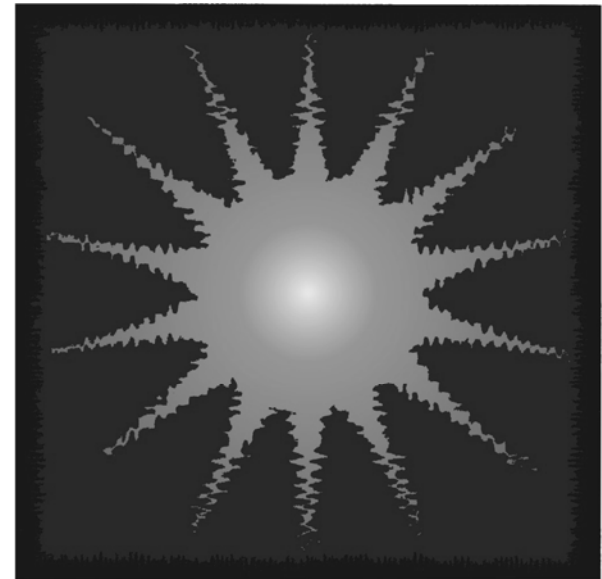


Owners Manual

Heatizon Systems Low Voltage Products
Floorizwarm System



HEATIZON
SYSTEMS



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Owner's Manual

Heatizon Systems Floorizwarm Series

Low Voltage Products

Congratulations on your decision to purchase the finest floor warming, space heating, roof snow and ice melting and/or snow melting products available today. We are so confident that your decision to purchase our products will provide you with many years of satisfaction that we have backed them up with the longest warranty in the industry. In the event you ever have questions regarding the Heatizon Systems products please do not hesitate to contact us.

Heatizon Systems
4137 South 500 West
Murray, Utah 84123
(801) 293-1232 Phone
(801) 293-3077 Fax
www.Heatizon.com

Heatizon Systems Products

Utilizing state of the art components and low-voltage electricity, Heatizon's products are unprecedented in ease of operation. They are virtually maintenance free and efficient in operation. Tuff Cable has a limited 25 year warranty and is engineered to provide simple and problem-free solutions to your floor warming, in floor space heating, snow melting and roof snow and ice melting needs. Heatizon's Tuff Cable is tried and proven, and has been Warming American's Cold Spots since 1979.

Heatizon Systems products do not use chemicals or potentially explosive gases. The secondary side of all of our low voltage products operates at 65 volt AC or less

The Heating Element

TUFF CABLE...is made to go **IN** something... like asphalt, concrete, a sand bed under pavers or a heatsink kit. Heatizon Tuff Cable heating element is a very durable coated copper cable that is chemical and gasoline resistant. It is designed to be installed in asphalt, concrete, tile mortar bed, thin set, or a Heatizon Heatsink Kit. Typical installations for Tuff Cable include total space heating, floor warming, snow melting, and roof snow melt.

Danger. Do not cut, short, or damage the Heatizon Tuff Cable heating element once it has been installed. If you are performing work in the area where the heating element is located:

1. Turn the power off
2. Identify the exact location of the Tuff Cable heating element
3. Contact Heatizon Systems (801-293-1232 or www.heatizon.com) if the heating element is damaged in any way

HEATWAVE SYSTEMS LIMITED WARRANTY

Twenty-five Year Limited Warranty for
Heatizon Systems Floorizwarm AC and
Specified Radiant Panel Heating Components

Heatizon Systems warrants to the end users of the following products that for the periods noted such products shall be free from defects in material and workmanship: Floorizwarm Cable Heating Element (E101-14) for a period of twenty-five (25) years, and the Control Box transformer for a period of five (5) years. Such warranty periods shall commence on the date of shipment by Heatizon Systems. If any parts are found to be defective in manufacture material or workmanship during such time period, Heatizon Systems will, at its sole option, replace or repair defective parts.

This Limited Warranty applies only if articles sold hereunder (a) are selected, designed, and installed according to instruction and operation manuals furnished by Heatizon Systems and installed in a "workmanlike manner" according to the building association standards adopted by Heatizon Systems, (b) remain in their originally installed location, (c) are connected to proper power supplies, (d) are not misused or abused, (e) show no evidence of tampering, mishandling, neglect, accidental damage, modifications or repair without the approval of Heatizon Systems, or damage done to the product by anyone other than Heatizon Systems, and (f) are installed in accordance with applicable code requirements. Any warranty claims must be made in writing, no later than one (1) month following expiration of the warranty period, and must be accompanied by the warranted part or component. Any claim not made in such manner shall not be honored by Heatizon Systems.

This Limited Warranty does not cover:

1. The workmanship of any installer of Heatizon Systems products.
2. Any Heatizon Systems products that have a failure or malfunction resulting from improper or negligent operation, accident, abuse, misuse, unauthorized alteration or improper repair or maintenance.
3. Any Heatizon Systems products that have had components not purchased from Heatizon Systems integrated into or connected to them.
4. Any labor costs for removal of alleged defective part(s) and/or reinstallation of replacement part(s), transportation to and from Heatizon Systems (if necessary) and any other material necessary to perform the exchange or repair.
5. Any Heatizon Systems heating products that have not been properly registered by completion and return of the Warranty Registration Card provided with your product.

DISCLAIMER OF WARRANTIES:

This warranty described above is in lieu of all other warranties, express or implied, including but not limited to any implied warranties of fitness for a particular purpose and merchantability. Heatizon Systems expressly disclaims and excludes any liability for losses, expenses, inconveniences, consequential, incidental, indirect, or punitive damages for breach of any express or implied warranty. By installing Heatizon Systems products, you accept the terms of this limited warranty.

Some states do not allow the exclusion or limitation of incidental or consequential damages, or limitations on how long an implied warranty lasts, so the above limitations and exclusions may not apply to you. This Limited Warranty gives you specific legal rights, and you may also have other rights, which may vary, from state to state.

WARNINGS

Check contents of all boxes immediately upon receipt of your Heatizon shipment and notify Heatizon within 24 hours of any discrepancy or missing part.

Read the Design and Installation Manual in its entirety before attempting to install any Heatizon Systems Products.

Installation of Heatizon Systems products and associated work must be performed by qualified persons and conform to local building codes, ordinances, trade practices, and in accordance with all applicable sections of the National Electric Code (NEC).

Risk of fire! Risk of fire possible if installation of system is not completed according to all of the installation instructions contained within this Installation Manual, including but not limited to the warnings and notes throughout. Risk of fire possible if metal or any other conductive material is allowed to come into contact with the Cold Leads and Tuff Cable or ZMesh Heating Element. Risk of fire possible if connections/joints between Cold Leads and Tuff Cable, Colds Leads and ZMesh, Tuff Cable and Tuff Cable, and or ZMesh and ZMesh are not crimped and/or soldered correctly. Risk of fire possible if loose strands of ZMesh or Tuff Cable Heating Element or cuts or other damage to ZMesh or Tuff Cable are not repaired correctly. Note: The safety features incorporated into Heatizon Systems products cannot detect cuts in Cold Leads and ZMesh or Tuff Cable element. Do not allow ZMesh to cross itself—maintain a minimum of 2" distance between adjacent runs of ZMesh Heating Element. Do not allow Tuff Cable to touch or cross itself.

Risk of shock! Make sure all power to your Heatizon Systems product and thermostat is shut off at the electric distribution panel before installing, removing covers, servicing, or working on any of the components of any Heatizon System product.

All connections/joints between Colds Leads and Tuff Cable heating element must be embedded into mortar, asphalt, or other acceptable cementitious Heatsink.

Knockout openings shall not be used except with devices that are designed to fill such openings.

Obtain written approval from Heatizon Systems for applications and installations that are different from those described herein.

In order for your Heatizon Systems product to operate correctly, the transformer portion of the Control Unit must be installed so that it can dissipate the heat that it generates

Like all electric products, Heatizon Systems products create a magnetic field that may interfere with certain brands of televisions, computer monitors, etc. Unlike Cathode Ray Tubes ("CRT"), Plasma Display Panels ("PDP") and Liquid Crystal Displays ("LCD") do not seem to be affected by magnetic fields. In the event magnetic field interference is a concern for you please consult Heatizon Systems or your sales representative prior to making your purchase.

Mattresses, Bean Bag Chairs, LoveSacs, Futons, and all other items which have high insulating values should never be placed directly on any surface which has a radiant heating product under it.

Never install Heatizon Systems products in space heating or floor warming applications to deliver more than the 15 watts per square foot (or 160 watts/m²) recommended by the Radiant Panel Association.

"Field installed wiring is to be in compliance with the National Electrical Code (NFPA-70) and/or ordinances," or equivalent.

Please call Heatizon Systems Technical Support Department at (801) 293-1232 with any questions you have regarding these Design and Installation Instructions, Owners Manual, and The Customer Information Sheet, or the installation, operation, and maintenance of Heatizon Systems products.

PERFORMANCE FEATURES

Energy Savings. Heatizon Systems low-voltage products utilize an isolated step down transformer and resistance in the Tuff Cable heating element to create the perfect amount of heat necessary to warm floors, heat buildings, remove snow and ice from roofs and melt snow from driveways, walkways, handicap ramps, loading docks, etc. All of our products are nearly 100 percent efficient and are designed to deliver the heat they create to the exact location necessary to accomplish their objective. The following tips will help your Heatizon Systems products conserve energy:



Snow Melting - Heatizon Systems recommends that your snow melting system(s) be turned on prior to a snow and/or ice storm whenever possible. Turning the system on prior to a snow and/or ice storm allows for the temperature of the mass of the asphalt, concrete, or pavers to rise in preparation for the snow/ice fall thereby increasing the possibility that it will be able to melt the snow/ice as it falls and avoiding situations where the snow/ice melt system must play catch-up. If your system is equipped with a temperature/moisture sensor it is designed to turn on whenever the temperature is 38 degrees F or lower and constant moisture is present.



Floor Warming - Heatizon Systems offers completely programmable thermostats with remote sensors with its entire floor warming products. The remote sensor coupled with the programmable thermostat allows you to determine when the system will be on and exactly what the temperature of the floor will be.



Space Heating - Heatizon Systems total space heating products provide the comfort of radiant heat without the uncomfortable concrete floors and the maintenance expense of its competitors.

TROUBLE SHOOTING PROCEDURES

Longevity and Reliability. There are no moving parts in your Heatizon Systems product. All controls are 100% solid-state for long term life and reliability.

Maintenance. Other than keeping the airflow vents on the Control Unit clean and unobstructed, Heatizon Systems products do not require any routine maintenance. In the event your Heatizon Systems products are not operating correctly please call a qualified electrical contractor to make any necessary adjustments or repairs.

Operation. Other than setting the activators and turning the breaker, Heatizon Systems products have nothing else that require your attention. In the event your Heatizon Systems products are not operating correctly, call a qualified electrical contractor or Heatizon certified installation professional to make any necessary adjustments or repairs.

Summer Shut-down. Heatizon Systems recommends that the circuit breaker (located in your electrical distribution panel) that services your Heatizon Systems product(s) and the remote power disconnect, if equipped, be turned to the “off” position during the summer time and other extended periods of time when it will not be used.

Comfort and Safety. Comfort and safety are the main goals for all Heatizon Systems products. Snow and ice free driveways, sidewalks, handicap ramps, loading docks, porches, etc. are safer and last longer when they are not subjected to salt or snow-melting chemicals. Snow and ice falling off of roofs can result in dangerous hazards to both buildings and people. Heatizon Systems in floor radiant heating products provide the utmost in comfort and since no dust is flying around they are good for your health. The comfort of floor warming is the best thing that ever happened to the tile and hardwood industries and your feet are the beneficiaries.

WARNING DECAL



This warning decal was supplied with your element kit, and should be permanently affixed to an appropriate surface.

Never cut or in any other way damage the Tuff Cable heating element. Never short the Tuff Cable to anything electronically conductive.

It is not recommend that you ever remove any of the covers on the Control Unit. Never open your Heatizon Systems Control Unit without first turning the power to said Control Unit completely off by flipping the circuit breaker in the electric distribution panel to the off position.

WARNING: HIGH VOLTAGE PRESENT! TROUBLE-SHOOTING PROCEDURES AND MEASUREMENTS MUST BE PERFORMED WITH THE SYSTEM ENERGIZED AND THE COVERS REMOVED. ALWAYS MAKE CERTAIN THAT THE PERSON PERFORMING THESE PROCEDURES IS FAMILIAR WITH SAFE PRACTICES REQUIRED FOR WORKING WITH HIGH VOLTAGE EQUIPMENT. A QUALIFIED TECHNICIAN OR ELECTRICIAN SHOULD PERFORM THE FOLLOWING PROCEDURES!

NOTE: Always turn power off prior to removing or reinstalling covers.

NOTE: Never install or reinstall the Control Board with the primary power in the “ON” position.

NOTE: Prior to trouble-shooting the system, check for obvious problems such as loose connections, cut or broken wires, etc. Check the jumpers on the printed circuit board for proper settings. See Design and Installation Manual.

The following procedures cover most problems that can be encountered when installing or servicing Heatizon Systems Floorizwarm products. If your Heatizon Systems product cannot be repaired using the following procedures, contact Heatizon Systems for further assistance.

A. There is no power in the Floorizwarm Power Unit:

1. Turn circuit breaker to the “off” position. Check for proper power connection to the control unit.
2. Turn circuit breaker to the “off” position. Check all connections in control unit.
3. Check that the 20 amp circuit breaker panel is in the “on” position.

B. There is power in the Floorizwarm Power Unit:

1. Check the fuse in the Floorizwarm Power Unit.
2. Check that the Thermostat is wired properly.
3. Check that the Thermostat is programmed correctly and is calling for heat.
4. Push the GFI reset on the Thermostat.
5. Check for 120 VAC on relay coil across pin 0 and 1.
6. Check for 120 VAC on primary of Transformer.
7. Check for proper voltage on secondary of Transformer.
8. Using a clamp on Amp meter, check for current in the heating element. If no amperage is present, turn the circuit breaker to the Power Unit to the “off” position, disconnect the Cold Lead from the Transformer, and check for continuity of the Floorizwarm Heating Element.

Note: Prior to returning anything to Heatizon Systems, 4403 South 500 West, Murray, UT 84123, call (801) 293-1232 for a Return Materials Authorization form.