KT-190
KT-200

Pipe Thawing Units

OPERATOR'S MANUAL

• Castellano – pág. 11

⚠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.

RIDGID®

Table of Contents

RIDGID®

KT-190 and KT-200 Pipe Thawing Units

KT-190 and KT-200 Pipe Thawing Units	
Record Serial Number below and retain product serial number which is located on nameplate.	
Serial No.	

General Safety Information

WARNING! Read and understand all instructions. Failure to follow all instructions listed below may result in electric shock, fire, and/or serious personal injury.

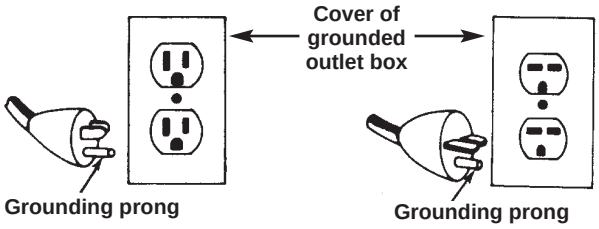
SAVE THESE INSTRUCTIONS!

Work Area Safety

- **Keep your work area clean and well lit.** Cluttered benches and dark areas invite accidents.
- **Do not operate these tools in explosive atmospheres, such as in the presence of flammable liquids, gases, or dust.** Electrical switches may create sparks which may ignite dust or fumes.
- **Keep bystanders, children, and visitors away while operating a Pipe Thawing Unit.** Distractions can cause you to lose control.

Electrical Safety

- **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 tool should electrically malfunction or break down, grounding provides a low resistance path to carry electricity away from the user.



- **Avoid body contact with grounded surfaces such as pipes, radiators, ranges and refrigerators.** There is an increased risk of electrical shock if your body is grounded.
- **Do not expose power tools to rain or wet conditions.** Water entering an electrical tool will increase the risk of electrical shock.
- **Do not abuse cord. Never use the cord to carry the tools or pull the plug from an outlet. Keep cord away from heat, oil, sharp edges, or moving parts.** Replace damaged cords immediately. Damaged cords increase the risk of electrical shock.
- **When operating an electrical tool outside, use an outdoor extension cord marked "W-A" or "W".** These cords are rated for outdoor use and reduce the risk of electrical shock.
- **Use only three-wire extension cords which have three-prong grounding plugs, and three-pole receptacles which accept the tools plug.** Use of other extension cords will not ground the tool and increases the risk of electrical shock.
- **Use proper extension cords.** *(See chart.)* Insufficient conductor size will cause excessive voltage drop, loss of power, and overheating.

Minimum Wire Gauge for Cord Set	
Total Length (in feet)	
0 – 25	14 AWG
26 – 50	12 AWG
Over 50 ft.	NOT RECOMMENDED

- **Keep all electric connections dry and off the ground. Do not touch plugs or tool with wet hands.** Reduces the risk of electrical shock.

Personal Safety

- **Stay alert, watch what you are doing and use common sense when operating a tool. Do not use tool while tired or under the influence of drugs, alcohol or medications.** A moment of inattention while operating tools may result in serious personal injury.
- **Avoid accidental starting. Be sure switch is OFF before plugging in.** Plugging in machines that have the switch ON invites accidents.
- **Do not over-reach. Keep proper footing and balance at all times.** Proper footing and balance enables better control of the tool in unexpected situations.
- **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

- **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.
- **Store idle tools out of the reach of children and other untrained persons.** Tools are dangerous in the hands of untrained users.
- **Maintain tools with care.** Properly maintained tools are less likely to cause injury.
- **Check for 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.

- **Use only accessories that are recommended by the manufacturer for your tool.** Accessories that may be suitable for one tool may become hazardous when used on another tool.
- **Inspect tool and extension cords periodically and replace if damaged.** Damaged cords increase the risk of electrical shock.
- **Keep handles dry and clean; free from oil and grease.** Allows for better control of the tool.
- **Disconnect the plug from the power source before making any adjustments, changing accessories, or storing the unit.** These preventative safety measures reduce the risk of accidentally starting the unit.

Service

- **Tool service must be performed only by qualified repair personnel.** Service or maintenance performed by unqualified repair personnel could result in injury.
- **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 electrical shock or injury.
- **Disconnect all power from the unit before servicing.** Eliminates the risk of electrical shock and accidental starting.

Specific Safety Information

⚠ WARNING

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

Tool Safety

- **Tool is made to thaw frozen iron or copper water pipes. Follow the instructions on proper use.** Other uses may increase the risk of injury.
- **Do not leave the unit unattended while thawing.** Such preventive measures reduce the risk of injury or fire.
- **Do not touch the clamp tips or cable connections.** Reduces the risk of burns.
- **Do not operate unit with housing removed.** Exposure to internal parts may result in injury.
- **Make both pipe connections before plugging in unit.** Prevents electrical arcing between the clamps and the pipe.
- **Use cable and clamps provided with unit.** Incorrect cables may result in overheating of the wires.
- **Keep clamps away from combustible materials or articles that can be damaged by heat.** Clamp tips become hot during use.

Description and Specifications:

Description

The RIDGID Pipe Thawing Machines are easy-to-use, and versatile for thawing ½″ to 1½″ copper or steel/iron pipe up to 150 feet (KT-200). Both the KT-190 and KT-200 use low voltage and high amperage to quickly thaw frozen tap water lines and frozen heating systems.

This method does not require that you know exactly where the frozen section is nor do you have to have direct access to the area. The KT-190 and KT-200 will thaw copper or steel pipe that is underground, beneath the floor or behind walls. Multiple voltage settings on the KT-200 allow for maximum amperage to provide the shortest thawing time. Vinyl coated clamps with 25 foot cables, standard with both units, permit thawing of a 50′ section of pipe. Additional 25′ cable extensions are available for longer runs.

Specifications

Line Capacity:

Primarily recommended for all indoor copper or steel pipes from ½″ to 1½″. Thawing units will not work with plastic pipe or lines containing plastic or rubber couplings.

Thawing Unit:

Input .....115 Volts, 15 Amps

	KT-190	KT-200
Output.....	6.0 Volts	4.5 - 7.6 Volts
Output.....	300 Amps	300 Amps
Minimum Reach	15′	4′
Maximum Reach	75′	150′
Weight	25 lbs	29 lbs
Weight	11.4 kgs	13.2 kgs

Standard Equipment

Qty.	Item
1	Thawing Unit, Model KT-190 or KT-200. 115 volts, 15 Amps.
2	Cables, 25 feet in length, with a vinyl coated spring clamp on one end and a mounting loop on the other.

Accessories

- Extension Cable, 25 feet, # 1/0 AWG c/w nut & bolt. Catalog No. 62772
- Series Cable, 3 feet, # 1/0 AWG Catalog No. 62812

Figure 1 – KT-200 Pipe Thawing Tool

Cables and Clamps

25 feet in length with vinyl coated clamp.

	KT-190	KT-200
Size	#2 AWG	#1/0 AWG
Weight	19 lbs/Pair (8.6 kgs)	23 lbs/Pair (10.5 kgs)

Problem Diagnostics

Main Service Lines

If there is no running water anywhere in the house, the main service from the curb valve to the house is frozen. The service can be thawed by placing one clamp on a tap water line in the basement and the other on the curb key attached to the curb valve. Make sure there is contact between the curb key and valve. Extension Cables are required if runs exceed 50 feet. Additional thawing units may be required to reduce thawing time. Refer to Special Application Procedure for Series Set-Up.

Tap Water Lines

Locate the frozen line by opening faucets and checking for water flow. The frozen section will normally be in an outside wall or in a crawl space with poor insulation. If one faucet does not have running water and the next faucet does, frozen section is between faucets. Place clamps on either hot or cold water lines, not on faucets.

Refer to **Thawing Tap Water Lines** for procedure.

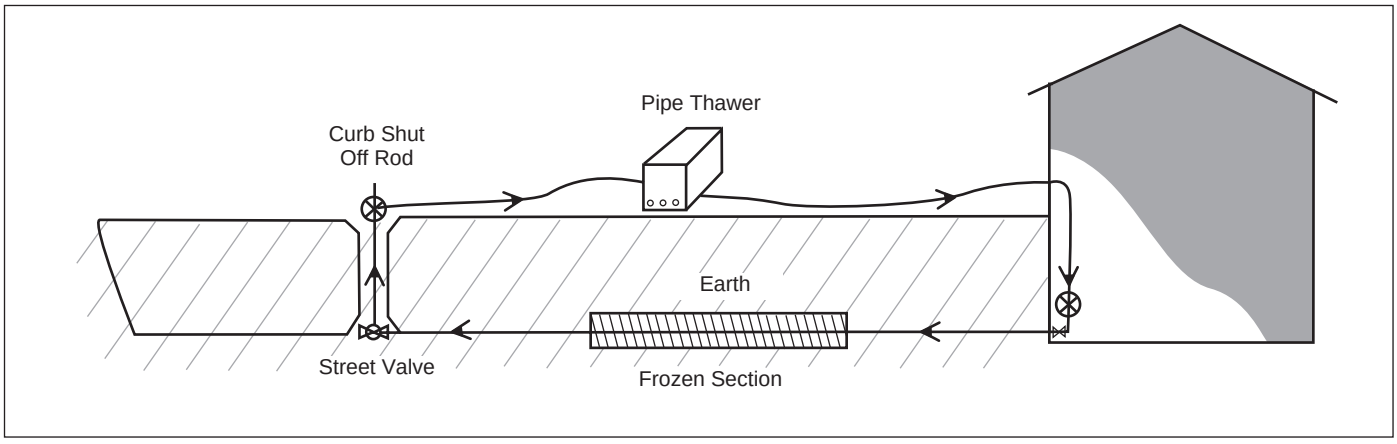


Figure 2 – Thawing Main Service Lines

Tool Assembly

⚠ WARNING

To prevent serious injury, proper assembly of the Thawing Tool is required. The following procedures should be followed:

Figure 3 – Thawing Tool with Cables Installed

Installing Cables with Clamps

1. Remove retaining nut from one of the lugs on back of unit.
2. Slip looped end of cable onto lug bolt with flat side towards unit.
3. Reinstall lug nut and secure tightly.
4. Ensure looped end of cable does not contact housing.
5. Repeat steps 1 and 2 for remaining lug.

NOTE! If cable leads are not securely fastened to thawing unit, thawing time may be extended and/or unit may not function properly.

Tool Inspection

⚠ WARNING

To prevent serious injury, inspect your Pipe Thawing Tool. The following procedures should be followed.

1. Make sure Pipe Thawing Tool is unplugged and the control switches are in the OFF position.
2. Inspect the power cord and plug for damage. If the plug has been modified, is missing the grounding prong or if the cord is damaged, do not use the Thawing Tool until the cord has been replaced.
3. Inspect the cables and clamps for damage. Be sure cable leads are securely fastened to thawing unit. If cable or clamps are damaged, do not use the Thawing Tool until they are replaced. Only use cable and clamps provided with the unit.
4. Clean any oil, grease or dirt from handles, controls and clamps.
5. Inspect the Thawing Tool for any broken or missing parts as well as damage to the metal enclosure. If any of these conditions are present, do not use the Thawing Tool until any problem has been repaired.

Tool Set-Up

⚠ WARNING

To prevent serious injury, proper set-up of the tool and work area is required. The following procedures should be followed to set-up the Pipe Thawing Tool.

1. Check work area for:
   - Adequate lighting
   - 15 Amp grounded electrical outlet
   - Clear path to the electrical outlet that does not contain any sources of heat or oil, sharp edges or moving parts that may damage electrical cord.
   - Dry place for tool and operator. Do not use the tool while standing in water.
   - Flammable liquids, vapors or dust that may ignite.
2. Position KT-190 or KT-200 Pipe Thawer near the area suspected of having a frozen section of pipe.
3. Make sure unit is unplugged and turned OFF. (Switch on KT-190 is in the down (OFF) position. Center switch on KT-200 is in the middle (OFF) position).
4. Uncoil both cables completely and insure they are not overlapping or in contact.
5. Follow instructions on proper placement of clamps.

⚠ WARNING Making pipe connections before plugging in unit prevents arcing between clamp and pipe.

NOTE! Whenever making connections, clean pipe of paint, scale rust, etc. to ensure good amperage flow from the clamps to the pipe. Poor connections will cause the clamps to get much hotter than normal.

6. When plugging the Pipe Thawing Tool into the electrical outlet, making sure to position the power cord along the clear path selected earlier. If the power cord does not reach the outlet, use an extension cord in good condition.

⚠ WARNING To avoid electric shock and electrical fires, never use an extension cord that is damaged or does not meet the following requirements:

- The cord has a three-prong plug similar to shown in Electrical Safety section.
- The cord is rated as “W” or “W-A” if being used outdoors.
- The cord has sufficient wire thickness (14 AWG below 25′/12 AWG 25′ - 50′). If the wire thickness is too small, the cord may overheat, melting the cord’s insulation or causing nearby objects to ignite.

⚠ WARNING To reduce risk of electrical shock, keep all electrical connections dry and off the ground. Do not touch plug with wet hands.

Operating Instructions

⚠ WARNING

To reduce risk of electrical shock, keep all electrical connections dry and off the ground. Do not touch plug with wet hands.

Be very careful when thawing frozen pipes. Clamp tips and cable connections become hot during use. Avoid contact with skin as burns can result.

Keep clamps away from combustible materials or articles that can be damaged by heat.

Do not leave the unit unattended while thawing.

Thawing Tap Water Lines

NOTE! It is recommended that there be standard water pressure on one side of the frozen section of pipe and an open faucet on the other side of the frozen section *(Figure 4)*. As the pipe warms to above freezing point, the water, with pressure behind it, will seep along the inside walls melting and flushing the remaining ice out of the faucet.

1. Make sure unit is unplugged and turned OFF and cables are completely uncoiled.
2. Place one clamp on each side of the frozen section of pipe. Open the faucet where no water flows.

⚠ WARNING Making pipe connections before plugging in unit prevents arcing between clamps and pipe.

3. Plug unit into a grounded 15 amp outlet making sure to position the power cord along the clear path selected earlier.
4. Move switch to ON (up position on KT-190. Center switch down to low position, left switch to A on KT-200).
5. If current is below 15 amps on KT-200, switch to B. If current is still below 15 amps, switch to high position on center switch and right switch up to C.
6. Continue until 15 amps is reached but not exceeded, D switch setting is used with long runs.

Thawing time may vary from a few seconds to several hours depending on length and diameter of pipe being thawed. If time seems unreasonable, check clamps for proper placement.

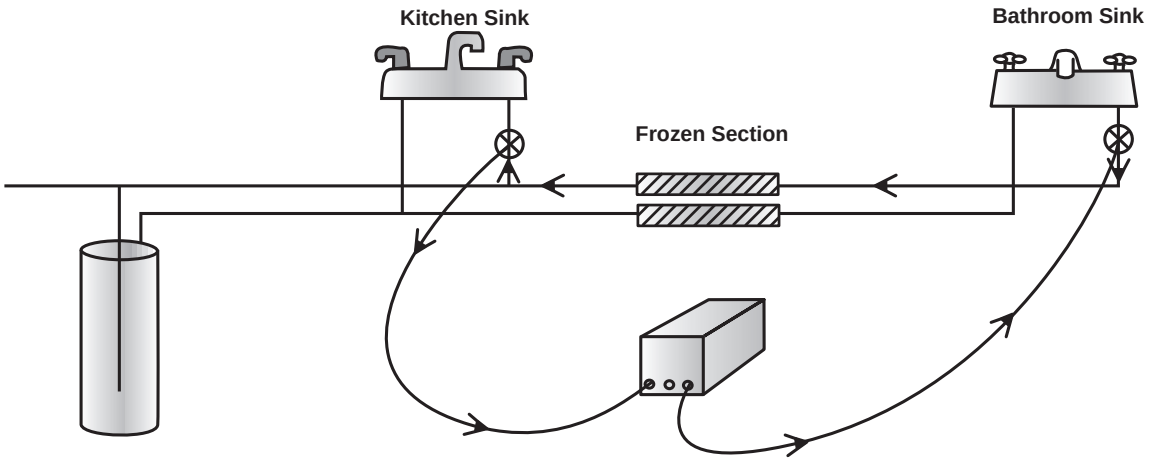


Figure 4 – Thawing Tap Water Lines

NOTE! This tool is equipped with a thermal overload for added safety. If thawing for long periods of time at maximum current, the unit may shut down automatically. Unit will resume operations automatically after approximately 3 minutes.

Tool Removal

1. When water lines have thawed, turn switch to the OFF position and unplug power cord from the electrical outlet.
2. Remove clamps from the pipe.

⚠ WARNING Clamp tips are hot and can cause burns.

3. Allow clamps to cool before coiling cables and placing the unit in storage. While the clamps are hot, keep them away from combustible materials or articles that can be damaged by heat.

Thawing Frozen Hydronic Systems

NOTE! Hydronic systems are harder to thaw due to the lower pressure produced by the circulating pump and the greater lengths of pipe required in a single or multi-zone system.

NOTE! The electrical output current of both the KT-190 and KT-200 can take two paths. The shortest distance between the clamps, or the long path around the pipe loop. Therefore, in some systems it is required to break the pipe to eliminate the short path *(Figure 7)*.

Single Zone System

1. Circulating pump must be operating.
2. Make sure unit is unplugged and OFF and cables are completely uncoiled.
3. Place one clamp near the furnace and the second clamp next to a radiator.

⚠ WARNING Making pipe connections before plugging in unit prevents arcing between clamps and pipe.

4. Plug unit into a grounded 15 amp outlet, making sure to position the power cord along the clear path selected earlier.
5. Position switch to ON. (Up position on KT-190. Center switch down to low and left switch to lower A position on KT-200).

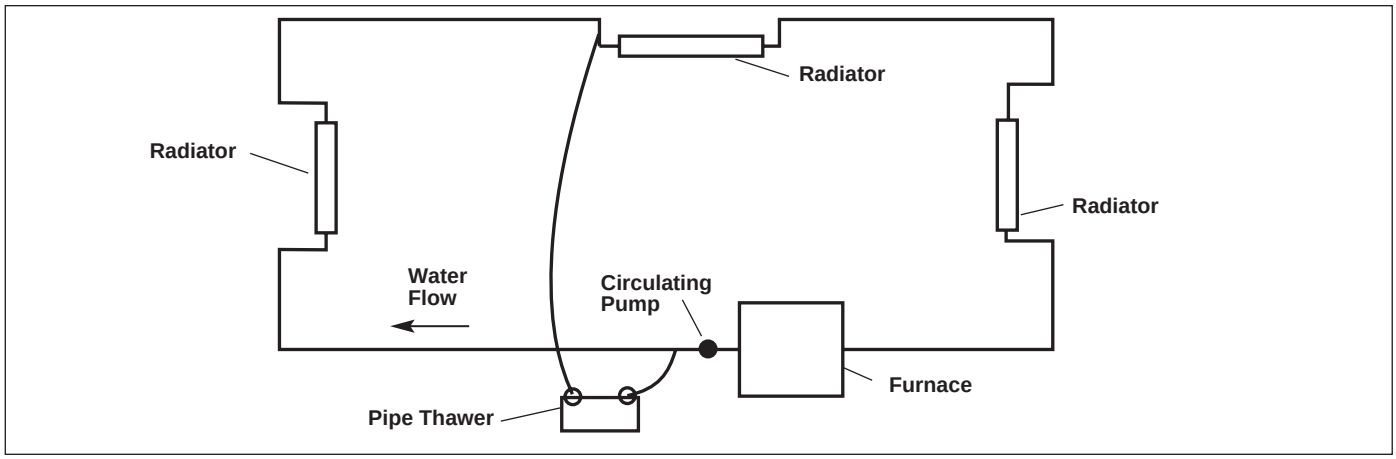


Figure 5 – Single Zone System

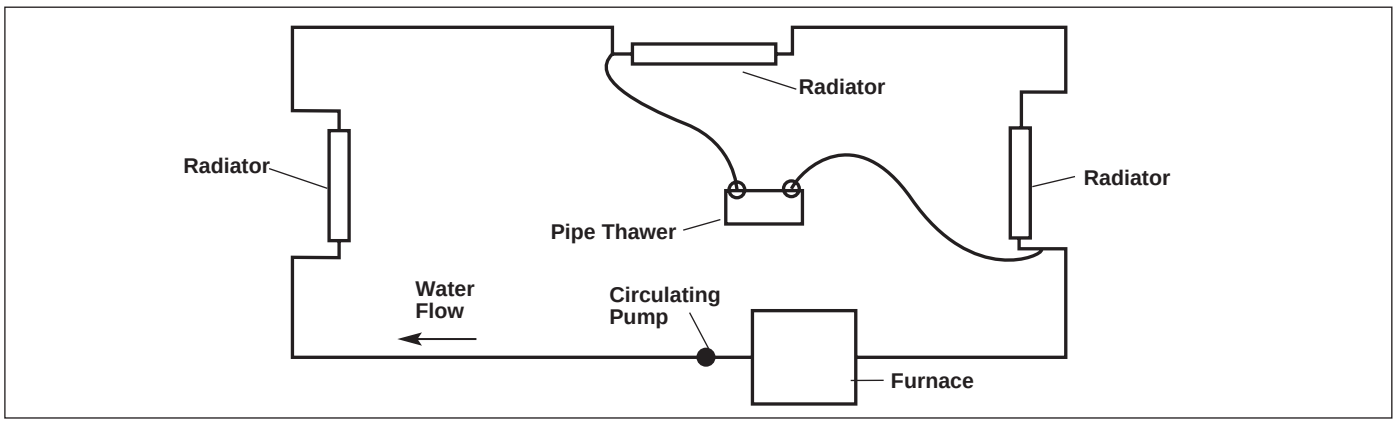


Figure 6 – Single Zone System

6. If current is below 15 amps on KT-200, switch to B. If current is still below 15 amps, switch to high position on center switch and right switch up to C.
7. Continue until 15 amps is reached but not exceeded; D switch setting is used with long runs.

Multi-Zone System

If you are dealing with multi-zones it will be necessary to break the electric current flow to specific zones.

1. Make sure unit is unplugged and switch is in the OFF position and cables are completely uncoiled.
2. Place the pipe clamps several feet apart.

⚠ WARNING Making pipe connections before plugging in unit prevents arcing between clamp and pipe.

3. Maintain a minimum of 15 feet between clamps when using the KT-190, 4 feet for KT-200, to prevent excessive amp draw.
4. Plug unit into a grounded 15 amp outlet making sure to position the power cord along the clear path selected earlier.
5. Move switch to ON (Up position on KT-190. Center switch to low and left switch down to A on KT-200.) If current draw is below 15 amps, select switch B, C, or D to maximize amp draw and reduce thaw time. (Do not exceed 15 amps)

NOTE! If the heat is not restored to piping in 10 minutes, change the location of the clamps to heat a different section of the system. If the above steps have been tried without success, the entire zone is frozen and will need to be thawed by following the Isolating Multi-Zone Steps.

Isolating Multi-Zone Systems

1. Break and cap pipe at point B. This prevents current flow through the second zone and allows for 100% of the current to be used in Zone #1. Do not let pipe ends contact one another.
2. Break the pipe at Point A and place pipe clamps as shown in *Figure 7*. This forces the current to flow through Zone #1. Use a container to collect the water.
3. Once Zone #1 is thawed, turn the unit and circulating pump OFF. If Zone #2 is frozen, cap the pipe at Point A Remove the cap from Point B and place a container at Point B to collect the water.
4. Place the clamps of the opposites sides of the break at Point B. Once Zone #2 is thawed, turn circulating pump and thawing unit OFF.
5. Reconnect all pipes and check both Zone #1 and #2 for heat.

Special Applications Procedure

Increasing Thawing Capacity on KT-200 Only

⚠ WARNING Failure to follow the procedures below for parallel and series operation of the thawing units can result in electrical shock or damage to the equipment.

Series Operation

Units arranged in series work best for long pipe lengths.

1. Position units near the frozen section of pipe and next to one another such that cable lugs are toward pipe.
2. Make sure the units are unplugged and center switch is in the OFF position.

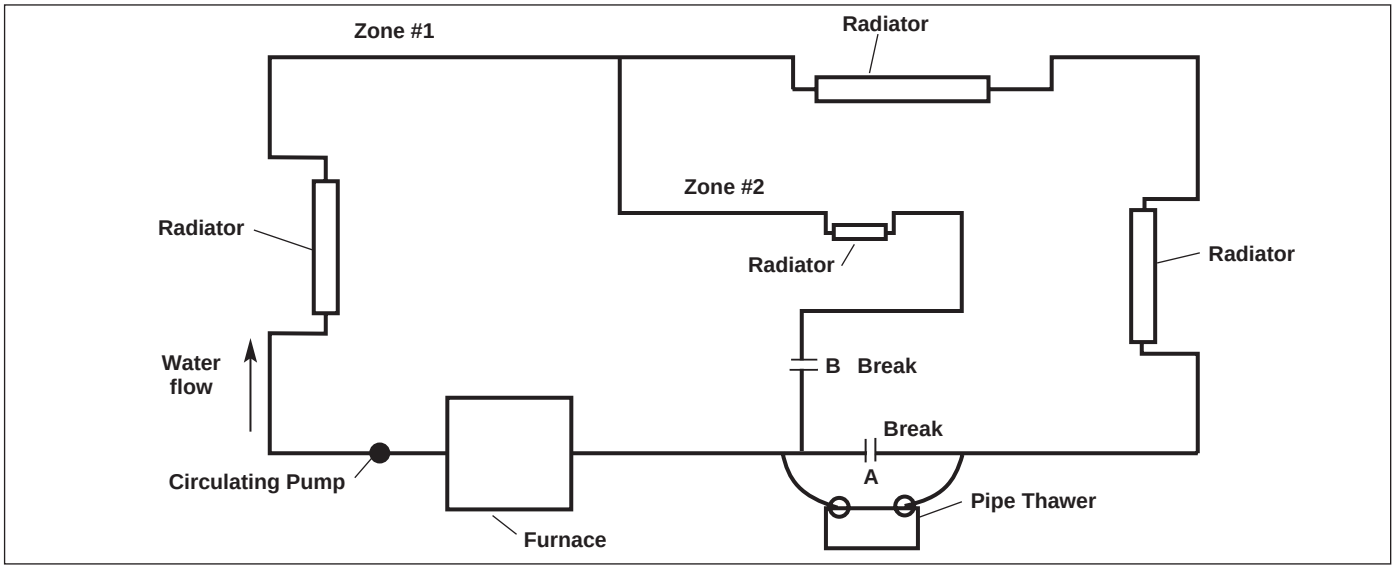


Figure 7 – Multi Zoned System

3. Connect one end of the pigtail (Ridge Catalog #62812) on the right lug of the left unit, and the other end on the left lug of the right unit.
4. Attach pipe thawing leads to remaining lugs.
5. Place one clamp on either side of the frozen section of pipe.

⚠ WARNING Making pipe connections before plugging in unit prevents arcing between clamps and pipe.

6. Plug the units into outlets that are NOT on the same circuit. (Protected by separate fuses).

⚠ WARNING Both thawing units must be plugged into electrical outlets before switching unit ON. Failure to follow the procedure can result in electrical shock.

7. With two units connected in series, seven power settings are available with the KT-200 by using the switches on both units. The combinations are AA, AB, BB, BC, CC, CD, DD.

NOTE! A circuit will not be completed until the switch of both units is in the ON position.

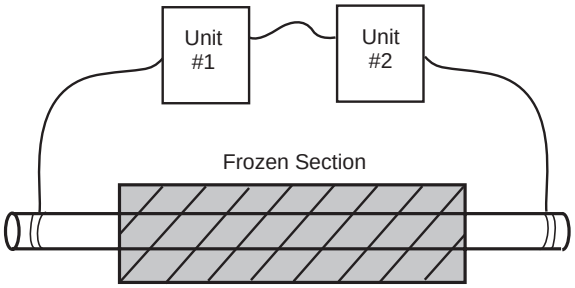


Figure 8 – Series Set-Up

Parallel Operation

Units arranged in parallel work best for larger pipes diameters.

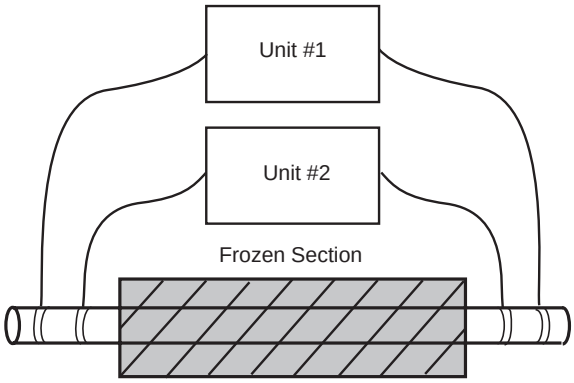


Figure 9 – Parallel Set-Up

1. Position units near frozen section of pipe.
2. Make sure units are unplugged and switches are in the OFF position and cables are completely uncoiled.
3. Attach cables and clamps to lugs.
4. Place clamps on either side of the frozen section of pipe.

⚠ WARNING Making pipe connections before plugging in unit prevents arcing between clamp and pipe.

5. Plug units into outlets that are NOT on the same circuit. (protected by different fuses).

⚠ WARNING Both thawing units must be plugged into electrical outlets before switching unit ON. Failure to follow the procedure can result in electrical shock.

6. The power settings available are AA, BB, CC, and DD with the KT-200.

NOTE! With both units on the same setting both KT-200 amp. meters should read approximately the same. If this does not occur, turn both units OFF and exchange the cables on one unit. The correct polarity is achieved by the cable hook-up that produces the lowest amp. meter reading.

IMPORTANT: Failure to follow above set-up will result in most current flowing through the adjacent clamps and not the pipe.

Maintenance Instructions

⚠ WARNING

Make sure unit is unplugged from power source before performing maintenance or repairs.

Tool Maintenance

1. Replace damaged, frayed, broken or worn cables.
2. Periodically clean lugs with steel wool and emery cloth.
3. Replace damaged, frayed, broken or worn cords.
4. Keep clamps dry and clean.

Tool Storage

⚠ WARNING Electrical equipment must be kept indoors or well covered in rainy weather. Store the tool in a locked area that is out of reach of children and people unfamiliar with Pipe Thawing tools. This tool can cause serious injury in the hands of untrained users.

Service and Repair

⚠ WARNING

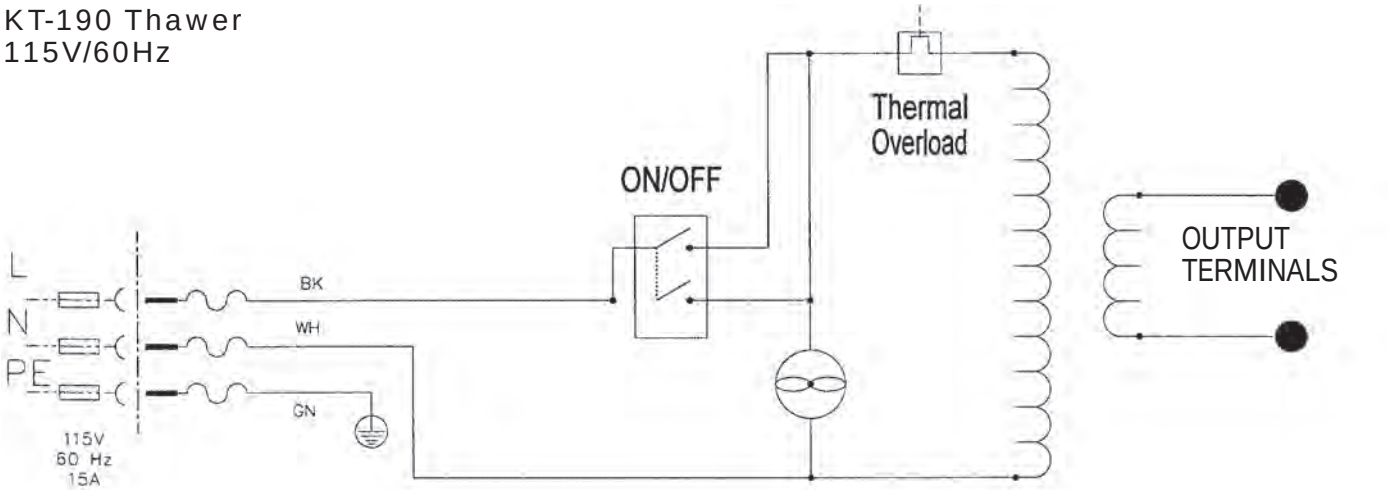
Service and repair work on this tool must be performed by qualified repair personnel. Thawing unit should be taken to a RIDGID Independent Authorized Service Center or returned to the factory. All repairs made by Ridge service facilities are warranted against defects in material and workmanship.

When servicing this tool, only identical replacement parts should be used. Failure to follow these instructions may create a risk of electrical shock or other serious injury.

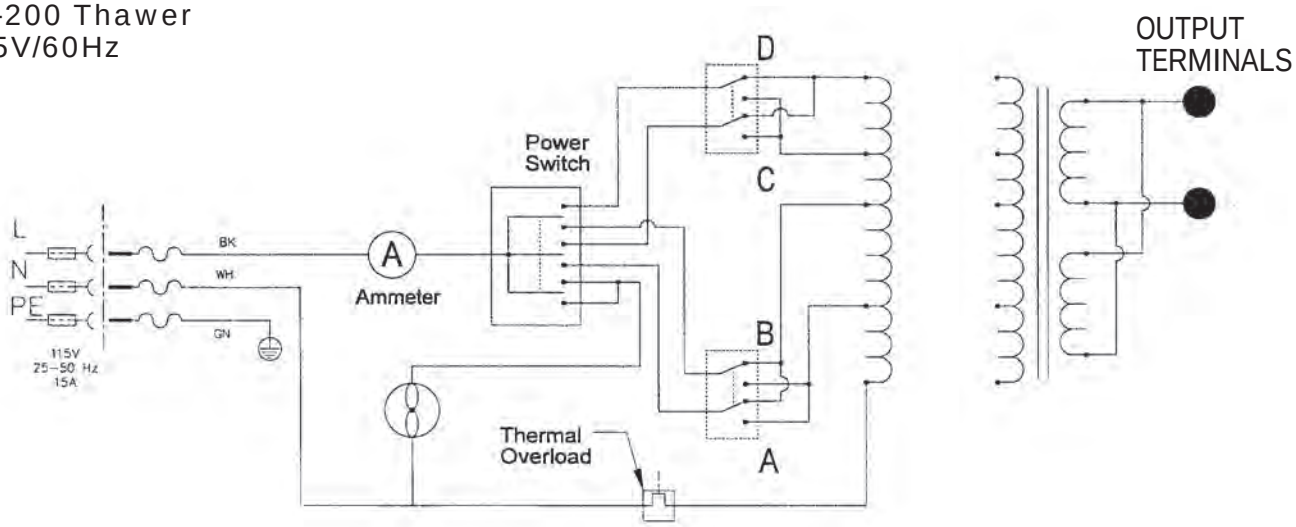
If you have any questions regarding the service or repair of this machine, call or write to:

Electrical Schematics

KT-190 Thawer
115V/60Hz



KT-200 Thawer
115V/60Hz



RIDGID
FULL LIFETIME WARRANTY
Against Material Defects & Workmanship

What is covered
RIDGID® tools are warranted to be free of defects in workmanship and material.

How long coverage lasts
This warranty lasts for the lifetime of the RIDGID® tool. Warranty coverage ends when the product becomes unusable for reasons other than defects in workmanship or material.

How you can get service
To obtain the benefit of this warranty, deliver via prepaid transportation the complete product to RIDGE TOOL COMPANY, Elyria, Ohio, or any authorized RIDGID® INDEPENDENT SERVICE CENTER. Pipe wrenches and other hand tools should be returned to the place of purchase.

What we will do to correct problems
Warranted products will be repaired or replaced, at RIDGE TOOL'S option, and returned at no charge; or, if after three attempts to repair or replace during the warranty period the product is still defective, you can elect to receive a full refund of your purchase price.

What is not covered
Failures due to misuse, abuse or normal wear and tear are not covered by this warranty. RIDGE TOOL shall not be responsible for any incidental or consequential damages.

How local law relates to the warranty
Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you. This warranty gives you specific rights, and you may also have other rights, which vary, from state to state, province to province, or country to country.

No other express warranty applies
This FULL LIFETIME WARRANTY is the sole and exclusive warranty for RIDGID® products. No employee, agent, dealer, or other person is authorized to alter this warranty or make any other warranty on behalf of the RIDGE TOOL COMPANY.

RIDGID
FULL LIFETIME WARRANTY
Against Material Defects & Workmanship

Qué cubre
Las herramientas RIDGID est n garantizadas contra defectos de la mano de obra y de los materiales empleados en su fabricaci n.

Duración de la cobertura
Esta garant a cubre a la herramienta RIDGID durante toda su vida til. La cobertura de la garant a caduca cuando el producto se torna inservible por razones distintas a las de defectos en la mano de obra o en los materiales.

Cómo obtener servicio
Para obtener los beneficios de esta garant a, env e mediante porte pagado, la totalidad del producto a RIDGE TOOL COMPANY, en Elyria, Ohio, o a cualquier Servicentro Independiente RIDGID. Las llaves para tubos y dem s herramientas de mano deben devolverse a la tienda donde se adquirieron.

Lo que hacemos para corregir el problema
El producto bajo garant a ser reparado o reemplazado por otro, a discreci n de RIDGE TOOL, y devuelto sin costo; o, si a n resulta defectuoso despu s de haber sido reparado o sustituido tres veces durante el per odo de su garant a, Ud. puede optar por recibir un reembolso por el valor total de su compra.

Lo que no está cubierto
Esta garant a no cubre fallas debido al mal uso, abuso o desgaste normal. RIDGE TOOL no se hace responsable de da o incidental o consiguiente alguno.

Relación entre la garantía y las leyes locales
Algunos estados de los EE.UU. no permiten la exclusi n o restricci n referente a da os incidentales o consiguientes. Por lo tanto, puede que la limitaci n o restricci n mencionada anteriormente no rija para Ud. Esta garant a le otorga derechos espec ficos, y puede que, adem s, Ud tenga otros derechos, los cuales var an de estado a estado, provincia a provincia o pa s a pa s.

No rige ninguna otra garantía expresa
Esta GARANTIA VITALICIA es la nica y exclusiva garant a para los productos RIDGID. Ning n empleado, agente, distribuidor u otra persona est autorizado para modificar esta garant a u ofrecer cualquier otra garant a en nombre de RIDGE TOOL COMPANY.

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Professional Tools

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