

# COMFORT HEAT

MADE IN THE USA SINCE 1967

**THERMAZONE**

**THERMAZONE**  
— THIN —



# THERMAZONE<sup>®</sup>

## THERMAZONE<sup>®</sup>

— T H I N —

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Hot since 1967, BBC<sup>®</sup> Industries has produced the best infrared heating element on the market. We manufacture elements perfectly suited for the comfort heat industry. Our tight wire construction, longevity, and selection separate us from the competition.

# RESEARCH SHOWS THERMAZONE HEATERS PRODUCE IDEAL COMFORT HEAT

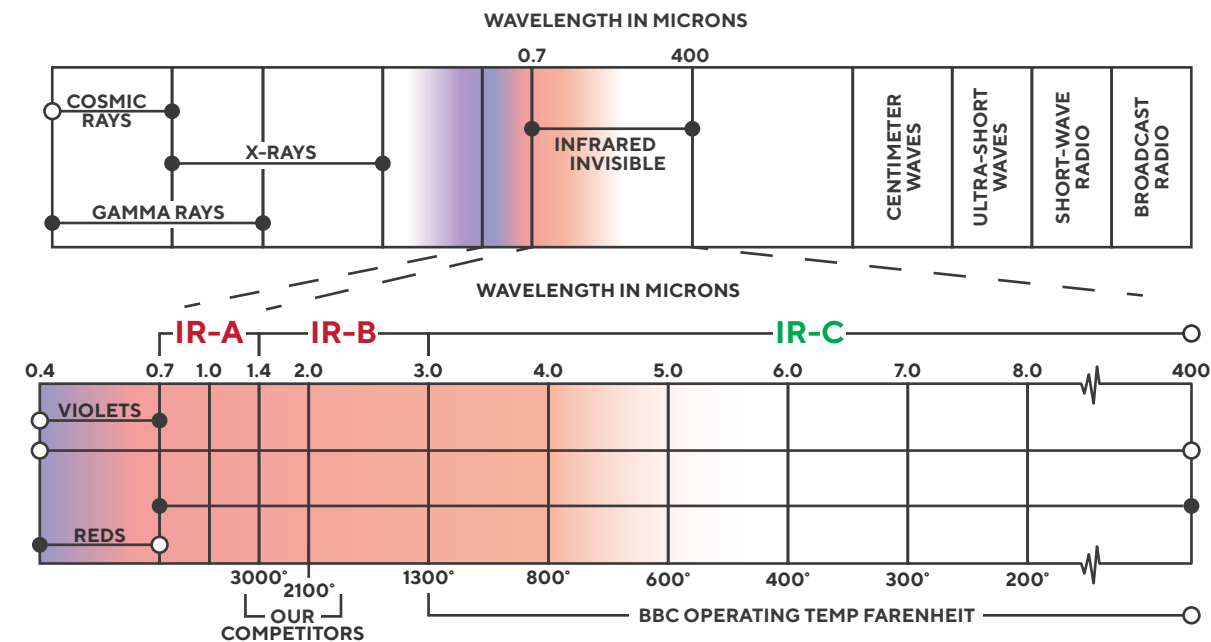
BUT DON'T TAKE OUR WORD FOR IT, READ IT FOR YOURSELF.



SCAN THIS CODE TO BE  
TAKEN DIRECTLY TO THE STUDY

The infrared or IR waveband is often subdivided into three regions: IR-A (.7 - 1.4  $\mu\text{m}$ ), IR-B (1.4 - 3  $\mu\text{m}$ ), and IR-C (3 - 1000 $\mu\text{m}$ ). IR causes a heating effect when it strikes a surface, in the case of comfort heating this is normally the skin. However, not all IR is converted to heat. IR can be absorbed or reflected.\* In the comfort heating world, we want to fall into the absorption range as much as possible. Good absorption directly correlates to better comfort heat. Generally, the longer the IR wave, the more absorption will occur (IR-C) and the shorter the wave, the more IR is reflected off of the skin (IR-A & IR-B).

BBC is producing heating elements that fall right in the sweet spot of the IR waveband, IR-C. Nearly 100% of the waves that the Thermazone® emits will be absorbed rather than reflected. Our competitors heating methods often land in the short-medium (IR-A and IR-B), which are ineffective for comfort heating applications. We're translating every penny you spend on energy into comfort heat rather than reflecting it around the room.



IR-A: SHORT WAVE

IR-B: MEDIUM WAVE

THERMAZONE OPERATES HERE  
IR-C: LONG WAVE



**MADE IN THE USA**

Proudly manufactured and hand assembled in Pacific, Missouri.



**95% ENERGY EFFICIENT**

Virtually all of the energy provided to the heater is converted into useful heat.



**100% ELECTRIC**

No flames or noxious gasses means Thermazone heaters are odor free and do not require ventilation.



**NO MOVING PARTS**

Nothing to break or wear out means the Thermazone is maintenance free.



**NO ORANGE GLOW**

Never worry about the eyesore of a glowing heater again. Every Thermazone has a clean, black face which does not give off any light, meaning it neatly blends into the background.



**NO REFLECTORS TO CLEAN**

No bulbs means no need for reflectors. Another reason Thermazone heaters require zero maintenance.



**NO BULBS**

Save yourself money and frustration by never having to replace a bulb.



# SUITABLE LOCATIONS FOR USE

Warehouses

Factories

Manufacturing Plants

Storage Facilities

Workshops and Garages

Autobody and Repair Shops

Fitness Studios

Hot Yoga

Ventilated Zoo and Animal Pens\*

Ventilated Stables and Barns\*

Transportation Terminals

Greenhouses

Airplane Hangers

Restaurants

Outdoor Patios

Water and other Treatment Facilities

Parking Garages

Indoor Pools

Hotel Entrances and Valet Stands

Stadiums and Arenas

Car Rental Stations

Retail Stores and Entry Foyers

Airports

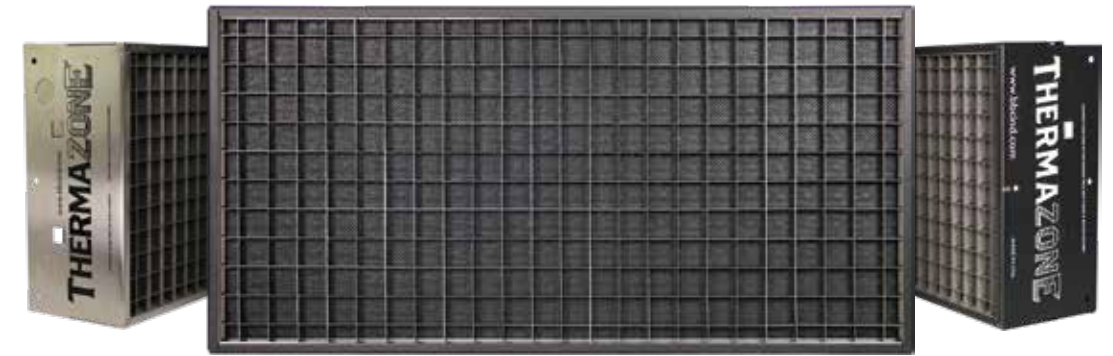
Shipping and Receiving Docks (and many more...)

\*Thermazone® and Theramzone Thin® are not rated for environments requiring explosion proof certification



95% ENERGY  
EFFICIENT

# THERMAZONE®



Whether you have a warehouse, dock, or workshop to keep heated, Thermazone® is the smart choice. Let the quartz era end and a revolution begin with a zero maintenance heater. You'll never worry about bulbs to replace or reflectors to clean.

With no moving parts to wear out, Thermazone® will last you for years to come, all the while giving you safe, clean, energy-efficient heat. There are no combustion products discharged, no flames, and no noxious gases emitted. Meaning there is no need to ventilate.

To top it all off, Thermazone® provides the most energy efficient heater in the comfort heat market, converting 95% of the used energy into useful heat.

Please visit [www.bbcind.com/catalog/comfortheat](http://www.bbcind.com/catalog/comfortheat) for additional product information.



ORDER YOUR THERMAZONE IN ANY OF OUR  
HIGH TEMP RESISTANT COLOR OPTIONS



ORDERING GUIDE

| Model #<br>+<br>Desired Voltage | Example       |
|---------------------------------|---------------|
|                                 | 11-800U-120V  |
|                                 | 21-2400U-240V |
|                                 | 43-4800U-480V |

1'

5.5"

MODEL 1x - 1x1

| SINGLE PHASE |           |           |      |      |
|--------------|-----------|-----------|------|------|
| MODEL        | BTUs      | WATTs     | 120v | 240v |
| 11-800U      | 2972      | 871       | 7.3  | --   |
| 11-1000U     | 3689      | 1081      | 9.0  | --   |
| 11-1200U     | 3791      | 1111      | 9.3  | --   |
| 11-1500U     | 5807/5572 | 1702/1633 | 14.2 | 6.8  |

2'

5.5"

MODEL 2x - 2x1

| SINGLE PHASE |             |           |      | THREE PHASE |      |
|--------------|-------------|-----------|------|-------------|------|
| MODEL        | BTUs        | WATTs     | 120v | 240v        | 240v |
| 21-1600U     | 5661/5804   | 1659/1701 | 13.8 | 7.1         | --   |
| 21-2000U     | 7479/6828   | 2192/2001 | 18.3 | 8.3         | --   |
| 21-2400U     | 7582/8285   | 2222/2428 | 18.5 | 10.2        | --   |
| 21-3000U     | 11615/11052 | 3404/3239 | 28.4 | 13.5        | --   |
| 23-2000U     | 6811        | 1996      | --   | --          | 4.8  |
| 23-2400U     | 8350        | 2447      | --   | --          | 5.9  |
| 23-3000U     | 10400       | 3048      | --   | --          | 7.3  |

4'

5.5"

MODEL 4x - 4x1

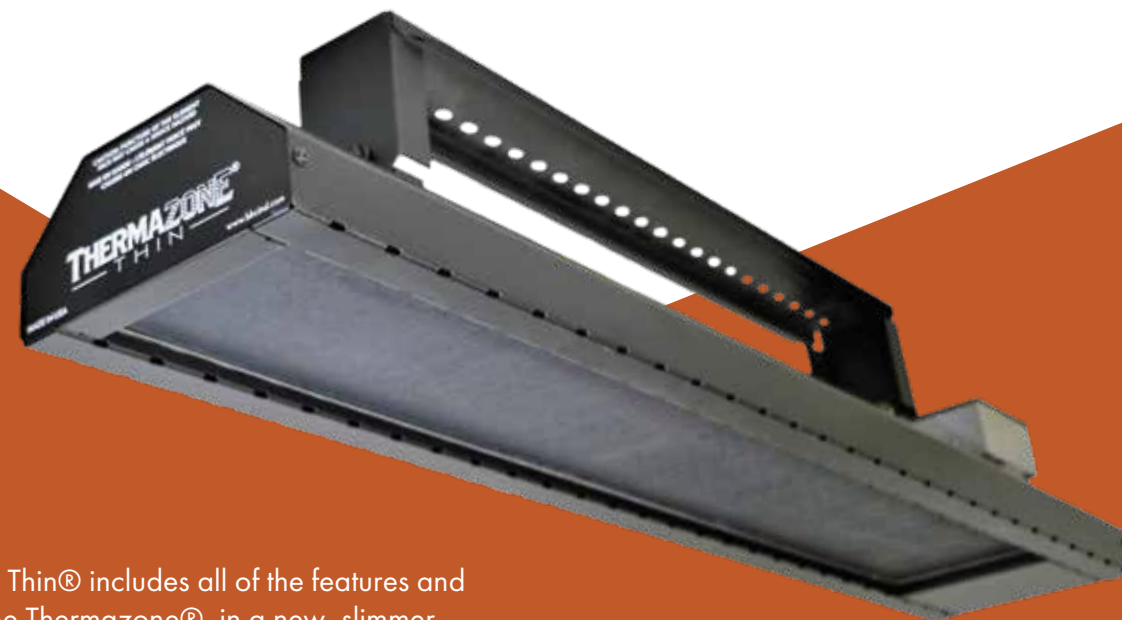
| SINGLE PHASE |             |                |      | THREE PHASE |      |      |      |      |
|--------------|-------------|----------------|------|-------------|------|------|------|------|
| MODEL        | BTUs        | WATTs          | 120v | 240v        | 277v | 480v | 240v | 480v |
| 41-3200U     | 11608       | 3402           | --   | 14.2        | --   | 7.1  | --   | --   |
| 41-4000U     | 13655/13526 | 4002/3964/4002 | --   | 16.7        | 14.3 | 8.3  | --   | --   |
| 41-4800U     | 16569/16296 | 4856/4776/4856 | --   | 20.2        | 17.2 | 10.1 | --   | --   |
| 41-6000U     | 22104/20517 | 6478/6013/6478 | --   | 27.0        | 21.7 | 13.5 | --   | --   |
| 43-4000U     | 13580/13802 | 3980/4045      | --   | --          | --   | --   | 9.6  | 4.9  |
| 43-4800U     | 16395/16545 | 4805/4849      | --   | --          | --   | --   | 11.6 | 5.8  |
| 43-6000U     | 20933/20725 | 6135/6074      | --   | --          | --   | --   | 14.8 | 7.3  |

10

IT'S NOW  
**HOTTER**  
&  
**SLIMMER**

# THERMAZONE<sup>®</sup>

— T H I N —



Thermazone Thin<sup>®</sup> includes all of the features and benefits of the Thermazone<sup>®</sup>, in a new, slimmer, modern design. Packed with more heat per square inch, the Thermazone Thin<sup>®</sup> is still perfect for all of your heating needs. Ideal for restaurants, outdoor patios, and any other area that needs to keep people warm, the Thermazone Thin<sup>®</sup> does so effectively and discretely.

Like its sister heater, the Thermazone Thin<sup>®</sup> converts 95% of applied energy to useful heat, it contains no bulbs or moving parts to replace, and is maintenance free for the life of the heater. The slim cove design gives Thermazone Thin<sup>®</sup> an attractive commercial or residential appeal, and with three colors to choose from, these heaters blend seamlessly into any space.

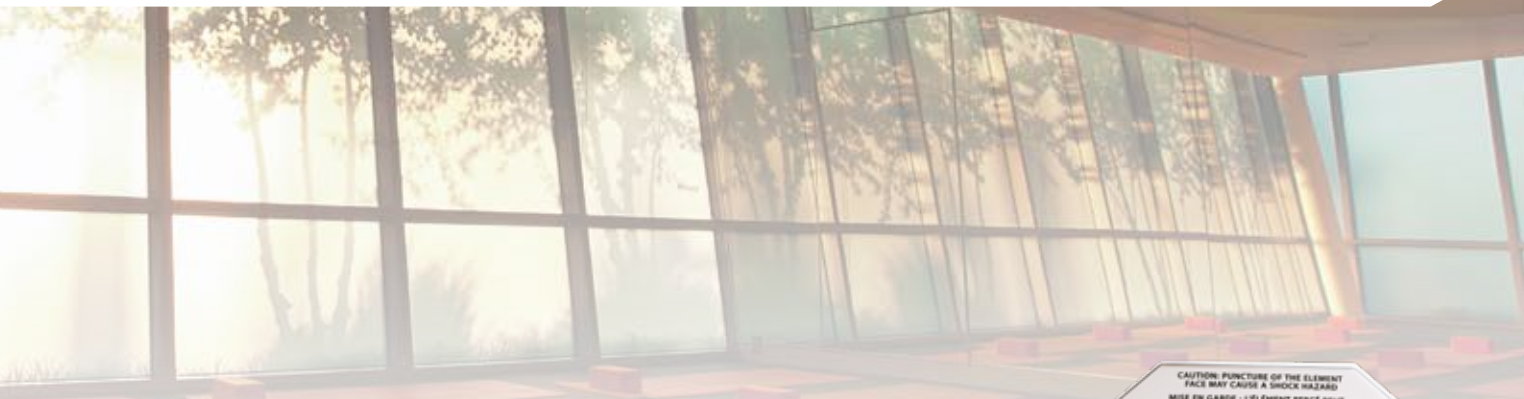
Please visit  
[www.bbcind.com/catalog/comfortheat](http://www.bbcind.com/catalog/comfortheat)  
for additional product information.





Thermazone Thin® is available with an 18" or 36" heating surface. The heating element is a flat panel IR emitter, which is able to be "cycled" for increased energy efficiency. All Thermazone Thin® heaters are UL rated for outdoor use under cover, and come supplied with a rear mounted junction box. The mounting bracket, included, is designed for ceiling or wall mounted locations, and is predesigned for pivoting to safely hang at an angle.

## CUSTOMIZE YOUR THERMAZONE THIN WITH AN ATTRACTIVE COLOR OPTION



BLACK



STAINLESS



WHITE

### 18" MODEL

3.8"

23.5"

8.85"

#### SINGLE PHASE

| MODEL          | BTUs | WATTS | 120v |
|----------------|------|-------|------|
| TZ18-2200U-120 | 7373 | 2161  | 18.1 |
| TZ18-1800U-120 | 6053 | 1774  | 14.8 |
| TZ18-1400U-120 | 4712 | 1381  | 11.5 |
| TZ18-1000U-120 | 3723 | 1091  | 9.1  |

### 36" MODEL

3.8"

41.5"

8.85"

#### SINGLE PHASE

| MODEL          | BTUs  | WATTS     | 208v | 240v |
|----------------|-------|-----------|------|------|
| TZ36-4300U-240 | 14747 | 3247/4322 | 15.7 | 18.1 |
| TZ36-3600U-240 | 12106 | 2665/3548 | 12.9 | 14.8 |
| TZ36-3100U-240 | 10591 | 2332/3104 | 11.2 | 12.9 |
| TZ36-2700U-240 | 9421  | 2074/2761 | 10.0 | 11.5 |
| TZ36-2200U-240 | 7438  | 1638/2180 | 7.9  | 9.1  |

## CONTROLS

All Thermazone® and Thermazone Thin® heater models are capable of being regulated or “cycled” to control their heat output. Different methods of control offer different levels of efficiency so each application should be examined to determine which control method is most suitable. The following pages discuss the BBC Industries recommended methods of control in more detail, highlighting the benefits and function of each.

Thermazone® and Theramzone Thin® heaters do not come with built in controls. The heaters may be installed and operated without controls, in which case a heater is either 100% on, or it is 100% off. This may be acceptable in many applications; however, when controls are needed to regulate temperature or follow a heating schedule, BBC Industries offers a variety of manufacturer recommended control options which range from single unit control, all the way to full system commercial and industrial grade control panels. Please contact your Thermazone supplier or a qualified electrician to determine if controls are needed for your heating application.

What is “Cycling” – Cycling your heater is a method to control the temperature by repeatedly turning the heater on and off in a given period of time. BBC Industries flat panel IR emitters are capable of producing heat even when they are “off” for short periods of time, so in a comfort heat application, there is no noticeable loss of temperature. This does not harm the heater what-so-ever, and in fact, BBC Industries uses this as a method of highly efficient energy control in many applications.

## EASILY CONTROLLED WITH YOUR SMART PHONE

1.

**HUB**

Set up your Z-Wave HUB in a centralized location.

Link your phone and all of the TZ Switches you plan to use.

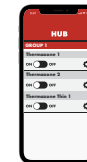
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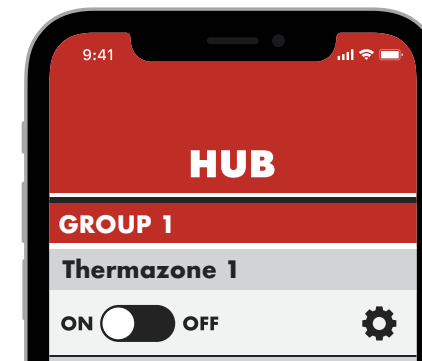
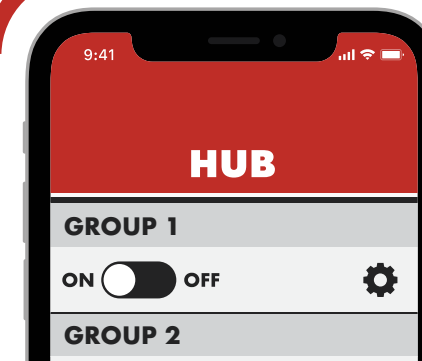
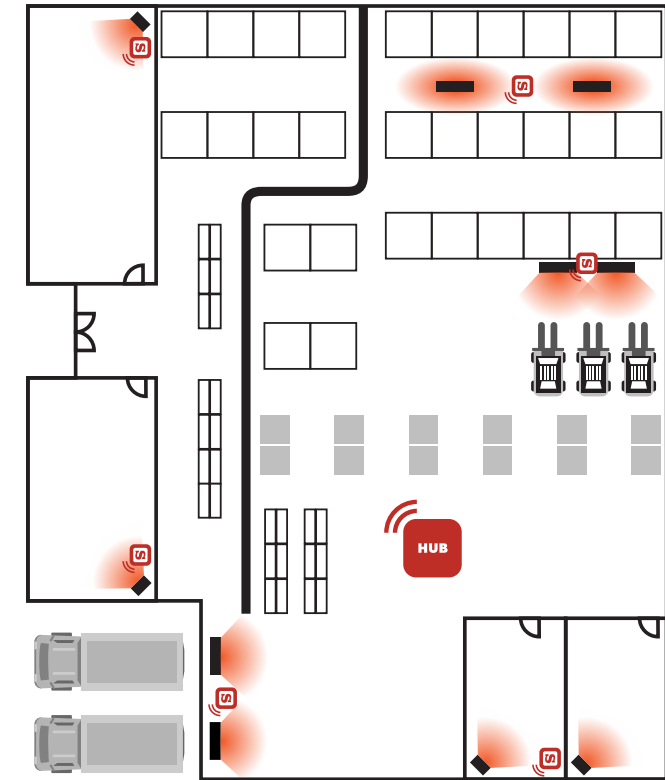
Set up all of your TZ Switches.

Each TZ Switch can control up to 40 Amps, so multiple Thermazone® or Thermazone Thin® heaters can be attached to one TZ Switch.

3.



With your Z-Wave HUB set up and your TZ Switches all connected, you can now control your Thermazone® and Thermazone Thin® heaters from your phone. Easily create a routine for your heaters to turn on or off automatically, or enjoy turning them on and off as needed from the convenience of your phone.



CONTROL PANEL



BBC Industries offers a variety of UL listed control panels as the most efficient and effective way to control your Thermazone® and Thermazone Thin® heaters. Suitable for 120V/240V and 480V heaters in both single and three phase design. Standard panels are equipped to handle up to 4 independently controlled heat zones. See below for a list of standard BBC control panel options.

TOUCH SCREEN



BBC’s remote mounted Touch Screen allows users to access control of the heaters at a convenient location. A 4” color screen allows access to each zone for independent temperature control. All BBC remote mounted touch screens are rated for indoor or outdoor use.

CONTROL PANELS

| MODEL            | ITEM DESCRIPTION  | RATING |         |       |
|------------------|---|--------|---------|-------|
|                  |   | AMP    | VOLT    | PHASE |
| THZ-1-1PH-CC-DV  | Thermazone Power Distribution Panel - 1 Zone w/ Touch Screen  | 48     | 120/240 | 1     |
| THZ-2-1PH-CC-DV  | Thermazone Power Distribution Panel - 2 Zones w/ Touch Screen | 96     | 120/240 | 1     |
| THZ-3-1PH-CC-DV  | Thermazone Power Distribution Panel - 3 Zones w/ Touch Screen | 144    | 120/240 | 1     |
| THZ-4-1PH-CC-DV  | Thermazone Power Distribution Panel - 4 Zones w/ Touch Screen | 192    | 120/240 | 1     |
| THZ-1-1PH-CC-480 | Thermazone Power Distribution Panel - 1 Zone w/ Touch Screen  | 48     | 480     | 1     |
| THZ-2-1PH-CC-480 | Thermazone Power Distribution Panel - 2 Zones w/ Touch Screen | 96     | 480     | 1     |
| THZ-3-1PH-CC-480 | Thermazone Power Distribution Panel - 3 Zones w/ Touch Screen | 144    | 480     | 1     |
| THZ-4-1PH-CC-480 | Thermazone Power Distribution Panel - 4 Zones w/ Touch Screen | 192    | 480     | 1     |
| THZ-1-3PH-CC-240 | Thermazone Power Distribution Panel - 1 Zone w/ Touch Screen  | 48     | 240     | 3     |
| THZ-2-3PH-CC-240 | Thermazone Power Distribution Panel - 2 Zones w/ Touch Screen | 96     | 240     | 3     |
| THZ-3-3PH-CC-240 | Thermazone Power Distribution Panel - 3 Zones w/ Touch Screen | 144    | 240     | 3     |
| THZ-4-3PH-CC-240 | Thermazone Power Distribution Panel - 4 Zones w/ Touch Screen | 192    | 240     | 3     |
| THZ-1-3PH-CC-480 | Thermazone Power Distribution Panel - 1 Zone w/ Touch Screen  | 48     | 480     | 3     |
| THZ-2-3PH-CC-480 | Thermazone Power Distribution Panel - 2 Zones w/ Touch Screen | 96     | 480     | 3     |
| THZ-3-3PH-CC-480 | Thermazone Power Distribution Panel - 3 Zones w/ Touch Screen | 144    | 480     | 3     |
| THZ-4-3PH-CC-480 | Thermazone Power Distribution Panel - 4 Zones w/ Touch Screen | 192    | 480     | 3     |

PERCENT TIMER



This 120V/240V 20 Amp Percent Timer offers simple control utilizing BBC’s preferred method of “cycling” to regulate heater output. The simple operation of this Percentage Timer makes this unit ideal for regulating your Thermazone® and Thermazone Thin® heaters. Two dials give the user complete control of the heat output; one controls the cycle time of the heater, and the other controls the amount of time in which the heater is on during that given cycle. For example, if the cycle time is set to 1 minute, and the percent set to 75%; then the heater will be on for 45 seconds, off for 15 seconds, then repeat. This allows precise temperature control while offering optimal heater efficiency. This method of heat control is ideal for areas that need to regulate a consistent temperature.

LINE VOLTAGE REGULATOR



Controlling the Thermazone® and Thermazone Thin® by means of a Line Voltage Regulator does so by controlling the amount of voltage that goes to a heater. By controlling the voltage that reaches the heater, we are controlling the wattage of the heater, thus controlling the temperature. Turning the dial up or down will change the amount of voltage that reaches the heater, thereby giving off more or less heat as desired. This method of control is ideal for areas that may need to change temperatures frequently.

TIMER



This 120V/240V 28 Amp In-Wall Timer gives the user precise control over the length of time a heater is on. Simply turn the dial to the desired time and it will be on for this period. At the end of this set time period, the heater will automatically shut off. This method of control is ideal for areas that are used frequently, but not for extended periods of time.

Z-WAVE

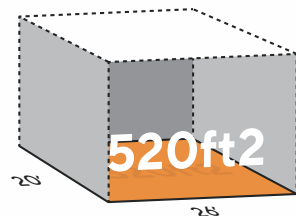
| MODEL     | ITEM DESCRIPTION                              | RATING |         |       |
|-----------|---|--------|---------|-------|
|           |   | AMP    | VOLT    | PHASE |
| TZ-HUB    | Thermazone Wireless Connection Hub            | ANY    | ANY     | 1     |
| TZ-SWITCH | Thermazone Wireless Controller, Z-WAVE Switch | 40     | 120/240 | 1     |

UNIT CONTROLS

| MODEL      | ITEM DESCRIPTION                  | RATING |         |       |
|------------|-----------------------------------|--------|---------|-------|
|            |                                   | AMP    | VOLT    | PHASE |
| TZ-PCT     | Thermazone Percent Timer          | 20     | 120/240 | 1     |
| TZ-LVR-TBD | Thermazone Line Voltage Regulator | TBD    | TBD     | TBD   |
| TZ-TIMER   | Thermazone Heavy Duty Timer       | 28     | 120/240 | 1     |



# HOW TO DETERMINE THE NUMBER OF HEATERS YOU WILL NEED

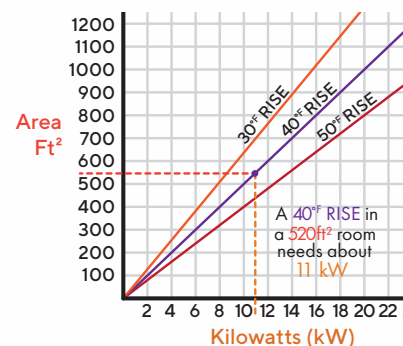


## FIRST.

You will need to find the approximate square footage of the area you wish to heat.

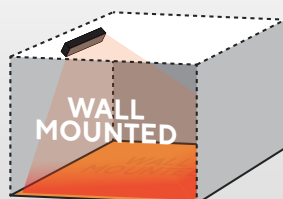
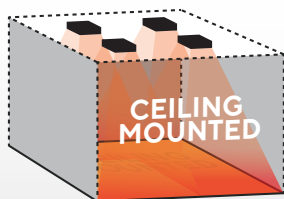
## SECOND.

Now that you know how big your space is, use this watts per square foot chart and reference the desired temperature rise. This will help determine the kW that is required to heat your space.



## THIRD.

After determining the total kW needed for your space. Visit the product portion of this catalog to select appropriately sized heaters for your space; keeping in mind voltage, phase, and wattage suitable for your needs. When determining the heater model and quantity that you need for your space, note that both Thermazone® and Thermazone Thin® can be ceiling or wall mounted. To achieve even heat distribution, we recommend smaller, more evenly spaced heaters throughout your space.



## FOURTH.

If heat controls are required for your application, reference the controls section of this catalog to determine what the best method of heat control is for your area. Note that not all heating control options mentioned in this catalog are suitable for every heater.

For more information on heater requirements or controls, contact your local distributor or call BBC Industries directly to speak with a comfort heat professional.



## WE REACH EVERY CORNER OF THE GLOBE.

Now that you see what we're capable of, visit us online or contact BBC® Industries Inc. directly to speak with a member of our team.

**1.800.654.4205**

Please visit [www.bbcind.com/catalog/comforheat](http://www.bbcind.com/catalog/comforheat) for additional product information.

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