

ProMelt® Hydronic Panels

Pre-Configured Snow Melt Solutions

Installation, Operation and Maintenance Manual

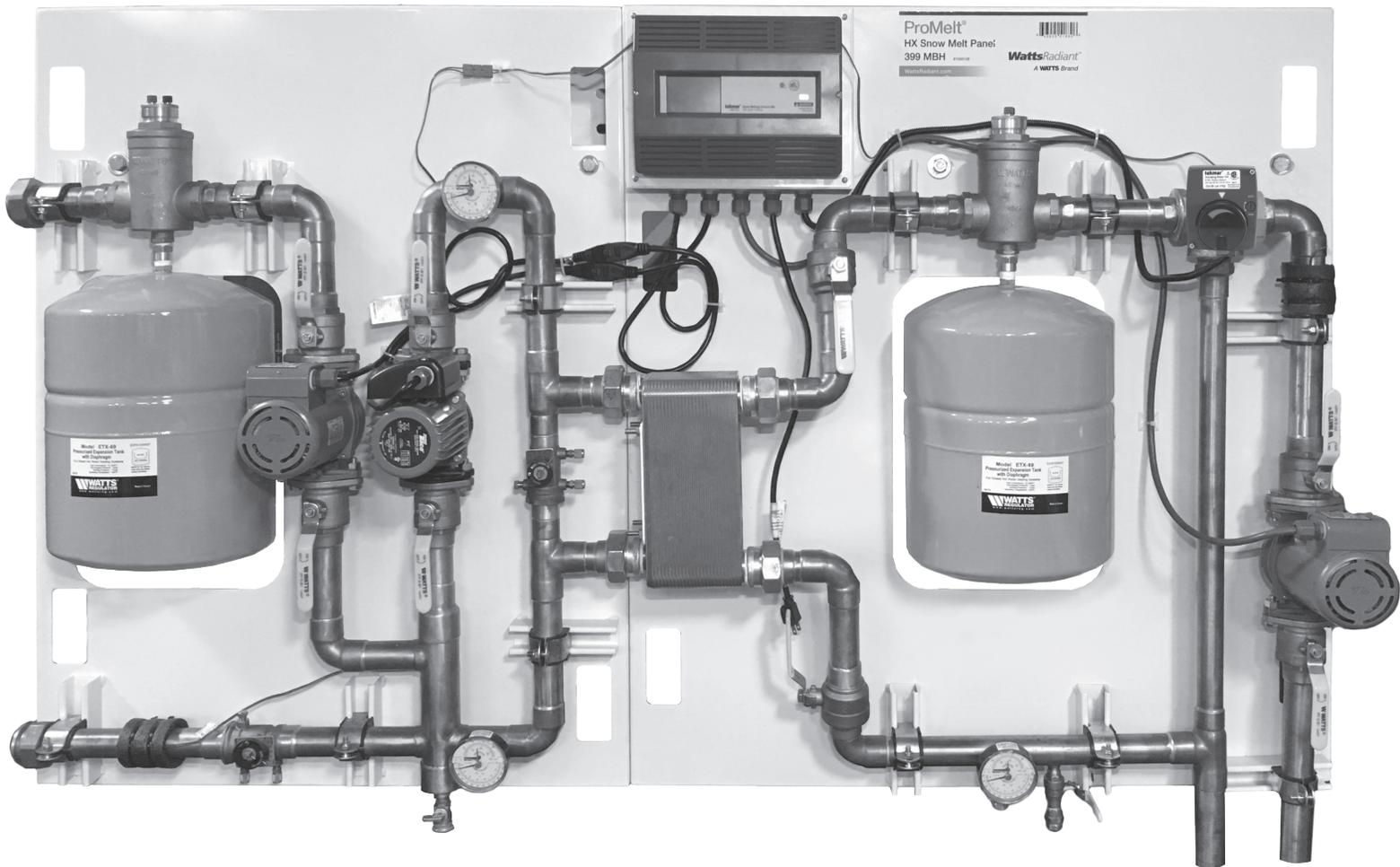


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Introduction and General Safety

Thank you for choosing a ProMelt Hydronic Panel for your snow melting system installation. This manual focuses on the installation details required for the ProMelt Direct and HX panels. With the exception of tubing, installation manuals relating to the controls, sensors, manifolds and other components of the snow melting system are included with individual parts. Directions for tubing installation are provided in the IOM-WR-PAP-PEX-PEXAL-PERT installation manual, available for download in the literature section of www.watts.com/radiant. Replacement manuals for the ProMelt Direct and HX Panels, manifolds, fittings, bend supports and other accessories are also available from www.watts.com/radiant. Replacement manuals for the snow melting controls and sensors are available from tekmarControls.com.

⚠ WARNING



**THINK
SAFETY
FIRST**

Read this Manual BEFORE using this equipment. Safety is important to those installing and servicing a ProMelt® panel. Please follow all safety guidelines in this manual, on the panel directly, as well as any local or state guidelines.

Failure to read and follow all safety and use information can result in death, serious personal injury, property damage, or damage to the equipment. Keep this Manual for future reference.

⚠ WARNING

Please be aware local codes may require this product and/or the thermostatic control to be installed or connected by an electrician.

Important Safety Information



This is a safety-alert symbol. The safety alert symbol is shown alone or used with a signal word (DANGER, WARNING, or CAUTION), a pictorial and/or a safety message to identify hazards.

When you see this symbol alone or with a signal word on your equipment or in this Manual, be alert to the potential for death or serious personal injury.



This pictorial alerts you to electricity, electrocution, and shock hazards.

⚠ WARNING

This symbol identifies hazards which, if not avoided, could result in death or serious injury.

⚠ CAUTION

This symbol identifies hazards which, if not avoided, could result in minor or moderate injury.

NOTICE

This symbol identifies practices, actions, or failure to act which could result in property damage or damage to the ProMelt panel.

Environmental Safety



Always keep the area around the ProMelt panel clean. Remove any debris or material which may be a hazard.

Always disconnect power from the ProMelt panel before beginning any type of repair.



ProMelt panels operate with hot water at moderate pressures. Opening a drain valve while the system fluid is still at temperature may result in burns.



ProMelt panels are designed to be used with propylene glycol to prevent the system fluid from freezing. Refer to manufacturer's labels for handling and disposal instructions. Most system designs call for a 50% water-glycol solution. Consult system design for further details.



Each ProMelt panel comes complete with a tekmar[®] snow melt control, sensors, and relays. This manual contains basic electrical and installation instructions necessary to ensure proper operation. Set up and operational instructions can be found in the corresponding tekmar control manual.

User Health and Safety



Care should be taken when lifting a ProMelt panel. Each panel can weigh in excess of 100 pounds and can be unevenly balanced, making it harder to maintain control. Two people are recommended to lift a ProMelt panel.



Make sure site is properly prepared, cleared of debris, and has a wall sturdy enough to support a ProMelt panel system. Failure to do so may result in the ProMelt panel falling.



Eye protection is recommended when installing a ProMelt panel.

Operational Safety

- Do not operate without system fluid.
- Do not place electrical outlets near air vents. It is common for some water spray to be present when air is released.
- Do not install a ProMelt panel in any orientation other than vertical.
- Do not mount a ProMelt panel in a manner which makes it difficult to service.
- Always make sure all gauges are working properly.

NOTICE

For systems using the tekmar Snow/Ice Sensor 090, ensure the Snow/Ice Sensor Socket 091 and conduit are installed before the concrete is poured. For installation

details, refer to the manual included with the 091. This manual is available for download from tekmarControls.com.

Receiving

Before unpacking the ProMelt panel(s), check the package for damage. Make sure there are no seriously crushed edges on the cover or surrounding supports. If damage is evident, report this to the shipping company. Contact Watts Radiant for assistance, if needed.

Note if the shock indicator sticker has been discolored. If the indicator has turned red, the ProMelt panel has experienced excessive shock and should be reported to the freight carrier.

Any type of damage can result in improper operation, both mechanically and electrically. Do not attempt to fix damaged areas without obtaining written instructions from Watts Radiant on how the corrections are to be performed.

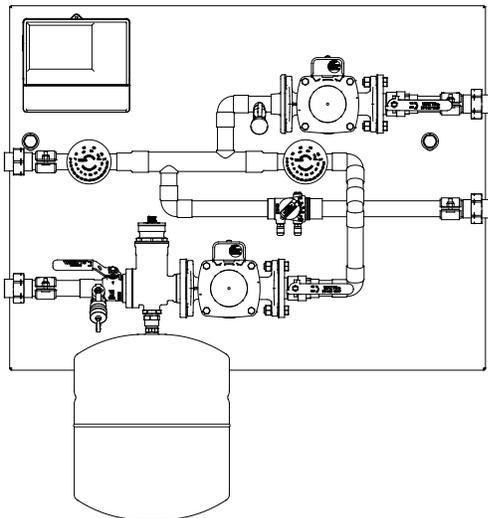


Product Description

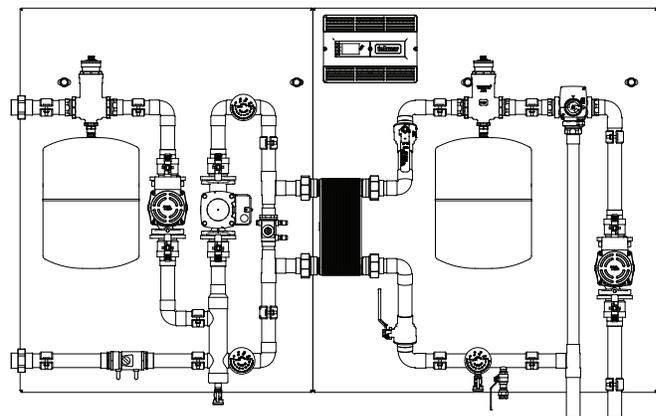
ProMelt panels are designed to be used solely with condensing boilers and are available in two main configurations: non-mixing and a heat exchanger (HX) with mixing optional.

The ProMelt panels are available in three system load sizes: the non-mixing panels are available in 150 and 250 MBH while the larger heat exchanger model is available in 399MBH with a mixing valve.

An integrated hydraulic separator ensures proper flow through both the heat source and zone. Each ProMelt system includes either a 670 or 680 tekmar snow melt control and corresponding snow/ice sensor. All panels come pre-wired, including the circulators, actuators, and disconnects. A standard 120 VAC receptacle plug is pre-wired to the panel to simplify wiring. Make sure a 120 VAC receptacle is located within three (3) feet of the ProMelt panel.



Non-Mixing ProMelt available in both 150 and 250 MBH sizes.



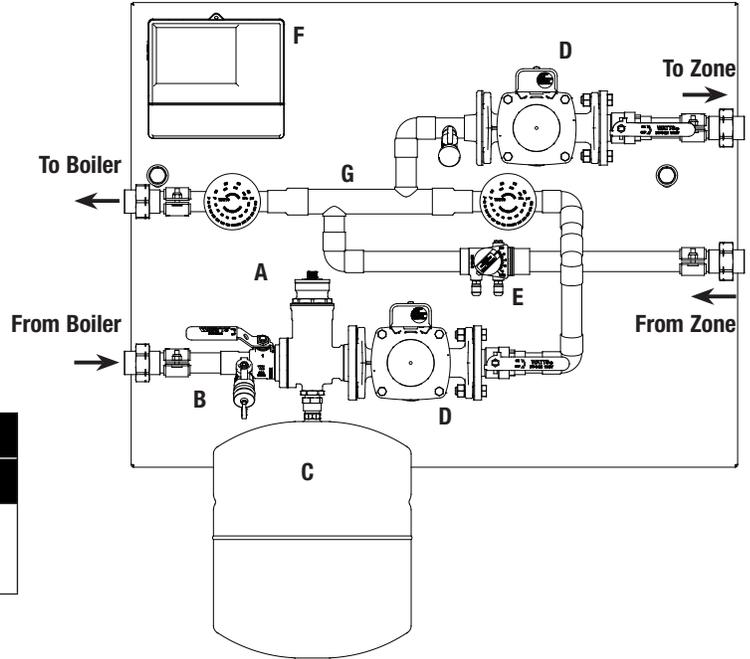
Heat Exchanger ProMelt available in 399 MBH.

ProMelt Panels

150-250 MBH ProMelt Panels

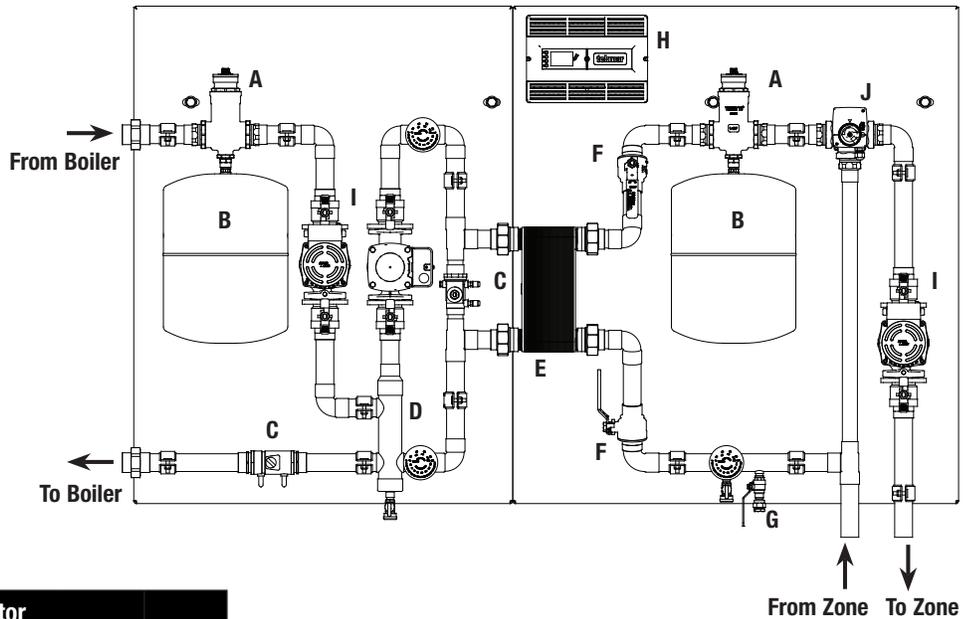
- A: Air Remover
- B: Iso-Drain Valve
- C: Expansion Tank
- D: Circulator
- E: Circuit Setter
- F: tekmar 670 Control
- G: Hydraulic Separator

Load MBH	Pipe Size	Max GPM	Circulator				
			Type	Ph	Volt.	Amps	HP
150	1"	9	0013	1	120	2	1/6
250	1-1/4"	15					



399 MBH ProMelt Panels

- A: Air Remover
- B: Expansion Tank
- C: Balance Valve
- D: Hydraulic Separator
- E: Heat Exchanger
- F: Ball Valve
- G: Drain Valve
- H: tekmar 680 Control
- I: Circulator
- J: Mix Valve with Actuator



Load MBH	Pipe Size	Max GPM	Circulator				
			Type	Ph	Volt.	Amps	HP
399	1-1/2"	25	0013	1	120	2.0	1/6
			2400-45			3.6	1/3

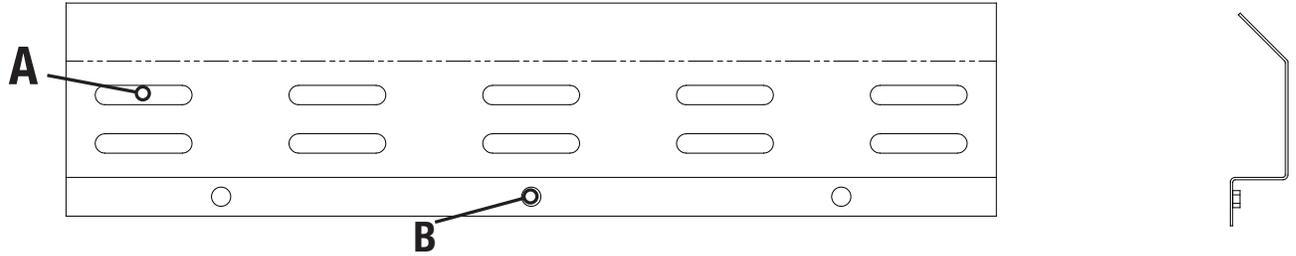
Panel Model	Snow Melt Area	Max BTUs /ft ²	Pipe Size	Total Length
150	700 ft ²	150	1"	50ft
250	1200 ft ²	150	1-1/4"	50ft
399	2000 ft ²	150	1-1/2"	50ft

**If your project is larger than 2000 square feet, or requires greater than 150 BTUs per square foot of output, or requires greater than a total of 50 feet of tubing to connect the ProMelt panel to the manifold (total includes the supply and return lines combined), please contact Watts technical services for assistance.*

Cleat Brackets

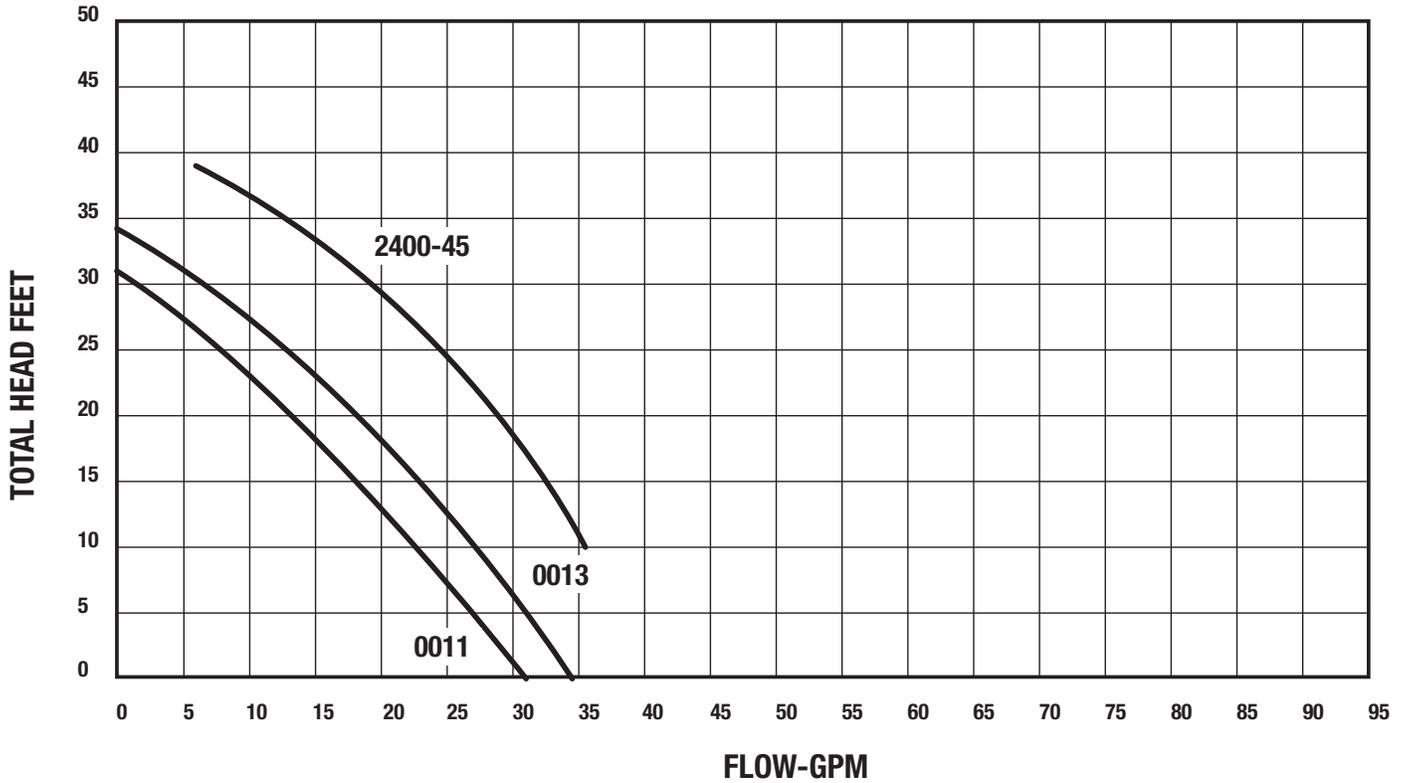
- A: Lag-bolt slots
- B: Panel Mounts

Each Cleat is designed to be used with a single ProMelt panel system and provides an anchor point to at least two studs (three studs for HX panels). Check packaging for Cleat when removing panel from packing material.



Circulators

When selecting a ProMelt panel make sure the included circulator is capable of handling the system flow and head pressure requirements.



Installation

CAUTION

The following outlines proper steps and precautions for installing a ProMelt panel. All site preparations are assumed to be completed before attempting an installation. Refer to accompanying product literature for specific information on panel components.

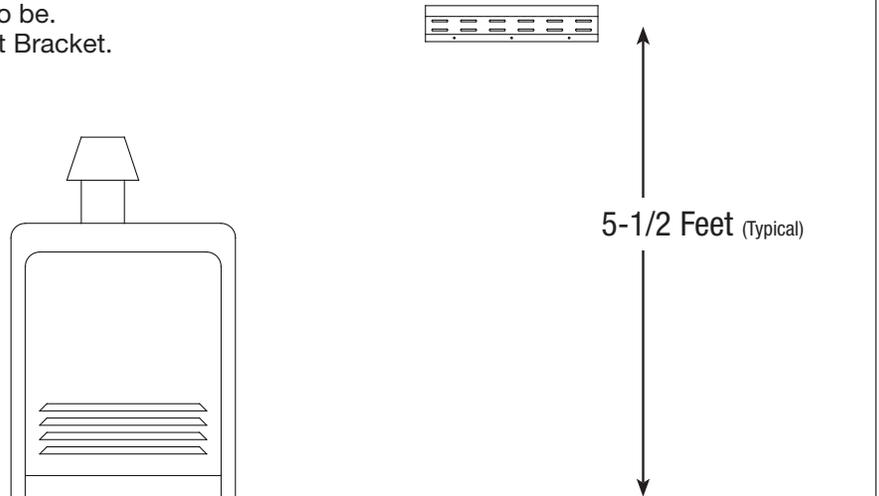


Verify wall or related structural elements are suitable to secure a ProMelt panel. Failure to do so may result in the panel falling off the wall or damaging nearby equipment.

Mounting ProMelt Panels

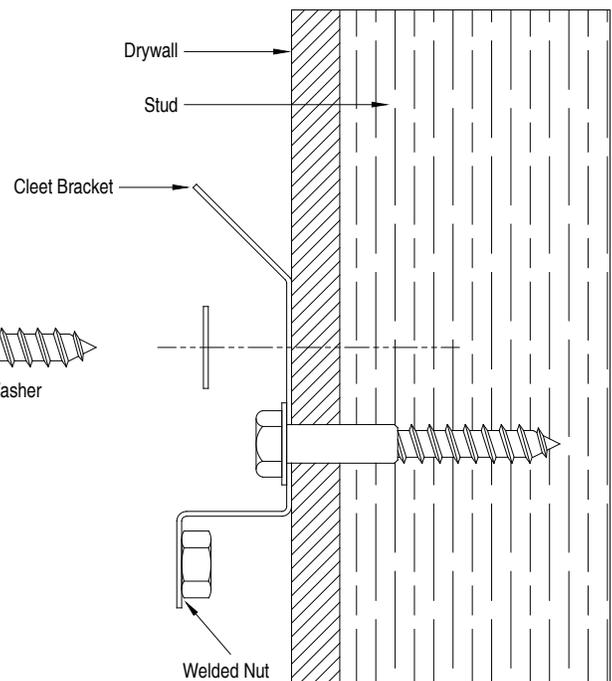
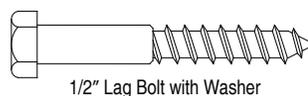
Each ProMelt panel uses a Cleat Bracket to secure to the wall. Cleats are designed to allow the ProMelt panel to be safely lifted and secured in place.

1. Locate where the top of the panel needs to be. This will correspond to the top of the Cleat Bracket.



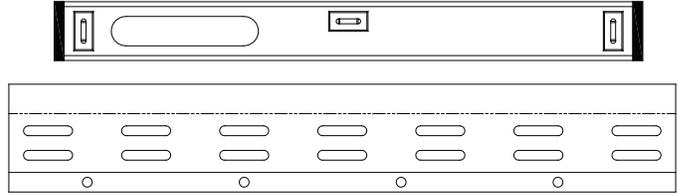
2. Mount the Cleat Bracket using two 1/2" x 3-1/2" (min) long lag bolts with the smaller 150 and 250 MBH ProMelt panels and four with the larger 399 MBH panels. Ensure the bracket is level on the wall and crosses at least two studs (three for HX). Pre-drill each bolt location with a 5/16" pilot hole. Additional bolts may be used for further support.

Use washers when installing lag bolts to reduce the risk of pull out.



Installation

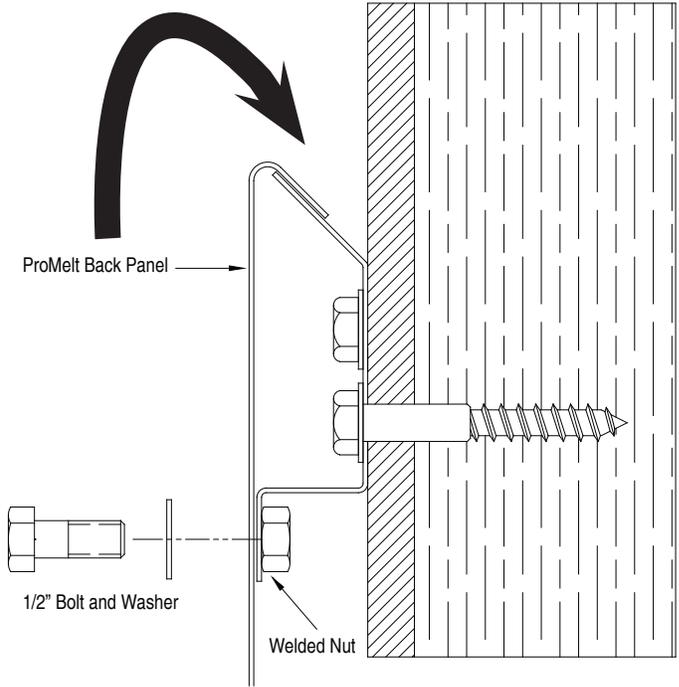
3. Confirm the Cleat Bracket is level.



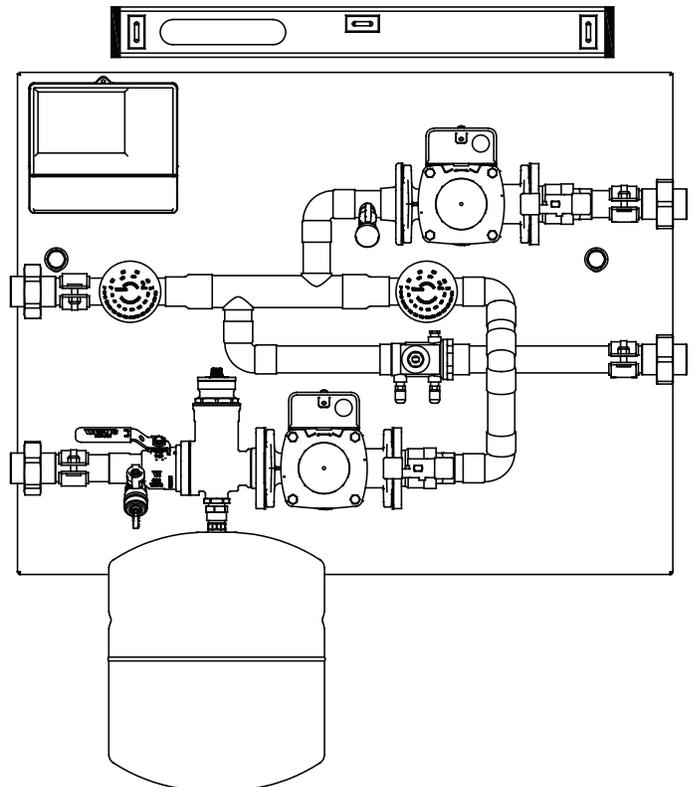
CAUTION



4. Locate mounting holes on the front of the ProMelt panel. With assistance, lift the ProMelt panel so the top edge sits on the Cleat Bracket. Make sure the mounting holes on the brackets align with the holes on the ProMelt panel. Secure the back panel to the cleat with the use of a 1/2" bolt and washer.



5. Confirm the panel is level and fully engaged.



Installation

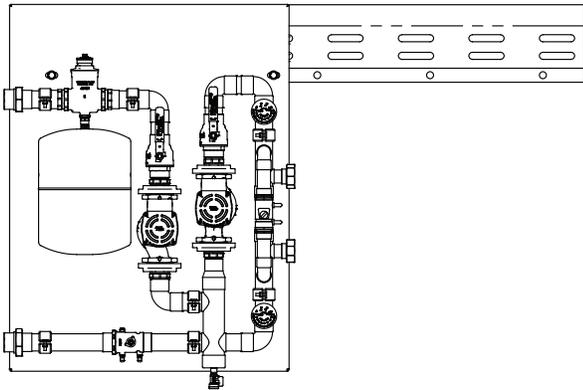
NOTICE

When installing the larger 399 MBH panels, it will be necessary to install in sections. The panel system will come fully assembled in the shipping crate. Expansion tanks will be shipped loose in the crate.

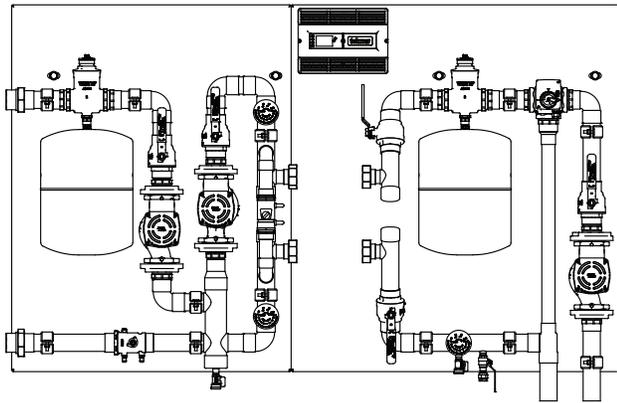
First, disconnect the heat exchanger before attempting to lift the assembly. Failure to do so may cause the panels to warp, deforming the connecting copper.

Lift and mount the primary side followed by the secondary. Center both panels on the Cleat Bracket. Connect the heat exchanger last. Ensure the heat exchanger is level and the unions are securely tightened.

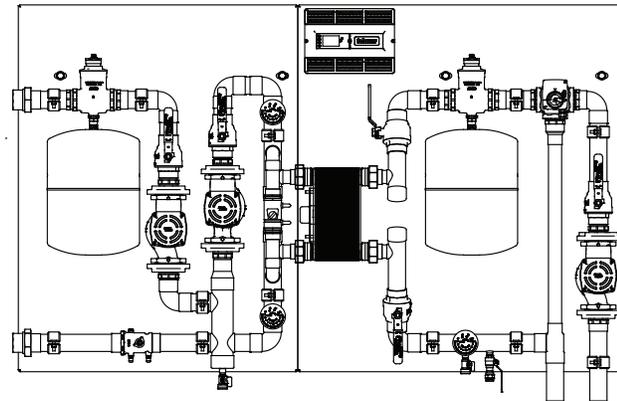
Step 1



Step 2



Step 3



6. Supply and Return Line Sizing

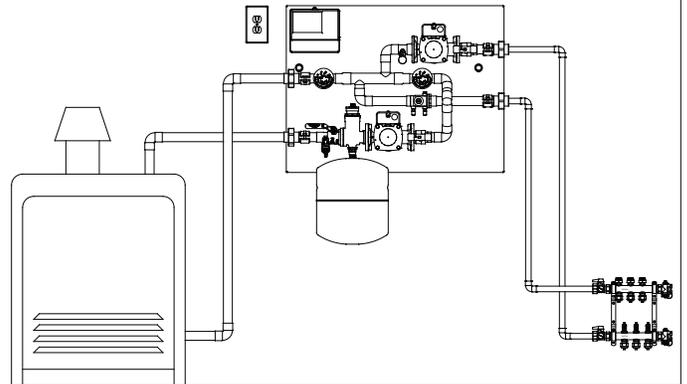
The ProMelt panels can be connected to the snow melt manifold using up to 50 feet (TOTAL of tubing including both the supply and return lines) of the following;

Supply and Return Pipe Sizes:

- 150 MBH – requires a minimum of 1" tubing (copper, RadiantPEX+, RadiantPERT or R-flex)
- 250 MBH – requires a minimum of 1-1/4" tubing (copper, RadiantPEX+ or R-flex)
- 399 MBH – requires a minimum of 1-1/2" tubing (copper, RadiantPEX+ or R-flex)

If the manifold is located further that 25 feet away from the panel (greater than 50 feet of tubing for the supply and return lines combined), please contact Watts technical services for assistance.

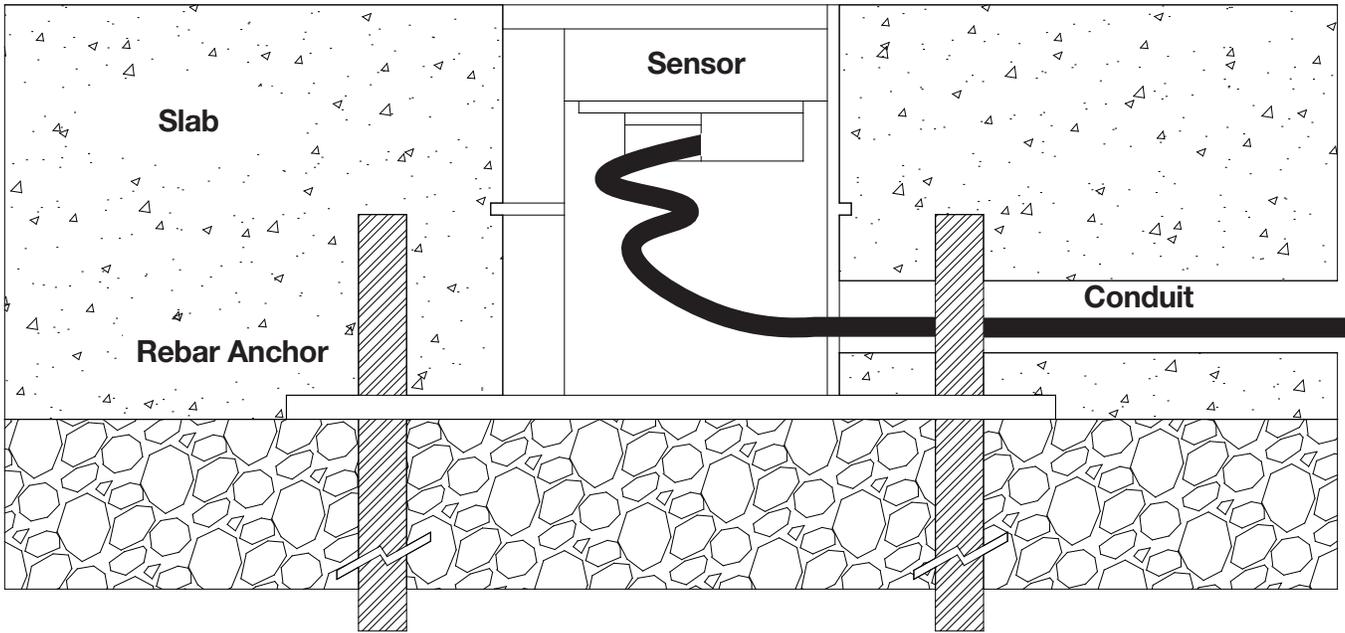
Insulation is required on the lines connecting the snow melt manifold to the ProMelt panel.



Installation

8. Follow the instructions provided with the sensor to connect them to the tekmar snow melting control. Refer to the corresponding tekmar installation manual for further information on wiring.

For a ProMelt panel to operate properly, either an 090 or 095 snow melt sensor and Outdoor Sensor 070 must be installed and wired to the panel.



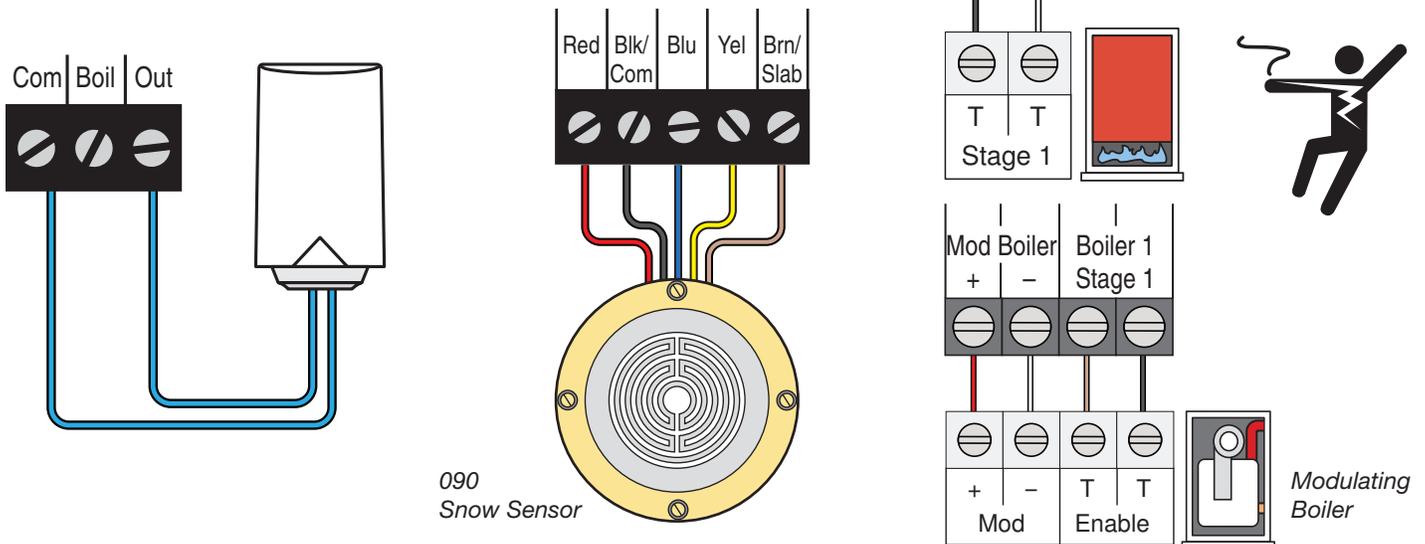
ALL CONDUIT AND RELATED ACCESSORIES MUST BE INSTALLED PRIOR TO SENSOR INSTALL.

Use five-conductor 18 AWG LVT cable for the 090 or 095 sensor and two-conductor 18 AWG LVT cable for the 070 air sensor. Either cable can be run up to 500 feet without impacting performance. Contact the factory if a longer distance is required.

NOTICE

This manual does not detail how to install external sensors. For details on how to install the sensors and socket, please refer to installation manuals included with the sensor packaging.

Sensors are not pre-wired to the ProMelt Panel. The tekmar Snow / Ice Sensor 090 comes with 65 feet of the necessary 18 AWG cable.



Installation

Each ProMelt panel comes pre-wired with a dedicated tekmar snow melt control. The smaller, non-mixing panels come standard with a 670, while the larger heat exchanger panels come with a 680. Both systems include a Snow/Ice Sensor 090 or Snow Sensor 095.

Follow the wiring instructions in the tekmar Snow Melting Control manual to connect to the heat source.

9. Plug in the tekmar control. A home screen will appear on the tekmar control. Follow all instructions in the corresponding tekmar literature to properly set up the ProMelt panel.

⚠ WARNING

All panels are pre-wired with a standard 120 volt power plug. A transformer (if necessary) is provided on each panel for the use of low voltage electrical components. Do not connect high voltage to low voltage connections.



System Filling, Commissioning and Maintenance

This section covers general commissioning steps and procedures. Refer to the specific tekmar control manual included with the ProMelt panel for complete details on system set up and operation parameters.

Follow all boiler manufacturer recommendations for set up, wiring, and operation.

1. **Field Verification:** Verify all installed system components reflect plans and specifications. If there are substitutions, verify compliance. If there are omissions, check to see if the system design was revised or if the omission is accepted by the project manager.
2. **Operational Performance:** Verify all components, including boiler, function as designed. Ensure all circulators run and water moves through the system without hindrance. If a mix valve is present, ensure actuators function and the valve opens and closes normally.

3. **Functional Performance:**

Verify system initiates on a call for melting, interacts with the WiFi and weather data properly, and cycles on/off as designed.

4. **Key Functions:**

Identify key functions, features and training the end-user on how to read, understand, and modify the tekmar control. Outline how to move the system from active to standby and how to engage a manual override if necessary.

It is important to perform a system start up approximately a month before the winter season. This process will help ensure circulators and other components continue to function as intended.

System Commissioning and Maintenance

All ProMelt systems will have fluid exposed to temperatures below freezing and will use propylene glycol to prevent the system fluid from freezing. The level of freeze protection will depend on the glycol concentration used.

If the system is to be filled and commissioned during freezing conditions, it is strongly recommended that a fill cart be used to fill the system with pre-mixed anti-freeze solution. Pre-mixing glycol with distilled water in the proper ratio is always the preferred method of filling the system. Be certain to follow the glycol manufacturer's instructions for mixing, testing and maintaining the anti-freeze solution.

NOTICE

When using the ProMelt 399 panel, typically only the snow melt side of the heat exchanger (connected to the snow melt manifold) is filled with anti-freeze solution.

Glycol Basics

Glycol is naturally corrosive. Buffers and inhibitors are added to offset this corrosive effect. In addition, glycol acts like an "oxygen grabber", absorbing any free oxygen molecules in the system. The more oxygen the glycol "grabs", the more acidic it will become.

Systems should not be operated at levels below 30% glycol. Glycol levels below 25% do not contain enough corrosion inhibitors and may cause the glycol to act as food, allowing microbes to grow. These microbes feed, grow and die, creating a black sludge material in the system. Propylene glycol concentrations above 25% prevent microbial growth. It is recommended to not use a concentration greater than 70% as the fluid may become too viscous (thick) for the circulators.



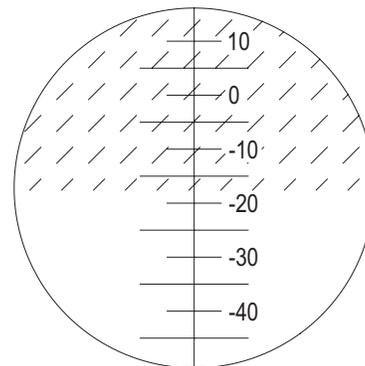
Refractometer

As glycol in the system ages, the inhibitors and buffers contained in the system begin to break down. This process slowly returns the system to the natural pH level of the glycol. If not properly maintained, glycol will cause corrosion. Check a glycol system at least once a year to ensure the glycol is still within its operating parameters.

Annual Glycol Maintenance

A glycol system should be checked for two things: system pH and freeze protection. The quickest way to check a glycol system's pH is with litmus paper. If the pH drops below 7, then more buffers must be added to a system or the system needs to be flushed and refilled. There are only a limited number of times buffers can be added to a system before it must be flushed and replaced. Check with the glycol manufacturer for further details. Some glycol manufacturers will require a higher minimum pH to be maintained.

The second item that must be checked in a glycol system is the actual level of freeze protection provided. Watts recommends a 30-50% glycol solution. However, a 50% anti-freeze solution and 50% water does not always equate to a 50% solution. Different glycol providers supply different concentrations of glycol and/or may mix a certain amount of distilled water with the inhibitors.



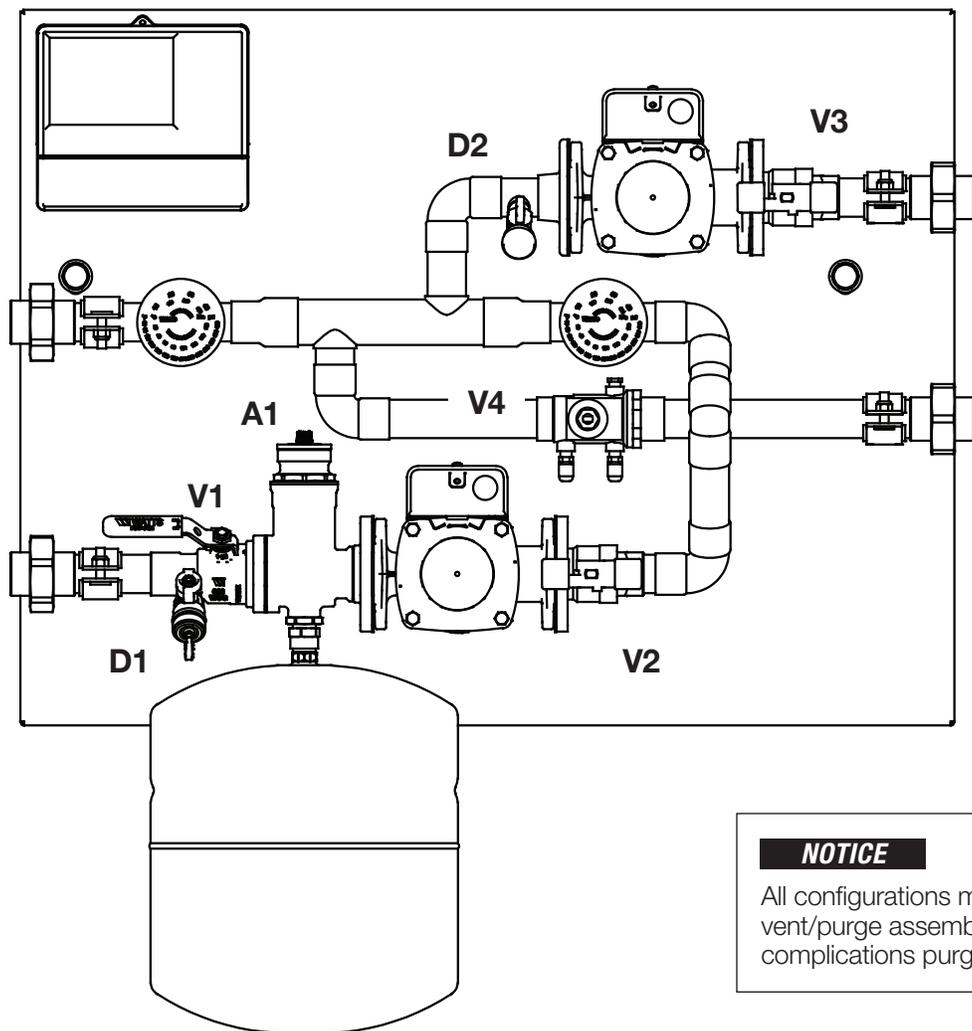
The only way to accurately measure the percentage of glycol in a system is to use a refractometer. A refractometer determines the freeze point of a liquid by measuring the angle through which light is bent (the angle of refraction) as it passes through the liquid. This angle is a direct correlation to its freeze point, and should be checked before and after the glycol is added to the system. Check a sample mixture of one cup glycol and one cup water. Test this solution with the refractometer to see what the system freeze protection will be. Do this each time the system is re-filled with new glycol. Also, check the freeze protection when the system pH is checked just to make sure the system is operating within the desired parameters.

System Commissioning and Maintenance

150 and 250 MBH Panels

1. Close V3. Open valves 1, 2, 4.
2. Open the black cap on A1 two full turns.
3. Attach fill hose to D2 and begin filling.
 - a. Water will push air slugs into boiler.
 - b. Allow system to pressurize to approximately 20 psi.
4. Close V1.
5. Open D1 50% to drain water/air from boiler.
6. Close D1 and allow to pressurize.
7. Close V4
8. Open V1.
9. Slowly open V3.
10. Slowly open purge valve at manifold until water/air begin flowing. Remain at this position until flow is water only.
11. Close manifold purge valve and D2 and replace cap(s). Air remains in return line from manifold.
12. Open V4.
13. Close D2 and disconnect fill hose and attach to D1.
14. Slowly open D1 and allow system pressure to stabilize to approximately 15 psi.

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NOTICE

All configurations must include manifold vent/purge assemblies. Failure to do so may result in complications purging.

System Commissioning and Maintenance

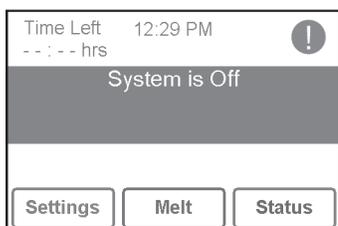
15. Use the tekmar control to enable the system pump relay and allow remaining air to circulate through to the vents.

Using the touch screen on the tekmar control, navigate to Settings, Override, and select Manual Override. Change this to “Hand”. Select Back, then arrow down to System Pump and select “On”.

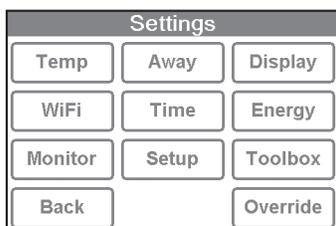
The control defaults to a run time of 10 minutes. If a longer manual run time is needed, go to the Override screen and arrow down to select “Hand Duration”. Enter the desired run time.

- 16. Allow pumps to run until air has been vented.
- 17. Turn off pumps and fill system to 15 psi. This may need to be done several times as air will vent over the next few days.
- 18. Close D1 and disconnect hose.
- 19. Manually enable system pump relay again, and adjust V4 to achieve desired flow.
- 20. Ensure caps are placed tightly on drain valves and return the valves to open positions.

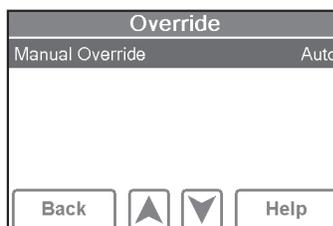
For additional information on setting up the control, refer to the enclosed tekmar control literature.



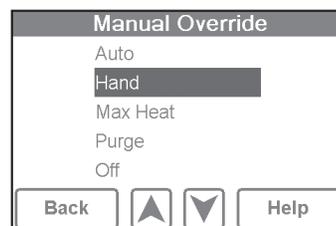
1. Home Screen: Select Settings



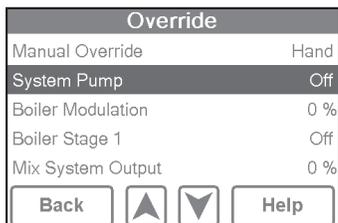
2. Select Override



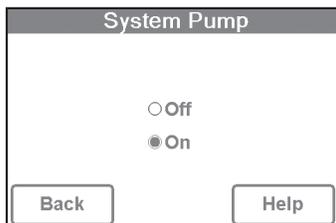
3. Select Manual Override



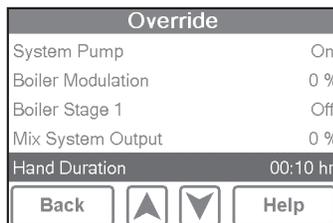
4. Select Hand type and then Back



5. Select System Pump



6. Select On then Back



7. Arrow down to Select Hand Duration to modify run times

NOTICE

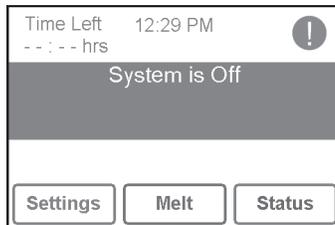
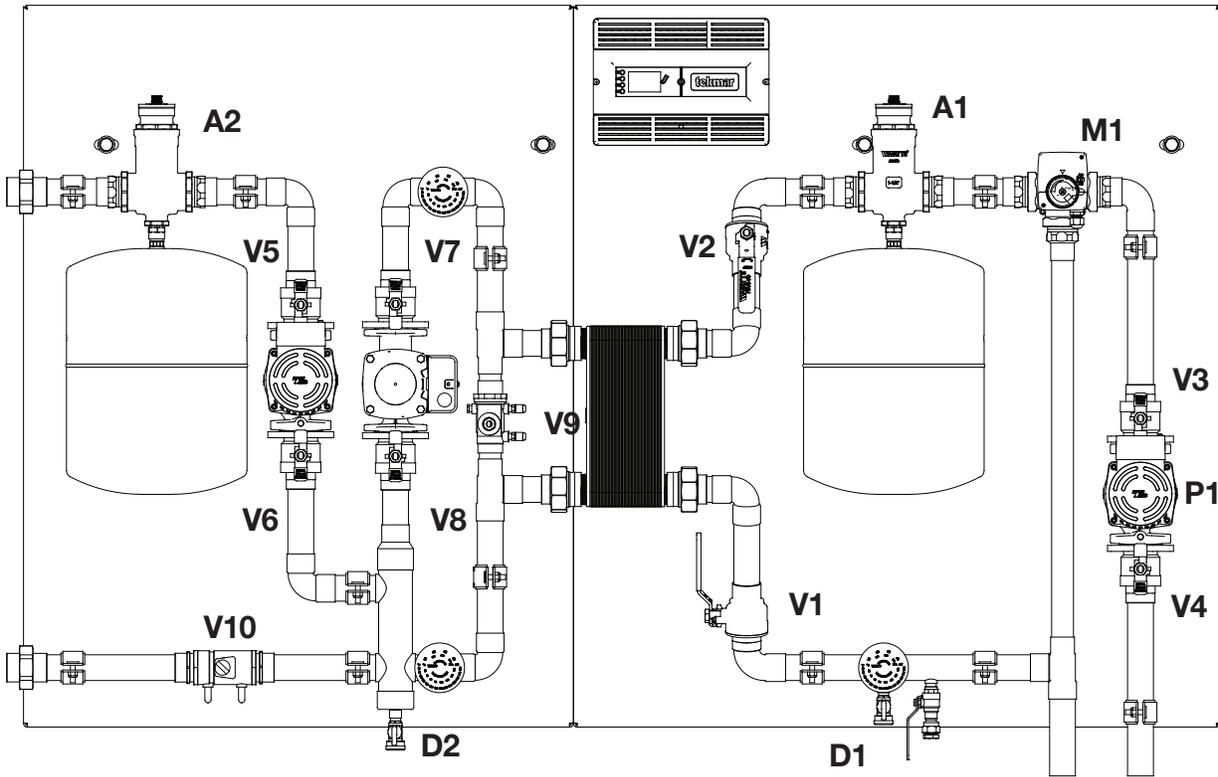
All configurations must include manifold vent/purge assemblies. Failure to do so may result in complications purging.

System Commissioning and Maintenance

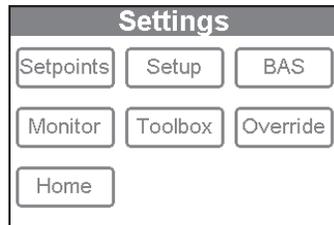
399 MBH Panels

Fill Secondary (zone) Side

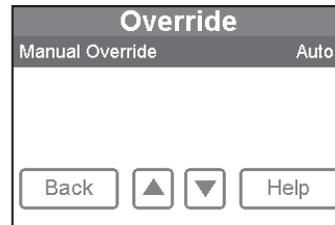
1. Open valves V1, V2, V3, V4.
2. Set mix valve actuator M1 to MANUAL and slowly turn to position 5.
3. Open black cap on top of air vent A1 two full turns.
4. Attach fill hose to D1 and begin filling. Water will push air slugs into main air vent A1 through return line.
5. Slowly open purge valve at manifold until water/air begin flowing. Remain at this position until flow is water for several seconds before closing manifold purge valve.
6. Pressurize system to 15 psi.
7. Use the tekmar control to enable the zone pump P1 relay and allow remaining air to circulate through to vents.
8. Allow pump to run until air has been vented. Do not turn off water supply.
9. Turn off pumps and fill system to 15 psi.



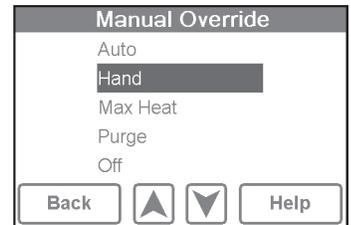
1. Home Screen: Select Settings



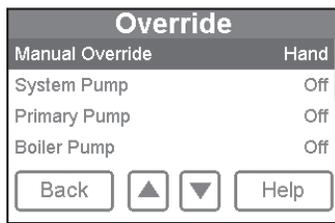
2. Select Override



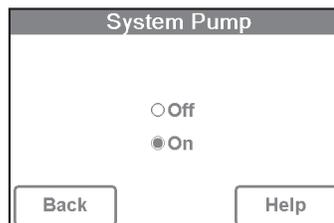
3. Select Manual Override



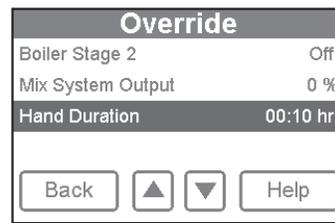
4. Select Hand type and then Back



5. Select Pump



6. Select On then Back



7. Arrow down to Select Hand Duration to modify run times

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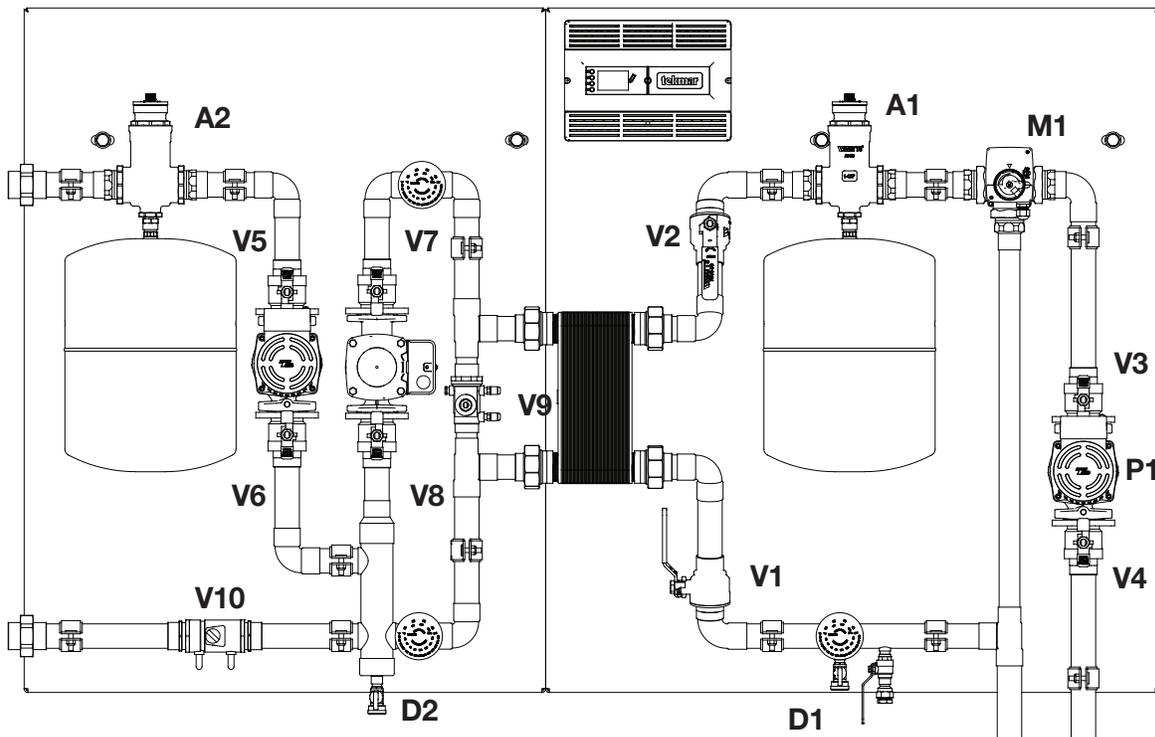
System Commissioning and Maintenance

- Return M1 valve actuator to position 0 and the mode selection switch to AUTO.
- Close valve D1 and turn off water supply. Disconnect supply hose.
- Ensure caps are placed tightly on drain valves and return the valves to open positions.

Fill Primary (boiler) Side

- Close V9
- Open V10, V5, V6, V7, V8
- Attach fill hose to D2 and begin filling
 - Water will push air slugs into main air vent A2
 - Fill until air stops venting from A2 and pressurize to 15 psi

- Use the tekmar control to enable the Primary and Secondary pumps P2 and P3 relays, and allow remaining air to circulate through to vents. See previous page for menu use details.
- Allow pumps to run until air has been vented. Do not turn off water supply.
- Turn off pumps and ensure system is filled to 15 psi.
- Close valve D2 and turn off water supply. Disconnect supply hose.
- Manually enable pumps P2 and P3 again, and adjust valves V10 and V9 to achieve desired flow.
- Ensure caps are placed tightly on drain valves and return the valves to open positions.



Adjusting System Pressure

Snow melting systems are typically subjected to temperatures well below freezing. As the anti-freeze solution decreases in temperature, its volume will also decrease. This will result in lower system pressure during the winter months when the system is not operating.

The minimum required operating pressure for the ProMelt panel is 5 PSI. If the pressure falls below 5 PSI, additional anti-freeze solution will need to be pumped into the system to maintain the minimum pressure in the coldest conditions. When adding anti-freeze solution in cold conditions, do not exceed **10 PSI!**

Due to the large temperature swing in the system fluid (110 degrees F. or more from cold start to full output), typical operating pressure will range between 5 PSI (required minimum) to 25 PSI (recommended maximum). In excessive pressure conditions, the pressure relief safety valve will begin to open at 30 PSI. If this condition occurs, contact Watts Radiant technical support for assistance.

Troubleshooting

Always consult accompanying technical sheet before attempting these suggested solutions. Contact Watts for further assistance if the solution cannot be found in either the accompanying documentation or within this troubleshooting guide.

No power to panels

- a. Verify circuit breaker is not tripped and 120VAC power is present at outlet.
- b. Verify 120V power connection on panel is connected to outlet and has power.

Panel not operating correctly

- a. Verify circuit breaker is not tripped and 120VAC power is present at outlet.
- b. Verify 120V power connection on panel is connected to outlet and has power.
- c. Check that the snow melt sensor is connected at tekmar control and all operational functions are set properly (see manufacturer's instructions).
- d. Verify there is fluid flow when circulators energize.
 - Is the system air locked?
 - Is the circulator running?
 - Is 120V power present at circulator(s)?

Panel is functional but the boiler is not firing

- a. Verify all power and fuel connections to boiler.
- b. Check wiring connections from ProMelt Panel to TT on boiler are present and correct; i.e. normally open or normally closed (see boiler installation instructions).
- c. Check system pressure is at least 12psi.
- d. Check the snow melt sensor connection at the relay box verifying all operational functions are set properly (see manufacturer's instructions).
- e. Verify there is flow.
 - Is the system air locked?
 - Is the circulator running?
 - Is 120V power present at circulator(s)?

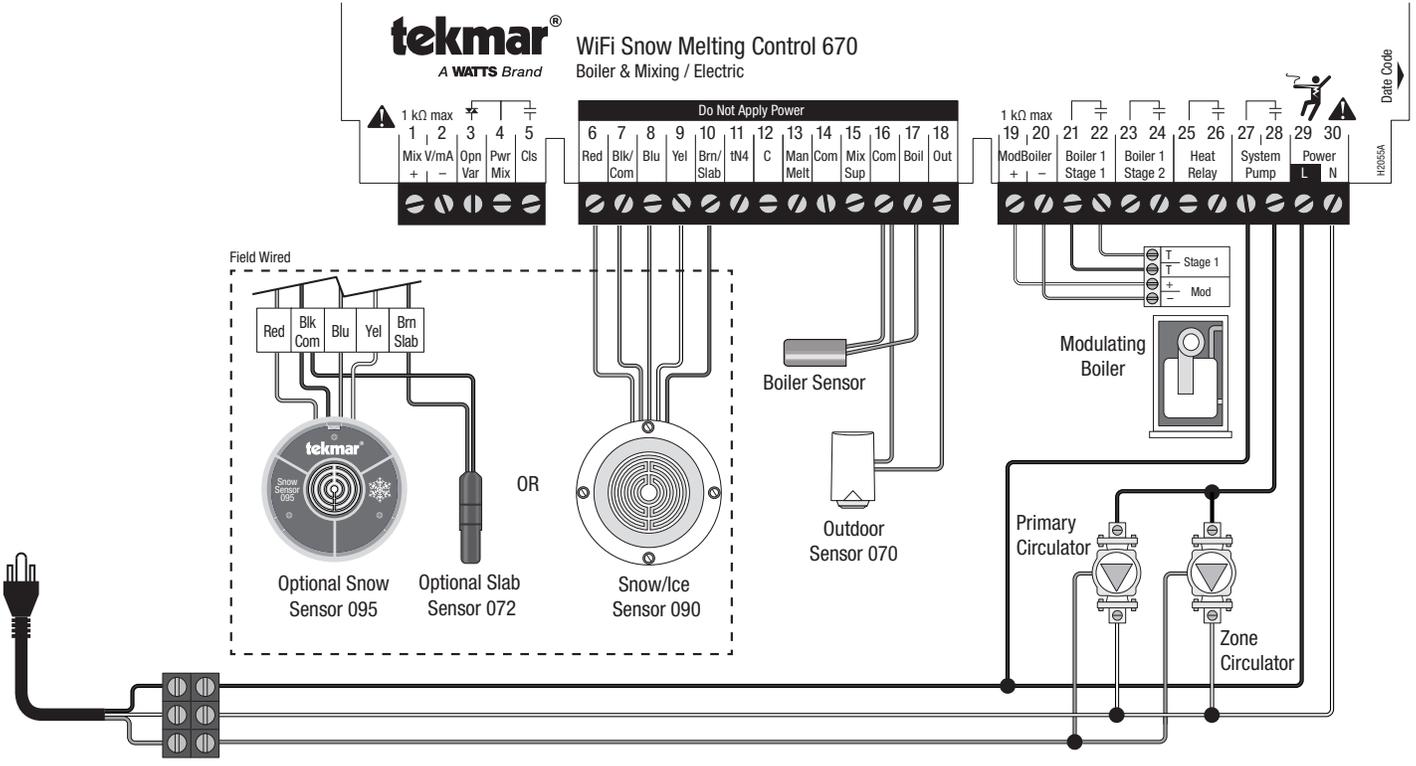
tekmar control is not operating correctly.

- a. Verify circuit breaker is not tripped and 120VAC power is present at outlet.
- b. Verify 120V power connection on panel is connected to outlet and has power.
- c. Check wiring connections to the tekmar control.
- d. Check that the snow sensor is connected and all operational functions are set properly (see tekmar snow melting control manual).
- e. Check settings on the tekmar control. Are they the proper settings for the boiler type and system requirements?
- f. Check all wiring connections and resistance (Ohm readings) on tekmar sensors (i.e. Boiler Supply sensor, Boiler Return sensor, mix sensor and Outdoor sensor). Ohm reading will change with changes in temperature. See tekmar brochure for ohm-to-temperature chart.
- g. Check that the system pressure is at least 12 psi.

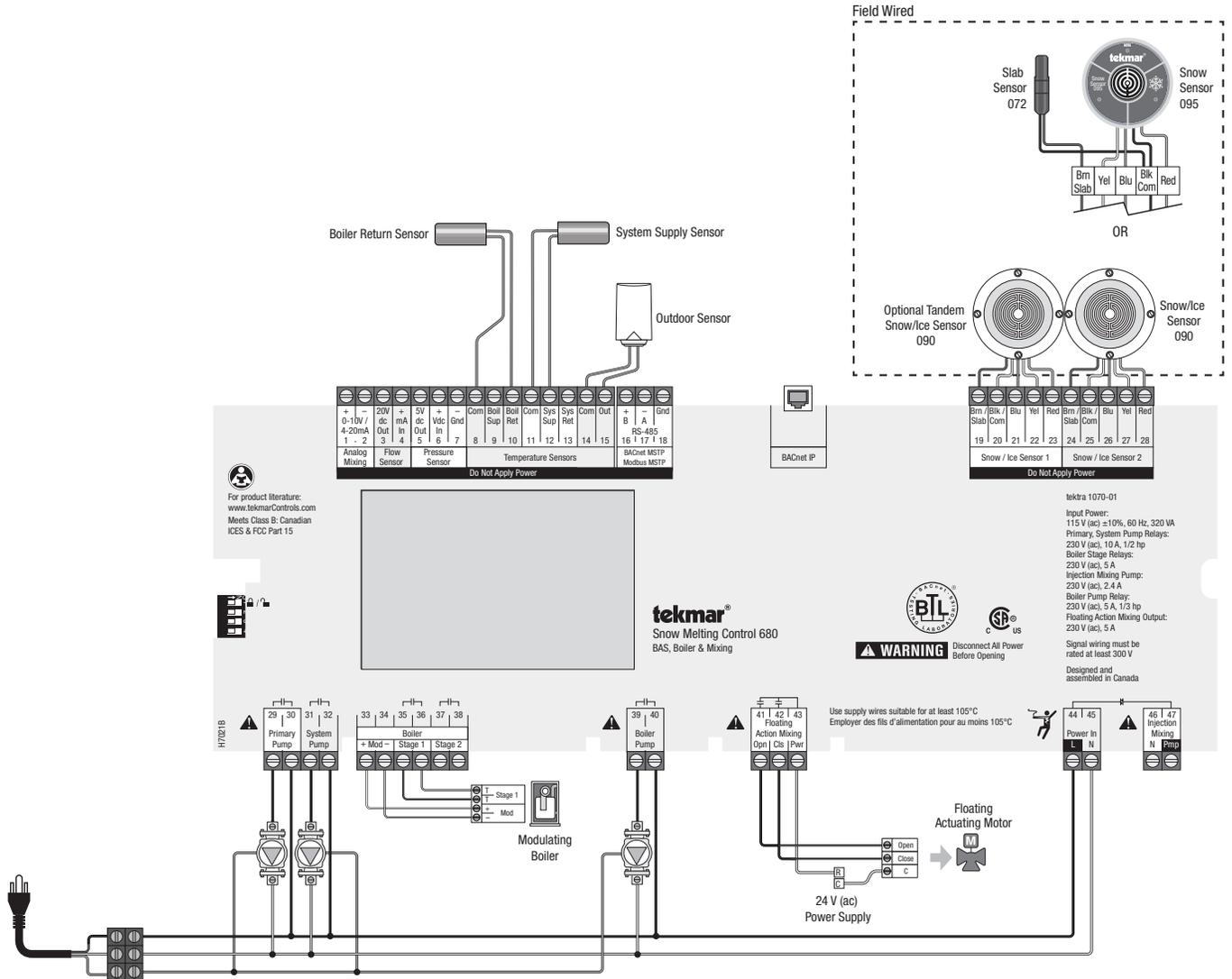
Excessive boiler short-cycling.

- a. Is primary circulator operating?
 - Is there proper flow through the boiler?
 - Are all ball valves open?
 - Is there a wye-strainer on the boiler loop? If so, is it clogged?
- b. Is boiler set up and operating correctly?
- c. Is boiler oversized for the heating load?

Appendix - Control Wiring



Appendix - Control Wiring



ProMelt® Snow Melt Mechanical Panels Limited Warranty

1. Watts warrants that its ProMelt® Snow Melt Mechanical Panels/controls are free from defects in material and workmanship for a period of one year from the date of manufacture.
2. Watts warrants that each panel/control is tested, which includes pressure testing and electrical operation. A reasonable labor and parts allowance will be paid to repair any defects in material or workmanship that develop within one year from the date of manufacture.
3. To receive an allowance payment under this warranty, the installing contractor must call Watts with the work order number found on the panel and a repair cost estimate, and receive written authorization from Watts to proceed prior to any repair work being performed. Watts will ship, freight prepaid, any necessary electrical or mechanical parts under this warranty that prove defective. After the work is completed, the installing contractor should submit a bill reflecting work done, including detailing the part that has failed, the circumstances under which it failed, approved labor costs, and reference prior approval number. In addition, the failed part must be returned to Watts within 30 days, unless Watts waives this requirement.
4. Note that field testing to pressures exceeding 30 psi may result in damage to gauges, expansion tanks, pressure switches, and other parts, and this damage is not covered by this warranty, unless the panel/control was originally specified by Watts to operate at higher pressures.
5. Each ProMelt® Panel is tested for electrical logic and continuity prior to shipment. The electrical controls and all electrical parts are warranted in accordance with the terms of this warranty, if the panel/control is installed per Watts instructions, and if the information submitted to Watts by the installing contractor was correct.
6. Evidence of tampering, mishandling, neglect, accidental damage, unqualified or unauthorized repair that causes damage to a Watts panel/control will void any warranty coverage. Claims related to leaks caused by desoldering of panel joints by the installing contractor or leaks caused by damage to panels in the installation process are not covered by this warranty. Electrical damage caused by incorrect field wiring also is not covered by this warranty.
7. **THE WARRANTY SET FORTH HEREIN IS GIVEN EXPRESSLY AND IS THE ONLY WARRANTY GIVEN BY WATTS WITH RESPECT TO THE PRODUCTS DESCRIBED IN PARAGRAPH 1. WATTS RADIANT MAKES NO OTHER WARRANTIES, EXPRESS OR IMPLIED. WATTS HEREBY SPECIFICALLY DISCLAIMS ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.**
8. The remedy described above in this warranty shall constitute the sole and exclusive remedy for breach of warranty, and, apart from that remedy, Watts shall not be responsible under any legal theory for any incidental, special or consequential damages, including without limitation, lost profits or the cost of repairing or replacing other property which is damaged if the products do not work properly, other costs resulting from labor charges, delays, vandalism, negligence, fouling caused by foreign material, damage from adverse water conditions, adverse chemical environments, or any other circumstances over which Watts has no control. This Limited Warranty shall be invalidated by any abuse, misuse, misapplication or improper installation of the products.

Some states do not allow limitations on how long an implied warranty lasts, and some states do not allow the exclusion or limitation of incidental or consequential damages. Therefore the above limitations may not apply to you. This Limited Warranty gives you specific legal rights, and you may have other rights that vary from state to state. You should consult applicable state laws to determine your rights. SO FAR AS IS CONSISTENT WITH APPLICABLE STATE LAW, ANY IMPLIED WARRANTIES THAT MAY NOT BE DISCLAIMED, INCLUDING THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, ARE LIMITED IN DURATION TO ONE YEAR FROM THE DATE OF ORIGINAL SHIPMENT.

Shipping Discrepancies:

Incoming materials shall be inventoried for completeness and for possible shipping damage. Any visible damages or shortages must be noted with shipper prior to signing for or accepting the product delivery. Any discrepancy concerning type or quantity of material shipped, must be brought to the attention of Watts within 15 days of the shipping date entered on the packing slip for the order.

Return Policy:

No products may be returned without Watts prior written authorization. When credit is issued, it will be at the price charged, or prevailing price if lower, less handling charges based on costs of reconditioning, boxing, etc. However, a minimum 25% restocking fee will apply. A minimum handling charge of \$20.00 is applied whenever the 25% restocking fee does not total \$20.00. Products which are obsolete or made to special order are not returnable. All returned items must be in new condition. Products, controls or other parts that have a quality defect will be replaced (not credited) at no charge to the customer. If an item is shipped in error, there will be no restocking charge. All items returned, for replacement, credit or repair, must have a Returned Goods Authorization (RGA) number from Watts, or they will not be accepted. Please call customer service for an RGA number. Products purchased more than 180 days prior, products that have been damaged, or products that have been used or placed in service, may not be returned.



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