VARNA buildings

INSTRUCTION MANUAL

203012R / 204212R
SINGLE TRUSSED SHELTERS

www.varnabuildings.com

TABLE OF CONTENTS

INTRODUCTION

Thank you for purchasing the Hardlife Utility 203012R/204212R single trussed storage tent. The Hardlife 203012R/204212R storage tents are tough, sturdy, and reliable. The frames are made of single trussed, Q215 hot galvanised steel tubes that can withstand bad weather, and the fabric is made of heavy-duty PVC.

To ensure safety, please read through this instruction manual carefully prior to the assembly, installation, use, and removal of the shelter. Improper site preparation, assembly, and maintenance of the shelter may invalidate warranty. Please reach out to your local dealer for any queries.

To ensure user-friendly assembly of the shelters, each individual component is identified with their respective component code, as indicated in the “Component List” of this manual. Please refer to the component codes and the figures to ensure hassle-free and safe assembly.

The information, specifications, and illustrations in this manual are on the basis of the information that was available at the time of publication. Our products are subject to improvements and changes without prior notice. The manual will be revised from time to time based on upgrades to the shelters. Please contact the manufacturer or the authorised dealers for the latest available information.

ASSEMBLY INSTRUCTIONS

1. Adhere to the instructions mentioned in this manual during assembly, anchoring, use, and removal of the shelters. Improper assembly can result in potential hazards.
2. Keep the work area free of clutter.
3. Assemble and install the shelters only on flat, hard, and level surfaces. Do not install the shelters on slippery or wet surfaces, in areas of high-velocity winds, or near snow drifts.
4. Ensure to keep children and bystanders away during installation, maintenance, and removal of the shelters.
5. Ensure proper footing and balance at all times.
6. Do not assemble the shelter under the influence of alcohol, drugs, or medication. Read the warning labels on your medication to determine if your judgment or reflexes may be impacted.
7. Do not assemble the shelter in windy conditions; fasten the base of the shelter in concrete if it's likely to be windy.
8. Ensure personal safety during assembly of the shelter. Wear safety goggles and gloves during assembly, and exercise caution when handling clips and tubes.
9. Ensure there is adequate ventilation for exhaust and other dangerous fumes.

USAGE INSTRUCTIONS

1. Ensure that the tent fabric is clear of snow at all times, taking care to remove snow manually if it does not fall off by itself.
2. Ensure to keep the shelter away from heat sources. Do not expose the tarpaulin to open flame.
3. Ensure to remove the fabric cover before hurricanes and blizzards.
4. Tighten the fabric cover every month.
5. Ensure adult supervision at all times.

SHELTER SPECIFICATIONS

DIMENSIONS	203012R	204212R
Overall Dimensions (ft.)	20W X 30L X 12H	20W X 42L X 12H
Overall Dimensions (m)	6.1W X 9.15L X 3.66H	6.1W X 12.81L X 3.66H
Door Dimension (m)	4.5W X 3.2H	4.5W X 3.2H

COMPONENT LIST

COMPONENT CODE	DESCRIPTION	203012R (Quantity)	204212R (Quantity)
1	Roof Bent Tube	6	8
2	Middle Bent Tube	12	16
3	Lower Bent Tube	12	16
4	Roof and Sidewall Purlin	25	35
5	Lower Tension Tube	2 Groups	2 Groups
6	Diagonal Bracing Tube	4	4
7	Base Plate for Corners	4	4
8	Base Plate for Inner Side Walls	8	12
8A	Ratchet	12	16
9	Clip for Component Code 6	8	8
10	Stake Pegs	36	48
11	Roof Cover	1	1
12	Front and Back Covers	2	2
13	Carriage Bolts M8 X 60 mm	72	96
14	Carriage Bolts M10 X 100 mm	30	40
15	Duct Tape	1 Roll	1 Roll
16	Knitting Rope for Cover	1 Bundle	1 Bundle
17	Ratchet Strap for Component Code 8A	12	16
18	Plastic Plug	4	4
19	Tension Ball for End Cover	62	62

FRAME SKETCH

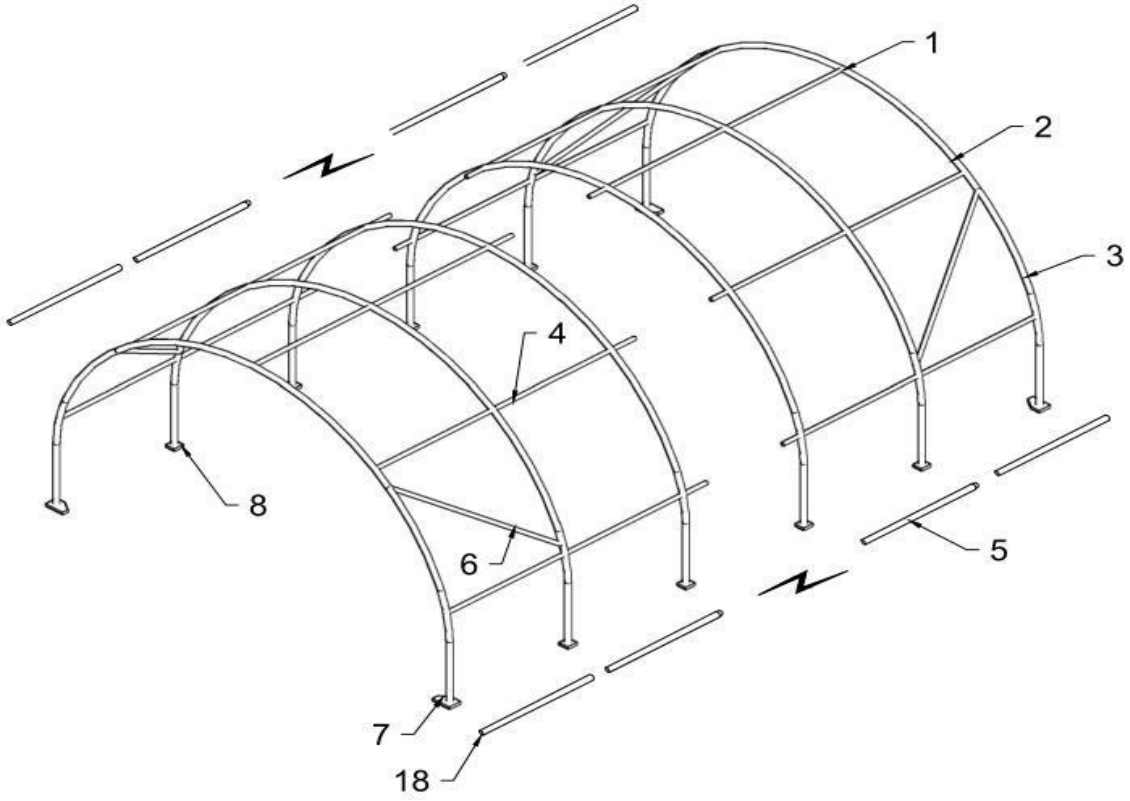


Figure 1

ASSEMBLY AND INSTALLATION

You can install the Hardlife single trussed storage tent with a 2–4 member team of your own in 1–2 days, by carefully following the instructions provided in this Instruction Manual.

WARNING
Ensure that you do not leave this product partially assembled, as it can pose serious dangers.

CAUTION
Ensure that all the components are securely fitted before use.

TOOLS REQUIRED FOR INSTALLATION

1. Measuring tape
2. String for alignment
3. Stakes
4. Step ladder
5. Sledge hammer
6. Drill
7. Wrench
8. Scissors

SITE PREPARATION

To prepare the site for installing the shelter:

1. Select a flat, hard, and level surface.
2. Ensure that all the components are present by checking with the Component List prior to installation.
3. Mark out a rectangular site using a string or chalk. It is recommended that the string or chalk line is slightly larger than the tent area.
4. Lay out all the components within the rectangular site, in the approximate locations at which they will be assembled. All base plates will be placed within this marking. This makes preliminary work easier on an open, clear space rather than having parts scattered in the way.

BASE PLATE INSTALLATION

Refer to *Figure 2* to install the base plates. All measurements are from centre to centre of the tubes.

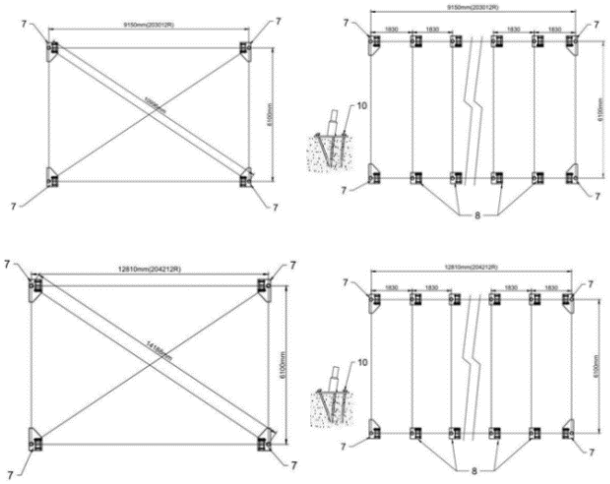


Figure 2

1) Arrange the 4 base plates for corners (component code 7) to form a rectangular foundation, as shown in *Figure 2*.
2) Arrange the 8/12 base plates for inner side walls (component code 8) at equidistant points, as shown in *Figure 2*.
3) There are 3 holes each on the base plate for corners and the base plates for the inner side walls, where stake pegs (component code 10) have to be driven into the ground using a hammer. Thus, each base plate is equipped with 3 stake pegs (*Figure 3*) and the base plate is securely grounded.

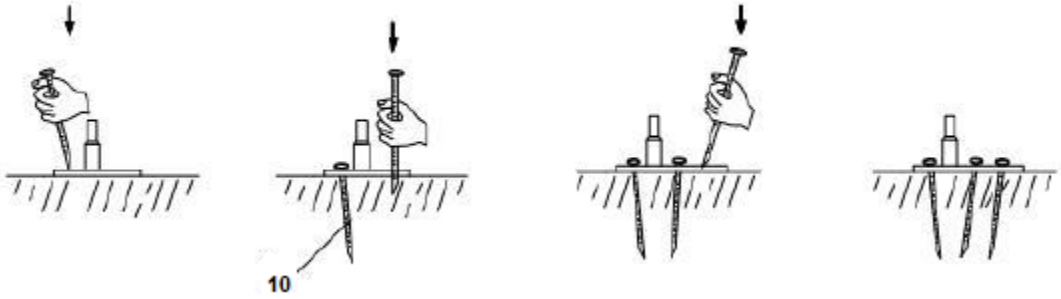


Figure 3

NOTE:

- The stake pegs are only to be used on normal surfaces. They are not suitable for use on rocky terrains, frozen grounds, or on a concrete base.
- When installing the shelter on a concrete base, drill through the holes in the base plates and use expansions bolts, as shown in *Figure 4*, to securely ground the base plates. Expansion bolts do not come with this shelter; they are provided on request.

Figure 4

FRAME ASSEMBLY

NOTE:

1. The arches will be wider than the base plates.
2. Assemble all the arches and lay them on the ground. Do not erect the arches until all the arches have been assembled.

The frame comprises several arches that are made of galvanised steel tubes.
Each arch, as shown in *Figure 5*, is made of:

- One roof bent tube (component code 1)
- Two middle bent tubes (component code 2)
- Two lower bent tubes (component code 3)
- Carriage bolts M8 X 60 mm (component code 13)

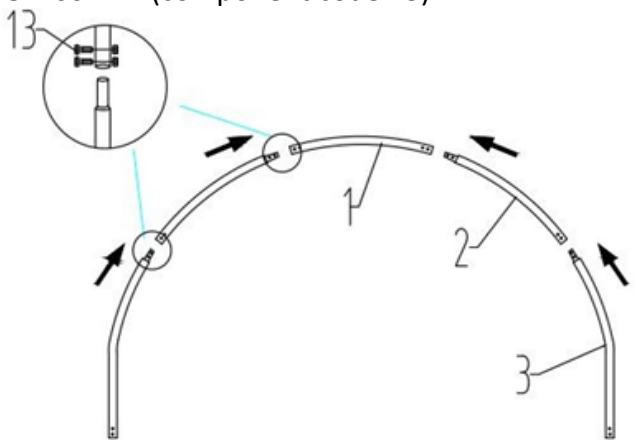


Figure 5

The tubes are assembled to form an arch using M8 X 60 mm carriage bolts, as shown in *Figure 5*.

CAUTION

Do not install the carriage bolt on top of the truss, where the fabric will rest, as it can tear the fabric.

FRAME INSTALLATION

1. Erect the first arch using ropes. Secure the ropes to a heavy object, and install the arch in the standing position by inserting one end of the assembled arch into one base plate and forcing the other end of the arch into the opposite base plate, as shown in *Figure 6*.

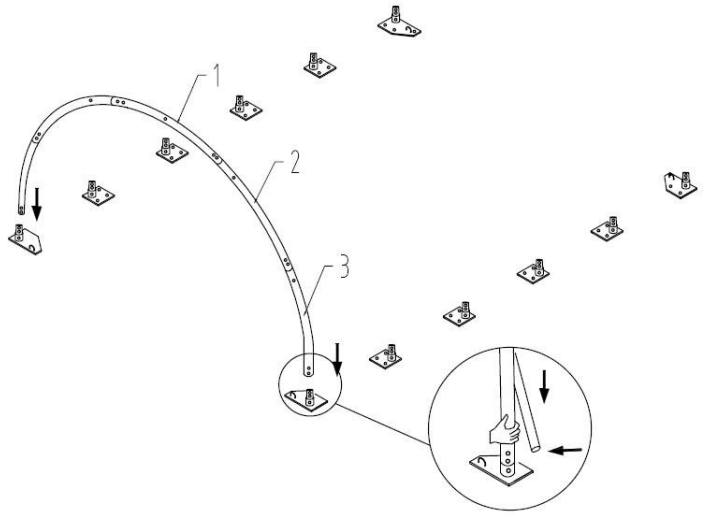


Figure 6

2. Install the second arch in the same manner immediately after installing the first arch, and connect the two arches using purlins (component code 4). Secure the purlins using M10 X 100 mm carriage bolts (component code 14), as shown in *Figure 7*.

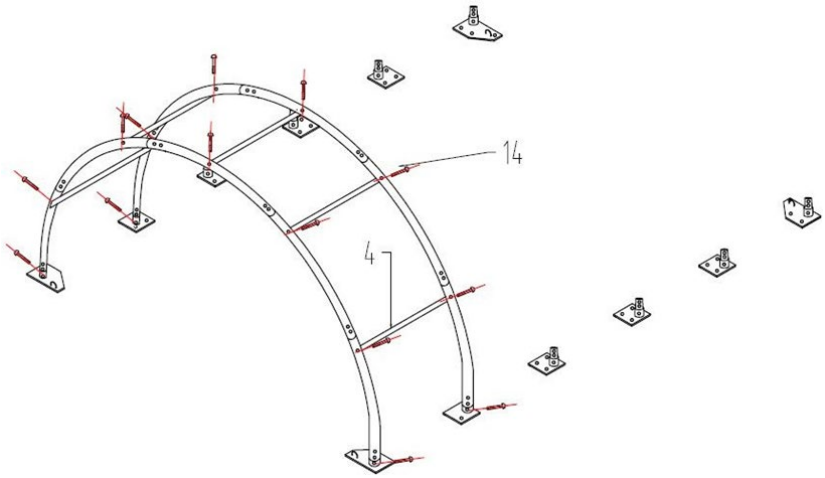


Figure 7

3. Connect the diagonal bracing tube (component code 6) between the lower bent tubes of the arches using clips (component code 9), as shown in *Figure 8*, and adjust the length as required.

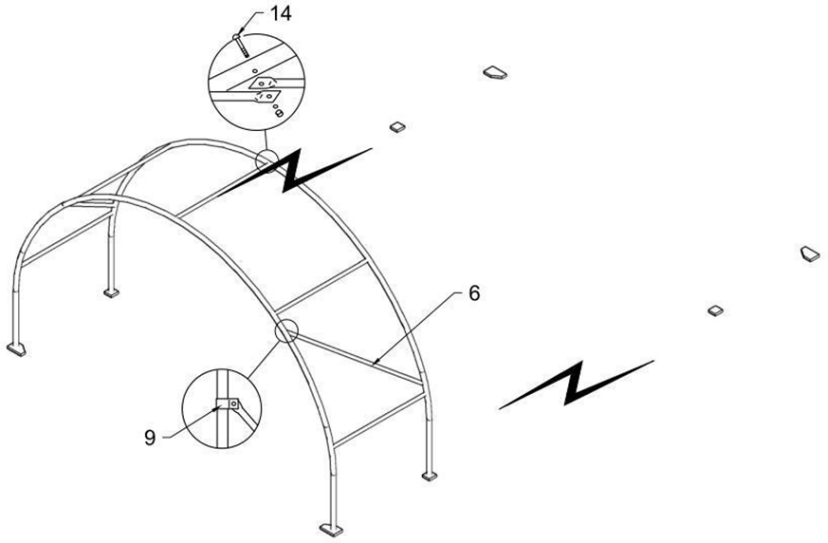


Figure 8

4. Then, install the third arch and connect the purlins and diagonal bracing tubes. Likewise, install all the other arches in the same manner and connect the purlins and diagonal bracing tubes.
5. Tighten all the frame bolts and purlins adequately before installing the covers.

INSTALLING THE FRONT AND BACK COVERS

CAUTION

Do not install the front and back covers onto the frame of the shelter in high wind conditions.

1. Position the front cover such that the zippers face outside.
1. Use the tension ball for end cover (component 19) and the knitting rope to lace the front cover (component code 12) onto the frame, as shown in *Figure 9.*
2. The cover is tied to the frame, door tube, and side rails using the knitting rope, as shown in *Figure 9*.
3. Adjust, remove wrinkles, and securely tie the rope to the loop on the two front corner base plates.
4. Repeat the same procedure for the back cover. Refer to *Figures 9 and 10*.

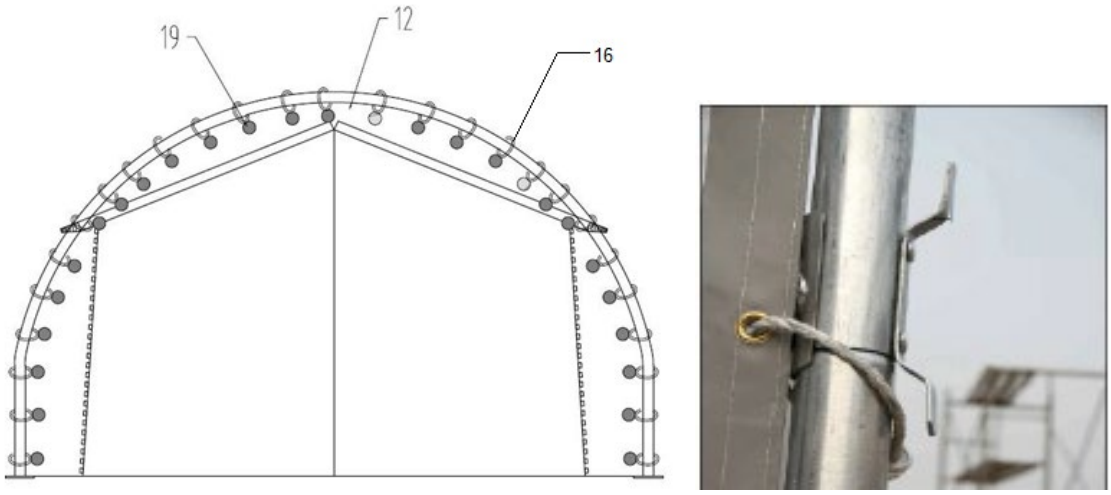


Figure 9

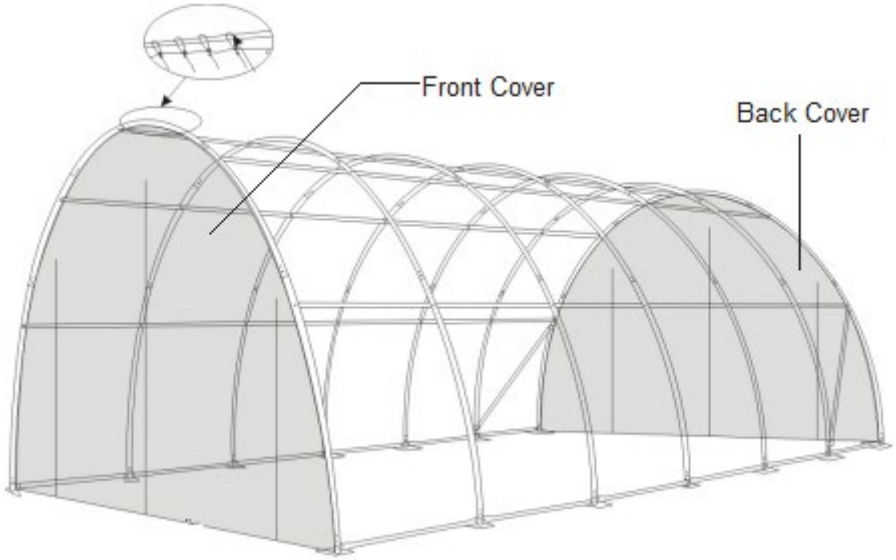


Figure 10

INSTALLING THE ROOF COVER

NOTE:

A slight breeze is the most advantageous for roof cover installation. To take advantage of the breeze, gently pull the cover up over the arches using ropes, with breeze blowing in the cover like a sail filled with air.

1. Unpack the roof cover (component code 11) and lay it open on the ground, parallel to the assembled frame on one side.

NOTE:
The inner surface of the roof cover has pockets for the tensioning tube.

2. Insert the lower tension tubes (component code 5) into the pockets, as shown in *Figure 11*, make small slits in the pocket, and use the ratchet strap (component code 17) to attach the tube to the cover.

NOTE:
Ensure that you do not tighten the ratchet strap.

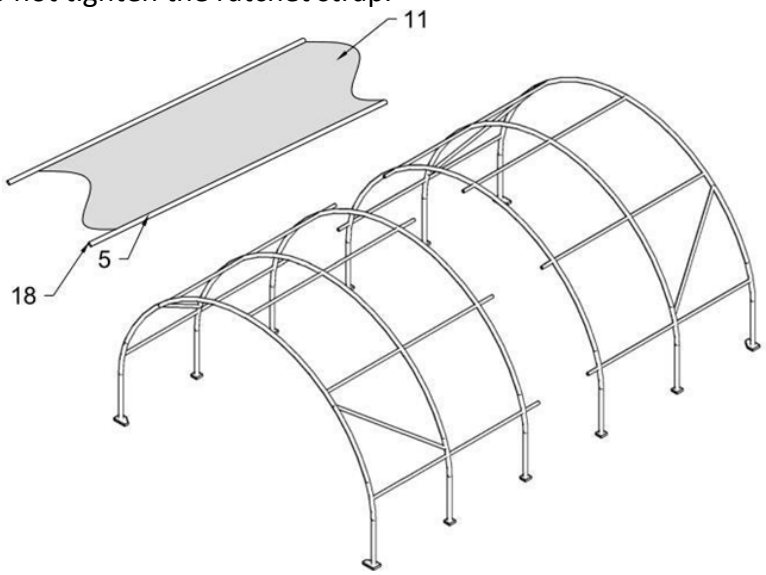


Figure 11

3. Pull the roof cover over the frame evenly, carefully, and slowly as shown in *Figure 12*. Use multiple ropes that have been looped over the top of the frame to pull the roof cover over the frame.

NOTE:
Ensure that the roof cover does not get snagged on any part of the frame as it can result in tears.

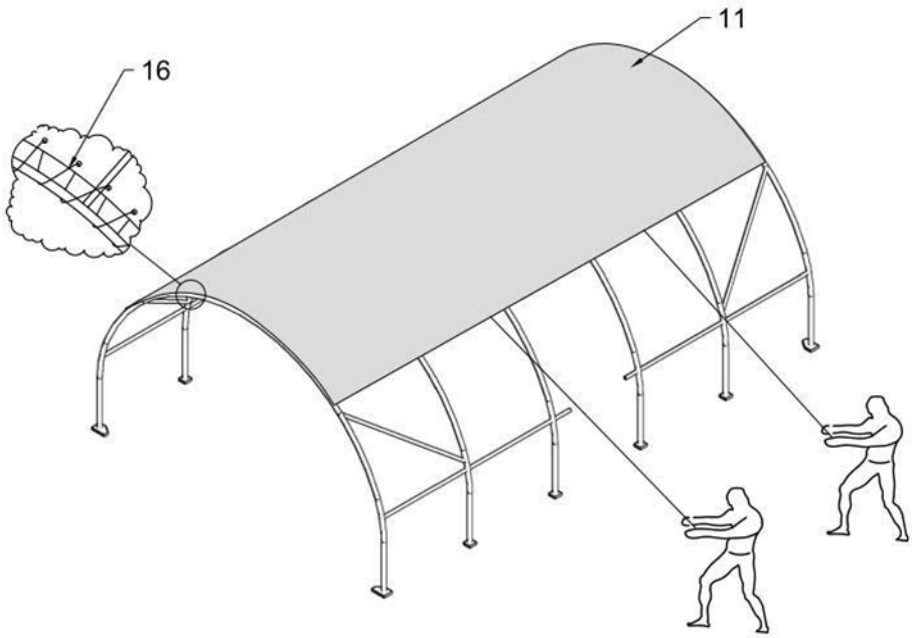


Figure 12

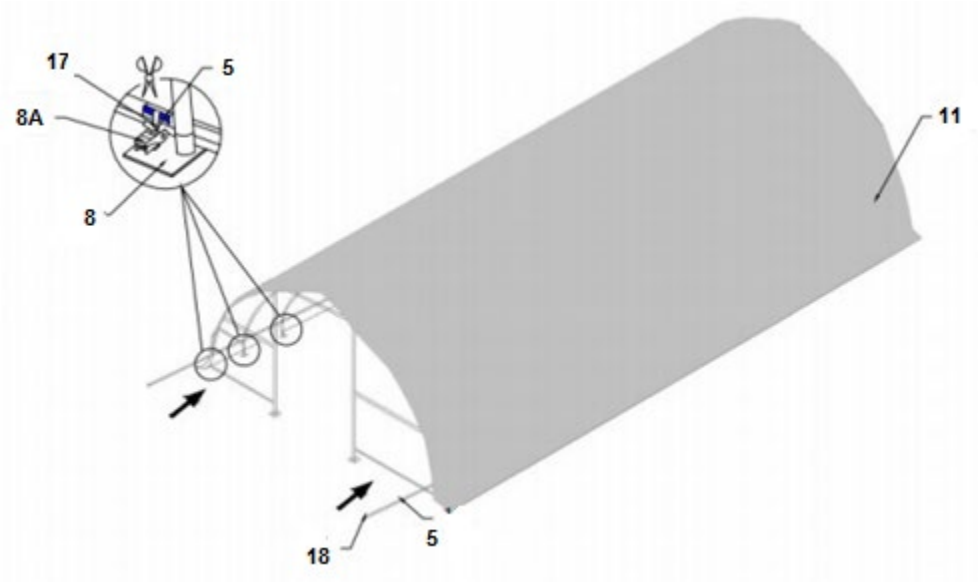


Figure 13

4. Adjust the cover such that it is evenly centred on the frame, and smoothen to remove all wrinkles on the cover.

NOTE:

The end flaps must overhang evenly at both ends of the frame.

5. With the end flaps flipped back and out of the way, use the knitting rope (component code 16) to lace the roof cover to the arches as shown in *Figure 12*. The recommended procedure is to use separate pieces of rope, which are cut based on your requirement.
6. To secure the roof cover:
   a. Lace the cover from the bottom edges up to the top centre using knitting ropes.

b. Secure the ropes at the top centre and then apply tension as you lace down both sides.

NOTE:

Ensure that you do not over tighten the lacings.

c. Fasten the rope at the bottom edge. Plug the ends of the tension tubes with plastic plugs (component code 18), as shown in *Figure 11*.

d. Make small cuts in the cover pocket using a scissors for the ratchet tie down strap to go through. The cuts should be made exactly at the ratchet locations. Loop the strap around the tension tube through the cuts on the cover. Pull the strap through the reel of the ratchet and crank the ratchet back and forth till the roof cover is taut, as shown in *Figures 13* and *14*.

Figure 14

NOTE:

Use the ratchet mechanism to remove the slack on the roof cover. Evenly adjust the ratchet on both sides of the roof so that the cover is evenly centred and taut.

e. Straighten the roof cover, back cover, and front cover. Fasten the ratchet strap inside the end of the roof cover, ensure the cover holds to the frame, and tie the end of the ratchet strap to the loops on the base plates present at the four corners of the shelter.

7. Your assembly is now complete.

WARNING

Never leave the roof cover unattached under any circumstances until the final assembly and tightening have been completed.

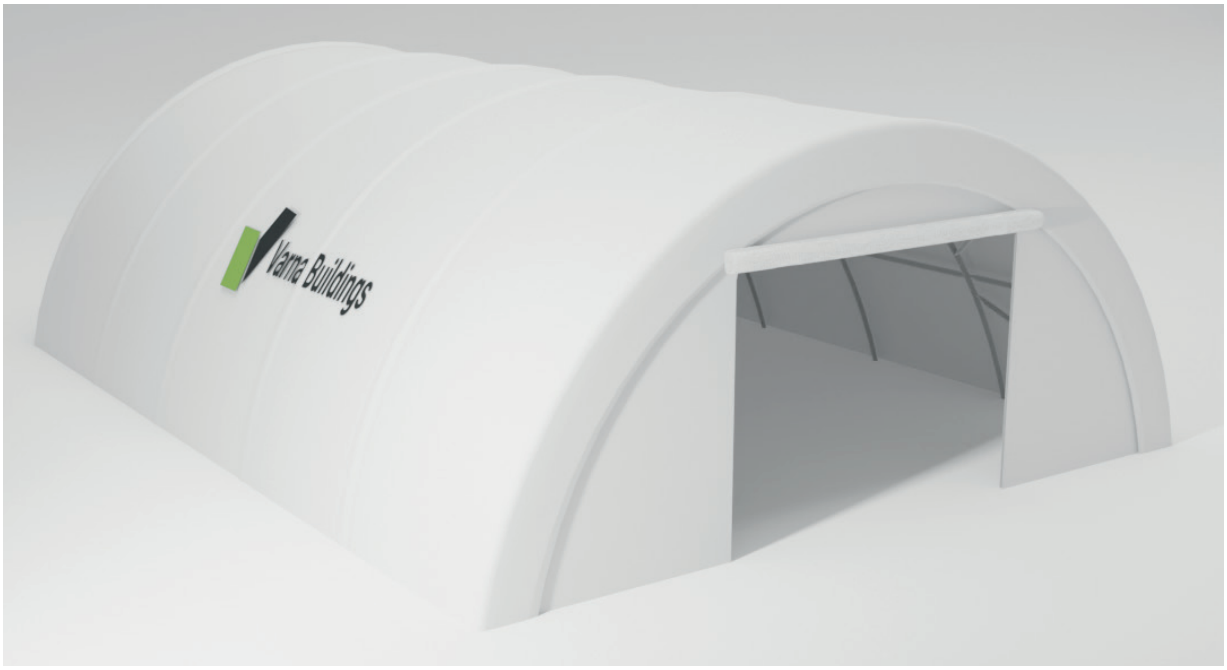
NOTE:

Use the duct tape (component code 15) to close the gaps in between the steel frame after installation of the shelter, as shown in *Figure 15*. The duct tape is also used on some tube connections near the top of the frame to ensure that the roof cover doesn't tear from rubbing against sharp corners.

Figure 15

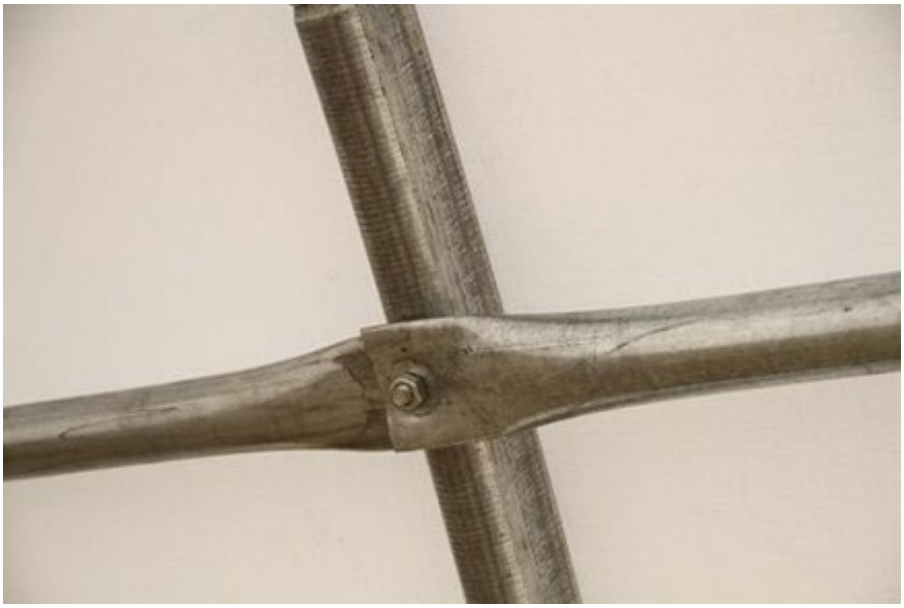
MAINTENANCE

- It is mandatory to tighten the roof fabric enough to avoid “hammocks” on the roof and retighten the roof fabric regularly. This maintenance procedure is crucial as the roof fabric tends to be stiff in the cold season (autumn and winter) and slack during summer. Hence, the roof fabric should ideally be retightened before the next winter.
- Adjust the roof cover every month to ensure you always have a flat and tensioned roof cover.
- Inspect the shelter regularly, and replace damaged components.



INSTALLATION PROCESS

1) Using Duct Tape to Prevent Damage to the Roof Cover



2) Connecting the Purlin to the Arch Tube

3) Installing the Diagonal Bracing Tube

4) Opening the Windows on the Front Cover