kinked or broken) cables with genuine GENERAL replacement cables.

Variable Speed Switch

A variable speed control is built into the trigger mechanism. You can control and increase the machine's speed by applying more pressure to the foot pedal until you get the speed that you want.






You can also control the machine's direction of rotation by switching the forward and reverse lever, which is located just above the trigger switch. Move the lever toward the Forward arrow for forward rotation and toward the Back arrow for reverse rotation.

Table 1. Cable Applications



Cable Size	Pipe Size	Typical Applications
1/4"	1-1/4" to 2"	Small lines, tubs, and shower drains
5/16"	1-1/2" to 2"	Sinks, basins, and small drains
3/8"	2" to 3"	Stacks, toilets, small drains (Not roots)

The 1/4" and 5/16" diameter cables with EL-Basin plug heads can be spun through most strainer crossbars and work well in lines blocked by soft stoppages such as hair, soap, fats, etc.

Table 2. Cutter Applications

Cutter	Catalog #	Typical Applications	
	Arrow Head	AH	Ideal for heavy cutting and scraping.
	Flexible Arrow Head	FAH	More flexibility than Arrow Head; can take sharp turns in small lines.
	Boring Gimlet	BG	To remove or retrieve loose objects
	Down Head Boring Gimlet	DHBG	Leads cable down drain line rather than up vent or across tee.
	1-1/4" Side Cutter	1-1/4 SCB	Works well in grease stoppages, scrapes walls of pipe.

Other accessories available are:

	Down Head fitting	DHF	Converts various cutters to the down head style.
	Toilet Attachment	CAA	For clearing stoppages in toilet bowl.

Operation

1. Make sure the Forward/Off/Reverse switch is in the Forward position.
2. Place cable into the drain opening as far as it will go. The machine must be within one foot of drain opening to operate safely.
3. Gently squeeze the motor trigger. Then squeeze the power cable feed lever to feed the cable into the line.
4. Feed the cable carefully. Use the variable speed trigger to adjust feeding speed as resistance is met. Do not force the cable. Don't feed faster than the cable can go into the drain. Too much cable between machine and drain will cause whipping and kinking.
5. Don't leave too much slack in the cable since this will cause whipping. If the cable starts to bend or build up too much twist, stop the machine by taking your finger off the motor trigger. Release the feed lever and rotate the container in the opposite direction to relieve the twist on the cable. Push any excess cable back into the container and then continue.
6. When cable reaches the stoppage, put feed in neutral by releasing feed lever. Move the machine back and forth as the cable is rotating until the stoppage has been cleared. Slight feed lever pressure may be applied as required to maintain contact with the stoppage.
7. To retract the cable, put Forward/Off/Reverse switch in the Reverse position and press the feed lever and motor trigger.

To change cable cartridges

1. Remove the cutter and connecting screw from the cable, if one is attached.
2. Squeeze the feed lever and pull back on the lever retaining latch. Swing the feed lever open. Remove the top roller assembly.
3. Loosen three screws that hold front and back of container together. Then pull the container front off the machine revealing the cable cartridge within.
4. Remove the cable cartridge.
5. Press replacement cartridge firmly into back of container. Make sure to line up the grooves in the cartridge with the slots in the container back.
6. Slide the cable through the container front.
7. Position the container front so that the three screws aligned with the slots in the container back. Then press the container front into the container back.
8. Tighten screws firmly, making sure the screw heads are centered in the slots and flush with the container surface.
9. Insert top roller assembly into the feed housing. Make sure that the guide pin in the carrier is aligned with the slot in the housing.
10. Swing the feed lever closed. Squeeze the lever and push the retaining latch forward to secure the feed lever in place.

Maintenance

To keep your machine operating smoothly, it is essential that all bearings and cables be lubricated. Oiling moving parts is particularly important where machine comes into contact with sand, grit and other abrasive material.

You can extend roller life by removing built-up debris as necessary. It is essential that the rollers spin freely or the feed will not work properly. In addition, frozen rollers will cause cable tangling.

To get maximum service from your cables, be sure they are well oiled. Some users periodically pour oil directly into the container. Then as the container turns, the cables get complete lubrication. Our SNAKE OIL is ideal for this purpose since it not only lubricates the cables; it disinfects and deodorizes them as well.

To clean or replace feed rollers

1. Squeeze the feed lever and pull back on the lever retaining latch.
2. Swing the feed lever open. Remove the top roller assembly.
3. Remove the three Cover Plate retaining screws to expose the two lower rollers.
4. Loosen and remove the screws holding the lower two rollers in place.

To remove motor

1. Pull the cable out of the container.
2. Loosen the three screws that hold the container front and back together.
3. Pull the container front off the machine.
4. Loosen the two set screws in the beveled collar and remove both the collar and the felt washer.
5. Slide a flat head screw driver into the Hub Spindle and unscrew the Left Hand locking screw from the drive shaft by turning it clockwise.
6. Unscrew the Hub Spindle from the Right Hand Drive Shaft by rotating the container back counter-clockwise.
Note: The Hub Spindle, Hub, and Container Back remain as one unit. The thrust bearing will come free.
7. Reverse these instructions when re-assembling.

Table 3. Trouble Shooting Guide

Problem	Probable Cause	Solution
Cable kinks	Operator forcing the cable.	Do not force the cable. Let the cutter do the work.
	Too much slack between machine and drain	Allow no more than six inches between machine and drain.
	Cable used in wrong size drain line	A cable that is too large or too small a diameter for a line is more likely to kink. Consult Table 1 - Cable Applications.
Failure to Feed	Frozen or worn rollers.	Clean debris from around rollers. If rollers do not turn, cable will not feed. Badly worn rollers must be replaced.
	Cable tangled in container	Do not retract end of cable into feed rollers. Open container and untangle cable. Make sure to use proper size cable for the job. (See Table 1—Cable Applications)
Motor does not run	Trigger in neutral (off) position.	Switch Trigger to either Forward or Reverse.

Parts List and Diagram

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