



Nexus® Modular Hybrid Cooler

Model NXF

RIGGING & ASSEMBLY INSTRUCTIONS



For units ordered or manufactured after Oct 2026

The Nexus® modular hybrid cooler is unlike any other evaporative cooling equipment on the market. There are many unique features and components that should be given special attention during rigging. Each unit can consist of one to six individual modules that are controlled by a shared control panel. Each module has its own spray pump, fan(s), heat transfer module, and associated wiring. Special care should be given to the factory installed wiring between the modules during installation not to damage the wiring.

The Nexus modular hybrid cooler should be rigged and assembled as outlined in this bulletin.

These procedures should be thoroughly reviewed prior to the actual rigging and assembly of the equipment to acquaint all personnel with procedures to be followed and to ensure that all necessary equipment will be available beforehand. If outstanding circumstances require a departure from the procedures outlined in this manual, contact your local BAC Representative for guidance before proceeding.



Be sure to have a copy of the certified drawings available for reference. If you do not have a copy of these drawings, or if you need additional information about this unit, contact your local BAC Representative whose name and telephone number are located on a label on the unit. The model number and serial number of the unit will also be on a nameplate.



Table of Contents

1.	Safety Warning & Notices	4
2.	Introduction	6
	Safety	6
	Shipping	6
	Pre-Rigging Checks	8
	Freeze Protection	10
	Connection to PuriStream™ Water Treatment System with UV Light	10
	Location	10
	Unit Operation	11
3.	Unit Rigging & Assembly.....	12
	General Information	12
	Lifting of a Factory-Assembled Multi-Module Unit	12
	Lifting of an Assembled Module	13
	Lifting and Assembly of the hCore® Heat Transfer Technology Section	15
	Lifting and Assembly of the Spray Section.....	16
	Assembly of the Touchscreen Control System Panel	18
	Assembly of Multi-Module Units.....	19
	Wiring Individual Modules after Assembly	21
	Manifold and Leaving Process Fluid Temperature Sensor Installation	26
	Fan Guard Installation.....	28
	Optional Sound Attenuation	30
	Optional Tapered Discharge Hood	36
	Optional Positive Closure Dampers	38
	Optional Ducting.....	44
	PuriStream™ Water Treatment System with UV Light	45
4.	Electrical Information.....	52
	Electrical Power Quality	52
	Power Connections	52
	Inspection	52

1. Safety Warning & Notices

It is important that anyone performing work on the equipment be familiar with the following warnings and notices and take appropriate action to guard against identified hazards.

⚠ DANGER This unit must be installed in locations not accessible to the general public. Adequate safeguards (including the use of protective enclosures where necessary) should be taken with this equipment to safeguard the public from injury and to prevent property damage.

⚠ DANGER Rotating equipment will cause severe personal injury or death to persons who come in contact. Do not perform any service, maintenance, or inspection on or near the fan(s), motor(s), or inside the unit without first ensuring that the fans and pump motors are disconnected, locked out, and tagged out.

⚠ DANGER Performing work on an energized unit poses a risk of electrocution, which can cause severe personal injury, death, and/or property damage. Do not perform any service on or near the unit without first ensuring the unit is de-energized and all lockout / tagout procedures have been followed. Wait five minutes after disconnecting the voltage at all poles before opening the fan and motor assembly.

⚠ DANGER Failure to follow applicable national, state, and local codes for field wiring installation and grounding could result in improperly installed and/or grounded wiring, which poses a risk of fire and electrocution and could result in death or serious injury. To avoid these hazards, follow requirements for field wiring installation and grounding as described in the NEC and applicable local/state/national electrical codes.

⚠ WARNING The top horizontal surface of the unit is not intended to be used as a walking surface or working platform and doing so poses a risk of death or severe injury. All maintenance should be done in front of the equipment. If access to the top of the unit is desired, the end-user should use appropriate means of complying with applicable safety standards and to guard against equipment damage.

⚠ WARNING Failure to use designated lifting points can result in a dropped load, causing severe injury, death, and/or property damage. Lifts must be performed by qualified riggers following BAC published Rigging Instructions, and generally accepted lifting practices. The use of a supplemental safety sling may also be required if the lift circumstances warrant its use, as determined by the rigging contractor.

⚠ WARNING To prevent bodily injury or property damage, only qualified personnel should undertake the installation, operation, maintenance, and repair of this equipment. Proper care, procedures, and tools must be used in handling, lifting, installing, operating, maintaining, and repairing this equipment.

⚠ WARNING The forklift pockets are only to be used to lift single equipment modules with a forklift or pallet jack. Assembled multi-module units are NOT to be lifted with a forklift or pallet jack.

⚠ CAUTION Before lifting the unit, open the access hatch(es) and clear any water, snow, ice, or debris that has collected or accumulated in the unit. Such accumulations substantially add to the

equipment's lifting weight and, if not cleared or otherwise accounted for, could pose a risk of severe personal injury, death, or property damage during lifting.

⚠ CAUTION Do not touch the glass portion of either UV bulb with bare hands, which may cause it to fail prematurely. Always hold the bulb by the ceramic base.

⚠ CAUTION The PuriStream water treatment system includes two UV bulbs that contain mercury. If the lamp breaks, avoid inhalation or ingestion of the debris and avoid exposure to eyes and skin. Never use a vacuum cleaner to clean up a broken lamp as this may scatter the spilled mercury. Obey local regulations and guidelines for the removal and disposal of mercury waste.

NOTICE For weight information and piping connections, refer to the submittal drawing package.

NOTICE Avoid installing the units near warm air discharge sources such as steam vents or boiler stacks from the building. This warm air can be pulled into the unit and affect performance and possible lead to corrosion.

NOTICE Each unit must be located and positioned to prevent the introduction of discharge air into the ventilation systems of the building on which the unit is located and of adjacent buildings.

NOTICE Refer to the wiring diagram provided in the submittal package and inside the control panel for all wiring details.

NOTICE Series flow has two flexible couplings VICTAULIC® per module, parallel flow has four per module. Refer to your submittal for the flow type.

NOTICE Begin the manifold installation from the opposite end of the connection inlet/outlet.

NOTICE Some jobs will require VICTAULIC reducers to change diameters, see **Figure 21**.

2. Introduction

Safety

⚠ DANGER Failure to follow applicable national, state, and local codes for field wiring installation and grounding could result in improperly installed and/or grounded wiring, which poses a risk of fire and electrocution and could result in death or serious injury. To avoid these hazards, follow requirements for field wiring installation and grounding as described in the NEC and applicable local/state/national electrical codes.

⚠ WARNING Failure to use designated lifting points can result in a dropped load causing severe injury, death, and/or property damage. Lifts must be performed by qualified riggers following BAC published Rigging Instructions, and generally accepted lifting practices. The use of a supplemental safety sling may also be required if the lift circumstances warrant its use, as determined by the rigging contractor.

⚠ WARNING To prevent bodily injury or property damage, only qualified personnel should undertake the installation, operation, maintenance, and repair of this equipment. Proper care, procedures, and tools must be used in handling, lifting, installing, operating, maintaining, and repairing this equipment.

Adequate precautions appropriate for the installation and location of these products should be taken to safeguard the equipment and the premises from damage and the public from possible injury. **The procedures listed in this manual must be thoroughly reviewed prior to rigging and assembly. Read all warnings, cautions, and notes detailed in the margins.**

Proper field wiring and grounding is required. All field wiring MUST be performed by qualified personnel. Failure to follow code could result in death or serious injury. Improperly installed and grounded field wiring poses fire and electrocution hazards.

To avoid these hazards, you MUST follow requirements for field wiring installation and grounding as described in the NEC and your local/state/national electrical codes.

Shipping

Nexus® modular hybrid coolers are factory-assembled to ensure uniform quality with minimum field assembly ready for field piping and wiring. Additional shipping options are available to aid in unique on-site rigging situations. Refer to your submittal package for the shipping option ordered when purchased. Contact your local BAC Representative for more information. For the dimensions and weights of a specific unit or section, refer to the certified drawings.

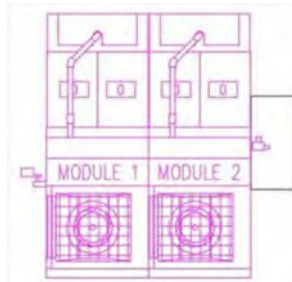


Figure 1a. Standard Shipment: Fully Assembled, Multi-Modules Shipped Connected

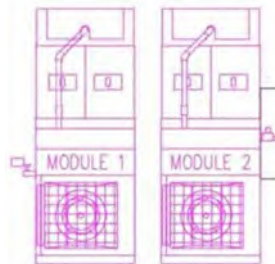


Figure 1b. Modular Shipment: Individual Modules are Shipped and are Connected, Assembled, and Wired On-Site

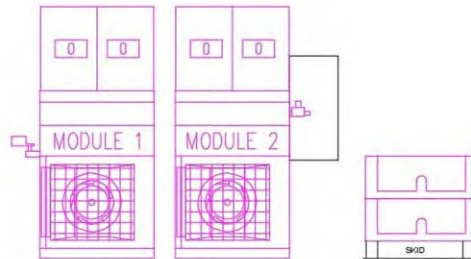


Figure 1c. Modular Shipment: Individual Modules are Shipped with the Spray Section Removed and are Connected, Assembled, and Wired On-Site

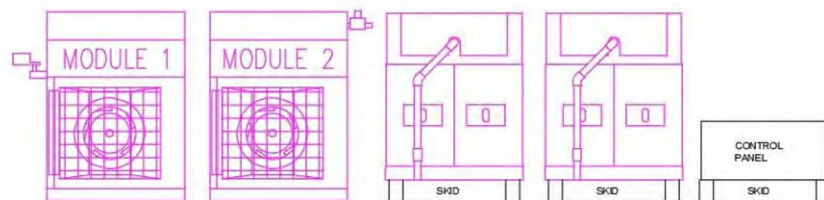


Figure 1d. Modular Shipment: Individual Modules are Shipped with the Spray Section/Heat Transfer Section Removed and the Control Panel Removed, and are Connected, Assembled, and Wired On-Site

Rigging and assembly of the Nexus® modular hybrid cooler depends on the way it was ordered to be shipped. Follow the order below for your shipment.

Figure 1a. Standard Shipment: Fully Assembled, Multi-Modules Shipped Connected		Figure 1b. Modular Shipment: Individual Modules are Shipped and are Connected, Assembled, and Wired On-Site	
Order	Page #	Order	Page #
Introduction	6-7	Introduction	6-7
Lifting of a Factory-Assembled Multi-Module Unit	13	Lifting of an Assembled Module	14
Accessory Installation	18-45	Assembly of Multi-Module Units	15
Electrical Information	51	Wiring Individual Modules after Assembly	21-26
		Accessory Installation	18-45
		Electrical Information	51
Figure 1c. Modular Shipment: Individual Modules are Shipped with the Spray Section Removed and are Connected, Assembled, and Wired On-Site		Figure 1d. Modular Shipment: Individual Modules are Shipped with the Spray Section/Heat Transfer Section Removed and the Control Panel Removed, and are Connected, Assembled, and Wired On-Site	
Order	Page #	Order	Page #
Introduction	6-7	Introduction	6-7
Lifting and Assembly of the Spray Section	16	Lifting and Assembly of the hCore Heat Transfer Technology Section	8
Lifting of an Assembled Module	14	Lifting and Assembly of the Spray Section	9-10
Assembly of Multi-Module Units	12	Lifting of an Assembled Module	7
Wiring Individual Modules after Assembly	21-26	Assembly of Multi-Module Units	12
Accessory Installation	18-45	Wiring Individual Modules after Assembly	21-26
Electrical Information	51	Accessory Installation	18-45
		Electrical Information	51

Table 1. Order of Instructions Based on the Shipping Method

Pre-Rigging Checks

CAUTION

Before lifting the unit, open the access hatch(es) and clear any water, snow, ice, or debris that has collected or accumulated in the unit. Such accumulations substantially add to the equipment's lifting weight and, if not cleared or otherwise accounted for, could pose a risk of severe personal injury, death, or property damage during lifting.

NOTICE

Avoid installing the units near warm air discharge sources such as steam vents or boiler stacks from the building. This warm air can be pulled into the unit and affect performance and possibly lead to corrosion.

NOTICE

Each unit must be located and positioned to prevent the introduction of discharge air into the ventilation systems of the building on which the unit is located and of adjacent buildings.

When the unit is delivered to the jobsite, it should be checked thoroughly to ensure all required items have been received and are free of any shipping damage prior to signing the bill of lading.

The following parts should be inspected:

- | | |
|--|--|
| ☐ hCore® heat transfer technology surface | ☐ Motorized drain valve |
| ☐ EC fan system (fan(s) and motors(s)) | ☐ High efficiency drift eliminators |
| ☐ Fan guard(s) | ☐ Outside air temperature sensor |
| ☐ Spray water basin | ☐ Interior surfaces |
| ☐ Spray water basin accessories (Mechanical makeup valve, Recirculating water pump, water diverter, radar sensor, etc.) | ☐ Exterior surfaces |
| ☐ Fluid connections | ☐ Mating surfaces between sections/modules (depending on shipping configuration) |
| ☐ Piping manifold and couplings | ☐ Optional accessories: Basin Heater(s), Positive Closure Dampers, etc. |
| ☐ Component wiring | ☐ Miscellaneous Items: All bolts, nuts, washers, and sealer tape required to assemble sections or component parts are furnished by BAC and shipped with the unit. |
| ☐ Spray distribution system | |
| ☐ Solenoid makeup valve | |
| ☐ PuriStream™ water treatment system components: | |
| o Both UV lights | |
| o Metering pump | |
| o Chemical injection pump (if used) | |
| o Conductivity sensor | |

Unit Weights

Before rigging any unit, the weight of each section should be verified from the unit certified drawing. Unit print weights include the final assembled unit with all accessories.

Anchoring

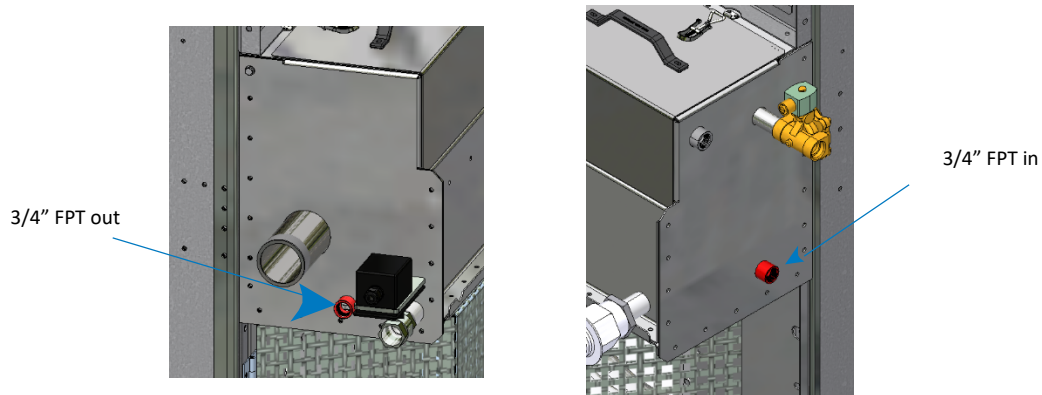
Seven-eighths inch (7/8") diameter holes are provided in the bottom flange of the lower section for bolting the unit to the support beams. Refer to the suggested support drawing included in the submittal for location and quantity of the mounting holes. **The unit must be level for proper operation** (1/4" over length of unit). Support beams must also be level; Shims should be used between the unit base and the support beams to level the units, the bearing length should meet the minimum bearing area specified. Anchor bolts must be minimum SAE J429 Grade 5 or ASTM F3125, provided by others. The IBC rating is only certified with standard anchorage locations. Using alternate anchorage locations or alternate steel supports will void any IBC wind or seismic ratings. Contact your local BAC Representative for details.

Freeze Protection

These products must be protected by mechanical and operational methods against damage and/or reduced effectiveness whenever a unit is stored or idle in freezing ambient conditions. Please refer to the *Nexus® Modular Hybrid Cooler Operation and Maintenance Manual*, or contact your local BAC Representative for recommended cold weather operation and storage recommendations.

Connection to PuriStream™ Water Treatment System with UV Light

Units include (2) 3/4" FPT connections on either side of the cold-water basin for PuriStream water treatment system, provided by others. Connections have removeable plugs and pipe thread sealant for leak-free operation.



Location

NOTICE Avoid installing the units near warm air discharge sources such as steam vents or boiler stacks from the building. This warm air can be pulled into the unit and affect performance and possible lead to corrosion.

NOTICE Each unit must be located and positioned to prevent the introduction of discharge air into the ventilation systems of the building on which the unit is located and of adjacent buildings.

All evaporative cooling equipment must be located to ensure an adequate supply of fresh air to the unit air intakes. When units are located adjacent to walls or in enclosures, care must be taken to ensure the warm, saturated, discharge air is not deflected and recirculated back to the air intakes.

Adequate space for maintenance and inspection surrounding the unit should follow the layout guidelines located on www.BaltimoreAircoil.com. Allow adequate space for access to the hinged EC fan system access panel, spray distribution system, PuriStream™ water treatment system panel and the touchscreen control system.

Unit Operation

Prior to start-up and unit operation, refer to the *Nexus® Modular Hybrid Cooler Operation & Maintenance Manual* shipped with the unit, on www.Baltimoreaircoil.com, and also available through your local BAC Representative.

3. Unit Rigging & Assembly

General Information

⚠ WARNING

Failure to use designated lifting points can result in a dropped load causing severe injury, death, and/or property damage. Lifts must be performed by qualified riggers following BAC published Rigging Instructions, and generally accepted lifting practices. The use of a supplemental safety sling may also be required if the lift circumstances warrant its use, as determined by the rigging contractor.

NOTICE

For weight information and piping connections, refer to the submittal drawing package.

Refer to **Table 2** and **Figure 2** for the required minimum spreader bar length W1 and W2 and the recommended vertical dimension "H".

Model Number	Number of Modules	H	W1	W2
Installation of a Factory-Assembled Multi-Module Unit (See Figure 1a, page 2)				
NXF-0403-x-x2	2	4'-0"	4'-2"	2'-1"
NXF-0403-x-x3	3	10'-0"	4'-2"	2'-1"
NXF-0403-x-x4	4	10'-0"	4'-2"	2'-1"
NXF-0403-x-x5	5	16'-0"	4'-2"	2'-1"
NXF-0403-x-x6	6	16'-0"	4'-2"	2'-1"
NXF-0603-x-x2	2	4'-0"	6'-2"	3'-1"
NXF-0603-x-x3	3	10'-0"	6'-2"	3'-1"
NXF-0603-x-x4	4	10'-0"	6'-2"	3'-1"
NXF-0603-x-x5	5	16'-0"	6'-2"	3'-1"
NXF-0603-x-x6	6	16'-0"	6'-2"	3'-1"
Installation of a Single Module or a Modular Shipment (See Figures 1b, 1c, and 1d on page 7)				
NXF-0403-x	1-6	4'-0"	4'-2"	2'-1"
NXF-0603-x	1-6	4'-0"	6'-2"	3'-1"

Table 2. Minimum Vertical Dimension and Spreader Bar Length

Lifting of a Factory-Assembled Multi-Module Unit

⚠ DANGER

Failure to follow applicable national, state, and local codes for field wiring installation and grounding could result in improperly installed and/or grounded wiring, which poses a risk of fire and electrocution and could result in death or serious injury. To avoid these hazards, follow requirements for field wiring installation and grounding as described in the NEC and applicable local/state/national electrical codes.

⚠ WARNING

Failure to use designated lifting points can result in a dropped load causing severe injury, death, and/or property damage. Lifts must be performed by qualified riggers following BAC published Rigging Instructions, and generally accepted lifting practices. The use of a supplemental safety sling may also be required if the lift circumstances warrant its use, as determined by the rigging contractor.

⚠ CAUTION

Only personnel qualified to do so should undertake operation, maintenance and repair of this equipment. Proper care, personal protective equipment, procedures and tools must be used in handling, lifting, installing, operating, maintaining, and repairing this equipment to prevent personal injury and/or property damage.

The instructions below are applicable for the configurations shown in Figure 1a on page 6. Refer to the Shipping section in Section 2 for the order of rigging and assembly based on the shipping method applicable to order. Refer to your submittal for details.

Products that are shipped fully-assembled as one unit come with a shared lifting bar that spans the length of the unit. The number of mounting points will be determined by the number of modules (see **Figure 2**). All wiring between modules is completed at the factory. Care should be taken to avoid damaging protruding components such as valves, piping connections, and wiring conduit.

Prior to lifting, ensure all lifting lines are clear of obstructions to avoid damage to external piping, headers, or connections.

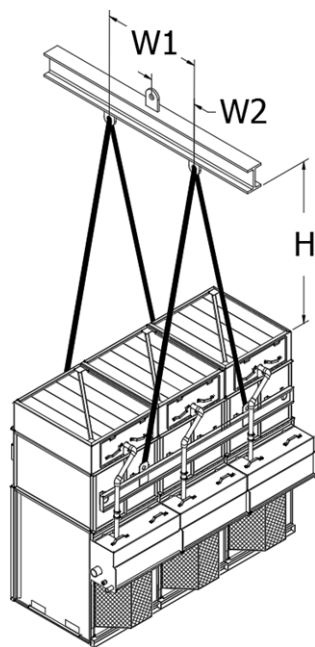


Figure 2. Lifting of Factory-Assembled Multi-Module Unit (Three Module Unit Shown)

Lifting of an Assembled Module

⚠ WARNING

Failure to use designated lifting points can result in a dropped load causing severe injury, death, and/or property damage. Lifts must be performed by qualified riggers following BAC published Rigging Instructions, and generally accepted lifting practices. The use of a supplemental safety sling may also be required if the lift circumstances warrant its use, as determined by the rigging contractor.

⚠ WARNING

The forklift pockets are only to be used to lift single equipment modules with a forklift or pallet jack. Assembled multi-module units are NOT to be lifted with a forklift or pallet jack.

⚠ WARNING

To prevent bodily injury or property damage, only qualified personnel should undertake the installation, operation, maintenance, and repair of this equipment. Proper care, procedures, and tools must be used in handling, lifting, installing, operating, maintaining, and repairing this equipment.

The instructions below are applicable for configurations ordered as shown in Figures 1b, 1c, and 1d. Refer to the Shipping section in Section 2 for the order of rigging and assembly based on the shipping method applicable to your order. Refer to your submittal for details.

Refer to **Table 2** and **Figures 2a** and **2b** for each section's required minimum spreader bar length W1 and W2 (if applicable) and the recommended vertical dimension "H".

Prior to lifting, ensure all lifting lines are clear of obstructions to avoid damage to external piping, headers, or connections.

Refer to **Assembly of Multi-Module Units** section below.

Lifting and Assembly of the hCore® Heat Transfer Technology Section

⚠ WARNING

Failure to use designated lifting points can result in a dropped load causing severe injury, death, and/or property damage. Lifts must be performed by qualified riggers following BAC published Rigging Instructions, and generally accepted lifting practices. The use of a supplemental safety sling may also be required if the lift circumstances warrant its use, as determined by the rigging contractor.

⚠ WARNING

To prevent bodily injury or property damage, only qualified personnel should undertake the installation, operation, maintenance, and repair of this equipment. Proper care, procedures, and tools must be used in handling, lifting, installing, operating, maintaining, and repairing this equipment.

The instructions below are applicable for configurations ordered as shown in Figure 1d on page 7. Refer to the Shipping section in Section 2 for the order of rigging and assembly based on the shipping method applicable to your order. Refer to your submittal for details. You may rig the lower fan section first onto the steel or assemble the unit on the ground but only one module at a time. To lift multiple modules at once, use the factory supplied lifting bar shown in Figure 2.

1. Apply sealer tape around the perimeter of the lower fan section as shown on **Figure 3a**. Be sure to overlap sealer tape anywhere two ends meet by 1 inch, including in the corners.
2. Lift the hCore Heat Transfer Technology Section onto the lower fan section using the specified lifting locations in **Figure 3b**.
3. Align sections using drift pins and secure the two sections together using the factory-supplied fasteners. Note the fastener type varies on the location and the unit's material of construction. See **Figure 7** and **Table 3** for more details. Repeat as necessary for all modules of the unit.

Sealer Tape Applied
Around the Perimeter

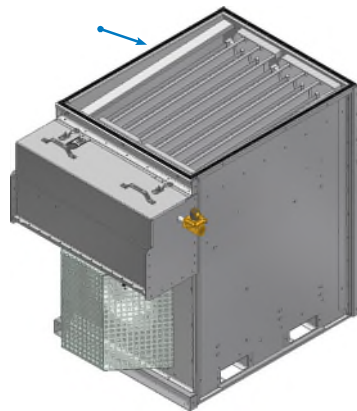


Figure 3a. Applying Sealer Tape to the Lower Fan Section

Lifting Points
(Qty 4 per module)

Lifting Points
(2 on this side not shown)

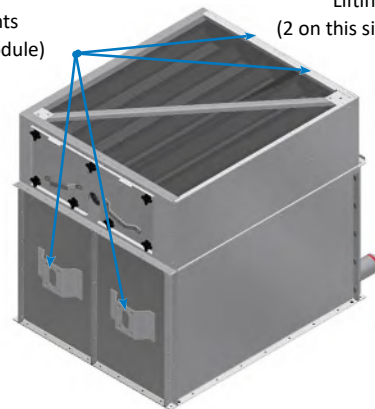


Figure 3b. hCore® Heat Transfer Technology Section Lifting

Lifting and Assembly of the Spray Section

⚠ WARNING

Failure to use designated lifting points can result in a dropped load causing severe injury, death, and/or property damage. Lifts must be performed by qualified riggers following BAC published Rigging Instructions, and generally accepted lifting practices. The use of a supplemental safety sling may also be required if the lift circumstances warrant its use, as determined by the rigging contractor.

⚠ WARNING

To prevent bodily injury or property damage, only qualified personnel should undertake the installation, operation, maintenance, and repair of this equipment. Proper care, procedures, and tools must be used in handling, lifting, installing, operating, maintaining, and repairing this equipment.

The instructions below are applicable for configurations ordered as shown in Figures 1c and 1d on page 7. Refer to the Shipping section in Section 2 for the order of rigging and assembly based on the shipping method applicable to your order. Refer to your submittal for details.

1. **For Figure 1c Only:** Remove the access panel from the spray section, saving the hardware. Then carefully remove the eliminators through the opening after noting each eliminator's orientation and location. The eliminators will be replaced after installing the spray piping. See **Figures 4 and 7**.



Figure 4. Spray Section with Door Panel Removed

2. **For Figure 1c Only:** Apply sealer tape to top of the hCore Heat Transfer Technology section per **Figure 5**. Overlap the sealer tape 1 inch in the corners. The spray section can then be lifted and attached on all four sides to the lower section using factory-supplied fasteners. Note the fastener type varies on location and unit material of construction. See **Figure 6** and **Table 3**.

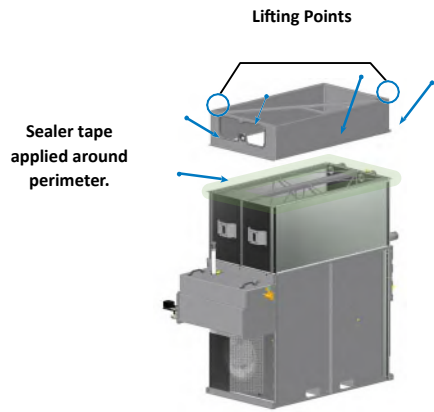


Figure 5. Attaching the Spray Section to the Module

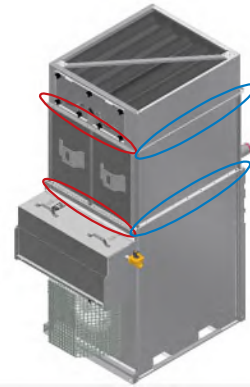


Figure 6. Fastener Type for the Spray Section Assembly

Unit Material of Construction	End Fastener Type (Red Circled Area)	Side Fastener Type (Blue Circled Area)
Thermosetting Hybrid Polymer	5/16" Stainless Steel Nuts and Bolts	5/16" Tappers
Stainless Steel	5/16" Stainless Steel Nuts and Bolts	5/16" Stainless Steel Bolts

Table 3. Fastener type depending on material of construction

3. **For Figures 1c and 1d:** If it is still in place, remove the access panel from the spray section, saving the hardware. Install the water distribution system pipe between the two rubber couplings (see **Figure 7**). Slide the pipe into the bracket and ensure the nozzles are pointing downward. Place and install two rubber couplings at the top and bottom of the spray pipe. If they were already removed, replace the eliminators into the spray section, noting the original location and orientation. Replace the access panel (see **Figure 4**). Repeat as necessary for all modules of the unit.

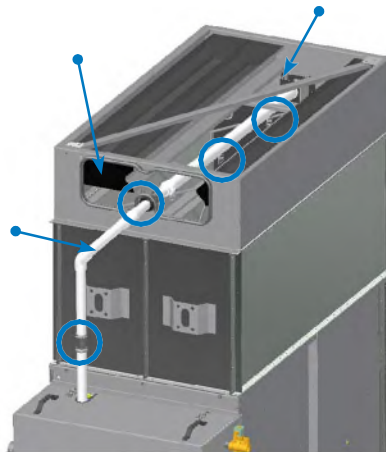


Figure 7. Spray Pipe Install, Upper Pipe and Eliminator Install

Assembly of the Touchscreen Control System Panel

⚠ WARNING

To prevent bodily injury or property damage, only qualified personnel should undertake the installation, operation, maintenance, and repair of this equipment. Proper care, procedures, and tools must be used in handling, lifting, installing, operating, maintaining, and repairing this equipment.

The instructions below are applicable for configurations ordered as shown in Figure 1d on page 7. Refer to the Shipping section in Section 2 for the order of rigging and assembly based on the shipping method applicable to your order. Refer to your submittal for details.

1. After the module is fully assembled, attach the bracket and mounting channel for the control panel. Measure the control panel width before installing the mount channel to match the mounting location. Also check the control panel location on Face A or B. Refer to your submittal drawing (see **Figures 8 and 9**).
2. Attach the control panel using the mounting holes at each corner. Ensure the space from the bottom of control panel to the bottom of unit is 32".

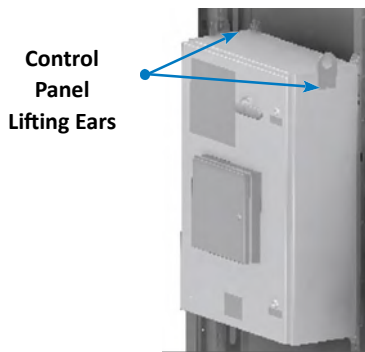


Figure 8. Touchscreen Control System Panel

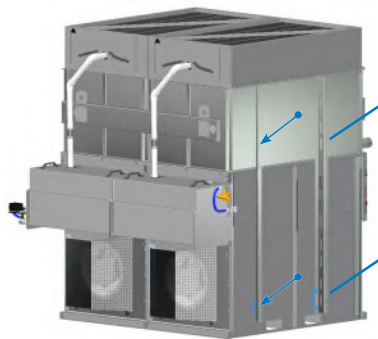


Figure 9. Installation of the Control Panel on the Mount Channels

Assembly of Multi-Module Units

⚠ WARNING

Failure to use designated lifting points can result in a dropped load causing severe injury, death, and/or property damage. Lifts must be performed by qualified riggers following BAC published Rigging Instructions, and generally accepted lifting practices. The use of a supplemental safety sling may also be required if the lift circumstances warrant its use, as determined by the rigging contractor.

⚠ WARNING

The forklift pockets are only to be used to lift single equipment modules with a forklift or pallet jack. Assembled multi-module units are NOT to be lifted with a forklift or pallet jack.

⚠ WARNING

To prevent bodily injury or property damage, only qualified personnel should undertake the installation, operation, maintenance, and repair of this equipment. Proper care, procedures, and tools must be used in handling, lifting, installing, operating, maintaining, and repairing this equipment.

The instructions below are applicable for configurations ordered as shown in Figures 1b, 1c, and 1d on page 7. Refer to the Shipping section for the order of rigging and assembly based on the shipping method applicable to your order. Refer to your submittal for details.

Lift the first module into the final installation location. Refer to **page 2** for lifting of a single module.

1. Prepare the second module's spray water basin by applying sealer tape (BAC part #554009) as shown in **Figure 10b**. Where the sealer tape meets in the corners, be sure to overlap one inch.
2. Maneuver the second module and slide it towards the receiving module. See **Figure 10a**.
3. Bolt the modules together at the locations shown in **Figure 10c**. Use 3/8" bolts at the circled locations and 5/16" bolts in the spray water basin.
4. Repeat steps 2 through 4 for the remaining modules.
5. Test the spray water basin for leaks by plugging drain, filling basin, and observing the unit for leaks, especially at seams.

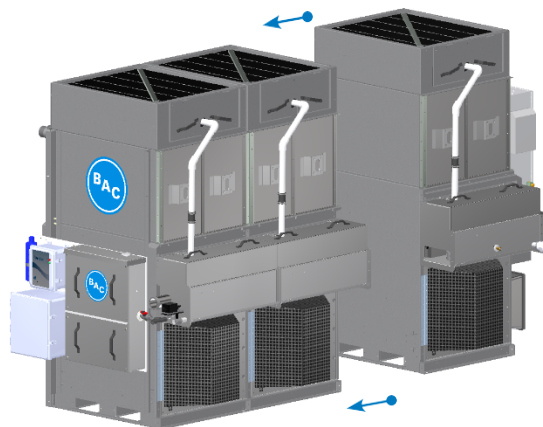


Figure 10a. Module to Module Assembly

1" Sealer Tape Overlap

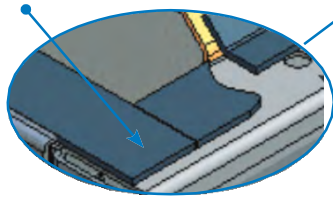


Figure 10b. Sealer Tape Locations

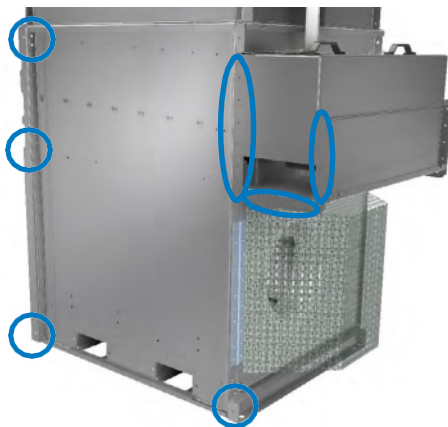


Figure 10c. Location of Bolts Required to Join Modules

Wiring Individual Modules after Assembly

⚠ DANGER

Failure to follow applicable national, state, and local codes for field wiring installation and grounding could result in improperly installed and/or grounded wiring, which poses a risk of fire and electrocution and could result in death or serious injury. To avoid these hazards, follow requirements for field wiring installation and grounding as described in the NEC and applicable local/state/national electrical codes.

NOTICE

Refer to the wiring diagram provided in the submittal package and inside the control panel for all wiring details.

The instructions below are applicable for configurations ordered as shown in Figures 1b, 1c, and 1d on page 7. Refer to the Shipping section on page 2 for the order of rigging and assembly based on the shipping method applicable to your order. Refer to your submittal for details.

The wires will be labeled and identified as follows:

1. **Fan power (Large 4 Wire Cable):**

Fan	Cable Label
Fan 1	CBL-MO1
Fan 2	CBL-MO2
Fan 3	CBL-MO3
Fan 4	CBL-MO4
Fan 5	CBL-MO5
Fan 6	CBL-MO6

2. **Fan Communications:** CBL600

3. **Pumps:**

Pump	Cable Label
Pump 1	CBL-PMP1
Pump 2	CBL-PMP2
Pump 3	CBL-PMP3
Pump 4	CBL-PMP4
Pump 5	CBL-PMP5
Pump 6	CBL-PMP6

4. **External IO Components:**

Component	Cable Label
Conductivity Sensor (in PuriStream panel)	CBL410
Drain Valve	CBL-DRNVALVE
Make Up Valve	CBL-INLETVALVE

PCD1	CBL-PCD1
Positive Closure Damper (PCD) 2 (If equipped)	CBL-PCD-2
Basin Heater Enable (Dry Contact-NO)	CBL1119
General Alarm (Dry Contact-NO)	CBL1113
Radar Sensor	CBL726
Leaving Temperature Sensor	CBL724

Locating Bundled Wires after Shipping

1. Remove the back cover panel located on the opposite side of spray water basin (Face D as indicated on Submittal Drawings). Find the fan wire stored under cover panel for each module. See **Figure 11**.
2. Remove the side cover panel located on the opposite side of control panel. Find the component wire (drain valve, or make-up valve) stored under cover panel. See **Figure 12**.
3. Remove the basin cover, then find pump wire stored within the basin. See **Figure 13**.

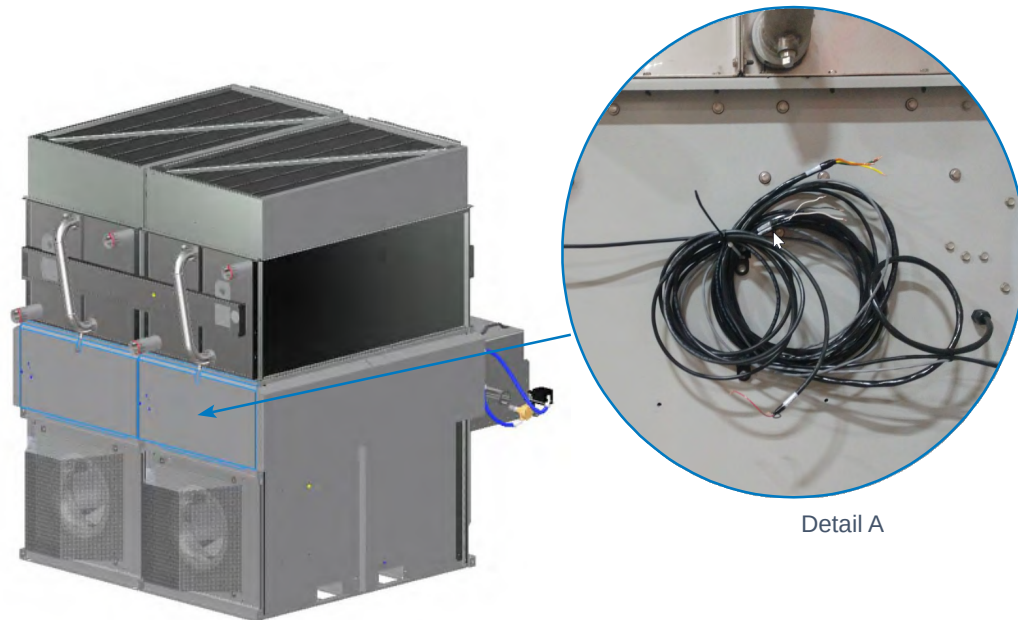


Figure 11. Location of Fan Wiring

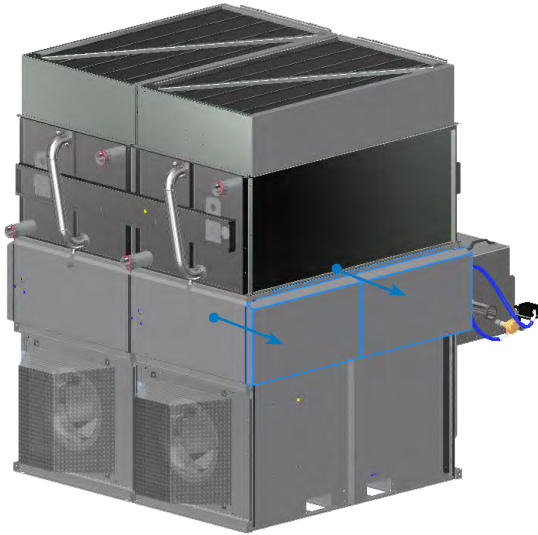


Figure 12. Location of Component Wiring

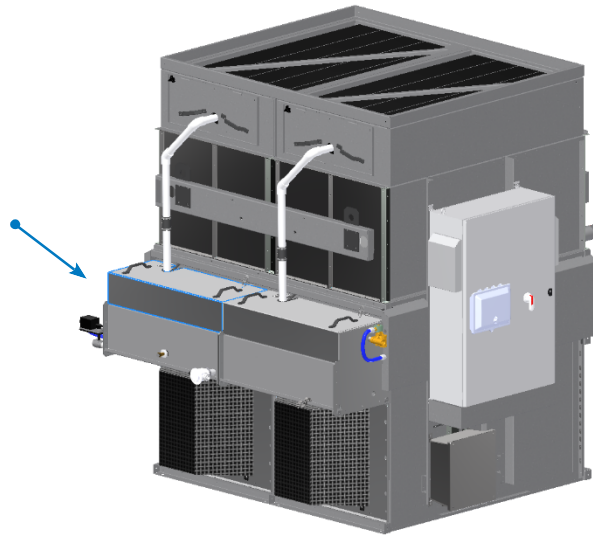


Figure 13. Location of Pump Wire

Routing Wires to the Touchscreen Control System Panel

1. Remove the rest of cover panels around control panel and above the spray water basin. Keep the hardware available for reinstallation of panels. See **Figure 14**.
2. Find the drain valve component wires on the side of unit opposite the control panel. Pull the wire around the corner to back (opposite the basin side) and secure it to the mounts with zip ties (provided by BAC). Pull the wire through the first notch from top and secure the wire to the hole with zip ties. See **Figure 12** and **15**.

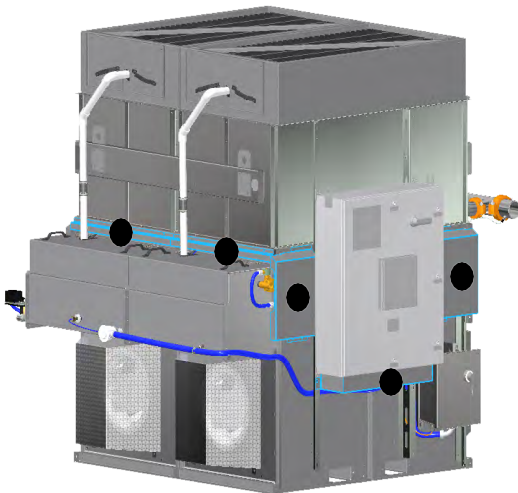


Figure 14. Location of Cover Panels Around the Touchscreen Control System Panel (Optional Basin Heater Shown)

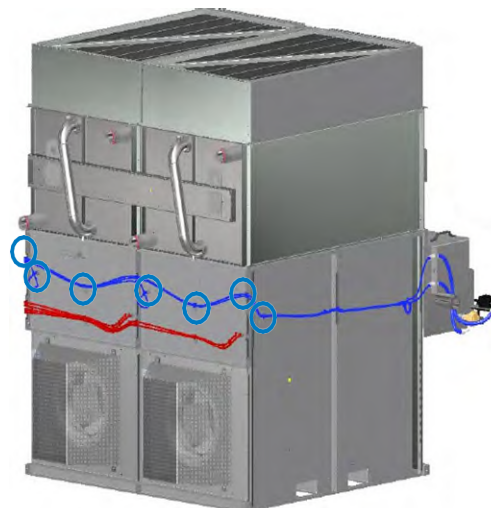


Figure 15. Fan Communication Wire and Component Wire Routing

3. Pull the fan communication wire through the first notch and the wire mount along with the component wire. Secure the wire with zip ties. The conductivity sensor, drain valve, and fan communication wire run together to the control panel. See **Figure 15**.
4. Route the fan power wire through the third notch from the top and wire mount, then secure the wire with zip ties to the unit. The fan power wire may use the second (middle) notch on NXF-0603 units when need. See **Figure 16**.

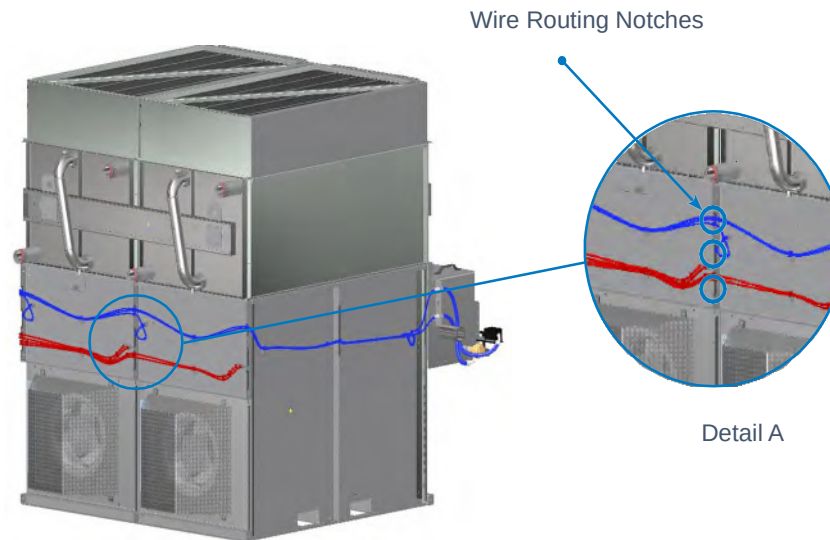


Figure 16. Fan Power Wire (Red Wire)

5. Read all wire labels and refer to the fan wiring diagram found inside the touchscreen control panel before proceeding to the next step.
6. Route the fan power wire through the bottom oblong hole with the edge trim on the control panel mounting channel. Pull each wire through each cord grip at the bottom of the control panel, then connect each connector of wire to the correct terminal block position. See **Figure 17**.
7. Route the fan communication and component wires through the oblong hole with edge trim on the control panel mount channel. Pull each wire through each cord grip at the bottom of control panel, then connect each connector of wire to the correct terminal blocks position. See **Figure 17**.

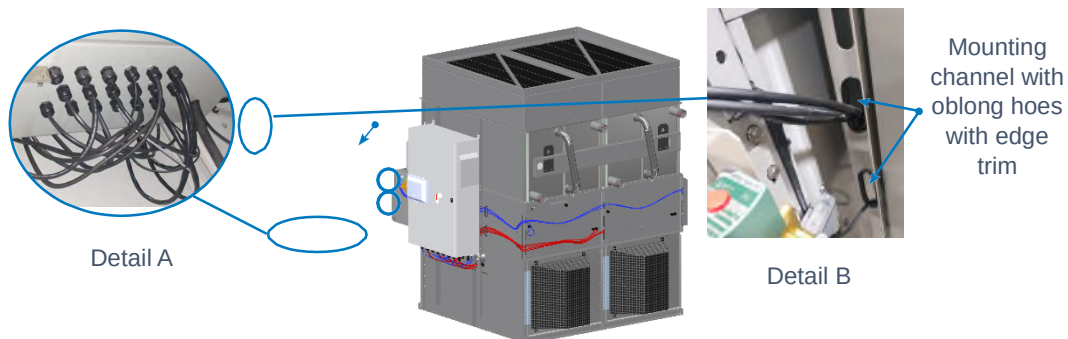


Figure 17. Wire to the touchscreen control system panel

8. Route pump wire through grommet at top of spray water basin. Follow wire path toward the control panel end. Pull pump wire through top oblong hole with edge trim on control panel mount channel. Pull each wire through individual cord grips at the bottom of control panel, then connect each wire to the correct terminal block. Please follow wire diagram located within control panel. See **Figure 18**.

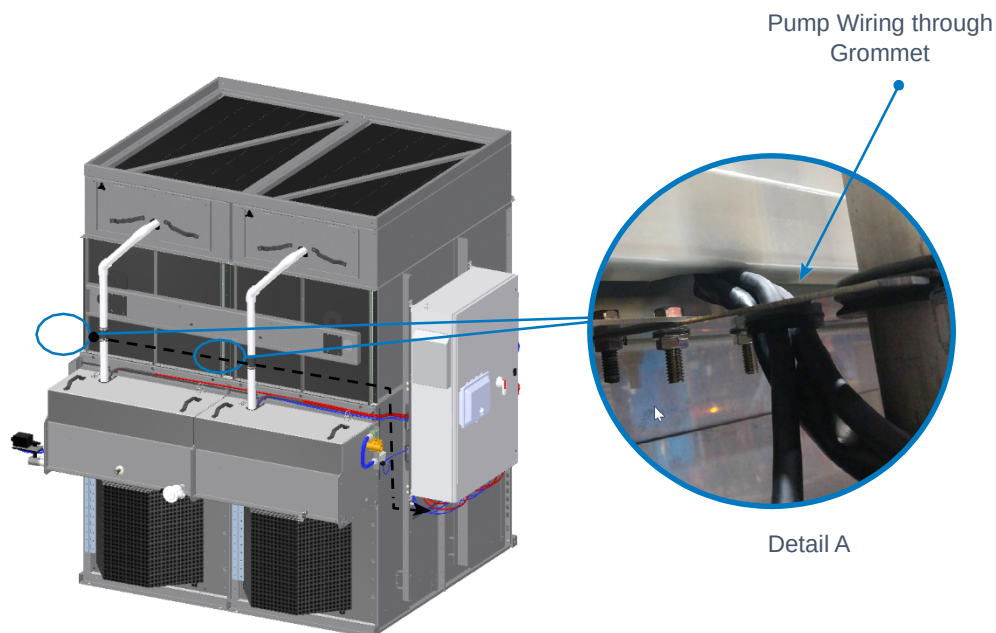


Figure 18. Pump Wire to the touchscreen control system panel

9. Use a torque wrench on all cord grips and torque down to 50 in-lbs. (5.65 Nm)
10. Install the wire cover panel at the top of the spray water basin. See **Figure 19**. Install the cover panel at the back and side. See **Figure 11** and **12**. Finally, install the cover panels a
11. round touchscreen control system panel, see **Figure 14**.

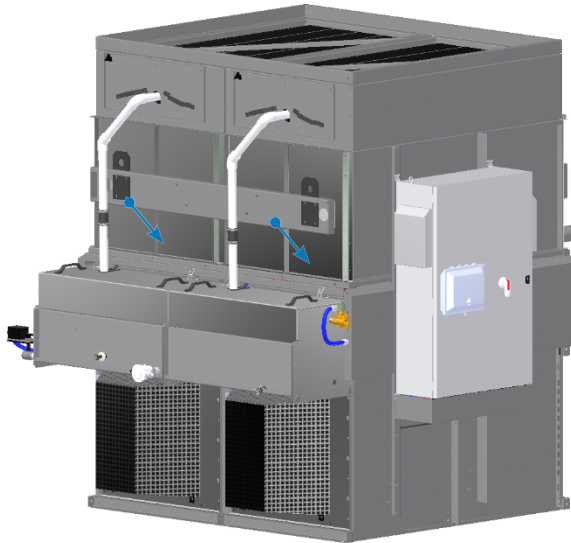


Figure 19. Install Wire Cover

Manifold and Leaving Process Fluid Temperature Sensor Installation

WARNING

To prevent bodily injury or property damage, only qualified personnel should undertake the installation, operation, maintenance, and repair of this equipment. Proper care, procedures, and tools must be used in handling, lifting, installing, operating, maintaining, and repairing this equipment.

NOTICE

Series flow has two flexible couplings VITAULIC® per module, parallel flow has four per module. Refer to your submittal for the flow type.

NOTICE

Begin the manifold installation from the opposite end of the connection inlet/outlet.

NOTICE

Some jobs will require VITAULIC reducers to change diameters, see **Figure 21**.

NOTICE

Refer to the wiring diagram provided in the submittal package and inside the control panel for all wiring details.

The instructions below are applicable for configurations ordered as shown in Figures 1a, 1b, 1c, and 1d on page 7. Figure 1a accessories may be factory installed. Refer to the Shipping in Section 2 for the order of rigging and assembly based on the shipping method applicable to your order. Refer to your submittal for details.

1. Refer to the *Style 177 Victaulic Installation Manual* for instructions on how to install the manifold. See your customer information packet or visit www.victaulic.com.
2. Place the 3" flexible coupling (VITAULIC®, BAC #202174M6) onto the hCore® Heat Transfer System. See **Figure 20**.

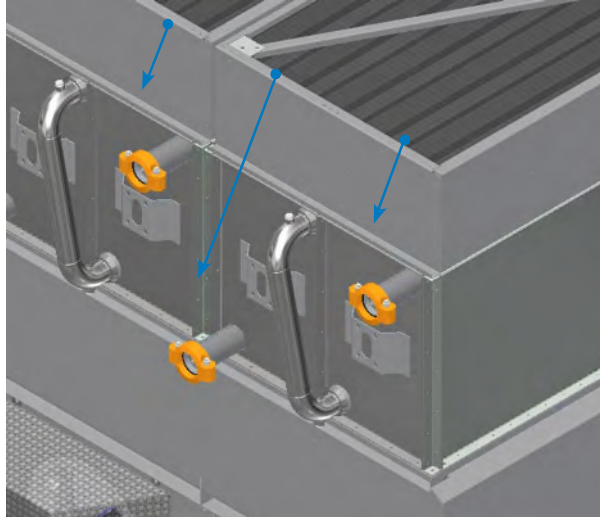


Figure 20. Place Flexible Coupling (Series Flow Shown)

3. Check the drawing in your submittal package for the quantity and size of the pipe and location. Always start installing pipes from the side furthest from the intended system connection. The connection could be on Face A or B. The manifold could also be installed on Face C or D, see **Figure 21**. Refer to your Submittal and Submittal Drawings for details.

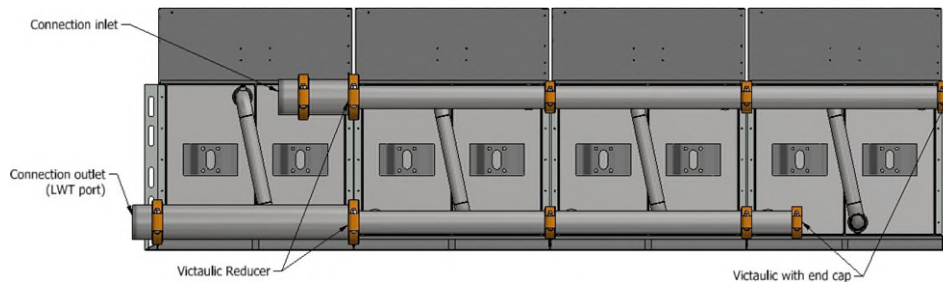


Figure 21. Manifold Layout

4. Always start with the smallest diameter pipe on the engineering drawing-- 4" is the smallest possible size. Work toward the intended system connections, attaching the Victaulic unions as needed.

5. Install the connection outlet with the leaving process fluid temperature sensor port pointing at 45° toward unit. Run the wire through the cord grip and brackets. Install the bracket as needed. This wire will be routed through the same path as the fan communication wire and back to the touchscreen control system panel. See **Figures 22 and 23**.
6. Connect each connector of wire to the correct terminal block position. Please use the torque wrench on all cord grips and torque down to 50 in-lbs.

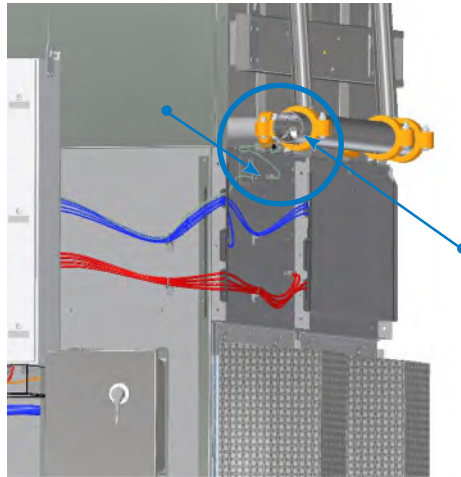


Figure 22. Manifold Connection Outlet and Leaving Process Fluid Temperature Sensor

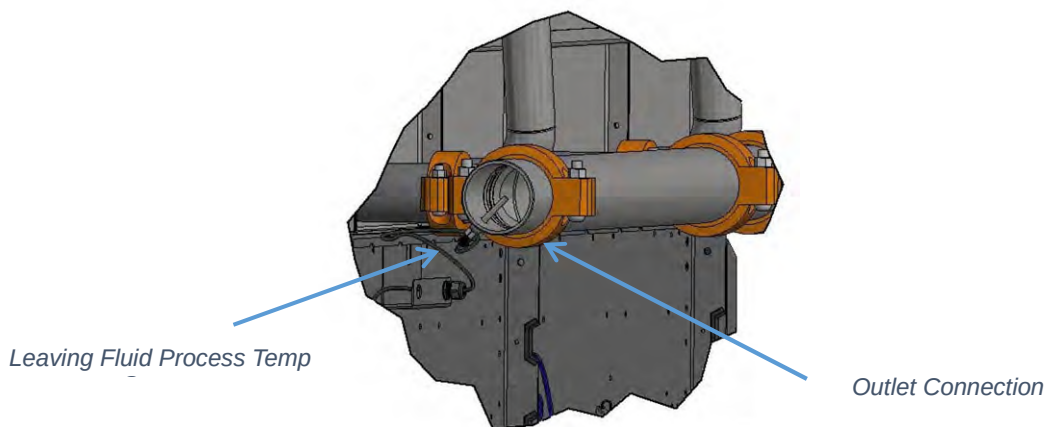


Figure 23. Outlet and Leaving Process Fluid Temperature Sensor

Fan Guard Installation

⚠ DANGER Failure to follow applicable national, state, and local codes for field wiring installation and grounding could result in improperly installed and/or grounded wiring, which poses a risk of fire and electrocution and could result in death or serious injury. To avoid these hazards, follow requirements for field wiring installation and grounding as described in the NEC and applicable local/state/national electrical codes.

⚠ WARNING

To prevent bodily injury or property damage, only qualified personnel should undertake the installation, operation, maintenance, and repair of this equipment. Proper care, procedures, and tools must be used in handling, lifting, installing, operating, maintaining, and repairing this equipment.

1. Remove the fastener from the EC Fan System panel. The fastener will be reused in step 2. See Figure 24a.
2. Place and align the fan guard mounting hole with the fan panel holes. Secure the fan guard with fasteners from step 1. See **Figure 24b**.

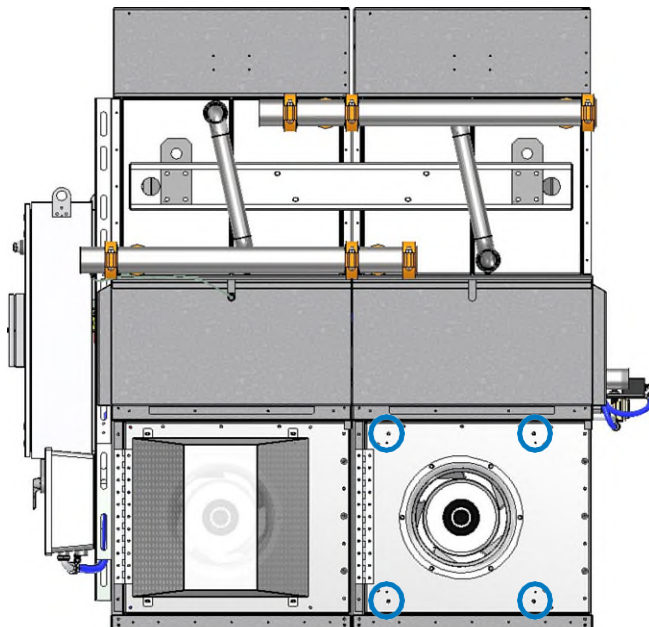


Figure 24a. Figure 24a. Fan Guard Installation Step 1

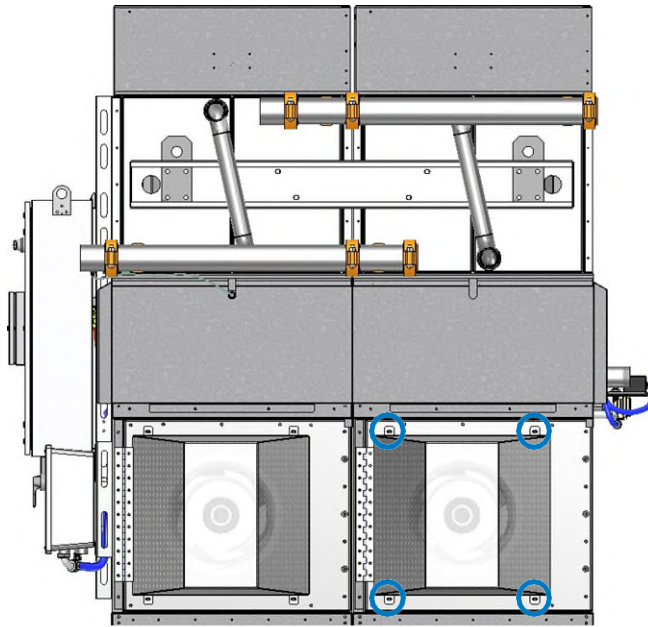


Figure 24b. Fan Guard Installation Step 2

Optional Sound Attenuation

⚠ WARNING To prevent bodily injury or property damage, only qualified personnel should undertake the installation, operation, maintenance, and repair of this equipment. Proper care, procedures, and tools must be used in handling, lifting, installing, operating, maintaining, and repairing this equipment.

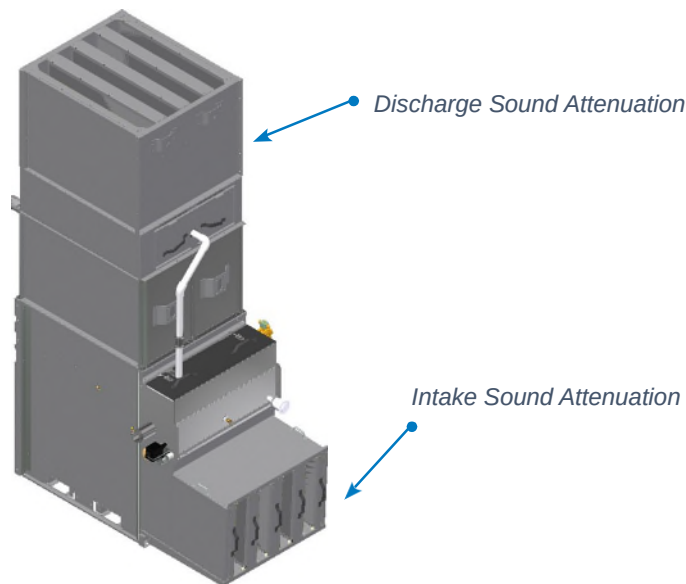


Figure 25. Intake and Discharge Sound Attenuation

Intake Attenuation Assembly

1. Arrival at jobsite:
 - a. When intake sound attenuation is provided, each Nexus® modular hybrid cooler unit (single-module or multi-module) will arrive with the following parts:
 - i. (1) frame per fan, < 50 lbs. each – ships installed on fully-assembled units, or ships loose in crate on units that are not fully assembled to be field-installed by others.
 - ii. (1) attenuator with baffles < 100 lbs. – ships loose, with baffles zip-tied to attenuator; all attenuators for each unit ship in crate to be field-installed by others.
 - iii. Cover plates – qty (2) for NXF-0403, and qty (4) for NXF-0603, ships loose in crate to be field-installed by others.
 - iv. Hardware kit, including foam tape, ships loose in crate.
 - b. Inspect all parts and ensure that they are in good condition.
2. To assemble:
 - a. For units that ship fully assembled, discharge attenuators can be installed before lifting the unit onto its final location. When modules ship separately, the unit must be assembled and lifted into place before installing discharge attenuators.
 - b. Remove the zip ties and slide the baffles out for access to the inside of the attenuator for access to bolt hole locations inside of the attenuator.

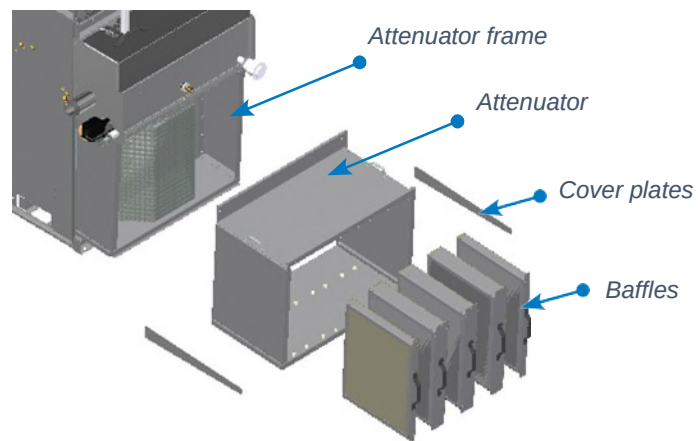


Figure 26. Intake attenuator exploded view

- c. If equipment does not ship fully assembled, install frame onto unit.
- d. Clean foam tape surfaces with acetone and install foam tape on the frame as shown.

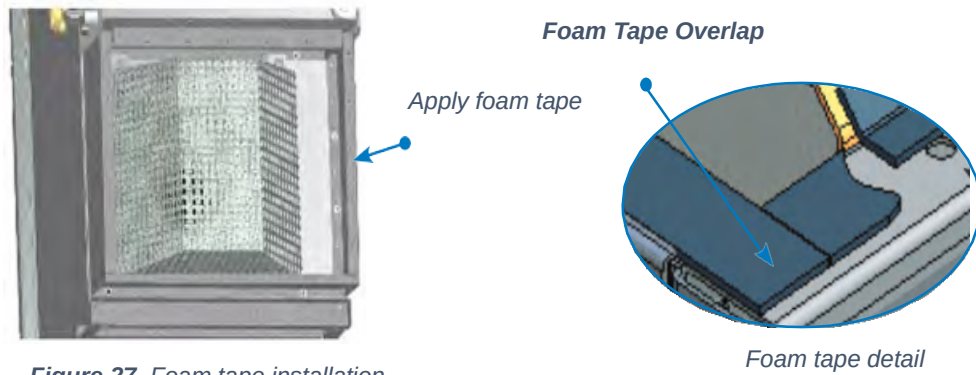


Figure 27. Foam tape installation

- e. Lift the attenuator and align attenuator lip to the frame.

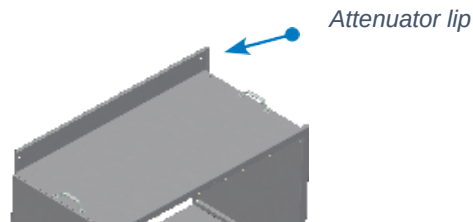


Figure 28. Attenuator

- f. Fasten attenuator to frame using the required hardware, listed below.

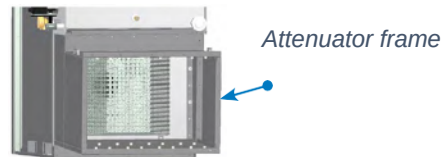


Figure 29. Attenuator

- i. Galvanized steel protected by a Thermosetting Hybrid Polymer
 1. Ø5/16"x1" bolts with flat washers and lock washers into weld tabs for attenuator and baffles.
 2. Ø5/16x3/4" tappers for cover plates.
- ii. Stainless steel
 1. Ø5/16"x1" bolts with flat washers and lock washers into weld tabs for attenuators, baffles, and cover plates.

- g. Install baffles using required hardware, listed above.

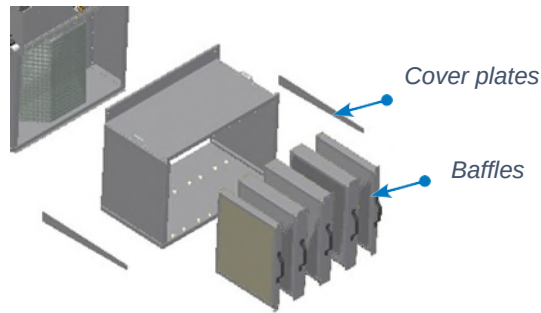


Figure 30. Baffle installation

- h. Install cover plates using required hardware, listed above.

Discharge Attenuation Assembly

1. Arrival at jobsite:
 - a. When discharge sound attenuation is provided, all components will ship loose and must be field installed by others. Parts include the following:
 - (1) attenuator for up to three modules, or (2) attenuators for four to six modules; attenuators ship on skids.
 - Hardware kit, including foam tape, ships in crate.
 - b. Inspect all parts and ensure that they are in good condition.
2. To assemble:
 - a. For units that ship fully assembled, discharge attenuators can be installed before lifting the unit onto its final location. When modules ship separately, the unit must be assembled and lifted into place before installing discharge attenuators because the discharge attenuation spans multiple modules.
 - b. Clean foam tape surfaces with acetone and install foam tape on top of spray distribution section.

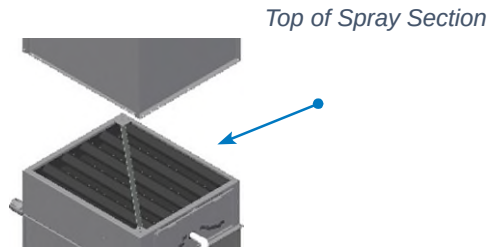


Figure 31. Attenuator assembly

- c. Using lifting points, lift attenuator into place.

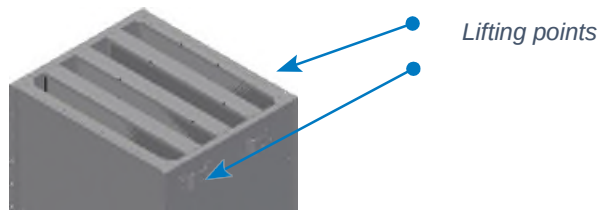


Figure 32. Attenuator installation

- d. Fasten attenuator to unit using the following hardware:
 - i. Galvanized steel protected by a Thermosetting Hybrid Polymer
 - i. Ø5/16x3/4" tappers into spray frame.
 - ii. Ø5/16"x1" bolts with flat washers and lock washers between attenuation sections.
 - ii. Stainless steel
 - i. Ø5/16x1" bolts with flat washers and lock washers into weld tabs on spray frame.
 - ii. Ø5/16"x1" bolts with nuts, flat washers and lock washers between attenuation sections.
- e. Fasten sections to each other (4-6 module only).
 - i. Lift using integral lifting points.

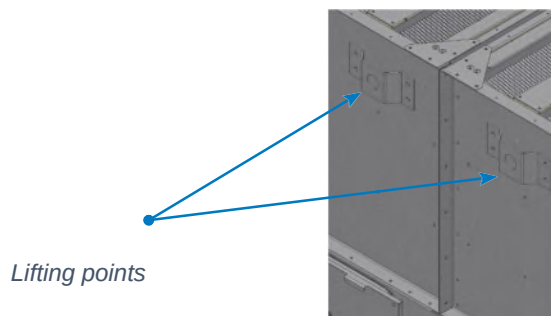


Figure 33. Attenuator assembly for 4-6 modules

- ii. For lifting instructions and spreader bar dimensions, see **Table 2** in the “Unit Rigging and Assembly” section.
- iii. Use the “H” dimension in **Table 2** from the top of the unit, including discharge accessories.
- f. The unit can be rigged in a single lift as a completed assembly, per **Table 2** and **Figure 2**.

Optional Tapered Discharge Hood

⚠ WARNING To prevent bodily injury or property damage, only qualified personnel should undertake the installation, operation, maintenance, and repair of this equipment. Proper care, procedures, and tools must be used in handling, lifting, installing, operating, maintaining, and repairing this equipment.

Arrival at jobsite:

1. When tapered discharge hoods are provided, all components will ship loose and must be field installed by others.



Figure 34. Tapered discharge hood

- a. Parts arrive onsite as follows:
 - i. Hoods ship on skids.
 - ii. Hardware kit ships in spray water basin or in crate.
 - b. Inspect all parts and ensure that they are in good condition.
2. Parts include the following:

Tapered discharge hood - (1) hood for up to 3 modules, or (2) hoods for 4 to 6 modules.

 - i. Gap plate attached to a single hood on 4-6 module units.

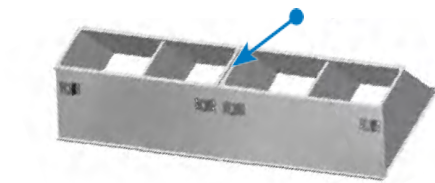


Figure 35. Gap plate

- ii. For 1-3 modules, (1) Section will span the modules.
- iii. For 4-6 modules, (2) Sections will span the modules.
 - c. 4 modules: (2) 2-module sections.
 - i. Gap plate is preinstalled on one of the sections.
 - d. 5 modules: (1) 2-module section and (1) 3-module section.
 - i. Gap plate will be preinstalled on one of the sections.
 - ii. The 2-module section is closest to the control panel.
 - e. 6 modules: (2) 3-module sections.
 - i. Gap plate will be preinstalled on one of the sections.
- 3. To assemble:
 - a. For units that ship fully assembled, tapered discharge hood can be installed before lifting the unit onto its final location. When modules ship separately, the unit must be assembled and lifted into place before installing tapered discharge hood.
 - b. Clean foam tape surfaces with acetone.
 - c. Install foam tape on top of spray distribution section.
 - d. Using lifting points, rig hood into place.

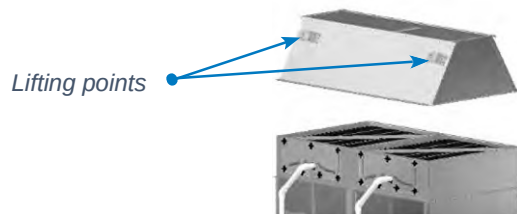


Figure 36. *Tapered discharge hood assembly*

- Fasten tapered discharge hood to unit using the following hardware:
- Galvanized steel protected by a Thermosetting Hybrid Polymer:
 - o Ø5/16x3/4" tappers into spray frame.
 - o Ø5/16"x1" bolts with flat washers and lock washers. between attenuation sections into weld tabs.
- Stainless steel:
 - o Ø5/16x1" bolts with flat washers and lock washers into weld tabs for spray frame and attenuation sections.
- Fasten sections to each other (4-6 module only) with gap plate between sections.

Optional Positive Closure Dampers

⚠ WARNING

To prevent bodily injury or property damage, only qualified personnel should undertake the installation, operation, maintenance, and repair of this equipment. Proper care, procedures, and tools must be used in handling, lifting, installing, operating, maintaining, and repairing this equipment.

Positive closure dampers are available for applications that can benefit from reduced heat loss during the winter, including heat pump loops.

PCD Assembly *with* Tapered Hoods (see above section for PCDs without hoods)

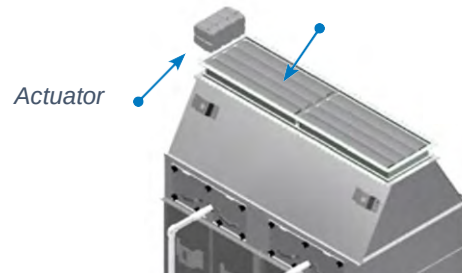


Figure 37b. Tapered discharge hood with positive closure dampers

1. Arrival at jobsite:
 - a. Inspect all parts and ensure that they are in good condition
 - b. When positive closure dampers are provided, they ship separately as follows:
Tapered discharge hood – ships installed
 - c. Parts include the following:
Conduit and wiring for actuator, coiled up and installed on same side as control panel.



Figure 38. Tapered discharge hood with positive closure dampers

2. To assemble PCD Assembly with Tapered Hoods:
 - a. For units that ship fully assembled, positive closure dampers can be installed before lifting the unit onto its final location. When modules ship separately, the unit must be assembled and lifted into place before installing positive closure dampers.

PCD Assembly *with No Hoods* (see below section for PCDs with tapered hoods)

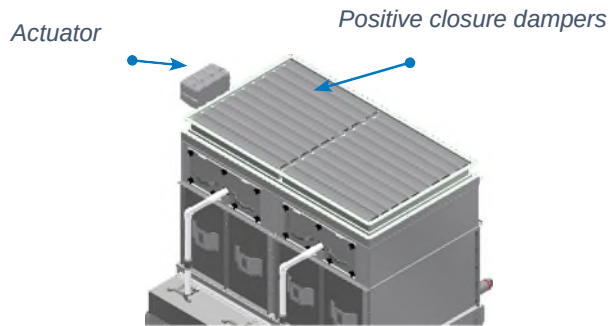


Figure 37a. Positive closure dampers

1. Arrival at jobsite:
 - a. Inspect all parts and ensure that they are in good condition
 - b. When positive closure dampers are provided, they ship separately as follows:
 - i. Ships installed from factory on fully assembled units, and ships loose on skid for units with other shipping methods.
 - c. Parts include the following:
 - i. Conduit and wiring for actuator, coiled up and installed on same side as control panel.
2. To assemble PCD Assembly with No Hoods:
 - a. For units that ship fully assembled, positive closure dampers can be installed before lifting the unit onto its final location. When modules ship separately, the unit must be assembled and lifted into place before installing positive closure dampers.



Figure 39. Positive closure dampers

Assembly Common to Both:

1. Clean foam tape surfaces with acetone.
2. Install foam tape on top of spray distribution section.
3. On multi module units install the positive closure damper sub frame by first installing plate DAK in **Figure 40** between each module within the positive closure damper frame using the following hardware.

NOTE: One positive closure damper sub frame can supply three Nexus modules. On a six-

module Nexus there will be two positive closure damper sub frames.

- Galvanized steel protected by a Thermosetting Hybrid Polymer
 - o Ø5/16x3/4" tappers into spray frame.
 - Stainless steel
 - o Ø5/16x1-1/4" tappers into spray frame.
4. Install the positive closure damper sub frame parts WAG & WAH using the following hardware.
- Galvanized steel protected by a Thermosetting Hybrid Polymer
 - o Ø5/16x3/4" tappers into spray frame.
 - o Ø5/16x1" bolt with two flat washers, lock washer and nut (1 at each corner).
 - Stainless steel
 - o Ø5/16x1-1/4" tappers into spray frame.
 - o Ø5/16x1" bolt with two flat washers, lock washer and nut (1 at each corner).

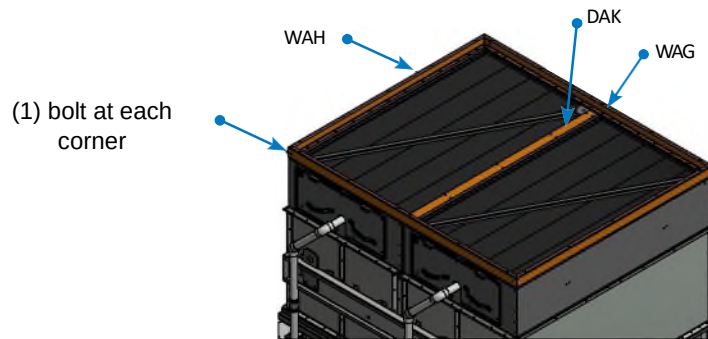


Figure 40. Positive closure damper sub frame

5. Clean foam tape surfaces with acetone
6. Install foam tape on positive closure damper sub frame.
 - a. Install positive closure damper to sub frame.
 - b. Lift or handle positive closure damper using the frame. Do not handle or lift the positive closure damper using blades, linkage, actuators, or jackshafting.
 - c. Lift one positive closure damper assembly at a time. Be sure to mount the positive closure actuator on the same face as the Nexus control panel. For Nexus units that require two positive closure damper assemblies mount the second positive closure damper with the actuator on the opposite end of the unit.

NOTE: One positive closure damper assembly can supply three Nexus **cooler** modules. On a six-module Nexus cooler there will be two positive closure damper assemblies.

7. Fasten the positive closure damper(s) to the sub frame using the following hardware.

- a. Galvanized steel protected by a thermosetting hybrid polymer
 - i. Ø5/16x3/4" tappers into spray frame.
- b. Stainless steel
 - i. Ø5/16x1-1/4" tappers into spray frame

To connect wiring:

- i. The following procedure applies to all positive closure assemblies that do not ship factory installed.
- ii. Uncoil the positive closure damper flexible conduit and route behind the control panel. Secure the flexible conduit to the unit with zip ties as needed. For Nexus units with more than 3 modules route the flexible conduit from the far positive closure actuator along the outer flange of the positive closure damper frame securing with zip ties as needed.

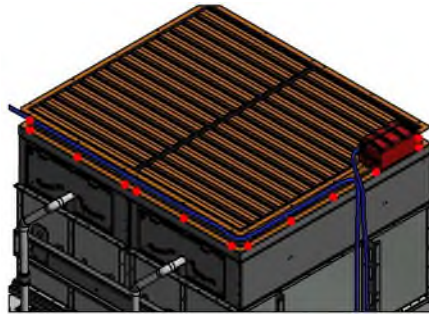


Figure 41. Positive closure damper flexible conduit location

- iii. Secure the flexible conduit into the positive closure damper junction box using the conduit fittings. Use zip ties as needed to secure the flexible conduit. Inside the positive closure damper junction box, combine all damper communication and power wires according to the wiring diagram below.

NOTE: Only one set of damper actuator communication and power wires is terminated within the Nexus cooler control panel.

- iv. Secure all loose wiring with zip ties as needed and re-install the positive closure damper junction box cover.

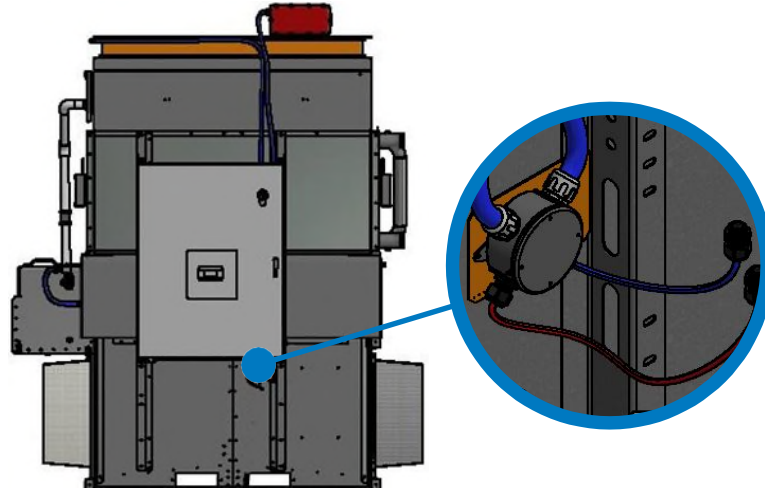


Figure 42. Positive closure damper junction box connection

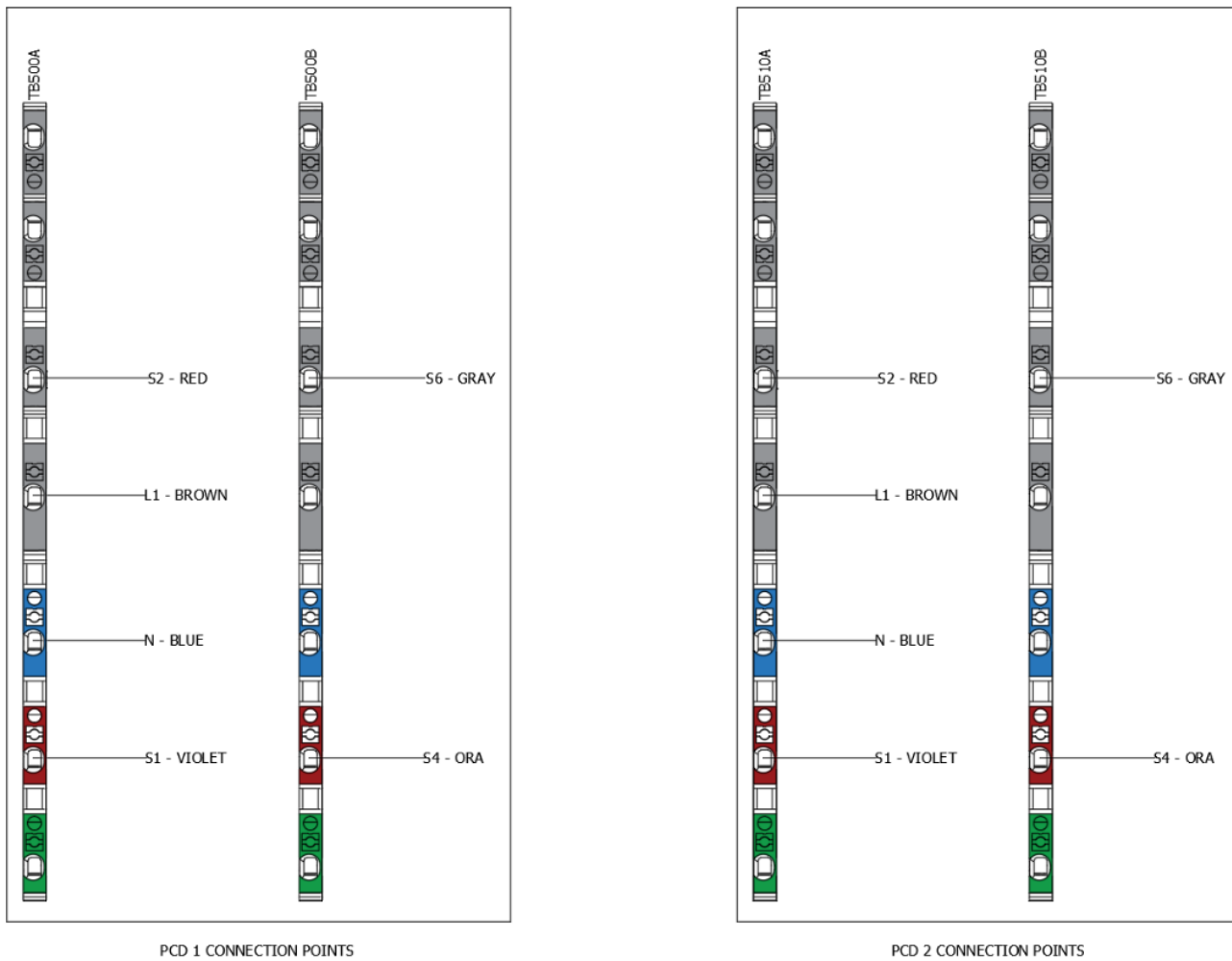


Figure 43. Positive closure junction box wiring diagram

Optional Ducting

⚠ WARNING

To prevent bodily injury or property damage, only qualified personnel should undertake the installation, operation, maintenance, and repair of this equipment. Proper care, procedures, and tools must be used in handling, lifting, installing, operating, maintaining, and repairing this equipment.

The Nexus cooler can be installed indoors and can discharge air through ductwork installed by others. When ductwork is required, install it as follows:

1. Duct each module separately.
2. Ducting at air intake:
 - a. Add provision to remove ducting for maintenance purposes, ensuring enough clearance to open the swing out fan panel, per the submittal drawings.
 - b. Add provision to access the spray water basin for maintenance.
3. Ducting at air discharge:
 - a. Internal partitions are required to prevent air bypass / recirculation between modules when partial load conditions do not require all fans to be running.
 - b. For tapered hood without positive closure dampers, ducting between modules can be attached to the internal ducting partition(s) of the tapered hood.

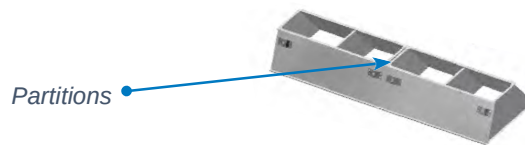


Figure 44. Internal ducting partitions

- c. When the tapered discharge hood is not included, internal partitions (by others) should be installed in the ducting that extends to the air discharge of each module. The duct work also needs to be externally supported vs supported by the unit.
- d. Add provision to remove ducting for maintenance purposes.
 - i. For all units with positive closure dampers, ensure that 2" of clearance above the dampers is available to allow them to open.

PuriStream™ Water Treatment System with UV Light

⚠ WARNING To prevent bodily injury or property damage, only qualified personnel should undertake the installation, operation, maintenance, and repair of this equipment. Proper care, procedures, and tools must be used in handling, lifting, installing, operating, maintaining, and repairing this equipment.

⚠ CAUTION Do not touch the glass portion of either UV bulb with bare hands, which may cause it to fail prematurely. Always hold the bulb by the ceramic base.

⚠ CAUTION The PuriStream water treatment system includes two UV bulbs that contain mercury. If the lamp breaks, avoid inhalation or ingestion of the debris and avoid exposure to eyes and skin. Never use a vacuum cleaner to clean up a broken lamp as this may scatter the spilled mercury. Obey local regulations and guidelines for the removal and disposal of mercury waste.

The PuriStream water treatment system with UV light has been designed to reduce bacterial growth. Please follow these assembly instructions closely to ensure reliable system operation.

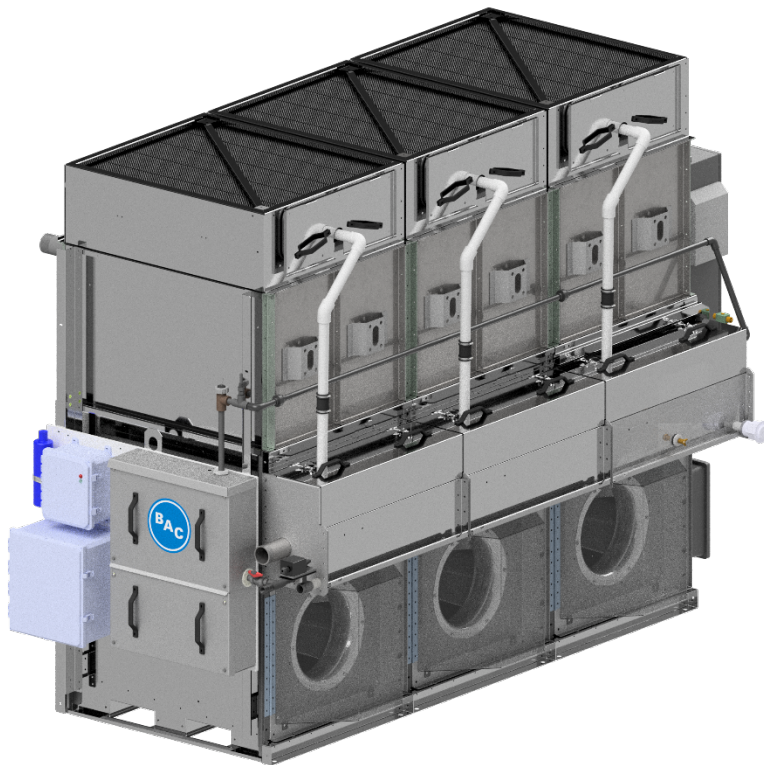


Figure 45. Nexus® unit showing PuriStream water treatment system and crossover pipe

1. Arrival at jobsite:
 - a. With the PuriStream™ water treatment system, each unit (single-module and multi-module) includes (1) PuriStream water treatment panel for all modules in that unit (see *Figure 47*).
 - b. On fully assembled units, the water treatment system will be factory-installed except for the two UV light bulbs, which is explained below.
 - c. When units do not ship fully assembled, the water treatment system will be factory-installed except for the UV bulbs, crossover piping, and wiring between the PuriStream water treatment system and the main control panel. For details, see drawings and wiring diagrams in the submittal.
2. To assemble UV bulb in silver tube:
 - a. Remove the upper water treatment system enclosure cover using a ratchet and ½" socket. Handles are provided to ease the removal and installation of the enclosure panel.



Figure 47. *Water treatment system enclosure with cover*

- b. Remove the lamp connector by squeezing the plastic locking tabs on the side of the connector.

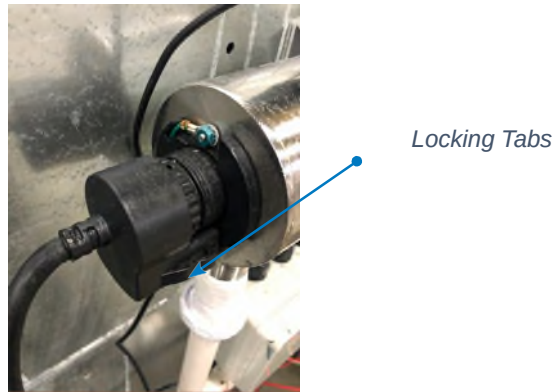


Figure 48. Lamp connector

- c. The UV bulb ships inside of the Nexus® cooler spray water basin, adjacent to the UV system, to prevent shipping damage. Remove the UV bulb.
- d. Remove the bulb from the protective packaging. Do not touch the glass portion of the bulb with bare hands. Always hold it at the ceramic ends. Insert the new bulb fully into the chamber leaving about two inches of the bulb protruding from the chamber.



Figure 49. UV Bulb connection

- e. Attach the connector to the bulb; the connector will only allow correct installation in one position.

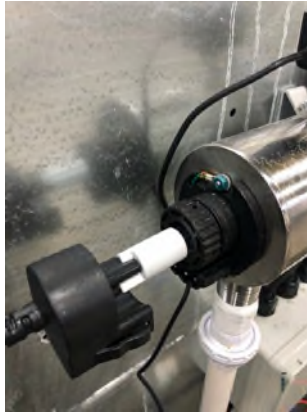


Figure 50. UV bulb connection to wiring

- f. Push the connector against connector base together until an audible click is heard.
- g. Replace the PuriStream™ water treatment system cover onto the panel and tighten down.

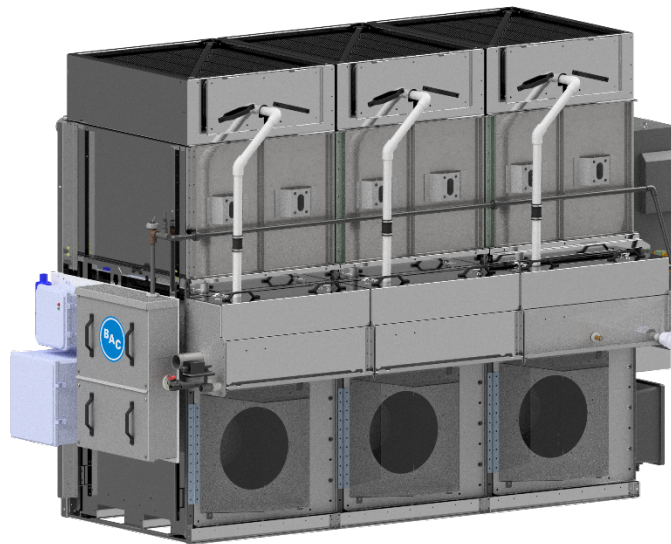


Figure 51: PuriStream water treatment panel showing advanced oxidant UV bulb in blue chamber



Figure 52: PuriStream advanced oxidant generator UV bulb

3. To Install the advanced oxidant generator bulb (blue tube), there is no need to remove the blue lamp chamber.
 - a. Simply unplug the weatherproof 4-pin connector at the top of the lamp chamber.
 - b. Unscrew the lamp from the chamber. The lamp was initially installed hand tight but may need a pair of channel lock pliers to assist in removing it.
 - c. The new lamp threads are pre-wrapped with PTFE tape. Gently insert the new lamp into the chamber and tighten your hands. If pliers are used do not tighten more than a 1/8th turn.³
 - d. Reconnect the 4-pin connector. Push until you feel a click.



*Figure 51. PuriStream water treatment system with UV Light.
Crossover piping visible for multi-module units*

4. PuriStream™ water treatment system crossover piping for units that do not ship with modules fully assembled
5. After all modules are fully assembled onsite, remove the crossover piping sections from the shipping crate. These piping section(s) are comprised of 3' to 6' $\frac{3}{4}$ " pipes with union connections on the ends. See the **Table 6** for piping lengths:

	Crossover Pipe Quantity	Approximate Crossover Pipe Length(s) ($\pm 3''$)
1 module	1	42 3/4"
2 modules	1	82 1/4"
3 modules	1	82 1/4"
	1	39 1/4"
4 modules	1	82 1/4"
	1	78 3/4"
5 modules	1	82 1/4"
	1	78 3/4"
	1	39 1/4"
6 modules	1	82 1/4"
	2	78 3/4"

Table 4. Crossover piping

1. Remove the U-bolts from the brackets that are on the face of the hCore® casing.

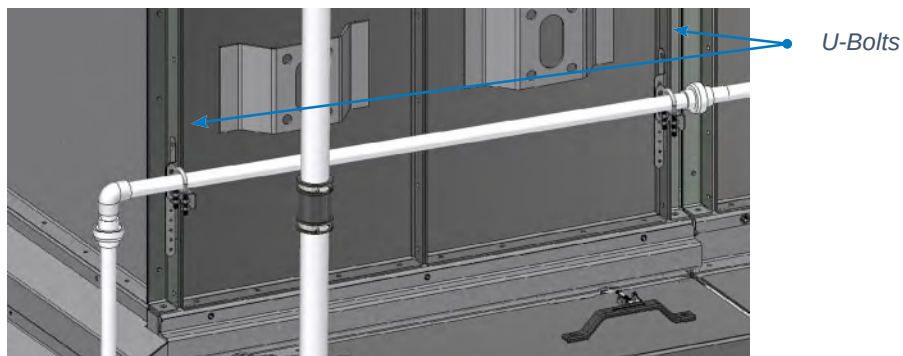


Figure 52. Crossover piping assembly

2. Assemble piping sections in series using unions and attach the assembled pipe section to the piping brackets using the U-bolts were removed.

3. The assembled piping system should extend from the PuriStream™ water treatment system, across the spray water basin face of the unit and back into the spray water basin on the control panel side.

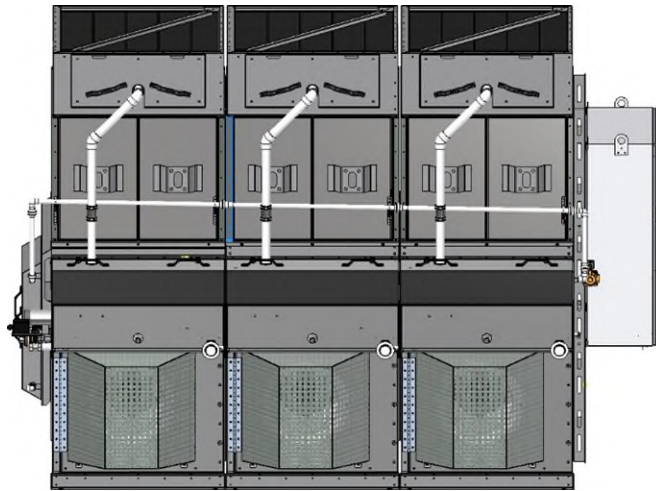


Figure 53. Crossover piping installed

4. Electrical Information



Failure to follow applicable national, state, and local codes for field wiring installation and grounding could result in improperly installed and/or grounded wiring, which poses a risk of fire and electrocution and could result in death or serious injury. To avoid these hazards, follow requirements for field wiring installation and grounding as described in the NEC and applicable local/state/national electrical codes.

Refer to the wiring diagram in the submittal package showing customer power and control signal input connections. If the optional basin heater was ordered, more information can also be found in the submittal package. Refer to the *Nexus® Modular Hybrid Cooler Operation & Maintenance Manual* for more set-up and operation details on the touchscreen control system available in the Customer Information Packet or through your local BAC Representative.

Electrical Power Quality

This unit requires clean electrical power to operate properly. Voltage and frequency should be within 10% of the designed voltage for the unit. Failure to provide this power may damage the unit.

The EC Fan System direct-drive motor(s) contain built-in protection circuits that will shut down the fan if there is a power quality issue. If the fans go into protect or emergency mode, the unit must be shut down and restarted to return to normal operation, assuming the power quality issue has been corrected.

Power Connections

The Nexus modular hybrid cooler requires a three phase 60Hz power source (50Hz also available). The voltages available are 200-208V, 230V and 460V (380V is also available).

A label on the inside of the door of the control panel will contain the electrical information for the unit such as the FLA, etc. This electrical information can also be found in the certified drawing in the submittal package.

Please ensure that the correct voltage is supplied to the unit. If unsure, check your unit's submittal package to verify that the provided power matches your unit.

Inspection

Prior to start-up, inspect the general condition of the unit, described in detail in the *Nexus Modular Hybrid Cooler Operation & Maintenance Manual*.

COOLING TOWERS

CLOSED CIRCUIT COOLING TOWERS

ICE THERMAL STORAGE

EVAPORATIVE CONDENSERS

HYBRID PRODUCTS

ADIABATIC COOLERS & CONDENSERS

DRY COOLERS

IMMERSION COOLING

PARTS & SERVICES



www.baltimoreaircoil.com

7600 Dorsey Run Road, Jessup, MD 20794 › Telephone: (410) 799-6200 › Fax: (410) 799-6416

© 2026 Baltimore Aircoil Company, Inc. › RGANXF-02