

# *Super-Vee*<sup>TM</sup>

## *Operating Instructions*

For 1-1/4" through 3" lines



***General***  
***PIPE CLEANERS***

**Y**our Super-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 Super-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 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.

## 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 Super-Vee 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 the operator and damage the 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 trigger switch and the other hand around the grip shield.
10. The Super-Vee must be operated within one foot of drain opening. If you can't get the machine 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 trigger pressure until you get the speed that you want.

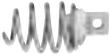
You can also control the machine's direction of rotation by switching the forward and reverse lever, which is located just above the trigger switch. Move the lever toward the Forward arrow for forward rotation and toward the Back arrow for reverse rotation.

**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:**

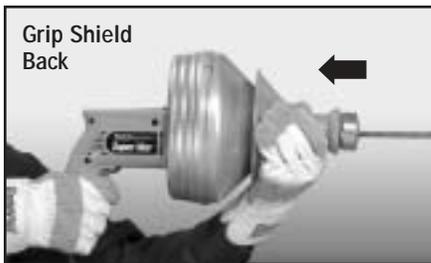
	Down Head fitting	DHF	Converts various cutters to the down head style.
	Toilet Attachment	CAA	For clearing stoppages in toilet bowl.

## Operating Instructions

1. Slide the grip shield forward to release cable.  
Place the cable in the drain by hand as far as it will go.  
Leave six inches of cable between the machine and drain.



2. Slide the grip shield back to grip cable. Then gently squeeze the trigger and move the machine toward the drain opening. **DO NOT FORCE THE CABLE.**  
The job won't go any faster and you could kink the cable.



3. After the cable has fed into the drain, release the trigger.
4. Slide the grip shield forward to release the cable.  
Pull the Super-Vee back while holding the cable in place.  
After you are past the first bend, you probably will not have to hold the cable as you pull the machine back.



5. Slide the grip shield back, squeeze the trigger and move the machine toward the drain again. Then slide the grip shield forward and pull the machine back. Be sure to allow no more than six inches of cable between the machine and drain opening. Too much slack in the cable can cause it to tangle and kink.
6. Repeat procedure until you have worked through the stoppage.
7. Reverse the procedure to pull the cable out of the line.

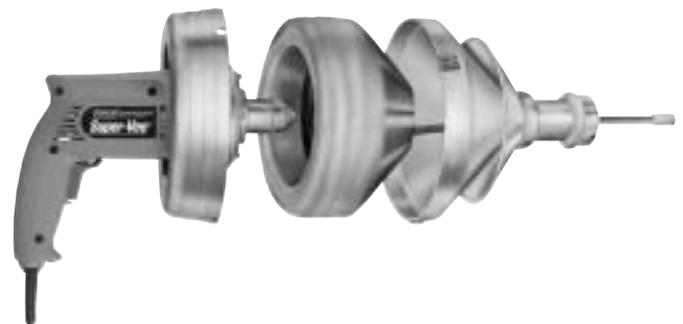
## CAUTION:

*Do not use reverse to pull cable out of the drain. Always run your machine in forward, whether you are feeding the cable into the line or pulling it out. Use reverse only to release cable if it should become caught in the line.*



## To Change Cable Cartridges

1. Remove the cutter and screw from the cable, if one is attached.
2. Loosen the three screws that hold the front and back of container together.
3. Pull the container off the front of machine.
4. Remove the cartridge. Press replacement cartridge firmly into back of container. Make sure to line up grooves in the cartridge with slots in the container back.
5. Slide cable through the front of the container. Be sure the grip shield is in the forward position. Position container front so that the screws and slots in the container back are aligned.
6. Tighten screws firmly, making sure they are centered in the slots, and tightened so that the heads of the screws are flush with the container.



**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.

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.

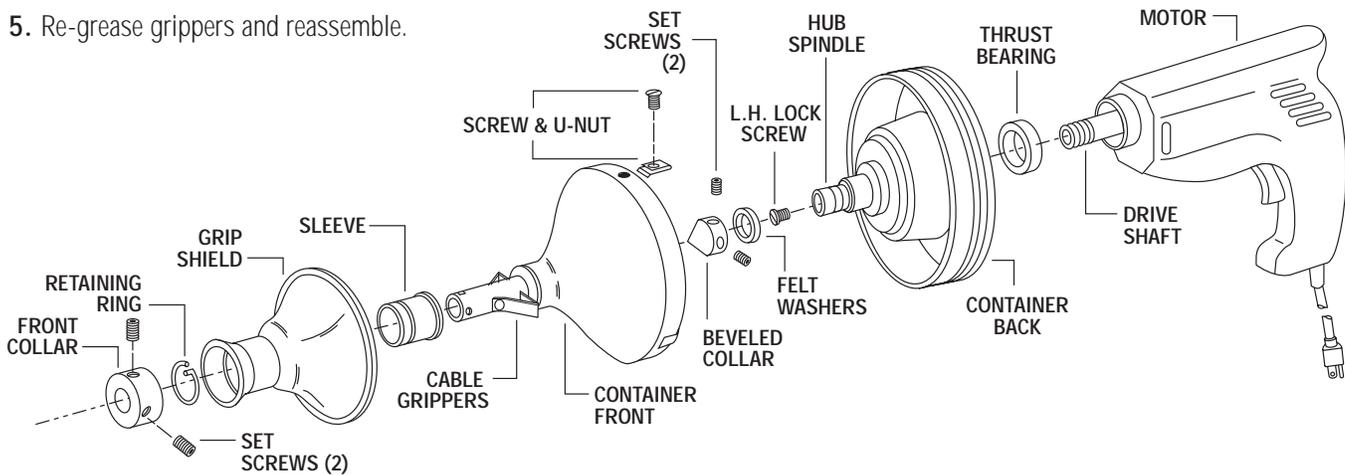
**To Clean or Replace Grippers**

If your Super-Vee is not gripping the cable properly, the cable grippers may need to be cleaned or replaced.

1. Loosen 3/8" set screws in the front collar.
2. Remove the front collar and slide off the grip shield.
3. Remove screws holding the cable grippers.
4. Clean or replace cable grippers.
5. Re-grease grippers and reassemble.

**To Remove Motor**

1. Pull the cable out of the container.
2. Loosen the three screws that hold the front and back of container together.
3. Pull the container off the front of machine.
4. Loose set screws in 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, 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 2 - Cable Applications.)
Cable tangles in container	Operator forcing the cable.	Do not force the cable. Let the cutter do the work.
	Machine run in reverse.	Do not run machine in reverse to retract cable from drain. Use reverse only if cable is caught in line.
Motor does not run	Trigger in neutral (off) position.	Switch trigger to either Forward or Reverse.

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