



**QLCI**™   
*Designed by TROX®*

*Displacement Induction Ventilation*

**QLCI ACCESSORIES INSTALLATION, OPERATION, & MAINTENANCE  
(IOM) MANUAL**

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### 1.1 INTRODUCTION



**Important!**  
You must read all instructions prior to the installation, operation, or maintenance of this product!

The QLCI accessories are designed to integrate with the QLCI displacement induction ventilation diffusers as a total system solution. The QLCI accessories consist of bookcases, utility cabinets, fill sections, and vertical duct covers as well as finishing end panels. The QLCI displacement induction ventilation diffusers are designed to provide air quality and acoustical performance similar to conventional displacement systems but are designed specifically for the North American climate. Units are fitted with a series of air induction nozzles that allow the supply of conventional air (50° to 55°F) to the terminal. These nozzles induce room air through a cooling and/or reheat hydronic coil to pre-condition the air prior to mixing with the supply air jets. The result is a constant volume (variable temperature) displacement type supply of air to the space. The integral hydronic coil within the unit is sized to allow the QLCI terminal to condition the room while the central system air handler supplies air at (or near) the mandated space ventilation rate. Therefore, the central station air handler can supply 100% outside air while all of the return air from the space is exhausted. The diffuser uses the primary air energy to induce air through the hydronic coil and does not contain any moving parts such as fans, motors, or compressors to be maintained.

### 1.2 SAFETY

The customer must use qualified personnel and follow all applicable building codes and safety regulations when installing, commissioning and performing maintenance of this product. Eye protection and gloves should be worn at all times when handling the product. Consult all local building, occupational safety and other codes applicable to the installation. Please pay particular attention to the symbols used throughout the manual that indicate safety related issues, warnings and important notices or information; read the complete manual before installation and be familiar with the meaning of the safety symbols in the next section 1.3.

### 1.3 SYMBOLS USED IN THIS MANUAL

When reading this manual, particular attention must be given to the parts marked with the following symbols:

	<b>Warning!</b> Indicates a potentially dangerous situation for the product and the environment
	<b>Important!</b> Designation of a danger that can cause personal injury or damage to property
	<b>Note!</b> Indicates important notices or information



**Fragile!**  
Handle with care. The diffuser should not be handled using the water pipes which may cause damage to the unit.

### 1.4 RECEIVING, INSPECTION AND STORAGE

All Carson Solutions products are inspected and tested prior to shipment to ensure the highest quality. Carson Solutions products are packed and labeled in individual cardboard cartons.

Upon receipt of the product shipment, conduct a thorough inspection of the outer packaging and pallets for possible damage. If damage has occurred during shipping, indicate the damaged items on the delivery papers immediately and inspect the product contained in those containers for damage.

If damage has occurred during shipping, immediately file a claim with the carrier.

Refer to the Manufacturer's Representations and Warranties on pages 17-18 of this manual for detailed handling instructions and damage reporting procedures.



**Note!**  
Carson Solution products should not be removed from its individual carton for storage. Do not unpack units until they have been moved to the installation location and just before installation is to begin.

Carson Solutions products should be stored in a clean and dry location. If products remain packaged as delivered (strapped and wrapped on pallet), they can be stored as delivered (do not stack pallets). If the packaged products are removed from pallet, they should not be stacked more than four high.

**Packaging is not suitable for outside storage**



## 2.1 PRODUCT OVERVIEW

The QLCI accessories are designed to be install along with the main QLCI displacement induction ventilation diffusers. The QLCI accessories share common dimensions such as heights and depths with features to accommodate the duct work and hydronic piping for the heat transfer coils install within the QLCI displacement induction ventilation diffusers. Common architectural features such as textured paint finish as well as front face panels selections are built to order.

The QLCI displacement induction ventilation diffusers and the QLCI accessories should be installed in the quantities, sizes and configurations shown on the project plans and performance schedules.

## 2.2 CONSTRUCTION DESCRIPTION

The QLCI accessories such as bookcases, utility cabinets, fill sections, and vertical duct covers as well as finishing end panels are constructed out of the same heavy gauge steel the QLCI displacement induction ventilation diffusers are. All QLCI accessories are powdercoated with a fingerprint proof texture paint. Many of the QLCI accessories share the same type of mounting brackets to be installed against the room wall and attached to the 2x4 mounting rails.

## 2.3 PREPARATION FOR INSTALLATION



### Important!

Installation must be performed by properly trained and authorized personnel only! Read all instructions before beginning installation.

### The QLCI accessories are manufactured by Carson Solutions with the following details:

- Varying lengths, widths, and depths
- Vertical duct covers to cover supply air ductwork
- Adjustable bookcases
- Solid or perforated face panels
- Mounting brackets with 3/8" x 1" slots
- Field cut able filler panels
- Architectural accessories to match QLCI's

## 2.4 ITEMS PROVIDED BY INSTALLER

### Installer to provide (according to all applicable local building codes):

- Proper PPE should be used by the installer
- Level and measure equipment
- Clamps and painters tape
- Tools such as wrenches, pliers, screw drivers, and drills
- Sheetmetal cutting tools
- A mounting system including 2x4's and all mounting hardware for installation
- Recommended hardware to attach each unit to each other is (4) 5/16-18 x 1" Phillips head truss screws and (4) 5/16" Serrated nuts per BBS/DBS and BUC units

## 2.5 UNIT WEIGHTS



### Caution!

Machinery recommended for movement and installation of QLCI's. Refer to table below for unit weights and use caution when removing from packaging.

BBS/ DBS Unit Size	13.5" Deep Units Weight	16.625" Deep Unit Weight
18"	39 lbs/ 40 lbs	45 lbs/ 45 lbs
24"	47 lbs/ 50 lbs	54 lbs/ 55 lbs
30"	55 lbs/ 59 lbs	63 lbs/ 65 lbs
36"	63 lbs/ 68 lbs	72 lbs/ 75 lbs
42"	71 lbs/ 77 lbs	81 lbs/ 85 lbs
48"	79 lbs/ 86 lbs	89 lbs/ 95 lbs
BUC Unit Size	13.5" Deep Units Weight	16.625" Deep Unit Weight
18"	31 lbs	34 lbs
24"	36 lbs	42 lbs
30"	43 lbs	49 lbs
36"	53 lbs	57 lbs
42"	60 lbs	64 lbs
48"	63 lbs	72 lbs
BFS Unit Size	13.5" Deep Units Weight	16.625" Deep Unit Weight
6"	10 lbs	11 lbs
12"	16 lbs	17 lbs
18"	21 lbs	23 lbs
24"	27 lbs	30 lbs
30"	32 lbs	36 lbs
36"	38 lbs	42 lbs
42"	43 lbs	48 lbs
48"	49 lbs	54 lbs
60"	60 lbs	67 lbs
EP Unit	13.5" Deep Units Weight	16.625" Deep Unit Weight
Left or Right	8 lbs	10 lbs
VDC2 Unit	13.5" Deep Units Weight/ Ft	16.625" Deep Unit Weight/ Ft
13.5" Wide	6.4 lbs	7.1 lbs
16.0" Wide	7.0 lbs	7.6 lbs
18.0" Wide	7.4 lbs	8.0 lbs
24.0" Wide	8.6 lbs	9.3 lbs
30.0" Wide	9.9 lbs	10.5 lbs
VDC3 Unit	13.5" Deep Units Weight/ Ft	16.625" Deep Unit Weight/ Ft
13.5" Wide	9.3 lbs	10.5 lbs
16.0" Wide	9.8 lbs	11.3 lbs
18.0" Wide	10.1 lbs	11.6 lbs
24.0" Wide	11.6 lbs	12.9 lbs
32.0" Wide	13.3 lbs	14.5 lbs
VDC4 Unit	13.5" Deep Units Weight/ Ft	16.625" Deep Unit Weight/ Ft
13.5" Wide	11.6 lbs	12.9 lbs
16.0" Wide	12.6 lbs	14.1 lbs
18.0" Wide	13.5 lbs	15.0 lbs
24.0" Wide	16.1 lbs	17.4 lbs
32.0" Wide	19.4 lbs	20.8 lbs

### 3.1 GENERAL PROCEDURE

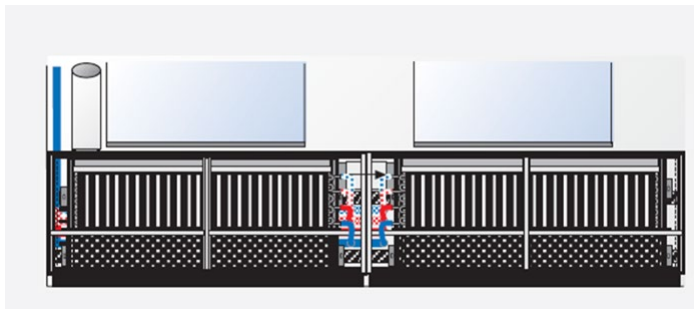
The QLCI displacement induction ventilation diffusers should be installed in quantities, sizes and configurations shown on the project plans, schedules, and submittals. Deviation from the designed plan should be avoided as the QLCI unit locations and configurations is critical to the comfort of the conditioned space. Units are designed for easy installation and access for maintenance. The QLCI accessories should be installed in conjunction with the main QLCI units.

### 3.2 INSTALLATION CONSIDERATIONS



**Note:**  
The locations of the 2x4's is very important to install in the locations provided in the dimensions in **Section 3.3**.

Most classrooms will require the QLCI units are installed along 75% to 80% of the exterior exposure to provide adequate space conditioning at noise levels that are compliant with ANSI S12.60. The supply air duct and vertical pipe runs can be housed in the class- room walls or may be covered using optional architectural duct covers and can be accessed through the utility cabinets provided by Carson Solutions.



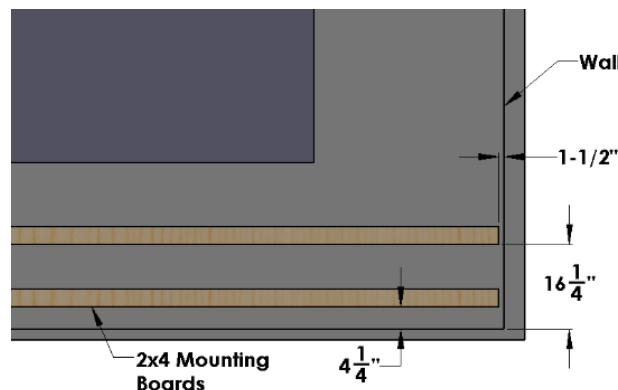
### 3.3 INSTALLING THE QLCI MOUNTING BOARDS

#### STEP 1: INSTALL 2X4'S MOUNTING BOARDS

- a.) Secure two **2x4 Mounting Boards** to the perimeter wall making sure they are securely mounted to wall framework as shown below. (Fasteners supplied by others).



- b.) The **2x4 Mounting Boards** should run the length of the QLCI installation (not individual units). The **2x4 Mounting Boards** should stop 1.5" from edge of wall to allow end unit side panel to set flush against the wall.



### 3.4 INSTALLING THE QLCI

Refer to the CS QLCI IOM for detailed instructions.

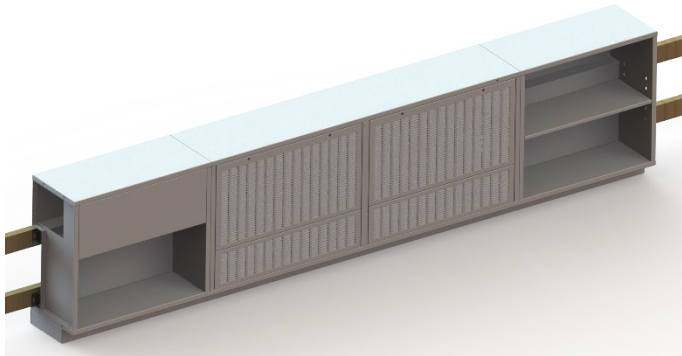
Scan the QR code to view.

**Standard QLCI**

**Rear Heat QLCI**

### 3.5 BBS/ DBS UNITS

The following is a general procedure for installing a BBS (Basic Bookcase Section) or DBS (Ducted Bookcase Section). The final installation should have a flush fitment in line with the QLCI product line.



**STEP 1:**

Insure the 2x4's run the length of the QLCI installation (not individual units), less 4 inches near the location of the pipe feeds. **The 2x4's must be located as described in section 3.2.**



**STEP 2:**

Position the BBS/ DBS unit next the specified units. Refer to the project plans and room by room pictorial representations within the Carson Solutions submittal for their locations.

**STEP 3:**

If installing next to a QLCI unit or a BUC unit, locate the (2) socket head screws on the top of each upper face panel. Loosen the locking screws using an 5/32" Allen Wrench and remove the units upper face panels (as shown below). Do not use a power driver to loosen or tighten latches. Do not allow the upper face panels to fall as this could cause damage to the panel surface.



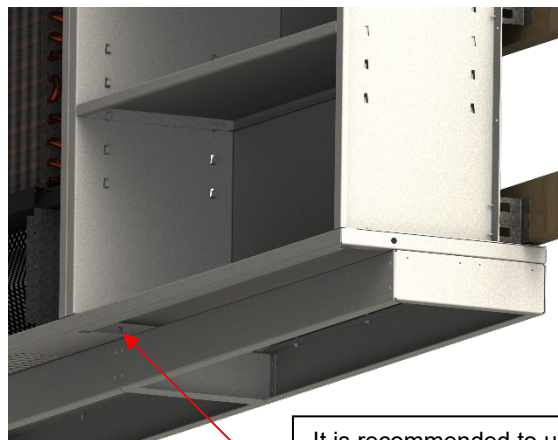
**STEP 4:**

Secure BBS/ DBS units to the 2x4 mounting rails by driving 3/8" lag bolts through the unit's four (4) mounting brackets (as shown below).

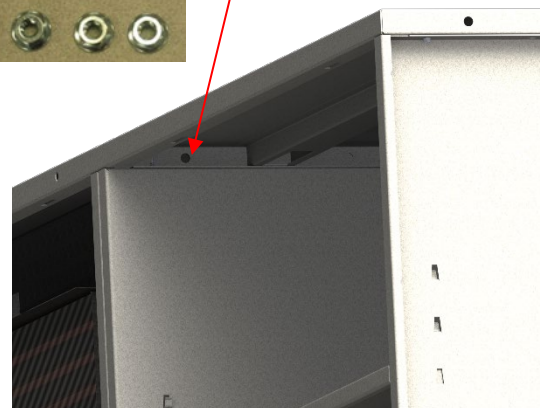


**STEP 5:**

Locate the top and bottom panel holes. Attached each BBS/ DBS unit to a QLCI or to each other using (4) 5/16-18 x 1" Phillips head truss screws and (4) 5/16" Serrated nuts per QLCI. End wall units only require 2 of each per BBS/ DBS unit. If attaching to a QLCI unit, it will be necessary to removing the upper and lower face panel of the QLCI. Refer to **SECTION 3.3 (Step 3) of the CS QLCI IOM** for detailed instructions on removing the front face panels.



It is recommended to use these holes on the BBS/ DBS top and bottom panels to attach each unit together.

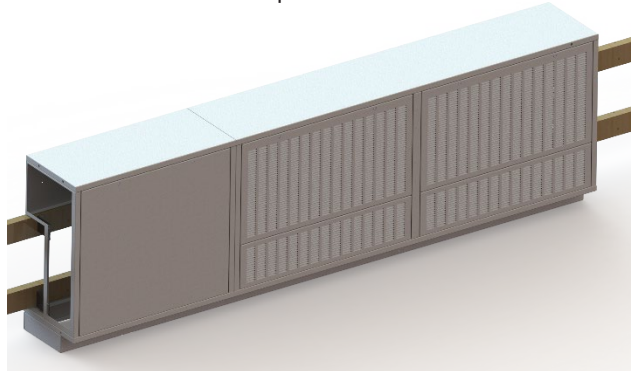


**STEP 5:**

Once the BBS/ DBS units are mounted, re-installed the QLCI lower and upper face panels.

### 3.6 BUC UNITS

The following is a general procedure for installing a BUC (Basic Utility Compartment). The final installation should have a flush fitment in line with the QLCI product line.



**STEP 1:**

Insure the 2x4's run the length of the QLCI installation (not individual units), less 4 inches near the location of the pipe feeds. **The 2x4's must be located as described in section 3.2.**



**STEP 2:**

Position the BUC unit next the specified units. Refer to the project plans and room by room pictorial representations within the Carson Solutions submittal for their locations.

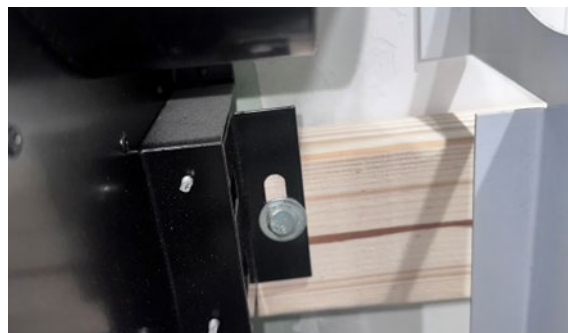
**STEP 3:**

If installing next to a QLCI unit or a BUC unit, locate the (2) socket head screws on the top of each upper face panel. Loosen the locking screws using an 5/32" Allen Wrench and remove the units upper face panels (as shown below). Do not use a power driver to loosen or tighten latches. Do not allow the upper face panels to fall as this could cause damage to the panel surface.



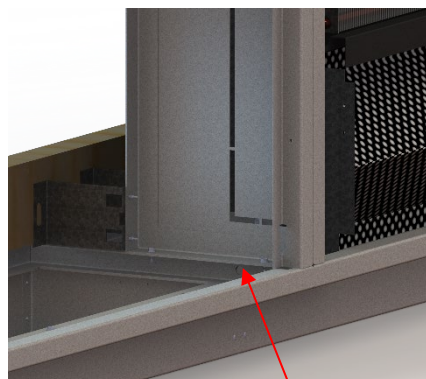
**STEP 4:**

Secure the BUC units to the 2x4 mounting rails by driving 3/8" lag bolts through the unit's four (4) mounting brackets (as shown below).

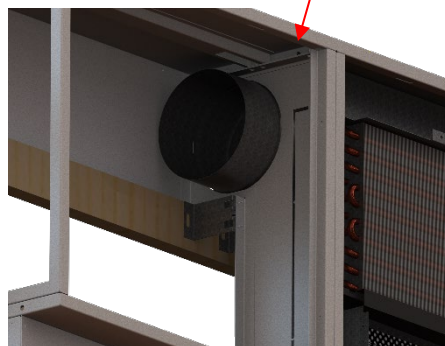


**STEP 5:**

Locate the top and bottom panel holes. Attached each BBS/ DBS unit to a QLCI or to each other using (4) 5/16-18 x 1" Phillips head truss screws and (4) 5/16" Serrated nuts per QLCI. End wall units only require 2 of each per BBS/ DBS unit. If attaching to a QLCI unit, it will be necessary to removing the upper and lower face panel of the QLCI. Refer to **SECTION 3.3 (Step 3) of the CS QLCI IOM** for detailed instructions on removing the front face panels.



It is recommended to use these holes on the BUC top and bottom panels to attach each

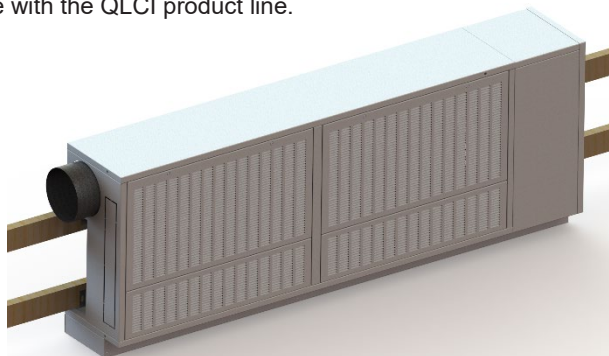


**STEP 5:**

Once the BUC units are mounted, re-installed the BUC and QLCI lower and upper face panels.

### 3.7 BFS UNITS

The following is a general procedure for installing a BFS (Basic Filler Section). The final installation should have a flush fitment in line with the QLCI product line.



#### STEP 1:

Insure the 2x4's run the length of the QLCI installation (not individual units), less 4 inches near the location of the pipe feeds. **The 2x4's must be located as described in section 3.2.**



#### STEP 2:

Position the BFS unit next the specified units. Refer to the project plans and room by room pictorial representations within the Carson Solutions submittal for their locations. Determine if the basic fill section is going on the left or right side of the adjoining cabinet.

#### STEP 3:

If installing next to a QLCI unit or a BUC unit, locate the (2) socket head screws on the top of each upper face panel. Loosen the locking screws using an 5/32" Allen Wrench and remove the units upper face panels (as shown below). Do not use a power driver to loosen or tighten latches. Do not allow the upper face panels to fall as this could cause damage to the panel surface.



#### STEP 4:

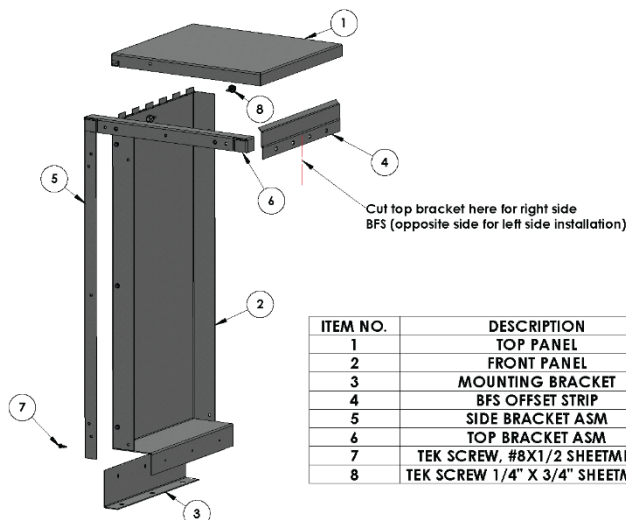
For right side installation, all of the parts below in **Step 5** should be cut to the desired length on the right side of the fill section (steps described below are for right side BFS)

If it is a left side installation, all of the parts below should be cut to the desired length on the left side of the fill section and attached using steps below. Opposite of the images below.

#### STEP 5:

Determine the overall length required for the fill section. All components (top panel, front panel, mounting bracket and back wall offset strip) must be cut to length in the field.

- Cut **Item 1** top panel to the desired length minus 1/4"
- Cut **Item 2** front panel to the desired length minus 1/4"
- Cut **Item 3** mounting bracket to the desired length
- Cut **Item 4** offset strip to the desired length minus 1"
- Cut **Item 6** the top bracket (see BFS diagram)



**Preferred method of cutting the parts is to use a bench or floor mounted metal cutting bandsaw.** Alternative equipment to use is either a 90deg cutting wheel or die grinder to make the cuts. Deburr sharp edges once cuts are complete. The side and top brackets that cover the top and front panels have 7/8" of overlap to cover the cut edges.





**STEP 6:**

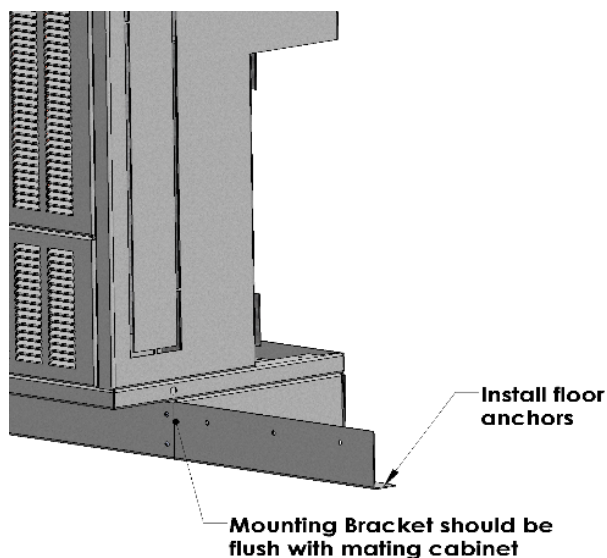
Install **Item 4** next the unit that it will be mounted to. Using a tape measure, level, and pencil, locate and mark the position of the back wall offset strip, by following these guidelines. **Offset strip must be mounted level!**

- The offset strip should be located  $27\text{-}\frac{3}{8}$ " from floor to the bottom edge of the offset strip.
- The offset strip should be mounted  $\frac{1}{2}$ " from the side of the mating cabinet and the unit or wall.



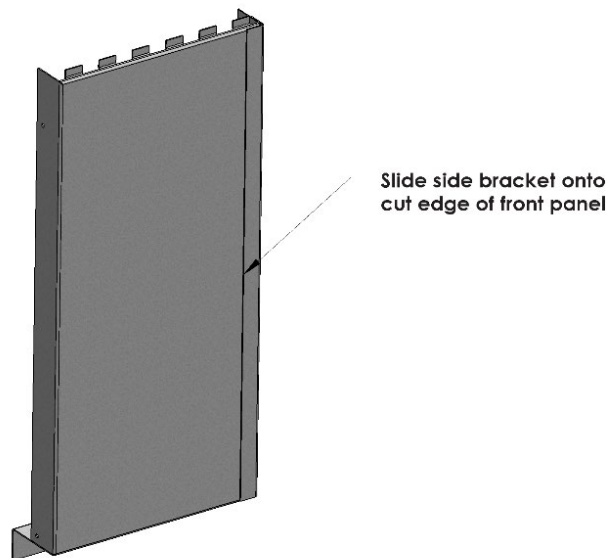
**STEP 7:**

Install **Item 3** mounting bracket making sure it is flush with the outside of the mating cabinet using floor anchors (provided by others).



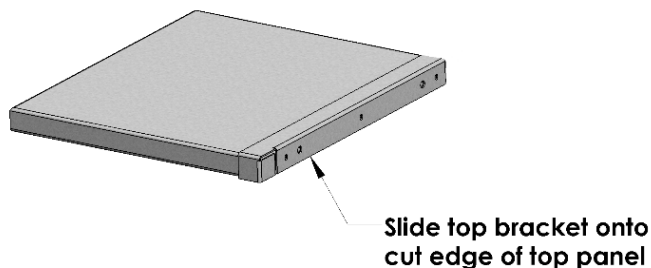
**STEP 8:**

Slide **Item 5** side bracket onto cut edge of **Item 2** front panel. Use a few dabs of clear caulking or sealant in the gap of the **Item 5** side bracket to help hold it in place.



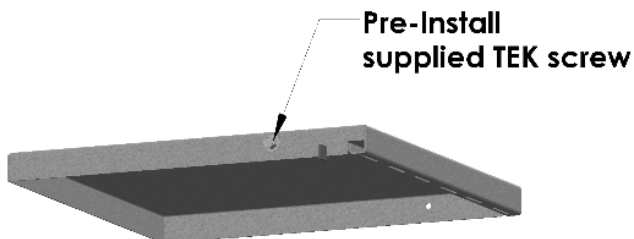
**STEP 9:**

Slide **Item 6** top bracket onto cut edge of **Item 1** top panel. Use a few dabs of caulking or sealant in the gap of the **Item 6** top bracket to help hold it in place.



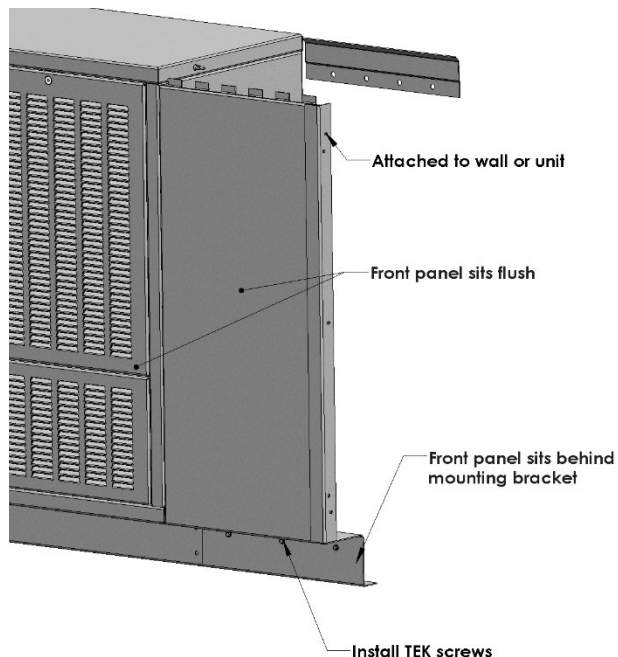
**STEP 10:**

Pre-Install the **Item 8**  $\frac{1}{4}$ " X  $\frac{3}{4}$ " TEK screw to establish the self cutting threads into the **Item 6** top panel. Unscrew the **Item 8**  $\frac{1}{4}$ " X  $\frac{3}{4}$ " TEK screw.



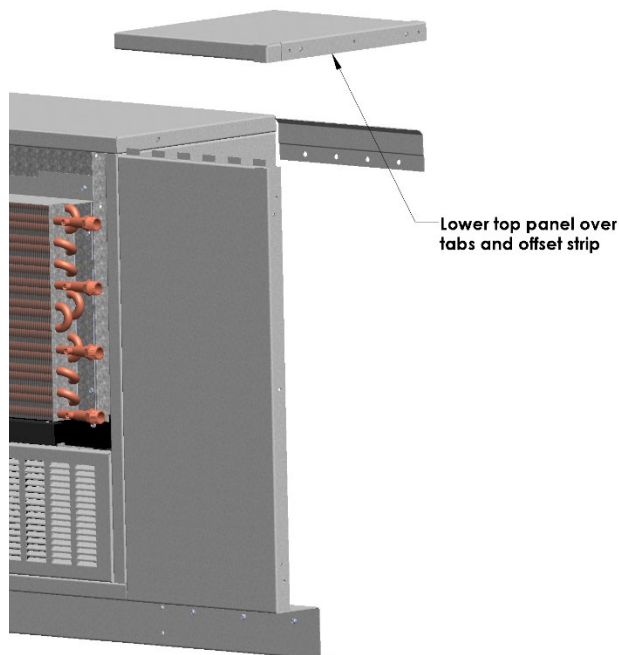
**STEP 11:**

Place the **Item 2** front panel bottom lip behind the **Item 3** mounting bracket. Once the **Item 2** front panel is flush with the front face of the unit it is mounting next to attach **Item 5** side bracket to wall or unit. Using the supplied **Item 7** TEK screws, attached the **Item 2** front panel to the **Item 3** mounting bracket.



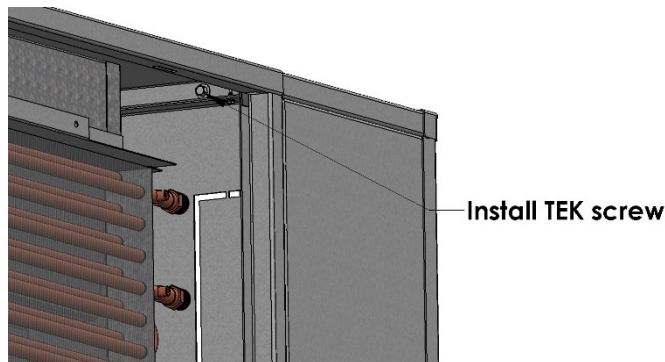
**STEP 12:**

Set **Item 1** top panel and **Item 6** top bracket down over the **Item 4** offset strip and the tabs of the **Item 2** front panel to secure it in place, ensuring the top and front seams of the fill section and utility compartment are level.



**STEP 13:**

Once **Item 1** top panel and **Item 6** top bracket are in place, install **Item 8** 1/4" X 3/4" TEK screw, attach top panel to mating cabinet through the removed front face panel. Note, if attaching the BFS unit to another accessory rather than the corner room wall, hardware will be needed to do so using (4) 5/16-18 x 1" Phillips head truss screws and (4) 5/16" Serrated nuts per QLCI. End wall units only require 2 of each per BFS/ DBS unit. If attaching to a QLCI unit, it will be necessary to removing the upper and lower face panel of the QCLI. Refer to **SECTION 3.3 (Step 3) of the CS QLCI IOM** for detailed instructions on removing the front face panels.



**STEP 14:**

Once the BFS units are mounted, re-installed the QLCI or BUC upper face panels. If desired, apply caulking around the wall seams for a finished look.



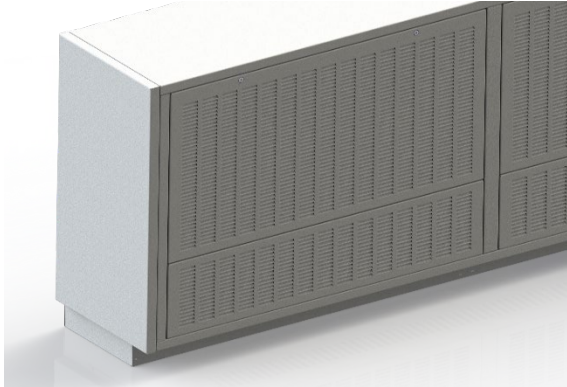
**STEP 15:**

Scan the RFQ code to view the installation video.



### 3.8 EP UNITS

The following is a general procedure for installing the EP (End Panel). The final installation should have a flush fitment in line with the QLCI product line.



#### STEP 1:

Insure the 2x4's run the length of the QLCI installation (not individual units), less 4 inches near the location of the pipe feeds. **The 2x4's must be located as described in section 3.2.**



#### STEP 2:

Position the Left or Right EP unit next the specified units. Refer to the project plans for their locations and room by room pictorial representations within the Carson Solutions submittal

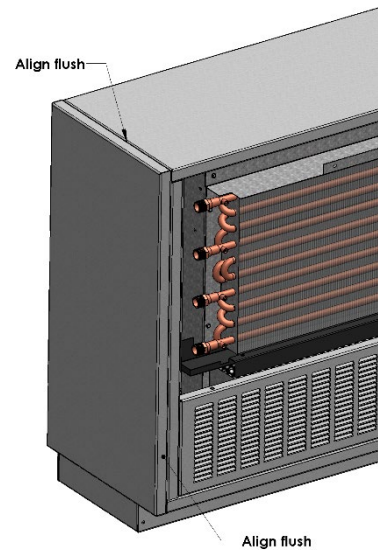
#### STEP 3:

If installing next to a QLCI unit or a BUC unit, locate the (2) socket head screws on the top of each upper face panel. Loosen the locking screws using an 5/32" Allen Wrench and remove the units upper face panels (as shown below). Do not use a power driver to loosen or tighten latches. Do not allow the upper face panels to fall as this could cause damage to the panel surface.



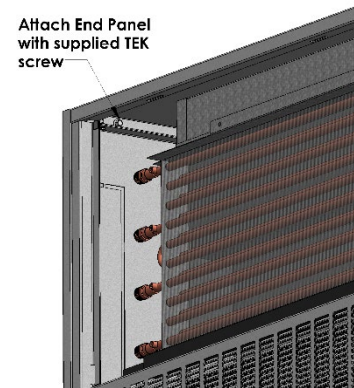
#### STEP 4:

Align EP flush with top panel and face panel of the cabinet it is being installed on. Use clamps or painters tape to hold in place.



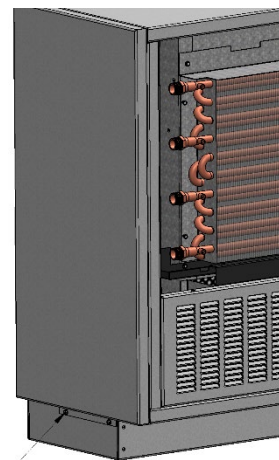
#### STEP 5:

Using the supplied 1/4" X 3/4" TEK screw, attach top panel to mating cabinet through the removed front face panel.



#### STEP 6:

Using the supplied #8"x1/2" TEK screws to attach end panel to mating cabinet.



#### STEP 7:

Once the EP units are mounted, re-installed the QLCI or BUC upper face panels.

### 3.9 VDC UNITS

The following is a general procedure for installing a VDC (Vertical Duct Cover). The final installation should have a flush fitment in line with the QLCI product line.

#### Vertical duct and piping covers

Vertical duct covers are designed for use with QLCI top-entry units, models QLCI-LE, QLCI-RE, QLCI-LX and QLCI-RX. These vertical duct and piping covers are available in heights from 54" to 96" (height is project specific). All VDC come in 10 standard width and depth options. Duct covers can also be installed with basic filler sections BUC-TE accessory cabinets when needed.

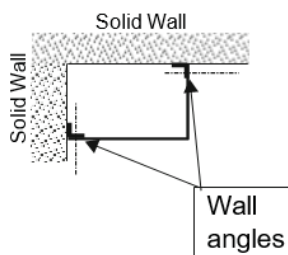
#### Type VDC2

This two-sided duct cover is designed for placement in a corner where two solid walls come together. It is field mounted (by others) using painted countersunk screws (provided) per wall angle. The cover is provided with two angle plates for field mounting to top of QLCI terminal (by others). VDC2 are universal and can be fitted left or right handed.

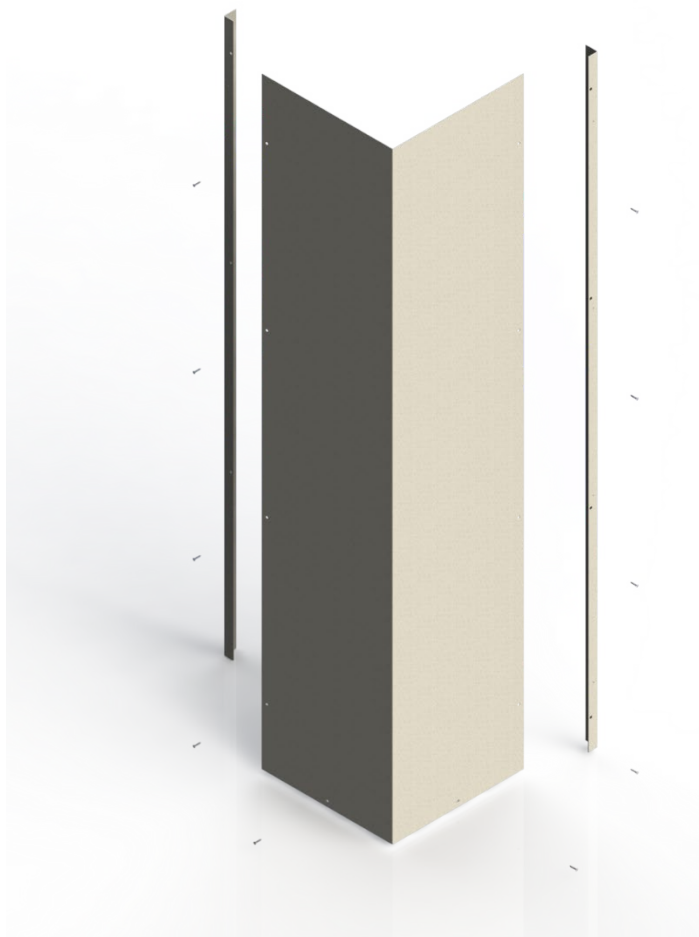
#### Installation:

1. In the specified plan's location, attach supplied angles to wall (hardware by others). Locate 1/16" from width and depth depending which wall angle you are installing. This will allow the duct cover to sit flush with the face of the cabinet it is being mounted on.
2. Attach supplied angle plates with supplied TEK screws to top of QLCI or BUC. Locate 1/16" from width and depth depending which wall angle you are installing. This will allow the duct cover to sit flush with the face of the cabinet it is being mounted on.
3. Once wall angles and angle plates are mounted, install duct cover against wall mounted angles. Rest the duct cover on top of the cabinet.
4. Attach the duct cover using the supplied painted countersunk screws.

#### Type VDC2 2-Sided Vertical Duct Cover



Cover is field mounted (by others) using painted countersunk screws (provided) per wall attachment angle.



**Type VDC3W**

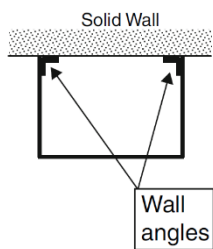
This three-sided duct cover is designed for placement along a solid wall. It is field mounted (by others) using painted countersunk screws (provided) per wall attachment angle. The cover is provided with three angle plates for field mounting to top of QLCI terminal (by others).

**Installation:**

1. In the specified plan's location, attach supplied angles to wall (hardware by others). Locate 1/16" from width and depth depending which wall angle you are installing. This will allow the duct cover to sit flush with the face of the cabinet it is being mounted on.
2. Attach supplied angle plates with supplied TEK screws to top of QLCI or BUC. Locate 1/16" from width and depth depending which wall angle you are installing. This will allow the duct cover to sit flush with the face of the cabinet it is being mounted on.
3. Once wall angles and angle plates are mounted, install duct cover against wall mounted angles. Rest the duct cover on top of the cabinet.
4. Attach the duct cover using the supplied painted countersunk screws.

**Type VDC3W**

3-Sided Vertical Duct Cover



Cover is field mounted (by others) using painted countersunk screws (provided) per wall attachment angle.

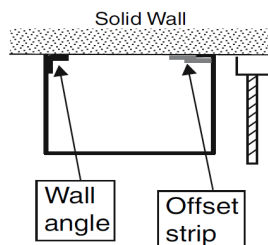


**Type VDC3C**

This three-sided duct cover is designed for placement in a corner where a solid wall meets a window wall. It is field mounted (by others) using painted countersunk screws (provided) per wall attachment angle and offset strip. The cover is provided with three angle plates for field mounting to top of QLCI terminal (by others).

**Installation:**

1. In the specified plan's location, attach supplied angle to wall (hardware by others). Locate 1/16" from width and depth depending which wall angle you are installing. This will allow the duct cover to sit flush with the face of the cabinet it is being mounted on.
2. Attach supplied offset strip to wall (hardware by others). Locate 1/8" from width and depth depending which wall angle you are installing. This will allow the duct cover to sit flush with the face of the cabinet it is being mounted on.
3. Attach supplied angle plates with supplied TEK screws to top of QLCI or BUC. Locate 1/16" from width and depth depending which wall angle you are installing. This will allow the duct cover to sit flush with the face of the cabinet it is being mounted on.
4. Once wall angle, offset strip, and angle plates are mounted, install duct cover by sliding behind the offset strip and then against wall mounted angle. Rest the duct cover on top of the cabinet.
5. Attach the duct cover using the supplied painted countersunk screws.

**Type VDC3C****3-Sided Vertical Duct Cover**

Cover is field mounted (by others) using painted countersunk screws (provided) per wall attachment angle.



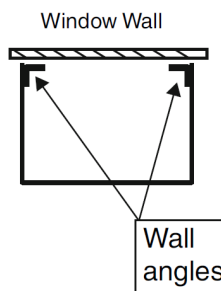
**Type VDC4**

This four-sided duct cover is designed for placement along a window wall. It is field mounted (by others) painted countersunk screws (provided) to attached to window cover. The cover is provided with three angle plates for field mounting to top of QLCI terminal (by others).

**Installation:**

1. In the specified plan's location, attach supplied window cover back panel to top of QLCI or BUC cabinet and to the top of the wall soffit (hardware by others).
2. Attach supplied angle plates with supplied TEK screws to top of QLCI or BUC. Locate 1/16" from width and depth depending which wall angle you are installing. This will allow the duct cover to sit flush with the face of the cabinet it is being mounted on.
3. Once window cover back panel and angle plates are mounted, install duct cover against window cover back panel. Rest the duct cover on top of the cabinet.
4. Attach the duct cover using the supplied painted countersunk screws.

**Type VDC4**  
4-Sided Vertical Duct Cover



Cover is field mounted (by others) using painted countersunk screws (provided) per wall attachment angle.



## 4.1 CLEANING INSTRUCTIONS

QLCI accessories contain no moving or consumable parts, therefore the maintenance requirements are limited to periodic inspection for leak- age and occasional cleaning of the hydronic coil, front face panel and the condensate tray.

The accumulation of dust on the hydronic coil will eventually restrict the airflow through the coil, reducing cooling and heating performance.

The inspection frequency is subject to the environmental conditions and occupancy levels. It is recommended that the QLCI units and accessories be inspected on an annual basis until a scheduled maintenance pattern is established.



### Important!

Maintenance is to be performed by properly trained and authorized personnel only!

Properly maintain water conditions which prevent corrosion of copper tubing. If included in the system design, check the condensate sensors or humidity sensors according to sensor manufacturer's methods and schedule.



### Important!

Wear eye protection and gloves.  
Product includes sharp edges and burrs.

### To clean the QLCI accessories:

When necessary, the cabinet can be cleaned using a mild detergent diluted with warm water. Apply with a soft cloth, rinse, and wipe dry.



### Note!

Strong or abrasive chemical detergents should not be used as they may cause damage to the paint finish.

## 4.2 REPLACEMENT PARTS

The QLCI displacement induction ventilation diffuser and the QLCI accessoires contains no serviceable or consumable parts. Contact Carson Solutions for more information.



## 5.1 MANUFACTURER'S REPRESENTATIONS & WARRANTIES

**CARSON DESIGN MANUFACTURING (CDM), INC. DBA (CARSON SOLUTIONS) TERMS & CONDITIONS OF SALE Version 01-01-22 ALL SALES ARE SUBJECT TO THESE TERMS AND CONDITIONS OF SALES ("TERMS") AND AS CONTAINED IN CDM'S INVOICE AND ARE ALSO SUBJECT TO CDM'S CREDIT AND OTHER POLICIES AND PROCEDURES, WHICH ARE HEREBY INCORPORATED BY REFERENCE AND SUBJECT TO CHANGE.**

**1. TERMS TO GOVERN:** These Terms shall be binding upon CDM Inc, and its subsidiaries and affiliates ("Seller") and the buyer ("Buyer"). No modification, amendment or change, whether in Buyer's purchase order, shipping release forms or otherwise shall obligate Seller, unless authorized in writing by Seller. Any different or inconsistent terms and conditions contained in Buyer's forms whether issued before or after Seller's quotation are hereby expressly superseded by these Terms.

**2. ACCEPTANCE & PRICES:** Any proposal offered by Seller to Buyer is valid for sixty (60) days from Seller's issuance. Upon the expiration of sixty (60) days or sooner if revoked by Seller, the proposal shall expire. Pricing shall remain valid for Seller's products shipped within 90 days from the date of Seller's acceptance. Thereafter, prices are subject to change. Prices include transportation charges predicated on a single shipment and any partial shipments may result in additional cost to Buyer. Seller reserves the right, at any time, to withdraw a bid, quote or a price that contains an error.

**3. PAYMENT & TAXES:** Upon credit approval, payment terms for Products shipped hereunder or labor performed will be thirty (30) days net with no retainages unless contrary terms appear on the face hereof or otherwise expressly agreed to in writing by Seller. Should Buyer default in the timely payment to Seller of sums due on an order, Seller is entitled to any remedies provided in these Terms or by law. If Buyer fails to pay any amounts when due, Buyer shall pay Seller interest thereon at a periodic rate of the lesser of one and one-half percent (1.5%) per month or the maximum allowable legal interest rate, along with all costs and expenses (including without limitation mechanics lien or bond, collection expenses, reasonable attorneys' fees, filing and service fees and disbursements and Court costs) incurred by Seller. Buyer is responsible for all sales, customs, or use tax imposed by any governmental agency, including, but not limited to, Federal, State, Local or international authorities, payable on the transaction under any applicable statute, except those taxes due as a result of Seller's gross profits. If Seller is not timely paid or Buyer is otherwise in default, Seller reserves the right to pause or terminate any work or services in process and/or reschedule any delivery at any time.

**4. PERFORMANCE:** Seller shall be obligated to furnish only the Products or labor described in the applicable purchase order or acknowledgement and agreed to in writing. The duty to perform under any order on the part of Seller and the price thereof is subject to the approval of its Credit Department, and is contingent upon the absence of strikes, accidents, floods, act(s) of terrorism, war, fires, fuel shortages, the inability to procure materials from the usual sources of supply, the requirements of the US Government (through the use of priorities or preference or any other manner) that Seller divert either the material or the furnished Product to the direct or indirect benefit of the US Government, or upon any like or unlike cause beyond the reasonable control of Seller. Upon disapproval of the Credit Department or upon the occurrence of any such event, Seller may delay performance or, at its option, renegotiate prices and terms and conditions of sale with Buyer. If Seller elects to renegotiate and Seller and Buyer are unable to agree on revised prices or terms, Seller may cancel without any liability.

**5. SHIPMENT & RISK OF LOSS:** Shipment dates are estimates only, FOB factory. Title and risk of loss shall pass to Buyer upon Seller's delivery to carrier. Customers may only make their own shipping arrangements with Seller's agreement. Seller shall advise when the Products have been completed and send an invoice at that time. All Product must be picked up by Buyer within 30 days of Seller's completion of manufacture. Seller specifically rejects any order containing a time is of the essence clause or liquidated damage penalties for late shipments. Seller is not responsible for loss of goods from shortages, damages or transit delays. Any claims for damage in shipment, mis-delivery, loss of the Products or other damage shall be the responsibility of and filed by Buyer.

**6. CHANGES, CANCELLATION & RETURNS:** Changes requested by Buyer following Seller's acceptance of order must be approved by Seller in writing and may result in an increase in price by Seller to recover all labor and material costs, including normal overhead and profit. If any portion of a Seller accepted order is cancelled by Buyer without default on the part of Seller or without Seller's written consent, Buyer shall be liable to Seller for cancellation charges including, but not limited to, Seller's incurred costs and the profit Seller would have realized from the transaction had the agreement not been breached by Buyer. Products shall not be returned except by written permission of Seller pursuant to Seller's return policy.

**7. AUTHORITY OF AGENTS:** No agent, employee or representative of Seller has the authority to bind Seller to any affirmation, representation or warranty concerning the Product or labor sold, except for Seller's authorized agents, employees or representatives.

**8. INDEMNITY:** Seller shall protect and indemnify Buyer from and against all claims, damages, judgments and loss solely arising from Seller's infringement or alleged infringement of any United States patent by any of the articles or material delivered hereunder, provided that in the event of suit or threat of suit for patent infringement, Seller shall promptly be notified and given full opportunity to negotiate a settlement. Seller does not warrant against infringement by reason of Buyer's design of the articles or the use thereof in combination with other materials, or in the operation of any process. In the event of litigation, Buyer agrees reasonably to cooperate with Seller. All parties concerned shall be entitled, in connection with any proceeding under the provisions of this Article, to be represented by counsel at their own expense. Buyer shall defend, indemnify and hold Seller harmless from any personal injury, wrongful death or property damage caused in whole or in part by Buyer's breach, negligent or intentional act(s).

**9. LIMITED WARRANTY:** Seller warrants that at the time of delivery and for a period of twelve (12) months from the initial startup ("Start-Up"), or eighteen (18) months from date of shipment, whichever is less, Products will be free from defects in material and manufacture provided that Products have been installed with proper Start-Up, maintained and operated under normal conditions for service in accordance with the instructions of Seller, and that Products have the capacities and ratings set forth in Seller's design specifications. No warranty is made against corrosion, erosion or deterioration. At Seller's option, Seller's obligations and liabilities under this warranty are limited to repair of Products or replacement of components for Products not conforming to this warranty. This Limited warranty does not cover labor for component repair or replacement. Once Seller's service department has been notified and approved any warranty related service work, Seller will repair or replace components as needed and ship FOB factory. Seller shall not be obligated to pay for the cost of lost refrigerant or Glycol. Consumable parts and Products that are consumable in nature are explicitly excluded from this warranty. Consumables include, but are not limited to, filters, glycol and refrigerant. No warranty or liability whatever shall attach to Seller until full payment has been received. No warranty herein extended shall apply to repair or correction of conditions arising from improper or incorrectly connected air duct, piping, wiring, power supply, blown fuses, freezing, improper Product control when programmed by non-Seller controls, or personnel, or by anyone other than Seller employee or its representative. Operation of Products for temporary conditioning of a building during construction without the written consent of an officer of the Seller immediately voids any warranty coverage. If the Product is replaced, the replacement may not be new, but will be in good working order and at least functionally equivalent to the item or Product replaced. The replacement assumes the warranty status of the replaced Product. The warranty period does not restart. **THIS LIMITED WARRANTY IS VOIDED BY MISUSE, NEGLIGENCE, FAILURE TO FOLLOW INSTRUCTIONS OR SELLER'S MANUALS OR TAMPERING WITH, THE PRODUCTS PERFORMED BY ANY PERSON OR ENTITY OTHER THAN SELLER WITHOUT SELLER'S PRIOR WRITTEN APPROVAL OR ANY USE OF REPLACEMENT PARTS NOT SUPPLIED BY SELLER. THE WARRANTY AND LIABILITY SET FORTH HEREIN REPRESENT BUYER'S EXCLUSIVE REMEDY AND ARE IN LIEU OF ALL OTHER WARRANTIES AND LIABILITIES WHETHER IN CONTRACT, TORT, WARRANTY OR IN NEGLIGENCE, EXPRESSED OR IMPLIED, IN LAW OR IN FACT, INCLUDING IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR USE. SELLER PROVIDES NO INDEPENDENT WARRANTY FOR THIRD PARTY PRODUCTS OR COMPONENTS SOLD TOGETHER OR INCORPORATED WITH SELLER'S PRODUCT(S).**

**10. LIABILITY DISCLAIMER:** TO THE MAXIMUM EXTENT PERMITTED BY LAW, SELLER'S TOTAL LIABILITY FOR CLAIMS, REGARDLESS OF THE FORM OF ACTION OR THEORY OF LIABILITY (INCLUDING CONTRACT, TORT OR WARRANTY), SHALL BE LIMITED TO THE FEES PAID TO SELLER BY BUYER FOR THE PRODUCTS OR LABOR THAT WAS THE PROXIMATE CAUSE OF THE DAMAGE. IN NO EVENT SHALL SELLER BE LIABLE TO BUYER FOR ANY INCIDENTAL, CONSEQUENTIAL, SPECIAL, PUNITIVE, OR INDIRECT DAMAGES OF ANY KIND (INCLUDING, WITHOUT LIMITATION, LOST PROFITS, LOSS OF USE, OR CLAIMS OF THIRD PARTIES) THAT MIGHT OCCUR AS A RESULT OF THE PERFORMANCE OR BREACH OF THE AGREEMENT OR IN ANY WAY ARISING OUT OF OR IN CONNECTION WITH THE AGREEMENT WHETHER BY CONTRACT, TORT, WARRANTY OR OTHERWISE. SELLER SHALL NOT BE LIABLE OR RESPONSIBLE FOR ANY CRANE, RIGGING, LABOR OR OTHER CHARGES OR DAMAGES OF ANY KIND OR NATURE CAUSED IN WHOLE OR IN PART BY DELAYS IN SHIPMENT OR SELLER'S BREACH.

**11. ASSIGNMENT:** Buyer may not assign or transfer this agreement. Seller may assign its rights or obligations under this Agreement in the event of a merger or change of control of Seller.

**12. GOVERNING LAW:** This Agreement shall be governed and construed in accordance with the laws State of Minnesota. Buyer consents to jurisdiction in the Circuit Court of Hennepin County, Minnesota. Each party consents to that choice of law and jurisdiction and irrevocably waives any objection to same.

**13. EXPORT CONTROLS:** Buyer shall comply with the export laws and regulations of the United States. Buyer agrees it shall not export or enter into an agreement for the export any goods from Seller to any prohibited or embargoed country or to any denied, blocked or restricted person or entity.

**14. MISCELLANEOUS:** Seller's waiver or failure to enforce the terms of this Agreement shall not constitute a waiver of Seller's rights. The prevailing party may recover their reasonable attorney fees and reasonable out-of-pocket expenses.

