

# **BREEZAIRE** PRODUCTS COMPANY

8610 Production Avenue • San Diego, California 92121 • (858) 566-7465 • Fax (858) 566-1943

## **WKCE SERIES (USA Only)**

### **--INSTALLATION INSTRUCTIONS--**

Thank you for choosing a **BREEZAIRE** cooling unit. We believe our products are the best on the market and will provide many years of trouble free service.

Please take a few minutes and read the entire instruction before beginning the installation.

**Before removing the cooling unit from the box, please inspect for damage, which might have occurred during shipping. If damage is found, notify the Freight Company immediately.  
*BREEZAIRE* is not responsible for any damages during shipping.**

**MODEL** \_\_\_\_\_ **SERIAL NUMBER** \_\_\_\_\_

**INSTALLED BY** \_\_\_\_\_ **DATE** \_\_\_\_\_

While great effort has been made to provide accurate guidelines, **BREEZAIRE** cannot warrant its units to properly cool a particular enclosure. Customers are cautioned that enclosure construction, unit location and many other factors can affect the operation and performance of the unit. Therefore the suitability of the unit for a specific enclosure or application must be determined by the customer and cannot be warranted by **BREEZAIRE**.

## INSTALLATION INSTRUCTIONS FOR WKCE SERIES COOLING UNITS

The **BREEZAIRE** WKCE Series cooling units are designed to, when installed in a properly constructed enclosure, provide a constant, selectable temperature between 48°F and 62°F while maintaining the relative humidity to the proper 50% to 75%. **BREEZAIRE** cooling units are designed to lower the temperature, while removing *only* excessive moisture. In a properly constructed enclosure this process can raise the *relative* humidity. The unit does not add moisture to the enclosure. The unit does not include a heating system and will not warm the enclosure. The WKCE Series is not intended to cool service cabinets, which are maintained at lower temperatures and opened or entered frequently.

The Digital Electronic (Sentry III) thermostat has the following features:

- ☞ Large, easy to read, green LED display.
- ☞ Accurate, easy to adjust readable set points with continuous reading of enclosure temperature or displaying of set point when changing enclosure temperatures.
- ☞ Power outage protection, which delays unit start up after power outages.
- ☞ Blocked airflow protection, which shuts down unit and protects wine in case of high temperatures caused by condenser blockage.
- ☞ Controls temperature by enclosure air sensors or optional bottle probe.

**Please see the Sentry III Owners manual**

The **BREEZAIRE WKCE** series, with the cold air discharge on the bottom of the cooling units were designed and engineered for cabinets and credenzas. However if you have looked at the **BREEZAIRE WKL** series cooling unit and you feel the **WKCE** series units will better serve your application consult your dealer for assistance.

### ENCLOSURE CONSTRUCTION GUIDELINES

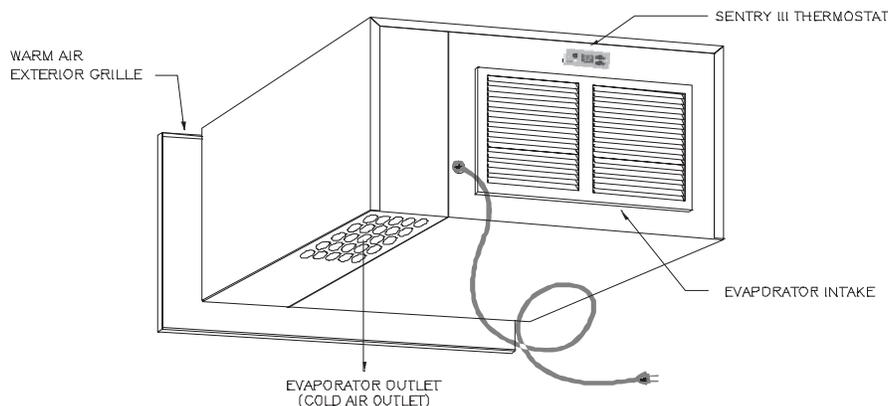
To use the below SIZING GUIDE, the enclosure to be cooled must be built to the following minimum specifications. If the enclosure cannot be built to these minimum specifications, consult your **BREEZAIRE** dealer for assistance in choosing the correct unit. **BREEZAIRE cooling units are not warranted to cool a specific enclosure.**

All walls, floors and ceilings should have a vapor barrier. This vapor barrier should be installed on the warm side of the insulation. All interior walls and floors should be lined with a minimum of R-11 insulation and exterior walls and ceiling insulation value should be a minimum of R-19. There should be no glass windows or doors.

- ☞ WKCE series are specifically designed and engineered to be installed in cabinets and credenzas. The enclosures in which you install the cooling unit must be well insulated and air tight for the cooling unit to perform properly.
- ☞ All joints, door frames, electrical outlets or switches and any pipes or vents which go through the enclosure should be sealed to prevent air and moisture leakage into the room. Concrete and brick are not insulation or moisture barriers.
- ☞ Doors into the enclosure should be of minimum size, insulated to R-11 and be tightly sealed with a high quality weather stripping. Be sure to seal the bottom of the door and behind the door frame's molding.
- ☞ Enclosure lighting should be of low wattage, with a timer to insure lights are not left on when the enclosure is unoccupied. Recessed lighting should not be used, as they will allow outside air to enter the enclosure.
- ☞ If the ambient temperature surrounding the enclosure exceeds the enclosure's temperature by more than 25°F the units cooling capacity will be reduced. No enclosure wall should receive direct sunlight or strong wind.
- ☞ **Note:** Glass doors and/or windows are not included in our calculations and should not be used in a wine enclosure.

- ☞ This is a mechanical piece of equipment, it will make some noise and produce heat on the warm side exterior grille (Fig. 3). Remember, unit installation location is not only important inside the wine cellar, but just as important is where the warm side exhaust air is being rejected.

FIGURE 1



### SIZING GUIDE & SPECIFICATIONS

*This guide to be used only for enclosures meeting the above construction requirements.*

BREEZAIRE Model	Electrical	Dimensions (inches)	Weight (Lbs.)
WKCE 1060	3 Amp	18W x 10.5H x 16.5D	45
WKCE 2200	4 Amp	18W x 10.5H x 16.5D	55

Note: All units are 115 Volt, 60 Hz

### INSTALLATION

Before installing the unit, inspect it again for any shipping damage. Test the unit by placing it in a room where the temperature is above 65°F. Position the unit to allow cold air to flow from evaporator outlet. (See Fig. 1) Plug the unit's electrical cord into a properly grounded electrical outlet of adequate capacity (see unit specification for unit electrical requirements).

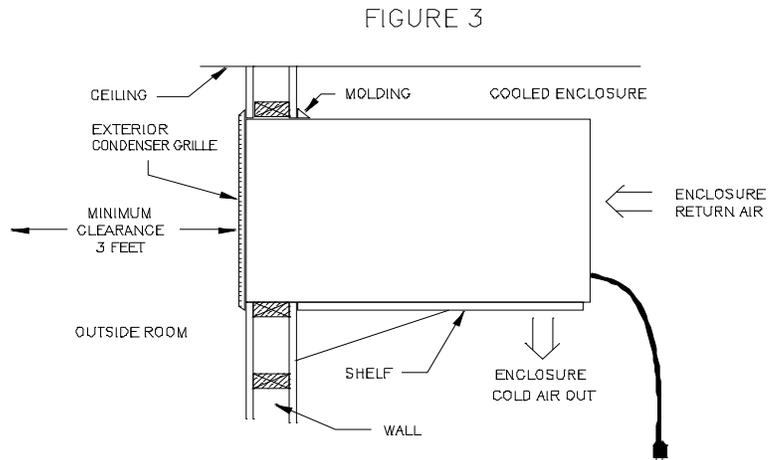
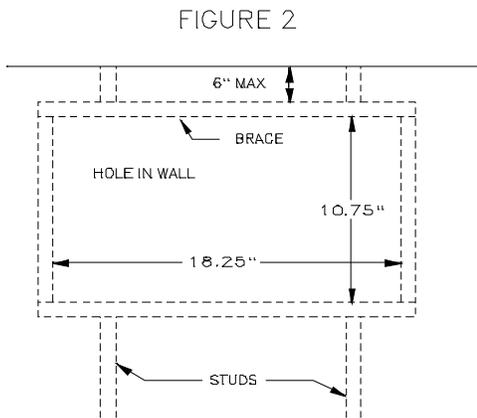
The control system has no "off" position; therefore it will begin to run within 5 minutes of being plugged in. Allow it to run for a minimum of 15 minutes. There should be a flow of cool air from the lower evaporator outlet side (see Fig. 1) and warm air should be flowing from the rear opening on the exterior grille side (see Fig. 3). If there is no airflow or no change in temperature on either side, contact your dealer.

- ☞ **BREEZAIRE** units should **NOT** be installed in a fire rated wall without consulting your local building inspector and building codes.
- ☞ The unit must be installed in the upright position and is not designed to have duct work on either the warm air or cold air sides. Do not drill any holes into the cooling unit. It may damage the unit, promotes rust, and will void the warranty. Do not install the unit so that its removal will be difficult or impossible. It may be necessary to periodically remove the unit to clean the condenser coil.
- ☞ The best location for the WKCE series cooling unit is six (6) inches from the ceiling, mounted on a shelf (see above unit specifications for weight of unit) and with no obstruction for the evaporator cold air outlet airflow (minimum 12 inches) and a minimum of three (3) feet for the warm air discharge from the exterior grille. (see Fig. 1, 2 and 3) It is preferred that the unit be mounted as close to equal distance from each end of the wall as possible.
- ☞ The area into which the unit exhausts must be well ventilated. If not, the unit will be unable to reject the excessive moisture and heat, resulting in unsatisfactory performance. Inappropriate locations for the

warm air exhaust includes unventilated small rooms, closets, bathrooms, hot garages, unventilated crawl spaces, attics and humid basements.

- ☞ Make sure that the warm air exterior grille can be properly attached to the unit (see Fig. 3).
- ☞ Make a hole through the wall as illustrated in Fig. 2. Construct a shelf as shown in Fig. 3. This shelf must be capable of supporting the weight indicated in the specifications. NOTE: Insulation placed between the unit and the shelf will reduce noise and help reduce condensate from forming on the underside of the unit.
- ☞ **If your installation cannot be performed in accordance with these instructions contact your dealer.**

Place the unit through the opening with the exhaust side flush to the outside wall. Attach the warm side exterior grille (Fig. 1&3) to unit and wall with screws supplied. Please remember that in *all* cases the exterior grille must be directly attached to the warm side of the unit. **Do not** leave an air gap between the unit's surface and the exterior grille. **The unit will not work properly without this grille.** The warm side exterior grille has only a white primer coat. If the grille is installed on an outside wall it should be coated with an appropriate paint to prevent rust.



## OPERATION

On initial start-up the cooling unit will reduce the temperature of the enclosure slowly. The unit may run constantly or cycle off for short periods. The time required to reach the desired temperature will vary, depending on the enclosure's construction and contents.

The thermostat is factory set to 55° Fahrenheit. Unless the temperature falls below that desired, do not change the thermostat setting for at least 3 days.

During normal operation of the Sentry III thermostat the LED readout will display the temperature of the air entering the intake of the cooling unit. If the optional bottle probe is installed the intake air sensor will be disconnected and the temperature of the probe will be displayed. The temperature being displayed is also the temperature used by the control system to turn the cooling unit on and off.

After initial cool down, the "on-off" cycle should be relatively constant. The percentage of "off" time will depend on enclosure's construction, placement of unit, contents, and surrounding outside temperatures. If it is necessary to adjust the temperature of the enclosure; adjust the thermostat to a colder temperature while the unit is running and to a warmer temperature while the unit is off. The set point may be set no lower than 48°F or higher than 62°F. NOTE: If the enclosure is not cooling to the current set point, lowering the set point temperature further will not help. (See ENCLOSURE PROBLEMS section)

The Sentry III set point (desired enclosure temperature) may be changed by pressing and holding the "SET" button while pressing the "COOLER" or "WARMER" button. When the "SET" button is pressed the readout will automatically change and display the current set point temperature

Should the operation of the cooling unit be interrupted by a power outage or by raising the set point temperature while the unit is running the Sentry III internal delay will be activated and the unit will not restart for two (2) to three (3) minutes. NOTE: This delay may also occur on initial power-up.

## MAINTENANCE

The **BREEZAIRE** cooling unit requires very little maintenance. To keep the system operating at its top performance, at least once every three months the condenser coil should be inspected and vacuumed to prevent air blockage. Remove the large warm air exhaust grille located outside the enclosure where the warm air is discharged. Use a vacuum with a brush attachment to remove the lint or dirt that may reside between the aluminum fins. **If the condenser coil becomes blocked the unit will over heat causing a loss in cooling efficiency and will result in a failure of the unit not covered under warranty.**

## ENCLOSURE PROBLEMS

**BREEZAIRE** is extremely proud of the quality and reliability of its products. Experience has shown that of the small number of problems encountered, the large majority are due to improper unit selection or enclosure construction. Should the cooling system be suspected of malfunctioning, check the temperature of the air being exhausted from the warm air exterior grille. If it is warm, the unit is working. A further check may be made by comparing the temperature entering the front grille on the cold side (Evaporator Intake) with that leaving from the bottom left side (Cold Air Outlet)(see Fig.1). If the air leaving the unit is 6°F or more colder than the temperature entering, the unit is working properly. In some cases, improper placement or installation may cause the unit's performance to be compromised.

In situations where the ambient relative humidity is very low, the desired enclosure relative humidity may not be achieved without adding moisture. To add moisture to the enclosure only use slow, natural evaporation from a small porous water container. Do not use a humidifier.

In some cases, improper placement or installation may cause the unit's performance to be degraded. **The warm air exterior side of the unit must have a constant supply of fresh air.** If the unit is exhausted into a confined area with poor ventilation, it will not be able to reject the heat and moisture it is removing from the enclosure and a malfunctioning unit will be suspected. If an obstruction to the flow of fresh air into or from the cooling unit (see Fig. 3) is stopped or restricted for any reason the unit could heat rather than cool the enclosure.

NOTE: Should this condition develop when using the Sentry III, the unit will turn off when the enclosure temperature rises to approximately 75°F, the unit will not restart until the enclosure temperature is lowered to approximately 65°F or the unit is disconnected and then re-connected to the power supply. This feature is disabled for approximately 45 minutes after the unit is connected or re-connected to a power supply.

Proper sealing of the enclosure through the use of a vapor barrier and weather stripping cannot be over emphasized. The unit will not be able to maintain the proper conditions if fresh, moisture-laden air is constantly being introduced into an improperly sealed enclosure. Symptoms of this condition are; unit runs all the time with only a slight reduction in enclosure temperature and/or water overflows from the unit. One way of discovering gross air leaks is to stand inside the enclosure with the lights off, allow your eyes to adapt to the dark and look for light showing through cracks in the walls or around the door. Also close the door on a piece of paper, if you can pull the paper through the door, that means air and moisture are also entering into your wine cellar. Because of the temperature difference between the inside and outside, very small cracks can allow large amounts of outside air into the enclosure. Please be aware that moisture will pass through solid concrete, brick, paint, paper and wood.

# OWNER'S MANUAL

## BREEZAIRE SENTRY III Plus Controller

This wine cooler controller is a specially designed state-of-the-art microprocessor product which provides the user many flexible capabilities, plus a degree of built-in safety features and "user friendliness" to provide a maximum of utility and reliable operation for your wine storage benefit for years to come.



### FEATURES OVERVIEW:

1. Adjustable storage temperature
2. Built-in compressor protection timing functions
3. Special alarm display features
4. Permanent retention of user adjustments during power outage
5. Independent selectable evaporator fan operation
6. Automatic Over-Heat protection
7. User-selectable operating and temperature display conditions
8. Automatic sensor error monitoring
9. Emergency manual operation

**When the unit is first powered up**, the display will momentarily show "°F" (or "°C"), then the current wine storage temperature. If the temperature is above the desired set-point, the unit will start cooling.

**NOTE:** During the initial power-up of the unit, you should leave the door to your wine cellar or cabinet closed, in order to allow the unit to effectively cool the storage space before storing your wines. If the initial temperature is above 70°F and insufficient cooling is detected by the temperature sensor in the unit within the first 30 minutes of operation, the unit will automatically shut off, and the display will flash alternately "E1" and the **temperature**. You may re-start the unit by (1) a manual RESET (see below), or (2) unplugging it for 10 minutes or more.

A "call for cooling" will cause the right-hand decimal of the display to **flash**, then will be **on steady** when the chiller actually runs. The chiller will run for a minimum of 1 minute, for the compressor to stabilize.

### The above numbered features are described below:

1. **The storage temperature factory setting is 55°F (13°C).** To change the desired wine storage temperature (set-point), press and hold the SET button. Within five seconds, press either the WARMER or COOLER button to raise or lower the set-point, within the range of **45°-65°F (7-18°C)**, then release the SET button to return to normal storage temperature display.
2. When the unit shuts off, or if there is a momentary power outage, there is an automatic delay of 5 minutes before it will be enabled to re-start. This is to protect your compressor from possible damage due to "short-cycling". Upon a "call for cooling" during this delay, the lower right-hand dot on the display will blink, as explained above.
3. As an alert to you, the display will alternately flash "AL" and the **temperature** if the storage temperature rises above a preset alarm temperature. **The alarm factory setting is 62°F (17°C).** You may adjust this alarm setting (see 7, below). The unit will continue to operate while in the alarm mode, unless the temperature rises to 75°F (24°C), as described in 6, below.

4. The computer memory will retain all settings currently in use (see 7, below) if there is a power interruption for any period of time, or if the unit is unplugged. There is no need to “re-program” the controller in such an event.

5. When the compressor shuts off, the evaporator fan will continue to run for 45 seconds in order to “harvest” all possible cooling, as an energy-saving feature.

6. In the unlikely event that the storage temperature rises above 75°F (24°C), the unit will automatically shut off after 10 minutes, and the display will alternately flash “OH” and the **temperature**. The unit will remain shut off for a minimum of 30 minutes, after which you may attempt to re-start the unit with a manual RESET (see below). Or, during the 30 minute delay, a re-start of the unit may be attempted by unplugging and re-plugging the power to the unit for any amount of time. Re-start will only occur if the temperature is below 75°. If the same shut-off occurs, contact your Breezaire dealer.

7. You may adjust several operating conditions of the controller; namely, (a) the desired storage temperature (set-point), (b) the units of temperature display, (c) the degrees above and below the set-point for the unit to turn on and off (bandwidth), (d) the alarm temperature desired, and (e) the desired operating mode of the evaporator fan. Proceed as follows:

(a) Press and hold the SET button to adjust the **set-point**, as described in (1) above. (**Factory setting is 55°F**).

**Note:** If the SET button is held more than 5 seconds while adjusting set-point, the display will enter the control’s user-adjustable setting mode, as described next.

For other user-adjustable settings:

Hold the SET button for **more than 5 seconds**, until it changes to:

(b) **Temperature display units** (°F or °C), then **let go** of the SET button. (**Factory setting is °F**). Change the display mode by alternately pressing either the WARMER or COOLER button. After making this setting (or not), you may proceed to the next setting by pressing the SET button once until the display changes to:

(c) **Bandwidth setting: (Factory setting is +/- 1.0°F)**. You may reduce this setting to +/-0.5°F by pressing the COOLER button. You may increase the setting to +/-1.5°F by pressing the WARMER button. The equivalent changes will apply if the temperature units are °C. After making this setting (or not), you may proceed to the next setting by pressing the SET button once until the display changes to:

(d) **Alarm setting: (Factory setting is 62°F)**. The display will flash “AL”, then the **setting**. You may adjust this higher or lower by pressing the WARMER or COOLER button. After making this setting (or not), you may proceed to the next setting by pressing the SET button once until the display changes to:

(e) **Evaporator Fan mode: (Factory setting is Automatic “Au”)**. You may change this to always “On” by pressing either the WARMER or COOLER button, and vice versa. After making this setting (or not), pressing the SET button once will return the display to normal, showing the storage temperature.

**NOTE:** After any of the setting steps above, if no further action is taken after one minute, the display will revert to normal. The prior setting adjustments will be retained in memory, until further change(s). If necessary, the **factory default settings** may be re-set by simultaneously holding the WARMER and COOLER button down for more than 5 seconds. The display will indicate “Fr”.

8. If the temperature falls below 43°F (6°C), the display will flash the temperature to draw your attention. If the temperature sensor inputs below 32°F (0°C) the display will flash “LO”, and if above 99°F (37°C) it will flash “HI”.

9. A faulty sensor will be indicated by a display of “Er”. The unit will shut off, but may be manually operated with the COOLER button to turn ON, allowing for the “call for cooling” 5-minute delay. The WARMER button may be used to turn the unit OFF, which will be followed by a 5-minute delay before the unit may be re-activated.

**RESET:** The controller may be manually RESET by pressing and holding the WARMER button for at least 5 seconds. The display will momentarily show “8.8.”, then the current version of software, then “°F”, then the storage temperature. If this action is taken before the unit has been OFF for about 7-8 minutes, it will not re-start for five minutes, regardless of storage temperature at the time of RESET. **NOTE:** All user settings and parameters will be retained in memory upon a manual RESET operation.

**Limited Warranty for all  
BREEZAIRE self contained units  
(USA only)**

**BREEZAIRE** Products Company warrants this product to be free from defects in material and workmanship and agrees to repair or replace any part of the enclosed unit which proves defective under these terms and conditions.

**Alteration, repair or attempted repair of the unit by anyone other than BREEZAIRE will void this warranty.**

**Who is protected:**

This warranty may be enforced only by the original retail customer and is not transferable.

**Length of Warranty**

All parts used in this unit are warranted for Five years (60 months) from the original retail purchase. Factory labor is provided at no cost for one year (12 months) from the original retail purchase.

**What is not covered:**

1. Any unit on which the serial number cannot be verified.
2. Damage, deterioration or malfunction resulting from, but not limited to:
  - a. Any shipment of the unit (claims for shipping damage must be presented to the shipper).
  - b. Installation or removal of the unit.
  - c. Installation in an enclosure of inadequate design that does not follow the minimum guide lines of the installation instructions.
  - d. Inadequate ventilation for supplying and exhausting condenser air that does not follow the minimum guide lines of the installation instructions.
  - e. Accident, misuse, abuse, neglect, fire, water, lightning or other acts of nature, improper storage, unauthorized modification, electrical power surges or failure to follow instructions supplied with the unit.
  - f. Exposure to corrosive environments such as, but not limited to, marine air, caustic pool chemicals, cleaning solvents, gasoline and petroleum products.
  - g. Burial or coverage by, but not limited to, dirt, snow, mud, storage shelves, fabric products or vegetation.
  - h. Any cause which does not relate to product defect.

**What BREEZAIRE will pay for:**

1. During the first *12 months* **BREEZAIRE** will pay for labor and material to repair the unit at our factory. Additionally, **BREEZAIRE** will pay the cost of shipping the unit to and from our factory.
2. During the *13th to 60th months* **BREEZAIRE** will pay for the material to repair the unit at our factory.

**What BREEZAIRE will NOT pay for:**

1. Installation or removal of the unit.
2. Handling or packaging of the unit.
3. Repairs performed by anyone other than **BREEZAIRE**.
4. Any other damages, whether incidental, consequential or otherwise.

**How to obtain warranty service:**

**BREEZAIRE** may require you to provide the original bill of sale or receipt as proof of purchase in order to obtain warranty service. Please retain any such proof of purchase.

If a problem is suspected with a **BREEZAIRE** cooling unit, please contact your dealer. **Do not return a unit without authorization from BREEZAIRE.**

Should it be necessary to return your unit for warranty service, it must be packaged in the original packaging or similar packaging providing an equal degree of protection. Any freight charges must be prepaid, **BREEZAIRE** will not accept collect shipments. If the unit is found to be defective **BREEZAIRE** will reimburse (during the first 12 months) the cost of shipping the unit at standard second day freight rates.

**LIMITATION OF IMPLIED WARRANTY**

**BREEZAIRE'S** SOLE LIABILITY FOR ANY DEFECTIVE PRODUCT IS LIMITED TO, AT OUR OPTION, THE REPAIR OR REPLACEMENT OF THE UNIT. **BREEZAIRE** SHALL NOT BE LIABLE FOR:

1. DAMAGE TO OTHER PROPERTY CAUSED BY ANY DEFECTS IN THE UNIT, DAMAGES BASED UPON INCONVENIENCE, LOSS OF USE OF THE UNIT, LOSS OF TIME OR COMMERCIAL LOSS.
2. ANY OTHER DAMAGES, WHETHER INCIDENTAL, CONSEQUENTIAL OR OTHERWISE.

THIS WARRANTY IS EXCLUSIVE AND IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO, IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.

While great effort has been made to provide accurate guidelines, **BREEZAIRE** cannot warrant its units to properly cool a particular enclosure. Customers are cautioned that enclosure construction, unit location and many other factors can affect the operation and performance of the unit. Therefore the suitability of the unit for a specific enclosure or application must be determined by the customer and cannot be warranted by **BREEZAIRE**.