RIDGID

K-750R Manual

5/8" Cage Machine

Table of Contents

*Original Instructions - English

Drain Cleaner

K-750R Drain Cleaning Machine

⚠ WARNING!

Read this Operator's Manual carefully before using this tool. Failure to understand and follow the contents of this manual may result in electrical shock, fire and/or serious personal injury.

K-750R Drain Cleaning Machine	
Record Serial Number below and retain product serial number which is located on nameplate.	
Serial No.	

Safety Symbols

In this operator's manual and on the product, safety symbols and signal words are used to communicate important safety information. This section is provided to improve understanding of these signal words and symbols.

This is the safety alert symbol. It is used to alert you to potential personal injury hazards. Obey all safety messages that follow this symbol to avoid possible injury or death.

⚠ DANGER DANGER indicates a hazardous situation which, if not avoided, will result in death or serious injury.

⚠ WARNING WARNING indicates a hazardous situation which, if not avoided, could result in death or serious injury.

⚠ CAUTION CAUTION indicates a hazardous situation which, if not avoided, could result in minor or moderate injury.

NOTICE NOTICE indicates information that relates to the protection of property.

This symbol means read the operator's manual carefully before using the equipment. The operator's manual contains important information on the safe and proper operation of the equipment.

This symbol means always wear safety glasses with side shields or goggles when handling or using this equipment to reduce the risk of eye injury.

This symbol indicates the risk of hands, fingers or other body parts being caught, wrapped or crushed in the drain cleaning cable.

This symbol indicates the risk of electrical shock.

This symbol indicates the risk of entanglement in a belt and pulley.

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.
- **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 by-standers 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 electrical 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 electrical 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.

* The text used in the General Power Tool Safety Warnings section of this manual is verbatim, as required, from the applicable UL/CSA/EN 62841-1 standard. This section contains general safety practices for many different types of power tools. Not every precaution applies to every tool, and some do not apply to this tool.

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 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 energizing 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.
- **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 jewelry. Keep your hair, and clothing away from moving parts.** Loose clothes, jewelry, 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 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 is designed.
- **Do not use 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 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.** The 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.

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.

Specific Safety Information

⚠ WARNING

This section contains important safety information that is specific to this tool.

Read these precautions carefully before using the K-750R Drain Cleaning Machine to reduce the risk of electrical shock or other serious injury.

SAVE ALL WARNINGS AND INSTRUCTIONS FOR FUTURE REFERENCE!

Keep this manual with machine for use by the operator.

Drain Cleaner Safety

- **Before using the tool, test the ground fault circuit interrupter (GFCI) provided with the supply cord to insure it is operating correctly.** A properly operating GFCI reduces the risk of electrical shock.

- **Only use extension cords that are protected by a GFCI.** The GFCI on the machine power cord will not prevent electrical shock from extension cords.
- **Only grasp the rotating cable with gloves recommended by the manufacturer.** Latex or loose fitting gloves or rags can become wrapped around the cable and may result in serious personal injury.
- **Do not allow the cutter to stop turning while the cable is turning.** This can overstress the cable and may cause twisting, kinking or breaking of the cable and may result in serious personal injury.
- **One person must control both the cable and the foot switch.** If the cutter stops rotating, the operator must be able to turn the machine motor OFF to prevent the cable from twisting, kinking and breaking.
- **Use latex or rubber gloves inside the gloves recommended by the manufacturer, goggles, face shields, protective clothing, and respirator when chemicals, bacteria or other toxic or infectious substances are suspected to be in a drain line.** Drains may contain chemicals, bacteria and other substances that may cause burns, be toxic or infectious or may result in other serious personal injury.
- **Practice good hygiene. Do not eat or smoke while handling or operating the tool. After handling or operating drain cleaning equipment, use hot, soapy water to wash hands and other body parts exposed to drain contents.** This will help reduce the risk of health hazards due to exposure to toxic or infectious material.
- **Only use the drain cleaner for the recommended drain sizes.** Using the wrong size drain cleaner can lead to twisting, kinking or breaking of the cable and may result in personal injury.
- **Keep hands away from rotating drum and guide tube. Do not reach into drum unless machine is unplugged.** Hand may be caught in the moving parts.
- **Keep glove-covered hand on the cable whenever the machine is running.** This provides better control of the cable and helps prevent twisting, kinking and breaking of the cable and may result in serious personal injury.
- **Position machine cable outlet within 3' (0.9 m) of the drain inlet or properly support exposed cable when the distance exceeds 3' (0.9 m).** Greater distances can cause control problems leading to twisting, kinking or breaking of the cable. Twisting, kinking or breaking cable may cause striking or crushing injuries.
- **Do not operate the machine in REV (reverse) rotation except as described in this manual.** Operating in reverse can result in cable damage and is used to back the cable end out of blockages.
- **Do not wear loose clothing or jewelry. Keep your hair and clothing away from moving parts.** Loose clothing, jewelry or hair can be caught in moving parts.
- **Do not operate this machine if operator or machine is standing in water.** Operating machine while in water increases the risk of electrical shock.
- **Do not use if there is the risk of contact with other utilities (such as natural gas or electric) during operation.** Visual inspection of the drain with a camera is a good practice. Crossbores, improperly placed utilities and damaged drains could allow the cutter to contact and damage the utility. This could cause electrical shock, gas leaks, fire, explosion or other serious damage or injury.
- **Read and understand these instructions and the instructions and warnings for all equipment and materials being used before operating this tool to reduce the risk of serious personal injury.**

RIDGID® Contact Information

If you have any question concerning this RIDGID® product:

– Contact your local RIDGID® distributor.

– Visit RIDGID.com to find your local RIDGID contact point.

– Contact Ridge Tool Technical Service Department at rtctechservices@emerson.com, or in the U.S. and Canada call (800) 519-3456.

Description, Specifications and Standard Equipment

Description

The RIDGID® K-750R Drain Cleaning Machine will clean drain lines 3" (75 mm) to 6" (150 mm) in diameter and up to 100 feet (30.5 m) in length. Corrosion resistant drum holds 100 feet of 5/8" (16 mm) diameter cable. Drum windows allows immediate view of cable for inspection and cleaning of drum and cable.

The drum is belt-driven by an electric motor that has a grounded electrical system. An integral Ground Fault Circuit Interrupter (GFCI) is built into the line cord. A pneumatic foot switch provides ON/OFF control of the motor. A “kickstand” base is provided for machine stability during operation.

The Cable Control System consists of a torque limiter to stop the drum from rotating when the torque exceeds the

set value. This helps to prevent cable damage from cable flip over in the drum. The torque limiter is designed to work with RIDGID C-24 HD 5/8" x 100' cable, and may not protect other cables.

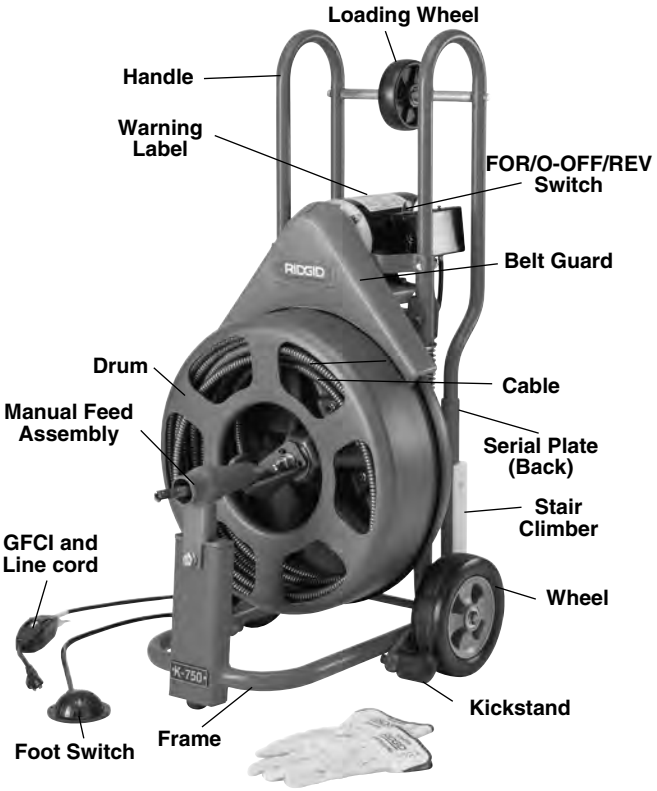


Figure 1 – K-750R Drain Cleaning Machine

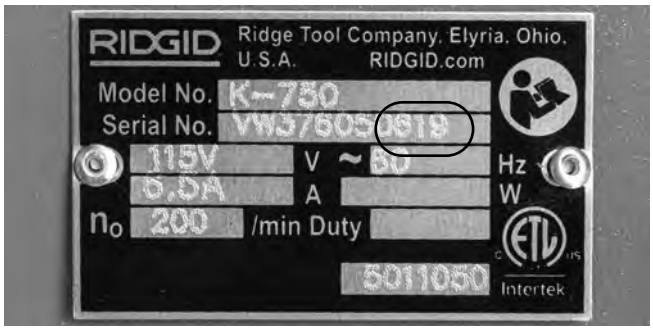


Figure 2 – Machine Serial Number

The machine serial number is located on the back of the power unit. The last 4 digits indicates the month and year of the manufacture. (06 = month, 19 = year).

Specifications

Line Capacity.....3" – 6" (75 mm to 150 mm) Lines, Up To 100 feet (30.5 m)
Drum Capacity.....100' of 5/8" Cable (30.5 m of 16 mm)
Cable Type.....RIDGID Cat. # 37754 C-24 HD 5/8" x 100'
Motor Type .....Induction
Motor Rating.....120 VAC, Single Phase, 6.5 A, 60Hz
No Load Speed .....200 r/min (RPM)
Controls.....FOR/O-OFF/REV Switch, Pneumatic Foot Switch
Operating Temperature.....-20° F to 120° F (-29° C to 49° C)
Storage Temperature ....-20° F to 140° F (-29° C to 60° C)
Weight (Machine Only) ...95 lbs. (44 kg)
With 100' 5/8" C-24 HD Cable.....180 lbs. (82 kg)
Dimensions:
Length .....26" (660 mm)
Width .....21" (533 mm)
Height.....43" (1092 mm)
Sound Pressure (L_{PA})* .....58 dB(A), K=3
Sound Power (L_{WA})*.....59.3 dB(A), K=3

* Sound measurements are measured in accordance with a standardized test per Standard EN 62481-1.
- Sound emissions may vary due to your location and specific use of these tools.
- Daily exposure levels for sound need to be evaluated for each application and appropriate safety measures taken when needed. Evaluation of exposure levels should consider the time a tool is switched off and not in use. This may significantly reduce the exposure level over the total working period.

Standard Equipment

All K-750R Drain Cleaning Machines come with one pair of RIDGID Drain Cleaning Gloves. Refer to the RIDGID catalog for details on equipment supplied with specific drain cleaner catalog numbers.

NOTICE This machine is made to clean drains. If properly used it will not damage a drain that is in good condition and properly designed, constructed and maintained. If the drain is in poor condition, or has not been properly designed, constructed and maintained, the drain cleaning process may not be effective or could cause damage to the drain. The best way to determine the condition of a drain before cleaning is through visual inspection with a camera. Improper use of this drain cleaning machine can damage the drain cleaning machine and the drain. This machine may not clear all blockages.

Machine Assembly

⚠ WARNING

To reduce the risk of serious injury during use, follow these procedures for proper assembly.

FOR/O-OFF/REV switch should be O-OFF and machine unplugged before assembly.

Installing Handles

1. Remove the bolts and nuts retaining the belt guard bracket to the machine frame, remove belt guard.
2. Loosely assemble loading wheel to handles with provided bolts *(see Figure 3)*.

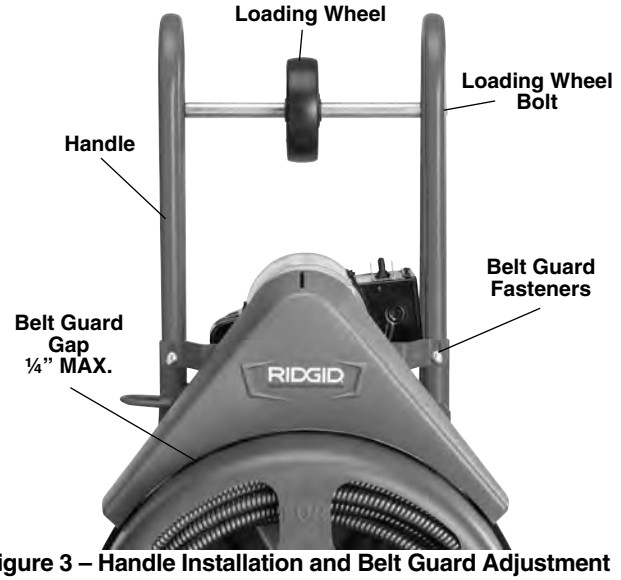
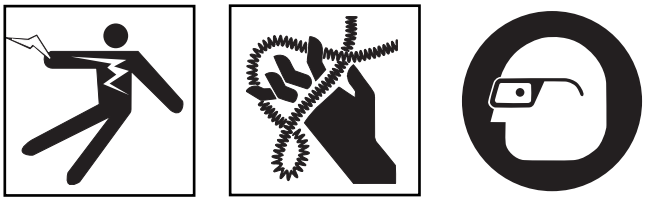


Figure 3 – Handle Installation and Belt Guard Adjustment

3. Insert handles into machine frame and install bolts through belt guard bracket, machine frame and handle. Install nuts to retain bolts, do not tighten.
4. Firmly tighten bolts holding loading wheel to handles.
5. Adjust gap between guard and drum to less than 1/4". Firmly tighten belt guard bracket bolts. Confirm that gap between belt guard and drum is less than 1/4" to prevent fingers and other objects from being pulled into the belt and pulley. Adjust if necessary.

Pre-Operation Inspection

⚠ WARNING



Before each use, inspect your drain cleaning machine and correct any problems to reduce the risk of serious injury from electric shock, twisted or broken cables, chemical burns, infections and other causes and prevent drain cleaner damage.

Always wear safety glasses, RIDGID drain cleaning gloves, and other appropriate protective equipment when inspecting your drain cleaner.

1. Inspect the RIDGID drain cleaning gloves or mitts ("gloves"). Make sure they are in good condition with no holes, tears or loose sections that could be caught in the rotating cable. It is important not to wear improper or damaged gloves. The gloves protect your hands from the rotating cable. If the gloves are not RIDGID drain cleaning gloves or are damaged or worn out, do not use machine until RIDGID drain cleaning gloves are available. Wear latex or rubber gloves inside the RIDGID drain cleaning gloves to protect against drain contents. *See Figure 4*.

Figure 4 – RIDGID Drain Cleaning Gloves – Leather, PVC

2. Make sure that the drain cleaning machine is unplugged. Inspect the power cord, Ground Fault Circuit Interrupter (GFCI) and plug for damage. If the plug has been modified, is missing the grounding prong or if the cord is damaged, to avoid electrical shock, do not use the machine until the cord has been replaced by a qualified repair person.
3. Clean the drain cleaner, including handles and controls. This aids inspection and helps prevent the machine or control from slipping from your grip. Clean and maintain the machine per the maintenance instructions.
4. Inspect the drain cleaner for the following items:
   - Proper assembly and completeness.
   - Broken, worn, missing, misaligned or binding parts. Rotate the drum and make sure that it turns freely.
   - Make sure the foot switch is attached to the drain cleaning machine. Do not operate the machine without the foot switch.
   - Presence and proper adjustment of the belt guard. Belt guard should be adjusted so that the gap between the guard and the drum is no more than 1/4". *(See Figure 3.)*
   - Presence and readability of the warning label *(see Figure 5).*
   - Any other condition which may prevent safe and normal operation.

   If any problems are found, do not use the drain cleaner until the problems have been repaired.

Figure 5 – Warning Label

5. Clean any debris from the cable and cutting tools. Inspect cables for wear and damage. Inspect for:
   - Obvious flats worn into the outside of the cable (cable is made from round wire and profile should be round).
   - Multiple or excessively large kinks (slight kinks up to 15 degrees can be straightened).
   - Space between the coils indicating the cable has been deformed by stretching, kinking or running in REVERSE (REV).
   - Excessive corrosion from storing wet or exposure to drain chemicals.

   All of these forms of wear and damage weaken the cable and make cable twisting, kinking or breaking more likely during use. Replace worn and damaged cable before using drain cleaner.

   Make sure cable is fully retracted with no more than 6" of cable outside of the machine. This will prevent whipping of the cable at start up.
6. Inspect the tools for wear and damage. If necessary, replace prior to using the drain cleaning machine. Dull or damaged cutting tools can lead to binding, cable breakage, and slow the drain cleaning process.
7. Make sure that the FOR/O-OFF/REV switch is set to the O-OFF position.
8. With dry hands, plug cord into outlet. Test the GFCI in the electrical cord to insure that it is operating correctly. When the test button is pushed in, the indicator light should go off. Reactivate by pushing the reset button in. If the indicator light goes on, the GFCI is functioning properly. If GFCI is not functioning properly, unplug the cord and do not use the drain cleaning machine until the GFCI has been repaired.

Figure 6 – Proper Drum Rotation (FOR Switch Position)

9. Move the FOR/O-OFF/REV switch into the FOR position. Press the foot switch and note the direction of rotation of the drum. If the foot switch does not control the machine operation, do not use the machine until the foot switch has been repaired. The drum should rotate counter-clockwise when viewed from the front of the drum, and will match the drum direction shown on the warning label (Figure 5) and shown in Figure 6. Release the foot switch and let the drum come to a complete stop. Place the FOR/O-OFF/REV switch into the REV position, and repeat above testing to confirm that the drain cleaner operates properly in reverse. If the rotation is not correct, do not use the machine until it has been repaired.
10. With the inspection complete, move the FOR/O-OFF/REV switch into the O-OFF position and, with dry hands, unplug the machine.

Machine and Work Area Set-Up

⚠ WARNING

Set up the drain cleaning machine and work area according to these procedures to reduce the risk of injury from electric shock, twisted or broken cables, chemical burns, infections and other causes, and prevent drain cleaner damage.

Always wear safety glasses, RIDGID drain cleaning gloves, and other appropriate protective equipment when setting up your drain cleaner.

1. Check work area for:
   - Adequate lighting.
   - Flammable liquids, vapors or dust that may ignite. If present, do not work in area until sources have been identified and corrected. The drain cleaner is not explosion proof and can cause sparks.
   - Clear, level, stable dry place for machine and operator. Do not use the machine while standing in water. If needed, remove the water from the work area. Wood or other coverings may need to be put down.
   - Properly grounded electrical outlet. A three-prong or GFCI outlet may not be properly grounded. If in doubt, have outlet inspected by a licensed electrician.
   - Clear path to electrical outlet that does not contain any potential sources of damage for the power cord.
2. Inspect the drain to be cleaned. If possible, determine the access point(s) to the drain, the size(s) and length(s) of the drain, distance to mainlines, the nature of the blockage, presence of drain cleaning chemicals or other chemicals, etc. If chemicals are present in the drain, it is important to understand the specific safety measures required to work around those chemicals. Contact the chemical manufacturer for required information.

   If needed, remove fixture (water closet, etc) to allow access to the drain. Do not feed the cable through a fixture. This could damage the drain cleaner and the fixture.
3. Determine the correct drain cleaning equipment for the application.

   Drain cleaners for other applications can be found by consulting the RIDGID Catalog, on line at RIDGID.com
4. Make sure machine has been properly inspected.
5. If needed, place protective covers in the work area. The drain cleaning process can be messy.
6. Position the drain cleaning machine so that the K-750R cable outlet is within 3' (0.9 m) of the drain access. Greater distances from the drain access increases the risk of the cable twisting or kinking. If the machine cannot be placed with the cable outlet within 3' of the drain access, extend the drain access back to within 3' (0.9 m) of the cable outlet with similar sized pipe and fittings. Improper cable support can allow the cable to kink and twist and can damage the cable or injure the operator. *(See Figure 7.)*

Figure 7 – Example Of Extending Drain To Within 3' of Cable Outlet

7. Tilt the machine forward and use your foot to rotate one kickstand at a time to the backside of the wheel. The machine should firmly rest on the kickstands. The kickstands stabilize the machine and help prevent tipping or walking during use. If working on soft ground, it may be necessary to place wood or other solid material under the drain cleaner for proper support.

Figure 8 – Setting Kickstands

8. Evaluate the work area and determine if any barriers are needed to keep bystanders away from the drain cleaner and work area. The drain cleaning process can be messy and bystanders can distract the operator.

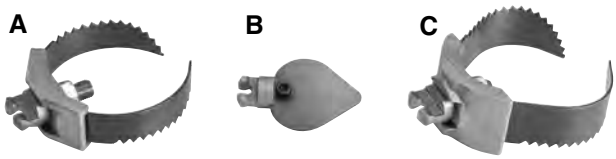


Figure 9 – Tools Supplied with K-750R

A. P-Trap Cutter – For use in cleaning pipes of general material clinging to pipe walls. Aids in negotiating tight bends.
B. Spade Cutter – For following up after augers have been used and to open up floor drains.
C. Double Cutter – For use in cleaning pipes of general material clinging to pipe walls.

9. Select proper tool for the conditions.

   If the nature of the obstruction is unknown, it is good practice to explore the obstruction and retrieve a piece of the obstruction for inspection.

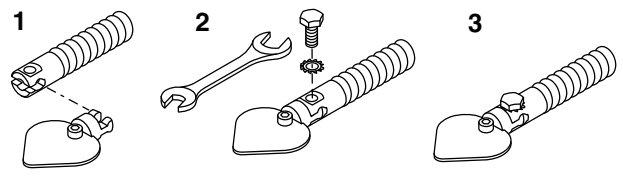
   Once the nature of the obstruction is known, an appropriate tool can be selected for the application. A good rule of thumb is to start by running the smallest available tool through the blockage to allow the backed up water to start flowing and carry away the debris and cuttings as the drain is cleaned. Once the drain is open and flowing, other tools appropriate for the blockage can be used. Generally, the largest tool used should be no bigger than the inside diameter of the drain minus one inch.

   Proper tool selection depends on the specific circumstances of each job and is left to the users' judgement.

   A variety of other cable attachments are available and are listed in the Optional Equipment section of this manual. Other information on cable attachments can be found in the RIDGID Catalog and on line at RIDGID.com.

10. Securely install tool on the end of the cable *(See Figure 10)*. If the connection is not secure, the cutting tool may fall off in use.

11. Position the foot switch for easy accessibility. You must be able to hold and control the cable, control the foot switch, and reach the FOR/O-OFF/REV switch.



1. Slide the couplings together
2. Insert ¼" - 20 x ⅝" bolt with lock washer. Securely tighten with 7/16" wrench.
3. Confirm connection is secure to prevent tool loss.
4. Reverse steps to disconnect.

Figure 10 – Connecting/Disconnecting Tools

12. Confirm that the FOR/O-OFF/REV switch is in the O-OFF position.

13. Run the cord along a clear path. With dry hands plug the drain cleaner into a properly grounded outlet. Keep all connections dry and off the ground. If the power cord is not long enough, use an extension cord that:
    - Is in good condition.
    - Has a plug similar to that supplied on the drain cleaner.
    - Is rated for outdoor use and contains a W or W-A in the cord designation (i.e. SOW), or complies with H05VV-F, H05RN-F types or IEC type design (60227 IEC 53, 60245 IEC 57).
    - Has sufficient wire size (16 AWG (1.5mm^2) for 50' (15.2m) or less, 14 AWG (2.5mm^2) for 50' – 100' (15.2m – 30.5m) long). Undersized wires can overheat, melting the insulation or causing a fire or other damage.

    When using an extension cord, the GFCI on the drain cleaner does not protect the extension cord. If the outlet is not GFCI protected, it is advisable to use a plug in type GFCI between the outlet and the extension cord to reduce the risk of shock if there is a fault in the extension cord.

Operating Instructions

⚠ WARNING

Always wear eye protection to protect your eyes against dirt and other foreign objects.

Always wear RIDGID drain cleaning gloves or mitts ("gloves") in good condition. Latex or loose fitting gloves or rags can become wrapped around the cable and may result in serious personal injury. Only wear latex or rubber gloves under drain cleaning gloves. Do not use damaged drain cleaning gloves.

Always use appropriate personal protective equipment while handling and using drain cleaning equipment. Drains may contain chemicals, bacteria and other substances that may be toxic, infectious, cause burns or other issues. Appropriate personal protective equipment always includes safety glasses and RIDGID drain cleaning mitts, and may include equipment such as latex or rubber gloves, face shields, goggles, protective clothing, respirators and steel-toed footwear.

Do not allow the cutter to stop turning while the machine is running. This can overstress the cable and may cause twisting, kinking or breaking of the cable. Twisting, kinking or breaking cable may cause striking or crushing injuries.

Position machine cable outlet within 3' (0.9 m) of the drain inlet or properly support exposed cable when the distance exceeds 3' (0.9 m). Greater distances can cause control problems leading to twisting, kinking or breaking of the cable. Twisting, kinking or breaking cable may cause striking or crushing injuries.

One person must control both the cable and switch. If the cutter stops rotating, the operator must be able to turn the tool OFF to prevent twisting, kinking and breaking of the cable and reduce the risk of injury.

Follow operating instructions to reduce the risk of injury from twisted or broken cables, cable ends whipping around, machine tipping, chemical burns, infections and other causes.

1. Make sure that machine and work area is properly set up and that the work area is free of bystanders and other distractions.
2. Pull cable out of drum and feed into drain. At least one foot (0.3 m) of cable must be in drain so that the end of the cable will not come out of the drain and whip around when the machine is started.

   Directly route the cable from the outlet of the machine to the drain opening, minimizing exposed cable and changes in direction. Do not tightly bend the cable – this can increase the risk of twisting or breaking.
3. Assume a proper operating position that will allow:
   - Be sure you can control the ON/OFF action of the foot switch and can quickly release the foot switch if needed. Do not press foot switch yet.
   - Be sure that you have good balance, do not have to over reach, and cannot fall on the foot switch, drain cleaning machine, the drain or other hazards.
   - You must be able to place at least one hand on the cable at all times to control and support the cable.
   - You must be able to reach the FOR/O-OFF/REV switch.

   This operating position will help to maintain control of the cable and machine. *See Figure 11.*

Figure 11 – In Operating Position

4. Move the FOR/O-OFF/REV switch to the FOR (FORWARD) position. **Do not depress the foot switch yet.** FOR/O-OFF/REV refers to the drum/cable rotation and not to the direction of cable movement. Do not rotate the cable in reverse except as specifically described in these instructions. Running the drain cleaner in REV can damage the cable.

Operation

K-750R Drain Cleaning machines are not equipped with AUTOFEED® power feed units. If your machine has a power feed unit, please see the operating instructions for the RIDGID K-750 Drain cleaning machine for information on proper power feed operation.

Feeding The Cable Into The Drain

Confirm that at least one foot (0.3 m) of cable is in the drain. Grasp the exposed cable with both gloved hands equally spaced and pull 6"-12" (150 mm - 300 mm) of cable out of the drum so that there is a slight bow in the cable. Gloved hands must be on the cable to control and support the cable. Improper cable support can allow the cable to kink or twist and can damage the cable or injure the operator. Make sure that the cable outlet of the drain cleaner is within 3' of the drain opening *(Figure 12)*.

Depress the foot switch to start the machine. The person controlling the cable must also control the foot switch. Do not operate the drain cleaner with one person controlling the cable and another person controlling the foot switch. This can lead to twisting, kinking and breaking of the cable. Feed the rotating cable into the drain. The rotating cable will work its way into the drain as you push on

the cable with gloved hands. Do not allow the cable to build up outside the drain, bow or curve. This can allow the cable to twist, kink or break.

When the cable has been fed into the drain opening, pull 6"-12" (150 mm - 300 mm) more cable from the drum and continue feeding the rotating cable into the drain.

Figure 12 – Feeding of the Cable

Passing Through Traps Or Other Transitions

If it is difficult to get the cable through a trap or other fitting, the following methods or combinations of methods can be used.

- Sharp thrusts of the cable, both with and without the cable rotating, can help the cable through a trap.
- In some cases, with the switch in the O-OFF position, rotating the drum by hand can change the orientation of the cutter to allow it to more easily negotiate the fitting.
- Run the drain cleaner in REV (REVERSE) rotation for several seconds while pushing on the cable. Only do this long enough to get the cable started through the trap. Running the cable in reverse can damage the cable.
- Use a flexible leader between the tool and the cable.

If these options don't work, consider using a smaller diameter or more flexible cable, or a different drain cleaner.

Cleaning The Drain

As you feed the cable into the drain, you may see the cable slow down or build up outside the drain. Always keep your hands on the cable. You may feel the cable start to wind or load up (this may feel like the cable is starting to twist or squirm). This may be a transition in the drain (trap, elbow, etc.), build up in the drain (grease, etc.) or the actual blockage. Feed the cable slowly and carefully. Do not let cable build up outside the drain. This can cause the cable to twist, kink or break.

Pay attention to the amount of cable that has been fed into the drain. Feeding cable into a larger drain, septic tank or similar transition may cause the cable to kink or knot and prevent removal from the drain. Minimize the amount of cable fed into the transition to prevent problems. Each wrap of the cable in the drum is approximately four feet (1.2 m) long.

Working The Blockage

If the end of the cable stops turning, it is no longer cleaning the drain. If the end of the cable becomes lodged in the blockage and power is maintained to the drain cleaner, the cable will start to wind up (this may feel like the cable is starting to twist or squirm). Having a hand on the cable allows you to feel this wind up and control the cable. If the cable end stops turning or if the cable starts to wind up, immediately pull back on the cable to free the cable end from the blockage.

Don't keep the cable rotating if the cable is stuck in a blockage. If the cable end stops turning and the drum keeps rotating, the cable can twist kink or break.

Once the cable end is free of the blockage and turning again, you can slowly feed the cable end back into the blockage. Do not try to force the cable end through the blockage. Let the spinning end "dwell" in the blockage to completely break it up. Work the tool in this manner until you have moved completely past the blockage (or blockages) and the drain is flowing.

While working the blockage, the cable and tool may become clogged with debris and cuttings from the blockage. This can prevent further progress. The cable and tool need to be retrieved from the drain and the debris removed. *See section on "Retrieving the Cable".*

Handling A Stuck Tool/Cable End

If the tools stops turning and the cable cannot be pulled back from the blockage, release the foot switch while firmly holding the cable. Do not remove hands from cable or cable may kink, twist and break. The motor will stop and the cable and drum may turn backwards until the energy stored in the cable is relieved. Do not remove hands from cable until the tension is released. Place FOR/O-OFF/REV switch in O-OFF position.

The torque limiter helps to prevent cable damage from cable flip over in the drum by stopping drum and cable rotation when the torque exceeds the setting. The motor will continue to rotate as long as the foot switch is pressed, but the drum and cable will stop rotating when the torque limiter setting is exceeded. The torque limiter cannot prevent all cable damage in the drum, and cannot prevent cable

flip over outside the drum. If the drum stops turning, the cable and tool also are not turning.

Freeing A Stuck Tool

If the tool is stuck in the blockage, with the FOR/O-OFF/-REV switch in the O-OFF position and the foot switch released, try pulling the cable loose from the blockage. If the tool will not come free from the blockage, place the FOR/O-OFF/REV switch in the REV position. Grasp the cable with both gloved hands, press the foot switch for several seconds and pull on the cable until it is free of the blockage. Do not operate the machine in the REV position any longer than required to free the cutting tool from the blockage or cable damage can occur. Place the FOR/O-OFF/REV switch in the FOR position and continue cleaning the drain.

Retrieving The Cable

Once the drain is open, start a flow of water down the drain to flush the debris out of the line. This can be done by running a hose down the drain opening, turning on a faucet in the system or other methods. Pay attention to the water level, as the drain could plug again.

Figure 13 – (1) Pulling Cable and (2) Feeding into the Drum

With water flowing through the drain, retrieve the cable from the line. The flow of water will help to clean the cable as it is retrieved. The FOR/O-OFF/REV switch should be in the FOR position – do not retrieve the cable with the switch in the REV position, this can damage the cable. As with feeding the cable into the drain, cables can be caught while being retrieved.

With both gloved hands equally spaced on the exposed cable for control, pull 6"-12" lengths of cable from the drain at a time and feed it into the drum *(Figure 13)*.

Continue retrieving cable until the cable end is just inside the drain opening. Release the foot switch and allow the machine to come to a complete stop. Do not pull the end of the cable from the drain while the cable is rotating. The cable can whip around and cause serious injury.

Place the FOR/O-OFF/REV switch in the O-OFF position. Pull the remaining cable from the drain with gloved hands and feed back into the drain cleaner. If needed, change the tool and continue cleaning following the above process. Several passes through a line are recommended for complete cleaning.

With dry hands unplug the machine.

Draining Drum

If the machine needs to be drained, turn machine OFF, and with dry hands, unplug the machine. Tip the machine forward to drain the drum and rotate the drum to allow it to drain completely.

Figure 14 – Preparing For Transport

Preparing For Transport

Remove any tool from the cable. Feed cable into the drum, leaving no more than 6" (15 cm) exposed. Wrap cord and foot switch around the handle. One transport method shown in *Figure 14*. If the machine needs to be lifted, use proper lifting techniques. Use care moving equipment up and down stairs, and be aware of possible slip hazards.

Loading

Place the machine with the wheels toward the vehicle. Lean the machine back and rest the loading wheel on the vehicle bed. Lift the front of the machine and slide it onto the vehicle *(Figure 15)*. Use care not to damage electrical cord or foot switch hose.

Be aware of the machine weight – depending on the machine and cable, the machine may weigh 194 lbs. (98 kg) or more. Use proper lifting techniques. More than one person may be required.

Figure 15 – Loading Onto Vehicle

Storage

⚠ WARNING The drain cleaner must be kept dry and indoors or well covered if kept outdoors. Store the machine in a locked area that is out of reach of children and people unfamiliar with drain cleaners. This machine can cause serious injury in the hands of untrained users.

Maintenance Instructions

⚠ WARNING

FOR/O-OFF/REV switch should be O-OFF and machine unplugged before performing any maintenance.

Always wear safety glasses and other appropriate protective equipment when performing any maintenance.

Cleaning

After each use, clean the machine. A mild detergent or antibacterial solution can be used if desired. Do not use solvents, abrasives or other harsh cleaning agents.

Machine – Use a damp, soft cloth to wipe off the machine. Do not submerge or flush the machine with water. Do not allow water to enter motor or other electrical components. Make sure unit is completely dry before plugging in and using.

Drum and Cable – Flush the drum and cable with water after every use to prevent damaging effects of sediment and drain cleaning compounds. Drain debris from drum by tipping machine forward after every use to remove sediment, etc. which can corrode cable. Allow to dry to reduce cable corrosion.

Lubrication

Lubricate machine with general purpose grease at grease fitting located at connection of guide tube and drum *(see Figure 16*). If drum is changed or removed, once a week if used every day: once a month if used less. Lubricate cable coupling plunger pins with light machine oil.

Figure 16 – Grease Fitting Location

Changing Cable

Remove Cable

1. Pull entire cable from drum, so coupling can be accessed. Disconnect cable. *(See Figure 17.)*

Installing Cable

Do not remove the band/staples from the cable carton. The cable is under tension and can whip or strike if released. Only use RIDGID catalog number 37754, C-24 HD $^{5}/_{8}$" x 100' cable in K-750R Drain Cleaning Machine.

1. Retrieve male coupling end of cable through the center hole of the carton and pull approximately 6' of cable from the carton.

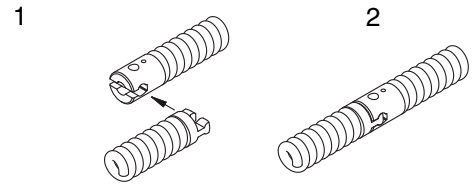
2. Connect the male coupling of the cable to the pigtail coupling *(See Figure 17)*. Confirm connection is secure.
3. Pull short sections of cable from the carton and manually feed into the drum. Do not turn machine ON.

Keep couplings clean and lubricated. Plunger pin must move freely and fully extend to secure connection.

New style – Plunger pin

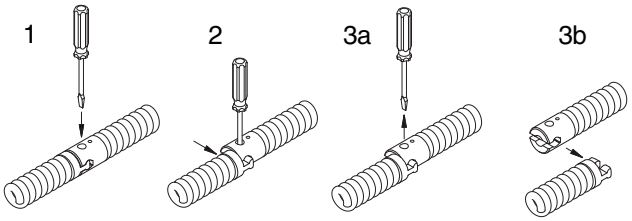
Screwdriver required.

Connecting



1. Slide the couplings together. If needed, depress plunger pin.
2. Confirm connection is secure. (plunger pin fully extended).

Disconnecting



1. Insert the screwdriver to depress the plunger pin.
2. Push the couplings apart until the male coupling contacts the screwdriver.
3. Remove the screwdriver and push the couplings apart.

Figure 17 – Connecting/Disconnecting Drum machine Cable Coupling

Belt Removal/Installation

1. Remove belt guard *(See Figure 3)*. Do not operate drain cleaner with belt guard removed.
2. Push down on motor table handle to release belt tension and slip belt off pulley. *(See Figure 18.)*
3. Remove manual feed assembly by removing the bolt.
4. Slide the belt off the machine, between the guide tube and the frame.
5. Reverse procedure to replace belt.
6. Adjust gap between guard and drum to less than 1/4". Firmly tighten belt guard bracket bolts. Confirm that gap between belt guard and drum is less than 1/4" to prevent fingers and other objects from being pulled into the belt and pulley. Adjust if necessary.

Figure 18 – Belt Removal

Motor Thermal Overload

1. The motor is equipped with a thermal overload that turns OFF the motor if it gets too hot. *(See Figure 19.)*
2. To reset the thermal overload, unplug machine, turn ON/O-OFF/REV switch to the O-OFF position and allow the motor to cool for 15 minutes.
3. Press the reset button. If motor does not start or the thermal overload continually trips during normal operation, the machine should be taken to a RIDGID Independent Service Center.

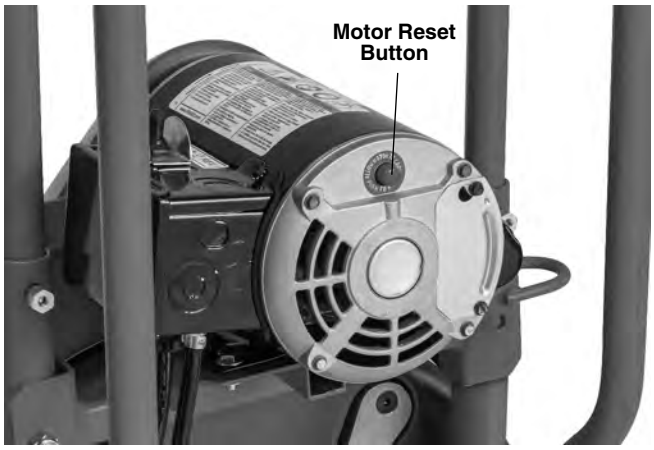


Figure 19 – Motor Reset Button

Service and Repair

⚠ WARNING

Improper service or repair can make machine unsafe to operate.

The "Maintenance Instructions" will take care of most of the service needs of this machine. Any problems not addressed by this section should only be handled by an authorized RIDGID service technician.

Tool should be taken to a RIDGID Independent Authorized Service Center or returned to the factory.

For information on your nearest RIDGID Independent Service Center or any service or repair questions, *see Contact Information section* in this manual.

Troubleshooting

PROBLEM	POSSIBLE REASONS	SOLUTION
Cable kinking or breaking.	Cable is being forced.	Do Not Force Cable! Let the cutter do the work.
	Cable used in incorrect pipe diameter.	Use correct cable for pipe size.
	Motor switched to reverse.	Use reverse only if cable gets caught in pipe.
	Cable exposed to acid.	Clean cables routinely.
	Cable worn out.	If cable is worn, replace it.
	Cable not properly supported.	Support cable properly, see instructions.
Drum stops while foot switch is depressed. Restarts when foot switch is re-depressed.	Hole in foot switch or hose.	Replace damaged component.
	Hole in air switch.	If no problem found with foot switch or hose, replace air switch.
Cable turns in one direction but not the other.	Faulty FOR/O-OFF/REV switch.	Replace switch.
Ground Fault Circuit Interrupter (GFCI) trips when machine is plugged in or when switch is depressed.	Damaged power cord.	Replace cord set.
	Short circuit in motor.	Take unit to authorized service center.
	Faulty Ground Fault Circuit Interrupter (GFCI).	Replace cord set that includes a Ground Fault Circuit Interrupter.
	Moisture in motor, switch or on plug.	Take drain cleaner to an Authorized Service Center.
Motor turning but drum is not.	Belt slipping because cable is being forced..	Do not force cable.
	Torque limiter slipping because cable is being forced.	Do not force cable.
	Belt not on drum or pulley.	Re-install belt.
Machine wobbles or moves while cleaning drain.	Cable not evenly distributed.	Pull all cable out and refeed in, evenly distribute.
	Kickstands are not on ground.	Move kickstands to use position.
	Ground not level/stable.	Place on level stable surface.

Optional Equipment

⚠ WARNING

To reduce the risk of serious injury, only use accessories specifically designed and recommended for use with the RIDGID K-750R Drain Cleaning Machine, such as those listed below.

Catalog No.	Model No.	Description
37754	—	5/8" x 100' C-24 HD Cable for K-750R
92485	T-403	P-Trap Cutter
92495	T-406	Spade Cutter
92510	T-411	2" Cutter
92520	T-413	3" Cutter
92525	T-414	4" Cutter
41937	—	RIDGID Leather Drain Cleaning Gloves
70032	—	RIDGID PVC Drain Cleaning Gloves
59360	—	Toolbox

For a complete listing of RIDGID equipment available for these tools, see the Ridge Tool Catalog online at RIDGID.com or see Contact Information.

Disposal

Parts of the K-750R drain cleaner contain valuable materials and can be recycled. There are companies that specialize in recycling that may be found locally. Dispose of the components in compliance with all applicable regulations. Contact your local waste management authority for more information.