KIT BUILDING SYSTEMS

# MODEL:455016

# W14xL15.24xH4.95M

# INSTALLATION INSTRUCTIONS

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# Installation Instructions

Congratulations on your purchase of our instant shelter. This unit is a combination of excellent manufacturing and design. It is comprised of a rigid frame and a durable cover. For easy assembly, we have marked all the parts with codes, with proper installation, use and maintenance, your unit will provide many years of good and suitable service.

# Tools Required

The following hand tool will be needed for proper installation of your new building:

- 12mm, 14mm, and 17mm open end wrenches
- 12mm, 14mm, 17mm sockets or box wrenches
- Large flat head screwdriver
- 2lb maul or sledgehammer
- 4ft level
- 14ft step ladder
- Stake and string for aligning base plates and frame

# Assembly Procedure

1. Prepare location and place all unit boxes near location sight. Perform an inventory check before beginning, to be certain all components are available for installation.
2. Secure base plate flanges to base surface.
3. Assemble every group of the arch.
4. Begin frame assembly with front end arch, first interior arch, purlins, etc.
5. Add to assemble other groups of arches.
6. Install main cover over frame.
7. Install end cover over end panels.

Read all the detailed instructions and notices in the following assembly instructions!

# Maintenance and Care

Annually or more often, the unit should be completely inspected internally and externally to make certain the unit remains properly installed and secured. Particular attention should be paid to:

- Hardware - check all carriage bolts and hardware connectors to be certain they are in place and tightened.
- Weather trends - The unit will strain against the base plate flange under windy conditions, pegs hardware, connection to frame members should be maintained tight and depth of pegs should be checked to be certain they remain deeply and firmly set.
- Snow Accumulation - All snow accumulation on the main cover should be removed as soon as possible. Tap the main cover from the inside with a broom or soft brush to clear cover.
- Main Cover Lacing - The poly rope that secures the main cover to the bottom rail of the frame assembly should be checked, and adjusted as needed. The tension on the main cover should be uniform from end and side to side. Rope ends must be tied off onto the frame members at the ends on each side.
- Cleaning - Cover and doors can be cleaned with a mixture of light detergent and water. A soft bristle brush with the mixture can be used to loosen any hard dirt, mould, or build up on the cover. After cleansing, the cover should be rinsed thoroughly to avoid any chemical reaction from residual detergent. Allowing dirt and debris to sit on cover over an extended time will damage cover irreparably.
- Severe Weather - in preparation for inclement weather, completely secure the door of your buildings portable building.

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Parts List

| Part | Description | Quantity | Located in Box |
|---|---|---|---|
| 1 | Top roof truss | 8 | 1 |
| 1A | Top roof truss for front panel | 1 | 1 |
| 2 | Uppper roof truss | 14 | 1 |
| 2A | Upper roof truss for front panel | 2 | 1 |
| 2B | Upper roof truss for back panel | 2 | 1 |
| 3 | Lower roof truss | 14 | 2 |
| 3A | Lower roof truss for front panel | 2 | 2 |
| 3B | Lower roof truss for back panel | 2 | 2 |
| 4 | Shoulder truss | 16 | 2 |
| 4A | Shoulder truss for back panel | 2 | 2 |
| 5 | Sidewall truss | 18 | 2 |
| 6L | Base plate for left corner | 2 | 2 |
| 6R | Base plate for right corner | 2 | 2 |
| 7L | Base plate for left side | 7 | 2 |
| 7R | Base plate for right side | 7 | 2 |
| | Ratchet | 18 | 2 |
| 8 | Base plate for back panel | 4 | 2 |
| 8A | Base plate for front panel | 2 | 2 |
| | Lock for middle of door | 1 | 2 |
| | Lock for sides of door | 2 | 2 |
| 9 | Horizontal tube | 56 | 1 |
| 10 | Lower vertical tube for back panel | 4 | 1 |
| 11 | Upper vertical tube for middle of back panel | 2 | 1 |
| 12 | Upper vertical tube for sides of back panel | 2 | 1 |
| 13 | Rail for middle of back panel | 3 | 1 |
| 14 | Rail for sides of back panel | 2 | 1 |
| 15 | Vertical tube for front panel | 2 | 1 |
| 18 | Middle door rail | 2 | 1 |
| 18A | Side door rail | 2 | 1 |
| 18B | Door rail for ends | 2 | 1 |
| | Hexagon bolt for door rail | 2 | 1 |
| 19 | Door tube | 4 | 3 |
| 20 | Middle hanging tube for front panel | 1 | 1 |
| 20A | Side hanging tube for front panel | 2 | 1 |
| 21 | Suspender tube for middle | 1 | 1 |
| 21A | Suspender tube for sides | 2 | 1 |
| 22 | Slanting support tube | 8 | 1 |
| 22A | Clip for @22 | 22 | 1 |
| 23 | Tensioning tube for roof cover | 10+2 | 1 |
| 24 | Tensioning tube for back panel | 4+1 | 1 |
| 25 | Stake peg for sidewall | 54 | 1 |
| 25A | Stake peg for front and back panel | 12 | 1 |
| 25B | Stake peg for locl | 6 | 1 |
| 25C | Stake peg with ring | 4 | 1 |
| 26 | Wind brace for door | 1sets | 1 |
| | Turn buckle kit | 2+4 | 1 |
| 27 | Steelwire for back panel | 4 | 1 |
| 27A | Steelwire for back panel | 2 | 1 |
| 27B | Steelwire for sidewall | 12 | 1 |
| 27C | Steelwire for roof | 12 | 1 |
| | Turn buckle kit | 18+36 | 1 |
| | Turn buckle kit | 12+24 | 1 |
| 28 | Single pulley for front panel | 20 | 1 |

| | | | |
|---|---|---|---|
| 28A | Double pulley for front panel | 4sets | 1 |
| 28B | C hook for door cover | 20 | 1 |
| 29 | Hexagon bolt M10*75 | 394 | 1 |
| 30 | Carriage bolt M10*85 | 76 | 1 |
| 31 | Hexagon bolt M10*90 | 34 | 1 |
| 32 | Hexagon bolt M10*30 | 40 | 1 |
| 33 | Hexagon bolt M8*20 | 8 | 1 |
| 34 | Plastic cap | 6 | 1 |
| 35 | Roof cover | 1 | 3 |
| 36 | Cover for front panel | 1 | 3 |
| 36A | Cover for back panel | 1 | 3 |
| 37 | Cover for door | 2 | 3 |
| 38 | Rope for cover installation | 15 | 3 |
| 39 | Band for ratchet | 18 | 3 |
| 40 | Anti-wear sheet | 18 | 3 |
| 40A | Anti-wear sheet | 56 | 3 |
| 41 | Band for door cover | 2 | 3 |
| 42 | PVC tube for roof cover | 14+2 | 3 |
| 43 | Band for PVC tube | 40 | 3 |
| 44 | Ratchet for PVC tube | 40 | 1 |

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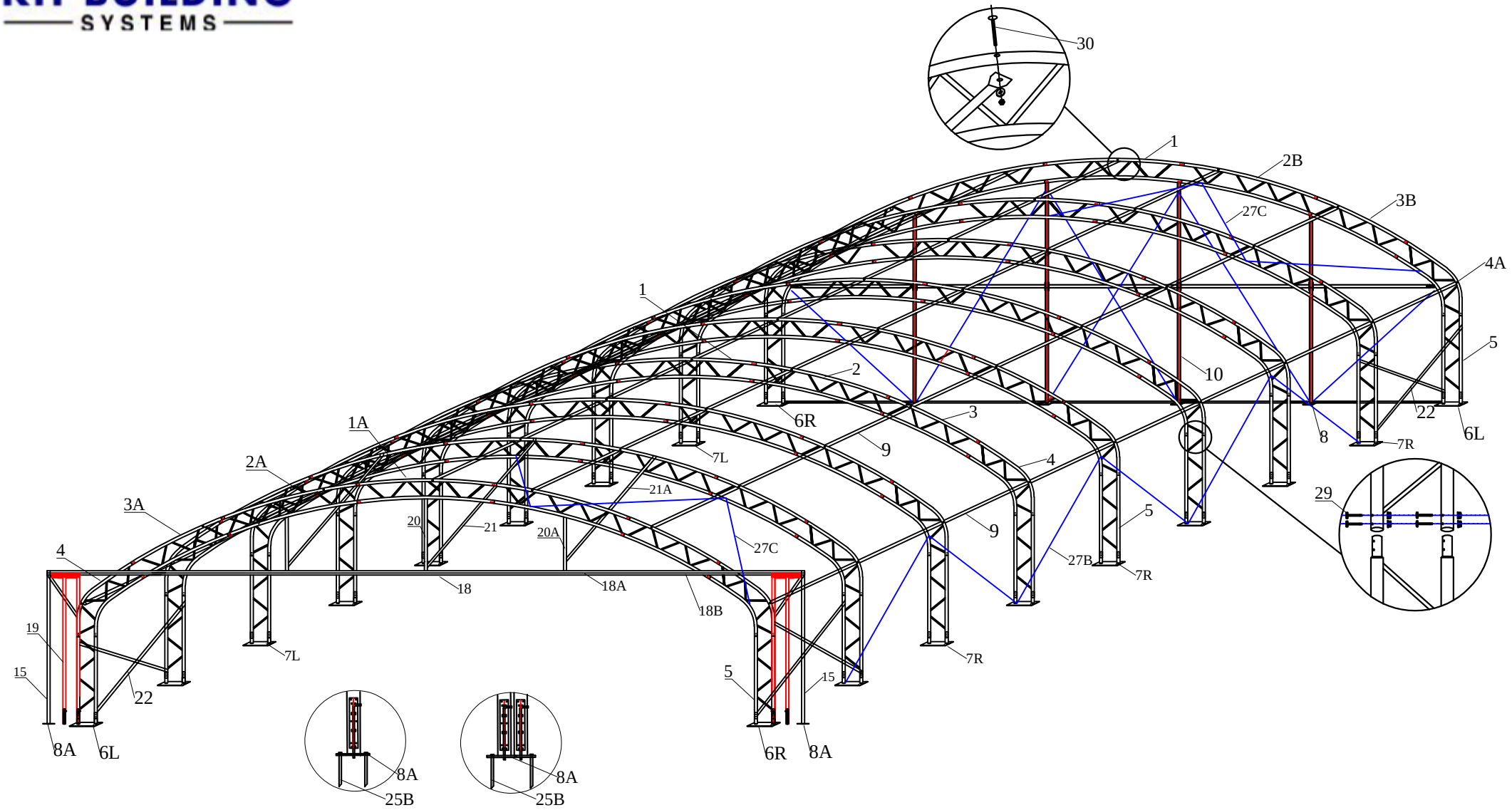



Figure 1 The sketch for the 455016 W14.0xL15.24xH4.95m

# Step #1 --SECURING BASE FLANGES

Sit the building boxes in the chosen location. Remove all the components from packaging to ensure all components are present by checking with the Part List.

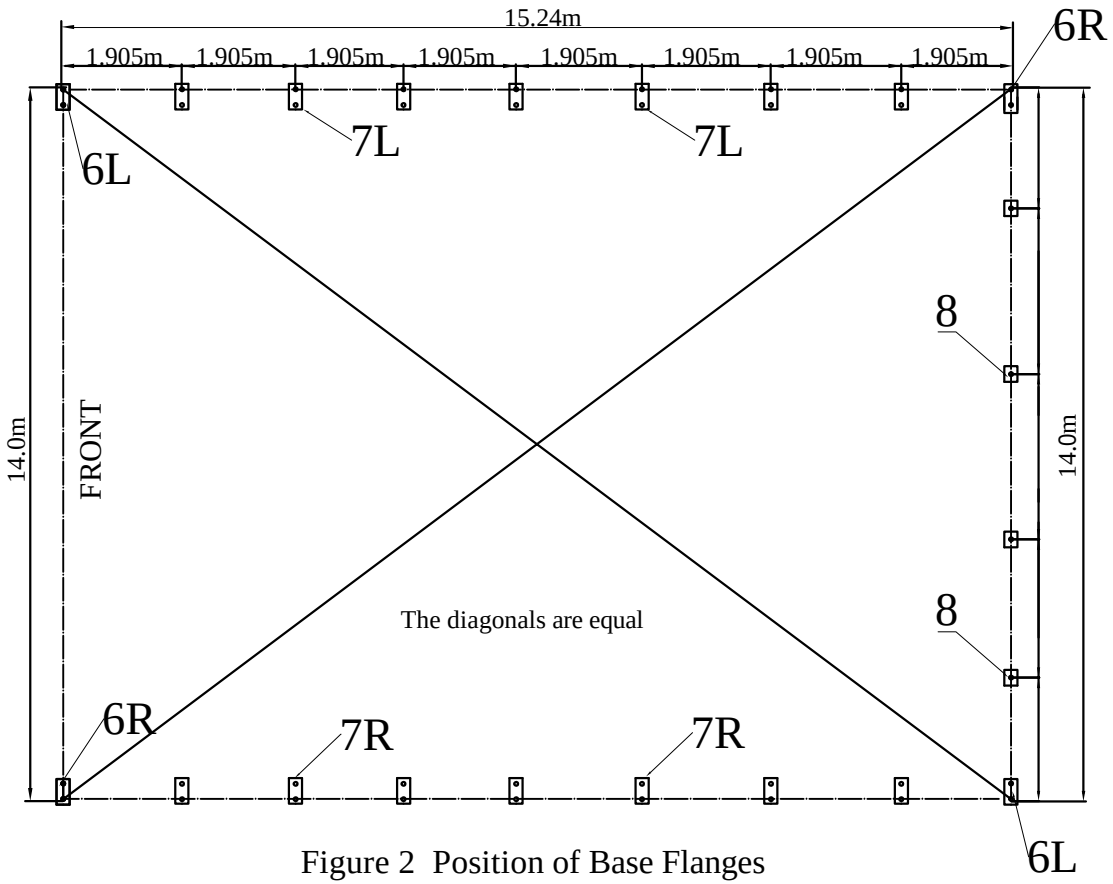



Figure 2 Position of Base Flanges

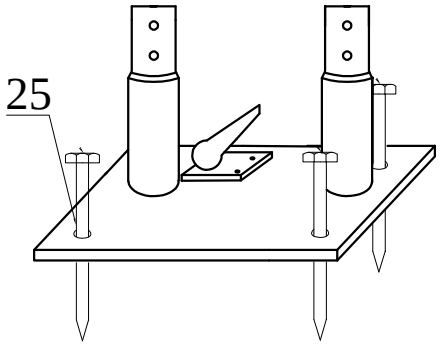



Figure 3
As Figure 4 shows, each base flange is equipped with three stake pegs.

Begin by determining exact location of the four (4) corners of the building. Mark front edge and side-to-side width of assembly on ground. Draw alignment strings along both ends and sides of the building to the dimensions shown in Figure 2. The outline of the strings will represent the final location of the base flanges.The diagonals are equal. The initial location of each Corner Base Flanges (6R & 6L) is critical to the alignment and fit of the frame components and cover.

Locate the Left Corner Base Flange (6L) and Right Corner Base Flange (6R). Secure the base flanges with Stake peg(Part #26/26A/26B). Measurements shown in Figure 3 are to the center of the upright sockets on each Base Flange.

The Shelter must be secured to a firm surface that can receive and retain the earth auger and stake pegs firmly in position. The shelter should be installed on FIRM GROUND, not on SWAMP, SOFT/WET GROUND. The Base Flanges must be secured so they cannot be moved. Arches are tensioned at their base as they insert into the Base Plate sockets.

## Step #2 --ARCH ASSEMBLY

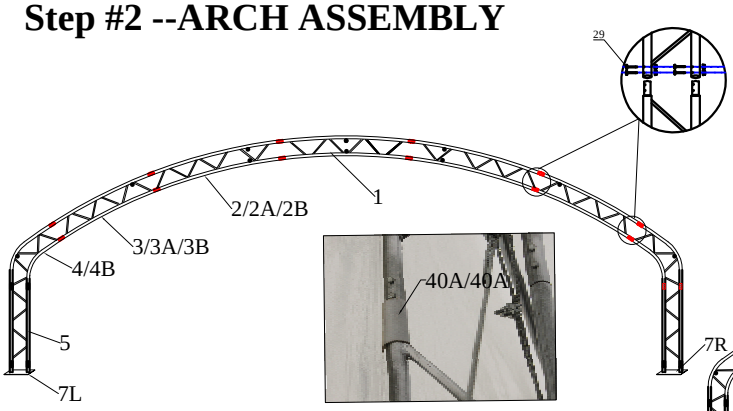



Figure 4 The arch installation

Assemble each arch on ground. Each arches consist of:
One Top roof tube (Part # 1/1A)
Two Upper roof curving tube (Part # 2/2A/2B)
Two Lower roof curving tube (Part # 3/3A/3B)
Two Roof curving tube at shoulder height (Part # 4/4A)
Two Sidewall tube (Part # 5)
Connect the arches by Using the hexagon bolts with washers and nuts through predrilled holes in frame members. Do not tighten down the nuts completely until frame is fully assembled and set in place.

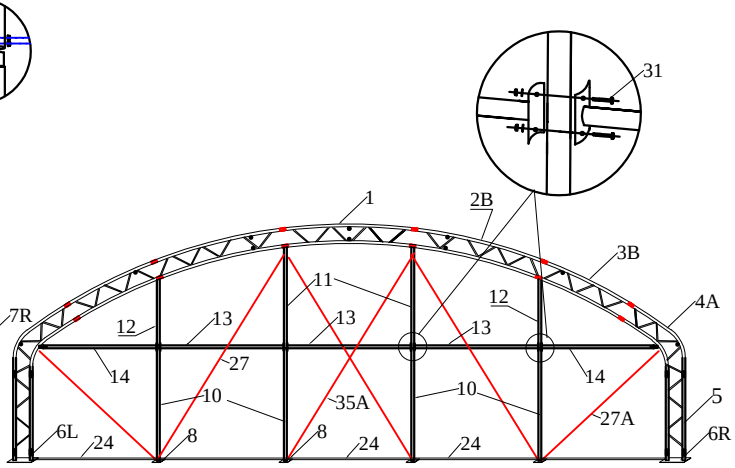
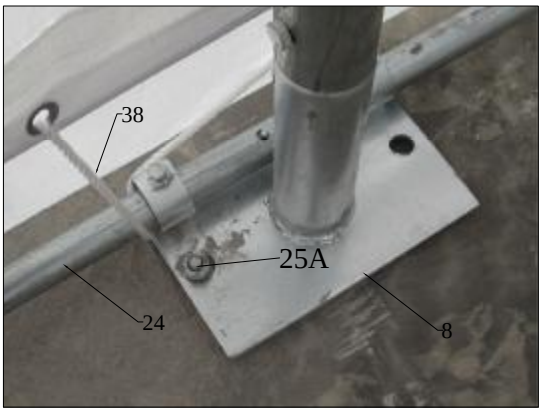



Figure 6 Frame Installation for Back Panel




## THE FRONT PANEL FRAME ASSEMBLY

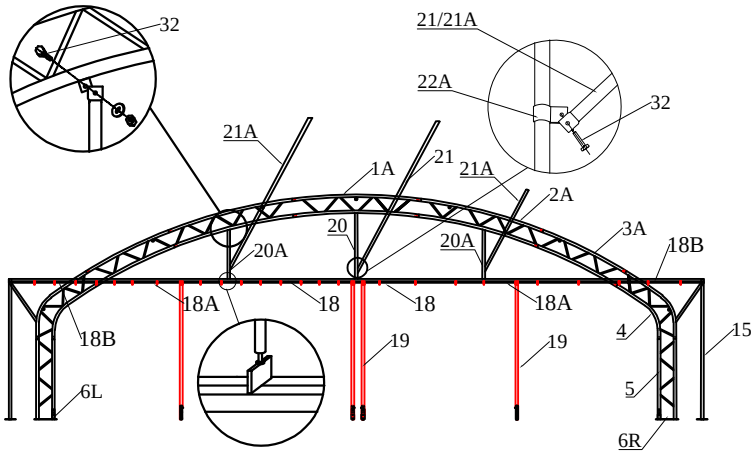



Figure 5 Frame installation for Front Panel

Assemble the front panel frame. According to Figure 5&6, connect the end wall frame by Using the hexagon bolts with washers and nuts through predrilled holes in frame members. Do not tighten down the nuts completely until frame is fully assembled and set in place.

NOTE: Please notice that the part code of the arch sections. The sections of different arches are not the same. Check with the Part List and the Sketch Figure #1.

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# Step #3 --ERECTING ARCHES

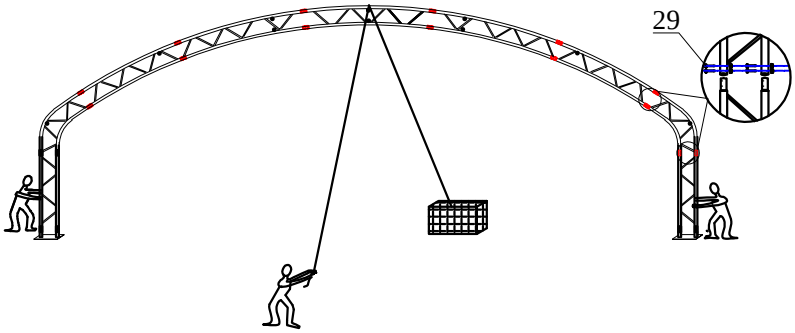



Figure 7 Attaching Arches to Base Flanges

Begin frame assembly by erecting Front Arch into Front Corner Base Flanges. Place left frame sidewall tubing into the upright tube socket into the Left Base Flange (Part #6L). Place Hexagonal Bolt through base flange socket and arch sidewall tube hole.

In order to insert Right Sidewall Tube into Right Front Corner flange (Part #6R), it is necessary to support arch on left side to prevent movement. Position the Right Sidewall Tube over the Right Corner Base Flange.

Once the Right Sidewall Tube is placed into right corner base flange, insert a hexagonal bolt and nut to prevent it from popping out of the socket while assembly continues.

Next stand first interior arch up to repeat insertion into Base flanges.

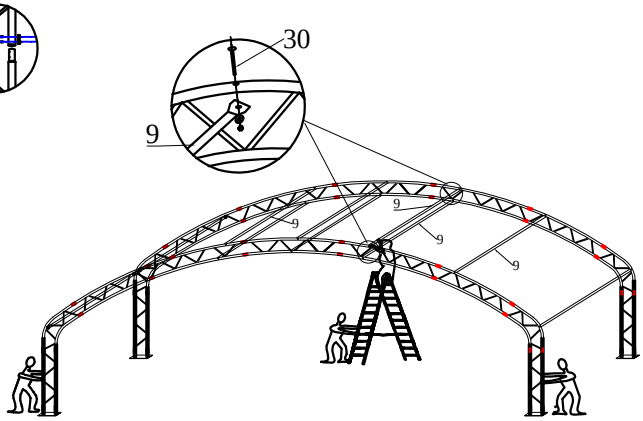



Figure 8

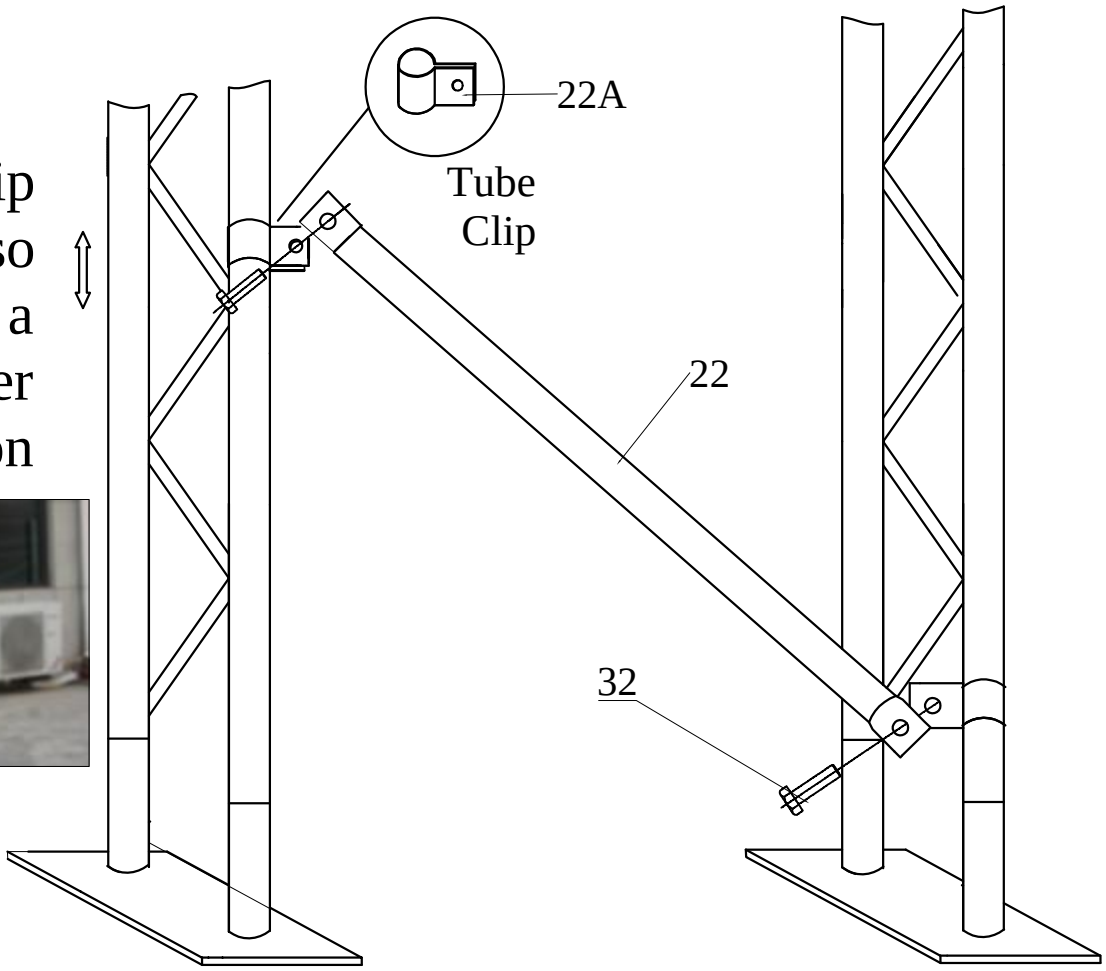
Immediately after putting first interior arch into place, connect Front Arch and Interior arch using Roof Purlin Tubes at top ridge and side shoulder cures of arches. Secure the Roof Purlin tubes into place using carriage bolts and nuts.

Continue to install other Arches Assemblies in the same manner. Overlap pinched ends of Roof Purlin onto same carriage bolts inside frame assembly.

Next check entire frame assembly for square and plumb. Adjust Wind Braces and Roof Purlin as necessary to being frame into plumb. Next tighten frame bolts adequately. **DO NOT** over tighten bolts so as to oval or compress frame components.

IMPORTANT NOTES:
Before Installing the fabric, the anti-friction straps must be strapped over the joints of the steel tubes to prevent the fabric from scratching against the steel which can otherwise cause damage to the fabric over time.

The tube clip is movable, so as to find a proper position




Wind Brace Supports(part 22)

Figure 9

Next install the Wind Brace supports that connect the Front Arch to the first Interior Arch. The Wind Braces give the arch assemblies strength as a unit.Use Bolt M10X30 (Part #32) at the end of each Wind Brace Support to secure.

## Step #4 --WIND STABILIZERS CABLES AND TURNBUCKLES

On each side of frame, between the first and last two groups of arches, and on the front&back panel frame, cables with turnbuckle are provided to align and strengthen frame before installing cover. After installing all cables, tighten the turnbuckles slightly to adjust the arches vertically and to add rigidity.

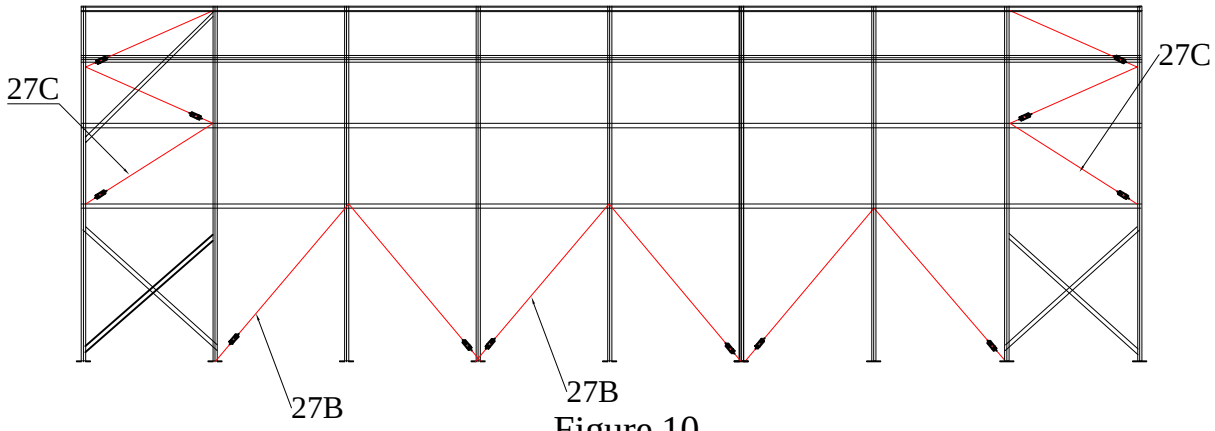



Figure 10

The position of windstabilizers(turnbuckle and cable) at the sidewall.

## Step #5 --Installation of door tube and door cover

Put the door tube(part #19) into the door track and use "the hook used to hang the door cover"(part #28B) to hang the door cover on the door track. Then fix the side of door cover to the standing tube by Ropes.

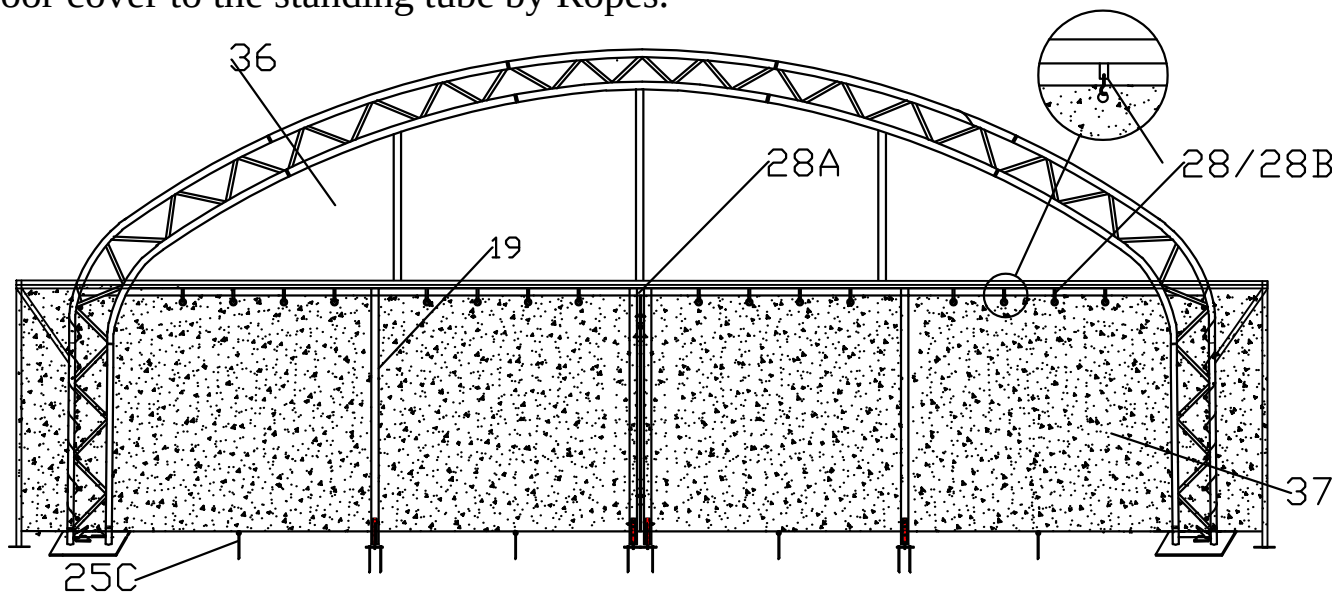



Figure 11 Installation of door tube and door cover

Notice: about part no. 26, the steel cable. When closing the door, get this steel cable through the rings in the bottom of the door tarp and tension it by buckle to the base flanges (part No 8A), then the door tarp could be tensioned. The stake pegs with ring (part no.25C) are also for this steel wire. Fix these stake pegs in reasonable places below the door, and get through the steel cable. This is to prevent unwelcomed ones getting inside the hanger from the bottom of the door tarp. Also, this will do the door tarp a favor in windy days.


27B


27B
25

## ROOF COVER INSTALLATION

### Step #6 --POSITION ROOF COVER

As figure 12 shows, when ready to install Roof Cover, unpack cover and lay parallel to building frame on one side. Cover must be pulled over top of frame assembly without being snagged or stressed on any frame members. Use multiple ropes over top of frame as shown in picture below. Having another person inside frame on a ladder to assist in getting Roof Cover over frame will insure the cover will go on without any damage.

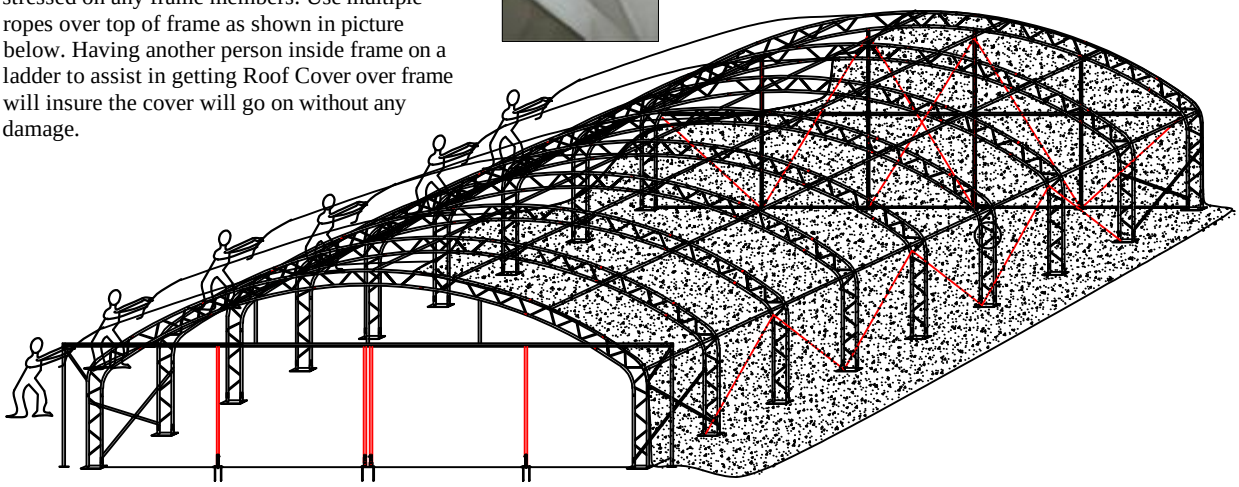
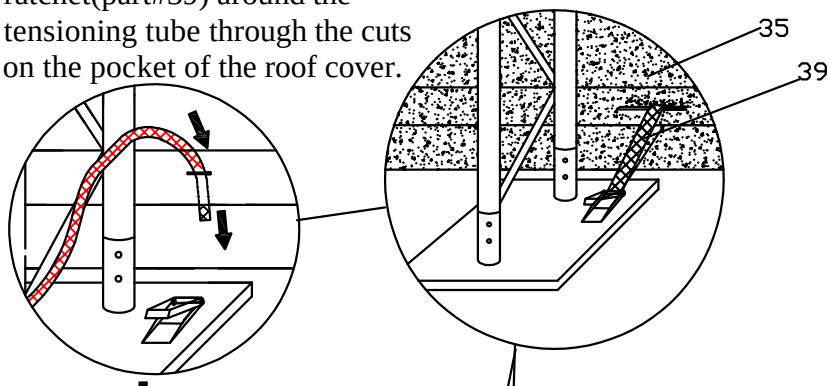


Figure 12 Pull the Roof Cover over the frame evenly

First circle the band for tie down ratchet(part#39) around the tensioning tube through the cuts on the pocket of the roof cover.





Then put the bands through the reel of the ratchet.

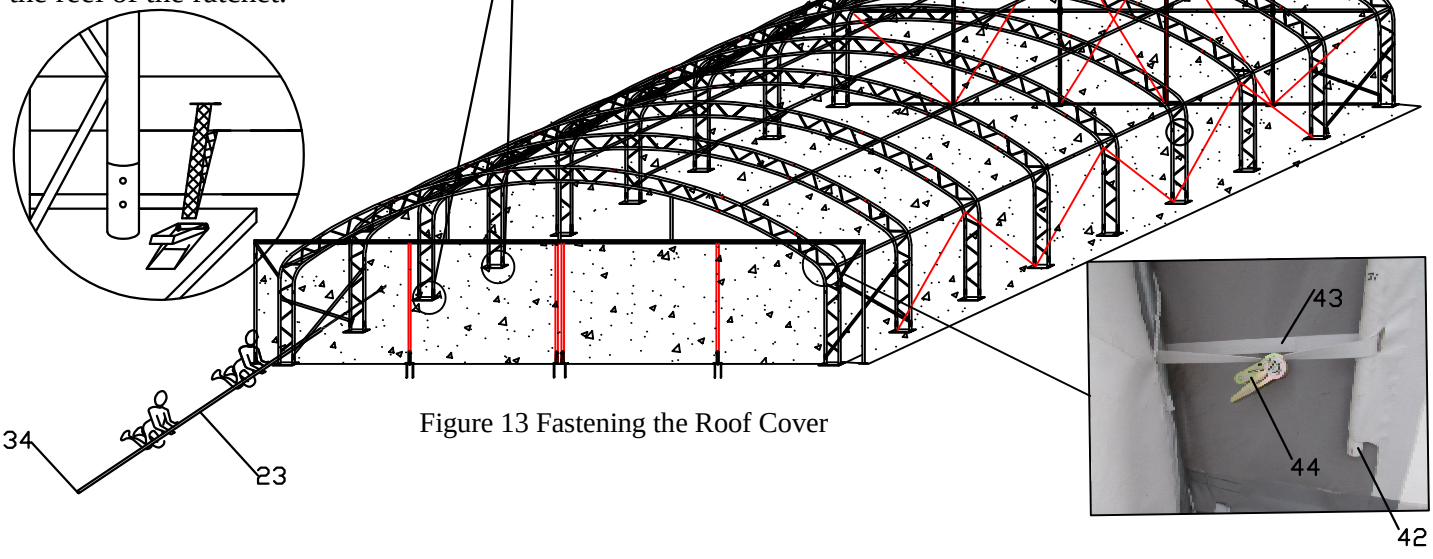



Figure 13 Fastening the Roof Cover

## Step #7 --TENSION COVER ON FRAME FROM SIDE-TO-SIDE

As Figure 13 shows, when Roof Cover is over top of Frame Assembly, insert Cover Tensioning Tubes into pockets along both sides of Roof Cover. Center Roof Cover over Frame assembly both side to side and front to back. Align one side of Roof Cover evenly front to back. Add Band for Tie Down Ratchet at each point along the cover opening, as shown. Put Band for Tie Down Ratchets over Cover Tensioning Tubes at each Base Plate along one side. Bands do not attach to Tensioning Tubes, but loop around and secure at both ends on ratchet.

Next take up slack in tie bands by ratcheting the mechanisms, tightening cover. Evenly adjust ratchets on both sides of roof cover to take wrinkles out of roof cover. **DO NOT** fully tighten cover yet. Leave adequate slack so that cover can also be adjusted front to back in next step.

## Step #8 --TIGHTEN ROOF COVER ON FRAME FRONT TO BACK

The roof cover is tensioned from front to back by the rope lacing to grommet flaps inside the main cover, inside the unit at both front and rear arches. Using the rope provided, lace the main cover grommet flap around the main frame front and rear arch pieces. Start in the top middle of each arch, and lace to each side. Add rope length by tying pieces together or cutting as necessary.

Lace all grommets on cover inside flap with rope. Starting at the middle top point over the door, tighten lacing only enough to take wrinkles out of the cover. Repeat for the Rear Arch. **DO NOT** over tighten lacing to pull out the grommets.

After the roof cover lacing is adjusted evenly across the grommet flap, go back and re-adjust the Tensioning Ratchets along the side edges of the Roof Cover. At this point, the main cover can be pulled taut enough to take all excess material and wrinkles out of cover. It will be necessary to repeat this step 2-3 weeks after unit assembly is complete and roof over has a chance to stretch out over the frame completely.

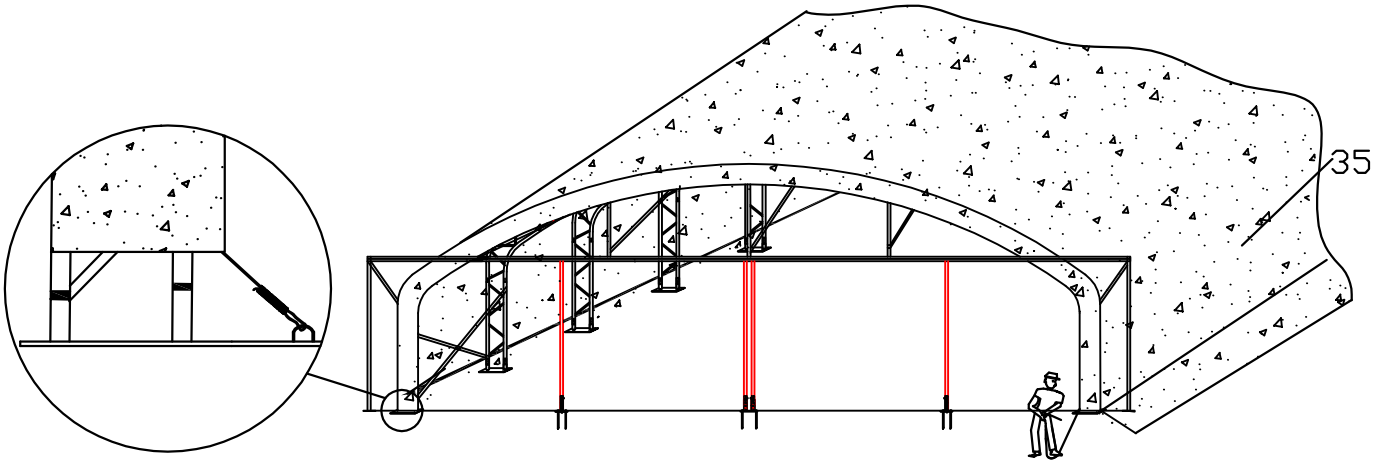



Figure 14 Fastening the two ends of the Roof Cover

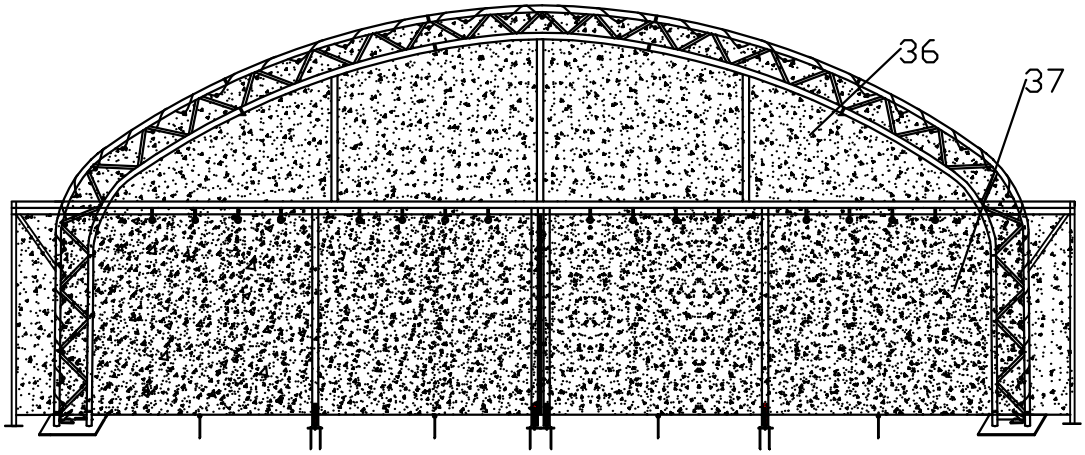



Figure 15 Installation of Top Cover Above the Door

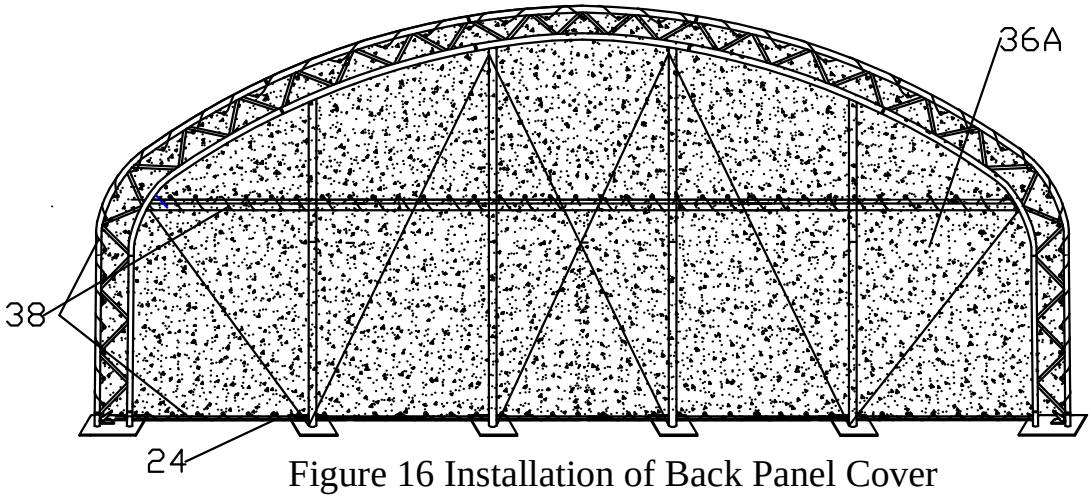



Figure 16 Installation of Back Panel Cover

# Step #9 --ASSEMBLE FRONT & REAR COVER

Secure the Front and Back Cover to the arch panel by using the ropes provided.

**Main Cover Edge Tie Off -** Once both Front and Rear Covers are installed, the Roof Cover Edge flap in the front and rear, should be tightened and tied off. Begin by pulling the remaining Roof Cover over the Frame arch, so the rope pocket is over the edge of the frame. Tie off the rope that goes through the rope pocket on one side. The rope ties off to the loop that is located on the Base Flange in Corner (6L or 6R). Moving to the other side, begin to pull the rope down. Hold the rope in hand, and push down at the bottom of the rope with a foot. Pull the rope tight, and tie off to the welded hoop on the Base Flange. As you are pulling the edge rope, it will be necessary to adjust the excess material that will collect along the rope packet. Adjust the material so that it is not bunched up and it does not pull the roof cover to one side or the other. Once the Front is completed, repeat the process on the Rear flap of the Roof Cover.

Finally, press the flap in the bottom of both sides and the rear panel, in case they flap or get damaged in wind.