

Drain-Rooter PH™

Operating Instructions

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



Your Drain-Rooter PH is designed to give you years of trouble-free service. However, no machine is better than its operator. We therefore suggest you read these instructions carefully before using your machine. This will enable you to operate the Drain-Rooter PH safely and effectively. Failure to follow these instructions may cause personal injury to operator or damage to equipment.

General
PIPE CLEANERS

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		designates this tool is listed by Underwriters Laboratories
.../min	revolutions per minute		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, and 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
	1-1/4" Side Cutter	1-1/4 SCB	Works well in grease stoppages, scrapes walls of pipe.

Assembly

1. To attach the guide tube, remove the connecting screw from the female connector at the end of the cable.
2. Pull five feet of cable out of the container and slide it through the guide tube.
3. Align the spring pin connector with the holes in the spout on the front of the container.
4. Slide the connector over the spout until the spring pin pops into place.

Operation

1. Position the Drain-Rooter PH so that the guide hose can be placed within 2" to 6" of the drain opening without excessive bending of the guide hose.

Note: Avoid sharp bends or kinking of the guide hose by repositioning the machine. The Drain-Rooter PH is designed to be positioned either horizontally or vertically to facilitate this.

2. On units with a female connector at the end of the cable, remove the connecting screw and insert the cutting tool into the connector. Then tighten the connecting screw and lock washer *firmly*.
Note: A good tool to start with is the Arrowhead or Boring gimlet. If you're having difficulty getting around a P-Trap or tight bend, attach the down head boring gimlet or flexible arrowhead. After the line has been opened, follow with the 1-1/4" side cutter blade that scrapes the inside of the pipe, assuring a real cleaning job.
3. Tighten the knob on top of the variable speed power cable feed so that the feed roller presses against the cable. Be sure not to over tighten since this could cause excessive cable wear.
4. The feed lever controls the feeding rate and direction of the cable. Move the feed lever down to feed the cable out of the container. The farther the lever is moved downward, the faster the cable will feed out. Move the lever up to retract the cable into the container. When the lever is in the middle (neutral) position, the cable will spin in place.
5. Make sure the Forward/Off/Reverse switch on the motor is in the Forward position.
6. Place the cable end and cutter into the drain opening.

7. With a hand on the guide hose, start the machine by stepping slowly but firmly on the foot pedal. The harder you press on the pedal, the faster the motor will rotate and the faster the cable will feed.
8. Feed the cable slowly. Use both the foot pedal and power cable feed 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 the guide hose and drain will cause whipping and kinking.
9. If the cable starts to bend or build up too much twist, take your foot off the pedal 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.
10. When the cable reaches the stoppage, put the feed in neutral. Then allow the cable to progress slowly, chewing into the stoppage as it goes. This slow forward movement will reduce stress on the cable while doing a more thorough cleaning job. A back and forth action usually works best.
11. When the obstruction is cleared, retract the cable by moving the feed lever into the reverse position. Keep the motor in the forward position. Running in reverse can damage the cable. Use reverse only if the cable gets caught in the line.

Hint: It's often helpful to have a small stream of water running in the line to wash the cuttings away while the machine is in operation and after.

To Change Cable Cartridges

1. Remove the cutter and connecting screw from the cable if one is attached.
2. Loosen the knob at the base of the front post and swing the front post and power cable feed forward.
3. Loosen the three screws around the outside of the container that hold the front and back of the container together.
4. Pull the container front off the machine, revealing the cable cartridge within.
5. Retract the cable out of the feed and guide tube and slide it into the cable cartridge by hand.
6. Remove the cable cartridge.
7. Press replacement cartridge firmly into the back of the container. Make sure to line up the grooves in the cartridge with the slots in the container back.
8. Slide the cable through the container front, power cable feed, and guide tube.
9. Position the container front so that the three screws align with the slots in the container back. Press the container front into the container back and tighten the screws firmly, making sure the screws are centered in the slots and the heads are flush with the container.
10. Swing the front post and feed back into position and tighten knob.

Maintenance

To keep your machine operating smoothly, it is essential that all bearings and cables be as clean as possible and well lubricated. Oiling moving parts is particularly important where machine comes in 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 that 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 ideally suited for this purpose, since it not only lubricates the cables; it disinfects and deodorizes them.

To Clean Or Replace Feed Rollers

1. Remove the feed tension knob and spring.
2. Then lift the top roller assembly out of the cylinder. Be sure control disc is aligned with slot to allow the swivel pin to slide through.
3. Remove the snap rings and thrust washers from the bottom housing cylinders. Then slide the bottom roller assemblies out. Again, Be sure control disc is aligned with slot to allow the swivel pin to slide through.
4. Clean or replace roller assemblies as necessary.

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.	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

General / **General Wire Spring Co.**
PIPE CLEANERS
1101 Thompson Avenue • McKees Rocks, PA 15136 USA
Phone: 412-771-6300
www.drainbrain.com