
User Manual for OSPHD R513A

WO2-3000

WO2-5000

WO2-7500

WO2-10000



ATTENTION

This manual provides the user, installer and maintenance technician the technical information for installation, operation and routine maintenance to ensure smooth operation and long-lasting operation of the CHILLER. This manual has been written with general guidelines and specifications for this platform of chillers. Always refer to your CHILLER's specific drawings that have shipped with the unit. When contacting the factory for service or replacement parts reference your CHILLER's serial and model numbers. These can be found on the data tag on the CHILLER or on the data pack information that shipped with the unit.

Information Subject to Change

While every effort has been made to ensure the accuracy and completeness of the information presented in this document, Dimplex Thermal Solutions assumes no responsibility and disclaims all liability for damages resulting from the use of this information or for any errors or omissions.

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1 Important Safety Instructions

This manual contains important safety instructions that should be followed during the installation and maintenance of the chiller. Read this manual thoroughly before attempting to install or operate this unit. Failure to follow the instructions in this document may damage the equipment, cause hazardous conditions and void the warranty.

Only properly trained and qualified personnel should move, install, operate or service this equipment.

Adhere to all warnings, cautions and safety instructions on the unit and in this manual when installing, operating, or maintaining the unit. Follow all operating and user instructions.



WARNING

This unit may present arc flash and electric shock hazards that could cause injury or death.

Open all local electric power disconnect switches and wear protective equipment before working within the chiller cabinet.

Earth ground to unit must be provided, per NEC, CEC and local codes, as applicable. Adhere to all other local codes as applicable.

The only way to isolate all power from the unit is to turn the chiller's main disconnect to its OFF position. This should only be performed when intending to service the unit.



WARNING

The chiller has automatically starting, high-speed fans. Open all electric power disconnect switches before working in the unit. Contact with fans when the chiller is powered can cause injury or death.

Do not operate this unit with upper doors or air filters removed.



CAUTION

Fan and pump motors, compressors, and refrigeration components can become extremely hot during operation. Allow enough time for them to cool before working within the unit. Wear protective gloves and arm protection when working on or near hot components.

Only HVAC/R qualified technicians should be working on refrigeration components.

NOTICE

Improper installation, application, and service practices can result in water leakage from the unit, causing damage to property and equipment.

Do not locate unit directly above any equipment that could sustain water damage.

NOTICE

Improper storage can cause damage to the unit.

Keep the unit upright, protected from moisture, and prevent contact damage.

2 Introduction

These outdoor chillers are designed to supply water/glycol as coolant to remove heat from process equipment and reject it to the air through a vapor compression refrigeration cycle. The chiller features:

- **Dual refrigeration circuits**
 - Over 99% system uptime.
 - 50% capacity remains if one circuit is shut down.
- **Redundant horizontal centrifugal pump**
 - Dual pumps provide complete redundancy in case of pump failure.
 - Automated pump rotation for increased longevity through load sharing.
- **Flow setter valve**
 - Flow setter valve automatically adjusts internal pressure drop to compensate for varying connecting pipe lengths while maintaining consistent flow.
- **Tank level switch**
 - Tank level switch prevents the pumps from running dry.
- **Variable speed fans**
 - Fans adjust rotational speed to provide optimal airflow through the condenser.
- **Flow switch**
 - Flow switch ensures flow is maintained while the unit is running.

Table 1 provides a summary of available Chiller models and their capabilities.

Table 1: Medical Chiller Capacities

Model	Cabinet Material	Coastal Application? (30 miles) (Yes/No)	Tank and Condenser Heater? (Yes/No)	Ambient Range (Min°F / Max°F)	Capacity at Max Ambient kW/ (BTU/Hr)
WO2-3000-SF-OSP-20-122-513A-M	Galvanized	No	No	-20 / 122	20/68,240
WO2-3000-SF-OSP-40-122-513A-M	Galvanized	No	Yes	-40 / 122	20/68,240
WO2-3000-CC-OSP-20-122-513A-M	Stainless	Yes	No	-20 / 122	20/68,240
WO2-3000-CC-OSP-40-122-513A-M	Stainless	Yes	Yes	-40 / 122	20/68,240
WO2-5000-SF-OSP-20-122-513A-M	Galvanized	No	No	-20 / 122	30/102,360
WO2-5000-SF-OSP-40-122-513A-M	Galvanized	No	Yes	-40 / 122	30/102,360
WO2-5000-CC-OSP-20-122-513A-M	Stainless	Yes	No	-20 / 122	30/102,360
WO2-5000-CC-OSP-40-122-513A-M	Stainless	Yes	Yes	-40 / 122	30/102,360
WO2-7500-SF-OSP-20-122-513A-M	Galvanized	No	No	-20 / 122	36/122,832
WO2-7500-SF-OSP-40-122-513A-M	Galvanized	No	Yes	-40 / 122	36/122,832
WO2-7500-CC-OSP-20-122-513A-M	Stainless	Yes	No	-20 / 122	36/122,832
WO2-7500-CC-OSP-40-122-513A-M	Stainless	Yes	Yes	-40 / 122	36/122,832
WO2-10000-SF-OSP-20-122-513A-M	Galvanized	No	No	-20 / 122	45/153,540
WO2-10000-SF-OSP-40-122-513A-M	Galvanized	No	Yes	-40 / 122	45/153,540
WO2-10000-CC-OSP-20-122-513A-M	Stainless	Yes	No	-20 / 122	45/153,540
WO2-10000-CC-OSP-40-122-513A-M	Stainless	Yes	Yes	-40 / 122	45/153,540




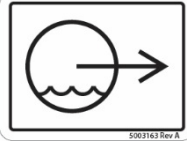


3 Specifications




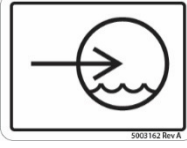
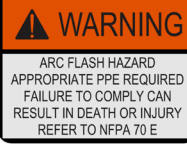
Table 2: Specifications

	WO2-3000		WO2-5000		WO2-7500		WO2-10000	
	Standard	Low Ambient	Standard	Low Ambient	Standard	Low Ambient	Standard	Low Ambient
Electrical								
Input power	460V, 3Phase, 60Hz							
FLA	30	33	42	44	56	59	70	73
MCA	32	35	45	48	61	64	77	80
MOPD	40	40	50	60	80	80	100	100
SCCR	10kA							
Number of Compressors	2							
Compressor Motor Power, each	5HP / 3.7KW		8HP / 6.0KW		12HP / 8.9KW		15HP / 11.2KW	
Refrigerant	R513A							
Number of Refrigeration Circuits	2							
Nominal Refrigerant Charge (Each Circuit)	15LB							
Number of Pumps	2							
Pump Motor Power	3.4HP							
Factory Flow Setter Valve Set Point (Adjustable)	10GPM		20GPM					
Nominal Supply Pressure	75PSI							
Crated weight	2300		2400		2500		2600	
Uncrated weight	2200		2500		2400		2500	
Operational weigh	2800		2900		3000		3100	
Length	112.0" (2845mm)							
Width	44.0" (1118mm)							
Height	72.7" (1847mm)							
Seismic units feature “OSP” in description	OSP-0169 HCAI Special Seismic Certification Preapproval (OSP)							

4 Labels

Table 3: Labels

Symbol	Description
	Caution Fan Starts Automatically
	Tank Level High
	Tank Level Low
	Fluid Outlet
	Arc Flash Warning
	Made in USA

Symbol	Description
	Do No Remove Guards
	Prop65 Warning
	Tank Drain
	Fluid Inlet
	Arc Flash Warning

5 Installation Guidelines

5.1 Exterior Components

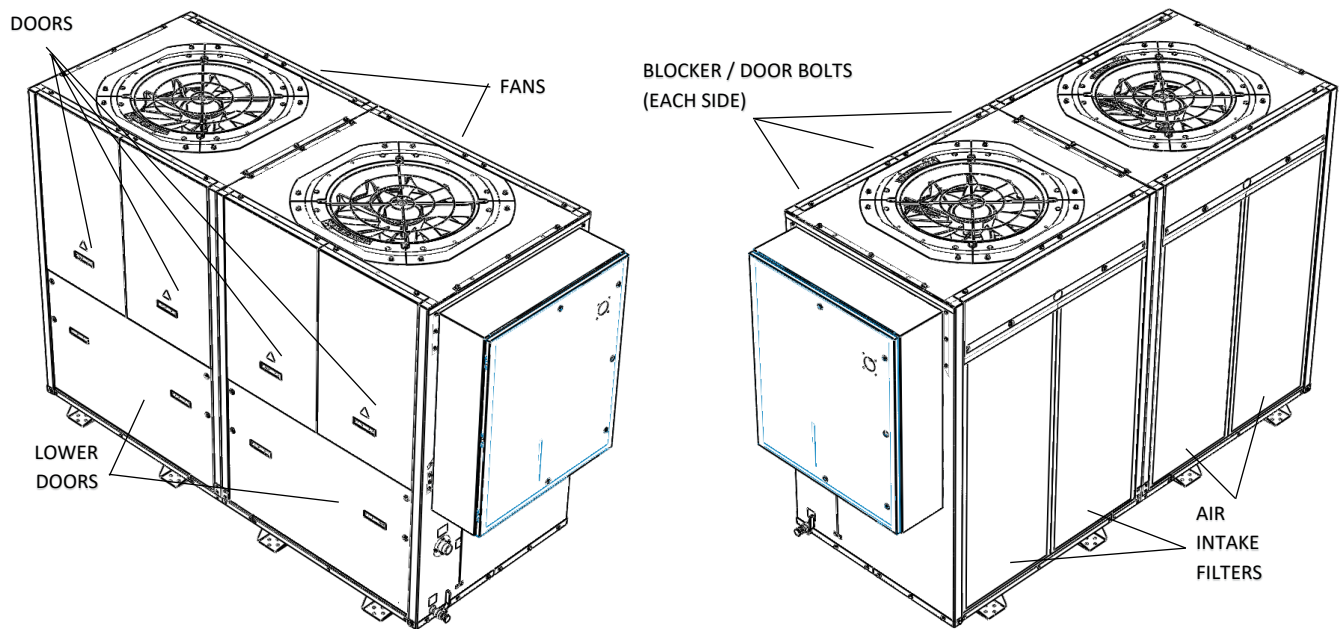


Figure 1: Exterior Components

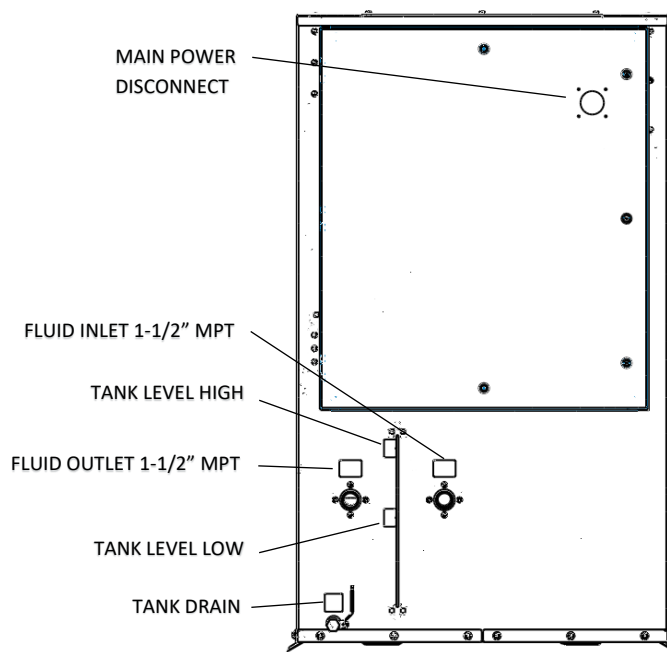


Figure 2: Exterior Components (Electrical Enclosure Side)

5.2 Overall Dimensions

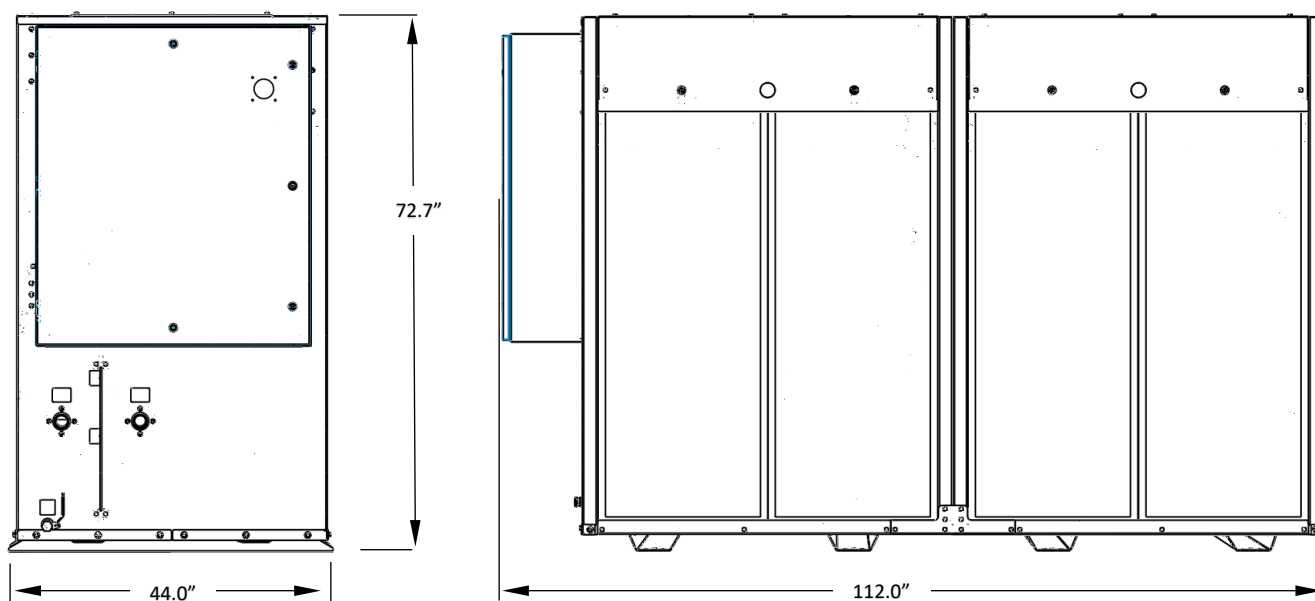


Figure 3: Overall Dimensions

5.3 Location Considerations

The chiller must be installed with enough clearance for service and for unrestricted air intake and exhaust. The chiller must be located sufficiently close to the process to ensure adequate flow rate of coolant by not exceeding the capabilities of the chiller's pumps. The following sections outline recommended installation practices. The chiller has potential for misuse that could result in unplanned downtime. The main disconnect, drain, and field installed service valves can be operated by unauthorized personnel. If unauthorized operation is a concern, then a security fence should be provided to reduce the potential for misuse. Fencing must not obstruct airflow and must leave room or be removable for service. The chiller's air intake and exhaust clearances must adhere to the following:

Table 4: Chiller Air Intake and Exhaust Requirements

Criterion	Value
Vertical clearance	≥ 8ft (2.4m)
Horizontal clearance (Door, Enclosure, and Rear Sides)	≥ 3ft (.9m)
Horizontal clearance (Air intake side)	≥ 6ft (1.8m)

Exhaust air must be freely discharged by the chiller's fans. This air must not be recirculated to the air intake side of the chiller. Avoid installing deflectors that redirect air to the air intake side of the chiller or installing ducting that directly connects to the chiller's top. The chiller uses axial fans that are not compatible with exhausting air through ducting. Ducting increases the pressure drop of the fans severely and lowers the volumetric air flow.

NOTICE

Improper air intake and exhaust clearances can lead to reduced capacity, thermal overloading of the fan motors and/or compressors, high pressure refrigeration faults, and/or rendering the chiller inoperable.

If ducting must be installed at the chiller's location a suitable duct auxiliary fan must be provided. Consult the factory for guidelines and recommendations.

Make sure the unit is placed on a level, firm surface. The chiller must be level or less than ½ inch of slope per 10 feet. Use shims to correct level if needed. If the chiller is mounted on a concrete slab, the slab should be 4-inch thick and at least 5 feet x 10 feet. If the chiller is roof mounted, two I-beam runners are typically provided to support the chiller feet at both ends. For rooftop mounting, the chiller should be anchored through the mounting holes provided in the feet. When the chiller is mounted above an office space, optional vibration mounting springs can be used to isolate the chiller from the building structure.

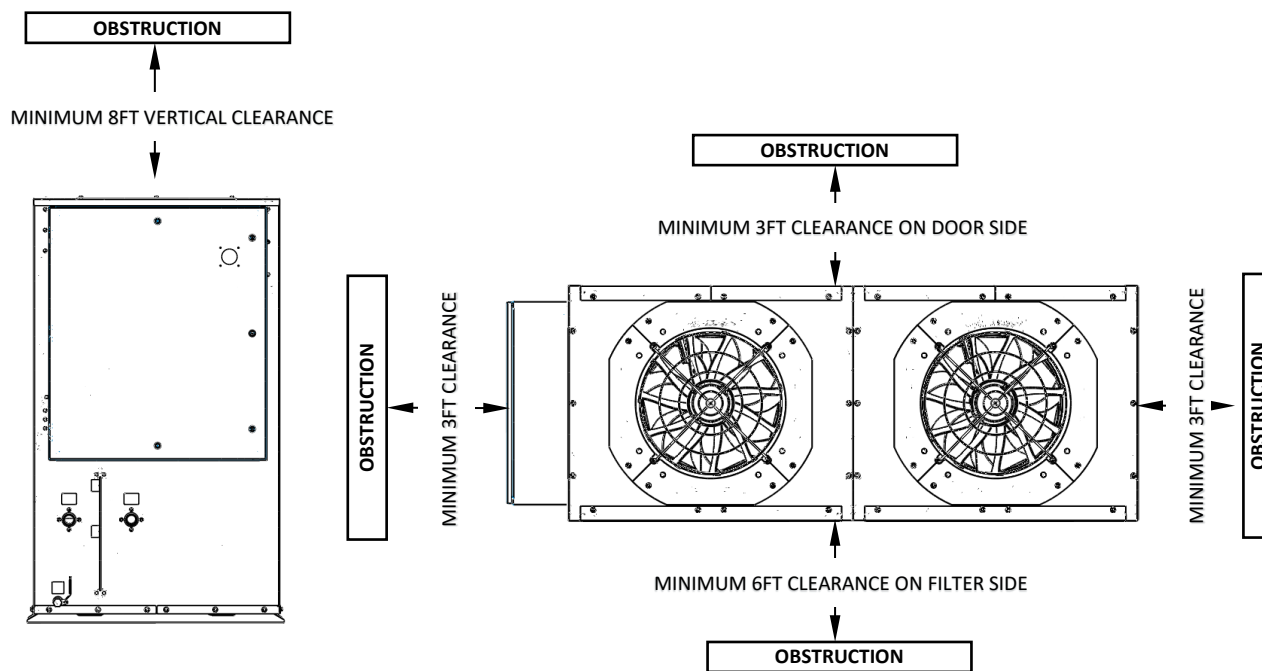


Figure 4: Required Clearances

Checking for Shipping Damage

Upon delivery of the chiller, verify that the shipment matches the bill of lading. Inspect the chiller immediately for signs of shipping damage both visible and concealed. Damaged crating likely indicates damage to the chiller and may require the removal of the panel and/or air filter(s) for further inspection. Any damage must be reported to the shipping carrier and a copy of the damage claim submitted to your sales representative.

5.4 Transportation

The chiller is shipped with protective packing and wrapping that should remain in place until the unit is transported to its final installation location. It is recommended that the chiller (crated or uncrated) be moved with a forklift.



WARNING

The chiller is heavy and there is risk of tilting or falling when moved. Transportation of the chiller must only be performed by trained and qualified personnel using appropriate equipment.

Ensure that the chiller is securely positioned (tines of forklift spread as far as permitted along the chiller's long edge and extend thoroughly through the opposite lifting face) before moving the chiller.

Improper handling or insecure lifting of the chiller during transportation can cause it to tip and fall leading to injury or death.

5.5 Uncrating

The chiller is secured to the skid during shipping with screws. To remove the chiller from its skid:

1. Move the crated chiller as close as practical to its installation location.
2. Cut or unwrap the plastic shrink-wrap from the unit.
3. Uncrate the chiller by removing the screws holding the chiller to the skid.
4. Use a forklift to lift the chiller until its feet clear the top boards of the skid.
5. Pull the skid from under the chiller.
6. Lower the chiller onto the floor.

6 Installation

6.1 Internal Access

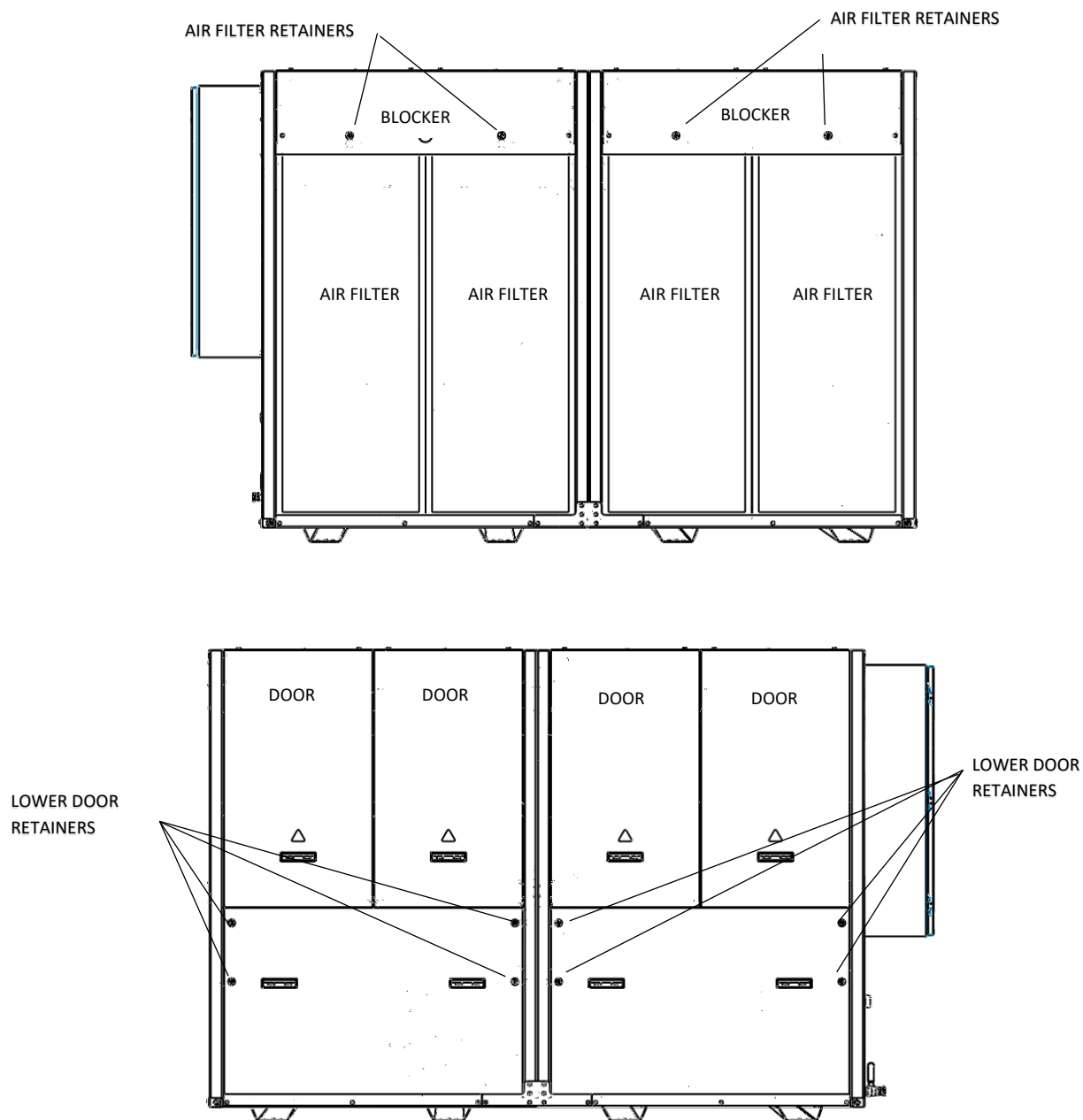


Figure 5: Internal Access

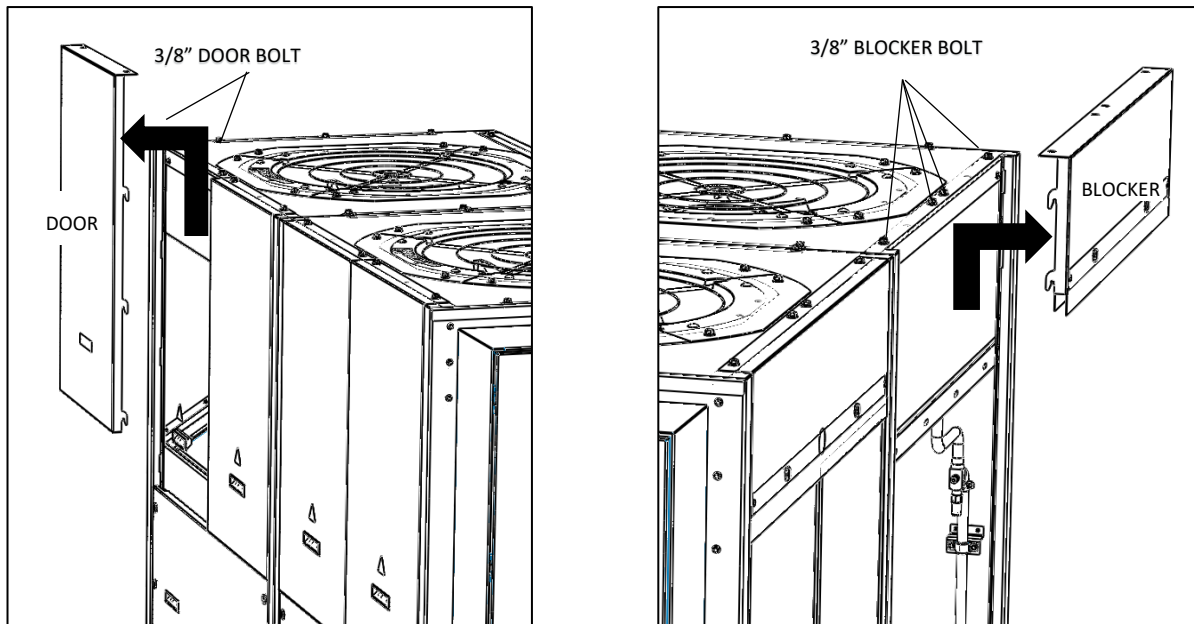


Figure 6: Removal of Doors & Blockers

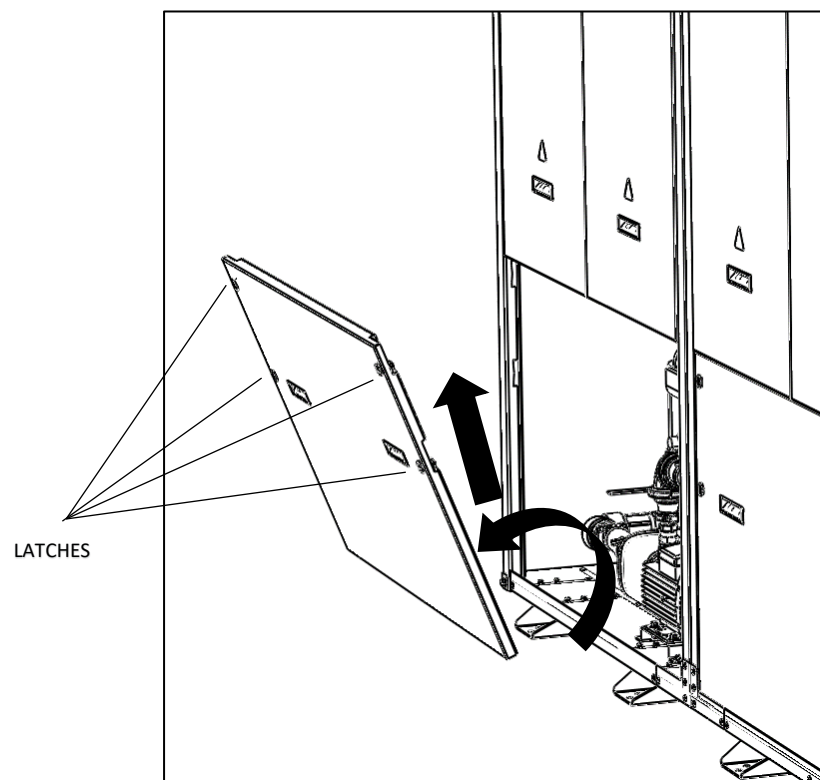


Figure 7: Removal of Lower Doors

To access the chiller's internal components (Refer to, Figure 5, Figure 6, Figure 7):

- **From the air intake/filter side**
 1. Use a slotted screwdriver to turn the quarter-turn *Air Filter Retainer* fasteners above the *Air Filters* counterclockwise.
 2. Gently lift the *Air Filter* upward by its mesh and then pull outward to remove the filter.
 3. For more access:
 - a. Use a wrench or socket to unscrew the *Blocker Bolts* located on the top of the unit. There are four bolts per blocker, two bolts per door.
 - b. Grab the bottom of the *Blocker* and push upwards to disengage the hooks. Once hooks are clear, pull the blocker outward to remove.
 4. Reinstall in the opposite order when access is no longer required.
- **From the door side**
 1. To access the pumps
 - a. Use a slotted screwdriver to turn both *Lower Door Retainer* on the left of the door clockwise, both the *Lower Door Retainer* on the right counterclockwise.
 - b. Gently pull outward and lift to remove lower panels.
 2. To access the coil and fans
 - a. Use a wrench or socket to unscrew the *Door Bolts* located on the top of the unit. There are two bolts per door.
 - b. Lift the *Door* upward to disengage the hooks. Once the hooks are disengaged, pull the door outward to remove the door.
 - c. Reinstall in the opposite order when access is no longer required.

NOTICE

The chiller must have all air filters and panels properly and securely installed when operating. Failure to do so can result in refrigeration circuit faults that will interrupt cooling to the system. When changing a pump, it is permissible to remove the lower door while the unit is running if the pump has been disabled.

6.2 Fan Removal

To remove fan:

1. Ensure power is disconnected.
2. Detach electrical connections.
3. Unbolt the eight 3/8" bolts on the lid.
4. Lift fan assembly out of machine
5. Remove mounting plates by loosening 3/8" carriage bolts.

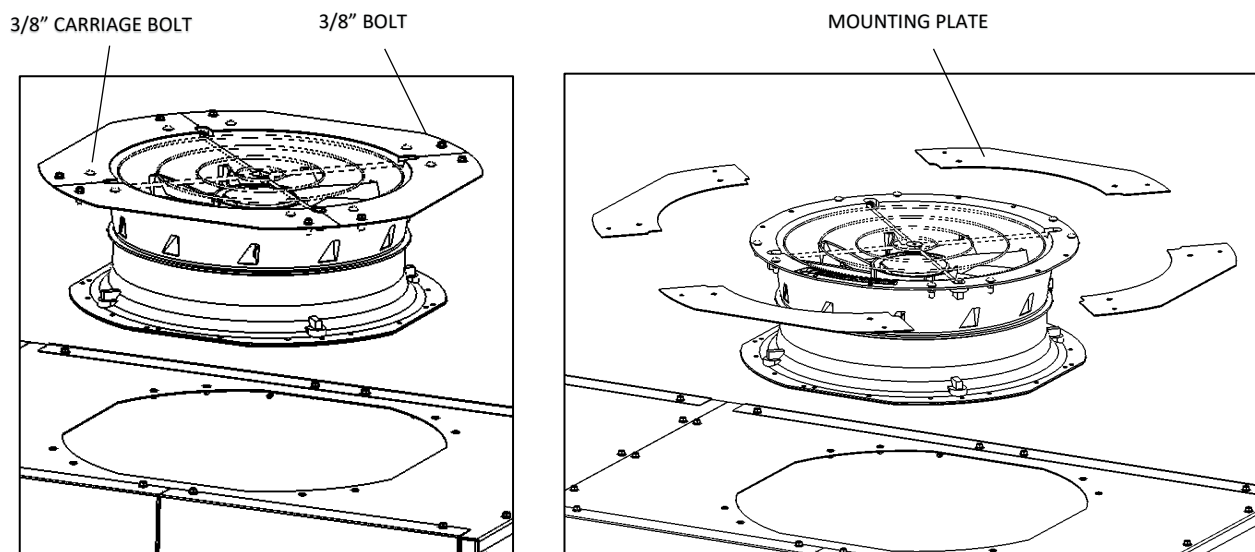


Figure 8: Fan Removal

6.3 Pump Removal

To remove pump:

1. Ensure power is disconnected.
2. Access pumps from lower doors.
3. Remove wiring.
4. Close ball valve.
5. Remove flange clamps on pump suction and discharge.
6. Remove 3/8" mounting bolts.
7. Remove pump assembly.

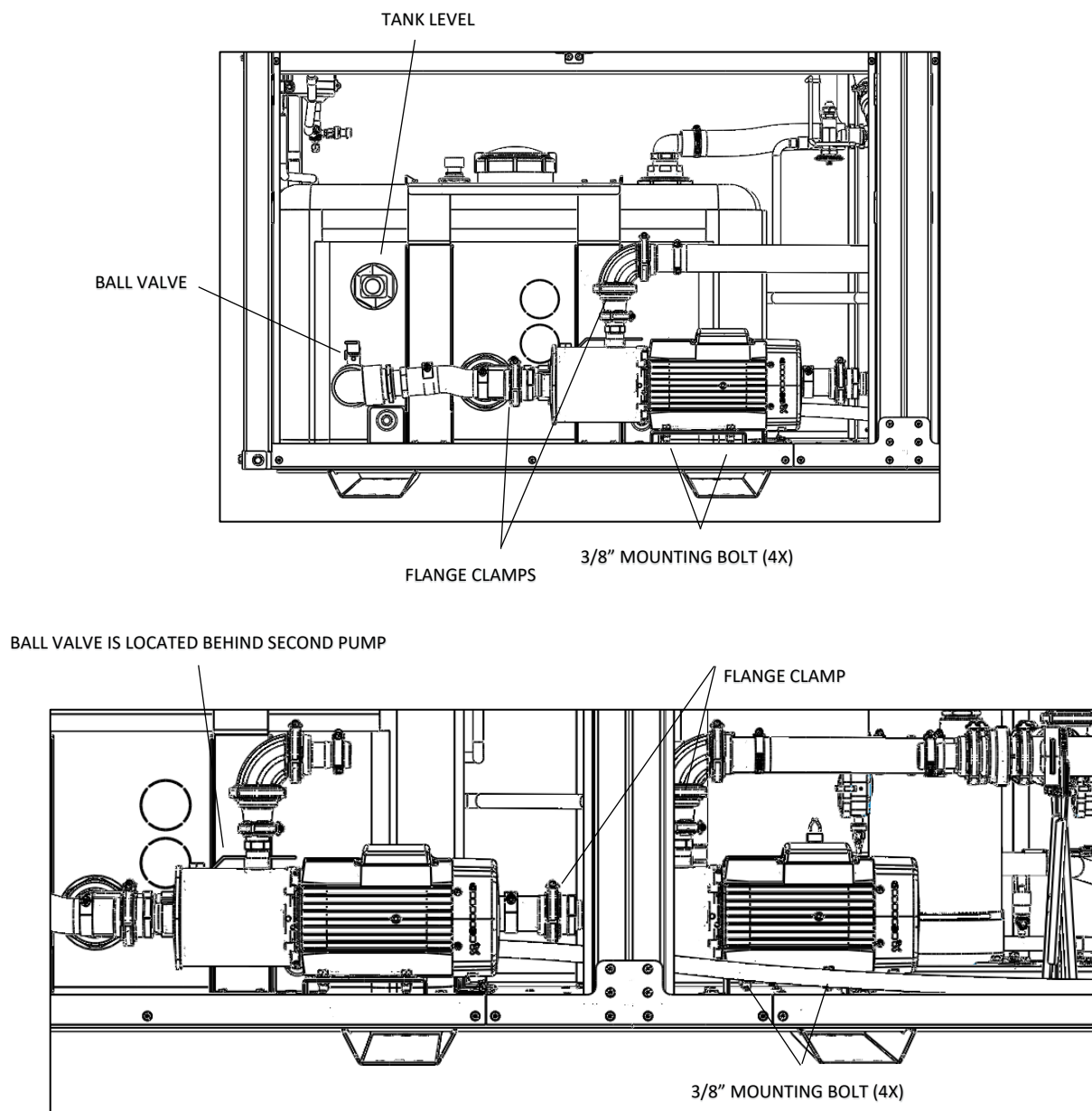


Figure 9: Pump Removal

6.4 Units Equipped with a Tank Heater

Tank heaters are mounted on the side of the tank with an over temperature switch mounted directly above it.

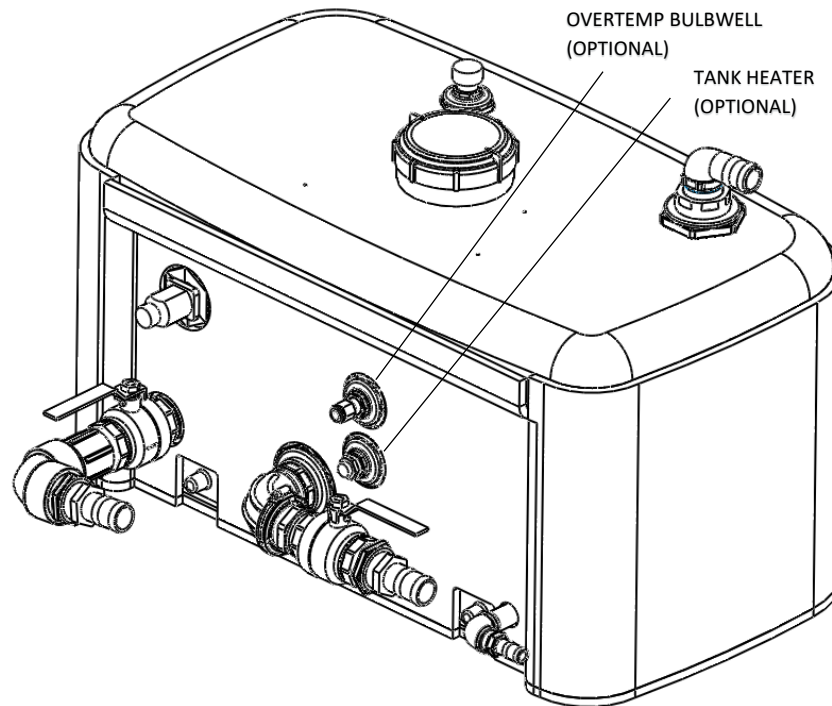


Figure 10: Tank Heater

HEATER CONTROL BOX (OPTIONAL)

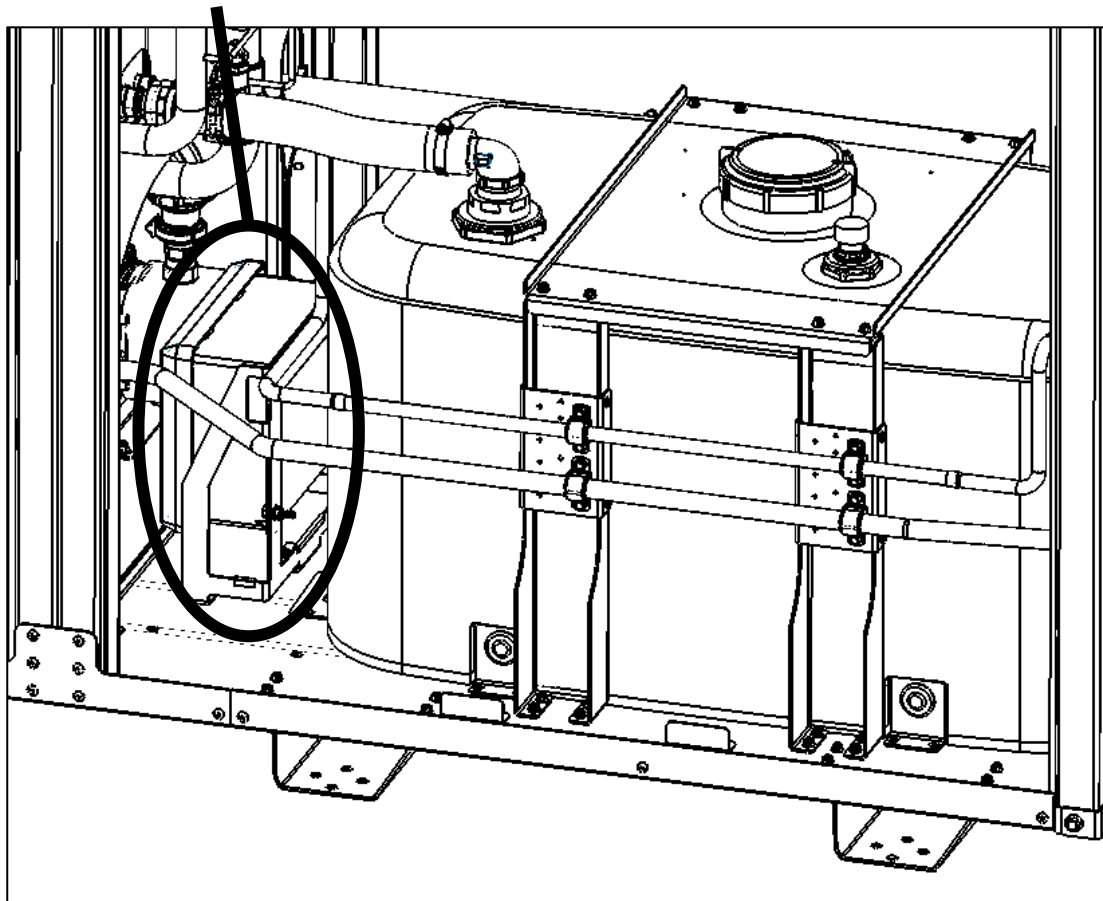


Figure 11: Tank Heater Control Box

6.5 Electrical



WARNING

This procedure involves a risk of electric shock that could cause property damage, injury and/or death.

All electrical connections should be performed only by properly trained and certified electricians wearing proper protective gear and using properly insulated tools.

Before attempting to make any electrical connections or disconnections to the chiller:

- Verify that the chiller's main disconnect handle is in the OFF position.
- Verify that the incoming power to the chiller has been turned off.
- Lock out and tag out main electrical connecting points.
- Use a voltmeter to verify there is no incoming power to the chiller.

Ensure that the supply power is enough to meet the chiller electrical requirements as found on the unit's data tag. The data tag is found on the front of the electrical enclosure. If a remote display is provided with the unit, install the provided 150-foot communications cable between the chiller electrical panel and the remote display location. For distances over 150 feet, an optional Long Distance Remote Display kit is required.

Connect power as follows:

1. Open the electrical enclosure by turning the main disconnect handle to the OFF position and releasing the quarter-turn latches using a flathead screwdriver.
2. Use a step bit or knockout punch to install appropriate conduit fittings in the electrical enclosure.



WARNING

Take care to prevent any metal chips from falling on the electrical components in the enclosure while installing conduit fittings. Metal chips can cause shorts in electrical components and introduce arc flash hazards.

3. Wire mains power to the main disconnect. Wire the ground lead to the provided ground lug.
4. Close the electrical enclosure and fasten the quarter-turn latches.

6.6 Coolant plumbing

The equivalent linear feet of total piping which may be installed external to the chiller is 500' using 1-1/2" plumbing. This is total piping which includes the supply and return lines. Contact the factory if lengths will exceed 500'

Table 5: Standard Fitting Losses in Equivalent Feet of Pipe

Fitting Description	Feet of loss
1-1/2" 90° Standard Elbow:	4.0'
1-1/2" 90° Street Elbow:	6.3'
1-1/2" 45° Standard Elbow:	2.1'
1-1/2" 45° Street Elbow:	3.4'
1-1/2" Globe Valve	43.0'
1-1/2" Gate Valve	1.8'
1-1/2" Angle Valve	18.0'

The chiller has the following plumbing connections:

Table 6: Chiller Plumbing Connections

Connection Description	Connection Type
Supply	1-1/2" Male NPT
Return	1-1/2" Female NPT

NOTICE

Exceeding recommended plumbing lengths can increase system pressure beyond the capabilities of the pumps and can cause the pumps to supply less than the required flow rate for proper operation. Consult the factory if recommended lengths are to be exceeded.

NOTICE

Do not allow the fluid pumps to run dry. This will damage the pump seals and will not be covered under warranty.

To install connecting plumbing between the chiller and process:

1. Remove all caps at each plumbing port on the chiller.
2. Pipe installation should adhere to ASME B1.20.1 for best practices.
3. Ensure that all plumbing is routed in an orderly fashion and free of kinks.
4. Fully open all valves (if present) on plumbing lines.

6.7 Adjusting the flow setter valve for alternative flowrate requirements

The machine is equipped with an adjustable flow setter. Flow is set at the factory so additional adjustment should not be necessary. However, if conditions require, the flow setter can be adjusted by rotating the handle shown in Figure 12. Adjustable range is from 9GPM to 50GPM. The chiller can operate without damage at any setting the flow setter is put into. Follow the numbering on the dial to achieve the desired flow.

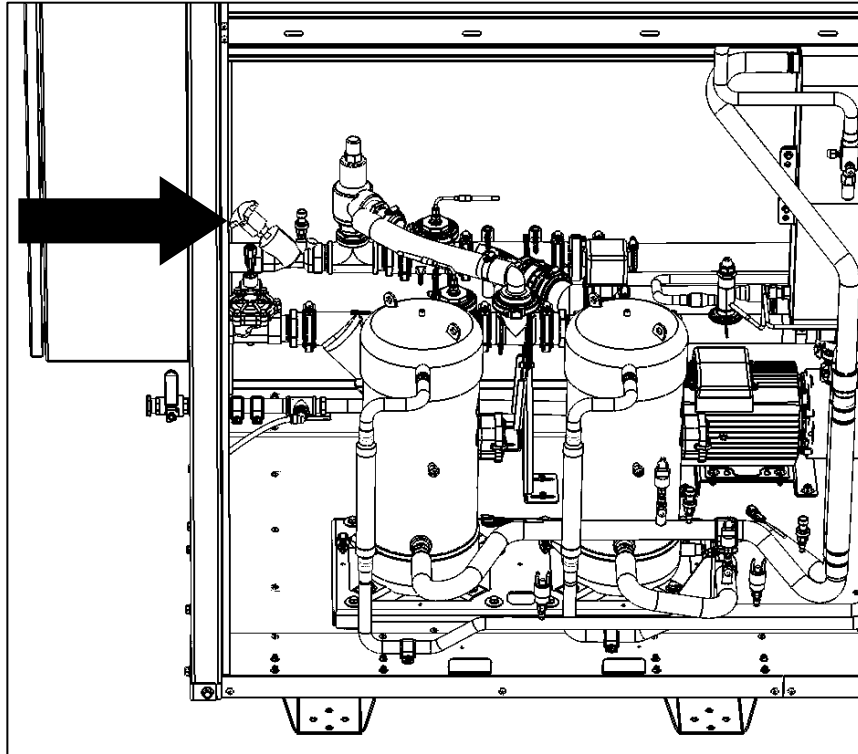


Figure 12: Adjustable Flow Setter



WARNING

All plumbing connections should be performed only by properly trained and certified operators wearing proper protective gear and using appropriate tools.

Failure to correctly install plumbing fittings can lead to leaks, loss of coolant, and/or water damage to nearby equipment.

NOTICE

Ferrous and galvanized steel fittings are incompatible with the coolant. Brass, plastic or stainless-steel fittings are recommended. The use of incompatible materials will lead to excessive corrosion.

6.8 Coolant Reservoir Filling

When the chiller's plumbing connections have been completed the reservoir must be filled with 50% water and 50% glycol.

To fill the chiller's coolant reservoir:

1. Remove the tank fill port cap.
2. Fill the reservoir with 50% water / 50% glycol. The fluid level should be between the high and low tank level labels.
3. The tank low level mark is the "break" point for the float switch.
4. The chiller's reservoir capacity is 60 gal (230L).
5. Reinstall the reservoir fill port cap and hand tighten.

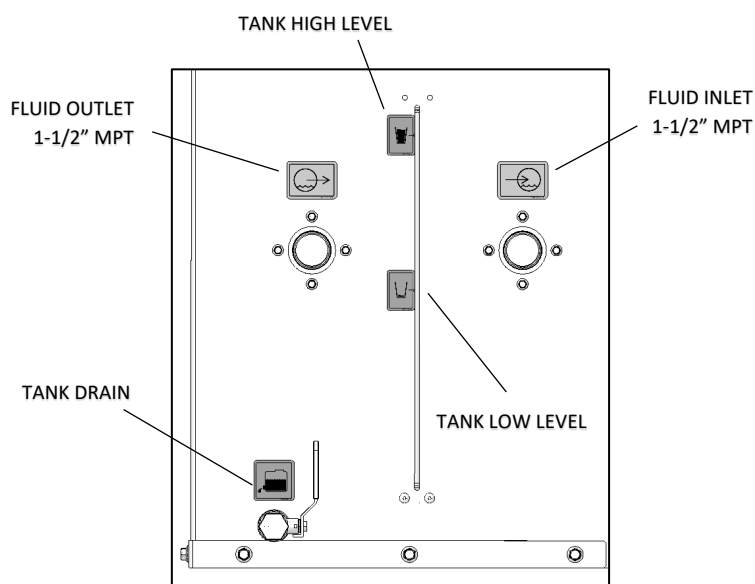


Figure 13: Reservoir Visual Level Indicator Marks

NOTICE

The chiller will require more coolant than the volumes listed above to fill the connecting hoses and the chillers internal plumbing components.

Additional coolant will most likely be required if the chiller is being commissioned for the first time after the pumps have begun running as this coolant will fill any empty plumbing components.

6.9 Installation Checklist

- **Transport and Location of Chiller**
 - ☐ Chiller has been unpacked and inspected for visual damage from shipping.
 - ☐ Required clearance for intake and exhaust air has been maintained around the chiller.
 - ☐ Required clearance for service access has been maintained around the chiller.
- **Electrical**
 - ☐ Supply voltage, current, phase and frequency match chiller's requirement.
 - ☐ Incoming main power is wired correctly.
 - ☐ Incoming power ground wire is connected to ground lug on electrical panel.
 - ☐ Chiller has been energized (main disconnect turned to ON position) for at least 8 hours prior to first run.
 - ☐ Electrical service conforms to all applicable national and local codes.
- **Plumbing**
 - ☐ Supply and return connections are correct.
 - ☐ Plumbing is not dead-headed: no kinks in hoses, valves between chiller and process are fully opened, etc.)
 - ☐ Plumbing has been checked for leaks.
 - ☐ Coolant reservoir is filled with the correct quality and to the correct level.

7 Operation

7.1 Initial Startup



WARNING

Risk of improper startup. Failing to complete the installation checklist could cause damage to the chiller.

The following startup procedures must be adhered to in sequence. This outline should be used as a checklist for the initial startup and for subsequent startups if the chiller is taken out of service for a prolonged period.

1. Verify that the main power source to the chiller meets the requirements on the chiller's data tag (located on the electrical enclosure).
2. Verify that all electrical connections have been correctly and securely wired.
3. Verify that all process plumbing connections between the chiller and process are installed correctly, securely, free of leaks and are not dead-headed (no kinks in hoses, valves fully opened, etc.).
4. Verify that the coolant reservoir level on the visual indicator is between the high and low levels.
5. Enable the main power to the chiller (turn on any breakers or switches upstream of the chiller if required).
6. Allow the chiller to be energized in this state for at least 8 hours prior to commissioning.
7. Phase monitor light must be green and master controller alarms should be clear.
8. If pump motors do not start, check incoming power for correct sequence. If incoming power is present, check for any faults on the master controller. Reset any faults which may be present.
9. Proceed to run the chiller pump for five minutes or more to allow any air in the system to be vented. Check the fluid level after the air has been purged from the piping and refill the reservoir as needed.
10. Check the controller for fault messages. Clear faults that may have occurred during startup procedure. If faults do not re-occur, the system is ready for continuous duty.

NOTICE

The chiller must be powered (supplied with incoming power and main disconnect handle turned to the ON position) for at least 8 hours before being started for the first time. (Power can be off for 30 minutes without observing the 8-hour pre-heat requirement) This is required to energize the compressor's crankcase heaters to vaporize any liquid refrigerant in the compressor crankcase. ***Starting the chiller with liquid refrigerant in the compressor crankcase will damage the compressor and eventually lead to failure of the compressor and refrigeration circuit. This will also void the warranty.***

7.1.1 Temperature control

The chiller will maintain coolant supply temperatures to the process according to its set-point. Temperature control over a wide range of heat loads is achieved through closed-loop control mechanisms. No manual intervention is required other than during the occurrence of faults.

8 Controller

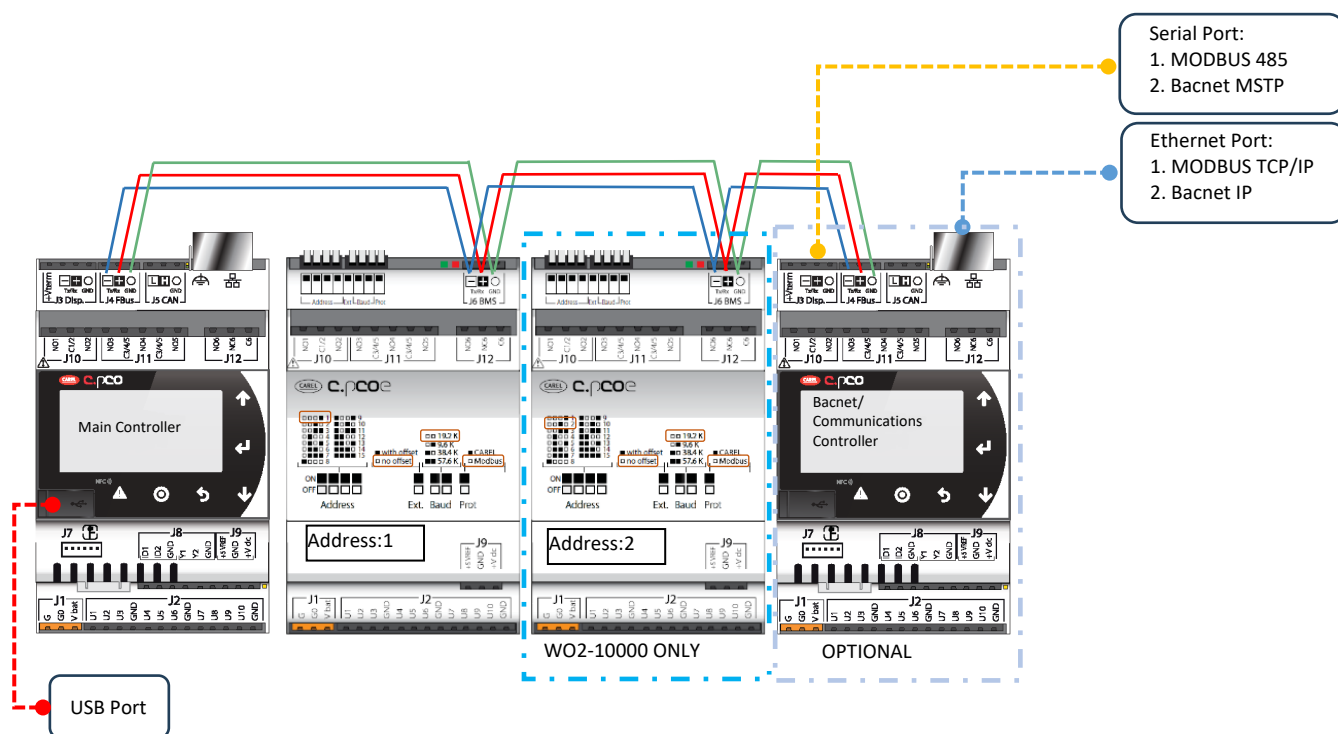
8.1 Controller Layout

This system uses 3 controllers to control the chiller. These controllers are located inside the electrical enclosure.

Figure 14: Controller Layout

The **Main Controller** executes the application logic and hosts the control user interface. All setting changes and program monitoring is done on this controller. **Expansion Modules 1 & 2** provide additional IO needed to control refrigeration circuits 1 & 2. The three controllers are functionally equivalent. In the event of a failure on the **Main Controller** either **Expansion Module** can be swapped in and the system can be operated with only two controllers. In this event only one refrigeration circuit will be operational.

Please contact the Dimplex Thermal Solution's sales department if interested in **Customer Link** functionality.



8.2 Button Layout

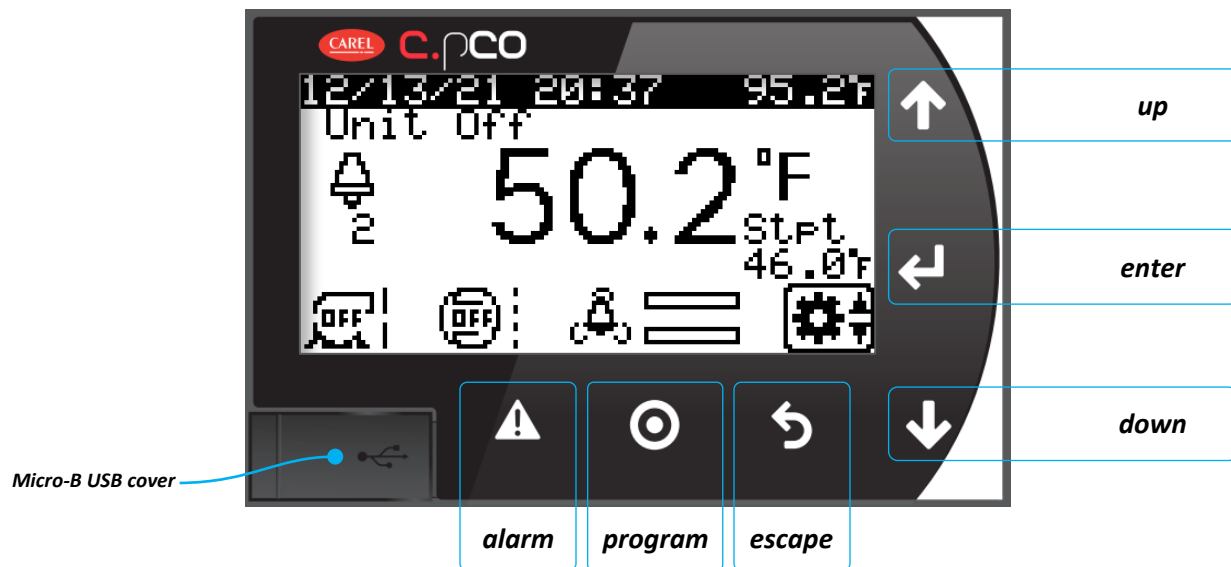


Figure 15: Button Layout on Carel pCO

If accessing the application through a remote display (shown below) the button symbols and functions are the same. Note that the external display is not equipped with a USB port.

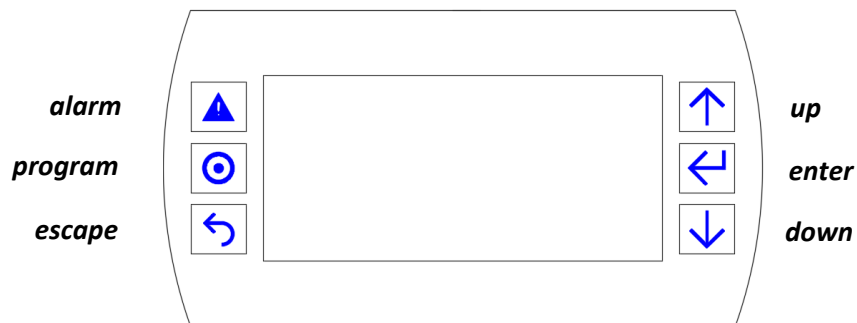


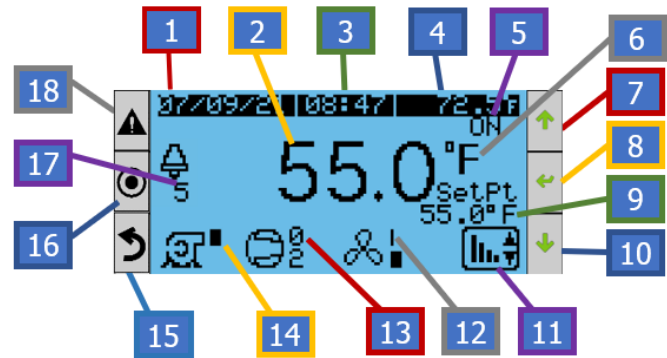
Figure 16: Button Layout on Remote Display





Alarms are logged in the controller's memory based on their time and date of occurrence.

A USB storage device can be connected to the controller via its micro-B USB port to update the controller's software and/or to extract alarm logs. Open the micro-B USB cover to access this port (refer to Figure 15). To extract alarm logs, refer to section Error! Reference source not found. Error! Reference source not found..




8.3 Home Screen Quick Start Guide

- 1) Date
- 2) Current Outlet Process Fluid Temperature
- 3) Time
- 4) Ambient Temperature (if sensor installed)
- 5) Status of Chiller (OFF, ON, or INIT)
- 6) Units: °F or °C
- 7) Increase Value or move up selection list
- 8) Enter
- 9) Outlet Process Fluid Temperature Setpoint
- 10) Decrease Value or move down selection list
- 11) Menu Select:





	Configuration Setup Chiller Parameters
	Status of Chiller Information
	Program Version Information
	HMI Chiller Power ON-OFF
SET	Adjust Setpoints of Temperature, Flow, or Pressure
I/O	Configure Sensor Wiring Location and Alarm




12) Fans





	Circuit 1 is used, Fans are OFF Circuit 2 is not used	Running		Any Fan or Compressor has Overload Alarm
	Circuit 1 Fans Running Circuit 2 Fans Running			

13) Compressors Running

No Compressors Running		Circuit 1 Number of Compressors Running Circuit 2 is not used
Only Refrigeration Circuit 2 has Compressors Running		Circuit 1 has 0 Compressors Running Circuit 2 has 2 Compressors Running

14) Process Pumps Running

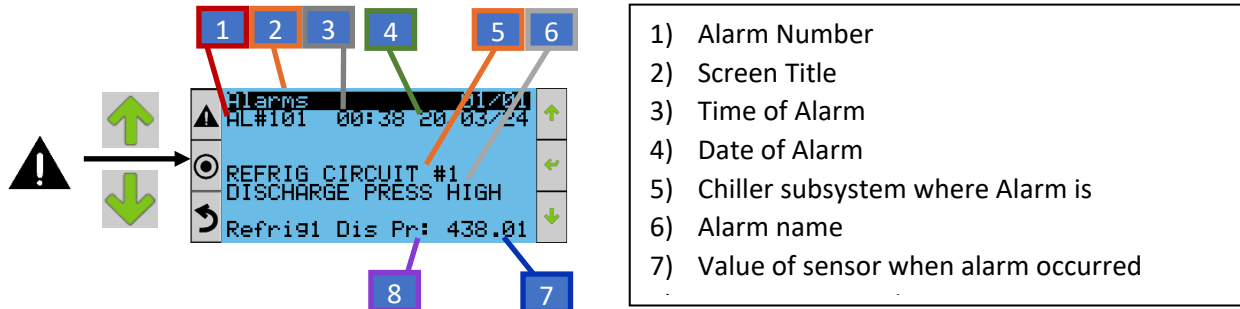
	Pumps Off		Pumps Running		Any Pump has an Overload Alarm
---	-----------	---	---------------	---	--------------------------------

- 15)  Escape key – back out of current screen toward home screen
- 16)  Program key – Password entry screen (see 2.1.2.1)
- 17)  Number of Alarms present
- 18)  Alarm key – go to Alarm screen

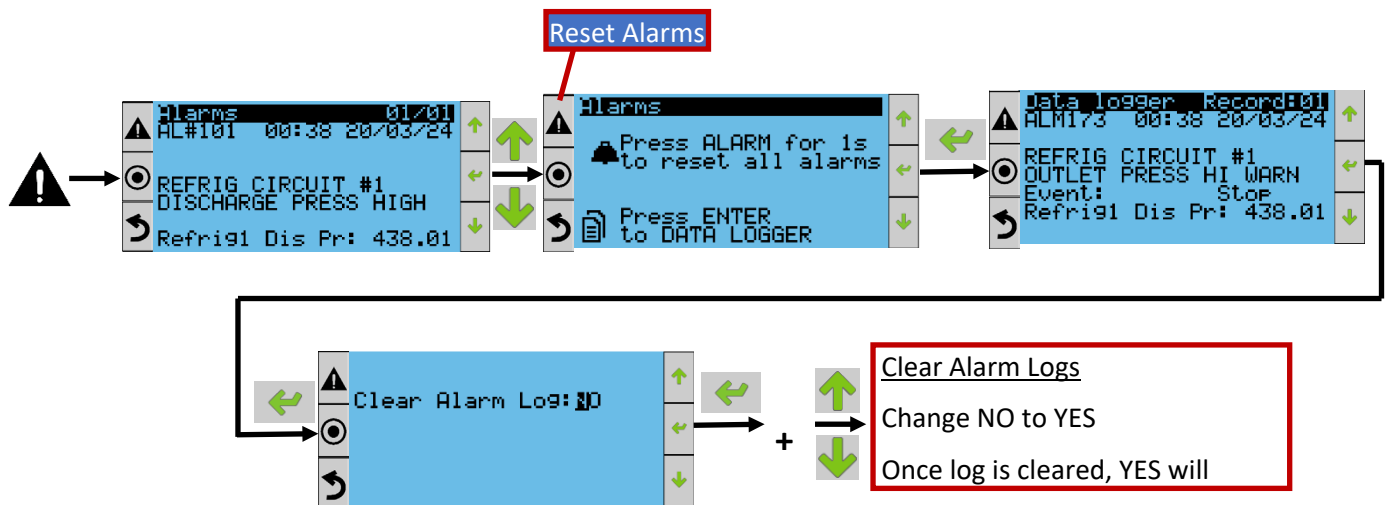
8.3.1 Alarms

8.3.1.1 Active Alarms

Pressing the Alarm key from any screen will bring up the current alarm screen. Use the up and down arrows to scroll through all active alarms.



8.3.1.2 Alarm Reset / Enter Data Logger (Alarm History)/Clear Alarm Log



8.4 Quick Menu Details

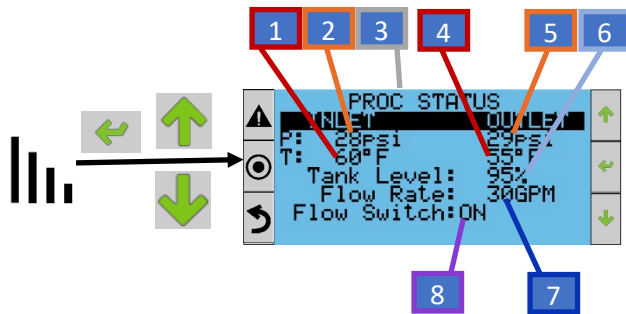
8.4.1 Menu Navigation

Traverse menu items and pages using the **up** and **down** buttons. Press **enter** to navigate into a menu item or to select editable fields. Change field values using the **up** and **down** buttons.

8.4.2 Monitoring

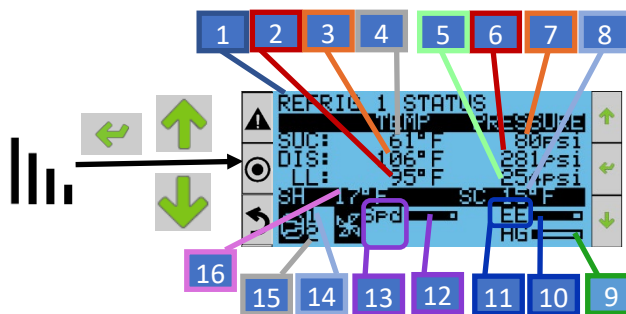
8.4.2.1 Process Status

This status screen is visible when there are no process circuit control loops.



- 1) Process Inlet Temperature (in °F or °C)
- 2) Process Inlet Pressure (in psi or bar)
- 3) Screen Title
- 4) Process Outlet Temperature (in °F or °C)
- 5) Process Outlet Pressure (in psi or bar)
- 6) Tank Level (in percent full)
- 7) Flow Rate (in Gal/Min)

8.4.2.2 Refrigeration Circuit 1 (and 2) Status

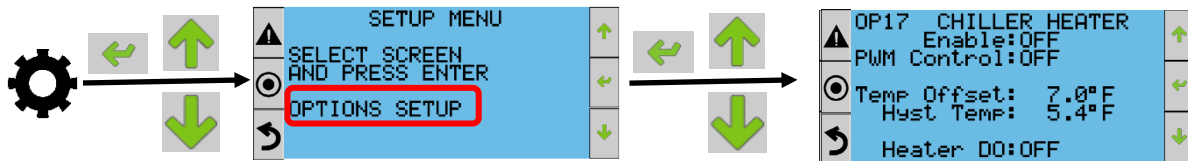


- 1) Screen Title
- 2) Liquid Line Temperature (in °F or °C)
- 3) Discharge Temperature (in °F or °C)
- 4) Suction Temperature (in °F or °C)
- 5) Liquid Line Pressure (in psi or bar)
- 6) Discharge Pressure (in psi or bar)
- 7) Suction Pressure (in psi or bar)
- 8) Sub Cooling (Temperature of gas based on discharge pressure – discharge Temperature)
- 9) Bar graph representing how much the motorized hot gas valve is opened
- 10) Bar graph representing how much the motorized Electronic Expansion Valve (EEV) is opened
- 11) EE = Electronic Expansion LLV = Liquid Line solenoid valve
- 12) Bar graph representing what percent of full speed the condenser fan is running
- 13) Spd = Variable Speed Fan LO: ON/OFF = 2 speed fan low speed status HI: ON/OFF = 2 speed fan high speed status ON: ON/OFF = fixed speed fan status
- 14) Compressor 1 is running
- 15) Compressor 2 is running
- 16) Superheat (Temperature of gas based on suction pressure – suction Temperature)

8.4.2.3 Pump 1 (and 2) Status

Where in the past this had been a separate screen, the pump status is now shown on the home page.
Please reference section [Home Screen Quick Start Guide](#).

8.4.2.4 Simple ON-OFF Digital Heater Control (Tank Heater)



Tank Heater (if equipped)

1. Heater Status
 - a. Heater Status
 - b. On at: Setpoint
 - c. Off at: Setpoint

Monitoring

8.4.2.4.1 Heater Visible

The Chiller Heater (sometimes called a maintenance heater) setup screen will become visible for access when digital output DO89 (Chiller Heater) is configured in the I/O.

8.4.2.4.2 Enable

This is a permissive for the chiller heater control to run.

8.4.2.4.3 PWM Control

This is an optional control to the digital control and is not provided on Medical chillers.

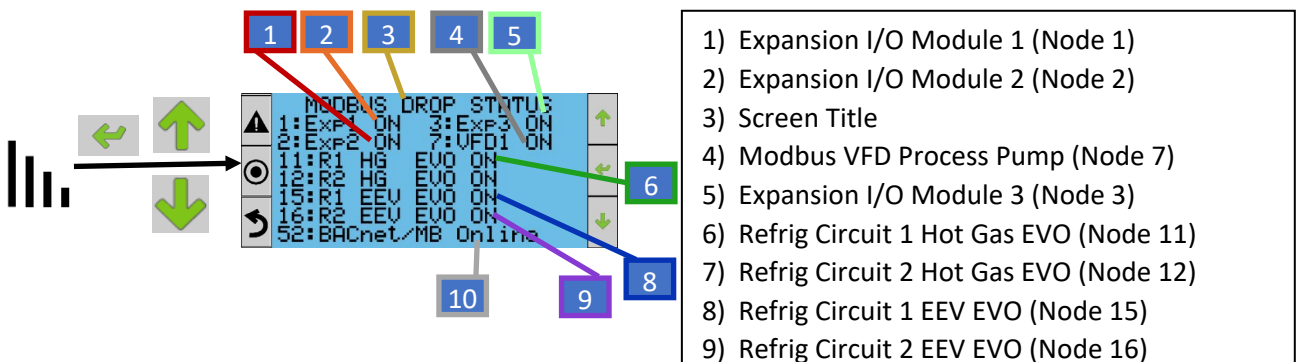
8.4.2.4.4 Temp Offset

This temperature offset is subtracted from the main chiller temperature setpoint to give a modified temperature setpoint lower than the main setpoint for the heater control. In most cases, the heater will be enabled at a lower temperature than the chiller setpoint. When the chiller temperature feedback falls below the modified setpoint, the heater contact (DO89) will turn on.

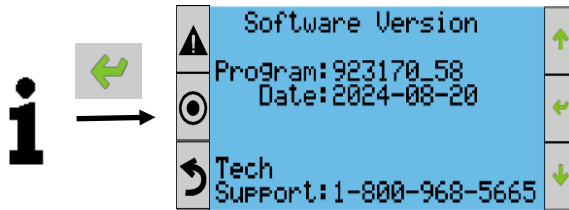
8.4.2.4.5 Hysteresis Temp

This hysteresis temperature will get added to the main chiller temperature with the offset to give a hysteresis offset temperature setpoint that tells when the heater contactor will turn off. When the chiller temperature rises above this hysteresis offset temperature, the heater contactor will turn off until it falls below the offset modified temperature defined above.

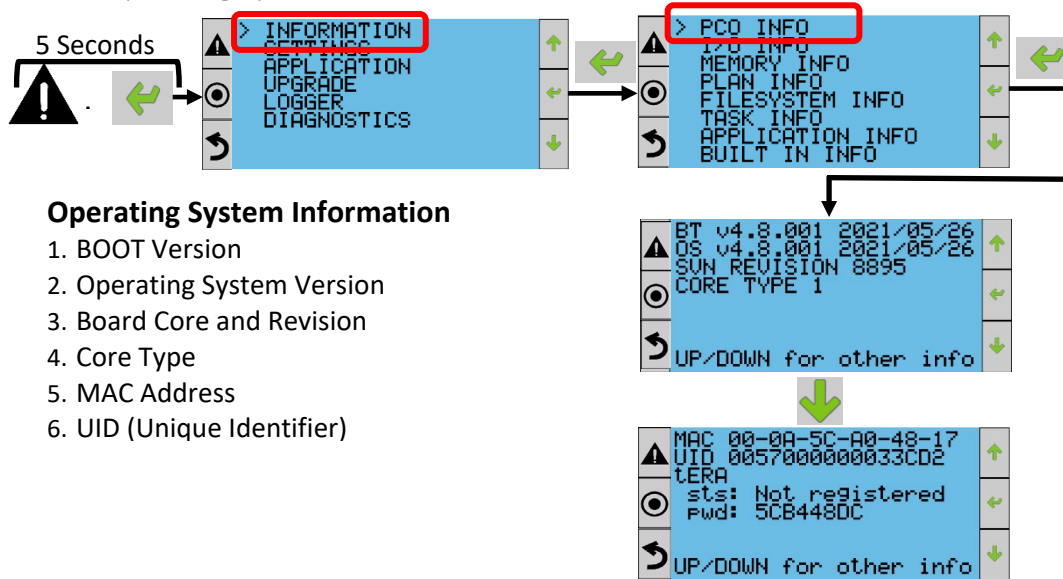
8.4.2.5 Communication (Network) Status



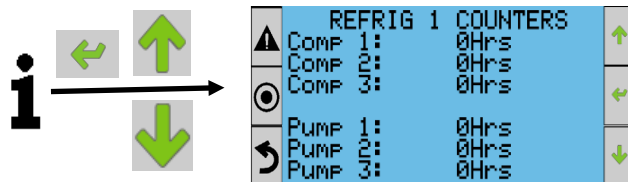
8.4.3 Program Information



8.4.4 Operating System Information



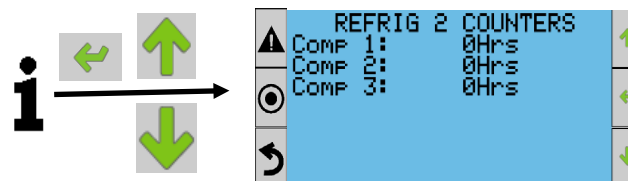
8.4.5 Hours of Operation



Refrigeration Circuit 1 and Process Pump Hours

Time running in hours of refrigeration circuit #1 compressors and process pumps.

Program Info



Refrigeration Circuit 2 Hours

Time running in hours of refrigeration circuit #2 compressors. (This screen will ONLY be available if two refrigeration circuits are configured in the system setup configuration 3/11 screen.)

Program Info

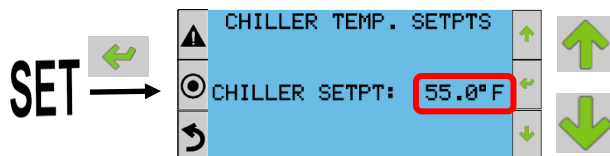
8.4.6 On/Off



“Screen” On/Off Selector (if enabled)
Must be enabled from “User Settings”

On/Off

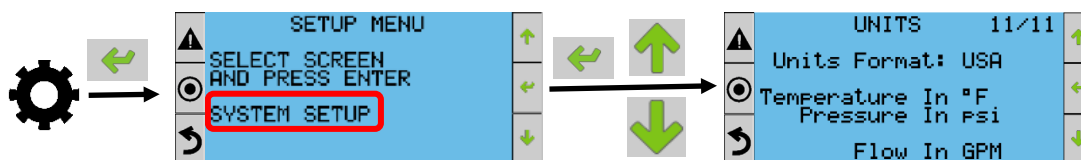
8.4.7 User Settings



Temperature Setpoint

1. Temperature Setpoint Control
 - a. Default reference is **Outlet Temperature**.

User Settings



User Defined Settings/Units

Unit of Measure used in User Interface

User Settings

Table 7: Controller Units of Measure

	None	SI	USA	UK	CAN	LON	SI (Bar)
Temperature	N/A	°C	°F	°C	°C	-	°C
Pressure	N/A	kPa	psi	bar	psi	-	bar

8.5 Passwords

8.5.1 Levels

There are three levels of passwords that grant different levels of access.

8.5.1.1 None

This password level gives access to the main screen, all the status information screens, the screen ON/OFF screen, and the setpoint screen.

8.5.1.2 User (1010)

This password level gives access to view all the setup screens. With a few minor exceptions, no setup values can be modified. The operator can scroll through all the different screen but as soon as an attempt is made to modify a setpoint value, the password login screen is displayed with a message to enter the Service password.

8.5.1.3 Service (2625)

This password level gives access to view all screens and modify all setup parameters.

8.5.2 Accessing

There are several ways to access the password login screen.

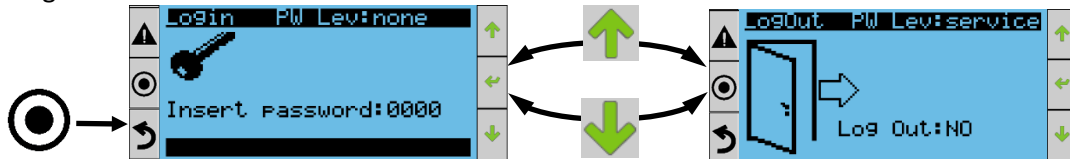
8.5.2.1 Program key

Pressing the program button (center button on the left side) will bring up the login screen.



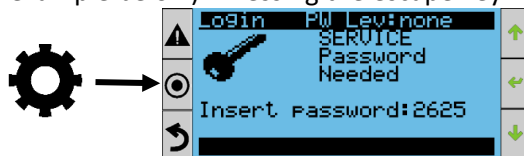
The current entered password level is shown in the upper right corner of the screen.

The up and down buttons on the right side of the HMI will switch between the login screen and the logout screen.

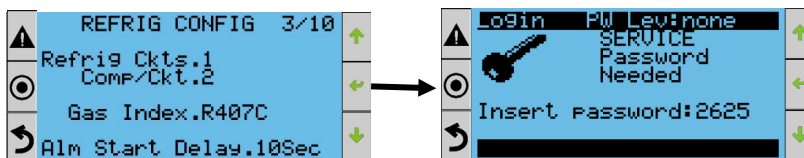


8.5.2.2 Accessing a Restricted Screen or Parameter

Trying to access a restricted screen will divert the user to the password login screen. Entering in the correct password will divert the user to the selected screen (the setup screen in the example below). Pressing the escape key will return to the previous screen.



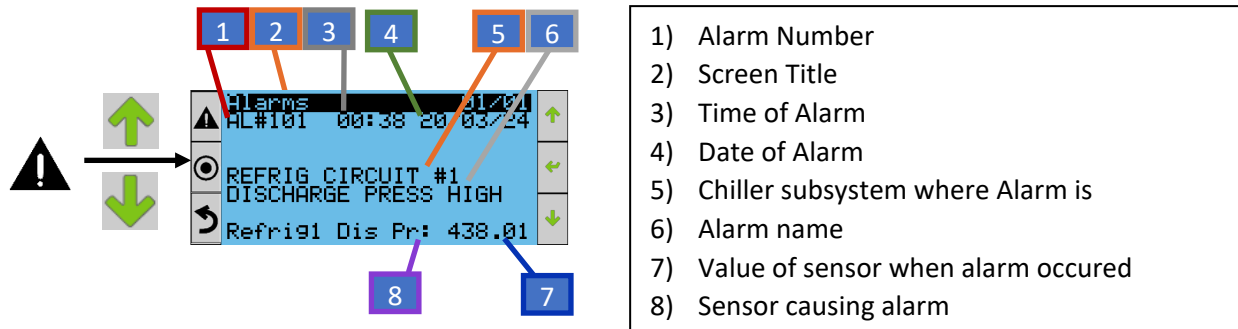
It is possible to view parameter settings by entering in the User password. This will allow the user to view any setup parameter but not make any changes. If an attempt is made to make changes, the user will be diverted to the password login screen. Entering the correct password will divert the user back to originating setup page where changes to parameters can then be made. Pressing the escape key will return back to the originating setup page.



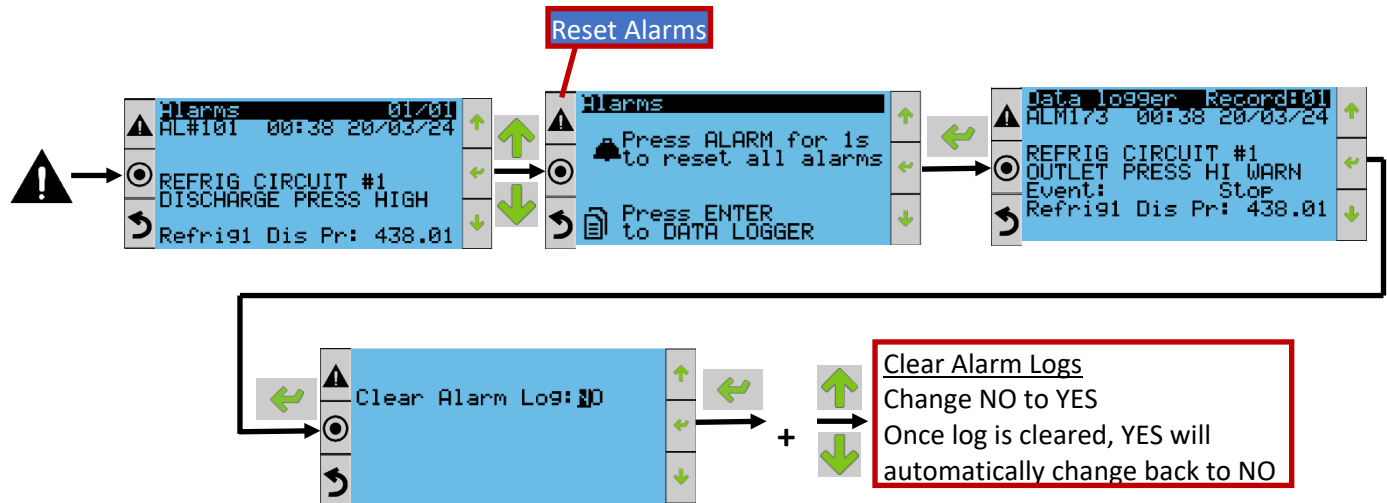
8.6 Alarms

8.6.1 Active Alarms

Pressing the Alarm key from any screen will bring up the current alarm screen. Use the up and down arrows to scroll through all of the active alarms.



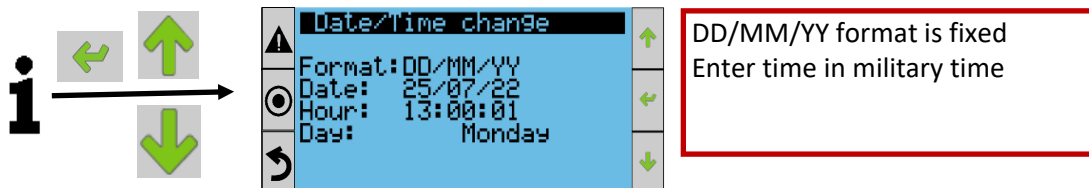
8.6.2 Alarm Reset / Alarm History / Clear Alarm Log



8.7 Controller Setup

8.7.1 Date & Time Setup

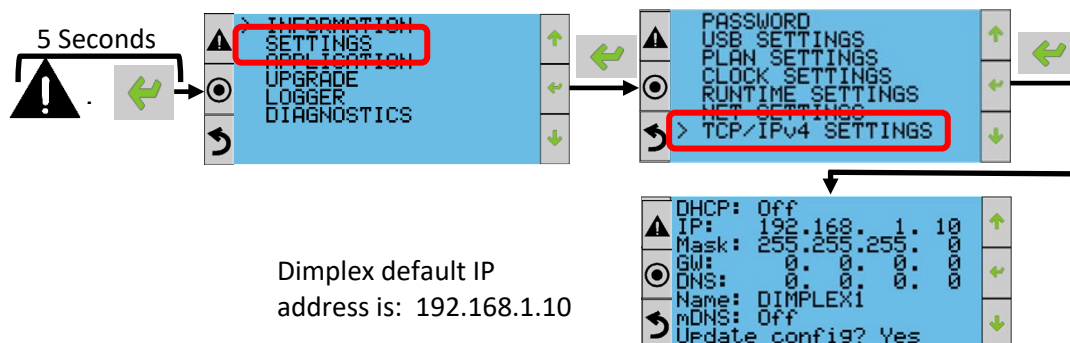
It is highly recommended to set the local date and time during installation. The time is configured to the 24-hour format. To set the date and time press the up and down buttons to get to the **Information Sub-menu** then press **enter** and navigate to the “Date/Time change” screen.



Use the **enter**, **up**, and **down** buttons to set the date (according to Format) and time (HH:MM:SS). The Day will update to show the correct weekday according to the date entered. The values entered are for writing update values only. They will not change as the current time is updated by the controller.

8.7.2 IP Address Setup

The controller is equipped with an ethernet port. This port can be used for Modbus communication (if enabled) or used to access the controller’s web interface for remote monitoring. To set the IP address press the **program** button to navigate to the “Main Menu”. Enter the “User Password” if prompted. From the “Main Menu” press **enter** to navigate into “Machine Settings”. Next use the **down** button to navigate to “Network Settings” and press **enter** to find the “Network Configuration” page. Use the **enter**, **up**, and **down** buttons to configure the network settings. Please contact your IT department for assistance in selecting the appropriate values.



8.8 Application Log Export

The controller is equipped with event and periodic logs that allow data to be captured when certain conditions are triggered or periodically during operation. This is used to capture critical information during certain alarms and record high level state variables periodically throughout the day.



Use the **enter**, **up**, and **down** buttons to select the memory type **USB** and confirm yes to initiate export. The export may take several minutes to complete. Once the export is started a status page will appear.

Press **escape** when export is complete. There should now be several .csv log files on the USB storage device.

8.9 USB Storage Device

Please see Figure 16: USB Storage Device as reference for a USB storage device that can be used for extracting data from the controller. This device allows a user to connect to either the controller or a computer. Note that with the cPCO.c controller the USB port is recessed and many off the shelf adapter cables will not fit in this recessed port. Dimplex therefore recommends a UGREEN brand that is available from Amazon, using the following web link: https://www.amazon.com/UGREEN-Adapter-Samsung-Controller-Android/dp/B00N9S9Z0G/ref=asc_df_B00N9S9Z0G?mcid=d7ec3ce6a8d93d9eb2300f62b75cf9d8&hvocijid=5332533875157235341-B00N9S9Z0G-&hvexpln=73&tag=hyprod-20&linkCode=df0&hvadid=692875362841&hvpos=&hvnetw=g&hvrnd=5332533875157235341&hvpone=&hvpw=&hvqmt=&hvdev=c&hvdvcmdl=&hvlocint=&hvlocphy=1016406&hvtargid=pla-2281435178778&th=1

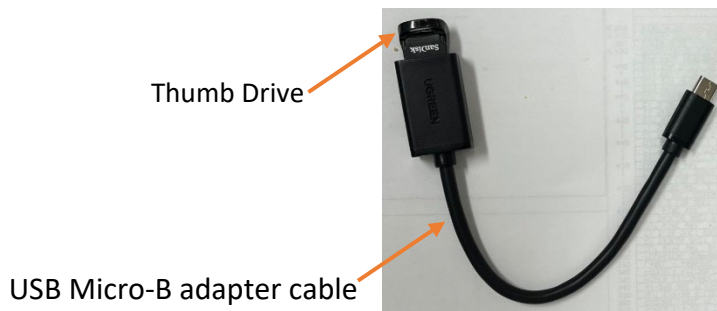


Figure 16: USB Storage Device

8.10 Customer Link

Customer Link (“Cust Link”) is a feature that allows customers to interface with the chiller application over a network. This allows for remote monitoring and remote On/Off and Temperature setpoint control. Refer to DTS document [ENG-SVC-0060](#) for setup and function details.

Please contact the Dimplex Thermal Solution’s sales department for more information.

9 Troubleshooting

9.1 Troubleshooting Guide

Table 8 Troubleshooting Service Guide

Symptoms	Possible Cause
Selector is in "ON" position & pump will not start.	<ol style="list-style-type: none"> 1. Open disconnect switch. 2. Tripped overloads. 3. Phase monitor fault. 4. Low tank level.
Pump is rotating but no pressure is established.	<ol style="list-style-type: none"> 1. Improper rotation. 2. No water in reservoir. 3. Valves not open. 4. No back pressure. 5. Pump suction blocked. 6. Pump seal leaking.
Pump runs properly, but compressor does not start.	<ol style="list-style-type: none"> 1. Compressor is not getting energized-flow switch not activated.
Compressor hums but will not start.	<ol style="list-style-type: none"> 1. Low line voltage. 2. Motor windings shorted to ground. 3. Internal compressor damage. 4. Improperly wired.
Compressor will not start (no hum).	<ol style="list-style-type: none"> 1. Open disconnect. 2. Thermal overload open. 3. Relay not closing to start compressor. 4. Bad motor windings. 5. Loss of refrigerant charge.
Compressor starts but trips on internal protector.	<ol style="list-style-type: none"> 1. High suction or discharge pressure. 2. Low line voltage. 3. Bad motor windings.
The unit short cycles.	<ol style="list-style-type: none"> 1. Low refrigerant charge. 2. Defective expansion valve.
High refrigerant pressure fault.	<ol style="list-style-type: none"> 1. Dirty air filters. 2. Refrigerant overcharge. 3. Dirty condenser. 4. Malfunction of fan motor. 5. Excessive ambient air temperature.
Low refrigerant pressure fault.	<ol style="list-style-type: none"> 1. Extreme low ambient temperature. 2. Refrigerant leak. 3. Lack of fluid flow through heat exchanger. 4. Liquid line solenoid valve stuck or not opening. 5. Expansion valve stuck or lost bulbwell charge.
Fluid flow fault.	<ol style="list-style-type: none"> 1. Pump not running. 2. System not filled. 3. Air in the system. 4. Flow switch paddle stuck.
Pump Overload fault.	<ol style="list-style-type: none"> 1. Overload setting incorrect. 2. Bad motor windings. 3. Low pump pressure due to low piping resistance.
Phase Monitor fault.	<ol style="list-style-type: none"> 1. Incorrect line phasing. 2. Low/High incoming voltage. 3. Voltage imbalance between phases.
Low Tank Level fault.	<ol style="list-style-type: none"> 1. Low/no fluid in Heat Exchanger reservoir. 2. Float switch stuck in the open position.

9.2 Refrigeration High Pressure Switch



WARNING

The refrigeration discharge lines may be extremely hot – avoid contact. Resetting of the refrigeration high pressure switch should only be performed by qualified personnel equipped with proper safety gear and tools.

The chiller's refrigeration circuit is equipped with a mechanical, high pressure switch that disengages (trips) the refrigeration circuit when dangerously high pressures occur to prevent damage to the refrigeration system. If the switch has tripped it can be reset by performing the following steps:

1. Access the chiller's air intake/filter side (refer to section 6.1).
2. Depress the red reset button until a tactile click is felt.
3. Reinstall the air intake filter(s) before restarting the chiller.

9.3 Maintenance

Establishing a proper maintenance schedule will extend the lifetime of the chiller. A suggested checklist has been provided in section 9.3.1.

9.3.1 Suggested maintenance checklist.

Items in this list should initially be performed on a weekly basis to determine how often they need to be serviced. Time between servicing must be re-established when operating conditions have changed.

9.3.1.1 *Inspect and clean the condenser coil and air intake filter*

Excessive buildup of dirt, oil, and/or other debris on the condenser coil and air intake filters will cause reduced air flow rates for heat dissipation leading to lower capacities. Ensure that the fins of the condenser coil are clean and undamaged. Use compressed air at no more than 120psi (8.3bar) to blow out the condenser coil and air intake filters in the direction opposite to normal air flow. For the condenser coil the cleaning air should enter the discharge side and exit from the intake side. If the air filters cannot be cleaned, then they must be replaced.

9.3.1.2 *Inspect the supply pressures*

Record the supply pressure after the initial startup and then periodically. If plumbing connections between the chiller and process have remain unchanged, the supply pressures should remain constant. An increase in pressure indicates a clogged filter/strainer or buildup of debris in the fittings.

9.3.1.3 *Inspect and clean fluid strainer*

Fluid strainers protect the brazed plate heat exchanger from becoming clogged. Inspect and clean strainer after first hour of operation, after first week of operation, and annually thereafter.

9.3.1.4 *Inspect the quality of the coolant in the reservoir*

Access the coolant in the reservoir via the access cap. System fluid should be clean and free of contaminants. Test the glycol concentration level to ensure levels are within the rated conditions. Refill tank as needed with pre-mixed glycol to maintain proper concentration. An inhibited glycol solution is recommended to prevent algae and bacteria from growing. If low toxicity glycol is desired or required, use an inhibited propylene glycol.



WARNING

Do not mix brand names or types of glycol as this may result in the inhibitors precipitating out of solution. Do not use automotive antifreeze in the Chiller Unit as it can cause extensive damage to the cooling system. The use of automotive anti-freeze can affect the heat transfer of the system, fluid flow, and attack the pump seals.



WARNING

Galvanized piping is not recommended because the zinc will react with the inhibitor in the fluids, causing precipitate formation, depletion of the inhibitor package, and removal of the protective zinc coating, particularly above 100°F. Precipitation can also lead to localized corrosion.

9.3.1.5 *Inspect fluid system for leaks of loose connections*

Visually check fluid connections for any leaks in the system. Ensure there are no plumbing parts that show any significant wear including chafing or cracking.

9.3.1.6 *Inspect and test refrigeration system for leaks*

Inspect the inside of the chiller for any visual evidence of refrigeration leaks. Spots of oil on the inside of the unit or on the refrigeration lines may signify a potential leak. Have a certified refrigeration technician inspect the unit for proper operation.

9.3.1.7 *Check all wiring for loose connections, chaffing or damage*

Turn off the main disconnect. Check all wiring inside of electrical panel and inside the chiller for loose or damaged wires. Tighten any loose terminals and replace any damaged wires.

Table 9: Electrical Component Torque

Component	Torque (in-lb)
Pump/fan contactor power terminals	22
Pump contactor overload terminals	12
Pump/fan contactor control terminals	8.9-13
Pump overload power terminals	22
Pump overload control terminals	5
Compressor contactor - Power	13.3-22
Compressor contactor - Control	8.9-13
Fused terminal	25
Disconnect wire terminal	35
Disconnect fuse screw	35
Disconnect shaft set screw	12
Fuse block terminal	35
Transformer - Allen Bradley	10
Transformer - Dongan	16-18
Power distribution block - Primary	120
Power distribution block - Secondary	25
Power distribution block - Secondary	20

Component	Torque (in-lb)
Control relay socket terminals	5-9
Controller plug screws - large	5
Controller plug screws - Small	2

9.3.1.8 Schedule planned maintenance services

Consult the factory to schedule and perform planned maintenance services on the chiller by qualified refrigeration technicians.

9.4 Alarm List

The following alarm actions are available for process fluid alarms:

OFF: No alarm will be generated.

WRN: An alarm message only will be generated on the HMI display. The chiller will continue to operate. This is an unlatched alarm. When the condition causing the alarm is removed, the alarm message on the HMI display will also be removed.

RFG: An alarm message will be generated on the HMI display. The refrigeration circuits of the chiller (compressors) will do an orderly shut down. The process pump(s) and process circuits will continue to operate. This is a latched alarm and will require the operator to reset to alarm. When the alarm is reset, the alarm message on the HMI display will then be removed.

FLT: An alarm message will be generated on the HMI display. The refrigeration circuits of the chiller will do an orderly shut down followed by the process circuits and pumps shutting down. This is a latched alarm and will require the operator to reset to alarm. When the alarm is reset, the alarm message on the HMI display will then be removed.

STR: An alarm message will be generated on the HMI display. The refrigeration circuits of the chiller and process circuits and pumps will continue to operate. However, once the chiller stops, it will not be allowed to restart until the alarm condition is cleared. This is a latched alarm and will require the operator to reset to alarm. When the alarm is reset, the alarm message on the HMI display will then be removed.

Table 10: Alarm List

Alarm	Description	Type
Alarms 1 through 99 are Process Fluid Alarms (Only applicable alarms are listed)		
05	Fluid Low Temperature Freeze Circuit 1	RFG
13	Inlet Temperature High Fault Circuit 1	ALM
15	Inlet Temperature Low Fault Circuit 1	FLT
17	Outlet Pressure High Fault Circuit 1	ALM
19	Outlet Pressure Low Fault Circuit 1	ALM
21	Outlet Temperature High Fault Circuit 1	WRN
23	Outlet Temperature Low Fault Circuit 1	WRN
25	Process Evaporator Flow Switch Alarm Circuit 1	FLT
27	Process Evaporator Low Flow Alarm Circuit 1	RFG

Alarm	Description	Type
29	Process Evaporator High Flow Alarm Circuit 1	WRN
31	Process Fluid Filter Pressure Fault (Dirty Filter) Circuit 1	ALM
32	Process Fluid Filter Pressure Fault (Dirty Filter) Circuit 2	ALM
37	Tank Level Low Alarm Circuit 1	FLT
45	Process Pump Circuit 1, Pump 1 Overload Fault	ALM
46	Process Pump Circuit 1, Pump 2 Overload Fault	ALM
54	Process Fluid Low Pressure Fault	ALM
55	Not Enough Process Pumps Online Circuit 1	ALM
57	Chiller System High Temp Alarm	ALM
58	Chiller System Low Temp Alarm	ALM
71	Chiller System High Temp Deviation Alarm	ALM
72	Chiller System Low Temperature Deviation Alarm	ALM
73	Process #1 Tank Level Low Warning	ALM
78	Evaporator Outlet Temperature High	OFF
79	Evaporator Outlet Temperature Low	OFF
80	Flow Loss Fault for Medical	RFG
91	Process Flow Unstable Fault	WRN
Alarms 100 thru 199 are Refrigeration Alarms		
100	Crankcase Heater Alarm	OFF
101	Circuit 1 High Outlet Discharge Pressure Alarm	ESTOP
102	Circuit 2 High Outlet Discharge Pressure Alarm	ESTOP
105	Circuit 1 Low Outlet Discharge Pressure Alarm	ALM
106	Circuit 2 Low Outlet Discharge Pressure Alarm	ALM
109	Circuit 1 High Inlet Suction Pressure Alarm	WRN
110	Circuit 2 High Inlet Suction Pressure Alarm	WRN
113	Circuit 1 Low Inlet Suction Pressure Alarm	ESTOP
114	Circuit 2 Low Inlet Suction Pressure Alarm	ESTOP
117	Circuit 1 High Outlet Discharge Temperature Alarm	FLT
118	Circuit 2 High Outlet Discharge Temperature Alarm	FLT
121	Circuit 1 Low Outlet Discharge Temperature Alarm	WRN
122	Circuit 2 Low Outlet Discharge Temperature Alarm	WRN
125	Circuit 1 High Inlet Suction Temperature Alarm	FLT
126	Circuit 2 High Inlet Suction Temperature Alarm	FLT
129	Circuit 1 Low Inlet Suction Temperature Alarm	WRN
130	Circuit 2 Low Inlet Suction Temperature Alarm	WRN
133	Circuit 1 Compressor or Fan Overload Fault	ESTOP
134	Circuit 2 Compressor or Fan Overload Fault	ESTOP
141	Circuit 1 High Outlet Discharge Pressure Safety Switch	ESTOP
142	Circuit 2 High Outlet Discharge Pressure Safety Switch	ESTOP
145	Circuit 1 Low Inlet Suction Pressure Switch Alarm	ESTOP
146	Circuit 2 Low Inlet Suction Pressure Switch Alarm	ESTOP
169	Circuit 1 Very Low Inlet Suction Pressure	ESTOP
170	Circuit 2 Very Low Inlet Suction Pressure	ESTOP
173	Circuit 1 High Discharge Outlet Pressure	WRN
174	Circuit 2 High Discharge Outlet Pressure	WRN

Alarm	Description	Type
177	Circuit 1 Evaporator Low Flow	FLT
178	Circuit 2 Evaporator Low Flow	FLT
181	Circuit 1 Compressor 1 Overload	WRN
184	Circuit 2 Compressor 1 Overload	WRN
Alarms 200 thru 300 are System Alarms		
200	Phase Loss	ESTOP
201	Expansion I/O Module #1 Off Line	ESTOP
204	Expansion I/O Module #1 Config Error	ESTOP
211	Universal I/O Channel 1 on the c.pco mini Base Error	FLT
212	Universal I/O Channel 2 on the c.pco mini Base Error	FLT
213	Universal I/O Channel 3 on the c.pco mini Base Error	FLT
214	Universal I/O Channel 4 on the c.pco mini Base Error	FLT
215	Universal I/O Channel 5 on the c.pco mini Base Error	FLT
216	Universal I/O Channel 6 on the c.pco mini Base Error	FLT
217	Universal I/O Channel 7 on the c.pco mini Base Error	FLT
218	Universal I/O Channel 8 on the c.pco mini Base Error	FLT
219	Universal I/O Channel 9 on the c.pco mini Base Error	FLT
220	Universal I/O Channel 10 on the c.pco mini Base Error	FLT
221	Universal I/O Channel 1 on Expansion #1 Error	FLT
222	Universal I/O Channel 2 on Expansion #1 Error	FLT
223	Universal I/O Channel 3 on Expansion #1 Error	FLT
224	Universal I/O Channel 4 on Expansion #1 Error	FLT
225	Universal I/O Channel 5 on Expansion #1 Error	FLT
226	Universal I/O Channel 6 on Expansion #1 Error	FLT
227	Universal I/O Channel 7 on Expansion #1 Error	FLT
228	Universal I/O Channel 8 on Expansion #1 Error	FLT
229	Universal I/O Channel 9 on Expansion #1 Error	FLT
230	Universal I/O Channel 10 on Expansion #1 Error	FLT
251	Chiller Off Alarm	WRN
252	Run Chiller with Process Fluid Flow Solenoid Off Alarm	ALM
260	Power Loss Alarm	ALM
265	Circuit #1 Inlet Suction Pressure Probe/Channel Alarm	FLT
266	Circuit #2 Inlet Suction Pressure Probe/Channel Alarm	FLT

10 Internal Components

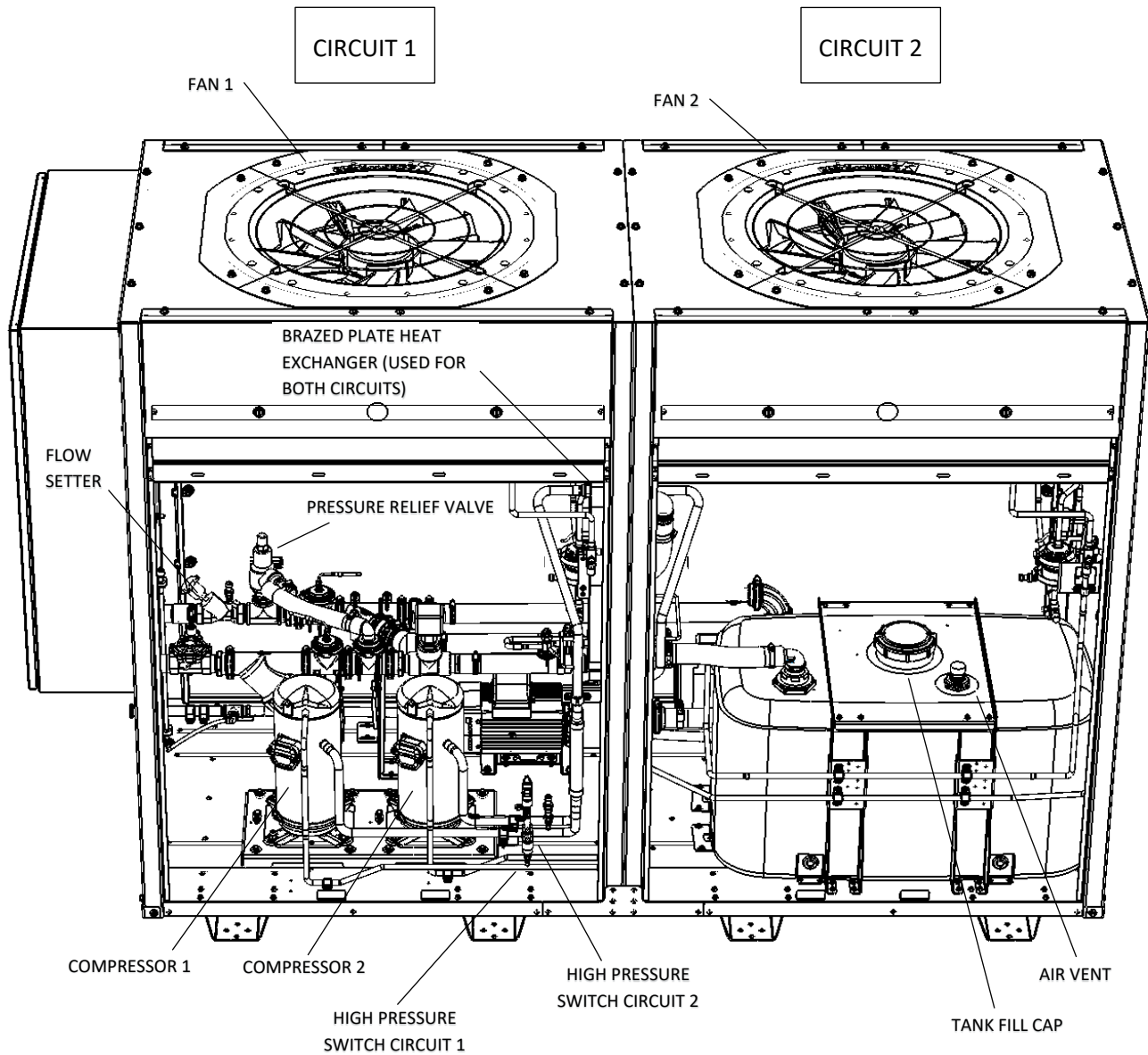


Figure 17: WO2-3000 Air Filter Side

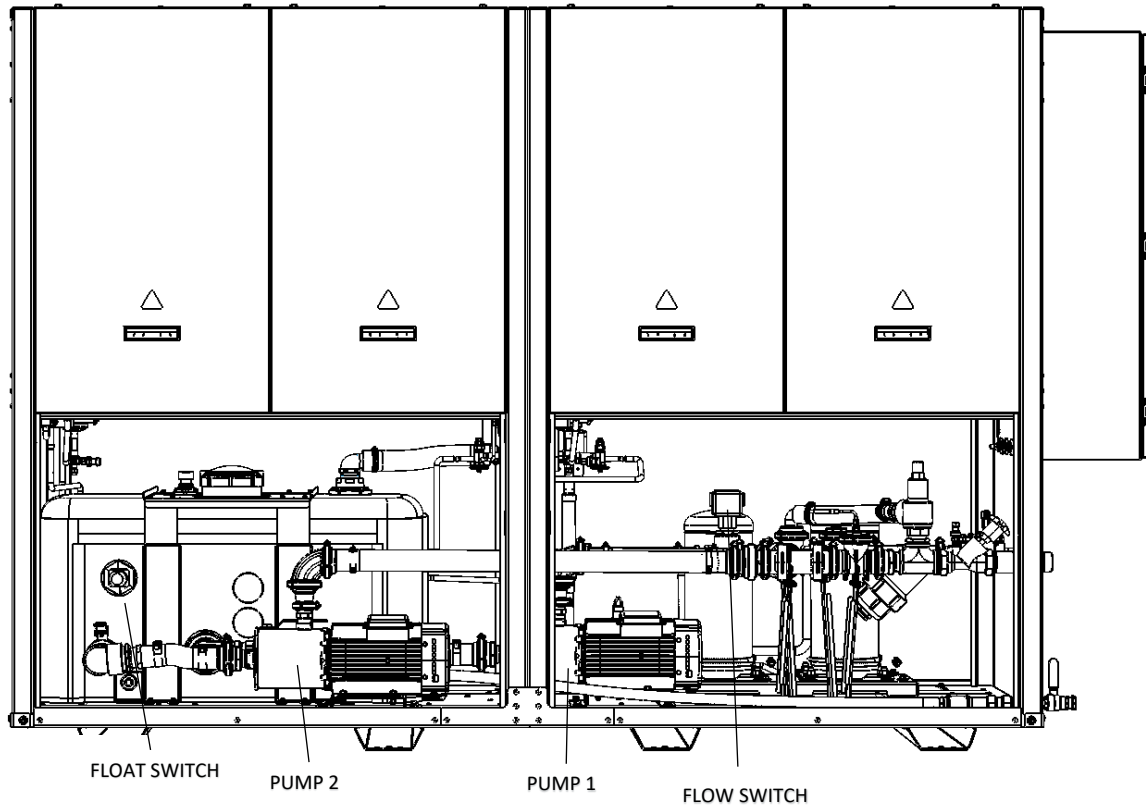


Figure 18: WO2-3000 Door Side

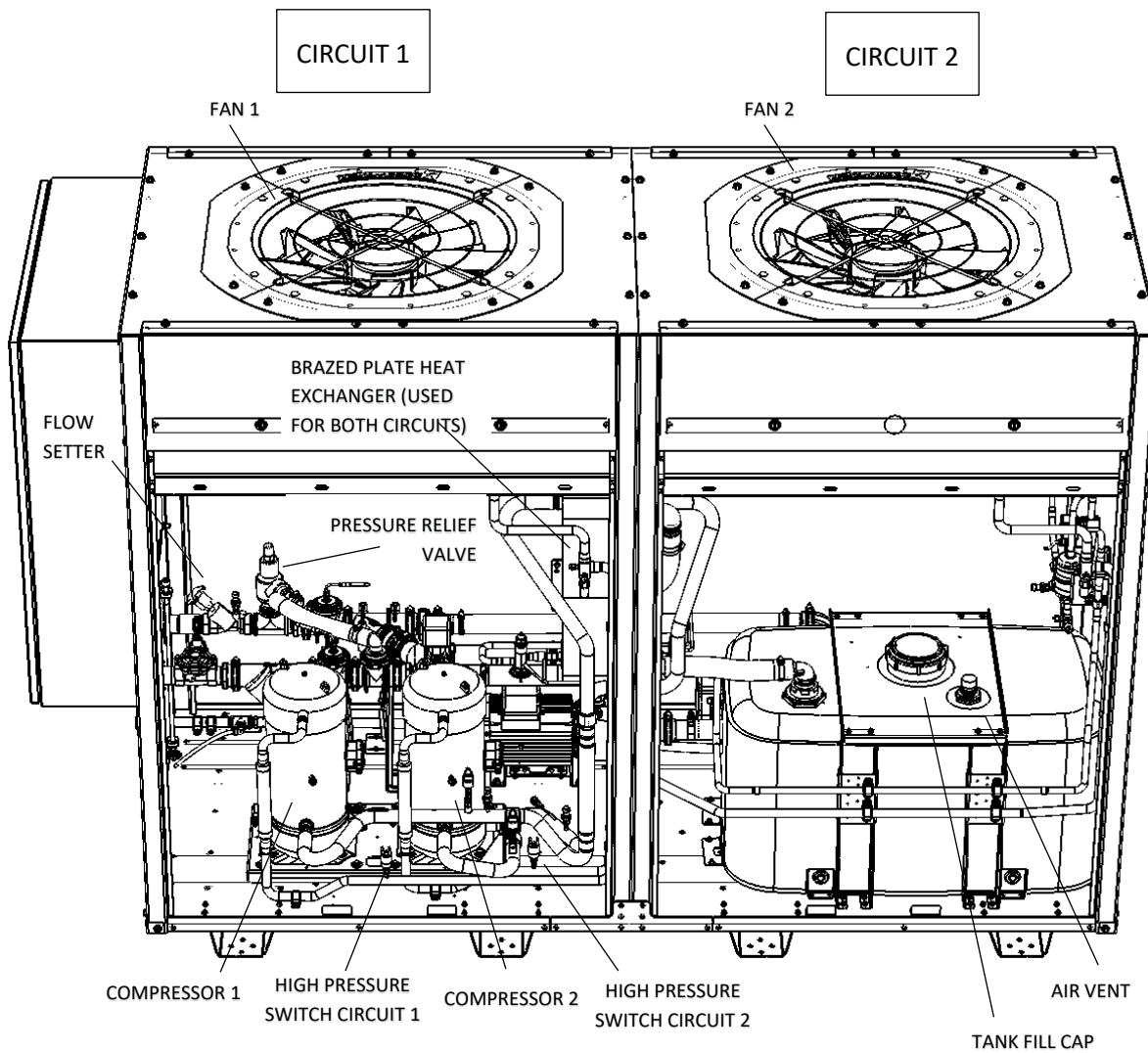


Figure 19: WO2-5000 Air Filter Side

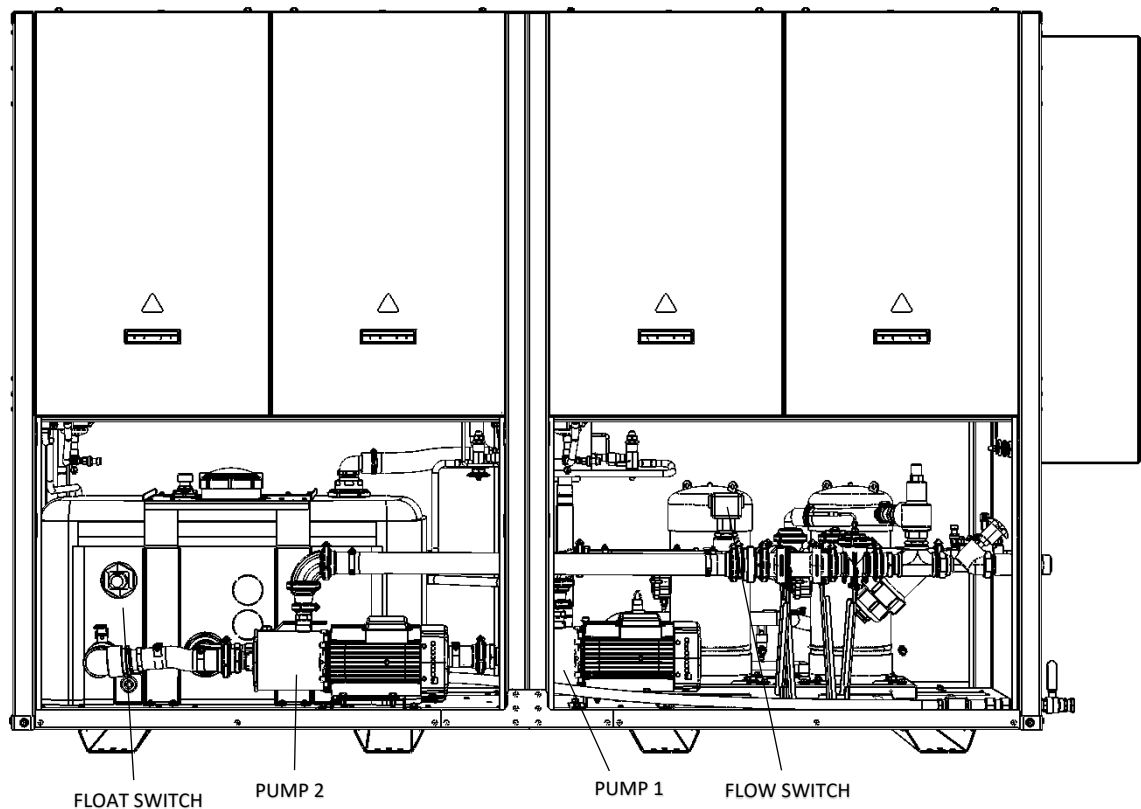


Figure 20: WO2-5000 Door Side

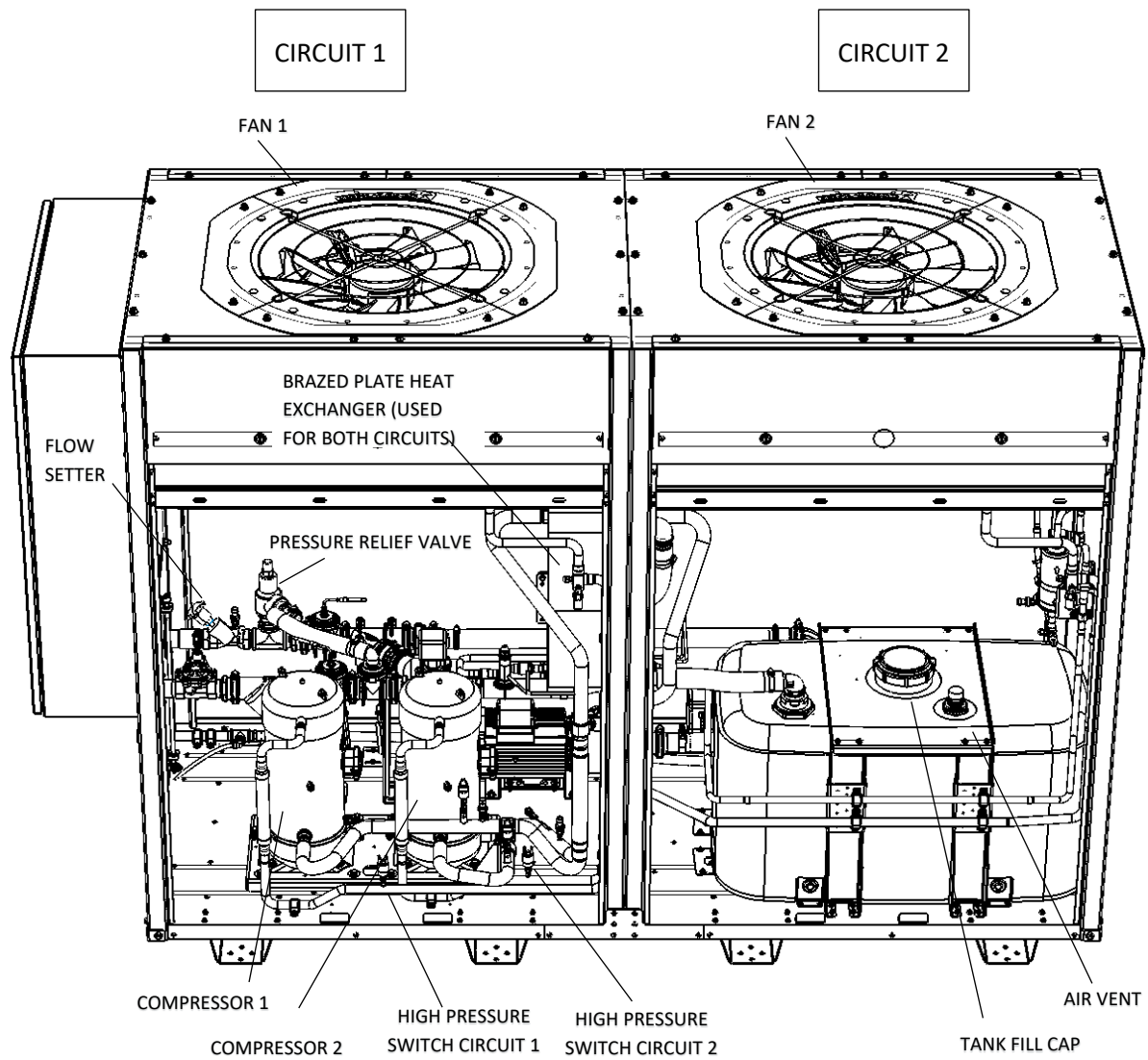


Figure 21: WO2-7500 Air Filter Side

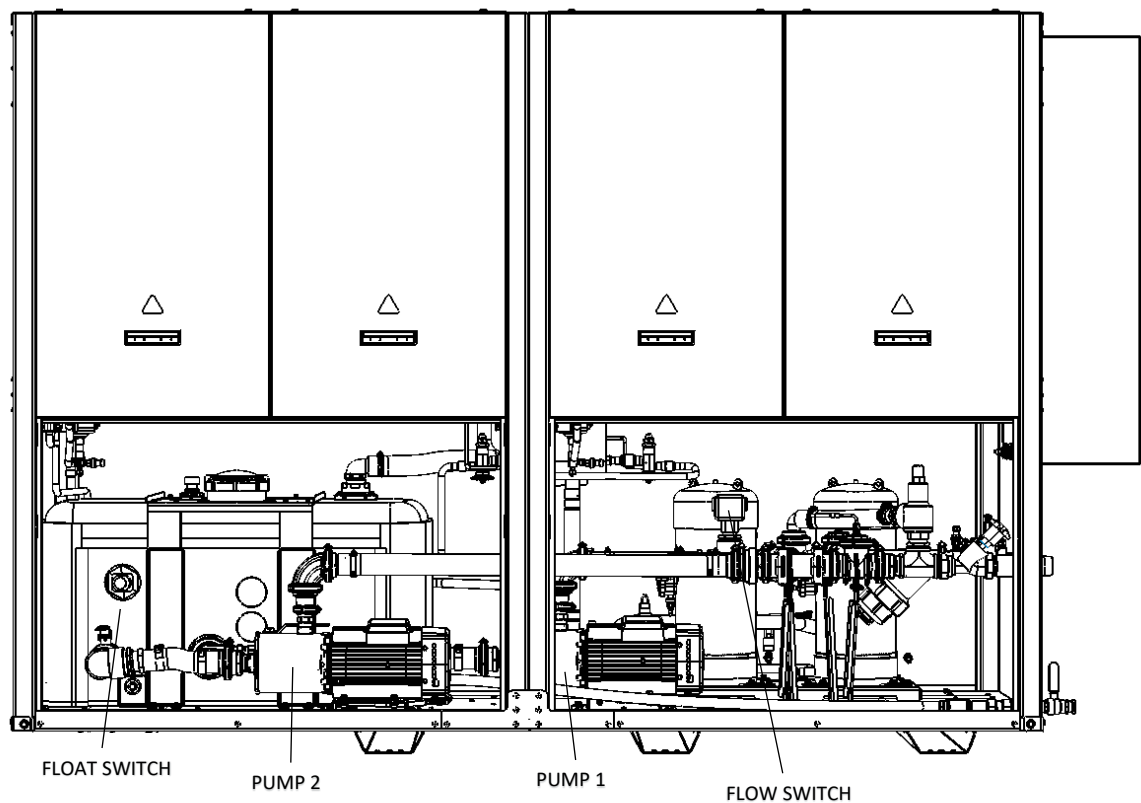


Figure 22: WO2-7500 Door Side

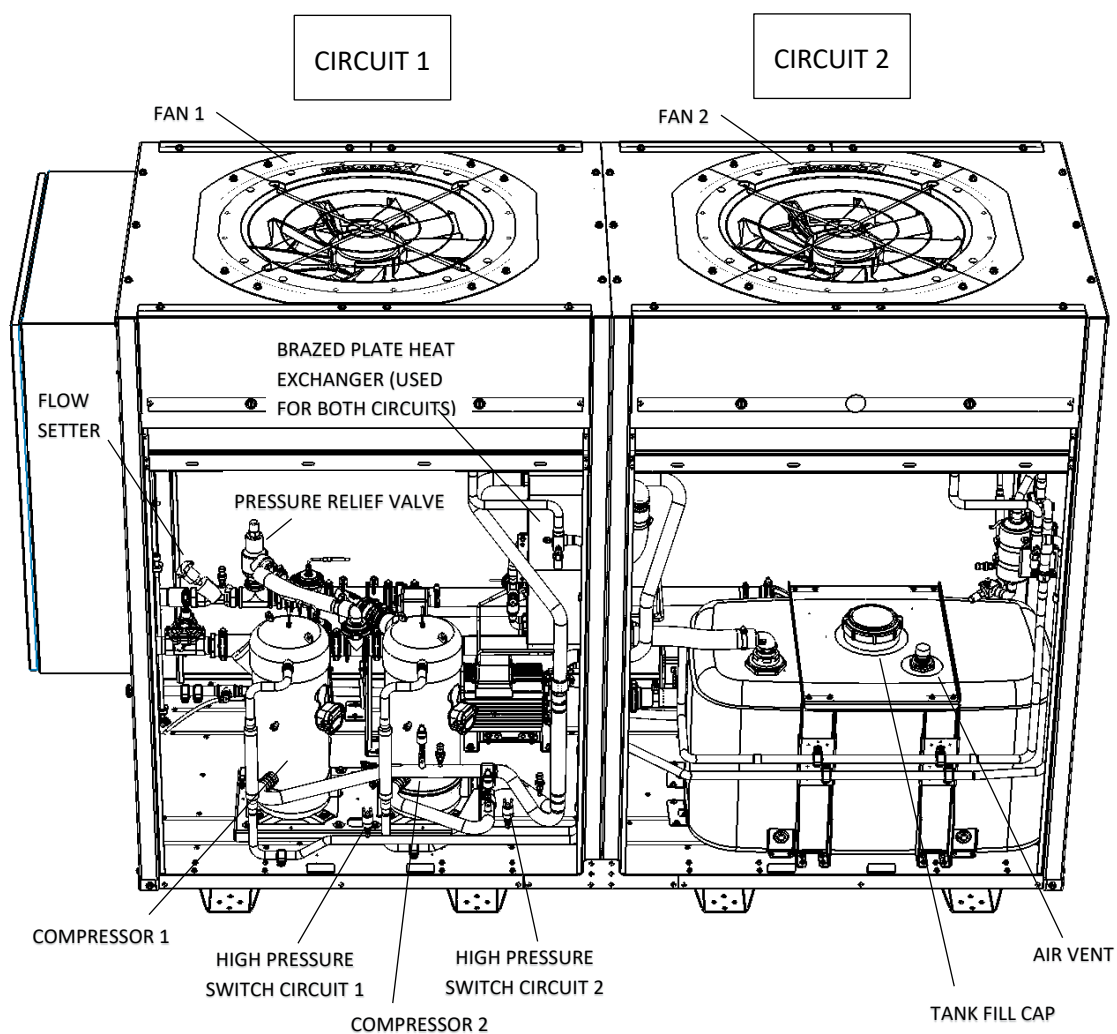


Figure 23: WO2-10000 Air Filter Side

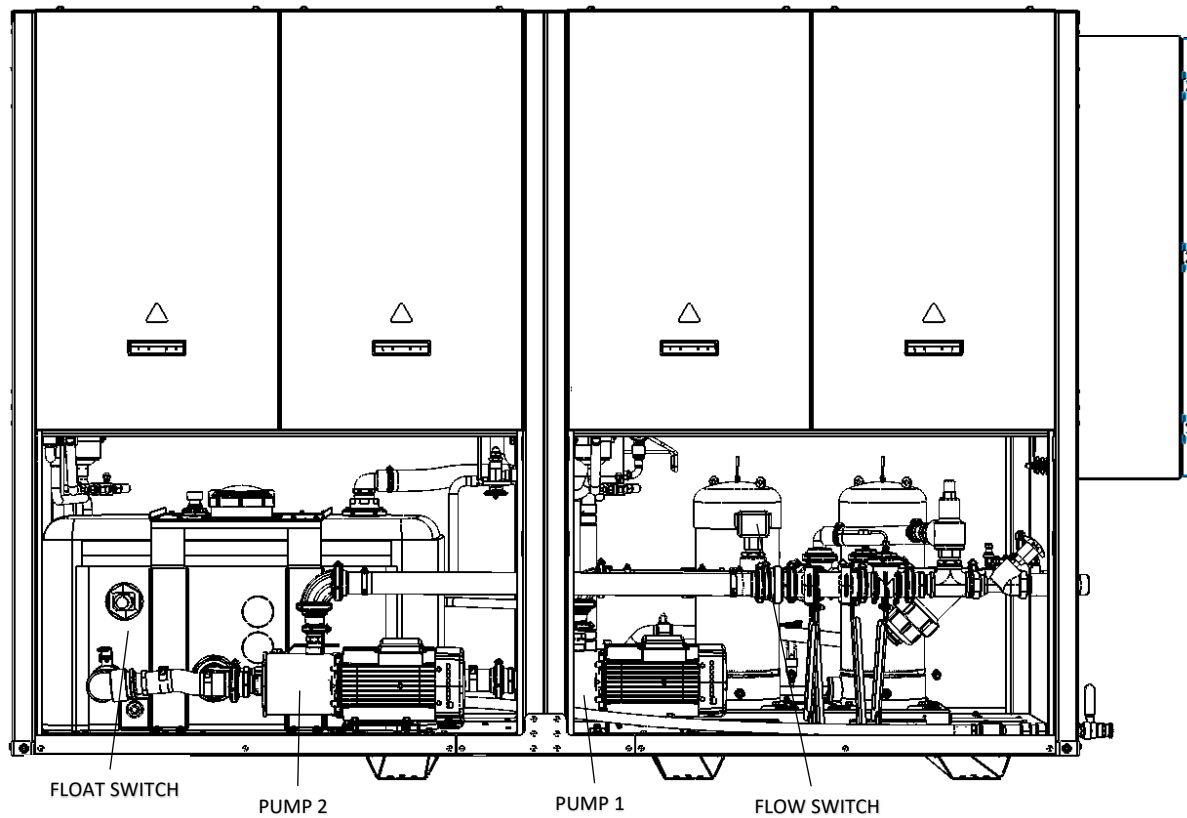


Figure 24: WO2-10000 Door Side

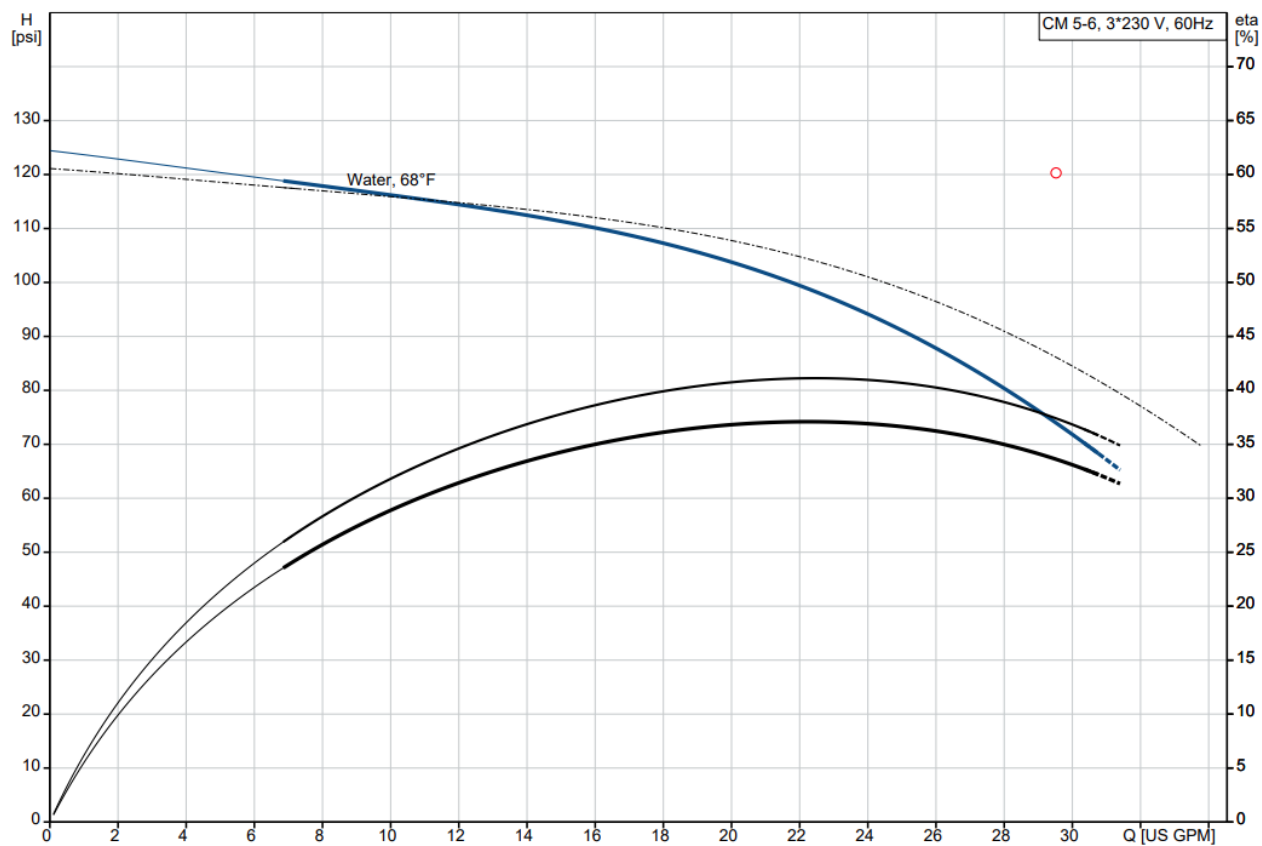
11 Spare Parts List

Description	WO2-3000	WO2-5000	WO2-7500	WO2-10000
Electrical				
Controller	5002081			
Power Supply	5004669			
Phase Monitor	5000472			
Enclosure Heater	3835107			
Relay	611279			
Pump MMP	5001572			
Pump Contactor	5000752			
Compressor MMP	5001243		5001246	5001247
Compressor Contactor	5000753	5000756	5000757	5000758
Fan Circuit Breaker	3123397			
Refrigeration				
Compressors	5007516	5007518	5007416	5007417
Fan	5005778			
Crank Case Heater	709679			
High P-Switch	3640018			
Low P-Switch	5007389			
Liquid Line Temp Sensor	5002920			
Suction Line Temp Sensor	5002920			
Liquid Line P-Transducer	4807739			
Suction Line P-Transducer	5000493			
Filter Dryer	2730004	2730006	2730005	2730039
Liquid Line Sol Valve	2710005	2710006	2710008	2610004
Liquid Line Sol Coil	2710109			2640017
Liquid Line Sol Coil Connector	4807100			
Expansion Valve	5007393	2760069	5007379	5007379
Plumbing				
Pump Assembly	714920			
Pump Part	5005541			
Suction Ball Valve	4113200			
Check Valve	5003906			
Discharge P-Transducer	5000493			
Fluid Sol Valve	5006590			
Fluid Temp Sensor	5000161			
Flow Switch	4807303			
Float Switch	3896118			
Tank Heater (Low Ambient Only)	3890103			

12 Revisions

Rev	Description	By	Date
A	Initial Release	B. Post	9/5/24
B	Updates for pCO Mini Controller	W. Wynn	12/20/24

Appendix A (Pump Curve)



Appendix B (Warranty)

Warranty Coverage

Chiller warranty terms are full parts and labor coverage for 18 months from ship date or 12 months from chiller commissioning, whichever comes first. Parts and labor cover the entire chiller up to the first external piping connection and conduit seal of electrical panel. Any issues with MR operation caused by issues outside of these terms will not be covered under the warranty and will require a service PO for Dimplex to address.

What is Included

- Full parts and labor warranty on chiller related failures as described above.
- 1 chiller startup visit, to be completed by DTS certified technician prior to magnet arrival.
- 2 Planned Maintenance (PM) visits to be completed by DTS certified technician at any time during the warranty term.
- Please refer to R-M002 for detailed instructions on the above visits.

What is Not Included

- Any failure that is not related to the chiller. i.e. site power failure, site plumbing leaks, environmentally caused failures, service requests placed in error (i.e. a call to work on the chiller, to find there are no existing issues), issues caused by MRI equipment, etc.
- Startup visits on overtime or exceeding the 4 hour on-site limit due to installation delays and issues.
- Please Note: Any service issues related to the above statements will be billable events to the customer.
- Customer Training – this must be purchased separately to be provided to the customer.
- Additional PMs or startup visits – this must be purchased separately to be provided to the customer.
- Installation of accessories that were purchased as add-ons (i.e. long distance remotes, BACnet cards, etc.) – this must be purchased separately to be provided to the customer.
- Additional Glycol required due to site installation issues or extensive pipe runs.

Appendix C (General Warranty Procedures)

Warranty Work

Before doing any work on a chiller covered under warranty, call Dimplex Thermal Solutions (DTS) and explain the problem to one of our service technicians who can then determine the best course of action. DTS will not be obligated to pay for warranty service performed without our prior approval.

Please Note: It is the service contractor's responsibility to enclose a service report/work order with each invoice. Unless pre-authorized for special circumstances, DTS will not honor invoices for work done by two or more people at a time, or for overtime labor charges. If the customer requests work that falls into either of these categories, the customer is responsible for the extra charges incurred.

Warranty Parts

All replacement parts under warranty must come from Dimplex Thermal Solutions. When it is necessary for DTS to replace parts which are under warranty, we will issue a Returned Goods Authorization (RGA) for all parts we wish to have shipped back to our factory, freight prepaid. RGAs are valid for a period of thirty (30) days. If DTS has not received the requested parts by the expiration date, the customer will be invoiced for the replacement cost at that time.

Please Note: While DTS is willing to pay freight charges one way for replacement parts, special freight charges, such as next day service, Saturday delivery, etc., are not included. If the customer requests one of these special services, they are responsible for the charges incurred.

Please note DTS standard warranty terms can change and be updated at any time. Please view our website for the most recent version.



Appendix D (Factory Contact)

Appendix D (Factory Contact)

Hours of operation are 8:00 a.m. to 5 p.m. EST, Monday to Friday.

Website: <https://www.dimplexthermal.com>

Service Support Team

- medicals@service@dimplexthermal.com
- (800) 968-5665
- (269) 349-6800

Parts Department

- partsdept@dimplexthermal.com
- (800) 968-5665
- (269) 349-6800

Appendix E (Chiller Registration)

The registration form must be submitted within 30 days of installation date or warranty coverage will be calculated from the date the chiller was shipped from the factory.

<http://www.dimplexthermal.com/service/register-chiller-location>

Register Your Chiller's Site Location

Why register your chiller?

Dimplex Thermal Solutions chillers are sold across the globe, and often bundled with other manufacturers' equipment. In order to provide a reliable chiller service network across North America, please register the chiller's site location with our inside service team. The team will map your location and make efforts to provide a reliable service experience in your area for years to come.

Appendix F (Chiller Drawings and Program Settings)



Service and Parts:

partsdept@dimplexthermal.com

Technical Support:

medicalservice@dimplexthermal.com

Sales Department:

salesdept@dimplexthermal.com

Assembled in USA. | ISO 9001 Certified

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800.968.5665 | 269.349.6800 | dimplexthermal.com



ENG-MAN-0069