

Vinotemp

WINE-MATE Cooling Unit

Use & Care Manual

VINO1500HZD

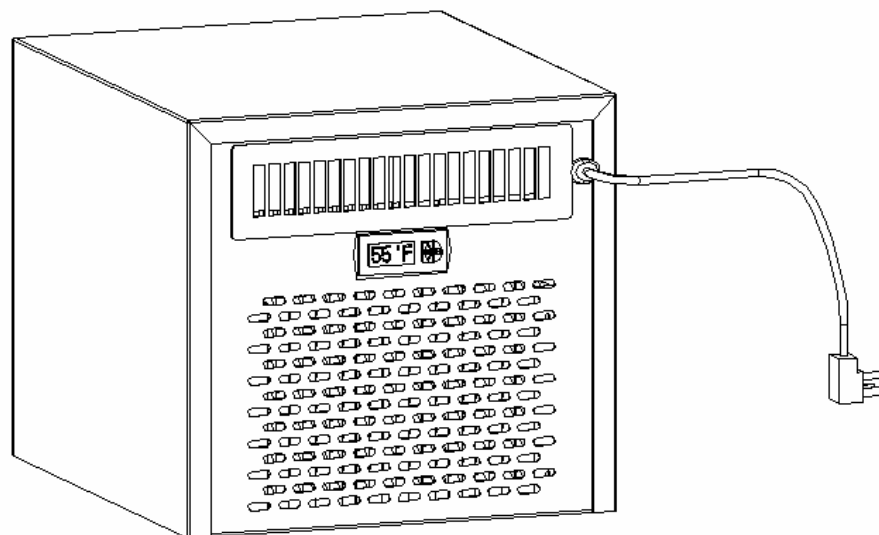
VINO2500HZD

VINO3500HZD

VINO4500HZD

VINO6500HZD

VINO8500HZD



Vinotemp International Corp.

www.winemate.com

READ AND SAVE THESE INSTRUCTIONS

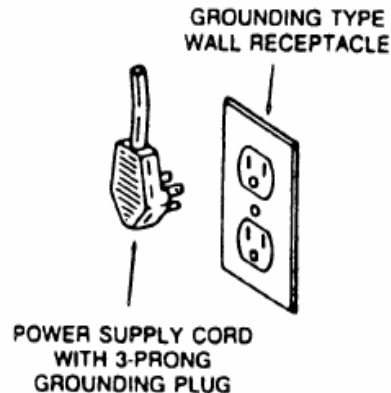
Important Safety Information

WARNING



To avoid the risk of electrical shock, property damage, personal injury or death:

- The power cord must be plugged into a 3-prong grounding-type wall receptacle, grounded in accordance with the National Electrical Code, ANSI/NFPA 70 - latest edition and local codes and ordinances.
- It is the personal responsibility of the consumer to have a proper 3-prong wall receptacle installed by a qualified electrician.
- **DO NOT, UNDER ANY CIRCUMSTANCES, REMOVE THE POWER CORD GROUNDING PRONG.**
- A separate adequately fused and grounded circuit should be available for this appliance.
- Do not remove any grounding wires from individual components while servicing, unless the component is to be removed and replaced. *It is extremely important to replace all grounding wires when components are replaced.*



WARNING



ELECTRIC SHOCK HAZARD

- Disconnect electric supply from appliance before servicing.
- Replace all panels before operating.
- Failure to do so could result in death or electrical shock.

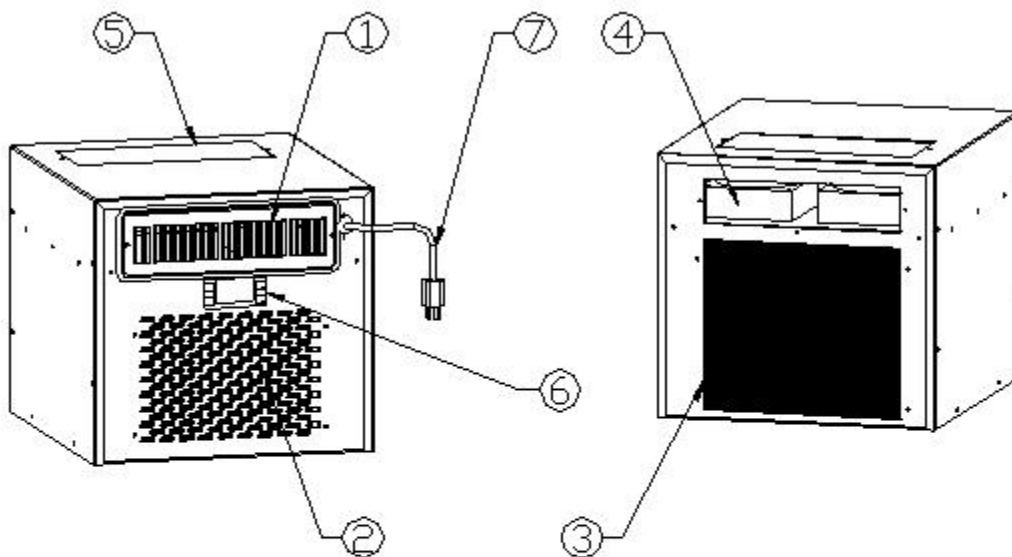
- **DO NOT PLUG IN UNTIL 24 HOURS AFTER DELIVERY.**
- **DO NOT USE A GROUND FAULT INTERRUPTER (GFI).**
- **A DEDICATED 15 OR 20 AMP CIRCUIT IS HIGHLY RECOMMENDED.**

TABLE OF CONTENTS

Feature Description.....	3
Installation Instruction.....	5
Temperature Control & Humidity Adjustment.....	13
Care Guide.....	16
Troubleshooting.....	17
Wiring Diagram.....	20
Customer Support.....	22
Warranty.....	23

Feature Description

- HZD cooling unit is designed and used to provide a stable temperature between 50~65 °F for suitable space at a normal environment.
- The refrigerated space will maintain humidity of 50~70% RH even when the environment becomes dry and humid.
- These temperatures and humidities are optimized for long term storage of wine, fur and tobacco.
- Horizontal cold-air supply is optimized for use in the wide cabinets or wine rooms.
- Self-contained ready for use and easy for installation



1. COLD-AIR SUPPLY
2. RETURN-AIR INTAKE
3. AMBIENT-AIR INTAKE
4. HOT-AIR REAR EXHAUST
5. HOT-AIR TOP EXHAUST (OPTION)
6. DIGITAL CONTROLLER
7. POWER CORD

Fig. 1.1 FEATURE DESCRIPTIONS

- See the voltage, frequency and current from the label on the back or side of the cooling unit.

The dimension and capacity are specified as follows:

MODEL	COOLING CAPACITY, CFM 55°F/75°F	BOTTLE CAPACITY 55°F/75°F		DIMENSIONS IN. WXHXD	ELECTRICAL	WEIGHT (lb)
		cu ft	bottles			
VINO-1500HZD	1500 Btu/h, 120 CFM	150 cu ft	800 bottles	14.25X13.25X 16	115V/60HZ/4A	50
VINO-2500HZD	2500 Btu/h, 180 CFM	250 cu ft	1200 bottles	14.25X13.25X 16	115V/60HZ/5A	55
VINO-3500HZD	3500 Btu/h, 250 CFM	650 cu ft	3000 bottles	14.25x19.75x21.25	115V/60Hz/6A	75
VINO-4500HZD	4500 Btu/h, 250 CFM	1000 cu ft	4500 bottles	14.25x19.75x21.25	115V/60Hz/9A	75
VINO-6500HZD	6500 Btu/h, 500 CFM	1500 cu ft	6500 bottles	17x22x28	115V/60Hz/14A	110
VINO-8500HZD	8500 Btu/h, 500 CFM	2000 cu ft	8500 bottles	17x22x28	115V/60Hz/16A	110

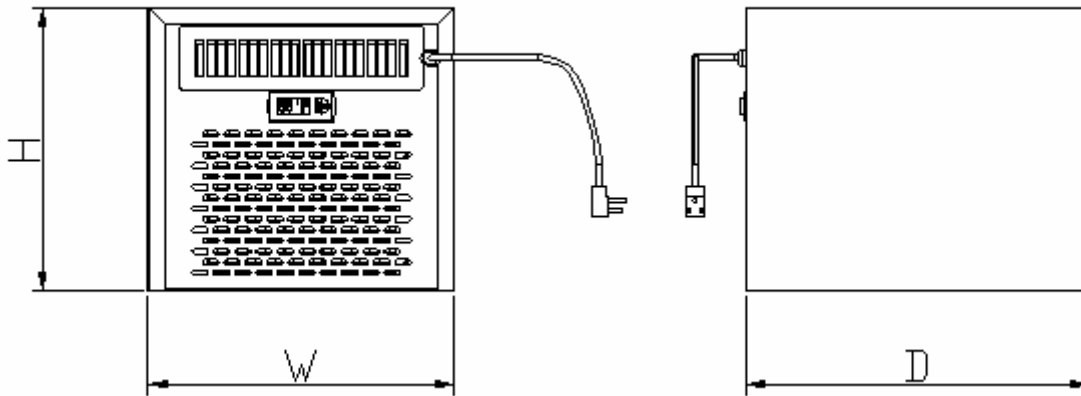



Fig. 1.2 DIMENSIONS

Installation Instruction

⚠ WARNING	
	<p>Always check wiring harness connections before initiating any test procedures.</p> <p>Disconnect electric power from the appliance before performing any maintenance or repairs.</p> <p>Voltage checks should be made by inserting meter probes beside the wires in the connector blocks with the electric power source on and the connector block plugged in.</p> <p>Resistance checks should be made on components with the electric power off and the connector block disconnected.</p>

Select a place to mount the unit where the exhaust airflow is unobstructed for a minimum of 6 inch. The area into which the unit exhausts must be well ventilated. If it is not, heat exhausted by the unit will build up and the unit will not operate properly. The ambient temperatures shall not be higher than 90 °F or lower than 50 °F. Additionally, cold supply air from the front grille must remain unobstructed. The unit shall be mounted near the ceiling with equal distance from each side of the cabinet or room.

1. VINO1500-2500HZD CABINET INSTALLATION

HOLES FOR THREAD INSERT, 16.75" TO REAR WALL OUTSIDE

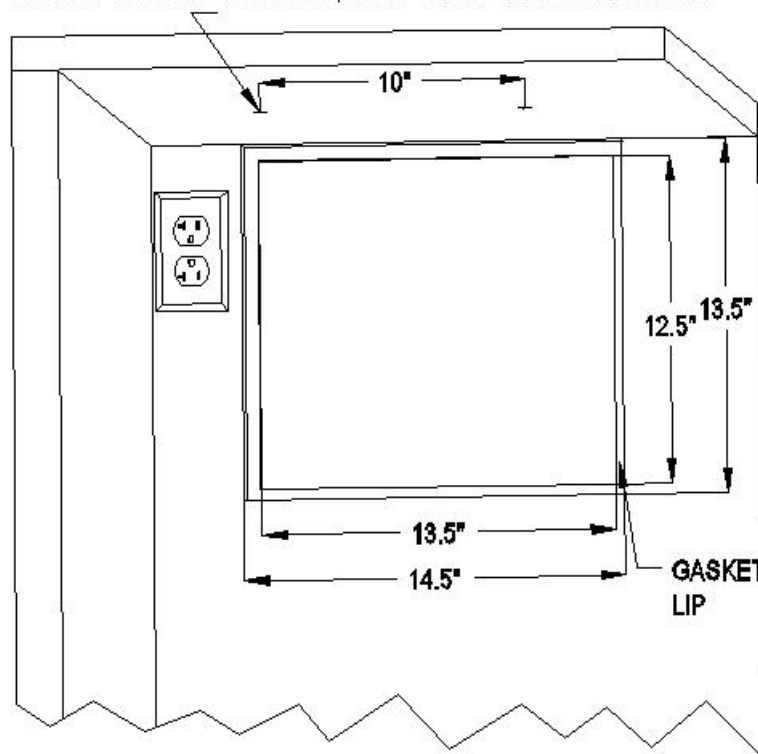


Fig. 2.1 CABINET CUTOUT & GASKET LIP

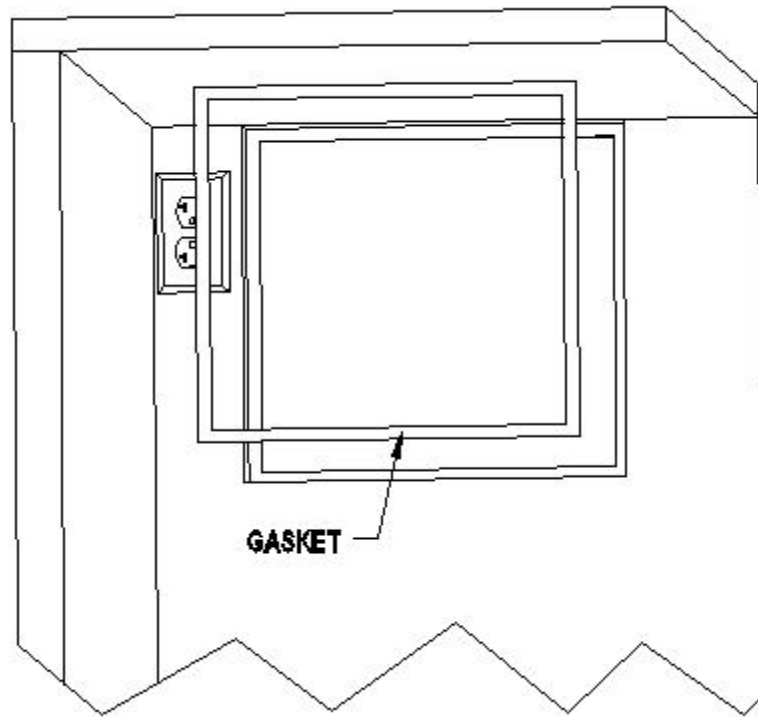


Fig. 2.2 GASKET

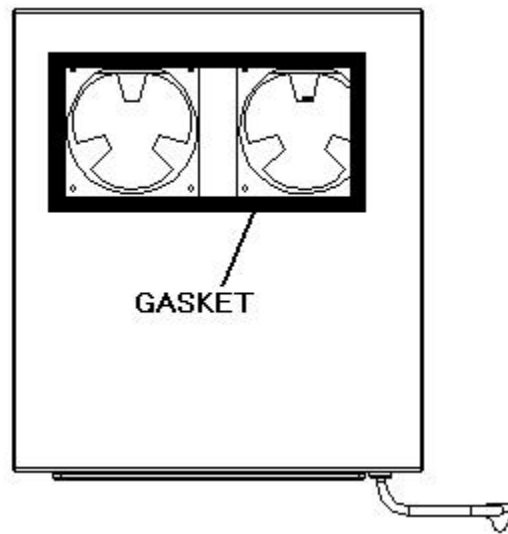


Fig. 2.3 TOP EXHAUST GASKET

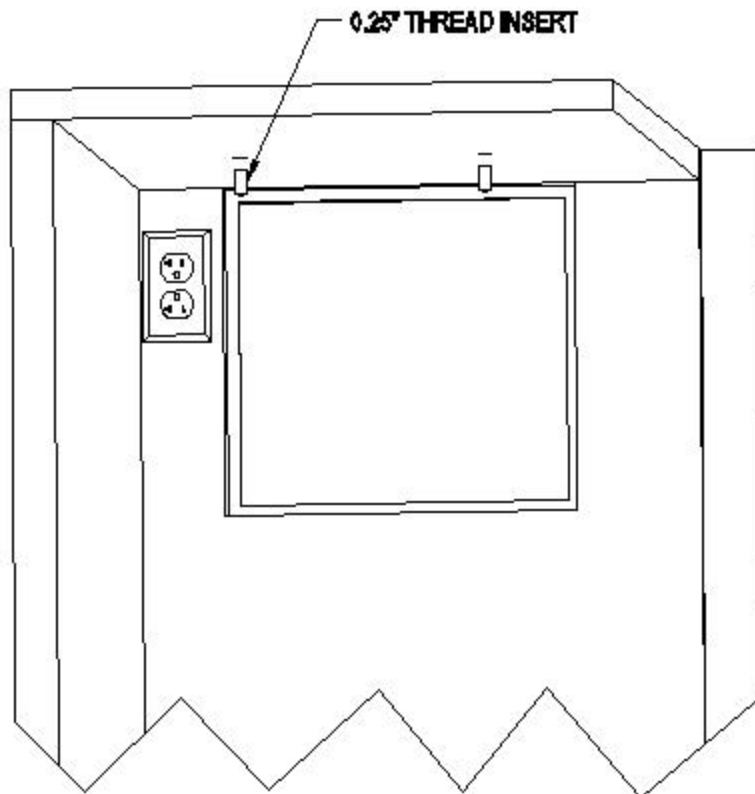


Fig. 2.4 THREAD INSERT

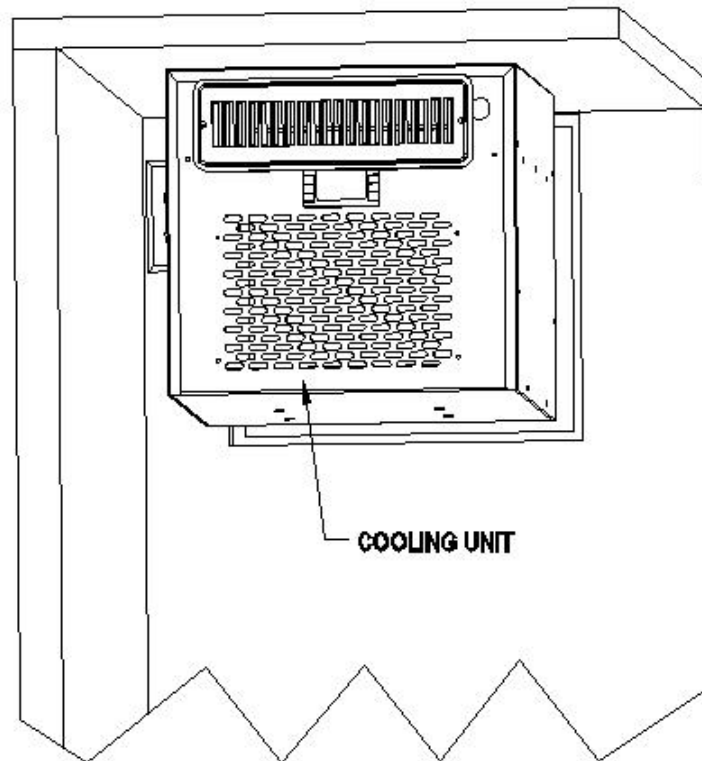


Fig. 2.5 COOLING UNIT

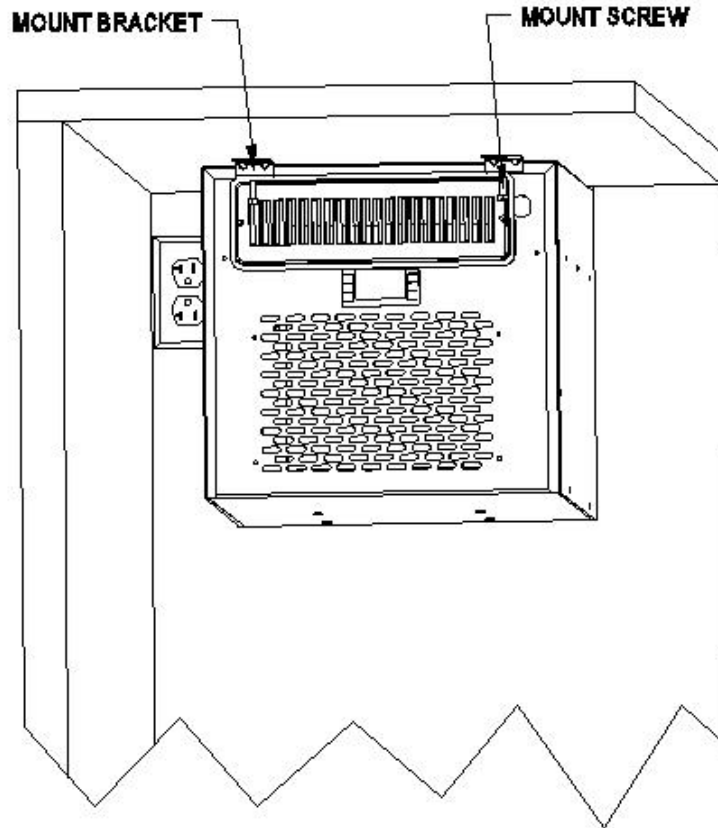


Fig. 2.6 FASTENING BRACKET & SCREW



Fig. 2.7 CABINET GRILLE

- Cut a rectangular inside opening with the 1/4" clearance inwards to the width and height of the cooling unit. By not going through, leave 1/2" lip inside at the wall to place the gaskets (see Fig 2.1 & 2.2).
- If top exhaust, cut another rectangular opening at the top of the cabinet to the length and width of the top exhaust.
- Make 2 holes at the ceiling to install the 1/4" inside diameter wood thread inserts (see Fig.2.1 & 2.4).
- Place the gaskets on the mounting lip sides (see Fig 2.2).
- If top exhaust, place another gaskets along the top exhaust at the top of the cooling unit (see Fig.2.3).
- Place the cooling unit to a flat and stable place.
- Then move it on the top of the wine rack temporarily.
- Move the cooling unit towards the mounting sides and push to press the gaskets (see Fig 2.5).
- Fasten the 2 brackets and use 7/16" wrench to tighten the 2 screws (see Fig 2.6).
- Attach the exhaust and fresh air grille from the rear side of the cellar (see Fig 2.7).

- Plug the cooling unit in receptacle.
- Plug the wine cellar.

2. VINO3500-8500HZD ROOM INSTALLATION

1. Cut a rectangular opening at the wine room wall as illustrated. The dimensions of the opening shall be 1/4" larger than the width and height of the unit.
2. If top exhaust, cut another rectangular opening at the top of the cabinet to the length and width of the top exhaust.
3. Construct a shelf as shown. The shelf must be capable of supporting the weight of the unit.
4. Place the unit on the shelf with the back of unit flush with the outside of the wall.
5. Attach the grille to the outside wall with screws.
6. Seal the area between the cooling unit and opening with a high quality weather stripping or polyurethane spray foam and cover with molding.
7. If top exhaust, place another gaskets along the top exhaust at the top of the cooling unit (see Fig.2.9).
8. Attach the molding to the wall not the unit.
9. Plug the unit into a properly grounded and dedicated outlet of adequate capacity.

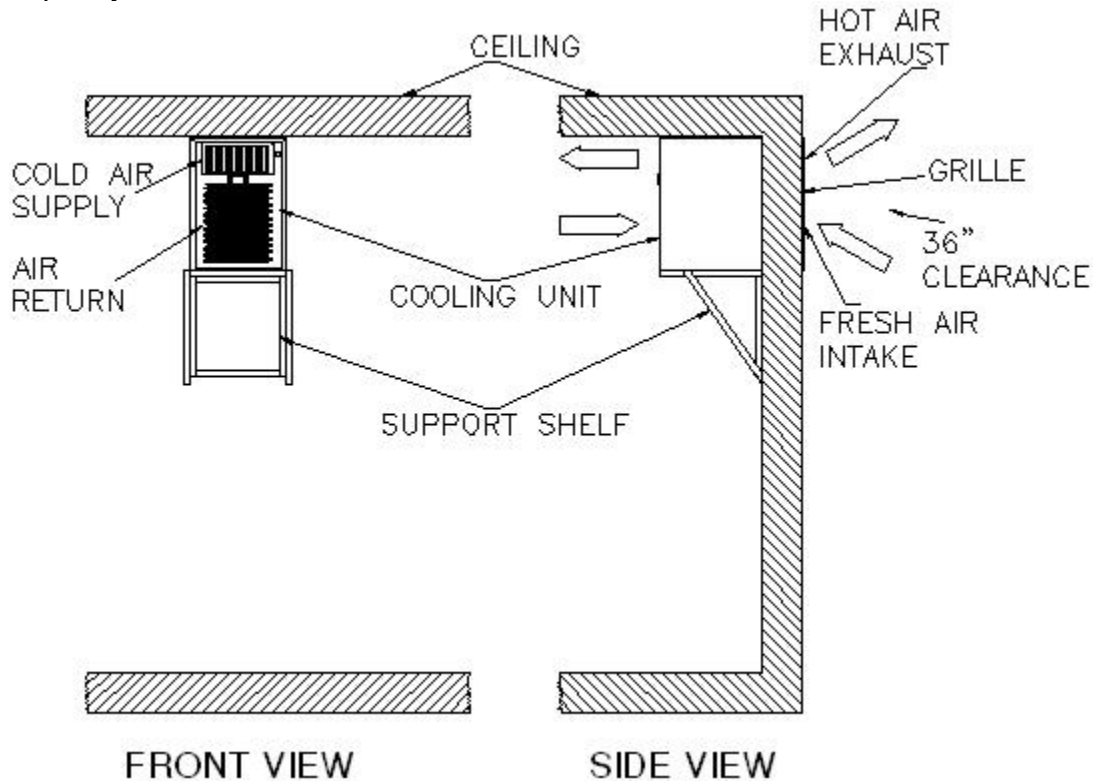


Fig. 2.8 ROOM INSTALLATION

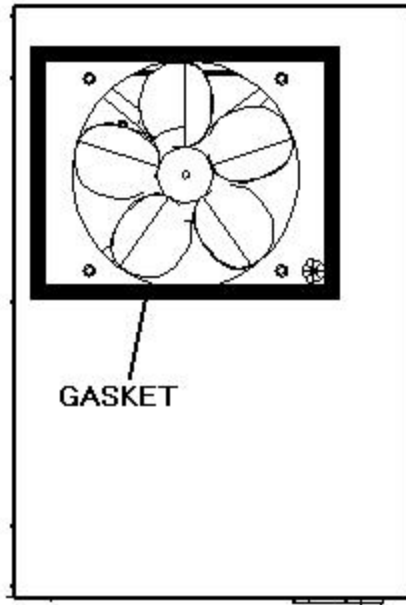


Fig. 2.9 TOP EXHAUST GASKET

3. Cellar Construction

This is only a guide and shall be considered as minimum requirements.

All interior walls and floors shall have a vapor barrier and a minimum of R11 insulation. All exterior walls and ceiling shall have a vapor barrier and a minimum of R19 insulation. The vapor barrier shall be installed on the warm side of the insulation. All joints, door frames, electrical outlets or switches and any pipes or vents that go through the enclosure shall be sealed to prevent air and moisture leakage into the room. Concrete, rock, and brick are not insulation or vapor barriers.

Doors shall be of a minimum size, insulated to at least R11 and tightly sealed with high quality weather stripping. Be sure to seal the bottom of the door and fill gap between the door's frame and wall before installing the cap molding.

In order to maintain 55 °F in the wine cellar, the ambient temperature surrounding the enclosure shall not exceed the temperature of the enclosure by more than 25 °F. No enclosure wall shall receive direct sun or strong wind.

Lighting shall be of low wattage, with a timer to insure lights are not left on when the enclosure is not occupied.

The cooling system will not be able to maintain the proper temperature if fresh moisture-laden air is constantly being introduced to the enclosure. Symptoms of this condition are; unit runs all the time with only a slight reduction in temperature and/or water overflows from the unit. Because of the temperature difference between the inside and outside, very small cracks can allow large amounts of outside air to enter into the enclosure. Please be aware that moisture can pass through solid concrete, paint and wood. Often a newly constructed room contains fresh wood, paint, concrete and other building materials. These materials contain

large amounts of moisture. When placed into operation in this type of environment, the system will work harder to remove this extra moisture resulting in increased “run” time.

4. Electrical Cord

Because of potential safety hazards under a certain condition we strongly recommend against the use of an extension cord. However, if you still select to use an extension cord, it is absolutely necessary that it is a UL LISTED 3-wire grounding type appliance extension cord having a 3-blade grounding plug and a 3-slot receptacle that will plug into the appliance. The marked rating of the extension cord shall be 115 V, 15 A or equivalent for VINO1500-2500HZD, 115 V, 20 A or equivalent for VINO3500-8500HZD and not greater than 15ft in length.

NOTE: DO NOT INSTALL ANY DUCTS ONTO THE SUPPLY, INTAKE ANY EXHAUST.

Temperature Control & Humidity Adjustment

1. Temperature Setting

- Set the temperature at 55 °F for the optimum aging of wine
- On initial start-up, the time required to reach the desired temperature will vary, depending on the quantity of bottles, temperature setting and surrounding temperature.
- Allow 24 hours to stabilize the temperature for each new temperature setting operation

2. Use of the controller



Fig. 3.1 DIGITAL CONTROLLER

1) Display


During normal operating conditions, the display shows the value measured by the air regulation probe. In case of active alarm, the temperature flashes alternately to the code alarm.


1.1 LED Functions


LED	MODE	FUNCTION
❄	ON	Compressor enabled
❄	Flashing	Anti-short cycle delay enabled
❄	ON	Defrost enabled
🔊	ON	An alarm is occurring
°C/°F	ON	Measurement unit
°C/°F	Flashing	Programming phase

1.2 Front Panel Commands

SET: To display target set point; in programming mode it selects a parameter or confirm an operation.



 **(DEF)** To start a manual defrost


 **(UP)**: To see the max. stored temperature; in programming mode it browses the parameter codes or increases the displayed value.


 **(DOWN)** To see the min stored temperature; in programming mode it browses the parameter codes or decreases the displayed value.

O/I To turn ON or OFF the controller (if enabled)

KEY COMBINATIONS:

 +  To lock & unlock the keyboard.

SET +  To enter in programming mode.

SET +  To return to the room temperature display.

2) Alarm Signals

2.1 Code Description

Message	Cause	Outputs
"P1"	Room probe failure	Compressor output acc. to par. "Con" and "COF"
"HA"	Maximum temperature alarm	Outputs unchanged.
"LA"	Minimum temperature alarm	Outputs unchanged.
"CA"	Serious external alarm (i1F=bAL)	All outputs OFF.

2.2 Alarm Recovery

Probe alarms "P1", start a few seconds after the fault in the related probe; they automatically stop a few seconds after the probe restarts normal operation. Check connections before replacing the probe. Temperature alarms "HA", "LA" automatically stops as soon as the temperature returns to normal value. Alarm "CA" (with i1F=PAL) recovers only by switching off and on the instrument.

3) Temperature Set-Point

3.1 How to see the set-point

1. Push and immediately release the SET key: the display will show the Set-point value;
2. Push and immediately release the SET key or wait for 5 seconds to display the probe value again.

3.2 How to change the set-point

1. Push the SET key for more than 3 seconds to change the Set point value;

2. The value of the set point will be displayed and the “°C” or “°F” LED starts blinking;
3. To change the Set value, push the keys ▲ or ▼ arrows within 10s.
4. To memorize the new set point value, push the SET key again or wait 10s.

4) Humidity Adjustment

The parameter **Fon** is used to adjust the humidity in the wine cabinet. The higher value of **Fon**, the higher relative humidity will be.

1. Press the **Set + ▼** keys for 3 sec until the “°C” or “°F” LED starts blinking.
2. Release the keys, then push again the **Set + ▼** keys for more than 7sec, the **Pr2** label will be displayed.
3. Release the keys, select the required parameter **Fon** by up or down keys ▲ ▼.
4. Press the “**SET**” key to display its value.
5. Use up or down keys ▲ ▼ to change its value.
6. The default value is 0, change high or low value to maintain high or low humidity.
7. Press “**SET**” to store the new value.
8. **To exit:** Press **SET + ▲** or wait 15sec without pressing a key.

5) Regulation Differential

The parameter **Hy** is used as intervention differential for set point. Compressor cut-in is the set-point + **Hy**, and compressor cut-out is the set-point.

1. Press the **Set + ▼** keys for 3 sec until the “°C” or “°F” LED starts blinking.
2. Release the keys, then push again the **Set + ▼** keys for more than 7sec, the **Pr2** label will be displayed.
3. Release the keys, HY will display immediately.
4. Press the “**SET**” key to display its value.
5. Use up or down keys ▲ ▼ to change its value.
6. The default value is 4, change high or low value to result in long high or short running cycle.
7. Press “**SET**” to store the new value.
8. **To exit:** Press **SET + ▲** or wait 15sec without pressing a key.

6) Defrost Cycle

The parameter **IdF** is used as interval between defrost cycles.

1. Press the **Set + ▼** keys for 3 sec until the “°C” or “°F” LED starts blinking.
2. Release the keys, then push again the **Set + ▼** keys for more than 7sec, the **Pr2** label will be displayed.
3. Release the keys, select the required parameter **IdF** by up or down keys ▲ ▼.
4. Press the “**SET**” key to display its value.
5. Use up or down keys ▲ ▼ to change its value.
6. 7. Press “**SET**” to store the new value.
8. **To exit:** Press **SET + ▲** or wait 15sec without pressing a key.

7) Manual Defrost

Push the DEF key for more than 2 seconds and a manual defrost will start.

Care Guide

1. Coil Cleaning

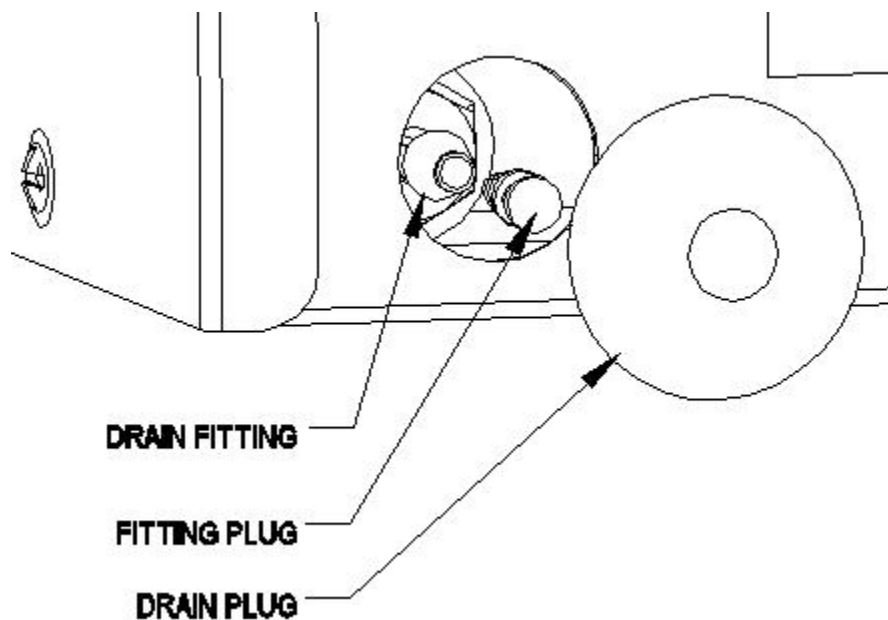
- Clean the condenser coil regularly. Coil may need to be cleaned at least every 6 months.
- Coil is on the ambient air intake side of the cooling unit.
- Unplug the unit or disconnect power.
- Use a condenser brush or a vacuum cleaner with an extended attachment to clean the coil when it is dusty or dirty.
- Plug the cooling unit or reconnect power.

2. Moisture Removing

- Remove the extra condensate if it is accumulated in the wine cellar at high humidity condition.

3. Drain Line

VINO3500-8500HZD units are equipped with a drain line fitting. In case there is a drain line needed, remove the drain plug on the bottom left at the rear, then remove the fitting plug, add a drain tube onto the drain fitting, 0.25" ID tube for VINO3500-4500HZD and 0.5" ID tube for VINO6500-8500HZD



Troubleshooting

This Troubleshooting Chart is not prepared to replace the training required for a professional refrigeration service person, not is it comprehensive

Troubleshooting Chart

Complaint	Possible Causes	Response
1. Unit not running	<ul style="list-style-type: none"> a. Power cord unplugged b. No power to unit c. Setting higher than ambient temperature d. Differential too high e. Incorrect or loose wirings f. Low voltage g. Defrost light blinking h. Compressor light blinking 	<ul style="list-style-type: none"> a. Check for power cord plug b. Check power at receptacle & fuses c. Lower temperature setting d. Decrease the value as to 4 °F e. Check all wirings and connections f. Contact an authorized electrician g. Unit is under defrost mode h. Unit waits for anti-short cycle delay
2. Fan running continually	<ul style="list-style-type: none"> a. Post-compressor fan running mode for humidity modulation 	<ul style="list-style-type: none"> a. See 4) to set FON = 0
3. Temperature fluctuating	<ul style="list-style-type: none"> a. Air sensor 	<p>a. When using an air sensor, the wine bottle temperature is mainly controlled by the average air temperature. If the set-point is 55°F with the differential 4F, the cooling unit turns on at 59°F of air temperature and turns off at 55°F of air temperature. The average air temperature is 57°F, and then the wine temperature is around 57+/- 0.5°F. The air is light enough to change so quickly that it maintains relatively constant average temperature that would prevent wine bottle temperature from varying.</p>
4. Temperature high, unit stopping and starting but short running time	<ul style="list-style-type: none"> a. Displaying 55°F, air sensor contacting the evaporator or in the supply air b. Setting too high 	<ul style="list-style-type: none"> a. Move the air sensor away from the evaporator and supply air b. Lower setting
5. Temperature high, compressor stopping and starting but short running time	<ul style="list-style-type: none"> a. Incorrect voltage b. Failed thermistor c. Failed components d. Improper condenser airflow e. Dirty condenser f. Overcharge of refrigerant g. Discharge or suction pressure too high 	<ul style="list-style-type: none"> a. Check for voltage b. Check thermistor by placing it in ice water and measuring resistance c. Check compressor windings, start relay and overload protector. d. Check for condenser fan e. Clean condenser f. Call service for removing refrigerant g. Call service for OEM information

6. “HA” alarm blinking and beeping, temperature high or not cooling and running continually	<ul style="list-style-type: none"> a. Improper room insulation & seal b. Room too large c. Ambient temperature too high d. Exhaust restricted e. Malfunctioning fans f. Improper evaporator or condenser airflow g. Dirty Condenser h. Iced evaporator i. Refrigeration system restriction j. Refrigerant leak k. Undercharge or overcharge l. Failed components 	<ul style="list-style-type: none"> a. Check for insulation, gasket and door opening b. Check for excessive size c. Check for installation location d. Leave minimum 3 feet clearance for the exhaust side and leave minimum 1 foot clearance for the fresh air intake side e. Check for both evaporator and condenser fans f. Check for air restrictions g. Clean condenser h. Defrost and reset temperature i. Call service for checking restrictions j. Call service for checking loss of refrigerant k. Call service to add or remove refrigerant l. Check compressor windings, start relay and overload protector
7. Unit running too long	<ul style="list-style-type: none"> a. Improper room insulation & seal b. Exhaust restricted c. Room too large d. Ambient temperature higher > 90°F e. Dirty Condenser 	<ul style="list-style-type: none"> a. Check for insulation, gasket and door opening b. Leave minimum 3 feet clearance for the exhaust side and leave minimum 1 foot clearance for the fresh air intake side c. Check for excessive size or increase setting d. Check for installation location or increase setting e. Clean condenser
8. Fan motor running but compressor not running	<ul style="list-style-type: none"> a. Post-compressor fan running mode b. Incorrect power supply c. Incorrect or loose wirings d. Failed components e. Liquid refrigerant in the compressor 	<ul style="list-style-type: none"> a. Check for fan running time FON b. Check for proper voltage c. Check all wirings and connections d. Check start relay, start capacitor, overload protector, compressor. e. Call service for OEM information.
9. Compressor running but fan not running	<ul style="list-style-type: none"> a. Fan blade stuck b. Incorrect or loose wirings c. Failed motors 	<ul style="list-style-type: none"> a. Check for proper clearance b. Check all wirings c. Call service for checking open or shorted windings
10. Evaporator Icing	<ul style="list-style-type: none"> a. Evaporator air flow restriction b. Not stopping due to air leak, high ambient temperature or low setting c. Low ambient temperature d. Bad thermostat or sensor e. Moisture in the system 	<ul style="list-style-type: none"> a. Check for fans b. Check for seal, door opening, ambient temperature and setting c. Defrost unit d. Check for thermostat and sensor e. Working initially then stopping

	<ul style="list-style-type: none"> f. Refrigerant low or leaking g. Capillary tube blockage 	<ul style="list-style-type: none"> f. Check for current and sealed system leakage g. Check for low side pressure
11. Water leak	<ul style="list-style-type: none"> a. High humidity b. Air leak in wine cellar c. Evaporator air flow restriction d. Water passages restricted e. Drip tray leak 	<ul style="list-style-type: none"> a. Use drain line b. Check for any air leak c. Check air flow or air TD crossing evaporator d. Clean the drip tray e. No water overflow but leak
12. Circuit tripping	<ul style="list-style-type: none"> a. Incorrect fuse or breaker b. Incorrect wirings c. Failed components 	<ul style="list-style-type: none"> a. Check for proper fuse or breaker b. Check for wirings and connections c. Call service
13. Noisy operation	<ul style="list-style-type: none"> a. Mounting area not firm b. Loose parts c. Compressor overloaded due to high ambient temperatures or airflow restriction d. Malfunctioning components 	<ul style="list-style-type: none"> a. Add support to improve installation b. Check fan blades, bearings, cabinet washers, tubing contact and loose screws. c. Check for airflow blockage d. Call service for checking internal loose, inadequate lubrication and incorrect wirings

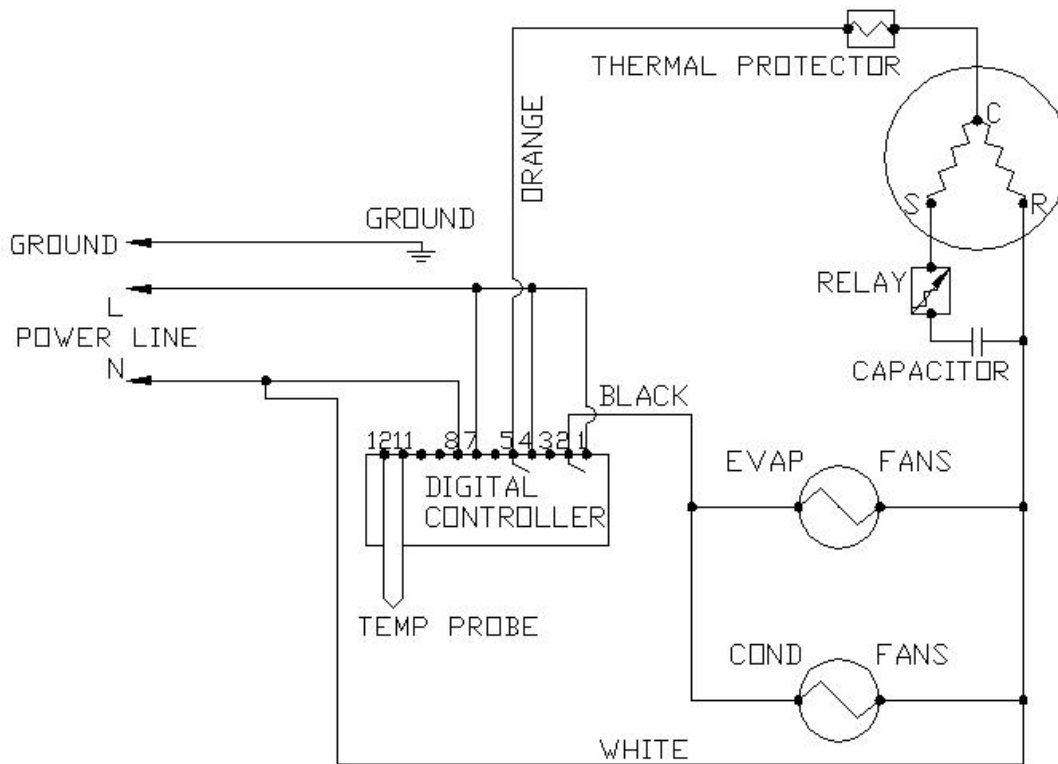


Fig. 6.3 VINO3500-8500HZD Wiring Diagram

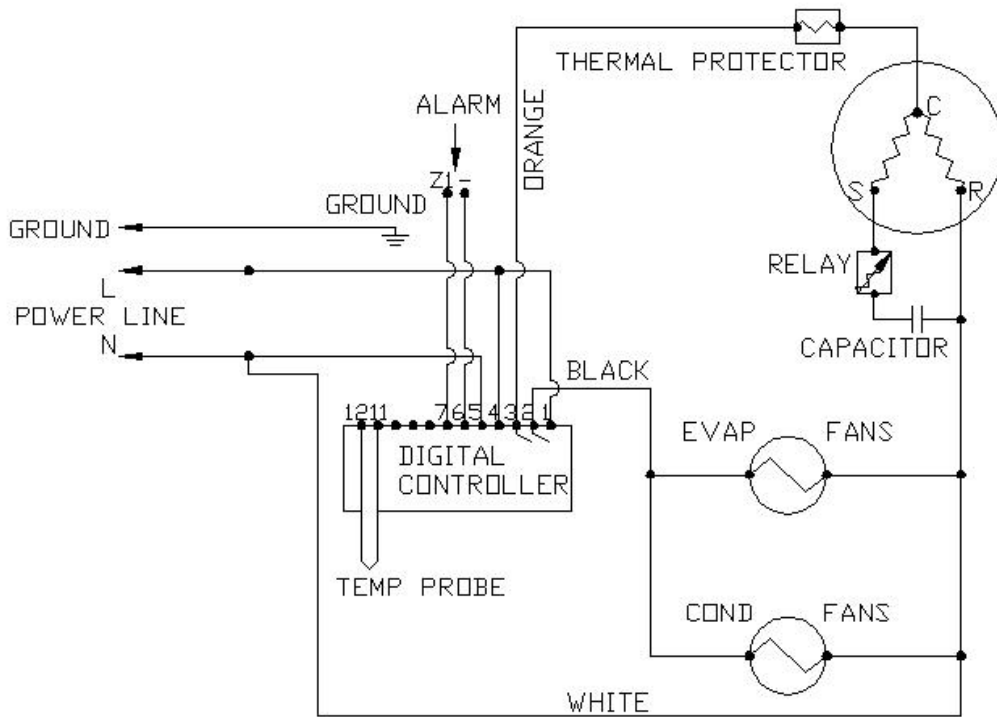


Fig. 6.4 VINO3500-8500HZD Call Feature Wiring Diagram

Customer Support

If you still have problems, please contact us at:

Vinotemp International
17631 South Susana Road
Rancho Dominguez, CA 90221
Tel: (310) 886-3332
Fax: (310) 886-3310
Email: info@vinotemp.com

Warranty

Thank you for choosing a Vinotemp cooling unit.

Please enter the complete model and serial numbers in the space provided:

Model _____
Serial No. _____

Attach your purchase receipt to this owner's manual.

1. Limited Warranty

VINOTEMP warrants its products to be free from defects due to workmanship or materials under normal use and service, for twelve months after the initial sale. If the product is defective due to workmanship or materials, is removed within twelve months of the initial sale and is returned to VINOTEMP, in the original shipping carton, shipping prepaid, VINOTEMP will at its option, repair or replace the product free of charge. Additionally VINOTEMP warrants all parts to be free from defects for a period of sixty months after initial sale.

This warranty constitutes the entire warranty of the VINOTEMP with respect to its products and is in lieu of all other warranties, express or implied, including any of fitness for a particular purpose. In no event shall VINOTEMP be responsible for any consequential damages what is so ever. Any modification or unauthorized repair of VINOTEMP products shall void this warranty.

Service under Warranty

This service is provided to customers within the continental UNITED STATES only. VINOTEMP cooling units are warranted to produce the stated number of BTU/H. While every effort has been made to provide accurate guidelines, VINOTEMP can not warranty its units to cool a particular enclosure.

In case of failure, VINOTEMP cooling units must be repaired by the factory or its authorized agent. Repairs or modifications made by anyone else will void the warranty.

Shall a VINOTEMP cooling unit fail, contact the dealer for instructions, do not return the unit to the factory without authorization from VINOTEMP. If the unit requires repair, re-pack it in the original shipping carton and return it to the factory, shipping prepaid. VINOTEMP will not accept COD shipments. If the unit

is determined to be faulty and is within the twelve month warranty period VINOTEMP will, at its discretion, repair or replace the unit and return it free of charge to the original retail customer. If the unit is found to be in good working order, or beyond the initial twelve month period, it will be returned freight collect.

2. Limitation of Implied Warranty

VINOTEMP'S SOLE LIABILITY FOR ANY DEFECTIVE PRODUCT IS LIMITED TO, AT OUR OPTION, REPAIRING OR REPLACING OF UNIT.

**VINOTEMP SHALL NOT BE LIABLE FOR:
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, ANY OUTER DAMAGES,
WHETHER INCIDENTAL, CONSEQUENTIAL OR OTHERWISE.**

THIS WARRANTY IS EXCLUSIBE AND IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR INPLIED, 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 VINOTEMP 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. There for suitability of the unit for a specific enclosure or application must be determined by the customer and cannot be warranted by VINOTEMP.