HOT AISLE CONTAINMENT

Safety Information

⚠ **WARNING**: Improper use of this product may lead to serious injury or death. Read and understand all instructions for proper installation and use of this product

Installation of aisle Containment products may require the use of ladder, Scaffolds, and other climbing tools. Follow all climbing device procedures and observe all safety and warning precautions.

The Aisle containment door components are heavy and large. This requires that at least two personnel be used for assembly and installation. Obtain adequate assistance or hire professional equipment riggers.

Intended Use

Install this rack only in a restricted service environment, such as a data center. Use indoors only, in environmentally controlled areas; do not use outdoors, in harsh environments or in air-handling spaces. Use this rack for computer equipment, including servers and peripherals. Allow only qualified service personnel to use this rack.
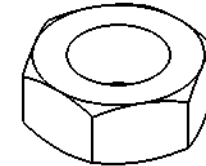
Tools Required

Utility knife
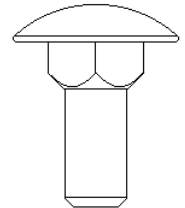#2 Phillips Screw Driver
10mm Socket Wrench.
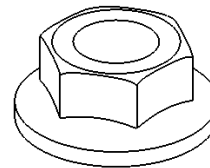
Included Hardware

3/8" -16 UNC
Screw
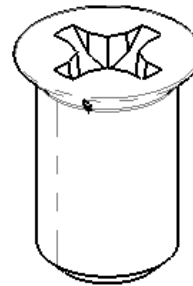
3/8" -16 UNC
Nut
8 each.

M6 X 16mm
Bolt, RHSN
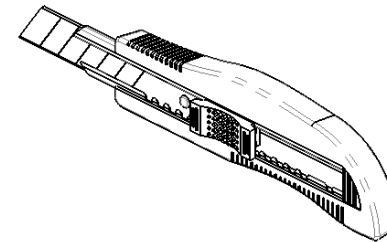8 each

M6
Hex Nut
8 each

Utility Knife

IIS-BTS_HAC_KIT, 12/01/13, Rev. 1, CPI/dknapp
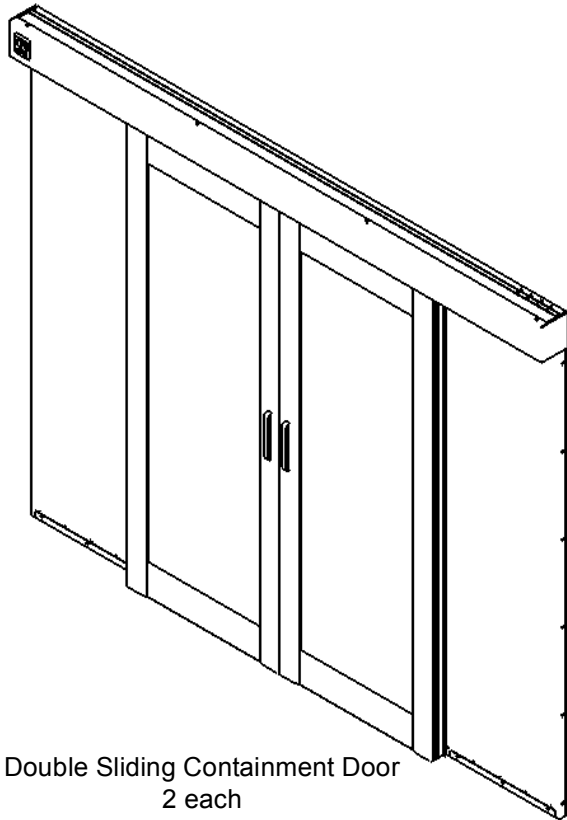
HOT AISLE CONTAINMENT

Containment Door Assembly Sequence (1/2) :
Part Identification:

⚠️ **WARNING**: Until the frame assembly is attached to the cabinet, the frame must be held up in place by at least one person.
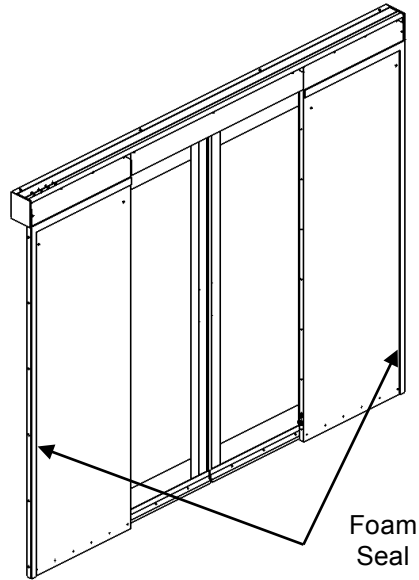
1. Prior to Installing the Doors, place a strip of foam sealing tape on either the door or the Cabinet (Fig.1).
2. Position the Containment door at an angle position (Fig.2).

Double Sliding Containment Door
2 each

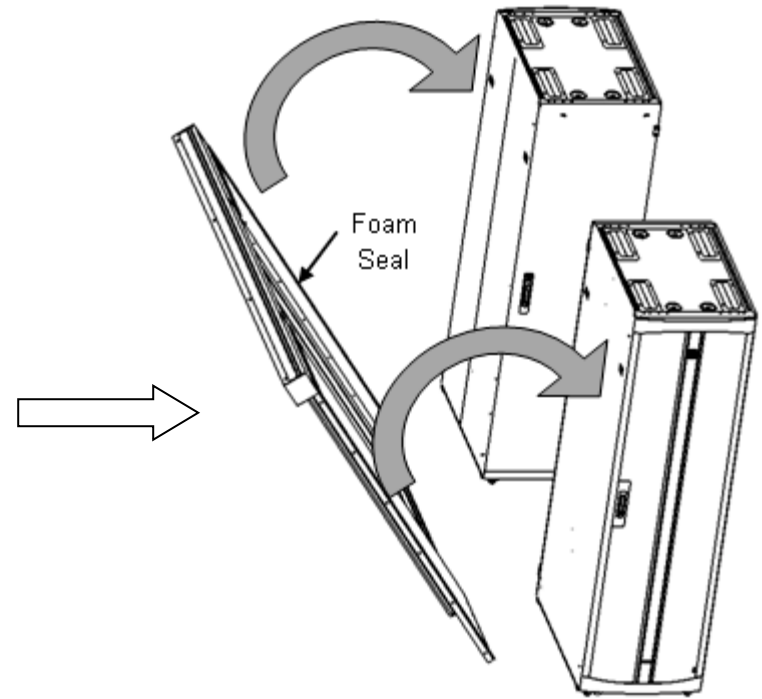Foam Sealing Tape

Foam Seal
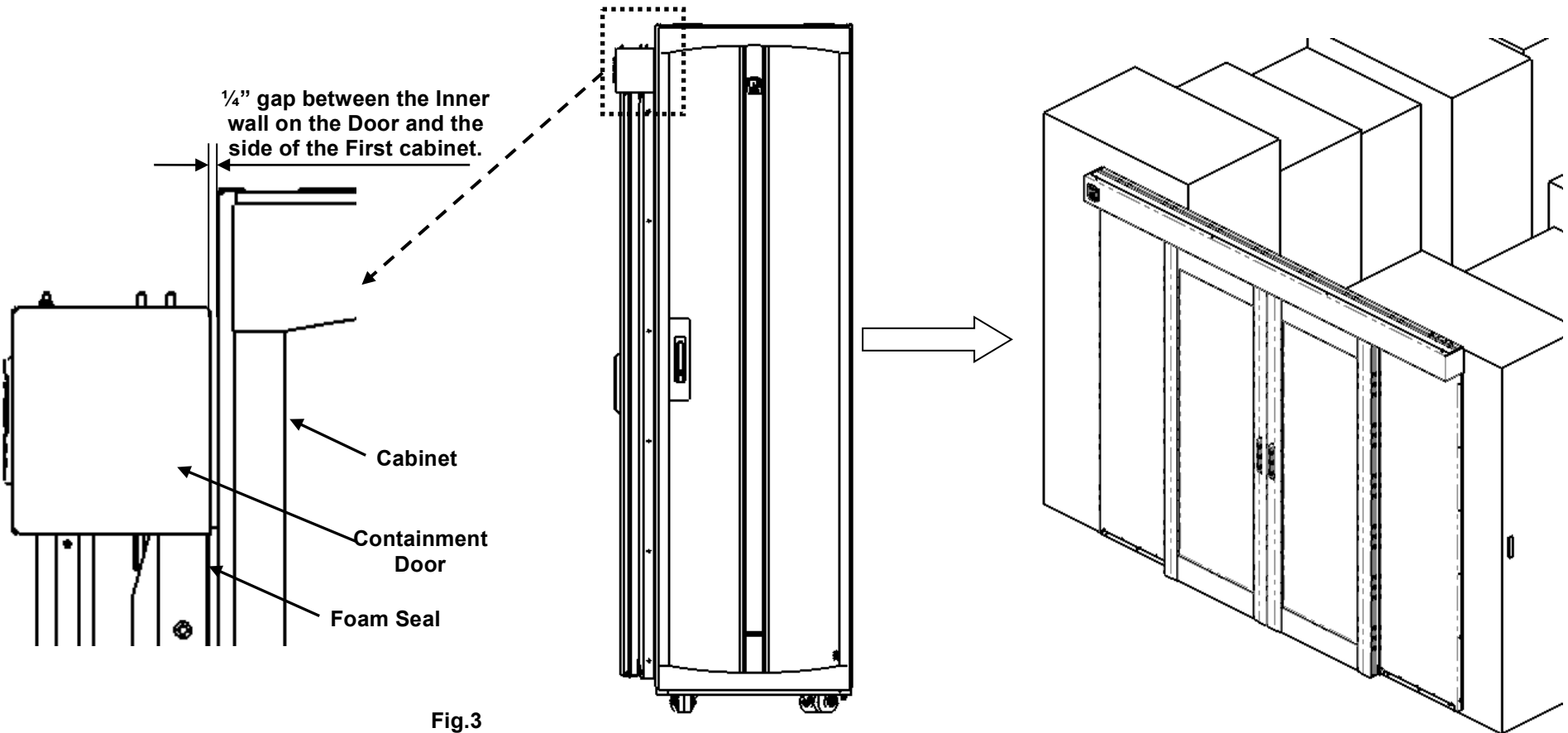
Back side view of
Containment Door
Fig.1

Foam Seal

Fig.2

HOT AISLE CONTAINMENT

Containment Door Assembly Sequence (2/2) :

3. Seal the Containment Frame assembly to the side wall of the Cabinet (Fig. 3)
4. After sealed by the Foam tape, There should be ¼" (6.35mm) gap between the inner wall on the door and side of the first cabinet (Fig. 3).
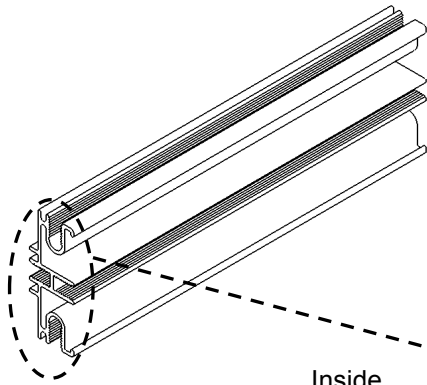
¼" gap between the Inner wall on the Door and the side of the First cabinet.

Cabinet

Containment Door

Foam Seal

Fig.3

HOT AISLE CONTAINMENT

Containment Structure Assembly Sequence (1/9) :
Part Identification:

Containment extrusion orientation.

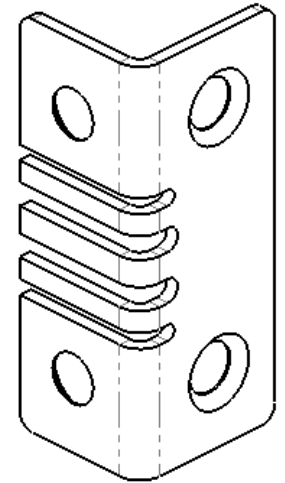**HAC beam Extrusion, Thread Groove 94" & 46"**

Inside Containment
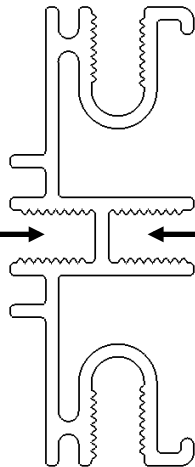
Outside Containment
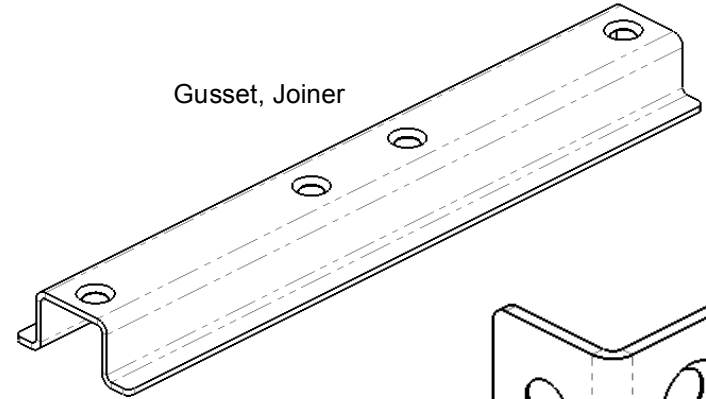
Gusset, Joiner

Dam, Corner
8 each

2mm

L=8' (96")

W=4' (48")
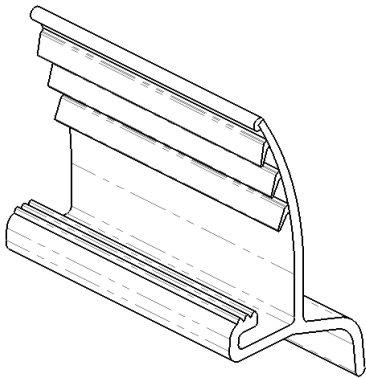
Polycarbonate Clip
2" Length
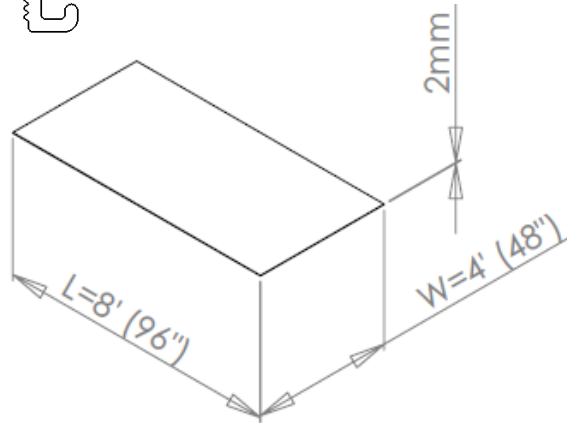
Polycarbonate panels
(4'W X 8'L X 6mm D Sheets)
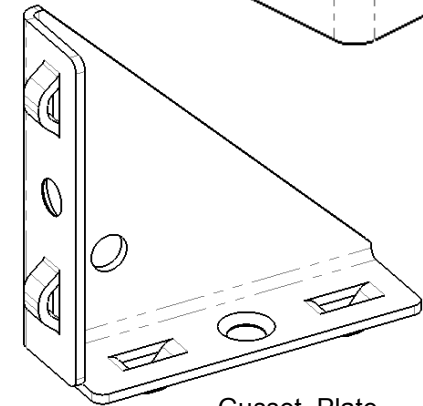
Gusset, Plate

HOT AISLE CONTAINMENT

Containment Structure Assembly Sequence (2/9) :

5. Join the two extrusion with Joiner using 3/8"-16UNC screw (fig. 4)

Extrusion, Thread Groove

L=94"

Extrusion, Thread Groove

Extrusion, Thread Groove

3/8"-16UNC Screw

3/8"-16UNC Screw

Gusset, Joiner

Gusset, Joiner

Fig. 4
Cross sectional view

HOT AISLE CONTAINMENT
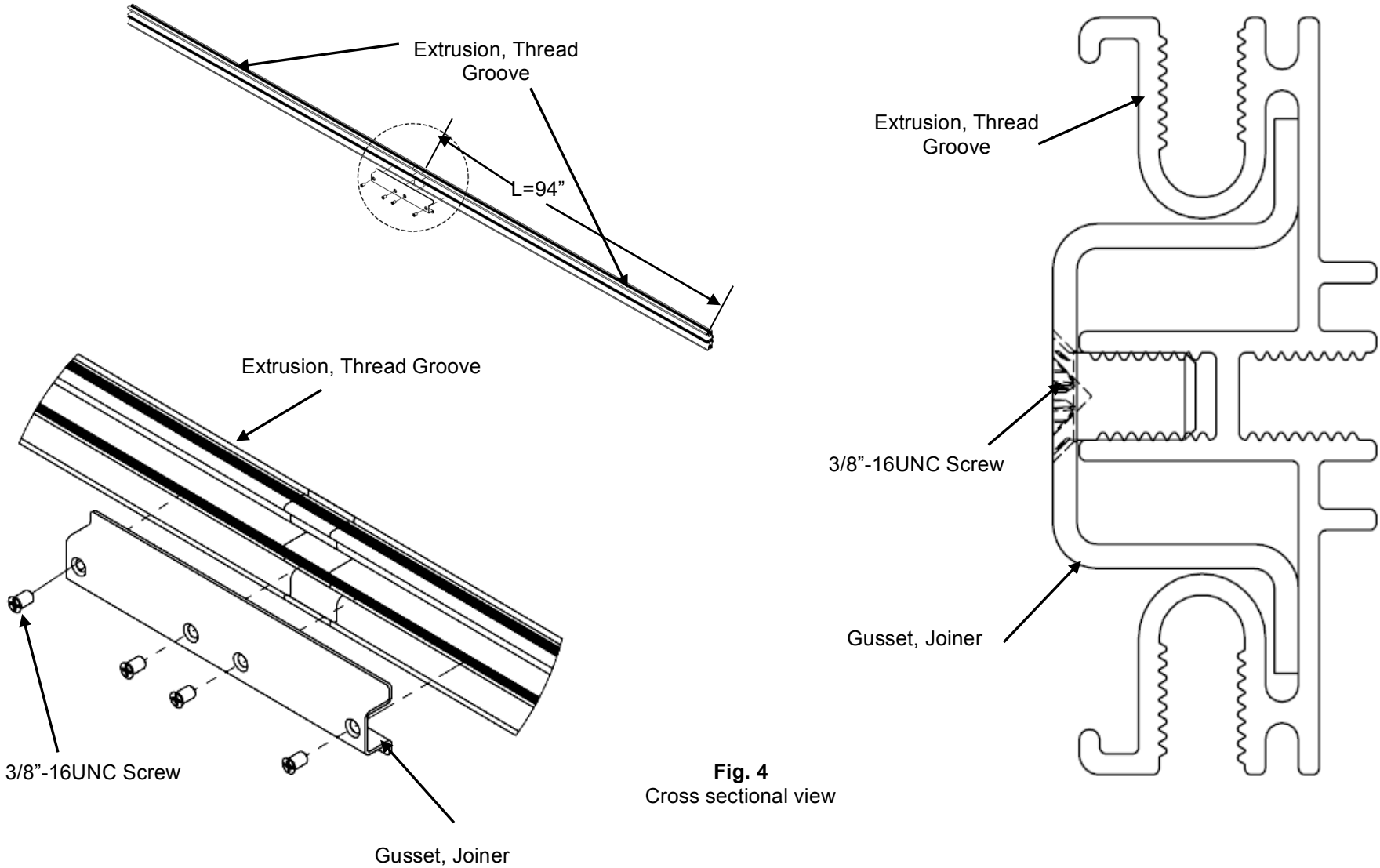
Containment Structure Assembly Sequence (3/9) :

6. Follow either one of the step for assembling Containment Structure:
   a. Position the Joiner along the length of the cabinet row (Fig. 5).
   b. Position the extrusion piece approximately centers of the cabinet row length and join the extrusion piece on both side using Joiner (Fig. 6).
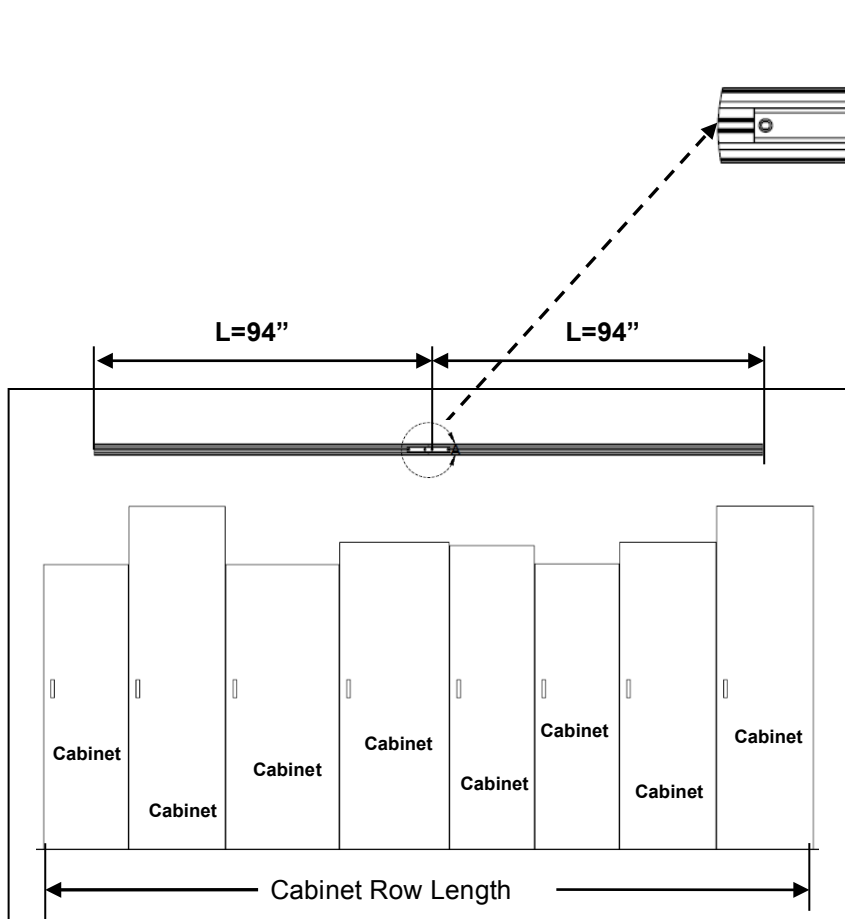
Joiner
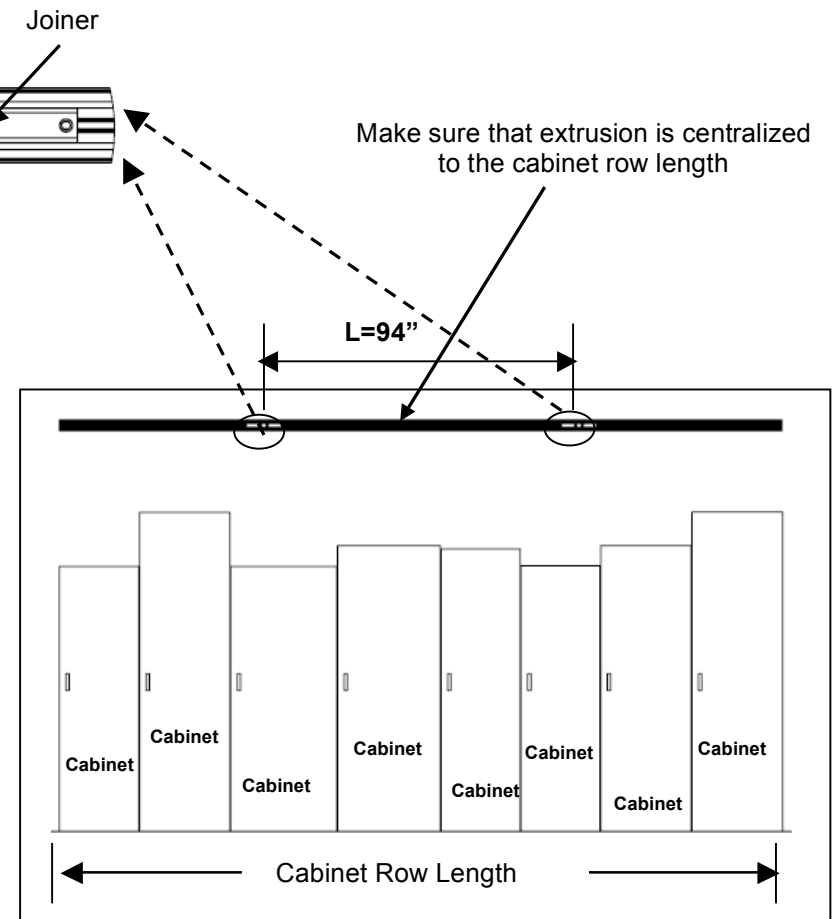
Make sure that extrusion is centralized to the cabinet row length

L=94" L=94"

L=94"

Cabinet Row Length

Cabinet Row Length

Fig. 5

Fig. 6

HOT AISLE CONTAINMENT

Containment Structure Assembly Sequence (4/9) :

7. Install the Ceiling drop down mounting to extrusion using 3/8"-16 CSK screw.

8. Hanging the First length Joiner by using 3/8" threaded rod through Ceiling drop down mounting slot with 3/8" Nut (Fig.7),
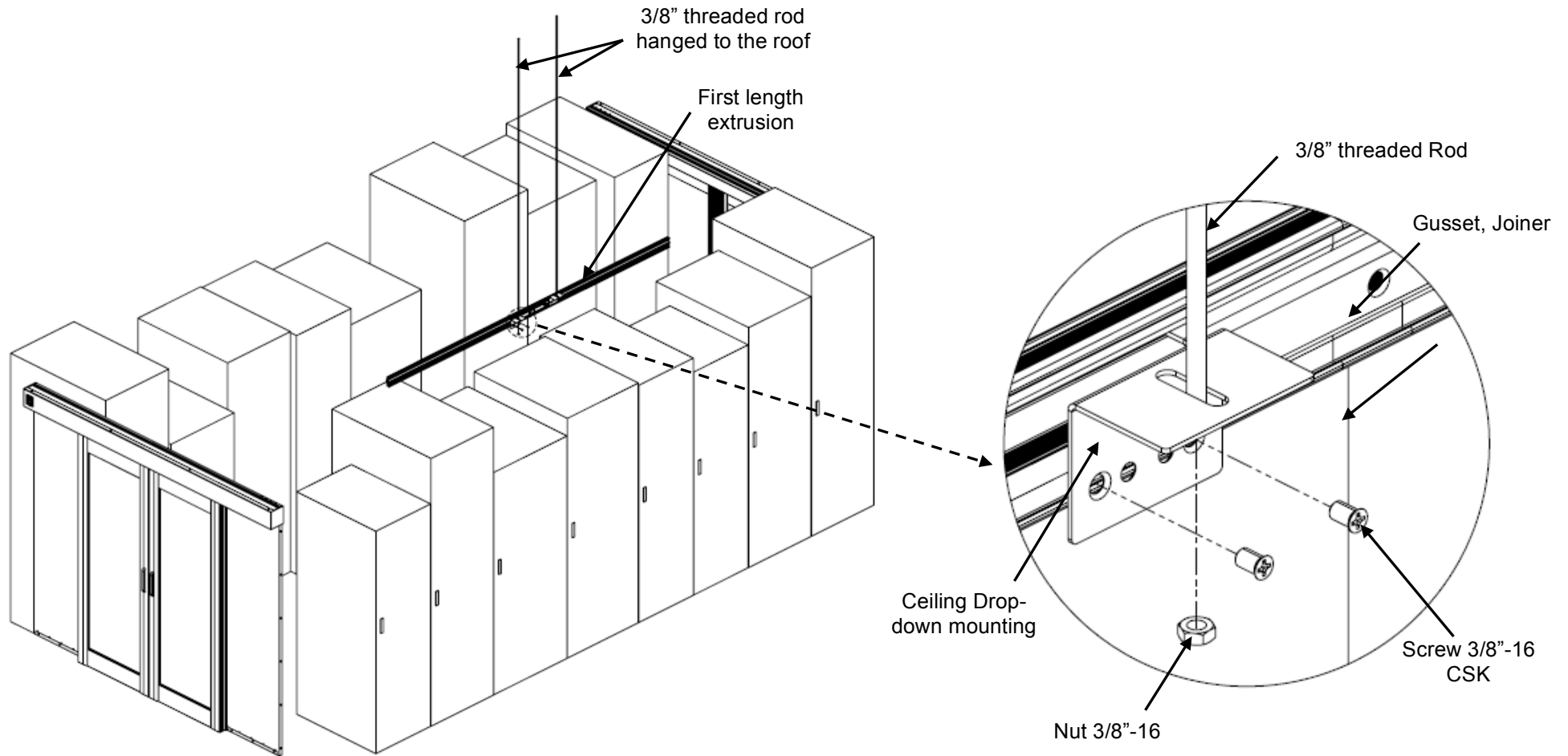
3/8" threaded rod hanged to the roof

First length extrusion

3/8" threaded Rod

Gusset, Joiner

Ceiling Drop-down mounting

Nut 3/8"-16

Screw 3/8"-16 CSK

Fig. 7

HOT AISLE CONTAINMENT

Containment Structure Assembly Sequence (5/9) :

9. After Cutting the extrusion to the required cabinet row length, hang the second length extrusion at both ends.

10. Repeat steps 5-9 for opposite side of containment row length (Fig.9).
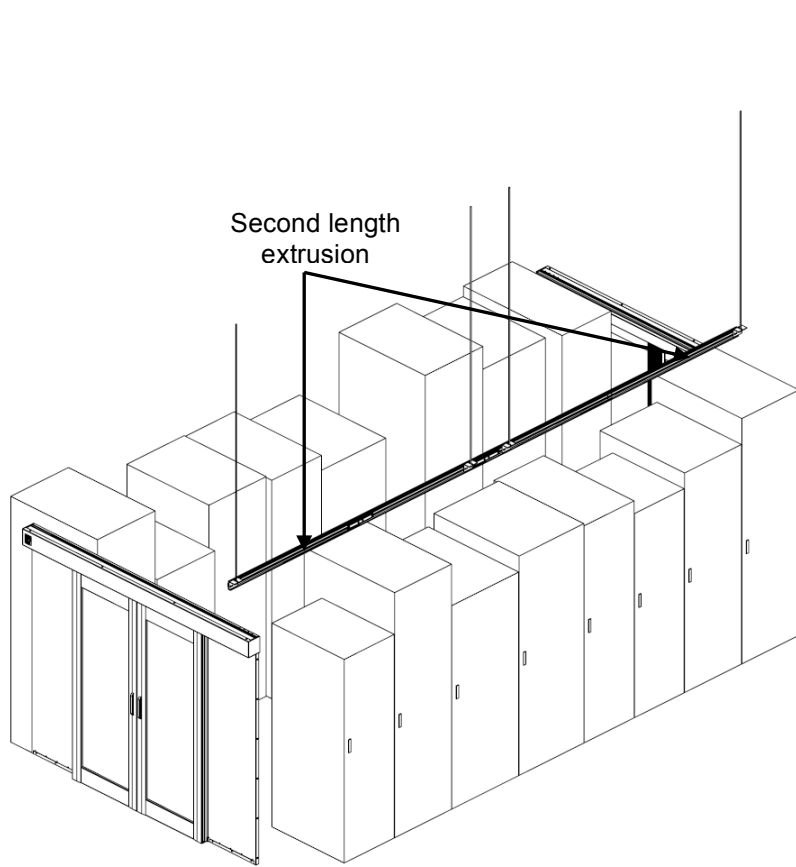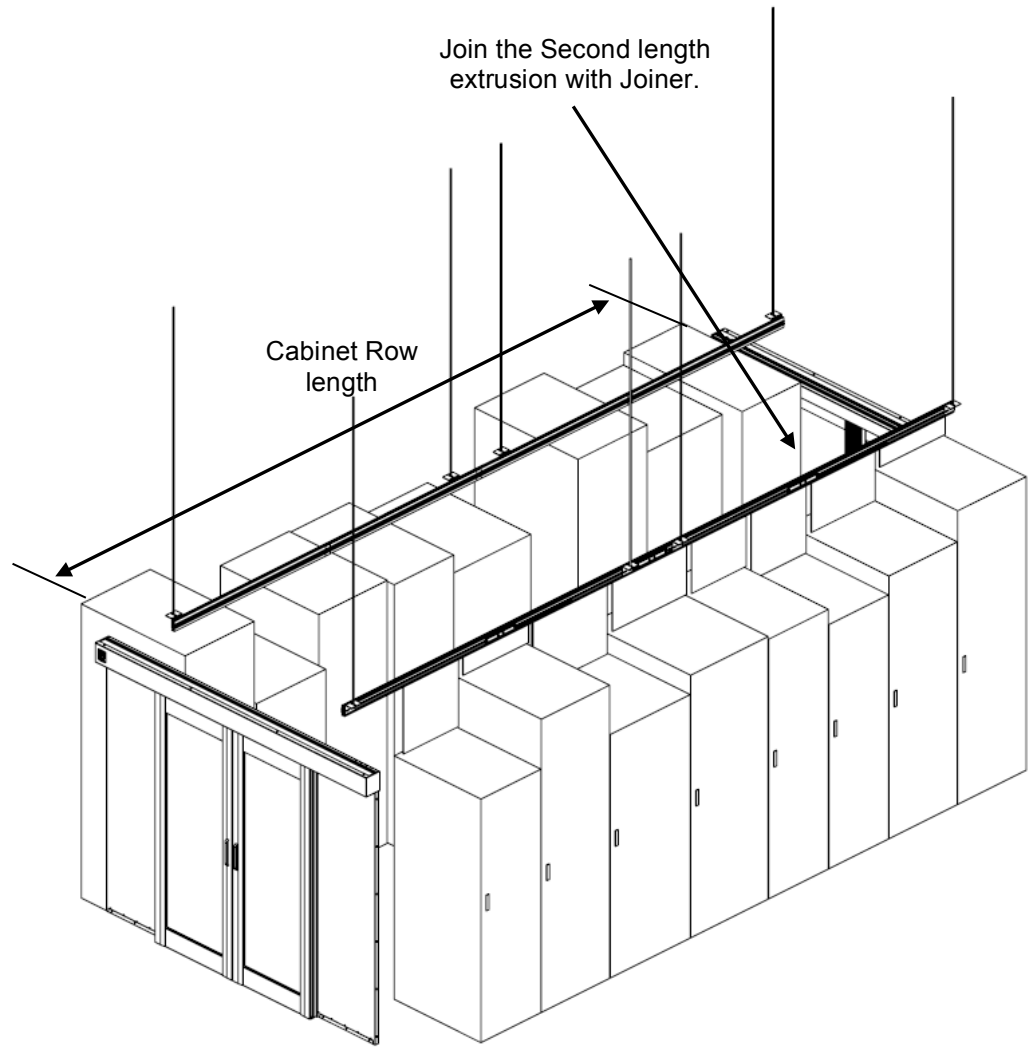
Join the Second length extrusion with Joiner.

Second length extrusion

Cabinet Row length

Fig. 8

Fig. 9

HOT AISLE CONTAINMENT

Containment Structure Assembly Sequence (6/9) :

11. Pre assembled the End Width Extrusion with Dam Corner and Gusset plate by using 3/8"-16UNC screw. (Fig. 10).

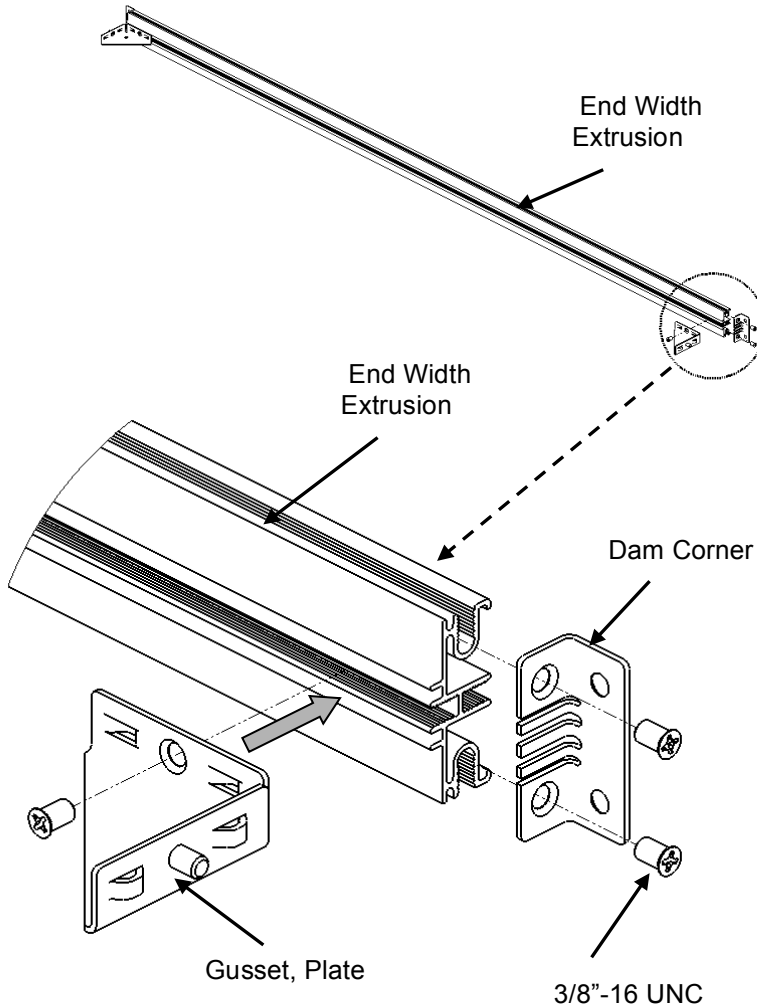12. Install end width onto the existing length assemblies (Fig. 11).

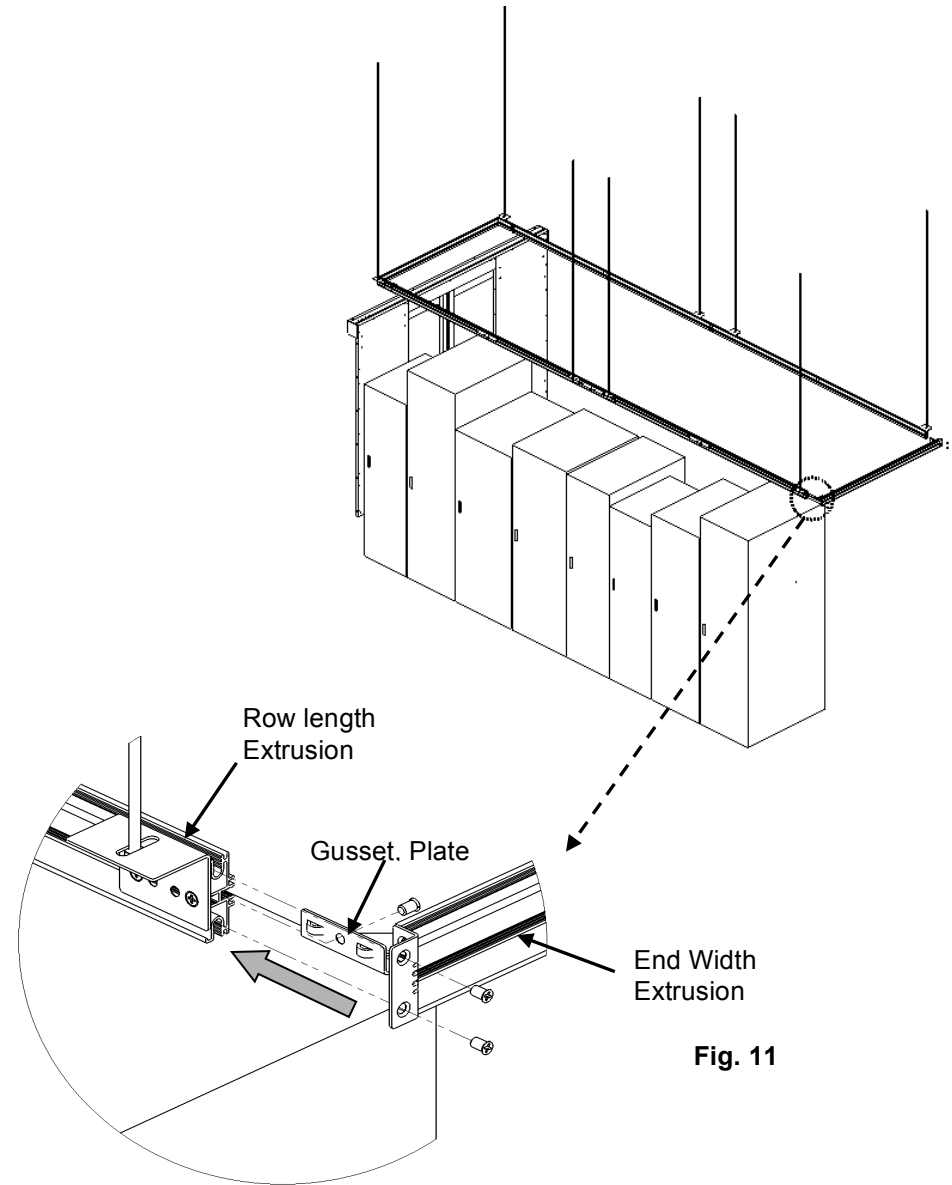End Width Extrusion

End Width Extrusion

Dam Corner

Gusset, Plate

3/8"-16 UNC

Fig. 10

Row length Extrusion

Gusset. Plate

End Width Extrusion

Fig. 11

HOT AISLE CONTAINMENT

Containment Structure Assembly Sequence (7/9) :

13. The Vertical Extrusion of the lateral should be cut 3.25 inches (83 mm) less than the cabinet to Roof distance to accommodate for the upper extrusion.

14. Install Extrusion vertically at the each end of Row length Extrusion and End width Extrusion with Gusset plate using 3/8"-16UNC Screws (Fig. 12).
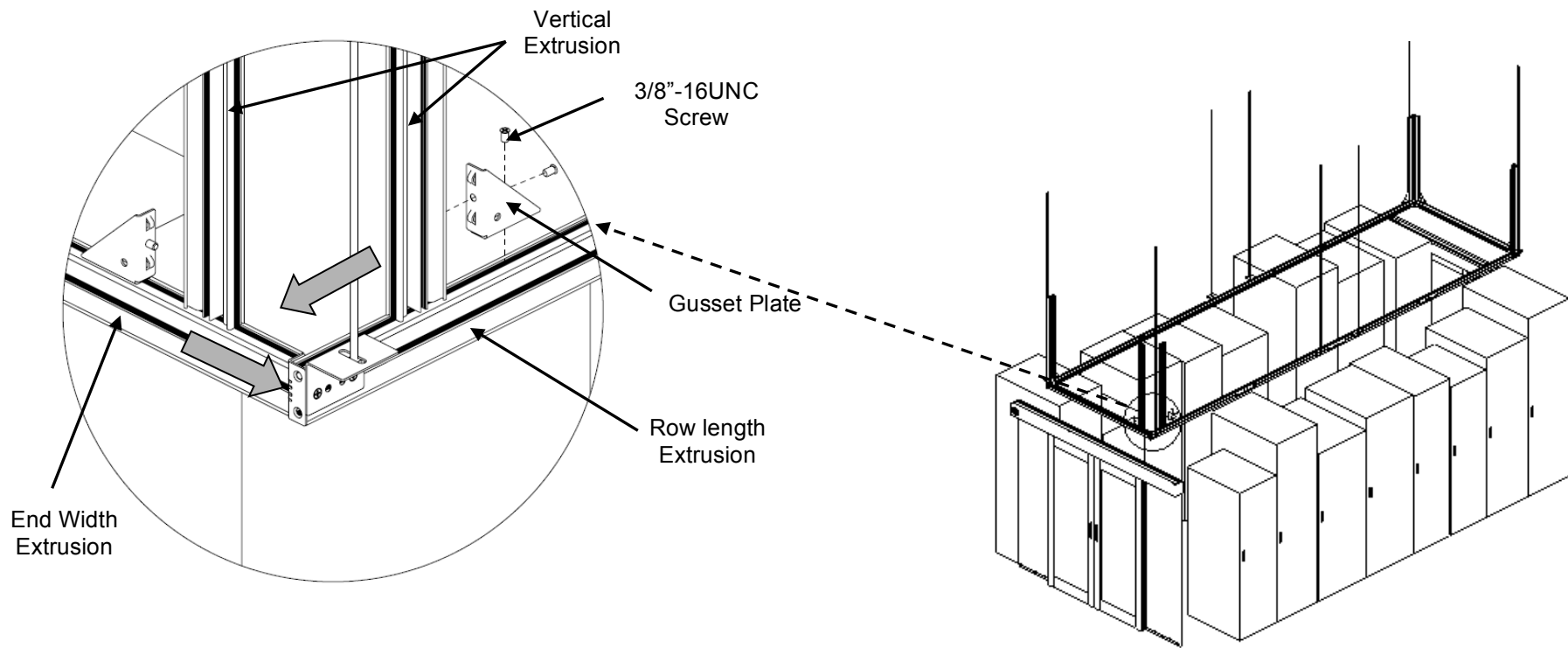

Fig. 12

HOT AISLE CONTAINMENT

Containment Structure Assembly Sequence (8/9) :

15. Loosely install the Vertical extrusion to convenient location approximately equal distance along the containment row length. Each Vertical extrusion should have minimum two gusset plate with 3/8"-16UNC screws (Fig. 13).

16. Install extrusion across the containment row length at alternate vertical extrusion on bottom rectangle containment. Each extrusion length should be equal to end width of extrusion.

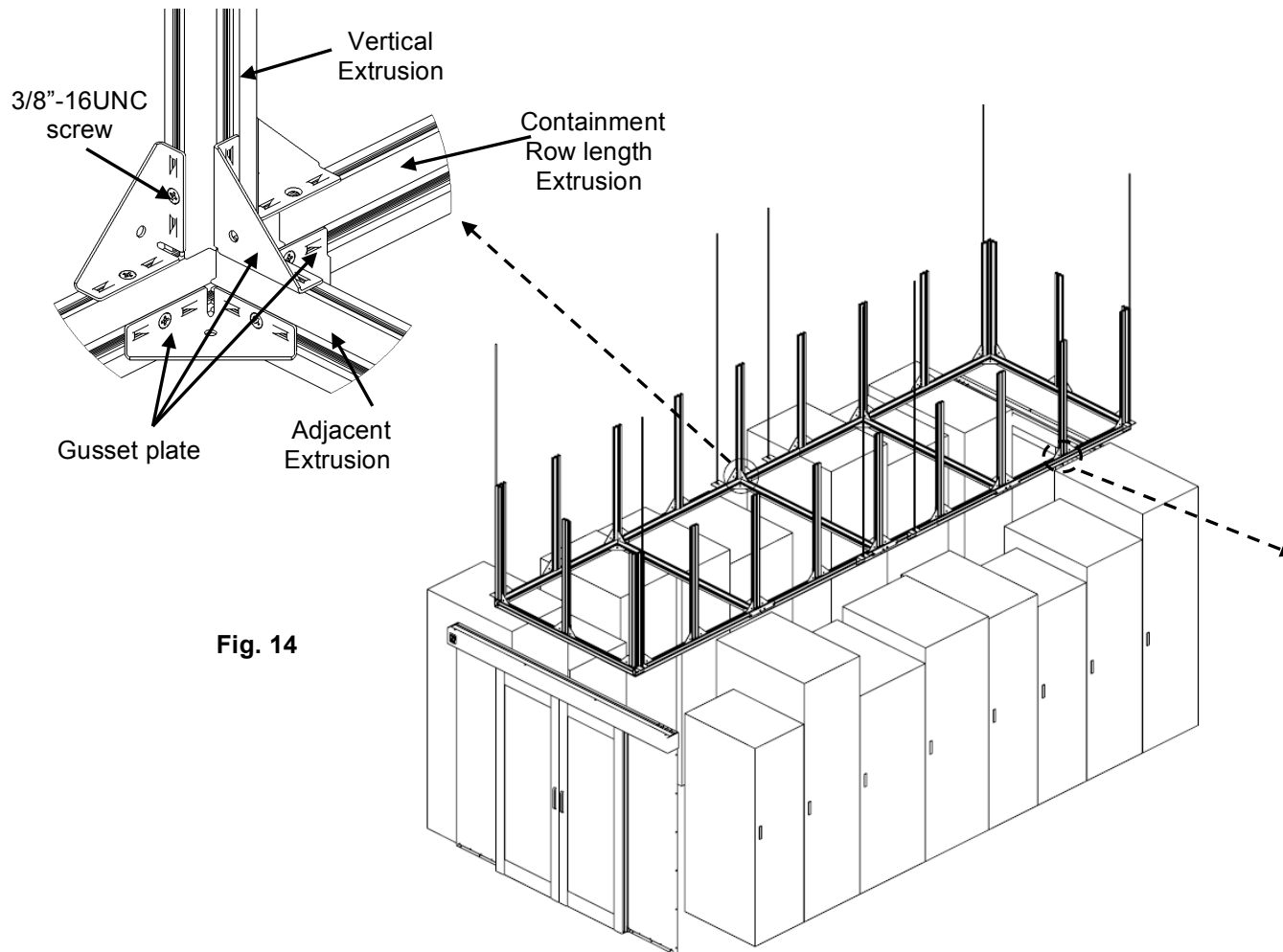17. Each adjacent extrusion should have minimum three gusset plate with 3/8"-16UNC screw. (Fig.14).

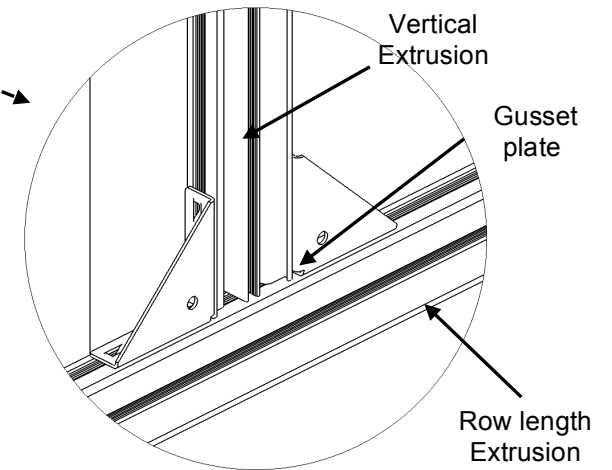Vertical Extrusion

3/8"-16UNC screw

Containment Row length Extrusion

Gusset plate

Adjacent Extrusion

Fig. 14

Vertical Extrusion

Gusset plate

Row length Extrusion

Fig. 13

HOT AISLE CONTAINMENT

Containment Structure Assembly Sequence (9/9) :

18. Continue installing the top of containment from row length extrusion, End width extrusion with joiner and Gusset plate using 3/8"-16UNC screws (Fig. 15).
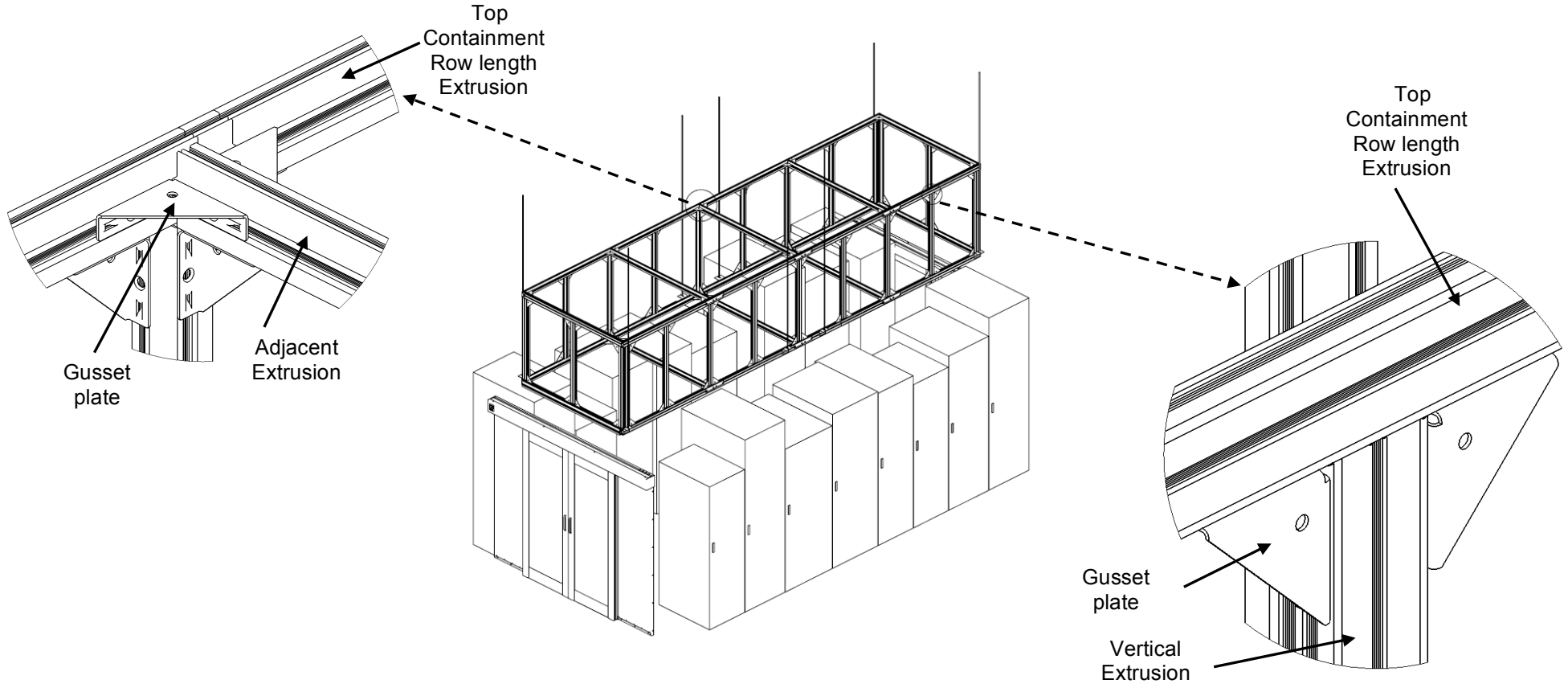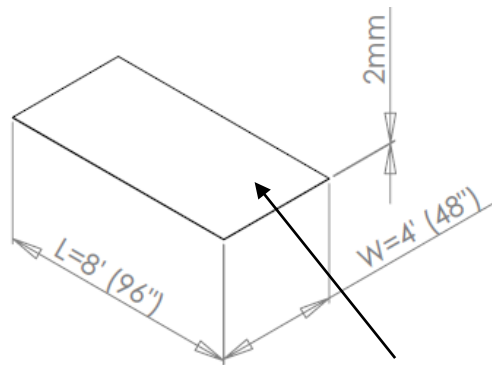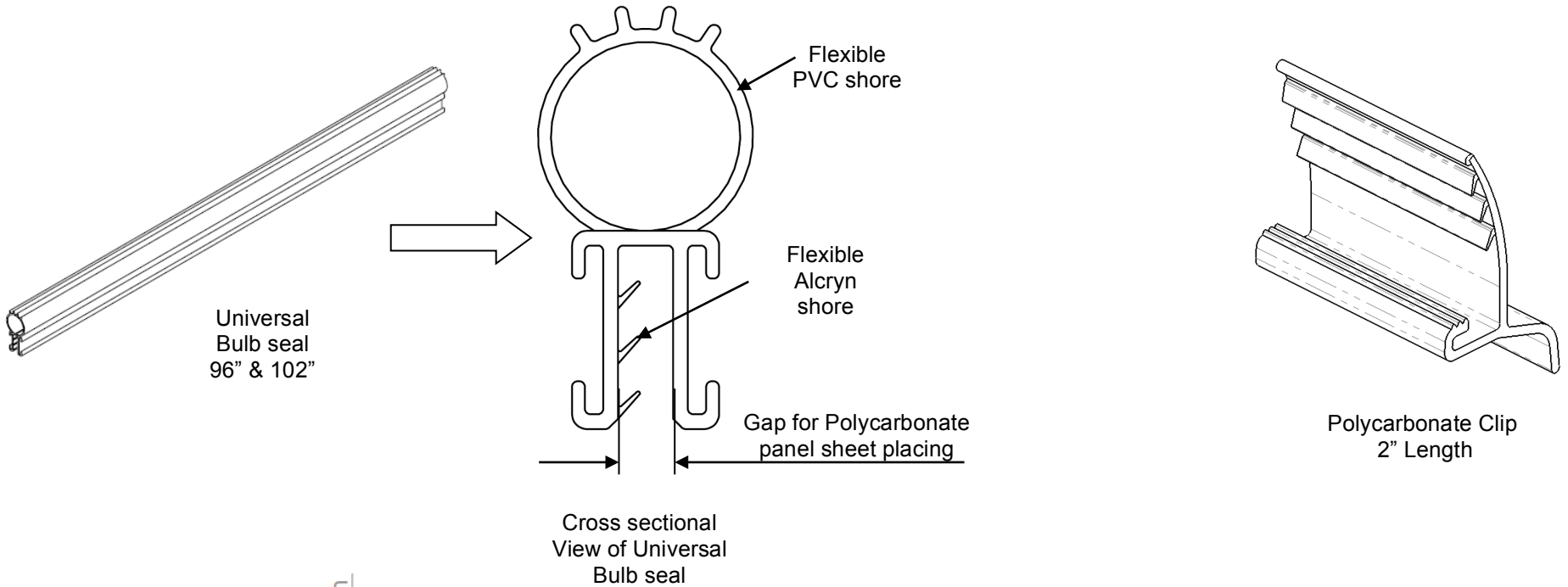
Top Containment Row length Extrusion

Top Containment Row length Extrusion

Gusset plate

Adjacent Extrusion

Gusset plate

Vertical Extrusion

Fig. 15

HOT AISLE CONTAINMENT

Header Panel Assembly Sequence (1/5) :
Part Identifications :

Flexible
PVC shore

Flexible
Alcryn
shore

Gap for Polycarbonate
panel sheet placing

Universal
Bulb seal
96" & 102"

Cross sectional
View of Universal
Bulb seal

Polycarbonate Clip
2" Length

2mm

L=8' (96")

W=4' (48")

Polycarbonate panels
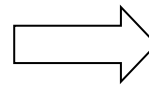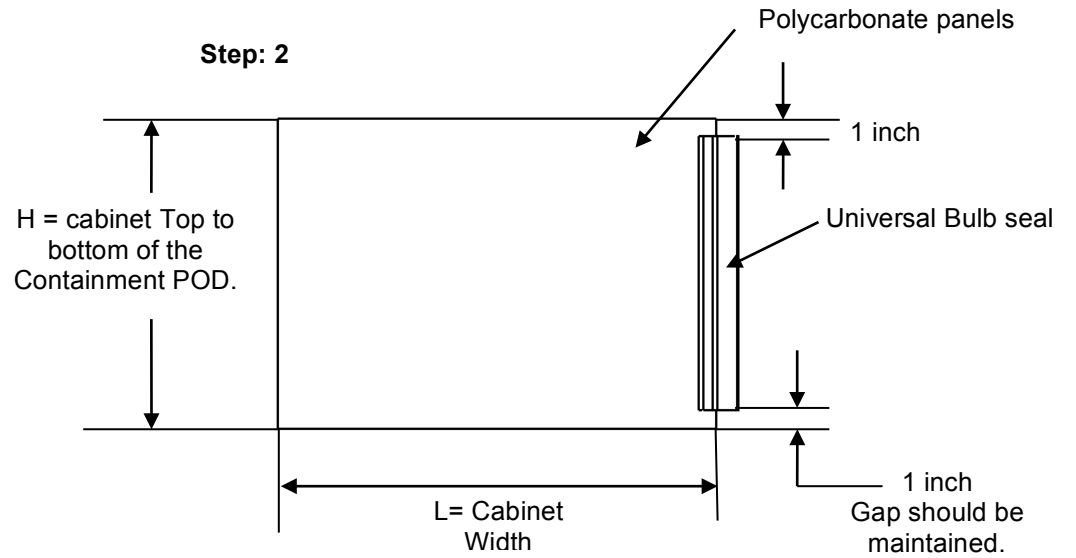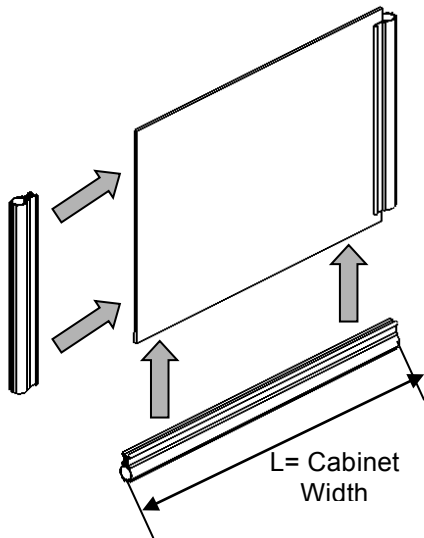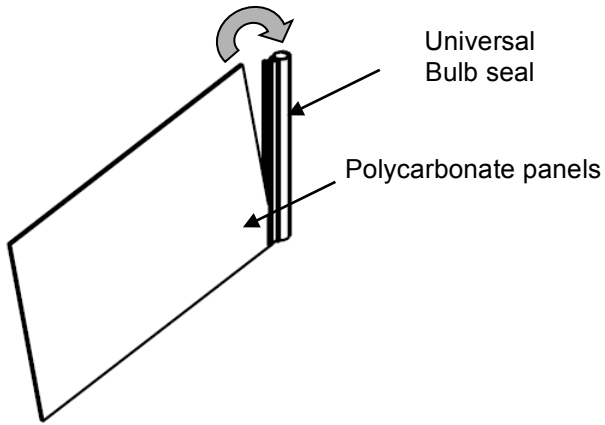(4'W X 8'L X 6mm D
Sheets)

Note: The pre-cut polycarbonate panels can be trimmed down/
resized easily with a razor/ straight edge as required.

HOT AISLE CONTAINMENT

Header Panel Assembly Sequence (2/5) :

19. First assemble Header panel (fig. 16).

Universal Bulb seal

Polycarbonate panels

Step: 2

Polycarbonate panels

1 inch

H = cabinet Top to bottom of the Containment POD.

Universal Bulb seal

1 inch
Gap should be maintained.
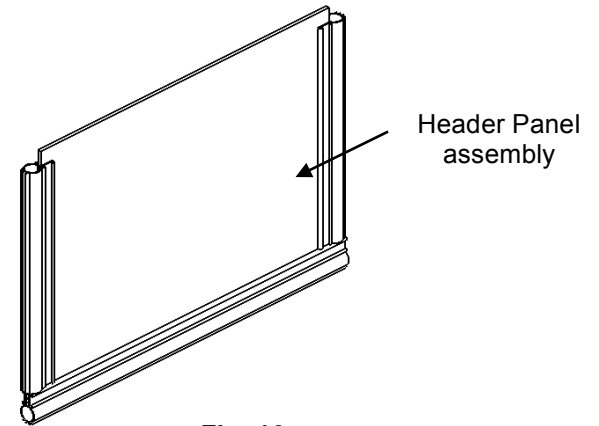
L= Cabinet Width

L= Cabinet Width

Step: 3

Header Panel assembly

Fig. 16

HOT AISLE CONTAINMENT

Header Panel Assembly Sequence (3/5) :
20. Install header panel into the extrusion by holding the polycarbonate clip
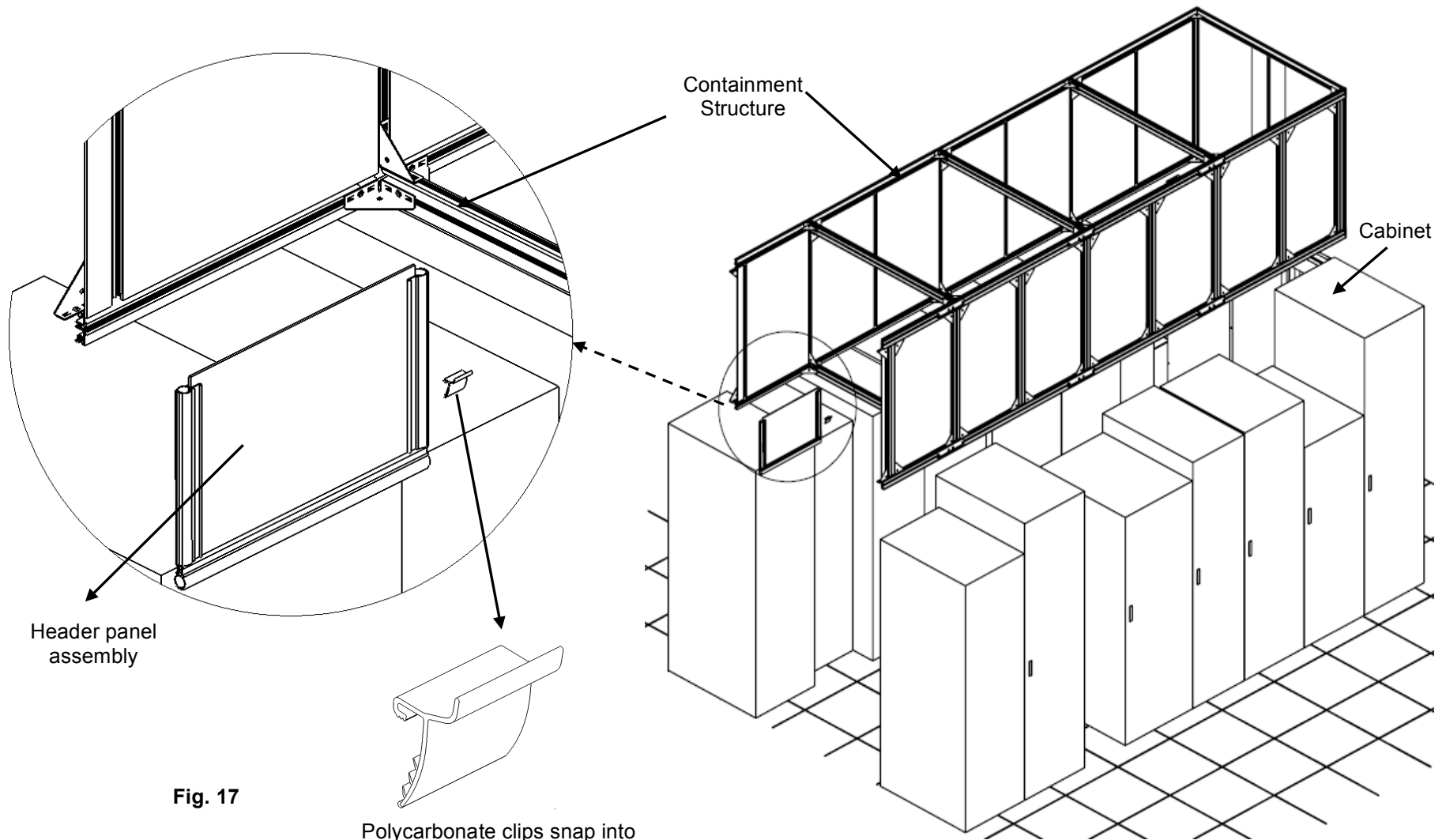(Fig. 17 & 18).

Containment
Structure

Cabinet

Header panel
assembly

Fig. 17

Polycarbonate clips snap into
inside containment extrusion
and hold polycarbonate panel
in place

HOT AISLE CONTAINMENT

Header Panel Assembly Sequence (4/5) :

Universal bulb seal

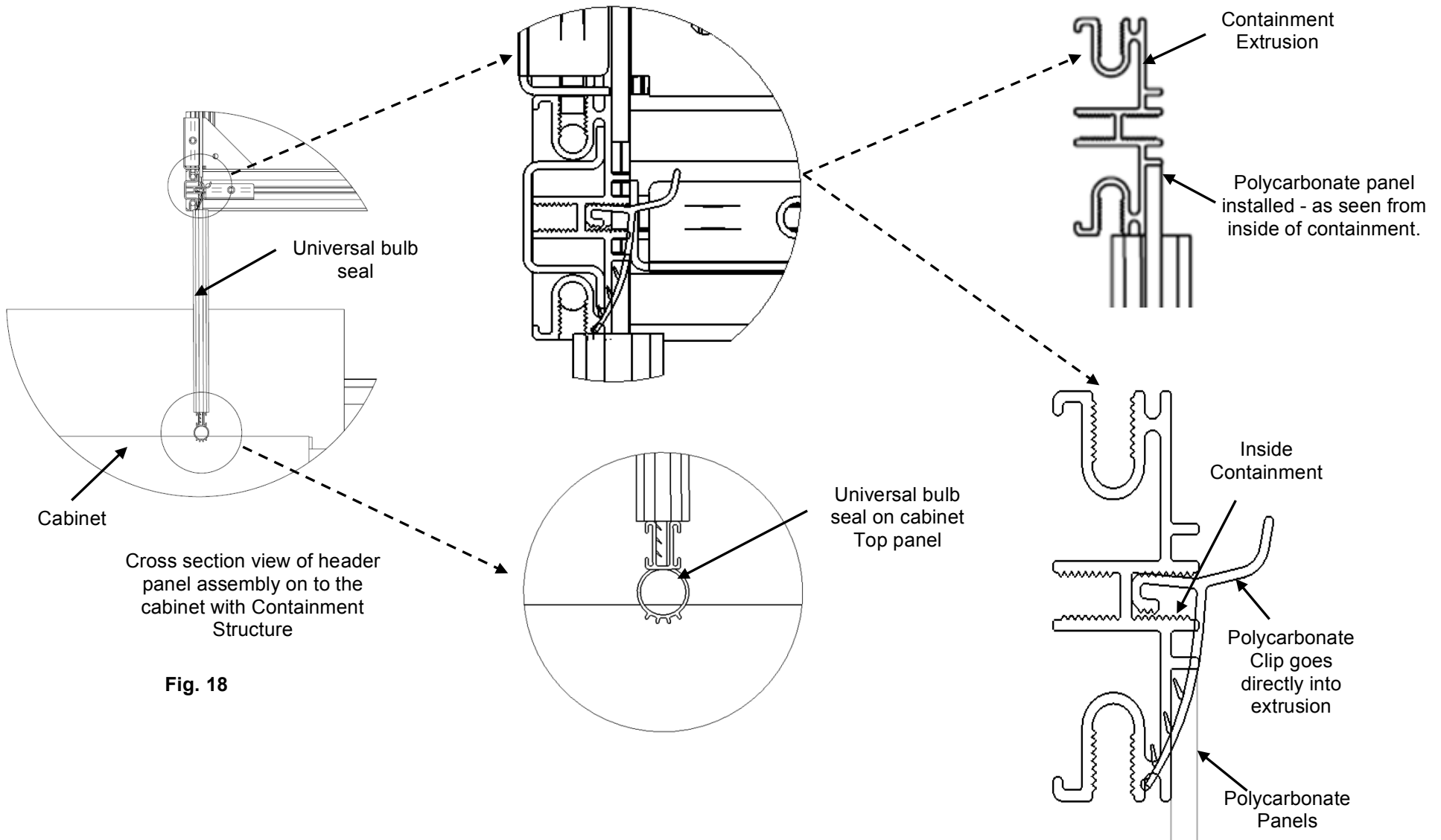Cabinet

Cross section view of header panel assembly on to the cabinet with Containment Structure

Fig. 18

Universal bulb seal on cabinet Top panel

Containment Extrusion

Polycarbonate panel installed - as seen from inside of containment.

Inside Containment

Polycarbonate Clip goes directly into extrusion

Polycarbonate Panels

HOT AISLE CONTAINMENT

Header Panel Assembly Sequence (5/5) :

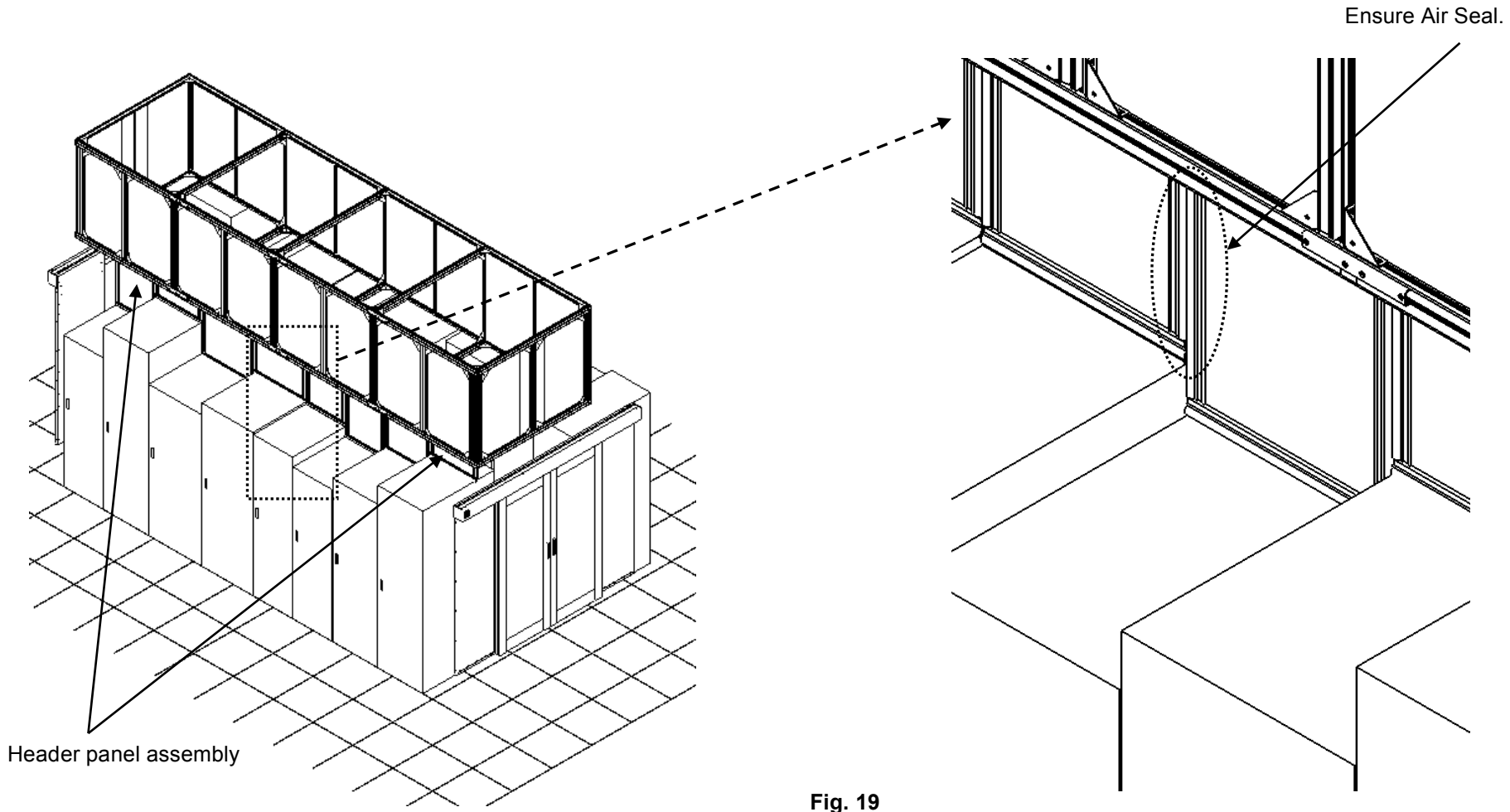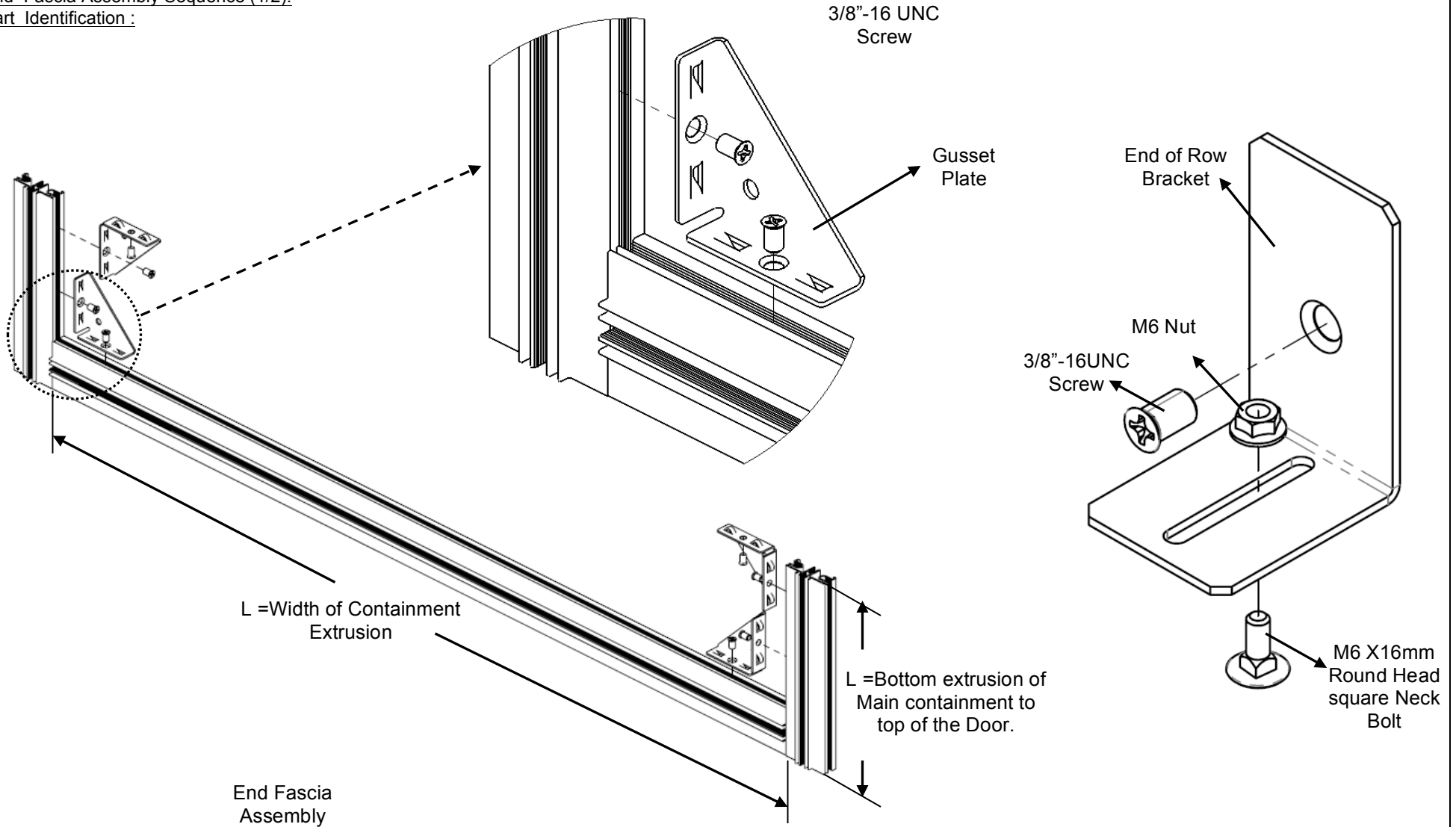21. Repeat the Header panel installation process for all remaining cabinets (Fig. 19).

Ensure Air Seal.

Header panel assembly

Fig. 19

HOT AISLE CONTAINMENT

End Fascia Assembly Sequence (1/2):
Part Identification :

3/8"-16 UNC Screw

Gusset Plate

End of Row Bracket

M6 Nut

3/8"-16UNC Screw

M6 X16mm Round Head square Neck Bolt

L =Width of Containment Extrusion

L =Bottom extrusion of Main containment to top of the Door.

End Fascia Assembly

HOT AISLE CONTAINMENT

End Fascia Assembly Sequence (2/2):

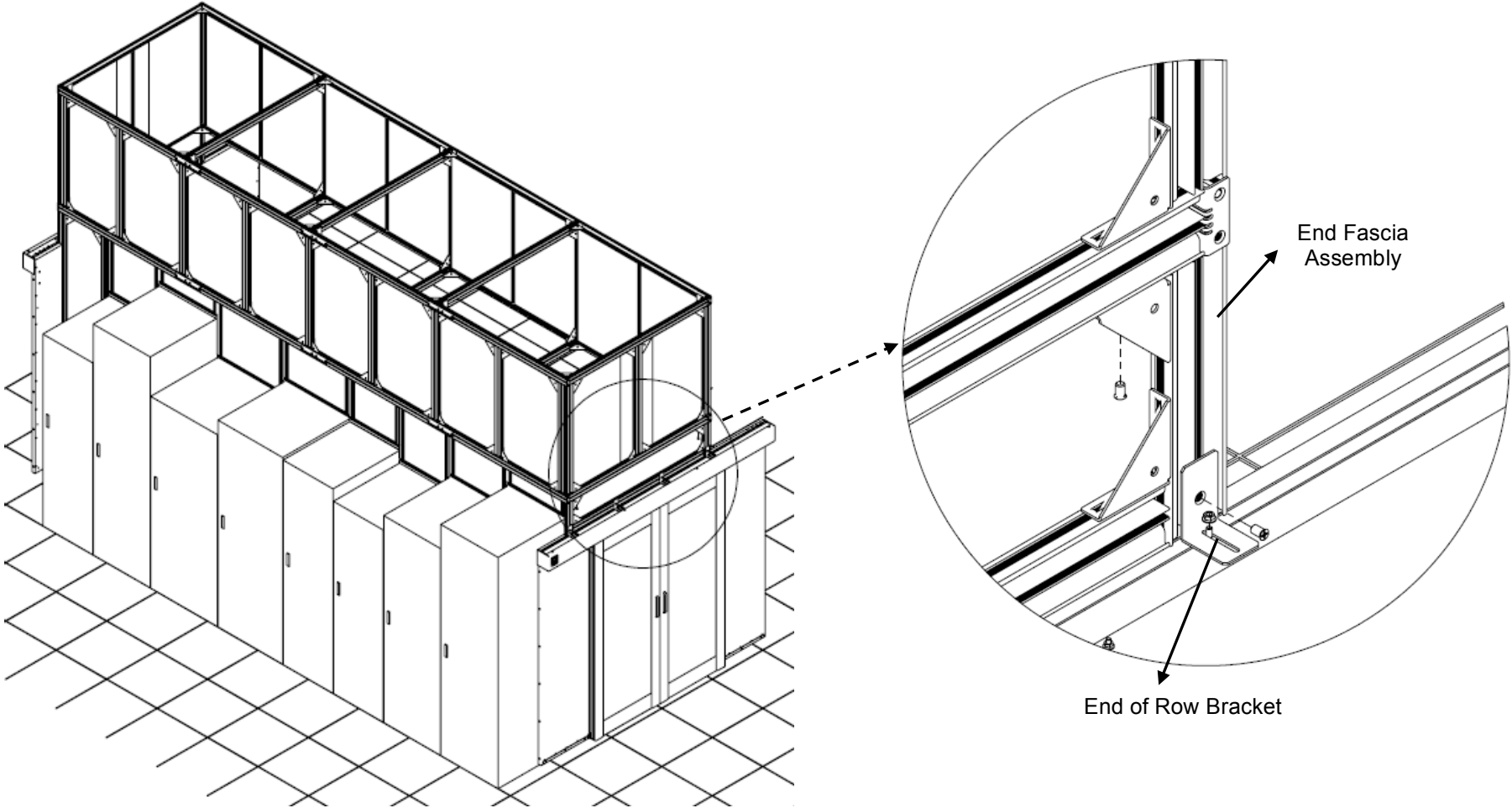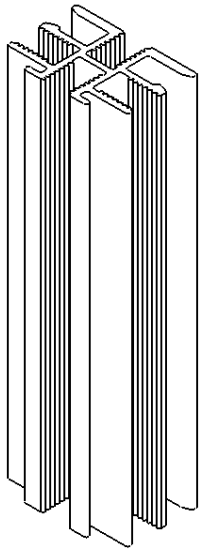22. Install end facia assembly with End row of bracket using 3/8"-16UNC screw.

End Fascia
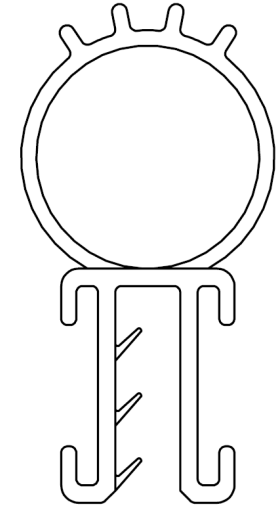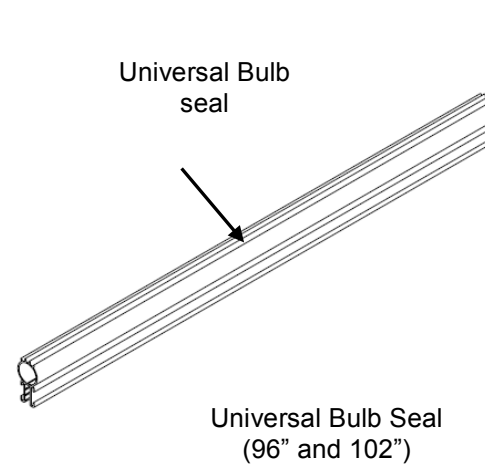Assembly

End of Row Bracket

Fig. 20

HOT AISLE CONTAINMENT

Filler Panel Assembly Sequence(1/3):
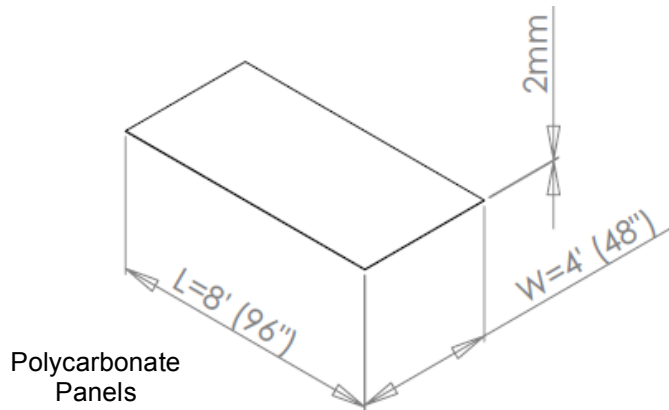Part Identification :

Inside
Containment

Outside
Containment

Filler panel full height
Extrusion (94" & 102")

Universal Bulb
seal

Universal Bulb Seal
(96" and 102")

Cross sectional
View of Universal
Bulb seal

2mm

L=8' (96")

W=4' (48")
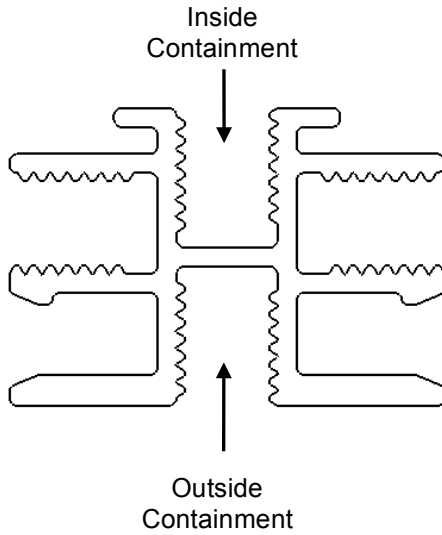
Polycarbonate
Panels
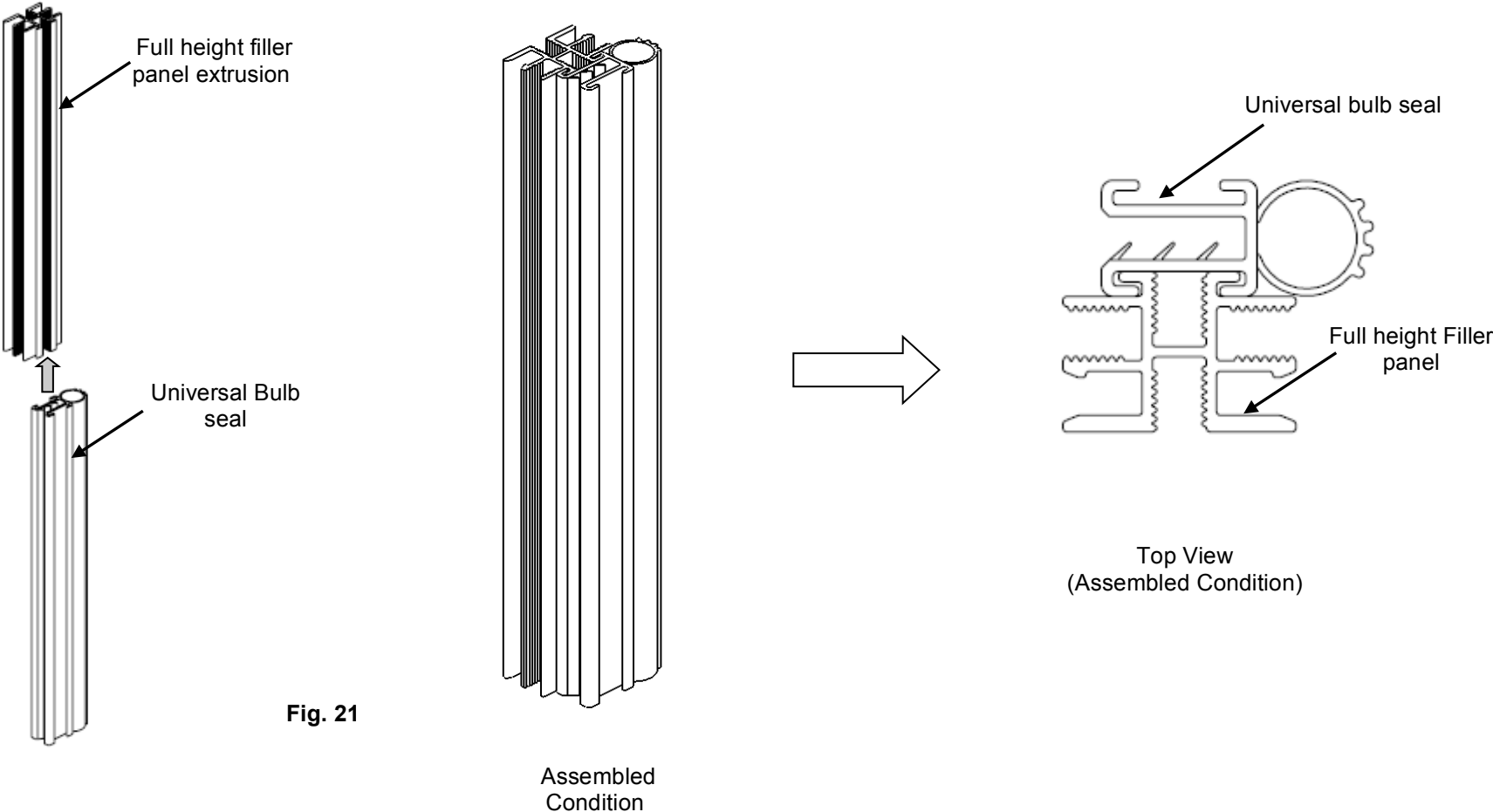
Polycarbonate
Clip

HOT AISLE CONTAINMENT

Filler Panel Assembly Sequence(2/3):

22. Sliding the Universal bulb seal onto Filler panel extrusion (Fig.21).

Full height filler
panel extrusion

Universal Bulb
seal

Fig. 21

Assembled
Condition

Universal bulb seal

Full height Filler
panel

Top View
(Assembled Condition)

HOT AISLE CONTAINMENT

Filler Panel Assembly Sequence(2/3):

23. Insert Polycarbonate sheet into the bulb seal (fig. 22).
24. Similarly assemble the extrusion and seal on other side (fig. 23).
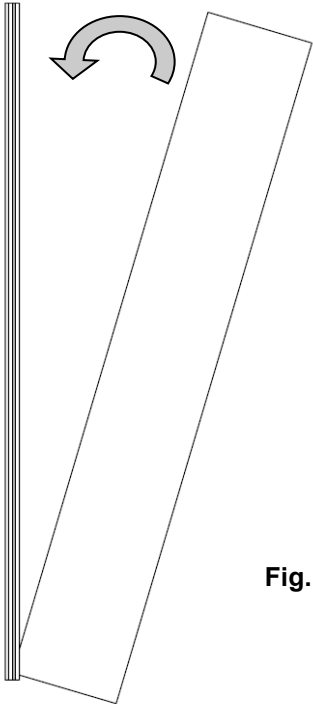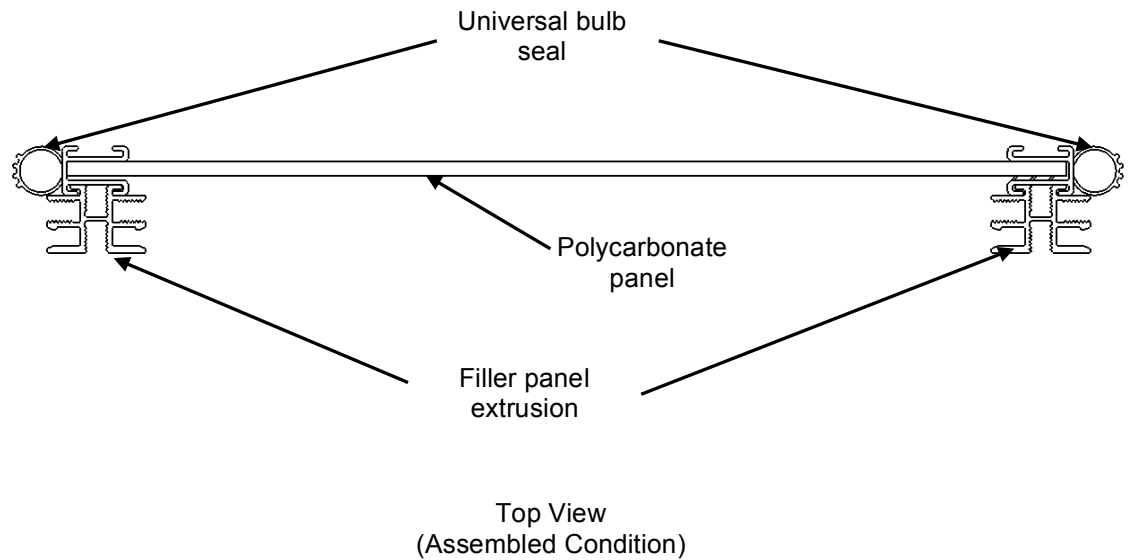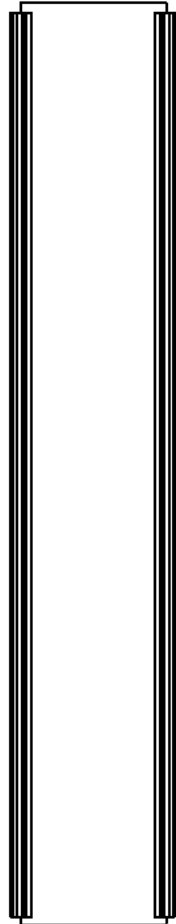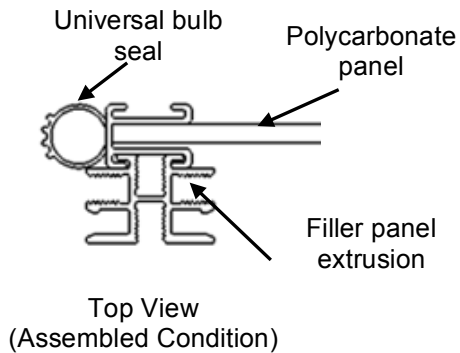
Fig. 22

Universal bulb seal

Polycarbonate panel

Filler panel extrusion

Top View
(Assembled Condition)

Universal bulb seal

Polycarbonate panel

Filler panel extrusion

Top View
(Assembled Condition)

Fig. 23

HOT AISLE CONTAINMENT

Filler Panel Assembly Sequence(2/3):

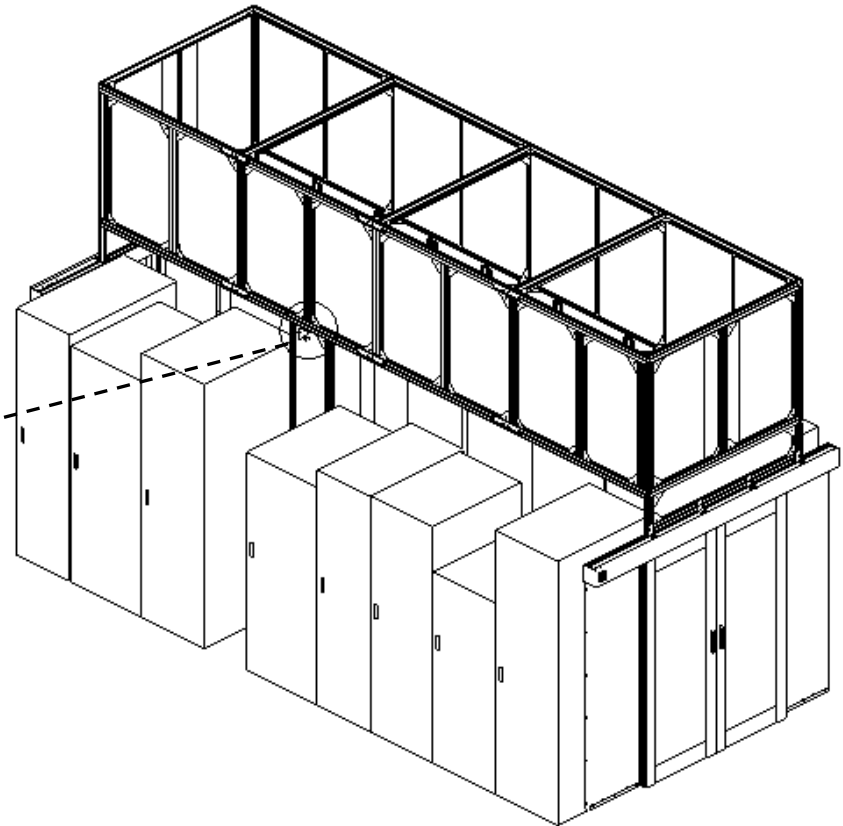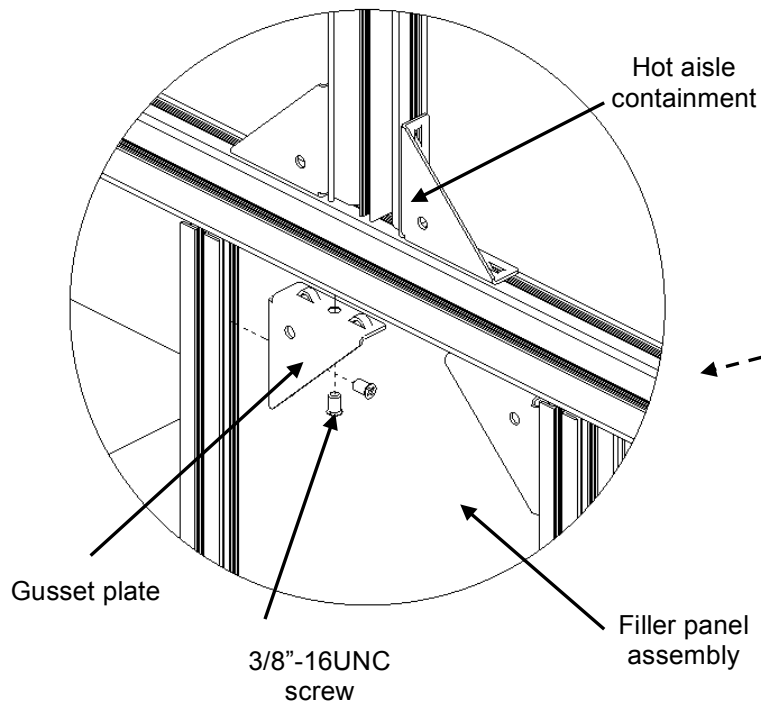25. Install filler panel into HAC extrusion using Gusset and 3/8"-16UNC screw (Fig.24).

Hot aisle containment

Gusset plate

3/8"-16UNC screw

Filler panel assembly

Fig. 24