



Climate Solutions

a subsidiary of  • a Berkshire Hathaway company

EZYFit™ Knockdown Solutions



Assembly Manual

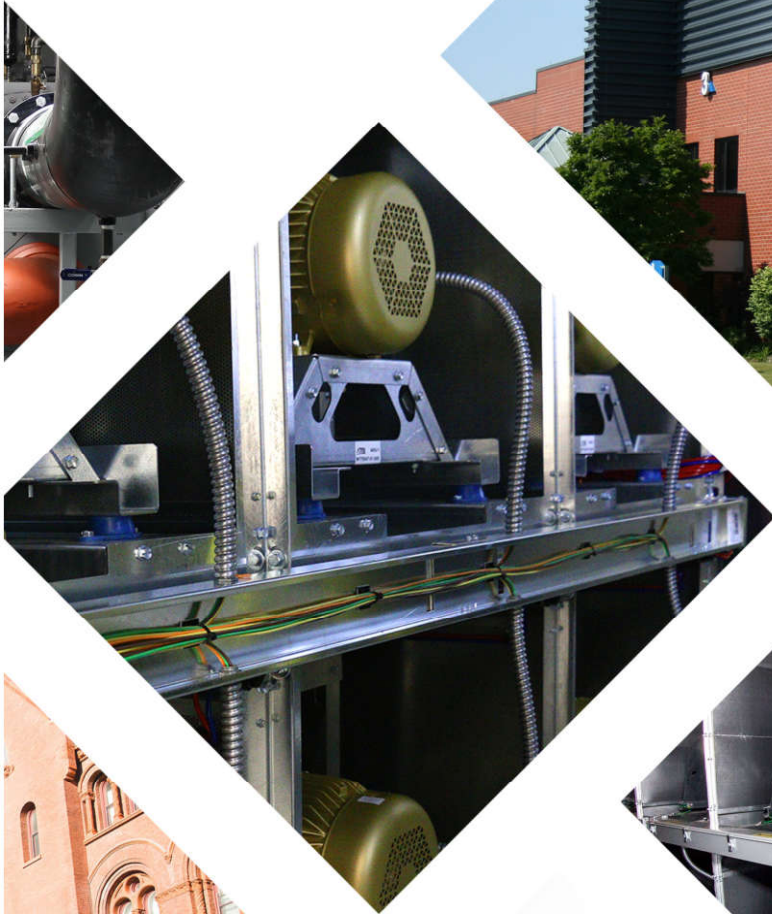




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Recommended Tools



Caulk Gun



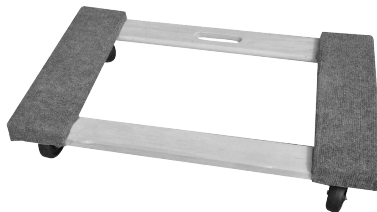
Sawzall Tool



Angle Grinder



Component Hoist



Dolly



Chain Hoist



Torque Wrenches



Hole Saw Set



Rivet gun (manual)

Recommended Tools



Come-Along & Chains (2x)



Johnson Bar/Pry Truck



Flat Pry Bar



4' Level



C-Clamps/Vice Grips



Mallet / Hammer



Cordless 1/4 in. Impact Driver



Long Footed Pipe Clamps



Tape Measure 100'

Recommended Tools

5/16" Nutdriver Bits for Tek screw: 3'', 6'', 12'' Lg

- To screw TEK screws

Impact Driver to 3/8" socket adapter

- To be able to use 3/8" socket on cordless 1/4" in impact driver

Ratchet Wrenches 3/8" & 1/2"

Socket set 3/8" : 1/4" , 3/8" , 1/2" , 9/16" , 5/8" , 11/16" , 3/4" , 13/16" , 7/8" , 15/16" , 1"

- To assemble fan section, connecting floor section together, install damper jumper bracket or jack-shaft & remove the lifting lugs if required

Square Drive Size and Flex Socket Adapter Sets 3/8" & 1/2"

- For use in a small place

Drill Bits : 1/8" , 3/16" , 1/4" , 3/8" , 1/2" (for Steel and if required for Stainless Steel)

- To drill holes for tubing, probe and conduits if required

Holesaw for sheet metal (2" , 2 1/2" , 3" , 3 1/2" , 4" , 4 1/2")

- To drill holes for coil pipe connections or extension, refer to coil selection to find the right holesaw to use.

Utility knives with replaceable blades

- For cutting gasket and tubing

Cloth Rags

- For cleaning the work area and removing extra caulking

Shims 1/16" and 1/8" (4''x4'' Sheet metal pieces)

- For leveling floor and unit according to the floor condition of the mechanical room

Optional Tool List

Screwdriver Sets

- For control and electrical panel installation, if required

Extension Power Cords

- For power tools

Freestanding Floodlights

- If extra lighting is required

Low Profile Floor Jacks

- To lift large components if chain hoist cannot be use (fans, coils, sub-assembly)

Level Dolly with wheels

- To handle panels and parts easily if long distance need to be cover

Vacuum Cleaner

- For cleaning the work area

Required Materials

Before the packaged materials arrive, be sure to have all essential equipment available to safely unload from truck. Clear an area near where the unit will be built. Move the materials directly from the truck to this area so that the materials can be appropriately organized and easily found for a seamless assembly.

Note: Use caution when lifting pallets as they are unbalanced loads. Pallets should be lifted from the bottom using a dolly or hoist. Once all items are removed from packaging the individual pieces are easily transported though-out the site per the field conditions outlined prior to manufacture.



Assembly Instructions

TMI Climate Solutions EZYFit™ Knockdown units are manufactured and delivered in sections for easy assembly in the field. If your assembly space is unrestricted, you may be able to build several sub-assemblies and then connect these to the base and together saving time. If this is not possible due to space limitations or other restrictions, it is easy to assemble the unit one piece at a time.

This installation manual is divided into 2 sections: assembling the enclosure and installing the components (equipment). The actual steps of assembly may differ from project to project, but in general it is preferable to do it in the following steps:

- 1) Attach base sections
- 2) Assemble walls
- 3) Insert equipment inside units (fans, coils, etc.)
- 4) Equipment blanking, doors, & access panels
- 5) Install roof
- 6) Sealing & Finishing
- 7) Cleaning

1.0 Base Assembly

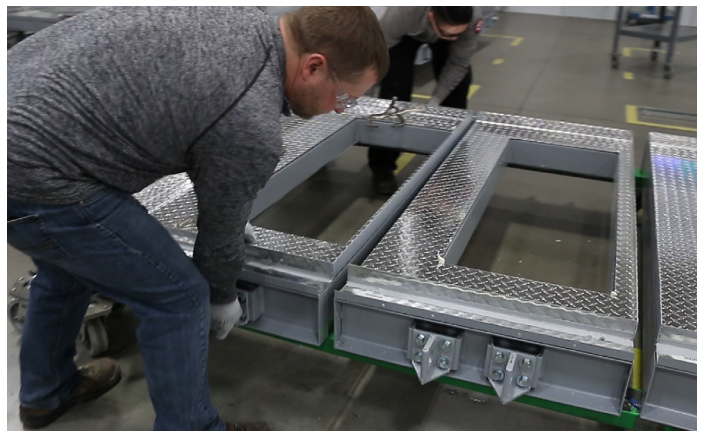
Check level of the location where finished unit is desired. It is important to verify the base is square, leveled (using the shims provided as needed) and manufactured to the required dimensions to ensure proper fit.

- Set all base sections into place, use General Layout drawing (**M-10X 1XXXXGLXX**) for location and the base assembly picture.
- A gasket (1 ½" X ¾") must be installed between each floor section (See image 1.01).
- Draw each section together by hand or using a come-along by fastening to the lifting lugs on the sides of the base frames (See image 1.02).

Image 1.01



Image 1.02



- Connect all base sections with C-clamp vice grips (See image 1.03).
- Connect together using provided treaded rods, 1/2" washers and 1/2-13 hex. nuts (See image 1.04).
- Tighten using 1/2" wrench until gasket is compressed to 1/4".

Image 1.03

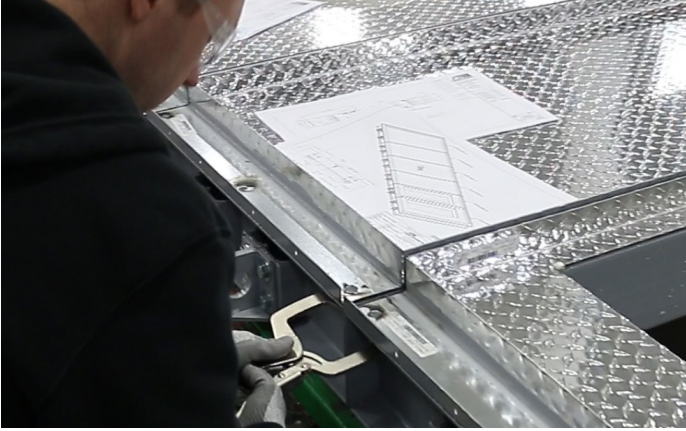


Image 1.04



Check base as you go to be sure it is square and leveled (use shims provided as needed).

Prior to Leveling



Using level to adjust base



Adding shims to shore up unit



The Installing Contractor is to ensure that unit is level, if there are any irregularities in the pad it will need to be shimmed up so that the unit can be installed in a level condition. All sections must be level within 1/8" per 25 ft. & no two points are to be greater than 1/4" from leveled throughout the entire unit.

After all base sections are joined together and level you are able to move onto the next step.

2.0 Wall Assembly

Rear or End Wall(s):

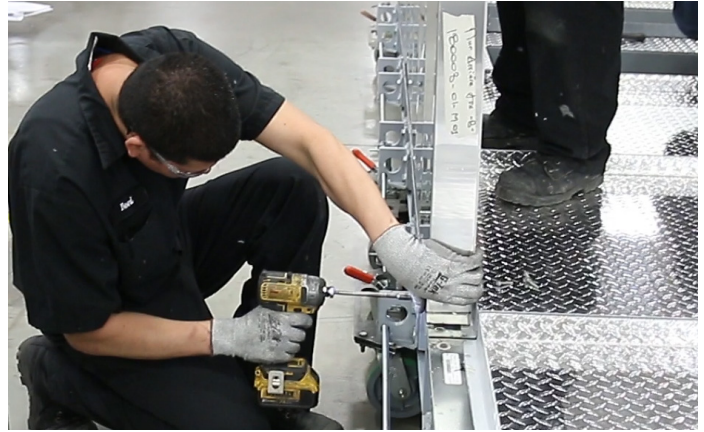
The wall assembly needs to be vertical, forming a 90° angle with the base/floor liner.

- Following provided drawings, place the wall panels or wall sub-assembly one by one inside where the base and upturned floor liner create a “track” (see image 2.01).
- Fasten the panels using provided sheet metal screws along the lower edge where the panels join the base. Fasten from the exterior (see image 2.02) and the interior through the upturned floor liner.

Image 2.01



Image 2.02



- Install the 1st panel by inserting it in the corner wall rail (see image 2.03).
- Fasten the 1st panel to the corner wall rail using screws and holes provided (see image 2.04).

Image 2.03



Image 2.04



- Continue installing panels one at a time inside the tracks. (see image 2.05)
- Fasten each panel at the bottom using screws into exterior base and interior floor liner.
- Fasten each panel to the previous panel by adding sealing strips over the seams fastening with provided screws (see image 2.06).

Sealing strips are installed on the interior and exterior

- Once all wall assemblies or panels are installed, apply sealant where the top of the floor liner lip meets the wall inner liner. Refer to the “Sealing & Finishing section” for more information.

Image 2.05

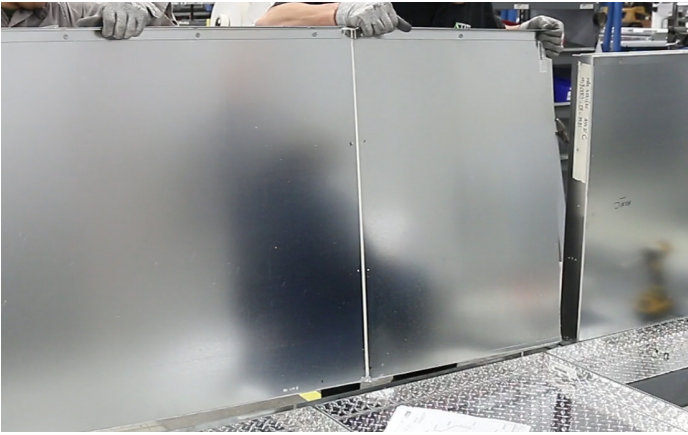


Image 2.06



Note 1: Sometimes the space between the unit and the building is too tight. In that case, install the “back wall” panels and all sealing strips, then internal equipment before remaining walls (see image N1).

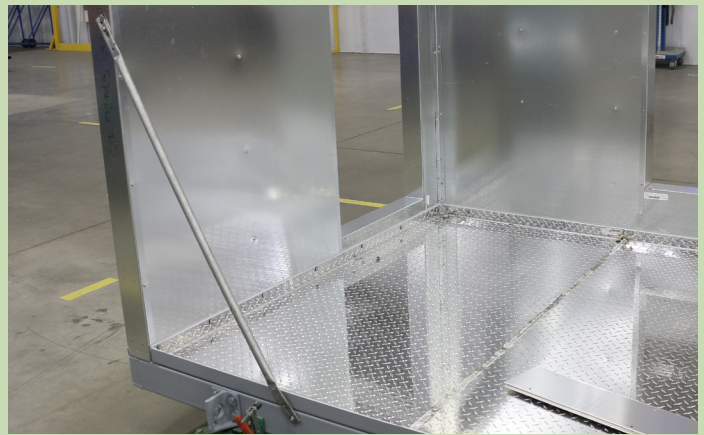
See “Components” step or for more information contact our Field Service Team or TMI Service Technician on site

Note 2: Occasionally the rear wall might require bracing to temporarily reinforce the structure until the other walls are installed. (see image N2)

Image N1



Image N2



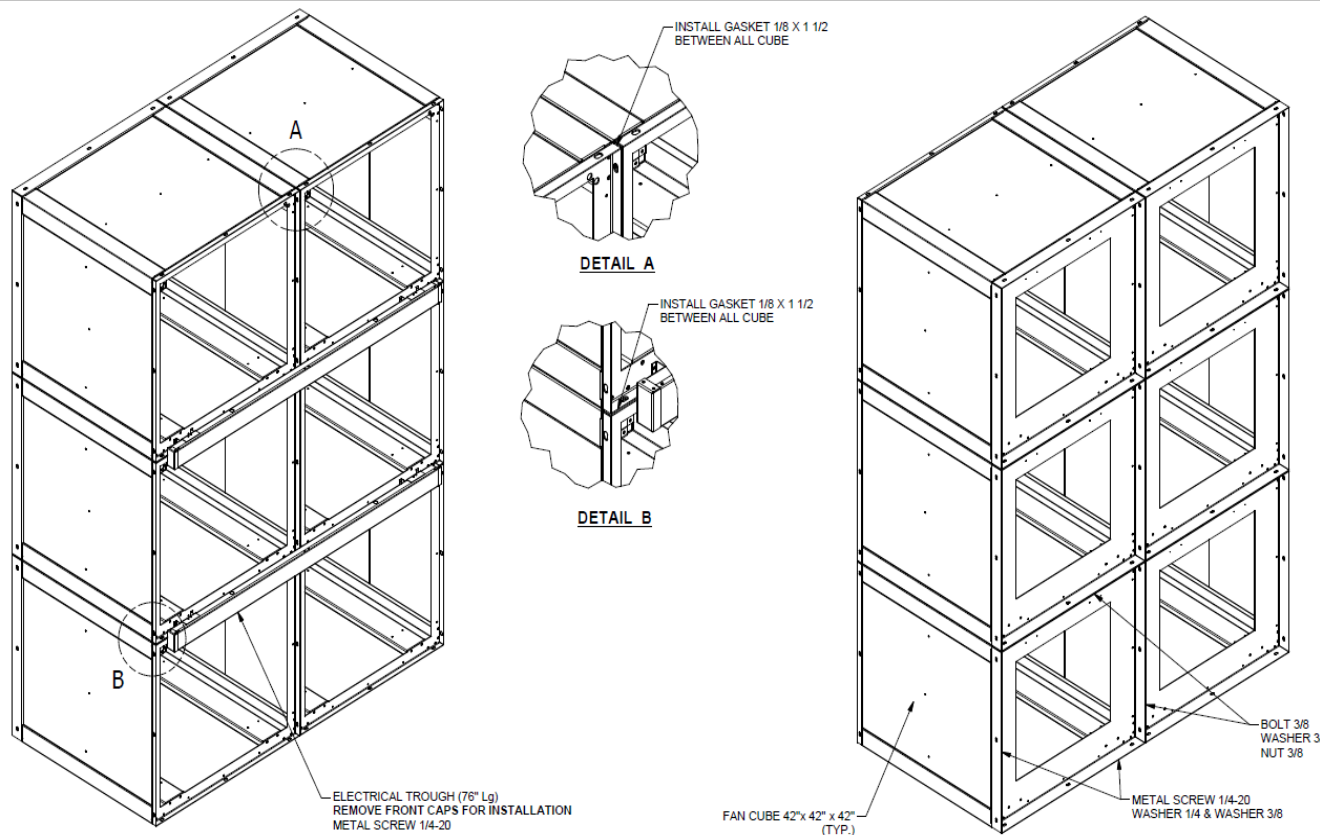
Notes:

Components Section

3.0 Fan Array

Fan Array System Assembly

- Verify receipt of all factory supplied components against enclosed packing list. Each fan cube will be numbered and the location within the array will be shown in your project specific drawings. Refer to these drawings as you assemble your Fan Array for specific notes and information pertaining to/affecting your project, as applicable.



- Carefully remove fan cubes from crates and other packing materials.
- If you have access to a hoist on site you can utilize the recommended lifting points and lugs to secure the individual cubes. (As shown in images 3.01, 3.02 & 3.03)
These points are predrilled to make transportation quick and easy.

Image 3.01

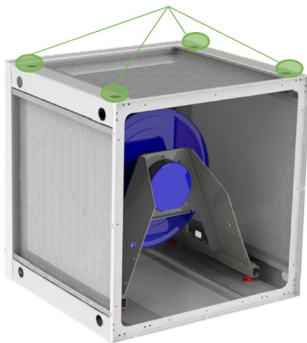


Image 3.02



Image 3.03



- Determine offset for the assembled array (from inside walls) on both sides of the unit and mark accordingly. (see image 3.04)

Image 3.04



Image 3.05



Image 3.06



- Add Gasket $1\frac{1}{2}$ " x $\frac{1}{8}$ " between each fan cube along the vertical edges of the inlet side of the cubes. If fan cubes are stacked, gasket is also required on the horizontal edges of the inlet side of the fan. Refer to your project specific documentation package to ensure your adding gasket to all edges necessary.
(see images 3.05 & 3.06)
- Align first fan cube (bottom row furthest from access side of unit) and only secure first cube to floor using tek screws (see image 3.07).
- Continue setting fan cubes until bottom row is completed, fasten together using supplied bolts, washers, nuts, and using provided holes on both inlet and discharge side of fan cubes (see image 3.08 & 3.09) Do not yet secure to floor.

Image 3.07

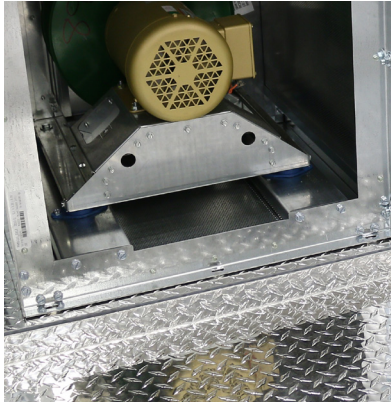


Image 3.08

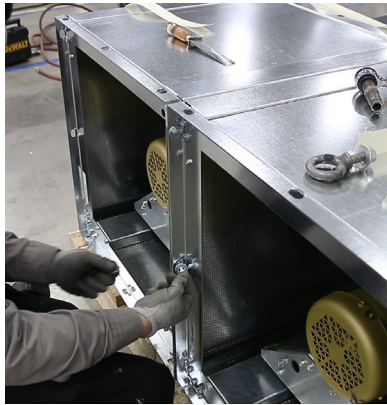


Image 3.09



- Check alignment and verify clearance on both sides of air handling unit inside walls. Adjust accordingly.
- After alignment is verified, secure complete first row of fan cubes to floor with tek screws.

Image 3.10



Image 3.11



Image 3.12



- Install additional rows of fan cubes and bolt together on both inlet and discharge side of fan cubes (see images 3.10, 3.11, & 3.12).
- To secure the fan array, attach blank-off walls to sides and ceiling of unit then secure to fan cubes. Apply gasket between blank-off walls and fan cubes as required to prevent air from bypassing the fan array (see images 3.13, 3.14, & 3.15).

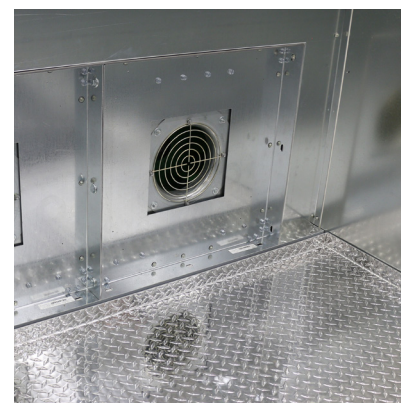
Image 3.13



Image 3.14

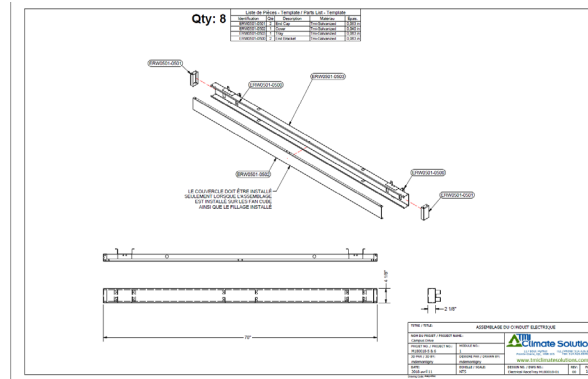


Image 3.15



- It is now time to attach the Electrical Raceway

Electrical Raceway Assembly



- Secure both end caps to Raceway housing using self-drilling hex screws provided (see image 3.16).
- Attach the mounting brackets along the length of the Raceway (see images 3.17 & 3.18). Location of mounting brackets will line up with slots in Raceway housing, please refer to your job specific documentation for exact spacing for each bracket.

Image 3.16



Image 3.17

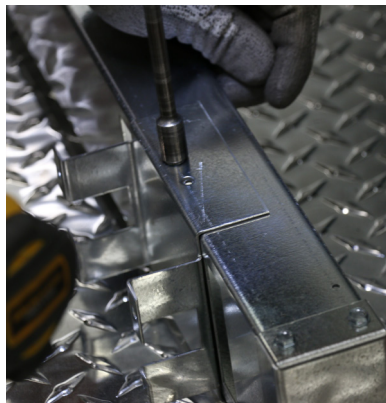


Image 3.18



- Hang Raceway on back of Fan Array by placing bracket over the fan cube frame's outer lip (see images 3.19 & 3.20). Fasten to Fan Array by driving the provided hex screws through slots in Raceway housing into pre-drilled holes in mounting brackets into the Fan Array's frame (see images 3.21, 3.22 & 3.23).

Image 3.19



Image 3.20



Image 3.21



Image 3.22

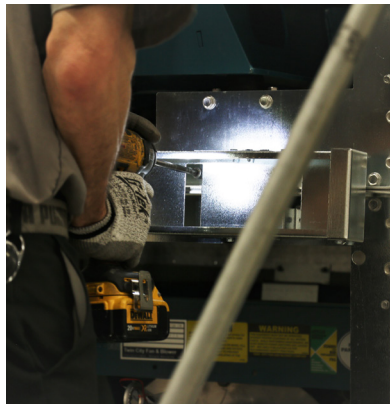


Image 3.23



Wiring

- Attach screw in connector to each end of flexible conduit; conduit not to exceed 3 Ft. Conduit connection to Raceway (see images 3.24 & 3.25). Conduit connection to motor (see images 3.26 & 3.27).

Image 3.24



Image 3.25



Image 3.26



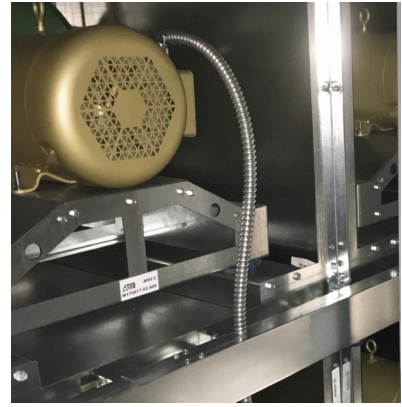
Image 3.27



Image 3.28



Image 3.29



- Install flexible conduit using screw in connector from the motor to the dedicated hole in the raceway (see images 3.28 & 3.29)
- Pass wires through the flexible conduit and through the raceway, minimum gage for AC motor is 12 AWG (see images 3.30 & 3.31).

Image 3.30

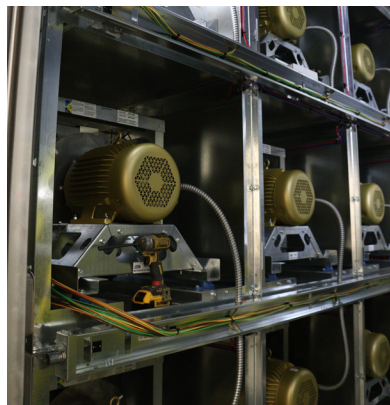
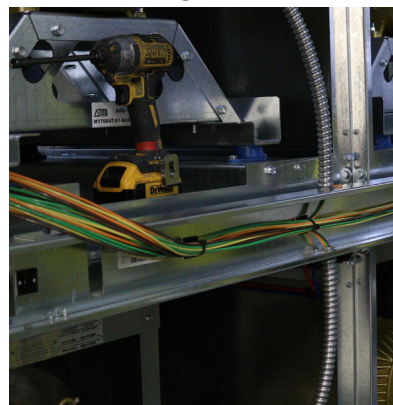


Image 3.31



- Follow the sequence of the fan array for connection in the motor overload panel (see images 3.32, 3.33, & 3.34).

Image 3.32



Image 3.33



Image 3.34



Note:

From raceway to the motor protection panel, use the appropriated conduit sizes according to NEC Code Annexe C

- Wire each fan cube motor to motor overload panel (if supplied) per wiring diagram. Diagram is located inside the motor overload panel lid.
- Once Fan Array has been fully wired you can snap the Racetray face plate into place to cover and protect exposed wires (see image 3.35).

Image 3.35



- Continue to assemble air handling unit walls, doors, safety devices, etc. per unit Manufacturer's recommendations.

4.0 Damper for Fan Array

When adding dampers to your fan array they will come with a spacer.
To assemble the spacer;

- Add supplied gasket tape to each spacer piece corner. (see image 4.01)
- Arrange spacer pieces into square securing with a C-clamp
- Fasten together with supplied screws (see image 4.02)

Image 4.01

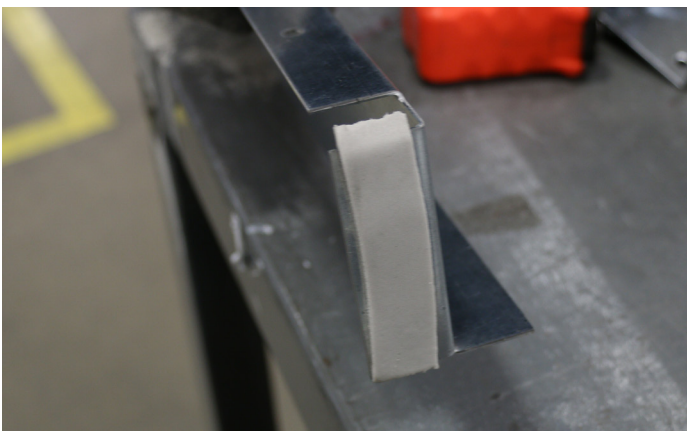


Image 4.02

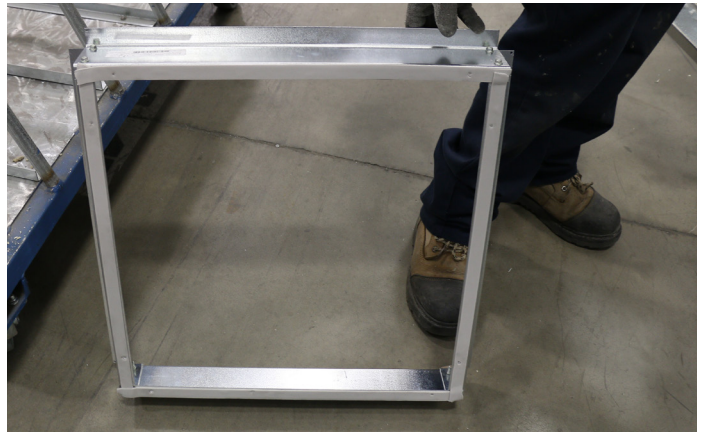


- Affix gasket to the back of spacer prior to attaching to fan array cubes.
(see image 4.03 & 4.04)

Image 4.03



Image 4.04

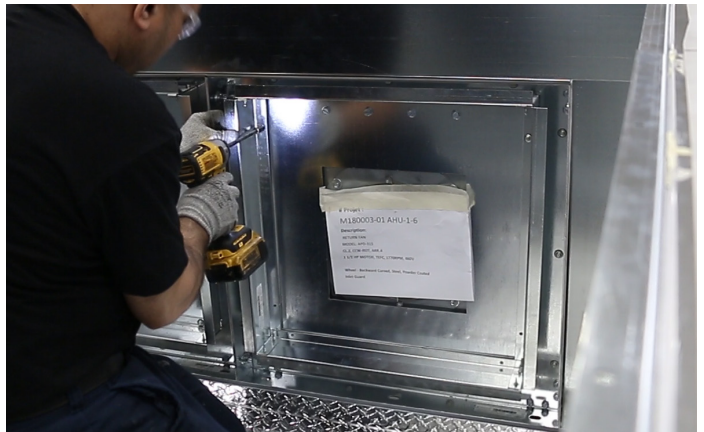


- Attach spacer to each fan array cube using screws (12-14 X 3/4" hex head) and holes provided. (see images 4.05 & 4.06)

Image 4.05



Image 4.06



To install the damper;

- Add supplied gasket tape to perimeter of face of each damper. To ensure maximum seal overlap gasket tape at each corner. (see images 4.07 & 4.08)

Image 4.07



Image 4.08



- Image 4.09

Image 4.10

Image 4.11

Image 4.12

5.0 Dampers

This section includes instruction for several damper types. Refer to your job specific drawings to determine your damper type and location within the unit. This will help you to select which portion(s) of these instructions to utilize.

Floor Installed Grating

To assemble the floor grate frame;

- Add supplied gasket tape to each frame piece corner. (see image 5.01)
- Arrange frame pieces into square securing with a C-clamp and fasten together with supplied screws (see image 5.02)

Image 5.01

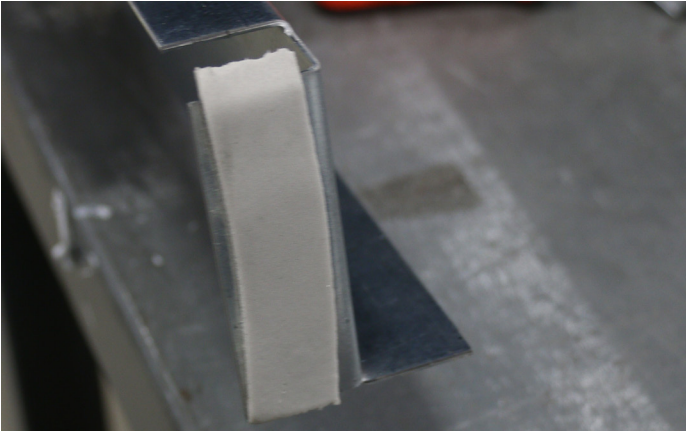
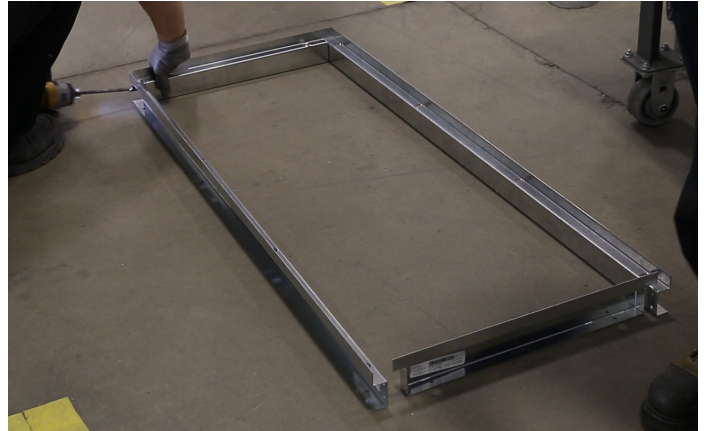


Image 5.02



- Set frame into place and using a measuring tape ensure the frame is square. (see image 5.03)
- Fasten using self-tapping hex screws provided to the base/floor liner (see image 5.04)

Image 5.03



Image 5.04



- Set grates into frame and secure by screwing supplied grating clips with self-tapping hex screws into the frame (see images 5.05, 5.06 & 5.07)

Image 5.05



Image 5.06



Image 5.07



Floor Installed Dampers

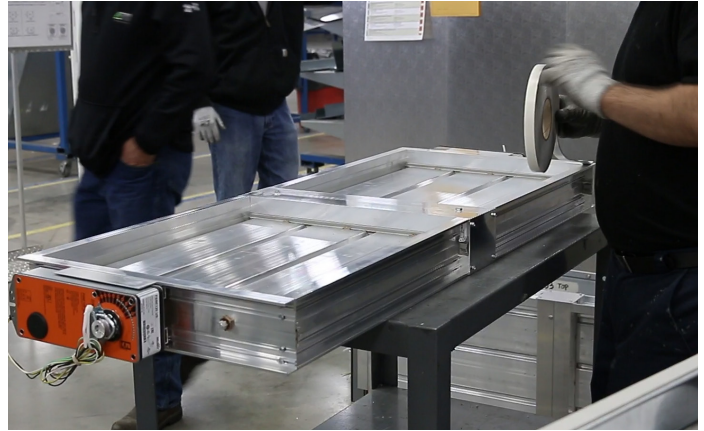
Some dampers may require you to join sections together before installing. To assemble the damper sub-assembly;

- Arrange dampers adjacent to each other and using brackets provided join using supplied screws (see image 5.06)
- Add supplied gasket tape to the perimeter of damper assembly (see image 5.07)

Image 5.08



Image 5.09



- Apply caulk to floor liner opening prior to placement of damper. (see images 5.10 & 5.11)
- Gently set damper into place and fasten to floor liner using provided self-tapping hex screws. (see images 5.12 & 5.13)
- Once damper is installed you can attach a spacer frame and flat bar grating to protect damper blades from damage. (see images 5.14, 5.15, 5.16 & 5.17)

Image 5.10



Image 5.11



Image 5.12



Image 5.13



Image 5.14



Image 5.15



Image 5.16



Image 5.17



Image N3



Note 5: There may be occasions due to space limitations that the actuators may need to be removed from the dampers, to get them into position within the unit, then re-attached once installed. (see image N3)

If you require instruction for how to remove the actuators please refer to the damper assembly instructions or contact our Field Service Team or one of our on-site technicians.

Notes:

Wall Installed Dampers

To install wall dampers;

- Add supplied gasket tape to damper face perimeter. Overlap gasket tape at each corner to ensure maximum seal. (see images 5.18 & 5.19)
- Place damper (see image 5.20) refer to your job specific packet.
- Fasten a bracket using hex screws provided then hang the damper on edge of bracket before securing to interior wall with hex screws. (see images 5.21 & 5.22)

Image 5.18



Image 5.19

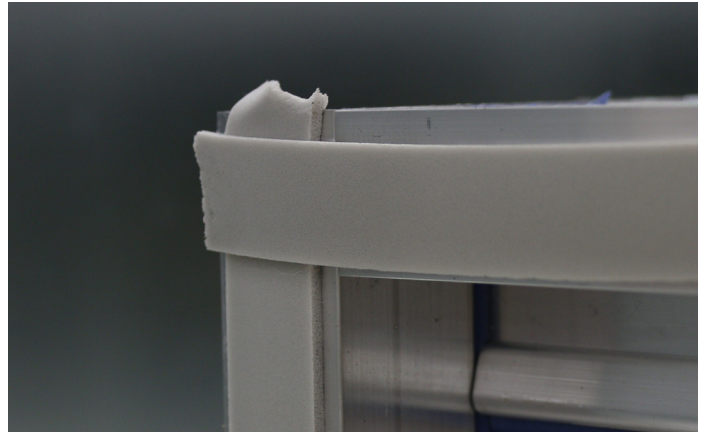


Image 5.20

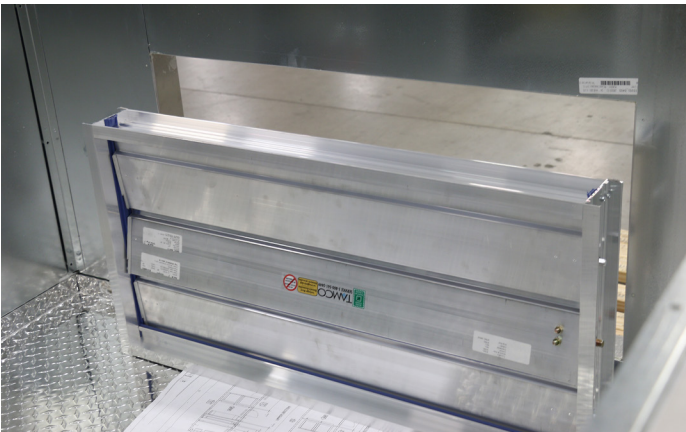


Image 5.21



Image 5.22



6.0 Coils

Not all EZYFit™ Knockdown solutions will require the installation of coils. Refer to your job specific drawings to determine if your unit will contain heating or cooling coils and refer to those instructions as needed.

Installing Cooling Coils

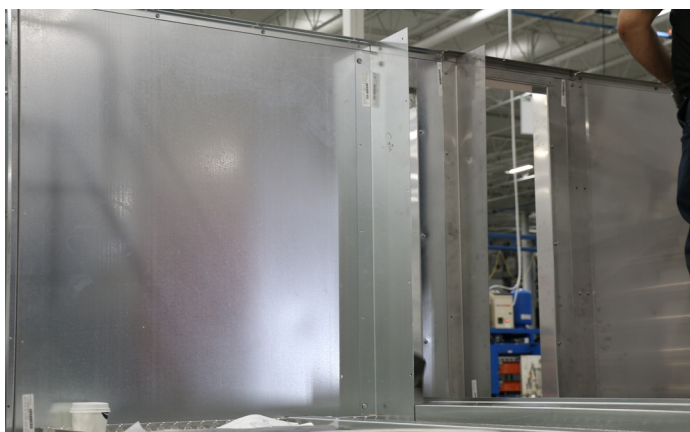
To install the cooling coil;

- Fasten cooling coil blanking to the floorliner and interior walls using the provided hex screws. (see images 6.01 & 6.02)

Image 6.01



Image 6.02



Note 6: Use caution when lifting and placing cooling coil. To transport coils in the field we would advise using a dolly or hoist if you have access.

Note 7: To secure coil to hoist for transport, use the brackets attached. (see image N4)

Image N4

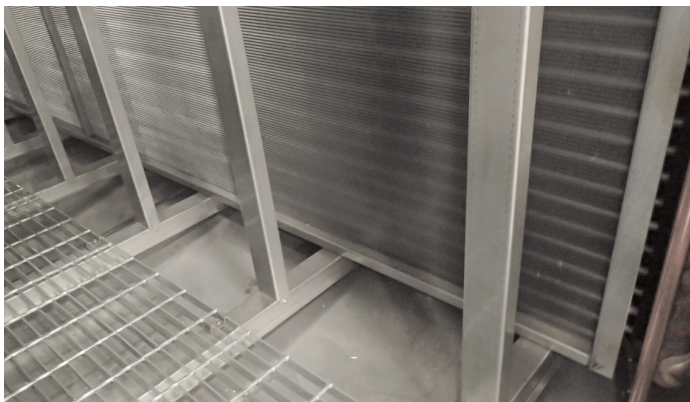


- Lift and place cooling coil inside unit then ensure coil is lined up with access openings front and back (see image 6.03 & 6.04)

Image 6.03



Image 6.04



- Add remaining blanking around coil, fastening to floorliner and interior wall with hex screws. (see images 6.05)

Remember to ensure connections are located on the correct side.

Image 6.05



Image N5



Note 8: Some unit assemblies will require the access panel wall to be installed after the coil(s) have been placed. This is demonstrated in image N5.

Some coils can require a coil rack installation. Please refer to your project specific drawings for these installation steps.

Installing Heating Coils

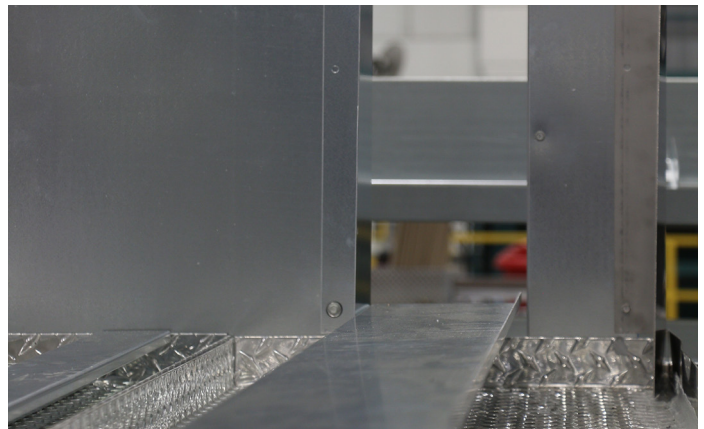
To install the heating coil;

- Fasten heating coil rack and blanking to the floorliner and interior walls using the provided hex screws. (see images 6.06 & 6.07)

Image 6.06



Image 6.07



- If you are installing a lighter weight heating coil you can remove the supplied brackets (shown in images 6.08 & 6.09) manipulate by hand until positioned correctly.

It is important to not lift the coil by the connections and take care to not damage the fins.

Image 6.08

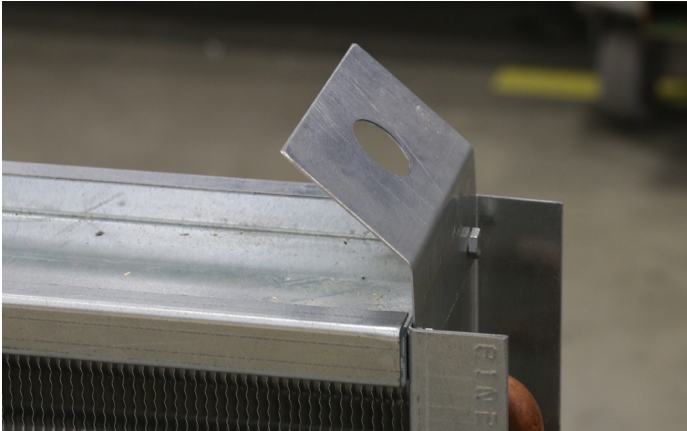


Image 6.09

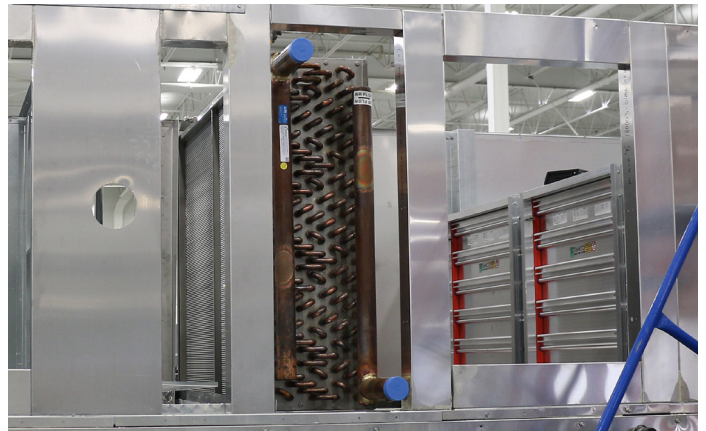


- Lift and place heating coil on the heating coil rack inside unit then ensure coil is lined up with access openings front and back (see image 6.10 & 6.11)

Image 6.10



Image 6.11



- Fasten blanking around heating coil inside unit with hex screws
- After heating and cooling coils are installed access panels with connection sealing plates can be installed.(see image 6.12 & 6.13)

Image 6.12

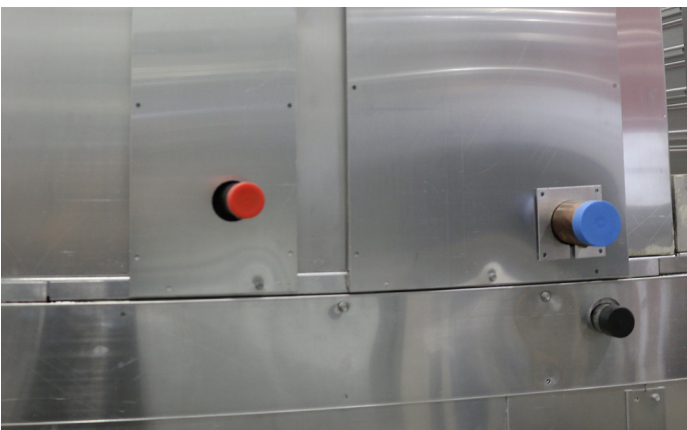
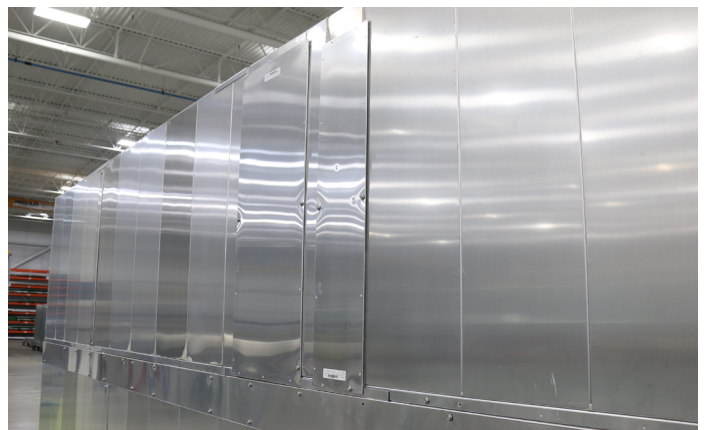


Image 6.13



7.0 Filter Frames

Make sure the frames are correctly placed according to the direction of air. The frames are provided pre-assembled fastened together with rivets and screws.

- Attach filter frame to the floor liner and interior walls using hex screws.
(see images 7.01, 7.02, 7.03 & 7.04)

Image 7.01



Image 7.02



Image 7.03

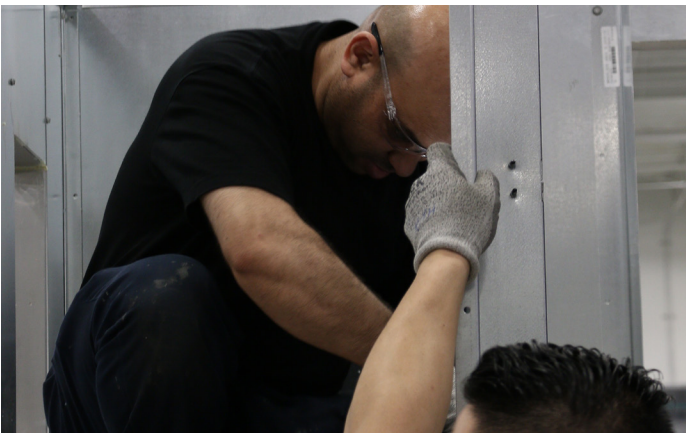
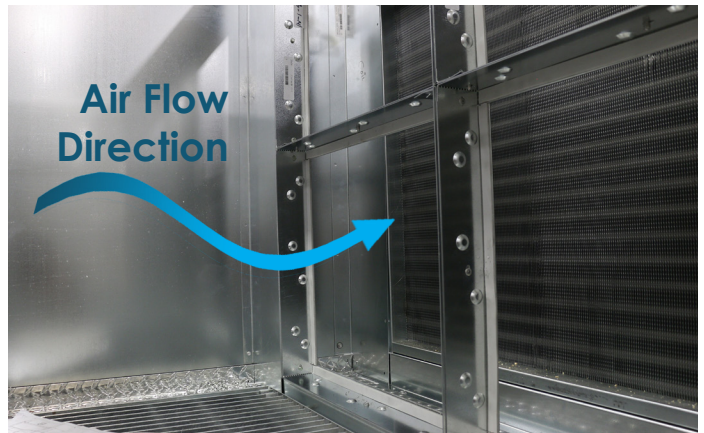


Image 7.04



Note 9: In most cases, the air filter racks are pre assembled. If not, they need to be assembled with rivets (3/16"). As shown below in images N6, N7 & N8

Image N6



Image N7



Image N8



Blanks, Doors & Access Panels

8.0 Blanks

For each piece of equipment that was previously installed (ex: coils and air filters), blanks need to be installed to eliminate air bypass around the specific equipment.

Refer to the project specific drawings provided with the unit, locate the blanks for each piece of equipment.

- Using the supplied screws (12-14 X $\frac{3}{4}$ " hex), fasten the blanks to the side walls first and to the equipment after.



9.0 Doors

TMI offers many door styles with inward and outward swing options. Please refer to your project specific drawing to determine which doors are supplied for your unit.

To install a door;

- Add a bead of caulk to the corner joint and smooth out. (see images 9.01 & 9.02)
- Before setting the door in place, check to see if any other joints near the door should be sealed. If so, add caulk and smooth out.

Image 9.01



Image 9.02



- Set door into place. Then starting from corner secure to the unit using two 12-14 X $\frac{3}{4}$ " hex screws placed $\frac{1}{2}$ " either side of the mitered corner of the door frame. (see images 9.03 & 9.04)
- After all four corners have been fastened to the unit place screws around the perimeter of the door frame equally spaced apart. (see image 9.05)
- Once door is firmly secure all the way around, check the swing action of the door. (see image 9.06)

Image 9.03



Image 9.04



Image 9.05



Image 9.06



10.0 Access Panels

Access panels are installed allowing for easy maintenance or replacement of some installed equipment. Refer to your project specific drawing to identify the location of access panels on your unit.

To install access panels;

- Simply place access panels over opening and fasten into place with screws in provided holes. (see images 10.01, 10.02, & 10.03)
- Remember to also place access panels over the opening to the back side of installed equipment. (see images 10.04 & 10.05) if applicable.

Image 10.01

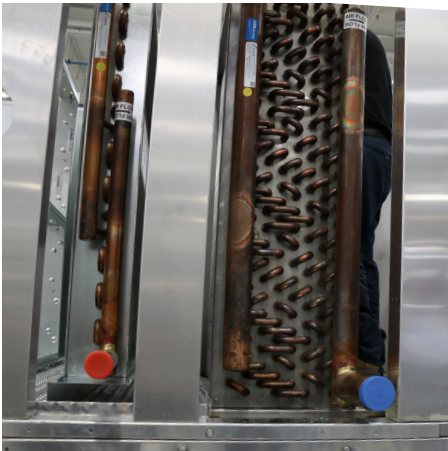


Image 10.02

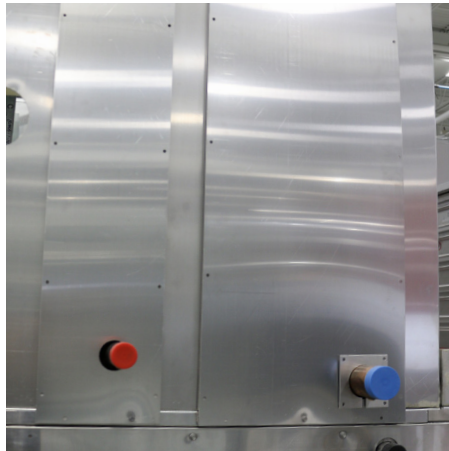


Image 10.03

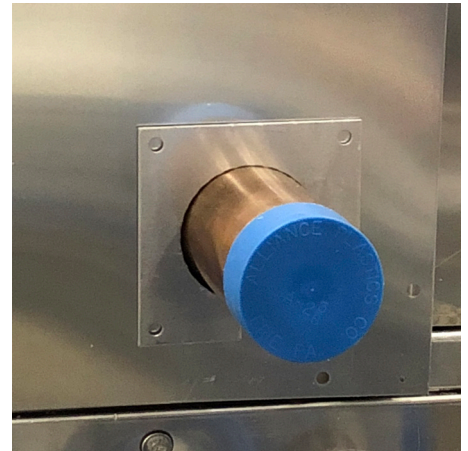
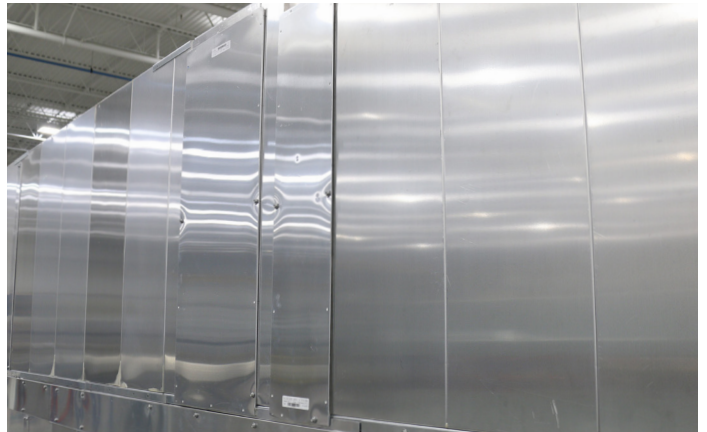


Image 10.04



Image 10.05



**If you have a multi-level unit, proceed to section 12.0 starting on page 33.
If your unit is a single level unit please continue on.**



Roof Installation

11.0 Roof Installation

Each EZYFit™ Knockdown unit will require a roof to be installed.

To install the roof;

- Carefully lift each roof panel section and place over top edges of the units wall.
(see images 11.01 & 11.02)

Image 11.01



Image 11.02



- Insulation to be installed inside the roof rail once the roof is placed and secured. Insulation to be cut to desired length (see images 11.03, 11.04, 11.05, & 11.06)

Image 11.03



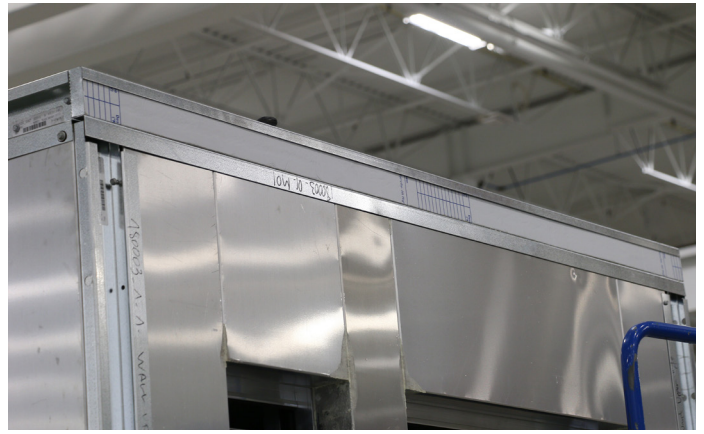
Image 11.04



Image 11.05



Image 11.06



- Cover rails with provided caps, and screw in place with provided self drilling screws (see image 11.07 and 11.08)

Image 11.07

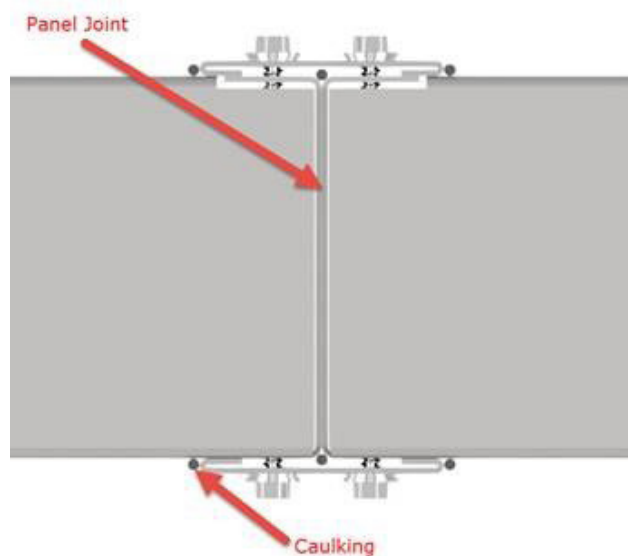


Image 11.08



- Sealing plates to be installed between roof sections, internally and externally. (see image 11.09)

Image 11.09



12.0 Multi-level Unit

This section includes instruction for the addition of multiple levels to a unit. Refer to your job specific drawings to determine your unit requirements.

If your unit has only a single level you can skip this section.

Installing additional floor level

To install the upper level base/floor;

- Add 1/8" x 1 1/2" gasket tape to the top of the bottom level wall panels prior to installing upper level floor.
Compress gasket using pipe clamps.
- Lift and set the 1st upper base/floor section into place, starting from the same location as the first lower wall panel positioned earlier.
- Continue to lift and place remaining upper base/floor sections, making sure to align with the lower walls (see images 12.01 & 12.02) Apply a 3/4" x 1 1/2" gasket between each base floor section and compress using pipe clamps.

Image 12.01

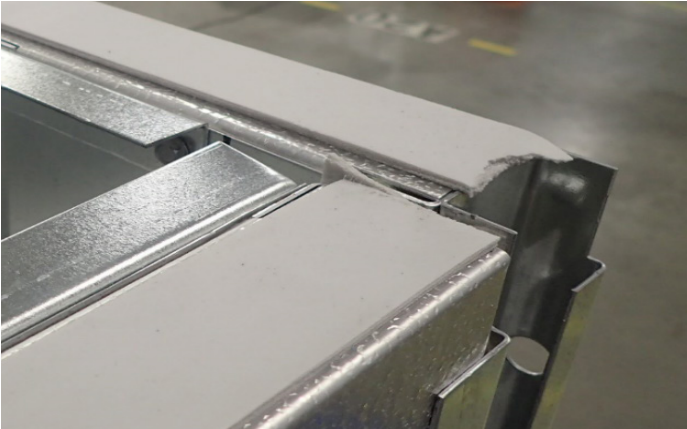


Image 12.02



- Secure exterior flashing to cover seams where lower walls and upper base/floor join. Fasten using the supplied screws (12-14 X 3/4" hex) into provided holes.
(see images 12.03 & 12.04)

Image 12.03



Image 12.04



Installing upper level walls

To install the upper level walls; use the same method from section 2.0 Wall Assembly add the first upper wall panel, starting in the same location as the first lower wall panel ('back' corner). See images 12.05 & 12.06

Image 12.05

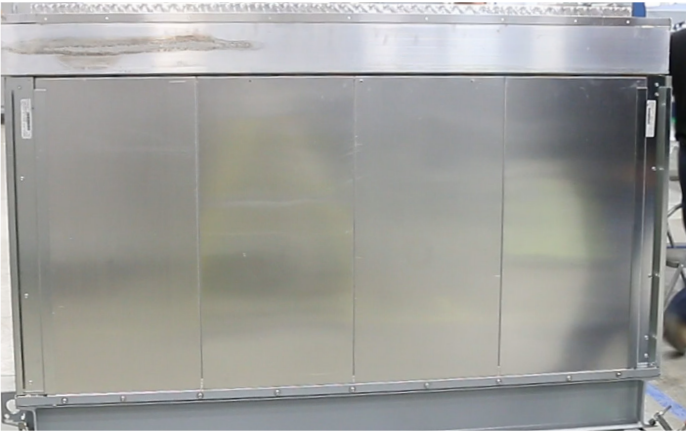
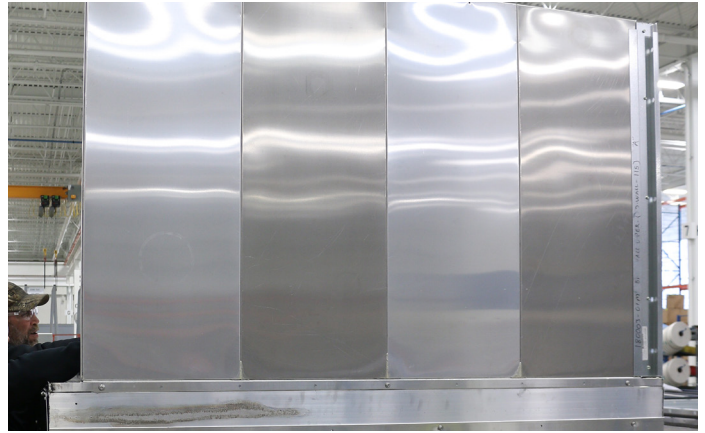


Image 12.06



- Add the second upper wall panel ensuring a tight fit into the corner wall rail and fasten with supplied hex screws. (see images 12.07, 12.08, 12.09 & 12.10)

Image 12.07



Image 12.08



Image 12.09



Image 12.10



- Continue to add the remaining upper wall panels. (see image 12.11)
- Some wall panel sections might require temporary bracing (using 1" x 1" angle) while interior equipment is added as shown in image 12.12.
- To add internal equipment please refer to section 3.0 through 7.0 in this manual. If you have additional questions or require further assistance please contact our Service Team or our Field Service Technician on site.

Image 12.11



Image 12.12



Image 12.13



Image 12.14



- Once all upper level equipment and wall panels have been installed and you have secured the sealing strips at each exterior and interior seam
(see image 12.13 & 12.14)

You can continue to add additional levels by repeating these steps or proceed to section 11.0 Roof Installation.

Sealing & Finishing

13.0 Sealing & Sealing Strips

This section includes instruction for how to seal your new EZYFit™ Knockdown unit.

Sealing Interior

- Caulking must be applied around all blanks to prevent internal air leakage.
Caulking must also be applied to all panel joints of internal walls.
(see images 13.01 13.02 , & 13.03)

Sealing Exterior

- Caulking must be applied on all external joints (between panel sections, between roof and walls, access panel perimeter, etc...). (see images 13.04 & 13.05)

Image 13.01



Image 13.02



Image 13.03



Image 13.04



Sealing Strips

- First, apply the sealant (provided by TMI) between the two joints.
- Install the provided sealing strip using 12-14 X 3/4" self-drilling hex head screws.
(see images 13.06, 13.07, 13.08 & 13.09)

Image 13.05



Image 13.06



Image 13.07



Image 13.08



Image 13.09



14.0 Gasket Application

This section focuses on how gasket should be used to seal your new EZYFit™ Knockdown unit.

Applying Gasket

- Gasket is best applied around all components and between all base/floor sections prior to installation.
- For maximum seal over lap gasket as shown in image 14.01, 14.02, & 14.03

Remember to compress gasket by 50% of its original thickness.
Example if gasket starts out at 3/4", compress to 3/8".

Image 14.01

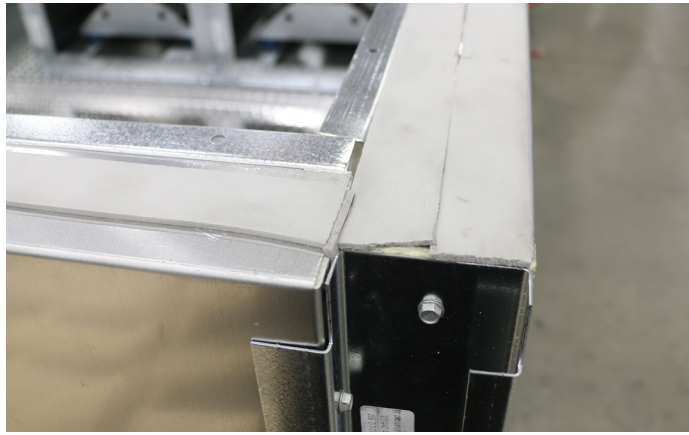


Image 14.02

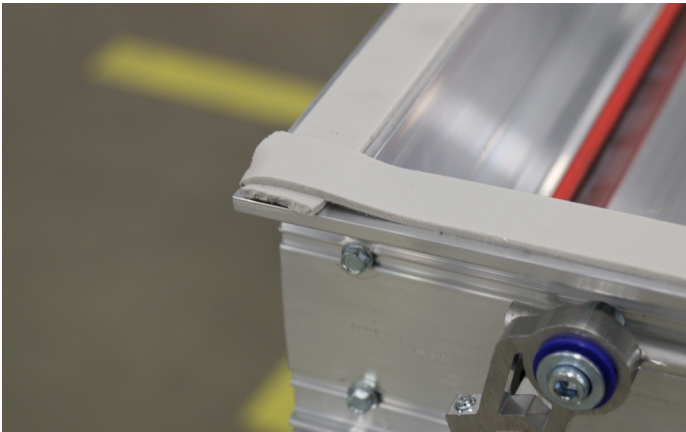
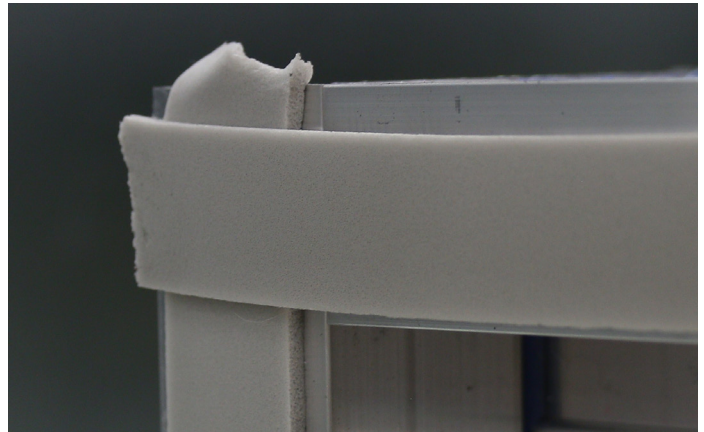


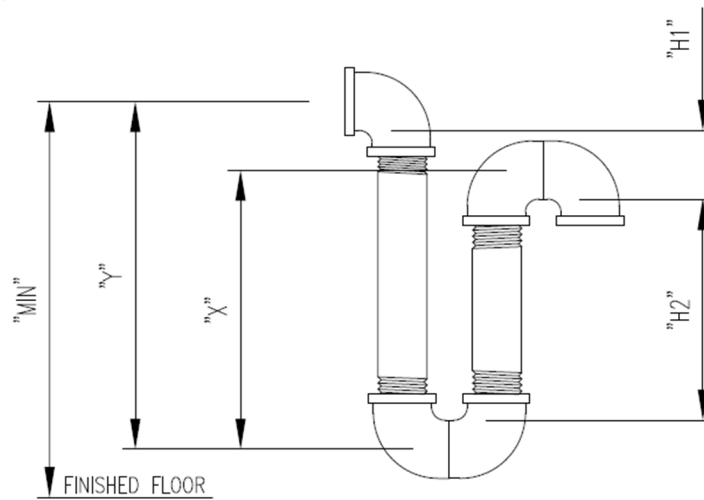
Image 14.03



15.0 Cleaning

Clean the interior and exterior of the unit. The assembly is now complete.

Notes:



POSITIVE TRAP (BY OTHERS)

POSITIVE CONDENSATE DRAIN TRAP

H1= 1/2" MINIMUM

H2= STATIC PRESSURE + SAFETY FACTOR

X = H2 + PIPE I.D.

Y = H1 + H2 + PIPE I.D.

Positive Pressure Compartment Drain Trap Height Chart

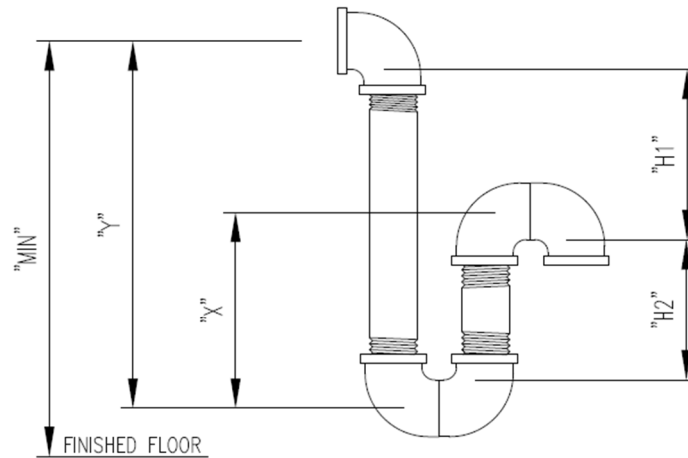
USE COMPARTMENT STATIC PRESSURE, NOT FAN TSP FOR TRAP HEIGHT

Compartment Static Pressure	2" Drain Trap					1-1/4" Drain Trap				
	H1	H2	X	Y	Min*	H1	H2	X	Y	Min*
2.0" w.c.	0.5"	2.5"	4.5"	5.0"	7.0"	0.5"	2.5"	3.8"	4.3"	5.5"
2.5" w.c.	0.5"	3.0"	5.0"	5.5"	7.5"	0.5"	3.0"	4.3"	4.8"	6.0"
3.0" w.c.	0.5"	3.5"	5.5"	6.0"	8.0"	0.5"	3.5"	4.8"	5.3"	6.5"
3.5" w.c.	0.5"	4.0"	6.0"	6.5"	8.5"	0.5"	4.0"	5.3"	5.8"	7.0"
4.0" w.c.	0.5"	4.5"	6.5"	7.0"	9.0"	0.5"	4.5"	5.8"	6.3"	7.5"
4.5" w.c.	0.5"	5.0"	7.0"	7.5"	9.5"	0.5"	5.0"	6.3"	6.8"	8.0"
5.0" w.c.	0.5"	5.5"	7.5"	8.0"	10.0"	0.5"	5.5"	6.8"	7.3"	8.5"
5.5" w.c.	0.5"	6.0"	8.0"	8.5"	10.5"	0.5"	6.0"	7.3"	7.8"	9.0"
6.0" w.c.	0.5"	6.5"	8.5"	9.0"	11.0"	0.5"	6.5"	7.8"	8.3"	9.5"
6.5" w.c.	0.5"	7.0"	9.0"	9.5"	11.5"	0.5"	7.0"	8.3"	8.8"	10.0"
7.0" w.c.	0.5"	7.5"	9.5"	10.0"	12.0"	0.5"	7.5"	8.8"	9.3"	10.5"
7.5" w.c.	0.5"	8.0"	10.0"	10.5"	12.5"	0.5"	8.0"	9.3"	9.8"	11.0"
8.0" w.c.	0.5"	8.5"	10.5"	11.0"	13.0"	0.5"	8.5"	9.8"	10.3"	11.5"
8.5" w.c.	0.5"	9.0"	11.0"	11.5"	13.5"	0.5"	9.0"	10.3"	10.8"	12.0"
9.0" w.c.	0.5"	9.5"	11.5"	12.0"	14.0"	0.5"	9.5"	10.8"	11.3"	12.5"
9.5" w.c.	0.5"	10.0"	12.0"	12.5"	14.5"	0.5"	10.0"	11.3"	11.8"	13.0"
10.0" w.c.	0.5"	10.5"	12.5"	13.0"	15.0"	0.5"	10.5"	11.8"	12.3"	13.5"
10.5" w.c.	0.5"	11.0"	13.0"	13.5"	15.5"	0.5"	11.0"	12.3"	12.8"	14.0"
11.0" w.c.	0.5"	11.5"	13.5"	14.0"	16.0"	0.5"	11.5"	12.8"	13.3"	14.5"
11.5" w.c.	0.5"	12.0"	14.0"	14.5"	16.5"	0.5"	12.0"	13.3"	13.8"	15.0"
12.0" w.c.	0.5"	12.5"	14.5"	15.0"	17.0"	0.5"	12.5"	13.8"	14.3"	15.5"

Notes:

Safety factor: 0.5" w.c.

* Distance from drain centerline to bottom of trap



NEGATIVE TRAP (BY OTHERS)

NEGATIVE CONDENSATE DRAIN TRAP

H1= COMPARTMENT PRESSURE +SAFETY FACTOR

H2= (H1)/2

X = H2 + PIPE I.D.

Y = H1 + H2 + PIPE I.D.

Negative Pressure Compartment Drain Trap Height Chart										
USE COMPARTMENT STATIC PRESSURE, NOT FAN TSP FOR TRAP HEIGHT										
Compartment Static Pressure	2" Drain Trap					1-1/4" Drain Trap				
	H1	H2	X	Y	Min*	H1	H2	X	Y	Min*
-2.0" w.c.	2.5"	1.3"	3.3"	5.8"	7.8"	2.5"	1.3"	2.5"	5.0"	6.3"
-2.5" w.c.	3.0"	1.5"	3.5"	6.5"	8.5"	3.0"	1.5"	2.8"	5.8"	7.0"
-3.0" w.c.	3.5"	1.8"	3.8"	7.3"	9.3"	3.5"	1.8"	3.0"	6.5"	7.8"
-3.5" w.c.	4.0"	2.0"	4.0"	8.0"	10.0"	4.0"	2.0"	3.3"	7.3"	8.5"
-4.0" w.c.	4.5"	2.3"	4.3"	8.8"	10.8"	4.5"	2.3"	3.5"	8.0"	9.3"
-4.5" w.c.	5.0"	2.5"	4.5"	9.5"	11.5"	5.0"	2.5"	3.8"	8.8"	10.0"
-5.0" w.c.	5.5"	2.8"	4.8"	10.3"	12.3"	5.5"	2.8"	4.0"	9.5"	10.8"
-5.5" w.c.	6.0"	3.0"	5.0"	11.0"	13.0"	6.0"	3.0"	4.3"	10.3"	11.5"
-6.0" w.c.	6.5"	3.3"	5.3"	11.8"	13.8"	6.5"	3.3"	4.5"	11.0"	12.3"
-6.5" w.c.	7.0"	3.5"	5.5"	12.5"	14.5"	7.0"	3.5"	4.8"	11.8"	13.0"
-7.0" w.c.	7.5"	3.8"	5.8"	13.3"	15.3"	7.5"	3.8"	5.0"	12.5"	13.8"
-7.5" w.c.	8.0"	4.0"	6.0"	14.0"	16.0"	8.0"	4.0"	5.3"	13.3"	14.5"
-8.0" w.c.	8.5"	4.3"	6.3"	14.8"	16.8"	8.5"	4.3"	5.5"	14.0"	15.3"
-8.5" w.c.	9.0"	4.5"	6.5"	15.5"	17.5"	9.0"	4.5"	5.8"	14.8"	16.0"
-9.0" w.c.	9.5"	4.8"	6.8"	16.3"	18.3"	9.5"	4.8"	6.0"	15.5"	16.8"
-9.5" w.c.	10.0"	5.0"	7.0"	17.0"	19.0"	10.0"	5.0"	6.3"	16.3"	17.5"
-10.0" w.c.	10.5"	5.3"	7.3"	17.8"	19.8"	10.5"	5.3"	6.5"	17.0"	18.3"
-10.5" w.c.	11.0"	5.5"	7.5"	18.5"	20.5"	11.0"	5.5"	6.8"	17.8"	19.0"
-11.0" w.c.	11.5"	5.8"	7.8"	19.3"	21.3"	11.5"	5.8"	7.0"	18.5"	19.8"
-11.5" w.c.	12.0"	6.0"	8.0"	20.0"	22.0"	12.0"	6.0"	7.3"	19.3"	20.5"
-12.0" w.c.	12.5"	6.3"	8.3"	20.8"	22.8"	12.5"	6.3"	7.5"	20.0"	21.3"
Notes:										
Safety factor: 0.5" w.c.										
* Distance from drain centerline to bottom of trap										

Blank lined paper for writing.

Blank lined paper for writing.





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