

OPERATION MANUAL

BIOKOOOL™
PATENT PENDING

Hygienic Portable Air Conditioner



Engineered Safe for use in
Health Care Environments



KwiKool®

FAMILY OF PRODUCTS

BIOKOOOL

ATTIC
MASTER

KPACII

PHP
PORTABLE HEAT PUMP



ICEBERG

KCW

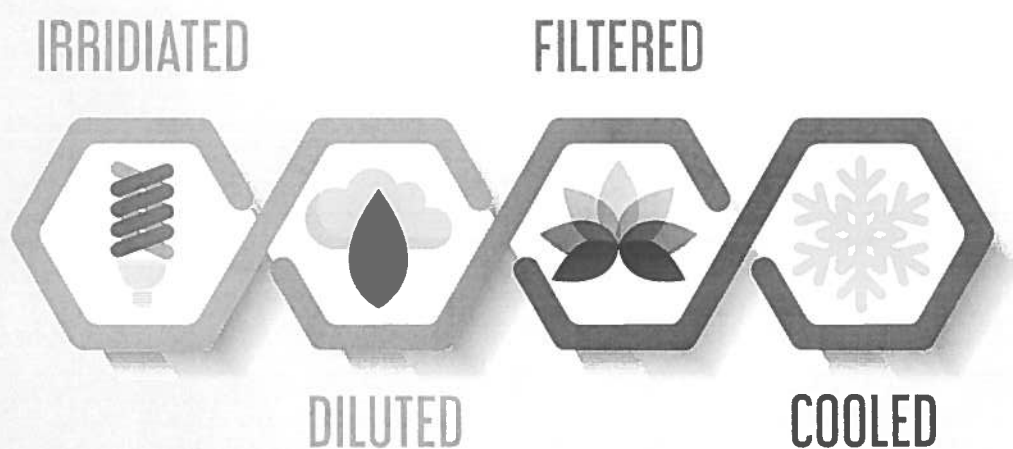
KCA

KPO
INDOOR & OUTDOOR

 **Kwikool®**

TAKE CONTROL OF AIR QUALITY

BioKool's exclusive four point air therapy process cools, cleans, disinfects and retards mold and microbe growth.



According to the CDC, hospital acquired infections are the fourth leading cause of death. The CDC recommends four lines of defense against infection which are pressure, filtration, purification, and dilution. Kwikool's BioKool™ targets these requirements, empowering health care facilities to meet their two primary goals, improving patient outcomes and also profitability.

KWIKOOL.COM

REQUIREMENTS

Air Temperature Requirements

Biokool air vents are located both on the front and on the top of the unit. The vents require the environment maintain temperatures between 60° F and 110° F . If the unit is operating in an environment above 110° F you will begin to notice performance diminishing. Eventually, this will cause the high pressure switch to trip, stopping the unit's compressor.

The **high pressure switch** is a manual reset. A reset switch is located in the **power cable receptacle box** in the back of the system. Reset your Kwikool Biokool system by pressing the **red button**. You will know when the system has been reset, when you hear a definite click.

Standard air-cooled Kwikool models are not designed to operate at temperatures below 60°F. Low-ambient temperature controls are special ordered. Temperatures below 60 ° F will cause the discharge air exhaust fan to cycle excessively. **Excessive cycling will potentially damage the switch.** If this occurs, seek a **certified Kwikool technician** or void your warranty.

Capacity & Temperature Settings

THE STANDARD

Choose your system by matching the capacity of the unit to the rooms specific heat load while maintaining a 72° F temperature.

In order to reach temperatures below 72° F, the unit must have extra capacity, over the the above standard. It is our recommendation that the temperature is never set below 70° F. However, if you choose to do so, be sure you choose a unit with a cooling capacity in excess of the above standard measure. If you do not follow this recommendation, you will cause the unit's evaporator coil to freeze up, resulting in diminished performance and also a dripping of condensation coming from the cabinet.

Positioning of Biokool

Do not place your Kwikool unit in direct sunlight, The unit should be positioned so that the output of the unit can be focused as close to the heat generating equipment as possible with the front grill fully exposed. Do not block the front of the unit, since this will cause a restriction in the airflow and can cause low performance and/or evaporator coil freezing.



Kwikool's, Biokool™ is the only portable air conditioner specially designed to perform air therapy for regulation in sensitive health care facilities. Biokool™ is engineered with the highest filtration in the world, known as HEPA. The ever impressive HEPA filter offers 99.99% efficiency with particulates larger than .3 microns. Together with HEPA a laboratory quality Ultraviolet light source penetrates both incoming warm and outgoing cool, isolated air streams with intense ultraviolet

KBIO1411

**13,800 BTUH (1-Ton)
115V 15 Amp Standard**

**304 Stainless Cabinet
99.9% HEPA Filtration
Ultraviolet Irradiation**



AIR COOLED

light. Biokool™ effectively cools the air while unmasking dormant microorganisms including viruses, bacteria, and mold spores. Biokool's interior evaporator chamber has been lined with a microbe-resistant insulation fabric, to further reduce the potential for cross-contamination. Kwikool's, Biokool™ is the new benchmark for hygienic, supplemental air conditioning that can live up to the exceptional and uncompromising standards required by the medical-industrial complex.

**Non Porous Insulation
Isolated Air Streams**

**Biokool's unique air
therapy system
cools, cleans,
disinfects and retards
mold & microbe growth
while preventing
cross contamination.**

KWBI01411

**13,800 BTUH (1-Ton)
115V 15 Amp Standard**



FAULT CODES

Your KwiKool BioKool System incorporates a self-diagnostic system that sounds an audible alarm, stops your system and displays a fault code to indicate the nature of the problem on the display panel. See the troubleshooting guide later in this manual for further information.

CF

Condensate Tank Full

CP

Condensate Pump Fault

HP

High Pressure Switch Tripped

LP

Low Pressure Switch tripped or tripping

FP

Freeze Protection

TROUBLESHOOTING GUIDE

FAULT

CAUSE

SOLUTION

Unit displays CF, Audio alarm fails to clear on start up or while operating

External Condensate Tank is full. Condensate bypass jack or condensate float switch jack is not installed or not positioned correctly. Water level switch is engaged.

If applicable, empty the external tank. Make sure tank is upright and level. Unplug bypass / tank plug to assure stable connections. System is set to automatically reset when the fault condition is corrected.

Unit Displays CP and Audio alarm is sounding during start up or while operating

Microprocessor board has detected high water level in the condensate pump.

Inspect the condensate pump for over flow, then check the condensate line for clogs or crimping. Resets automatically upon fault correction, or call 1-800-KWIKOOL if the problem persist.

Unit Displays HP, Audio alarm is sounding during start up or while operating

Microprocessor board has detected high pressure. The High Pressure switch is likely tripped.

High pressure is normally caused by reduced condenser air flow. Look for duct restrictions. Check for condenser air system ventilation (See Section II. C. 4). Look at the condenser motors and/or blowers for proper operation. Reset manually (located next to the power cable)

Display shows 32 and unit will not turn on cooling

The temperature sensor is not connected to the microprocessor. There is a temperature Sensor malfunction.

Call 1-800-KWIKOOL for instructions.

Supply air flow is limited, and / or water is dripping from the front of the system

Supply or return air is blocked or restricted, and or the evaporator coil is freezing.

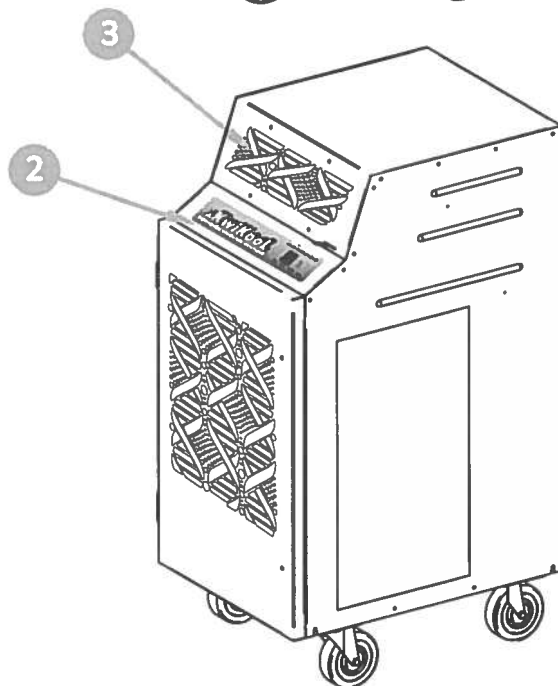
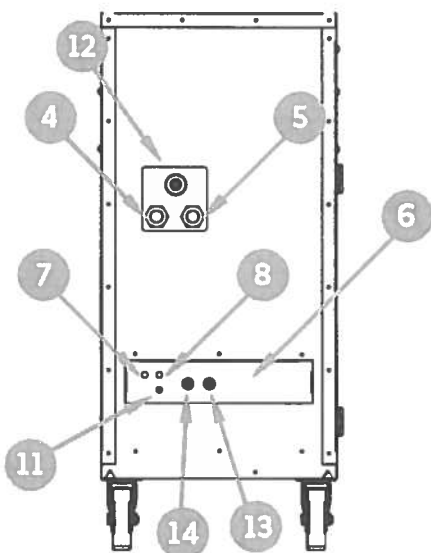
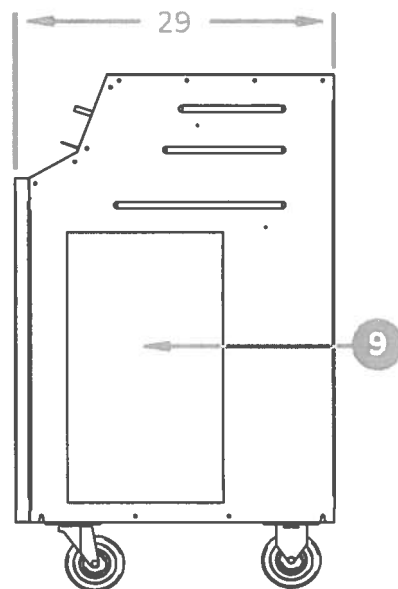
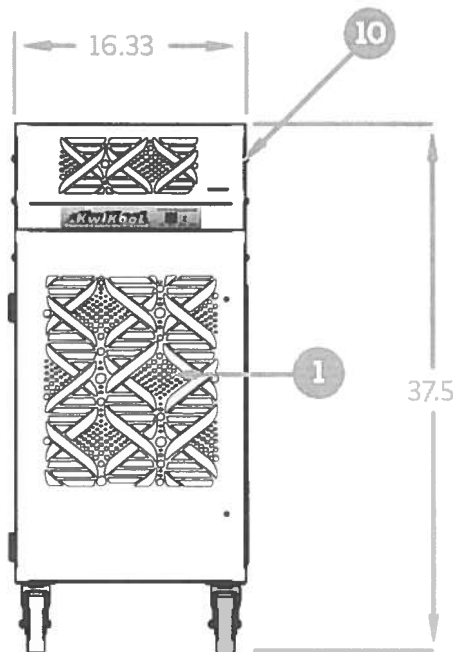
Verify the supply and return air are not blocked. Turn the system off in order to thaw the check the air filter for blockage. Replace filter if needed.

FAULT	CAUSE	SOLUTION
Condensate is not pumping	Water is below pumping level, external line restricted, line installed with too high of lift.	Reservoir fills, and then pumps. Check for line crimping or restrictions and proper line run height. Refer to the user guide Section V: Built in Safeguards.
Evaporator coil is freezing	Low or restricted air flow. Undersized capacity, unit constantly on, unable to achieve set point. Low return air temperature out of factory specifications. Evaporator door open, mechanical system malfunction.	Direct supply return air to area of highest heat load, check for blocked air flow from the supply air, replace air filters, adjust set point to allow the unit to cycle, add another KwiKool system or larger capacity model, close evaporator compartment door, inspect supply air blower for worn condition or breaking, Install service gauges to view pressures.
Chatter or hum is heard from the control box while the system is operating	Incoming source power is poor or low voltage component is faulty.	Check for proper voltage selection. Call 1-800-KWIKOOL.
99 Flashes on display	Ambient room temperature over 99 degrees F.	Unit is working properly. When the temperature in the room lowers, the 99 code will stop flashing.
60 Flashes on display	Ambient room temperature under 60° F.	Limits of unit have been reached. Operating temperatures 65° - 105°F.
Power is supplied but control is blank	Low voltage circuit is not engaged	Inspect the power breaker and verify that there is power getting through to the connector. Call 1-800-KWIKOOL

FAULT	CAUSE	SOLUTION
Unit Displays LP, Audio alarm is sounding during start up or while operating.	Microprocessor board has detected low pressure. This alarm might cycle on and off.	Check air filter and replace if dirty. Make sure nothing is blocking the filter inlet. Check for icing on coil. Resets automatically when fault condition is corrected.
Audio alarm fails to clear on start up or while operating, unit displays FP.	If the system has a factory installed freeze sensor, then the microprocessor has detected freezing on the evaporator coil.	Check for freezing on the evaporator coil and turn the system off to thaw. Call 1-800-KWIKOOL if your system lacks a freeze sensor.
System is ON and display is showing ON but unit is not supplying conditioned air. F or C is flashing.	System is in time out. One of three things. Either control is above room temp; adjusted out of operating parameters, or not in the correct operational MODE.	Wait 2 minutes, review System Operations guide.
System is ON but the microprocessor board resets the time delay (flashing F or C) when the compressor attempts to start.	Microprocessor board detects voltage drop below operating parameters.	Confirm the integrity of your source power, check for proper wire size and length of power extension cable. Be sure the circuit is dedicated to only the operation of your KwiKool.
System trips breaker on start up	Incoming power is incorrect, breaker is undersized or faulty, and or power cable is too long and or undersized.	Verify the circuit and power cable is within the systems specifications, consult with your electrician or Call 1-800-KWIKOOL.
System starts up and cools but the condenser discharge air exhaust fan ramps up and slows down or the condenser discharge fan stops and starts.	Normal operating condition especially in low temperatures.	No action required.

BIOKOOOL™
PATENT PENDING

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- | | |
|---------------------------|--------------------------------|
| 1) Cold Air Return | 8) Condensate Alarm Jack |
| 2) Control Pad | 9) Access Door |
| 3) Cold Air Supply | 10) Vent Control |
| 4) Condenser Water Inlet | 11) H.P. Reset Switch |
| 5) Condenser Water Outlet | 12) Sight Glass (Remove Cover) |
| 6) Cord Storage | 13) H.P. Service Port |
| 7) Condensate Nipple | 14) L.P. Service Port |



ETL LISTED CONFORMS TO ANSI/UL1995
CERTIFIED TO CAN/CSA 22.2 NO 235

KWB101411 WATER COOLED

13,800 BTUH (1-Ton)
115V 15 Amp Standard

COOLING CAPACITY

BTU/hr @95 F at 60%RH	13,800 / 1-Ton
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AIR PURIFICATION

ULPA/HEPA Filter	99.999% @ > .12 Microns
UVC Light Wave Length	UVC 17 Watts / Max 85 Watts

COMPRESSOR

Compressor Type	Hermetic Rotary
Operating Temperatures	60°-110°F 50% RH
Non-CFC Refrigerant	410A

FAN EVAPORATOR

Fan Type (Centrifugal)	Direct Drive
Air Flow (CFM)	460 / Single Speed
Supply Air Data	Adjustable Vent
Supply Air Chute Data (Optional)	2 - 5" dia x 16" length

CONDENSER WATER FLOW

Flow Regulation Valve .5" NPT	Automatic
Inlet Water 85F-95F Exit GPM	3
Inlet Water 75F-95F Exit GPM	1.5
Inlet Water 65F-95F Exit GPM	1
Inlet Water 55F-95F Exit GPM	.75

ELECTRICAL

Power Supply (Volts)	115 V / Single Phase
Current Consumption (Amps)	12
Power Consumption (kW)	1.38
Maximum Circuit Breaker (Amps)	15
Recommended Breaker Size	15
Minimum Circuit Ampacity (Amps)	18.87
Min/Max Voltage	105 - 125
Power Cord Gauge / Length in Feet	14 AWG / 6'
Plug Configuration	NEMA 5 - 15

DIMENSIONS

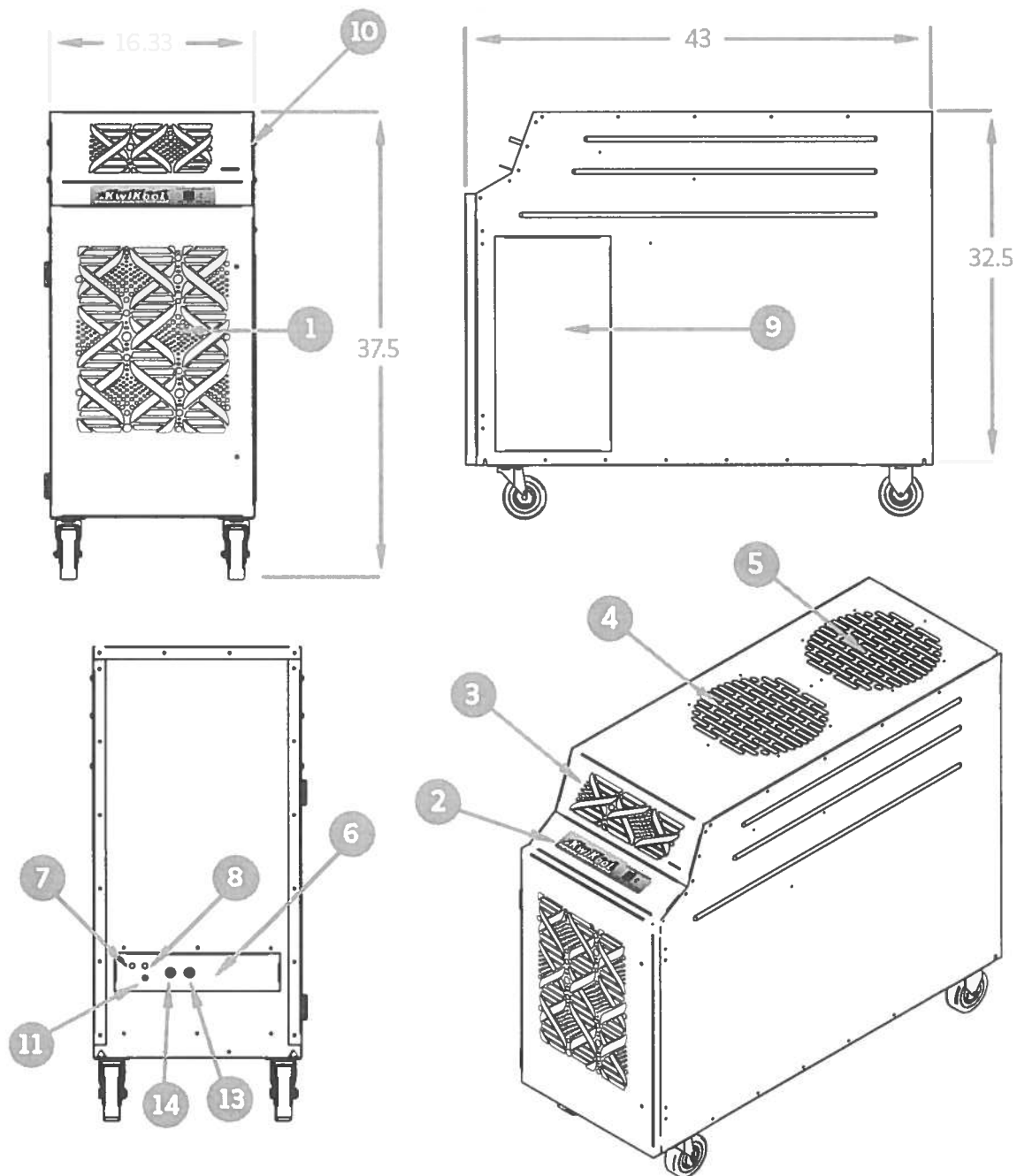
Width x Length x Height (inches)	16.325" x 29.0" x 37.75"
Weight (lbs)	189
Shipping Weight (lbs)	239

SAFETY DEVICE

Compressor Overload	Internal
Fan Motor Overload	Automatic Internal
Evaporator Freeze-up	Hot Gas Bypass
High Pressure Switch	Manual
Low Pressure Switch	Auto
Compressor Short Cycle	Yes
Automatic Restart	Yes
Thermostat Type	Digital Microprocessor
Condensate Pump Overflow	Yes
Condensate Tank Overflow	Yes
Condensate Pump W/20" Head Pressure	Yes

BioKool™
PATENT PENDING

KWIKOOL.COM



- | | |
|-------------------------|--------------------------|
| 1) Cold Air Return | 8) Condensate Alarm Jack |
| 2) Control Pad | 9) Access Door |
| 3) Cold Air Supply | 10) Vent Control |
| 4) Condenser Air Inlet | 11) H.P. Reset |
| 5) Condenser Air Outlet | 12) H.P. Service Port |
| 6) Cord Storage | 13) L.P. Service Port |
| 7) Condensate Nipple | |



ETL LISTED CONFORMS TO ANSI/UL1995
CERTIFIED TO CAN/CSA 22.2 NO 235

KB101411 AIR COOLED

13,800 BTUH (1-Ton)
115V 15 Amp Standard

COOLING CAPACITY		
	BTU/hr @95 F at 60%RH	13,800 / 1-Ton
AIR PURIFICATION		
	ULPA/HEPA Filter	99.999% @ > .12 Microns
	UVC Light Wave Length	UVC 17 Watts / Max 85 Watts
COMPRESSOR		
	Compressor Type	Hermetic Rotary
	Operating Temperatures	65°-105°F 50% RH
	Non-CFC Refrigerant	410A
FAN - EVAPORATOR		
	Fan Type (Centrifugal)	Direct Drive
	Air Flow (CFM)	450 / Single Speed
	Supply Air Data	Adjustable Vent
	Supply Air Chute Data (Optional)	2 - 5" dia x 16" length
FAN - CONDENSER		
	I/O Integral Condenser - In/Out	Balanced Air Flow
	Fan Type (Centrifugal)	Direct Drive
	Air Flow (CFM)	700
	Condenser Duct Data (Optional)	2 - 12" dia x 8" length
	Condenser Maximum Duct Length	25'
ELECTRICAL		
	Power Supply (Volts)	115 V / Single Phase
	Current Consumption (Amps)	11.5
	Power Consumption (kW)	1.3
	Maximum Circuit Breaker (Amps)	15
	Recommended Breaker Size	15
	Minimum Circuit Ampacity (Amps)	17.09
	Min/Max Voltage	105 - 125
	Power Cord Gauge / Length in Feet	14 AWG / 6'
	Plug Configuration	NEMA 5 - 15
DIMENSIONS		
	Width x Length x Height (inches)	16.325" x 43.25" x 37.75"
	Weight (lbs)	230
	Shipping Weight (lbs)	280
	Ceiling Kit CK-12 Weight (lbs)	38 (Optional)
	Shipping Weight with Ceiling Kit (lbs)	318
SAFETY DEVICE		
	Compressor Overload	Internal
	Fan Motor Overload	Automatic Internal
	Evaporator Freeze-up	Hot Gas Bypass
	High Pressure Switch	Manual
	Low Pressure Switch	Auto
	Compressor Short Cycle	Yes
	Automatic Restart	Yes
	Condensate Pump Overflow	Yes
	Condensate Tank Overflow	Yes

ASSEMBLY & INSTALLATION



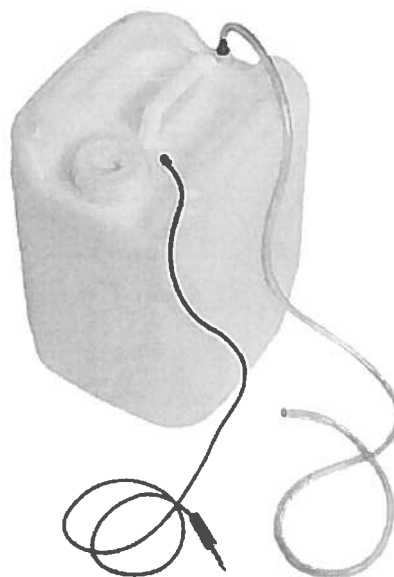
Air Chutes

Your unit may come equipped with air chutes, or you may have purchased them as an optional accessory. Install supply air flanges to the front of your KwiKool unit above the control panel. Please look for step by step instructions which come along with the air chute kit.

Condensate Tank

BioKool™ systems come standard with an external 5-gallon **condensate tank**. The tank is equipped with a float switch that shuts your KwiKool down and alerts operators with an alarm and display, when the condensate tank is full. It will read CF Condensate Full, on the screen. This prevents accidental water overflow on the floor. The alarm will clear automatically upon emptying the 5 gallon tank and reconnecting it. **If connecting to a permanent drain, DO NOT connect or use the equipped tank.**

To use the external condensate tank, remove the factory installed condensate float switch bypass plug on your KwiKool unit and install the male connector jack supplied on the condensate tank. Next connect the factory supplied ¼" ID condensate tubing to the ¼" OD barbed condensate water outlet on the back of your KwiKool and connect the discharge end of the tube to the ¼" barbed connector on the condensate tank. **The condensate float jack must be inserted into the female condensate jack to operate your BioKool™.** CF displays if the jack is not connected or the bypass plug is not inserted properly.



Five gallon condensate tank with automatic cutoff float assembly

Condensate Water Outlet

The Condensate Water Outlet is located in the back of the unit in the **cord compartment**. Look for the 1/4" OD **barbed fitting**. Push to connect the **clear tube** to the fitting.



The **condensate float switch jack** either connects to the **condensate tank**; or is bypassed by the factory installed male bypass switch, plug. You will find it next to the **condensate water outlet**.

OPTIONAL CEILING KIT

The ceiling kit is comprised of flanges with foam tape, fasteners, two (2) eight foot lengths of flexible duct, duct clamps, and one 24 x 24 in. replacement ceiling tile.

- 1 Align the holes of the flange to the holes located on the top of the unit. Attach to the top of the KwiKool BioKool™ system using the specially factory supplied fasteners.
- 2 Attach each duct to the flanges on the replacement ceiling panel(s); secure the duct to each flange using the supplied clamps.
- 3 Install the replacement ceiling panel(s) in the ceiling grid with the duct attached, connect the open end of the duct to the flanges on your KwiKool and secure with supplied clamps. Your KwiKool must have fresh make up air going to the condenser to operate at peak performance. Ensure the ducted space can absorb the heat load. It must be open enough to keep hot air from returning.
- 4 KwiKool's **two duct ceiling kit (CK-12)** is designed especially for KBIO models. BioKool™ is regularly used for primary, supplemental or standby cooling. In order to ensure you are able to utilize 100% of the units rated capacity and without creating a negative pressure in your conditioned space, use KwiKool's custom ceiling kit. KwiKool's exclusive IO integral condenser system isolates both the condenser discharge air and the condenser make up air from the conditioned space.



Ceiling Kit Discharge Outlet
(condenser exhaust) & Discharge
Make Up (fresh air inlet)

A WELL VENTILATED SPACE

Normally, the make up air and discharge air is directed above a drop ceiling. However, the ceiling kit is not limited to ceiling use and may be placed or fastened to any vertical surface or wall. **The important thing is space must be well ventilated and large enough for the heat load to be absorbed.** Condenser discharge air is prevented from entering the make up air inlet by way of a factory installed deflector on your Ceiling Kit. **The deflector should discharge from the rear duct.** If the condenser discharge and return space is unventilated, or unable to handle the exiting heat load, KBIO's high pressure safety switch will trip.

If this occurs, you will get an "HP" on the control panel. Resolve this by finding appropriate ventilation then reset the high pressure switch per the instructions in the **troubleshooting guide**. For areas with a closed ceiling or no ceiling use the double flange ceiling kit method or extended duct method.

AIR THERAPY

BIOKOOOL'S FOUR POINT PROCESS

COOL

Internal UVC light further reduces microorganisms by irradiating the evaporator coil, airstream and the internal surfaces of the evaporator chamber.

RETARD

Biokool's steel walls and non porous evaporator insulation prohibit spores and microbes from attaching, keeping internal surfaces pure.



DISINFECT

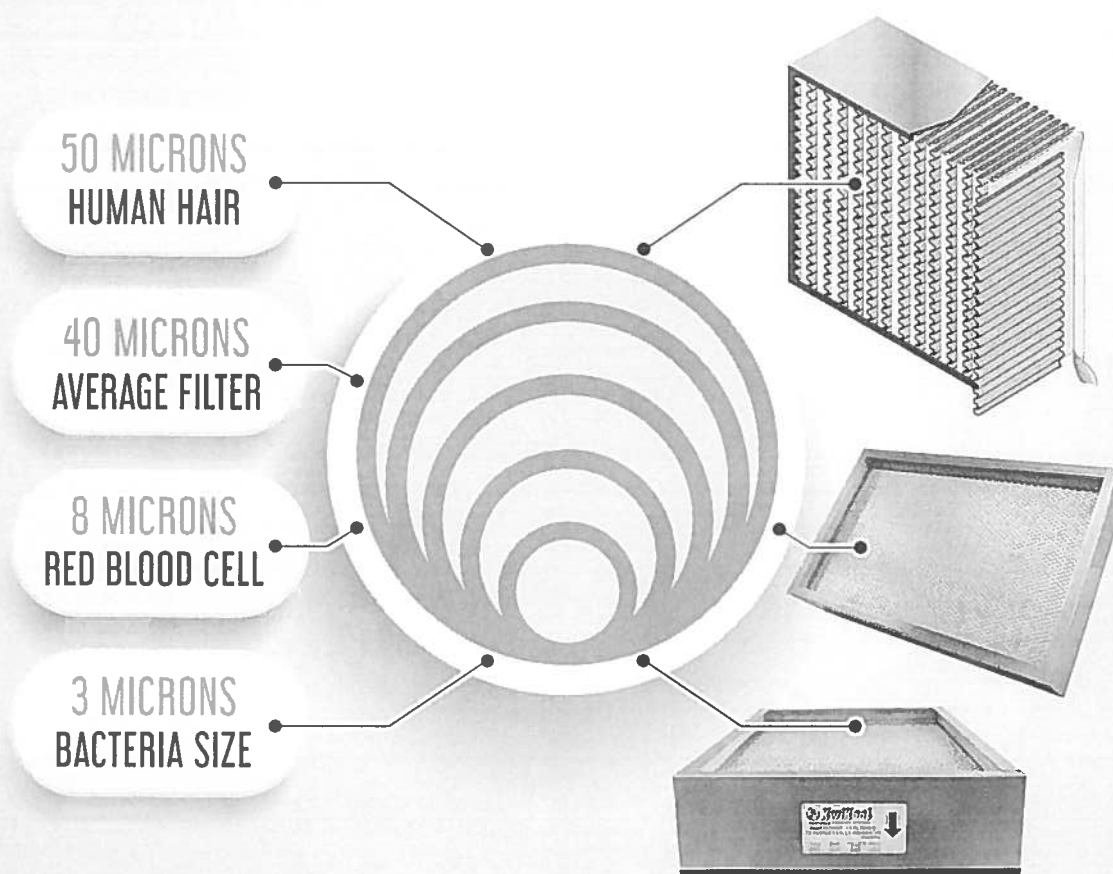
BioKool™ produces cool air without cross contamination. It features the only I/O Integral condenser system isolating the condenser section from conditioned space.

CLEAN

Biokool is engineered with HEPA technology and utilizes ultraviolet light inside the air chamber. Germicidal UV is a highly effective method of destroying microorganisms.

BIOKOOOL IS HEPA PURITY

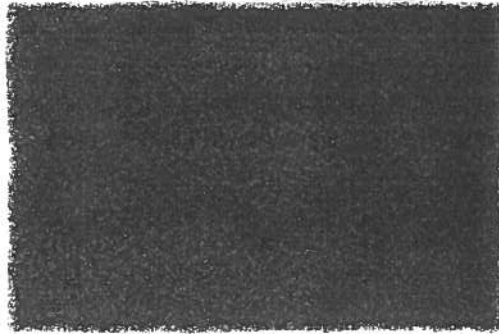
Common standards require that a HEPA air filter must remove 99.99% of particles greater than or equal to 0.3 μm diameter.



BIOKOOOLTM
PATENT PENDING

KWIKOOOL.COM

OUTER FILTER MAINTENANCE



Unplug System

Remove any and all power sources from the unit.

Access Filters

Loosen the two screws on the filter access door until the door opens.

Remove The Filter

Access the blue filter from the front panel. Pull it out from behind the door flanges.

Cleaning The Pre-Filter

OPTION ONE

In an open, well ventilated area blow out your blue pre-filter with compressed air away from you or others. Ensure to blow in the opposite direction of air flow. When facing the side you are blowing from, the cutouts for the door bracket should be on the left side. Blow until there is no more particulate coming from the filter.

OPTION TWO

Using a hose or a sink, direct a flow of water through the filter from the outlet side to the inlet side. Wash and squeeze the filter until the water is clear.

NOTE

Before reinstalling the filter, ensure that the pre-filter is completely dry. Typically a safe waiting time is three hours. This time will vary depending on conditions, so double check that your pre-filter is dry before installation. In order to minimize downtime; it is advised that you have two filters that can be switched out in order to continue using your portable cooling system.

Replace | Install The Filter

The replacement pre-filter must be inserted the same direction as the original pre-filter. Tuck the filter as deep as possible into the door flanges. NOTE the cutouts for the door brackets. When looking at the inside of the front panel, the two squares go on the left side so that the fastening screws go through the rectangular cutouts.

Latch The Panel Door Closed

Push the front panel closed and tighten the screws until they are firmly secured.

HEPA FILTER MAINTENANCE

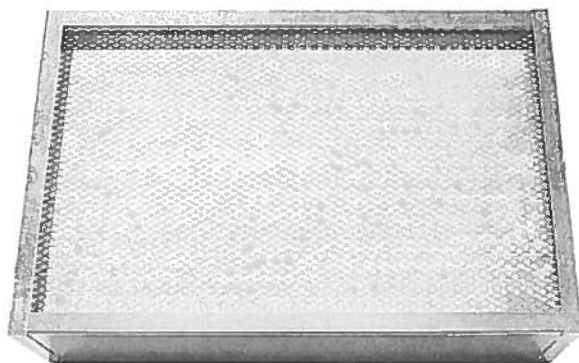


Kwikool's KBIO BioKool™ system is a highly effective way to reduce microorganisms such as virus, bacteria, and mold spores. Filters also prevent dust and debris from circulating in the conditioned space. This portable system will come standard from the factory with both the pre-filter and HEPA filter installed on the evaporator inlet. KBIO's filters are disposable and therefore must be periodically inspected and replaced based on the air quality of your conditioned space.

Encased in steel, HEPA filters measure 21 X 13.5 X 4 inches, and are lined with fibrous, filter material. Expect to replace each HEPA filter twice annually. The blue pre-filter is washable. If washed frequently, it will preserve the higher cost HEPA filter longer. Failure to maintain will restrict air flow, and lower air quality, as well as the overall performance of your system.



HEPA FILTER INSTALLATION



1

UNPLUG SYSTEM

IMPORTANT: Remove any and all power sources from the unit. Unplug the unit.

2

ACCESS FILTERS

Gently loosen the two screws on the filter access panel door until the door opens.

3

REMOVE PRE FILTER

Using the lip on the filter, pull the HEPA filter straight out.

4

INSTALL NEW FILTER

There is a correct air flow direction which is marked on the filter. Be sure it is reading and facing the right direction before placing it into the housing. The black rubber faces towards the interior of the unit.

5

INSTALL PRE FILTER

Push the front panel closed and tighten the screws until they are firmly secured.

OPERATIONAL SAFEGUARDS

BEFORE YOU INSTALL PLEASE READ THE FOLLOWING

- A. Do not operate or install your KwiKool unit in a potentially explosive, combustible, or corrosive gaseous atmosphere.
- B. Keep your KwiKool system away from flammable materials and open flame.
- C. To avoid electrical shock keep your KwiKool system away from direct contacts with water and any liquids and do not touch your system with wet hands.
- D. Is your KwiKool unit stable? It only takes a minute to drop a level onto the floor. The ideal surface for operation is free of any possibility of vibration, and strong enough to support the weight of your particular KwiKool model.
- E. **Do not move the system while it is operating.** Before moving, first turn the system OFF and unplug it from the power source. Lastly, unlock the casters.
- F. Do not tilt or overturn your unit, this will likely damage the compressor.
- G. Do not place objects on top of your unit, under any circumstances.
- H. Do not insert your hand or any other object into the cold air supply chutes.
- I. Do not operate your KwiKool system with its service doors open.
- J. If your KwiKool system makes abnormal noises or vibrations, call a KwiKool customer service team member to assist you: **1-800-594-5665**.

SOURCE POWER

First look at the serial plate on the unit. Verify the power source phase and breaker size are compatible. **BioKool™ requires a dedicated electrical circuit.** If you are unsure, make an effort to consult with a licensed electrician first.

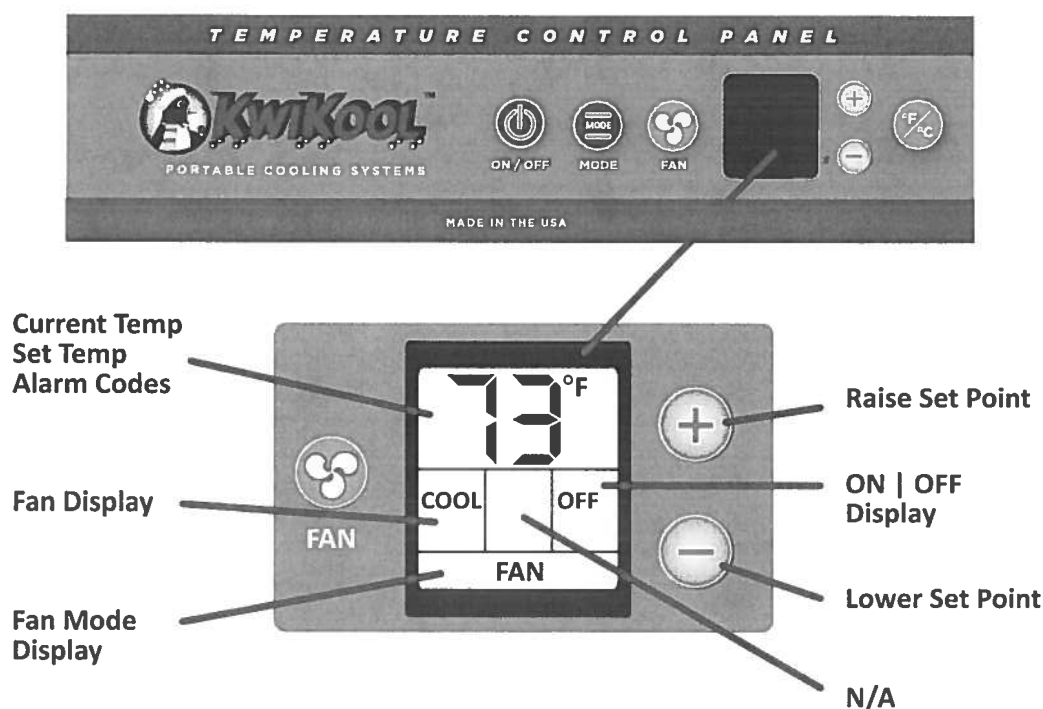
Biokool is factory equipped with an 8 foot power cable. **Extension power cable is allowed but must not exceed 25 ft.** Make sure your extension is rated correctly. **Slicing the power plug on your BioKool™ system will void the warranty.**

SAFE OPERATION

BEFORE YOU INSTALL PLEASE READ THE FOLLOWING

Powering Up Your System

Plug in your system and/or switch the breaker to the on position and your KwiKool display will come alive showing the current room temperature. The setting will read **OFF** and the fan is set to the default position. **The display will be flashing F** signifying that a two minute time delay has begun.



ON | OFF

Pressing this button on your control panel engages or shuts down your KwiKool system. Your selections are stored in the microprocessor and will be saved in case of power loss. Refer to the troubleshooting section of this manual if your BioKool™ flashes any warnings on power up.

MODE

Depress the **MODE** button to choose an operation. Select **COOL** for cooling with compressor operation. **COOL** will flash when the compressor is running. **COOL** will not flash when the room temperature is equal to or lower than the set temperature or if the system is timing out. Selecting **FAN** will activate air filtration without turning the compressor on.

SAFE OPERATION 'B' continued

°F | °C

Choose how you would like the temperature set point displayed on the control panel. Choose between Fahrenheit or Celsius. The factory default is °F. This indicator will flash when the system is in a *time out*, to prevent compressor from short cycling.

FAN

Pressing the fan button has two different operations.

Two Speed Models

The supply air fan control button has two functions. The two functions are to change from *auto fan* to *constant fan*. To change this function, press and hold the fan key until the indicator changes from fan (constant fan) to auto fan. The words **AUTO FAN** are displayed, the supply air fan is not on until the compressor is on. When in **FAN MODE**, auto fan is not available. If the unit was set to auto fan before changing the mode to fan, auto fan will return when the unit is set back to **COOL**. Factory default is **FAN** (constant fan) and is the best choice for electronic equipment.

Changing The Set Point

The + and – button will change the set point. The word **SET** will appear on the display and the set point temperature will flash **ON** and **OFF**. The value of the set point is changed one degree each time the button pressed. The set point will flash 12 times after each change before returning to display the room temperature.

Lowering or raising the set point will not change the temperature of the supply air. **For best results always adjust the set point to a temperature your KwiKool can cycle on and off at to avoid operational issues such as freezing or rapid discharge fan cycling.** KwiKool systems are designed to maintain the set point when sized properly. You can freeze your unit if you allow it to run for an extended time, unable to achieve the designated set point.



The lowest set point temperature available for your KwiKool is 60° degrees F, and the highest setting is 95° F. The control will not allow adjustments beyond these ranges.

SAFE OPERATION 'C' continued

COOL MODE

If the unit was previously set to **COOL** or was set to cooling mode when it was turned off, then it will still be set to **COOL** when you turn it on. If the compressor is running, the **COOL** on the display will be flashing. If your unit has been sitting for more than two minutes, this should happen immediately upon turning the unit on. If your set point is lower than the current room temperature when you turn it on, the unit will automatically turn on once the temperature rises above the set point.

If the unit was recently turned off or the unit turned off by itself because it reached the set point, the compressor will not turn on for approximately two minutes. This prevents the compressor from being damaged due to a condition called *short cycling*.



Time out for cool mode and start up.

The indication that KwiKool BioKool™ system is in the *time out* condition is that the **F** or **C** in the display will be flashing. When the compressor starts up again, the **F** will stop flashing and the **COOL** will begin flashing. Note the condenser fan will not start immediately with the compressor. Under **75°F** — you may notice the fan cycling on and off, this is normal. If the display flashes **99**, this indicates ambient temperature of **99°F** or more. This is normal, and will stop flashing when the ambient temperature falls below **99° F**.

If the system was previously set to **FAN** when it was turned off, then when it is powered up again, **FAN** will be displayed on the panel and the fan will start to run.



UV LIGHT



The UV spectrum has potential to either kill or inactivate microorganisms, preventing them from replicating. Biokool™ utilizes UVC energy at 253.7 nanometres to inactivate microorganisms, also known as Germicidal Irradiation or UVGI. UVC exposure inactivates microbial organisms such as bacteria and viruses by altering the structure and the molecular bonds of their DNA after UVC exposure, the organism dies off leaving no offspring, and the remaining population of the microorganism diminishes rapidly soon after. Biokool's™ Ultraviolet germicidal lamp provides a much more powerful and concentrated effect of ultraviolet energy than can be found naturally. Germicidal UV provides a highly effective method of destroying microorganisms.



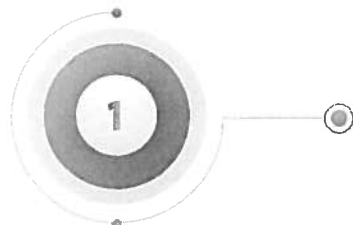
PART NUMBER
KK-UVB1
800-KWIKOOL
(1-800-594-5665)
TO ORDER

KWIKOOL.COM

ULTRAVIOLET BULB REPLACEMENT

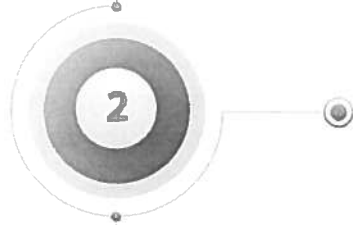
BEFORE YOU INSTALL PLEASE READ THE FOLLOWING

Max Voltage: 210 Volts | Max Wattage: 85 Watts



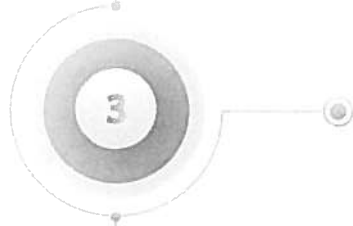
UNPLUG SYSTEM

IMPORTANT: Remove any and all power sources from the unit. Unplug the unit.



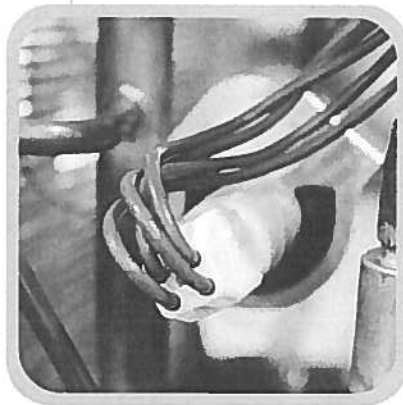
OPEN ACCESS DOOR

Use a flat screwdriver and turn the latches 180 degrees. Then pull the handle.



UNPLUG BULB

With one hand holding the plug and the other holding the white end cap of the bulb in place, pull the two apart.



Short-wave ultraviolet light damages DNA and sterilizes surfaces with which it comes into contact. Excessive exposure to UV radiation can result in acute and chronic harmful effects on the eye's dioptric system and retina.

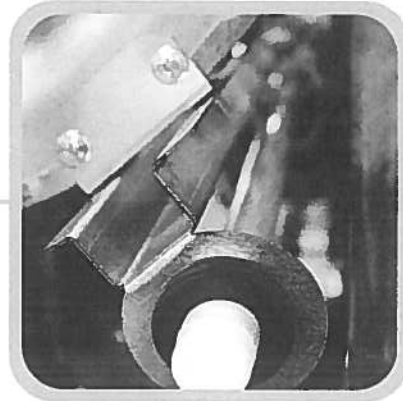


REMOVE BULB

Reach inside the unit and push the bulb up before pulling it out of its secure rubber holder. Properly dispose of the old bulb.



FRONT

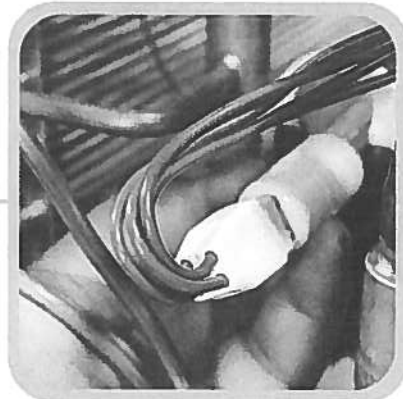
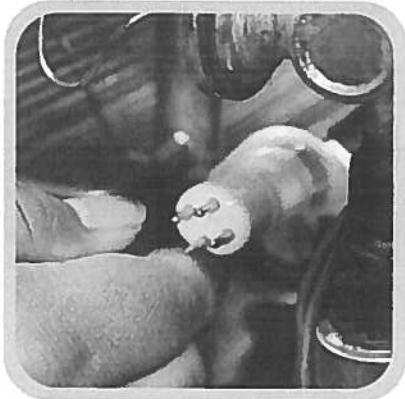


BACK



PLUG IN NEW BULB

Push the front panel closed and tighten the screws until they are firmly secured.



CLOSE ACCESS DOOR

Make sure there aren't any wires hanging out, and close the access door, repeating the steps to secure it with the installed door latches.

SAFEGUARDS

Time Delay

Protects your KwiKool from potential damage by delaying the compressor from starting before the pressures in the mechanical system equalize. This always activates when your KwiKool cycles off, is turned off, power is lost and then restored or the operational mode is changed. Display flashes C or F if the time delay is activated.

Condenser Fan Cycling or Condenser Fan Speed Control

Part of your KwiKool limited freeze protection and works by regulating the discharge air flow to keep the refrigerant pressures at the optimum range.

High-Pressure Switch and Alarm

Protects your BioKool Series unit from potential damage to the mechanical system by shutting down, sounding an audible alarm and displaying a fault code (HP) when the system pressure exceeds safe operating conditions. The high pressure switch is a manual reset switch and must be reset after the switch is activated and the condition causing the trip is corrected.

Low Pressure Switch and Alarm

Protects your KwiKool from potential damage to the mechanical system by shutting down the system, sounding an audible alarm and displaying a fault code (LP) when the low side pressure is too low. This is normally caused by low refrigerant charge. This switch is an automatic reset.

Automatic Restart

In the event of a power loss your KwiKool BioKool resumes operation when the power is restored. All operational functions are preserved in the memory of the Microprocessor Board including the ON/OFF selection.

Kwikool offers the highest quality products
and the most safety features found in any
portable cooling system on the market.

SAFEGUARDS cont.

Condensate Pump & High Level Alarm

BioKool models are factory equipped with an internal high lift condensate pump. KwiKool condensate pumps are able to pump the condensation either to the factory supplied condensate bottle, or to a drain or other location as required by the application. The internal pump is rated at 20 foot of head pressure. This means it can pump water to a maximum of 20 feet vertically. Each pump is equipped with an overflow safety cut-off that automatically shuts your BioKool system down, sounds an audible alarm and displays a fault code (CP). This prevents accidental flooding of the conditioned space.

Condensate Tank & High Level Alarm

BioKool models come standard with an external condensate tank. The tank is equipped with an overflow safety cut-off. When the tank is full, the safety will automatically shut down your BioKool unit, sound an audible alarm and display a fault code (CF) This prevents accidental flooding of the conditioned space. If you are using the supplied bypass plug and not using the tank this alarm is nonfunctional.

Service Ports

Located in the recessed cord pocket on the back of your KwiKool below the serial plate. This gives service personal a connection point for service gauges to monitor the operating pressures of your BioKools refrigeration system.

Sight Glass/Moisture Indicator

On air cooled systems the indicator is located in the discharge air make up inlet. On the water cooled system, you will find it on the back of the unit, above water connections. This feature allows operators and service personal to view the condition of the refrigerant returning to the evaporator coil. Used as a diagnostic tool by qualified personal.



KwiKool®

BIOKOOOL™
PATENT PENDING

 **Kwikool™**
PORTABLE COOLING SYSTEMS



KWIKOOL Manufactures
Excellent Commercial
Portable Cooling Equipment
IN THE U.S.A.

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sales@kwikool.com