

You Supply the Power and We'll Provide the HEAT!

Composite Decking and Cellular
PVC Trim Bending Made Easy

HC99 Series HEAT FORMING KIT



Table of Contents

Safety Warnings and Guidelines	3
HC7900 Temperature Controller Functions	5
Care Instructions for Heat Blankets	8
Troubleshooting Tips	12
HC99-200 Cellular PVC Trim Heat Forming Kit	15
Included Parts and Material List	16
Preparing to Heat Form Cellular PVC Trim	17
Heating the Cellular PVC Material	21
Heat Forming	22
Frequently Asked Questions	23
HC99-300 Composite Decking Kit	27
Included Parts and Material List	28
Preparing to Heat Form Composite Decking	29
Heating the Composite Decking Material	33
Frequently Asked Questions	35
Notes	39

Company Contact Information

HEATCON®, Inc.
600 Andover Park East
Seattle, WA 98188

Phone: 206.575.0815
Fax: 206.575.0856
Toll Free: 800.556.1990
Email: wainfo@heatcon.com

SAFETY WARNINGS AND GUIDELINES

Disclaimer:

The information contained in this manual is intended to assist you in heat forming Composite Decking and/or Cellular PVC Trim material with HEATCON® products. It is not intended to and does not create any warranties, expressed or implied, including any warranty of merchantability or fitness for a particular application.

HEATCON®, Inc. reserves the right to make changes to this material, data sheets, or other information in this manual, at any time without notice.



SAFETY WARNINGS and GUIDELINES...

WARNING: Read and understand all instructions before operating the Heat Forming Kit. Failure to follow all instructions listed below may result in electric shock, fire and/or serious personal injury.

1. Do not expose the heatforming kit to rain or wet conditions.
2. Ensure extension cord is rated to carry the current draw the Heat Forming Kit is rated for.
3. Do not allow contact between the two blankets to avoid damaging or overheating the blankets.
4. Blankets should be rolled for storage. Avoid any sharp turns or bends to the blanket.
5. Do not overlap blanket heater onto itself while plugged in.
6. Ensure thermocouples are plugged in before powering on.
7. Ensure the marked "X" on the heater is against the product to be heat formed.
8. The heat blankets operate at temperatures exceeding 275 degrees Fahrenheit. At no time should the heaters be handled without heat protectant gloves.
9. Perform in a well-ventilated area.

HC7900 TEMPERATURE CONTROLLER FUNCTIONS



TEMPERATURE CONTROLS AND DESCRIPTIONS...

The temperature controller is a single self regulating system that monitors and controls the heat regulation of the heat blankets. The controller processes input information from the thermocouples that are built into each heat blanket. After the thermocouple information is processed, the necessary electrical output is calculated to heat up each heat blanket.

NOTICE: Always operate the temperature controller in a dry area. Avoid operating the controller in extremely high temperatures to mitigate the possibility of

overheating the controller. If possible keep the controller out of the direct sunlight to keep the controller at a cooler operating temperature.

1. HEAT LED

Illuminates when voltage is being sent to the blankets.

2. TIMER LED

Illuminates in the RUN MODE while the material is being heated. The LED pulses when the temperature is within 5 degrees of goal temperature and the timer has started.

3. UP/DOWN ARROW

Adjusts the temperature and timer settings up or down. If pressed and held for 2 seconds, the temperature will scroll faster.

4. LEFT/RIGHT ARROW

Moves the cursor between the temperature or time settings while the controller is in the

IDLE or RUN MODE.

While the cursor is on the temperature or time setting UP/DOWN ARROW key will change the setting.

5. ON/OFF KEY

Turns the controller on and off.

6. ✓ KEY

Functions as an “enter” key. Pushing this key will enter the current value and advance to the next setting. This key will also enter the RUN MODE if pressed while in the SET MODE.

7. ✕ KEY

Cancels an action. If depressed while in a menu, it will move to the previous step. If depressed in the RUN MODE, it will return the controller to the SET MODE.

HEAT BLANKET CARE INSTRUCTIONS

CARE INSTRUCTIONS FOR SILICONE RUBBER HEAT BLANKETS...

HEATCON®'s quality standards are among the highest in the industry. We take great care in designing, manufacturing and testing our Silicone Rubber Heaters. Our desire is to provide our customers with a strong, durable and reliable tool for application purposes. The end result of our quality process is a Silicone Rubber Heater that is economical for the customer to use.

Each silicone rubber heat blanket has a series of evenly spaced distributed wires inside the blanket material (see illustration below). The wires are encapsulated in a high temperature silicone rubber material and then a protective layer of woven fiberglass materials is applied for extra protection (Figure 1).

Cut Away View of Heat Blanket Wire



(Figure 1)

In order to obtain the maximum usage of your Silicone Rubber Heater, follow these simple care instructions:

STORAGE –Silicone Rubber Heat Blanket

1. Store the heat blankets in the original case provided with your kit (Figure 2). When rolling the heat blankets:
 - Carefully lay both blankets on top of each other on a flat surface (ensure both blankets are at room temperature).
 - Starting at the end of the blankets roll the blankets

with no less than a four inch diameter air gap. Use caution and do not bend or fold the heat blanket (Figure 3).

- Ensure that the connector leads do not have a strain or pulling force on them.
2. If storing the heat blankets outside of the original case, store the heat blanket in a flat position or in a rolled up position. Ensure that the leads do not have a strain on them.



(Figure 2)



(Figure3)

HANDLING

1. Ensure blankets have completely cooled before handling. Handle using heat protectant gloves as provided in the kit.
2. Take care when handling the heat blanket. Do not roll, fold, or carry the heat blanket by its lead wires. DO NOT BEND TABS OF HEAT BLANKET.
3. Do not pull on, or stress, the lead ends of the blankets while handling.

USE

1. Operate the blanket within its designed operating temperatures. Most PVC or deck materials can be heated to a temperature between 250°F - 350°F. When higher temperatures are required, keep in mind that heat blanket life decreases. Operation at temperatures over 400°F

degrades the silicone surface and greatly reduces blanket life.

2. Avoid placing heat blankets on sharp objects that could cut the cured silicone surface or cut into the fine wire circuits.
3. Avoid placing the heat blankets on wet areas or liquids.
4. Do not overlap the heat blanket onto itself or another heat blanket while plugged in or in operation.
5. Place the blankets with the "X" facing the material and "Caution Hot" facing opposite side of the material being heated.
6. If a brown or black spot appears on the blanket surface, stop the heating process immediately. This maybe a sign of overheating or blanket malfunction. Contact HEATCON® for a consultation of the blanket condition.

TROUBLE- SHOOTING TIPS

TROUBLESHOOTING TIPS...

Issue: The heat blanket will not reach the goal temperature.

Solution: Ensure that you have followed all of the recommended heat forming setup and operation procedures as outlined in this instruction manual. Outside forces such as wind and cold ambient temperatures can affect the heating performance of the blankets. Our procedures and recommendations help to ensure you obtain peak performance from your heat forming kit.

Issue: The heat blankets will not heat up.

Solution: Your heat blankets maybe damaged. Check the blankets for signs of burn marks or frayed material. If the blankets are bent or tightly wound, it may cause a break in the electrical wiring inside the blanket. Contact HEATCON® for further diagnosis.

Issue: The “TEMP” reading or heat blanket temperatures on the controller are fluctuating in hundred degree increments.

Solution: The temperature sensor (thermocouple) inside the heat blanket may be malfunctioning. Contact HEATCON® for further diagnosis.

Issue: The controller is flashing an “INPUT 3 ERROR” message (Decking Kits Only).

Solution: The Input 3 is the external temperature sensor (thermocouple) used to measure the board internal temperature. Make sure the temperature sensor is connected to the controller box. If the sensor is connected and still flashing the error code, the temperature sensor may need replacement.

Issue: The controller flashes “T/C READ FAILURE” message on the display. The temperature sensor (thermocouple)

embedded in the blanket tab or external Input 3 temperature sensor (Deck Kits Only) is not readable or has exceeded measurement limits.

Solution: Check the temperature sensor connection for a loose wire. Replace as necessary or contact HEATCON® for further diagnosis.

Issue: The Input 3 (INP 3) or board internal temperature reading is fluctuating sporadically with high and low temperatures during operation. (Decking Kits Only)

Solution: The temperature sensor (thermocouple) may be failing. Move the sensor wire around to check for a possible loose connection at either end of the sensor. If you have another controller, connect the temperature sensor to another controller. If the temperature sensor exhibits the same symptoms replace the temperature sensor (thermocouple).

Issue: The controller is flashing "OT ERROR CH 1" or "OT ERROR CH 2" on line 2 and "OUTPUT SHUTDOWN" on line 1 of the display.

Solution: This error message indicates that the output channel 1 or output channel 2 is in an overheat situation. Allow the controller to cool down for 30 minutes. Relocate the control box away from any heat sources, move out of direct sunlight, or move to a cooler area where the ambient temperature is under 100°F/37°C.

Issue: If the controller flashes "UNIT OVER TEMP" message on the display.

Solution: The controller electronics may have exceeded minimum safe working temperatures. Allow the controller to cool down for 30 minutes. Relocate the control box away from any heat sources, move out of direct sunlight, or move to a cooler area where the ambient temperature is under 100F/37C.

**HC99-200
CELLULAR
PVC TRIM HEAT
FORMING KIT**

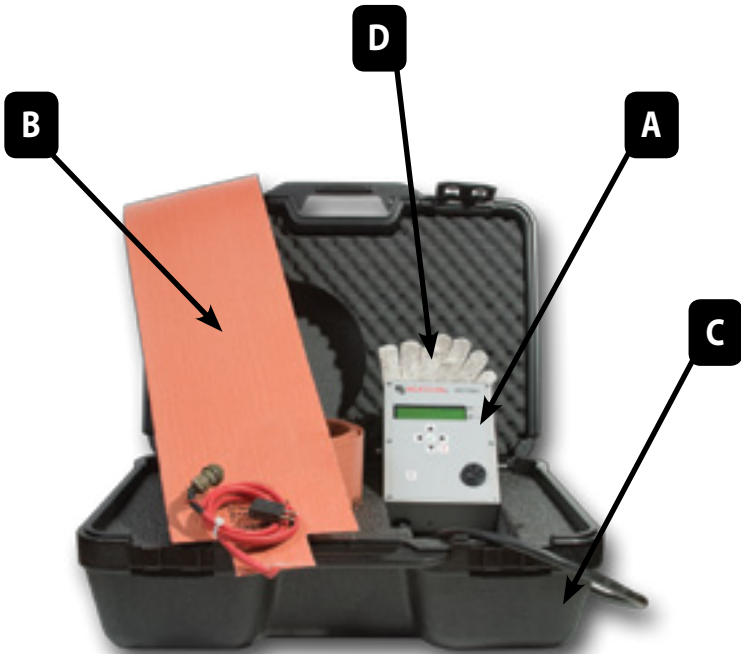
PARTS AND MATERIALS LIST FOR BENDING CELLULAR PVC TRIM...

Included with the HC99-200 Kit:

- A. One HC7900 Heat Controller
- B. Two Silicone Rubber Heaters
- C. Carrying Case
- D. Heat Protectant Gloves
- E. Instruction Manual

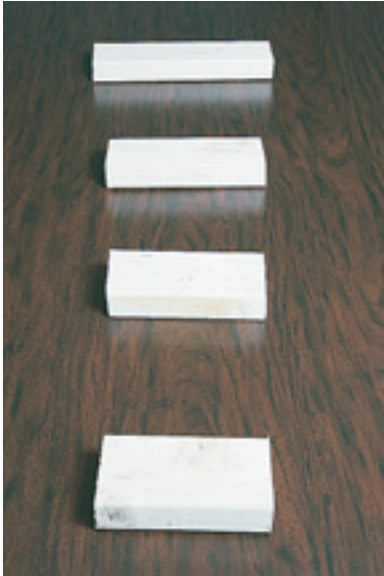
Provided by User:

- Two pieces of concrete board or siding that are 2" wider on each side and slightly longer than the heat blankets
- 4-6 pieces of scrap 2x4 or equal height items used to elevate the heat blankets off of the work surface
- Cellular PVC material to be heat formed



PREPARING TO HEAT FORM CELLULAR PVC TRIM...

1. Layout wooden blocks, as shown in Figure 2, to support the lower concrete board and to protect the work surface from heat.



(Figure 2)

2. Place one piece of concrete board on the wooden blocks as shown in Figure 3, the other on the work surface next to it.



(Figure 3)

3. Lay the heat blankets out on their respective piece of concrete board as shown in Figure 4.



(Figure 4)

4. Place the material to be heat formed on the heating blanket. Ensure the "X" is facing toward the material to be shaped (Figure 5).



(Figure 5)

NOTE: Always place the primary piece of material being heated at the front end of the heat blankets. Place any spacer boards at the end of the blankets (Figure 6).

5. Lay the second heat blanket on top of the material (Figure 7). Ensure "X" on the heat blanket is facing down on material to be shaped.

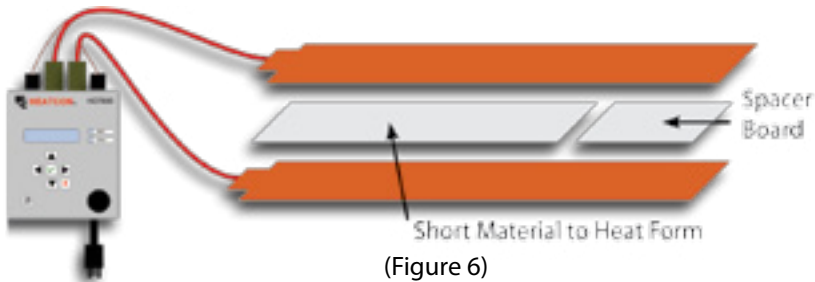
NOTE: If heating up PVC material that is shorter than

the heat blankets, use a spacer board in-between the area of the heat blankets. The spacer board should be a piece of the same material and color being heated. **DO NOT** use treated lumber or regular wood as a spacer.

WARNING: DO NOT allow the blankets to come in contact with each other during the heating operation.

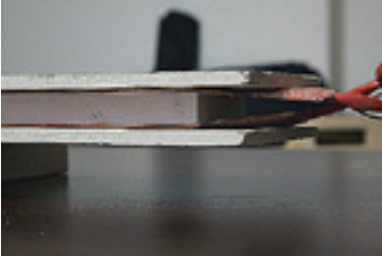


(Figure 7)



(Figure 6)

6. Add the second piece of concrete board as shown, ensuring the blankets do not shift on the material (Figure 8).



(Figure 8)

7. Make sure the controller is turned off and unplugged from the wall. Connect the heater power cords and thermocouple plugs on the top of the HC7900 Temperature Controller (Figure 9).

NOTE: Refer to the HC7900 Temperature Controller Functions section for functions and key descriptions.



(Figure 9)

8. Plug the temperature controller into a properly

rated electrical outlet and push the ON/OFF button. The display will flash the controller information then ask if you wish to bend PVC or Decking. Use the LEFT arrow to move the cursor to PVC then push the ✓ key (Figure 10).



(Figure 10)

9. The temperature controller will ask you for the goal temperature, use the UP and DOWN arrow keys to set the proper temperature. Push the ✓ key to enter the temperature (Figure 11). Your goal temperature should be 290-300°F for most PVC trim materials.



(Figure 11)

10. The temperature controller will now ask for the time at temperature, use the UP and DOWN arrow keys to set the proper time. Push the ✓ key to enter the time (Figure 12).



(Figure 12)


12. The Heat Forming Kit is now ready to heat the material.

11. The temperature controller is now in the "SET MODE." The display will show the temperature and the time. You can change the settings by using the LEFT/RIGHT arrow keys to select the temperature or time, and the UP/DOWN arrow keys to change the setting (Figure 13).



(Figure 13)

HEATING THE CELLULAR PVC TRIM MATERIAL...


1. Ensure the temperature and time settings are correct. Push the  key to begin the heating process.

2. The temperature controller will enter the "RUN MODE" as shown in Figure 14. The HEAT LED will begin to flash. The "TEMP" reading is the current temperature of the heat blankets. The "GOAL" shows the desired temperature.



(Figure 14)

3. When the heat blankets reach the goal temperature the Timer function will begin. The "RUN MODE" display will change to show the Timer Countdown. The TIMER LED will begin to blink.

4. At the end of the timer an audible alarm will sound. Push the  key to silence the

alarm.

WARNING: The heat blankets will remain on.

5. While wearing heat protectant gloves, remove the top concrete board and check the material for consistency. The material should have a consistency of cooked spaghetti (Figure 15).

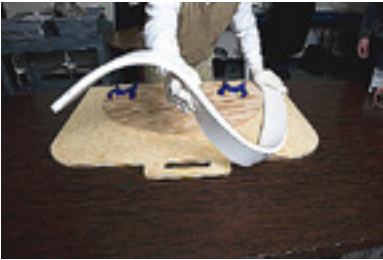


(Figure 15)

6. If the material does not have the correct consistency return the material to the heat blankets and check it every 2 minutes until the proper consistency is achieved. If the material feels correct, proceed to the Bending the Cellular PVC Trim Material section of this manual.

BENDING THE CELLULAR PVC TRIM MATERIAL...

1. While wearing heat protectant gloves, remove the material from the heat blankets. Place one end of the heated material on the edge of the form and clamp it down to keep it from moving (Figure 16).



(Figure 16)

2. Begin pulling the material gently along the form as shown in Figure 17. If the material wrinkles or feels rigid to form, straighten material out before it cools and place it back between the heat blankets.



(Figure 17)

3. After completely forming the material, clamp down the opposite end. Run hands along the material, as shown in Figure 17, while gently applying pressure to smooth the material as it cools.

WARNING: DO NOT apply too much pressure on the material.

4. After the material cools, unclamp the material and remove it from the form (Figure 18).



(Figure 18)

FREQUENTLY ASKED QUESTIONS...

How long will the heat blankets last?

If the heat blankets are handled and stored properly the heat blankets should last for seven (7) years. We have had PVC trim kits in the field for over a decade with all of the original equipment still in use. If the blankets are not handled as outlined in our heat blanket care instructions and users' manual, the life of the blankets may be shortened.

Why do I need a temperature controller for the heat blankets?

The heat blankets require a temperature controller to regulate the heating process. The temperature controller is simple to operate, however, internally it performs some complex tasks. The controller reads two different temperature readings from thermocouples (one from each blanket). It then utilizes the thermocouple feedback to calculate the needed output to heat up each blanket. Without the controller, the heat blankets will simply overheat.

Does the controller measure the temperature across the entire heat blanket?

No, it only measures in one spot on each heat blanket. This spot is marked with an "X" on the surface. It is important to ensure that the entire heat blanket has uniform material across the entire surface.

There are other ways of heating up PVC trim materials, what makes the HEATCON® system different?

Other heat forming methods such as tube heating systems will work, but may not provide even heat across the length of the board. This may cause the board to overheat on one end and not heat up enough in the center, making it difficult to bend. HEATCON®'s system is lightweight and portable and provides an even heat across the entire board.

Why is concrete board used in the heating process and can I use other materials to insulate the heat?

The heat forming procedure recommended by HEATCON® utilizes standard concrete board or concrete siding in the heating process. The purpose of the concrete siding is to keep the heat insulated between the heat blanket and material. It also helps to keep the heat blanket flat and in place against the PVC material. We recommend having at least 2" concrete board overlapping the heat blanket.

What outside forces can affect the heating process?

Outside forces such as wind and cool ambient temperatures may affect the heating process. Performing the heating forming procedure out of the wind and in warmer ambient temperatures will improve the heating process.

Why is there an odor during the heat forming process?

The PVC material will release an odor from heating the material. New heat blankets will also emit an odor after the first use. It is recommended to perform the process in a well-ventilated area.

Can I bend all PVC trim brands and what temperatures do I need to reach?

Most PVC trim materials offered today will require the material to be heated anywhere from 290°F to 300°F for 15-30 minutes to achieve a radial bend. Once the blankets are heated up the second piece of material will heat at a faster rate.

Can I use the HC99-200 PVC trim heat forming kit to form composite decking material as well?

The PVC trim blankets are not recommended for heating composite deck boards because the blankets heat at a faster rate than our standard deck blankets. PVC trim requires a higher surface temperature and can be heated at a faster rate than decking materials due to the material composition. Decking material is thicker and contains less PVC than interior trim. Thus, deck blankets are designed to heat at a slower rate to allow the

heat to radiate through the material.

How do I heat up a board that is shorter than the heat blankets?

Heating narrow or shorter pieces of material can be accomplished by using filler boards. It is recommended to use a piece of the same material, and color, as the board you are forming to maintain consistency in the heating process. It is also recommended to rotate cool filler boards in and out of the process if heat forming multiple boards. Do not use wood boards or treated lumber as they will not transfer the heat consistently.

Also remember that blankets should not touch for an extended period of time during the heating process due to extreme heat they generate.

How do I heat up a board that is longer than the heat blankets that I have?

If you are heating up a board that is longer than your heat blankets it is possible to heat up a section of the board and then form that heated section. Then, heat up and form the remaining portions of the board. The results will vary depending on the radius and experience of the user.

You can also use multiple heat forming kits to lengthen your heating surface. The heat blankets can be butted up end to end to make a longer heating surface.

Can I heat up a piece of material that is the same width as the heat blankets?

It is recommended to have at least a ½" of extra heat blanket on each side of the material being heated.

If heating up a board that is the same width as the blankets you will not be able to achieve a maximum radius or bend. Even though there is heat across most of the surface of the material, the outside of the material is exposed to the outside

air temperatures. This does not allow the outside edges of the board to maintain the same heat level as the rest of the material under the heat blanket.

Will the size or texture of the PVC material change during the heating process?

All PVC material brands will react differently. It is common for most materials to expand slightly. Some textured PVC trim boards will lose their texture look and feel after heat forming. It may be a good idea to test a piece of material before proceeding with a full project.

HC99-300 COMPOSITE DECKING KIT

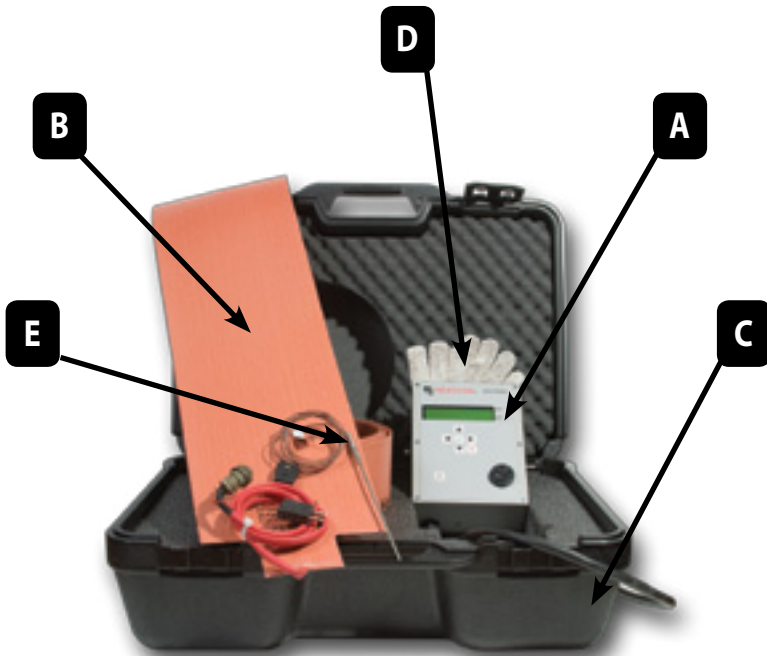
PARTS AND MATERIALS LIST FOR BENDING COMPOSITE AND PVC DECKING...

Included with the HC99-300 Half or Full Kit :

- A. One or Two HC7900 Heat Controllers
- B. Two or Four Silicone Rubber Heaters
- C. Carrying Case(s)
- D. Heat Protectant Gloves
- E. Thermocouple for Measuring Core Temperature
- F. Instruction Manual

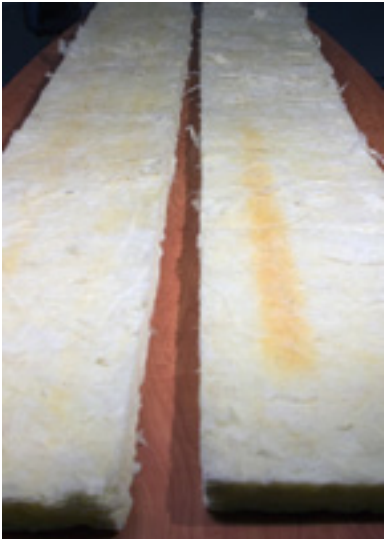
Provided by User:

- 2 pieces of insulation (R19 or lower) available. Minimum Size 12"W x 12' L or 12"W x 22' L (Depending on size of composite deck board being formed)
- Composite or PVC decking material
- Access to two separate 120V (15 Amp) electrical outlets (each HC7900 controller needs it's own electrical receptacle)



PREPARING TO HEAT FORM COMPOSITE DECKING...

1. Lay out the insulation as shown in Figure 19.



(Figure 19)

2. Center the blankets on their respective piece of insulation as shown in Figure 20.

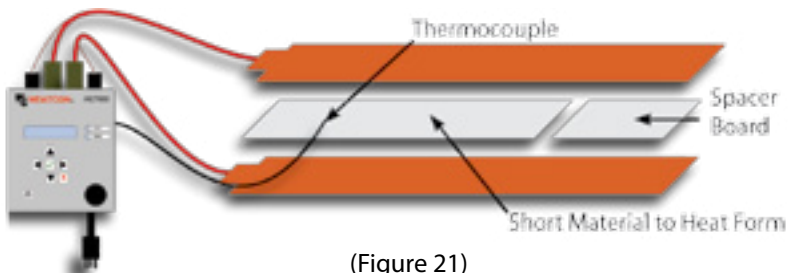
NOTE: If heating up material that is shorter than the heat blankets, use a spacer board in between the area of the heat blankets that require

the spacer. The spacer board should be a scrap piece of the same material and color being heated. Do not use treated lumber or regular wood as a spacer.



(Figure 20)

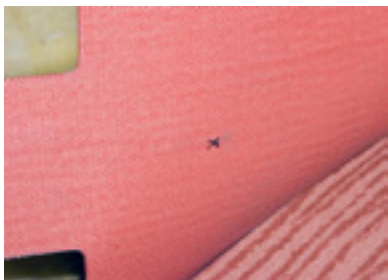
NOTE: Always place the primary piece of material being heated at the front end of the heat blankets. place any spacer boards at the end of the blankets. The Input 3 thermocouple should also be placed in the primary piece



(Figure 21)

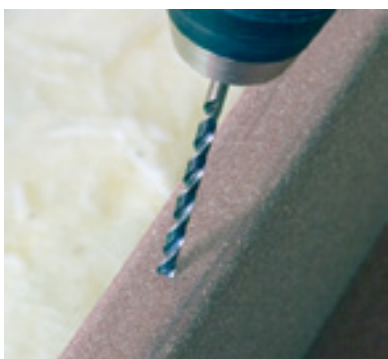
of material as shown in the following steps (Figure 21).

3. Center the material to be heat formed on the heat blanket. Ensure the "X" is facing toward the material to be formed (Figure 22).

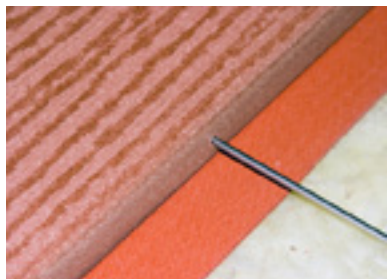


(Figure 22)

4. Drill a 1/4" hole into the center of the decking material, insert the thermocouple (Figure 23 and 24). The thermocouple will provide the internal core temperature of the board during the heating process.



(Figure 23)



(Figure 24)

5. Lay the second blanket on top of the material (Figure 25). Ensure that the "X" is facing the material being heated.

WARNING: DO NOT allow the blankets to come in contact with each other during the heating operation.



(Figure 25)

6. Add the second piece of insulation, as shown in Figure

26, ensuring the blankets do not shift on the material.



(Figure 26)

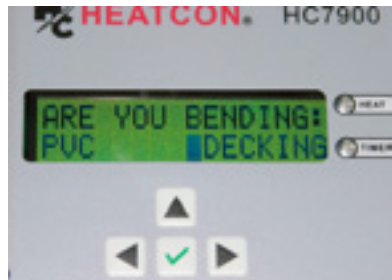
7. Make sure the temperature controller is turned off and unplugged from the wall. Connect the heater power cords and thermocouple plugs onto the top of the HC7900 Temperature Controller. Connect the thermocouple to the Input 3 on the side of the HC7900 Temperature Controller (Figure 27).

NOTE: Refer to the HC7900 Temperature Controller Functions section for functions and key descriptions.



(Figure 27)

8. Plug the temperature controller into the wall and push the ON/OFF button. The display will flash the controller information and then ask if you wish to bend PVC or DECKING. Use the RIGHT arrow to move the cursor to DECKING then push the ✓ key (Figure 28).



(Figure 28)


9. The controller will ask you for the goal temperature. Use the UP and DOWN arrow keys to set the proper temperature. Push the ✓ key to enter the temperature (Figure 29).



(Figure 29)



(Figure 31)

10. The controller will now ask for the INPUT 3 or Core Temperature. Use the UP/DOWN arrow keys to set the proper temperature. Push the  key to enter (Figure 30).



(Figure 30)

11. The Controller is now in the "SET MODE". The display will show the temperature and the core temperature. You can change the settings by using the LEFT/RIGHT arrow keys to select temperature or time, and using the UP/DOWN arrow keys to change the setting (Figure 31).

HEATING THE COMPOSITE DECKING MATERIAL...

1. Ensure the Goal Temperature and INPUT 3 settings are correct. Push the ✓ key to begin the heating process.
2. The controller will enter the "RUN MODE" as shown in Figure 32.
 - The HEAT LED will begin to flash.
 - The "TEMP" reading is the current temperature of the blankets.
 - "INP3" is the materials internal core temperature
 - The "GOAL" shows the desired temperature of the heat blankets



(Figure 32)

3. When the heat blankets reach the goal temperature, they will remain on while waiting for the INPUT 3 (Core

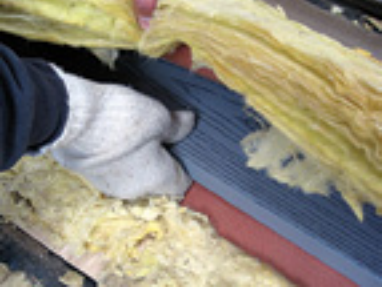
Temperature) to be reached.

4. When the INPUT 3 temperature is reached, an audible alarm will sound. Push the ✓ key to silence the alarm.

WARNING: The heaters will remain on. DO NOT lay the blankets on top of each other while they are hot.

5. While wearing heat protectant gloves, roll back a small section of the top layer of insulation. Check the material for consistency and ply-ability. The deck board will need to have consistent ply-ability across the surface of the board (Figure 33).

NOTE: All pvc and composite deck boards will vary in ply-ability once heated. Each manufacturer utilizes different types of materials for each deck board, so each deck board's ply-ability may vary. Refer to the table on page 37 as a reference when heating different types of deck boards.



(Figure 33)

6. When the consistency of the material feels correct, roll off the top layer of insulation and place the top heat blanket on top of the insulation. Remove the material. Form and install as desired (Figure 34).



(Figure 34)

FREQUENTLY ASKED QUESTIONS...

How long will the heat blankets last?

If the heat blankets are handled and stored properly they should last for several years. HEATCON® has 5 year old deck forming kits in the field with all of the original equipment still in use. If the blankets are not handled and operated as outlined in our user's manual, the life of the blankets will be shortened.

Why do I need a controller for the heat blankets?

The heat blankets require a controller to regulate the heating process. The controller is simple to operate, however, internally it performs some complex tasks. The controller reads 3 different temperatures from thermocouples (temperature sensors) at the same time. One from each heat blanket and one from the internal board thermocouple. The controller then utilizes the thermocouple feedback to calculate the needed power output to heat up each blanket. Without the controller the heat blankets will simply overheat. Each controller requires a 120V 15 Amp electrical circuit to operate.

Does the controller measure the temperature across the entire heat blanket?

No, it only measures in one spot on each heat blanket. This spot is marked with an "X" on the surface. It is important to ensure that the entire heat blanket has uniform material across the entire surface.

There are other ways of heating up composite or pvc decking materials, what makes the HEATCON® system different?

Other heat forming methods such as tube heating systems will work, but may not provide an even heat across the length of the board. This may cause the board to overheat on one end and not heat up enough in the center, making it difficult to bend. HEATCON®'s system is lightweight and portable and provides even heat across the entire board.

Why is insulation used in the heating process and can I use other materials to insulate with?

The heat forming procedure recommended by HEATCON® utilizes standard home insulation in the heating process. The purpose of the insulation is to encapsulate heat and keep a consistent temperature in and around the decking material. Standard insulation is inexpensive, portable, and proven to work in our process. Other methods may work, but have not been proven by HEATCON®.

What outside forces can affect the heating process?

Outside forces such as wind and cool ambient temperatures may affect the heating process. Performing the heating forming procedure out of the wind and in warmer ambient temperatures will improve the heating process.

Can I heat form composite deck hand rails using the HEATCON® system?

Heat forming composite hand rails maybe difficult due to the different thicknesses and physical form of the materials. Deck boards heat form more easily because they are flat and uniform in structure. No testing has been performed on hand rails by HEATCON®, therefore, we cannot recommend it.

Why is there an odor during the heat forming process?

The composite or pvc decking material will release an odor from heating the material. New heat blankets will also emit an odor after the first use. It is recommended to perform the process in a well-ventilated area.

How long does it take to heat up a composite or pvc deck board and to what temperature do I heat the material to?

It can take anywhere from 25 minutes to over an 1 hour to heat one board. The length of time will vary based on the several factors relating to the decking:

- The construction of the board. PVC material will heat faster than wood fiber composite boards.
- Darker color boards will heat more rapidly.

- The lower the air temperature, the longer it will take to heat the board.
- The starting temperature of the board will affect the heat up time. If the boards are pre-heated in the sun, it will decrease the heat up time.

The goal temperature will vary depending on the type of deck board material. See the chart below for basic guidelines. Contact the material manufacturer for any temperature recommendations.

DECKING TYPE	HEATFORMING ABILITY	TIGHTEST RADIUS	INTERNAL TEMPERATURE
PVC Decking	Excellent to Good	3.50' to 4'	220 - 260°F
Composite	Good to Fair	10.50' to 12'	240 - 260°F
Capstock	Poor	12' to 15'	240 - 260°F

Can I bend all composites or pvc deck board brands and what temperatures do I need to reach?

PVC materials tend to bend more readily, other composite materials then follow. Some capstock materials will not heat up consistently using our system. The outer layer of capstock does not absorb the heat at the same rate as the composite board underneath.

How do I heat up a board that is shorter than the heat blankets?

Heating narrow or shorter pieces of material can be accomplished by using filler boards. It is recommended to use a piece of the same material, and color, as the board you are forming to maintain consistency in the heating process. It is also recommended to rotate cool filler boards in and out of the process if heat forming multiple boards. Do not use wood boards or treated lumber as they will not transfer the heat consistently.

Also, remember that blankets should not touch for an extended period of time during the heating process due to extreme heat they generate.

How do I heat up a board that is longer than the heat blankets that I have?

If you are heating up a board that is longer than your heat blankets it is possible to heat up a section of the board and then form that heated section. Then, heat up and form the remaining portions of the board. The results will vary depending on the radius and experience of the user.

You can also use multiple heat forming kits to lengthen your heating surface. The heat blankets can be butted up end to end to make a longer heating surface.

Will the size or texture of the deck material change during the heating process?

Each composite or PVC deck material brand will react differently. It is common for most materials to expand very slightly. Most textured deck boards will maintain their texture look and feel after being heat formed. It may be a good idea that to test a piece of material before proceeding with a full project.

Can I use the HC99-300 deck heat forming kit to form Cellular PVC trim material as well?

The deck kit blankets will work for PVC trim, but the 8" x 10' deck forming blankets heat at a much slower rate than our standard PVC interior trim blankets. They are designed this way for a reason. Decking materials are thicker than interior trim, so the blankets are designed to heat at a slower rate to allow the heat to travel through the material. In addition, extreme radius bends may not be achievable.

If you are heating narrow trim using larger size blankets, extreme care must be taken not to allow the blankets to touch. Heating narrow pieces of material can be accomplished by using spacing boards or concrete board as a spacer. The decking controller will also run our 5" x 64" interior trim blankets, which can be purchased separately. The controller is setup to operate in either Decking or PVC trim mode.

HEATCON® , Inc.

600 Andover Park East
Seattle, WA 98188

Toll Free: 800.556.1990

Phone: 206.575.0815

Fax: 206.575.0856

WWW.HEATCON.COM