

 **Hog Hearth®**

User Manual and Installation Guide

From IHT Group:

Congratulations on your investment in Hog Hearth Heat Mats! We hope your experience is positive, however, if you find yourself with issues or questions, give us a call at 1 (800) 725-9661, or send us an email at support@ihtgroup.ca, and we will help resolve any issues you might have.

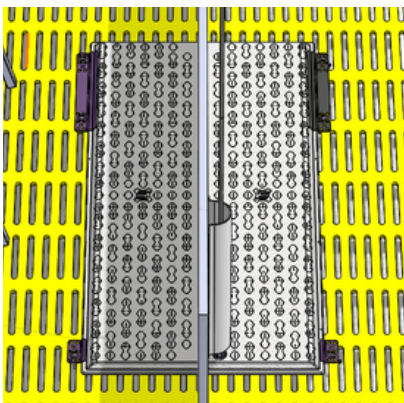
Note:

To ensure the safety and longevity of your Hog Hearth® heat mats, it is crucial to read all instructions before installation or use. These mats require careful handling due to their delicate nature. Avoid lifting or carrying them by the cord, as this can damage the power cable and connector, voiding the warranty. If the cord or component is damaged or the heater has been dropped or compromised, refrain from using it. Please note that no internal parts are serviceable, and should any problems arise during the warranty period, please contact an authorized dealer. These mats are not intended for outdoor use. Be mindful that the heater contains hot parts that can spark and arc and, therefore, should not be used in areas where gasoline, paint, or flammable liquids are stored. Always refer to the manual for proper usage instructions, as using the heater in any other way may result in fire, electric shock, or injury. Hog Hearth Heaters are specifically designed as a heating source for piglets, use in any other application will void the terms of our 3 year limited warranty.

Hog Hearth heat mats are available in both plug and hardwire configurations. Consult your local electrical inspector for 110/120V plug, receptacle and GFCI wiring requirements. Some 120V circuits with plugs and receptacles may require the installation of GFCI-protected breakers. IHT always recommends hardwiring 120V heaters when inspectors require installing GFCIs with plug-connected heat mats.

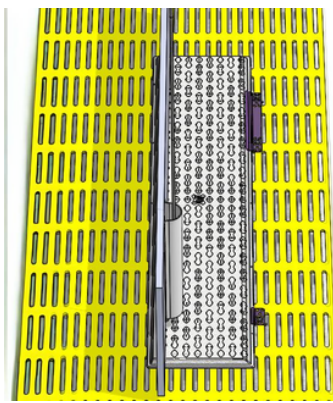
Hog Hearth Double Mat

(Installed w/ Extension Fastening Brackets)



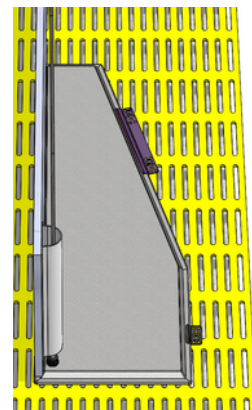
Hog Hearth Single Mat

(Installed w/ Extension Fastening Brackets)



Hog Hearth Angled Mat

(Installed w/ Extension Fastening Brackets)

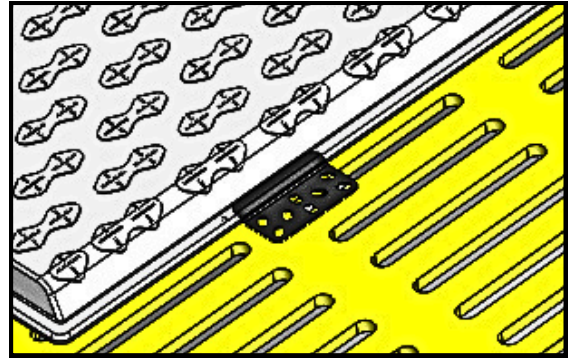


Securing the Hog Hearth Mat to plastic or steel grated flooring

Unsecured heaters may cause damage to the cord/enclosure and invalidate the heater's warranty. Ensure the heat mat, cord, and cord-protecting conduit are adequately secured to prevent pigs from causing damage.

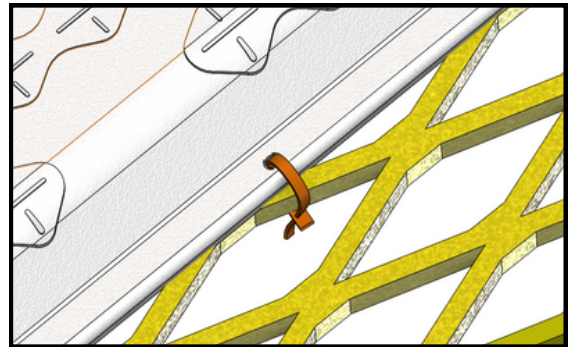
Option 1 – Hog Hearth fastening Brackets (RECOMMENDED)

Use Standard 3" or 12" Hog Hearth Brackets to secure the edge of the mat to the grated floor. (See Hog Hearth bracket installation manual for further detail.)



Option 2 – Zip Ties

Use 3/16" Zip Ties to secure the mat to the grated floor.



Note:

If using zip ties, take care when pre-drilling a 3/16" hole through the heater flange to avoid damaging the adhesive gasket seal. Always drill in the center of the flange from the black backer towards the top of the grey shell. New next generation Hog Hearth heaters have crescent moon guides as indicator markings for where to drill these holes.



Bracket Installation



Cord Protector Installation

Hog Hearth Connection Types

Hog Hearth Heat Mats come in 3 different varieties. Top Connect, where the connection is in the center of the short edge mat for a Double sized mat, or along one side of the mat if it is a single sized mat. Back Connect, where the connection is on the back side of the mat, positioned in the center of the mat, or Side (bullet) Connect, where the same positioning as Top connect applies, but the power lead comes out parallel to the surface of the mat. Follow the directions below to prepare your crate and your mat for installation.

Top Connect Heat Mat:

Follow the instructions below to correctly install the 3/8" PVC conduit into the top connect liquid tight connector.

a) Remove the Knurled Nut



b) Slide the nut over the flexible 3/8" conduit, ensure the water-resistant gasket is aligned correctly, then push the conduit firmly into the connector and retighten the knurled nut.



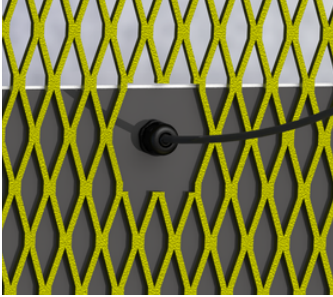
c) Conduit/Connector installed



Note: The flexible 3/8" conduit recesses into the connector approximately 1" (2.54cm). The conduit must be installed properly to prevent the flexible conduit from slipping loose, exposing the wire to moisture and possible damage.

Back Connect Heat Mat:

Feed the wire through the grated floor and secure the cord underneath. Electrical cord should be protected at all accessible points to avoid damage by workers and pigs.



Bottom-connect: ensure the floor grating is cut away to eliminate friction or damage to the power cord / connector.



(Image of bottom connect Double 5' heat mat)

Note:

The cord on the bottom-connected heater should be protected and secured outside the crate. PVC electrical conduit can be used to protect runs of power cables exposed to pigs and workers.

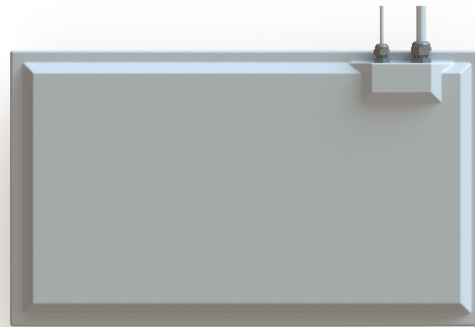
Side (Bullet) Connect Heat Mat:

Feed the wire out the back of the crate and connect to power. Electrical cord should be protected at all accessible points to avoid damage by workers and pigs.



Side-connect: ensure the cord is protected enough to prevent accidental damage during cleaning or maintenance.





Surface Mount Probe Kit
Available Fall 2024

Hog Hearth® Master Sensor Unit (MSU)

The Hog Hearth® MSU (Master Sensor Unit) is designed to regulate the temperature of all Hog Hearth heat mats in a farrowing room. Isolating the MSU control mat from the animals and mats installed in the crates provides an unaffected temperature signal to the master control. This ensures that all heat mats run at a consistent, even temperature. This system allows your Hog Hearth mats to operate most efficiently while ensuring that all piglets receive the right amount of heat at the right time.

Note: MSU's are compatible with 99% of industry standard variable controller types, contact us before ordering to ensure your controller is compatible and to ensure we install the correct temperature probe.

- MSU control mats are available in 120 / 208 / 240 volts to match the voltage of the Hog Hearth mats installed in each room.
- MSU control mats are recommended to be mounted on an inside wall but can also be mounted 3" above the top of the crate divider (Connections Up) to ensure piglets do not have access to the probe or power leads. Do not install the MSU mat over the heater servicing crates. This ensures that the heat radiating from the Hog Hearth mat fastened to the floor will not interfere with the sensor reading from the MSU to the master control.
- All Hog Hearth MSU mats come terminated with a side connect power lead (15') and sensor cable (20').
- The Hog Hearth MSU uses an internal 1K Ω thermo-sensor (or a custom temperature probe) to relay temperature readings from the surface of the heat mat to the HMC control.
- The MSU sensor wire length can be extended, but the connection points must be soldered and properly insulated for moisture protection
- To test 1K sensor resistance Ω / @ 25°C = 1000 Ω

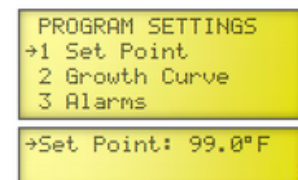
Calibrating Your Hog Hearth System

Calibrating your IHT Heating system is crucial for several reasons. Firstly, it ensures the correct heat output, which is essential for maintaining a comfortable and consistent temperature. Additionally, proper calibration leads to improved energy savings, as the system operates at its optimal efficiency. Lastly, calibration reduces wear and tear on the heat mats, prolonging their lifespan and minimizing the need for replacement.

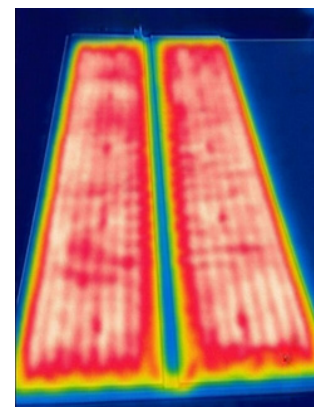
These instructions are for the HH-HMC-2, however the premise is the same for most controller types.

Follow the steps below to calibrate your Hog Hearth Heating System.

- Set your Set Point to be your Day 1 Temperature (Use 95 Degrees if unknown)

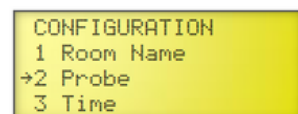


- Leave the system for 30-45 mins to come up to temperature and stabilize.

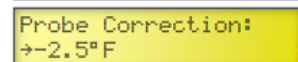
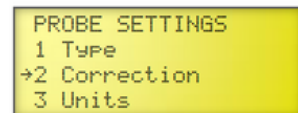


- Take a thermal camera (preferred; temp guns are often inaccurate) and measure the mats in one row.

- Take the average of the mats temperature and record that number.
 - Add up all the temps and divide by the number of mats.



- On the HMC-2, find the probe configuration menu, and adjust the probe correction until it matches what you recorded your average to be by adding a positive or negative correction.



Note: It is normal for the mats to be 3-5 degrees off from the controller, as these types of probes are never 100% accurate. to account for resistance tolerance

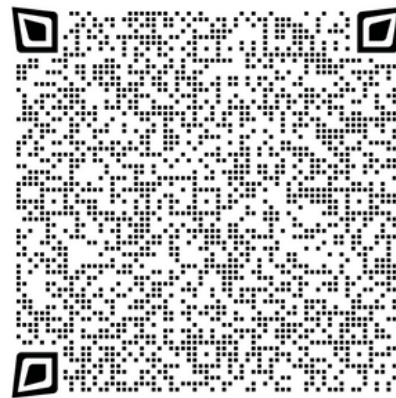
Technical Specifications		
	First Generation	Next Generation
Input Voltage	110 / 120 VAC, 208 VAC, 220 / 240 VAC	110 / 120 VAC, 208 VAC, 220 / 240 VAC
Connection options	110 / 120 VAC available with a hardwire, plug connection. 208 / 240 VAC available with hardwire connection only	110 / 120 VAC available with a hardwire, plug or 3-pin Quick Connection. 208 / 240 VAC available with hardwire, or 3-pin Quick Connection only.
Heating Conductor Type	Resistive Heating Wire	Resistive Heating Wire
Enclosure Type	Acrylonitrile Butadiene Styrene (ABS) Plastic	Fiberglass Reinforced Plastic
Enclosure rating	NEMA Type 4X - Liquid tight against jets of water from all directions	NEMA Type 4X - Liquid tight against jets of water from all directions
Dielectric Specs	4700v (Hog Hearth enclosure has a Dielectric Strength of 500 Volts /mil in a medium of oil and as high as 1000 Volts / mil in a medium of air)	4700v (Hog Hearth enclosure has a Dielectric Strength of 350 Volts/mil in a medium of oil)
Flammability	Enclosure tested to UL94 5VA rating.	Enclosure tested to UL94 5VA rating.
Colour stability @ UV exposure	Low UV Resistance	Low UV Resistance
Max surface temperature	128 (°F) / 53.3 (°C)	128 (°F) / 53.3 (°C)
Impact strength	IZOD Impact Strength of 176 J/m tested under ASTM D-256 Standards	IZOD Impact Strength of 641 J/m tested under ASTM D-256 Standards
Drop strength	Strain relief tested to 58 lbs (UL 1278)	Strain relief tested to 58 lbs (UL 1278)
Power Lead	(UL) SJTOOW E56356 105°C 300V 16AWGX3C	(UL) SJTOOW E56356 105°C 300V 16AWGX3C

Important Instructions:

- Read all instructions before installing or operating the heater.
- Always unplug the heater when not in use.
- Do not operate any heater with a damaged cord/component or if the heater has been dropped or damaged in any manner.
- Do not use products outdoors.
- To disconnect the heater, remove the plug from the outlet or disconnect if permanently connected.
- A heater has hot and arcing or sparking parts inside. Do not use it in an area where gasoline, paint or flammable liquids are used or stored.
- Use this heater only as described in this manual. Any other use not recommended by the manufacturer may cause fire, electric shock, or injury to persons.
- SAVE THESE INSTRUCTIONS.



Limited Warranty



Return Policy

Declare, accepting full responsibility, that the product(s) Radiant Heat, Floor Supported Panel Type Hog Hearth, LS - Tech, Pet - Tech, GH – Tech, Models HH, LS, PH, GH; followed by S, D, C, NUR, MSU, AC, AL or AR; followed by 4, 5, or 6; followed by 110, 120, 208, 220 or 240; followed by T, B, S, TL, TS, SL, or SS; may be followed by (A), comply with the provisions set forth with the following consensus based safety standards Electric Heating Appliances [UL 499:2014 Ed.14+R:14Jun2022] and Electric Air-Heaters (R2018) [CSA C22.2#46:2013 Ed.9] and verified to FCC Part 15b and ICES 003 unintentional radiator requirements.

October 1 / 2023; Oak Bluff, Manitoba, Canada



iHT GROUP

A Decisive Dividend Company

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