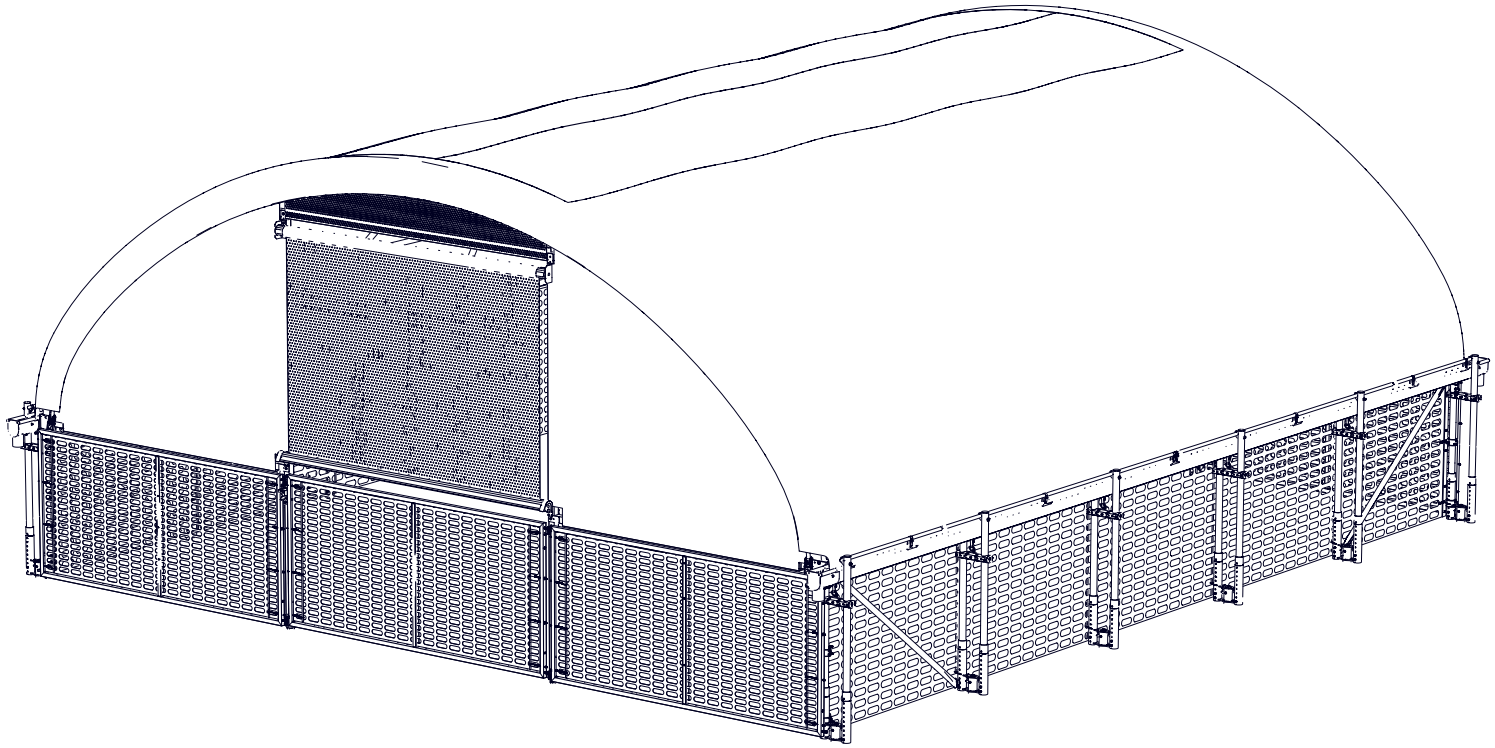
Agri Span 9 X 10/ Installation Manual



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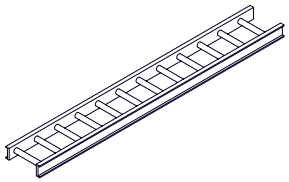
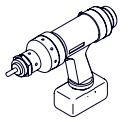
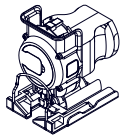


X 2 3.6m Combination ladder

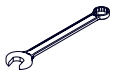
X 1 11mm Rope/ 30.0 metre length



X 2 1/2” Impact driver



X 1 Petrol Winch
(Optional But Strongly Recommended)

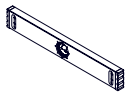


X 2 17mm, 13mm Spanner

X 1 Ratchet spanner

X 1 13mm Socket

X 2 17mm, 24mm Socket



X 1 1m+ Spirit level

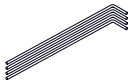
X 2 30m Tape measure

X 1 8m Tape measure

X 1 Ground marking spray

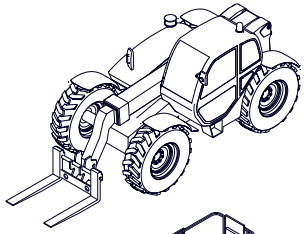
X 1 String line

X 1 Line bubble

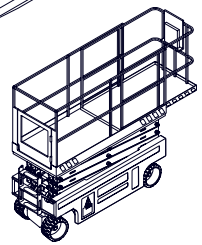


X 6 Line Pegs

Optional Powered Plant



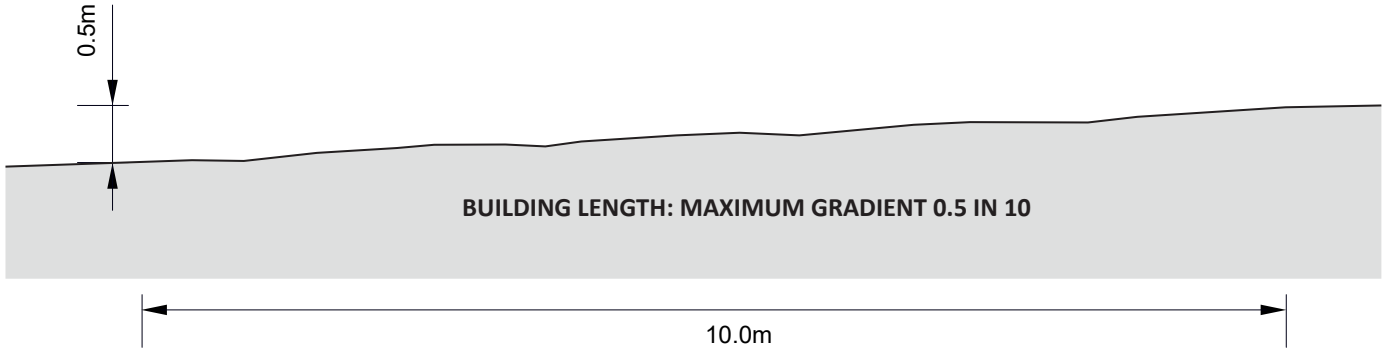
X 1 Telescopic Handler/ 12.0M 3.0 tonne
For Lifting Hoops & Installing Main Sheet

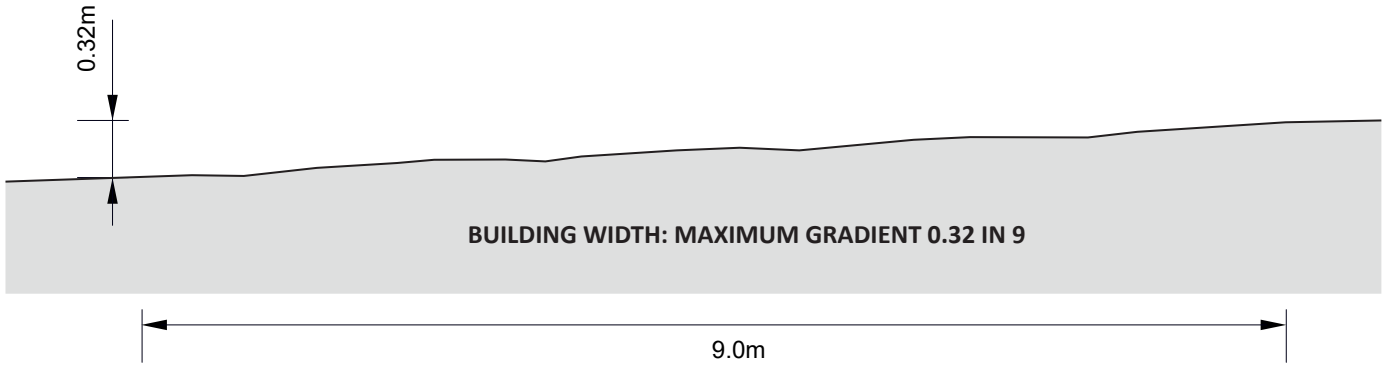


X 1 Scissor lift, 10.0m/ All-terrain Diesel
For Fitting Purlins & Gable Cross Bracing

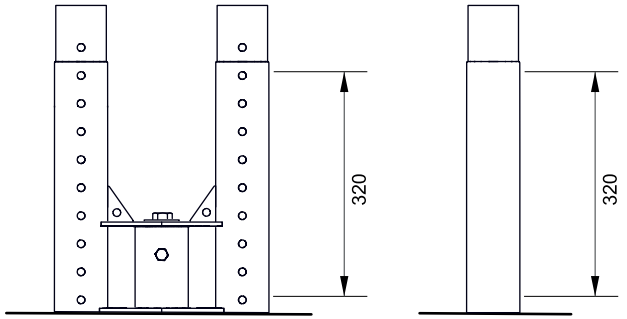
Step 1. Assessing the site. The AgriSpan structure is 9.36 metres wide by 10.0 metres long. The maximum gradient across the length of the building is 0.5 in 10, the maximum gradient across the width of the building is 0.32 in 9 (both shown in the illustrations below). Before committing to marking out the site, it is important to work out the highest and lowest points, roughly mark the positions of the 4 corners of the building, if these appear to be out of the buildings working range it will be prudent to consider adjusting the exact building location or skimming the ground at the high points.

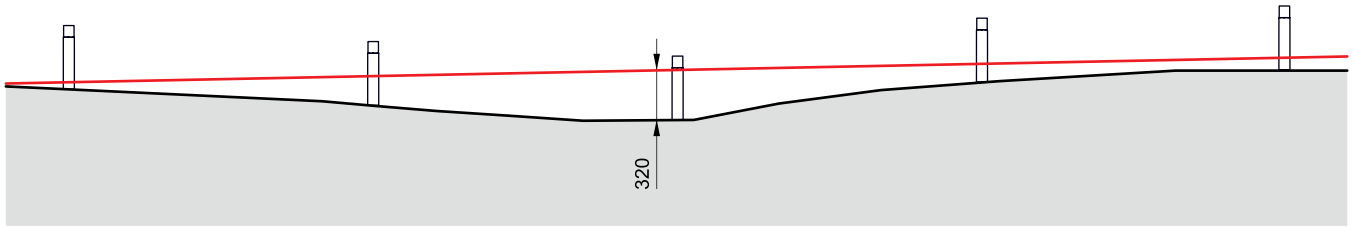
The principle of the set-up is to install the building level across it's width and create a shallow drop along the length to assist with gutter flow.

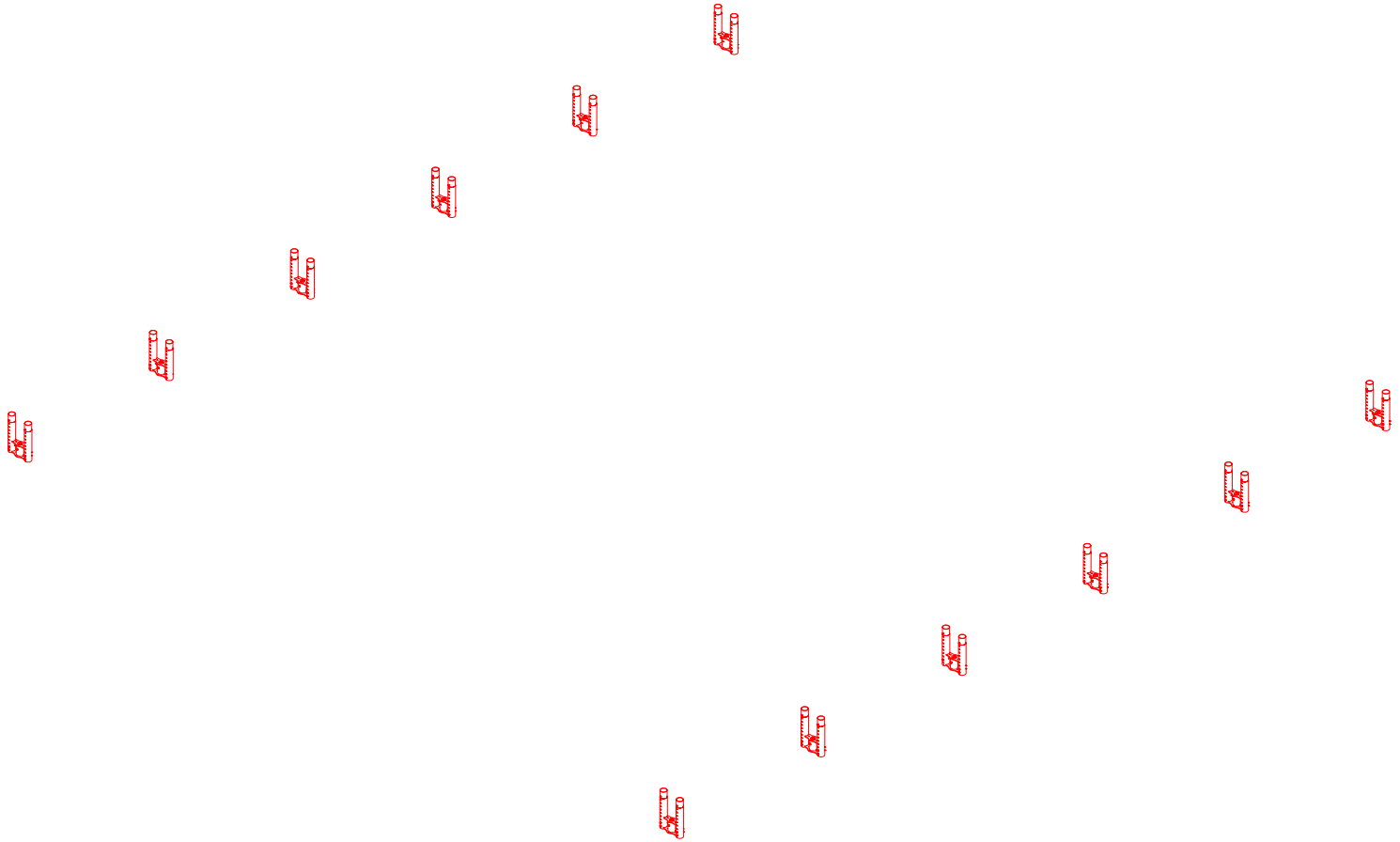




Assessing the site. Each anchor point has an independent height adjustment range of 320mm this is to accommodate undulations in the ground across the anchor plan and provide adjustment to level/ drop the anchor lines across the buildings footprint.

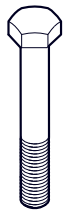




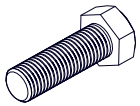


Section contents/

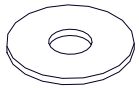
X 24 - M10 Nyloc Nut



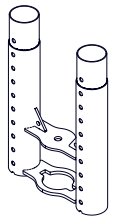
X 24 - M10 X 90 Bolt



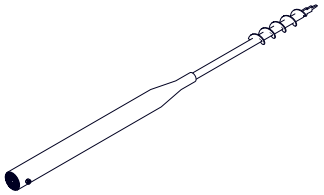
X 22 - M16 X 40 Set



X 22 - M16 Mudwing Washer



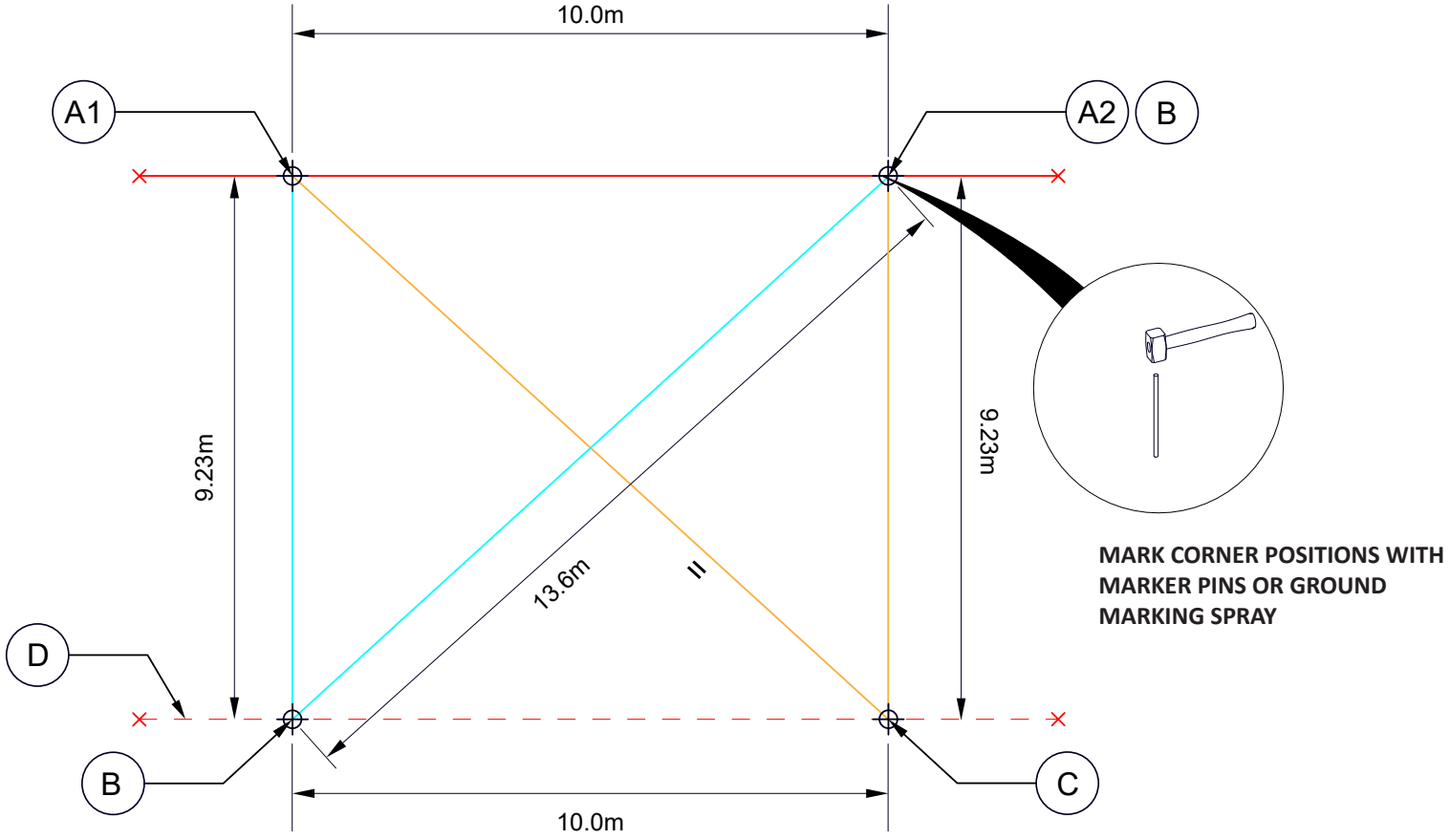
X 12 - Hoop Socket



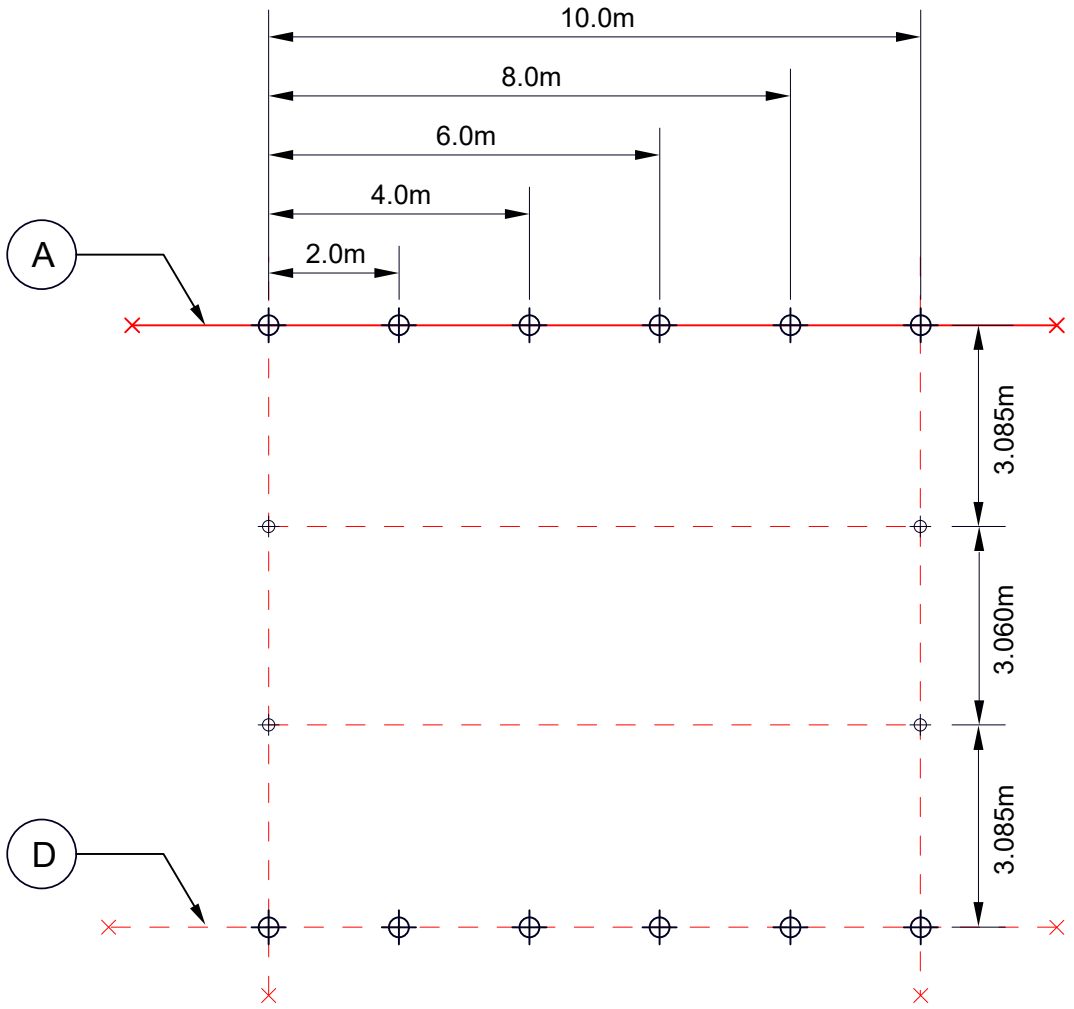
X 12 - Anchor

Step 1. Mark out the corner positions of the building using the measurements and method below to ensure the anchor plan is square.

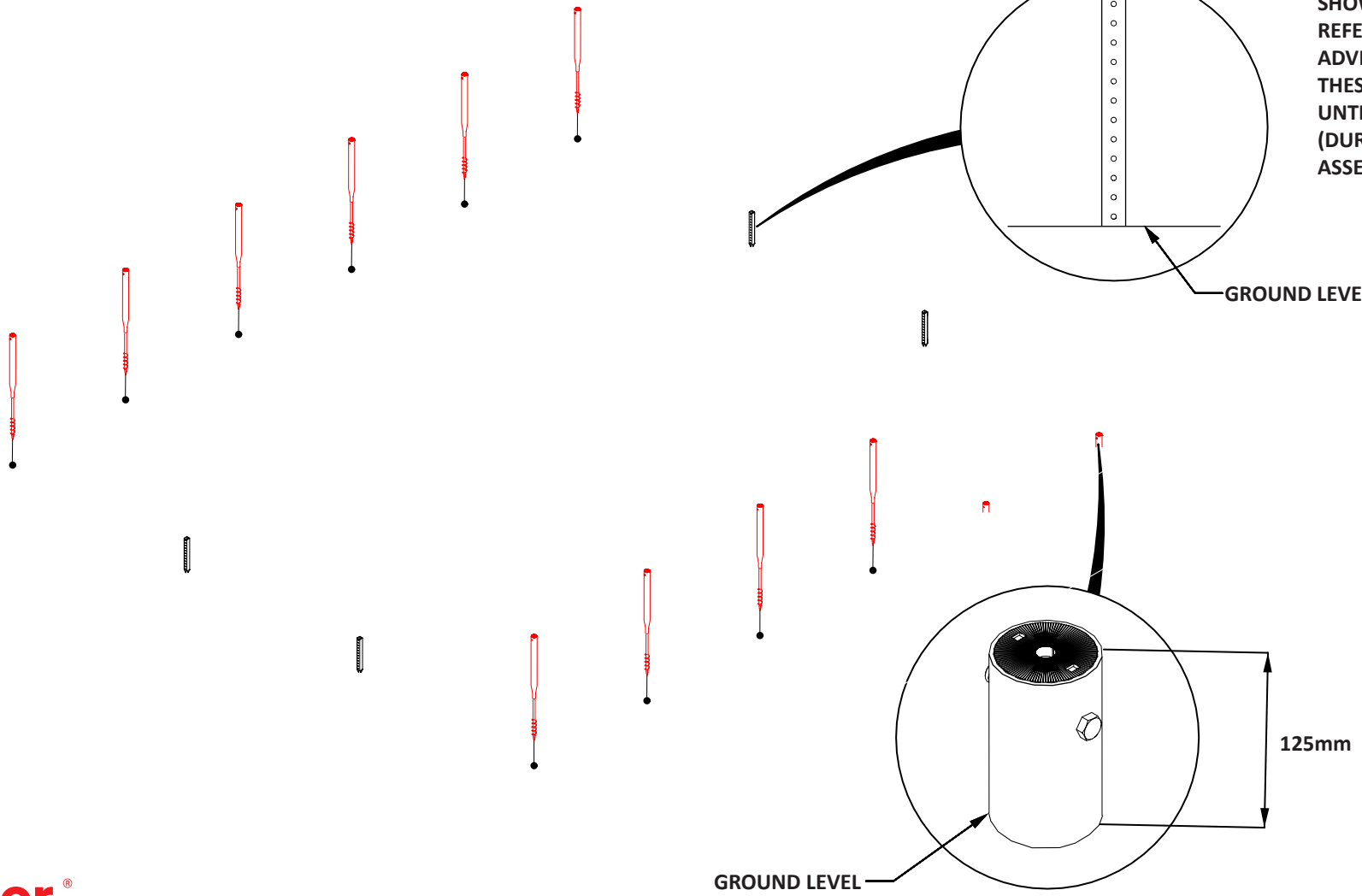
A. Set a string-line to mark the edge of the building, pin the string line in excess of 10 metres (shown in red). Within this string-line mark two points 10 metres apart - shown in positions A1 and A2 on the illustration, these will be the first two corners of the building. Do not remove the string-line.
B. Pin/ mark the position B using the two measurements shown to set the gable end at 90 degrees from the first edge. This will be the start of the anchor line on the opposing side of the building.
C. Pin/ mark the final corner position 'C' using the measurements shown - this will set the second gable end at 90 degrees from the first edge.
D. Set a tight string-line passing through points B and C. Check that the measurement between B and C is 10 metres.



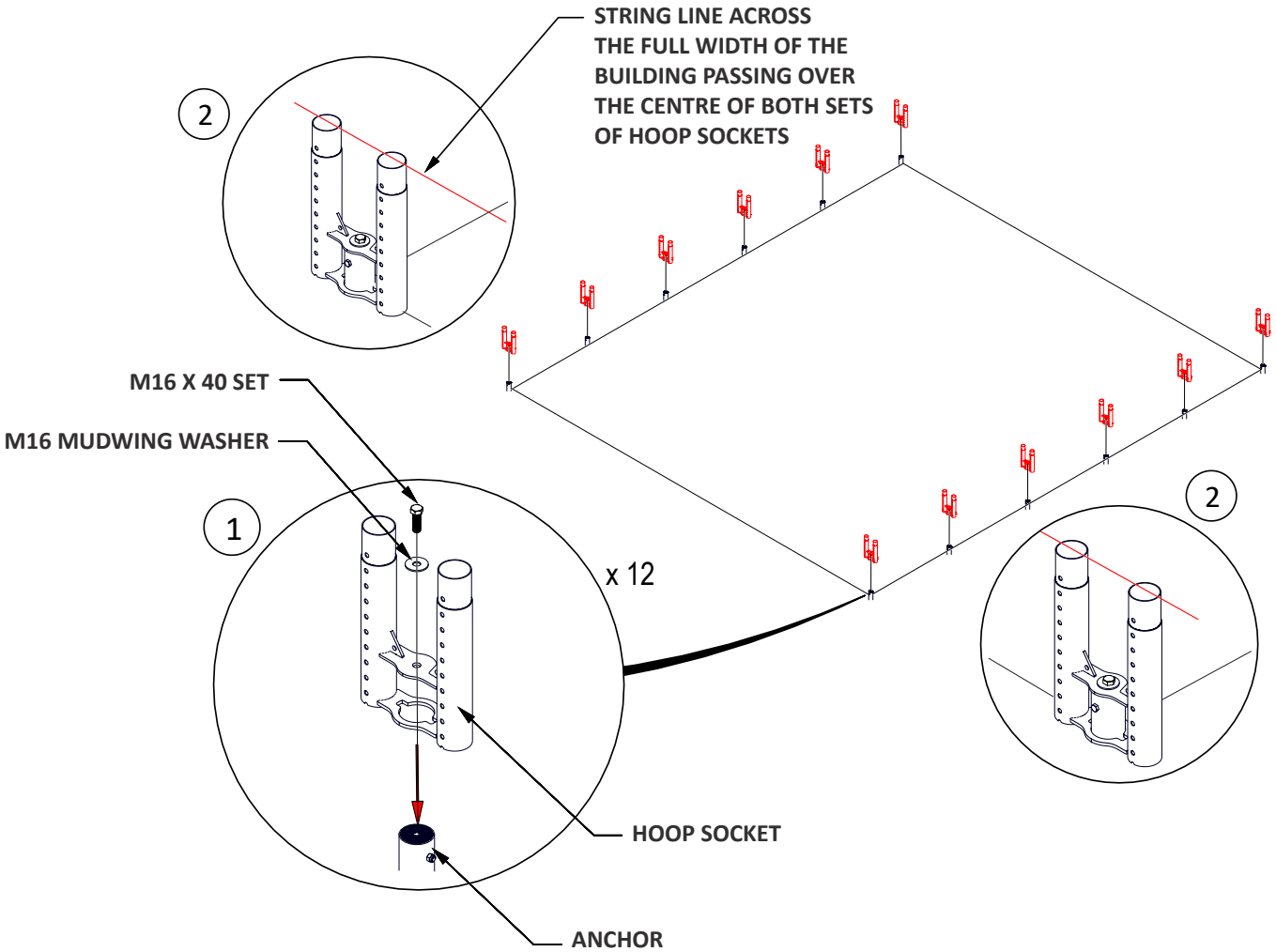
Step 2. Mark all the intermediate anchor positions along string-lines A and D. Always measure from one end to each anchor position as illustrated, do not stack dimensions.
NOTE: Accuracy is important throughout the anchor plan, however, It is most important to achieve the exact 2 metre spacing between the first and second set of anchors at each gable end.

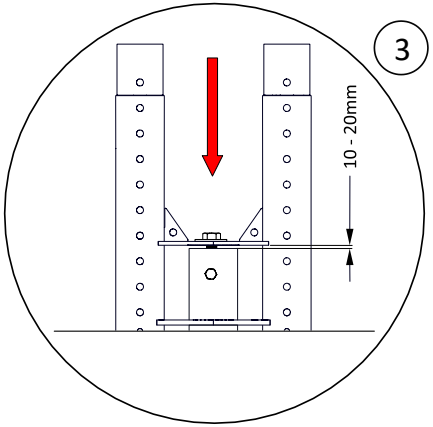


Step 3. Drive the anchors into the ground leaving 125mm of the top of the anchor above the ground. Ensure anchors are driven into the ground vertically - use a post level during installation if necessary.



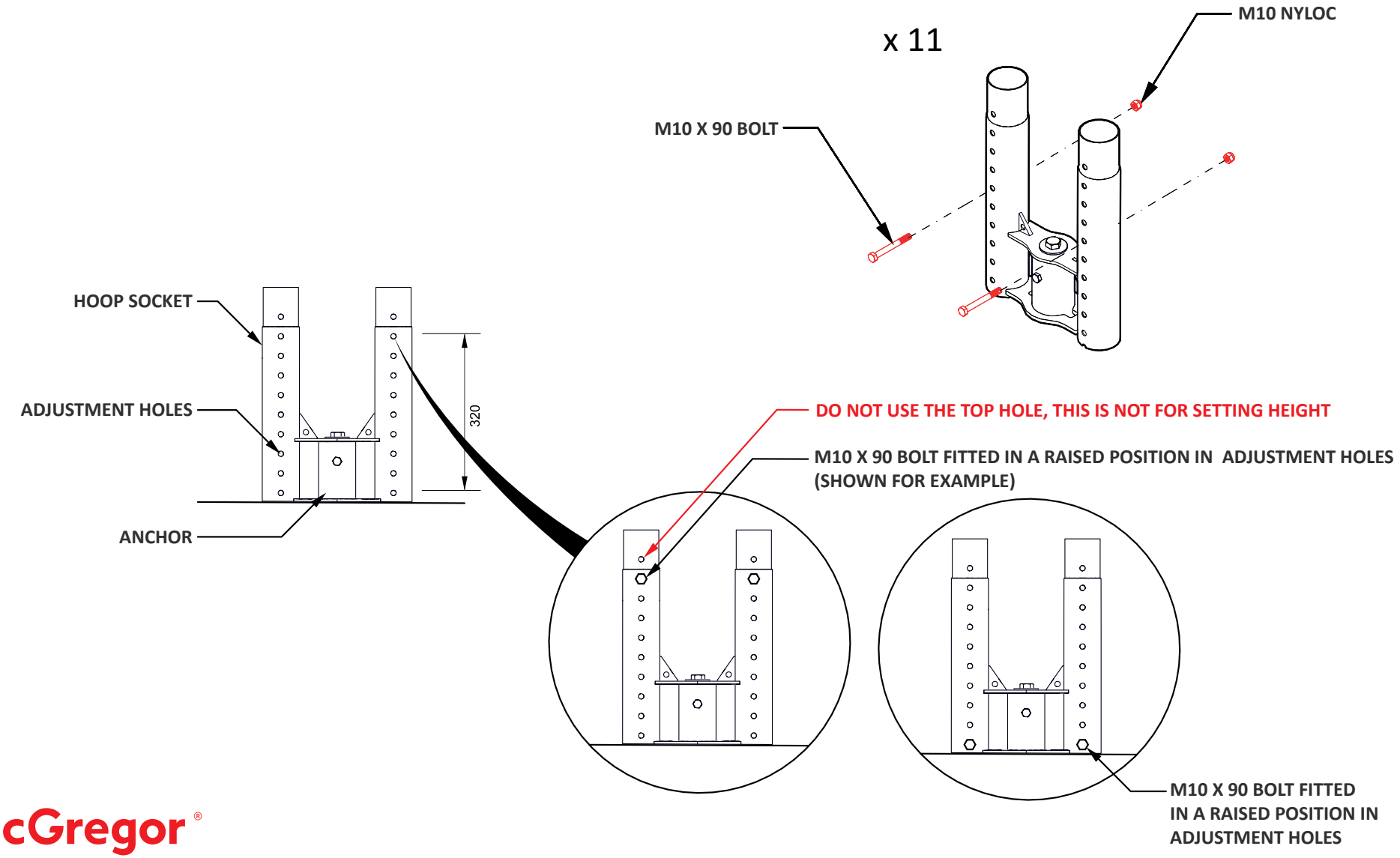
Step 4. Fit and align the hoop sockets. For each anchor position slide a hoop socket onto the 125mm anchor end that extends above the ground. Once located on the anchor, rotate the hoop socket so that the two tubes sit at 90 degrees opposing to the anchor line, a simple way to achieve this is to pull a string line tight across the width of the building so that it passes over the hoop sockets - then rotate the sockets until they align with the string line. Secure the hoop socket with an M16 X 40 set + M16 mudwing washer, as detailed below.





THE HOOP SOCKETS SHOULD REST ON THE GROUND, CREATING A CLEARANCE OF 10 - 20MM BETWEEN THE TOP OF THE ANCHOR AND THE HOOP SOCKET. TIGHTENING THE M16 BOLT SHOULD COMPRESS THE HOOP SOCKET INTO THE GROUND, CREATING A FIRM CONNECTION

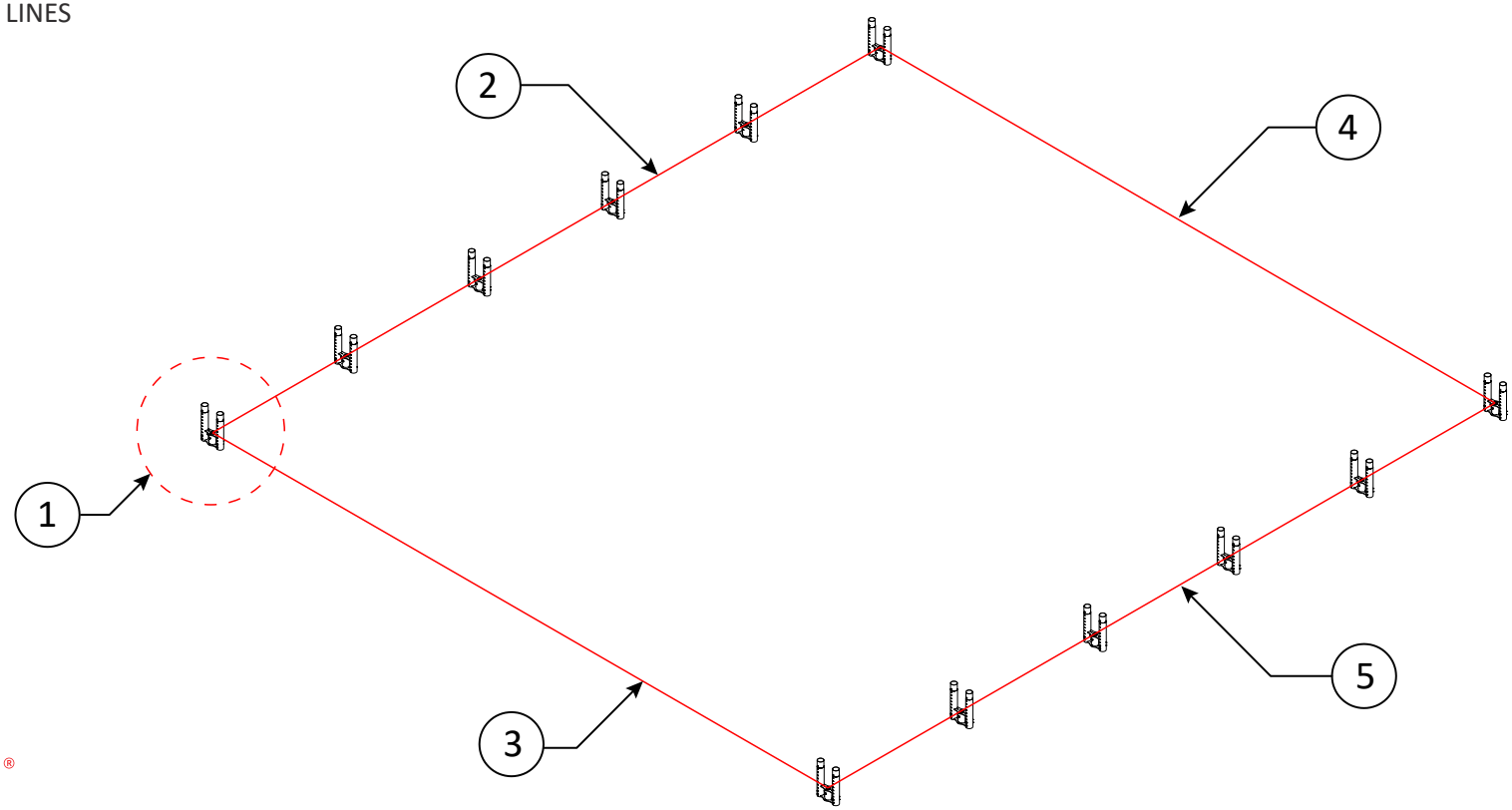
Anchor height adjustment overview. Anchor height is adjusted using the adjustment holes on the hoop socket. Work with string lines along the length of the building at the set its position to achieve a drop along the length **(reference pages 13, 14, 15 & 16).** Where the line passes across the anchor, identify the closest hole to the string line and insert a M10 x 90 bolt and fit an M10 nyloc nut to secure the bolt - tighten bolts to touch, do not over tighten.



Setting up string lines. Identify the corner anchor at the highest position, for illustration purposes this is marked in position 1 in the diagram below. Orientate the diagram to align with your site. Now work through the string lines in the number sequence shown below. **Reference pages 14 & 15 for general setup on flat and sloping sites.**

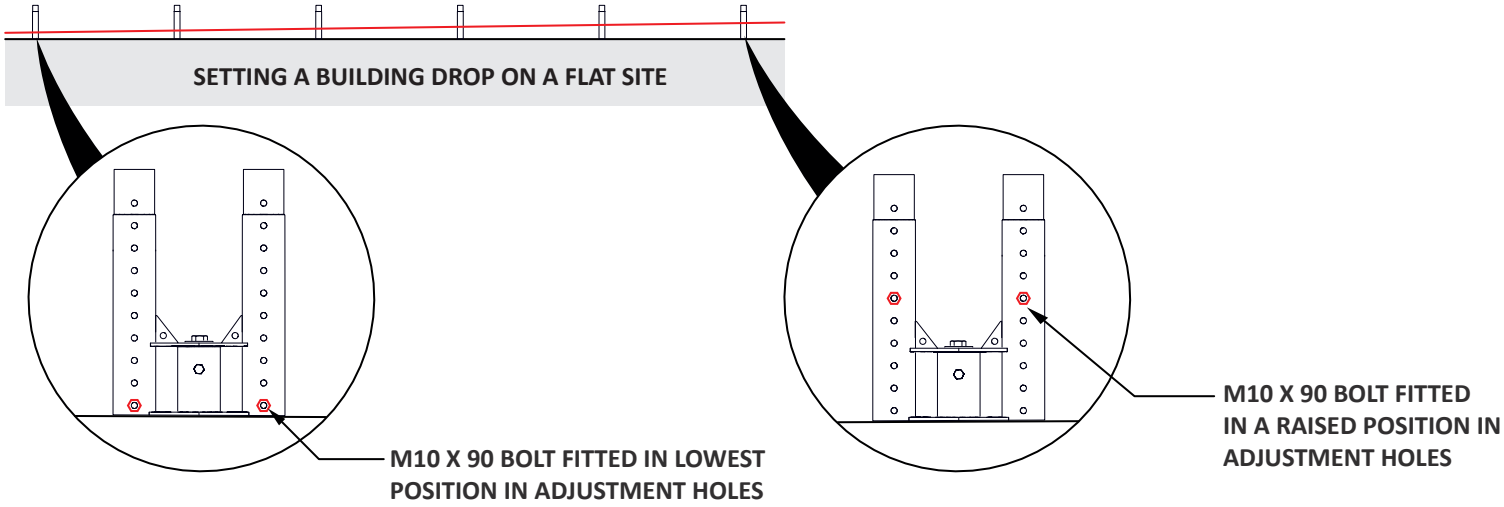
1. On the highest corner anchor (marked as 1 on the diagram), fit the bolt (with nut) at the lowest adjustment hole on the hoop socket.
2. Run a string line along the length (marked 2) so that a shallow drop is created away from point 1 - insert the bolt in the appropriate hole at the far end of the building.
3. Run a string line across the gable end (marked 3) to set the building level across its width - insert the bolt in the appropriate hole.
4. Run a string line across the opposing gable end (marked 4) to set the building level across its width - insert the bolt in the appropriate hole.
5. Run a string line between the inner bolt positions on each of the corner anchors (fitted at step 3 & 4) - marked 5 on the diagram.

Checks and adjustment
Check the alignment of the string lines 3 & 4 - adjust accordingly
Check the alignment of the string lines 2 & 5 - adjust accordingly
Following the above checks it may be necessary to adjust your starting height at point 1
DO NOT REMOVE STRING LINES

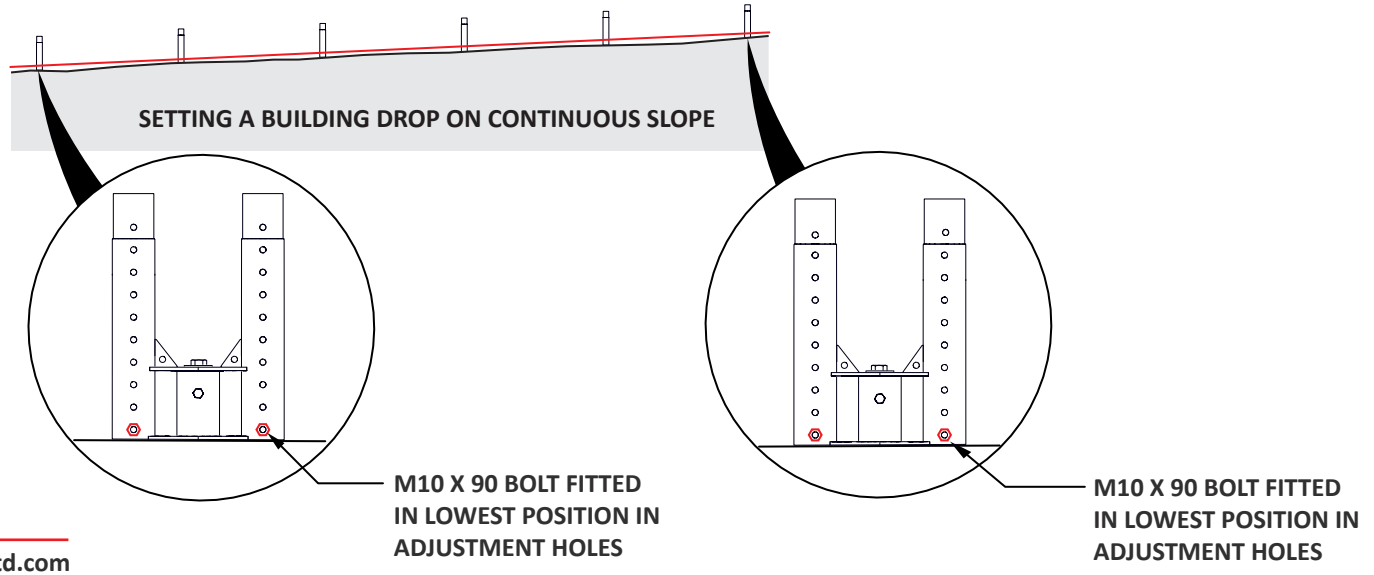


Setting a drop along the length of the building. To create gutter flow, the building should be set with a continuous drop along its length. The two examples illustrated below show exaggerated versions of a flat and sloped site. With this example of a flat site the height is set to drop from right to left using different adjustment hole heights. In the example of a site with a continuous slope all the heights are set at the same level so that the building slopes with the land.
Ensure your anchor setup matches one of these two scenarios.

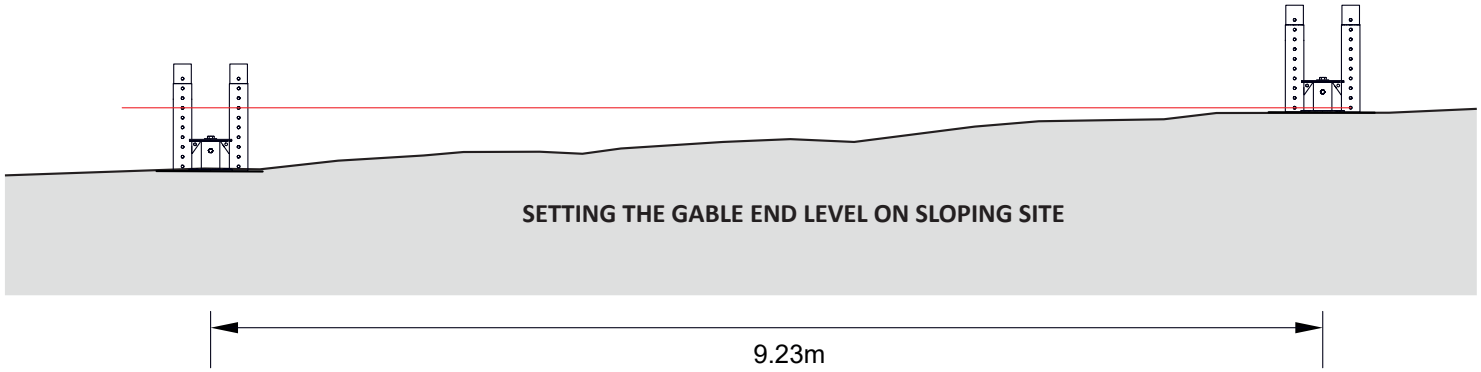
WATER EXITS GUTTER FROM THE GABLE END WHERE BUILDING IS SET AT ITS LOWEST HEIGHT

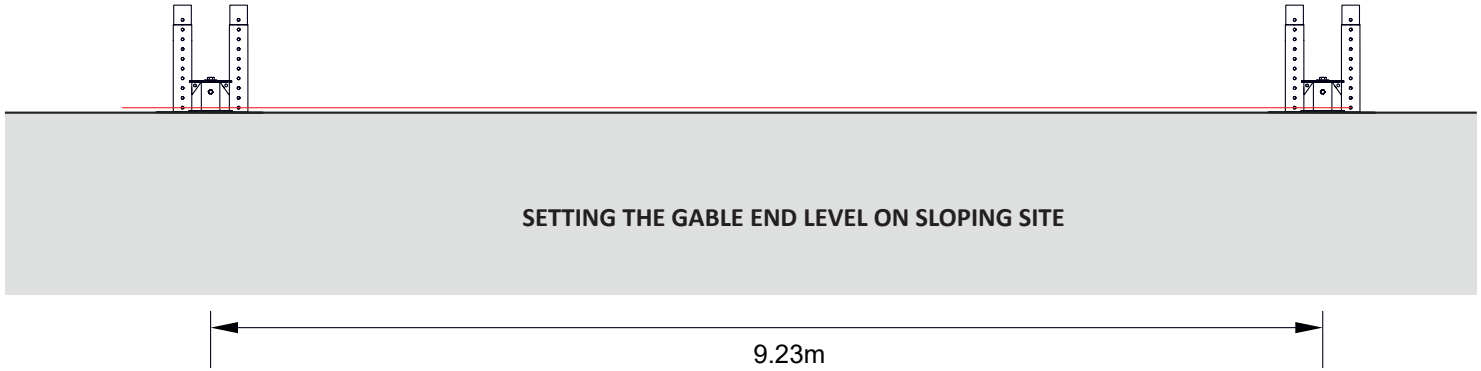


WATER EXITS GUTTER FROM THE GABLE END AT THE LOWER END OF THE SLOPE

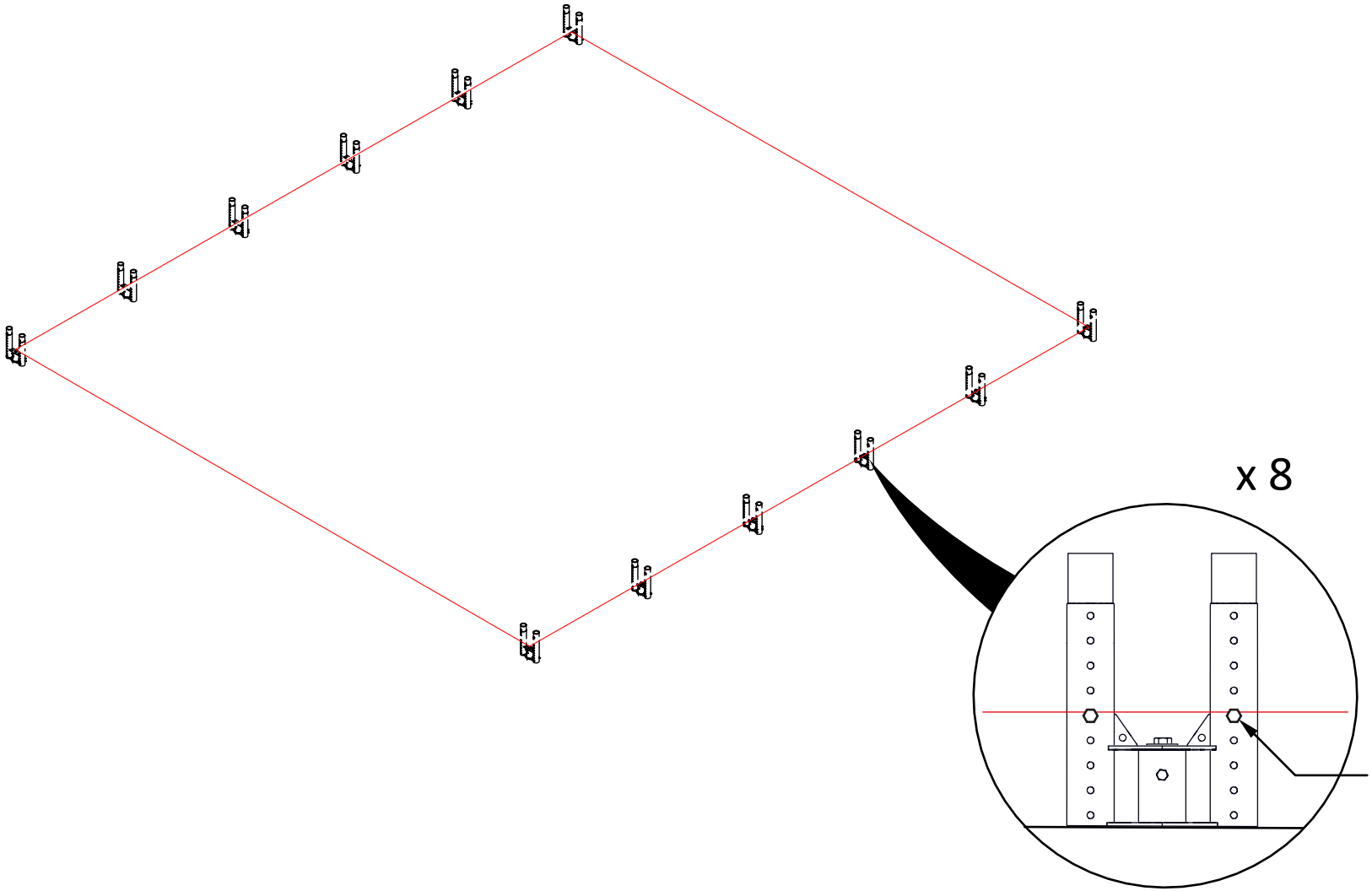


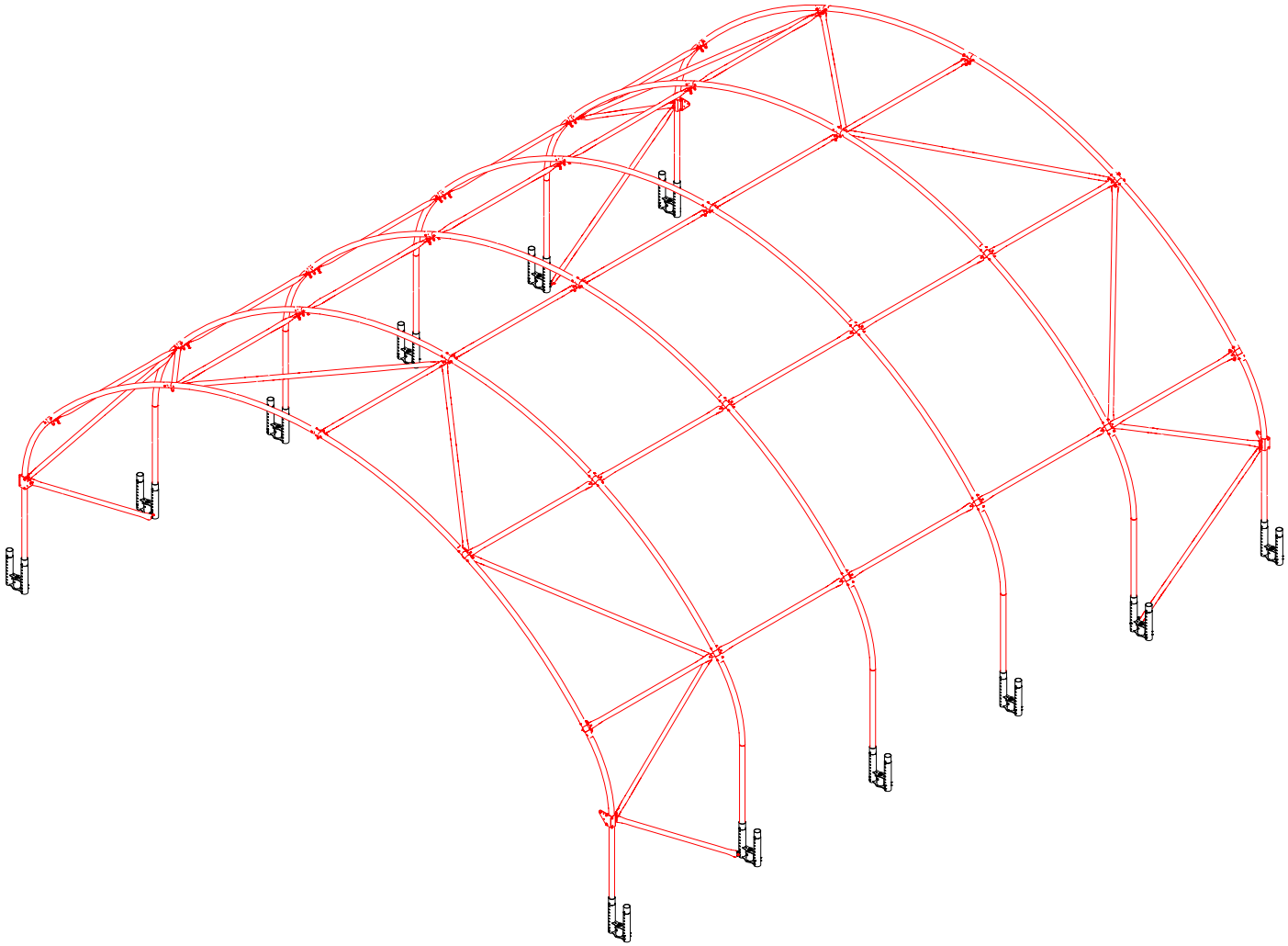
Levelling the building across the width. In all set-ups both gable ends should be set level as shown below. **Ensure your anchor setup matches one of these two scenarios.**





Insert the hight setting bolts in all the intermediate anchor positions. With the string-lines running between set bolt positions at each of the corner hoop sockets - as the string-line passes each hoop socket identify the closest hole to the string line and insert a M10 x 90 bolt and fit an M10 nyloc nut to secure the bolt - tighten bolts to touch, do not over tighten. Once all hoop sockets have bolts fitted string lines can be removed.





Section contents/

X 72 - M10 X 80 Bolt

X 24 - M10 X 90 Bolt

X 160 - M8 Nyloc Nut

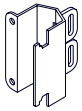
X 50 - M10 X 60 Coach Bolt

X 8 - M10 X 60 Set

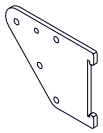
X 20 - M10 X 40 Set

X 8 - M10 Mudwing Washer

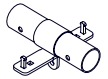
X 4 - Lower Brace tab



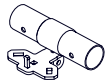
X 4 - Ratchet Back Seat



X 4 - Ratchet Support Plate

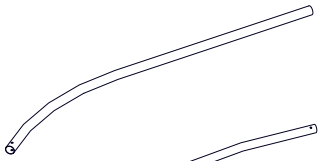


X 20 - Multi Knuckle

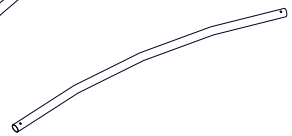


X 10 - Gable Multi Knuckle

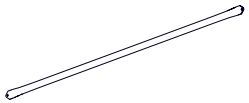
X 25 - Purlins 1900mm



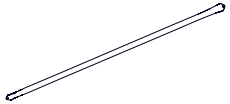
X 12 - Side Hoop



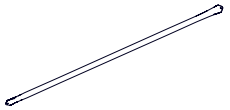
X 24 - Ridge Hoop



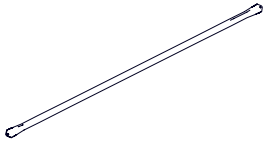
X 4 - Lower Brace 2360mm



X 2 - Mid Gable Brace LH 2170mm

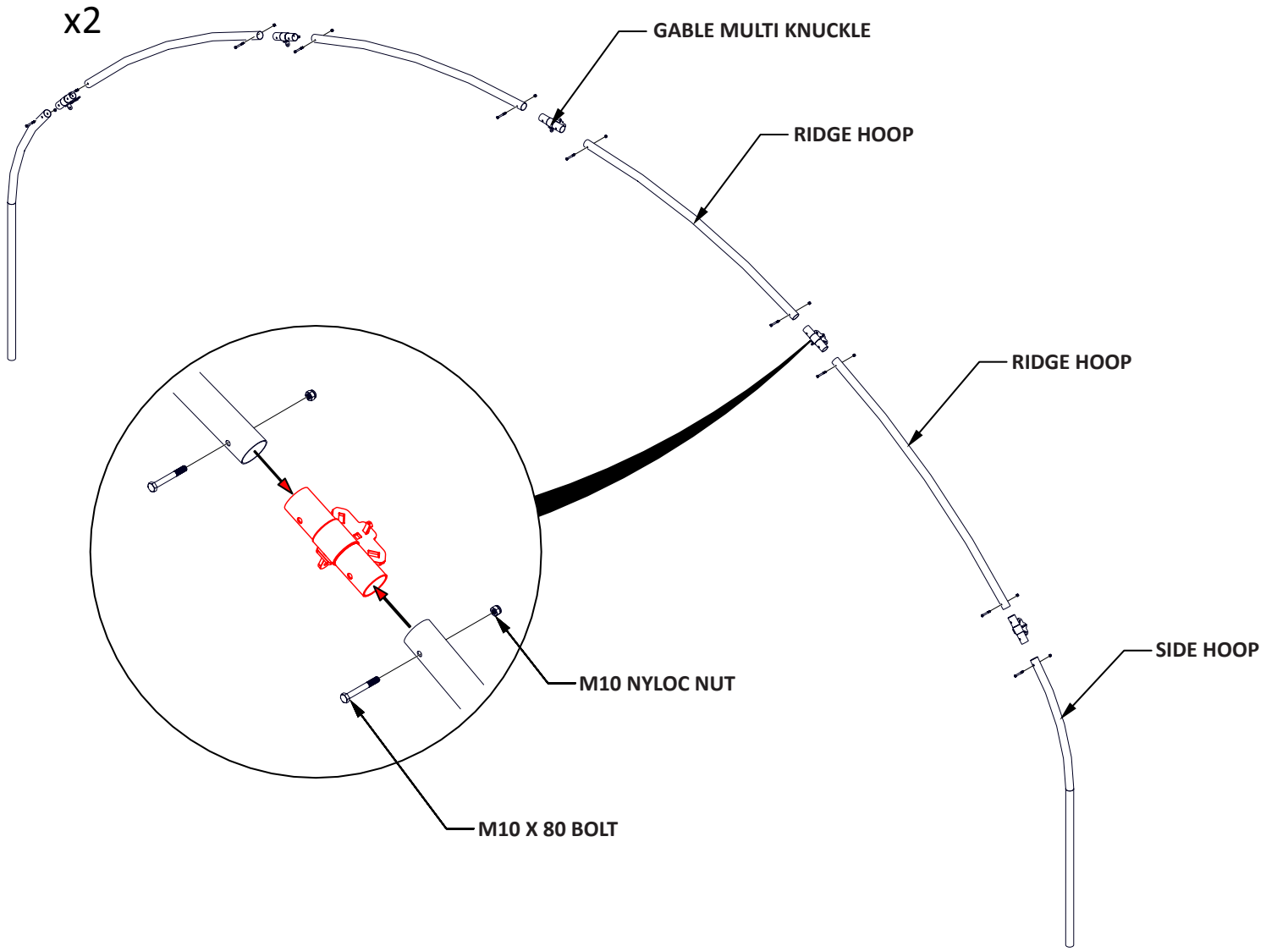


X 2 - Mid Gable Brace RH 2170mm

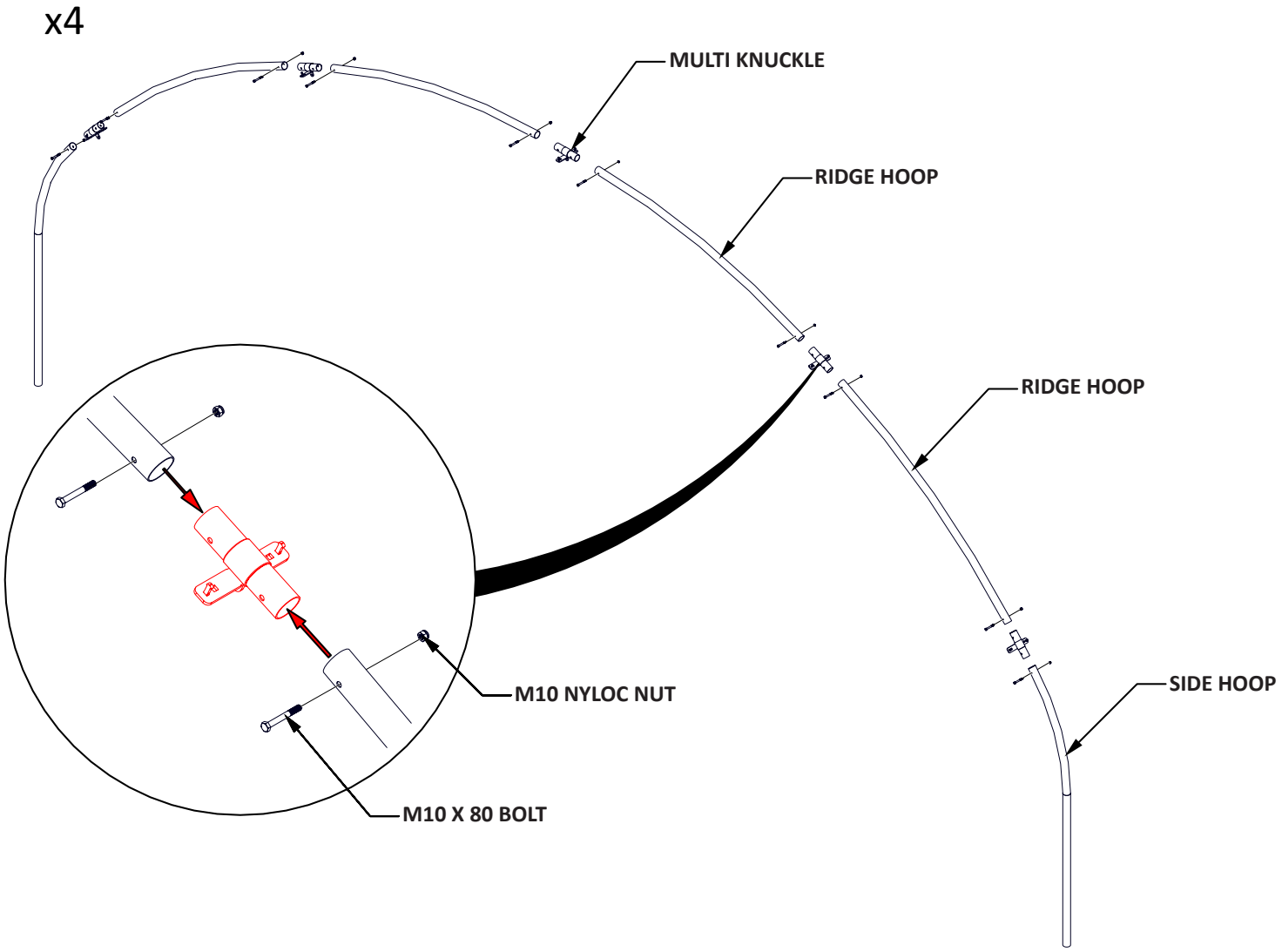


X 8 - Upper Gable Brace 2950mm

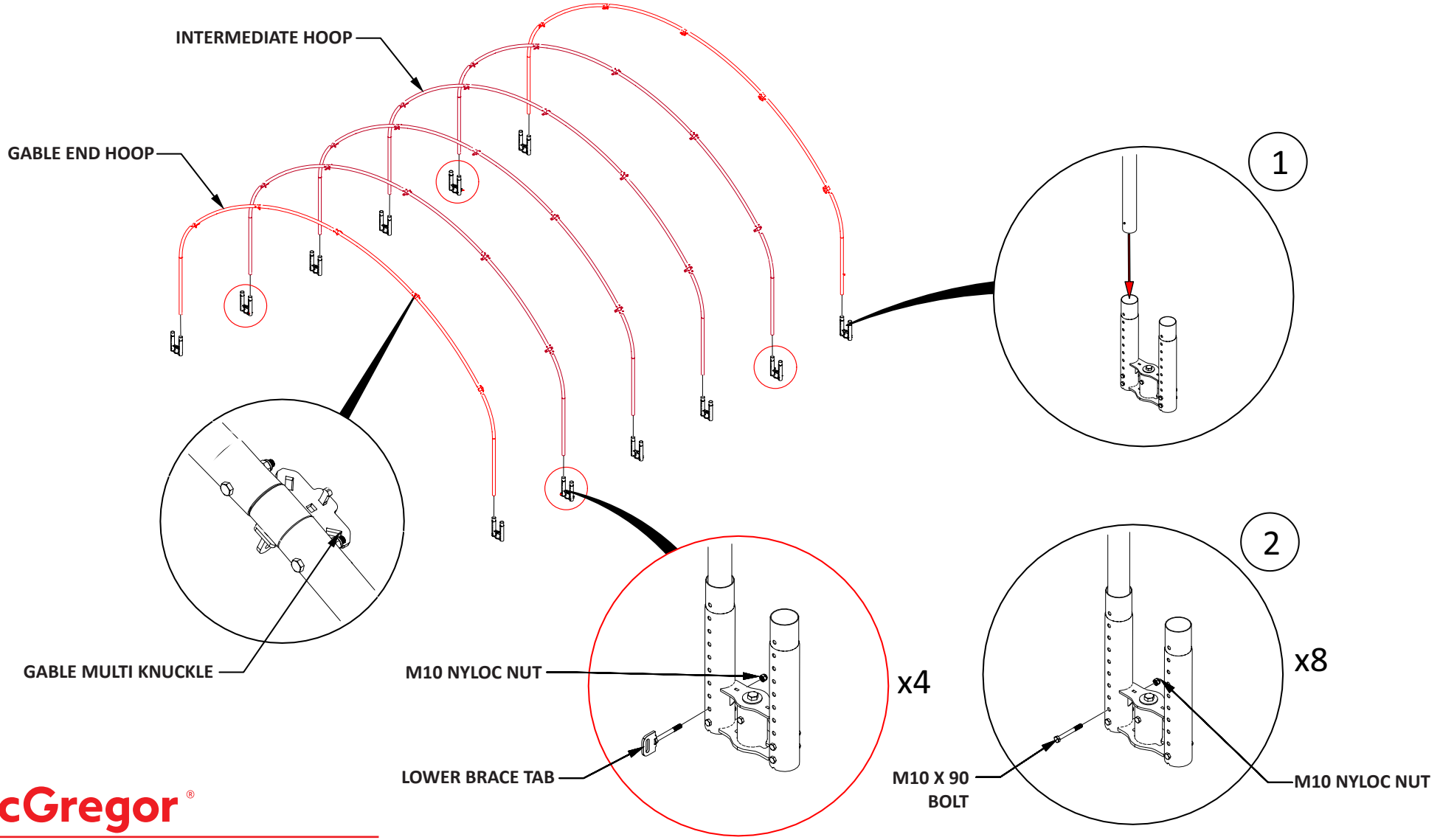
Step 1. Working on the ground, assemble the two gable-end hoops. Note: On both gable ends, the hoop knuckles need to be orientated correctly, so that the extending tab points away from the gable-end (pointing into the building). At each joint slide the hoop onto the multi knuckle and fix in each position with an M10 x 80 bolt and Nyloc nut.



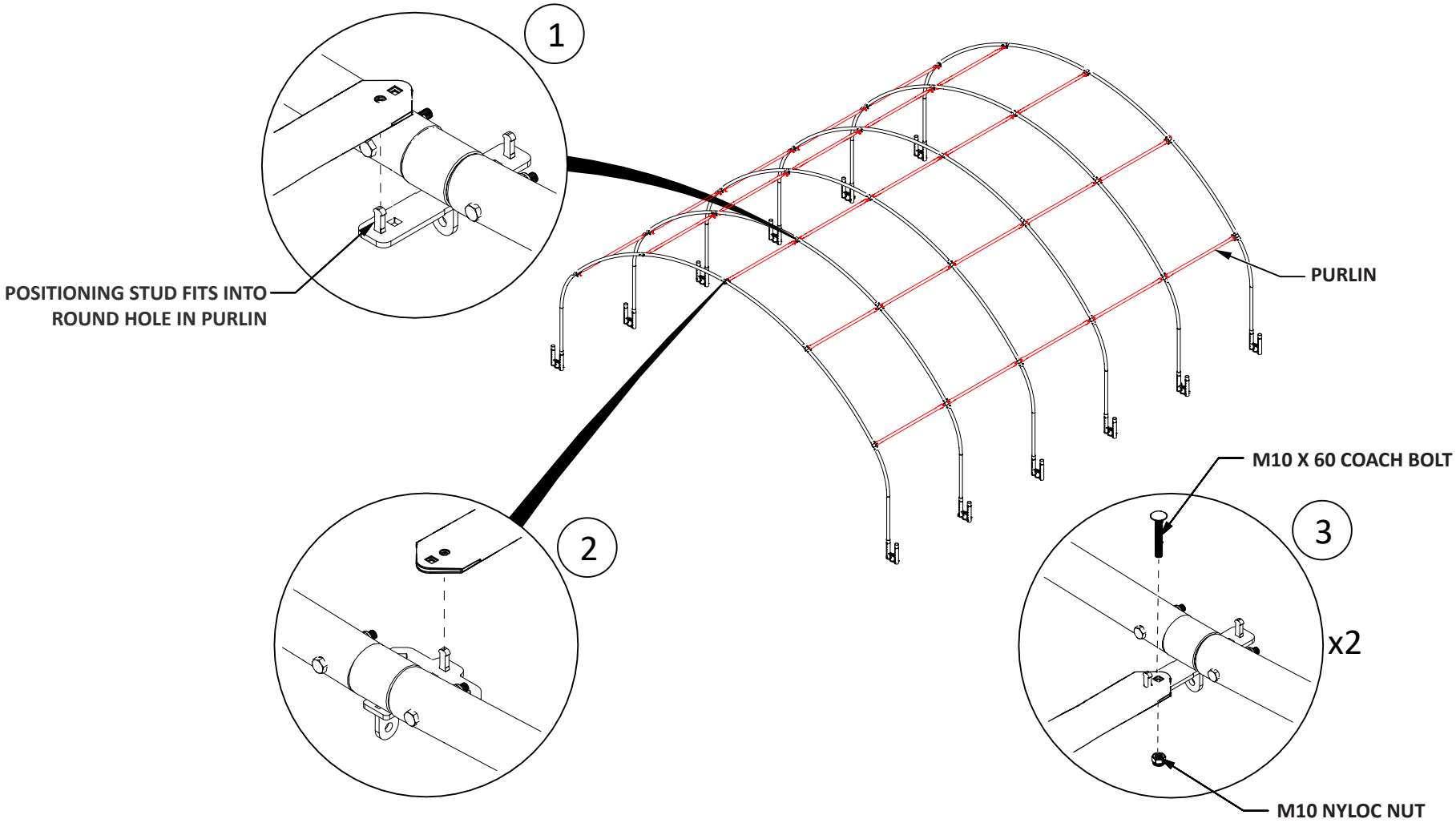
Step 2. Working on the ground, assemble the intermediate hoops, making sure to configure the ridge and side hoops correctly. Note: the joiners for these hoops have a tab that extends equally from both sides. Assemble the hoop sections - connecting each hoop to the next with a joiner. Fix the hoop sections to the joiners in each position with an M10 x 80 bolt and Nyloc nut.



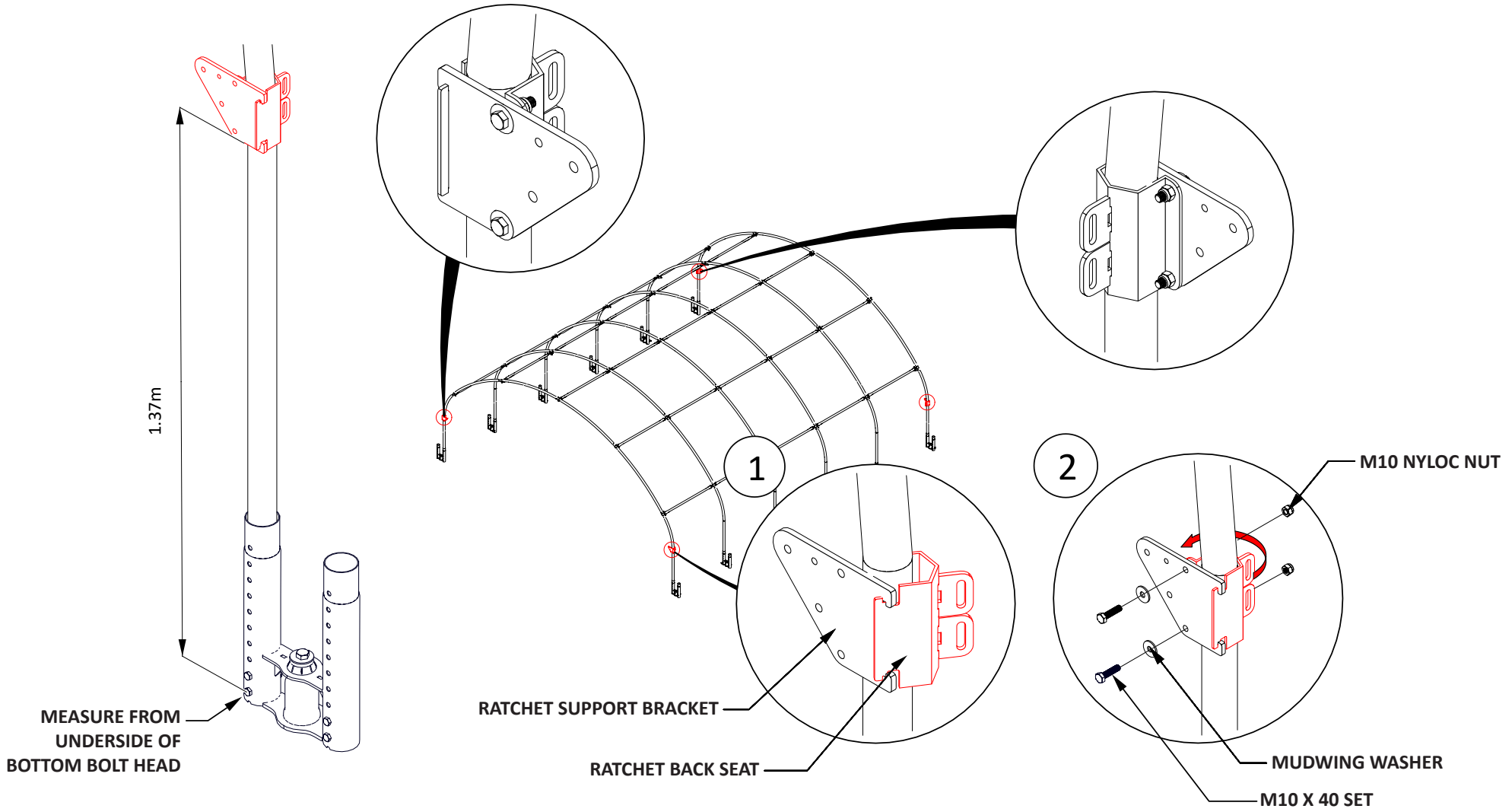
Step 3. Fit the assembled hoops into the hoop socket. Ensure you fit the gable-end hoops in the correct alignment, with the tabs pointing into the building. Starting with one gable end hoop, raise the hoop so that it is resting on the inner hoop socket, flex the hoop in and lift it into place, then let the hoop drop down and sit on top of the height position bolt (inserted during the anchor installation stages). Push the M10 x 80 bolt through the hole above where the height adjustment bolt is inserted to lock the hoop in place. Repeat this process for each hoop, working from one hoop to the next, finishing on the final gable-end hoop.



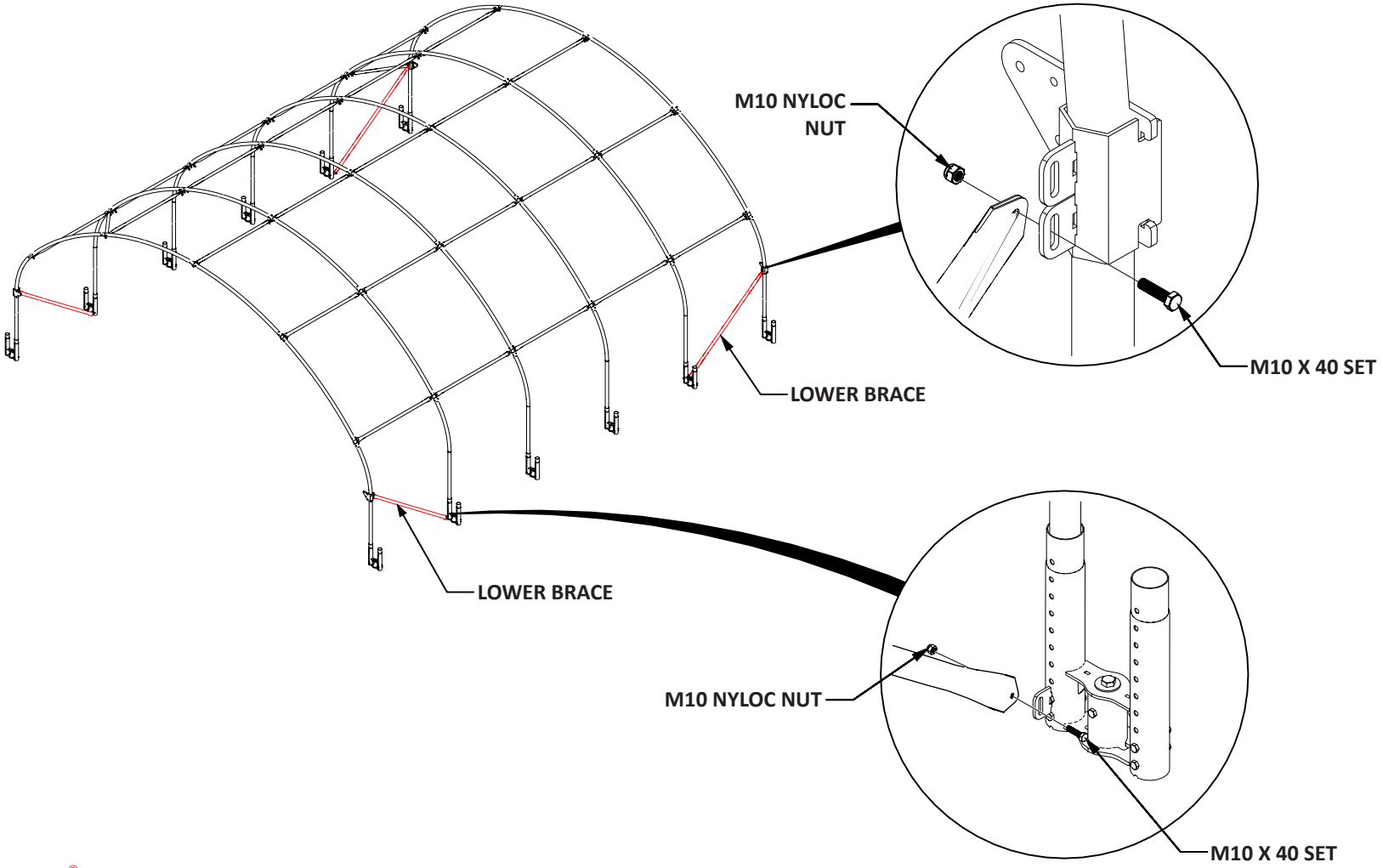
Step 4. Fit the purlins. Fit the purlins onto the positioning studs working from one gable end completing one bay at a time - the stud on the multi knuckle fits through the round hole in the purlin - rest the hole on top of the stud and twist the purlin back and forth until the stud locates. Fit the coach bolt and M10 nut to each purlin end. Fitting from above, push the coach bolt through the square hole in the end of the purlin and through the hole in the joiner tab. Complete assembly steps for remaining hoop sections.



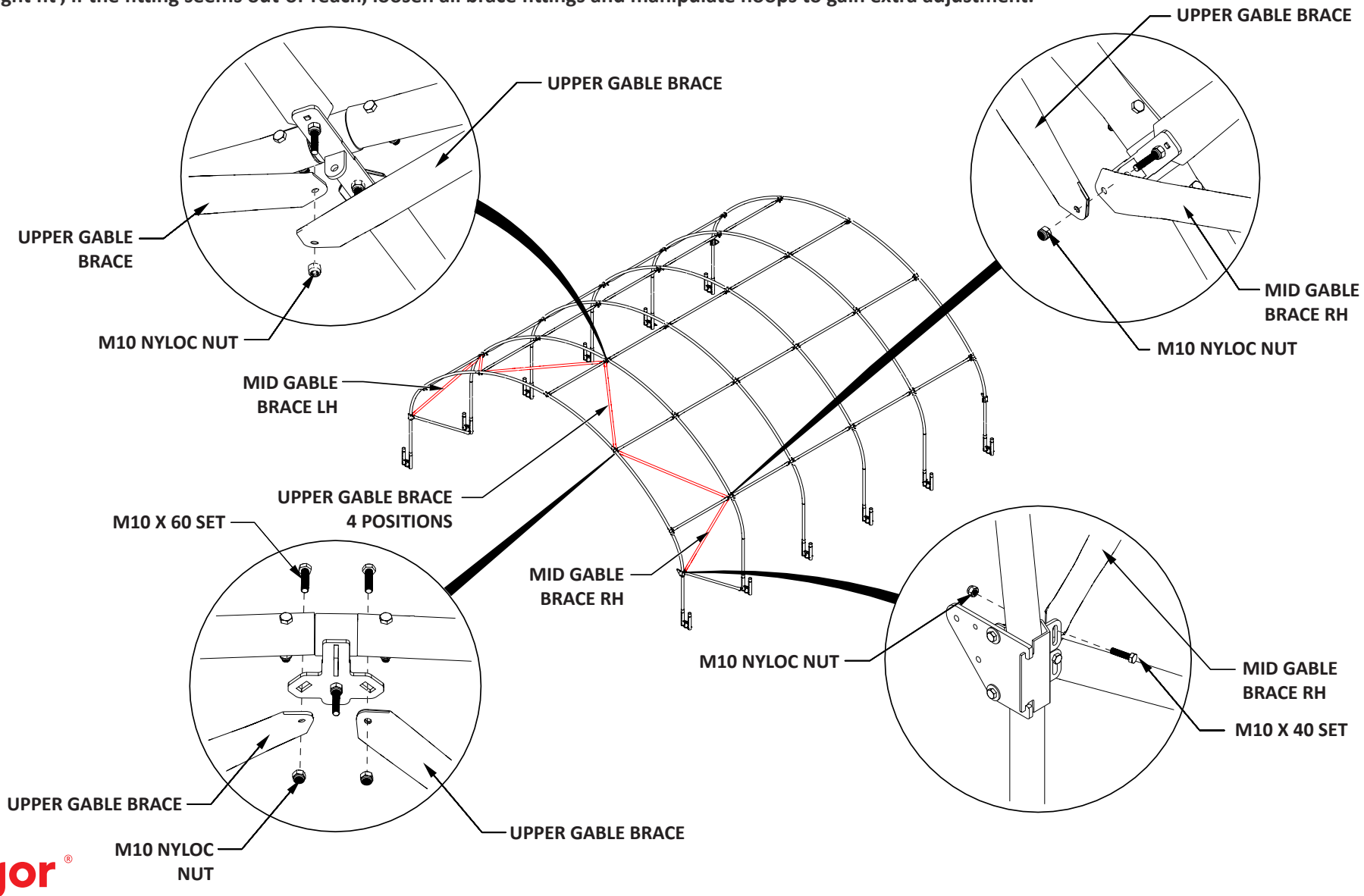
Step 5. Fit the ratchet support brackets to the gable hoops. Working at each corner of the building, measure from the lower bolt in the hoop socket up to 1.37m, mark the hoop and fit the bracket so that the ratchet support plate is in-line with the front of the building and points inwards, attach the ratchet back seat as shown, linking it to the plate before closing it round the hoop - this should be a tight fit and may need tapping with a mallet to locate, secure in place with bolts ash shown.



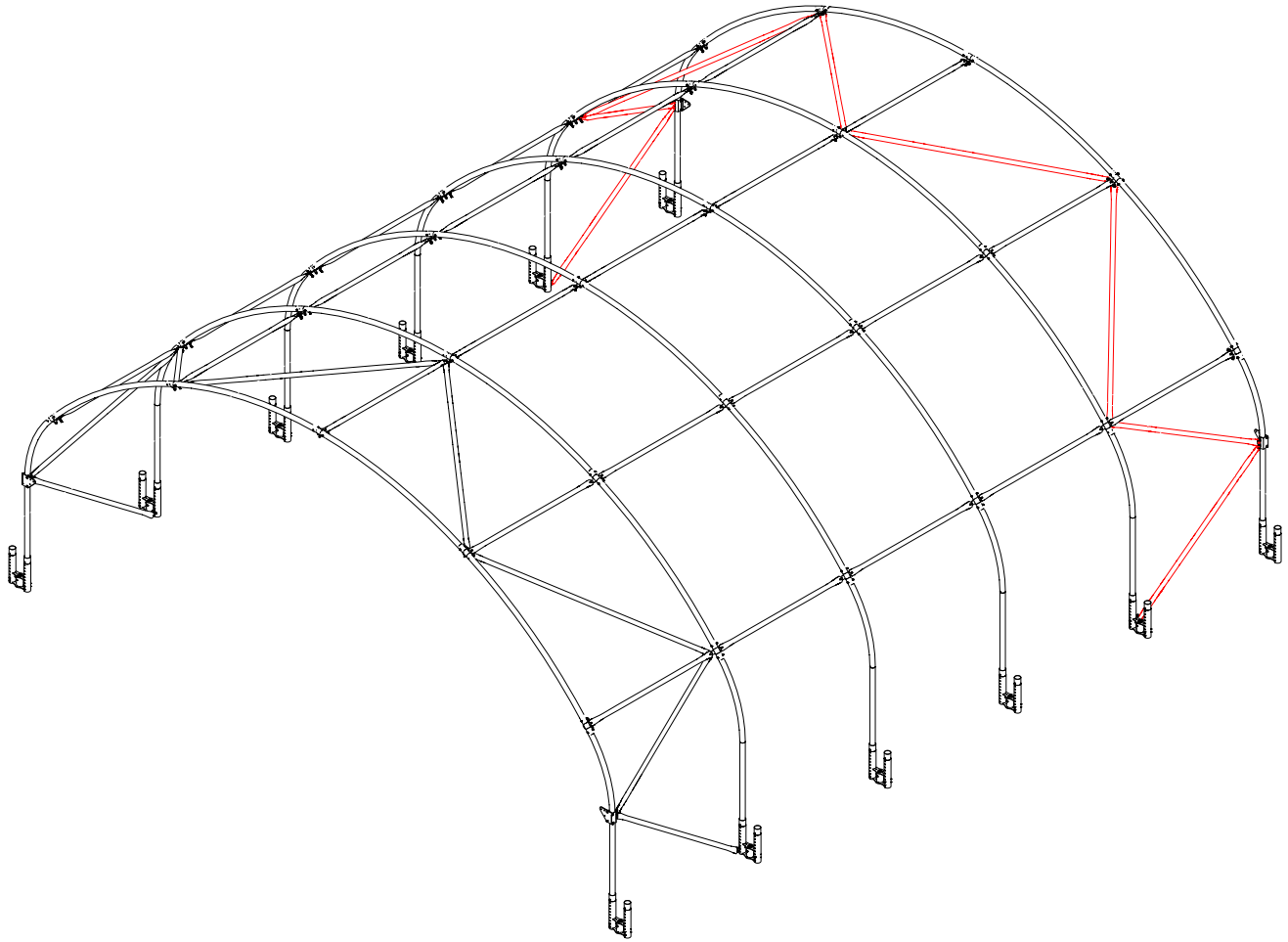
Step 6. Fit the lower gable braces (4 x). Attach the top of the brace to the lower lug on the back of the ratchet back seat, attach the base of the brace to the lower brace tab fitted to the hoop socket at step 3. Fit each brace loosely then fully tighten once all gable braces are in place (shown in step 7).

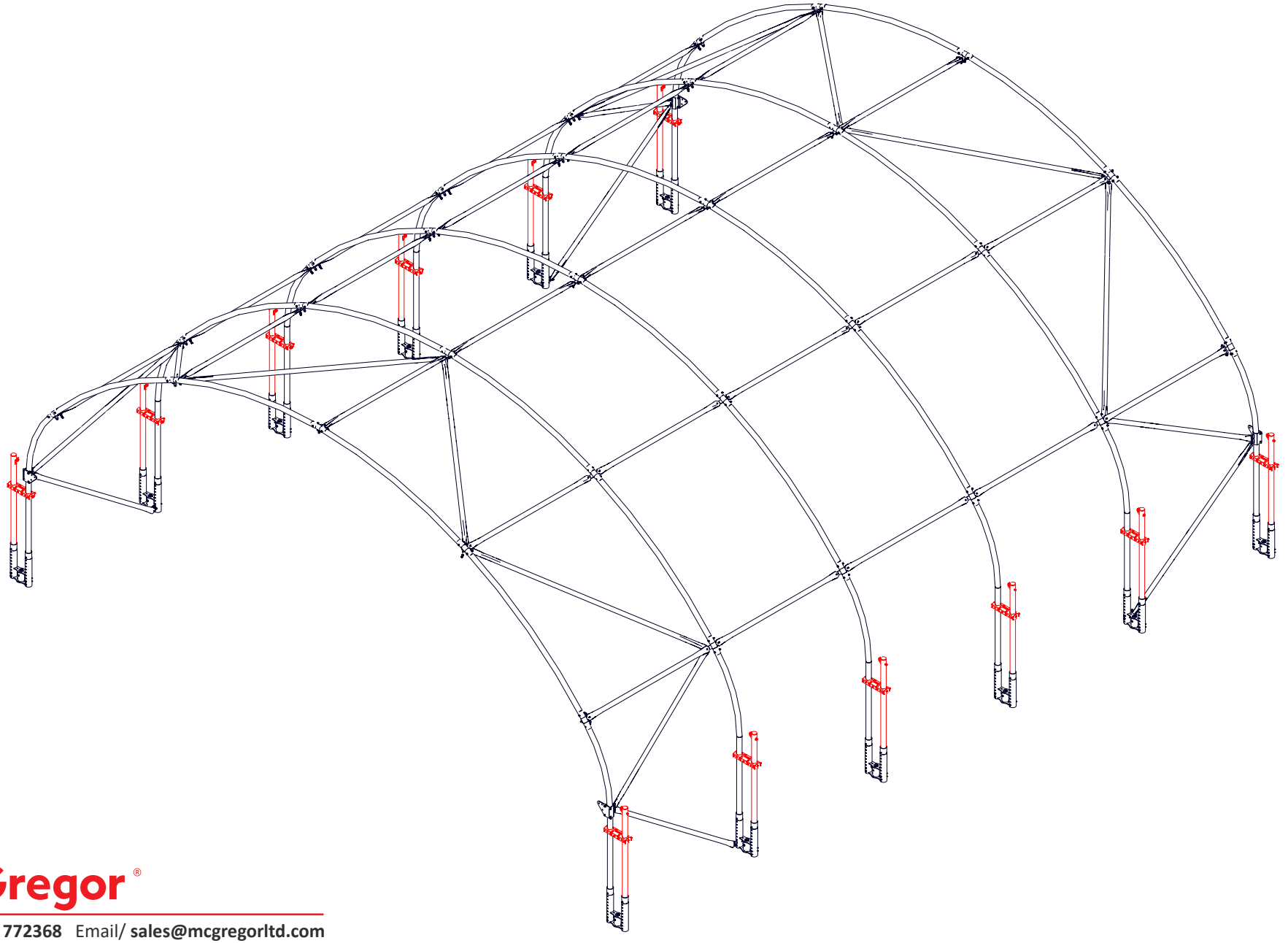


Step 7. Fit the upper gable braces (4 x) and the handed, mid gable braces (2 x) to the first gable end. Working from the top of the hoop down, fit the upper gable braces, fit each brace loosely then fully tighten once all braces are in place. Once the upper wind bracing is attached, fit the mid gable braces. **Note: The structure is designed so that the braces are a 'tight fit', if the fitting seems out-of-reach, loosen all brace fittings and manipulate hoops to gain extra adjustment.**



Step 8. Fit the gable end bracing (8 x) to the second gable end as per step 6 & 7.





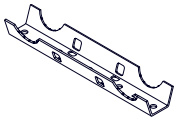
Section contents/

X 24 - M10 Nyloc Nuts

X 12 - M10 Standard Nut

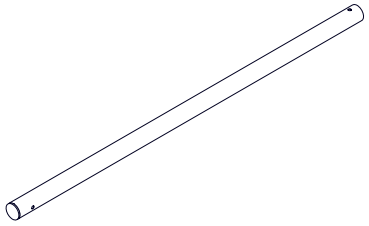
X 12 - M10 x 80 Bolt

X 36 - M10 x 110 Bolt



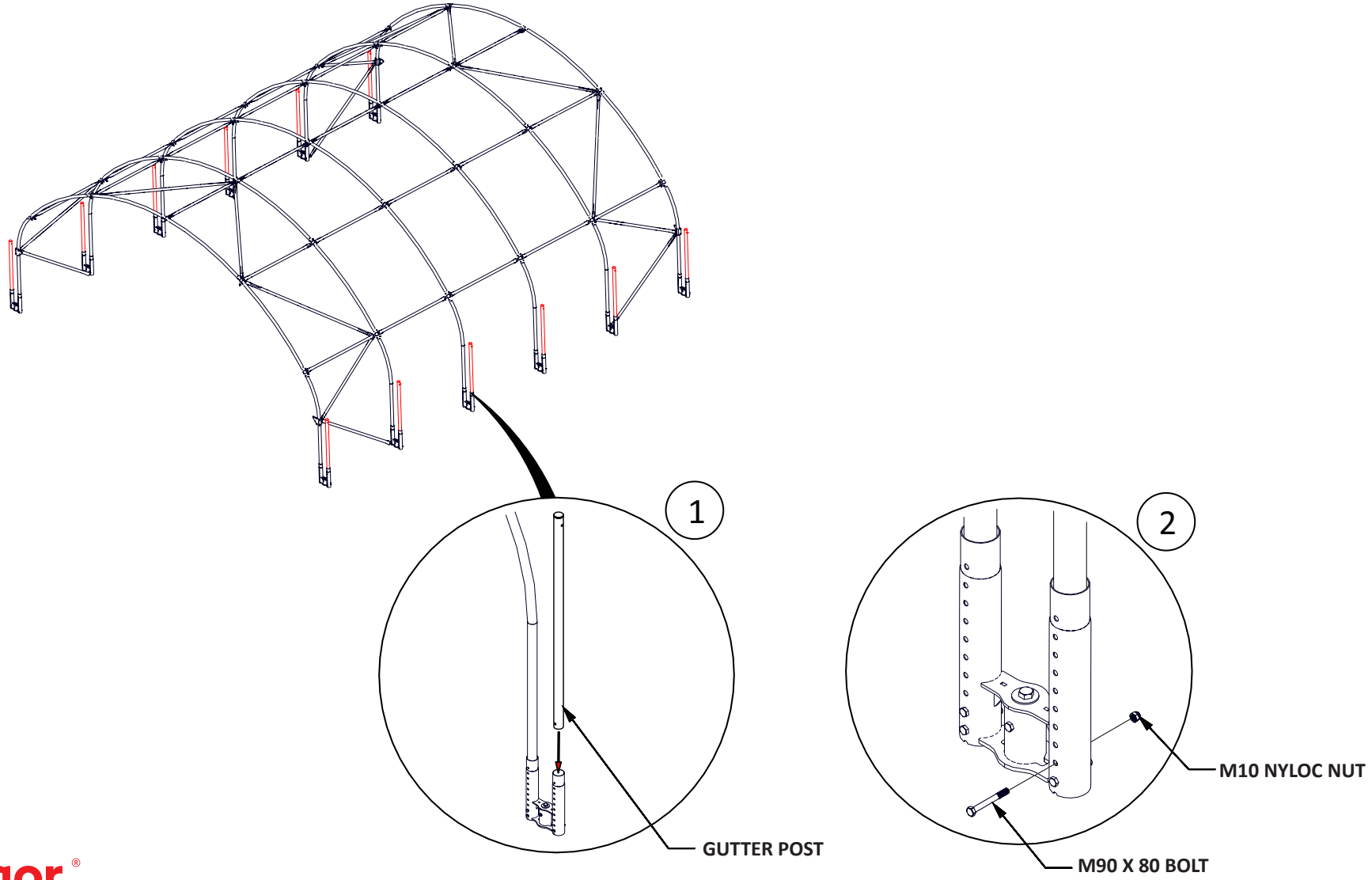
X 24 - Hoop Clamp

X 24 - Hoop Clamp Cap

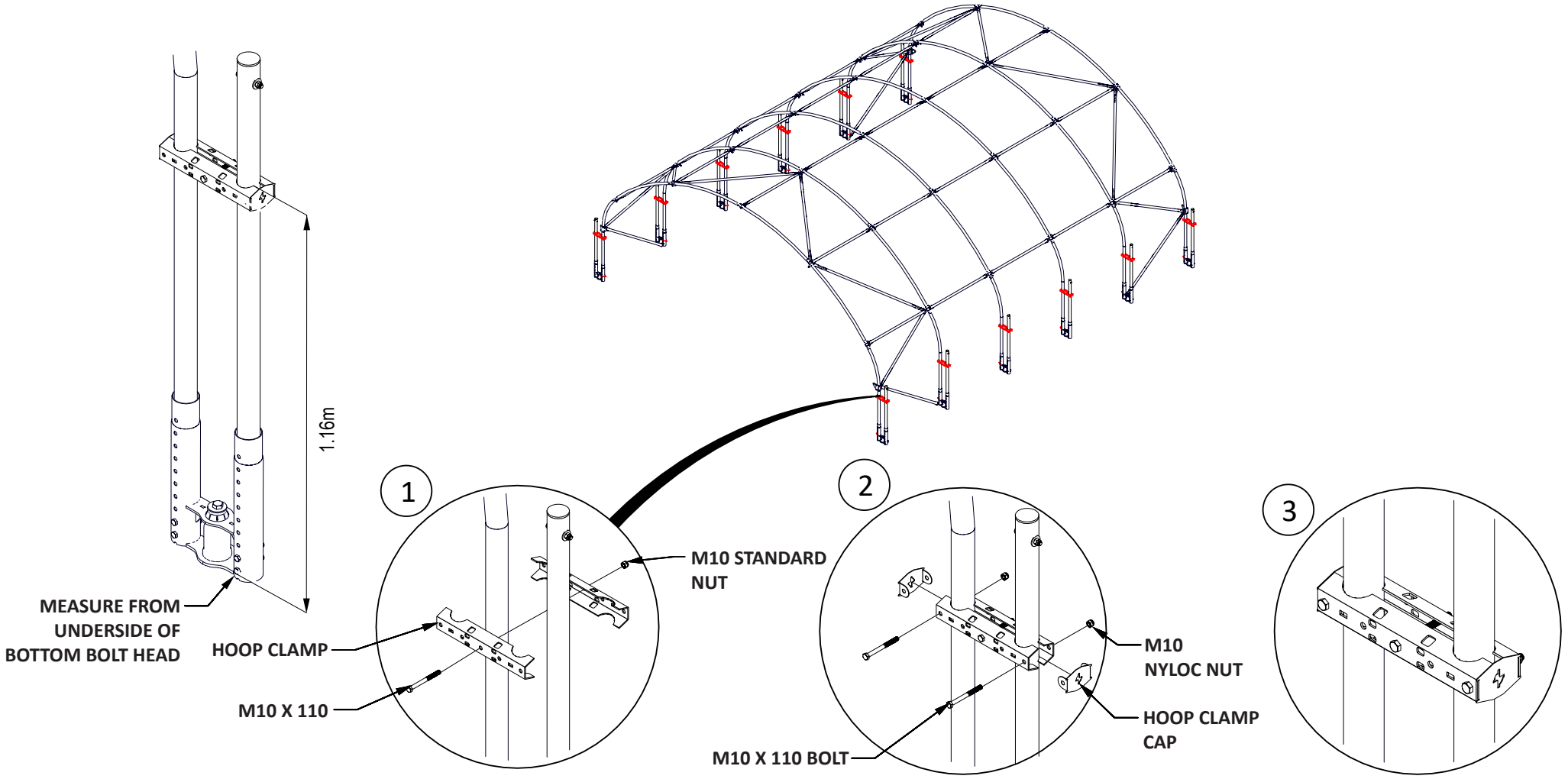


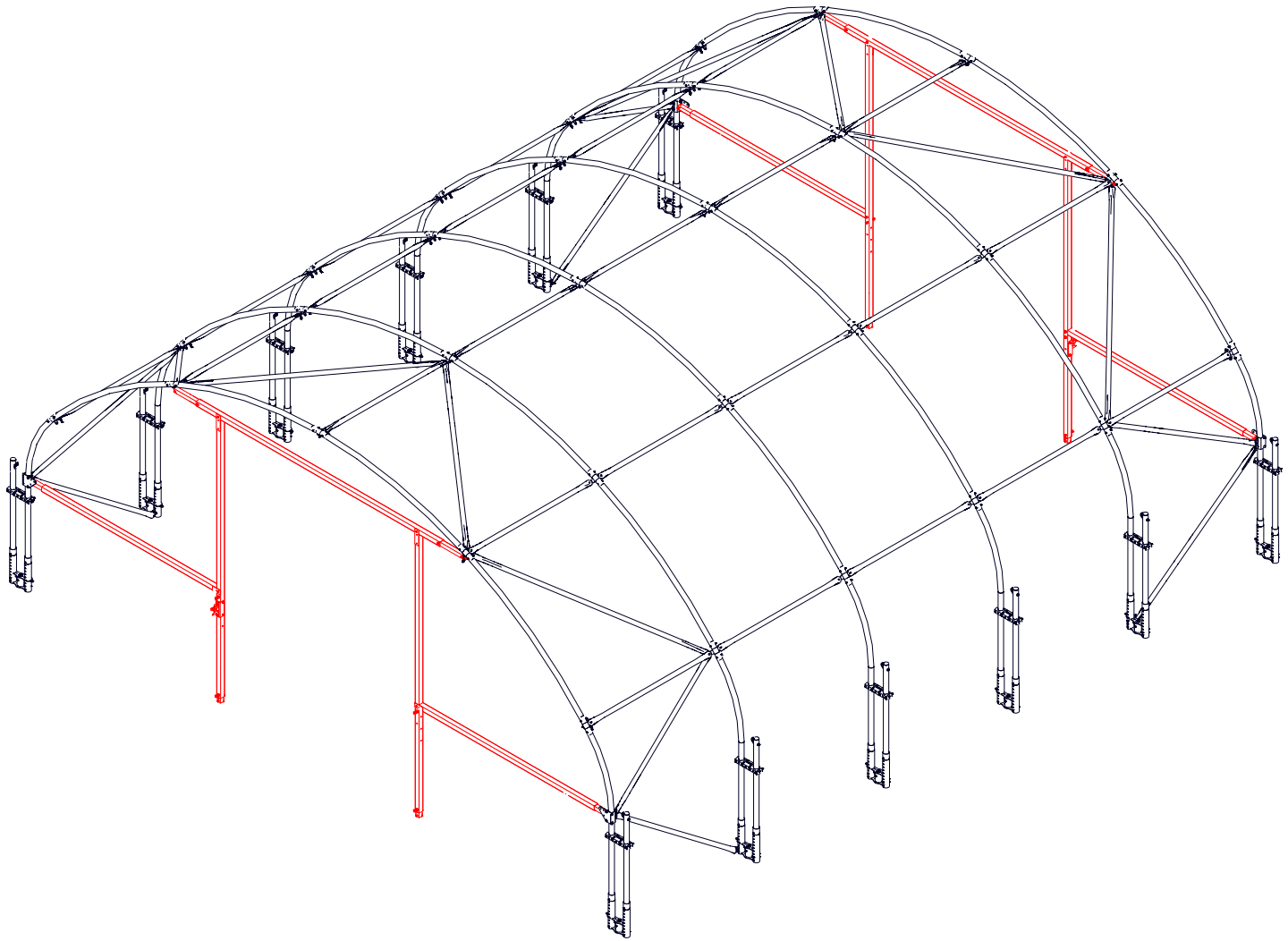
X 12 - Gutter Post 1550mm

Step 1. Insert and attach the gutter posts. Insert the gutter posts into the Anchor Sockets so that they rest on top of the bolt stops previously attached. Rotate the gutter post so that the lower hole aligns with the anchor socket hole. Insert an M10 x 90 bolt through the socket and post securing the other side with an M10 nyloc nut.



Step 2. Attach the outer posts to the hoop sections. Take two hoop clamps and connect the hoop and outer post using an M10 x 110 bolt through the centre hole with an M10 nyloc nut - do not fully tighten at this stage. Adjust the height of the clamp to 1.16m from the underside of the lower bolt on the hoop socket. Take an end cap for both ends of the assembly and attach them to the clamp assembly by passing and M10 x 110 bolt through the clamp and end cap securing with an M10 nyloc nut, fully tighten but be careful not to over tighten (which will distort the shape of the clamp). **Repeat process to attach all hoop clamps.**





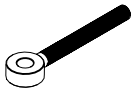
Section contents/

X 24 - M10 x 80 Set Bolt

X 14 - M10 Mudwing Washer

X 14 - M10 Nyloc Nut

X 4 - M10 Pivot Bolt

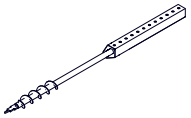


X 4 - M12 x 100 Gate Eye

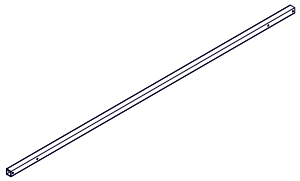
X 8 - M12 Mudwing Washer

X 4 - M12 Standard Nut

X 4 - M12 Nyloc Nut

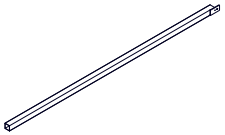


X 4 - Gable Anchor

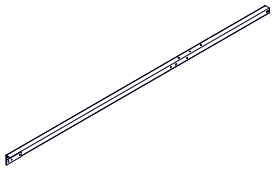


X 2 - Upper Horizontal 4000mm

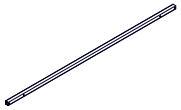
X 8 - Horizontal Extender 500mm



X 4 - Gable Lower Horizontal 2700mm

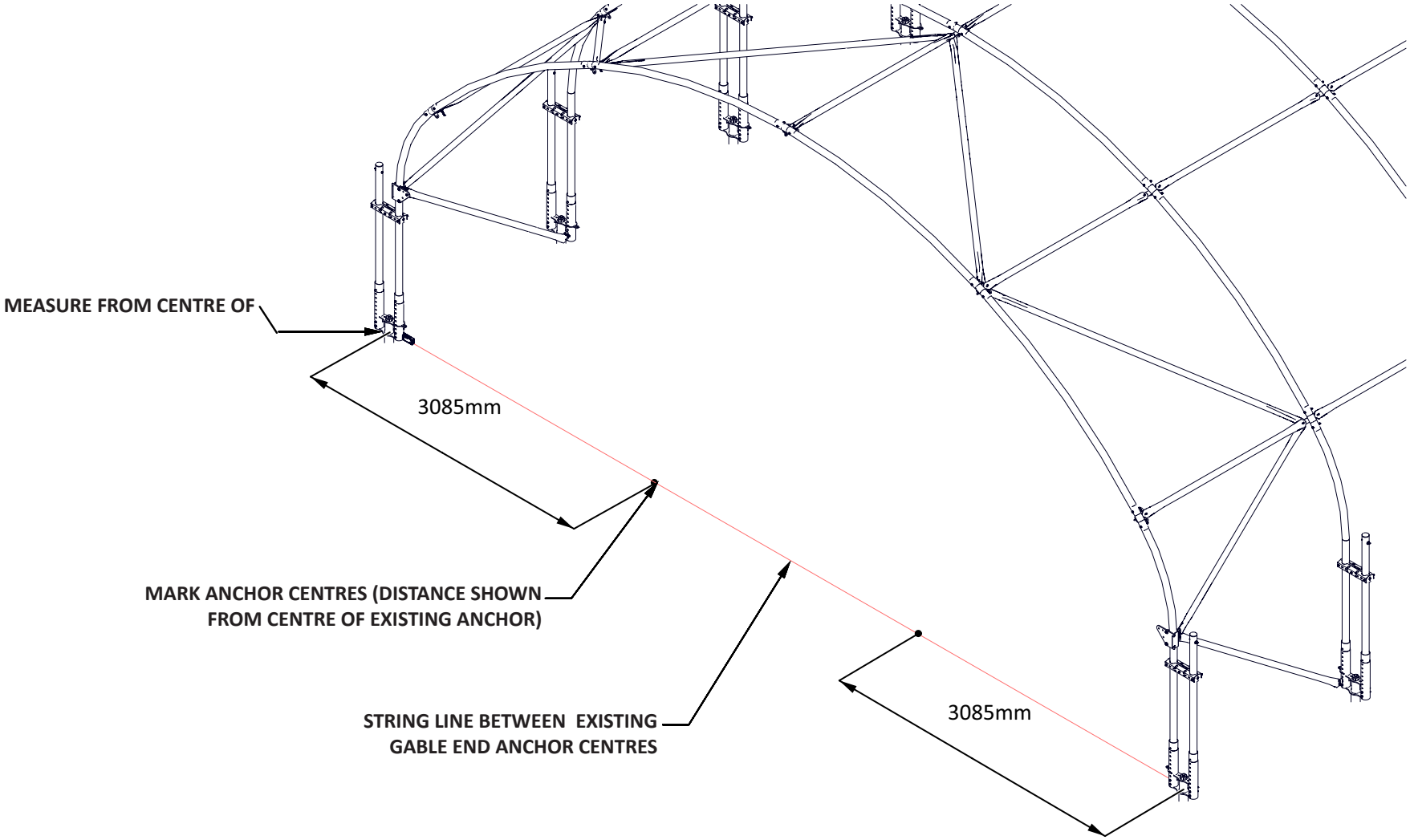


X 4 - Gable Upright 3720mm



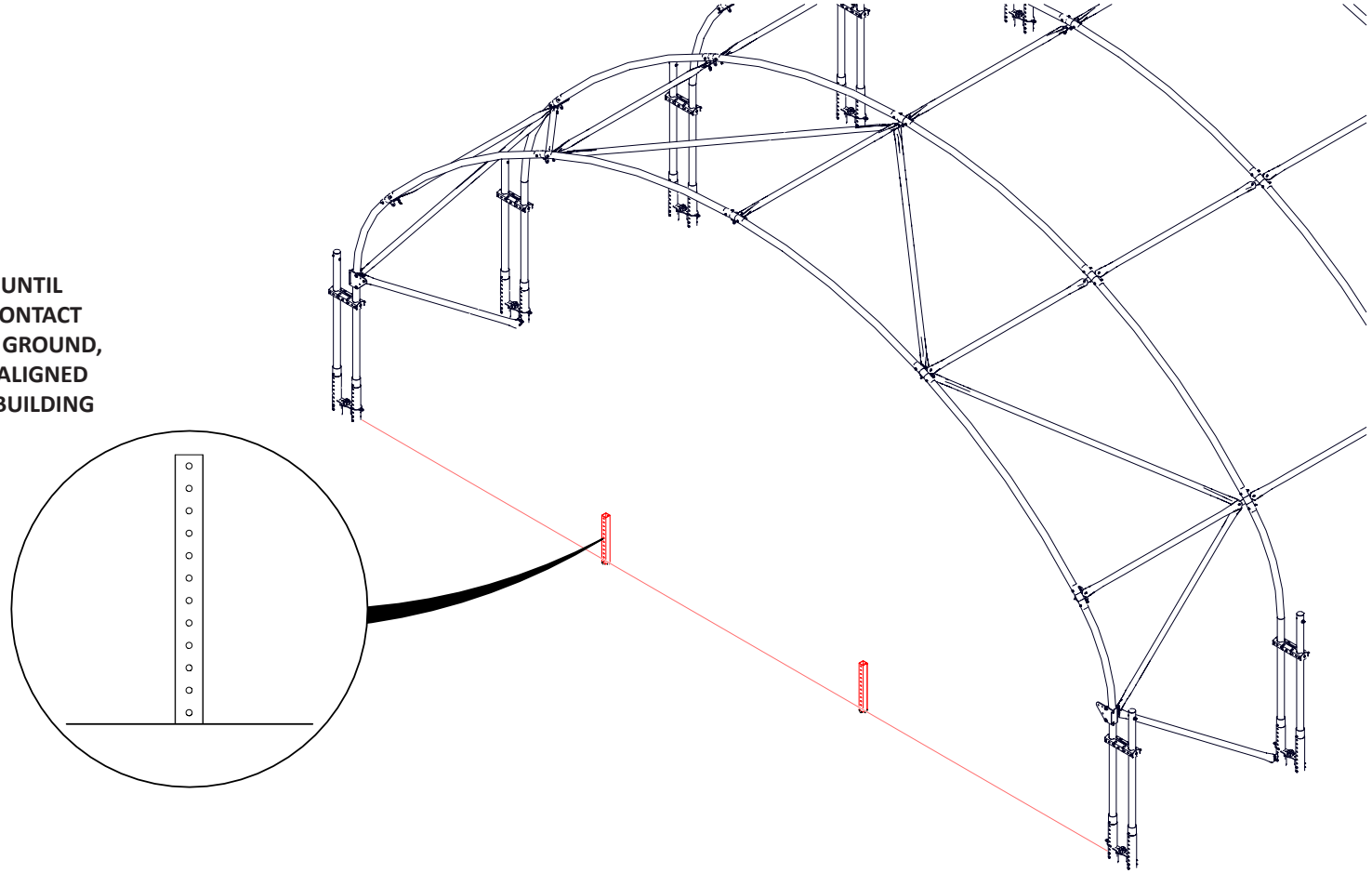
X 1 - Gable Anchor Fitting Tool

Step 1. Mark the positions of the gable frame anchors. Run a string line between the centres of the gable frame anchors. Mark the gable frame anchor centres along the string line 3085mm in from each outer anchor centre.

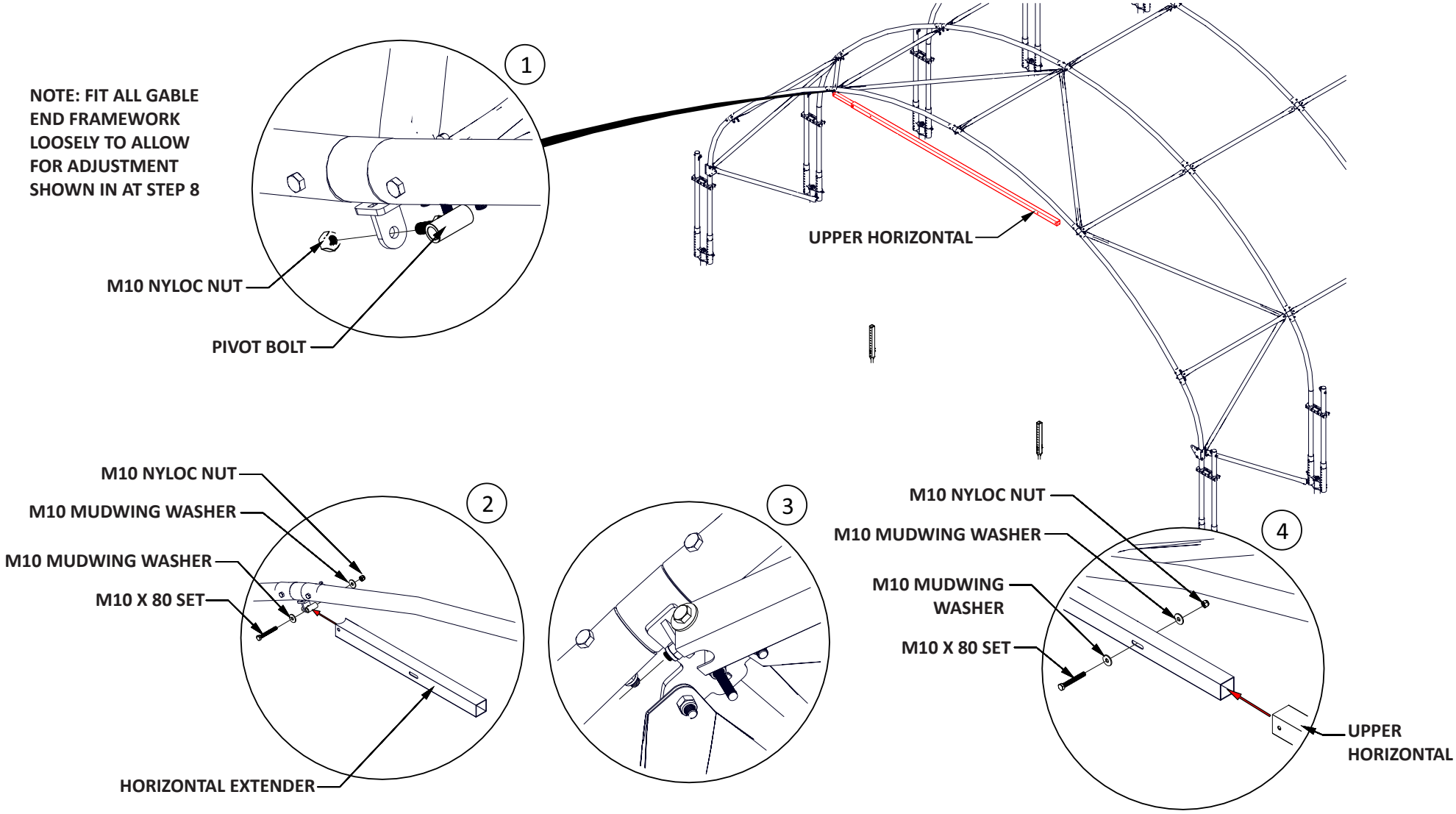


Step 2. Drive in the gable end anchors. Drive each anchor into the ground in the two marked positions ensuring the anchor is square . Drive the anchor in until the box section is in contact with the ground and adjust so that the holes point in-line with the length of the building.

DRIVE THE GABLE ANCHOR UNTIL THE BOX SECTION MAKES CONTACT WITH THE SURFACE OF THE GROUND, ENSURING THE HOLES ARE ALIGNED WITH THE LENGTH OF THE BUILDING

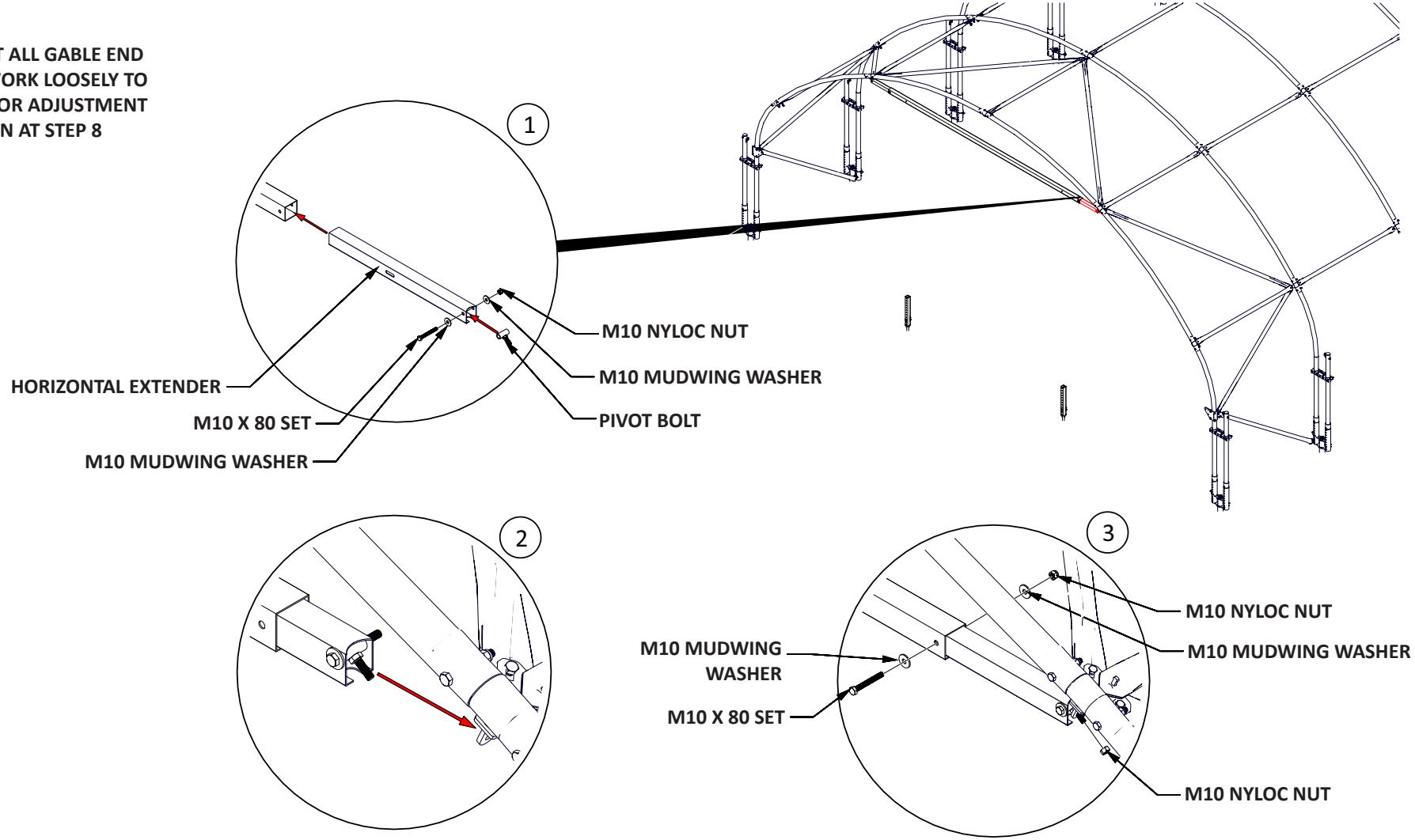


Step 3. Assemble the upper horizontal. First loosely attach one pivot bolt to the descending lug on the gable end multi-knuckle as shown. Slide a horizontal extender over the pivot bolt and attach loosely using as shown - the horizontal extender will be able to be lowered and raised on the axis of the pivot bolt. Slide the upper horizontal over the extender and attach through the slotted hole as shown.

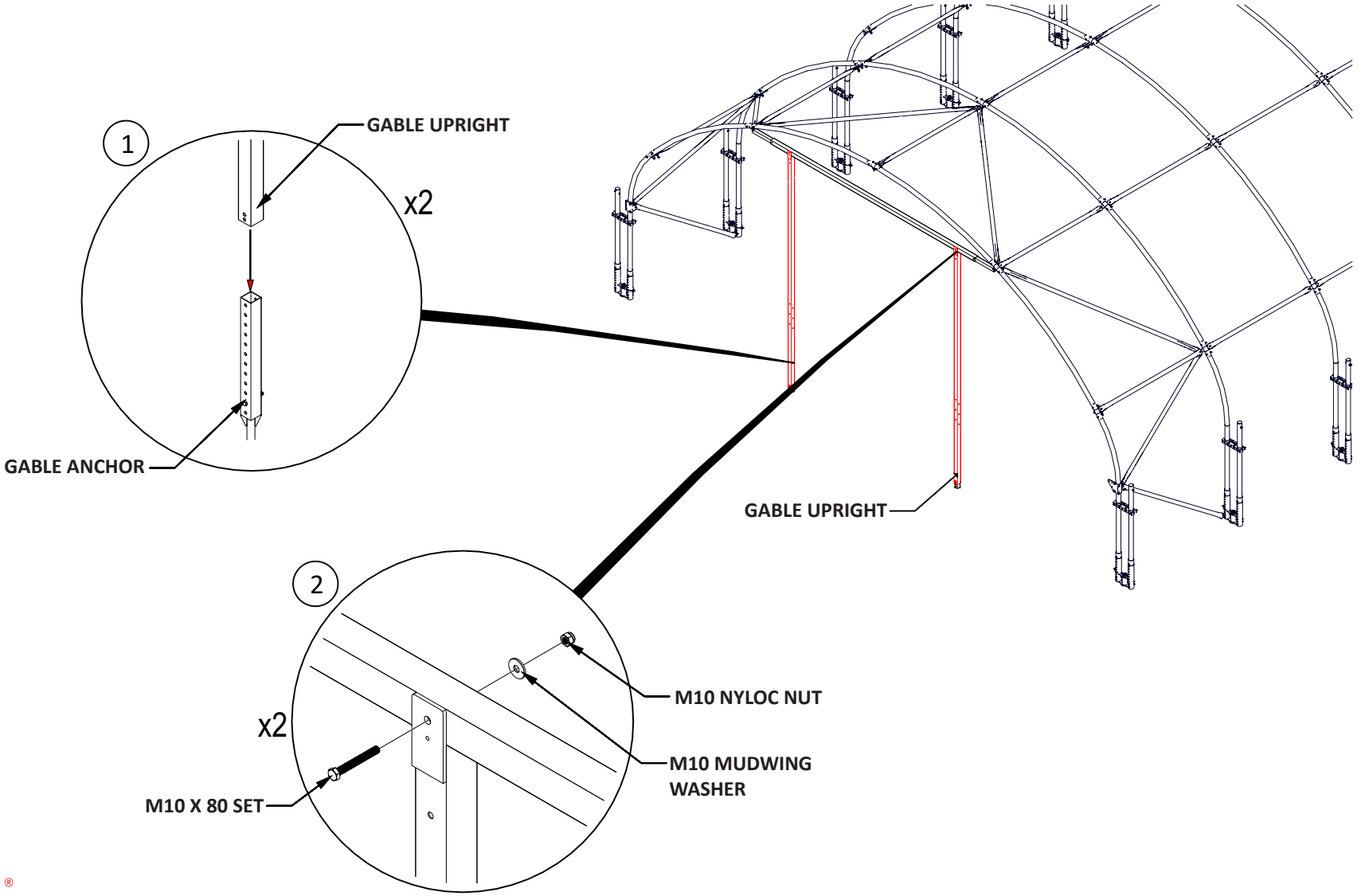


Step 3. With the upper horizontal attached to the pivot bolt via the extender, lift the assembly Ensure that the extenders are securely held into the ends of the horizontals. Lift the horizontal up to the building and attach each end the gable frame brackets using M10 nyloc nuts. Secure the extenders to the horizontal at each end using M10 x 80 set mudwing washer and nyloc nuts.

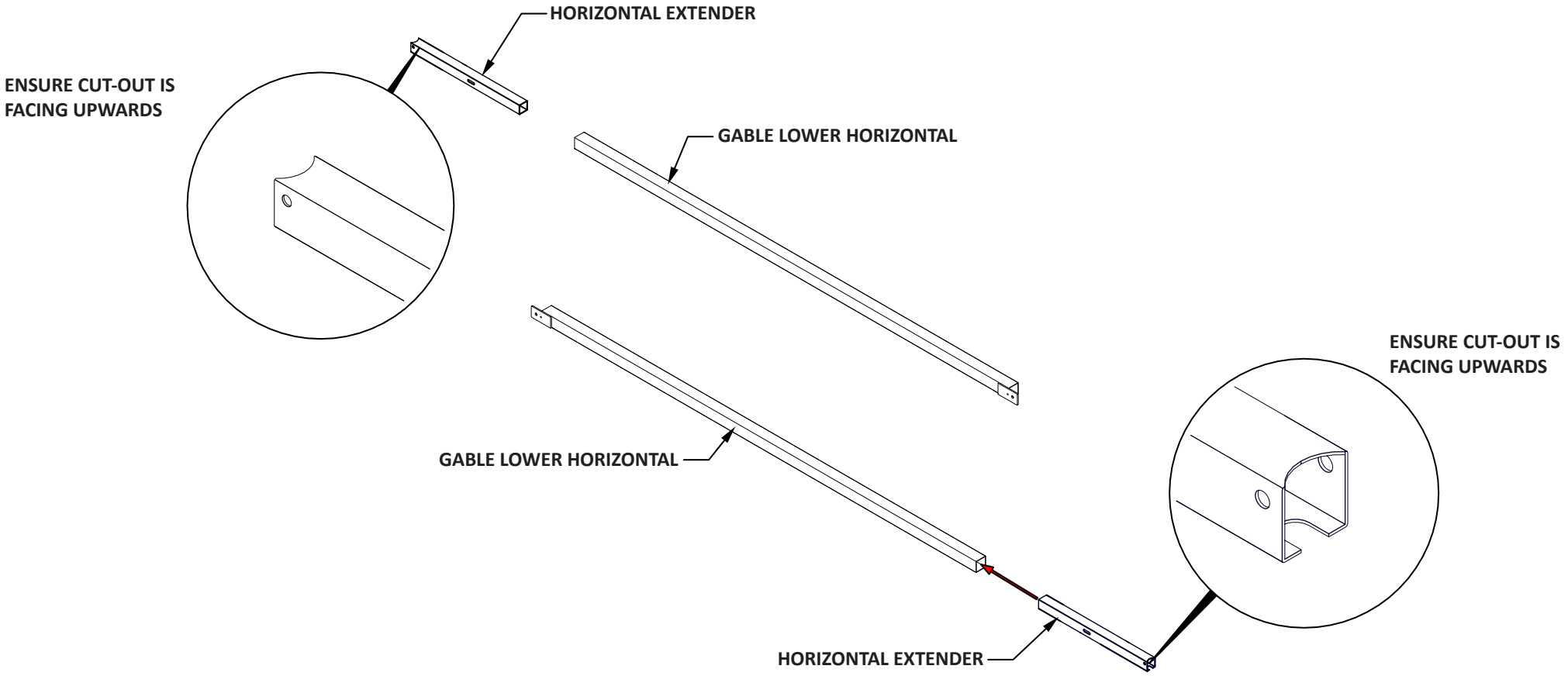
NOTE: FIT ALL GABLE END FRAMEWORK LOOSELY TO ALLOW FOR ADJUSTMENT SHOWN IN AT STEP 8



Step 4. Attach the uprights. Lift and insert the uprights over the gable anchors, then attach the plate at the top of each upright to the horizontal using M10 x 80 sets mudwing washer and M10 nyloc nut as shown.

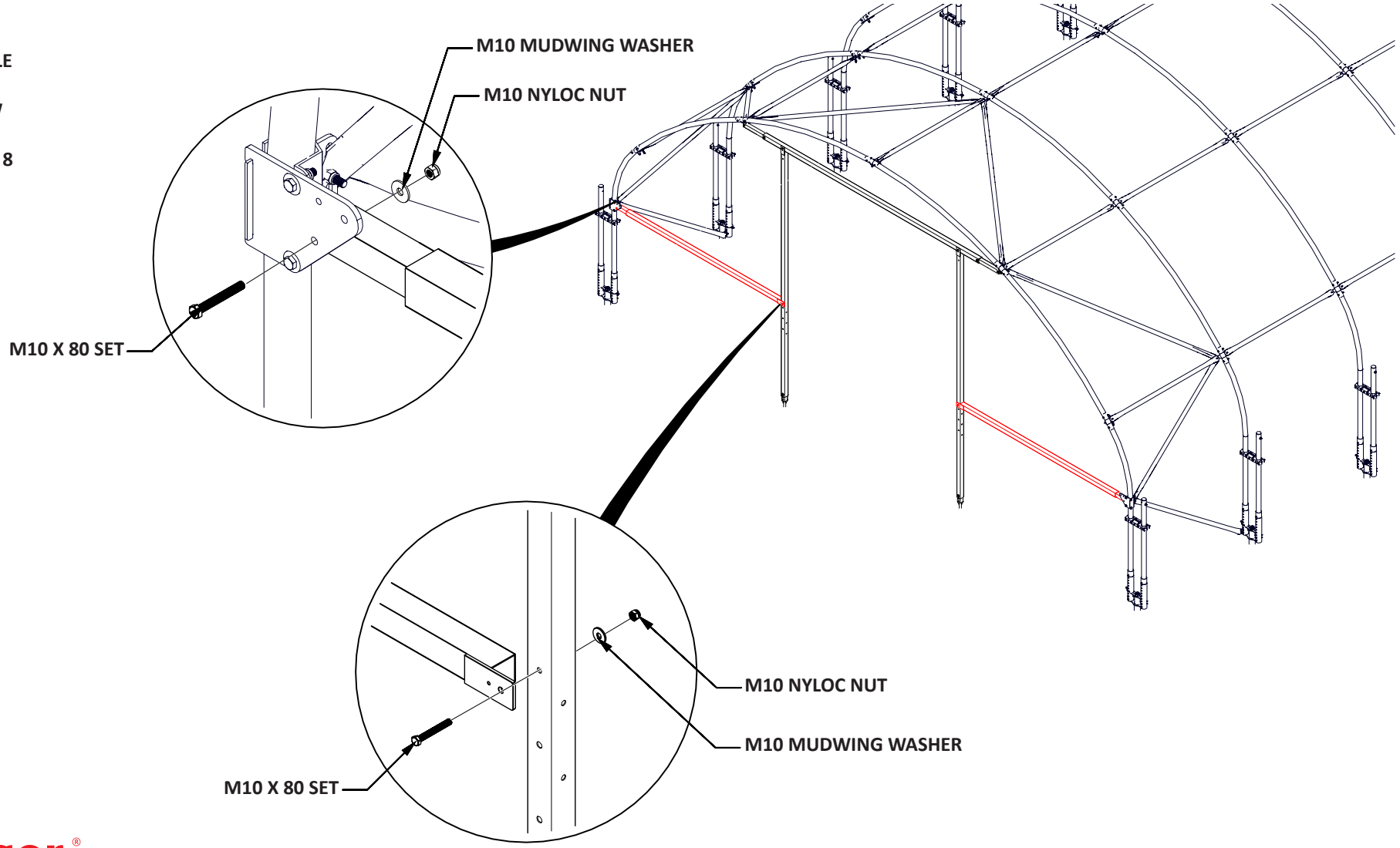


Step 5. Assemble the lower horizontals. Take the gable lower horizontals and insert an extender into the ends.

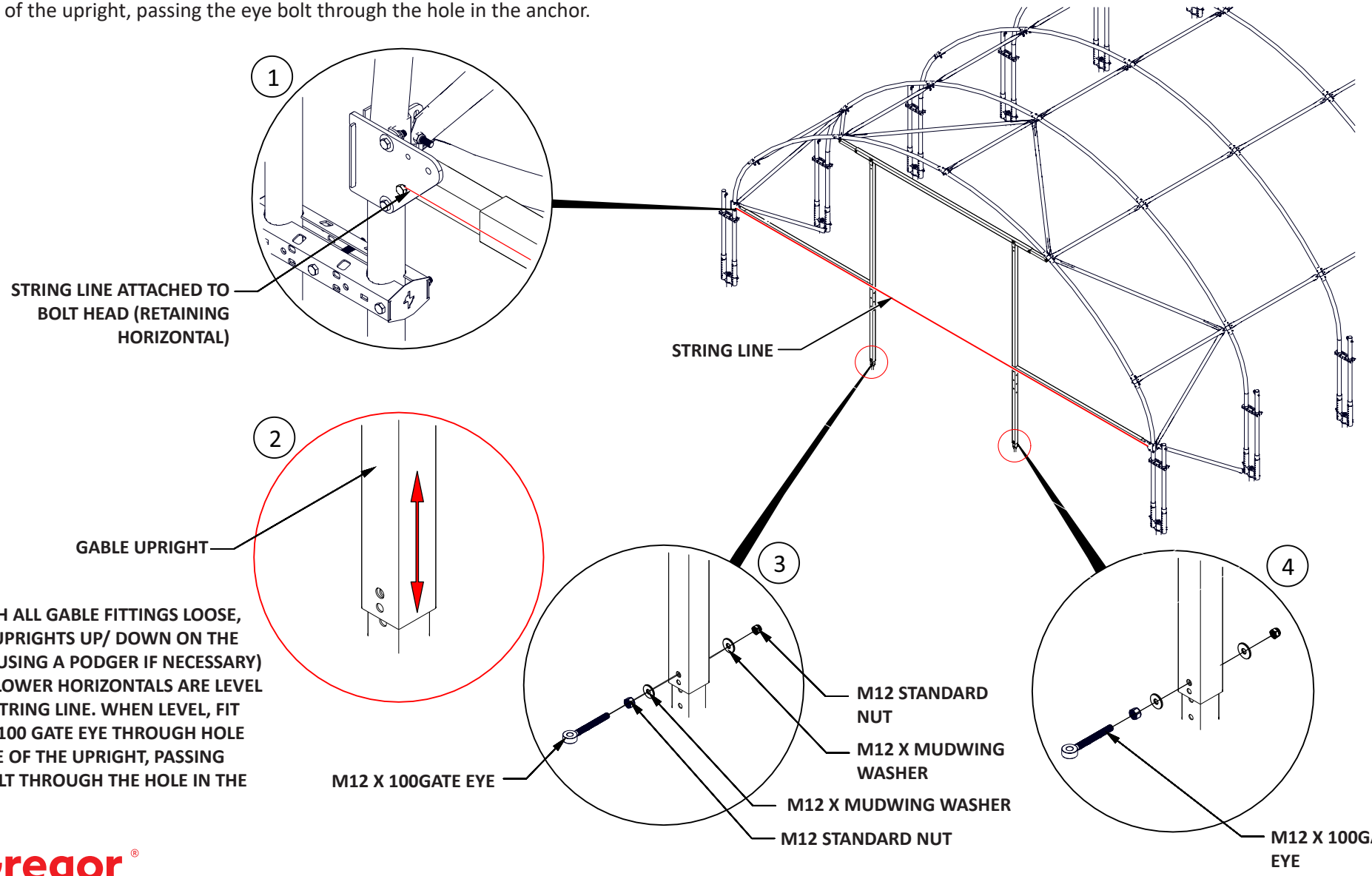


Step 6. Attach the lower horizontal assemblies to the frame. Attach the extender end onto the ratchet support bracket using an M10 x 80 set securing at the rear with a mudwing washer and a nyloc nut. **Repeat the process for the opposing side.**

NOTE: FIT ALL GABLE END FRAMEWORK LOOSELY TO ALLOW FOR ADJUSTMENT SHOWN IN AT STEP 8

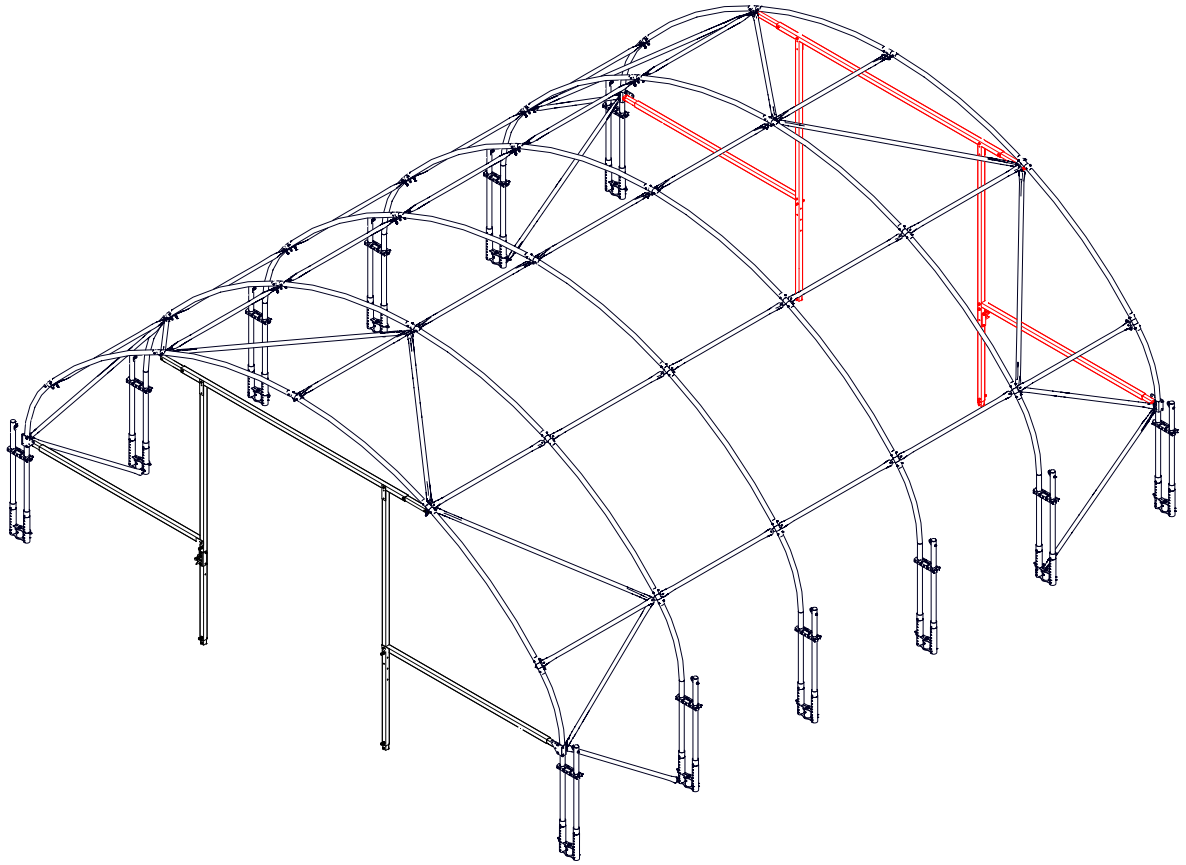


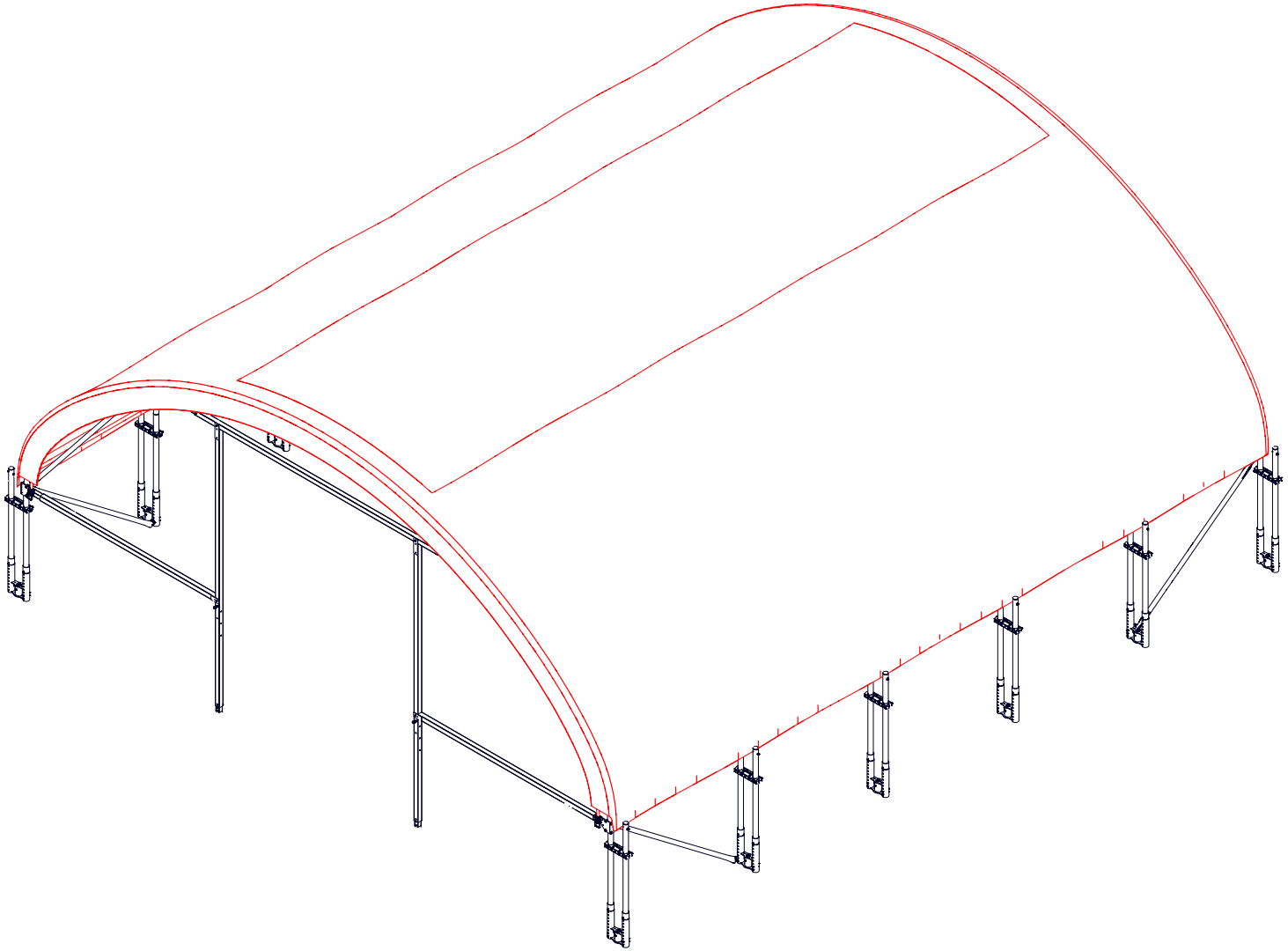
Step 7. Set the level on the gable end framework. Run a string line tight between equal points on the ratchet support brackets as shown. With all gable fittings loose, raise the uprights up/ down on the anchors (using a podger if necessary) until the lower horizontals are level with the string line. When level, fit the m12 x 100 gate eye through hole in the base of the upright, passing the eye bolt through the hole in the anchor.



NOTE: WITH ALL GABLE FITTINGS LOOSE, RAISE THE UPRIGHTS UP/ DOWN ON THE ANCHORS (USING A PODGER IF NECESSARY) UNTIL THE LOWER HORIZONTALS ARE LEVEL WITH THE STRING LINE. WHEN LEVEL, FIT THE M12 X 100 GATE EYE THROUGH HOLE IN THE BASE OF THE UPRIGHT, PASSING THE EYE BOLT THROUGH THE HOLE IN THE ANCHOR .

Step 8. Repeat steps 1-8 to assemble and attach the rear gable frame.



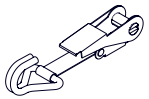


Section contents/

X 4 - M10 x 40 Set Bolt

X 4 - M10 Mudwing Washer

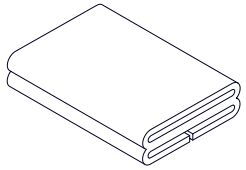
X 4 - M10 Nyloc Nut



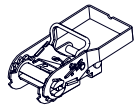
X 12 - 25mm Ratchet With Hook

X 12 - 25mm Webbing (1.0m Red)

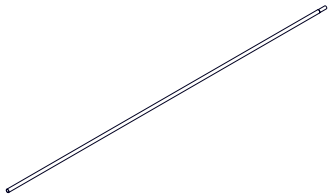
X 4 - 25mm Webbing (1.5m Black)



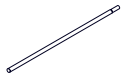
X 1 - Roof Sheet



X 4 - Ratchet Handle 50mm

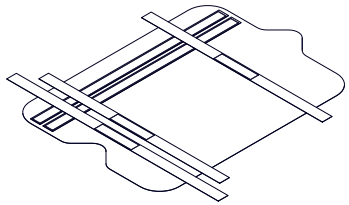


X 4 - 31mm Tensioner Tube - 3680mm



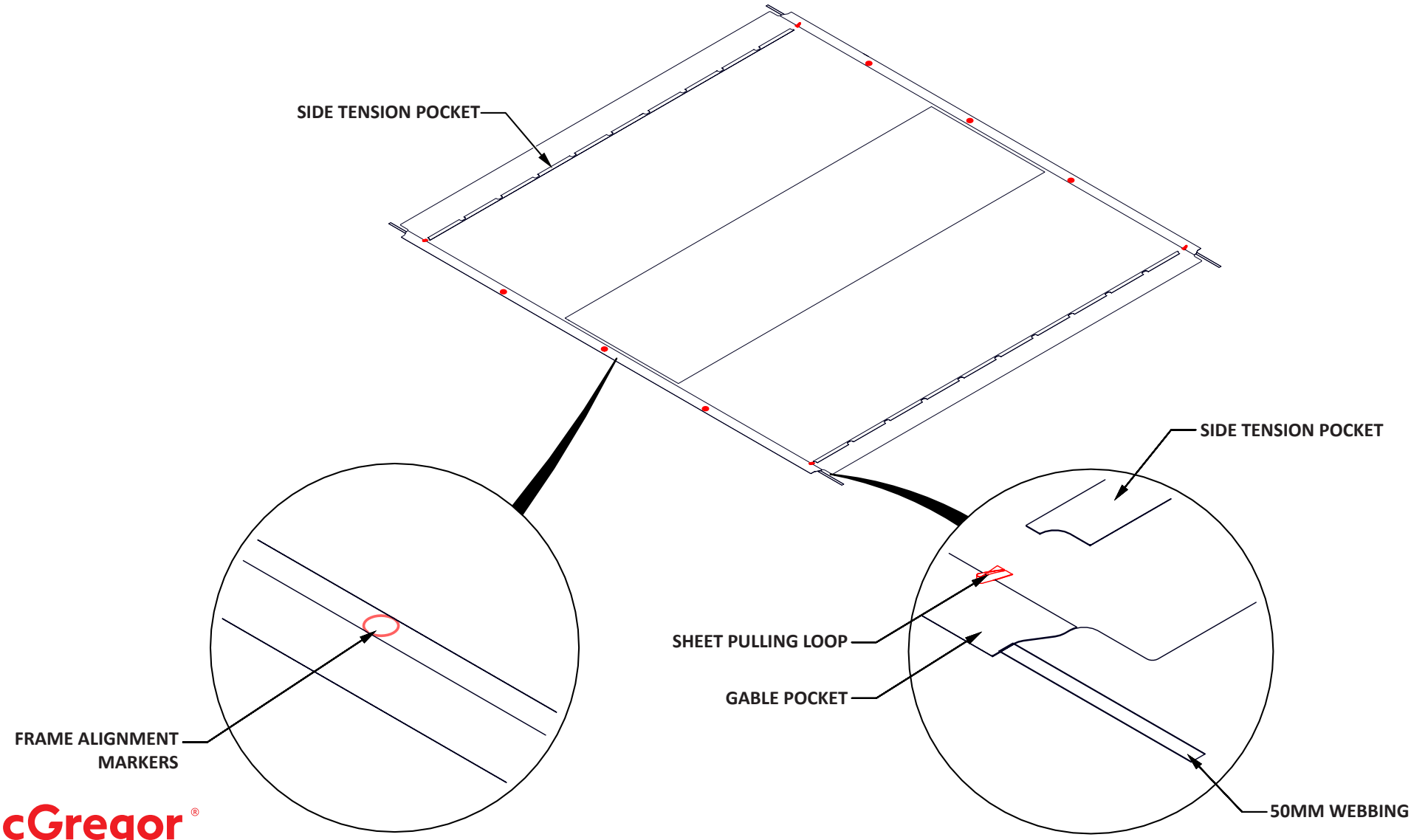
X 2 - 31mm Tensioner Tube End SWG
- 1510mm

X 2 - 31mm Tensioner Tube End PLN
- 1430mm

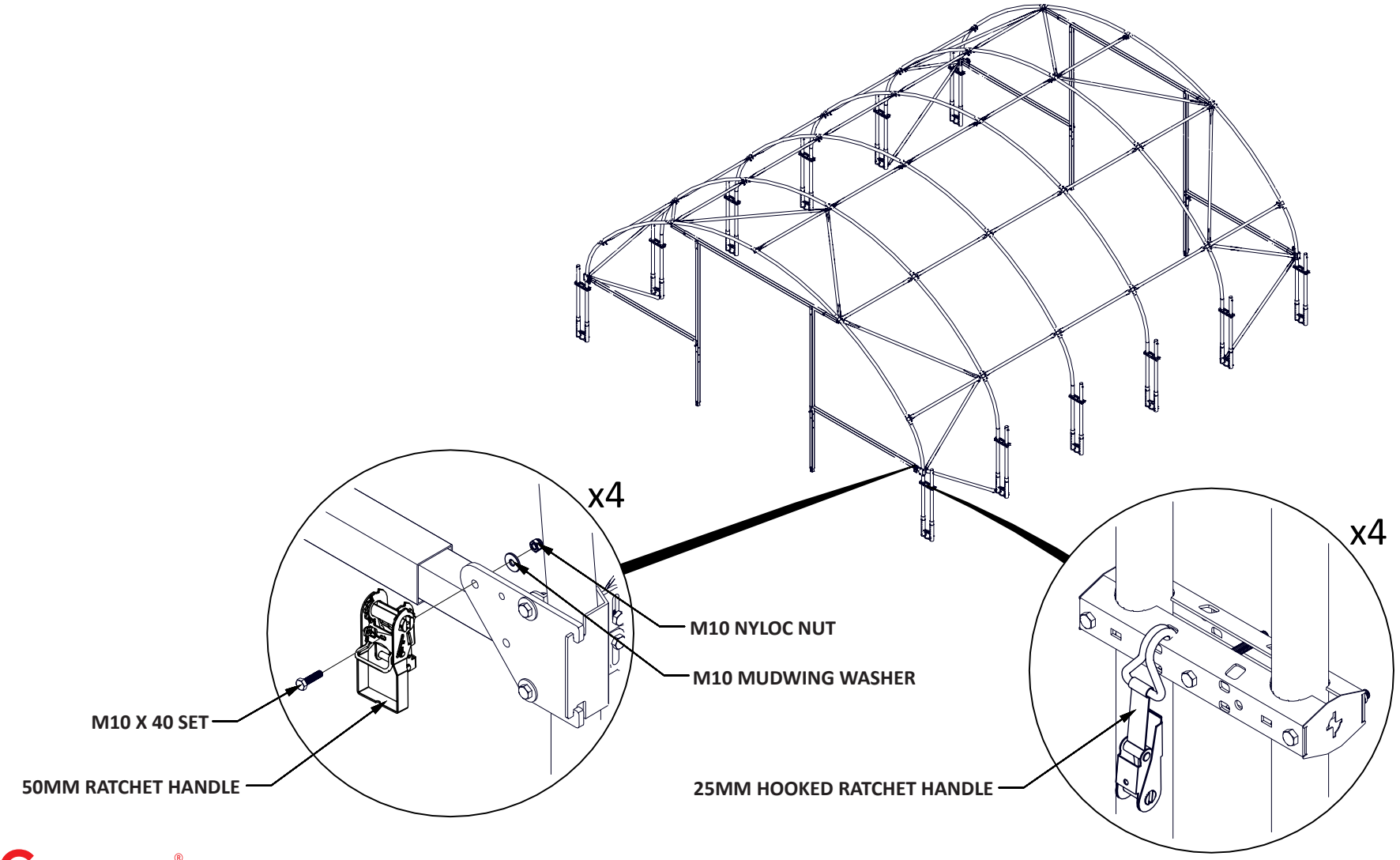


X 1 - Sheet Pulling Sling

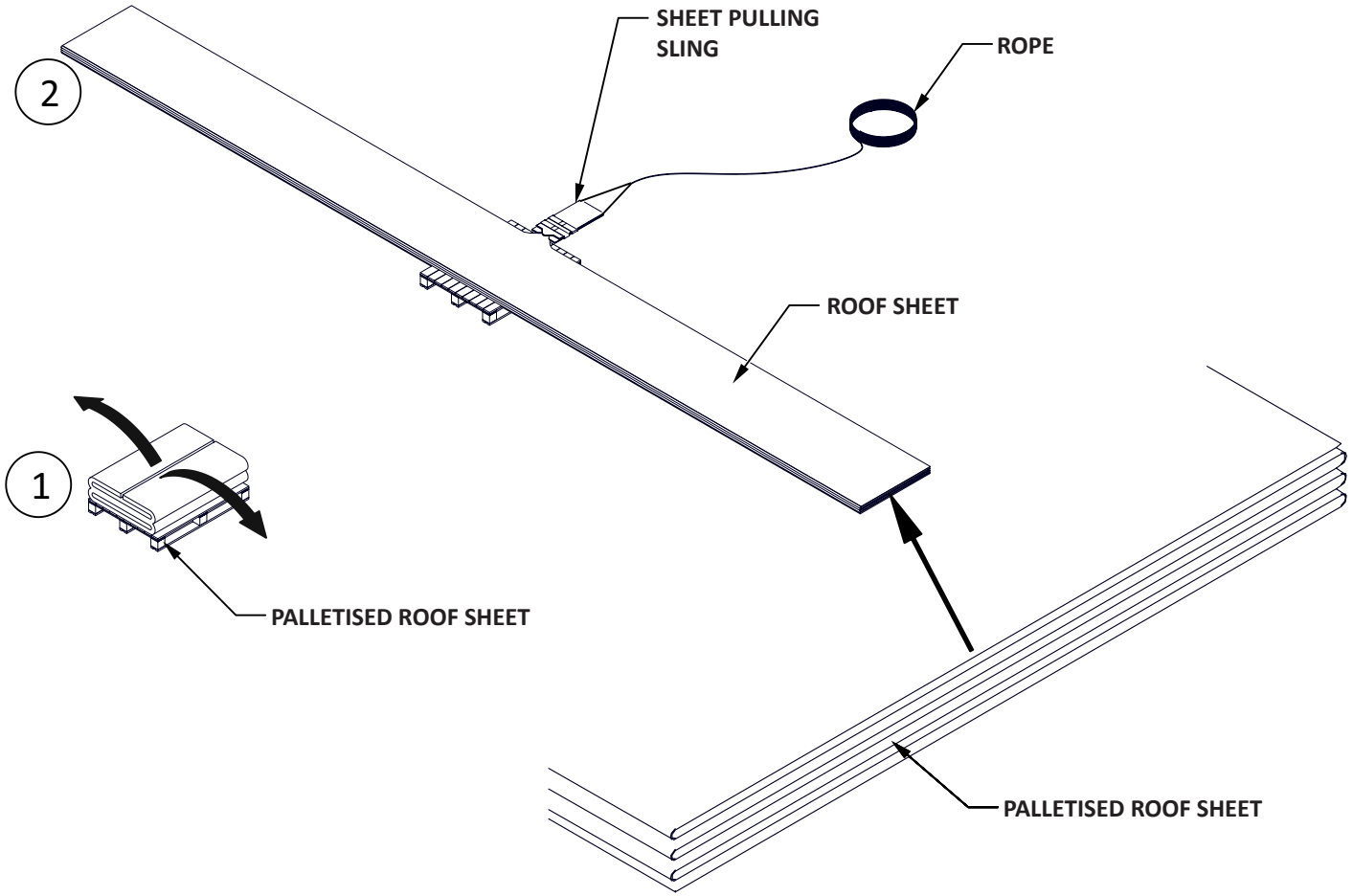
Step 1. Unpack and identify roof sheet features. **Step 1.** Identifying roof sheet features. This illustration introduces the main roof sheet features (that appear on the inside of the sheet). This is for illustration purposes - **DO NOT ATTEMPT TO UNPACK AND OPEN THE SHEET OUT AS SHOWN.**



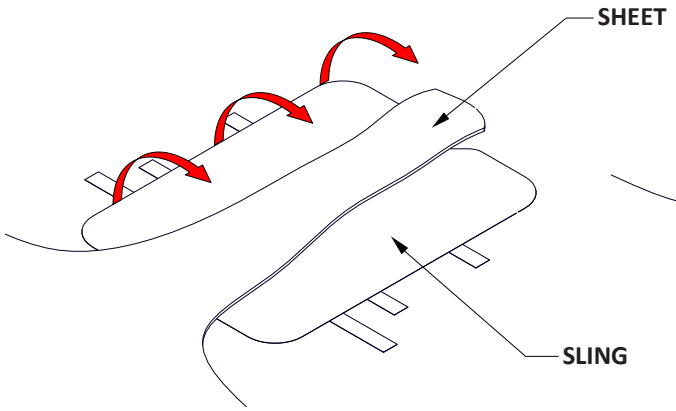
Step 2. Attach the corner ratchet handles. Take a 50mm ratchet handles and attach it to the ratchet support bracket at each corner using an M10 x 40 set mudwing washer and nyloc nut. Hook a 25mm ratchet assembly onto the corner hoop clamps.



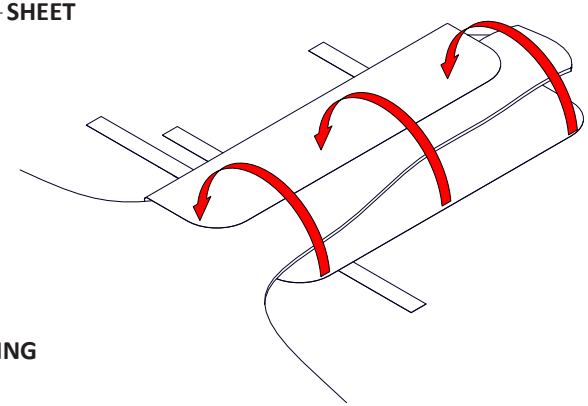
Step 3. Consult below method to ensure that the pull over rope is correctly attached to the main roof sheet.



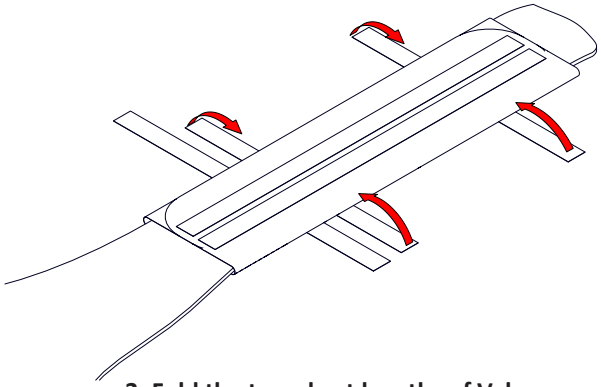
Step 4. Attach the sheet pulling sling.



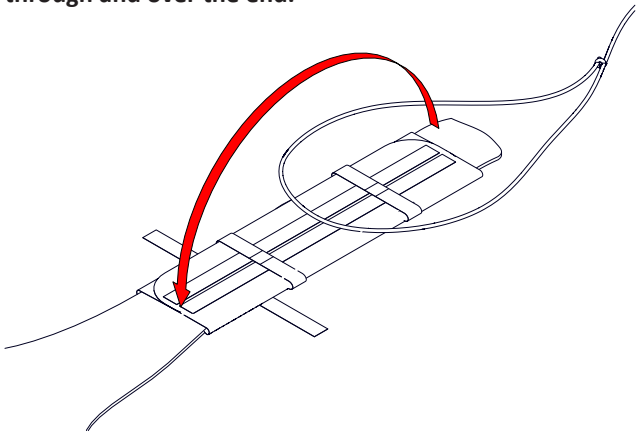
1. Gather the centre of the roof sheet and lay approximately 1.2m of the sheet in the centre of the sling so that it passes right through and over the end.



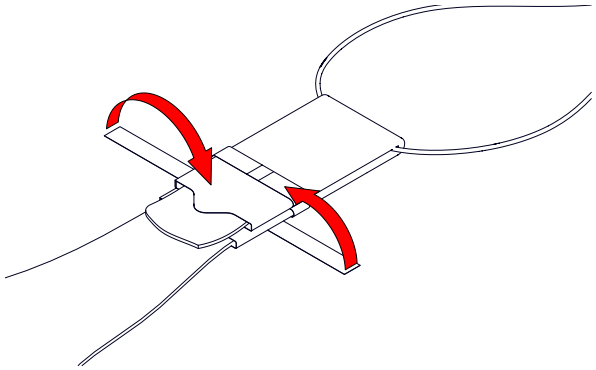
2. Fold the two sides of the sling over the sheet so that they overlap with the side that has 2 lines of Velcro finishing on top.



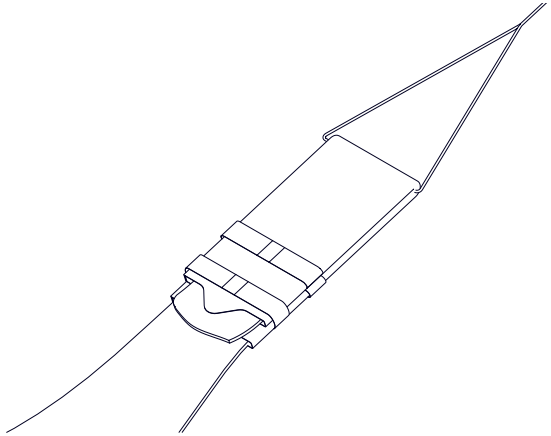
3. Fold the two short lengths of Velcro over the sling so that they attach to each other and fit tightly round the sheet in the sling.



4. Lay a looped rope or webbing into the centre of the sling, then fold the sling over so that the 2 lines of Velcro sticks to itself.

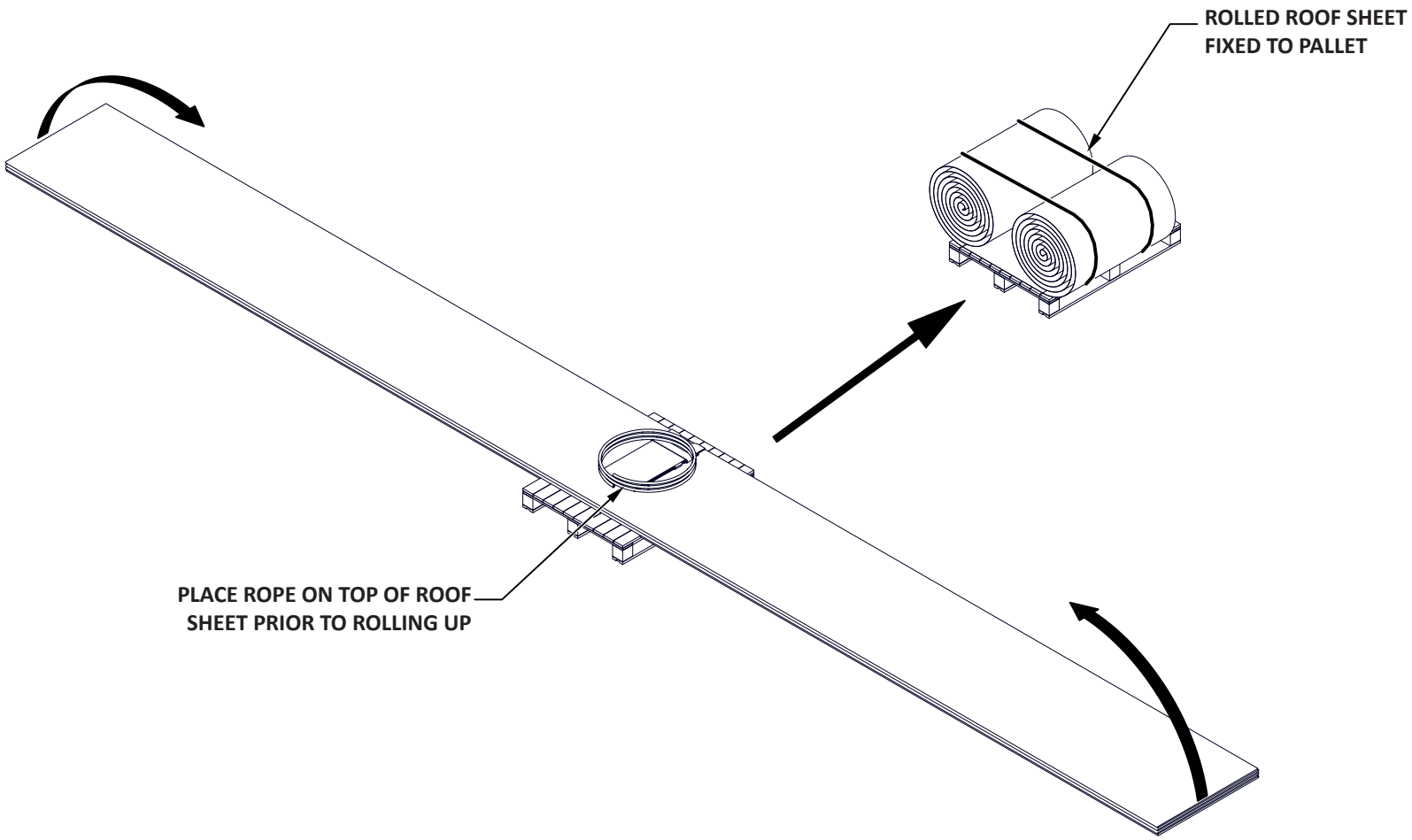


5. Fold the long length of Velcro over the folded sling to firmly trap the sheet.

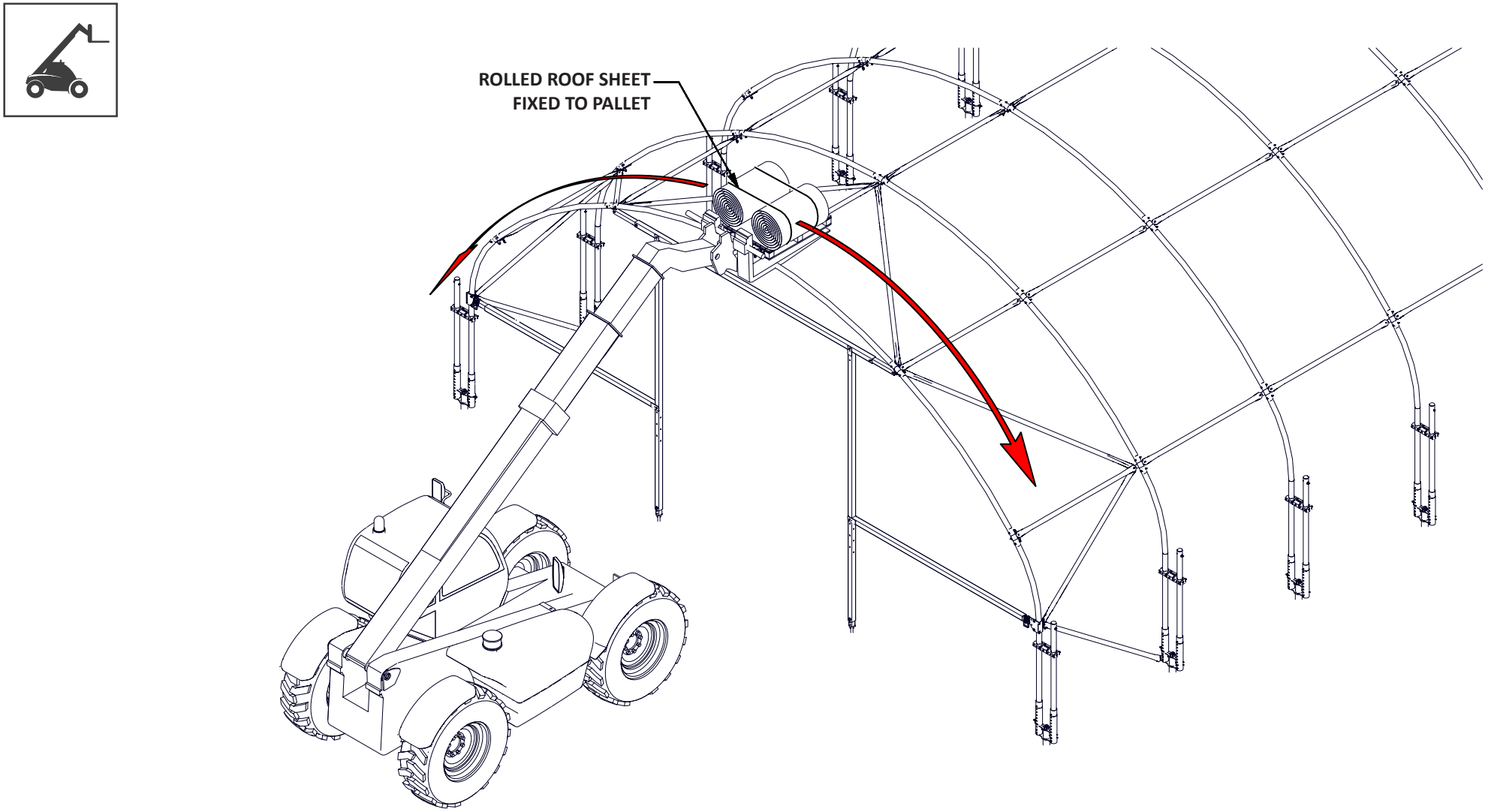


6. The roof sheet should now be firmly trapped in the pulling sling. Pull hard on the rope to test before cladding.

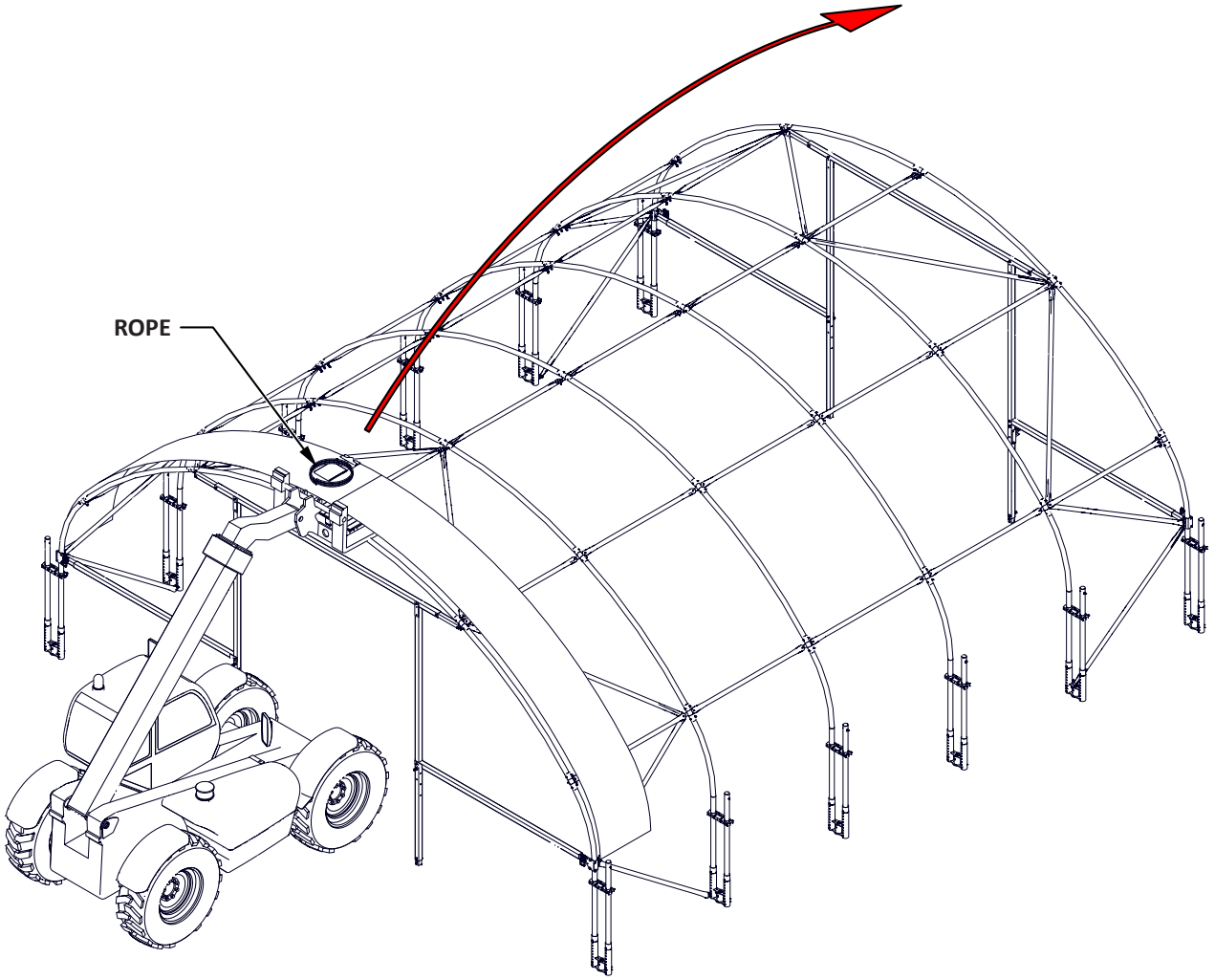
Telehandler Method - Step 1 - With the sheet pulling sling attached, roll up the sheet. Roll each end of the sheet to the centre of the pallet and wrap a rope around the pallet and sheet to secure it before lifting.



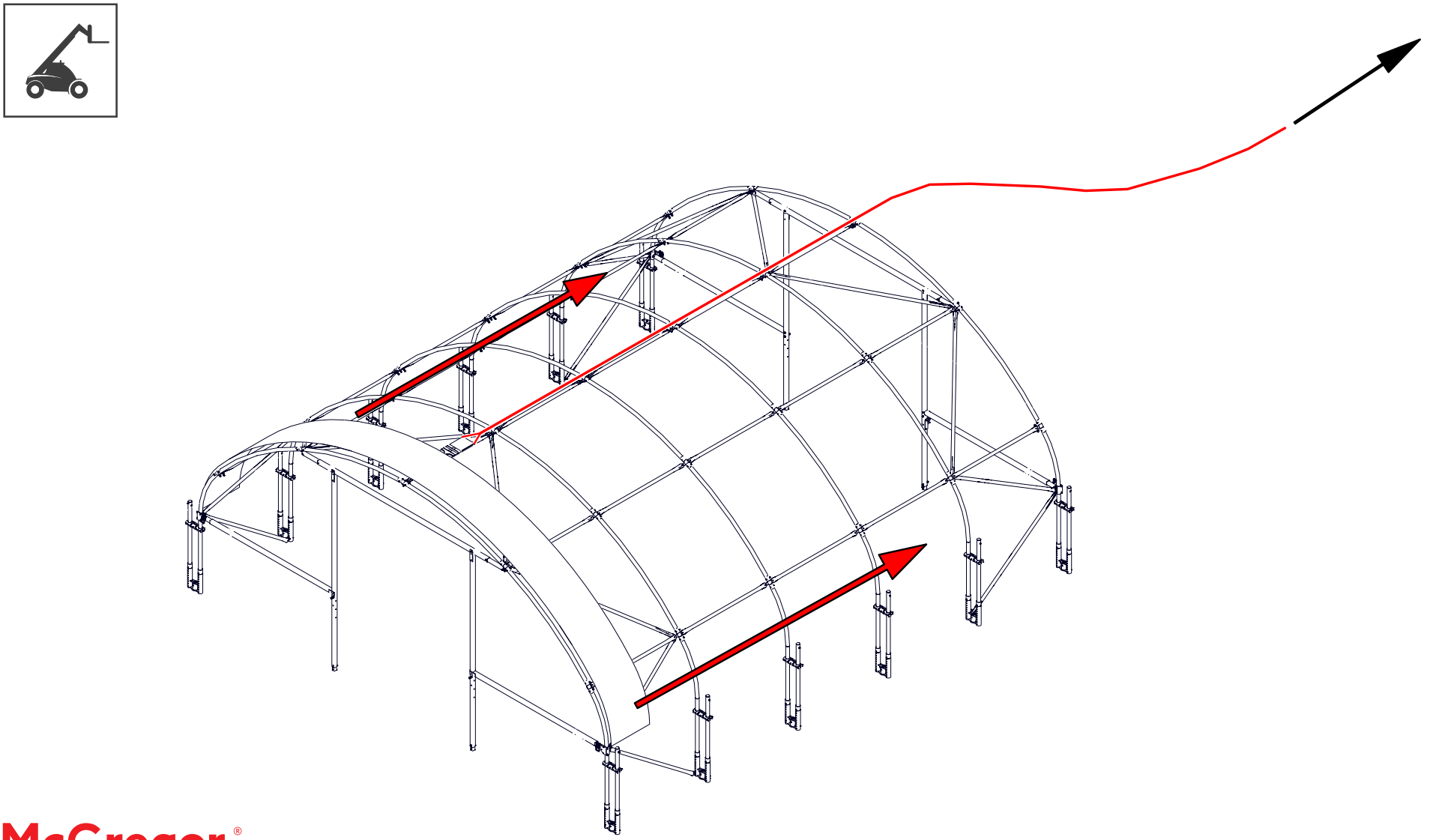
Telehandler Method - Step 2. Raise the roof sheet. Lift up the roof sheet pallet using a telehandler. Remove the securing ropes from around the pallet and rolled up sheet and carefully unfurl the sheet so that it sits evenly over the gable end.



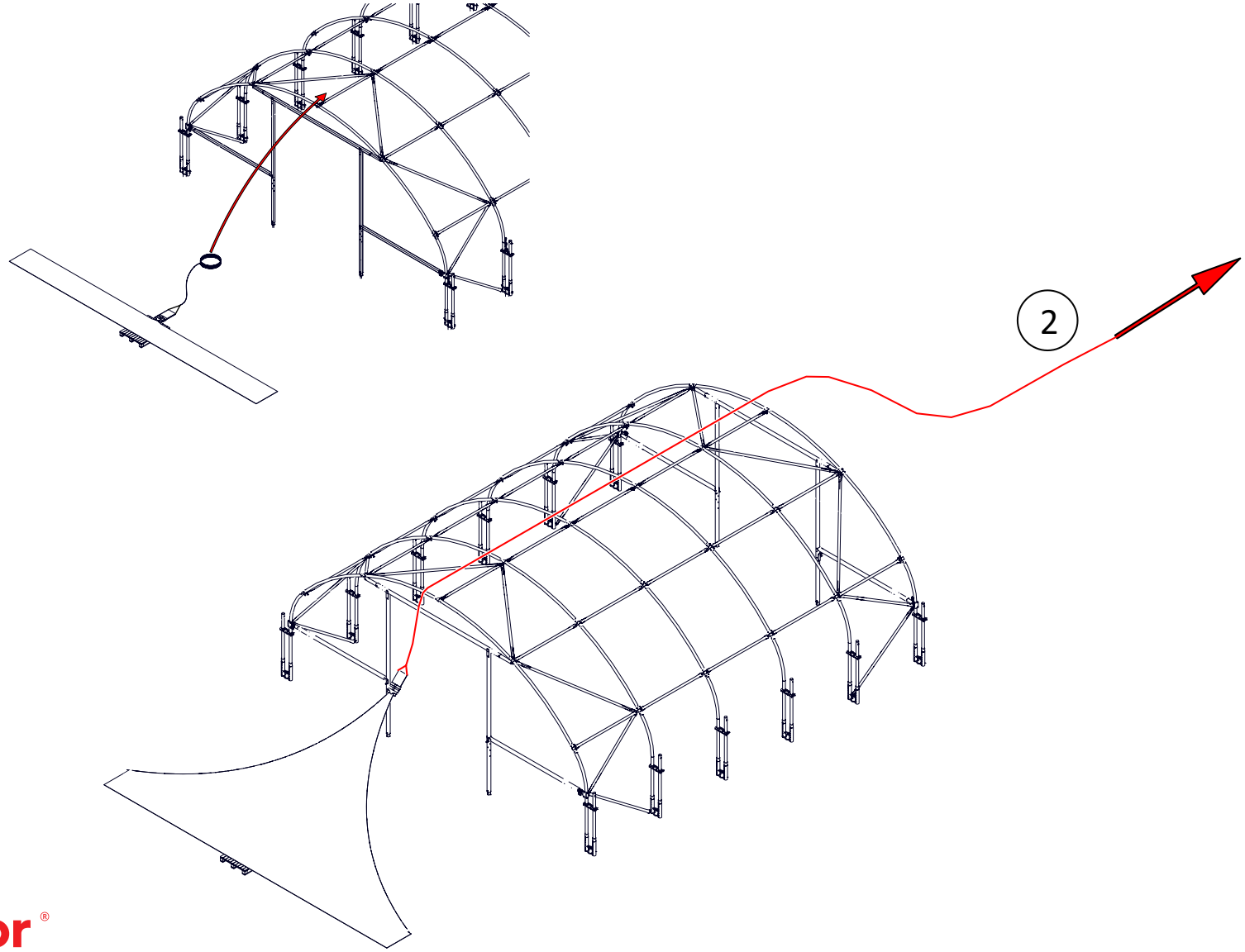
Telehandler Method - Step 3. Throw the rope over the centre of the building.



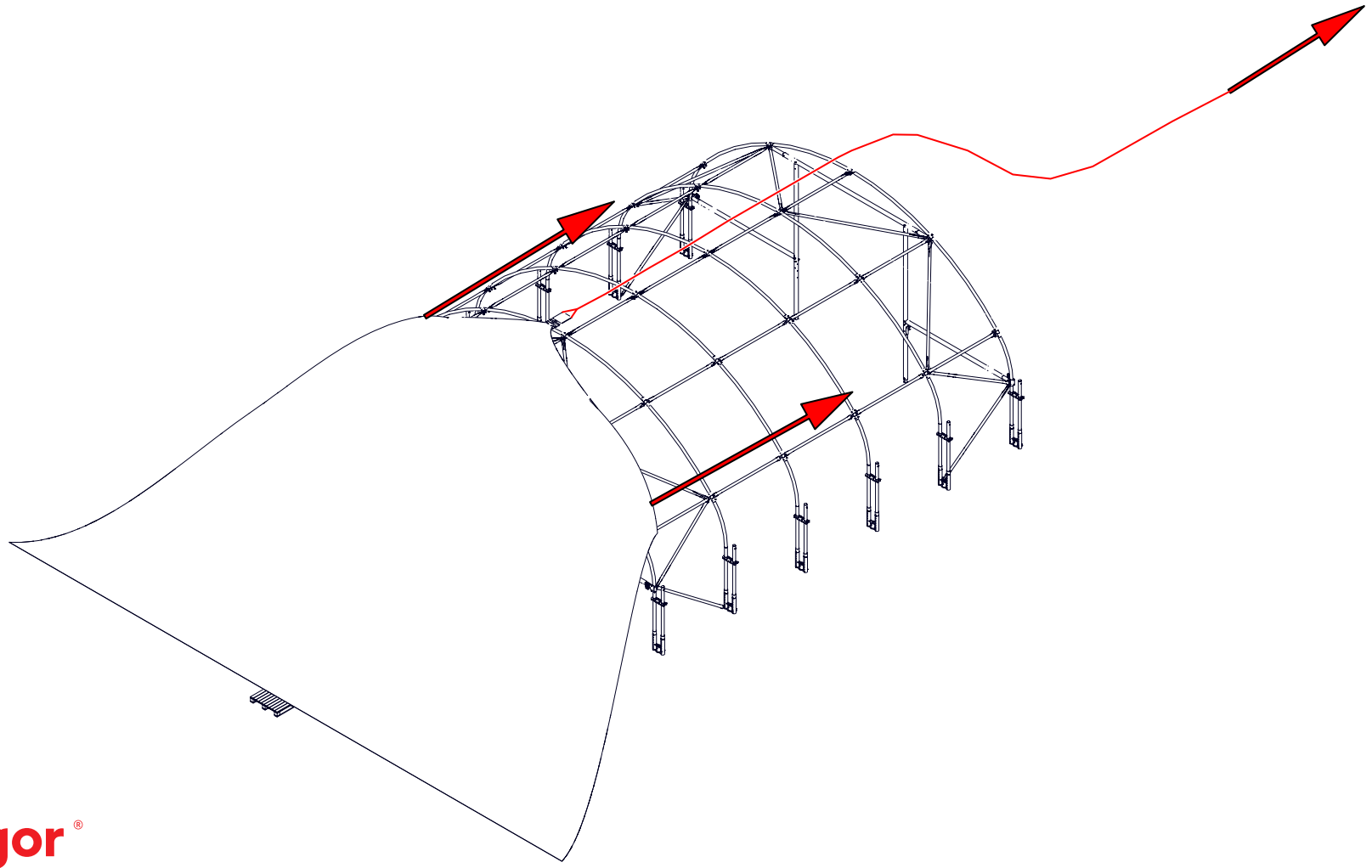
Telehandler Method - Step 4. Pull the sheet over the building. With the sheet laid out on the gable end, pull the rope from the opposite end, gradually pull the sheet over the building guiding the sheet either side to ensure it does not snag - it is recommended to use a petrol winch to pull the sheet.



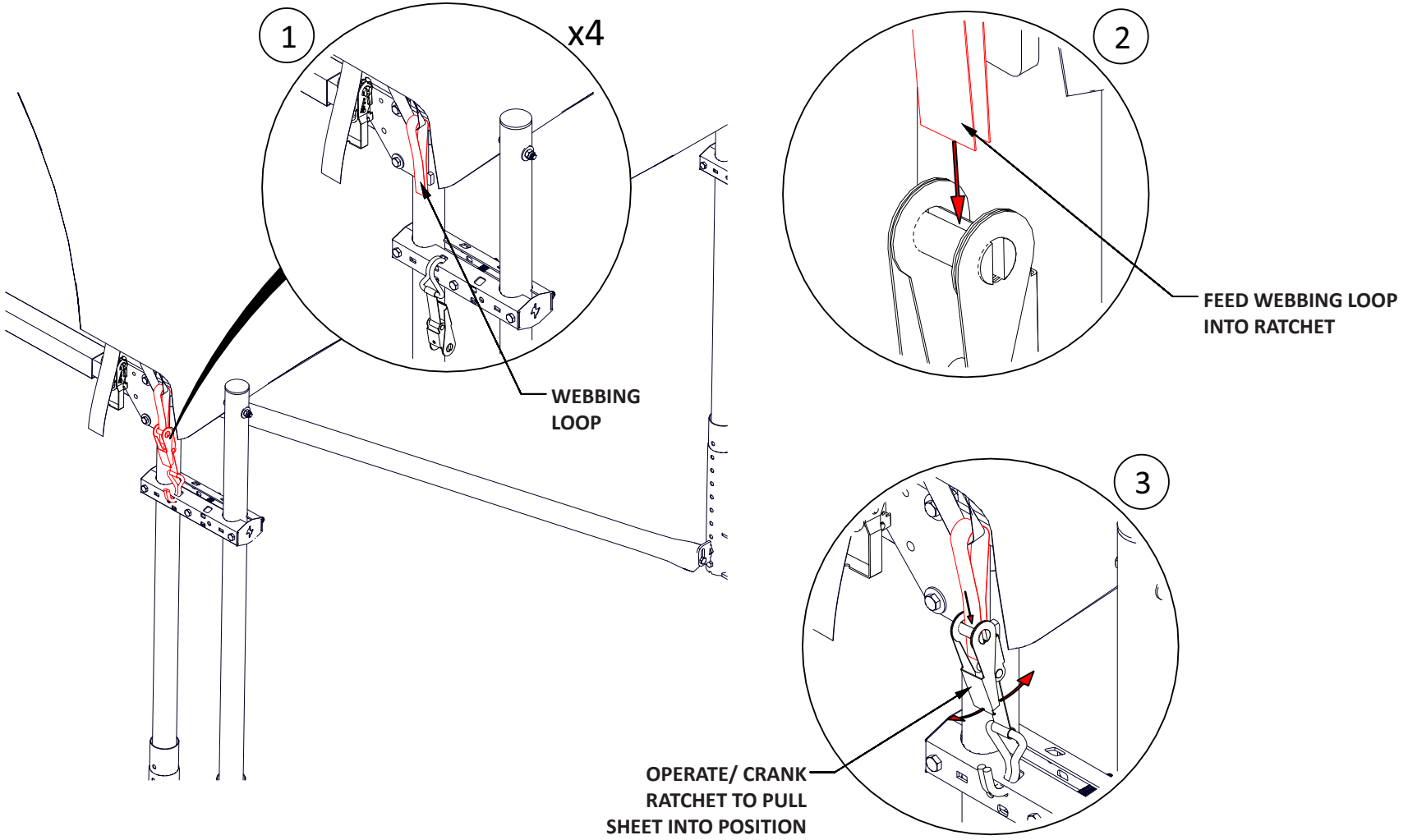
Manual Method - Step 1. With the sheet laid out on the floor and the rope attached**.** Throw the rope over the centre of the building to the opposing end. Pull on the rope to start guiding the sheet over the front gable end - it is recommended to use a petrol winch to complete this step.



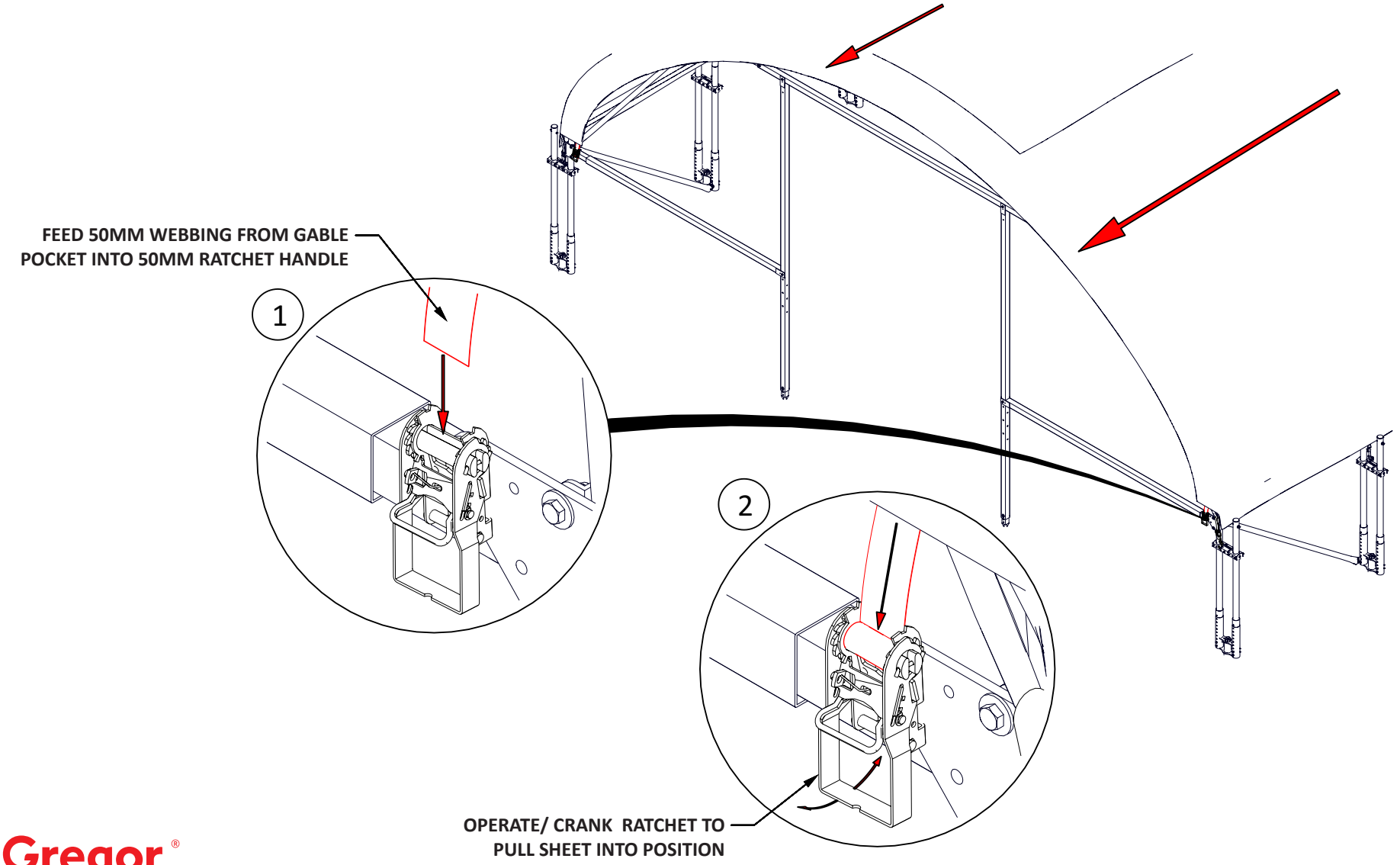
Manual Method - Step 2. Pull the sheet over the building using the rope - it is recommended to use a petrol winch to complete this step.



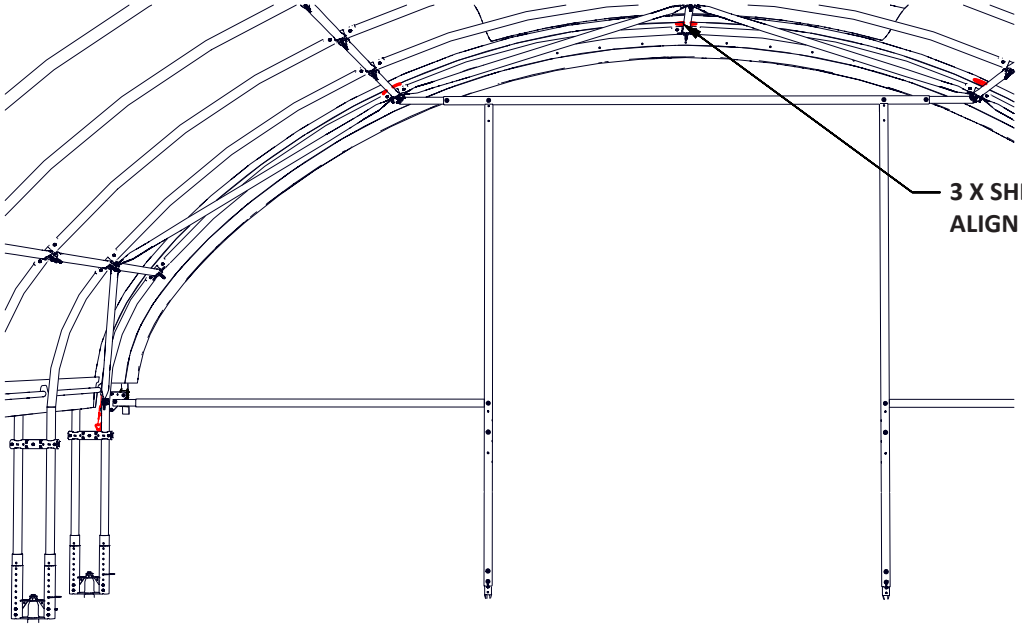
Step 11. Moving the sheet into position. Expose the sheet pulling loops and feed a length of 1.5m black webbing through each of the loops. Lift up each 25mm ratchet handle and feed the webbing into the ratchet handle. Crank the ratchet handles a few times to hold the inserted webbing into ratchets.



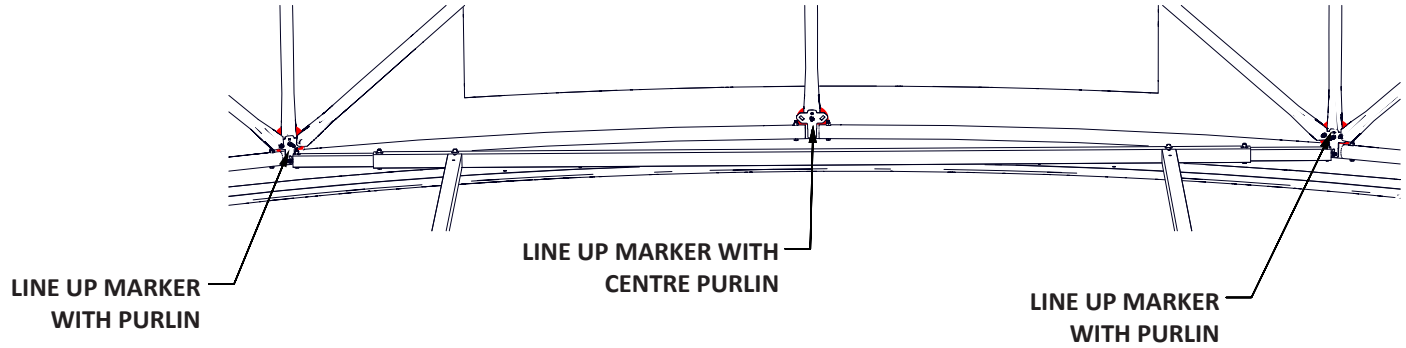
Step 12. Insert the gable end webbing straps into the 50mm ratchet handles. Insert the gable end corner webbing straps into the 50mm ratchet handles. Crank the handles a few times to hold straps.



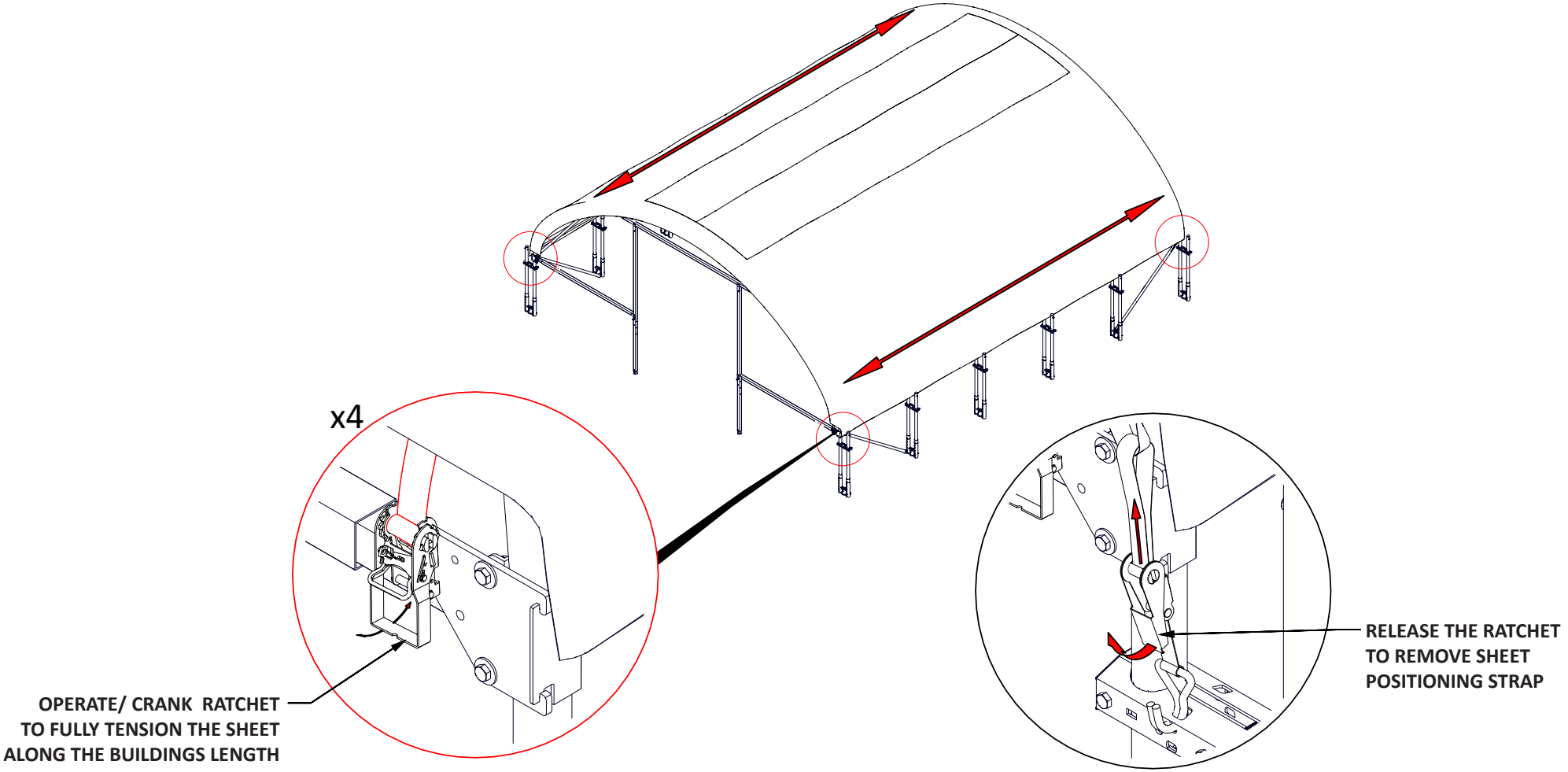
Step 13. Align the roof sheet. View the roof sheet from the inside and identify the location markers at the gable ends to see if adjustment is needed.



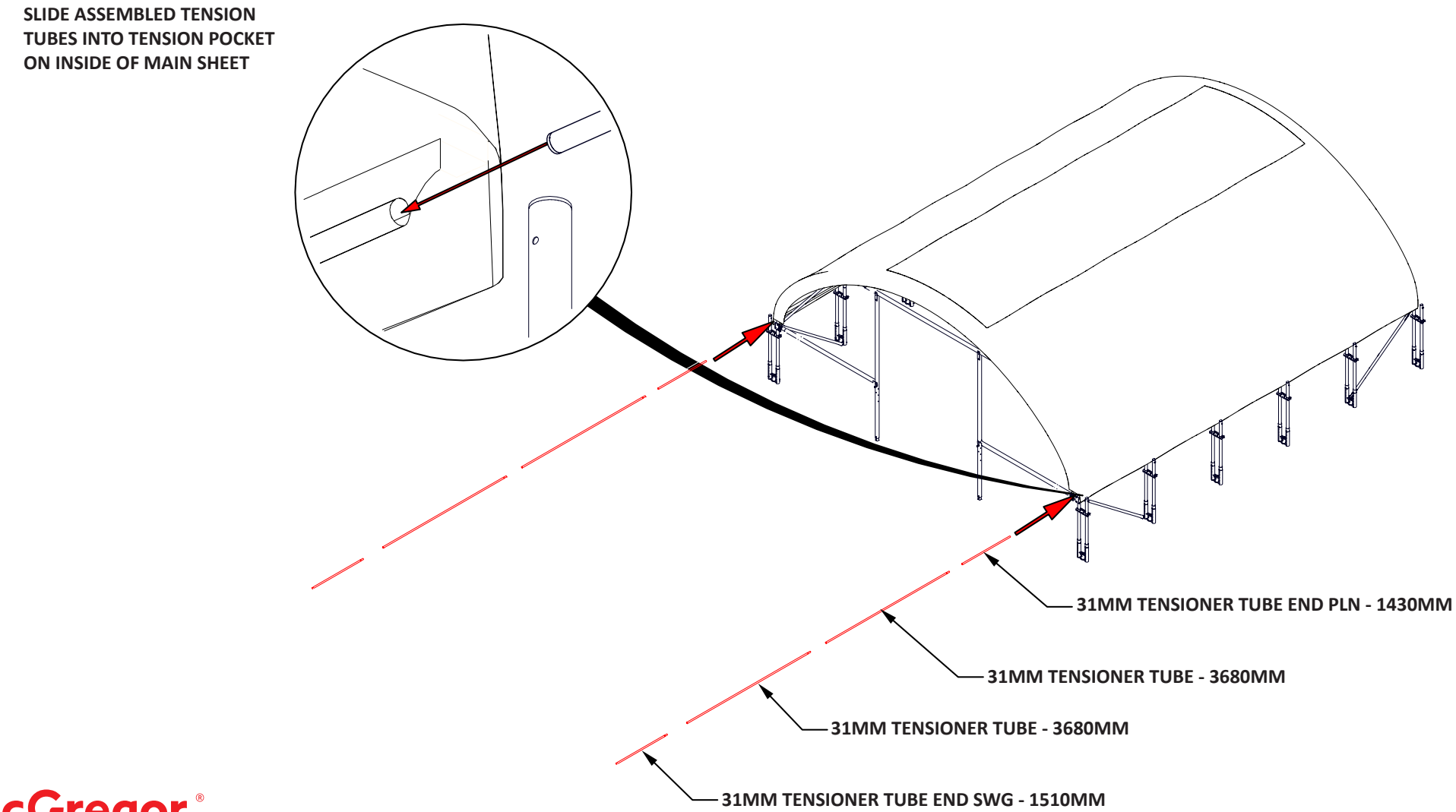
VIEW - SHOWN FROM THE ENTRANCE OF THE BUILDING LOOKING UP AT THE UNDER SIDE OF THE SHEET & FRAMEWORK



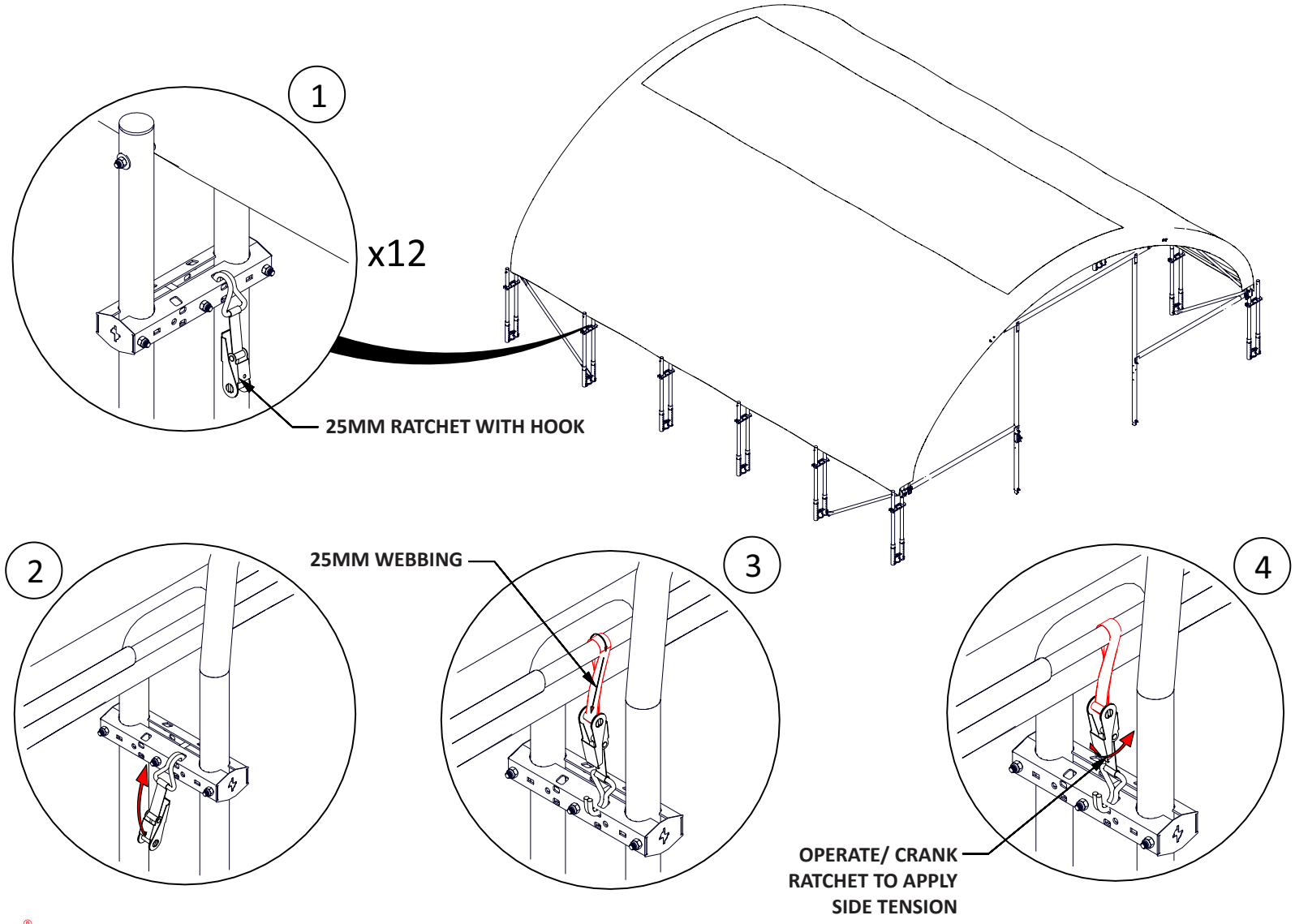
Step 14. With the sheet in position, feed the 50mm webbing into the 50mm ratchet handles. Tension the sheet fully along the buildings length, crank the 50mm ratchets until the fabric of the roof sheet is 10 - 20mm away from the ratchet handle. If webbing gathers too much around the ratchet spindle this may need to be released and fed back into the ratchet handle to complete the tensioning. When the sheet is tensioned, release and remove the 25mm ratchets.

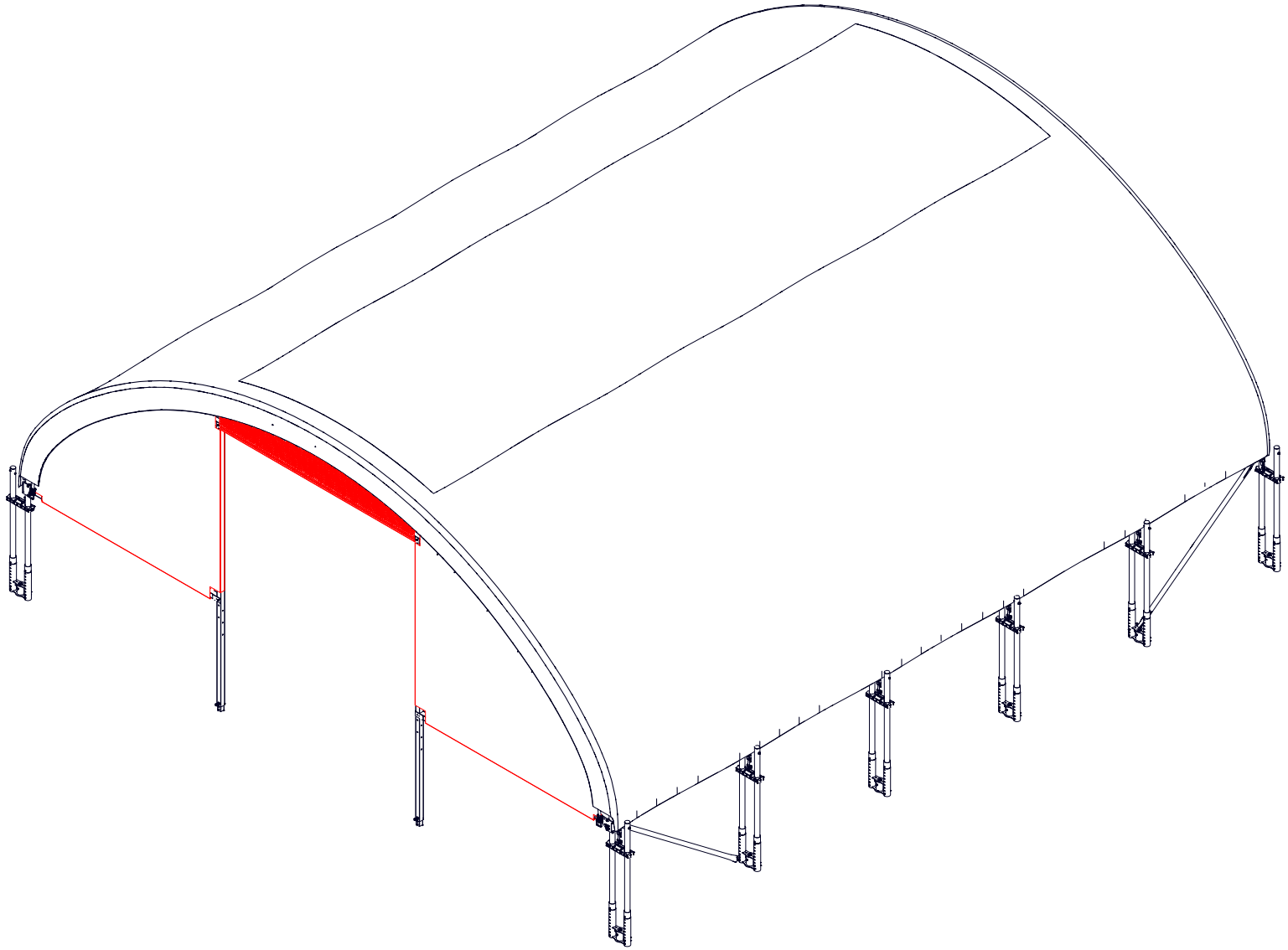


Step 15. Insert the 31mm tensioner tubes. Assemble each tensioner tube assembly and slide them into the side pockets (found on the inside of the sheet).



Step 16. Tension the side bars. Attach a 25mm ratchet handle assembly to each hoop clamp. Take the webbing pieces and wrap the around the exposed tension bar points. Lift up the 25mm ratchets and feed in the webbing straps. Operate the handles evenly to the tension down the sheet at the sides.





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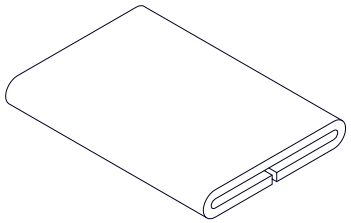
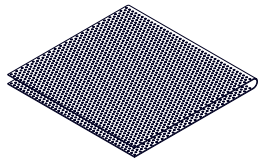
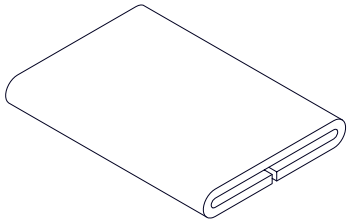


X 2 - **Left Hand Gable Quadrant**

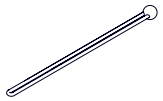


X 2 - **Gable Vent Sheet**

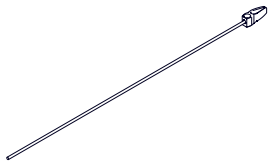


X 2 - **Right Hand Gable Quadrant**

X 95 - **Shock Cord Ball Loop 150mm**

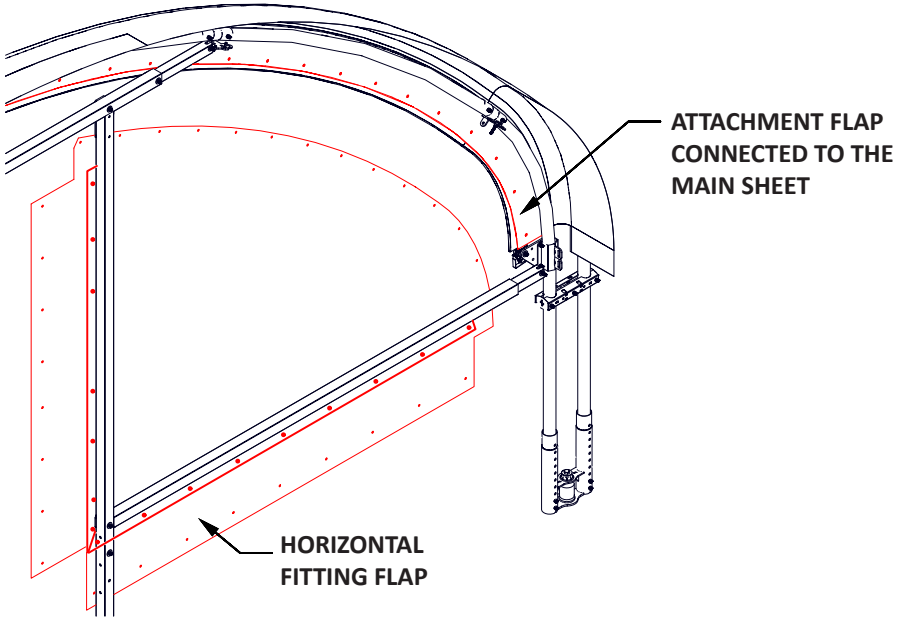


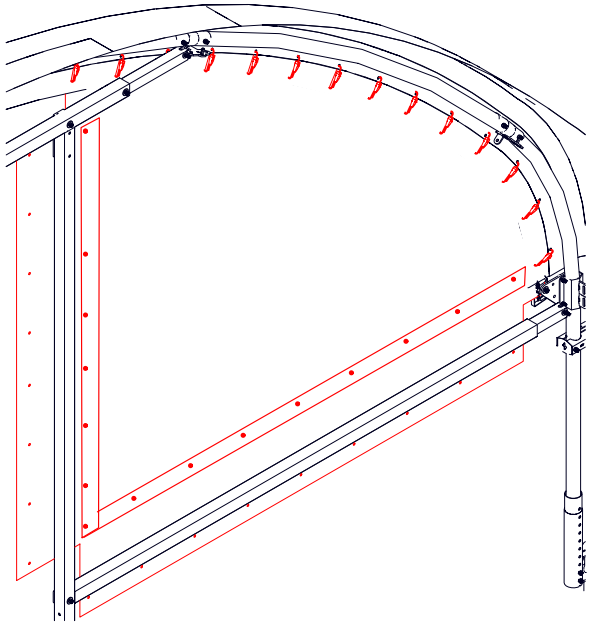
X 20 - **Shock Cord Ball Loop 225mm**
(Supplied To Assist installation - Not Always Used)

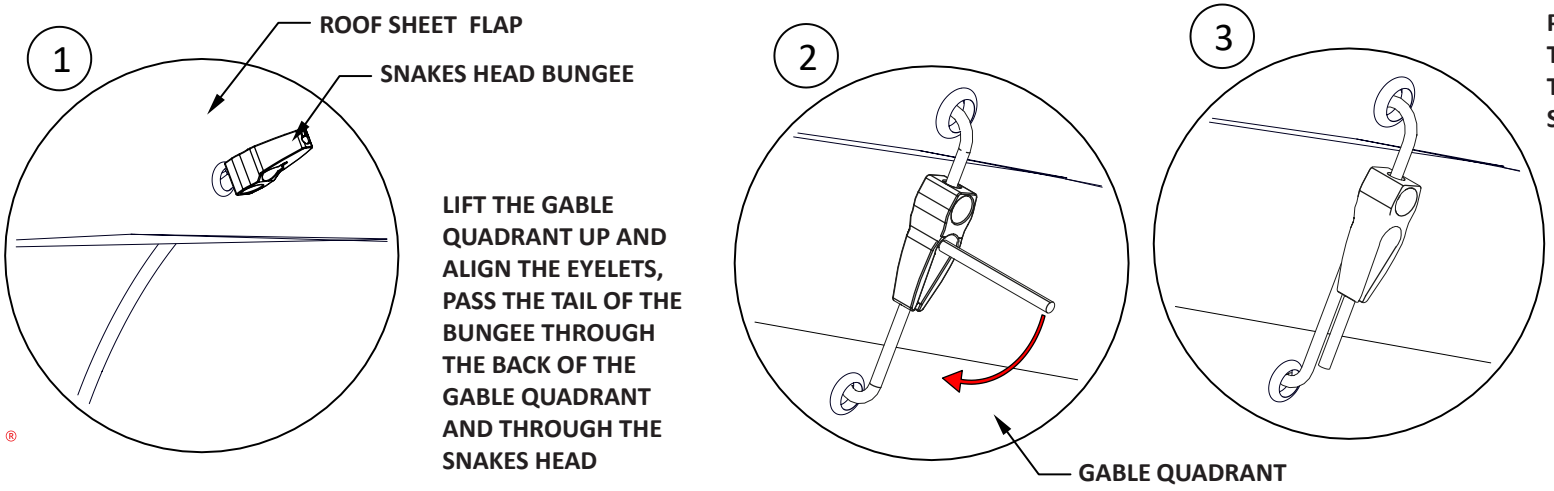


X 60 - **Snakes Head Bungee**

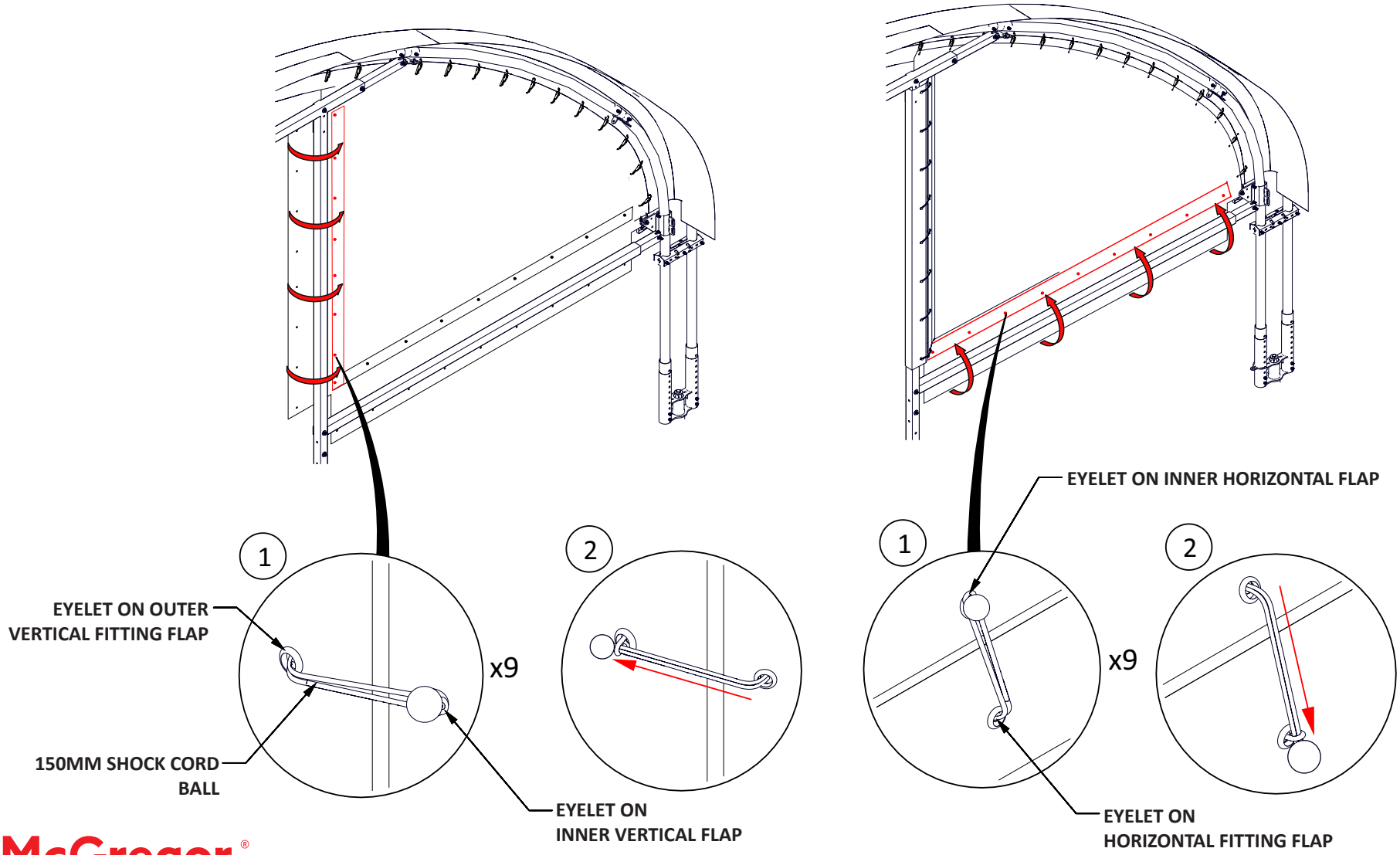
Step 1. Working from the inside of the building attach the first LH gable quadrant sheet to the main roof sheet. Offer up the gable quadrant to the inner flap of the roof sheet and attach it using snakes head bungee cords around the curved edge.



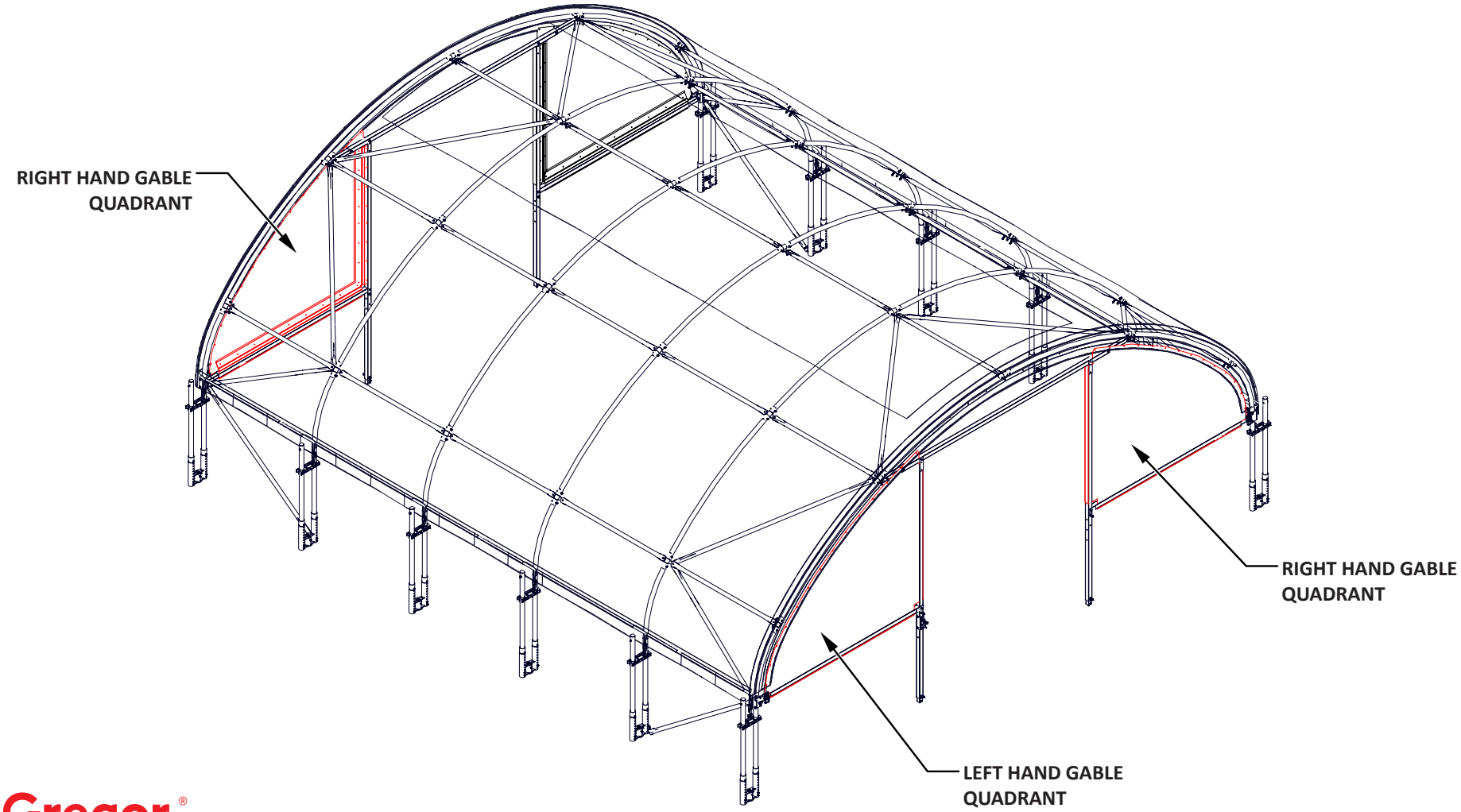




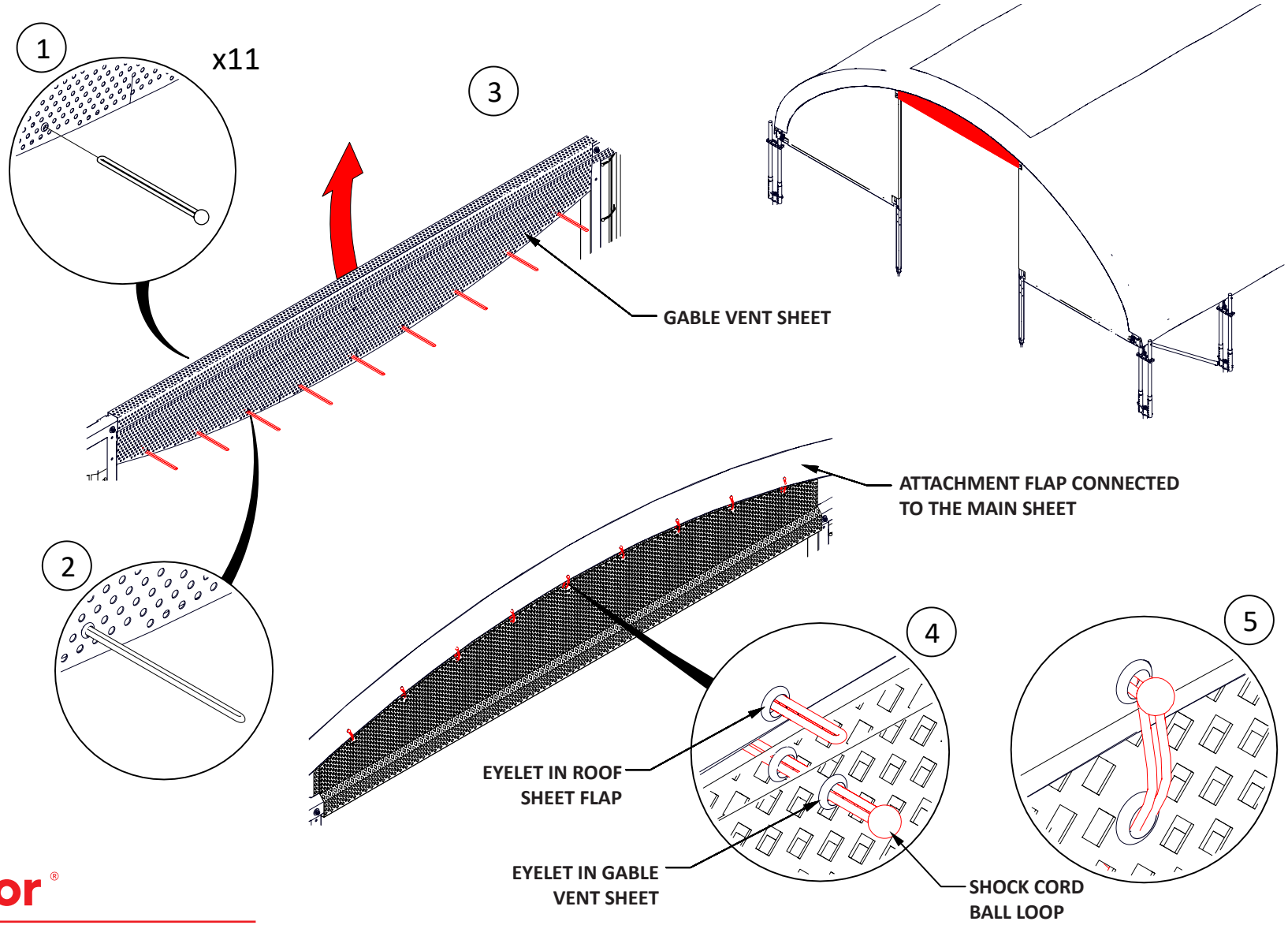
Step 2. Attach the sheet around the gable end frame. Wrap the sheet around the upright and lower horizontal and attach the sheet using shock cord ball loops.

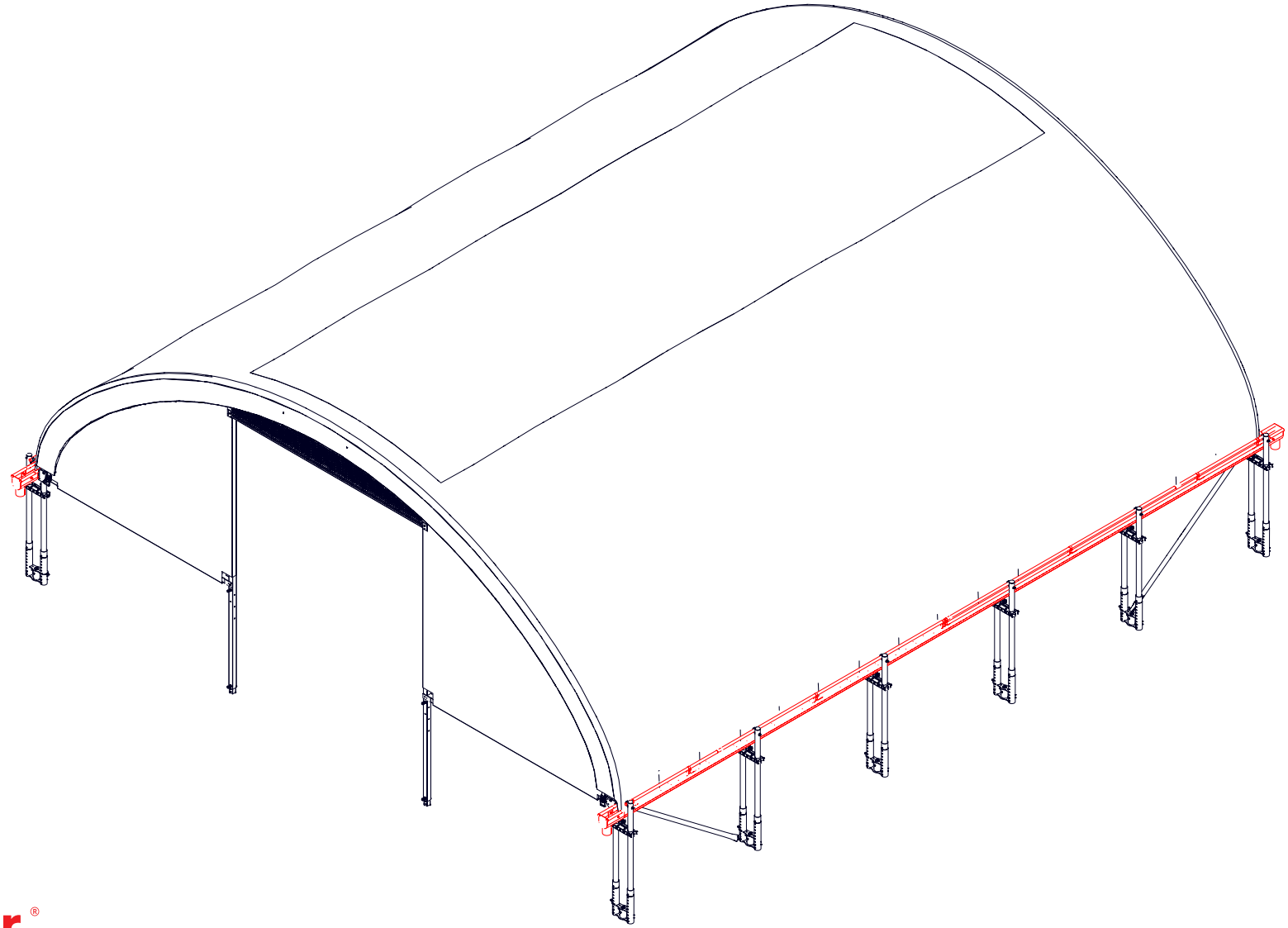


Step 3. Follow steps 1 and 2 to fit the remaining LH and RH gable sheets.



Step 4. Attach the gable vent sheet. Wrap the vent sheet around the upper horizontal so that it hangs down. Pass the shock cord ball loops through the eyelets on both sides of the vent sheet. Lift and rotate the vent sheet so that the elasticated tails of the shock cord ball loops can be passed through the corresponding eyelets on the inner flap of the main roof sheet. Complete attachment of all shock cord ball loops.





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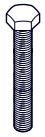


X 12 - M10 x 80 Set

X 12 - M10 Mudwing Washer

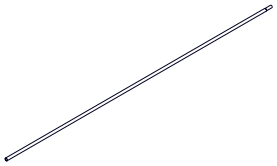
X 12 - M10 Nyloc Nut

X 12 - M8 x 25 Set

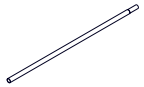
X 12 - M8 Bonded Rubber Washer

X 12 - M8 Nyloc Nut

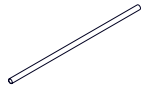
X 12 - M8 Mudwing Washer



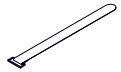
X 8 - 31mm Gutter tubes (full) 3680mm



X 4 - 31mm Gutter tubes (SWG) 1545mm

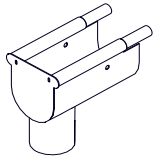


X 4 - 31mm Gutter tube (PLN) 1465mm



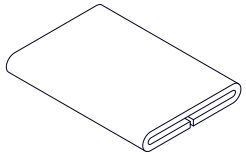
X 14 - Velcro Buckle Strap

X 12 - Tube Hook



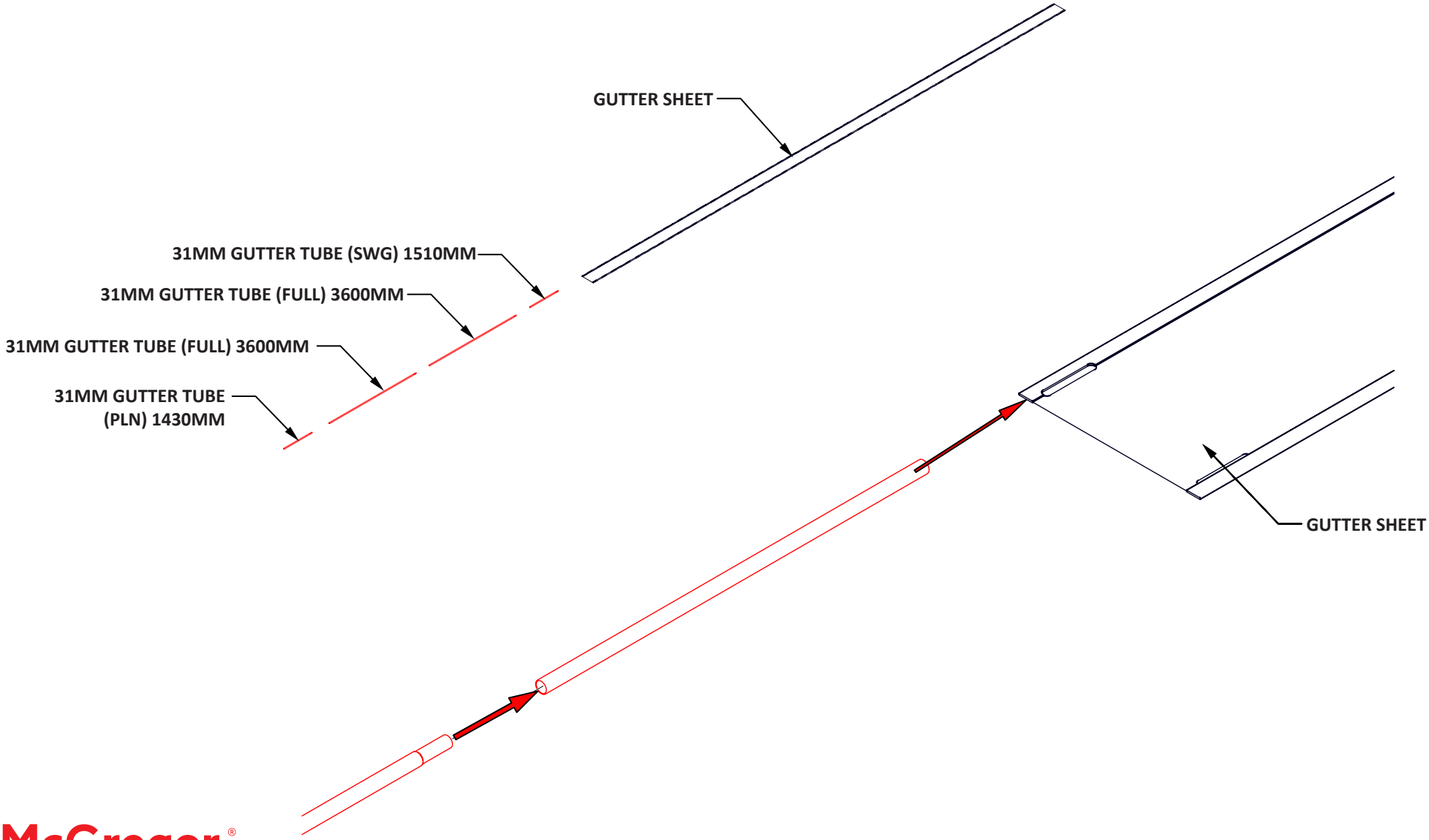
X 4 - Gutter Outlet

X 4 - Gutter Sealing Strip

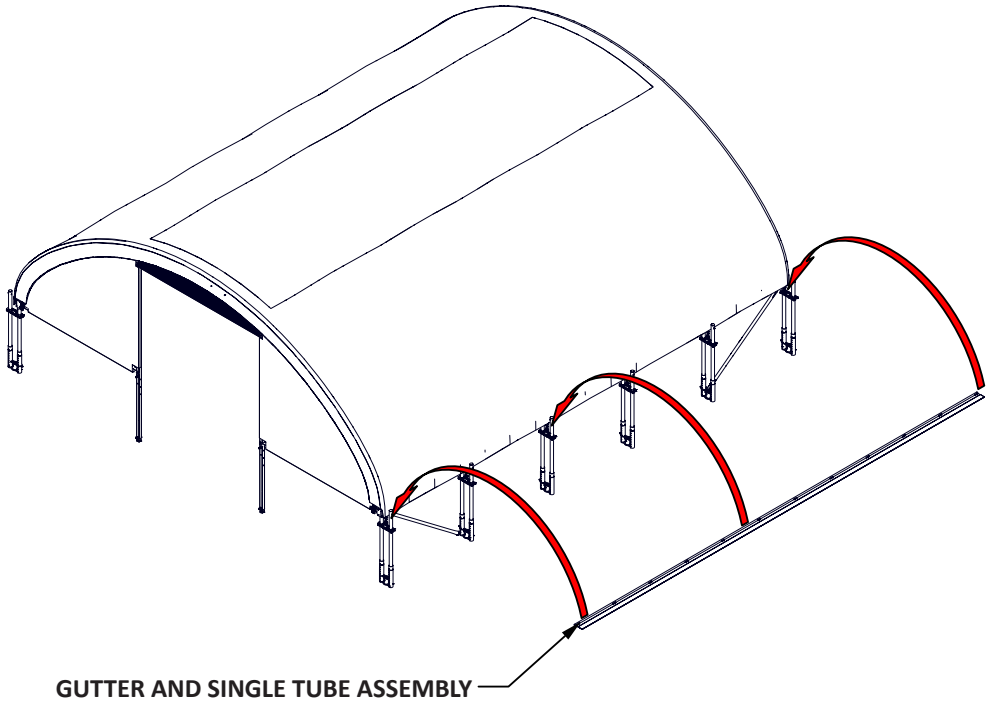


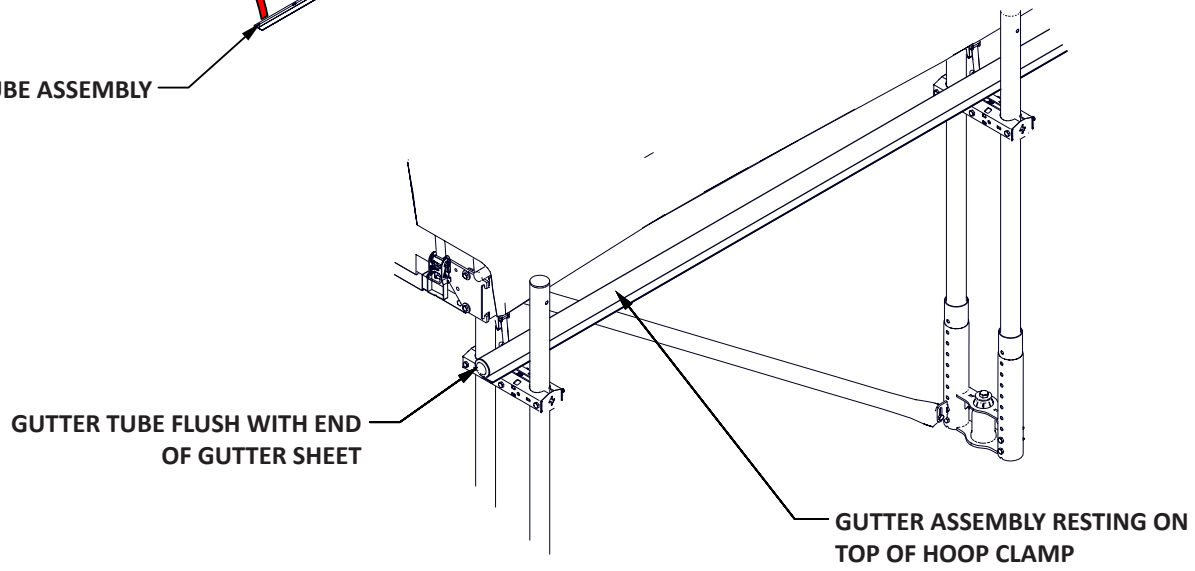
X 2 - Gutter Sheet

Step 1. Insert one length of gutter tubes into the gutter sheet. Assemble the gutter tubes as shown and insert them into one of the gutter pockets.

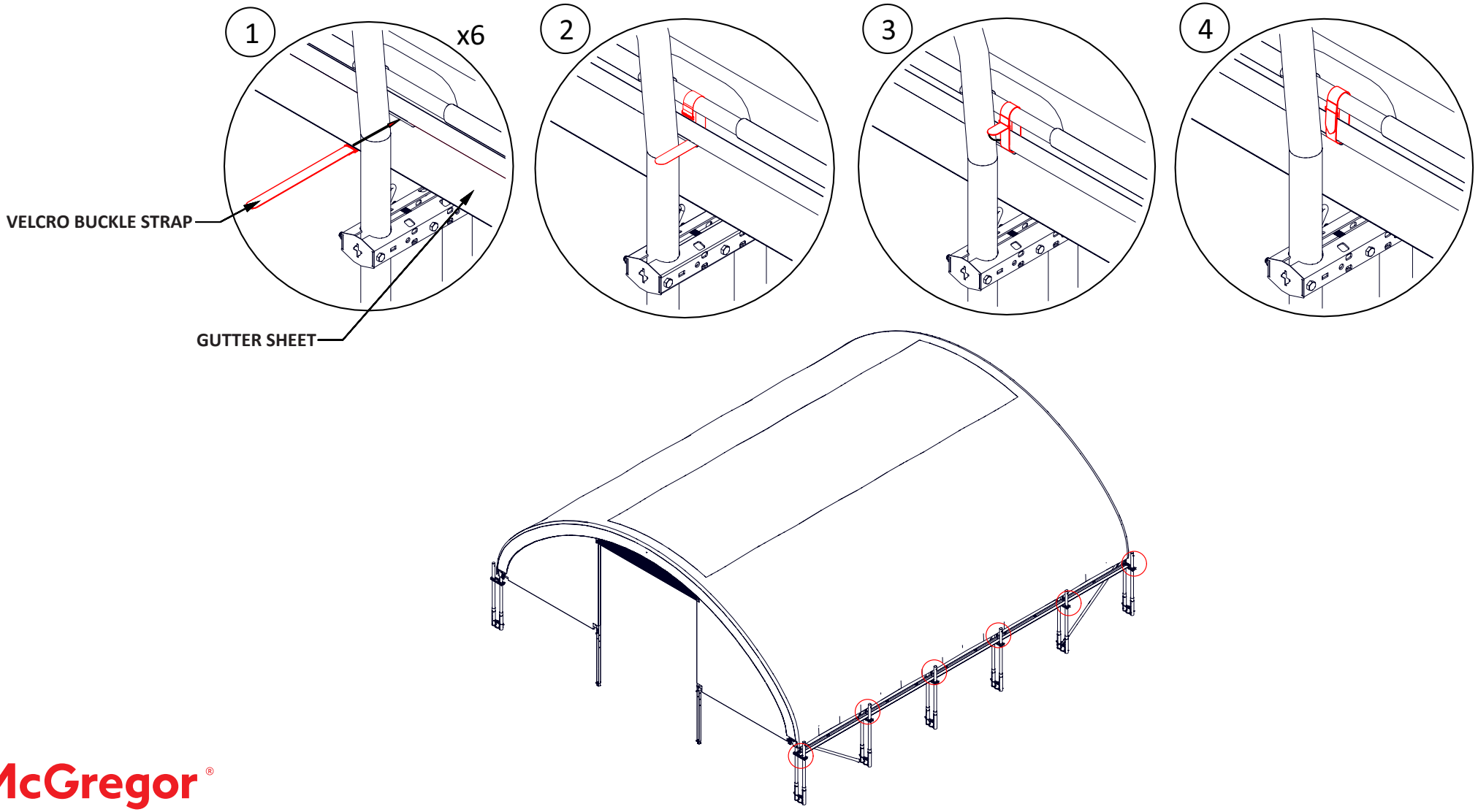


Step 2. Lift the gutter into position. Wrap the loose gutter material around the inserted bar and lift the assembly so that it rests on top of the hoop clamps.

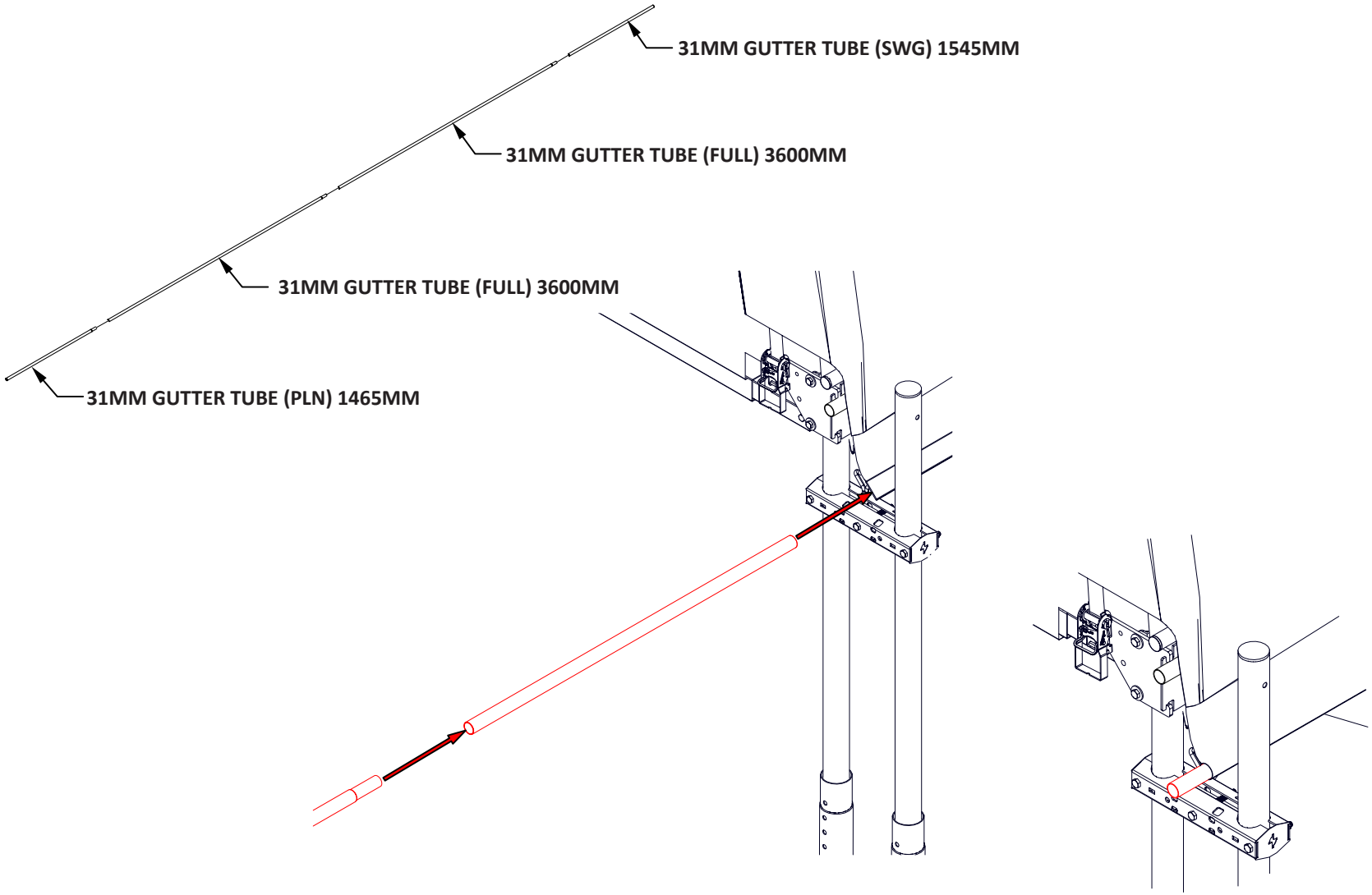




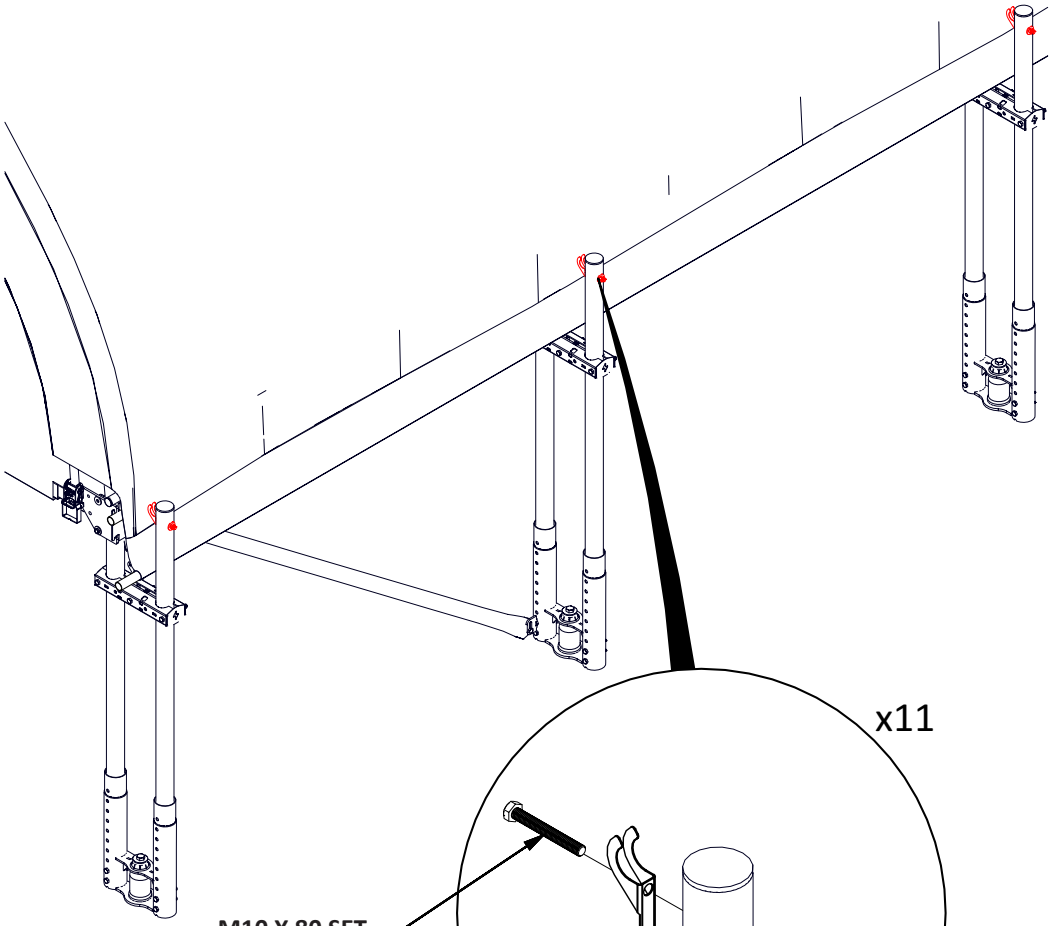
Step 3. Attach the gutter to the roof sheet tension bar on the inside of the main roof sheet. Unwrap the gutter assembly offer up the inserted bar to the lower edge of the sheet. Attach the exposed bar sections to the roof sheet using the Velcro buckle straps follow steps shown.



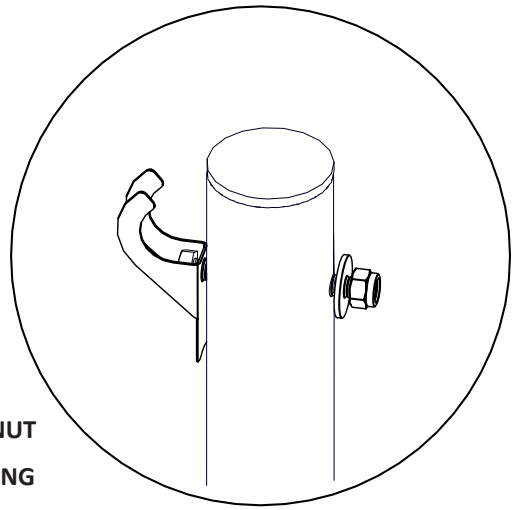
Step 4. Insert the second set of gutter tubes. Assemble the gutter tubes and insert the assembly into the empty pocket in the gutter sheet.



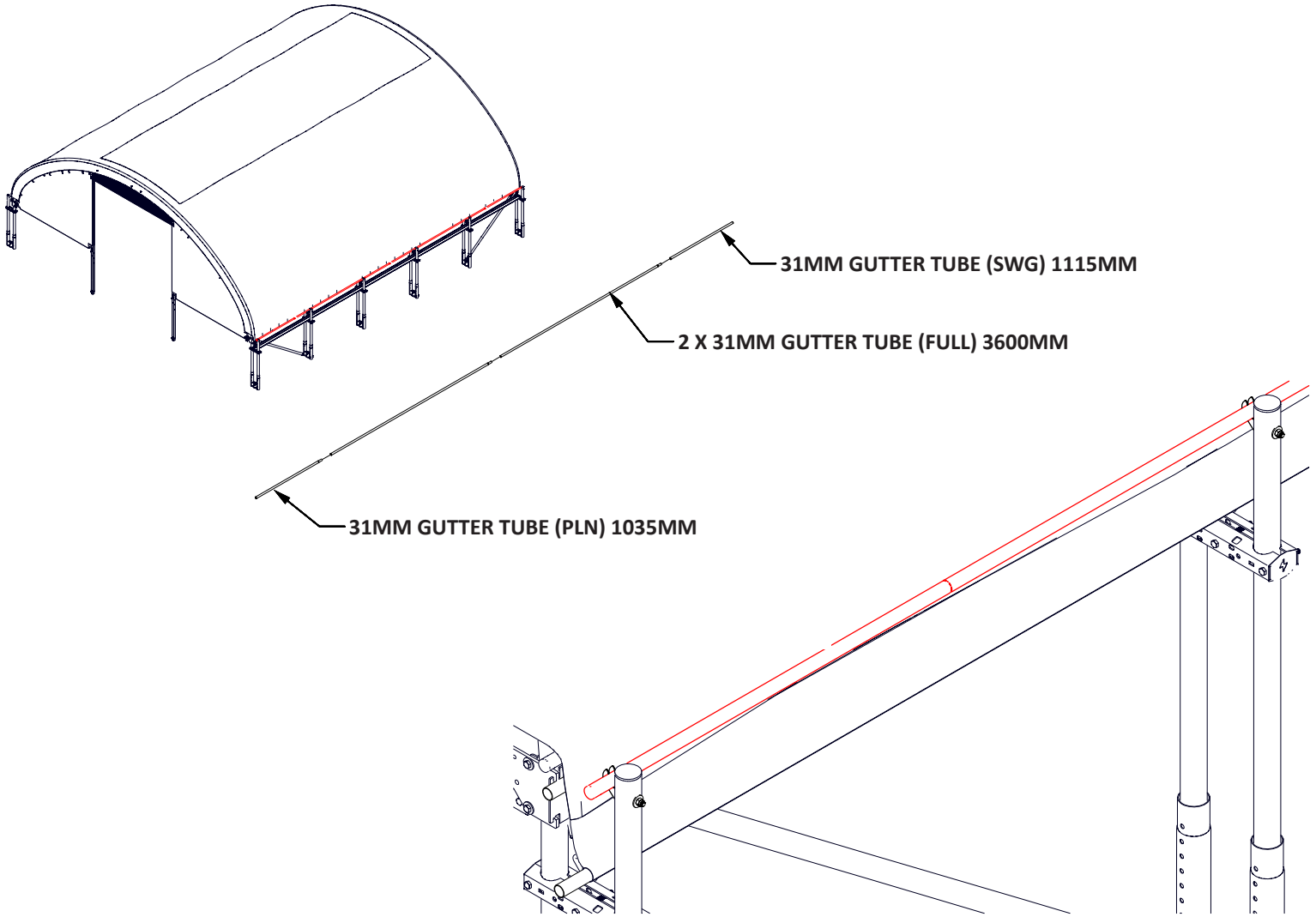
Step 5. Attach tube hooks to the tops of the gutter posts using M10 x 80 sets, mud wing washer and M10 nyloc nuts. Do not fully tighten the bolts.



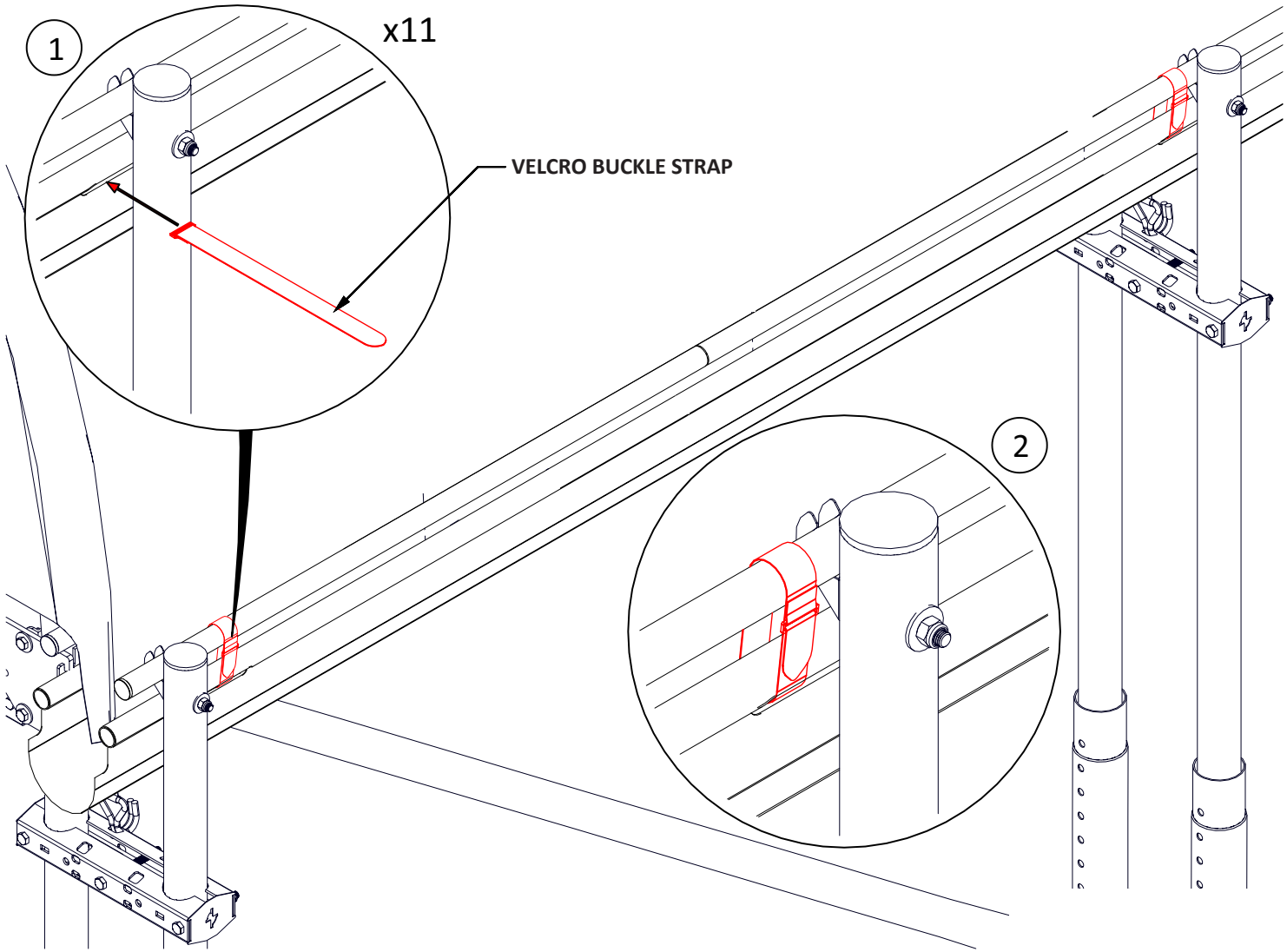
TUBE HOOK ASSEMBLED LOOSELY - HOOK SHOULD MOVE FREELY ON THE FITTINGS



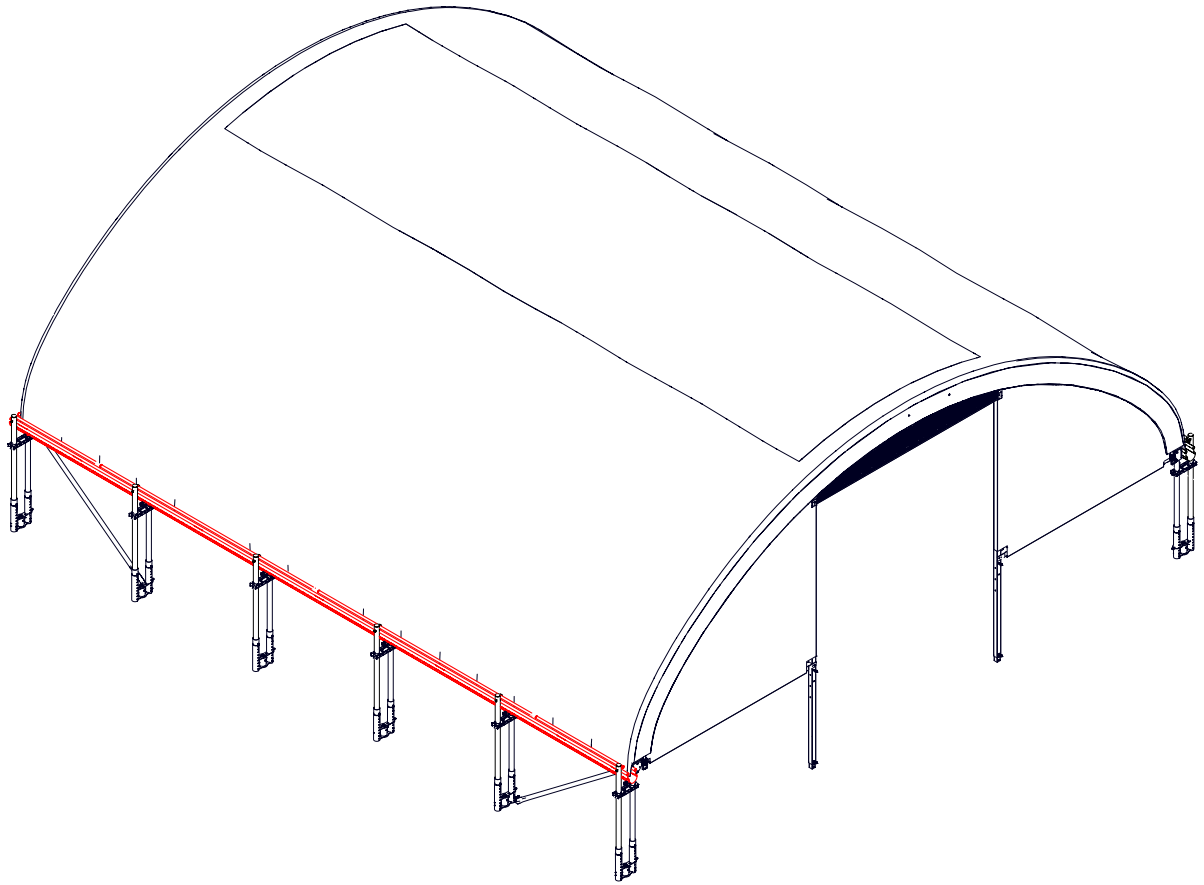
Step 6. Assemble the outer gutter tube. Assemble the outer gutter tube sections and place the assembly onto the tube hooks. Tighten the bolts on each hook to secure the outer gutter tube assembly to the outer posts.



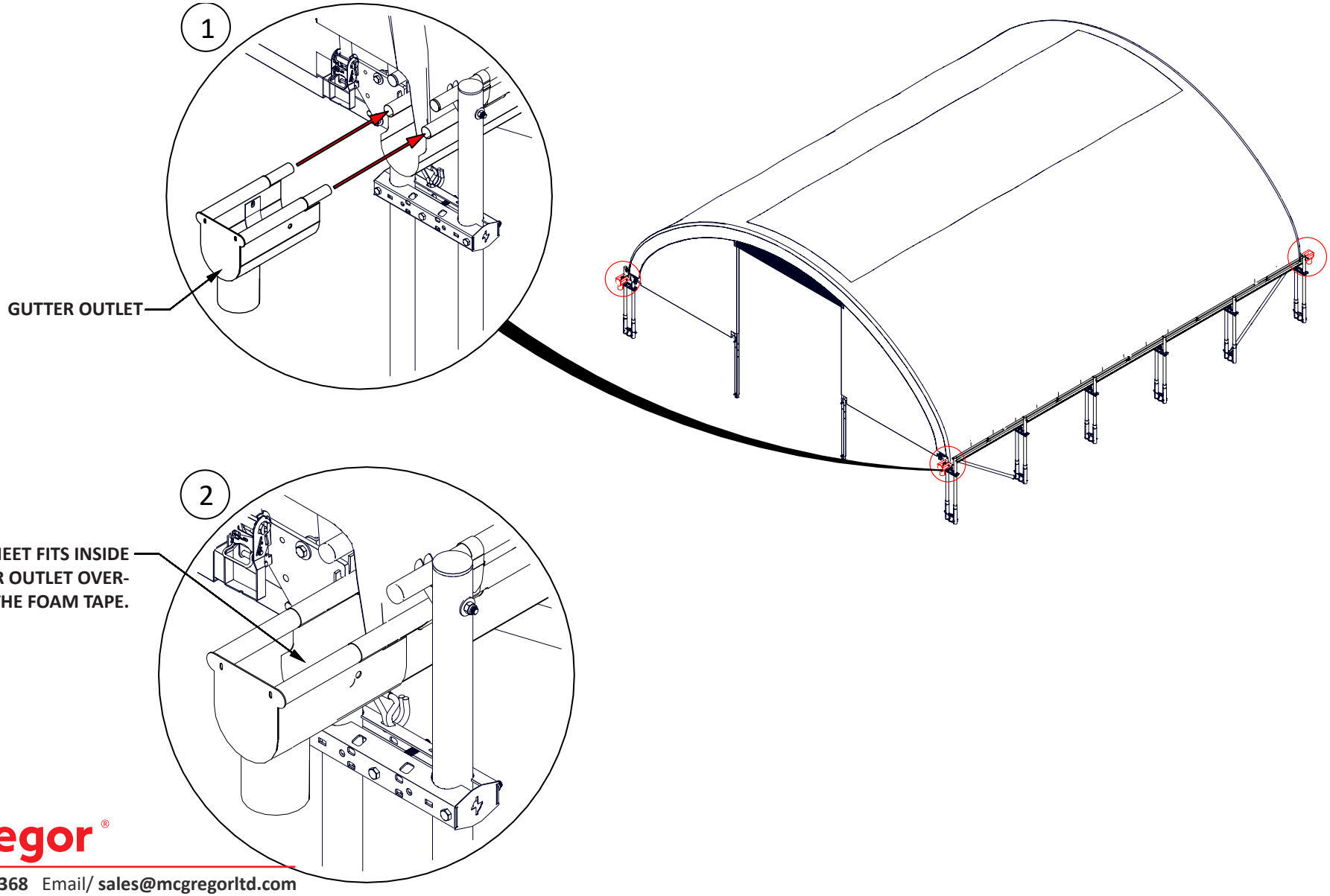
Step 7. Attach the outer gutter edge. Lift up the loose gutter edge to meet the outer gutter tube and attach the gutter pole using Velcro buckle straps as shown.



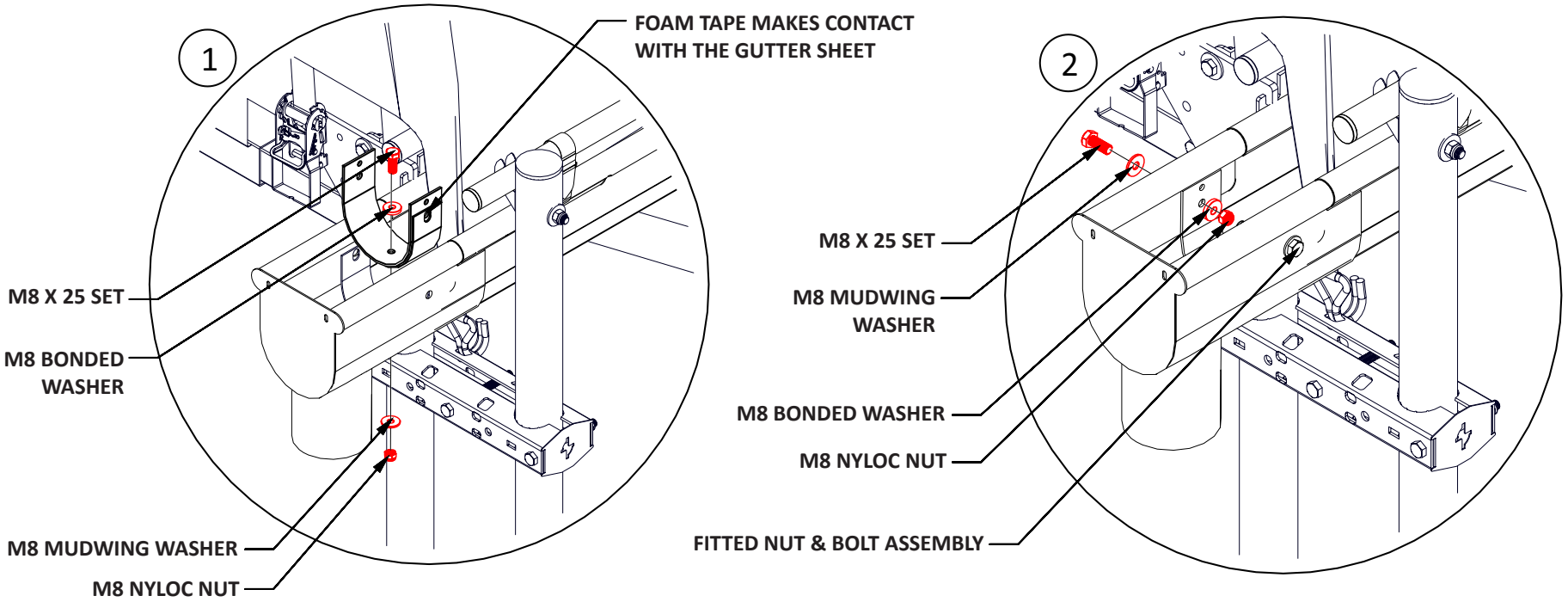
Step 8. Attach the second gutter as per steps 1 to 7.

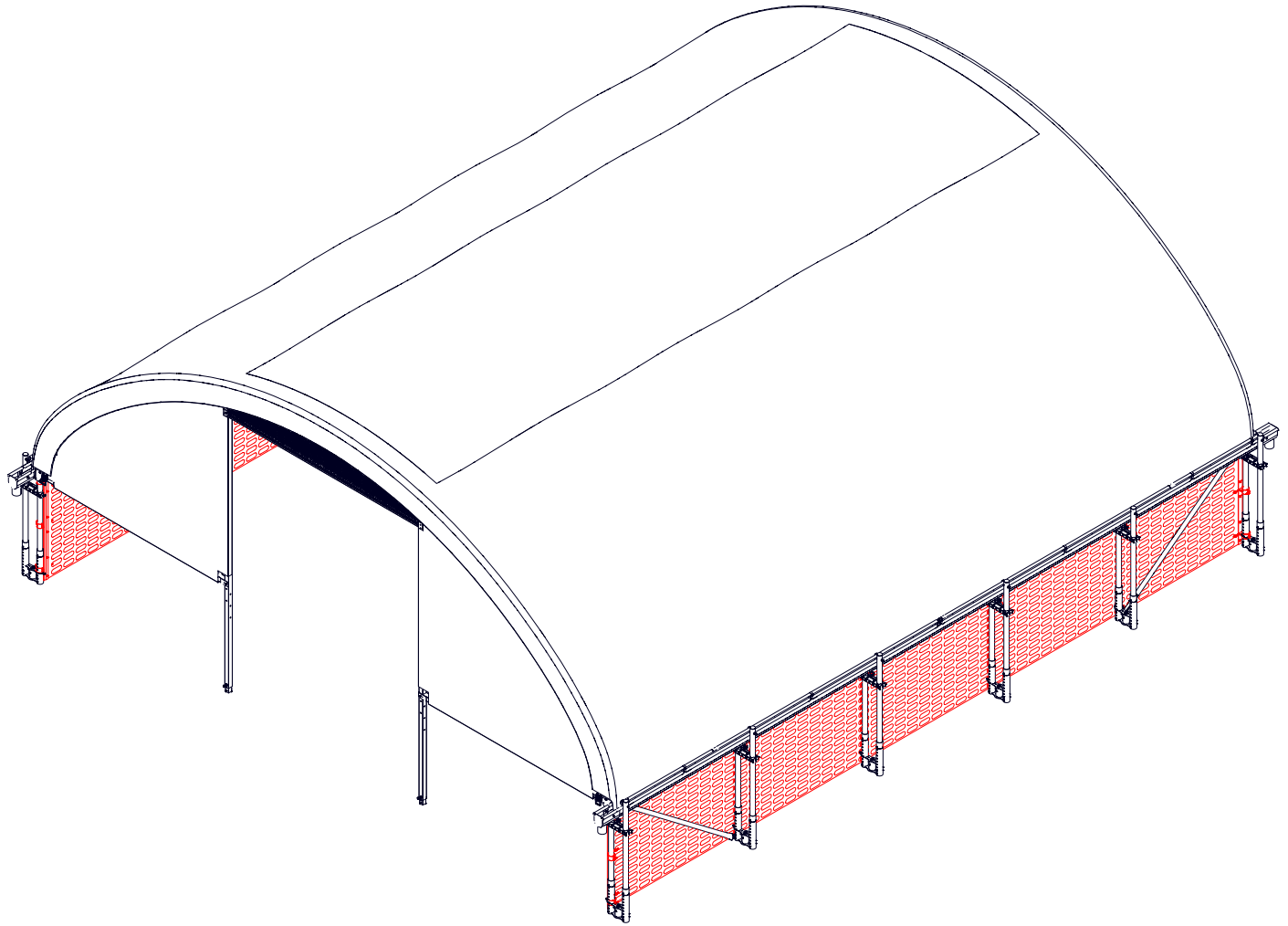


Step 9. Attach the gutter outlet. Slide the gutter outlet onto the gutter tubes lifting the end of the gutter sheet until the gutter outlet is fully located on to the gutter tubes as shown. Press down the end of the sheet against the inner sealer strip ensuring there are no creases.



Step 10. Fix the gutter sheet to the gutter outlet with the gutter sealing strip. Secure the sealer strip to the base of the gutter by passing an M25 set, screw through the centre hole ensuring place a bonded rubber washer between the bolt head and the sealer strip. Secure the sealer strip to the gutter at the top each side using an M10 x 25 set and mud wing washer either side and nyloc nut.





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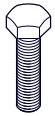


X 24 - M10 x 40 Set

X 24 - M10 x 25 Set

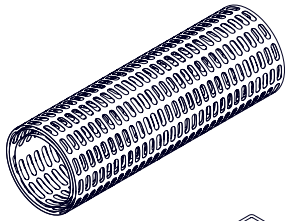
X 12 - M10 x 150 Set

X 12 - M10 Mudwing Washer

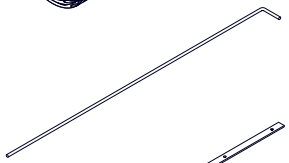
X 6 - M10 Standard Nut

X 48 - M10 Nyloc Nut

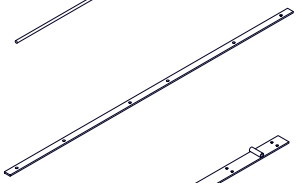
X 8 - Key Lug



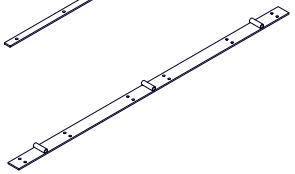
X 2 - Stock Proof Net - 22.5m Roll



X 8 - Drop Pin



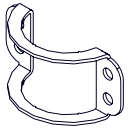
X 4 - Net Weave Bar



X 4 - Net Backing Bar

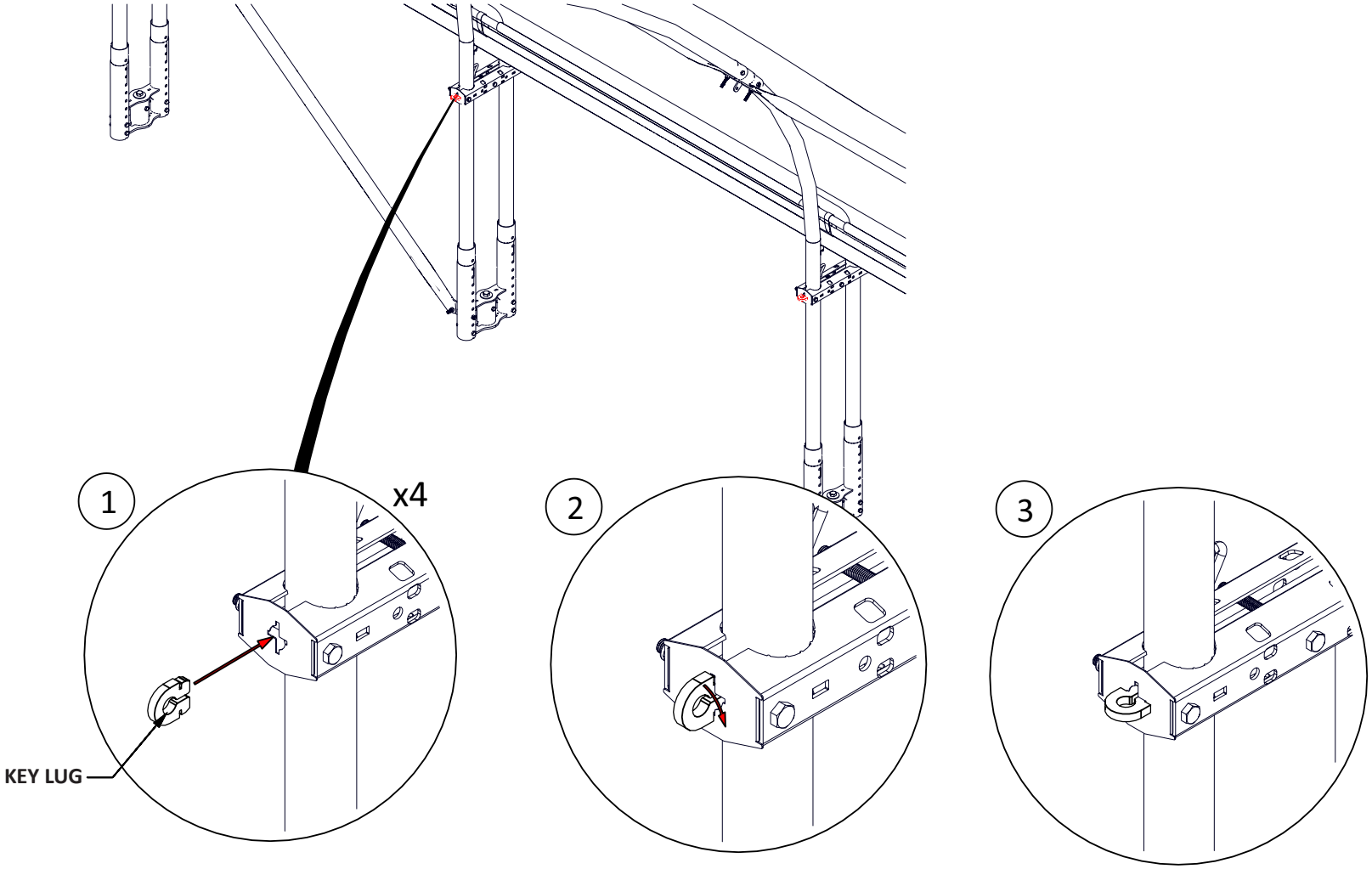
X 8 - Ring Clip

X 16 - 60mm Half Clamp

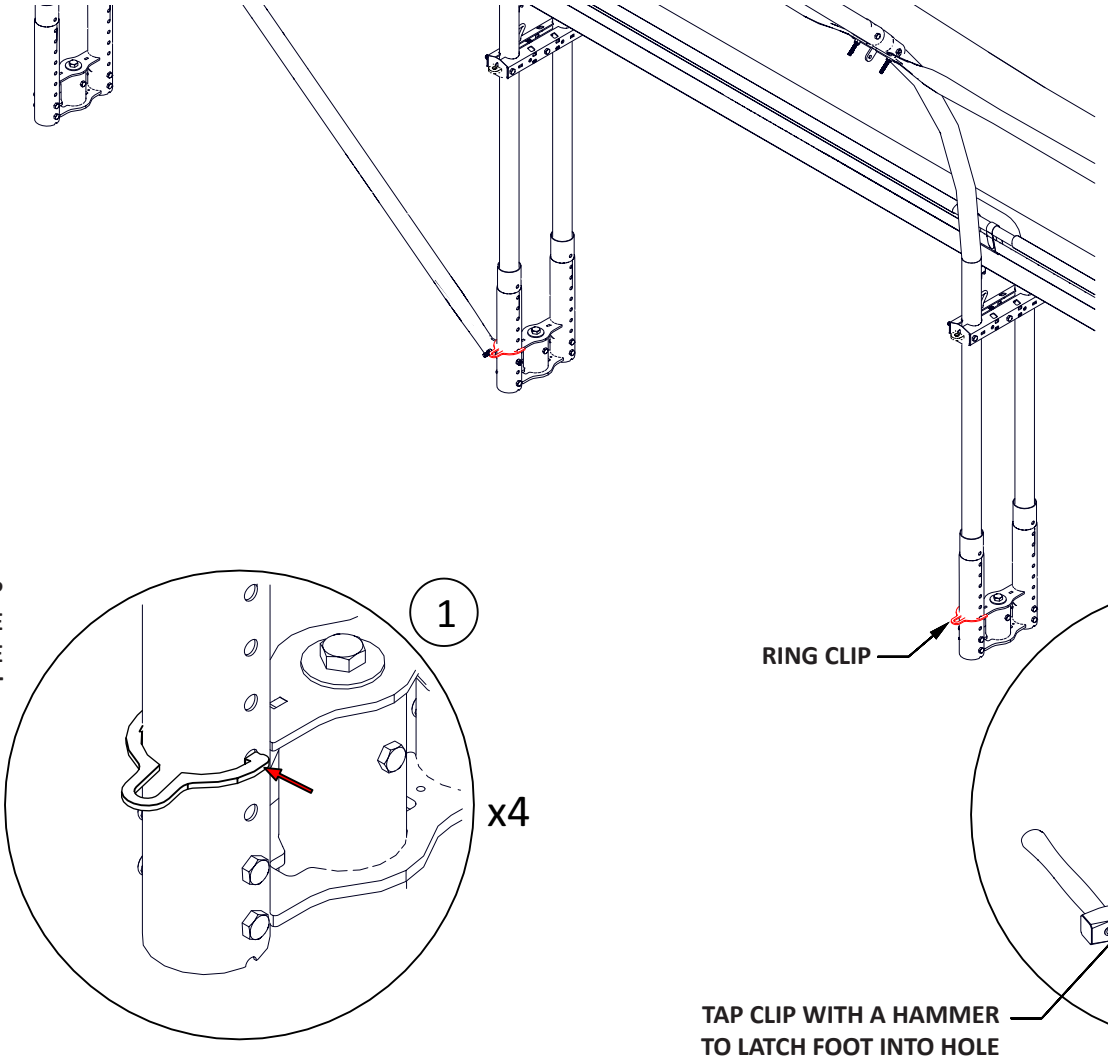


X 8 - 76mm Half Clamp

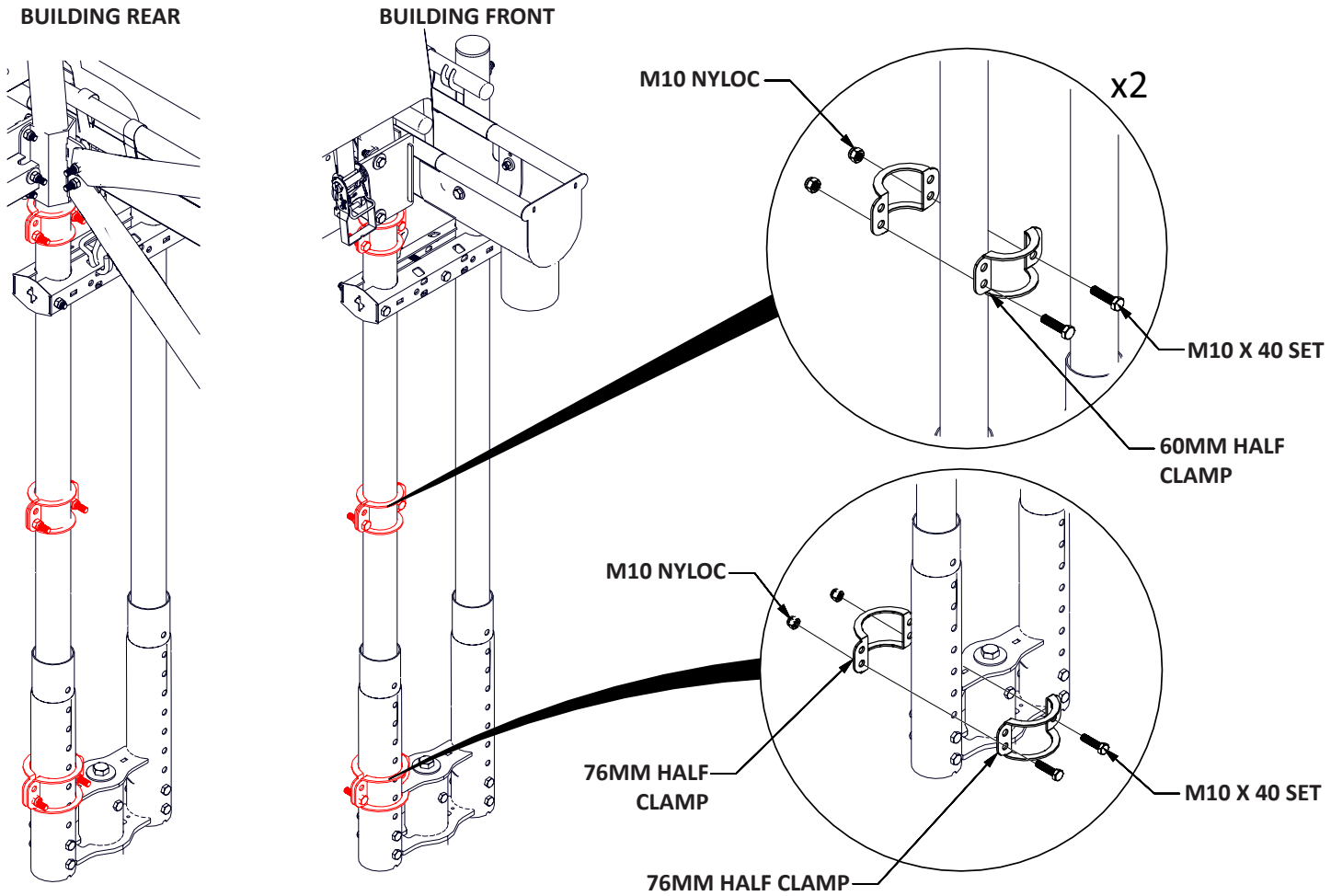
Step 1. Attach the key lugs to the hoop clamps. Insert a key lug into the inner end of each hoop clamp **excluding the gable end clamps.** Turn the key lugs clockwise to lock into place.



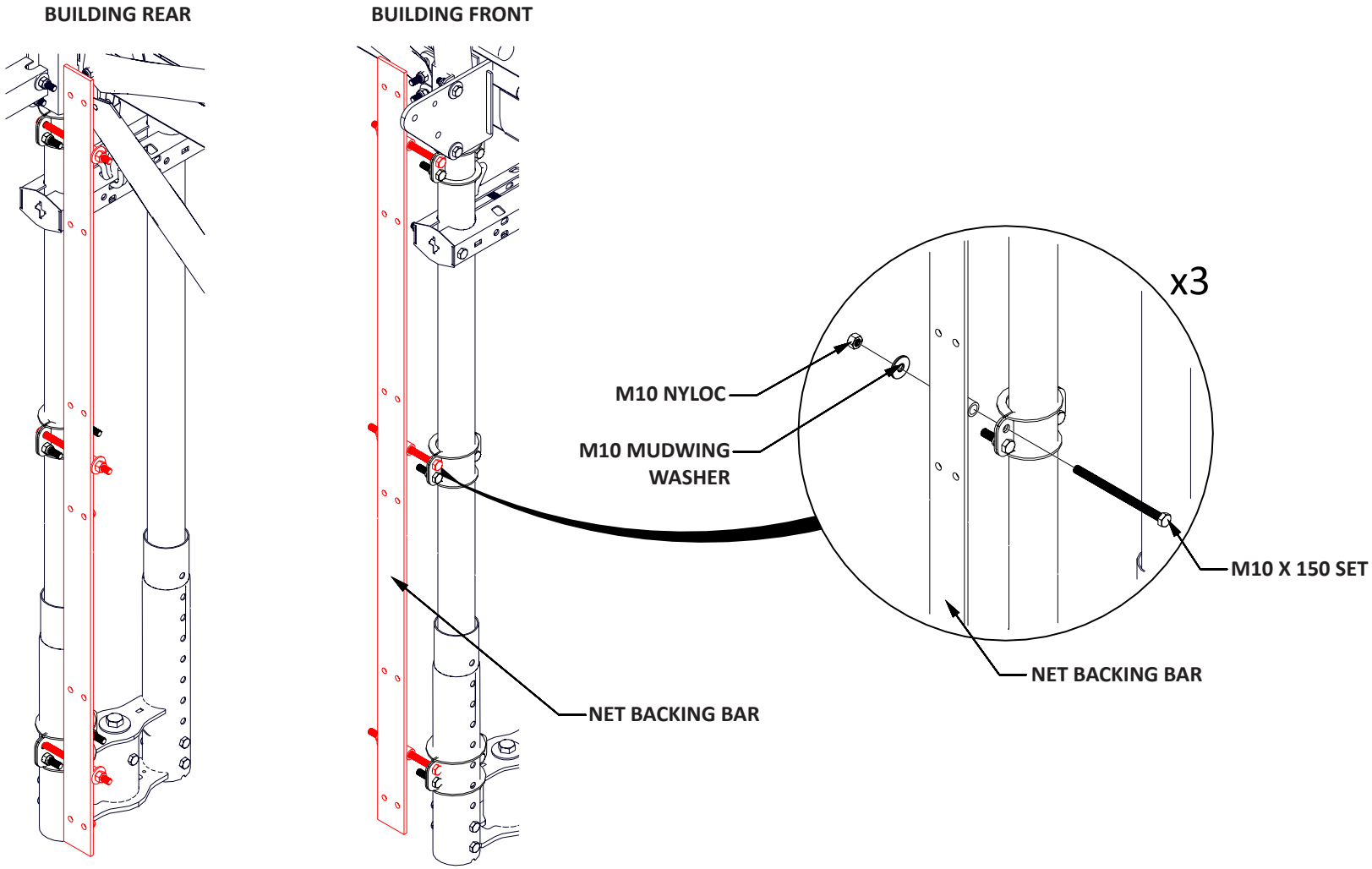
Step 2. Attach the ring clips. Locate and tap a ring clip onto the base of each hoop socket excluding the gable corner hoop sockets.



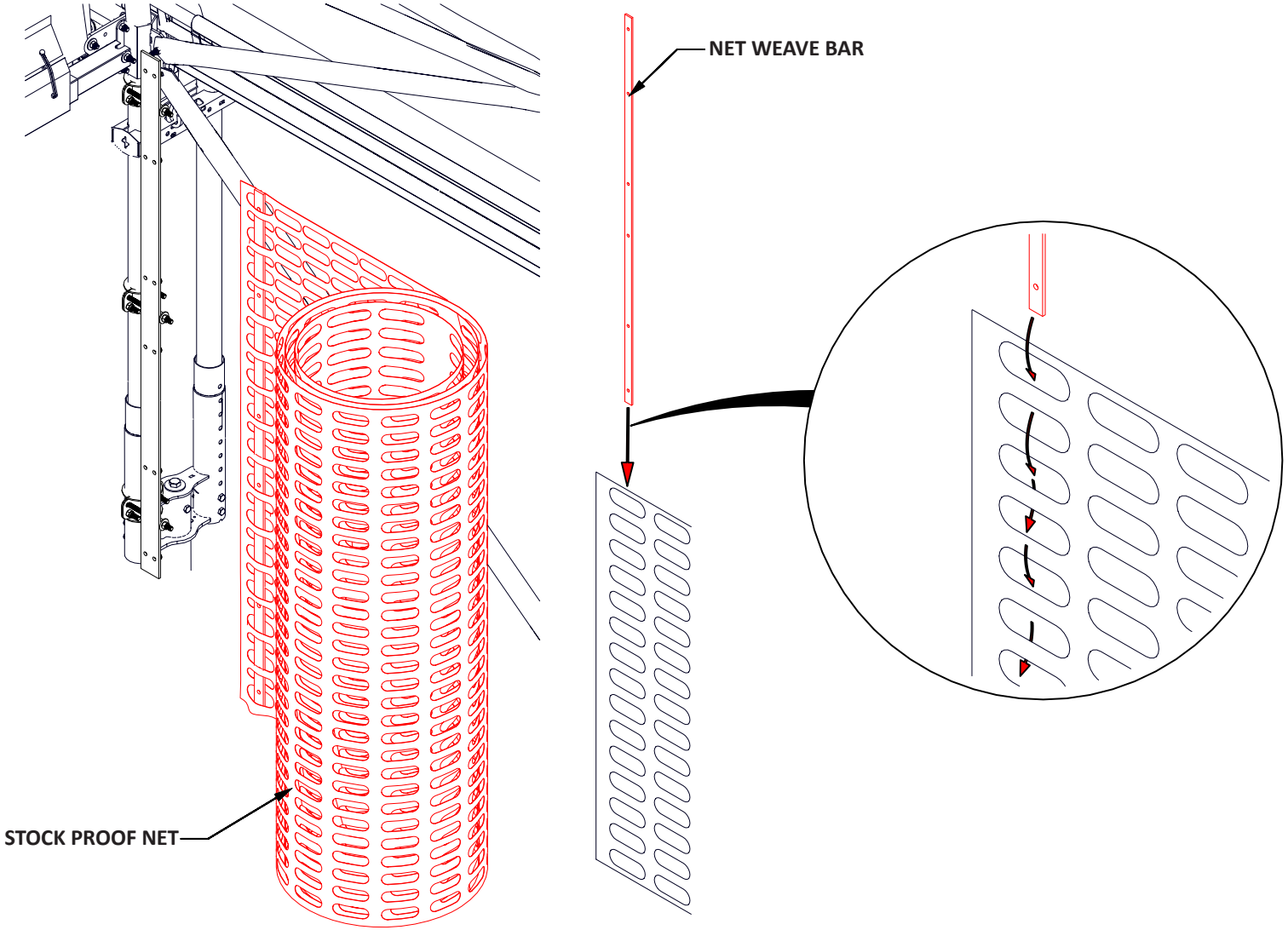
Step 3. Attach the gable corner tension clamps. Take two 76mm half clamps and attach them to the hoop socket on each gable corner using M10 x 40 sets and nyloc nuts. Do not fully tighten at this stage. Take two 60mm half clamps and attach them approximately half way on the uprights using M10 x 40 sets and nyloc nuts. Do not full tighten. Attach a further set of 60mm clamps between the upper face of the hoop clamps and ratchet support brackets.



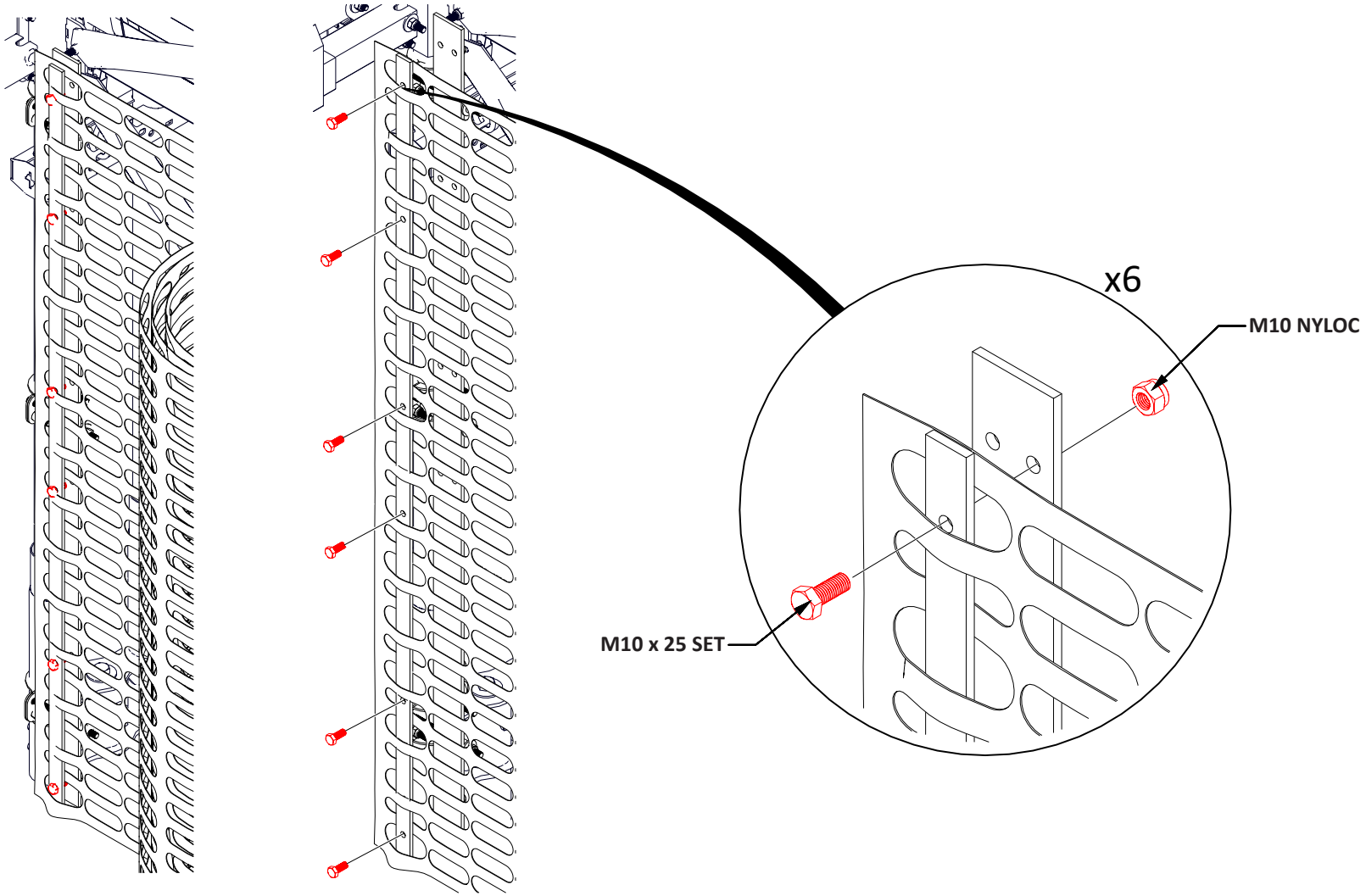
Step 4. Attach the side net backing bars. Attach a backing bar to the three clamps each end of the structure by passing an M10 x 150 set through the free inner hole and the backing bar attachment holes. Insert a washer onto the end of the bolt and attach an M10 nyloc nut to each. Wind on the nuts to pull the backing bar closer to the gable end ensuring to leave enough thread to adjust the tension later.



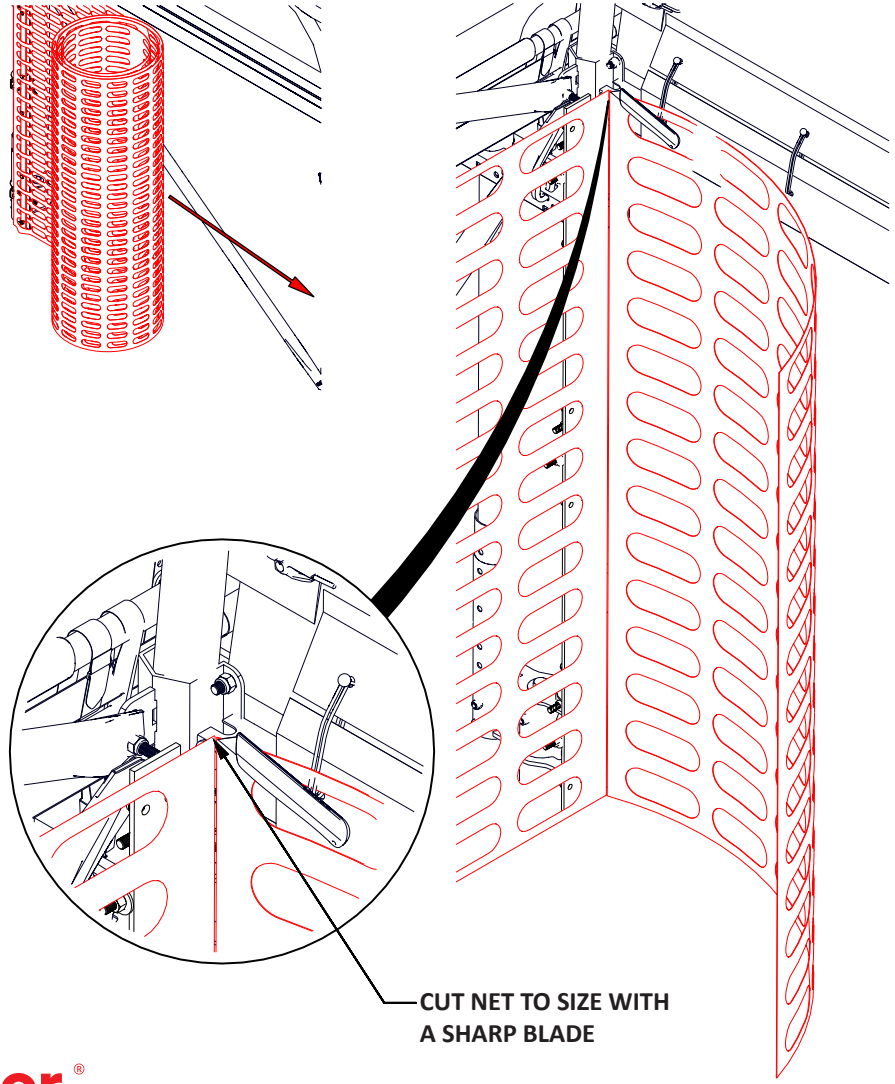
Step 5. Attach the netting to the backing bar. Take a 21m roll of netting and insert a weave bar into the end of the net ensuring to weave in and out each hole as shown.

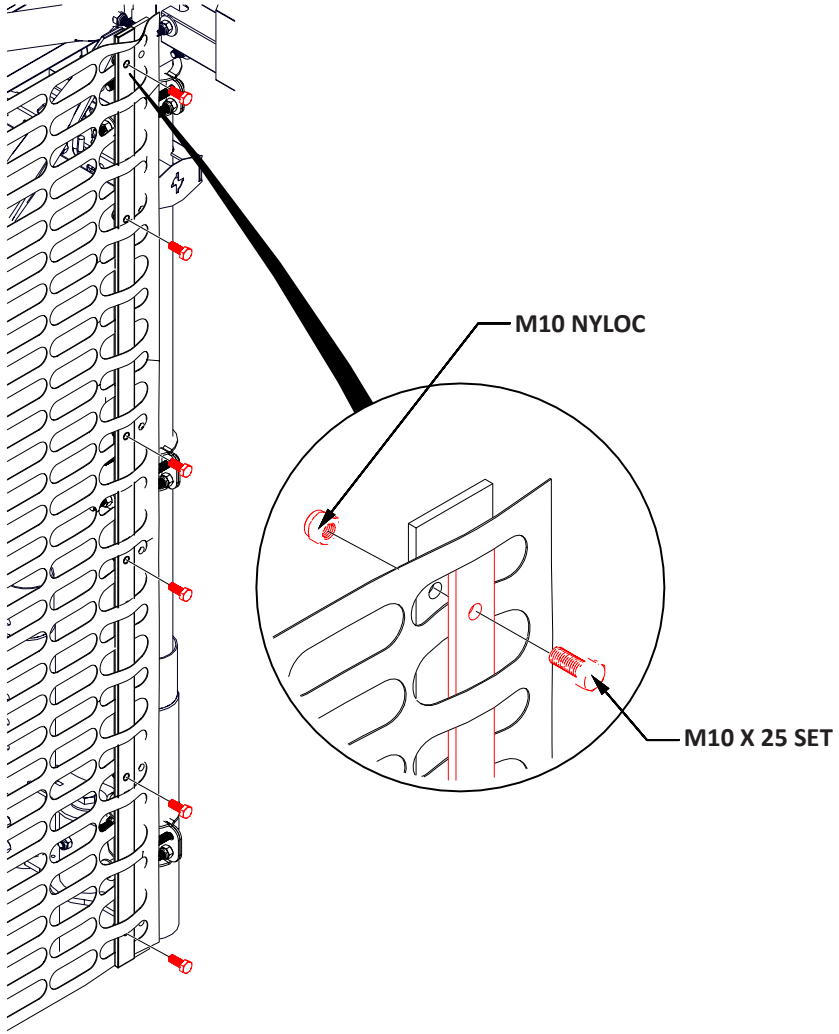


Step 6. Attach the end of the netting role to the backing bar. Attach the end of the netting role to the backing bar using M10 x 20 sets and nyloc nuts.

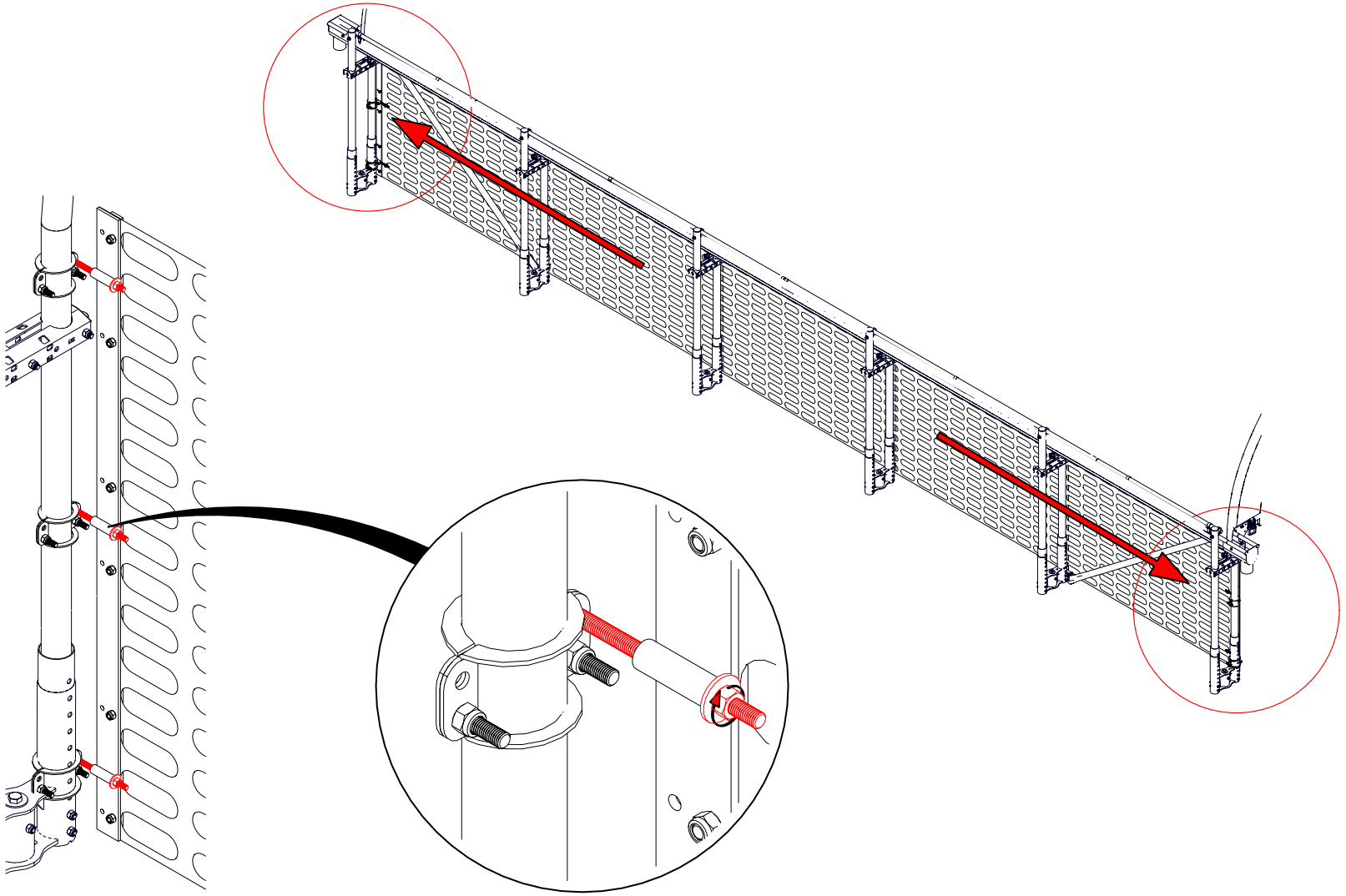


Step 7. Attach the netting to the opposing end backing bar. Roll out the net so that it is fully extended to far end of the structure. Hold net against the backing bar and cut away the excess netting. Insert a weave bar through the end of the netting and attach the net to the backing bar using M10 x 20 sets.

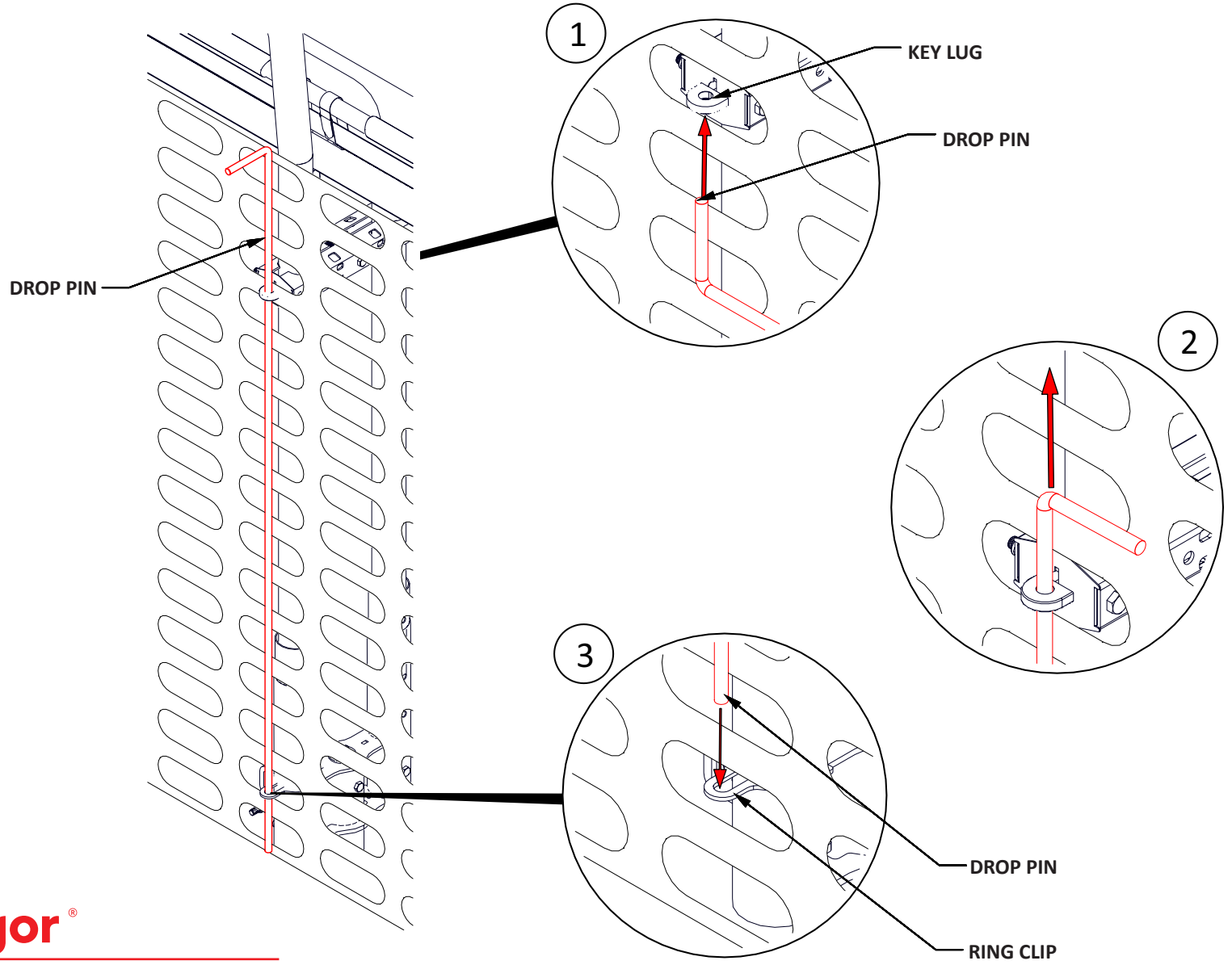




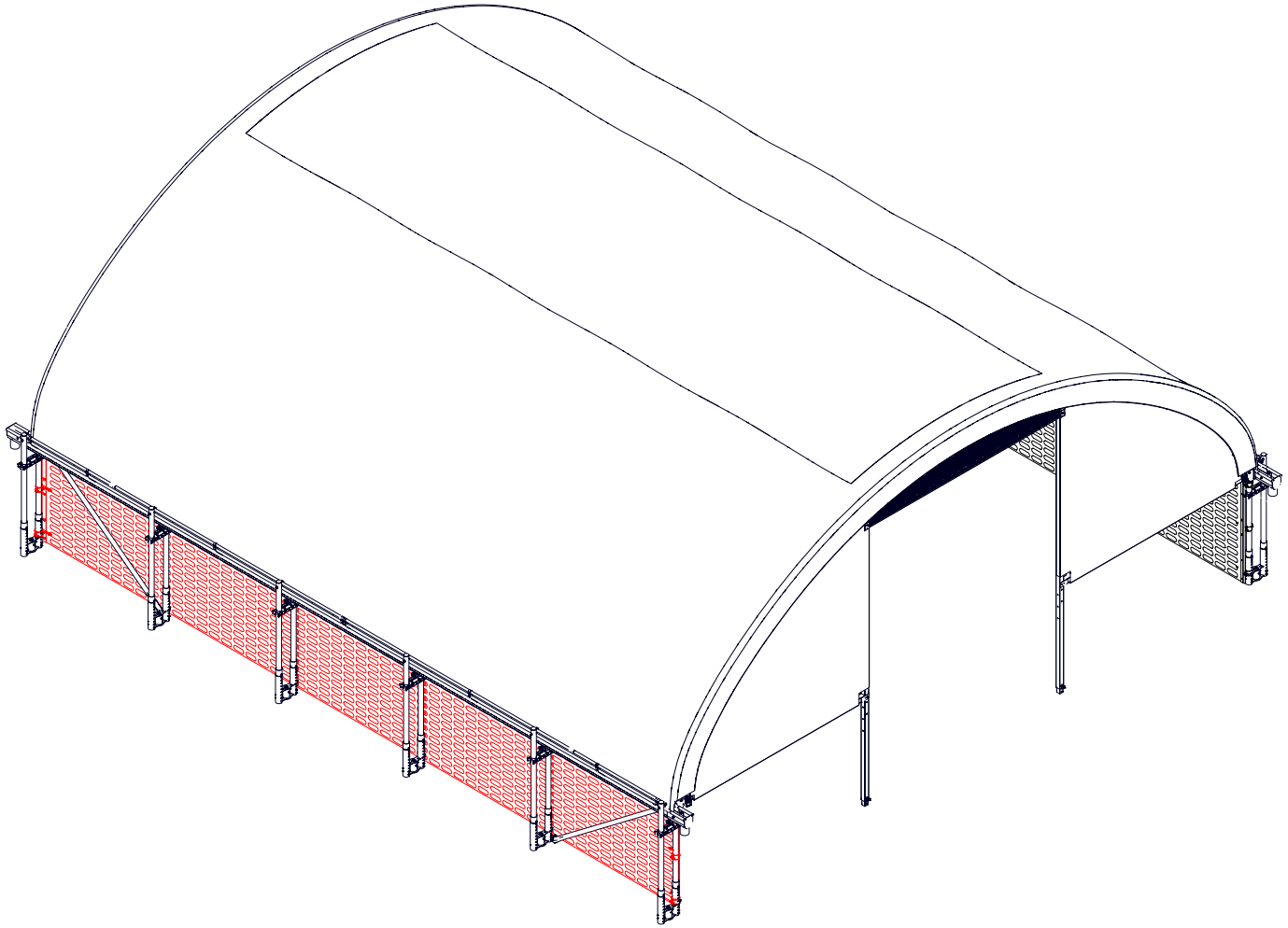
Step 8. Tension the net. Tension the netting by adjusting the bolts attaching the backing bars to the clamps.

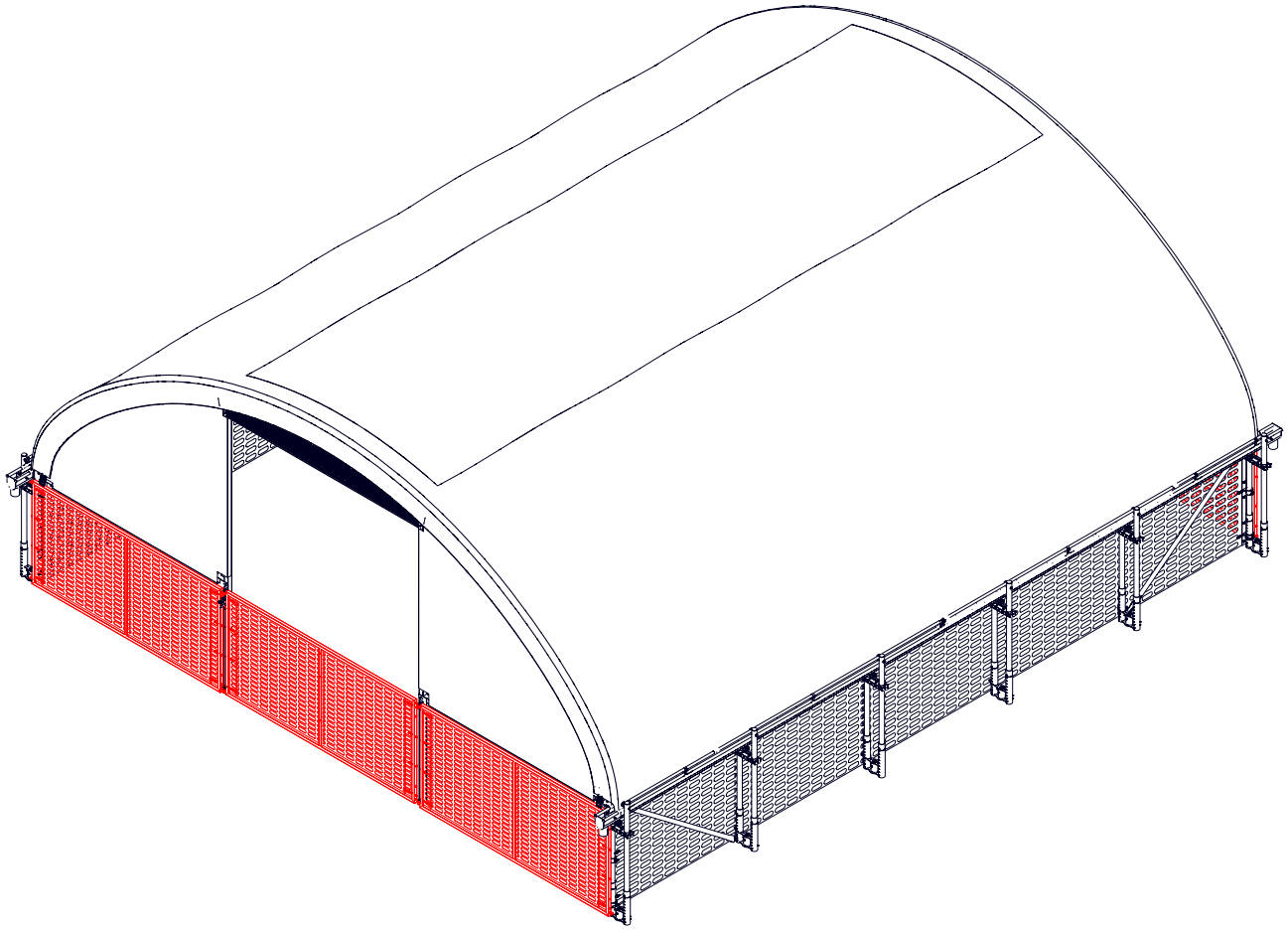


Step 9. Insert drop pins. **Excluding the gable end hoops -** Insert the handle end of the drop pin up throught the key lug, pull the drop pin up through the key lug until the opposing end has raised past the ring clip. Then lower the drop pin into the ring clip. Install 1 drop pin at each of the 8 intermediate hoop sections.



Step 10. Repeat steps 1 to 9 to attach opposing side netting.





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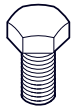
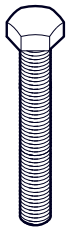
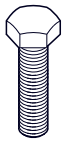


X 4 - M10 X 20 Set



X 4 - M10 X 80 Set

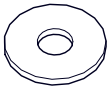


X 8 - M12 X 50 Set

X 8 - M10 Nyloc Nut

X 4 - M12 Nyloc Nut

X 4 - M12 Standard Nut

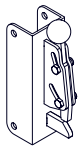


X 32 - M12 Washer

X 4 - M12 x 100 Gate Eye

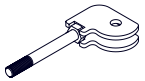
X 20 - M12 x 60 Gate Eye

X 2 - Spelter Bar

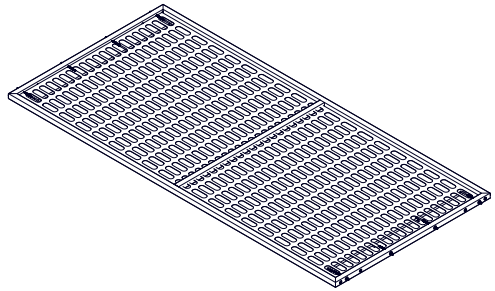


X 2 - Auto Gate Latch

X 1 - Gate Hinge Inner

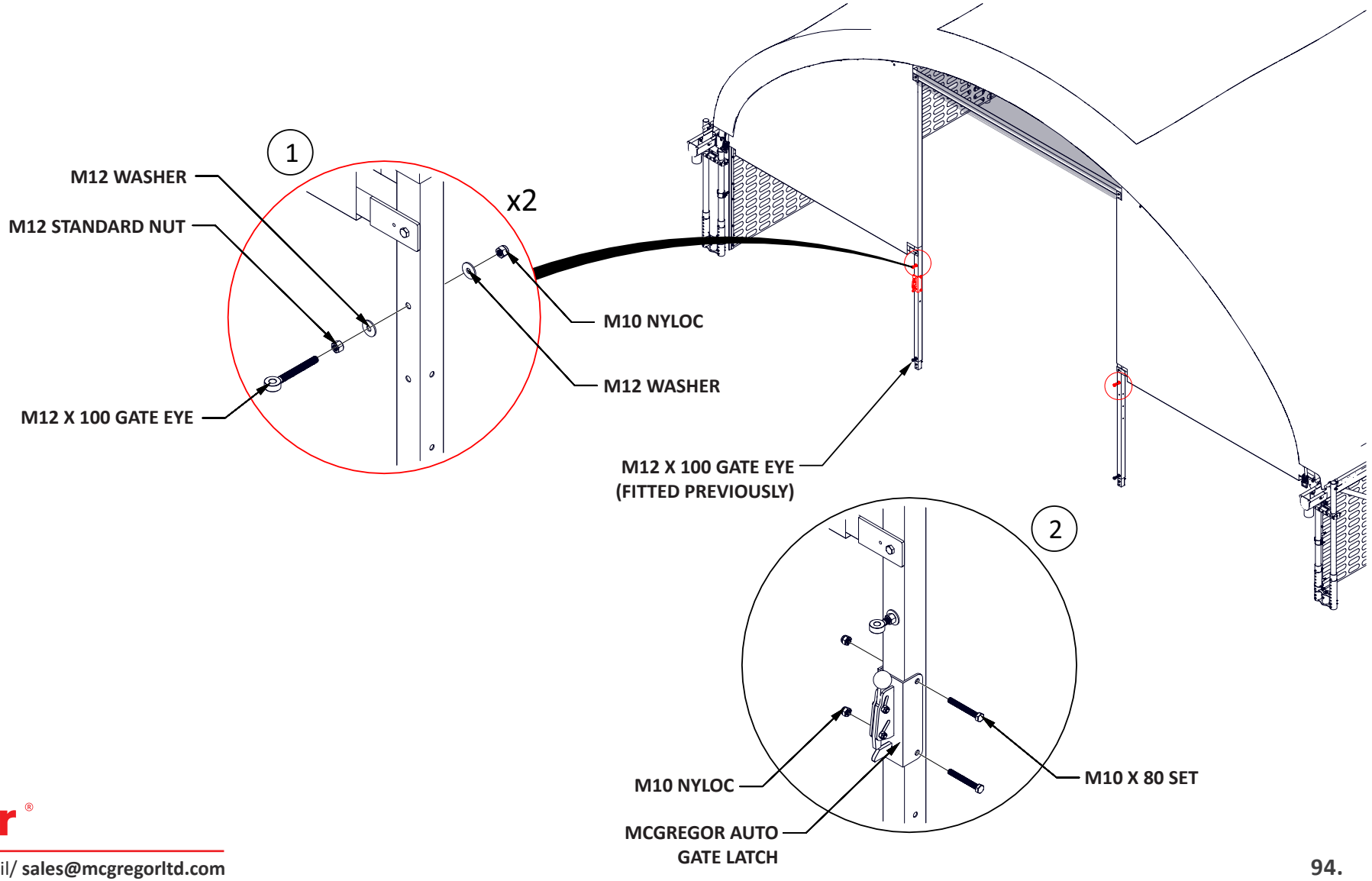


X 1 - Gate Hinge Outer

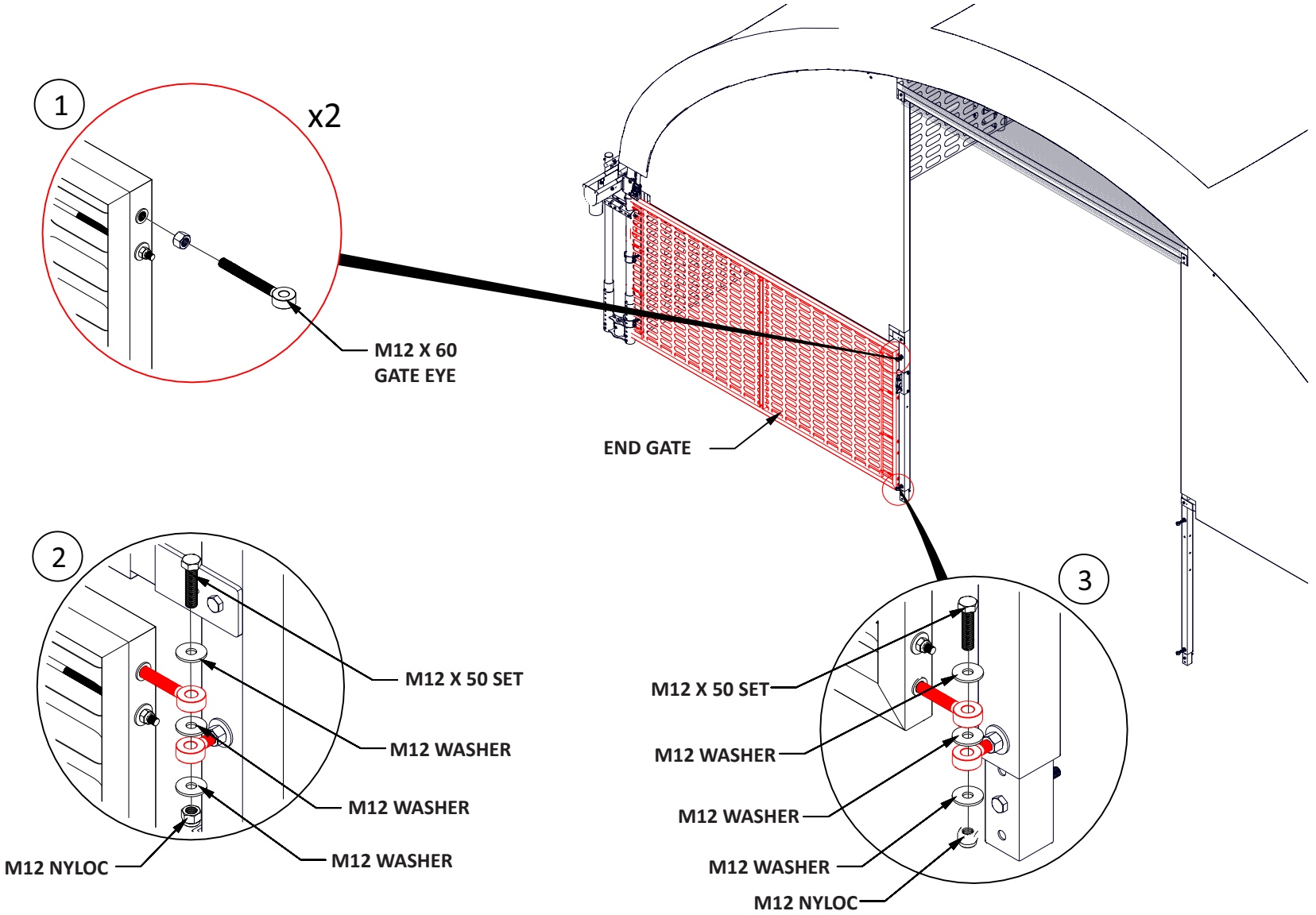


X 6 - End Gate

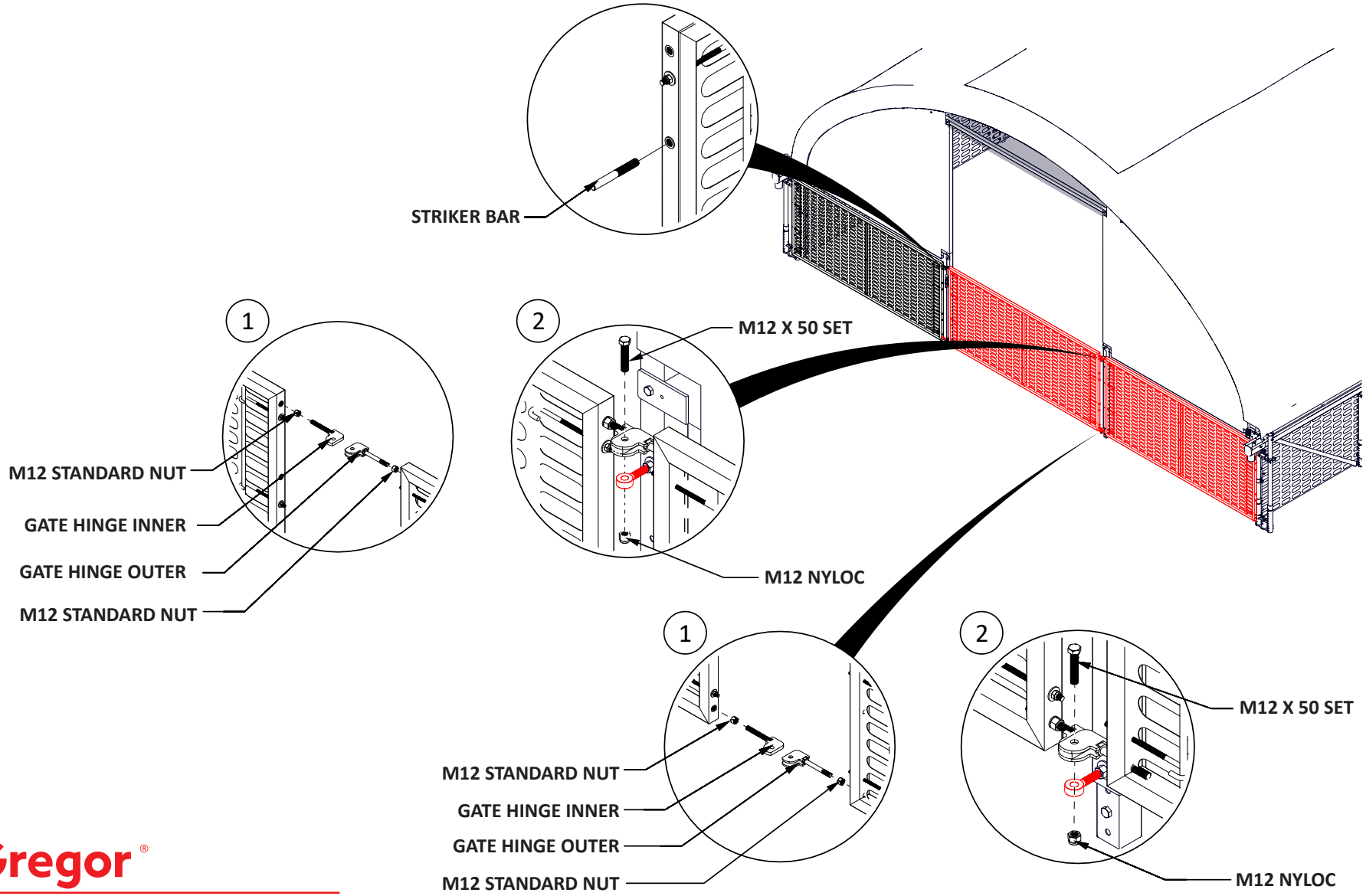
Step 1. Fit the gate latch and upper gate eye. Attach the gate latch and attach it to the left hand gable upright using M10 x 80 sets through the bracket and upright securing using M10 nyloc nuts. Take an M12 x 100 gate eye and wind on an M12 standard nut. Slide on a mud wing washer and pass the assembly through the upright attaching at the rear using a mud wing washer and nyloc nut. Repeat the procedure to attach a gate eye to the upright on the other side of the door.



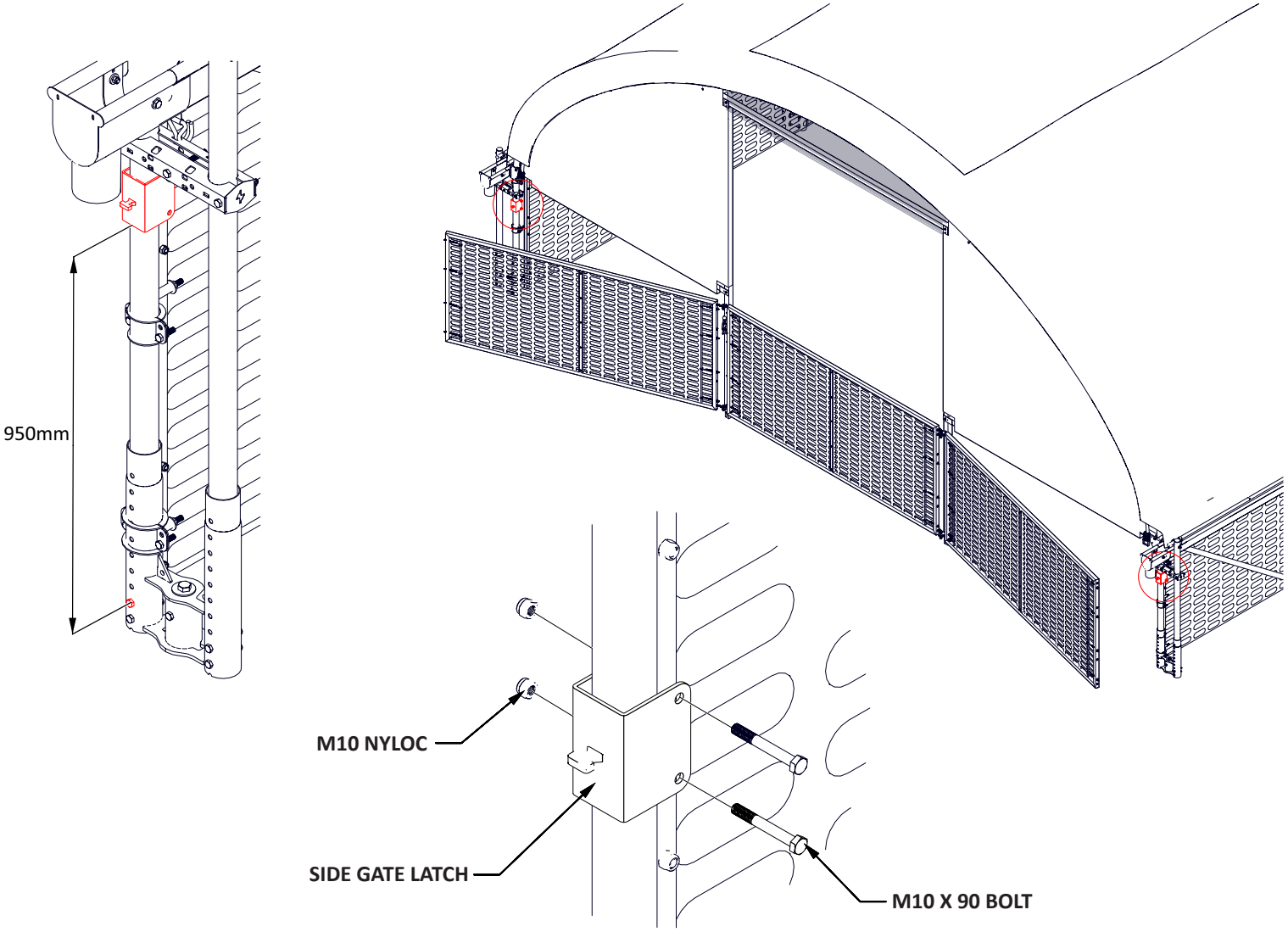
Step 2. Attach the left hand gate. Wind an M12 x 60 gate eye to the RH side of an end gate at the top and bottom corners. Attach the gate to the LH gable upright by passing an M12 x 50 set through the gate eyes to form a hinge inserting M12 washers at the positions shown. Attach a nyloc nut to the ends to secure.



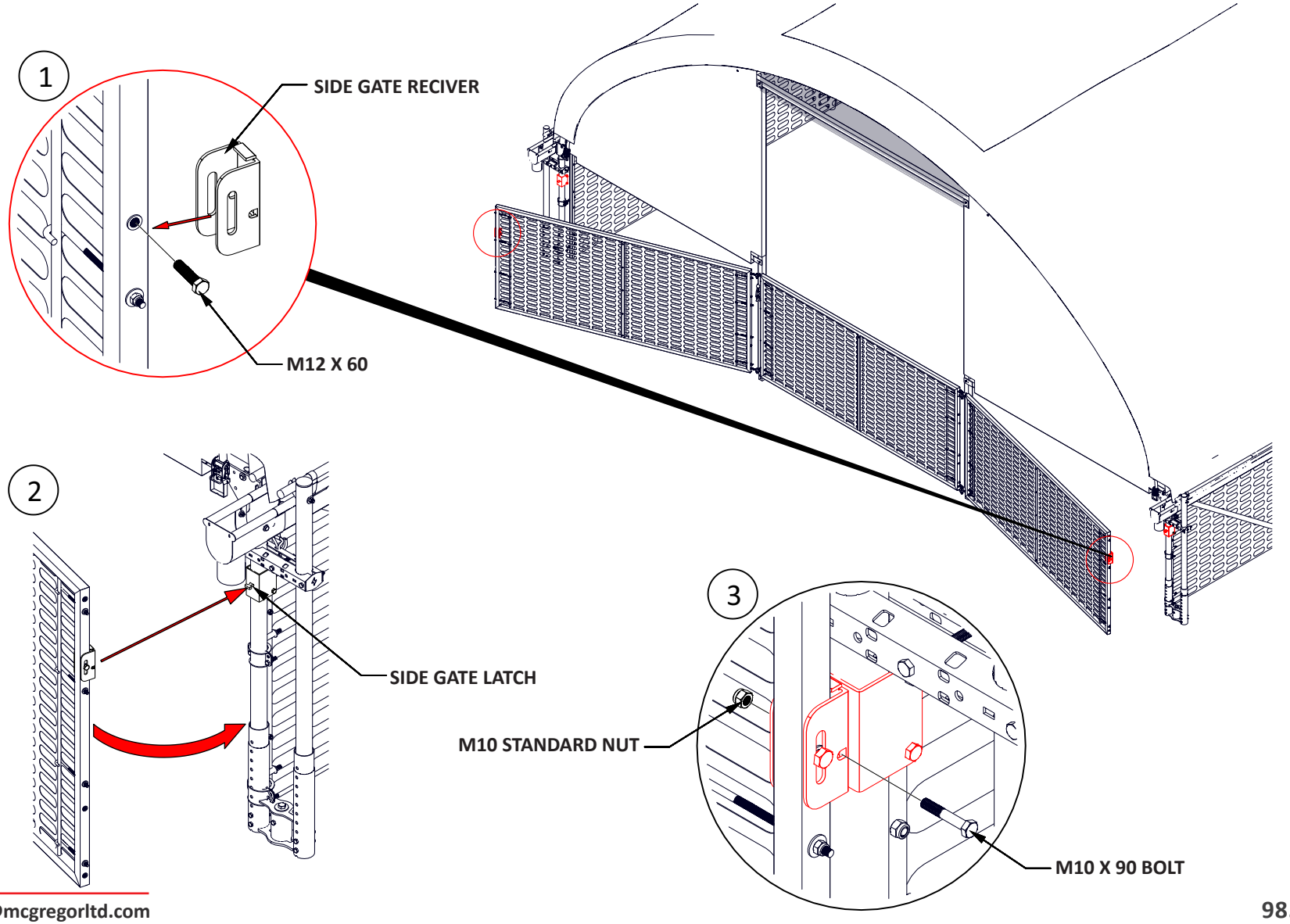
Step 3. Fitting the centre and right hand side gate. First wind the standard nuts all the way onto the thread on all hinges, then wind in the inner and outer gate hinges into the centre and right hand gates in the upper and lower positions leaving a 20mm gap between the nut and the gate edge. The hinges should be horizontal and facing away from the building as shown. When adjusted the standard nuts on the hinges should be wound out to contact the gate.



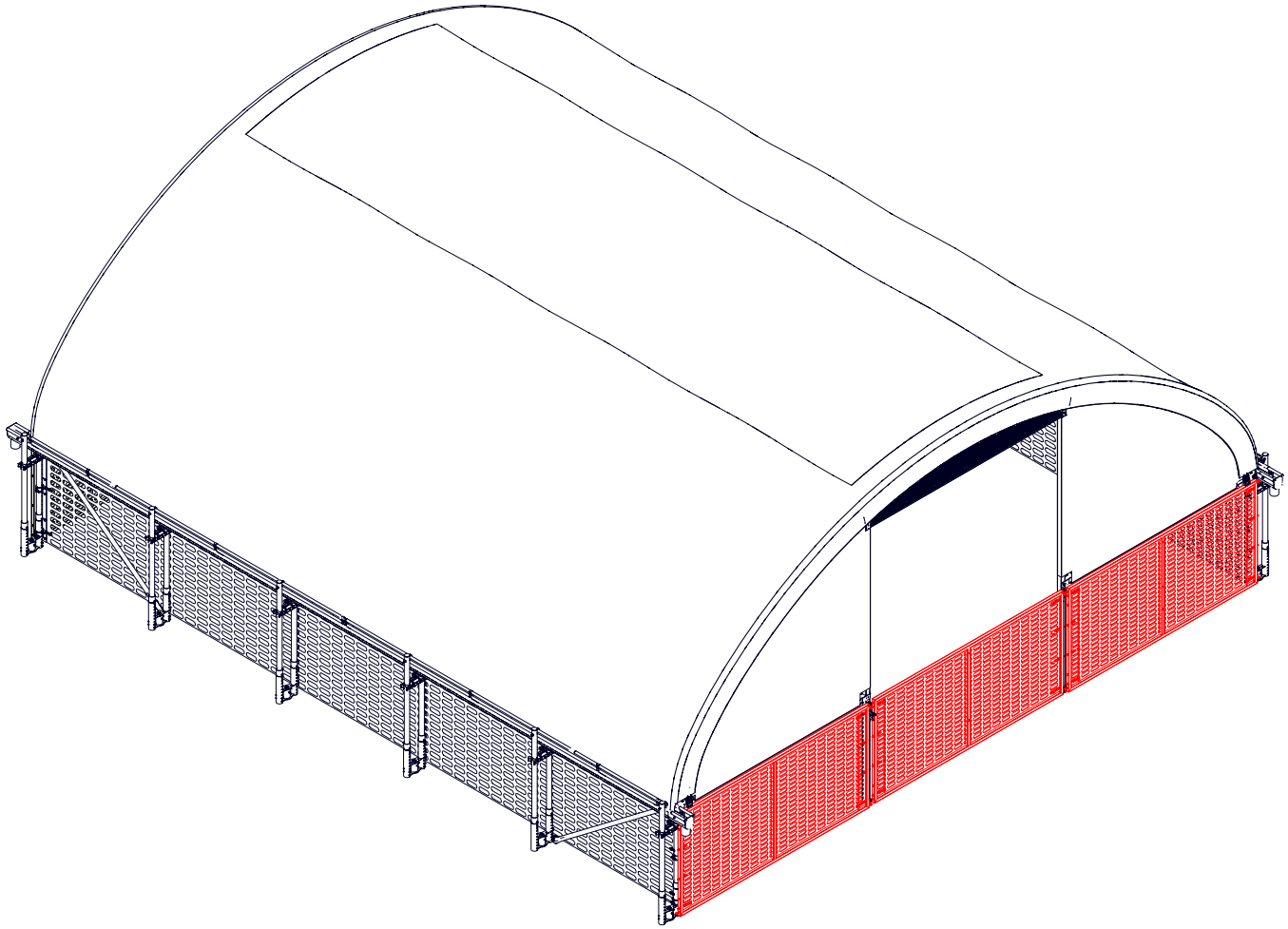
Step 4. Attach the side gate latch to the gable end hoop as shown.



Step 5. Fit the side gate reciver to the out side edge of the side gate. Fit the side gate reciver to the threadded insert in the side gate as shown below then close the gate against the side gate latch and lift the gate and drop into position to engage the latch. Adjust the positions if nessacerry, the gate inge position may need adjusting at this point. To open the gate lift the gate to disengage the latch. To lock the side gate in position insert the M10 x 90 bolt and fit the standard nut as shown.



Step 6. Attach the opposing gable end gates.



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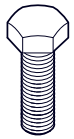
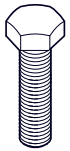


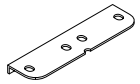
X 64 - M10 X 40 Set



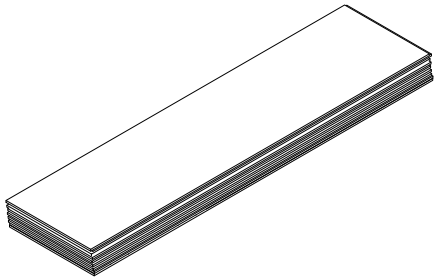
X 8 - M10 X 60 Set

X 144 - M10 Mudwing Washer

X 136 - M10 Nyloc Nut

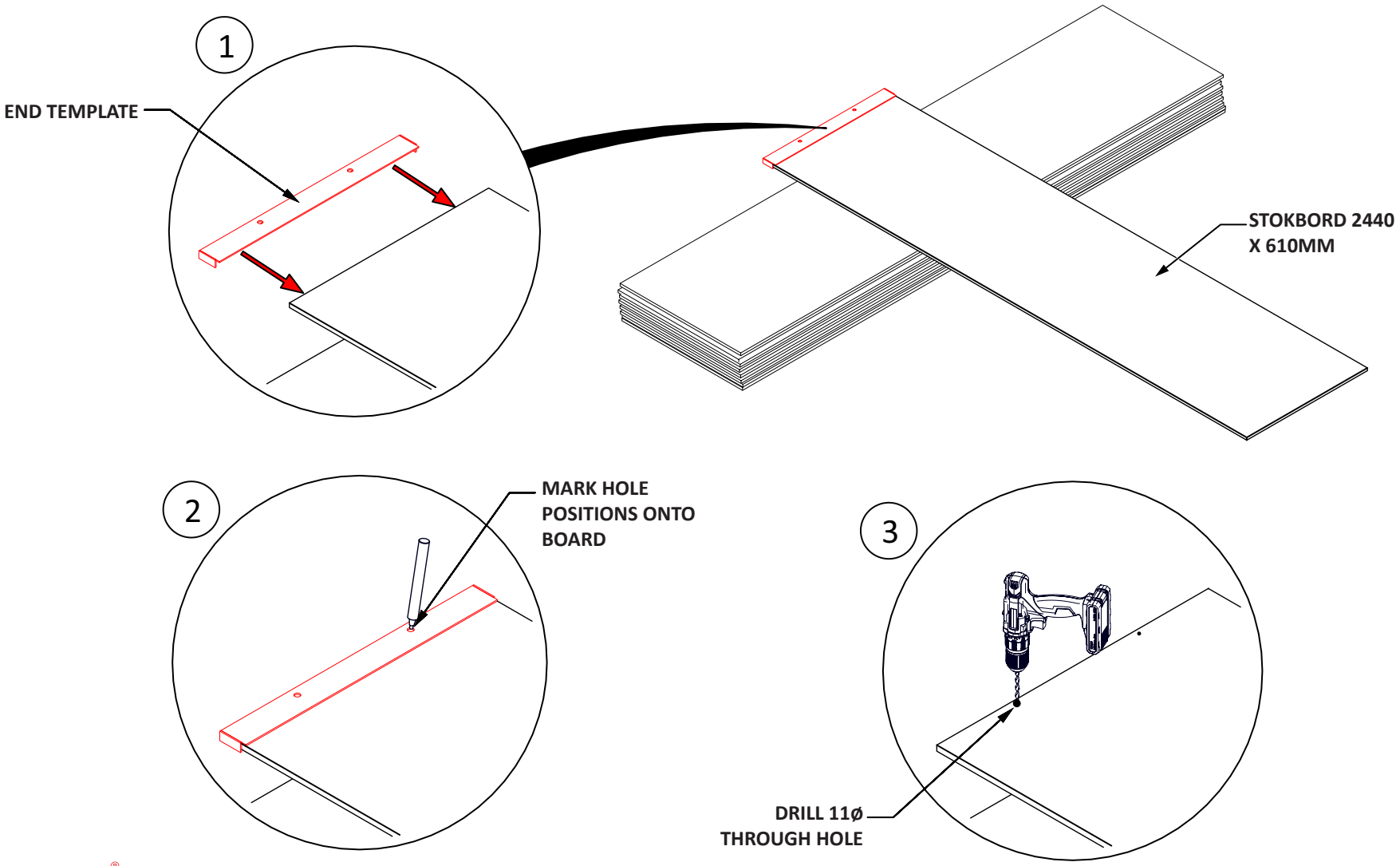


X 32 - SB Connector

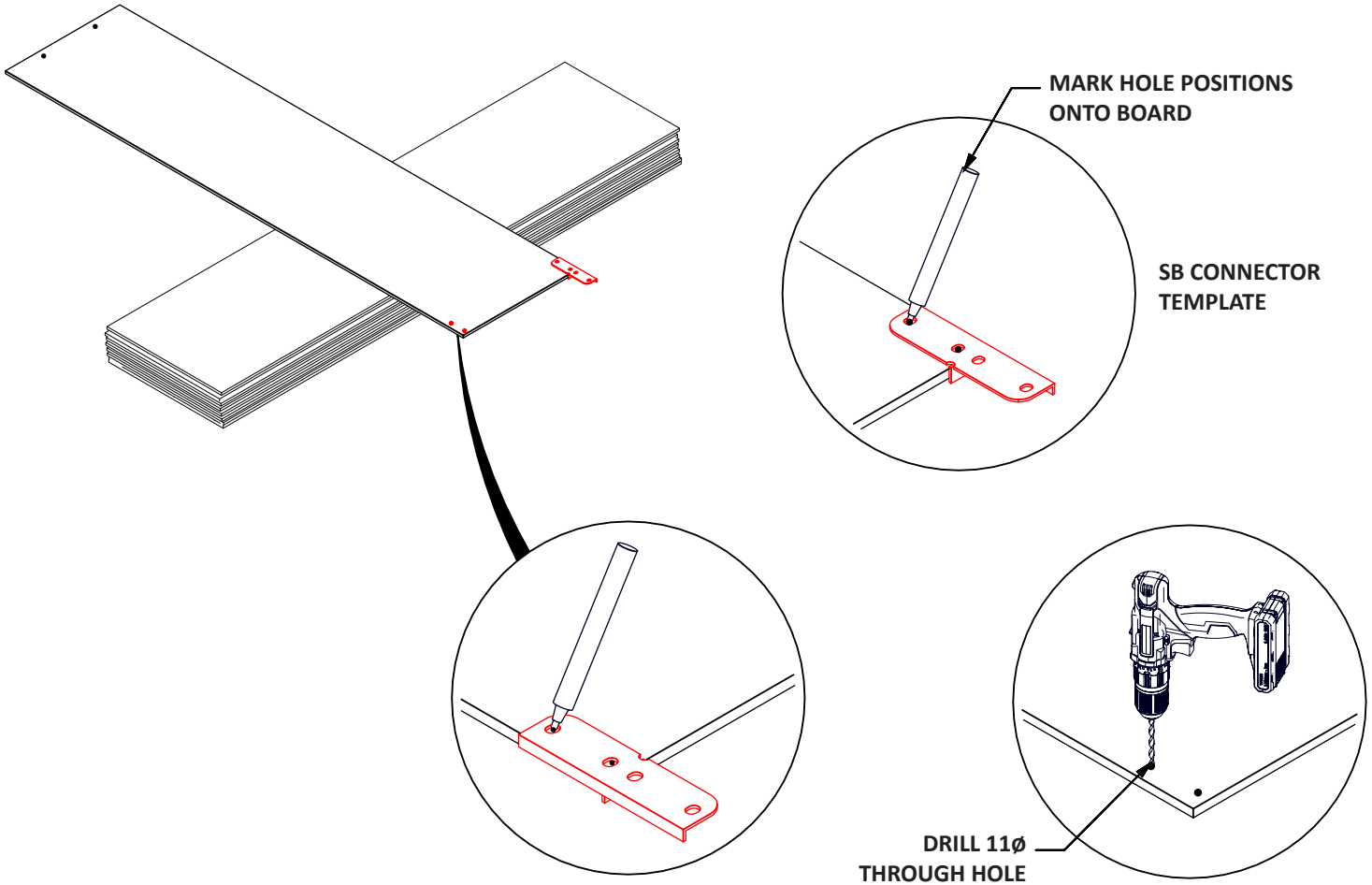


X 9 - Stokbord 2440 X 610MM
(Not Supplied With Building)

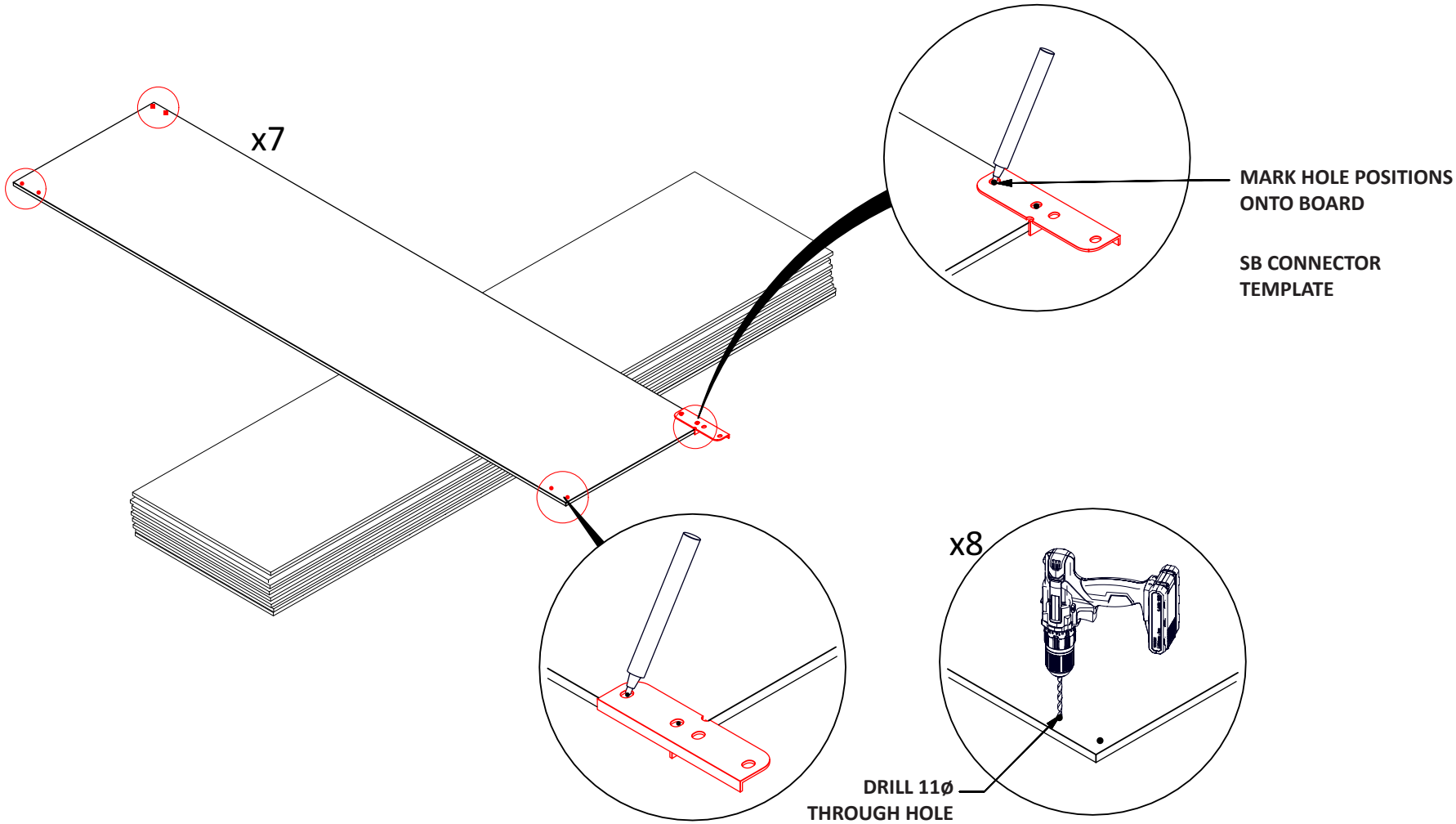
Step 1. Mark out and drill holes for the first board section. Take a stack of stokboard and place the stack of boards inside the building. Take one section and slide the end template home onto one end of the board. Mark the end hole positions and remove the template. Drill two dia holes through the end of the board at the marked positions.



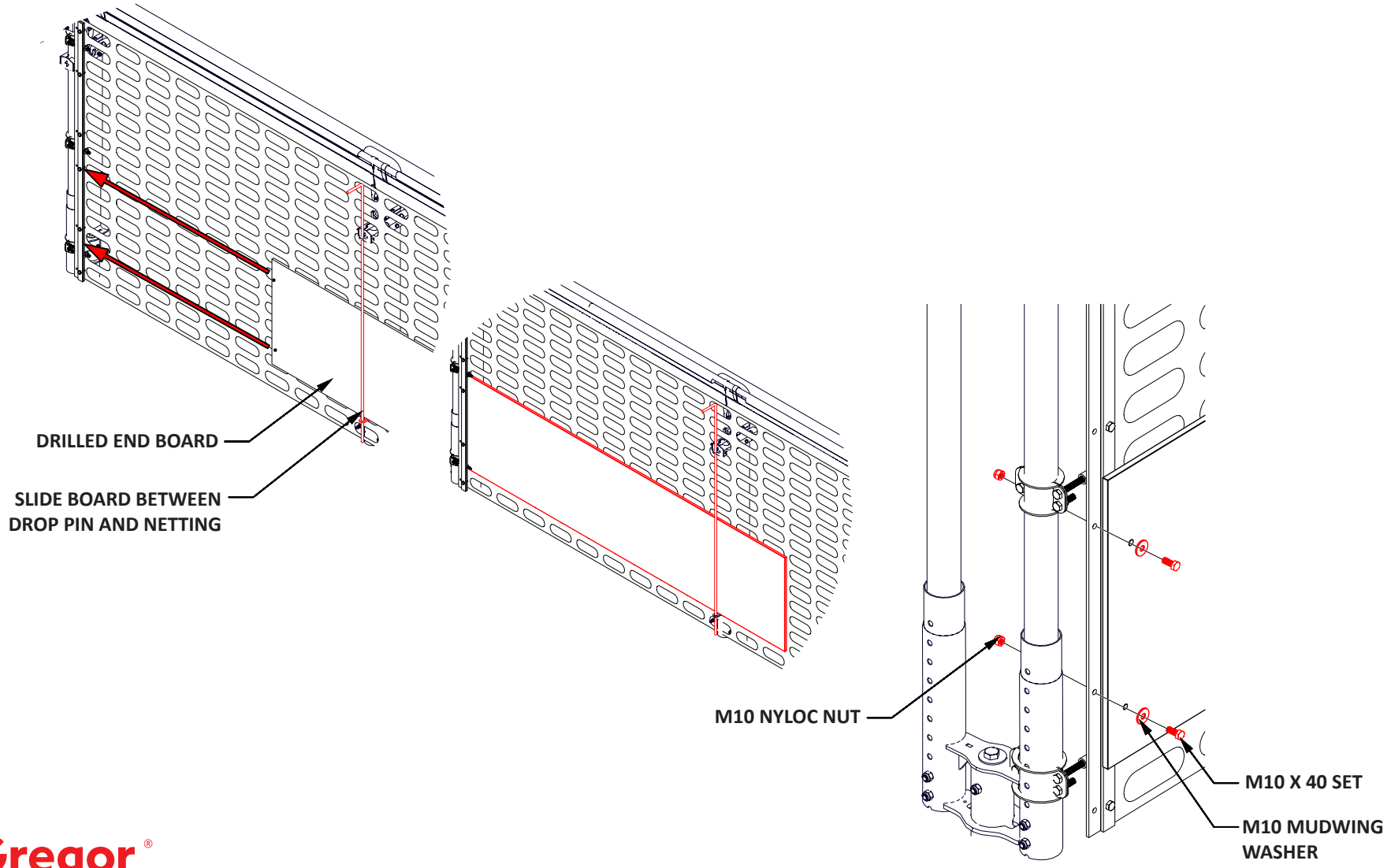
Step 2. Take the drilled board from step 1 and mark the positions of the corner connector holes at the opposite end of the drilled end holes using the SB-connector template. Drill dia 11 holes through the board at the marked position.



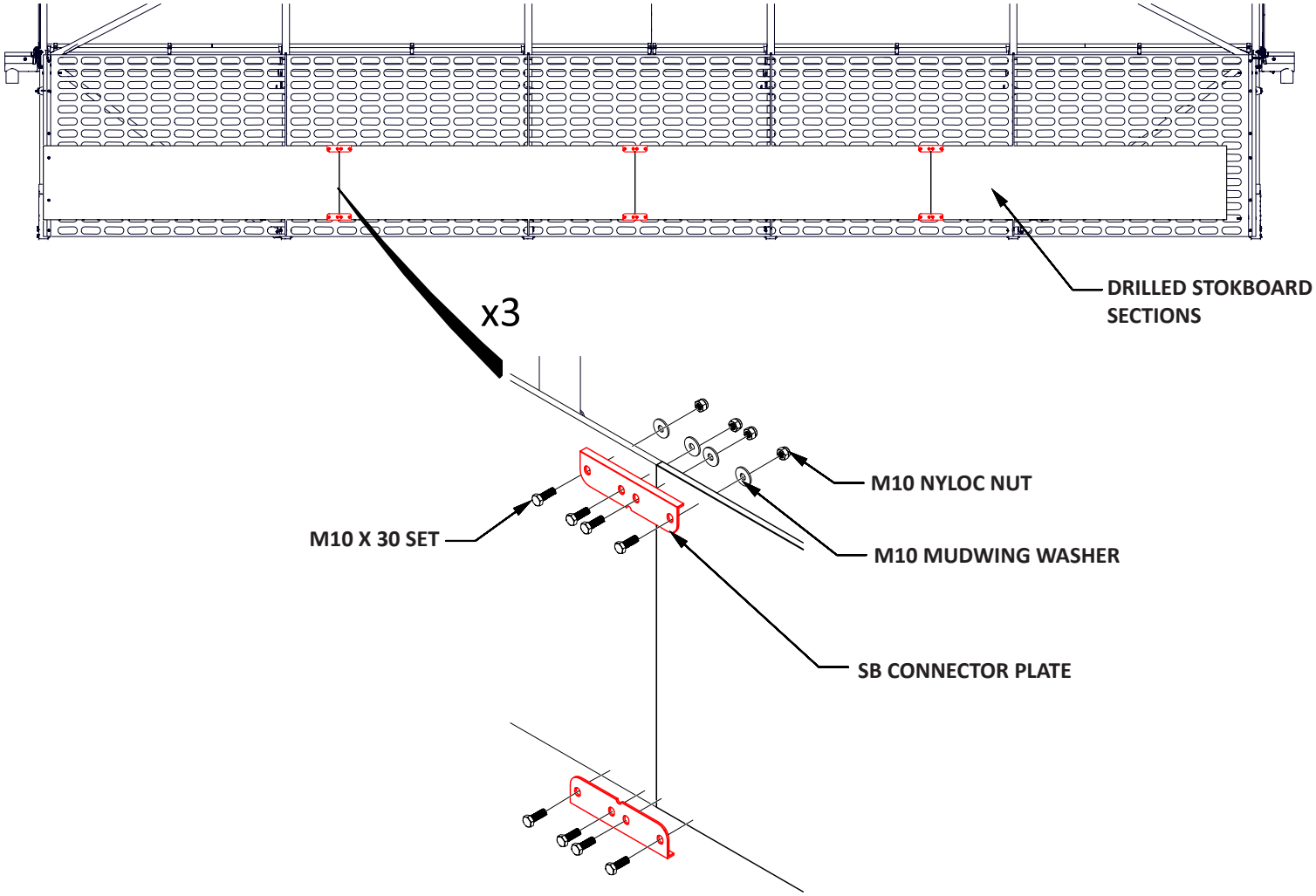
Step 3. Mark the hole positions for 7 intermediate boards. Take a second stokboard and mark the SB-connector holes at each corner using the SB-connector template. Drill dia 11 holes through the board at each marked hole position. Repeat this process for remaining 6 boards.



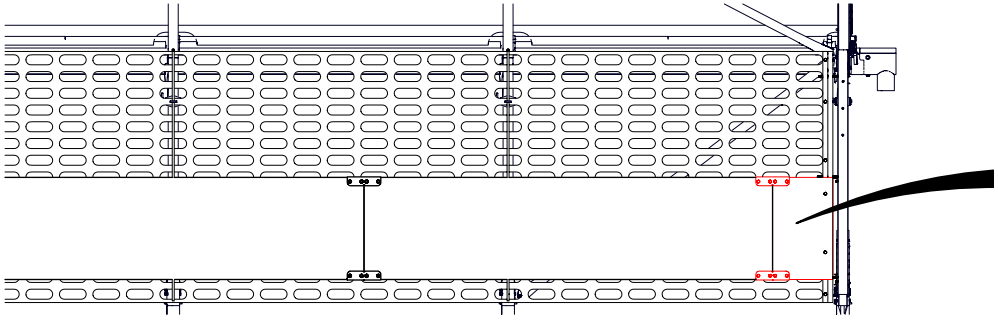
Step 4. Attach the first board to the netting backing bar. Slide the previously mark end board section behind the first drop pin to line up with the end of edge of the net backing bar. Attach the board to the backing bar using M10 x 40 sets and nyloc nuts through the previously marked end holes placing a mud wing washer between the set and the board.

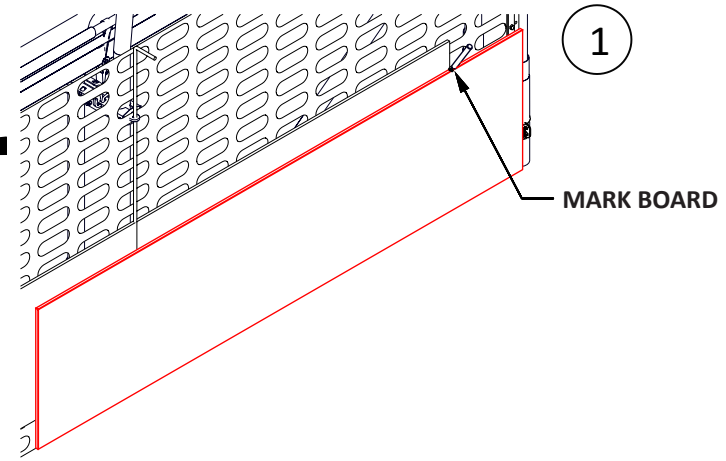


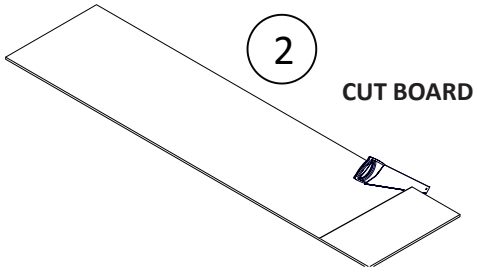
Step 5. Attach the intermediate board sections. Take an intermediate stokboard section and attach it to the end board using an SB-connector top and board with M10 x 30 sets through the connector and the holes in the board securing with a mud wing washer and nyloc nut behind the board.

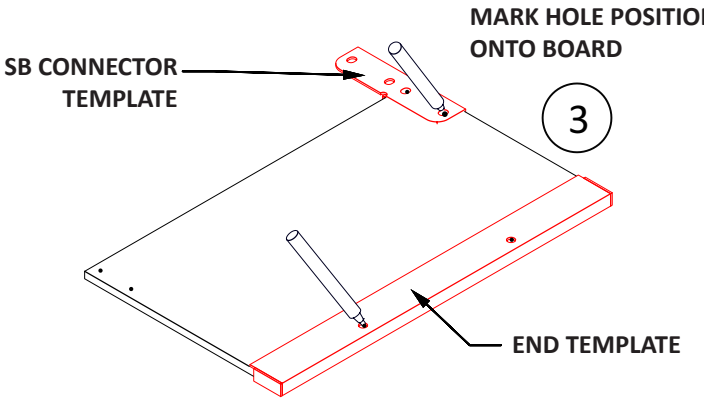


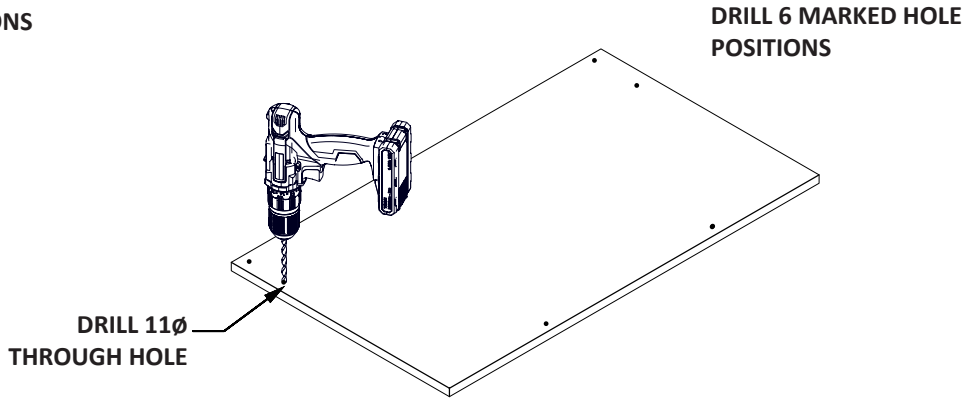
Step 6. Cut and drill the last board section. Take the remaining board and hold one edge flush to the end of the net backing bar. Mark the board for cutting so that it butt up against the last intermediate board. Cut the board to produce an off cut to complete the boarding run. Mark and drill holes to attach the board to the adjacent board and the net backing bar using the appropriate templates.



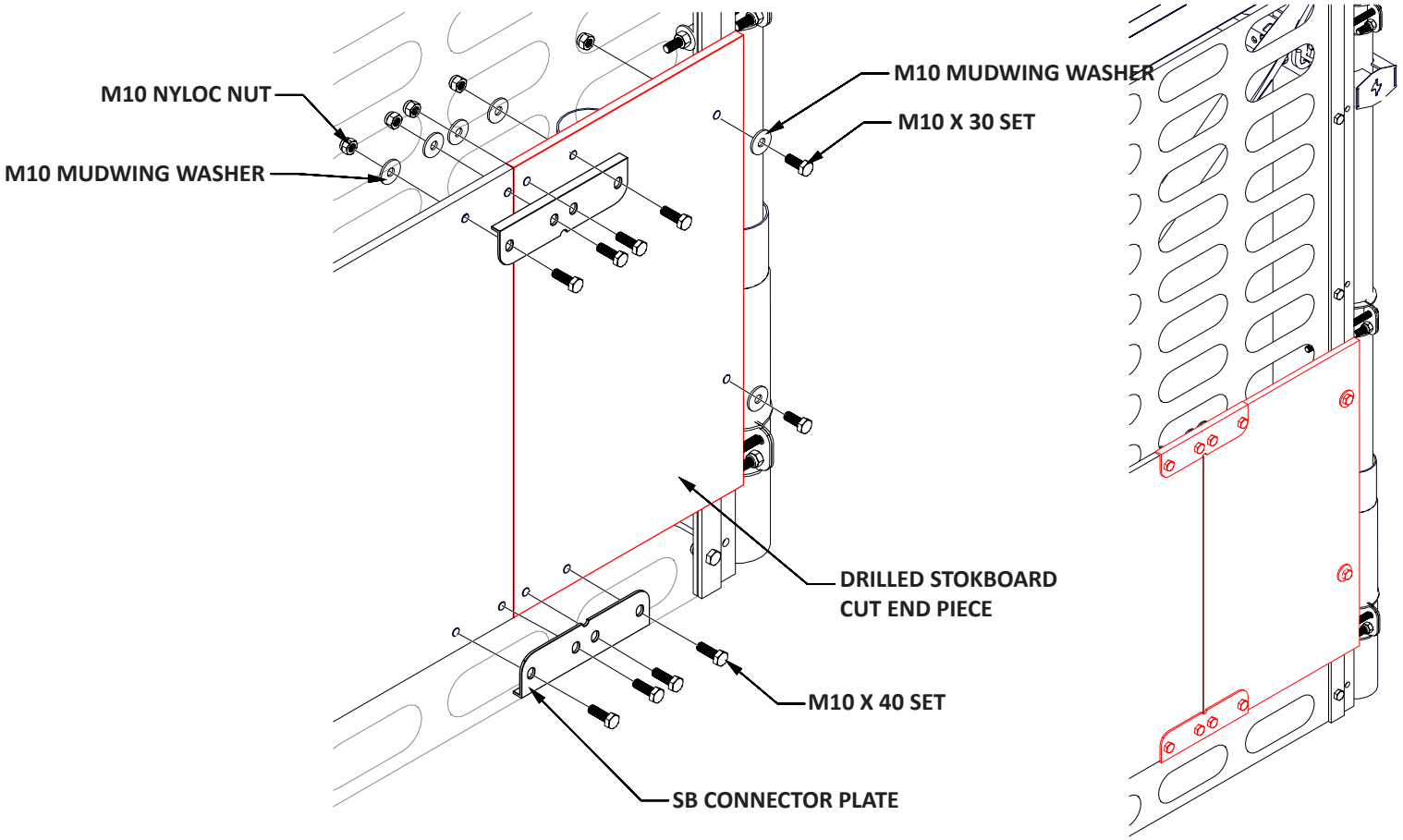








Step 7. Attach the boarding off cut. Attach the boarding off cut to the last intermediate stokboard using an SB-Connector top and bottom by passing M10 x 30 sets through connector and the holes made on the corner of the boards securing at the rear using mud wing washers and nyloc nuts. Attach the board to the netting backing bar using M10 x 40 sets and nyloc nut through the two end holes using a mud wing washer between the sets and the board.



Step 8. Repeat steps 1 to 7 to attach the boarding to the opposing side of the structure.