



Producer's Installation Manual  
"Warming Up Your World"®

## Hog Hearth Heat Mat / Accessory Info

### Hog Hearth Double Mat

Designed to service two farrowing crates

**Double Channel Mat** (27" x 60" / 68.6 x 152cm)  
Available in top connect

#### Standard Double Mats

**Double 4'** (24" x 48" / 61 x 122cm)  
**Double 5'** (24" x 60" / 61 x 152cm)  
Available in top & back connect  
120, 208 & 240 volts



### Hog Hearth Single Mat

Designed to service single farrowing crate

**Single 4'** (14" x 48" / 35.6 x 122cm)  
**Single 5'** (14" x 60" / 35 x 152cm)  
Available in top left / top right & back connections  
120, 208 & 240 volts



### MSU (Master Sensor Unit)

Designed to regulate temperature of all heat mats on variable controller

(14" x 24" / 35.6 x 61cm) side connect  
120, 208 & 240 volts



### HMC-2 (Heat Mat Control V2)

Variable controller with 6-step temperature curve  
20 Amp variable stage  
120/230 VAC, 50/60 Hz



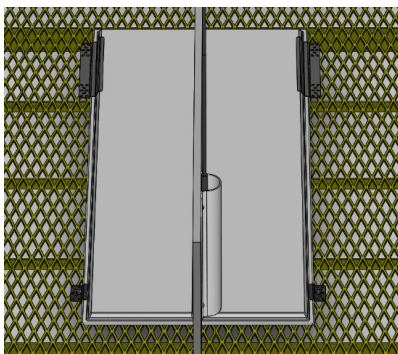
**4X Enclosure**

## Hog Hearth Installation

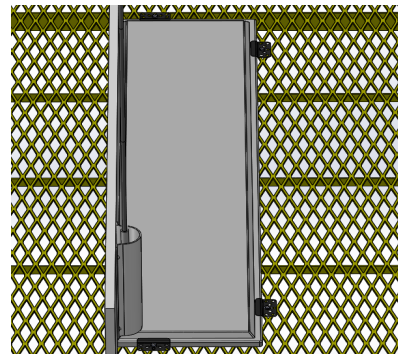
### Note:

Read all instructions before installing or operating heat mats. Hog Hearth® heat mats should be handled with care. Do not lift or carry heat mat by the cord as this may cause damage to the power cable / connector and the void warranty. Always unplug the heater when not in use. Do not operate any heater with damaged cord / component or if heater has been dropped or damaged in any manner. No internal serviceable parts. Contact authorized dealer for all warranty claims. Do not use outdoors. A heater has hot and arcing or sparking parts inside. Do not operate heater in areas 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.

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 in cases where inspectors require the installation of GFCI's with plug connected heat mats.



**Hog Hearth Double Mat**  
(Installed w/ extension fastening brackets)



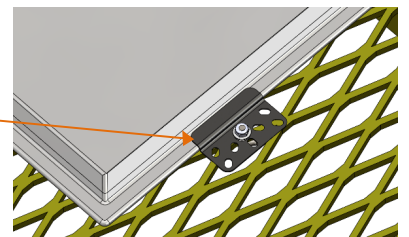
**Hog Hearth Single Mat**  
(Installed w/ standard 3" fastening brackets)

### Securing the Hog Hearth Mat to plastic or steel grated flooring

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

#### Option 1 – Hog Hearth fastening Brackets

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

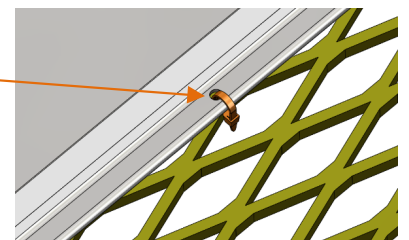


#### Option 2 – Zip Ties

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

#### Note:

If using zip ties take care pre-drilling 3/16" hole through heater flange to avoid damaging adhesive gasket seal. Always drill in the center of the flange from the black backer out towards the top of the grey shell.



## Hog Hearth Installation Cont.

### Top-connect heat mat:

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

#### Top-connect:

a) Remove knurled nut



b) Slide nut over flexible 3/8" conduit and push conduit firmly into the connector



c) Retighten knurled nut

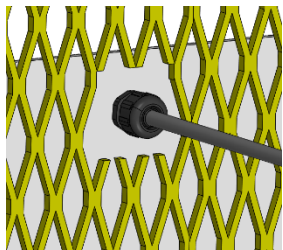


d) Conduit/Connector installed



**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.

**Bottom-connect heat mat:** Feed wire through grated floor and secure 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.

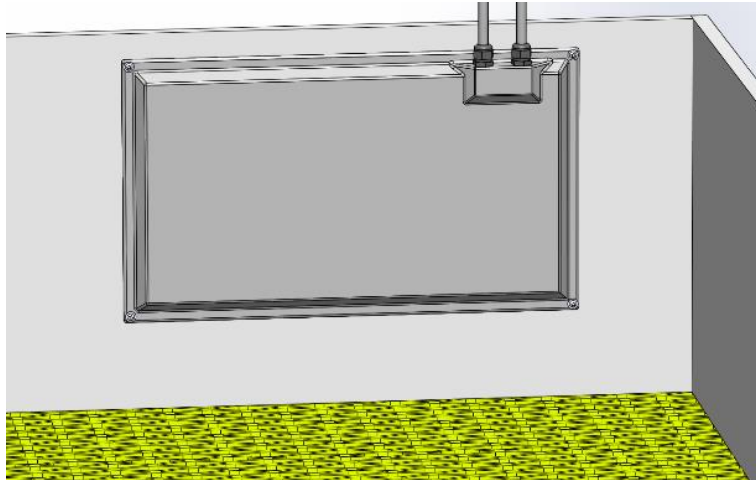


(Image of bottom connect Double 5' heat mat)

#### 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 off power cable exposed to pigs and workers.

## Hog Hearth Installation Cont.



Hog Hearth® MSU Image 14" x 24" (35.6cm x 61cm)

## 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 in the most efficient manner while ensuring that all piglets are receiving the right amount of heat at the right time.

- 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 can be mounted on an inside wall or vertically mounted 3" above the grated floor on the crate divider (Connections Up). Do not install the MSU mat over top of heaters servicing crates. This ensures the heat radiating up 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 $\Omega$  thermo-sensor to relay temperature readings from the surface of the heat mat to the HMC control. The sensor cable must run through its own conduit and be connected to the sensor input of the HMC controller.
- If using a different brand of controller, ensure the sensor parameter input is set to 1K.  
(To test sensor resistance  $\Omega$  / @ 25°C = 1000  $\Omega$ )
- The MSU sensor wire length can be extended but the connection points **must be soldered** and properly insulated from moisture.



## Technical Specification Sheet

<b>Input Voltage</b>	110 / 120 VAC, 208 VAC, 220 / 240 VAC
<b>Connection options</b>	110 / 120 VAC available with and without male plug end 208 / 240 VAC available with hardwire connection only
<b>Enclosure rating</b>	Type 4X - Liquid tight against jets of water from all directions
<b>Dielectric Specs</b>	<b>4700v</b> (HogHearth 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)
<b>Flammability</b>	Enclosure tested to UL94 5VA rating
<b>MIN Wall thickness</b>	0.125" (Enclosure)
<b>Color</b>	Medical grade dolphin gray w/ black backer
<b>Color stability @ UV exposure</b>	Low UV Resistance
<b>Max surface temperature</b>	128 (°F) / 53.3 (°C)
<b>Impact strength</b>	Ball Impact Resistance (mm) >3000 >3000 >3000 Dart Impact Resistance (mm) >1075 >1075 >875
<b>Drop strength</b>	Strain relief tested to 58 lbs (UL 1278)
<b>Top Load</b>	Maximum top load of 300 lbs (.5 PSI) per heat mat

## Hog Hearth® Model Numbers / Dimensions & Specs

	Model Number	Size (in.)	Size (cm.)	Weight lbs	Connection	Watts	Volts	Amps	HPC
<b>Mini FW</b>	HH-36-120S	14 (W) x 24 (L) x 1 (H)	35.6 x 60 x 2.5	4.5	Side	36	120	0.30	30
<b>Mini MSU</b>	HH-36-120S-MSU	14 (W) x 24 (L) x 1 (H)	35.6 x 60 x 2.5	5	Side	36	120	0.30	
	HH-36-208S-MSU	14 (W) x 24 (L) x 1 (H)	35.6 x 60 x 2.5	5	Side	36	208	0.17	
	HH-36-240S-MSU	14 (W) x 24 (L) x 1 (H)	35.6 x 60 x 2.5	5	Side	36	240	0.15	
<b>Single 4'</b>	HH-75-120T	14 (W) x 48 (L) x 1 (H)	35.6 x 120 x 2.5	7	Top	75	120	0.63	30
	HH-75-120B	14 (W) x 48 (L) x 1 (H)	35.6 x 120 x 2.5	7	Back	75	120	0.63	30
	HH-75-120S-MSU	14 (W) x 48 (L) x 1 (H)	35.6 x 120 x 2.5	7.5	Side	75	120	0.63	
	HH-75-208T	14 (W) x 48 (L) x 1 (H)	35.6 x 120 x 2.5	7	Top	75	208	0.36	52
	HH-75-208B	14 (W) x 48 (L) x 1 (H)	35.6 x 120 x 2.5	7	Back	75	208	0.36	52
	HH-75-208S-MSU	14 (W) x 48 (L) x 1 (H)	35.6 x 120 x 2.5	7.5	Side	75	208	0.36	
	HH-75-240T	14 (W) x 48 (L) x 1 (H)	35.6 x 120 x 2.5	7	Top	75	240	0.31	60
	HH-75-240B	14 (W) x 48 (L) x 1 (H)	35.6 x 120 x 2.5	7	Back	75	240	0.31	60
	HH-75-240S-MSU	14 (W) x 48 (L) x 1 (H)	35.6 x 120 x 2.5	7.5	Side	75	240	0.31	
<b>Single 5'</b>	HH-90-120T	14 (W) x 60 (L) x 1 (H)	35.6 x 152 x 2.5	8.5	Top	90	120	0.75	25
	HH-90-120B	14 (W) x 60 (L) x 1 (H)	35.6 x 152 x 2.5	8.5	Back	90	120	0.75	25
	HH-90-208T	14 (W) x 60 (L) x 1 (H)	35.6 x 152 x 2.5	8.5	Top	90	208	0.43	43
	HH-90-208B	14 (W) x 60 (L) x 1 (H)	35.6 x 152 x 2.5	8.5	Back	90	208	0.43	43
	HH-90-240T	14 (W) x 60 (L) x 1 (H)	35.6 x 152 x 2.5	8.5	Top	90	240	0.38	50
	HH-90-240B	14 (W) x 60 (L) x 1 (H)	35.6 x 152 x 2.5	8.5	Back	90	240	0.38	50
<b>Double 4'</b>	HH-135-120T	24 (W) x 48 (L) x 1 (H)	60 x 120 x 2.5	13	Top	135	120	1.13	17
	HH-135-120B	24 (W) x 48 (L) x 1 (H)	60 x 120 x 2.5	13	Back	135	120	1.13	17
	HH-135-208T	24 (W) x 48 (L) x 1 (H)	60 x 120 x 2.5	13	Top	135	208	0.65	29
	HH-135-208B	24 (W) x 48 (L) x 1 (H)	60 x 120 x 2.5	13	Back	135	208	0.65	29
	HH-135-240T	24 (W) x 48 (L) x 1 (H)	60 x 120 x 2.5	13	Top	135	240	0.56	34
	HH-135-240B	24 (W) x 48 (L) x 1 (H)	60 x 120 x 2.5	13	Back	135	240	0.56	34
<b>Double 5'</b>	HH-180-120T	24 (W) x 60 (L) x 1 (H)	60 x 152 x 2.5	15	Top	180	120	1.50	13
	HH-180-120B	24 (W) x 60 (L) x 1 (H)	60 x 152 x 2.5	15	Back	180	120	1.50	13
	HH-180-208T	24 (W) x 60 (L) x 1 (H)	60 x 152 x 2.5	15	Top	180	208	0.87	22
	HH-180-208B	24 (W) x 60 (L) x 1 (H)	60 x 152 x 2.5	15	Back	180	208	0.87	22
	HH-180-240T	24 (W) x 60 (L) x 1 (H)	60 x 152 x 2.5	15	Top	180	240	0.75	25
	HH-180-240B	24 (W) x 60 (L) x 1 (H)	60 x 152 x 2.5	15	Back	180	240	0.75	25
<b>Double 5' Channel</b>	HH-180-120T-DWC	27 (W) x 60 (L) x 1 (H)	68.5 x 152 x 2.5	18	Top	180	120	1.50	13
	HH-180-208T-DWC	27 (W) x 60 (L) x 1 (H)	68.5 x 152 x 2.5	18	Top	180	208	0.87	22
	HH-180-240T-DWC	27 (W) x 60 (L) x 1 (H)	68.5 x 152 x 2.5	18	Top	180	240	0.75	25

Controllers	HMC2 (Heat Mat Controller)	120/208/240
	HMC2-S (Heat Mat Slave Unit)	120/208/240
	HMC-Saver / USB	120/208/240
	HMC-Firmware Updater	

Accessories	HH-Bracket Set (4PC) - Hog Hearth 4PC 3" Bracket Set
	HH-Bracket ESet (4PC) - Hog Hearth 4PC Extension Set ( 2-3" + 2-12")
	HH-Bracket Single Mat ESet (4PC) - Hog Hearth Single Mat 4PC Extension Set (3-3" + 1-12")
	HH-CP - Hog Hearth Cord Protector Set - 18" w/ mounting hardware (screws & washers)

### **Important Instructions:**

- Read all instructions before installing or operating heater
- Always unplug the heater when not in use
- Do not operate any heater with a damaged cord / component or if heater has been dropped or damaged in any manner.
- Do not use outdoors.
- To disconnect heater, remove plug from 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

### **Innovative Heating Technologies Inc. Warranty:**

IHT warrants the Hog Hearth® heat mat to be free of defects in materials and workmanship pro-rated for the period of three (3) years from the original date of purchase by the end user, provided the product has been installed, connected and operated in accordance with IHT's written instructions. This warranty shall be delivered to the end user either directly by IHT or through an approved IHT distributor or at the approved distributor's discretion. IHT will replace the heater free of charge, within the first year and at a pro-rated charge for remaining 2 years. IHT will return same, shipping prepaid.

This warranty does not apply to damage resulting from surface wear, neglect, abuse, shipping damage, improper voltage connections, incorrect mounting, or color deterioration of the heating unit. The warranty applies to the heater ONLY and no warranties apply to the electrical cord, ends or standpipe / conduit. There are no warranties or conditions expressed, written or implied, other than as contained herein, provided that nothing herein modifies or subtracts from mandatory warranties or rights contained in applicable legislation.

Declare, accepting full responsibility, that the product Radiant Heat, Floor Supported Panel Type Animal Brooders, Series FRP65, -70 & -120 with Suffixes to which this declaration relates, conforms with the following standard(s) (1) EN 60335-1:94 per the provisions of the Low Voltage Directive 73/23/EEC and 93/68/EEC in accordance with the provisions of: (2) EN 55014:1993 per the provisions of the Electromagnetic Compatibility Directive (89/336/EEC and 93/68/EEC) directive.

May 1 / 2013; Oak Bluff, Manitoba, Canada

205 Oakland Road, Oak Bluff, Manitoba, Canada; R4G 0A4



205 Oakland Rd Oak Bluff, MB, R4G 0A4  
P: 204.896.7500 / TF: 800.725.9661 / F: 204.885.0903  
[innovativeheatingtech.com](http://innovativeheatingtech.com) / [hoghearth@ihtec.ca](mailto:hoghearth@ihtec.ca)