

Kelvin System, Inc.

# Cozy Installation Guide

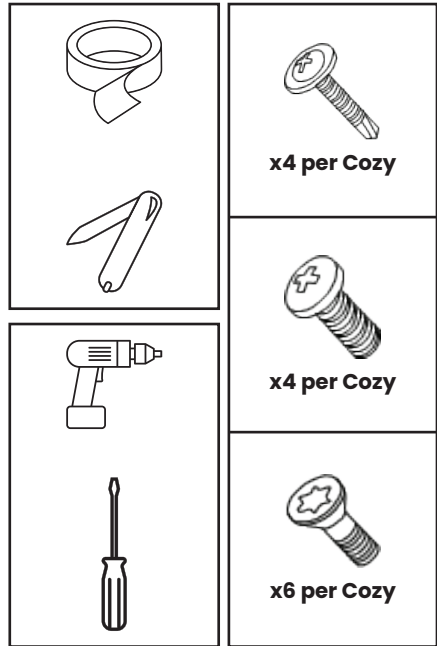
**Kelvin**

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## **Tools**

1. Heat-resistant tape
2. Power Drill (with phillips and Torx head bits)
3. Screwdriver (with phillips and Torx head bits)
4. Self-Tapping screws (to Secure to Wall)
5. L-Bracket Screws (to Secure to Enclosure)
6. Electronics-Kit screws



## **PPE Needed:**

- Gloves (Heat Resistant & Insulation Safe)
- Face Mask
- Protective Glasses

## The Cozy – Metal Enclosure



The Cozy is comprised of two main components:

1. A metal cover that fits over the radiator (*figures 1, 2, 3 below*)
2. An Electronics Kit (e-Kit) that fits into the metal cover and connects to a power outlet (*figures 4, 5, and 6 on following page*)

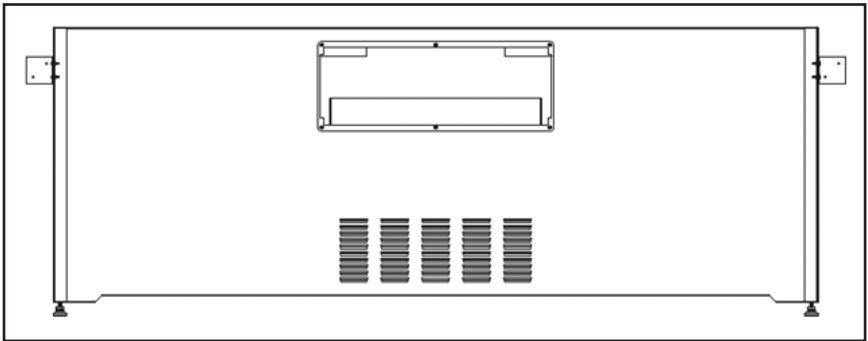


Figure 1: Cozy (Front View)

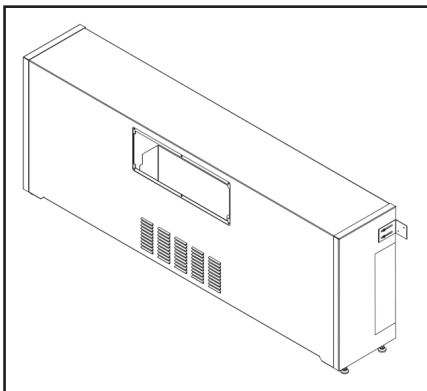


Figure 2: Cozy (Front Isometric)

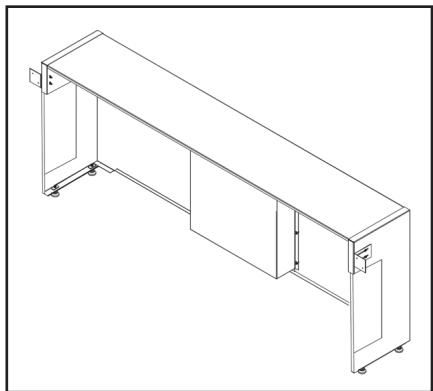


Figure 3: Cozy (Rear Isometric)

## The Cozy – Electronics Kit (e-Kit)



The Cozy is comprised of two main components:

1. A metal cover that fits over the radiator (*figures 1, 2 and 3 on previous page*)
2. An Electronics Kit (e-Kit) that fits into the metal cover and connects to a power outlet (*figures 4, 5, and 6 below*)

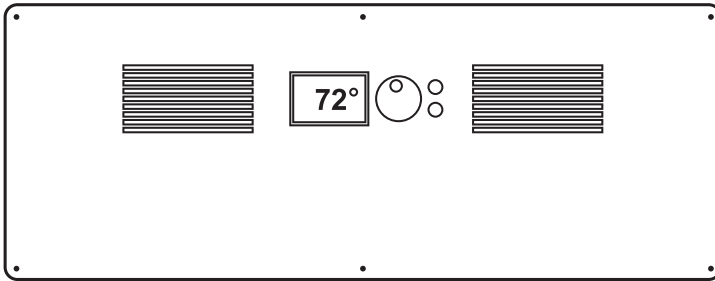


Figure 4 E-Kit – Front View



Figure 5 E-Kit – Top View

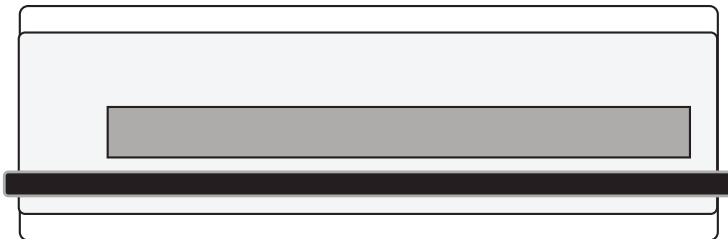


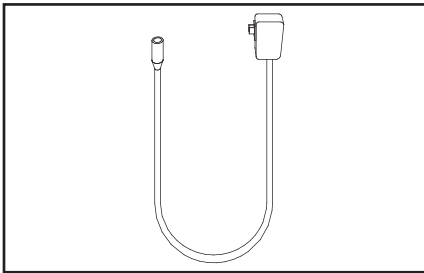
Figure 6 E-Kit (Rear View)

## The Cozy – Cables & Sensors

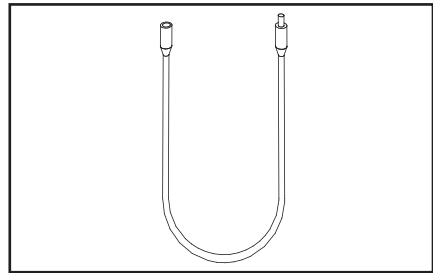


There are four cables in the Cozy:

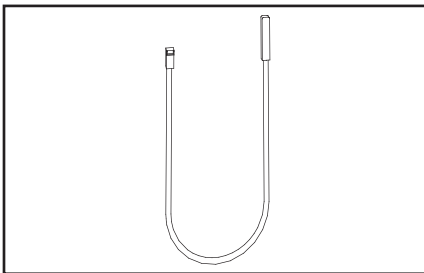
3. Power cable (and Power Brick) (*figure 7*)
4. Barrel Jack Extender (essentially an internal extension cord) (*figure 8*)
5. Radiator Sensor (*figure 9*)
6. Steam Trap Sensor (if applicable) (*figure 10*)



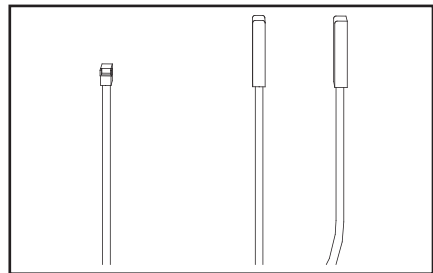
*Figure 7*  
Power Cable & Brick



*Figure 8* Barrel Jack Extender (Power Extension cable)



*Figure 9* Radiator Sensor (Copper Sensor on one end, plastic connector on other)



*Figure 10* Steam Trap Sensor (Plastic Connector on one end, two copper sensors on the other)

## The Cozy – Installation

Cozy installation consists of three primary steps:

1. Attach all sensors
2. Install the metal enclosure over the radiator
3. Test and install the electronics kit (e-Kit)

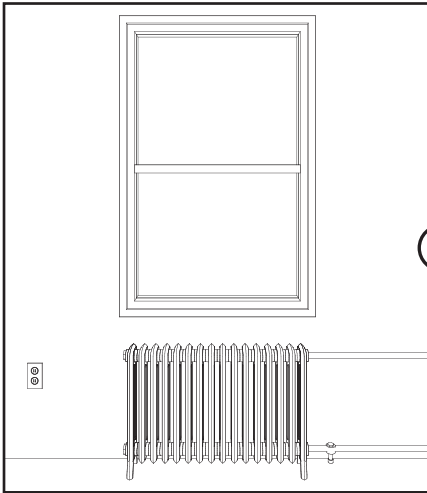


Figure 11  
Radiator before Cozy Installation

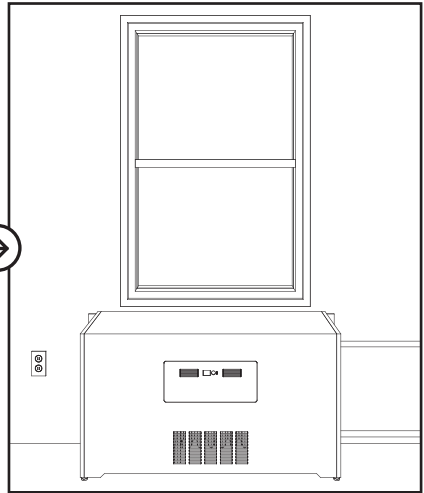


Figure 12  
Radiator after Cozy Installation

## Installation – Sensor & Cables

Select a Cable Bundle and separate out the three cables. Each bundle should have a Radiator Sensor, Power Cable, and Steam Trap Sensor cable. The first step is to attach the Radiator and Steam Trap sensors

### 1. Radiator Sensor:

- Ziptie the Radiator Sensor to radiator pipe just below copper sensor (Figure 13, 14)
- For additional security, tape the copper sensor directly to the pipe (Figure 15)

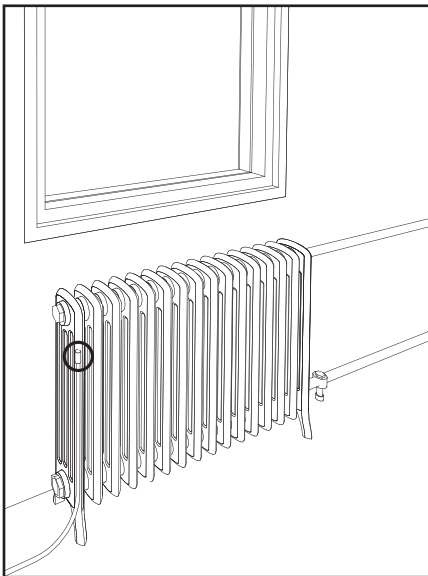


Figure 13

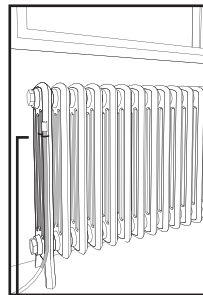


Figure 14

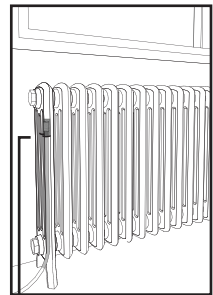
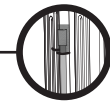


Figure 15





## 2. Steam Trap Sensor:

- Ziptie the Steam Trap sensors to either side of the steam trap (*Figure 16 & 17*)
- For additional security, tape each sensor directly to the pipe (*Figure 18*)

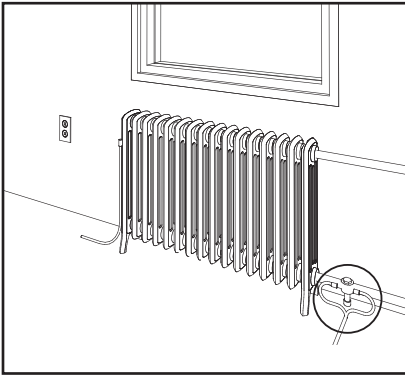


Figure 16

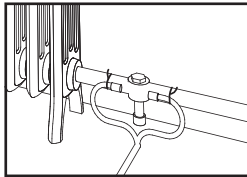


Figure 17

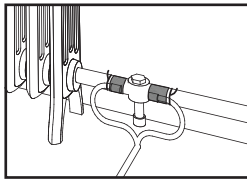


Figure 18

## 3. Power Cable:

- Route the power cable starting from over the top of the radiator, between the radiator and the wall, to the closest power outlet.
- Keep the three cords close together (*figure 19*)

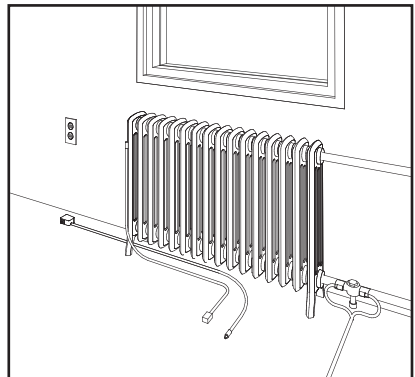


Figure 19

## Installation – Prepping the Cozy

Now the metal enclosure can be placed over the radiator:

1. Position the Cozy so that it's back is to the radiator and the eKit-Cavity is facing out. *(Figure 20)*

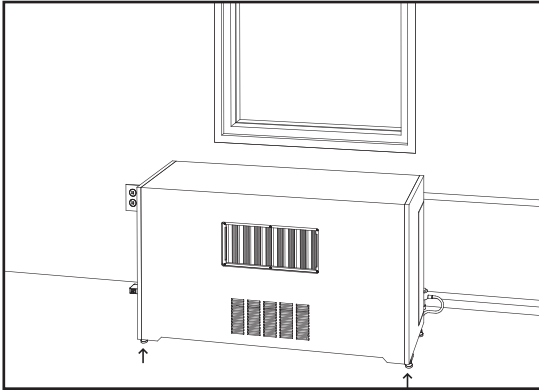


2. Route the Radiator Sensor Wire, Power Cable and Steam Trap Sensor Cable through the back of the eKit-Cavity and out through the right side of the duct, letting them dangle down the front of the Cozy. *(Figure 21)*

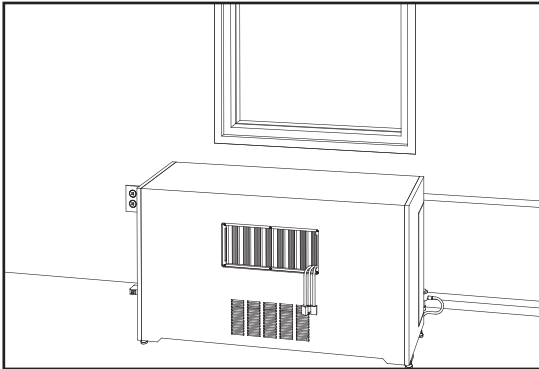


3. Note the location of the side piping and cut the rigid insulation accordingly, so that the insulation sits snug against the pipe. *(Figure 22)*

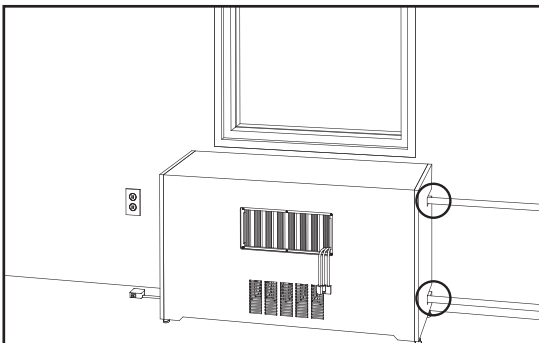




*Figure 20*  
Position the Cozy with the e-Kit cavity facing front. Adjust the levelers on the bottom so that the top of the Cozy sits just above the top of the Radiator.



*Figure 21*  
Route the three cables through the back of the e-Kit cavity and through the right side of the duct



*Figure 22*  
Note the location of the side piping and cut the rigid insulation accordingly, so that the insulation sits snug against the pipe

## Installation – Lifting & Placing the Cozy

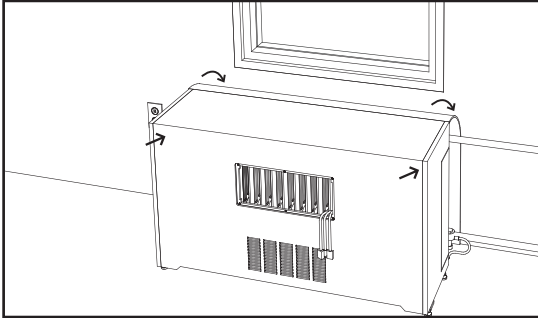
Now the metal enclosure can be placed over the radiator:

1. Unfurl the soft insulation affixed to the rear of the Cozy and tuck it between the rear of the radiator and the wall. (*Figure 23*)
2. Lift the Cozy and set it in place over the radiator (*see figure 23 on the following page*) with the side brackets against the wall. Adjust the feet levelers so the Cozy is not resting on the top of the radiator.
  - **Note:** If the Cozy is not flush against the wall, the radiator may have to be shifted closer to the wall.
3. Secure the L-Bracket to the side of the Cozy using the L-Bracket Screws and secure the L-Bracket to the wall using self-tapping screws. (*Figure 24-25 on following page*)
4. Using the white insulation tape, tape over the cut in the rigid insulation to leave a snug and clean-looking fit against the radiator pipe.

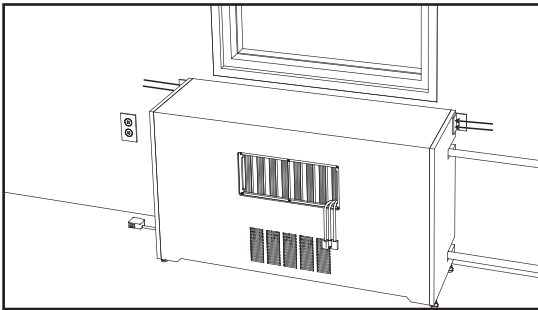


## Installation – Lifting & Placing the Cozy

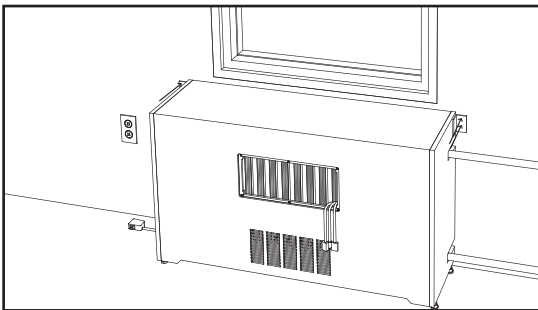
Now the metal enclosure can be placed over the radiator:



*Figure 23  
Unfurl the soft insulation affixed to the rear of the Cozy and tuck it between the rear of the radiator and the wall. Place the Cozy over the radiator. Note: If the Cozy is not flush against the wall, the radiator may need to be pushed back against the wall.*



*Figure 24  
Secure the L-Bracket to the side of the Cozy.*



*Figure 25  
Secure the L-Bracket to the wall.*

## Installation – Electronics Testing

Before installation, the pre-assembled Electronics Kit (e-Kit) must be tested:

1. Locate the three cables running from the e-Kit. The gray cable is the radiator sensor, the white cable is the power cord, and the four-pronged colorful cable is the Steam Trap Sensor.
2. Connect all three cables to the correct cable that is affixed to the radiator (for the sensors) and power brick (for the power cable). The power cable must be connected last.
3. Once plugged in, the fan should begin to spool up and the LED display should show green, yellow, and red bars. Once the front button blinks GREEN (see figure 26 below), the electronics kit has been successfully tested.
  - **Note:** If it blinks blue or orange, swap the kit out for a different one and mark the malfunctioning e-Kit for return to Radiator Labs.
4. Ensure the buttons do not stick when you push them.

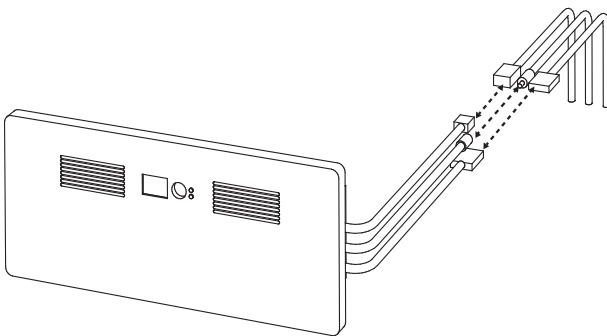
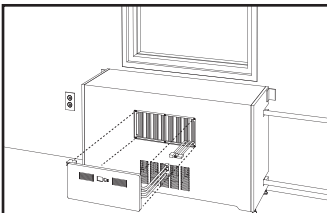


Fig. 26  
After you connect the cables and the LED light bar starts up, wait until you see a green light blink, indicating a successful test

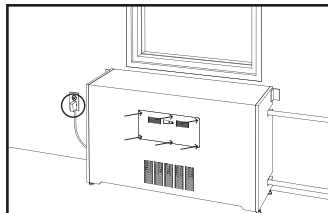
## Installation – Installing the Electronics Kit

And finally, install the Electronics Kit:

1. Connect all three cables to the correct cable that is affixed to the radiator (for the sensors) and power brick (for the power cable). The power cable must be connected last. (*figure 27*).
  - **Note:** If the e-Kit successfully passed testing, then the cables should already be plugged in.
2. Insert the e-Kit into the cavity, ensuring the wires are not pinched between the interior duct and the e-Kit.
3. Secure the e-Kit with six screws in the front plate (*figure 28*). If using a power drill, torque setting must be set to 3 or 4 ONLY. Use manual ideally.
  - **Note:** ONLY use the security screws provided when installing the e-Kit. Any other screws will damage the kit and void warranty.
4. Plug in the Cozy!
5. Pair the Cozy via the MAC Address barcode on the outside of the e-kit and the Pairing Form on the Device Magic App on your smartphone.



*Fig. 27*  
Locate and attach the two cables.  
Insert e-Kit into cavity



*Fig. 28*  
Secure the e-Kit with six security screws  
and plug in the Cozy!