

# 20ACH1211

1-ton Portable Air-Cooled Heat Pump ENGINEERING, INSTALLATION AND SERVICE MANUAL





Cooling and Heating done Right!



OCEANAIRE



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# **TABLE OF CONTENTS**

	PAGE
GENERAL INFORMATION	1
PRODUCT DATA AND SPECIFICATIONS	2
UNIT DESCRIPTION	
Standard Features	3
Applications / Operation Cooling ModeHeating Mode	4 5
Electrical Configurations	6
Use of Extension Cords	6
Condensate	7
Accessories	8 - 9
Inspection/Installation	10
Deluxe Electronic Controller	11 - 13
SERVICE	
Replacement Parts Procedure	14
Troubleshooting Guide	15
Preventive Maintenance	16
Interior View	17
DIAGRAMS/SCHEMATIC	
Piping Schematic	18
Wiring Schematic	19
WARRANTY	20
END USER INFORMATION	Back Cov

#### **FORWARD**

This manual provides the user with basic details for the installation and operation of the OceanAire 2OACH1211 heat pump. It is recommended to read and fully understand the instructions outlined within this manual, before operating the 2OACH1211 unit.

As with all commercial air conditioning equipment, it is recommended to have the 2OACH1211 sized and installed by a licensed specifying engineer and contractor, in accordance with all local and state codes. The length of service received can be extended by following the installation and preventive maintenance instructions.

#### NOTICE

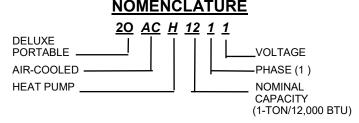
In our ongoing process of continuous improvement, the items and procedures described in this manual are subject to change without notice. Please note model and serial number of the 2OACH1211 unit before contacting the factory.

## **GENERAL INFORMATION**

The OceanAire 2OACH1211 is a portable air-cooled heat pump designed for permanent or temporary spot cooling or heating applications. The entire unit has been built in a premium sheet metal cabinet, equipped with heavy-duty casters for mobility. All 2OACH1211 models come standard with a 10-foot power cord for electrical connection and added mobility in service. These units direct heated/cooled air to specific areas or objects through a discharge grille located on the upper-front of the unit, while rejecting cooled/heated air from the top of the unit. The 2OACH1211 model will satisfy most space cooling or heating requirements.

The 2OACH1211 is a self-contained unit with the entire system (evaporator and condenser blower assemblies, electrical and refrigeration components), neatly arranged in a gray and blue polyester powder coated metal cabinet. When connected to the proper source of electrical power, the 2OACH1211 is controlled by a solid-state electronic controller, with numerous options of temperature and airflow controls that will provide the desired level of comfort when cooling or heating.

A wide variety of accessories and factory installed options are available for the 2OACH1211 units allowing for improved performance and added versatility.



#### **CAPACITY RATING**

12.....12,000 BTU/HR

#### NOT APPROVED FOR OUTDOOR USE

#### WARRANTY

ALL OCEANAIRE PRODUCTS ARE COVERED BY THE OCEANAIRE LIMITED WARRANTY

1 YEAR ON THE FULL PRODUCT

PLUS, 4 ADDITIONAL YEARS FOR THE COMPRESSOR (Restrictions Apply)

## **WARRANTY CARD**

It is important that the warranty card be filled out completely and returned to the factory within fourteen (14) days of installation of the unit in order to receive the benefits of the warranty.

# **SPECIFICATIONS**

# 20ACH1211

COOLING CAPACITY	11,800 BTUH
HEATING CAPACITY	11,000 BTUH
VOLTAGE	115 V, 60 Hz, Single Ph
AMPS	10.4 A
TOTAL WATTS	1180 W
IN RUSH AMPS	60 A
PLUG TYPE	5-15P, LCDI
EER	10.0
COMPRESSOR HP COMPRESSOR RLA COMPRESSOR LRA	1 COOLING
EVAP CFM - HIGH EVAP MOTOR HP	9.5 50 400 1/8
COND CFM	580
COND MOTOR HP	1/8 HP
CONDENSATE TANK (Pump Optional)	5 GALLON
REFRIGERANT CHARGE	18 oz R-410A
HEIGHT	37-3/4 in
WIDTH	20 in
DEPTH	25 in
NET WEIGHT	180 lb

#### SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE

Cooling Capacity is total BTUH at 80°DB/67°WB return air, 95°F Outdoor at high fan speed

OA Heating Capacity is total BTUH at 70°DB/60°WB indoor, 47°DB/43°WB Outdoor

OA Dedicated Circuit and Time Delay fuses/circuit breakers are recommended

EER is determined at high fan speed, with condenser discharge air ducted into another area

OA CFM with free discharge

Amps & Watts at 115 Volts

COOLING AMBIENT OPERATING RANGE 65° TO 105° OPERATING RANGE 40° TO 85°

NOT APPROVED FOR OUTDOOR USE

# STANDARD FEATURES

#### **CABINET**

The 2OACH1211 Series heat pump has a cabinet that is constructed of 18 gauge steel with a polyester powder coated finish that will compliment any decor. The cool blue front compliments any surrounding space, and is insulated with sound-absorbing insulation for cool, quiet comfort. All units come equipped with handles and premium swivel casters for portability and convenient set-up.

#### **DELUXE ELECTRONIC CONTROLLER**

Each 2OACH1211 unit is equipped with a deluxe electronic controller. When power is connected to the unit, the thermostat will control the unit to cool/heat a space to the desired temperature. The thermostat is also capable of controlling the fan to operate automatically when needed, or continuously.

One additional feature of the Deluxe Electronic Controller is that it will display a condition alarm "CON". "CON" displays when a condensate alarm, or a high pressure reset condition has been met. To protect the compressor from short-cycling, there is a built-in time delay. In the event of a power outage, all thermostat settings are saved, and the unit will re-start automatically.

#### FAN SPEED CONTROL

One of the features of the electronic controller is that the unit supply fan can be controlled either automatically or manually. In AUTO mode, the indoor blower will adjust air flow automatically for added comfort and performance. Or, if desired, the controller can be set to MANUAL fan mode, and the indoor blower will run continuously at one of six levels of fan speed.

#### CONDENSATE TANK/PUMP

The 2OACH1211 unit comes equipped with a means for handling the condensate generated during the cooling/heating process. The tank can be easily removed from the unit and emptied as needed.

An optional automatic condensate pump (2DPC-1) is available and can be factory installed . The pump comes with a 20 foot long vinyl hose that allows for the removal of the condensate water to a drain. The automatic pump is capable of a 20ft vertical lift, to handle almost any installation requirement.

#### **FILTERS**

All 2OACH1211 unit is equipped with washable filters at the air intakes. Electrostatic mesh air filters located behind the evaporator return air grille serve to filter the air before it is cooled/heated, and behind the condenser return air grille to prevent dust build-up. Both filters can be easily removed and cleaned.

#### HIGH PRESSURE SAFETY SWITCH

Located on the back of the 2OACH1211 unit is a manual re-set high pressure switch, used for the protection of the compressor. If the condensing pressure exceeds the limit setting, the switch will cycle the compressor off, while the evaporator fan remains running. The display will indicate the default setting "CON". The compressor can then be re-started, once the condensing pressure has equalized, by depressing the "RESET" button.

#### **POWER CORDS**

All 2OACH1211 units come standard with a power cord for a convenient connection. It is equipped with LCDI for added safety features.

# **APPLICATIONS**

#### **COOLING MODE—SPOT COOLER**

The 2OACH1211 can be used in an open environment to cool specific objects or "spots". Spot Cooling is a convenient and economical way to provide air conditioning, where cooling the entire space is impractical. Cool air is discharged from the unit and is directed where it is needed. Nozzle kits can be used for directional cooling.

#### **AREA COOLER**

When the 2OACH1211 is installed in an open area, the condenser exhaust duct directs the warm air away from the space, allowing the evaporator air to cool the specific area.

#### **ROOM AIR CONDITIONER**

When ducted properly, the 2OACH1211 can be used as a room air conditioner to cool an enclosed space. Using the condenser return air plenum, additional ceiling kit, and other accessories, the 2OACH1211 can then operate as a room air conditioner with the condenser air isolated from the conditioned space.

#### 20ACH1211—COOLING MODE OPERATION / DESCRIPTION

**OUTDOOR FAN DISCHARGE** 

# ELECTRONIC CONTROLLER CONDENSER AIR INLET (Back of Unit) WASHABLE GRILLE AND FILTER EVAPORATOR RETURN

20ACH1211—COOLING MODE

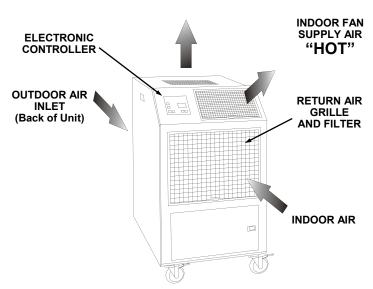
# **APPLICATIONS**

#### **HEATING MODE—HEAT PUMP**

In HEAT mode, The 2OACH1211 can be used in an open environment to provide heat to a specific area or "spots". The 2OACH1211 is a heat pump, and the supply air will feel warm, but not extremely hot to the touch. Nozzle kits can be used for directional heating.

#### 20ACH1211—HEATING MODE OPERATION / DESCRIPTION





**20ACH1211—HEATING MODE** 

# **ELECTRICAL CONFIGURATION**

#### SERVICE CORD

All 2OACH1211 units are equipped with a standard 10-foot long service cord with plug configurations and receptacle requirements as shown in this chart. 2OACH1211 units come with **LCDI** (Leakage Current Detection & Interruption) devices that serve as a means of electrical protection.

UNIT/MODEL	PLUG CONFIGURATION	RECEPTACLE
<u>115 VOLT</u> 20ACH1211	15A-125 VOLT NEMA 5-15P	NEMA 5-15R

# CAUTION DO NOT USE THE LCDI AS AN ON/OFF SWITCH FOR THE UNIT

A DAMAGED LCDI POWER SUPPLY CORD <u>MUST</u>
BE REPLACED WITH A NEW POWER SUPPLY
CORD AND NOT REPAIRED

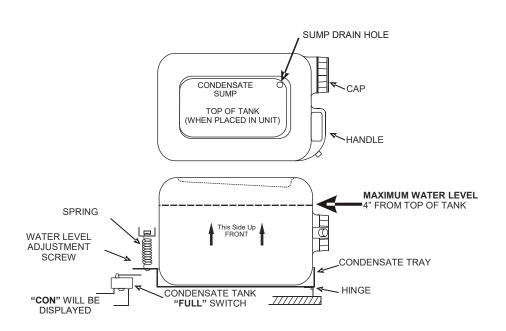
# **USE OF EXTENSION CORDS**

#### CAUTION

<u>FOR MODEL 20ACH1211</u> AN EXTENSION CORD CAN BE USED, PROVIDED IT IS RATED AT LEAST 15 AMPS @ 115 VOLTS WITH GROUNDING-TYPE ATTACHMENT PLUG AND GROUNDING TYPE CONNECTOR (LOAD FITTING)

# **CONDENSATE**

For Models 2OACH1211, a 5-gallon polyethylene tank is provided to collect condensate. The tank is located in the lower front section of the unit, and can be accessed though the condensate tank door. When the high water level is reached, a cut-out switch will AUTO-MATICALLY cycle off the compressor/condenser fan.



#### TANK LEVEL ADJUSTMENT INSTRUCTIONS

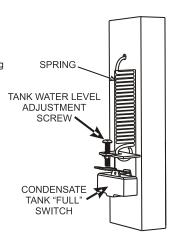
An adjustment screw is provided to vary the cut-off level of the tank full switch. If less water is desired, turn the adjusting screw clockwise **(CW).** 

#### **CAUTION**

UNPLUG UNIT BEFORE REMOVING TANK TO ADJUST THE SET SCREW.

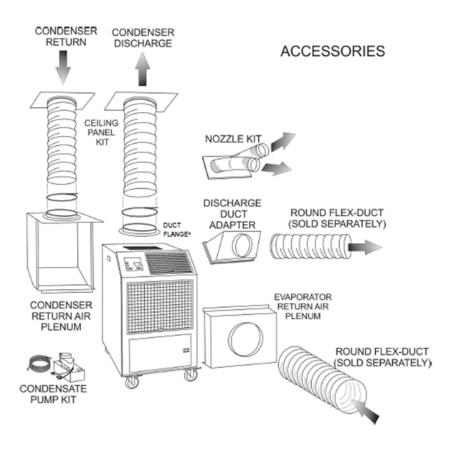
Turning the screw clockwise (CW), will make the tank easier to remove.

MAXIMUM WATER LEVEL 4" FROM TOP OF TANK



# **20ACH1211 ACCESSORIES**

# **NOTE** - IT IS IMPORTANT TO SPECIFY THE SERIAL NUMBER WHEN ORDERING ACCESSORIES



# 20ACH1211 ACCESSORIES

NOZZLE KIT. 2NK-1 (2 x 4") The Nozzle Kit is used to direct the conditioned air to a specific target area. By concentrating the airflow, the nozzles increase the air velocity towards production lines to cool personnel or equipment. In server rooms, the nozzles can be used to induce airflow through the rack to remove the hot air from the area of the equipment.



#### EVAPORATOR RETURN AIR PLENUM. DEP-10

The Evaporator Return Air Plenum is available for installations where it is required to duct air to the inlet of the evaporator. The evaporator return air plenums allow the user to connect round ducts (flexible or rigid) to the return air intake to reduce air noise and increase the number of options for solving difficult cooling problems. The plenum attaches to the front of the unit, replacing the return air grill.



#### DISCHARGE DUCT ADAPTER, 2DDA-6

The Discharge duct adapter is available for applications where ducted evaporator discharge is required. The adapters can be easily installed on the unit without fasteners, and be installed for either vertical or horizontal ducting. The standard discharge grill is removed and the DDA is attached in the grill opening.



#### CONDENSATE PUMP KIT. 2DPC-1

A plug-in Condensate Pump Kit is available for applications where emptying the 5 gallon condensate tank is not desired. The pump kit consists of a condensate pump with mounting hardware and electrical connections, along with the tubing required for the drain and discharge of the condensate water.



## CEILING PANEL KIT, CK-12 (Includes Panel, Duct,

Strap and Flange)
This kit is available for discharging the condenser air above a drop ceiling. The ceiling panel duct kits are furnished with a white vinyl coated flexible duct that allows for convenient installation. A 2ft X 2ft ceiling duct panel is included to replace a 2ft X 2ft drop-ceiling panel where the connection is desired.



DUCT FLANGE, DF-12 The optional 12" duct flange allows for round, flexible ducting to be attached to the condenser discharge.



#### CONDENSER RETURN AIR PLENUM , 2DCP-1

The plenum is available for installations where it is required to duct air to the inlet of the condenser. The plenum easily attaches with one screw to the back of the unit, and is provided with flange or connecting 12-inch flexible ducting. A condenser return air plenum can substantially reduce air noise and allows the unit to operate without drawing condenser air from the conditioned space.



# INSTALLATION INSTRUCTIONS

#### RECEIVING—INSPECTION

Upon receiving your 2OACH1211 unit, inspect the packaging for any damage. All units are shipped on a skid, and packaged in a triple-wall carton for added protection.

#### **BEFORE INSTALLING**

Check the unit for any damage. All OceanAire products are thoroughly inspected at the factory and carefully packaged. If any damage is evident, contact OceanAire **IMMEDIATELY.** 

#### **ELECTRICAL REQUIREMENTS**

Check the nameplate located on the back of the unit to confirm the proper power is available for the unit. **Refer to "Specifications"** section for voltage and amperage requirements. For proper NEMA receptacles, refer to "Electrical service plug configuration". When using extension cords, use the proper gauge cord, and check cord voltage to the unit.

TIME DELAY FUSES/CIRCUIT BREAKERS ARE RECOMMENDED

# WARNING—OPERATING THE UNIT ON IMPROPER VOLTAGE WILL VOID THE WARRANTY

#### **ACCESSORIES**

Verify that all accessories are correct for the model, and are installed in accordance with all instructions.

#### START-UP

Install the unit in accordance with all local and state building codes, and install all accessories. Allow for a clearance around the unit for future maintenance and/or service. Level unit and lock casters, when available. Connect power and test the LCDI on the power cord (if available). Power up unit, via thermostat and check for proper operation. Refer to Thermostat Operation for more details.

## **DELUXE ELECTRONIC CONTROLLER**

The 2OACH1211 controller is equipped with many features for a more precise level of comfort and operation. Additionally, the controller can be removed from the unit and installed for remote operation, if needed (accessory parts may be required).

	OCEANAIRE
	MODE COOL HEAT
	FAN SPEED MANUAL
POWER button	TEMP SELECT DISCHARGE SETPOINT

#### OCEANAIRE DELUXE ELECTRONIC CONTROLLER

## The systems controls temperature within +/- 2°

POWER U - Turns the unit on/off when power is supplied

**MODE** - Select the mode of operation from

AUTO...COOL....HEAT....MOISTURE CONTROL.

**AUTO** - The controller will heat or cool as required. **HEAT or COOL** will display accordingly. A 4° differential is needed to change between cooling and heating modes.

COOL - The system will operate in cooling mode, only.

**HEAT** - The system will operate in **heating mode**, **only**.

**MOISTURE CONTROL** - The system operates in the cooling mode to reduce humidity within the conditioned space. Every 4 hours, the fan is started, circulating the air, and the air temperature is recorded by the controller. The cooling cycle is started for one hour, or until the room temperature drops 2°, which ever comes first. This cycle repeats every four hours.

FAN SPEED—The operator can select between AUTO or MANUAL fan speed control. Pressing the FAN SPEED button will switch speed from AUTO to MANUAL. In MANUAL mode, pressing the FAN SPEED button will change fan speed from low to high. In AUTO mode, the fan speed is controlled automatically. In cooling mode, the controller automatically adjusts the fan speed to high, and as the inside temperature approaches the set point, the fan speed will reduce. In heat mode, the fan speed adjusts from low to high as the temperature reaches the set point

**TEMP SELECT**—Allows the operator to view the controller temperatures **INSIDE** = return air temperature, **DISCHARGE** = supply air temperature, **SET POINT** can be seen and adjusted by pressing ▲ or ▼.

#### CONTROLLER PROGRAMMING MENU

- 1) Make sure the unit has (b) power.
- 2) Press the power button "OFF".
- 3) Press the following buttons in sequence "S-U-D-S" (Select—Up arrow — Down arrow — Select)
- 4) The display will begin flashing P1 and a number.









If there is no display, repeat the sequence, making sure the unit has power, but is turned OFF.

- 5) To adjust any program feature, press the ARROW UP ▲ or ARROW DOWN ▼ button until the desired value is displayed.
- 6) Use the "MODE" button to scroll through the programmable settings P1 through P16.
- 7) If no buttons are pressed, the display will then return to the "OFF" position after about 50 seconds.

#### PROGRAM SETTINGS

- P1—High Fan Speed Limit Setting. 56 85
- P2—Low Fan Speed Limit Setting, 30 55
- P4—Temperature Sensor Calibration, +/- 10°
- P10— Temperature Display, °F or °C
  P13—Supply Fan Operation, Cycling or Continuous
- P15—Fan Motor Type Setting, PSC or Shaded Pole
- P1, P2 To adjust fan speed settings, P1 represents the high fan speed parameter, while P2 represents the low fan speed parameter. When using nozzle kits, discharge duct adapters and evaporator plenums, setting P1 to 85 will help to avoid freeze ups.
- P4 Adjust the P4 setting to match the actual INSIDE room temperature, if needed.
- P10 Use this parameter to display temperatures in the desired units.
- P13 To cycle the evaporator fan with the compressor, access code P-13. Press the up or down button to switch to "CYC", which means cycle the fan with the compressor. The factory default setting is "CON", which means continuous fan operation.
- P15 Fan Motors are PSC type, SC should be selected.
- 8) Press **POWER (** you should see an alphanumeric code.
- Press **U POWER** and the unit will start at the new settings.

# 20ACH1211 PROGRAM SETTINGS

MODEL	CODE SETTINGS
20ACH1211	P1 = 65, P2 = 45

#### NOTICE

Program Parameters are NOT controller default values. They are OceanAire Factory Settings

#### **DISPLAY FAULTS**

LAC..... Low AC line power

AAA...... Failed Air Sensor (unit will not run)

CON...... Empty Condensate Bucket—Units with a bucket Condensate Pump Over-Flow Alarm—Units with pump High Pressure Cut-Out—Restricted Air Flow

correct problem, and re-set unit at HP RESET

#### TO CHECK THE NUMBER OF HOURS ON THE UNIT

- 1) Disconnect unit power, and reconnect unit power.
- 2) When "888" appears in display, push and release the arrow down button



- 3) The first set of numbers displayed reads thousands of hours: 02 = 2000, 04 = 4000 hours, 00 means less than 1000 hours.
- 4) The second set of numbers read hours directly: 58 = 58 hours. 742 = 742 hours.
- 6) Add the 2 number sets together to get total hours. 03 and 486 = 3486 hours. 01 and 59 = 1059 hours.

TOTAL HOURS REPRESENTS COMPRESSOR "RUN" TIME

# REPLACEMENT PARTS PROCEDURE

# IT IS RECOMMENDED THAT ALL OCEANAIRE UNITS BE SERVICED BY A QUALFIED AIR CONDITIONING SERVICE TECHNICIAN

# WARNING—TO AVOID INJURY, DISCONNECT UNIT POWER PRIOR TO SERVICING

#### A. FAN MOTORS

- 1. Remove cabinet's left-side panel (when looking at the front of the unit).
- 2. Evaporator fan motor—disconnect evaporator motor wires from evaporator fan contactor and power module. Condenser fan motor—disconnect condenser motor wires from condenser fan contactor.
- 3. For model 20ACH1211, remove the screws securing motors and inlet-ring to blower housings (all screws are external and visible), and remove blower wheel-motor assembly. Remove the blower wheel set screw and disassemble the blower wheel from the motor shaft and remove the motor.
- 4. Install the new motor, reversing the removal procedure.

#### B. ELECTRONIC CONTROLLER (THERMOSTAT)

To remove the heat/cool display, remove the cabinet's left-side panel (from front). Locate the two nuts securing the display to the front panel. Unplug the display cable and remove display. Install new display and secure. Plug in display cable.

#### C. POWER MODULE

To remove the power module, remove the rear control box cover. Disconnect wires (one at a time), and re-attach each wire, while holding replacement module in other hand. Once all wires have been reconnected in accordance with the wiring diagram, install new power module.

# D. CONDENSATE PUMP (ON ALL 5-TON UNITS, OR ON UNITS WHERE THE CONDENSATE PUMP KIT HAS BEEN INSTALLED)

- 1. Remove side panel.
- 2. Remove brackets securing condensate pump in base pan, or condensate tank tray pan
- 3. Disconnect pump wire leads at Molex connectors. Remove retainer clamp and tubing.
- 4. Replace pump, install by reversing procedure.

#### E. HIGH PRESSURE SAFETY SWITCH

- 1. Remove cabinets right side panel, or right rear side panel of Model 60.
- Remove flare nut that secures capillary to the refrigeration system high pressure side.A schrader valve is located in the discharge port which allows removal without losing the refrigerant charge.
- 3. Remove two screws that secure high pressure switch.
- 4. Disconnect wire leads from compressor contactor and condensate pump safety switch.
- 5. Install new High Pressure Control, reversing the procedure.

To gain access to compressor and compressor run capacitor, remove left hand side panel.

# TROUBLESHOOTING GUIDE

The following steps and procedures are recommended for correcting the problems indicated. In the event that the problem can not be corrected, service may be required.

# SERVICE SHOULD BE PERFORMED BY A QUALIFIED AIR CONDITIONING SERVICE TECHNICIAN

#### PROBLEM: UNIT DOES NOT POWER UP

CAUSE: Power interruption

**REMEDY:** Check LCDI (on models with LCDI), and reset LCDI. Check external power supply making sure that the disconnect is ON. Check for blown fuses or tripped circuit breakers. Reset or replace if needed.

CAUSE: Loose display cable

**REMEDY:** Re-seat display cable at display and power module.

## PROBLEM: EVAPORATOR FAN RUNS BUT COMPRESSOR AND CONDENSER FAN DO NOT START

**CAUSE: SET POINT** — **setting may be too high for cooling or too low for heating. REMEDY:** Make sure set-point is adjusted accordingly. You should see a red dot to the right of the temperature display indicating compressor ON.

Note—there is a time delay for the compressor

**CAUSE: Loose Display Cable** 

**REMEDY:** Examine the control unit for loose wires. Tighten any loose connections.

CAUSE: Condition Alarm—"CON".

**REMEDY:** Check condensate tank and empty tank or check condensate pump and make sure pump is working properly and that there is no kink in the drain line from the pump.

**CAUSE: High Pressure Cut-Out—"CON"** Check High Pressure Cut-out Switch. **REMEDY:** Press Reset and clear away any obstructions to the condenser intake or condenser discharge.

CAUSE: Defective Power Module REMEDY: Replace Power Module

# PREVENTIVE MAINTENANCE

2OACH1211 Heat Pumps are designed to last a long time and to give maximum performance and reliability with minimum maintenance. To prolong the life of the unit, regular maintenance must be performed as specified below:

#### **BLOWER MOTORS**

The motors on all units have permanently lubricated bearings. No oiling is necessary

#### **FILTERS**

A clogged filter will cause the unit to operate at greatly reduced efficiencies. We recommend that the filter be inspected on a regular basis **every six weeks or less**, depending on the environment. The evaporator filter is located behind the return air grille and can be easily removed and cleaned. The condenser filter is located on the backside of the unit. The filters must be washed periodically as needed by placing them in a dishwasher or soaking them in a solution of warm water and detergent for 10 minutes. Then rinsing them clean with hot water and shaking excess moisture from filter.

#### **CONDENSATE PUMP**

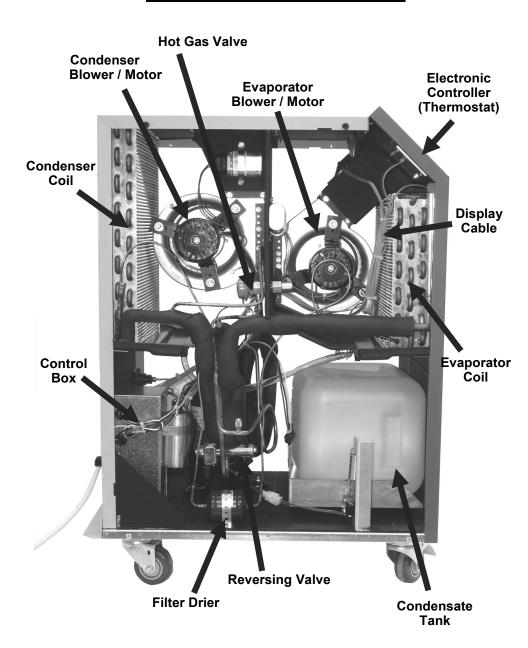
When servicing pump follow these steps;

- 1. Make certain that the unit is disconnected from the power source before attempting to service or remove any component.
- 2. Be sure the floats move freely. Clean as necessary.
- 3. Remove the pump housing and check for obstructions.
- 4. Clean the housing with warm water and mild soap when mineral deposits are visible.
- 5. Check the inlet and outlet piping. Clean as necessary. Be sure there are no kinks in the lines that would restrict flow

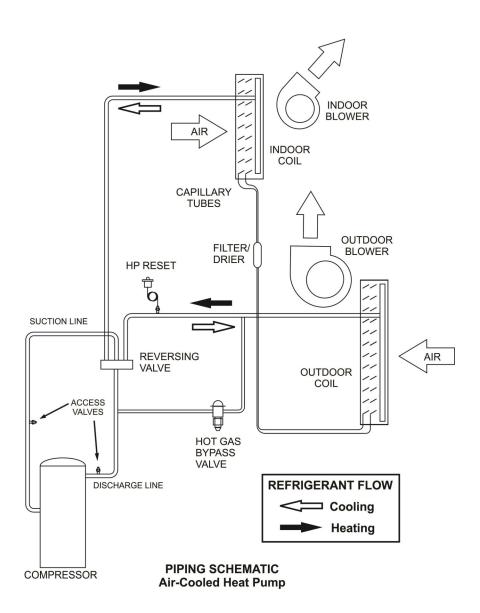
#### **GENERAL**

When necessary maintenance steps outlined above are followed, the air conditioner will provide long and reliable service. The refrigeration and electrical circuits of the system should only be serviced by a fully qualified service technician.

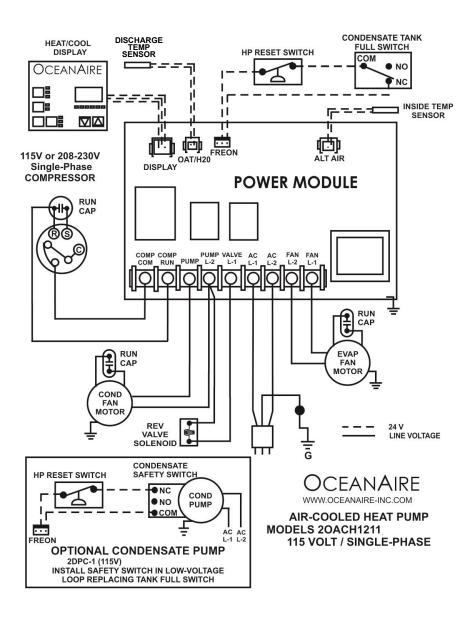
# **20ACH1211 INTERIOR VIEW**



# **PIPING SCHEMATIC**



# **WIRING SCHEMATIC FOR 20ACH1211**



#### LIMITED WARRANTY

The Manufacturer (OceanAire, Inc.) warrants to the original owner that the Product will be free from defects in material or workmanship for a period not to exceed one (1) year from date of installation. If upon examination by the Manufacturer, the Product is shown to have a defect in material or workmanship during the warranty period, the Manufacturer will repair or replace, at its option, that part of the Product which is shown to be defective.

The Manufacturer further warrants that the product's compressor-motor will be free from defects in materials and workmanship for five (5) years from the date of installation.

If upon examination by the Manufacturer the Product is shown to have a defect in materials or workmanship during the warranty period, the Manufacturer will repair or replace, at its option, that Part of the Product which is shown to be defective. Compressor warranty shall be pro-rated for years 2 – 5 at the sole discretion of OceanAire. Electrical parts such as relays, overloads, capacitors, etc., and the sealed refrigeration system (condenser and evaporator) are included in the one year limited warranty, but not with the five year limited warranty of the compressor.

This limited warranty does not apply to:

- a) Product that has been subjected to misuse or neglect, has been accidentally or intentionally damaged, has not been installed, maintained or operated in accordance with the furnished written instructions, or has been altered or modified in any way.
- b) Product that has been subjected to any abnormal power conditions such as loss of power, power surges, voltage irregularities such as brown-outs or phase loss on three-phase equipment).
- any expenses, including labor or material, incurred during removal or reinstallation of the Product.
- d) any workmanship of the installer of the Product.

This limited warranty is conditional upon:

- a) return to the Manufacturer, of the part of the Product thought to be defective.
  - Goods can only be returned with prior written approval from the Manufacturer. All returns must be freight prepaid.
- b) determination in the reasonable opinion of the Manufacturer, that there exists a defective in material or workmanship.

Repair or replacement of any part under this Limited Warranty shall not extend the duration of the warranty with respect to such repaired or replaced part beyond the stated warranty period.

THIS LIMITED WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES, EITHER EXPRESSED OR IMPLIED, AND ALL SUCH OTHER WARRANTIES, INCLUDING WITHOUT LIMITATION IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, ARE HEREBY DISCLAIMED AND EXCLUDED FROM THIS LIMITED WARRANTY. IN NO EVENT SHALL THE MANUFACTURER BE LIABLE IN ANY WAY FOR ANY CONSEQUENTIAL, SPECIAL, OR INCIDENTAL DAMAGES OF ANY NATURE WHATSOEVER, OR FOR ANY AMOUNTS IN EXCESS OF THE SELLING PRICE OF THE PRODUCT OR ANY PARTS THEREOF FOUND TO BE DEFECTIVE. THIS LIMITED WARRANTY GIVES THE ORIGINAL OWNER OF THE PRODUCT SPECIFIC LEGAL RIGHTS. YOU MAY ALSO HAVE OTHER RIGHTS WHICH MAY VARY BY EACH JURISDICTION.

## OTHER PORTABLE HEAT PUMP MODELS AVAILABLE

MODEL: 20ACH	1211	1811	2412	3612	3632	3634	6012	6032	6034	
COOLING CAPACITY	11,800	16,800	24,020	36,050		•	60,100			
HEATING CAPACITY	11,000	15,600	22,000	32,500			53,500			
VOLTAGE (V/Phase) at 60Hz	11	5/1	208-230/1		208-230/3	460/3	208-230/1 208-230/3 460		460/3	
AMPS	10.4	14.1	14.9	19.6	17.2	8.7	32.0	20.4	14.8	
TOTAL WATTS	1180	1670	2700	3620		6000				
IN-RUSH CURRENT (AMPS)	60	75	68	113	93	60	178	162	87	
PLUG TYPE	5-15P	5-20P	6-20P	6-30P	L15-30P	L16-20P	6-50P	L15-30P	L16-20P	
EER	10	0.0	8.9	10.0			0.0	0.0		
COMPRESSOR HP	1	1 1/2	2	3		5				
COMPRESSOR RLA	9.5	12.3	10.5	13.6	8.8	5.0	27.6	18.1	9.0	
COMPRESSOR LRA	50	63	48	83	77	35	158	137	62	
EVAP CFM	400	600	810	1200 1950		1950	1950			
EVAP MOTOR HP	1/8			1/3			1			
CONDENSER CFM	580	930	1010	1390		2200				
COND MOTOR HP	1/8 1/3		1							
CONDENSATE	5 Gallon Condensate Tank -		STANDARD (Pump Optional)		Pump - STANDARD (20 ft. Lift)					
R-410A CHARGE (oz.)	18	40	37	66		80				
(A) HEIGHT (in.)	37-3/4	45-3	45-3/4		50-1/4		51-3/4			
(B) WIDTH (in.)	20	24		27-1/2						
(C) DEPTH (in.)	25	30		35		39-1/2				
NET WEIGHT (lb.)	180	26	0		365	400	4:	85	520	
SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE								30ACHS	DECSO10110	

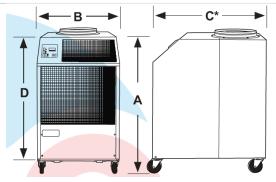
#### NOTES

- \* Dedicated Circuit and Time Delay fuse or Circuit Breaker are recommended
- \* Cooling Capacity is total BTUH at 80°DB/67°WB return air, with 95° DB Condenser Air
- \* Heating Capacity is total BTUH at 70°DB/60°WB Indoor, 47° DB/43° WB Outdoor
- \* CFM with free discharge
- \* Cooling EER is determined at high fan speed, with condenser air ducted into another area
- \* Sound Pressure, dB at 5 feet, commercial operation
- \* Amps and Watts at 208 Volts (208-230V Models)

#### COOLING AMBIENT OPERATING RANGE 65° TO 105°

May COOL down to 55° if equipped with hot gas bypass (factory installed)

#### HEATING AMBIENT OPERATING RANGE 45° TO 85°







# **END USER INFORMATION**

MODEL:	
SERIAL NUMBER:	
Date Purchased:	
Purchased from:	
Date Installed:	

For Technical Support or service parts, contact our

Keep Cool Team at 847-583-0311

In order to receive the benefits of our warranty, please register on-line at www.oceanaire-inc.com







oceanaire-inc.com

6228 Oakton Street Morton Grove, IL 60053 Phone: (847) 583-0311 Fax: (847) 583-0312