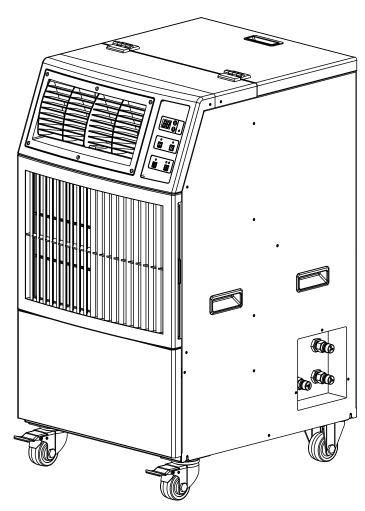


## **Instruction & Installation Manual**

## Portable water-cooled air conditioner





THANK YOU FOR PURCHASING THIS WATER-COOLED PORTABLE AIR CONDITIONER. FOR SAFE AND CORRECT OPERATION, PLEASE CAREFULLY READ THE INSTRUCTIONS BEFORE OPERATION.

**NOTE:** All of the information reported herein is based on data available at the moment of printing. The factory reserves the right to modify its own products at any moment without notice. The company reserves the right of final interpretation.

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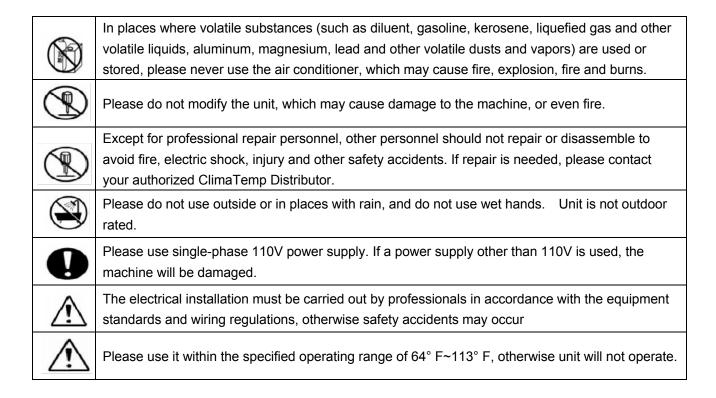
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#### INSTALLATION & GENERAL SAFETY INFORMATION

- Unit Designed for indoor usage only. Do not submerge or spray water on the portable air conditioner.
- Do not use the unit at conditions above 95°F in cooling mode
- Use 115V-60HZ, 1Phase power supply only. Securely plug into grounded 15amp outlet.
- Do not use an extension cord which may cause a risk of fire or electric shock.
- Do not bend or kink power cable. Damage to power cord can cause electric shock or injury.
- Do not place anything on the top of the machine. Do not stand or place hands or fingers inside of the unit while in operation.
- Install unit on smooth level ground. Lock the castors breaks to minimize rolling and movement.
- Always power off unit by the control panel, do not turn off by removing plug from power source.
- Make sure all quick connections are secure and not leaking
- After hose kit connections are made, supply only cold water to the unit. Unit will not operate with hot water supply. Additional Precautions:
  - Please place the machine out of the reach of children.
  - Do not store the machine in a place with high temperature, rain or direct sunlight.
  - Do not store the machine horizontally or upside down. Always keep upright.
  - When keeping and storing the machine, be sure to cut off the power supply

#### For safety, please observe



#### For safety, please observe

To prevent malfunction and injuries, the air conditioner should not be used in the following places:

- Vibrating ground
- Sloping ground



- Stairs, emergency exits, entrances to buildings, etc.
- Places where unstable articles are piled around
- Places with strong wind and humidity, places with dust or strong chemicals or outside.



If the machine is not used for a long time, please cut off the power supply.



To prevent electric shock, please cut off the power supply during installation and maintenance.



Please do not put your fingers and hands into the air outlet



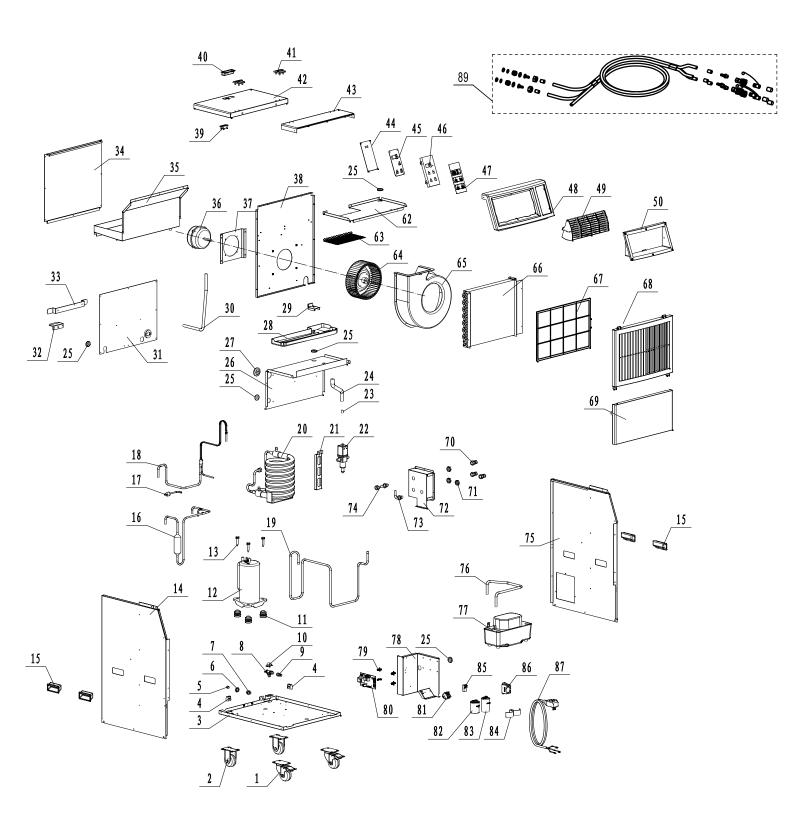
Unit is equipped with a LCDI power supply cord and must be replaced with a new LCDI power cord from ClimaTemp Portables, if damaged. Replacing the plug or repairing will void the unit warranty.

## **Technical Specifications**

Dawar	A C 4 4 E \	//0011-	
Power	AC115\		
Refrigerating capacity	18000BTU		
Air volume selection	Hi	Low	
Cold air volume (cfm)	610cfm	490cfm	
Rated current (amps)	10.7A	10.4A	
Maximum current (amps)	11.6A		
Power consumption	1210W	1180W	
Maximum power consumption	133	0W	
Compressor	Totally enclose	ed rotary type	
Refrigerant	R3	32	
Refrigerant charge volume	510g/	18oz	
High Pressure (HP) Switch	Autor	matic	
Hose Kit connection type	Stainless Steel, Double	e Lock Quick Connect	
Water In Hose Kit connection size	3/8	3"	
Water Out Hose connection size	3/8	3"	
Condensate discharge	17' Lift Auto cor	ndensate pump	
Operating environment	64°F-′	113°F	
Overall dimensions	(22.5´Lx18.9	′Wx35.9′H)	
Weight kg/lbs.	69kg(1	51.8lb)	

<sup>※</sup> The above data are measured under the environment of 95°F temperature and 60% RH relative humidity.

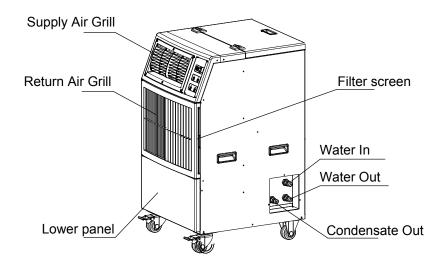
## **Parts and Components Breakdown**

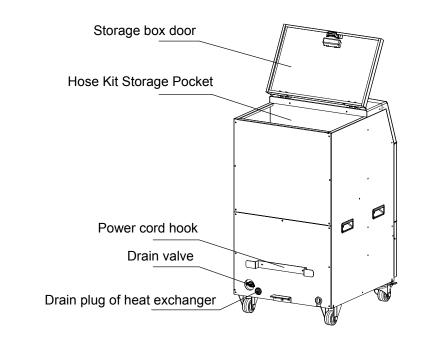


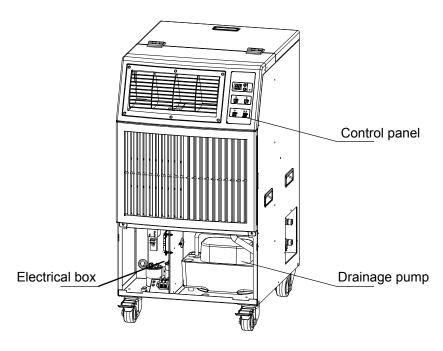
# **Parts and Components List**

Item	Item Description	Qty.	Item	Item Description	Qty.
1	Universal wheel	2	40	Recessed handle	1
2	Directional wheel	2	41	Hinge	2
3	Chassis	1	42	Upper cover assembly	1
4	Power cord clamp	2	43	Upper panel assembly	1
5	Drain plug	1	44	Cover plate of electric control box	1
6	Copper nut M18	1	45	Electric control display board	1
7	Drainage welding joint	1	46	Electric control box	1
8	Drain valve	2	47	Electric control facial mask	1
9	Drain joint	1	48	Air outlet panel	1
10	Fixing clip of water valve	1	49	Louvre	1
11	Compressor damping pad	3	50	Air outlet window	1
12	Compressor	1	62	Air outlet baffle	1
13	Pump foot screw	3	63	Air outlet grid	1
14	Plate AS-LH	1	64	Centrifugal fan blade of evaporator	1
15	Recessed handle	4	65	Evaporator volute	1
16	Exhaust tube as.	1	66	Evaporator assembly	1
17	Pressure controller	1	67	Evaporator filter screen	1
18	Condensate outlet pipe assembly	1	68	Upper panel	1
19	Air return pipe assembly	1	69	Lower panel assembly	1
20	Sleeve condenser assembly	1	70	Quick plug male connector	3
21	Regulating valve bracket	1	71	Copper nut	3
22	Condensate pressure regulating valve	1	72	Nozzle fixing box assembly	1
23	Negative pressure plug	1	73	Condensate drain connection	1
24	Evaporator drain hose	1	74	Cooling water inlet connector	1
25	Wire passing retainer1	4	75	Plate AS-RH	1
26	Lower partition board	1	76	Water pump drain hose	1
27	Wire passing retainer2	4	77	Drainage pump	1
28	Drain pan	1	78	Electrical box assembly	1
29	Water baffle	1	79	PC board isolation column	4
30	Storage box drain hose	1	80	Electric control main board	1
31	Lower backplane	1	81	Terminal blocks	1
32	Presser foot plate	1	82	Compressor capacitor	1
33	Power cord hook	1	83	Fan capacitor	1
34	Upper backplane	1	84	Capacitor clamp	1
35	Water pan assembly	1	85	Transition terminal	1
36	Fan motor	1	86	Power relay	1
37	Motor bracket	1	87	Power cord	1
38	Upper diaphragm	1	89	Hose Kit 30' Quick Connect	1
39	Magnet	1			

## **Product Components**





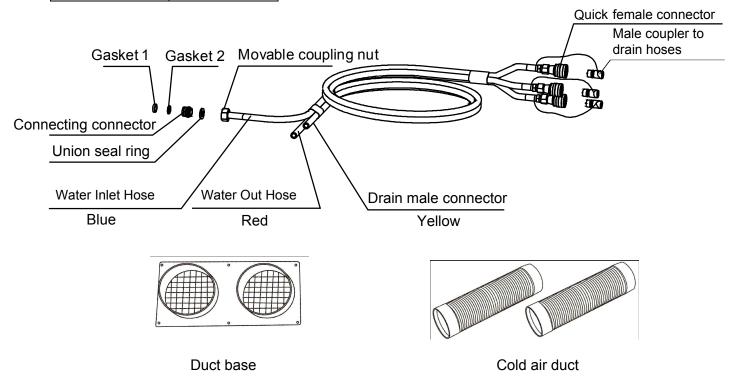


#### **Accessories**

### Hose Kit 30' Quick Connect

#### Accessories

Hose Kit	1(30')
Connecting connector	1
Gasket 1	1
Gasket 2	1
Union gasket	1
Duct base	1(Buy separately)
Cold air duct	2(Buy separately)

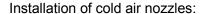


#### **Nozzle Kit**

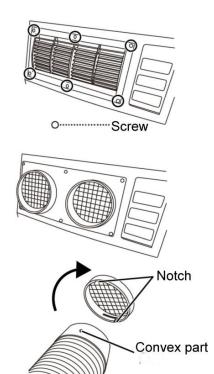
Installation of Nozzle kit (accessory sold separately)

Installation of air duct base components:

Remove the six mounting screws at the air outlet window, and remove the air outlet window assembly,
Align the air duct base assembly with the six mounting holes, and tighten the screws.



Align the cold air duct nozzle with the adapter base and push nozzle into base assembly, rotate nozzle clockwise to secure.



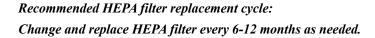
#### **Accessories**

#### **HEPA Filter Kit**

Installation of the HEPA kit (accessory sold separately)

#### Please follow the instructions for installing the HEPA accessory kit below:

- 1. Working from the front of the CTW-18 remove the front lower metal panel by removing the set screws. This will allow access to the 2 screws to remove the evaporator panel.
- 2. Remove the 2 screws at bottom of panel that attaches the evaporator panel to the unit. Once the screws are removed, the panel will drop down. This will release the evaporator panel.
- 3. Unbox both the HEPA accessory frame kit and HEPA filter. These will be separately boxed. Remove plastic bag covering the HEPA filter and place HEPA filter inside the HEPA accessory kit frame. Rubber bead of HEPA filter should be facing out so it can be placed against the evaporator of the unit which will make the air tight seal.
- 4. Once the HEPA filter is placed inside the frame kit it can now be attached to the unit. To attach the HEPA accessory kit, align the 2 tabs on the top of the kit with the 2 slots on the unit. Push the kit as far up as possible and secure by attaching the 2 screws at the bottom of the kit to the unit. Tighten screws.
- 5. The HEPA accessory kit includes a stage 1 prefilter. The prefilter keeps large particulate off of the HEPA filter and should be cleaned monthly. Keeping the prefilter clean will allow the unit to operate properly and the HEPA filter to perform at peak efficiency. Clean the prefilter by sliding the filter out of the frame and hand washing in water with a mild detergent or by using a vacuum cleaner. Allow prefilter to dry completely before replacing.



\*Neglect to change the HEPA filter per recommendations can result in substandard filtration performance and potential damage to the CTW-18 portable water-cooled unit.

\*Replacement OEM filters can only be purchased through ClimaTemp Portables or its Authorized Distributors. For more information go to www.Clima-Temp.com

### **Quick Connect Hose Kit Installation Instructions**

All ClimaTemp portable water-cooled units are equipped with quick connect fittings. These quick connect fittings feature a double lock quick connection for a safer connection between the unit and hose kit.

- (a) To connect hose, hold the female quick connector and line up with male quick connect on the unit;
- (b) Connect the female connector with the connector on the machine according to the corresponding color code, move the locking sliding sleeve of the female connector back by hand, and release the sliding sleeve after the connector is completely connected;
- (c) Connect "cooling water inlet/supply", "cooling water out/hot water discharge" and "condensate drainage" according to the corresponding color code.

Blue to Water In

Red to Water Out

Yellow to Condensate Drain

(d) Each hose kit is equipped with a Quick Connect male coupler for each water line. These couplers are attached to each hose by a lanyard. This device is used to release the internal valve which allows to break the vacuum and release the water from the hose.

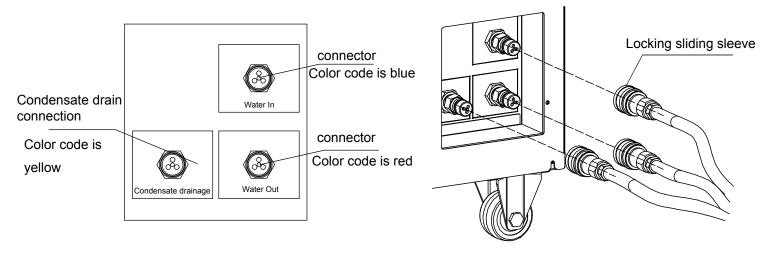


Diagram of water connections at the lower right side of the machine

#### Cooling water requirements:

- (a) The cooling water shall be clean and free of impurities such as sediment and chemicals;
- (b) Pressure range of cooling water: 29  $\,\sim\,\,$  87 PSI;.
- (c) Temperature range of cooling water: ≤ 91°F.
- (d) Unit comes equipped with an automatic High Pressure (HP) switch. If the unit goes into a "P" fault due to insufficient water supply or water temperature it can be reset by reestablishing the cold-water supply, unplugging the unit, plugging the unit back into power, and pressing the power switch button to on.

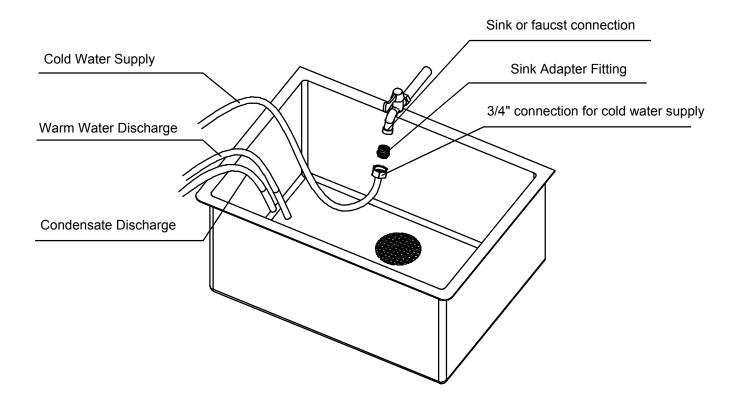
## Requirements for Connecting the Hose Kit to Water Source

#### Thread specification for sink adapter fitting

External thread specification	15/16"-27
Internal thread specification	55/64"-27T

#### Connection method:

- (a) Install sink adapter fitting to sink or faucet connection and tighten, make sure gasket is in place.
- (b) Connect and tighten the 3/4" female hose kit connection to the sink adapter fitting.
- (c) Once tightened, turn on the water source to make sure there are no leaks.
- (d) All hose kits come with a 4-way sink adapter fitting. The adapter can be used for other sink connection sizes other than 3/4".



### **Power cord connection**

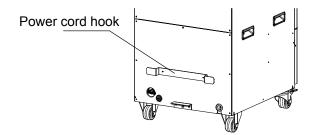
Please take power directly from 115V/60Hz power socket

# Notice

- If you need to use an extension cord, please select the appropriate power extension cord according to the following table.
- ◆ If the extension wire is too long and thin, it will cause voltage drop and make the machine unable to operate normally, leading to machine failure.

Power cord length	Specification
Within 25'	14AWG
Within 40'	12AWG

- (a) The unit is equipped with a LCDI 5-15 Plug. Please use a 14AWG grounded wire;
- (b) Always use a commercial heavy duty extension cord.
- (c) The power cord can be wound on the power cord hook when the machine is moved or stored.



### **Operation**

#### • Inspection before use

Check whether the cooling water is connected;

Check whether the power supply meets the requirements of the machine.

#### Power switch

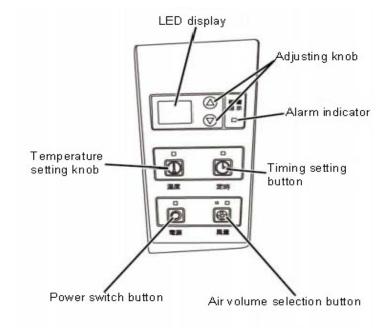
When the power is turned on, the power switch indicator is on. Press the power switch button to turn the machine on and off.

#### Air volume selection

Press the air volume selection button to select the Hi and Low air volume, the air volume indicator will display the Hi and Low air volume setting.

#### Temperature setting

Press the temperature setting button, the LED display screen switches to the temperature setting mode, and the temperature indicator flashes. Press the up and down buttons to set your desired ambient temperature, that is, operate in the ambient setting temperature mode. The ambient temperature can be set between 64°F~95°F. Three seconds after the operation is completed, the LED display screen automatically reverts to the temperature display mode, and the current ambient temperature is displayed as default. When the ambient temperature is 1 °F. higher than the set temperature, the compressor works and the air outlet outputs cold air; When the ambient temperature is 1 F lower than the set temperature, the compressor disengages and the air outlet supplies ambient air.



#### Timing setting

Press the timing setting button, the timing indicator will be on, the temperature indicator will be off, and the LED display screen will display the timing shutdown time (12 hours). Press the up and down adjustment buttons to select the shutdown time (1-12 hours) cyclically. After 3 seconds of operation, the LED display screen will resume displaying the ambient temperature, and the temperature indicator will be on.

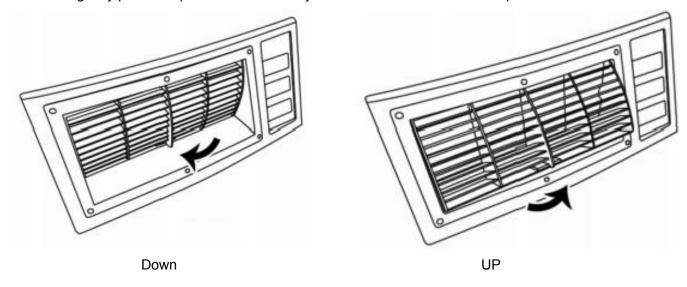
#### "FL" Alarm indicator

If the condensate pump malfunctions and fills with water, the alarm indicator lights up in conjunction with an audible alarm. The unit will shut down while the code is active. The LED display screen displays the corresponding fault code "FL". Servicing or troubleshooting of the pump may be necessary.

## Air Louvre and Castor Adjustments

Adjustment of air outlet direction.

The user can gently push and pull the Louvre to adjust the air outlet direction as required.



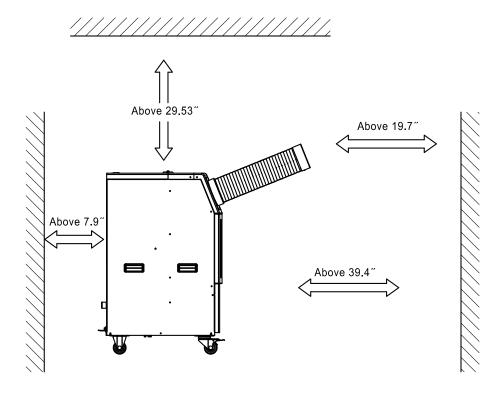
### Locking of casters.

The front two universal wheels are equipped with locking devices. For safety, please fix the locking device in the OFF position when the machine is in operation. Unlock the device to ON position when the machine is off and needs to be moved.

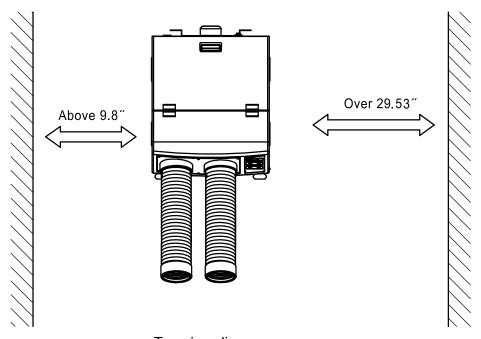


## **Unit Placement Requirements**

- The machine should be placed on a flat ground and shall not be used on slopes, uneven floors, and building exits, etc. to avoid safety accidents.
- The unit should not be used in wet locations and is not rated for outdoor use.



Left view illustration



Top view diagram

### **Maintenance and Inspection**

### A

#### Be careful

- Please clean the filter screen regularly. If there is dust and dirt on the filter screen, it will affect the air inlet volume of the machine and may malfunction or cause machine failure,
- When cleaning the machine surface, do not use thinner, volatile oil and other chemicals, otherwise the appearance quality of the machine will be affected,
- Be sure to cut off the power supply during maintenance and inspection.
- Winterization: Before keeping and storing the machine in winter (room temperature ≤ 0 °C), be sure to drain the cooling water in the heat ex-changer to prevent the heat ex-changer from freezing and cracking, which will damage the unit.

#### Clean the filter screen.

- (a) Take out the filter screen from the right side of the air inlet grill;
- (b) Use a vacuum cleaner to remove the dust on the filter screen, and then use clean water to clean the filter screen. After it is completely dried, it can be restored.

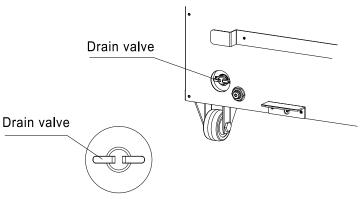


Filter screen

#### Water Hose Kit storage box drainage.

Before keeping and storing the machine, please drain the accumulated water in the hose kit storage box.

- (a) Open the drain valve knob at the bottom of the rear side of the machine clockwise to drain water;
- (b) After the accumulated water is drained, the handle of the drain valve can be closed counterclockwise:
- (c) The handle of the drain valve is closed at the horizontal position.

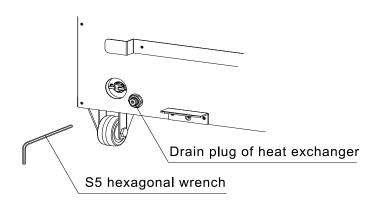


Drain valve closed

#### Heat exchanger drainage.

For winterization and before storing the machine in winter (room temperature  $\leq 0$  °C/32° F), please drain the cooling water in the heat exchanger.

- (a) Put the drain plug of the bottom heat exchanger at the rear side of the machine into the hexagon groove of the plug with an S5 Allen wrench and unscrew the plug counterclockwise to drain;
- (b) After the cooling water is drained, use the (S5) Allen wrench to tighten the screw plug by turning it clockwise.



#### **Off Season Preventative Maintenance**

To prolong the life of the CTW-18 it is necessary to follow regular seasonal maintenance as specified below:

#### WINTERIZATION - OFF SEASON STORAGE

For winterization and before storing the machine in winter (room temperature  $\leq$  0 °C/32° F) it is recommended to thoroughly clean and remove all water from the major components of the unit. Water should be removed from the Heat Exchanger/Condenser Coil, Water Lines and Condensate Pump. Removing all water will avoid freezing water from damaging the unit.

#### DRAINING THE HEAT EXCHNGER/CONDENSER COIL AND INTERIOR WATER LINES

For easy draining of the Heat Exchanger/Condenser Coil, the CTW-18 is equipped with a Heat Exchanger Drain Valve. To drain the Heat Exchanger/Condenser Coil, access the drain plug groove which is located at the lower rear of the unit. It is labeled Heat Exchanger Drain Valve. Place a Hexagon Allen wrench (S5) into the heat exchanger drain valve groove and turn clockwise to drain the water. Water will exit the unit below the drain plug valve. See page 16 for more instructions for Heat exchanger drainage. Place water collection tray underneath unit to collect any water exiting the unit.

#### DRAINING THE QUICK CONNECT HOSE KIT

To drain the CTW-18 hose kit, disconnect all hoses from unit, connect lanyard fitting which is attached to the hose kit ends, and allow the hoses to gravity drain.

#### REMOVING WATER FROM THE CONDENSATE PUMP

Access the condensate pump by removing the lower front cover of the unit. Using a Shop-Vac or similar vacuum device manually vacuum all water out of the condensate pump reservoir.

#### **STORAGE**

**The CTW-18 is not approved for outdoor use.** Please store unit indoors and protect from all-weather conditions.

### **Servicing & Replacement of Component Parts**

#### ELECTRONIC CONTROL MAIN PC BOARD (PART #80)

- 1. Remove lower front cover to access components and main PC board.
- 2. Take a picture of wire placement on the main PC board for reference.
- 3. Disconnect wires individually, making note of location for reconnection.
- 4. Remove the main PC board by pinching the plastic tabs attaching the main PC board.
- 5. Install new main PC board by reattaching to plastic tabs.
- 6. Reconnect wires according to reference picture or wiring diagram.

#### ELECTRONIC CONTROL DISPLAY BOARD/ LED CONTROLLER (TOP) (PART #45)

To access or replace the Electronic LED Thermostat controller board, remove the louvre air duct base by unscrewing the (6) screws that attach the louvre air duct base to the unit. Unplug the wiring harness from the back of the controller. This will allow you to remove the louvre air duct base completely from the unit. Unscrew backside of controller to access the upper control board. Replace with new control board (part #45), reattach wiring harness to controller and screw controller into louvre air duct base. Install louvre air duct base onto unit.

#### CONDENSATE PUMP

- 1. Remove lower front cover to access the condensate pump area.
- 2. Access the condensate pump and disconnect pump wire harness.
- 3. Remove pump by removing pump bracket screws.
- 4. Replace pump and install by reversing the procedure.

#### MAIN COMPONETS

The main components can be accessed by removing the rear panel. These components include compressor and fan motor. See Parts & Components list on page 6 for specific component and part numbers.

# **Troubleshooting and Fault Codes**

Problem	Causes	Solutions
Unit not operating	LCDI ground fault breaker trip or breaker trip from power source. The power plug is loose from receptacle. The power supply is faulty.	Make sure the LCDI power plug is seated into the receptacle firmly.  Reset the LCDI on the plug. A green light should be visible.  Ask a professional to check the user power supply and breaker.  Ask a professional to repair or contact the authorized ClimaTemp Dealer.
Shut down after running	The water valve of the cooling water supply line is not opened. PSI of supply cooling water is too low or no cooling water. Cooling water temperature is too high (Hot).	Turn on supply water.  Make sure only cold water is supplied to the unit.  If "P" code is displayed and cold water is restored, reset the unit by unplugging, then plugging the unit back in, and restart.
Water leakage	Connections or quick connects are not tight.	Disconnect and reconnect all hoses. Check for leaks.
No refrigeration	The refrigeration system leaks. The compressor capacitor is damaged. The input voltage is too high or too low. Excessive cooling water temperature may cause compressor overheating protection. Compressor fault.	Unit needs to be maintenance by professional. Replace the compressor capacitor. Ask professionals to check the cooling water system.
Fault code display "t1"	Ambient temperature sensor failure.	Replace the sensor.
Fault code display "FL"	Full water fault.	The water pump is damaged or the condensate drainage line is blocked or pinched. Replace the water pump or check the condensate line for blockages or pinches in the line.
The fault code displays "P	High voltage protection. High Pressure Reset.	The water valve of the supply water to the unit is not opened.  The water pressure of the supply water is too low or there is no cooling water.  The cooling water temperature is too high.  If "P" code is displayed and cold water is restored, reset the unit by unplugging, then plugging the unit back in, and restart.

## **Limited Warranty**

ClimaTemp Portables Inc. warrants its portable air conditioner products and accessories against defects in material or workmanship. Under ordinary use ClimaTemp will, at its sole discretion, repair or replace any defective product or part covered by this warranty. Warranty coverage is (12) monthsfor all parts on the ClimaTemp product and (36) months on the compressor or compressor components. This warranty is in effect from the date of purchase on any invoicing for the end user. This Limited warranty is conditional on the return of the part or unit to the manufacturer with approval in which all goods and services are freight prepaid from the customer or distributor. This warranty does not cover malfunctions or misuse beyond ClimaTemp's control including improper operation, neglect, abuse, abnormal use, incorrect electrical connections, and failure to perform routine maintenance. Furthermore, ClimaTemp will not be responsible for improper installation that damages unit or components. Any shipping damage or improper transport is not covered under this warranty. All other products are covered by a full 1-year warranty where applicable.

DISCLAIMER OF WARRNTY EXCEPT AS EXPRESSLY PROVIDED IN THIS STANDARD WARRANTY POLICY STATEMENT, CLIMATEMP PORTABLES HEREBY EXPRESSLY DISCLAIMS ALL REPRESENTATIONS, CONDITIONS AND WARRANTIES, WHETHER EXPRESS OR IMPLIED, INCLUDING BY WAY OF EXAMPLE AND NOT LIMITATION, THE IMPLIED WARRANTIES OF TITLE, MERCHANTABILITY, NONINFRINGEMENT AND FITNESS FOR A PARTICULAR PURPOSE. LIMITATION ON LIABILITY NOTWITHSTANDING ANYTHING HEREIN TO THE CONTRARY, IN NO EVENT WILL CLIMATEMP PORTABLES BE LIABLE FOR ANY SPECIAL, INCIDENTAL, PUNITIVE OR CONSEQUENTIAL DAMAGES WHATSOEVER, INCLUDING LOSS OF PROFITS, WHETHER ARISING IN CONTRACT, TORT, WARRANTY OR OTHERWISE, EVEN IF IT HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES. THE LIMITATIONS SET FORTH HERE WILL APPLY EVEN IF THE REMEDIES OF ERROR CORRECTION, REPAIR OR REPLACEMENT, REPERFORMANCE OF SERVICES AND REFUND OF PAYMENTS COMPLETELY FAIL OF THEIR ESSENTIAL PURPOSE. NOTWITHSTANDING ANYTHING HEREIN TO THE CONTRARY, THE LIMIT OF CLIMATEMP PORTABLES (WHETHER IN CONTRACT, TORT, NEGLIGENCE, STRICT LIABILITY, BY STATUTE OR OTHERWISE) TO CUSTOMER OR TO ANY THIRD PARTY WITH RESPECT TO WHICH SUCH CLAIM IS MADE. GOVERNING LAW AND JURISDICTION

## **Technical Support**

For Technical Support, Service or Parts, Contact us at 844-349-5665.

We can also be reached on our website for Technical Support and Warranty Registration at www.clima-temp.com/warranty-registration







**UL 2998 Ozone-Free Validation** 



**ClimaTemp Portables Inc.** 

844-349-5665.

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