



**BISON GEAR**

# Land Rover Defender L663 - 110 Roof Rack Installation Guide

**RR-L663-OX**





## 💡 Before you start

The Roof Rack is a 2-in-1 version – a standard front wind deflector or LED bar cutout which allows to install 42" LED Bar lamp. As a base is a cutout version which can be easily modified to standard version by screwing on a specially designed cover. This makes the roof rack standard version.

Familiarize yourself with these instructions. Ensure that all listed parts and hardware are present in package. Locate a flat surface or floor with a minimum area of **3 x 2.5 meters**. Gather the required tools. The installation requires two adult people.

## ⚙️ Part list

No.	PART	QTY	IMAGE	
1	Profile 90x25 L=1180	8		<input checked="" type="checkbox"/>
2	Profile 60x30 L=1180	1		<input type="checkbox"/>
3	Front rail	2		<input type="checkbox"/>



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4	Back rail L	1	
5	Back rail R	1	
6	Overlayer L	1	
7	Overlayer R	1	
8	Wind deflector	1	
9	Wind deflector cover	1	



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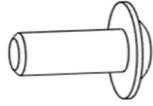
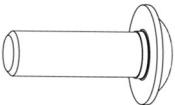
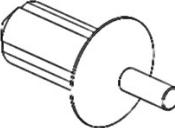
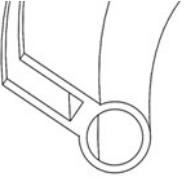
10	Front roof bracket R	1		
11	Front roof bracket L	1		
12	Middle roof bracket R	1		
13	Middle roof bracket L	1		
14	Back roof bracket R	1		
15	Back roof bracket L	1		



16	Slot bracket with thread pins	<b>6</b>		
17	Railing gap cover	<b>2</b>		
18	Support bracket	<b>2</b>		
19	Flange nut M6 DIN 6923	<b>22</b>		
20	T-slot M6 nut	<b>5</b>		
21	Flange nut M8 DIN 6923	<b>32</b>		
22	T-Slot M8x20 bolt	<b>10</b>		
23	Bolt M6x12 DIN 6921	<b>5</b>		



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24	Bolt M6x16 ISO 7380-2	<b>22</b>		
25	Bolt M8x25 ISO 7380-2	<b>46</b>		
26	Plastic clip	<b>10</b>		
26	Rubber wind deflector gasket	<b>1.2 m</b>		
27	Protection tape	<b>1.4 m</b>		

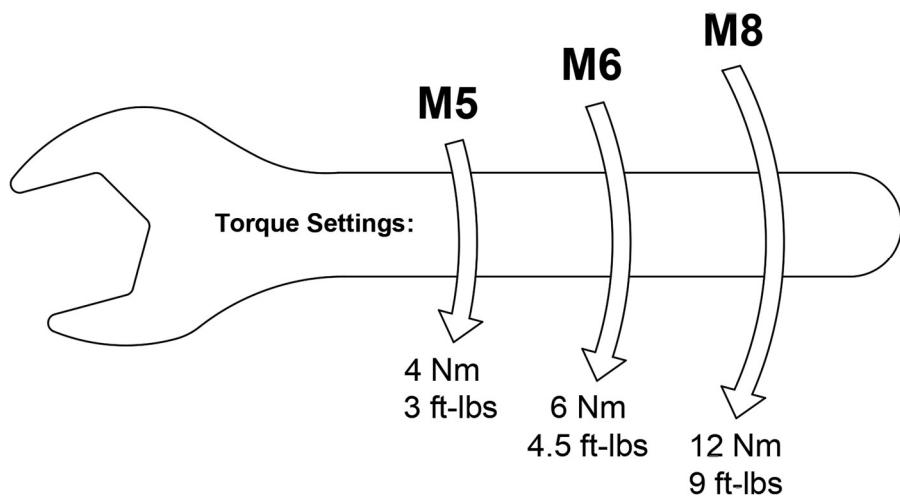


## ☒ List of necessary tools<sup>1</sup>:

- **4 mm Allen Key (Hex)**
- **5 mm Allen Key (Hex)**
- **10 mm wrench**
- **13 mm wrench**
- **cutters**
- **hammer**
- **\*(optional) torque wrench**

## ☒ Torque settings:

During assembly, use the recommended tightening torques for screw, unless other parameters are specified for a given connection.

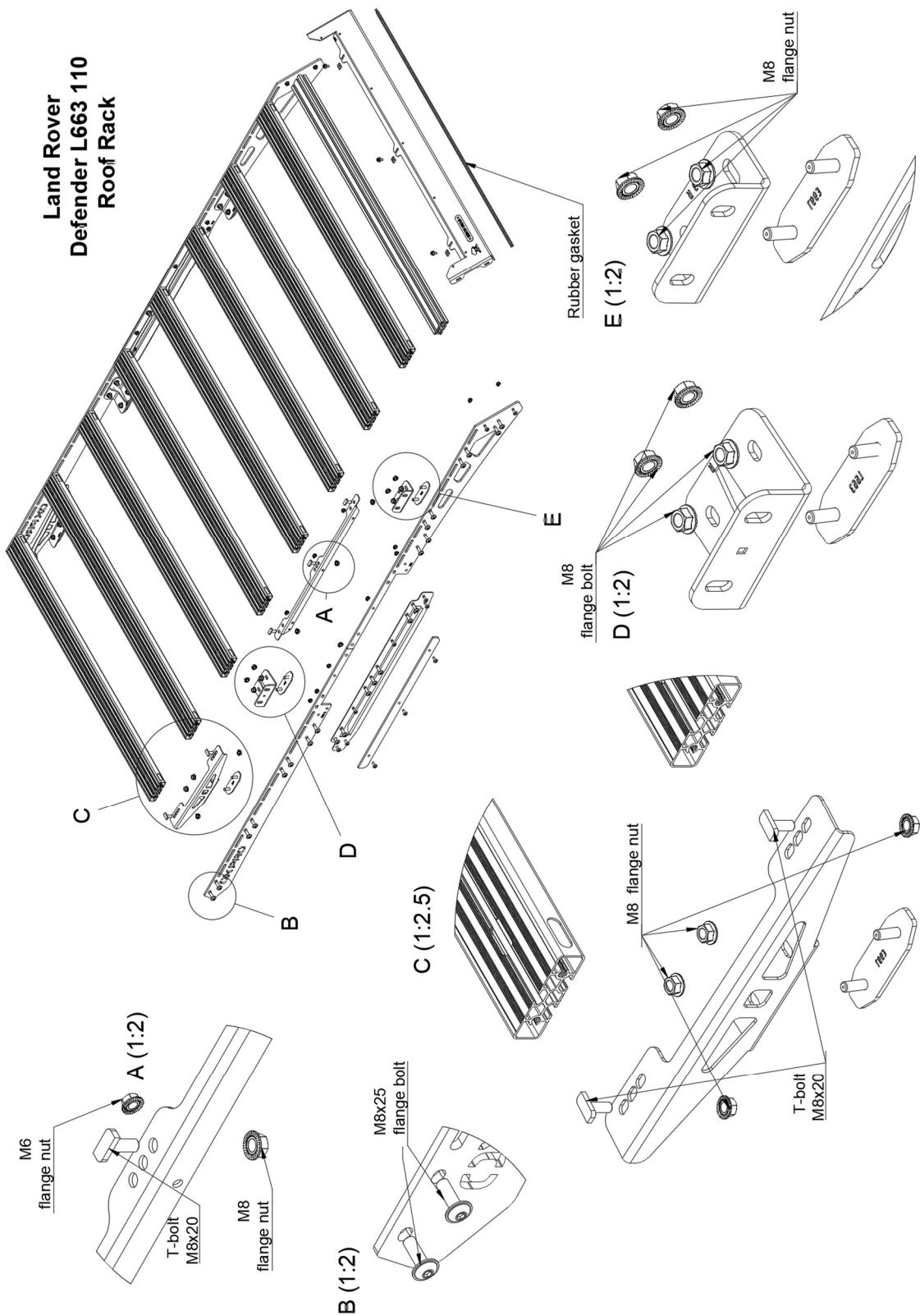


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<sup>1</sup> NOTE: The tools are not the part of the set.

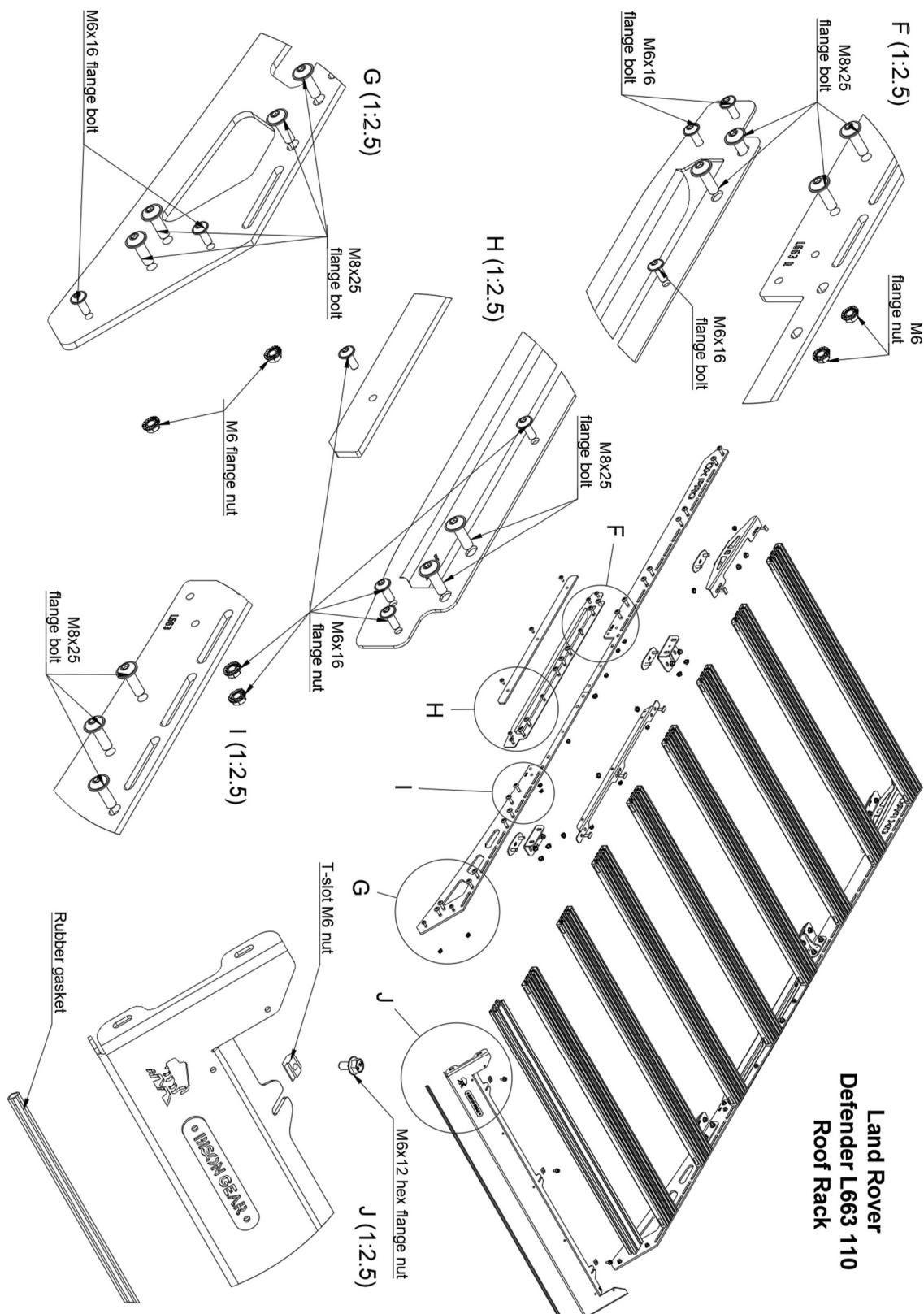


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Land Rover  
Defender L663 110  
Roof Rack



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## ⚙️ Installation:

Before you begin, review the Roof Rack Diagram on pages 8 and 9.

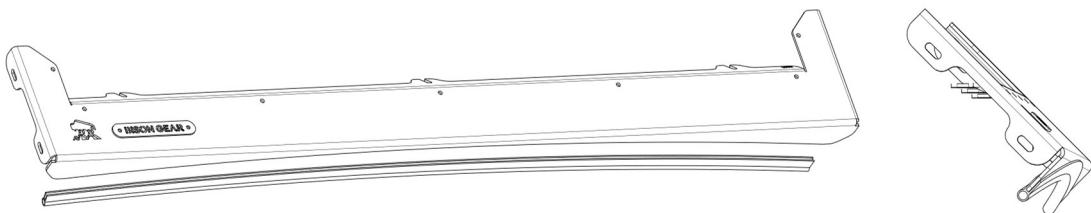
The exploded views illustrate how to assemble and mount the roof rack parts. The Roof Rack is a 2-in-1 design – it can be used as a standard front wind deflector or include a LED bar cutout that allows installation of a 42" LED Bar lamp.

The base version includes the LED cutout, which can be easily converted to the standard version by attaching a specially designed cover. The choice is yours, and you can switch between the versions at any time.

The set also contains 2 additional T-slot M6 nuts and 2 M6x12 flange hex bolts for LED bar installation.

Follow the steps below to install product correctly:

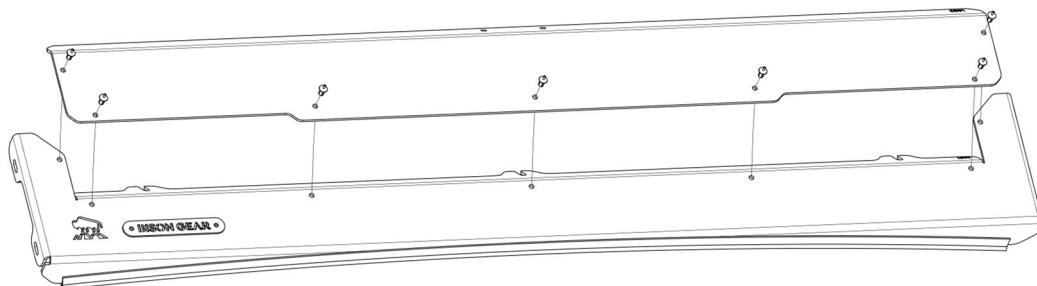
1. Start by preparing the product parts and gathering the necessary tools.
2. Place (and trim if necessary) the rubber gasket on the wind deflector.





### 3. \*\*\***(That point refers only to the standard version)**

For the standard version, place the cover on the wind deflector. Insert the plastic clips into the holes, then press the pins down until they lock with the clips. If necessary, use a hammer to gently tap them into place.



### 4. Assemble the **overlays, crossbars and rails** together using **M8x25 bolts**

At first, only pre-screw all the bolts. It is recommended to mount the roof rack upside down on a flat surface to ensure the top side is perfectly flat.

**(Tip:** Slide three T-slot M6 nuts into the first slot in the 60x30 profile before you screw it to the rails.)

#### **\*\*\*Important**

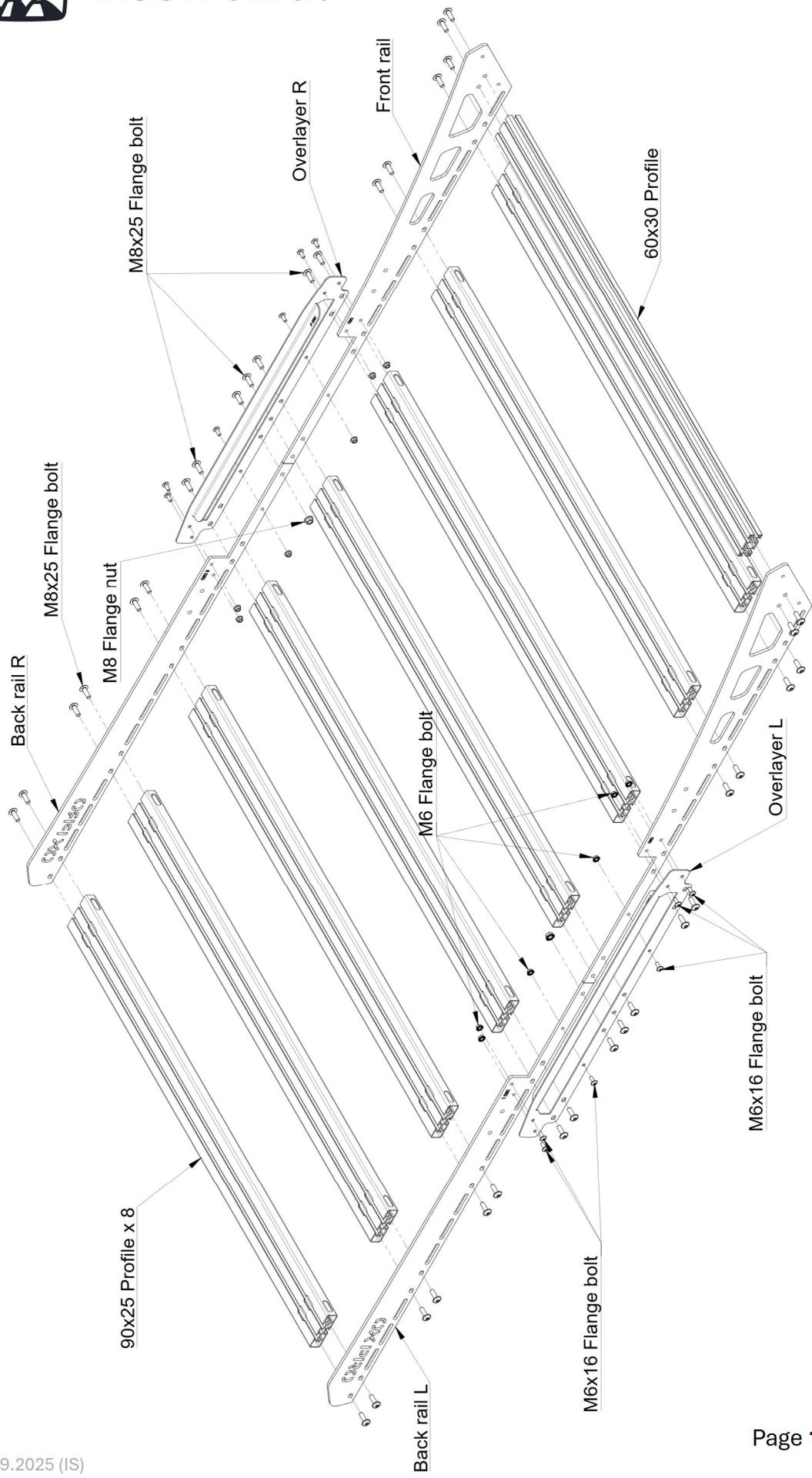
**The Bison Gear crossbar features one T-slot on one side and two T-slots on the other. It is symmetrical, allowing it to be mounted on the roof rack in either direction. If you wish to change the orientation, simply unscrew the four bolts and switch sides.**

**The third and fifth 90x25 crossbars (counting from the front of the roof rack) need to be installed with the side featuring two T-slots facing down.**

**There is a difference between left and right rails and overlays, refer to the pictures on the pages 12 and 13 and the markings on the parts themselves to assemble them correctly.**



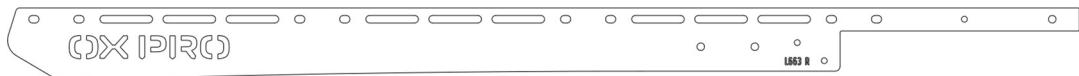
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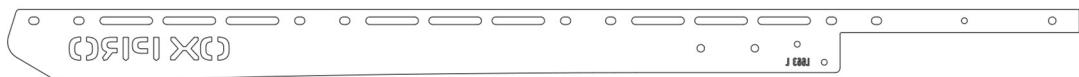


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Back rail R



Back rail L

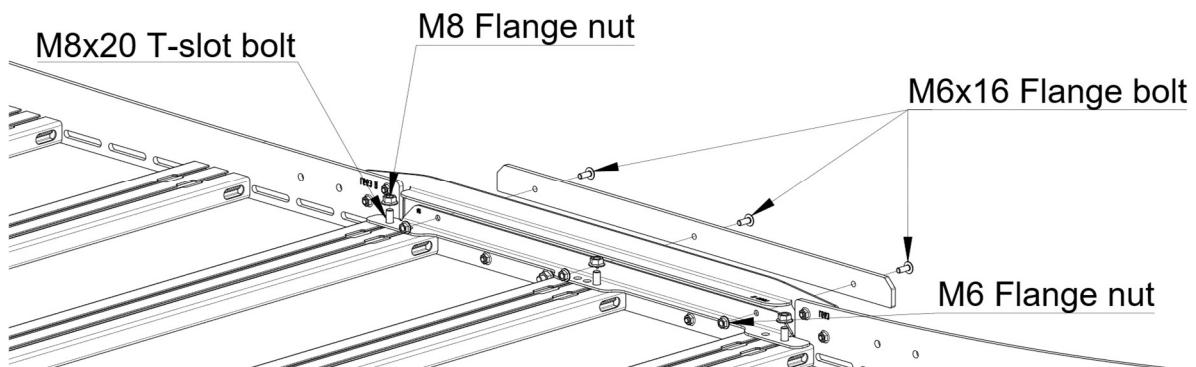


5. Tighten all the bolts.

6. Slide M8x20 T-bolts into the 3<sup>rd</sup>, 4<sup>th</sup> and 5<sup>th</sup> 90x25 crossbars (the crossbars have special oblong holes in each of the slots for the fasteners).

- Place the support bracket and pre-screw it using M8 flange nuts.
- Attach the railing gap cover to the support bracket using M6x16 flange bolts and M6 flange nuts.
- Align the railing gap cover with the gaps in the front rail and tighten the M8 nuts.

Repeat these steps on the other side.

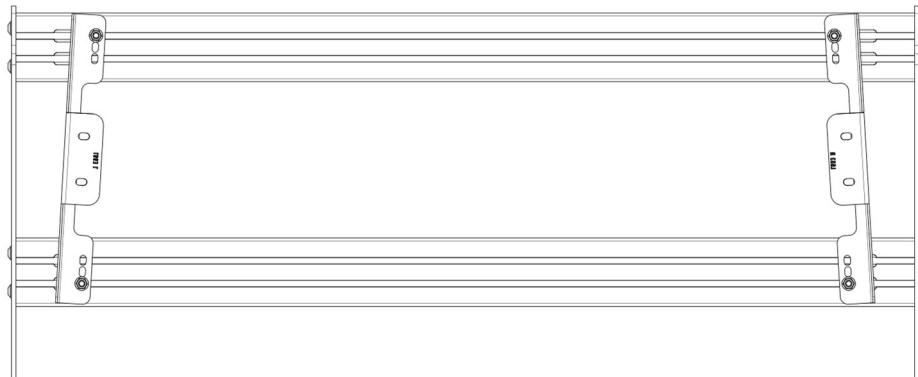
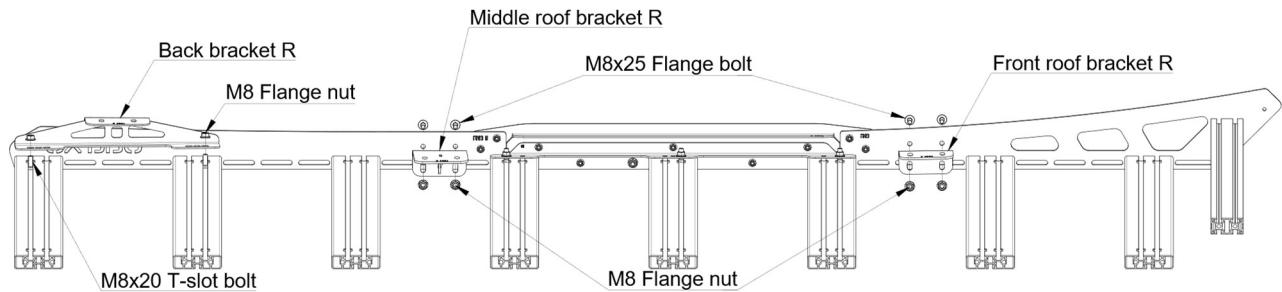




## 7. Pre-screw all the roof brackets to the construction as shown below.

The picture shows the right side of the roof rack, the left side is assembled the same way but uses the left set of brackets (the brackets themselves are marked R for the right side and L for the left side).

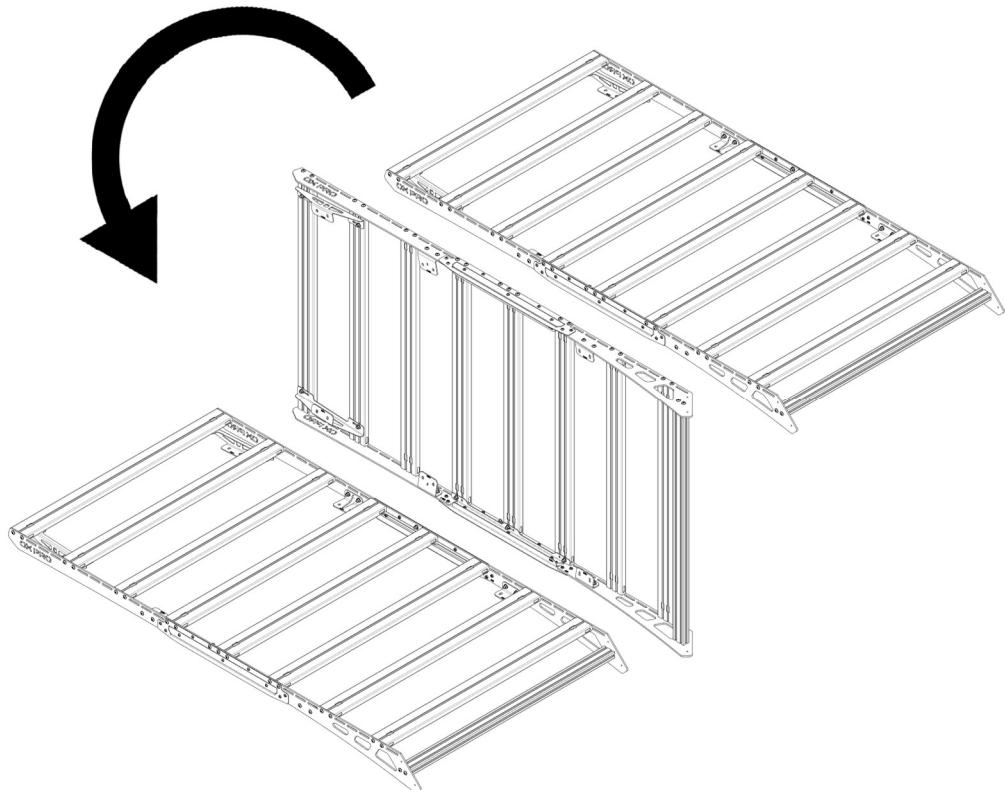
Try to angle the back brackets as shown below and if it is possible, mount the back bracket using the most external slots.



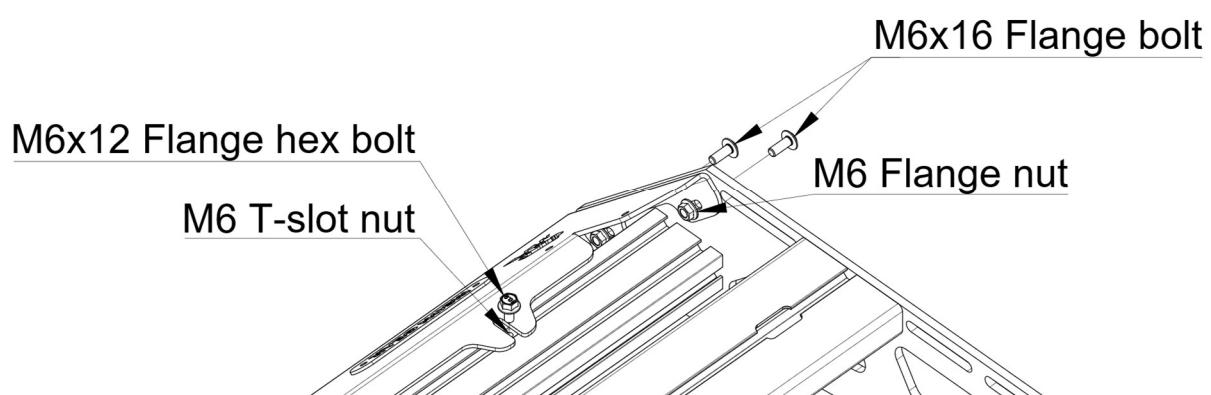


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8. Turn the roof rack back.



9. Install the wind deflector to the rack using **M6x16 flange bolts**, **M6 flange nuts**, **M6 T-slot nuts** and **M6x12 flange hex bolts**.

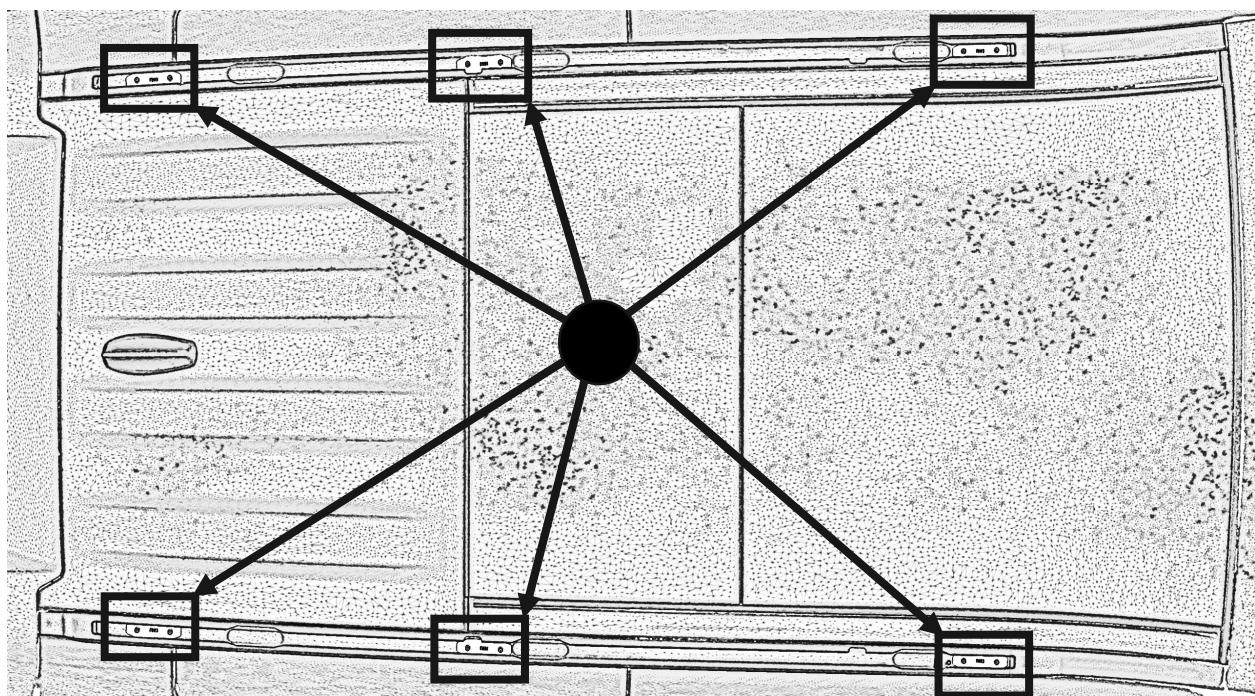




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10. \*\*\* If there are any items on the roof, such as factory rails, a roof rack or other items, you need to remove them before starting the roof rack installation. Refer to the vehicle's owner's manual for guidance.

11. Slide the slot brackets with threaded pins into the factory railing slots. The initial position of the brackets is shown in the picture below. Try to set them in these areas of the roof.



12. In the next step you will need the assistance of **at least one adult person** to help you lift the whole construction onto the roof. Before you start, prepare **12 M8 flange nuts**.

13. Place the roof rack on the roof.

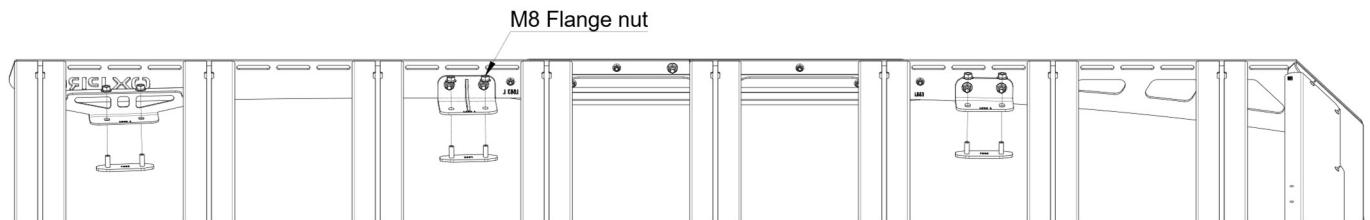


**\*\*\* Important!**

**The set includes protective tape. We recommend gluing it where the rubber gasket of wind deflector and car's roof meets. This will prevent damage of paintwork at the point of contact.**

14. (OPTIONAL) Mark the position of protective tape. Lift the front of the rack and glue the tape under wind deflector rubber gasket.

15. Pre-screw the roof rack to the car using **M8 flange nuts**.



16. Adjust the position of the roof rack so that it is centered on the car.

17. Tighten all the bolts and nuts.

- Use tightening torque of 25 Nm (18.5 ft-lbs) for the connection between middle and front roof brackets and the rails.

Make sure that everything is mounted properly, and all the bolts and nuts are tightened. If everything is correct, your work is done.

**After driving 50km with rack on the roof, check all the bolts and retighten them if necessary.**



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**Have a great time with Bison Gear product!**



Email: [contact@bison-gear.com](mailto:contact@bison-gear.com)

Phone: +48 505 642 981