TECHNICAL MANUAL

HEAVY-DUTY INFLATABLE SHELTER SYSTEM

P/N **SW-SII**

LIST OF VALID PAGES

The date of issue of the original and amended pages are:

January 2015

This manual consists of 37 pages as specified below:

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(*) 0 in this column indicates original pages.

WARNING:

- This manual is valid if complete with the duly updated, pages listed above.
- Copies of this manual may be ordered from the manufacturer.
- Please inform the manufacturer of any mistakes in this manual.

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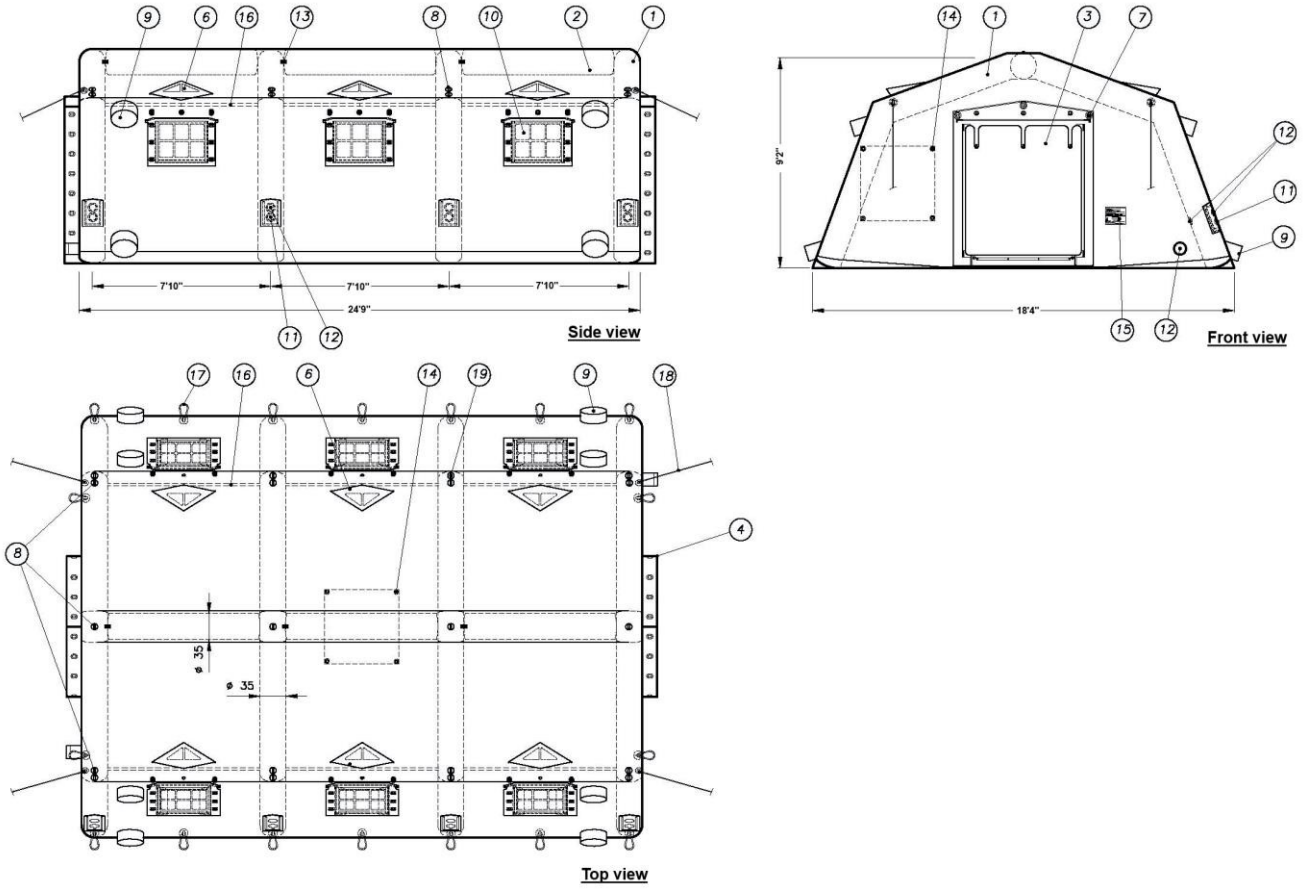
ILLUSTRATED PROCEDURES

SECTION 1

TENT COMPONENTS

1.1 TENT DIAGRAM



Pos.	Descrizione	Q.ty	Pos.	Descrizione	Q.ty
1	Pneumatic arch	4	11	Pressure relief valve	4
2	Pneumatic spacer	3	12	Arch inflation valve	8
3	Front door compartment	2	13	Connection between arch / distancing bar	3
4	Connection edge with eyelets	2	14	Studs for fixing user's logo	1
5	Electric cable sleeve	2	15	Tent ID table	1
6	Air vent	6	16	Alloy spacer bars	6
7	Studs for entrance module poles	6	17	Eyelets for fastening the tent to the ground	18
8	Eyelets for securing the sunshade liner	12	18	Frontal guy ropes	4
9	A/C sleeves	8	19	Studs for lateral guy ropes (optional)	8
10	Windows	6			

Figure 1.1 – SW-SII 4 arches 2 doors tent diagram.

1.2 FEATURES

Dimensions of the assembled tent

Width	18'5"
Length (3-arches tent)	16'11"
Length (4-arches tent)	24'9"
Length (5-arches tent)	32'8"
Height (roof)	9'2"
Height (gutter)	6'10"

Working pressure	4.35 psi
Working temperature range	-25°F +120°F
Waterproofing	rain - snow
Wind resistance (on ground of average consistency)	≤ 62 mph
Snow weight resistance (per sqft)	≤ 3.1 lbs

CHECKLIST (TENT WITH STANDARD EQUIPMENT)

Tolerance 5% on dimension and weight

Package 1	❍ tent		1 pc
Dim. 47''x39''xh26''	Weight 330 lbs	3-arches shelter	
Dim. 53''x39''xh27''	Weight 418 lbs	4-arches shelter	
Dim. 55''x47''xh29''	Weight 507 lbs	5-arches shelter	
Package 2	❍ stakes		
Dim. 5''x11''xh33''	Weight 49 lbs (3A)	❍ cross-shaped stakes (3-arches)	18 pcs
	Weight 56 lbs (4A)	❍ cross-shaped stakes (4-arches)	22 pcs
	Weight 61 lbs (5A)	❍ cross-shaped stakes (5-arches)	26 pcs
		❍ hammer	1 pcs
Package 3	❍ poles		
Dim. 13''x6''xh53''	Weight 19 lbs (3A)	❍ spacer rod (purlin) (3-arches)	4 pcs
	Weight 30 lbs (4A)	❍ ventilation spacer (3-arches)	4 pcs
	Weight 41 lbs (5A)	❍ spacer rod (purlin) (4-arches)	6 pcs
		❍ ventilation spacer (4-arches)	6 pcs
		❍ spacer rod (purlin) (5-arches)	8 pcs
		❍ ventilation spacer (5-arches)	8 pcs
Package 4	❍ inflation and repair kit		
Dim. 12''x10''xh29''	Weight 28 lbs	❍ manual inflator	1 pc
		❍ repair kit	1 pc

Figure 1.2 - Checklist

SECTION 2

TENT ASSEMBLY PROCEDURE

2.1 PREPARATION OF THE GROUND AND ASSEMBLY OF THE LEVELLING FLOOR

A - Identify the area where to erect the tent so as to optimize positioning of the floor. Make sure that there are no depressions on the ground. A space of approximately 28' x 43' is required for erecting a "4 arch" tent, including extended entrance module, sunshade and guy lines.
B - Level the ground, remove roughness and sharp objects, such as stones, branches, bushes, etc.

2.2 TENT ASSEMBLY

The recommended procedure is as follows:
A - Check that all material is present (Checklist figure 1.2).
B - Remove tent from its cover and open out as shown in the following pictures (Illustrated Procedure, images from 1 to 11).
C - Open the doors on both sides of the tent. **Do not open the zipper past the last button at the top of the door** (Illustrated Procedure, image 12).
D - Roll both doors open and fasten with the straps (Illustrated Procedure, image 13).
E - The windows can now be opened as shown in the picture (Illustrated Procedure, image 15). They can, however, also be opened after the tent has been erected.
F - Unscrew the caps on the safety pressure release valves and ensure that the inlet valve is closed (Illustrated Procedure, image 16).

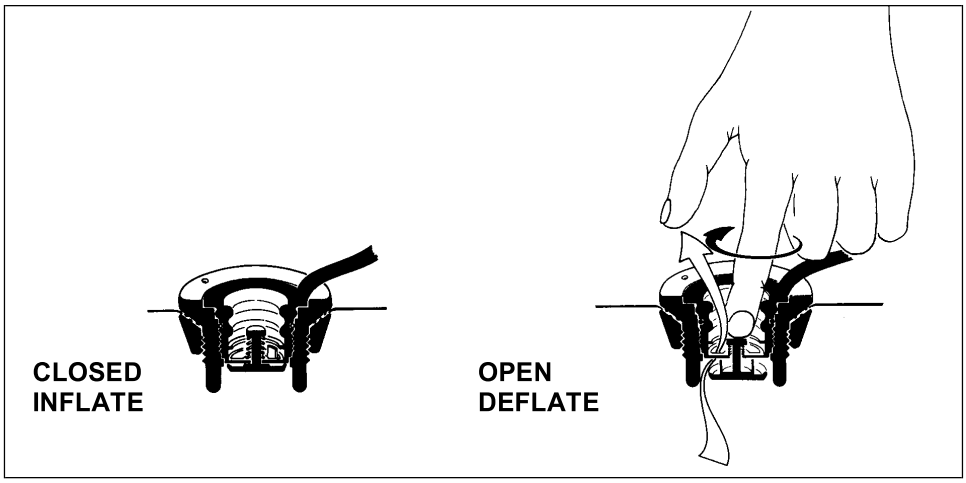


Figure 2.1 - Inflation valve closing

G - Insert the L-shaped rods for the ventilation vents into the opening placed on the inside (Illustrated Procedure, image 17). The vents are located above each window. **These have been eliminated in newest TAG units.**

H - Take the spacer rods (purlins) from the pole package and position them on the ground.

CAUTION! ASSEMBLE THE SUNSHADE AS SHOWN IN OF PARAGRAPH 2.3 STEPS A-B-C-D BEFORE INFLATING THE TENT.

ILLUSTRATED PROCEDURE FOR SHELTER DEPLOYMENT


6


7


8


9


10


11


14


15


16


17

RAPID SHELTER INFLATION

A - After unfolding the tent completely, fix the four corners to the ground by means of stakes.

CAUTION! DRIVE THE STAKES INTO THE GROUND TO A DEPTH SO THAT THE GUY LINE HOOKS ARE FLUSH WITH THE GROUND.

B - Arrange the electric inflator and the tubes provided on the side of the tent where the valves are located. Arrange the inflator near the central window at a distance of less than 1 m from the tent.

C - Insert the inflation tube branch in the quick coupling on the inflator (marked "outlet") and secure with the specific fastener (fig. 2.3).

D - Press the tubes into the valves (fig. 2.4). Make sure the inflation taps are open.

E - Connect the automatic inflator to the electric power supply.

F - Start the automatic inflator by tripping the specific switch and inflate the tent.

G - While inflating the arcs, help the tent up by pulling the guy lines (Illustrated Procedure, images 1-4).

NOTE: *IF THE INTERNAL INSULATING LINER IS NOT ALREADY PRE-INSTALLED ON THE TENT, PROCEED TO INSTALL IT, ACCORDING TO THE PROCEDURE INDICATED ON PAR. 2.3.*

H - Unblock and insert the side spacer rods firstly through the holes in the insulating liner and then in the couplings on the arches. Push the spacer rod up to their clamping in extended position (fig. 2.5 – 2.6).

I - After erecting the tent, settle the bottom by pulling on the bottom braid and continue inflating until working pressure (approximately 4.35 psi) is reached as shown on the pressure gauge installed on the inflator itself.

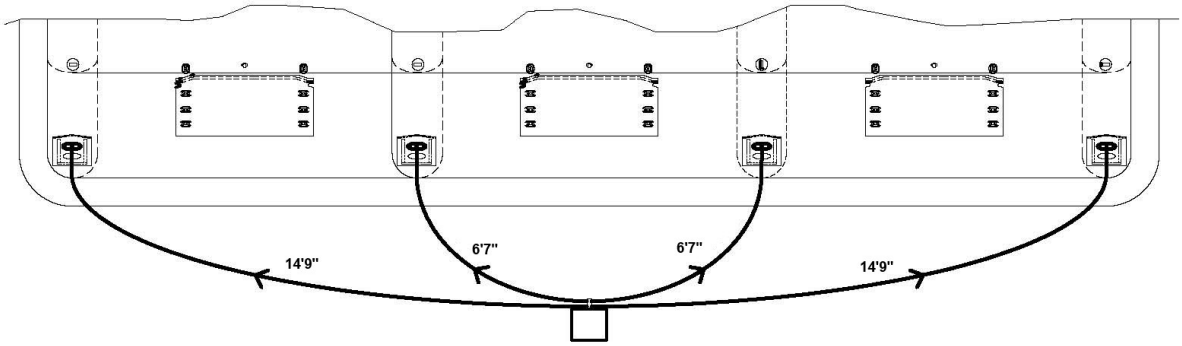


Figure 2.2. - Simultaneous inflation kit diagram for 4-arches tent

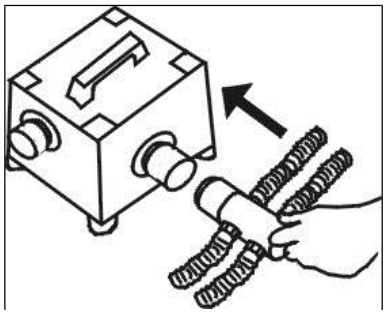


Figure 2.3. - Connecting the tube to the inflator.

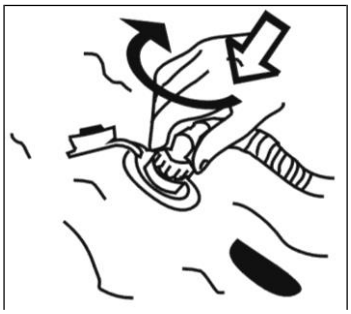


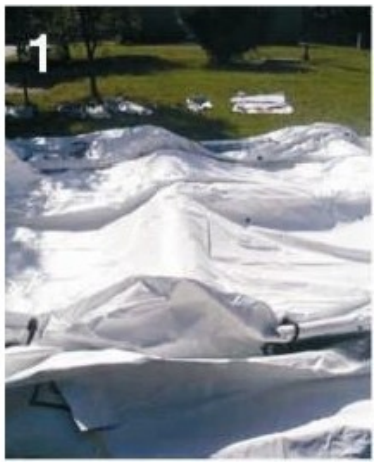
Figure 2.4 - Pressing the tube into the inflation valve.

J - Once the working pressure is reached, disconnect the tubes from the valves, close the inflation valve caps, switch the inflator off, close the tube taps, spread the bases of the arches on the bottom and stake the tent.

K - Remove the simultaneous inflation tube from the inflator and put it all back in the specific bag.

L - Complete staking the tent where required (reinforced eyelets and braided guy lines, refer to fig. 2.8).

ILLUSTRATED PROCEDURE FOR SHELTER INFLATION



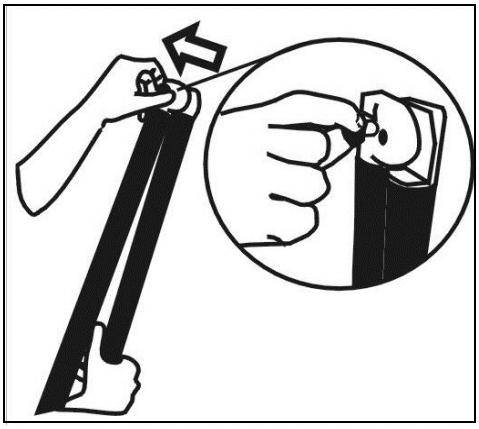


Figure 2.5 - Unblocking spacer rod clamp.

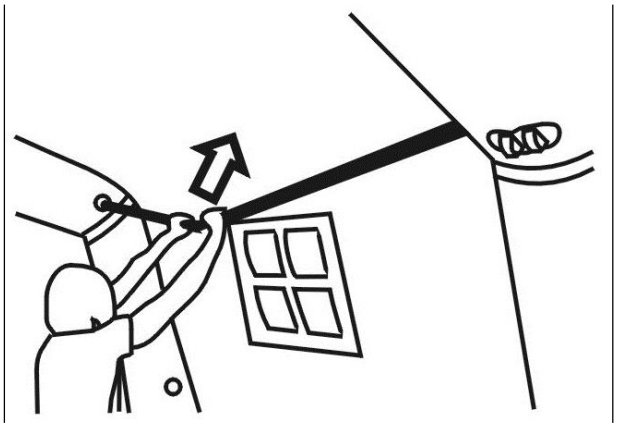
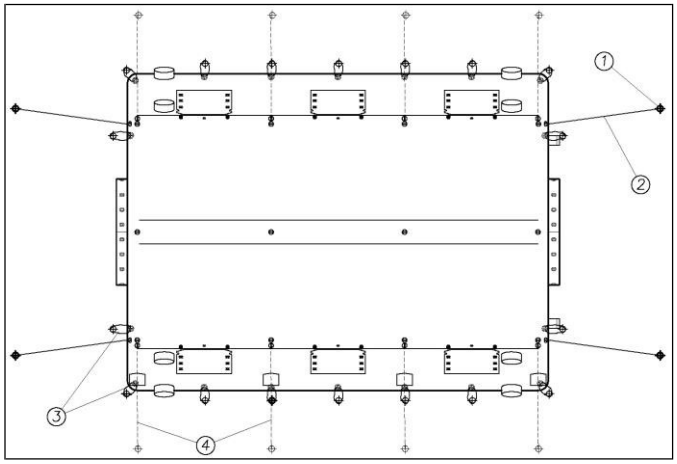


Figure 2.6 - Spacer rod engagement by means of union joint.

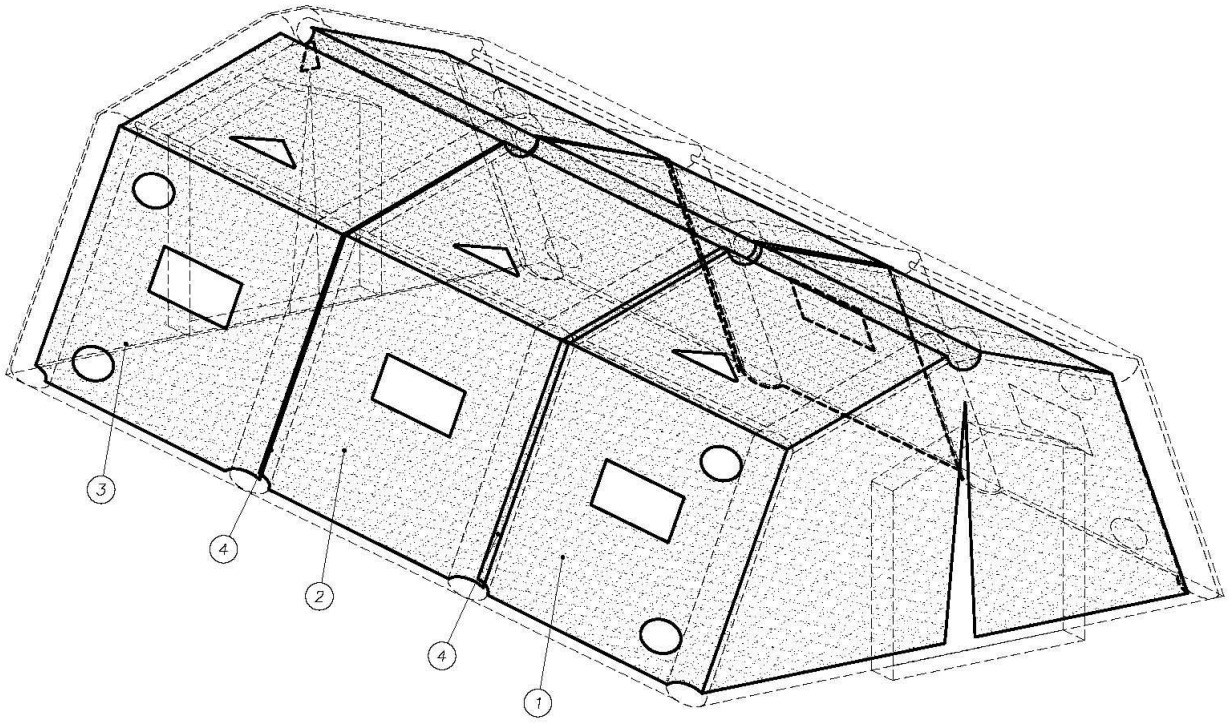
Figure 2.7 - Spacer rod (PURLIN) installed.



Part	*Component*	*Q.ty x tent*		
		3A	*4A*	*5A*
1	Cross-shaped stakes	18	22	26
2	Guy lines L=16'4"	4	4	4
3	Base braids L=3'3"	14	18	22
4	Guy lines L=16'4'' (optional)	2	4	6

Figure 2.8 - Stake and guy line arrangement for TAG NG 4 arches tent.

2.3 INNER INSULATING LINER ASSEMBLY AND DISASSEMBLY



Part	*Component*	*Q.ty x tent*		
		3A	*4A*	*5A*
1	Front insulation liner	1	1	1
2	Central insulation liner	-	1	2
3	Rear insulation liner	1	1	1
4	Modules joint	1	2	3

Figure 2.9 - Insulation liner diagram.

NOTE: *THE FOLLOWING INSTRUCTIONS ARE VALID IN CASE OF THE LINER IS NOT ALREADY PRE-INSTALLED ON THE TENT. IN THIS CASE ASSEMBLY THE INNER INSULATING LINER ONCE TENT IS INFLATED BUT BEFORE INSTALLING SPACER RODS (purlins).*

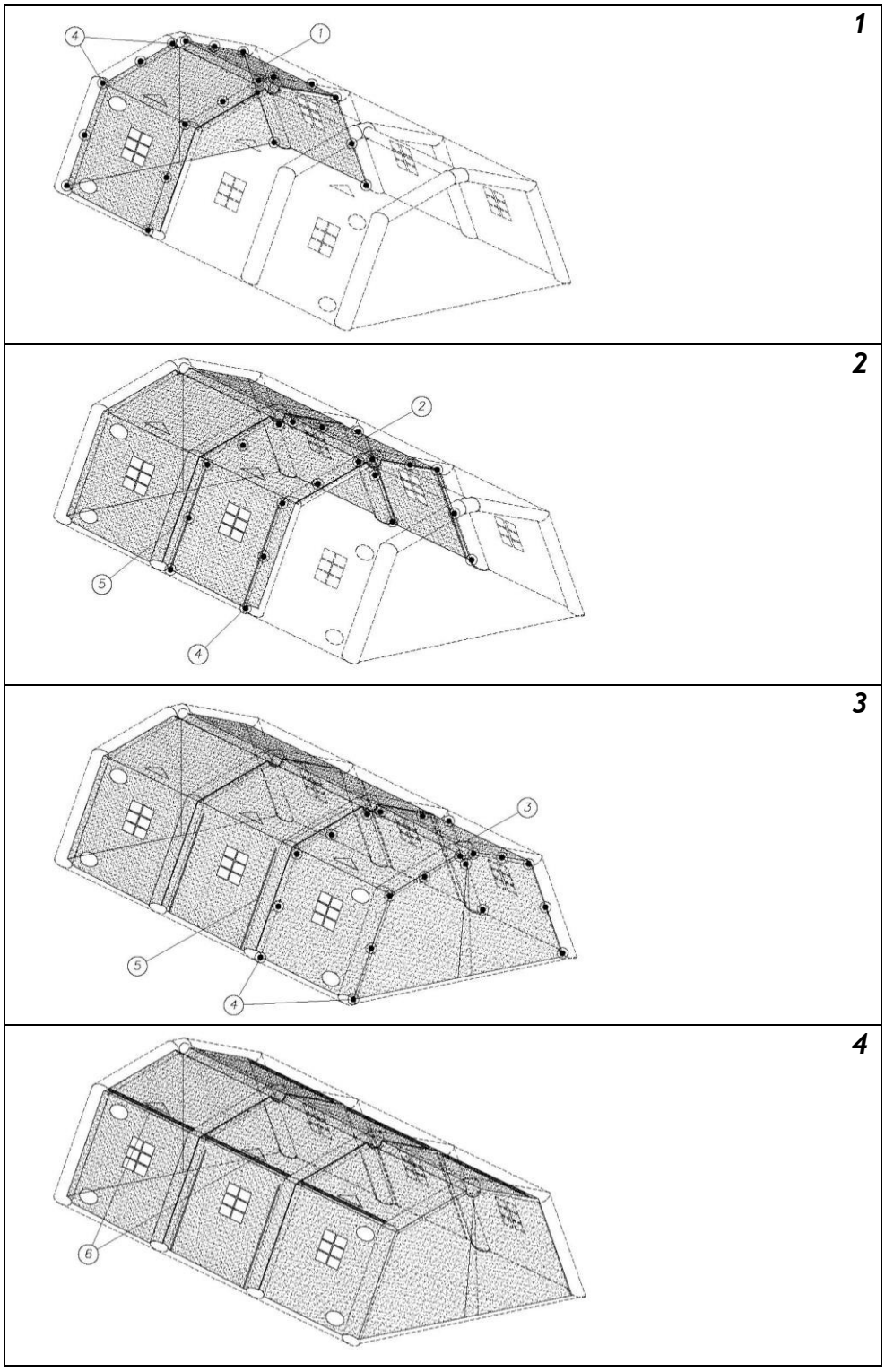
A - Install the front section by connecting the frogs of the liner to the studs of the arch structure (fig. 2.10 step 1);

B - Install the internal section as described above, joint the front and central sections by means of the Velcro tape (fig. 2.10 step 2);

C - Install the rear section as described above, connecting the Velcro tape (fig. 2.10 step 3);

D - Provide to install the alloy spacer rods passing them between the holes of the insulating liners (fig. 2.10 step 4).

NOTE: *THE TENT CAN BE FOLDED AND RE-PACKED WITH THE INSULATING LINER INSTALLED. IF YOU WANT TO DISMANTLE THE INSULATING LINER, REVERSE THE PROCEDURE TO DISASSEMBLE.*



Part	Component
1	Insulating liner – front section
2	Insulating liner – central section
3	Insulating liner – rear section

Part	Component
4	Arch-liner joint
5	Liner-liner Velcro joint
6	Spacer rods (Purlins)

Figure 2.10 - Assembly sequence of inner insulating liner for TAG NG 4 arches tent.

2.4 SUNSHADE ASSEMBLY AND DISASSEMBLY

NOTE: *ASSEMBLY THE SUNSHADE BEFORE INFLATING THE TENT.*

A - After fully unfolding the tent, arrange the pneumatic spacers in the specific engagements on the tent at the slope. The spacers are connected to the eyelets on the tent by means of wing bolts using the system show in figure 5.2.

B - Inflate the pneumatic spacers to working pressure.

NOTE: *CLOSE THE INFLATOR TAP NOT BEING USED FOR INFLATION.*

C - Arrange the sunshade folded along its middle line on one side of the tent making the middle line of the sunshade coincide with the central pneumatic spacer (fig. 2.11 step 2).

D - Fully unfold the other half of the sunshade pulling the guy lines outwards (fig. 2.11 step 3).

E - Inflate the tent as shown in paragraph 2.2.

F - After erecting the tent, position the sunshade correctly and fasten the guy lines to the ground by means of the stakes (fig. 2.11 step 4).

G - Pull the guy lines as follows: tie a noose knot at approximately 1.5 m from the end, pass the end about the stake and then inside the noose, pull the end of the guy line and tie the closing knot (fig. 2.13).

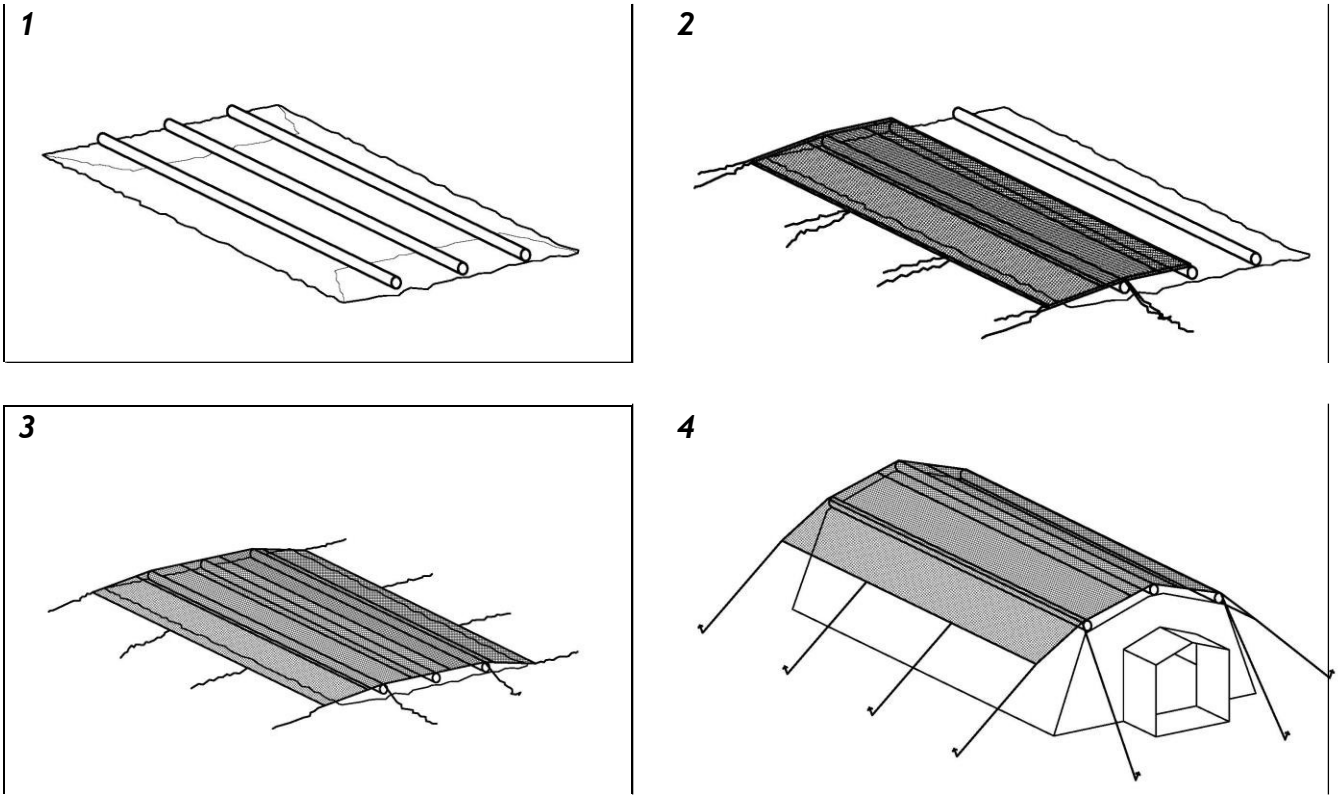
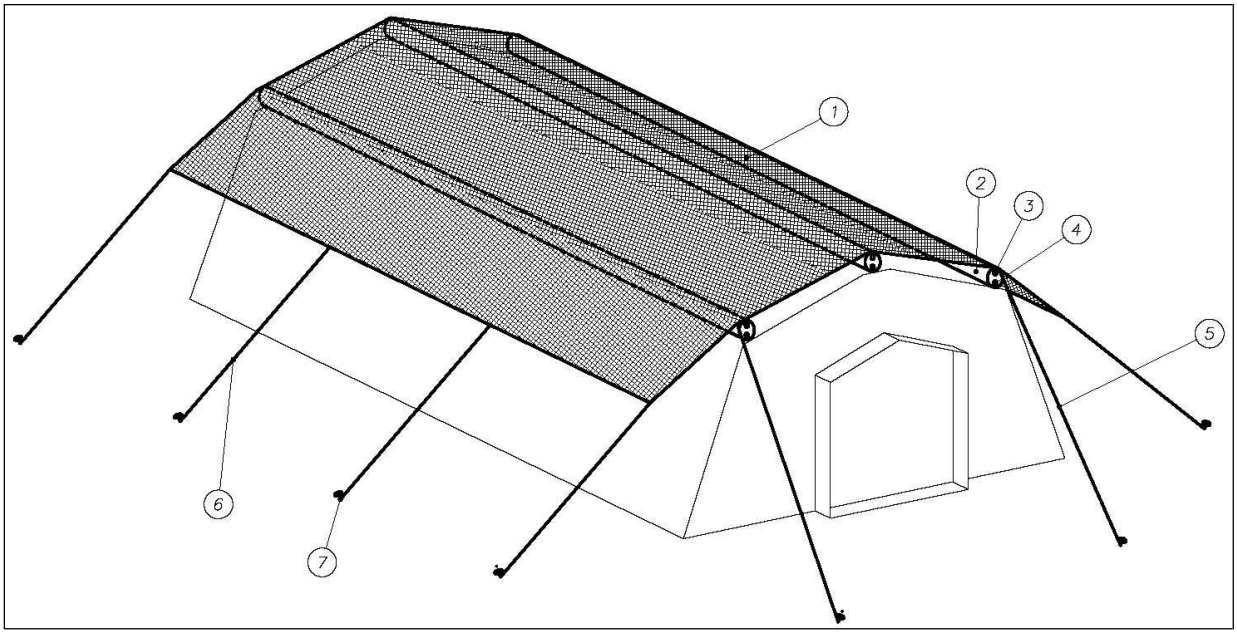


Figure 2.11 - Assembly sequence of the sunshade.

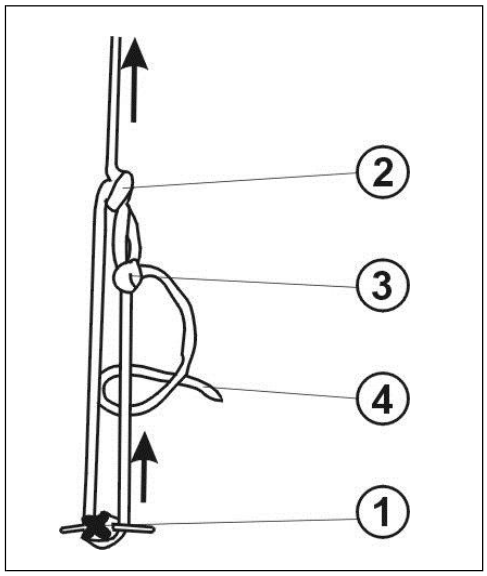
NOTE: *REVERSE THE PROCEDURE TO DISASSEMBLE. CLEAN THE CLOTH AND THE PNEUMATIC SPACERS BEFORE REINTRODUCING THEM INTO THE BAG.*



Part	Component	Qty
1	Sunshade	1
2	Pneumatic spacer	3
3	Spacer inflation valve	3
4	Spacer pressure relief valve	3

Part	Component	Qty
5	Front guy line L=18'	4
6	Side guy line L=13'1"	8
7	Anchoring stakes	12

Figure 2.12 - Installed sunshade diagram.



Part	Component
1	Stake
2	Noose knot
3	Safety knot
4	Guy line end

Figure 2.13 - Noose and knot on guy rod diagram.

2.5 DUST MAT ASSEMBLY AND DISASSEMBLY

Take the four larger rolls inside the tent and unroll them. Arrange them starting from the two middle ones using the center of the door as a reference. Arrange the other two external rolls under the base of the arches (refer to fig. 2.14).

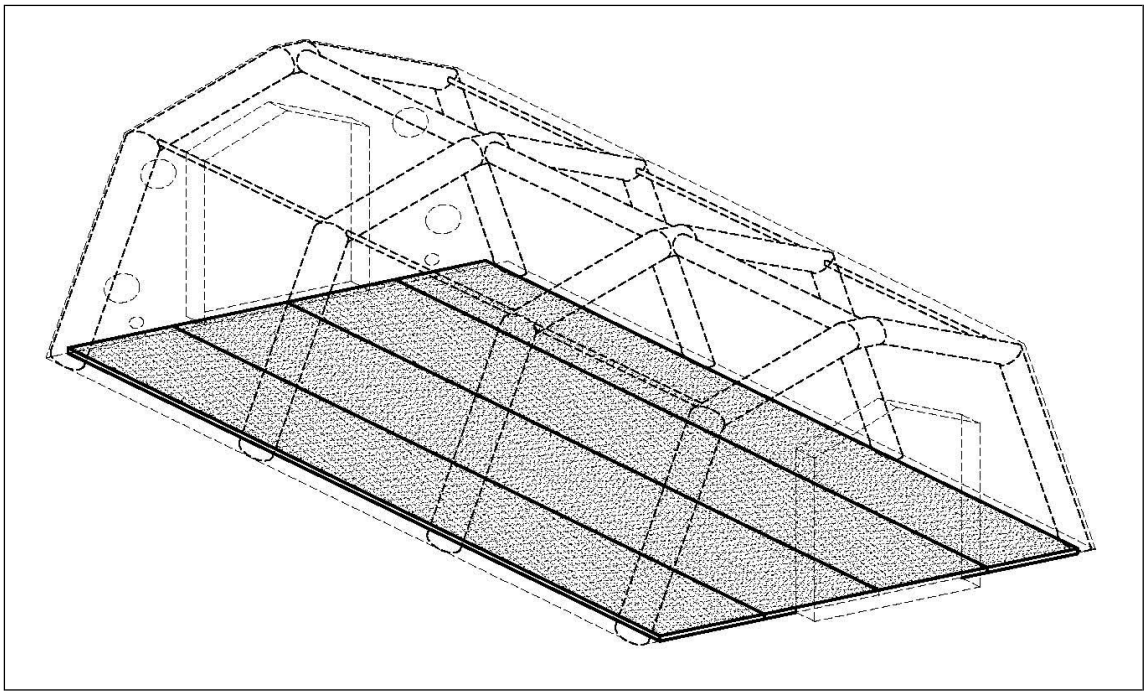


Figure 2.14 - Dust mat diagram.

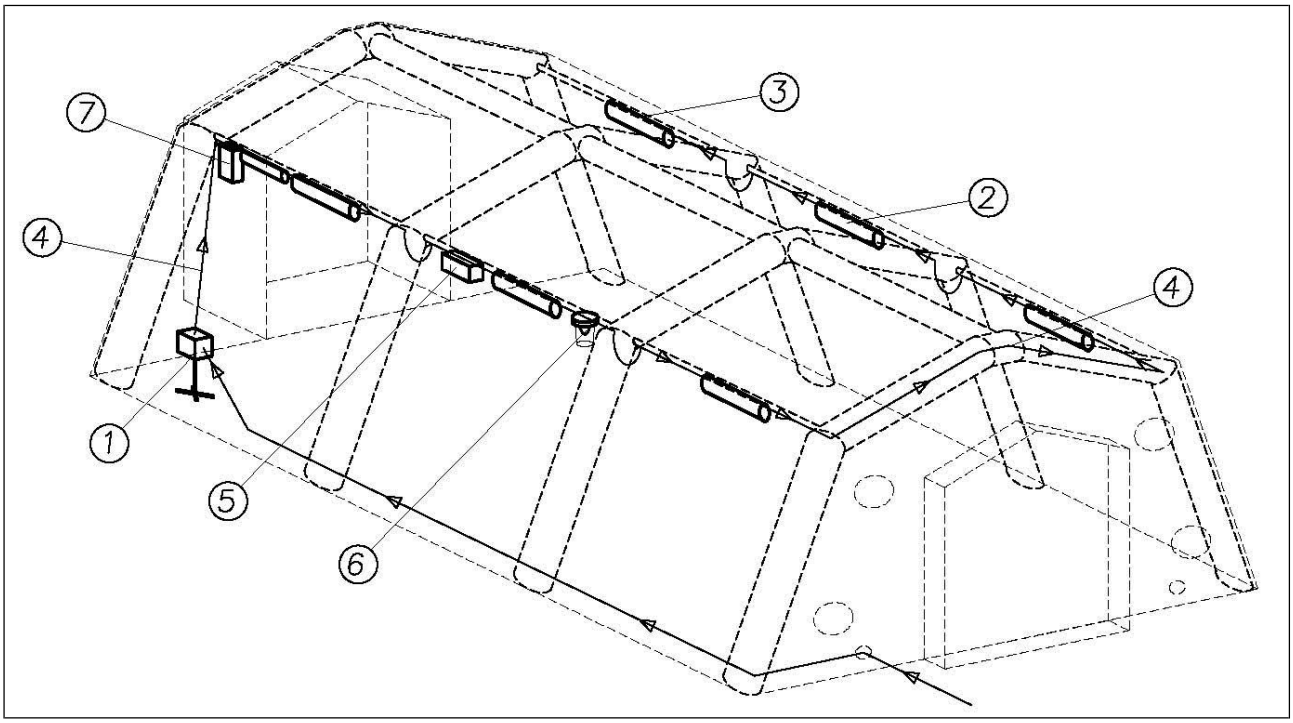
NOTE: *REVERSE THE PROCEDURE TO DISASSEMBLE. CLEAN THE MATS BEFORE PUTTING THEM BACK IN THE PACKAGE.*

2.6 ELECTRIC SYSTEM ASSEMBLY AND DISASSEMBLY

CAUTION! ***DISCONNECT POWER FROM THE CONCERNED LIGHT BEFORE STARTING ANY OPERATION ON ELECTRIC MATERIAL.*** ***(THIS SECTION APPLIES TO EUROPEAN ELECTRIC SYSTEM, NOT US)***

Install the electric system after assembling the tent. Refer to the diagram in figure 2.15 and to the following procedure:
A - Position the distributor panel inside the tent on the opposite side of the alloy support. Apply the emergency light to the tent poles using the plastic clips provided.
B - Use the specific clips to fasten each ceiling light to the side spacer bars. It is advisable to start from the first ceiling light near the distributor panel to avoid assembly mistakes.
C - Connect the extension to the electric panel and connect the first ceiling light to the extension.
D - Then connect the other lights in sequence. Use the extension to go from one side of the tent to the other. The last ceiling light is the one without a socket.
E - Apply the 16A distribution panel and night light on the right middle rod.
F - Check correct connection of the parts by turning the switches on the electric panel to the off position, connecting to the distribution network and then testing the installed line. Each ceiling light is provided with a switch (fig. 2.16). Make sure that is it in the on position.

WARNING: CHECK THAT ALL ELEMENTS ARE CORRECTLY CONNECTED BEFORE CONNECTING TO THE POWER NETWORK. **(EUROPEAN SYSTEM)**



Part	*Component*	*Qty*
1	32A distribution panel	1
2	Neon lamps	5
3	Neon lights (end of line)	1
4	10m extension	3

Part	*Component*	*Qty*
5	16A distribution panel	1
6	Night light	1
7	Emergency light	1

Figure 2.15 - Electric system diagram.

NOTE: *REVERSE THE PROCEDURE TO DISASSEMBLE. CLEAN THE COMPONENTS BEFORE PUTTING THEM BACK IN THE PACKAGE.*

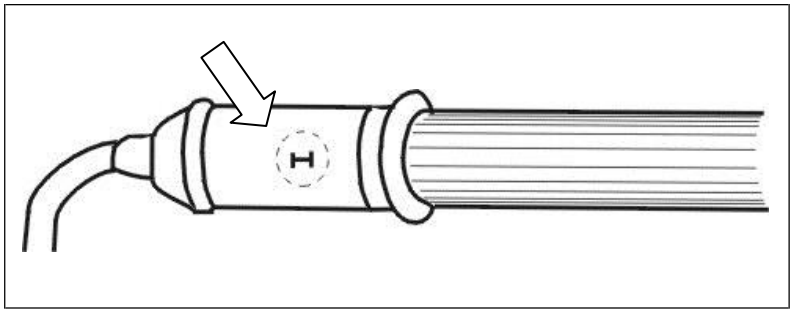


Figure 2.16 - Switch on ceiling light.

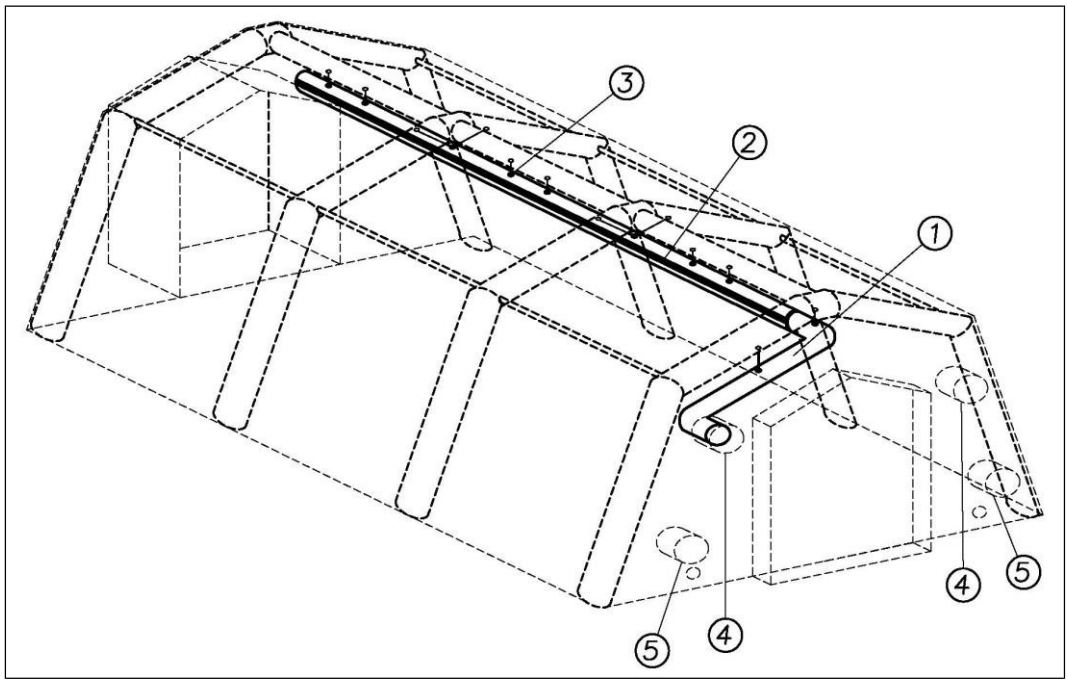
2.7 AIR VENTILATION TUBE

The tent is provided with an internal tube made of fireproof material arranged on the roof for uniformly distributing air from the A/C system.

The tube consists of two parts:

- a straight tubular pipe with a closed end provided with two side mesh bands from which air from the A/C system is issued. The width of the side bands increases towards the closed end;

- a S-shaped manifold for connect the straight pipe to the upper sleeve of the tent for connecting to the A/C system delivery. The manifold may be fitted either to the upper left sleeve or to the upper right sleeve.



Part	*Component*	*Qty*
1	S-shaped manifold	1
2	Straight tubular pipe	1
3	Tube fasteners	-
4	A/C inlet (delivery)	2
5	A/C inlet (suction)	2

Figure 2.17 - Air ventilation tube arrangement.

The connection between the pipe and the S-shaped manifold is performed by means of Velcro strips. Both the straight pipe and the manifold are secured to the tent by means of a system of straps and lanyards**.**

For connecting to the delivery tube of the A/C system, insert the end of the manifold over the delivery tube. Pull the strap around the edge to ensure air tightness. Then secure the tent sleeve onto the delivery tube. Reverse the procedure to disassemble.

2.8 ENTRANCE MODULE

A - The first step in erecting the entrance module is to insert all the eyes on the water guard edge over the stays.

B - Identify the stay at the apex of the module and fix it to the apex of the door edge by passing the fixing line through it.

C - Next insert the stays for the module into respective eyes in the door edge and thread the line through until you reach the bases. Then seal off the lines using the procedure shown in fig. 2.18.

D - Overlap the water guard edge for the door and the water guard edge on the module.

E - Fix the velcro strips on the bottom of the module to the respective velcro strips at the bottom of the door.

F - Once the correct position of the external corners and the apex have been identified, assemble the two external corners "D" (with the red marking) and the apex "E", using the two rods "B".

G - Position the assembled sides on the inside of the front of the module and attach them vertically by erecting the two rods "A" and "C" on the front.

H - Once the rods have been connected using connector "F" inside the drilled rods "G", fit the first pair on corner "E" at the apex and in the housing at the apex of the door. Adjust the longitudinal tension in the module by engaging the spring-loaded lug on rod "F" and the hole on rod "G". Do the same for the two corner housings.

I - Assemble the two pairs of rods "H" using the 2 rubber sleeves "I". Position the two assemblies at the tent door and about half way along rod "F".

J - Fix the entrance module to the ground using pegs both at the base (n° 2 pegs) and using the wind bracing lines (n° 2 pegs).

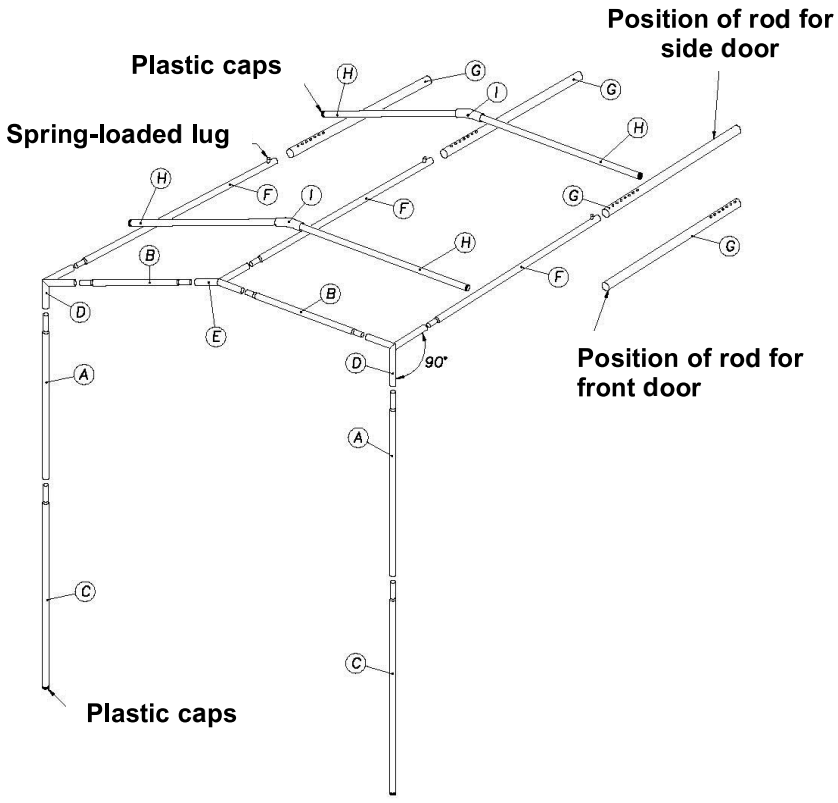


Figure 2.18 – Entrance module pole assembly diagram

2.9 CONNECTING CORRIDOR

Tents can be connected both end-to-end and side-to-end. These connections are formed using special corridors.
To assemble these corridors we recommend proceeding as follows:

A - Pass all the eyes in the water guard edge over the stays.

B - Identify the stay at the apex of the corridor and fix it to the apex of the door edge by passing the fixing line through it.

C - Next insert the stays for the module into respective eyes in the door edge and thread the line through until you reach the bases. Then seal off the lines using the procedure shown in fig. 2.19.

D - Overlap the water guard edge for the door and the water guard edge on the module.

E - Fix the Velcro strips on the bottom of the module to the respective Velcro strips at the bottom of the door.

F - Complete all the operations described thus far for the connection to the other tent as well.

G1 - (End-to-end connection) Insert one rod with a spring-loaded lug "F" into the housings at the apex of the doors and inside the rod with holes "B" so to have the shorter pole set; position the spring-loaded lugs into the proper holes so to tension correctly. Do the same for the two pairs of side housings.

G2 - (End-to-side connection) – same as point G1 but inverting the rod with holes "B" so to have the longer pole set. Do the same for the two pairs of side housings.

G3 - (Side-to-side connection) - Insert two rods with a spring-loaded lug "F" into the housings at the apex of the doors and inside the rod with holes "B" on both sides; position the spring-loaded lugs into the proper holes so to tension correctly. Do the same for the two set of side housing.

H - Assemble the 2 pairs of rods "H" using the 2 rubber sleeves "I". Position the four assemblies at the tent door and about half way along rod "F".

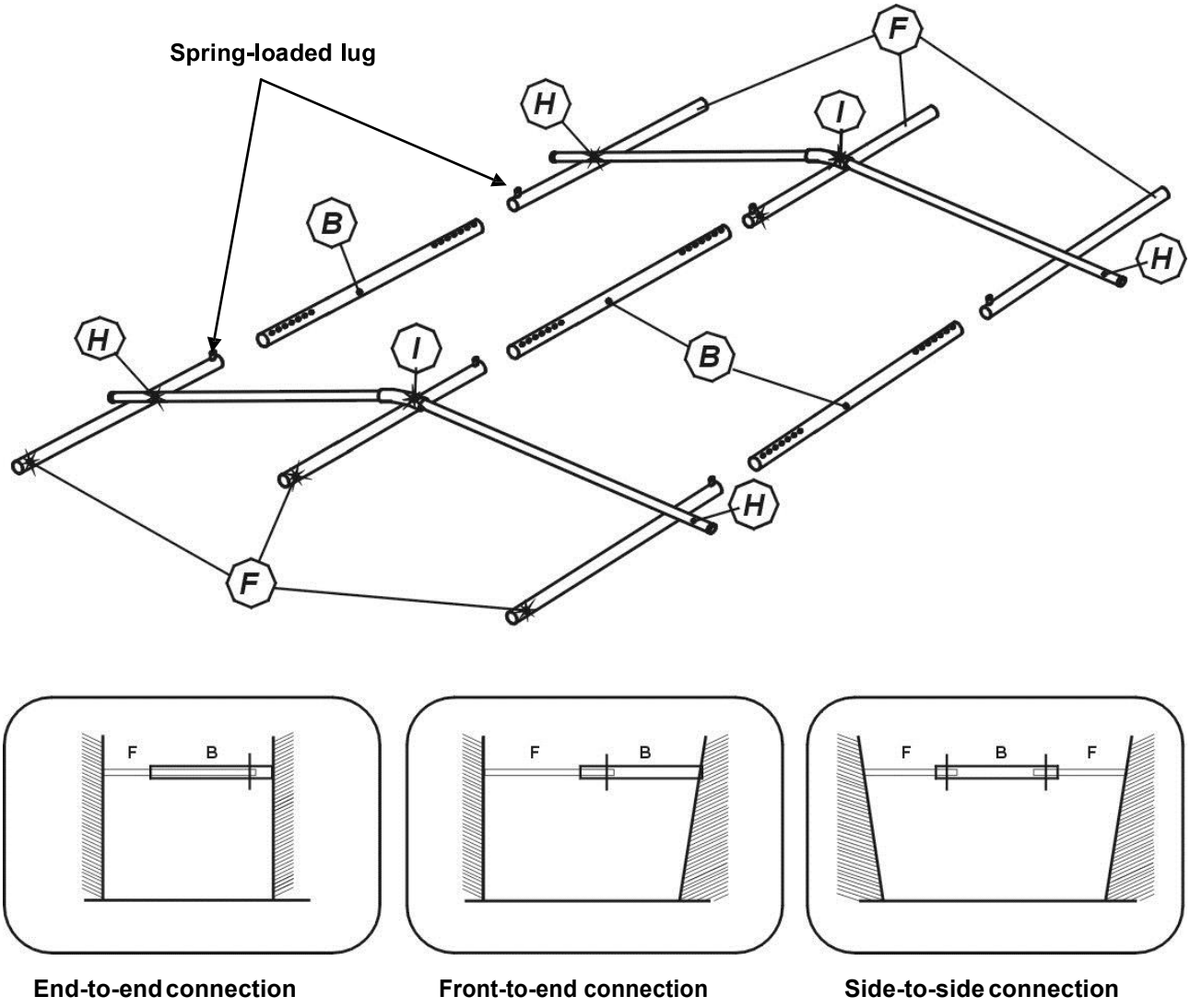


Figure 2.19 -Connecting corridor pole assembly diagram

2.10 USE CONFIGURATIONS OF THE WINDOWS

The tent is provided with six windows, three on each side. Each window consists of an opening with six holes protected by a fly screen, a clear panel and a curtain. The fly screen, the transparent panel and the curtain may be kept taut and fastened with Velcro strips and reinforced eyelets/loops on the edge of the window and alternatively may be rolled up (either separately or together) and held by means of button cords welded to the outside of the liner. Four configurations can be obtained in this manner (see figure 2.20):

1 - Window all open and panels all rolled up.

2 - Fly screen closed with Velcro tape to keep insects out and provide ventilation.

3 - Transparent panel closed equivalent to a closed window in a normal building.

4 - The curtain closed to make the inside of the tent dark.

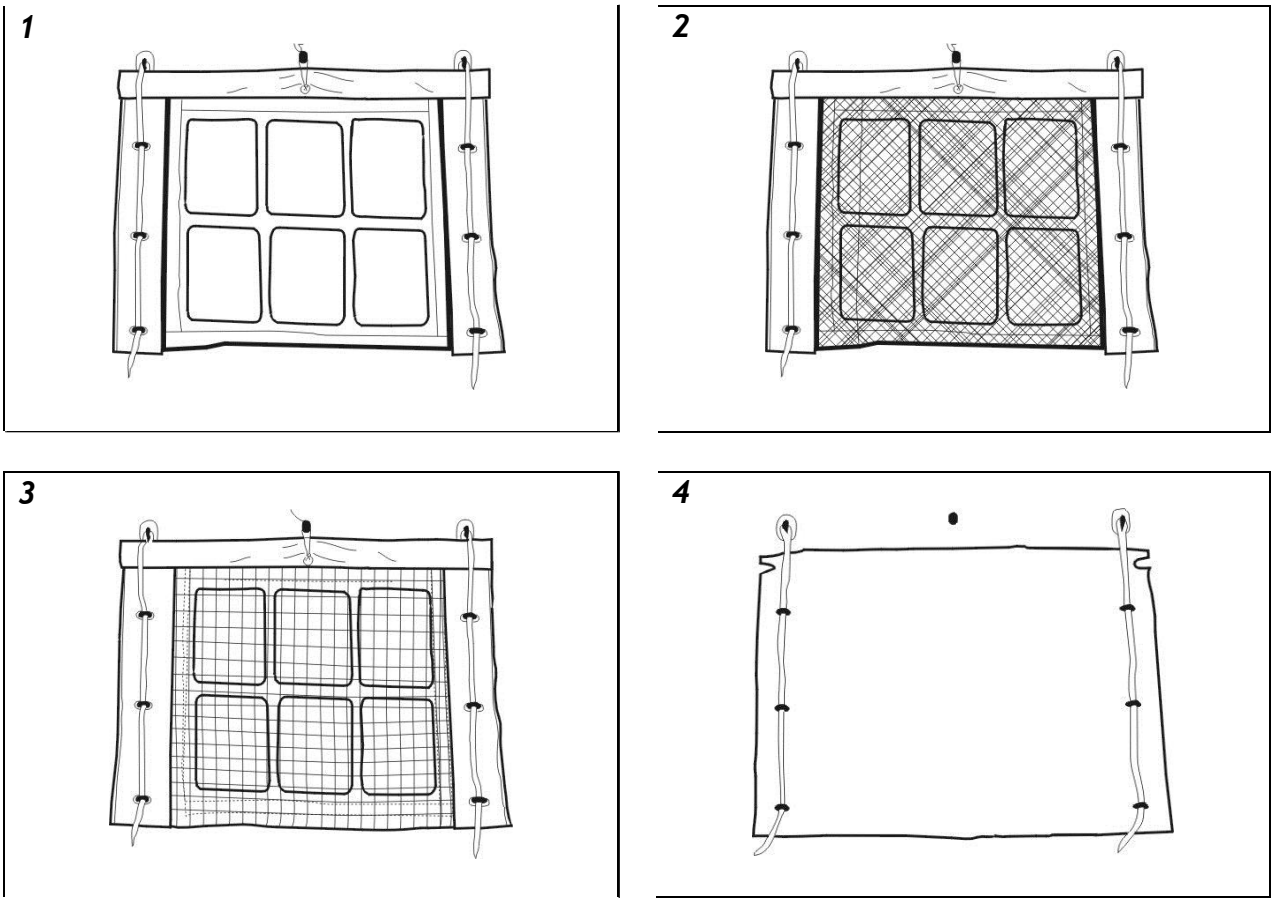


Figure 2.20 – Use configuration of the window

SECTION 3

DISASSEMBLY AND FOLDING OF THE TENT

3.1 DEFLATING THE TENT

The tent is obviously disassembled by reversing the assembly operation.

A - Firstly disassemble the internal accessories (dust mat, electric system). The insulation liners and the air distribution system can remain fitted inside the tent. Then clean the bottom of the tent.

B - Remove the sunshade as shown in paragraph 2.3 and put it back in its bag after folding it properly.

C - Remove the entrance module and put it back in the proper bag.

D - Close the doors, the curtains and the transparent window panels, and fasten them with the specific closing systems with which they are provided (braids, eyelets, loops and Velcro).

E - Remove all the stakes (from the base of the tent and from the guy lines), clean them and put them back in their bag.

F - Partially deflate the arches from the external valves leaving the tent partially and stability standing.

G - Remove the side spacer rods from the tent and put them in the pole bag.

H - Fully deflate the supporting arches and lock the external valve shutters in the open position. Position the tent as it deflates inside the footprint.

I - Fully deflate the sunshade pneumatic spacers.

J - Extract the inflation tube manifold and install it on the suction manifold (with the word "inlet") (fig. 3.1).

K - After closing the inflation valve shutters, press the tubes into the valves of the spacers and then into those of the arches (fig. 3.2). Turn the taps to open position.

L - Run the inflator until the spacers and/or arches are fully deflated.

M - Switch the inflator off and rapidly disconnect the tubes from the inflation valves.

N - Extract the tube from the inflator.

CAUTION! ***WHEN DEFLATING WITH THE ELECTRIC INFLATOR, BE VERY CAREFUL NOT TO SUCK DUST, DEBRIS, LIQUIDS OR OTHER MATERIALS INTO THE TUBE.***

NOTE: *THIS OPERATION MAY ALSO BE PERFORMED WITH THE MANUAL PUMP BY REVERSING THE DIRECTION OF INFLATION AND POSITIONING THE CORRUGATED TUBE INTO THE SUCTION HOLE OF THE INFLATOR.*

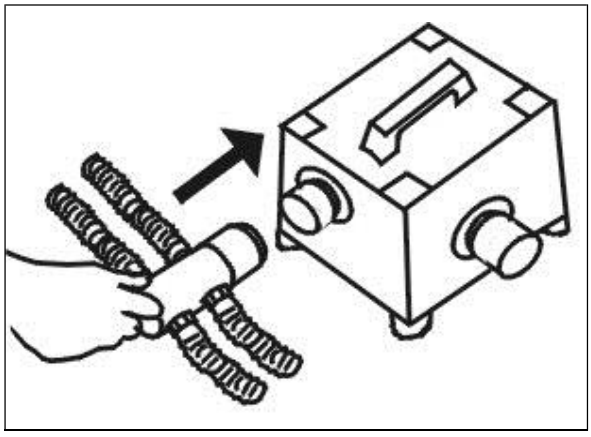


Figure 3.1 - Inflator tube engagement for deflation

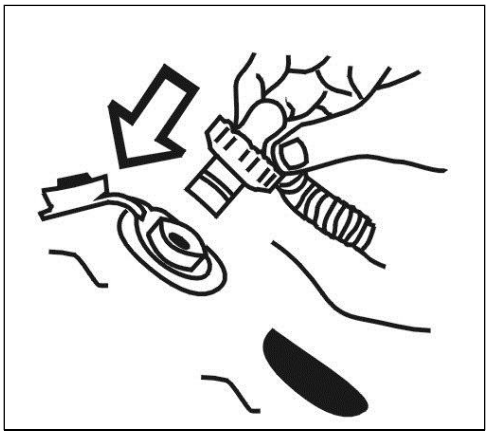


Figure 3.2 - Inflation valve tube pressure engagement

3.2 FOLDING THE TENT

NOTE: *TWO PEOPLE ARE REQUIRED FOR THIS OPERATION.*

O - After deflating the tubes, close the inflation valves and the protective flaps. The pressure relief valves must stay open.

P - When deflating the arches, make sure that the arches at the end of the deflating procedure assume the longitudinal position shown in figure 3.3.

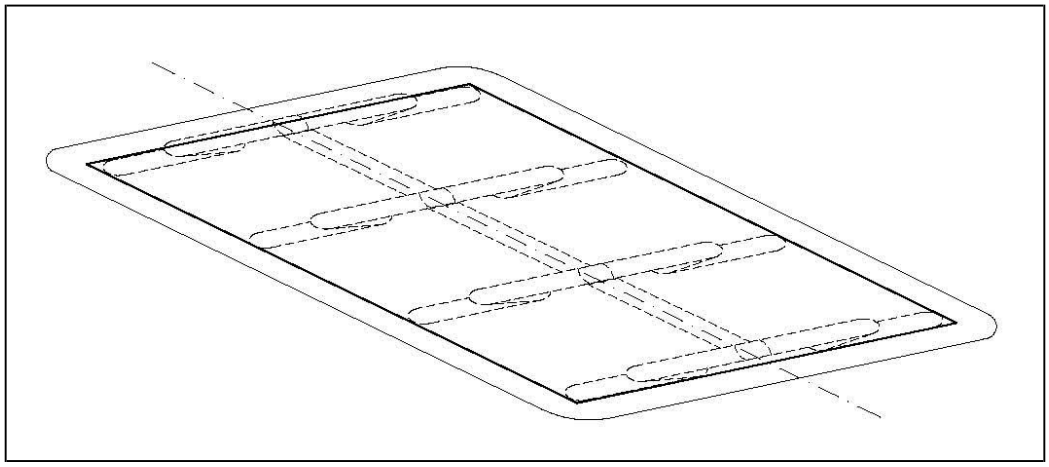


Figure 3.3 - Arrangement of the arches inside the deflated tent.

Q - Remove the three spacers from the sunshade as shown in paragraph 2.3 and place them in the bag.

R - Spread the tent pulling the four eyelets in the corners of the base footprint.

S - Roll up the guy lines and bind them so that they will not come loose, then start folding the tent.

T - Go to the sides of the tent at lift the edges to fold over the middle line of the footprint (fig. 3.4).

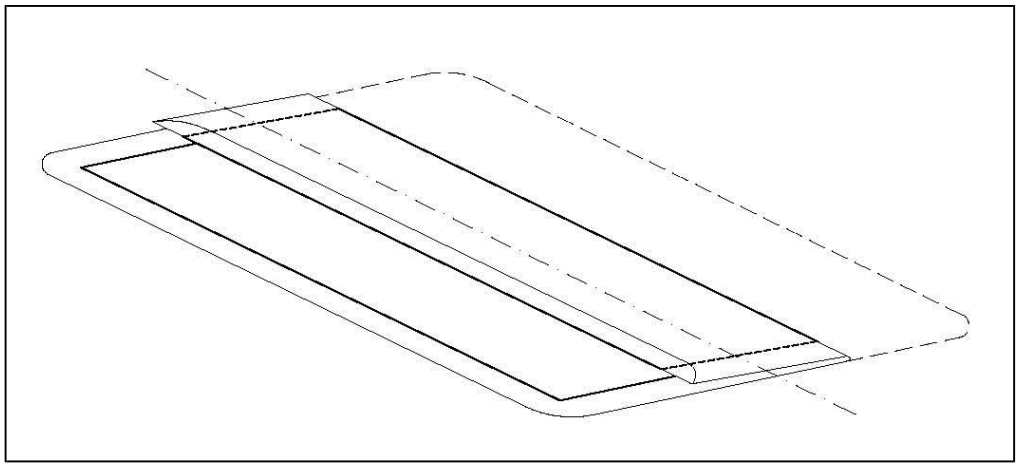


Figure 3.4 - First fold (right-hand side).

U - Repeat the operation on the other long side of the tent. The two folds may be perfectly overlapped (fig. 3.5).

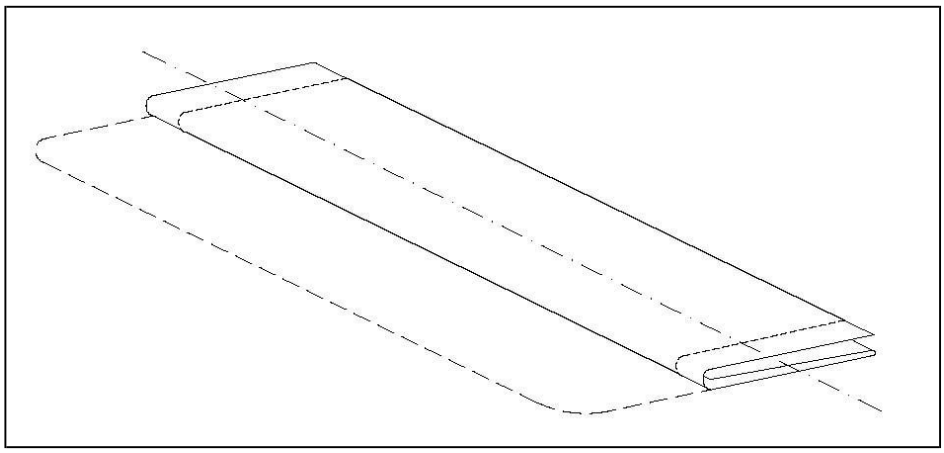


Figure 3.5 - Second fold (overlapping).

V - Fold in the direction of length rolling the tent up from the rear side to obtain a compact package sized 50"x28"x33" (fig. 3.6).

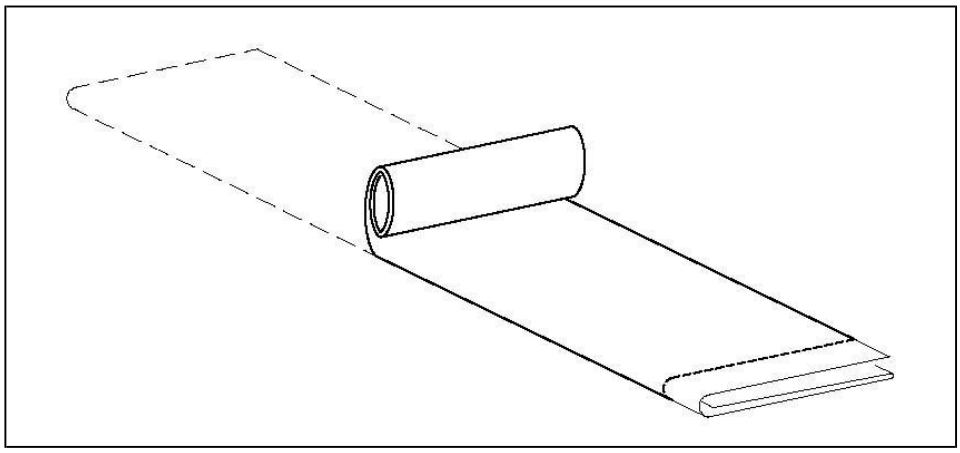


Figure 3.6 - Rolling.

W - Spread the bag by the side of the tent and roll up the package previously compacted using a belt in the middle of the bag (fig. 3.7).

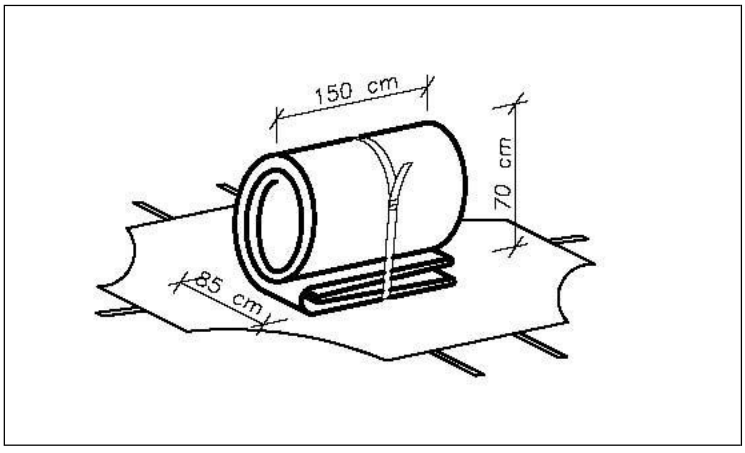


Figure 3.7 - Positioning in the bag.

Y - Then close the bag using the belts. The dimensions of the package in its bag must be approximately 51"x39"x27".

SECTION 4

INSPECTIONS AND OVERHAULS

4.1 FOREWORD

An inspection is an operation consisting in verifying the presence of all the accessories and the correct packaging in the corresponding bags. It also includes visually checking the integrity of the material.
An overhaul is an operation consisting in verifying the actual functionality of the material and repairing any damage.
The tent and the corresponding accessories must be inspect and/or overhauled by the scheduled terms shown below:

- **INSPECTION PRIOR TO DELIVERY**

To be performed on the premises of the organization to which the tent is supplied.	*Whenever the tent leaves storage.*

- ROUTINE OVERHAUL

To be performed on the premises of the organization to which the tent is supplied.	*After each use and always before returning the tent to storage.*

- GENERAL OVERHAUL AT THE MANUFACTURER'S PLANT

To be performed by the manufacturer.	*Whenever required by the organization or when interventions are required to repair damage which cannot be repaired by the organization.*

4.2 INSPECTION PRIOR TO DELIVERY

A - Visual inspection of bag integrity.

B - Check the bag contents using the checklist. Replace any missing parts using the spare parts list.

C - Deliver the tent if OK.

4.3 ROUTINE OVERHAUL

A - Assemble the tent.

B - Visually inspect the bags and the tent. Specifically:

- during tent assembly, check the bottom or footprint of the tent (the part in contact with the ground);

- after assembly, check the internal part of the bottom or footprint of the tent and then check the cover liner and the front panels.

C - Visually inspect the metallic parts, hinges, snap buttons, etc. to locate any rusty or deformed parts.

D - Test arch integrity as follows:

- Take the arch to working pressure (4.35 psi).
- Check and restore initial pressure if required after one hour.
- After four hours, check that the pressure has not dropped to less than 4.06 psi. Otherwise, proceed as shown in step 4.2.

E - Clean and wash the accessories.

F - Fold as shown in section 3.

NOTE: *WELDING REPAIRS MUST BE PERFORMED BY THE MANUFACTURER.*

SECTION 5

TENT REPAIRS

The tent is provided with a plastic repair kit in turn contained in the inflation system bag.
The contents of the repair kit are shown below:

Component	Quantity
Scissors	2 pcs
PVC fabric patches for cover liner (24''x20'')	1 pcs
PVC fabric patches for pneumatic arches (4''x4'')	10 pcs
PVC fabric patches for footprint (4''x4'')	10 pcs
Pressure relief valve caps	2 pcs
Pressure relief valve seals	8 pcs
Complete inflation valve	1 pcs
Inflation valve assembly tool	1 pcs
Pressure relief valve assembly tool	1 pcs
Minor EV/C2 two-component glue (8.82 oz)	1 pcs
Instruction manual	1 pcs

Figure 5.1 - Repair kit contents table.

5.1 WASHING AND CLEANING

Sweep and clean the footprint with a damp cloth. Automatic washing machines may be used: do not use temperatures higher than 100°C or strong chemical solvents.

Clean any part coming into contact with corrosive substances immediately. Repair the tent if damaged or sent to the manufacturer for general overhauling.

5.2 LOCATING PUNCTURES IN PNEUMATIC ARCHES

A - Inflate the arch at working pressure.

B - Check efficiency and sealing of all accessories (inflation and pressure relief valves) by pouring methylated spirits or soapy water onto them. The presence of air bubbles is indicative of an air leak.

C - Check the entire pneumatic arch and mark the located punctures.

CAUTION! ALWAYS CHECK FOR OTHER PUNCTURES ON THE ARCH.

D - Clean both surfaces to be glued together by rubbing hard with a cloth and MEK (methyl ethyl ketone) solvent or methylated spirits. Wait for the solvent to evaporate between each application.

CAUTION! BOTH METHYLATED SPIRITS AND METHYL ETHYL KETONE ARE HIGHLY FLAMMABLE LIQUIDS. KEEP AWAY FROM NAKED FLAMES. ALWAYS ADOPT THE NECESSARY PRECAUTIONS BEFORE USING THESE SUBSTANCES.

E - Prepare the EV/C2 two-component glue. Add catalyzer to the base component in a proportion of 5% by volume or 8% by weight.

F - Having joined the two components, shake hard to mix them well. Use the glue by 2 hours.

CAUTION! ***OBSERVE THE SAFETY RULES AND REGULATIONS IN FORCE FOR APPLYING GLUE, SPECIFICALLY READ THE GLUE INSTRUCTIONS CAREFULLY.***

WARNING: PERFORM REPAIR OPERATING WITH EVC2 GLUE IN THE FOLLOWING ENVIRONMENTAL CONDITIONS: TEMPERATURE > 5°C; RELATIVE HUMIDITY < 60%

G - Cut a patch of fabric approximately 1" larger than the puncture.

H - Apply a first layer of glue onto both sides to be glued together and wait for 5 minutes. It is advisable to delimit the area where the patch will be applied with adhesive paper before starting. This will avoid dripping glue outside the repair area.

I - Apply a second layer and wait for other 5 minutes.

J - Apply another layer of glue and leave to dry for approximately 10 minutes before gluing.

K - Arrange the patch on the damaged part and make the two glued areas coincide.

L - Press hard, preferably with a roller, on the entire glued part.

M - Wait for at least 24 hours before re-inflating the part concerned by the repair.

5.3 REPAIRED PNEUMATIC ARCH TEST

Pour methylated spirits or soapy water on the repaired surface and examine the edge of the patch. Then:

A - Inflate the arch at working pressure (measure the pressure using the pressure gauge).

B - Check and restore initial pressure if required after one hour.

C - After one hour check with methylated spirits or soapy water for leakage of air from the repaired area.

5.4 PNEUMATIC ARCH REPLACEMENT PROCEDURE

DISASSEMBLY

The arch is connected to the tent by means of special plastic material bolts with fastening wing. After deflating the arch to be replaced, remove the bolts fastening the arch to the tent and arrange the wing so that it may pass through the hole in the eyelet.

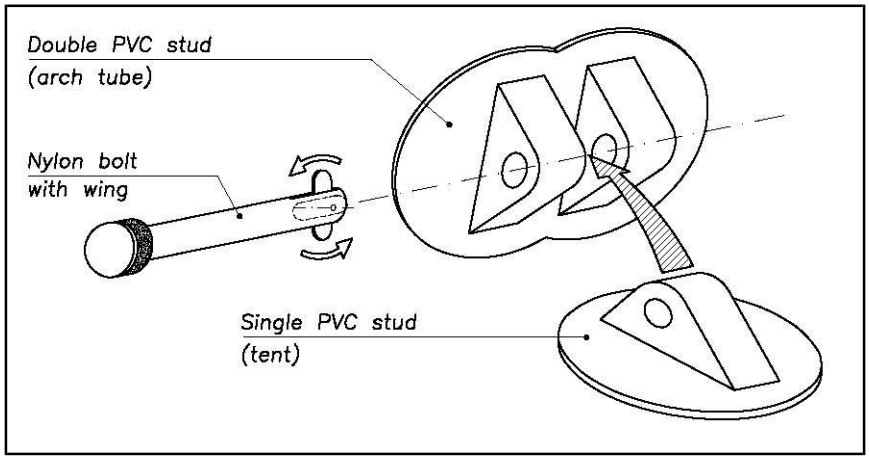
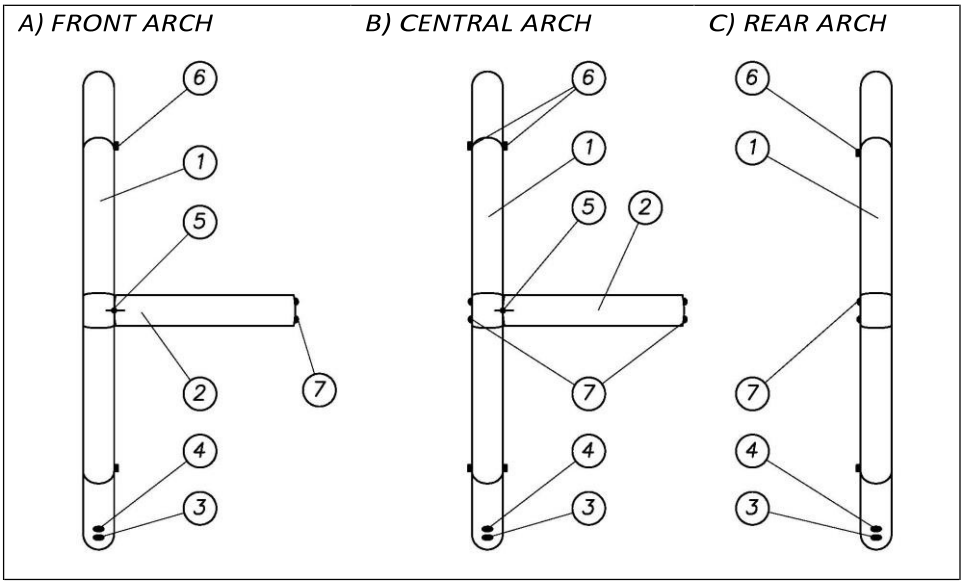


Figure 5.2 - Connection by means of wing bolt.

CAUTION! ***THE FRONT AND CENTRAL PNEUMATIC ARCHES COMPRISE THE PNEUMATIC SPACER CONNECTED TO THEM BY MEANS OF BOLTS AND A CONNECTION VALVE: DO NOT REMOVE THE SPACER FROM THE ARCH TO WHICH IT IS CONNECTED BY MEANS OF THE VALVE.***

ASSEMBLY

Before assembly, check that the arch is positioned correctly and then put all the bolts in place while the tube is still deflated. Inflate the tube after the operation.



Part	Component	Qty	Qty	Qty
1	Pneumatic arch	1	1	1
2	Pneumatic spacer	1	1	-
3	Pressure relief valve	1	1	1
4	Inflation valve	1+1	1+1	1+1
5	Arch-spacer connection valve	1	1	-
6	Pole inserts	2	4	2
7	Arch-arch connections	3	6	3

Figure 5.3 - Arch types.

5.5 INFLATION AND PRESSURE RELIEF VALVES

INFLATION VALVE - DISASSEMBLY

A - Partially loosen the valve body using the specific tool (with the tube inflated).

B - Deflate the tube.

C - Fully loosen and remove the valve body and recover the inner locking ring nut through the hole in the tube.

INFLATION VALVE - ASSEMBLY

D - Insert the ring nut in the hole and grip from the outside of the tube to hold it still.

E - Insert the valve body and center it in the anchoring hole. Then push the valve hard by hands and then with the tool.

F - Inflate the tube until it is not cylindrical (the internal pressure must be low). Tighten with the specific tool, then inflate the tube at the working pressure and tighten the valve one last time.

PRESSURE RELIEF VALVE - DISASSEMBLY

> ***NOTE:*** *THE PRESSURE RELIEF VALVE IS LARGER THAN THE CORRESPONDING HOLE IN THE TUBE. THEREFORE YOU MUST REMOVE THE INFLATION VALVE AND THEN LET THE BODY OF THE PRESSURE RELIEF VALVE OUT FROM THIS HOLE.*

A - Partially loosen the inflation and pressure relief valves using the specific tools with the tube inflated.

B - Then disassemble the inflation valve and extract it from the hole.

C - Fully loosen the locking ring nut and push the pressure relief valve body to the tube.

D - Recover the pressure relief valve body through the inflation valve hole.

PRESSURE RELIEF VALVE - ASSEMBLY

E - Insert the pressure relief valve body in the pressure relief valve hole.

F - Position the new pressure relief valve in its seat, tighten with your hands and then with the tool.

G - Refit the inflation valve in its seat.

H - Now inflate the tube until it is not cylindrical (the internal pressure must be low). Tighten the valves with the specific tools, inflate again by slightly increasing the pressure and tighten again. Repeat this operation several times, increasing the pressure each time. Then inflate the tube at the working pressure and tighten the valve one last time.

SECTION 6

SAFETY INSTRUCTIONS

6.1 GENERAL INSTRUCTIONS

Ventilate the environment inside the tent using the specific vents on the front panels, the windows and the doors when there are many people inside the tent or after performing activities which may have caused the development of harmful gas.

> ***CAUTION! NEVER USE WATER TO PUT OUT A FIRE NEAR ELECTRIC EQUIPMENT. USE FIRE EXTINGUISHERS OF THE APPROPRIATE CLASS. NEVER WASH ELECTRIC COMPONENTS WITH JETS OF WATER: UNPLUG THE DEVICE AND USE A DAMP CLOTH.***

6.2 BAD WEATHER

Check the stakes, check that the guy lines are taut and in good conditions and close the doors and the windows in strong wind.

> ***CAUTION! MAKE SURE THAT THERE ARE NO SHARP OR POINTED OBJECTS IN THE VICINITY WHICH COULD BE PUSHED BY THE WIND AGAINST THE TENT OR WHICH COULD COME INTO CONTACT WITH THE LINER OR THE PNEUMATIC TUBES OF THE TUBE AS THE TENT MOVES IN THE WIND.***

6.3 SNOW

The tunnel shape of the tent makes most of the snow slip down the sides. Simply push the upper part of the liner of the tent and the entrance module upwards occasionally to clear the top. The operation may be performed from the outside or the inside of the tent.

6.4 RAIN

The liner is shaped to avoid water loads caused by rain alone. Carefully close the doors and windows.
In order to improve waterproofing, it is advisable to dig a trench around the perimeter of the tent to convey rainwater away.

SECTION 7

LIST OF SPARE PARTS

7.1 MANUFACTURER

Please address requests for pneumatic tents and spare parts to the manufacturer:

Western Shelter Systems
815 Conger St., Eugene OR 97402
www.westernshelter.com
800-971-7201

Specify the following information in your order:
- The identification (P/N) of the part you need with a short description.
- The amount you need.

7.2 TENT AND STANDARD ACCESSORIES

DESCRIPTION	P/N
3 ARCHES 2 DOOR PNEUMATIC TENT (SPECIFY COLOR)	SW-SII3
4 ARCHES 2 DOOR PNEUMATIC TENT (SPECIFY COLOR)	SW-SII4
5 ARCHES 2 DOOR PNEUMATIC TENT (SPECIFY COLOR)	SW-SII5
BAG FOR TENT (GREY COLOUR)	PA-BGSII
BAG FOR POLES (GREY COLOUR)	PA-BGSIIPL
BAG FOR STAKES (GREY COLOUR)	PA-BGSIIHWTS
BAG FOR INFLATOR AND REPAIR KIT (GREY COLOUR)	PA-BGSIIINF
FRONT INTERNAL ARCH	PA-SIIFARCH
CENTRAL INTERNAL ARCH	PA-SIICARCH
REAR INTERNAL ARCH	PA-SIIRARCH
SPACER ROD (PURLIN)	PA-SIIPURLIN
VENTILATION BAR	PA-SIIVENTBAR

PLASTIC WING BOLT	PA-SIIWBOLT
INFLATION VALVE (COMPLETE)	PA-SIIINV-C

DESCRIPTION	P/N
PRESSURE RELIEF VALVE (COMPLETE)	PA-SIIPRV-C
SPANNER FOR INFLATION VALVE	PA-SIIIVSPAN
SPANNER FOR PRESSURE RELIEF VALVE	PA-SIIPRVSPAN
SCREEN FOR WINDOWS	PA-SIIWSCREEN
SCREEN FOR VENTILATION	PA-SIIVSCREEN
16'' STAKES	PA-SIISTAKE
GUY ROPE WHITE L=3'3"	PA-SIIGROPE-W
BLACK ROPE L=3'3"	PA-SIIGROPE-B
HAMMER 4.6 lbs	PA-SIIHAMMER
MANUAL INFLATOR	PA-SIIMANINF
TENT REPAIR KIT	PA-SIIRKIT

7.3 OPTIONAL ACCESSORIES

Inner insulating liner

DESCRIPTION	P/N
FRONT/REAR INSULATING LINER	PA-SIIISLE
CENTRAL INSULATING LINER	PA-SIIISLC

Sun Shades

DESCRIPTION	P/N
SUN SHADE SHEET FOR 3 ARCHES TENT	PA-SIISS3A
SUN SHADE SHEET FOR 4 ARCHES TENT	PA-SIISS4A
SUN SHADE SHEET FOR 5 ARCHES TENT	PA-SIISS5A

Electric inflator and accessories

DESCRIPTION	P/N
EURO ELECTRIC INFLATOR 4.35 psi	SO-ELINPM
3 ARCH HOSE KIT	PA-HOSSII3
4 ARCH HOSE KIT	PA-HOSSII4

5 ARCH HOSE KIT	PA-HOSSII5
TUBES SET FOR PRESSURE MAINTENANCE	PA-SIIPMT
MASTER BLASTER INFLATOR	SO-ELIN

Entrance modules and joining corridors

DESCRIPTION	P/N
ENTRANCE MODULE (SPECIFY COLOR)	SO-VESII
UNIVERSAL CONNECTING CORRIDOR (SPECIFY COLOR)	SO-VCSII