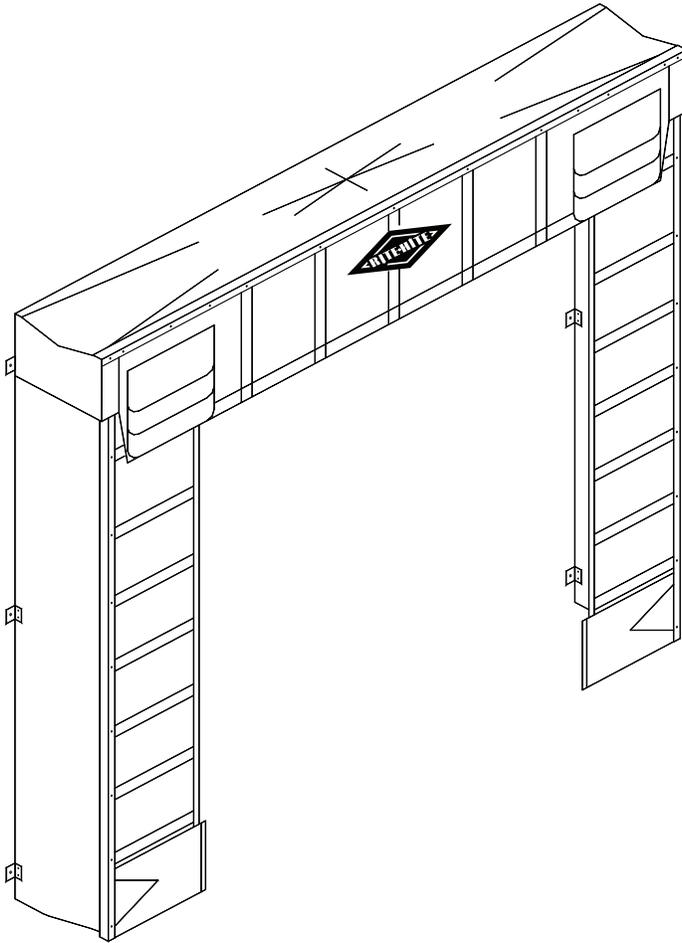


SURVIVOR™ 450S Impactable Dock Shelter (V-Flow Option)

This Installation/Owner's manual covers units shipped: **4/2010 to Date**

Installed on: _____

See supplemental instructions for other header options.



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NOTICE TO USER

Thank you for purchasing a Rite-Hite® Survivor™ Dock Shelter. For other applications, please contact your local Rite-Hite sales representative.

The following installation instructions are for standard applications of the 450S Series Shelter with the V-flow style header. For the Hybrid style header, reference publication 450S0002. For the Pivoting Canopy style header, reference publication 450S0003.

These instructions assume that the installer is outside of the building facing the loading dock.

Contact Order Engineering for installation instructions for any application of the 450S Series Shelter outside of standard application guidelines.

The Rite-Hite® products in this manual are covered by one or more of the following U.S. patents: 5953868, 6951084, 6014844, 6044597, 6205721, 6233885, 7146673, 7185463, 7246467, 7287353, 7334281, 7584517, 7695048, 7757442, 7877831, 7882663, 8042307, 8141305, 8156995, 8307588, 8327587, 8353136, 8458960, 8495838, 8540007, 8752335, 8800086, 8839842, 8887447, 8915029, 8943630, 8991467, 9003724, 9003725, 9010039 and may be covered by additional pending U.S. and foreign patent applications.

Preparation

Verify you received all components before installation. Notify Rite-Hite or your local sales representative if parts are missing or damaged.

Maintenance

As needed, remove excess snow from top of the header.

SAFETY

Safety Identifications

DANGER

Indicates a hazardous situation which, if not avoided, *will result in death or serious injury.*

WARNING

Indicates a hazardous situation which, if not avoided, *could result in death or serious injury.*

CAUTION

Indicates a hazardous situation which, if not avoided, *could result in minor or moderate injury.*

NOTICE

Indicates a situation which can cause damage to the equipment, personal property and/or the environment, or cause the equipment to operate improperly.

NOTE: A note is used to inform you of important installation, operation, or maintenance information.

INSTALLATION

Mounting Methods

See anchor manufacturer's recommendation on all anchors used for minimum anchor embedment, length, location and anchor use with the various wall/material types.

Concrete Block or Brick Wall

Preferred Method

Through bolt fastening. Bore a hole through the building wall. Use a 3/8" diameter threaded rod with a washer, nut, and jam nut on each end - it will be necessary to install a back-up plate inside the building wall when the wall will not support the bolt.

Alternate Method

Anchor through horizontal mortar joint. Min. of 3/8" anchor diameter. Consult anchor manufacturer's recommended minimum anchor embedment to determine anchor length for your wall/material type. (Acceptable only on foam seals, only if used on horizontal mortar joints and only if the mortar joint is in good condition and can support the members).

Concrete Tilt-Up Walls (Precast)

Use 3/8" lag bolts with expansion shields, 3/8" one piece anchor bolts with expansion collar, or equivalent fastener. If building wall is too thin to effectively hold the lag bolt or anchor bolt, the through bolt method of attachment is required.

Metal Sided Building

Through bolt method of attachment is required for this building style. It will be necessary to install a back-up plate that is fastened directly to structural members when it is not possible to fasten directly to structural building members. Use a 3/8" diameter bolt with a washer and lock nut to fasten the unit to the structural members of the building or to the back-up plates. If necessary, use a 3/8" diameter threaded rod with a washer and lock nut on each end.

INSTALLATION

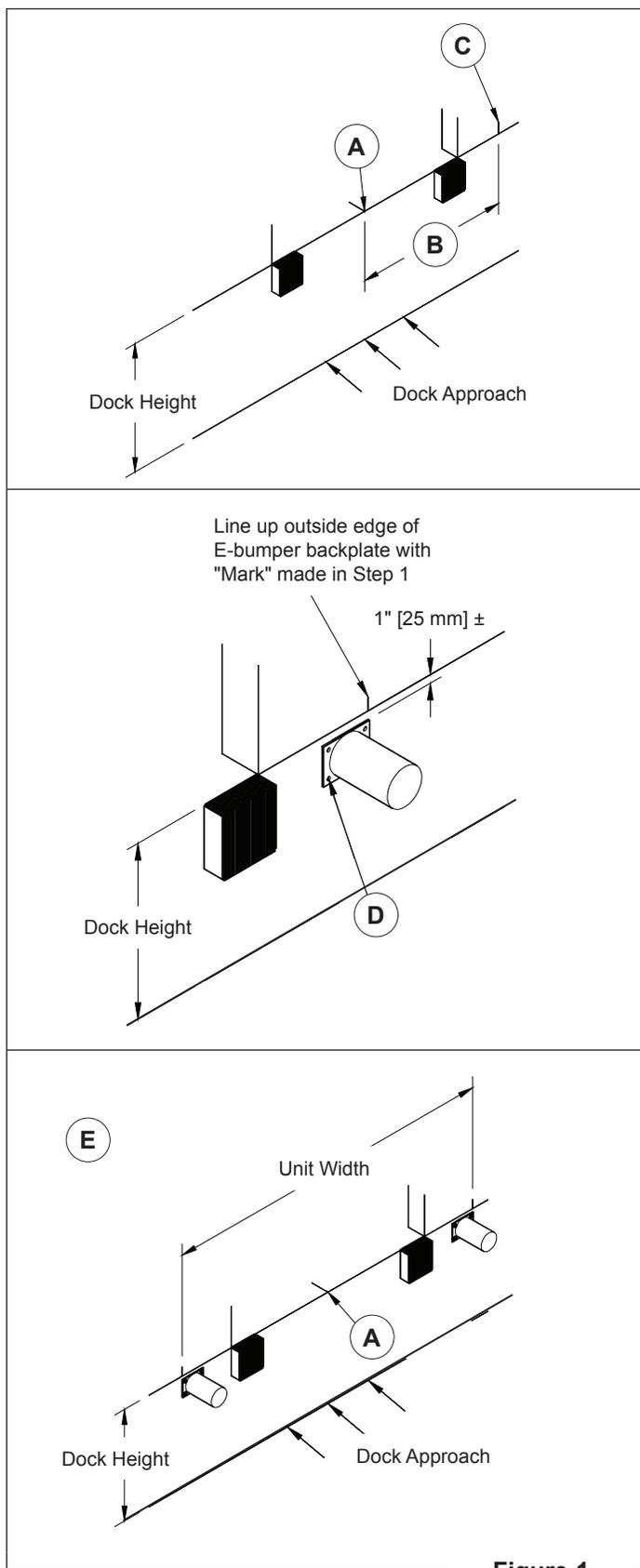


Figure 1

1 • General

! WARNING

To prevent unauthorized use, barricade the work area at dock and ground level while service work is being performed.

- Measure the *dock door opening* and divide in half to mark the centerline of opening at dock level (A).
- Divide the *overall width of the Unit* in half. Use that measurement (B) to measure out and mark both left and right (C) of the centerline.

2 • Steel Bumpers (OPTIONAL)

NOTE: If bumpers are not used, skip to *next page*.

Mark the location of 4 mounting holes from bumper backplate on wall. Drill holes and fasten bumper to foundation to concrete foundation using 1/2" x 4" [12 mm x 100 mm] lag with expansion collar or equivalent fastener (D).

Repeat mounting procedure for bumper on opposite side of door opening (E).

INSTALLATION

3 • Mount Side Members to Wall

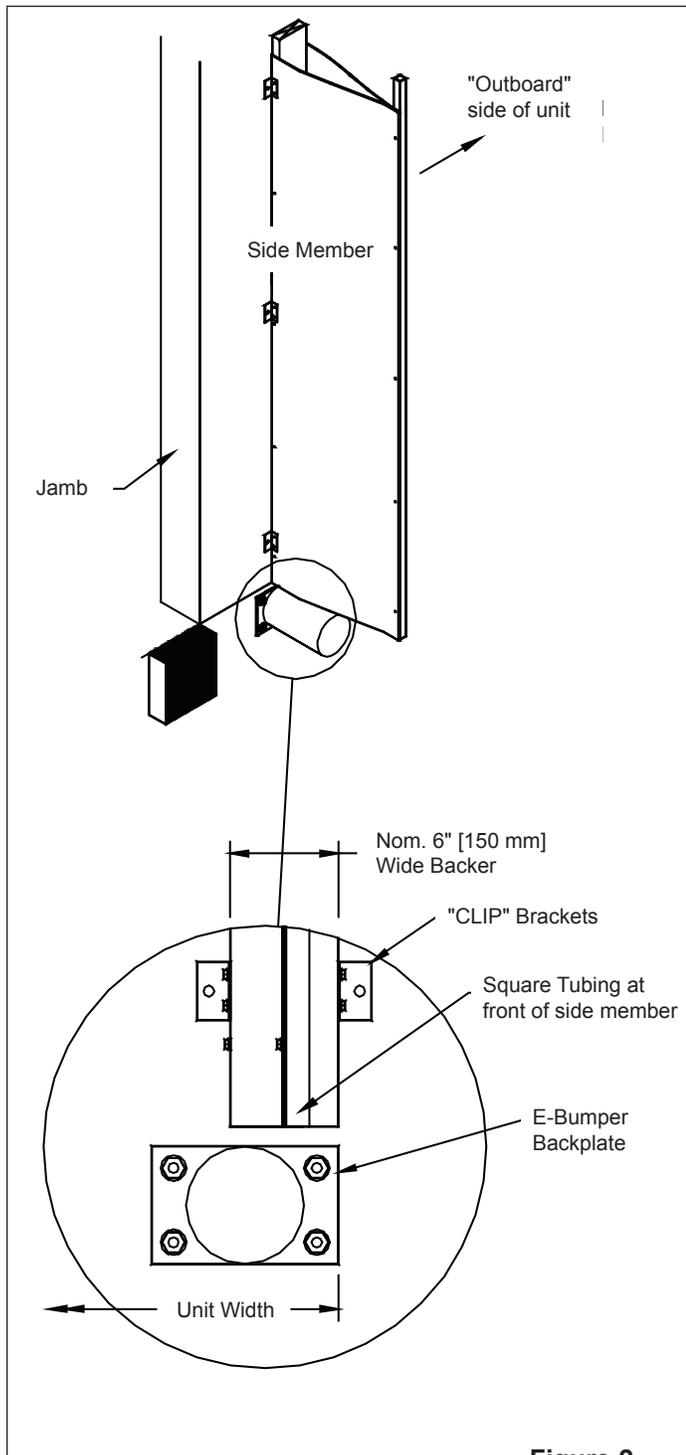


Figure 2

Reference the *Product Application Form (PAF)* or consult the sales representative for the appropriate mounting height. Typically, the bottom of the side pad/side frame is mounted at dock height, but some applications may require mounting them at a different location.

Example: When dock bumpers are mounted above dock height or above the pit floor on vertical leveler applications, it may be required to mount the bottom of the side pads/side frames at a height even with the top of the bumpers.

Position side member so the outboard edge of the side member sits flush with the outside edge of the "mark" made on wall (C).

The frame must be plumb top to bottom and at the correct overall unit width and height. Outer fabric panel and square tube are to be located to "outboard" side of unit.

Fasten each side frame to the building wall with a minimum of (6) "clip" brackets. (See Fastening Methods Section of Installation Instructions).

INSTALLATION

4 • Mount Side Curtains to Side Members

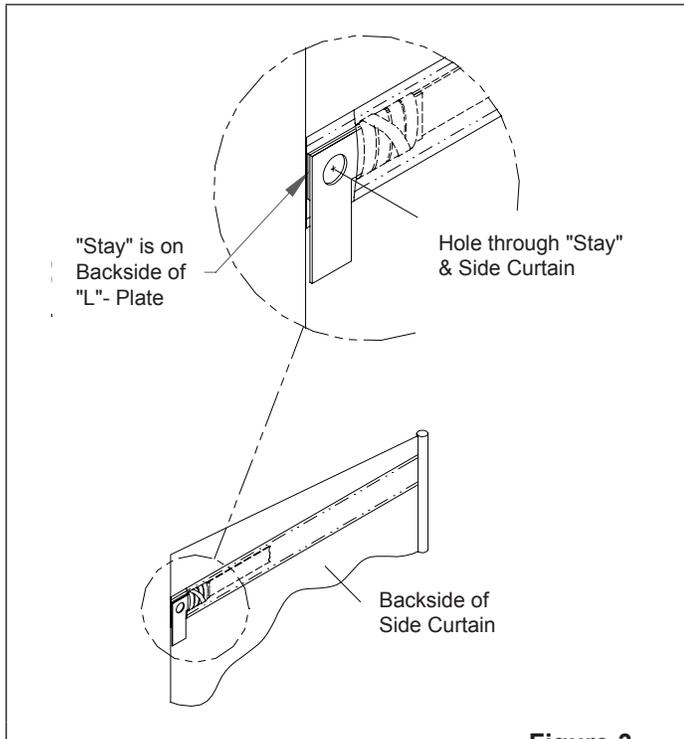


Figure 3

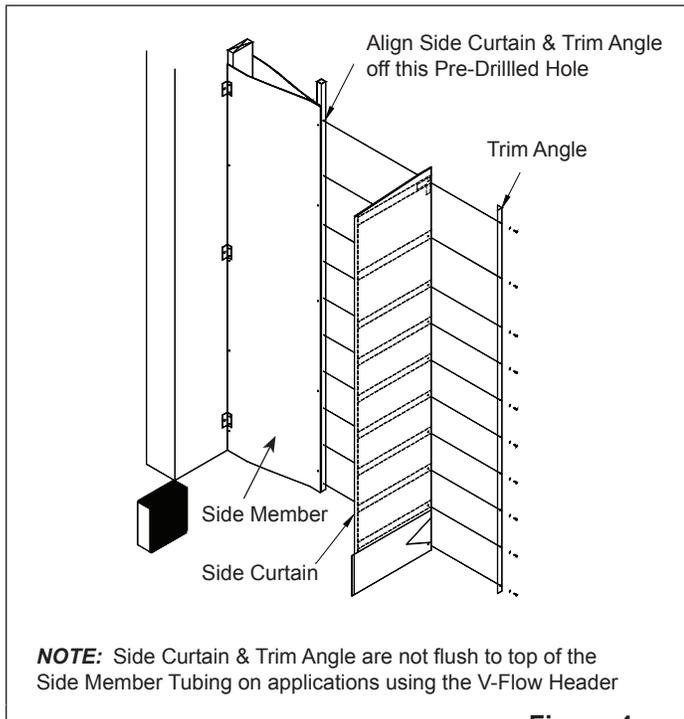


Figure 4

Side member tubing, side curtain and trim angle are all to be located flush to the bottom of the side member.

Trim is pre-punched and will align with the pockets and "stays" sewn into the side curtain (except bottom hole which has no "stay").

Side curtains for Survivor units are shipped with a special "L" plate attached to the uppermost "stay" in each side curtain. This "L" plate must remain with the side curtain at installation and will provide a "backer" for a second self-drill/tap screw that is needed to prevent the top of the side curtain from sagging (Figure 3).

Using one of the #14 x 1 1/4" self-drill/tap screws and s/s flat washers provided, align the top hole in the trim angle with the top hole in the side curtain and the pre-drilled hole near the top of the side member (screw should pass through oversize hole in "L" plate). Loosely fasten this screw so that the entire side curtain and trim hangs from this screw. Loosely fasten through the remaining pre-punched holes in the trim using the same screws and washers provided. Be careful to align each of the "stays" so that they are centered on the trim angle hole when running screws through.

Go back and tighten all screws, being careful not to strip screws out (Figure 4).

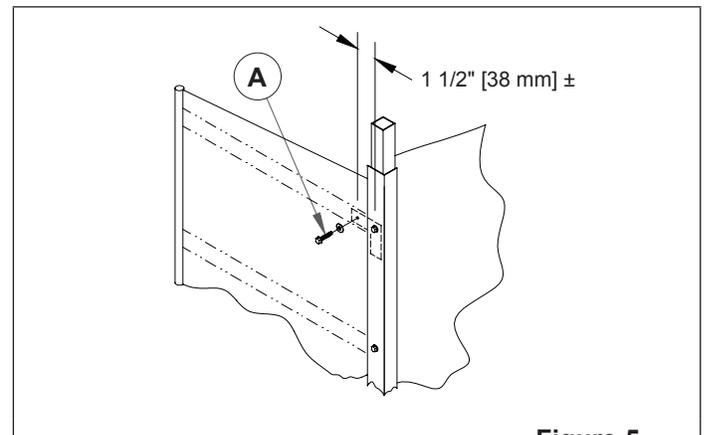


Figure 5

Critical: Now that all screws are fastened securely, add a second screw and washer (A) through the front of the side curtain, the top "stay" and into the "L" plate. Repeat for other side (Figure 5).

INSTALLATION

5 • Mount Header to Wall and Side Members

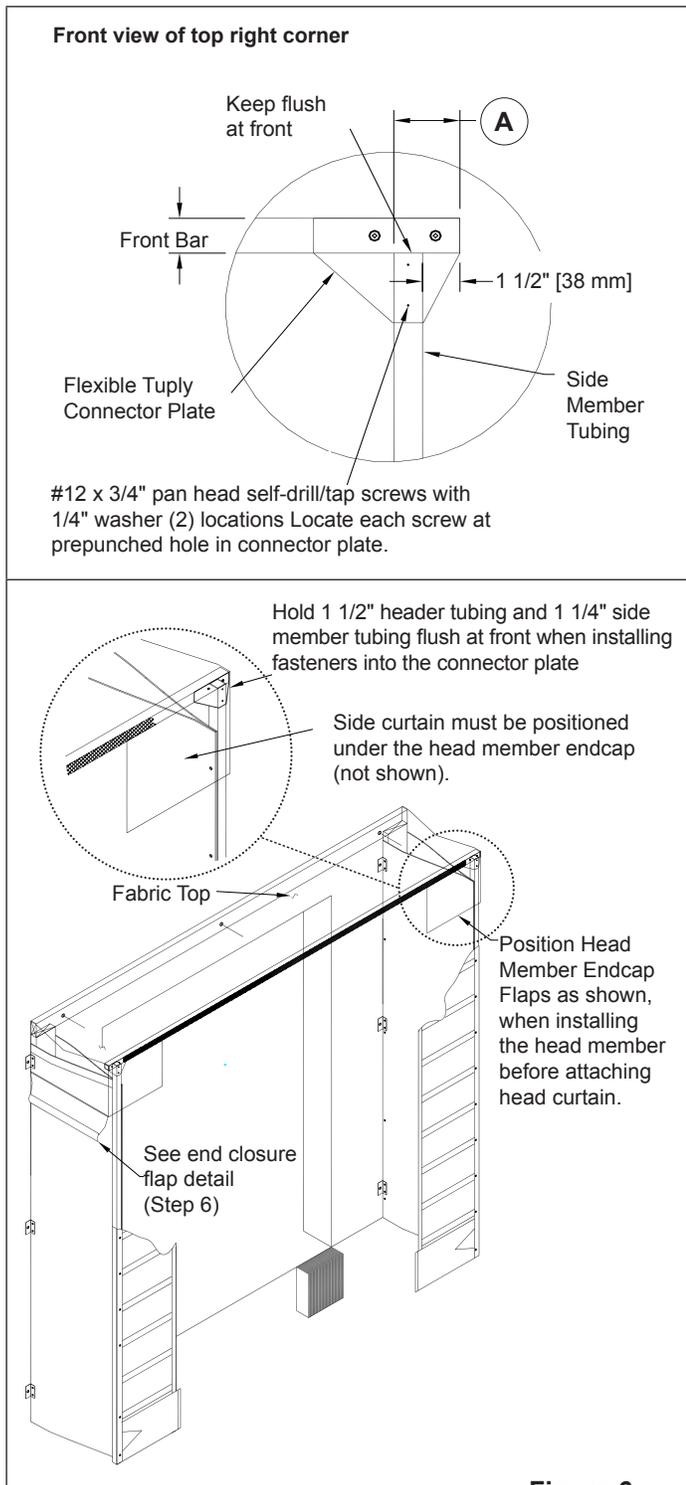


Figure 6

Set the head member backer on top of the side members so that the head member is centered over the side members and flush on outside edges.

Secure the "backer" to building wall in a minimum of (3) places as shown. See "Mounting Methods" on page 3.

Attach top of side member tubing to the head member front bar tubing, in location shown, using the flexible connector plate preinstalled on the front bar tubing using the #12 x 3/4 pan head tekscrews and 1/4" washers provided.

Side member tubing must be located at 2 3/4" [70 mm] from end of header front bar tubing (A). Header and side member tubing to be flush to each other at the front side (Figure 6).

INSTALLATION

6 • Secure Velcro on End Closure Flap

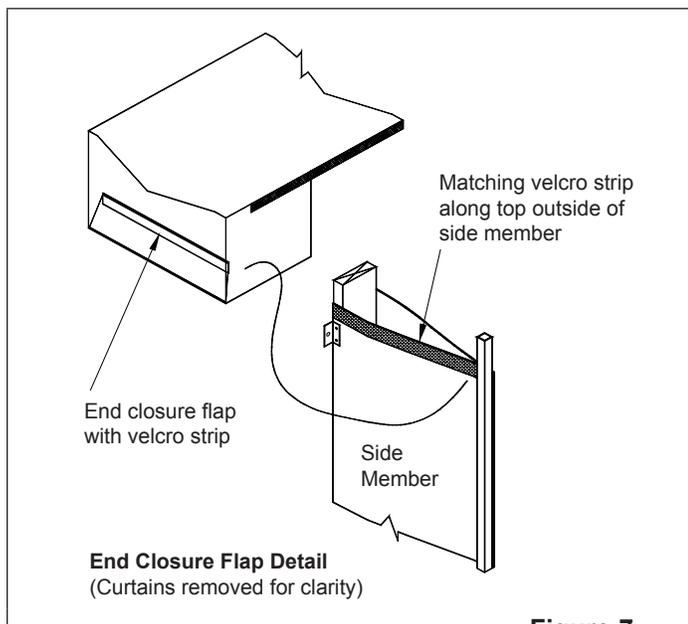


Figure 7

Once head member is in place, end closure flap "velcro" must be joined together as shown to seal out air infiltration at each end of unit (Figure 7).

7 • Install Head Curtain and Trim

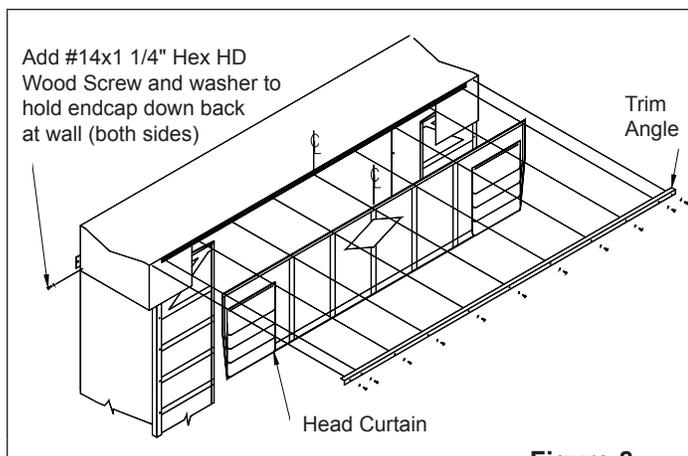


Figure 8

Center head curtain on unit width and temporarily hold in place with velcro strip sewn along top edge of head curtain (backside). Top edge of curtain should be flush with top edge of front bar tubing.

Locate trim angle so that it is centered on unit width. Pre-punched holes on trim must line-up with curtain "stays".

Fasten through all trim angle holes with #14 x 1 1/4" self-drill/tap screws and s/s flat washers provided, so that head curtain is securely fastened to front bar. (Figure 8).

8 • Wind Straps

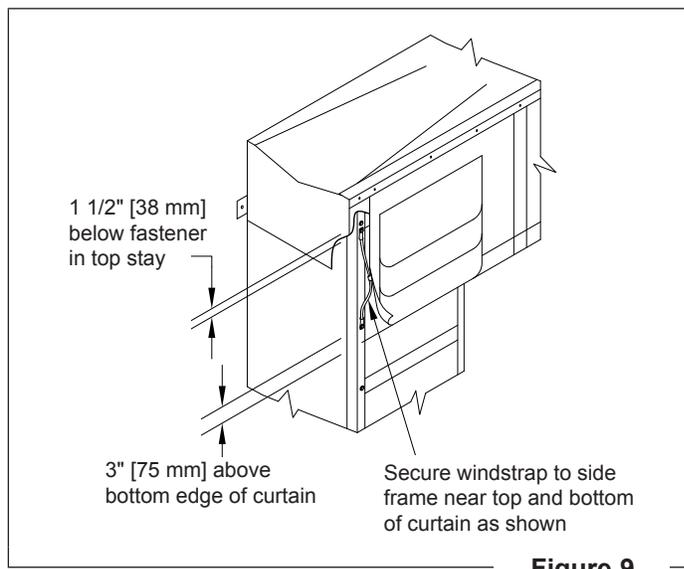


Figure 9

The rubber windstraps are installed through fabric loops on the head curtain at the factory.

Fasten through the top of the windstrap approximately 1 1/2" [38 mm] directly below the top fastener in the side curtain trim. The bottom of the windstrap should be fastened in the same fashion at a point 3" up from the bottom edge of the head curtain. Both ends of the windstraps are to be fastened with the supplied #14 x 1 1/4" tek screw and flat washer (Figure 9).

INSTALLATION

9 • Fiberglass Stay (Under Center of Canopy Fabric)

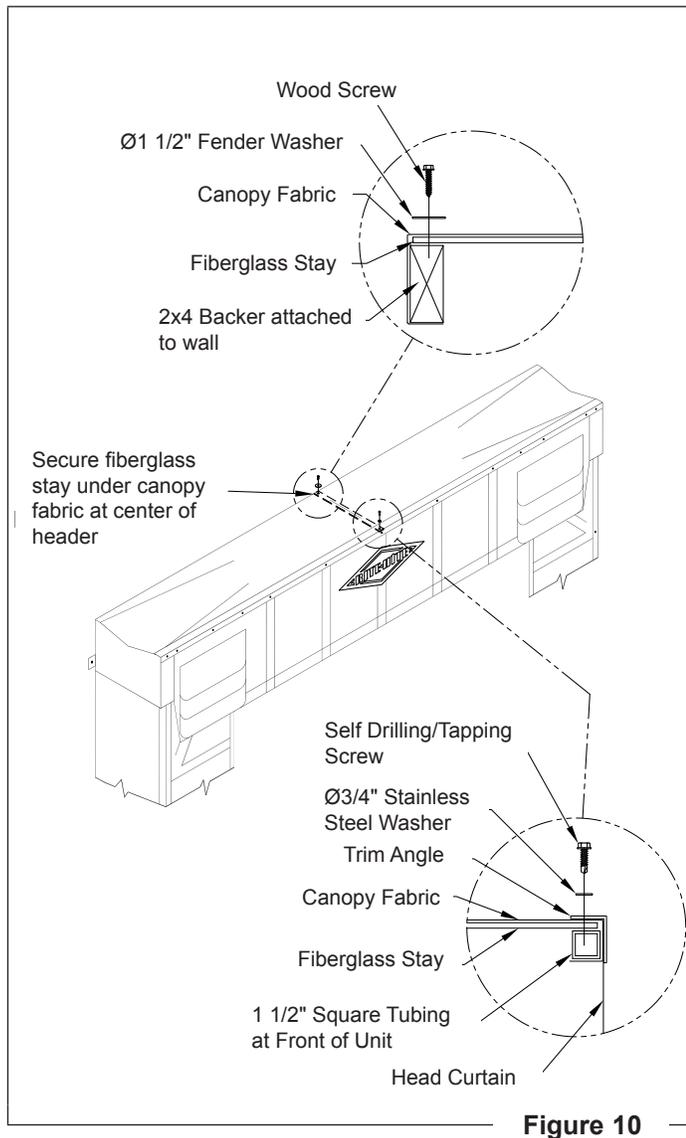


Figure 10

A fiberglass stay must be inserted under the fabric at the center of the V-flow header to hold the fabric at the desired elevation.

From under the header, insert the fiberglass stay so one end is resting on top of the 2x4 backer at the rear of the header and the other end is resting on top of the steel tubing at the front of the header, the stay should be centered on the width of the unit and must be located under the fabric.

Secure the stay in place at the front and back edges of the header by screwing from the top side of the header, down through the trim angle, through the canopy fabric, through prepunched hole in the stay, and into the 2x4 at the rear of the unit or the square tubing at the front of the unit (Figure 10).

10 • Attach Draft Pads to Side Members

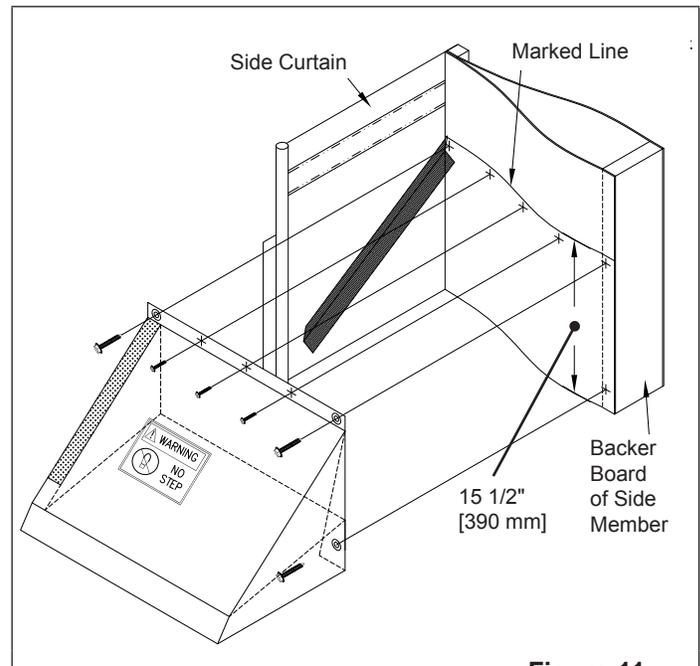


Figure 11

Mark a line on inside surface of side member at 15 1/2" [390 mm] up from bottom of side member.

Align draft pad to side member so that top edge of draft pad lines up flush with marked line.

Attach at backer first by fastening through grommet with #14 x 1-1/4" hex hd wood screw. Align draft pad once again with marked line and add a #14 x 1-1/4" self-drill/tap screw at front edge of draft pad through grommet and into the side member front tube. Now add another wood screw through grommet on underside of pad (fabric flap).

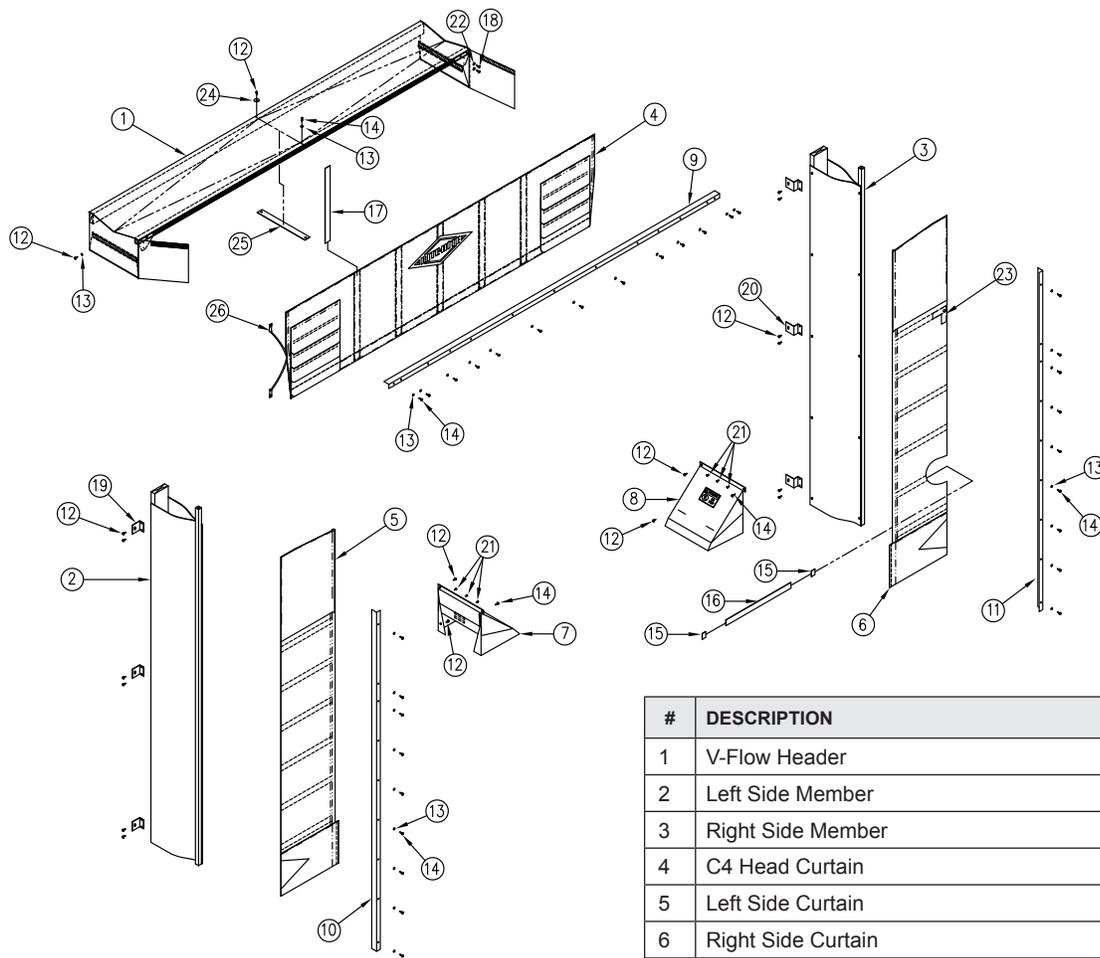
Add (3) of the self-piercing #12 x 3/4" hex hd screws down the center of the 1-1/2" [38 mm] fabric strip that is located along the top edge of the draft pad (as shown). Attach draft pad Velcro to side curtain (Figure 11).

11 • Caulk Unit

Caulk along the top edge of the head frame where it meets the wall and down the sides of the side frames as needed. Use a good grade of flexible caulk and follow manufacturers recommendations when applying.

PARTS

Exploded View*



#	DESCRIPTION
1	V-Flow Header
2	Left Side Member
3	Right Side Member
4	C4 Head Curtain
5	Left Side Curtain
6	Right Side Curtain
7	Left Draft Pad
8	Right Draft Pad
9	Head Member Trim Angle
10	Left Side Curtain Trim Angle
11	Right Side Curtain Trim Angle
12	Screw, Hwhsms #14 X 1 1/4" Zinc
13	Washer, 5/16" Stainless, Flat
14	Screw, Hwh Self Drill/Tap #14 X 1 1/4",Zinc
15	Cap, Vinyl
16	Stay, Side Curtain
17	Stay, C4 Head Curtain
18	Screw, Pph Tek # 12X1", Zinc
19	Bracket, L "Clips"
20	Brackets, Z-Style
21	Screw, Hwh, #12 X 3/4", Zinc, Self-Piercing
22	Washer, 1/4" X 3/4" Zinc, Flat
23	L-Plate (Attached To Stay)
24	Washer, 1 1/2" Fender
25	Stay, V-Flow Head Member
26	Windstrap

*This is a view of a standard configuration of the 450S Survivor. Depending on options chosen and application of the shelter, your unit may have configurations not shown in this exploded view.

RITE-HITE Company, LLC and its affiliates (collectively "RITE-HITE") warrant that the Product sold to the Owner will be free of defects in design, materials and workmanship (ordinary wear and tear excepted) for the periods set forth below ("Limited Warranty").

One (1) Year on all mechanical and electrical parts.
One (1) Year labor, based on approved travel and labor repair times.

REMEDIES

PARTS- RITE-HITE's obligations under this Limited Warranty are limited to repairing or replacing, at RITE-HITE's option, any part which is determined by RITE-HITE to be defective during the applicable warranty period. Such repair or replacement shall be RITE-HITE's sole obligation and the Owner's exclusive remedy under this Limited Warranty.

LABOR- RITE-HITE will provide warranty service without charge for labor per the specified warranty period. Thereafter, a charge will apply to any repair or replacement under this Limited Warranty.

CLAIMS Claims under this Limited Warranty must be made (i) within 30 (thirty) days after discovery and (ii) prior to expiration of the applicable warranty period. Claims shall be made in writing or by contacting the representative from whom the Product was purchased directly. Owner must allow RITE-HITE or its agent, a reasonable opportunity to inspect any Product claimed to be defective and shall, at RITE-HITE's option, either (x) grant RITE-HITE or its agent access to Owner's premises for the purpose of repairing or replacing the Product or (y) return of the Product to the RITE-HITE, f.o.b. RITE-HITE's factory.

NOT WARRANTED RITE-HITE does not warrant against and is not responsible for wear items such as fuses, batteries, bulbs, vision and seals. No implied warranty shall be deemed to cover damages that result directly or indirectly from: (i) the unauthorized modification or repair of the Product, (ii) damage due to misuse, neglect, accident, failure to provide necessary maintenance, or normal wear and tear of the Product, (iii) failure to follow RITE-HITE's instructions for installation, failure to operate the Product within the Product's rated capacities and/or specified design parameters, or failure to properly maintain the Product, (iv) use of the Product in a manner that is inconsistent with RITE-HITE's guidelines or local building codes, (v) movement, settling, distortion, or collapse of the ground, or of improvements to which the Products are affixed, (vi) fire, flood, earthquake, elements of nature or acts of God, riots, civil disorder, war, or any other cause beyond the reasonable control of RITE-HITE, (vii) improper handling, storage, abuse, or neglect of the Product by Owner or by any third party.

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