



# Armadillo Horizon

**HARDSHELL  
ROOF TOP TENT**

**USER MANUAL**



# THANK YOU

Congratulations on your purchase of a 23ZERO Rooftop Tent. We strive to provide you with the ultimate camping experience - the ARMADILLO HORIZON does just that.

Please carefully read this user manual. Follow all instructions and adhere to all safety and product care guidelines. Use of this product is only permitted to persons that have read and understood this user manual.

## CONTENTS

<b>SAFETY CONSIDERATIONS.....</b>	<b>2</b>
<b>HARDWARE &amp; ACCESSORIES.....</b>	<b>4</b>
<b>ASSEMBLY.....</b>	<b>6</b>
<b>INSTALLATION TO ROOF RACK.....</b>	<b>7</b>
<b>LADDER ADJUSTMENT.....</b>	<b>9</b>
<b>OPENING &amp; SETUP.....</b>	<b>11</b>
<b>CLOSING &amp; PACKDOWN.....</b>	<b>13</b>
<b>EXTERIOR DIMENSIONS.....</b>	<b>14</b>
<b>MOUNTING RAIL DIMENSIONS.....</b>	<b>16</b>
<b>CARE &amp; MAINTENANCE.....</b>	<b>18</b>
<b>WARRANTY.....</b>	<b>19</b>

# SAFETY CONSIDERATIONS

## WARNING

- Keep all flame and heat sources away from the tent materials.
- Under no circumstance should any naked flame sources or heating devices be used inside or near the tent.
- Keep campfires well away from the tent.
- Keep a look out for any airborne embers that may come in contact with the tent.
- Have a fire extinguisher or water bucket nearby in case of fire.
- Do not smoke within the tent.
- Do not operate any device which burns fuel inside the tent.
- Keep exit clear.

## WARNING

During set up and first use, some aluminium swarf may be present inside the roof top tent. We make every possible attempt to expel all aluminium swarf, however, with vibrations caused by logistics some residual swarf may dislodge and reappear. It is advised to remove and clean these during first set up.

## WARNING

For your safety and protection, ensure correct placement and angle of ladder. Recommended ladder placement is a 4:1 ratio or approximately 75°  
Ladder height may need to be adjusted depending on vehicle height, see "Ladder Adjustment"

**DO NOT CLIMB ON LADDER UNTIL CORRECT ANGLE IS ACHIEVED**

23ZERO - The wholesaler / manufacturer shall not be liable for special, indirect incidental or consequential damages.

## WARNING

Please ensure all 12V electrical connections from your vehicle's 12V system to the tent's internal power system are correctly wired and fused. Incorrect wiring and/or lack of fuses may cause short-circuiting of the system and cause a fire. 23ZERO disclaims all responsibility for damage caused by incorrect wiring.

# INSTALLATION & INSPECTIONS

Roof top tents have many moving parts, so regular maintenance checks are always advised. During trips regularly check that all nuts and bolts attaching the roof top tent to the vehicle as well as hinges and locks are tight and in good condition.

Alterations and / or inclusions such as roof racks and roof top tents applied to the vehicle roof may affect vehicle handling and characteristics. The manufacturer (23ZERO) disclaims all responsibility in case of accidents and / or damage due to installation of a roof top tent to an underrated roof rack, improper use, improper maintenance or checking the tightness of the brackets regarding the installation of the roof rack system.

## IMPORTANT

Before installing your 23ZERO Roof Top Tent please ensure you understand the following:

- **Your vehicle's maximum roof load rating.**
- **Your roof rack's maximum load rating including off-road capacity.**

The maximum amount of weight you can safely add to a vehicle's roof / cargo area differs according to make and type of vehicle including aftermarket additions such as roof racks / bars.

**Note: Roof rack off-road limits are immensely different to normal road use load ratings.** If in doubt, please contact your vehicle manufacturer and roof rack manufacturer / supplier for specified loading capacity of your vehicle and roof rack.

Not all factory roof racks or aftermarket roof bars can safely accommodate roof top tent models. The responsibility of fitting this roof top tent to rated roof racks or roof bars lies with the purchaser.

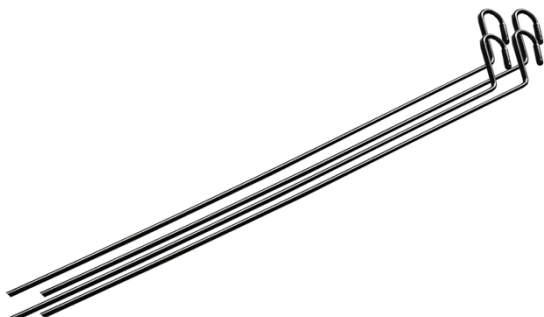
**Improper installation or use of the ARMADILLO HORIZON may result in serious injury and or property damage. Follow the installation instructions carefully to ensure proper installation to vehicle and safe use of the roof top tent.**



# HARDWARE & ACCESSORIES

The ARMADILLO HORIZON Rooftop Tent includes a mounting kit with everything required to mount the Rooftop Tent to most roof racks and platforms. See included accessories below:

**4 x Fly Pole**



**2 x Handle**



**4 x Mounting Plate**



**8x M8x65mm Bolt, Nut & Washer**



**88 x Mounting Channel Slide Plate**



**1 x LED Light Strip**



**1 x 2.3m Adjustable Wide-Step Ladder**



**4 x Mounting Rail End Cap**



**1 x Telescopic Safety Pole**



**1 x Safety Pole Weather Adaptor**

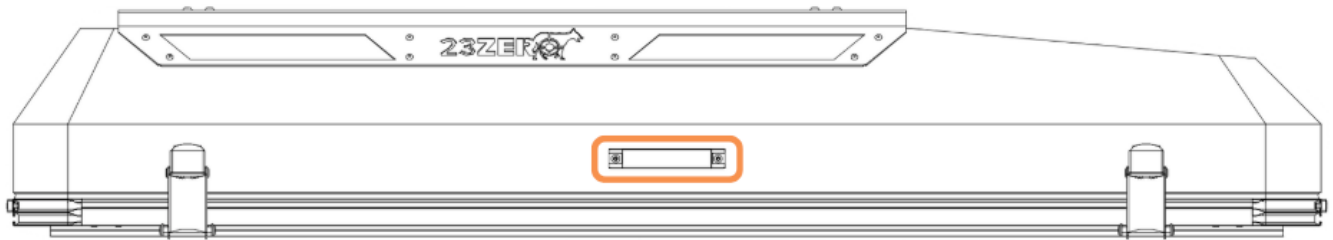


# ASSEMBLY

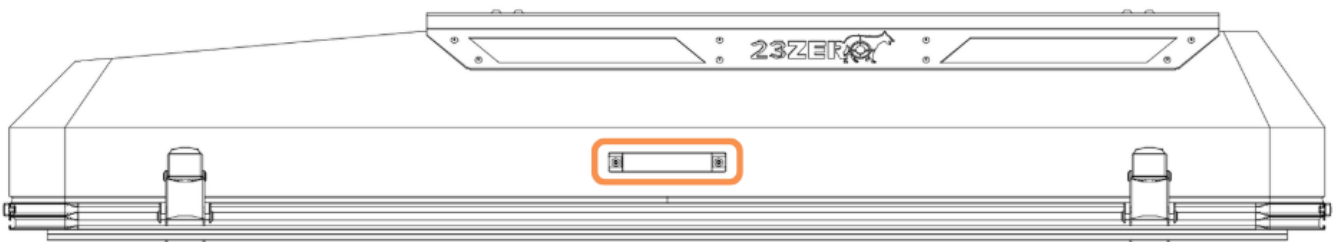
Out of the box, the ARMADILLO HORIZON requires some of its components to be installed prior to mounting to your vehicle.

**Handles** – Insert 2 x M8 button-head bolts into each handle and then attach to pre-drilled holes on both sides of the ARMADILLO HORIZON shell. Place rubber washers in between handle bolts and shell. Attach supplied washers and nyloc nuts by hand. Use supplied 5mm Allen key and 13mm wrench to tighten.

**RHS**



**LHS**



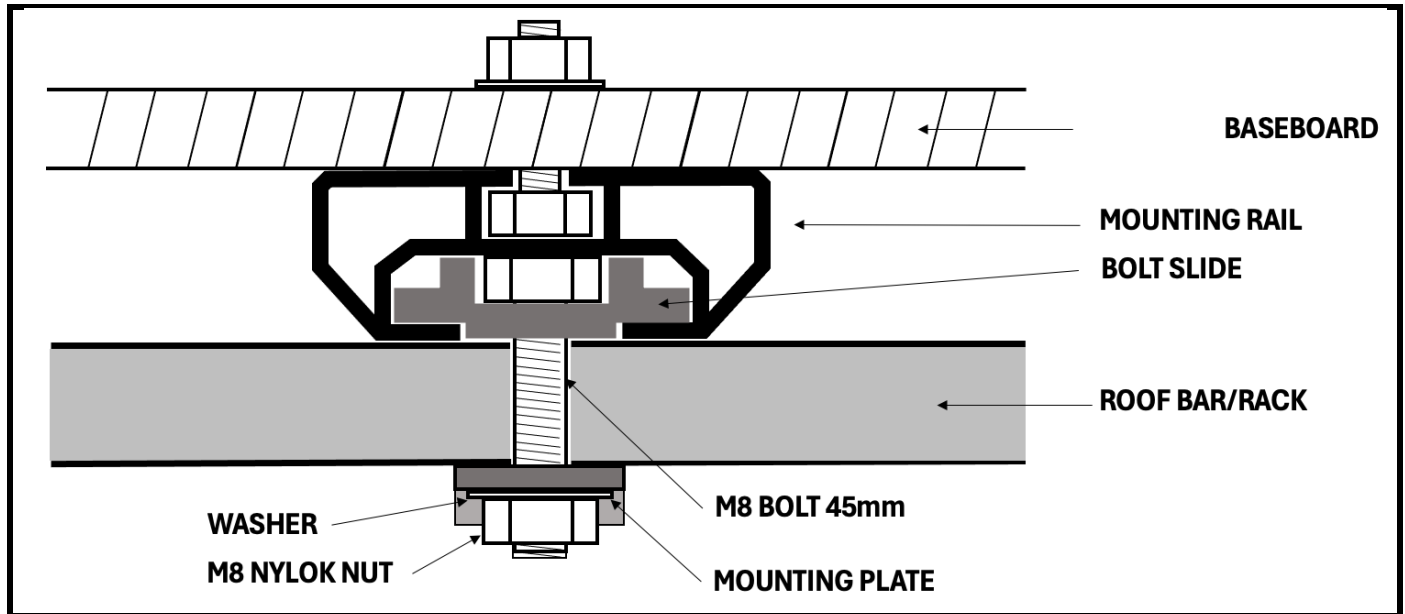
## IMPORTANT

The roof bars supplied with the ARMADILLO HORIZON are not designed to carry significant loads. A maximum of 44lbs can be carried on top of the ARMADILLO HORIZON providing this weight is spread evenly amongst both bars. Load weights greater than 44lbs will void any warranty. When adding additional weight to the top of the ARMADILLO HORIZON, consideration must be given to the overall weight rating capacity of your vehicle's roof and roof rack.

# INSTALLATION TO ROOF RACK

The ARMADILLO HORIZON can be installed to most roof bars or platform racks using the supplied mounting kit. Some platform racks have channels which are wider than the supplied mounting plate. 23ZERO has extended mounting plates available online for this scenario.

The ARMADILLO HORIZON has 2 pre-fitted mounting channels which have 1 bolt channel facing downward.



1. **Lift the ARMADILLO HORIZON onto the vehicle's roof rack (minimum 4-person lift).**
  - Ensure all 4 latches are closed.
2. **Position mounting bolts ((M8 x 65mm hex-head) in mounting rails.**
  - Slide 4 65mm M8 T-Bolts into each bottom mounting rail using the provided slide plates.
  - Position two bolts toward the front and two bolts toward the rear of the tent on each rail.
  - Tilt the tent to allow the inner bolts to cross over onto the inside of the roof bars.
3. **Inspect and adjust ARMADILLO HORIZON to desired position on roof rack.**
  - Ensure that tent will open and close correctly.
  - Check that shell will open and close without contacting any other components on your roof rack.
  - Ensure there is no excessive flex or movement in your vehicle's roof rack.

**4. Attach all 4 supplied mounting plates to the mounting bolts using supplied washers and nyloc nuts.**

- Thread the nuts on by hand and then use a 13mm wrench to tighten all 8 nyloc nuts.
- Ensure the bolts are straight when tightening to prevent galling.
- Do not use a rattle-gun or electric ratchet as these can cause cross-threading.
- Do not over-tighten. Stop tightening once the mounting plates begin to bend upwards towards the tent.

**5. Insert supplied end caps into the mounting rails.**

- Use a soft blow hammer if necessary.

**6. Final inspection.**

- Ensure all 8 nyloc nuts are tight and there is no movement of the ARMADILLO HORIZON on the vehicle's roof rack.
- Check all factory-fitted mounting rail nuts underneath the mattress are fastened and in good repair. Lift the mattress to gain access to these.

## IMPORTANT

Regularly check that all nuts and bolts attaching the roof top tent to the vehicle as well as hinges and latches are tight and in good condition.

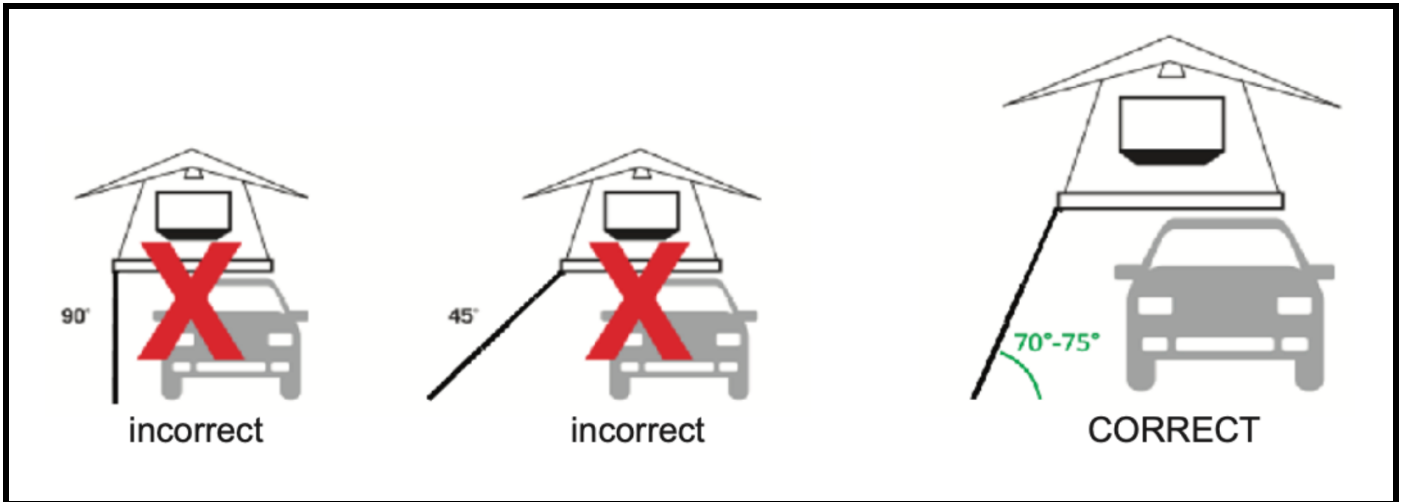
Regularly check your roof rack is securely mounted to your vehicle and that there are no signs of wear or damage.

**By following these steps, you are ensuring that your ARMADILLO HORIZON Rooftop Tent is securely mounted and safe to use.**

# LADDER ADJUSTMENT

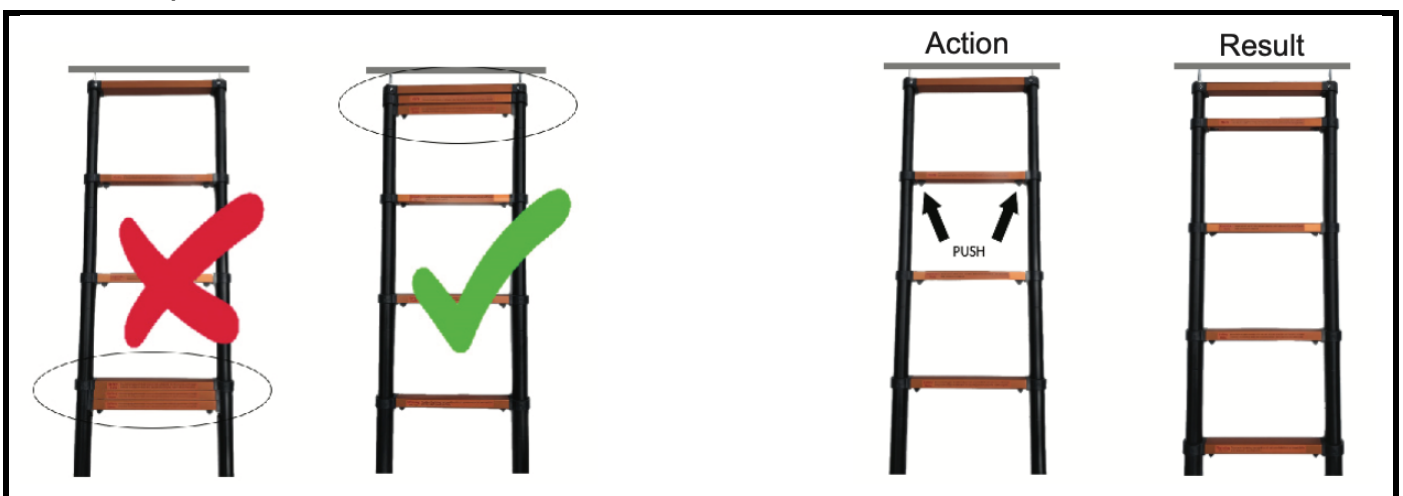
For your safety and protection, ensure correct placement and angle of ladder. See diagrams below. Recommended ladder placement is a 4:1 ratio or approximately 70° to 75°

**NOTE: Under no circumstances should anyone be inside the roof top tent if the ladder is not locked and secured at correct angle.**

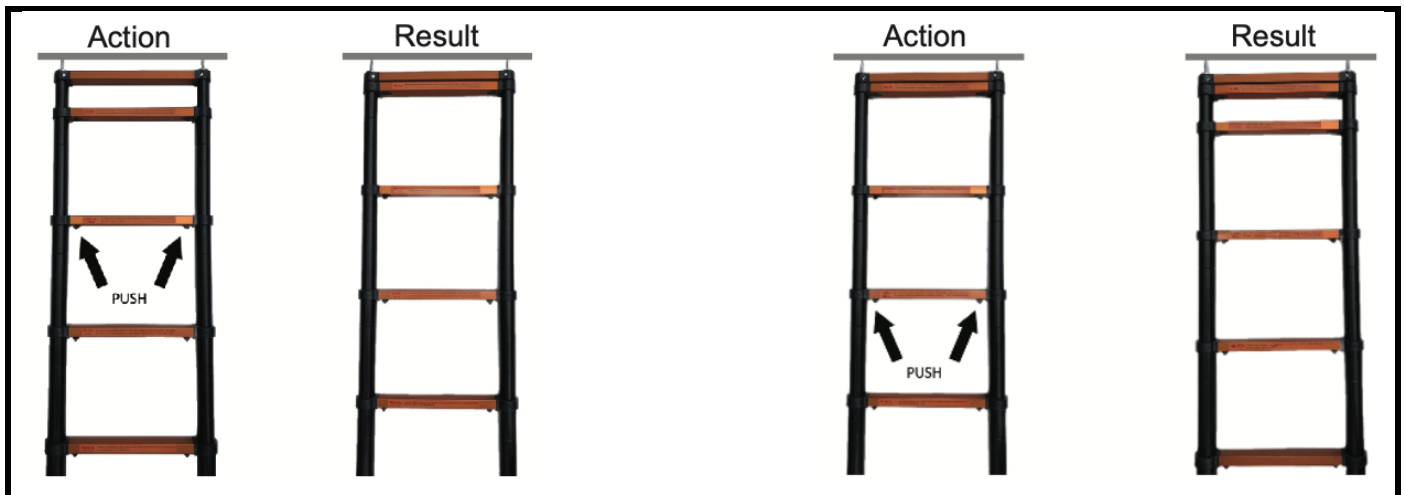


The ladder may need to be adjusted to achieve the correct angle depending on the height of your vehicle.

- If shortening is required, the adjustment must be done from the top rungs (second rung from the top) and allow the ladder to compress until a gap of approximately 85mm is achieved between rung 1 & 2.
- Note: The ladder will only lock in the downward position.
- Swing in the bottom of the ladder until it supports the weight of the roof top tent. If the angle of the ladder is between 70° and 75°, the adjustment is complete:



If further shortening is required, press the second set of locking buttons (third rung from the top). This will close the 85mm gap until rung 1 & 2 are touching. Swing in the bottom of the ladder until it supports the weight of the roof top tent. If the angle of the ladder is between 70° and 75°, this adjustment is complete:



**NOTE: When height adjusted, the ladder will only lock in the downward position.**

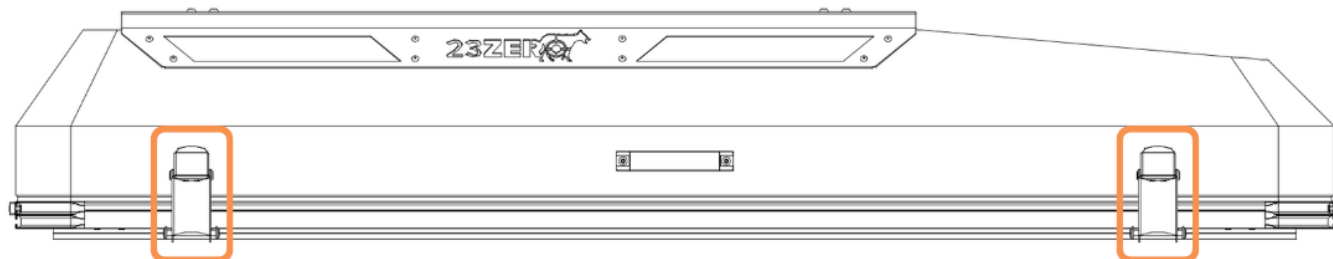
If further adjustment is required, repeat the above steps by continuing the sequence depressing the next set of locking buttons.

# OPENING AND SETUP

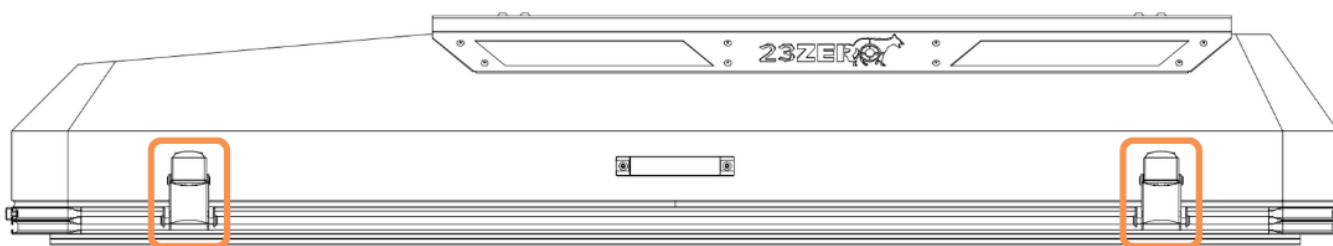
## 1. Release locking mechanism.

- Locate and release all 4 latches (2 on each side).

RHS



LHS



## 2. Raise shell.

- Using the top handle on the RHS of tent, lift the shell upwards.



## 3. Pull down elastic shock cord.

- Locate the external elastic shock cord and pull downwards and out of the way.

## 4. Extend front canopy hoop.

- Unlock 2 trigger locks (one on each side) and push canopy hoop upwards.

## 5. Climb in and locate all 4 fly poles.

- Insert the fly pole into the fly pole bracket in the shell first and then bend upwards until the hook end reaches the eyelet on the fly (2 on each side).



#### **6. Extend safety pole and weather adaptor.**

- If camping in wet weather and/or high winds, clip the safety pole onto the internal canopy hoop above the entrance to the tent and thread through the webbing loop at the top of the shell at rear.
- Attach the weather adaptor to the safety pole and push upwards to create a high-point on the ARMADILLO HORIZON fly.

#### **7. Initial setup complete.**

- Adjust internal windows to suit the climate you are in.
- Plug in LED light to 12V power system located at rear of tent.

### **WARNING**

Please ensure all 12V electrical connections from your vehicle's 12V system to the tent's internal power system are correctly wired and fused. Incorrect wiring and/or lack of fuses may cause short-circuiting of the system and cause a fire. 23ZERO disclaims all responsibility for damage caused by incorrect wiring.

# CLOSING & PACKDOWN

**1. Ensure all 12V accessories are switched off and unplugged from 12V power system.**

**2. Arrange bedding neatly on top of mattress.**

- Bedding and pillows can be left inside the ARMADILLO HORIZON depending on their size. Always place pillows in the center of the mattress so that they compress evenly when closing.
- Ensure sleeping bags or blankets are sitting flat on the mattress and not sitting up on the sides against the canvas of the tent.

**3. Remove all 4 fly poles.**

- Depending on how the ARMADILLO HORIZON is mounted, it may be easier to remove the fly poles by reaching out from inside the tent or by standing on the vehicle and removing them externally.
- Place all 4 fly poles in the supplied protective sleeve to prevent them moving around the tent when closed.

**4. Raise external shock cord.**

- Position the shock cord slightly above the external fly to assist in tucking the canvas in when lowering the shell.

**5. Pull down on strap to close the shell.**

- Once the top handle is in reach, use it to gently lower the shell while using tucking in any canvas that is protruding.
- **Tip: It is significantly easier to close the tent when the windows are open at least 50% - this allows the air to expel quickly.**

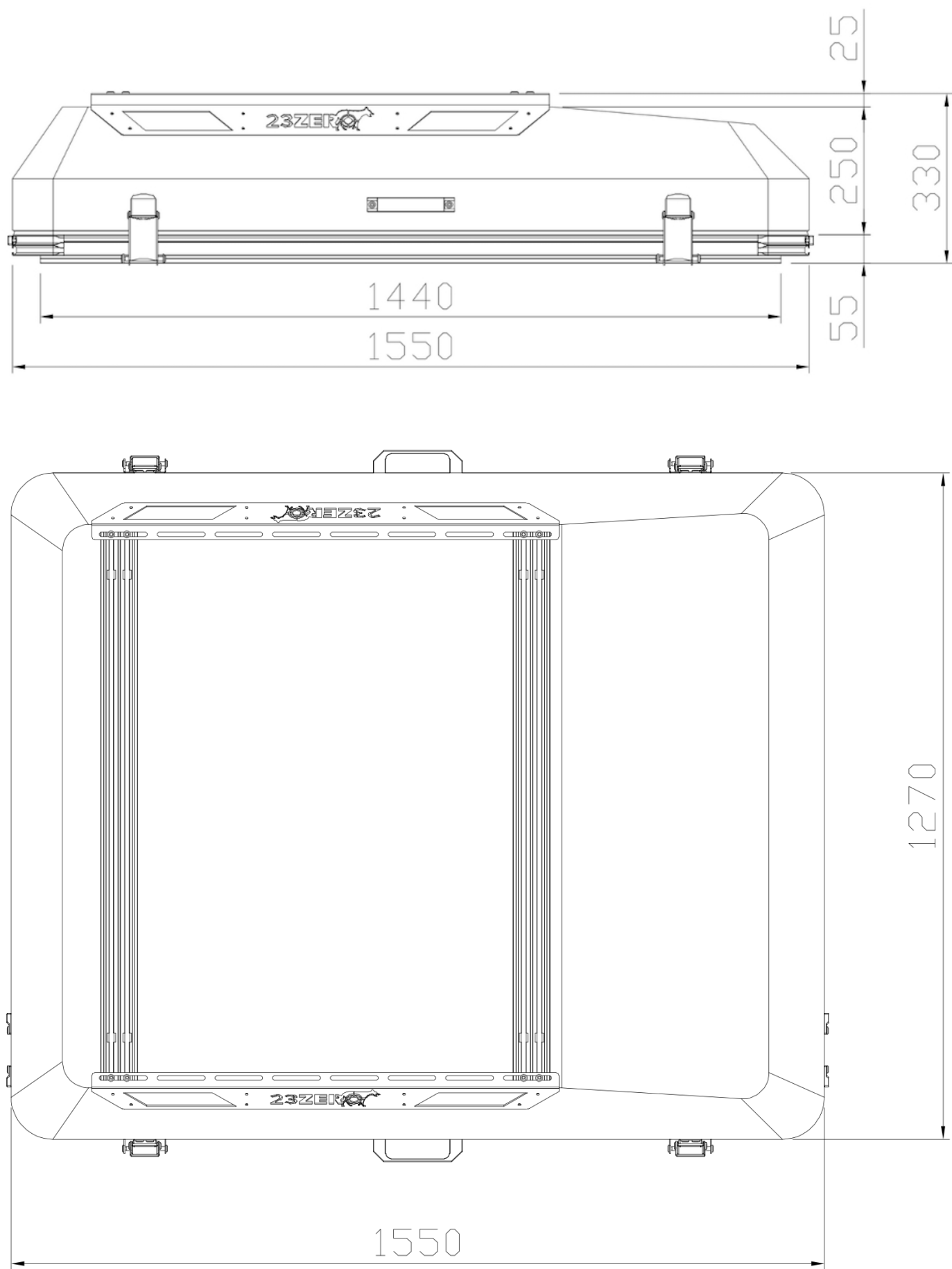
**6. Lock all 4 latches.**

- Ensure that no canvas is protruding through the rubber seal of the tent.

**7. Packdown complete.**

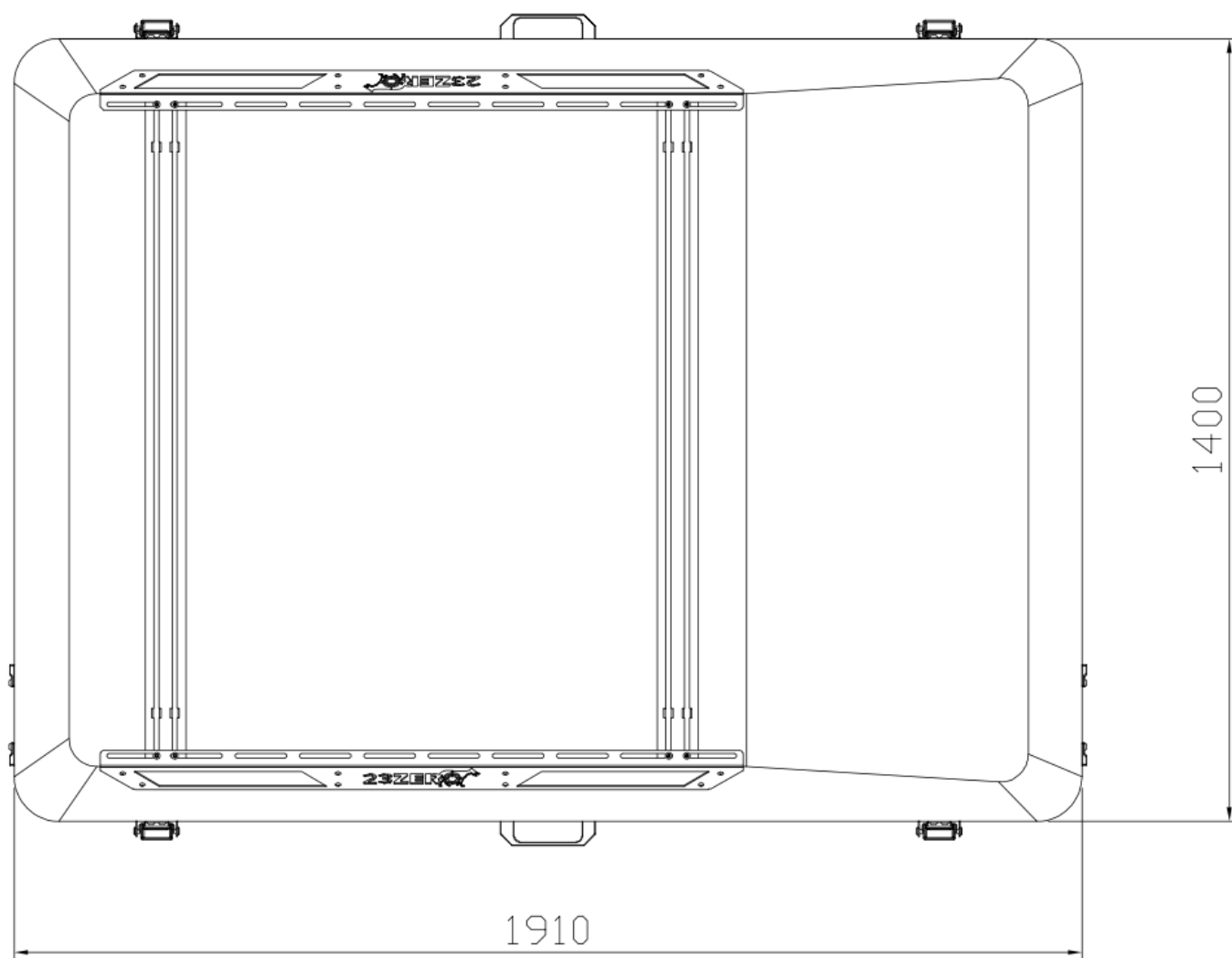
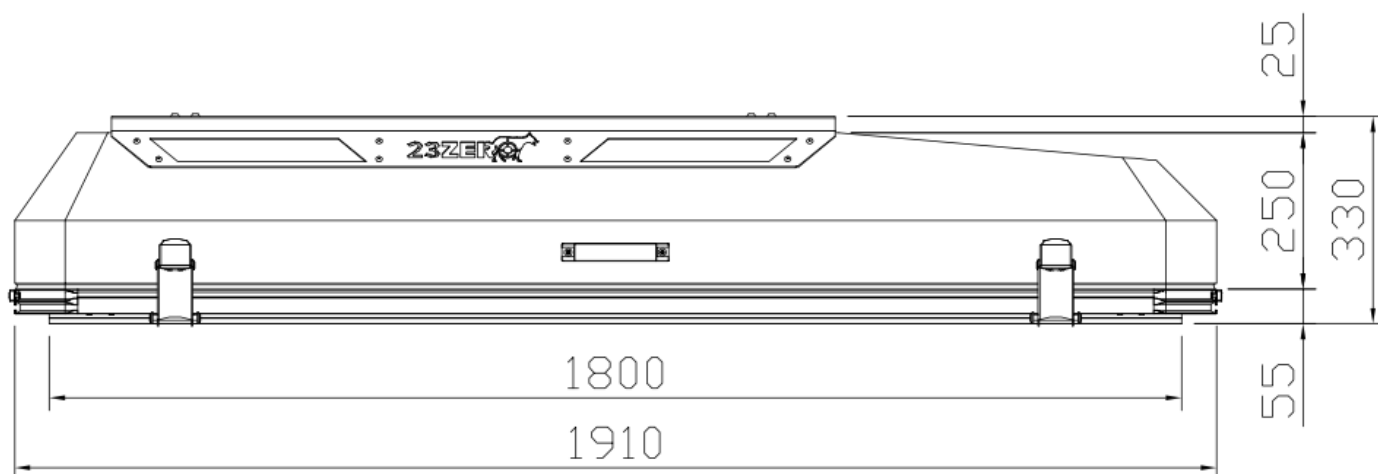
- Do a final walkaround of the tent before moving your vehicle.

# EXTERIOR DIMENSIONS – H2



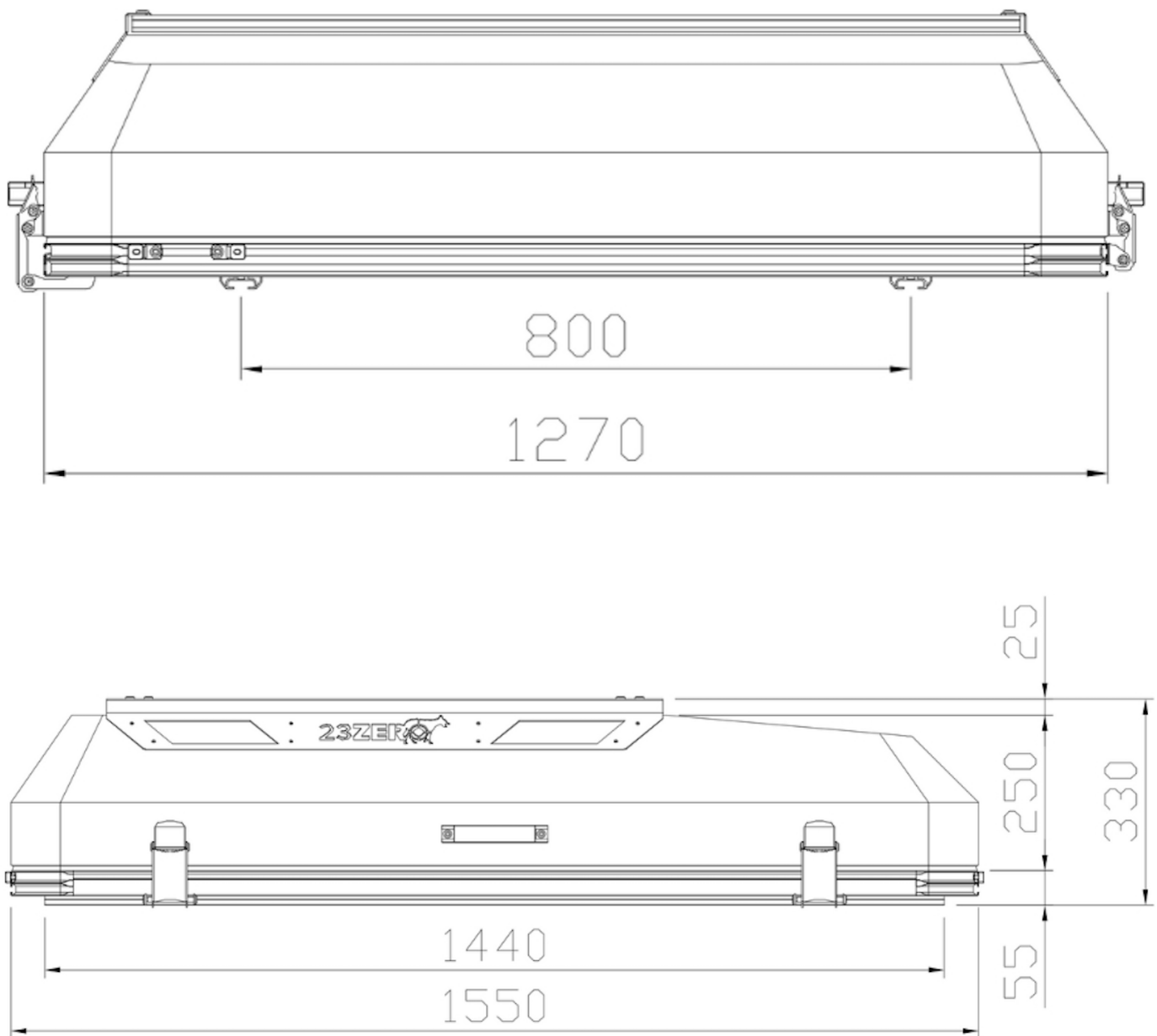
\*All measurements shown in millimeters

# EXTERIOR DIMENSIONS – H3



\*All measurements shown in millimeters

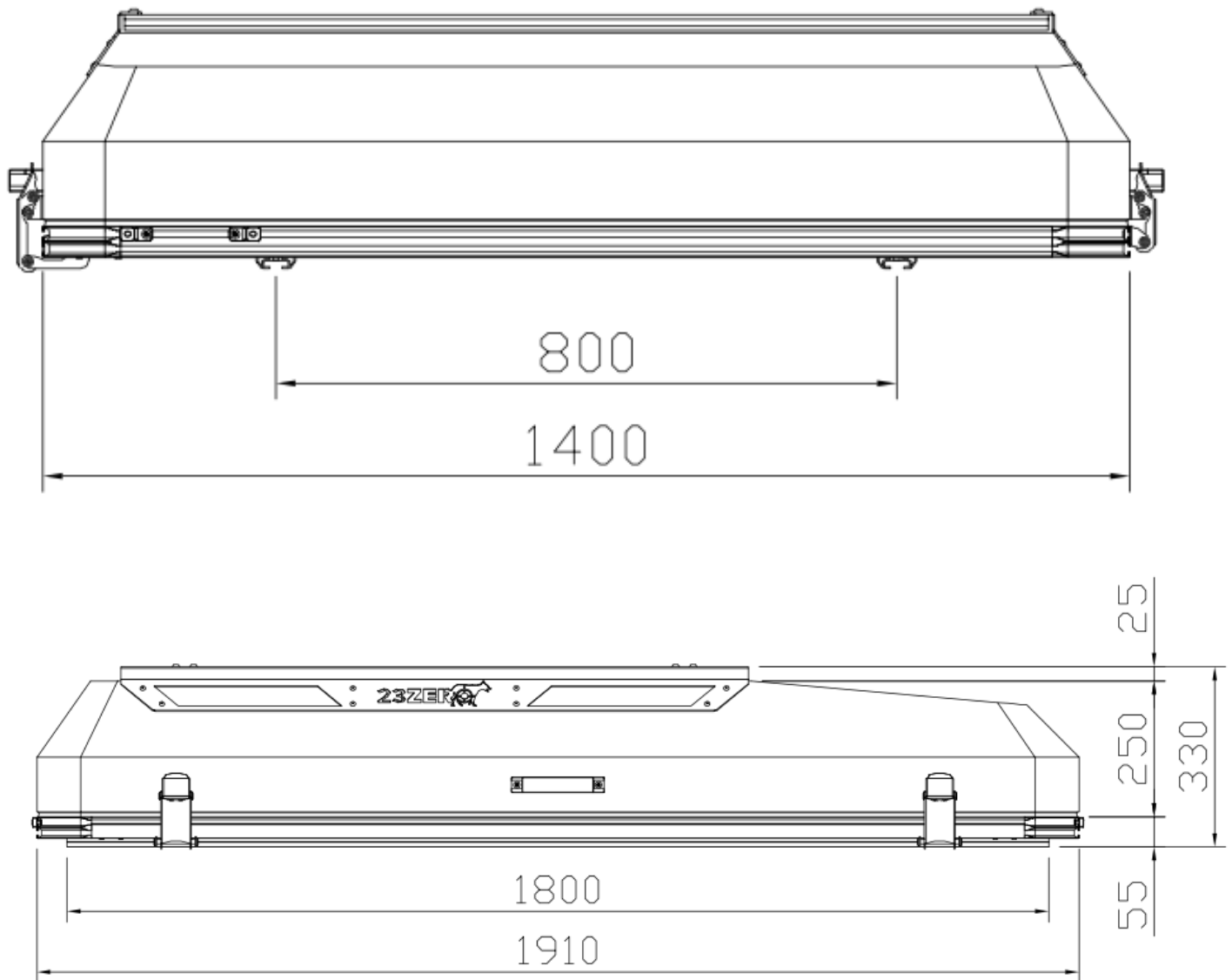
# MOUNTING RAIL DIMENSIONS – H2



**Note:** Measurements shown for the underside mounting extrusions may vary slightly due to manufacturing tolerances. It is highly recommended that any final modifications to your setup be made only after receiving delivery of the ARMADILLO Horizon.

**\*All measurements shown in millimeters**

# MOUNTING RAIL DIMENSIONS – H3



**Note:** Measurements shown for the underside mounting extrusions may vary slightly due to manufacturing tolerances. It is highly recommended that any final modifications to your setup be made only after receiving delivery of the ARMADILLO Horizon.

**\*All measurements shown in millimeters**

# CARE & MAINTENANCE

## CLEANING

Clean with lukewarm water and soft bristle brush.

Do not use soaps and or detergents.

Do not expose to petro-chemicals.

## STORAGE

Certain situations may require the ARMADILLO HORIZON to be packed down wet. It is essential that at the earliest opportunity the ARMADILLO HORIZON is re-opened and allowed to dry fully. Though we use the best polyurethane proofing available, prolonged exposure to moisture causes hydrolysis which can affect the integrity of the proofing. Storing the ARMADILLO HORIZON wet in warm conditions is likely to cause mildew growth which will stain canvas and lead to premature breakdown.

## WATERPROOFNESS

23ZERO uses a selection of refined raw materials and treatments in its design and development processes including long lasting polyurethane coatings and high frequency seam sealing. With multiple layer seams and addition of zips wind driven rain may cause small amounts of water ingress at times. Rubbing a softened candle wax stick over the affected area will help reduce any water ingress.

## HYDROLYSIS

Hydrolysis is the chemical breakdown of polyurethane (PU) caused by its gradual absorption of moisture or water over time, a process more prevalent in humid or tropical environments due to higher moisture levels. This reaction is a natural characteristic of PU and is not considered a manufacturing fault of 23ZERO products. To reduce the risk of hydrolysis, it is crucial to use the tent regularly, provide proper care, and conduct routine inspections. During long-term storage or stowing, ensure all additional bedding, such as sleeping bags, blankets, and pillows, are removed to avoid compressing the canvas for extended periods. The tent canvas should be checked regularly and exposed to direct sunlight periodically to help maintain its integrity. These practices will significantly extend the lifespan and performance of your tent.



# Warranty

23ZERO will replace or repair any product at its discretion that is subject to faulty manufacturing or workmanship including materials.

## ***Exclusions***

The above warranty is limited to manufacturing and material defects. The warranty does not cover ordinary wear and tear, damage caused by improper use, storm damage, improper cleaning, accidents, lack of general or improper maintenance, driving under car parks, hitting products against hard surfaces, damage caused by car washes, fires, sparks, abuse, alterations, animal attacks, acts of God, UV exposure, or zipper wear. This also excludes broken poles and damage caused by a jammed, snagged zipper or excessive force applied to zipper causing failure. Using 23Zero products for full-time, commercial, or rental situations voids all warranties. 23Zero reserves the right to determine quality standards under this warranty policy.

Due to our policy of continual product development, the specifications, colors and feature may vary.

Please visit <https://23zero.com/returns/> to see full details.

## ***Making a claim***

To make a claim in relation to the above manufacturers warranty please ensure you retain your sales receipt of purchase. Please contact us stating the nature of your claim and we will be in touch with you shortly. If you require additional assistance, please call 801-349-1099 to discuss and arrange your claim. Product subject to warranty will be sent to 23ZERO USA, 2195 South Presidents Dr. Ste B. West Valley City, UT 84120. All freight costs associated with return of product for assessment is payable by the customer.