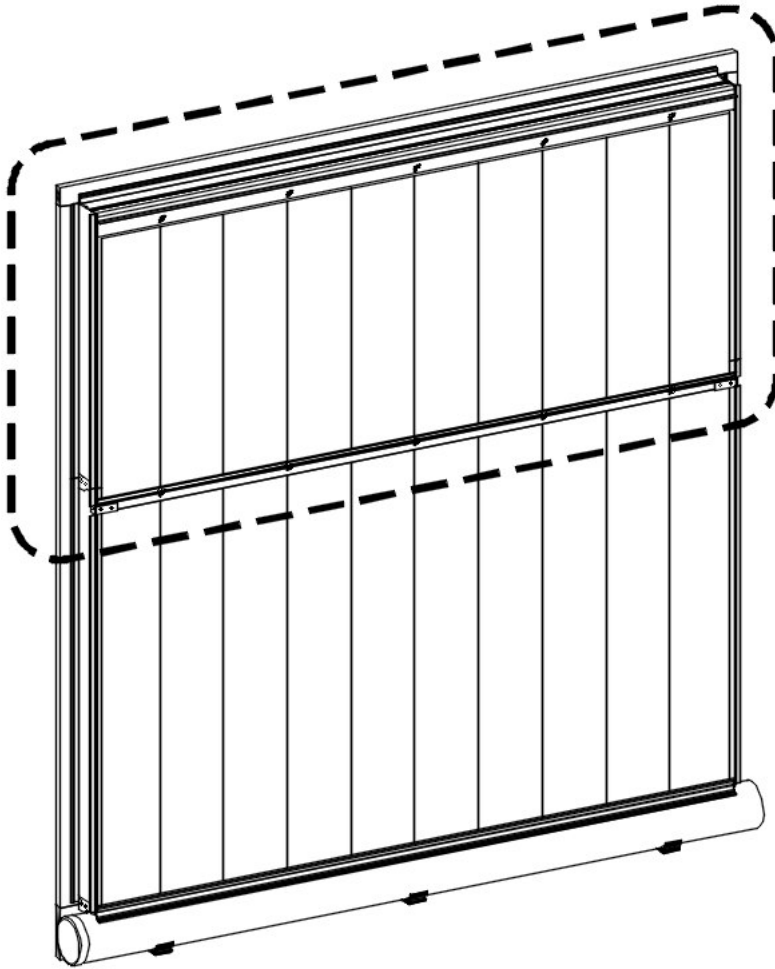


# Instruction Manual

## CH Extended Height Cooling Kit



## CH Extended Height Cooling Kit

Models: CHxx



# CH Extended Height Cooling Kit

## Instructions for Use and Maintenance

### Thank You:

Thank you for purchasing a Munters CH Extended Height Cooling Kit. Munters equipment is designed to be the highest performing, highest quality equipment you can buy. With the proper installation and maintenance it will provide many years of service.

### Please Note:

To achieve maximum performance and insure long life from your Munters product it is essential that it be installed and maintained properly. Please read all instructions carefully before beginning installation.

### Warranty:

For Warranty claims information see the "Warranty Claims and Return Policy" form QM1021 available from the [Munters Corporation office at 1-800-227-2376](http://Munters Corporation office at 1-800-227-2376) or by e-mail at [aghort.info@munters.com](mailto:aghort.info@munters.com).

### Conditions and Limitations:

- Products and Systems involved in a warranty claim under the "Warranty Claims and Return Policy" shall have been properly installed, maintained and operated under competent supervision, according to the instructions provided by Munters Corporation.
- Malfunction or failure resulting from misuse, abuse, negligence, alteration, accident or lack of proper installation or maintenance shall not be considered a defect under the Warranty.

# Index

Chapters	Page
1. Unpacking the Equipment	4
1.1 Parts List	4
1.2 Dimensions	5
2. Installation Instructions	6
2.1 Installation	6
3. Exploded View and Parts List	19

# Unpacking the Equipment

# 1.

Before beginning installation, check the overall condition of the equipment. Remove packing materials, and examine all components for signs of shipping damage. Any shipping damage is the customer's responsibility and should be reported immediately to your freight carrier.

**NOTE:** This instruction manual is meant to be used in addition to the manual for the Munters cooling system you are installing. Please refer to both manuals for complete installation instructions.

## 1.1 Parts List

Munters Evaporative Cooling Height Extension Kits come in lengths to match the main cooling system. An Ending Kit for each extended height system must be ordered separately. The main cooling system, pumps, tank kits and plumbing kits will be packaged separately.

- A CH10, CH20, CH30...CH10 & CH80 will arrive as multiples of 10'L. packages for the cooling frame and Ending kit.

Example: CH60 Height Extension kit  
6 - CH10, 10'L. Height Extension kit  
1 - EC4122 Ending kit

- A CH05, CH15, CH25...CH65 & CH75 will arrive as multiples of 10'L. packages and one 5'L. package and Ending kit.

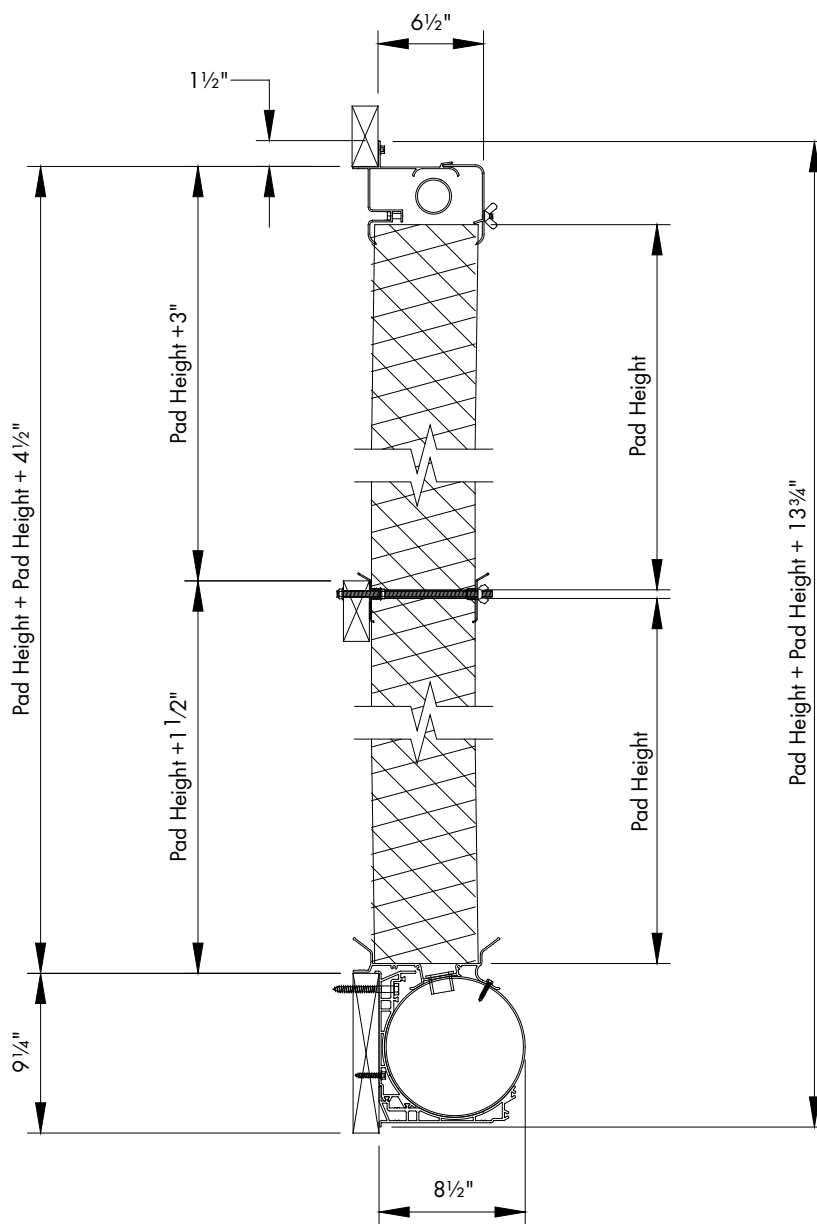
Example: CH65 Height Extension kit  
6 - CH10, 10'L. Height Extension kit  
1 - CH05, 5'L Height Extension kit  
1 - EC4122, Ending kit

If optional add on kits are ordered one or more extra box(es) marked CH02 or CH04 will be included.

Each CH Height Extension Kit includes:

Center Support Rails (A.K.A. - Open Header Pad Retainer)  
5/16" x 9"L. Threaded Rods  
5/16" Wing Nut, Nylon  
5/16" Flanged Hex Nut, SS  
CH Cooling Pad Support Kits  
#10 x 1.25"L. TEk Screws, SS  
2 - End panels, left/right, Plastic  
2 - Drip Collector End Cap, PVC  
2 - Angle Brackets

1.2 Dimensions



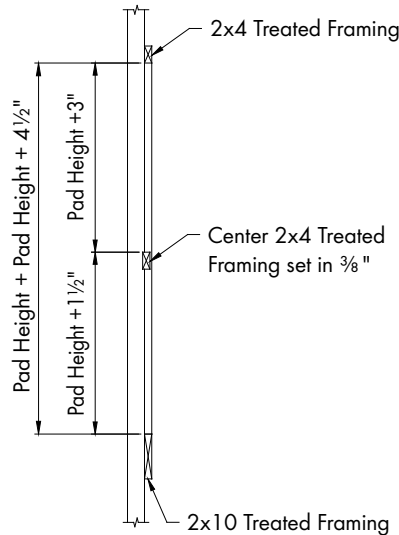
# Installation Instructions

# 2.

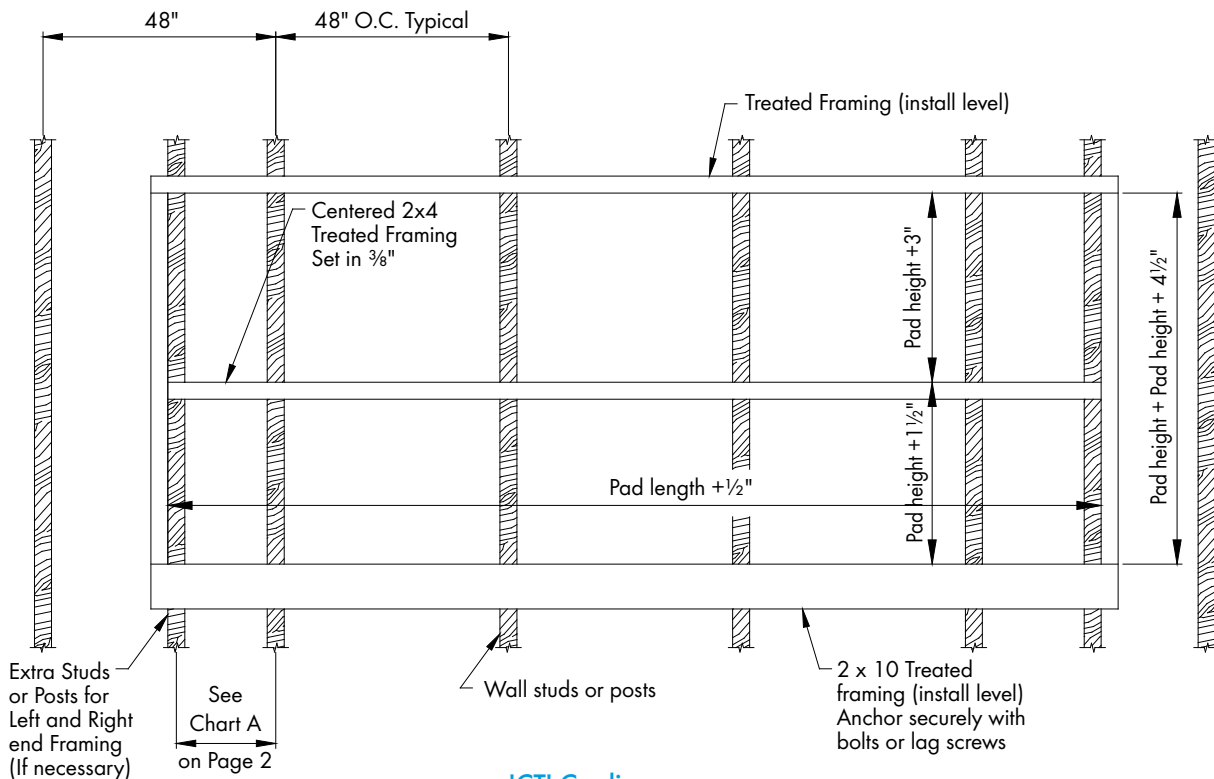
## 2.1 Installation

### Step 1

Construct a wall opening according to your cooling system size, with studs 2' O.C. or posts 4' O.C. (Max 5' O.C). See Figure 1A, 1B and 1C. (For example a 36' CT System with 10' of pad ( 2 - 5' H. Pieces of pad) would have an opening of 36' - 1/2" L x 124 1/2"H or a 40' CU System with 9' of pad (1- 4'H and 1-5'H. piece of pad) would have an opening of 40" - 1/2"L. x 115 1/2"H.) Also install a center 2x4 to support extended height bracket. This 2x4 must be set in 3/8" from face of wall opening or be trimmed down to 1 1/8". See Figures 1A, 1B and 1C.



'CT' Cooling  
Figure 1A



'CT' Cooling  
Figure 1B

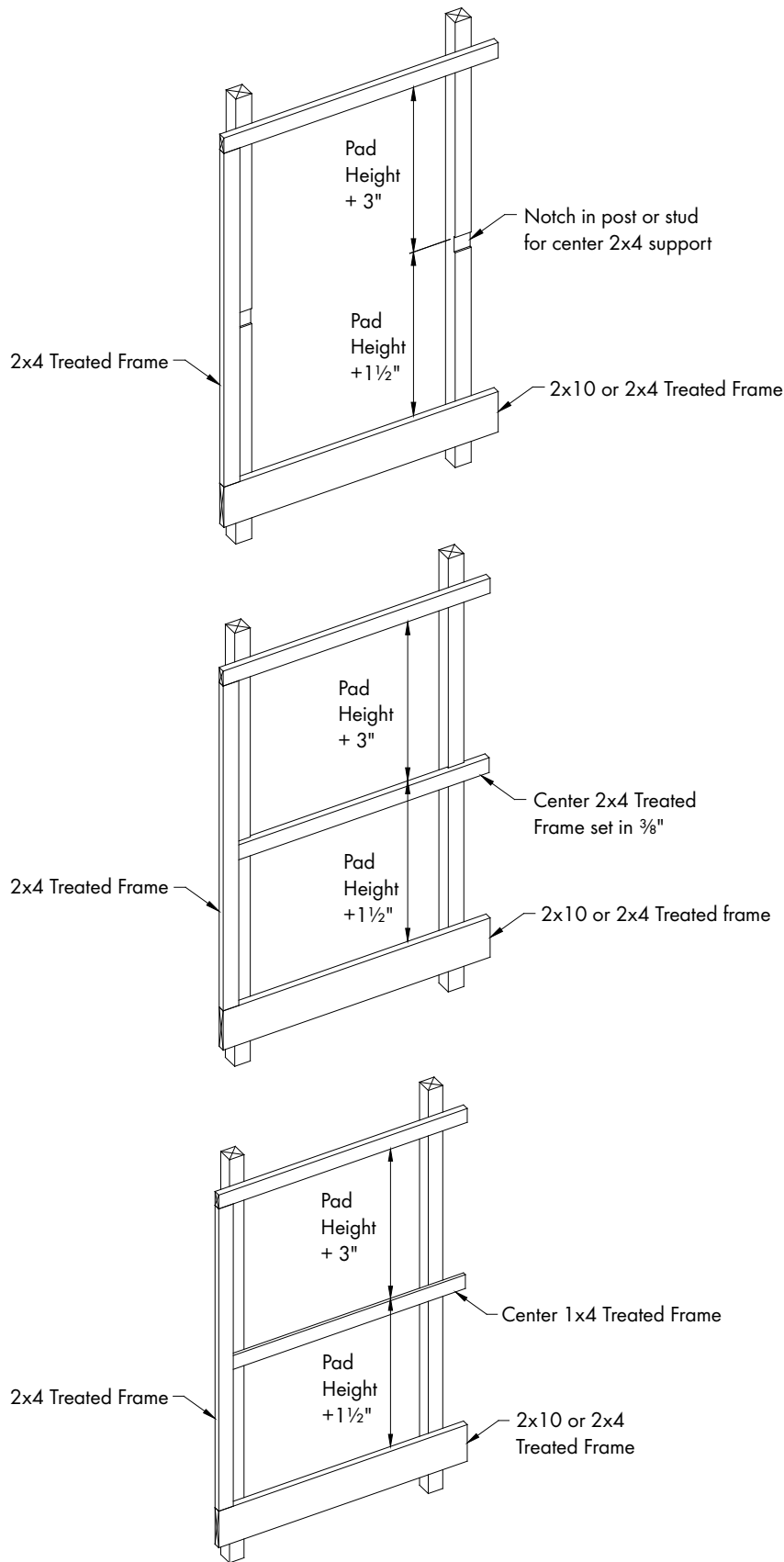


Figure 1C

\* Refer back to original manual

Chart A

Length of Cooling System	No of Brackets Needed	Placement of Brackets*
4'	2	2"
5'	2	12"
5'	2	12"
8'	3	2"
10'	3	12"
12'	4	2"
14'	4	12"
15'	5	2"
16'	5	2"
18'	5	12"
20'	6	2"
22'	6	12"
24'	7	2"
25'	7	12"
26'	7	12"
28'	8	2"
30'	8	12"
32'	9	2"
34'	9	12"
35'	10	2"
36'	10	2"
38'	10	12"
40'	11	2"
42'	11	12"
44'	12	2"
45'	12	12"
46'	12	12"
48'	13	2"
50'	13	12"
52'	14	2"
54'	14	12"
55'	15	2"
56'	15	2"
58'	15	12"
60'	16	2"
62'	16	12"
64'	17	2"
65'	17	12"
66'	17	12"
68'	18	2"
70'	18	12"
72'	19	2"
74'	19	12"
75'	20	2"
76'	20	2"
78'	20	12"
80'	21	2"

Chart B

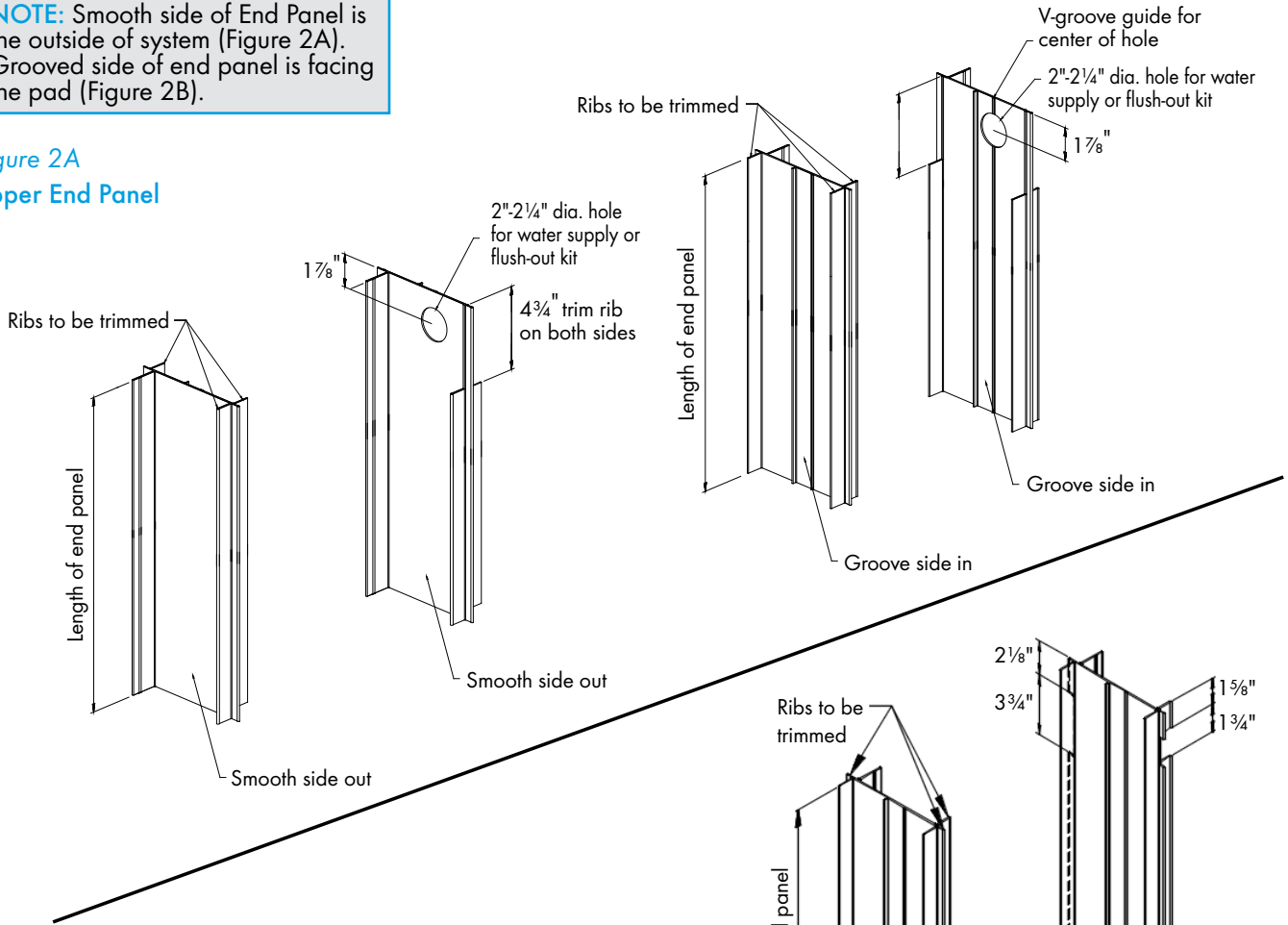
Pad Height	Length of Lower End Panel	Length of Upper End Panel
	CT	CT
24"H	27¼"	24¾"
36"H	39¼"	36¾"
48"H	51¼"	48¾"
60"H	63¼"	60¾"
72"H	75¼"	72¾"

**Step 2**

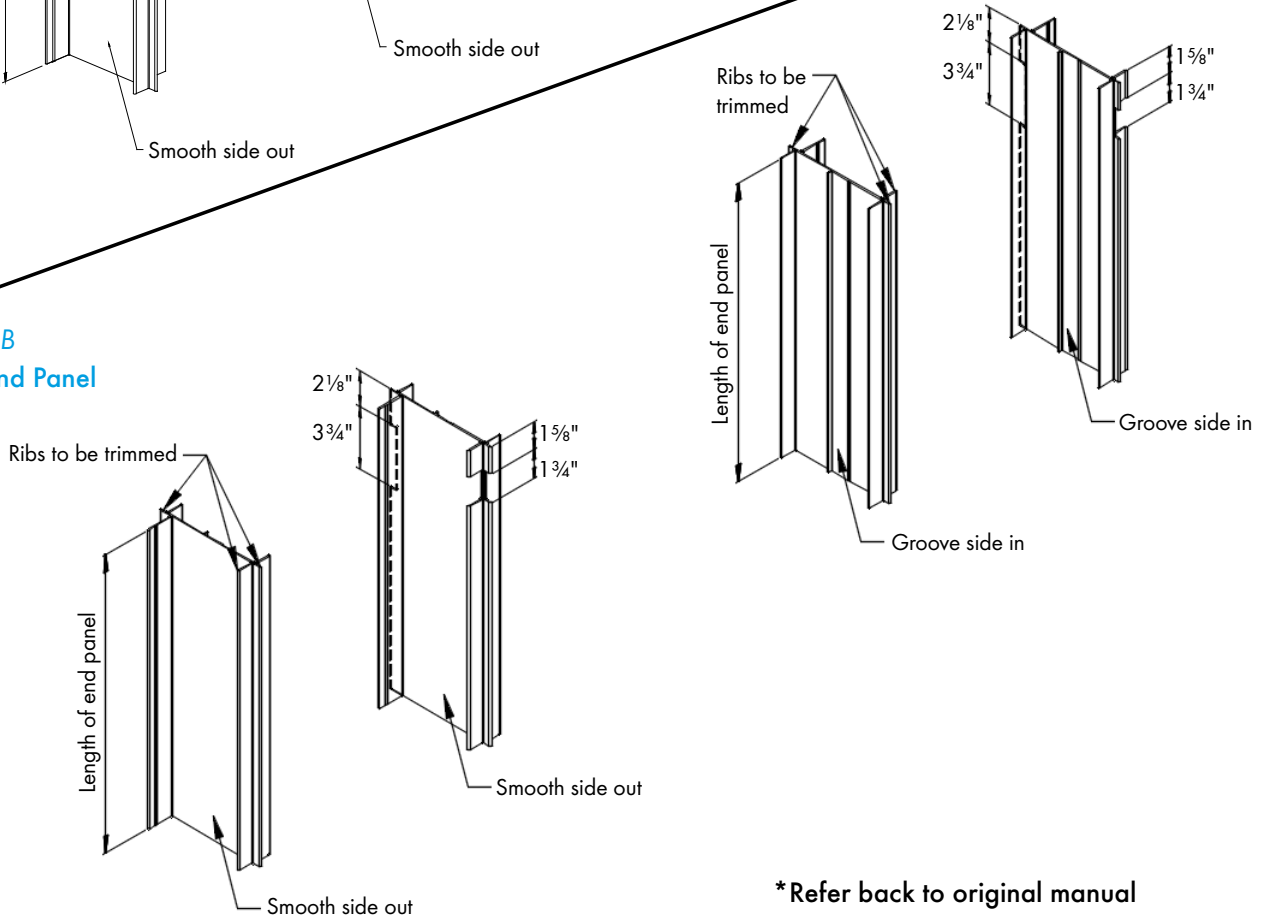
Determine the height of your lower and upper Cooling Pad and cut the lower and upper End Panels down to the correct length according to [Chart B, page 7](#). Trim the End Panels as indicated below. Determine which End Panel will be at the end with the water supply and drill a 2" - 2¼" diameter hole 1⅞" from top, as shown. If the EC1507 Flush-out kit was purchased, then drill a 2" - 2¼" diameter hole in the other End Panel. See [Figure 2A and 2B](#). If EC1609, Center Tank Kit is being used then only drill the hole if (2)EC1507 were purchased.

**NOTE:** Smooth side of End Panel is the outside of system (Figure 2A). Grooved side of end panel is facing the pad (Figure 2B).

**Figure 2A**  
**Upper End Panel**



**Figure 2B**  
**Lower End Panel**



**\*Refer back to original manual**



**Step 3**

Slide left Upper End Panel into framing and stack on top of left Lower End Panel. Connect Lower and Upper End Panels using a Drip Collector End Cap and (4) #10 x 1/4" Tek screws (provided).

See Figure 3A and 3B.

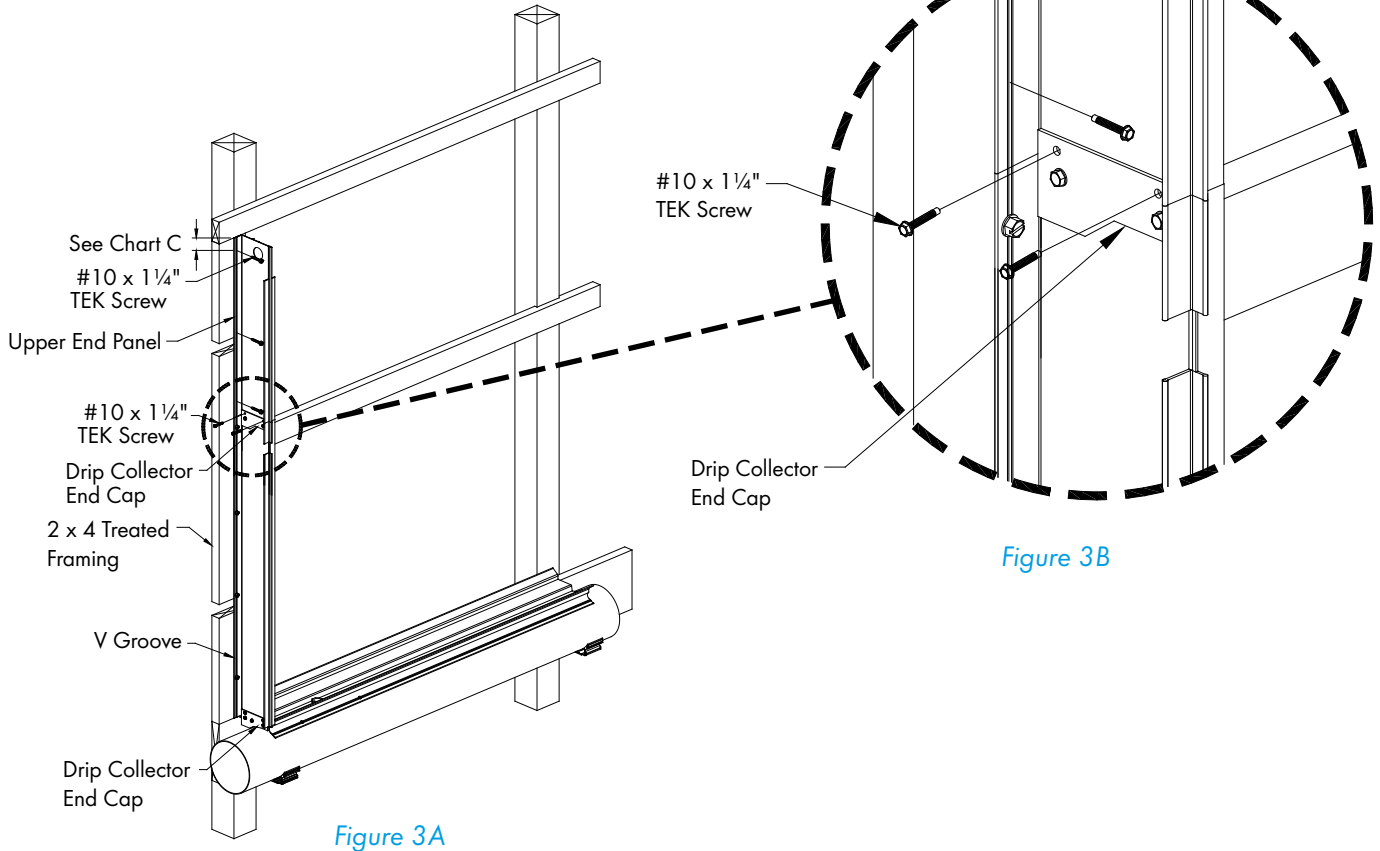


Figure 3A

Figure 3B

**Step 4**

Attach Center Support rail to left end of center 2x4 using #10 x 1/4" TEK screws below every hole in Center Support rail. Be sure that the end of the Center Support Rail is butted up to the flange of the End Panel. See Figure 4A, 4B and 4C.

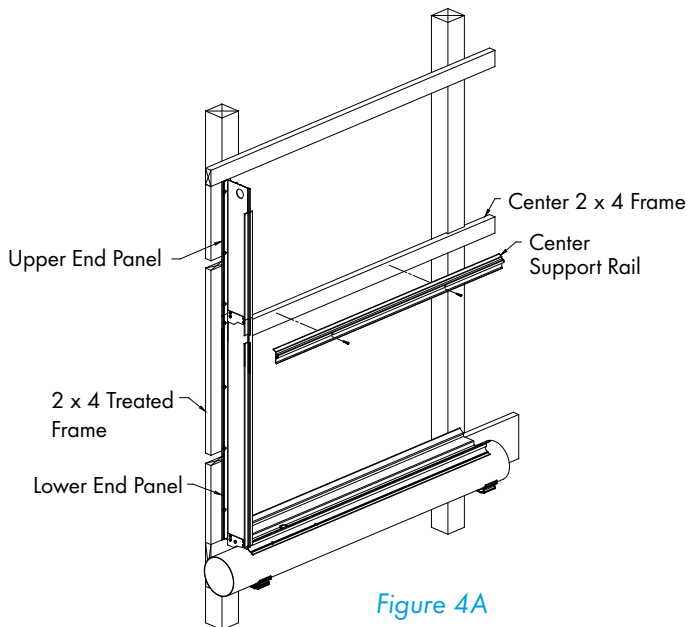


Figure 4A

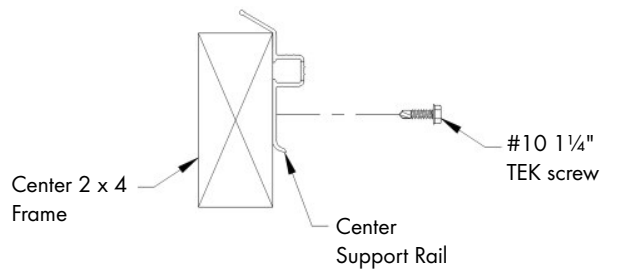


Figure 4B

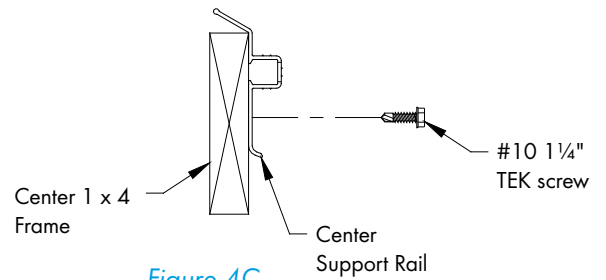


Figure 4C

**Step 5A**

Once Center Support Rail is in place, using the holes in the Support rail as a guide, drill a 1 1/2" diameter hole through center 2x4 frame. Hole should be approximately 3/4" below top of center 2x4. See Figure 5A and 5B.

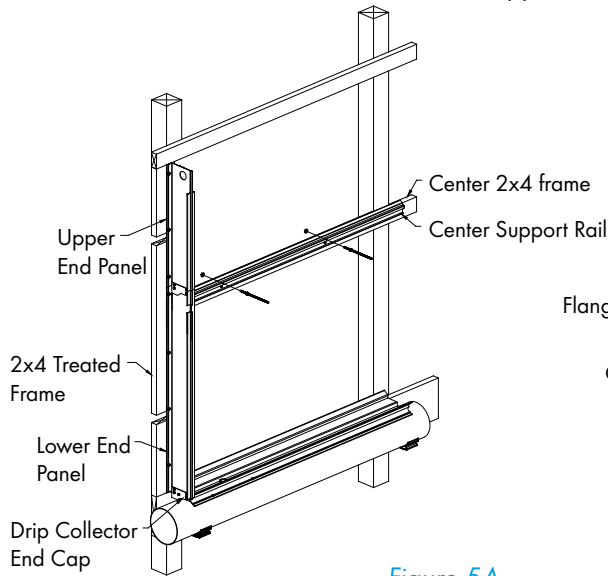


Figure 5A

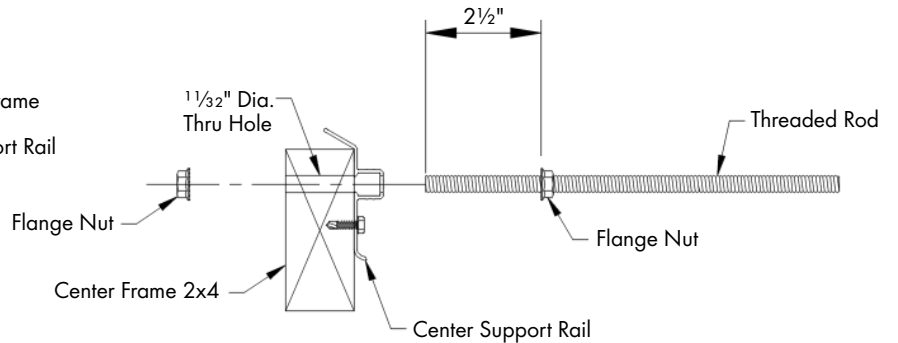


Figure 5B

**Step 5B**

Thread a flange nut onto the 9" L. Thread Rod, so that the flange side of the nut is 2 1/2" from the rod. Insert that end of the rod through the Center Support Rail and 2x4 and fasten in place using 2<sup>nd</sup> flange nut. See Figure 5A, 5B, 5C and 5D.

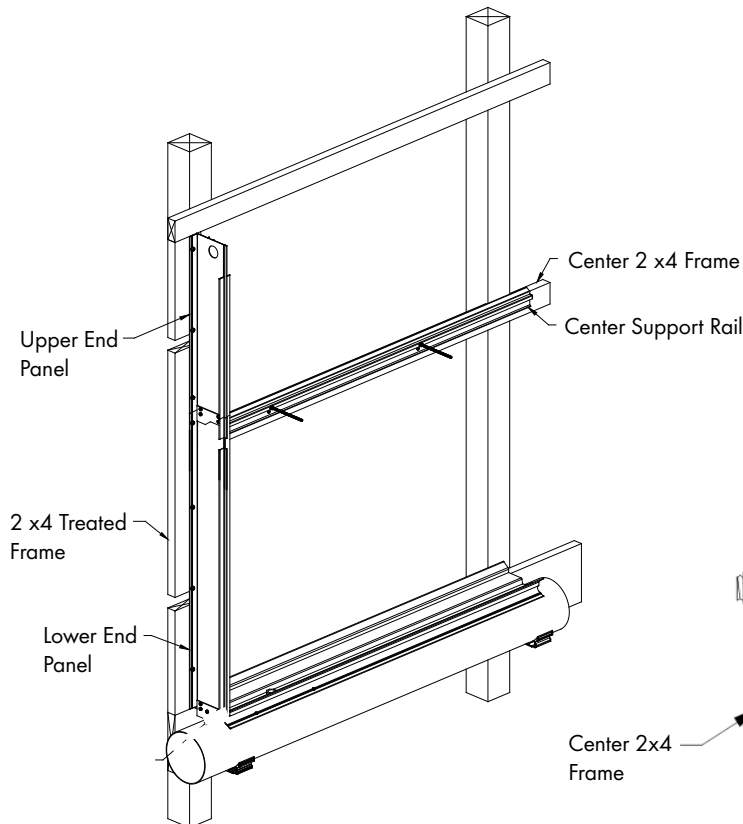


Figure 5C

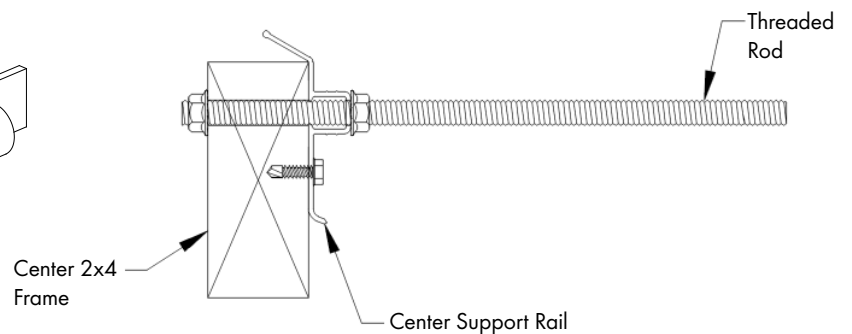


Figure 5D

\*Refer back to original manual.

**Step 6A**

On right side of system apply PVC cement to end of Drip Collector and line up the 3 holes in the Drip Collector End Cap to the 'U' Channels in the Drip Collector, fasten using (3) #10 x 1¼" TEK Screws (provided). See Figure 6A.

**Step 6B**

Slide right End Panel into framing and into Drip Collector on right end. End Panel should fit snug, make sure ribs sit down tight into the Drip Collector. Fasten the last 2 screws into the Drip Collector End Cap using (2) 10 x 1¼" TEK Screws. See Figure 6B.

**Step 6C**

Hold the End Panel tightly against the framing and attach End Panel to framing using #10 x 1¼" TEK screws (provided), See Chart C, page 11 for spacing and number of Screws provided.

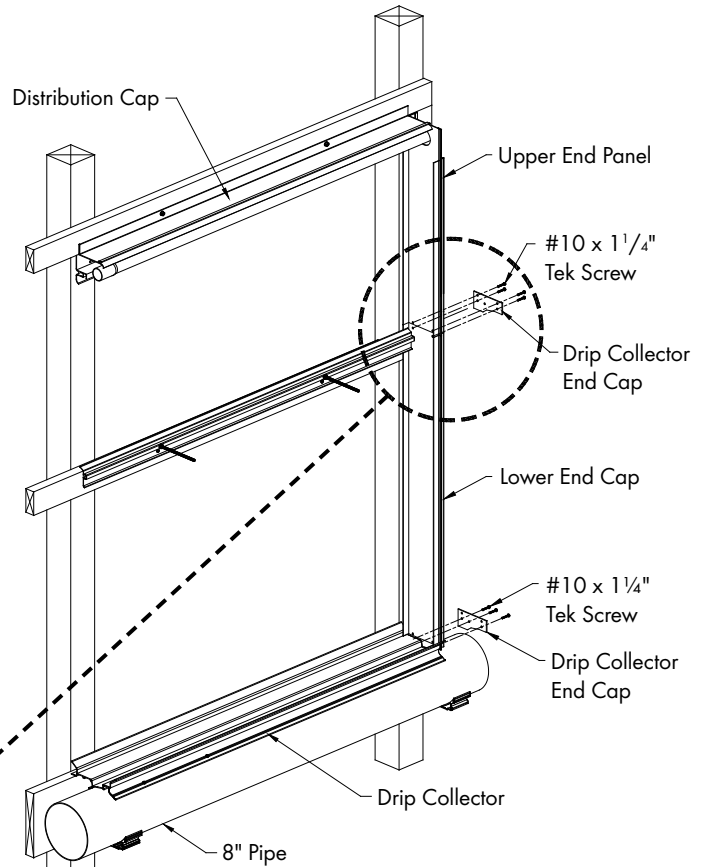


Figure 6A

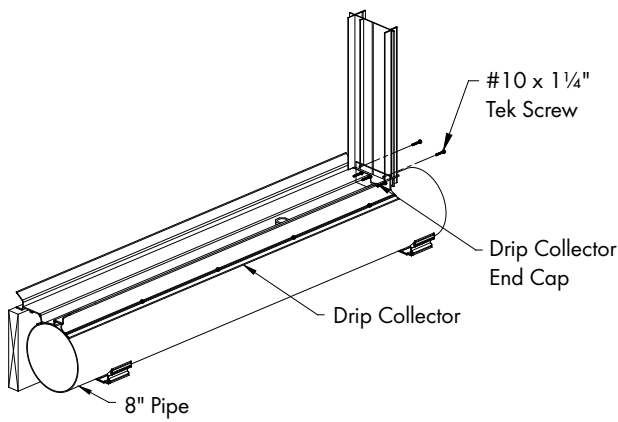


Figure 6B

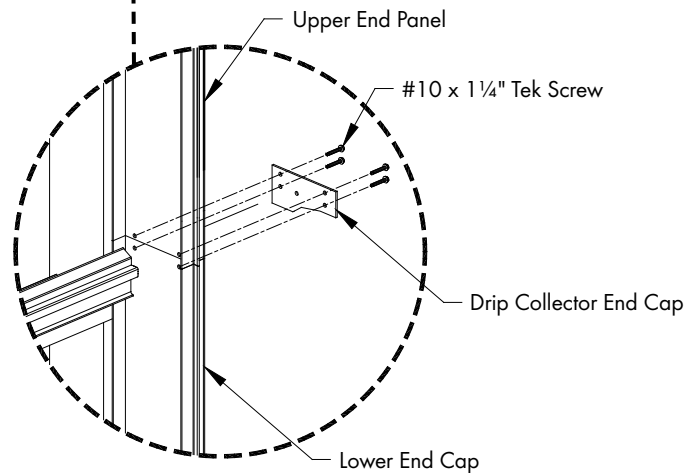


Figure 6C

Pad Height	No. of Screws	Spacing	Spacing Top to First Screw
24"H.	1	24"O.C.	2"
36"H.	2	18"O.C.	2"
48"H.	2	24"O.C.	2"
60"H.	3	20"O.C.	2"
72"H.	3	24"O.C.	2"

Chart C

**Step 7**

Slide right Upper End Panel into framing and stack on top of right Lower End Panel. Connect lower & upper End Panels using Drip Collector End Cap and (4) #10 x 1¼" TEK Screws (provided). See Figure 6A and 6C. Hold the upper End Panel tightly against the framing and attach End Panel to framing using #10x1¼" TEK Screws (provided). See Chart C, page 11 for spacing and number of Screws provided.

**\*Refer back to original manual**

**Step 8**

Make sure caulk is dry and begin putting cooling pad in place, taking care to position pieces tight together. If your pad has Directional Arrows, position arrows to point upward and to the inside of the building. See Figure 7. Continue this pattern, stopping at the next to the last piece of pad.

**Step 9**

Slide the next to the last piece of pad into the End Panel. Measure the opening that is left for the last piece of pad at the top and bottom of the opening. If the opening is smaller than the width of the last piece of pad, then using a hand saw, trim the last piece of cooling pad to fit the opening. Put the last piece in place. See Figure 8.

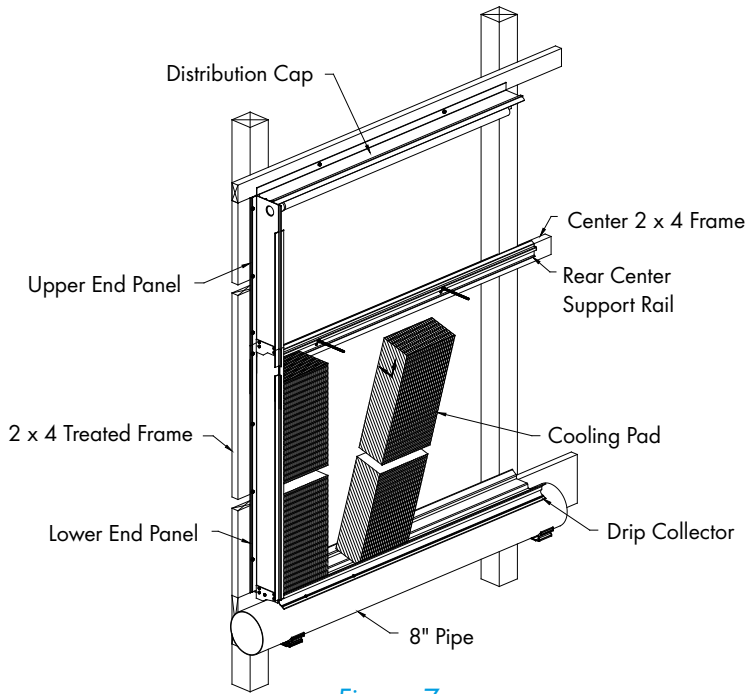


Figure 7

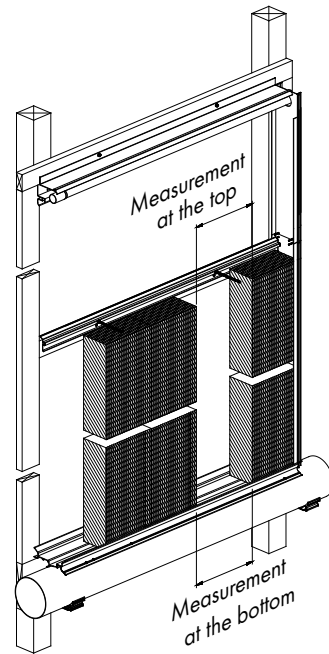


Figure 8

**Step 10A**

With lower Cooling Pad in place slide Front Center Support Rail onto Threaded Rods and fasten with Nylon Wingnuts. See Figure 9A and 9B.

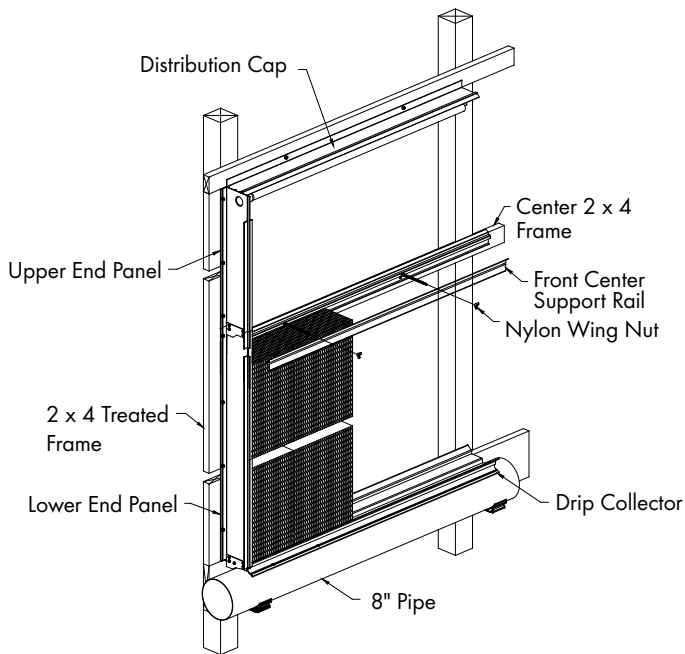


Figure 9A

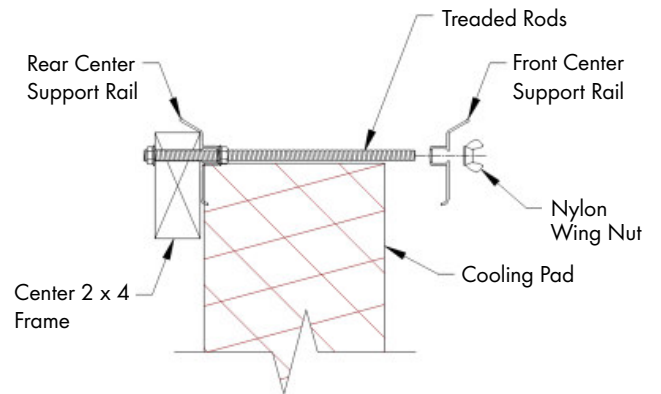


Figure 9B

**Step 10B**

Holding the left End Panels tight to front Center Support Rail, place the long side of Angle Bracket on Center Support Rail and the short side over End Panel. *See Figure 9C.* Attach Angle Bracket to Center Support Rail using (2) #10 1¼" TEK Screws (provided). Repeat for Right End Panels.

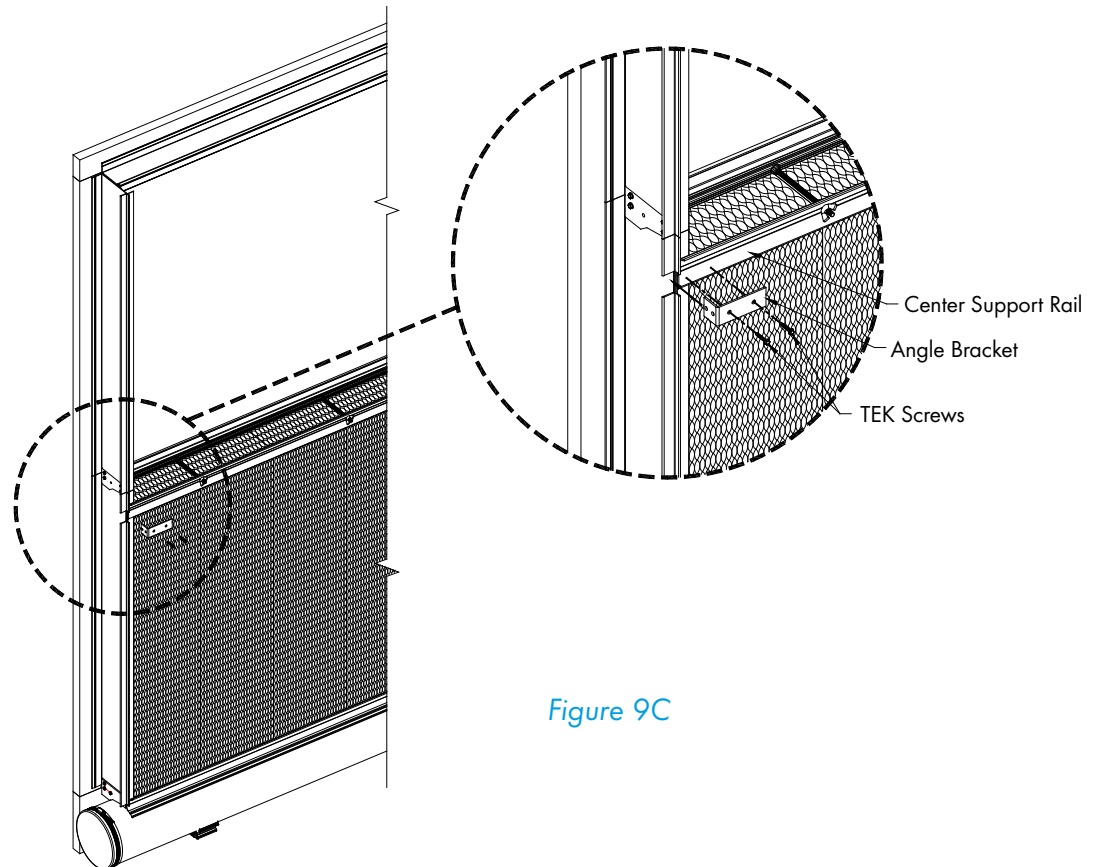


Figure 9C

**Step 11**

Begin putting upper Cooling Pad in place, taking care to position pieces tight together. If your pad has directional arrows, position arrows to point upward and to the inside of the building.

*See Figure 10.* After the first 2 pieces of pad are in place proceed to *Step 12.*

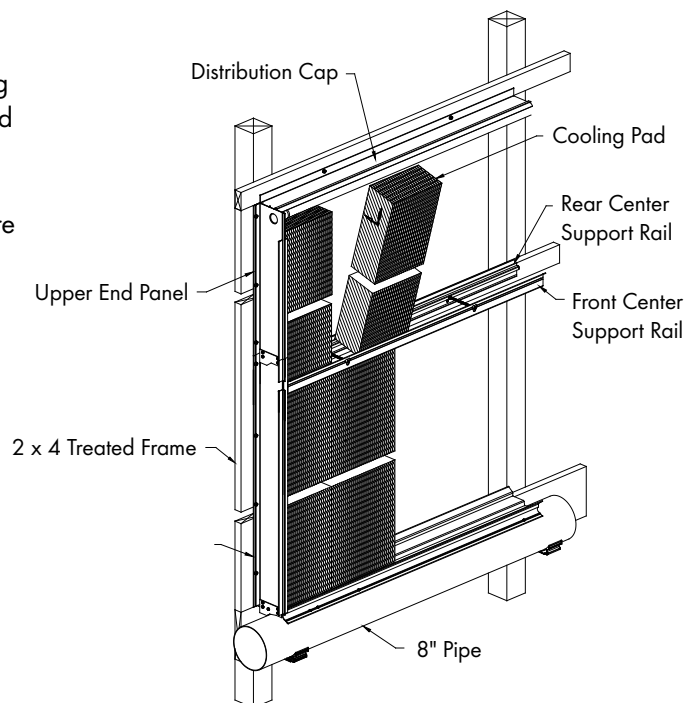


Figure 10

**Step 12**

To help support the Center Support Rails a 'Cooling Pad Support Kit' must be installed at this time. Each 10' section of Center Support Rails will get 2 Support Kits, so a CH20 will get 4 Support Kits or a CH70 will get 14 Support Kits. After the first 2 upper pieces of pad are installed drill a  $1\frac{1}{32}$ " dia. hole in the front Center Support Rail  $\frac{1}{8}$ " past the end of the pad. See Figure 11A, 11B and 11C.

**Step 13**

Drill a  $1\frac{1}{32}$ " dia. hole. vertically in the Distribution Cap  $\frac{1}{8}$ " past the end of the pad. See Figure 11D.

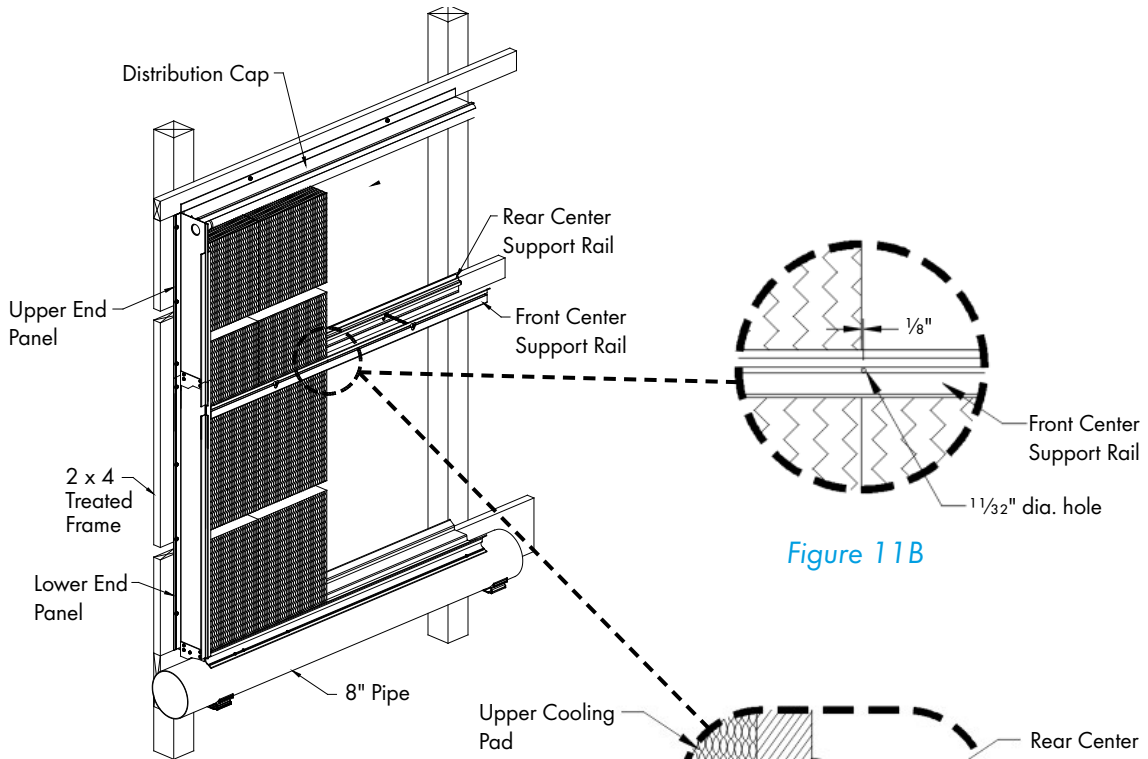


Figure 11A

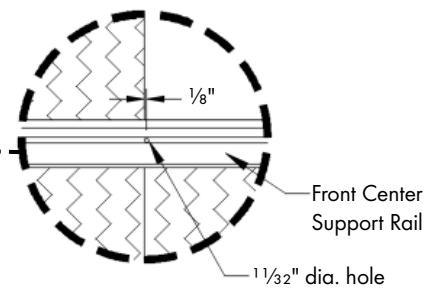


Figure 11B

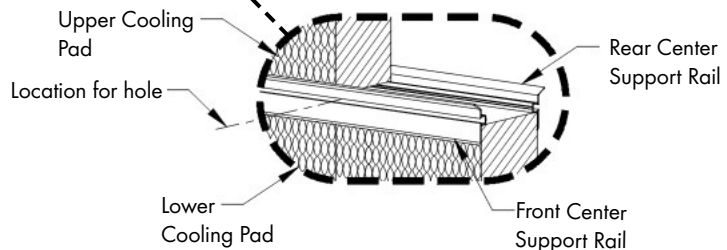


Figure 11B

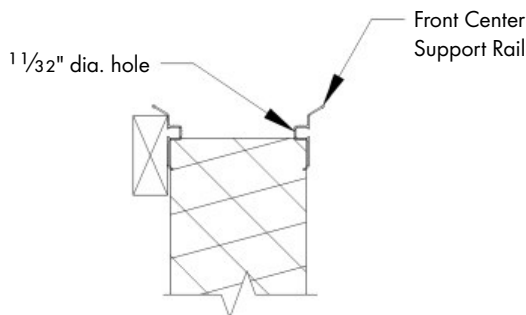


Figure 11C

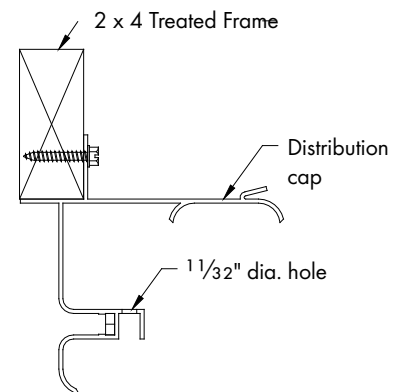


Figure 11D

**Step 14**

Make sure the nut on the Open Eye Lag Bolt is threaded all the way onto the Open Eye Lag Bolt. Insert the Open Eye Lag Bolt with nut into the front Center Support Rail from the inside out and fasten with flange nut. See Figure 12A and 12B.

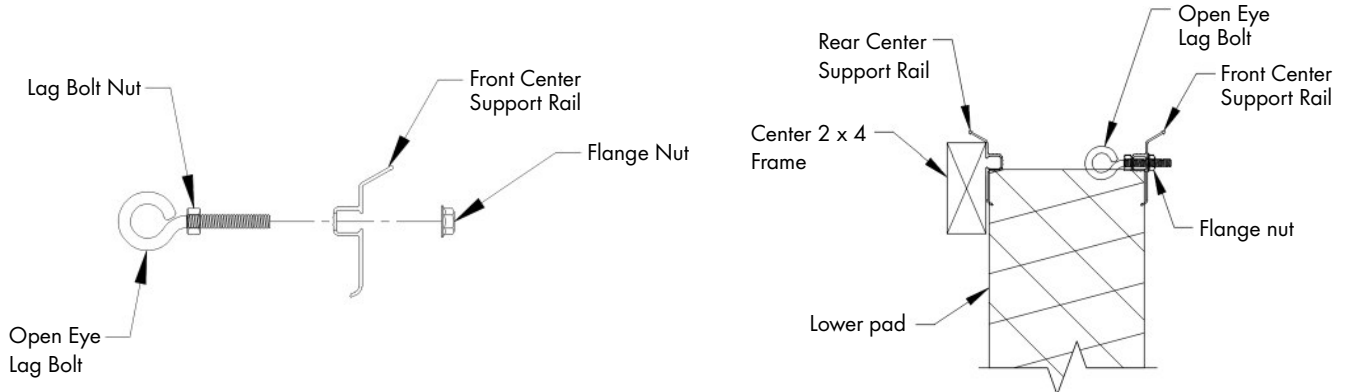


Figure 12A

Figure 12B

**Step 15**

Insert 1/8" dia. cable (provided) through new hole in Distribution Cap creating a loop and fasten cable to itself with cable clamp. Insert other end of cable through Open Eye Lag Bolt creating a loop and fasten cable to itself with Cable Clamp, pulling cable tight while tightening clamp. Cut off any excess cable. See Figure 13.

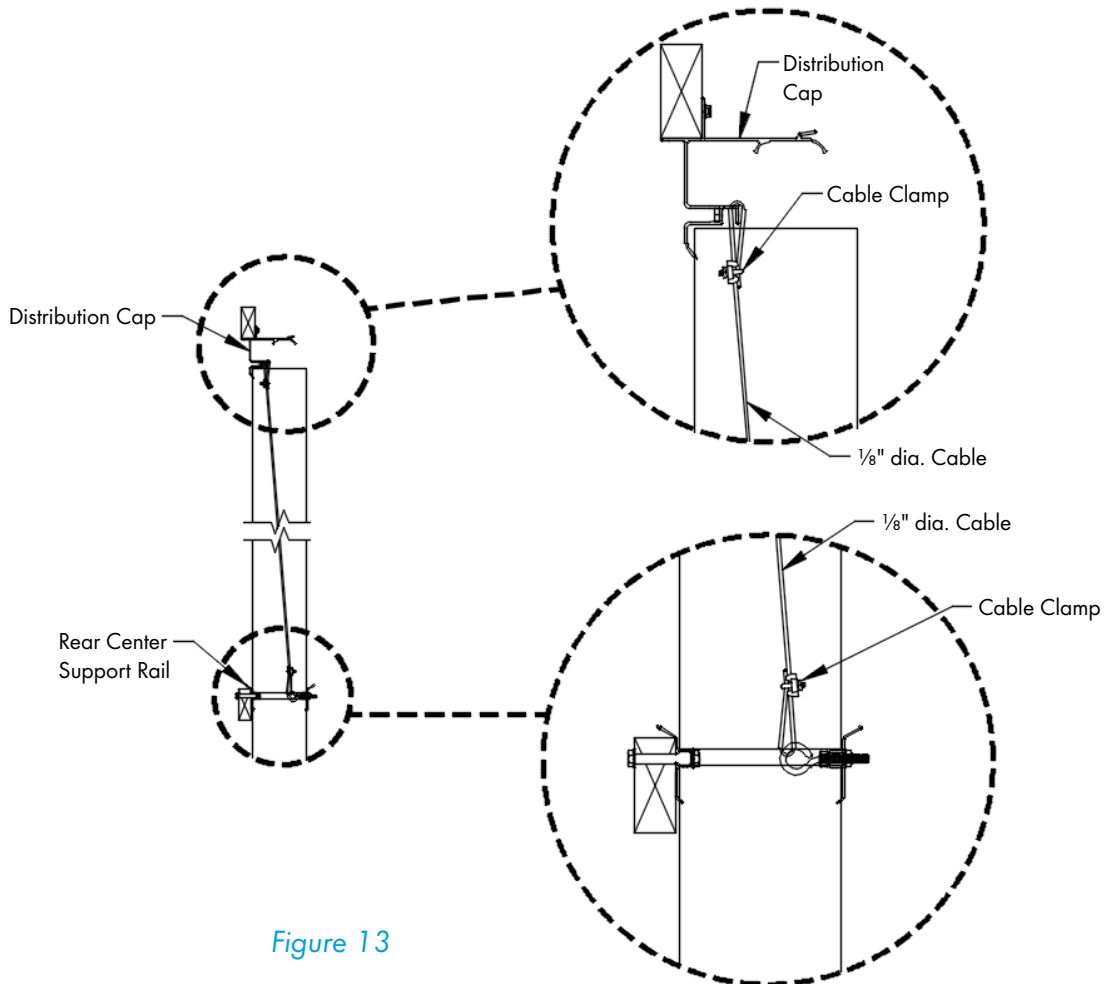


Figure 13

**Step 16**

Put 5 more pieces of pad in place and repeat [Steps 12-14](#). Continue this pattern, stopping at the next to last pieces of pad.

**Step 17**

Slide the next of the last piece of pad into the end panel. Measure the opening that is left for the last piece of pad at the top and bottom of the opening. If the opening is smaller than the width of the last piece of pad, then using a hand saw, trim the last piece of cooling pad to fit the opening. Put the last piece in place. [See Figure 14](#).

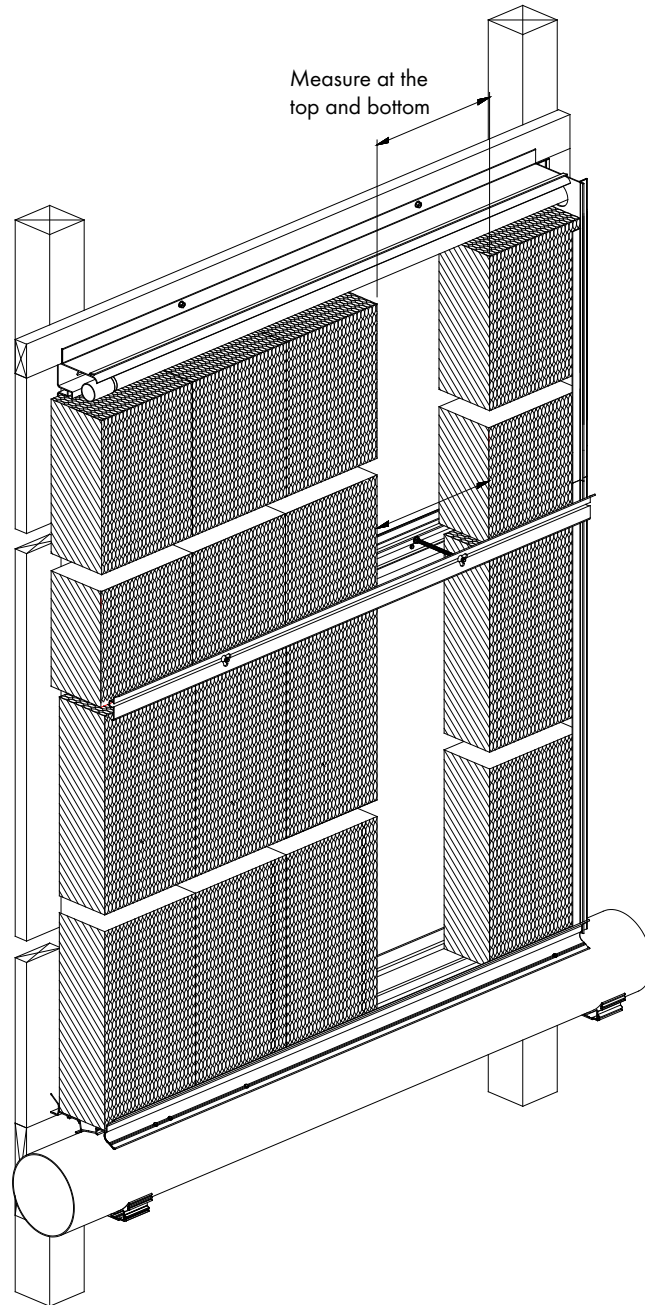


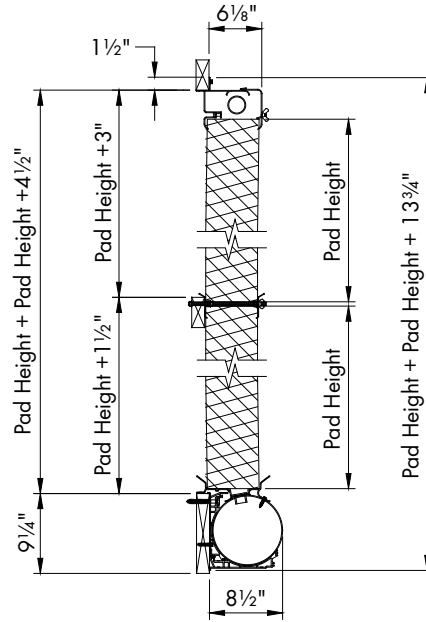
Figure 14

\*Refer back to original manual

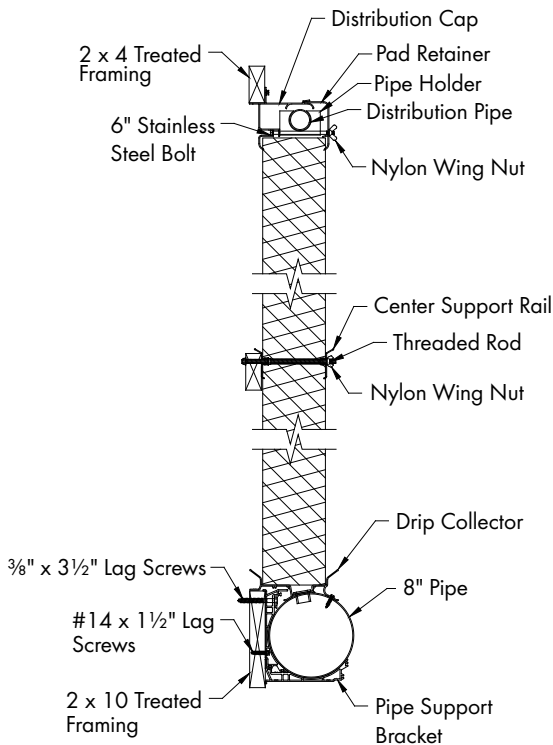


**Step 18**

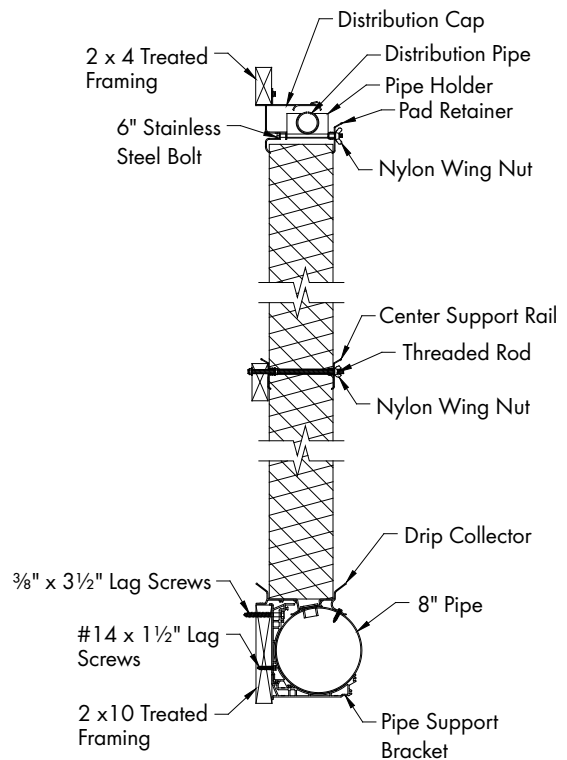
Installation of cooling frame is now complete. Installation should resemble that of *Figure 15A and 15B*. Proceed to next section in cooling manual for plumbing instructions.



**Figure 15A**  
(Side View Complete Assembly)



**Figure 15B**  
(Side View Closed Header)

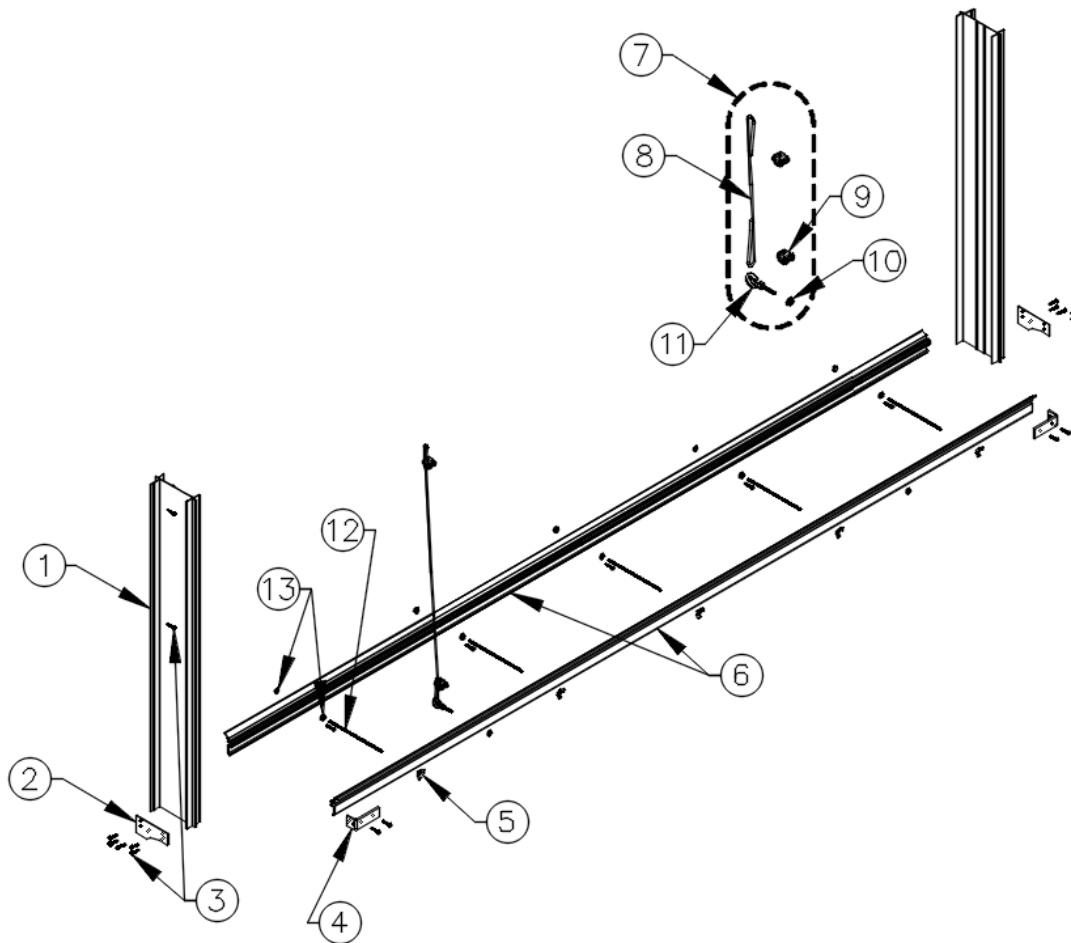


**Figure 15C**  
(Side View Open Header)

\* Refer back to original manual for plumbing details and information on system start-up, operation and adjustment, and maintenance.

# Exploded View and Parts List

# 3.



Item	Cat. No.	Part Name/Description	Qty.
1	EC1081	End Panel, 83.25"H., Plastic	2
2	EC1310	Drip Collector End Cap	2
3	KS2257	#10 x 1 1/4" TEK Screw, Hex Washer, SS	varies
4	EC1202	Angle Bracket, 1 1/2" x 4" x 1 1/2", SS	2
5	KN2302	5/16" Wing Nut, Nylon	varies
6	Center Support Rails (A.K.A - Open Header Pad Retainer)		
	EC1902	Pad Retainer, Open Style, 2'L., Aluminum	varies/foot
	EC1904	Pad Retainer, Open Style, 4'L., Aluminum	varies/foot
	EC1905	Pad Retainer, Open Style, 5'L., Aluminum	varies/foot
	EC1910	Pad Retainer, Open Style, 10'L., Aluminum	varies/foot
7	EC1620	CH Cooling Pad Support Kit	varies/foot
8	AC1380	1/8" Dia. 7x7 Aircraft Cable, SS	8'
9	AC1381	1/8" Dia. Cable Clamp, ZP	2
10	KN0704	5/16" Flanged Hex Nut, SS	1
11	KS2754	5/16" x 3.25" Open Eye Bolt w/ Nut	2
12	KS2804	5/16" x 9"L., Threaded Rod, SS	varies/foot
13	KN0704	5/16" Flanged Hex Nut, SS	varies/foot

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CH Extended Height Cooling System is developed and produced by Munters Corporation, Lansing, Michigan U.S.A. 1-800-227-2376



Munters Europe AB, Isafjordsgatan 1, P.O. Box 1150, SE-164 26 Kista, Sweden. Phone +46 08 626 63 00, Fax +46 8 754 56 66.

Munters Corporation 2691 Ena Drive Lansing, MI 48917 U.S.A. Phone +1 800-227-2376, Fax +1 517-676-7078

[www.munters.us](http://www.munters.us)

**Australia** Munters Pty Limited, Phone +61 2 6025 6422, **Brazil** Munters Brasil Industria e Comercio Ltda, Phone +55 41 3317 5050, **Canada/US** Munters Corporation Lansing, MI Phone +1 517 676 7070, **China** Munters Air Treatment Equipment (Beijing) Co. Ltd, Phone +86 10 80 481 121, **Denmark** Munters A/S, Phone +45 9862 3311, **India** Munters India, Phone +91 20 3052 2520, **Indonesia** Munters, Phone +62 818 739 235, **Italy** Munters Italy S.p.A., Chiusavecchia, Phone +39 0183 52 11, **Japan** Munters K.K., Phone +81 3 5970 0021, **Korea** Munters Korea Co. Ltd., Phone +82 2 761 8701, **Mexico** Munters Mexico, Phone +52 818 262 54 00, **Russia** Munters AB, Phone +7 812 448 5740, **Singapore** Munters Pte Ltd., Phone +65 744 6828, **South Africa and Sub-Sahara Countries** Munters (Pty) Ltd., Phone +27 11 997 2000, **Spain** Munters Spain S.A., Phone +34 91 640 09 02, **Sweden** Munters AB, Phone +46 8 626 63 00, **Thailand** Munters Co. Ltd., Phone +66 2 642 2670, **Turkey** Munters Form Endüstri Sistemleri A.Ş, Phone +90 322 231 1338, **USA** Munters Corporation Lansing, MI Phone +1 517 676 7070, **Vietnam** Munters Vietnam, Phone +84 8 3825 6838, **Export & Other countries** Munters Italy S.p.A., Chiusavecchia Phone +39 0183 52 11