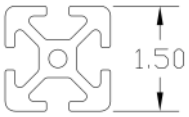
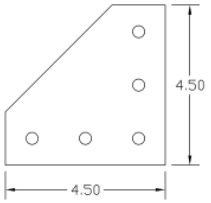
Support Assemblies:

Parts list:
(Note – see enclosed cut sheet for quantities and dimensional information)

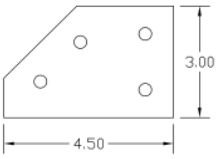
A – vertical structural member (1 ½" x 1 ½" modular frame)
B - horizontal structural member (1 ½" x 1 ½" modular frame)
C – cross member (1 ½" x 1 ½" modular frame)



1- 90 degree corner bracket

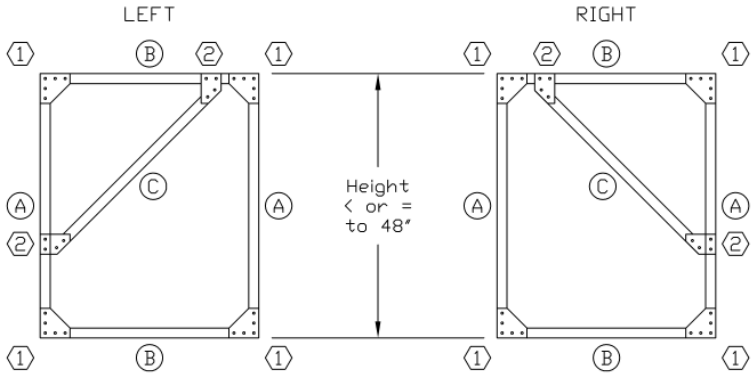


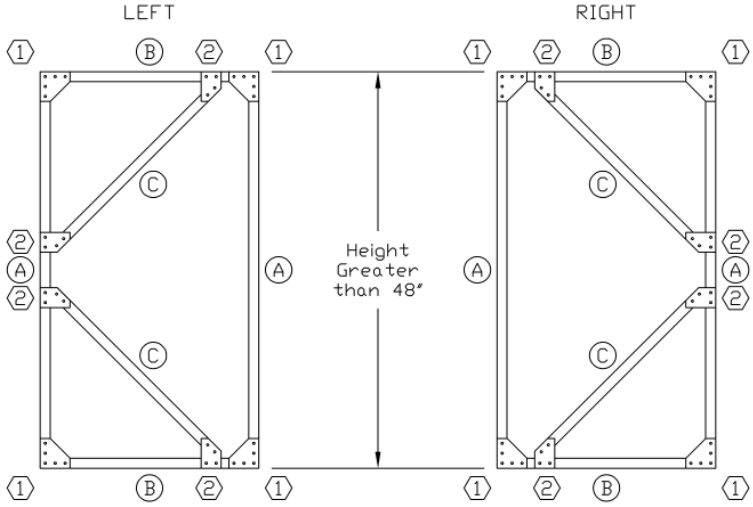
2- 45 degree cross bracket



5/16-18 x 1" carriage bolt, 5/16-18 nut, 5/16 lock washer

Finished Support Assembly Configurations:





Steps:

1. Begin by laying out the framing members (see Figure 1-A). Depending on the size and configuration of your equipment screen, the quantities and dimensions of the framing will vary. This information is included in the cut sheet that accompanies these instructions.

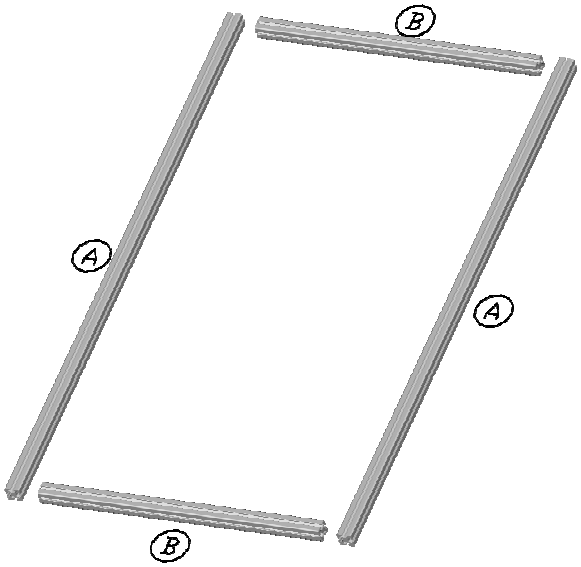


Figure 1-A

2. Insert 3 carriage bolts into the structural member "A". Insert 2 carriage bolts into structural member "B" (see Figure 2-A). Make sure to include 2 extra bolts into the channel "A" as shown (on one side only). These will be used for the attachment of cross member "C".

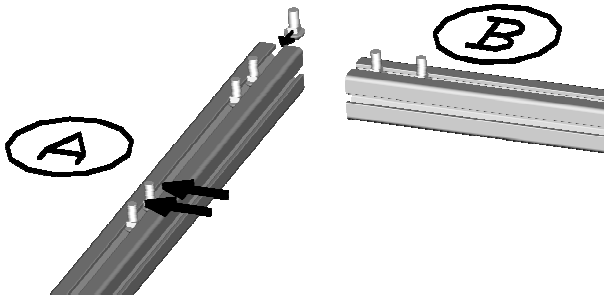


Figure 2-A

3. Push framing members A and B together and position the bolts so that the corner bracket will fit over them. Slide corner bracket "1" over the bolts (see Figure 3-A). Apply one lock washer and nut to each bolt – hand tighten. Make sure the surfaces of each framing member are flush to the adjacent member. Use a carpenter's square to align the corner. Tighten the bolts with a ratchet or box end wrench.

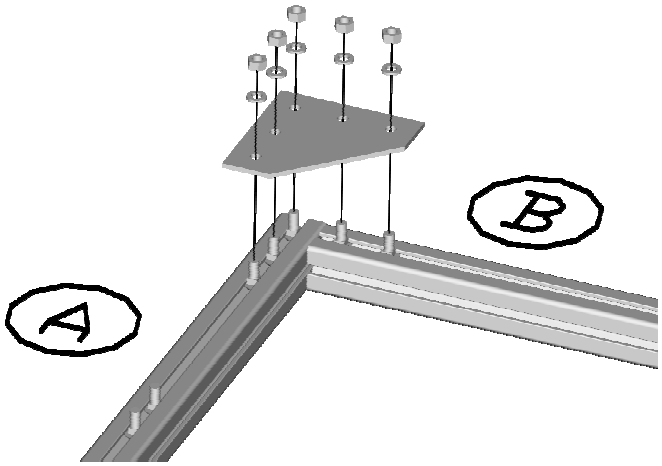


Figure 3-A

4. Follow the same procedure for the other top corner. Insert 2 extra bolts in framing member B, which will be used for the attachment of cross member "C" (see Figure 4-A).

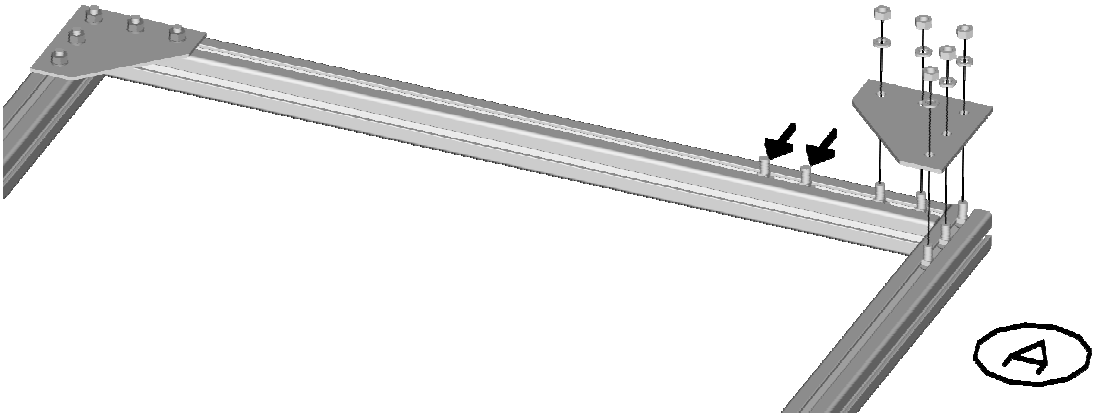


Figure 4-A

5. Repeat the same procedure for the bottom of the support assembly by mounting corner bracket "1" at each bottom corner (see Figure 5-A). Include 2 extra carriage bolts in framing member A and B if you have an equipment screen height that exceeds 48". These will be used to mount cross member "C" on taller units.

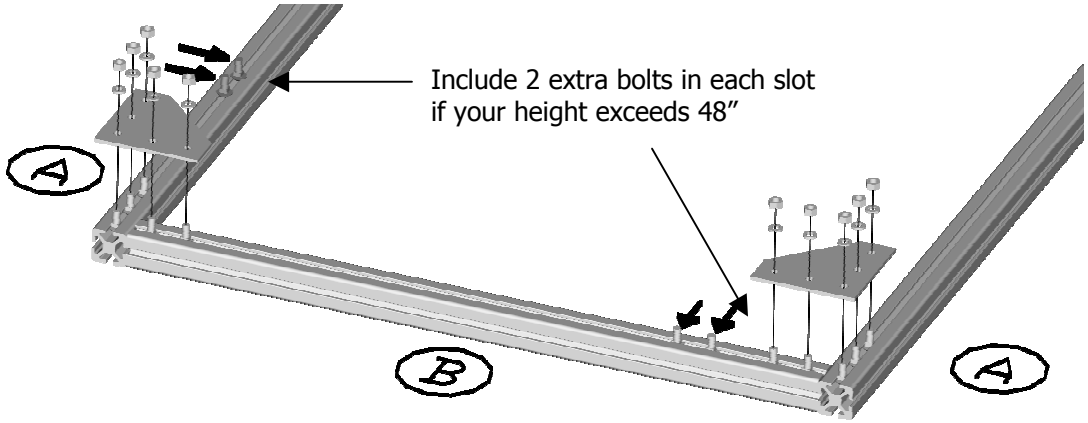


Figure 5-A

6. Fit bracket "2" (45 degree cross bracket) to each end of framing member "C" (see Figure 5-A). Hand tighten the nuts. Align the assembly "C" over the bolts in framing member "A" and "B" and apply one washer and nut to each bolt. Framing member "C" should be at a 45 degree angle and touching both adjacent framing members after assembly. Tighten all bolts with a ratchet or box end wrench.

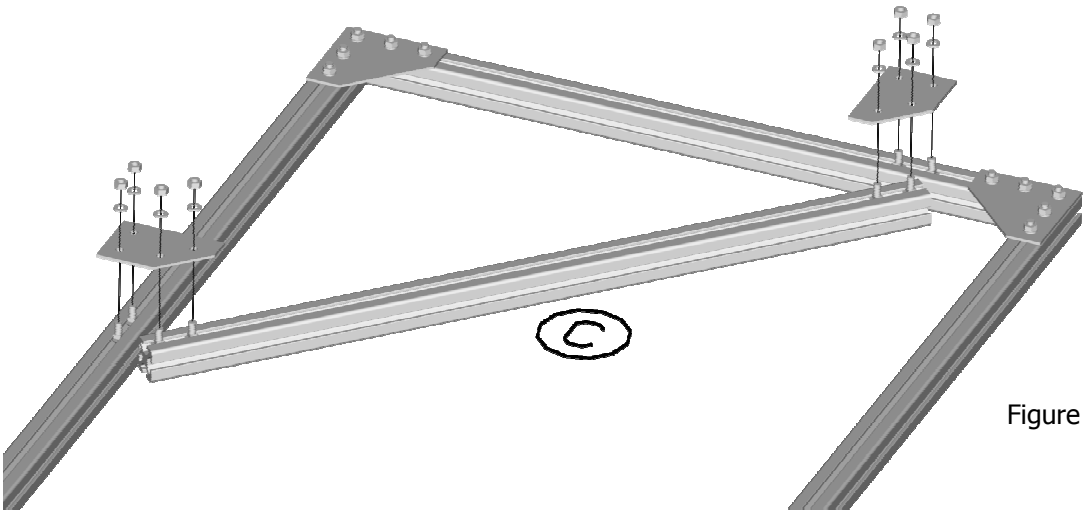


Figure 6-A

7. If your overall equipment screen height exceeds 48": repeat step 6 for the bottom of the support assembly (see Figure 7-A).

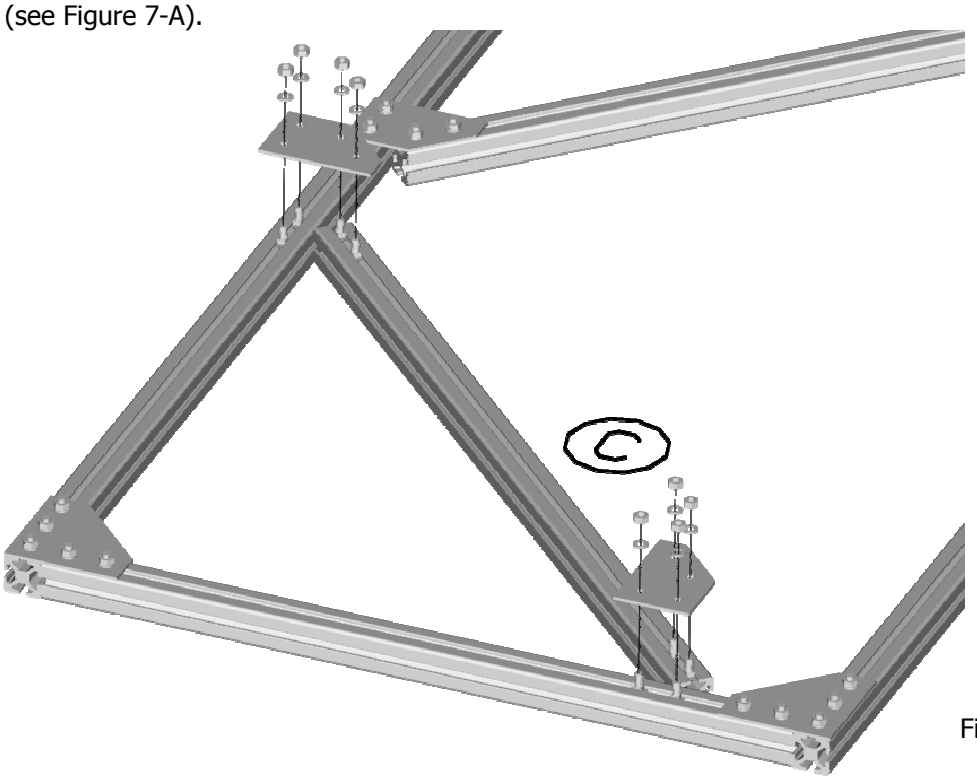


Figure 7-A

8. Make equal quantities of left and right assemblies.

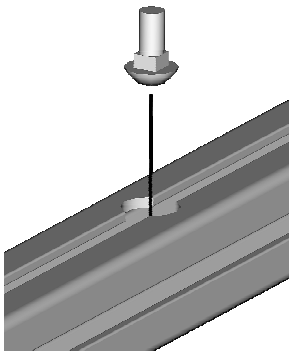


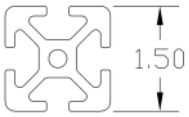
Figure Hint-1

Hint: If you need to insert bolts in a captivated channel, they can be added using a ¾" drill bit (See Figure Hint-1). Move 3"-4" away from where the bolt will be required. Drill a hole centered on the channel. *Do not drill all the way through the structural member* – the hole only needs to penetrate the upper legs of the channel. Insert a bolt through the hole and slide it to the required location.

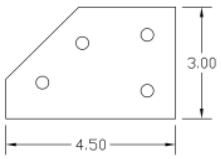
Mount Support Assemblies to Air Handling Unit:

Parts list:
(Note – see enclosed cut sheet for quantities and dimensional information)

C – cross member (1 ½" x 1 ½" modular frame)



2 - 45 degree cross bracket



3 – Corner clip angle 1 ½"

5/16-18 x 1" carriage bolt , 5/16-18 nut, 5/16 lock washer
Fasteners to air handling unit (not provided)

Steps:

1. Locate vertical structural framing inside the air handling unit (AHU). Most air handlers have framing at corners and at intervals along the length. Position support assemblies so fasteners mount through the air handling skin and into these framing members where possible. If a support assembly cannot be located at an AHU framing member, consider adding an internal framing member to the AHU at the location where a support assembly is required.

2. Drill holes through the "A" leg of the support assembly every 12" of height. Use a drill bit size that will create a tight clear hole for the fastener you have selected. Typical fasteners are 2" long #14 stainless steel Tek screws with a #3 bit. Use a washer of sufficient size under each fastener head to prevent pull through into the slot of the framing member.

3. Mount one support assembly to the air handler (see Figures 3-A and Figure 3-B). The bolts and brackets of the support assembly must face away from the corner. As you mount more support assemblies, make sure they are at the same elevation by using a laser level or string for alignment.

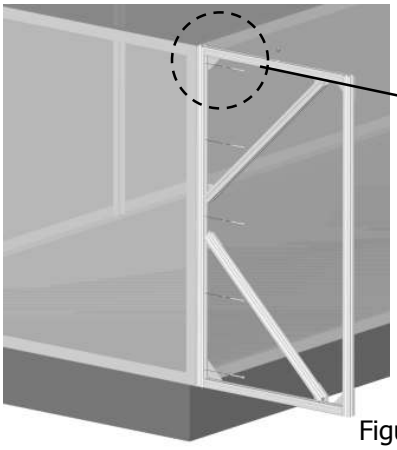


Figure 3-A

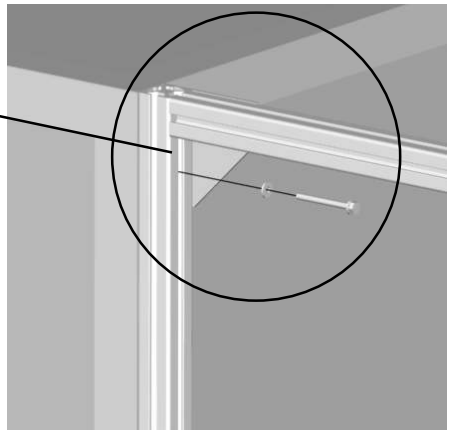


Figure 3-B

4. Mount the mating support assembly at the corner following the same procedure (see Figure 4-A). Bolts and brackets must face away from the corner. Each corner uses one "Left" and one "Right" assembly (see section "Finished Support Assembly Configurations" for details).

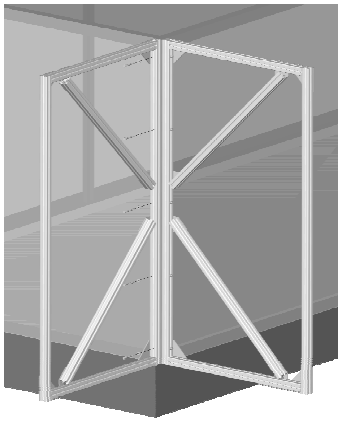


Figure 4-A

5. The top and bottom of each corner requires one racking brace (see Figures 5-A and 5-B). Fit bracket "2" (45 degree cross bracket) to each end of framing member "C" with 2 carriage bolts at each end. Hand tighten the nuts. Insert 2 carriage bolts into the outside slot of each support assembly. For the insertion of the bolt heads, use the method shown in Hint 1. Align the assembly "C" over the bolts in framing members "B" and apply one washer and nut to each bolt. Framing member "C" should be at a 45 degree angle and touching both adjacent framing members after assembly. Use a carpenter's square to align the support assemblies at right angles to each other. Tighten all bolts with a ratchet or box end wrench.

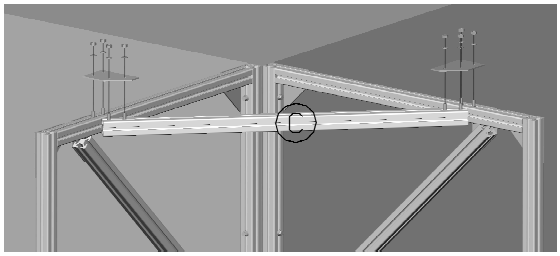


Figure 5-A

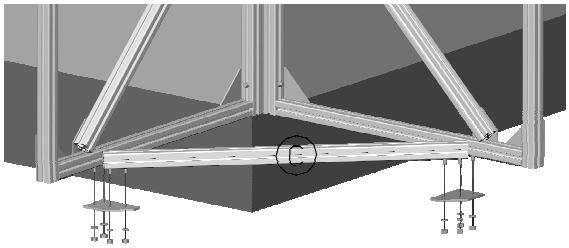


Figure 5-B

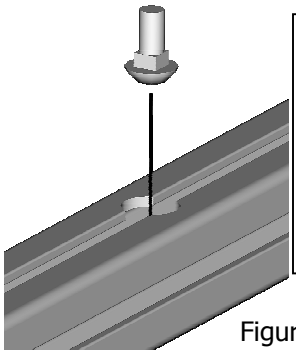


Figure Hint-1

Hint: If you need to insert bolts in a captivated channel, they can be added using a ¾" drill bit (See Figure Hint-1). Move 3"-4" away from where the bolt will be required. Drill a hole centered on the channel. *Do not drill all the way through the structural member* – the hole only needs to penetrate the upper legs of the channel. Insert a bolt through the hole and slide it to the required location.

6. Each corner requires one corner angle clip "3" for every 18" of height. Place two carriage bolts through the holes in the corner angle clip (see Figure 6-B). Apply one washer and nut per bolt. Leave the nuts loose. Slide the heads of the carriage bolts into the slots of the support assemblies (see Figure 6-A). Locate one corner clip angle every 18" of height and tighten the nuts with a ratchet or box end wrench.

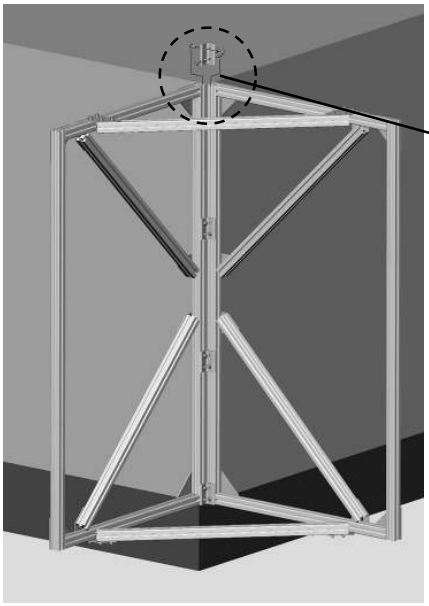


Figure 6-A

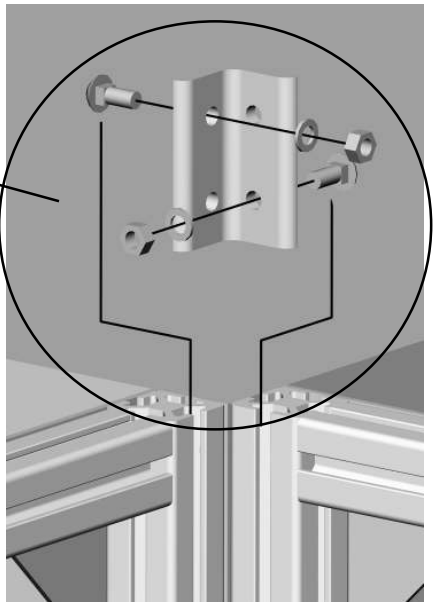


Figure 6-B

7. Mount any intermediate support assemblies using the same method as described in step 3 (see Figure 7-A). Maximum span between support assemblies is 96". Final layout should appear as shown in Figure 7-B.

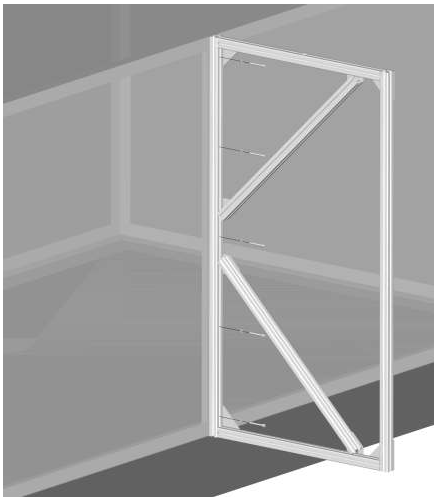


Figure 7-A

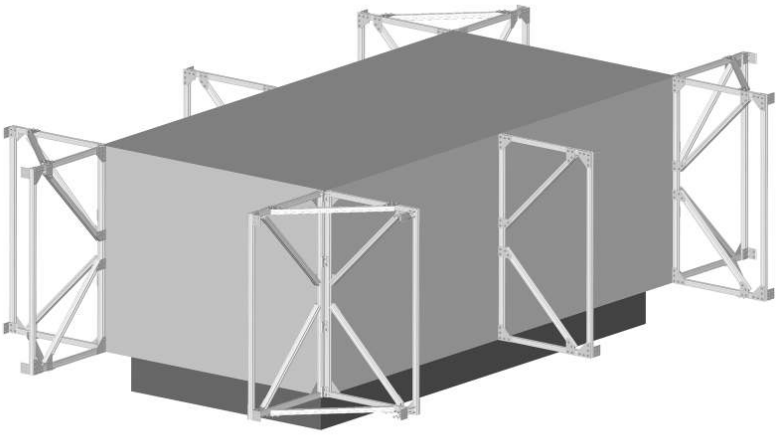
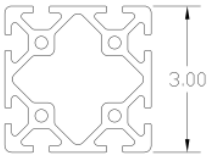


Figure 7-B

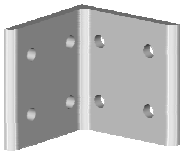
Mount Rails to Support Assemblies:

Parts List:

S – Rail structural member (3" x 3" modular frame) - Length
T - Rail structural member (3" x 3" modular frame) - Width



4 – Corner clip angle 3"



5/16-18 x 1" carriage bolt , 5/16-18 nut, 5/16 lock washer

Steps:

1. Attach corner clip angle "4" to the top and bottom end of each support assembly (see Figures 1-A and 1-B). Flush the corner clip angle to the top and bottom edge of the support assembly. Tighten nuts.

Figure 1-A

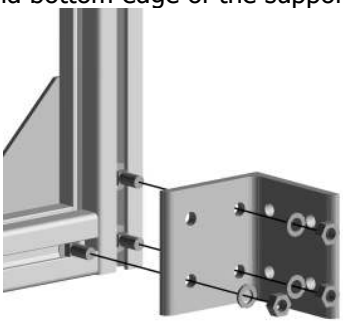


Figure 1-B

One set of corner clip angles "4" is required at each support assembly (see Figure 1-C).

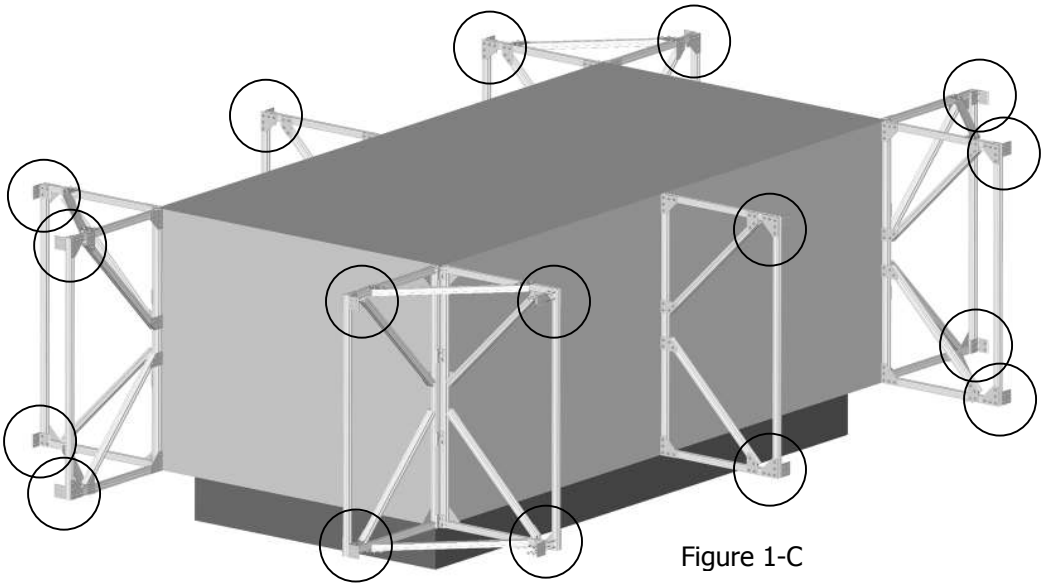


Figure 1-C

2. Slide one bolt per mounting point into each slot (on one side only) of the Rail "S". Each mounting point has one upper and one lower fastening point (see Figure 3-B).

3. Lift the Rail "S" into place and align the bolts with the corner angle clips (see Figure 3-A). Center the rail left to right on the support assemblies. Apply one lock washer and nut to each bolt and hand tighten (see Figure 3-B). *Do not tighten nuts with a wrench until all rails are mounted and aligned.* Mount all rails on the long sides using the same procedure.

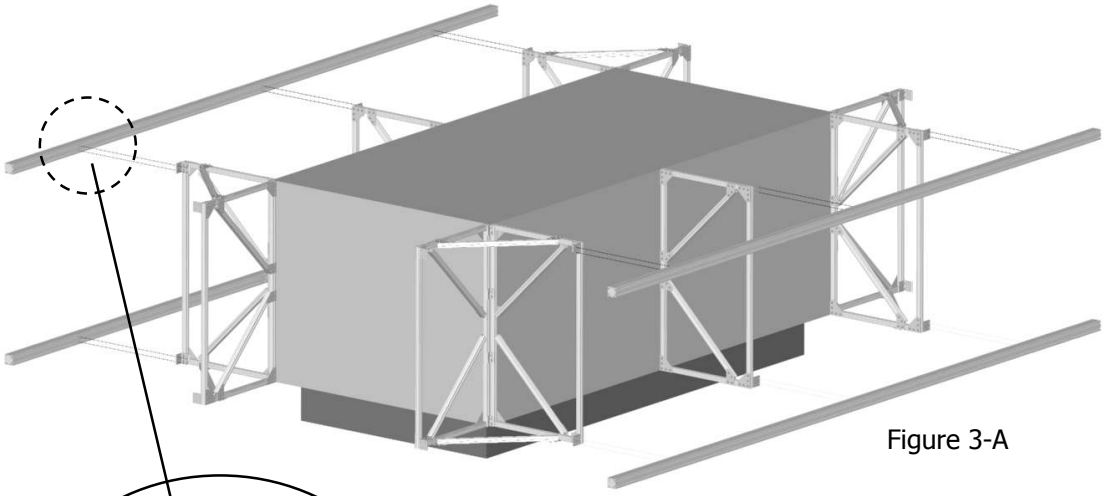


Figure 3-A

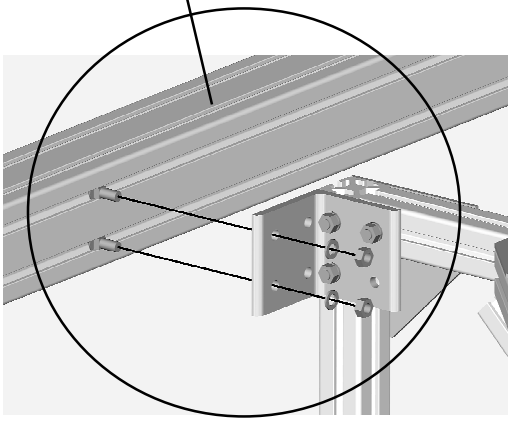


Figure 3-B

4. Mount corner angle clip "4" to the ends of the mounted Rails "S" (see Figure 4-A) with 3 carriage bolts as shown.

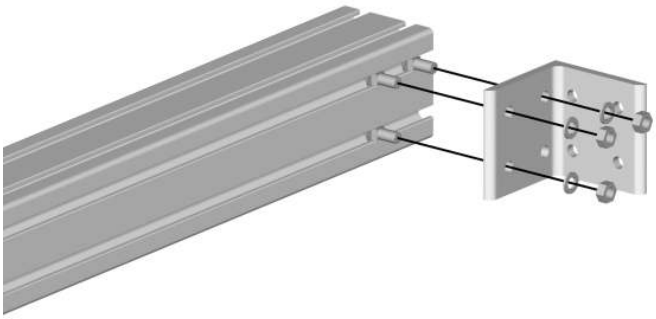


Figure 4-A
(end of rail)

5. Into Rail "T" (an un-mounted rail), slide one bolt per mounting point into each slot of one side. Each mounting point has one upper and one lower fastening point.

6. Lift rail "T" into place (see Figure 6-A). Align the carriage bolts with the mounting points on the support assemblies. Slide the carriage bolts through the holes in the corner clip angles "4" (mounted to support assemblies and rail "S"). Apply one washer and one nut to each carriage bolt. Hand tighten the nuts. Mount all remaining rail(s) using the same procedure.

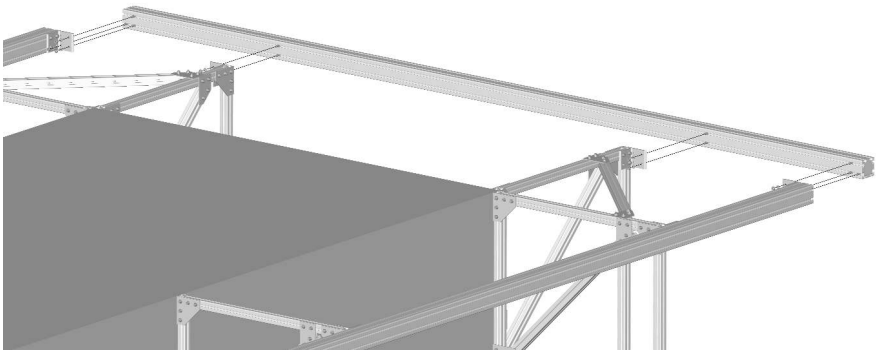


Figure 6-A

7. At each corner, align the rails so that the tips of adjacent rails "S" and "T" are touching on the inside (see Figures 7-A and 7-B). Tighten the nuts at the corner angle clips with a ratchet or box end wrench.

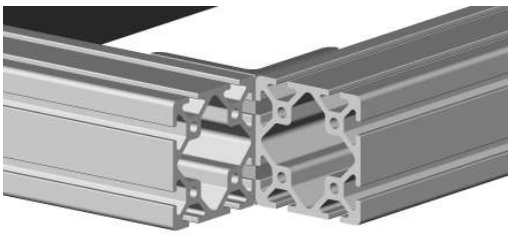


Figure 7-A
(outside view of corner)

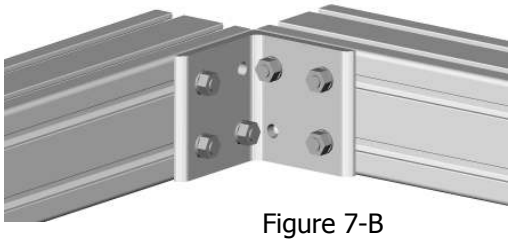


Figure 7-B
(inside view of corner)

8. Check the vertical alignment of the top and bottom rail to each corner. Use a plumb bob or carpenter's level and reposition rails until all corners are vertically aligned.

9. Tighten the nuts at each mounting point along the rails (see Figure 9-A) with a ratchet or box end wrench.

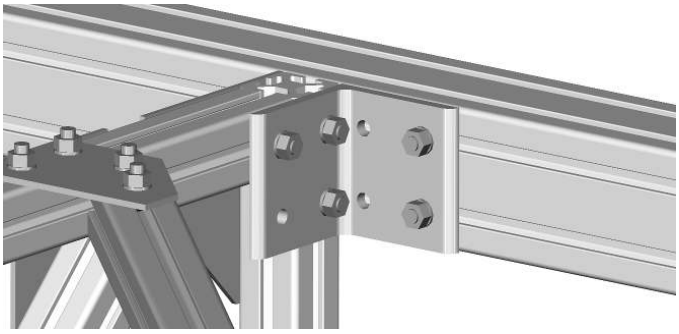
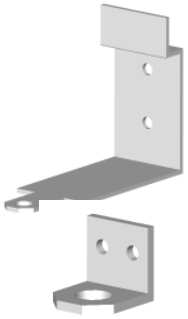


Figure 9-A

Mount Louvers and Latch Hardware to Rails:

Parts List:

Louver panels with factory attached hinges
L - Latch bracket



M - Latch clip

5/16-18 x 1" carriage bolt, 5/16-18 nut, 5/16 lock washer
7/16-14 x ¾" hex bolt, 7/16-14 nylon insert locking nut
#10 x ¾" Tek screws

Steps:

1. Determine the number of louver panels per side of the equipment screen.

2. For each louver panel, slide two carriage bolts into each slot in the top and bottom rails (ie – if you have 4 louvers on a side, 8 screws in each slot). One carriage bolt per slot will be used for each hinge, and one for each latch. Push the carriage bolts down the slots for mounting of the first louver panel.

3. Start at the hinge end of one rail (see Figure 3-A). If you are mounting a right hinge panel, start at the right end. If you are mounting a left hinge panel, start at the left end.

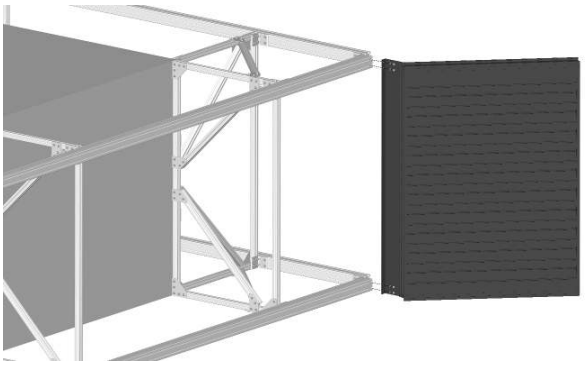


Figure 3-A

4. Mount the hinge over the first set of carriage bolts (see Figures 4-A and 4-B). Apply one lock washer and nut over the carriage bolts and hand tighten.

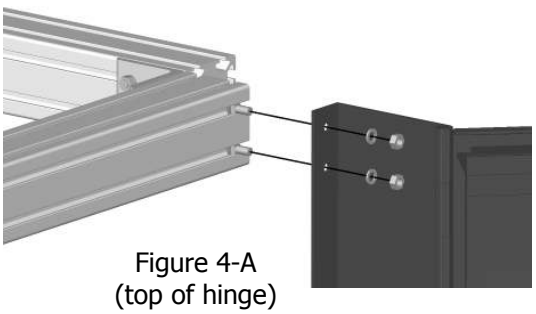


Figure 4-A
(top of hinge)

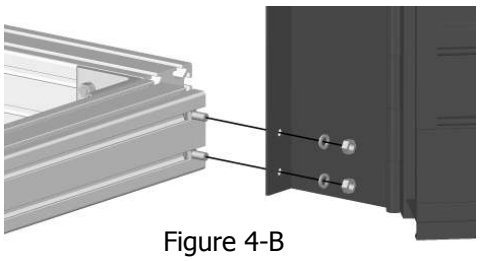


Figure 4-B
(bottom of hinge)

5. Align the outside of the hinge with the end of the top and bottom rails (see Figure 5-A). Tighten the nuts with a wrench or ratchet.

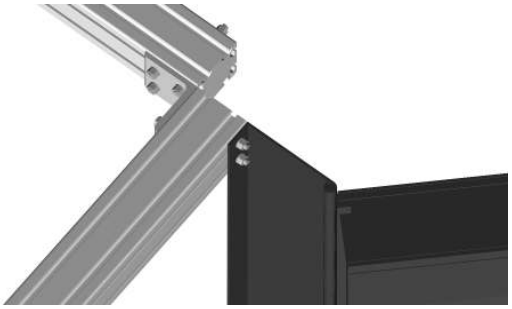


Figure 5-A
(top view)

6. Slide the latch brackets "L" over the carriage bolts in the rail slots (see Figures 6-A and 6-B). Mount one latch "L" at top and one at the bottom of the louver panel. Apply one lock washer and nut per carriage bolt. Hand tighten the nuts. Close the louver panel. Slide the latch bracket until it overhangs the end of the mounted louver panel ½" (see Figure 6-C). Open the louver panel and tighten the nuts with a ratchet or box end wrench.

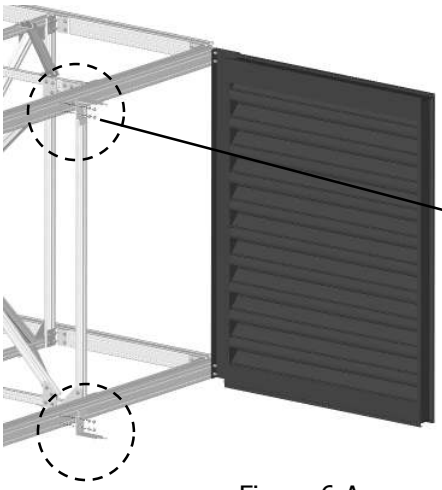


Figure 6-A

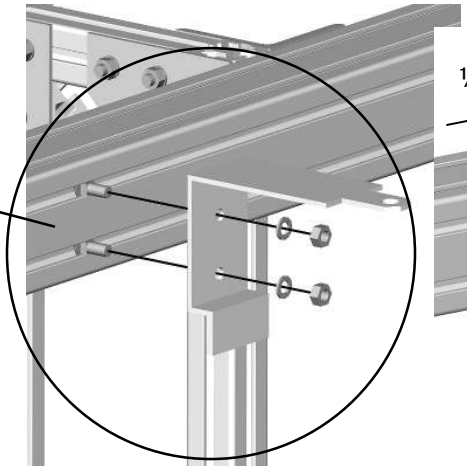


Figure 6-B

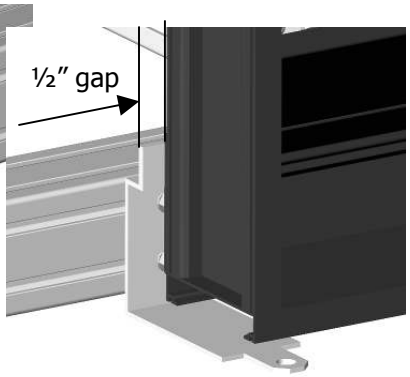


Figure 6-C

7. Mount the next louver panel following the same procedure, except flush the hinge to the adjacent latch (already mounted from the previous louver panel – see Figure 7-A). Check the gap between the hinge and the adjacent louver panel to make sure the gap is ½". Make adjustments if necessary to ensure a consistent gap along the entire height.

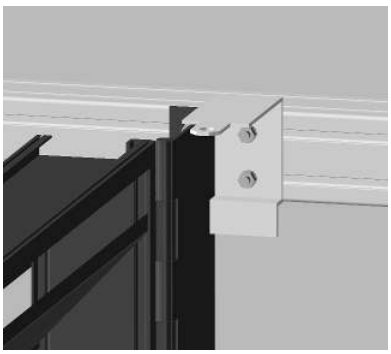


Figure 7-A

8. Mount all louver panels along one set of rails. The latch bracket "L" of the last louver panel should be flush with the end of the rail. Make adjustments if necessary in the latches and hinges to create a consistent gap between panels.

9. One latch clip "M" is required for the top and bottom latch bracket of each louver panel. Close each louvered door panel and assemble one latch clip "M" with one 7/16-14 x ¾" hex bolt, one 1/8" spacer, and one 7/16-14 nylon insert locknut (see Figure 9-A). This assembly mounts though the hole in each top and bottom latch bracket "L" (already attached to the rails). Tighten the nut against the latch bracket.

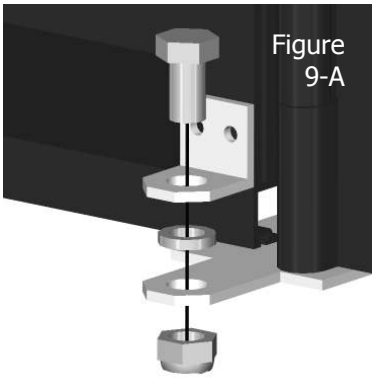


Figure 9-A

Figure 9-B

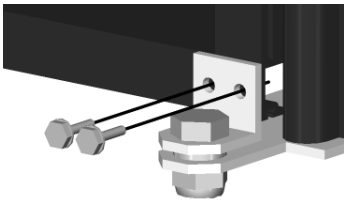
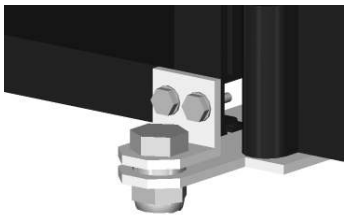


Figure 9-C



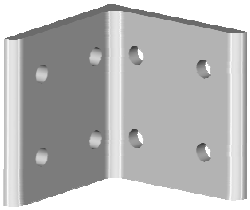
10. Fasten the latch clip to the louver panel using two #10 x ¾" Tek screws at each location (see Figure 9-B). Final assembly is shown in Figure 9-C.

11. Follow the same procedure to mount all louver panels and hardware.

Mount Corners:

Parts List:

Corner Assembly (Factory pre-assembled)
4 – Corner clip angle 3"



5/16-18 x 1" carriage bolt , 5/16-18 nut, 5/16 lock washer
#10 x ¾" Tek screws

Steps:

1. Slide one carriage bolt into each inside slot of each rail at the corner joint (see Figure 1-A). There are 4 connection points per corner – top left, top right, bottom left, bottom right. .

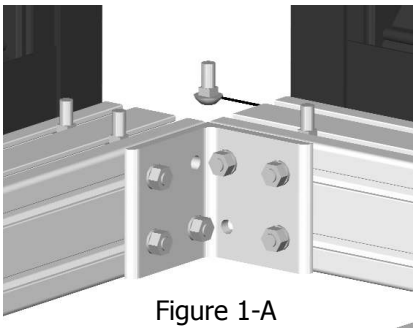


Figure 1-A

2. Mount one inside corner clip angle "4" over carriage bolts (see Figures 2-A and 2-B). Apply one lock washer and nut to each carriage bolt. Align the corner angle bracket flush with the end of the rail and tighten nuts.

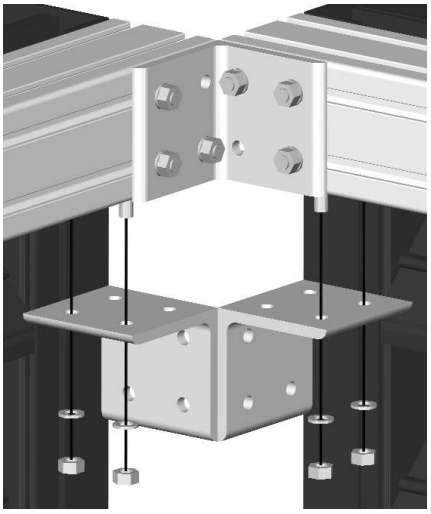


Figure 2-A top

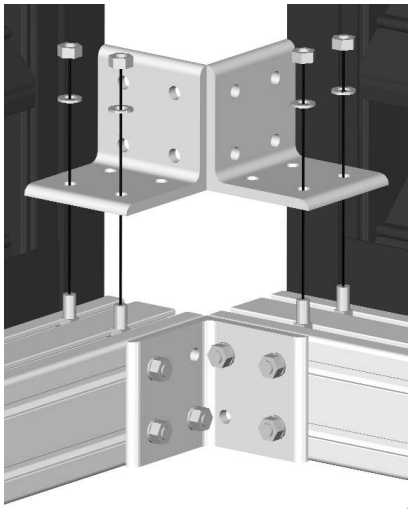


Figure 2-B bottom

3. Insert the corner assembly between the rails. Align the top of the corner assembly with the top of the rails. Drive #10 x ¾" Tek screws through the outside hole in each corner clip angle into the corner assembly (see Figures 3-A and 3-B).

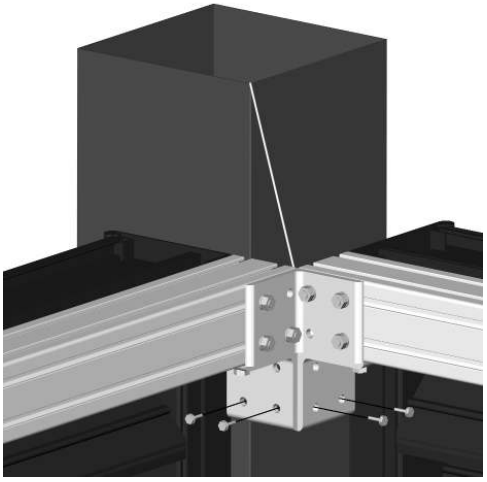


Figure 3-A top

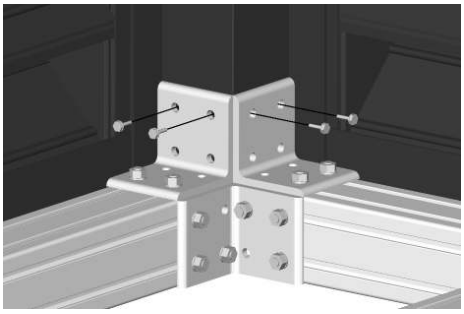


Figure 3-B bottom

