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# INSTALLATION GUIDE

## SOLAR SYSTEM

### WITH SINGLE SOLAR PANEL 200L

FIXATION SUPPORT CONTAINING LIST OF ACCESSORIES  
STEP BY STEP INSTALLATION IMAGES

#### contact



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## VENMAN

SAVING ENERGY PRODUCTS

## General Installation guidelines

### **ATTENTION!**

The installation shall be done according to the respective local regulations that concern hydraulic and electrical installations. The package removal shall be done at the installation site, so as to protect the items against scratches or other damages. Under no circumstances shall the solar panel/s stand on the connection tubes. Before the installation please make sure that you have removed the protective plastic cups from the tank and the panel/s. The liquid injection procedure shall not take place over solar radiation, so as to prevent the solar panel overheating. During the whole installation process (until the system is fulfilled) the solar panel/s shall remain covered. Always the tank shall be filled first (domestic water) and then the solar panel circuit (water with antifreeze liquid).

### **INSTALLATION POINT**

Before installing the solar system please make sure you have chosen the right spot and surface that can withstand the system's weight. This spot shall never be shadowed by trees, buildings or other obstacles during the year, so that the solar panels will maintain their full exposure to solar radiation. The installation shall take place only over totally flat surfaces with substantial carrying capacity. Prior to install the system please make sure that the flat or tiled roof disposes sufficient carrying capacity in Statics terms and according to the maximum expected load at the installation site. If the installation site is in a region with extreme wind or snow load the system shall be examined by a certified person (e.g. special engineer). In special cases there might be necessary to add reinforcements or other more resistant supports.

### **INSTALLATION SPACE REQUIREMENTS**

Every side of the system shall be away about 1,5m from any other object so as to:

1. Maintain easy access to the solar panel/s for maintenance reasons.
2. Protect the solar panel/s and the support against strong winds over the corners and/or edges of the roof.
3. Be able to get rid of the snow.

### **ORIENTATION – OPTIMAL INCLINATION - SHADING**

A crucial factor for the system's best performance is the correct choice of the orientation and the inclination in combination with the place (city) and the time during which we aim for max gain. The solar system shall be oriented this way that the selective surface is towards the South when we are talking about the North hemisphere (and respectively towards the North when we are in the South hemisphere), in any case the solar panel/s shall always be facing the equator. Any divergence will affect the system's performance. If you can't obtain the recommended orientation then the system's performance shall be amended with additional selective surface, after a specific condition evaluation study is held. The solar radiation's angle of incidence is changing during the year and depending also on the installation site so for this reason the solar panel's inclination angle shall be as much as the latitude in the specific site. This is the correct inclination for the max energy reception in annual base.

## **INSTALLATION PARTICULARITIES**

In the case that the installation surface is not compatible with the standard equipment provided along with the system then a different equipment shall be used. Responsible for this choice is only the installer and under no circumstance the manufacturer. The installer shall choose if there should be proposed another sort of equipment to the end user and these 2 parties shall only agree upon the equipment in use.

## **SPECIAL WEATHER CONDITIONS**

In regions where snowfall is intense you should always look after removing in time the excessive snow. For this particular case and for regions where storms, strong winds, tempests, cyclones, typhoons are common the system shall be installed as firmly as possible. It shall even be fastened with additional metal stripes. Last but not least, in regions where the hail is bigger than  $\varnothing 20\text{mm}$  an insurance contract is recommended.

## General Precautions

1. Please keep the installation site clean and free of any other irrelevant items during the installation process.
2. Never allow irrelevant persons approach the installation site or the tools.
3. Use only the specific parts/accessories destined for each specific system. The use of other parts or inappropriate tools may cause injury or other damage.

## **PERSONNEL CONDITIONS**

1. The solar system's installation shall only be effected by certified installer (technician).
2. Always wear protective glasses, suitable working clothes, protective shoes and protective helmet.
3. In dangerous sites, inclined roofs and/or points of great height, there should be taken special protective precautions and special equipment.

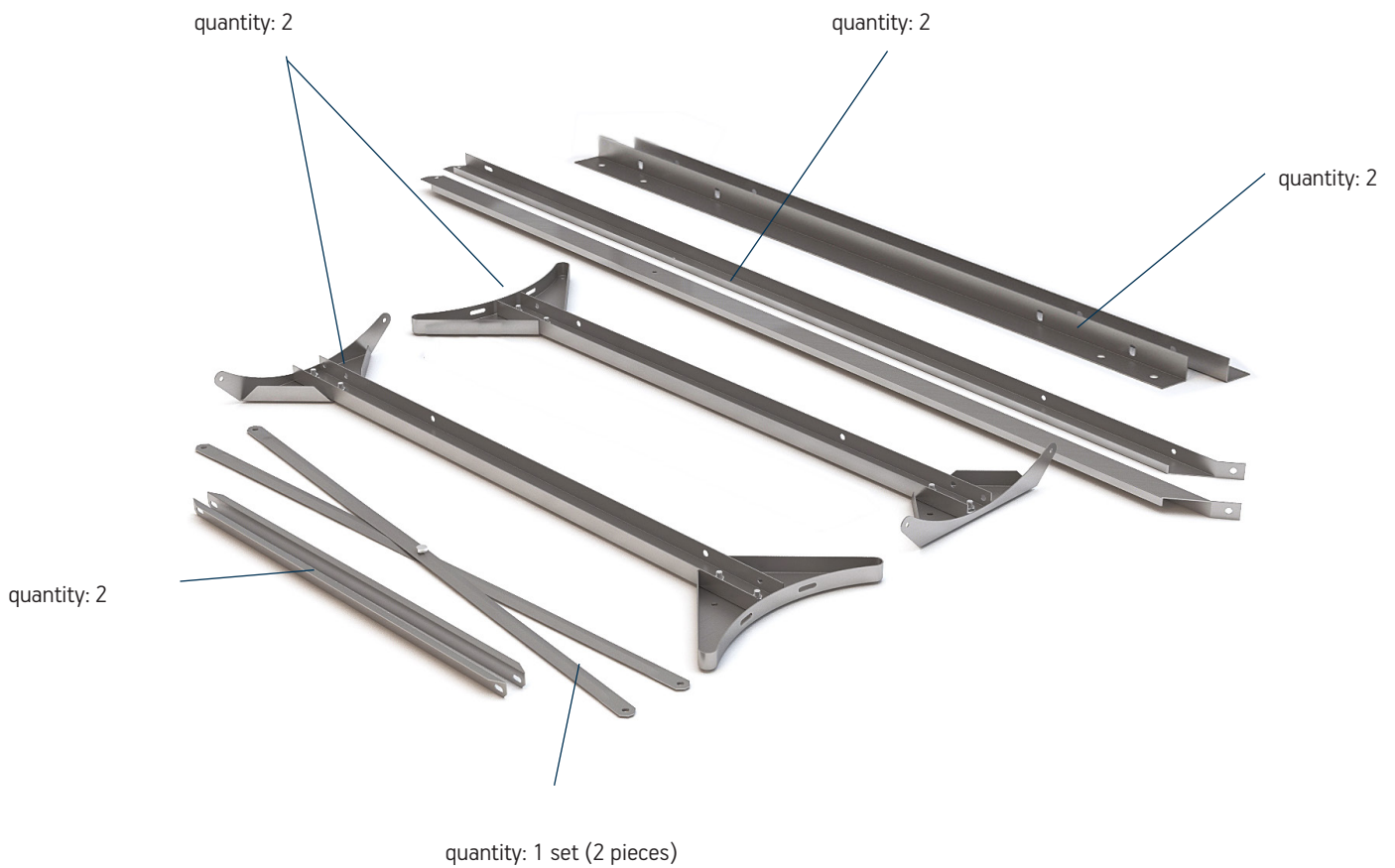
# Package Contents

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## Package Contents

The package contains all the necessary parts for the solar system's installation as they are described below (items and quantities).



## Package Contents

The package contains all the necessary parts (screws, nuts and grommets) for the solar system's installation as they are described below (items and quantities).

M8 NUT quantity: 23



Ø10 WASHER quantity: 23



M8x16 quantity: 19



M8x16 quantity: 4



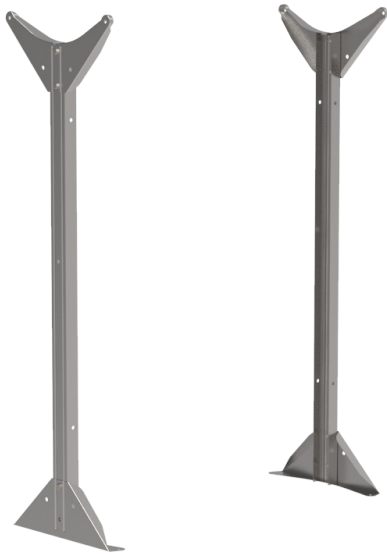
M8x12 quantity: 4



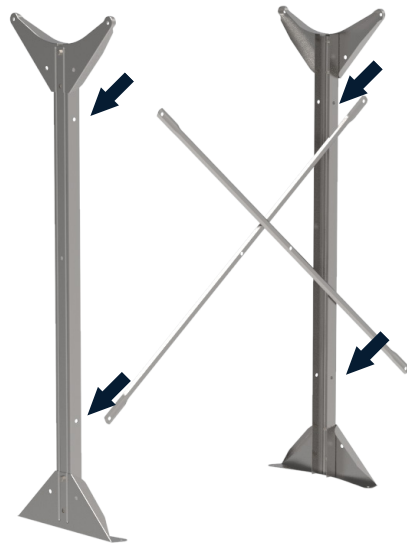
### NOT INCLUDED

M10 SCREW AND Ø10 GROMMET quantity: 4

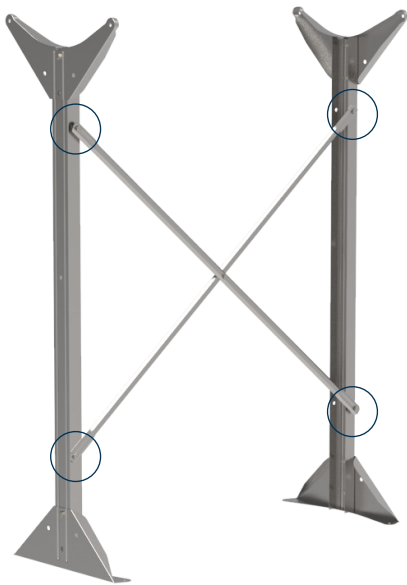




Step 1



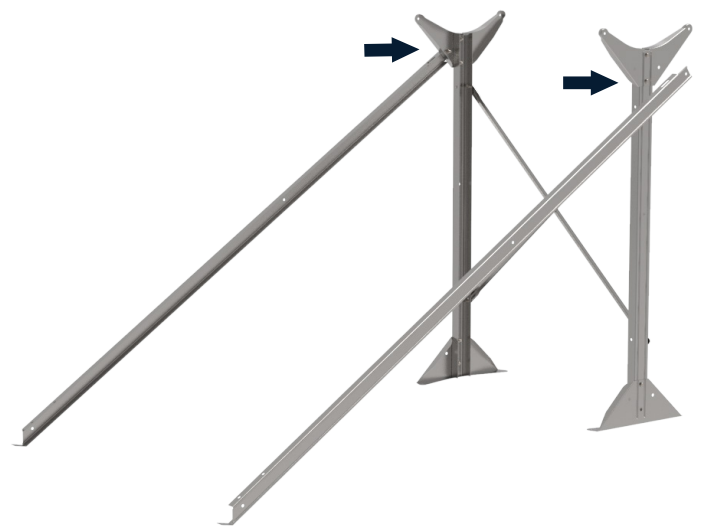
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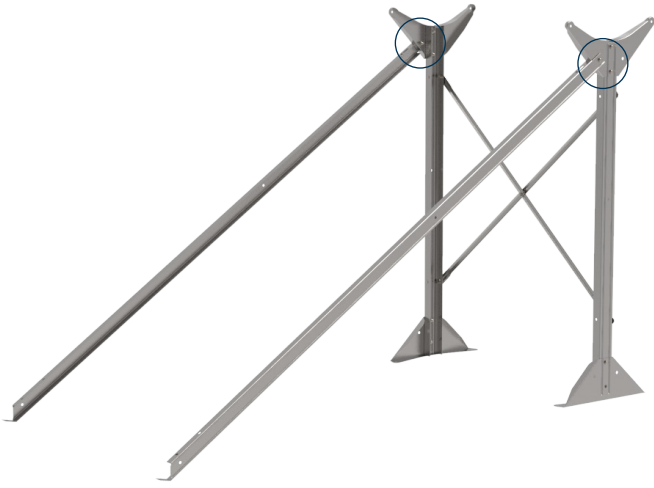
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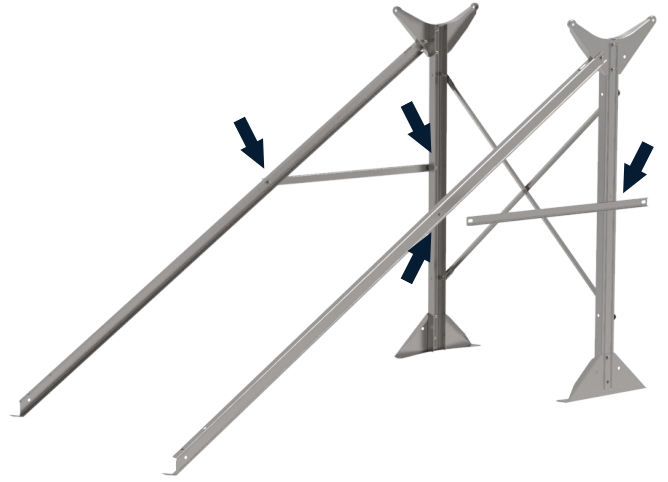
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13



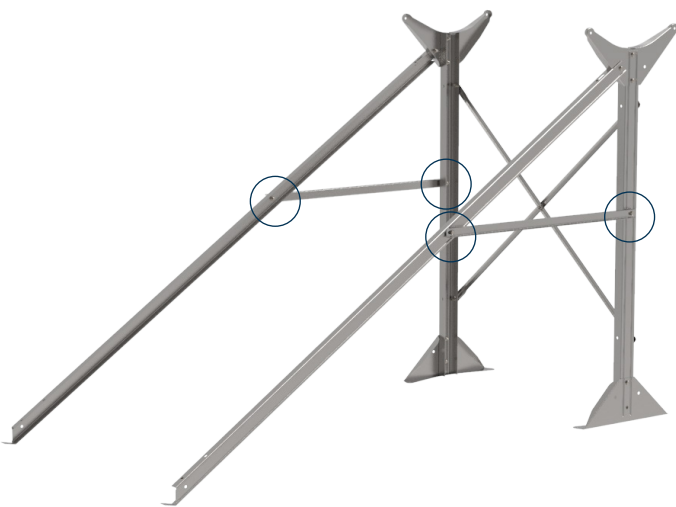
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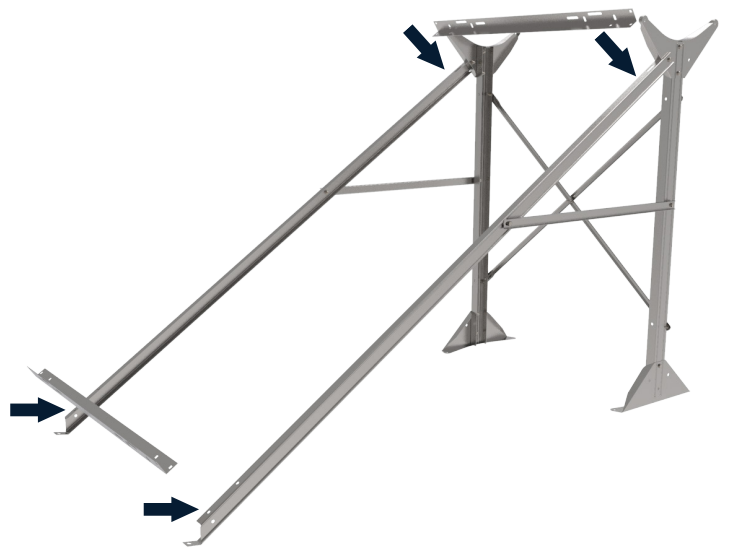
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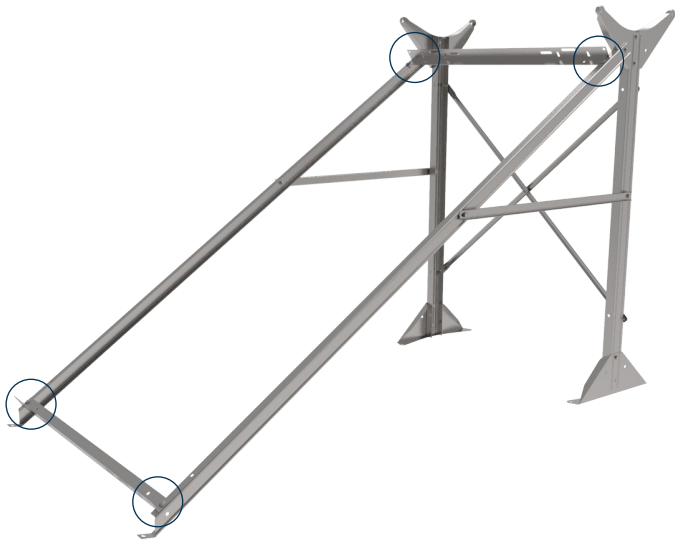
Step 6



Step 7



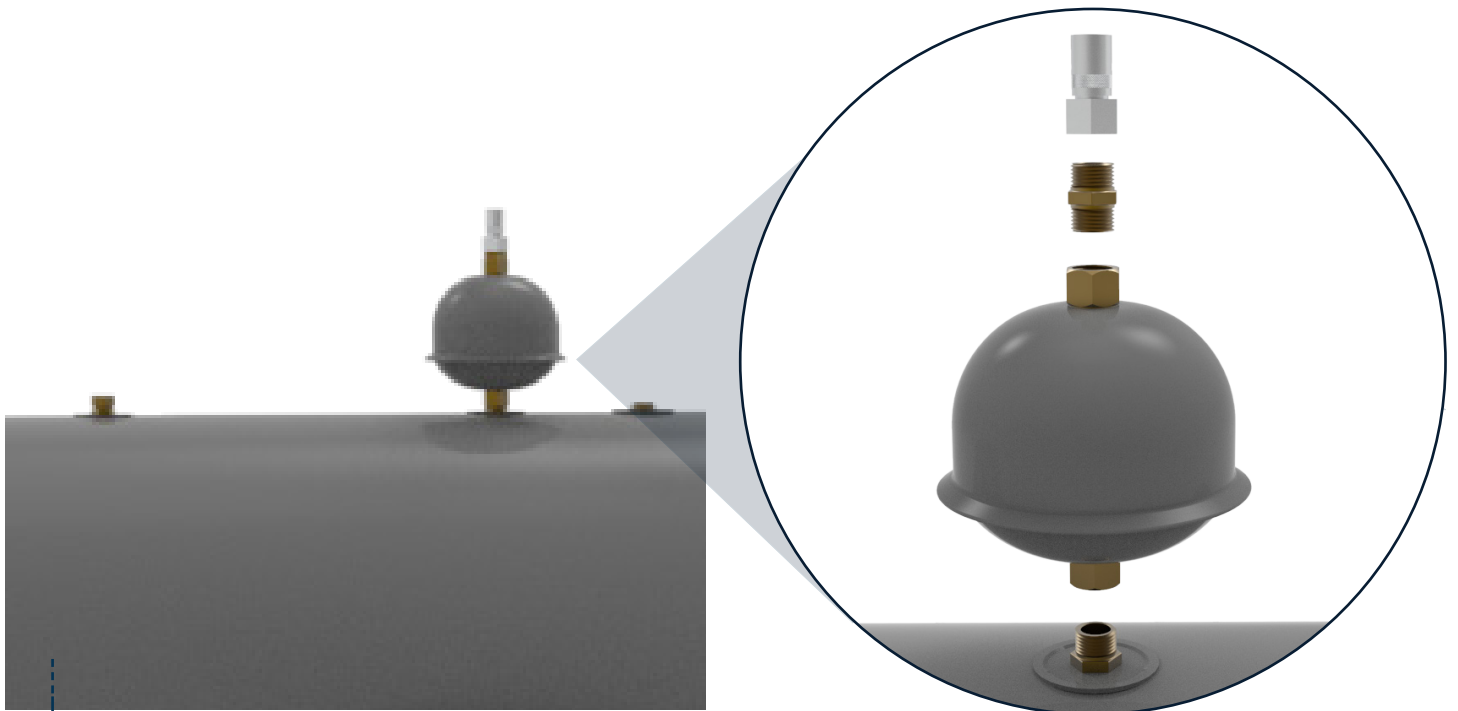
Step 8



Step 9



Step 10



Step 11



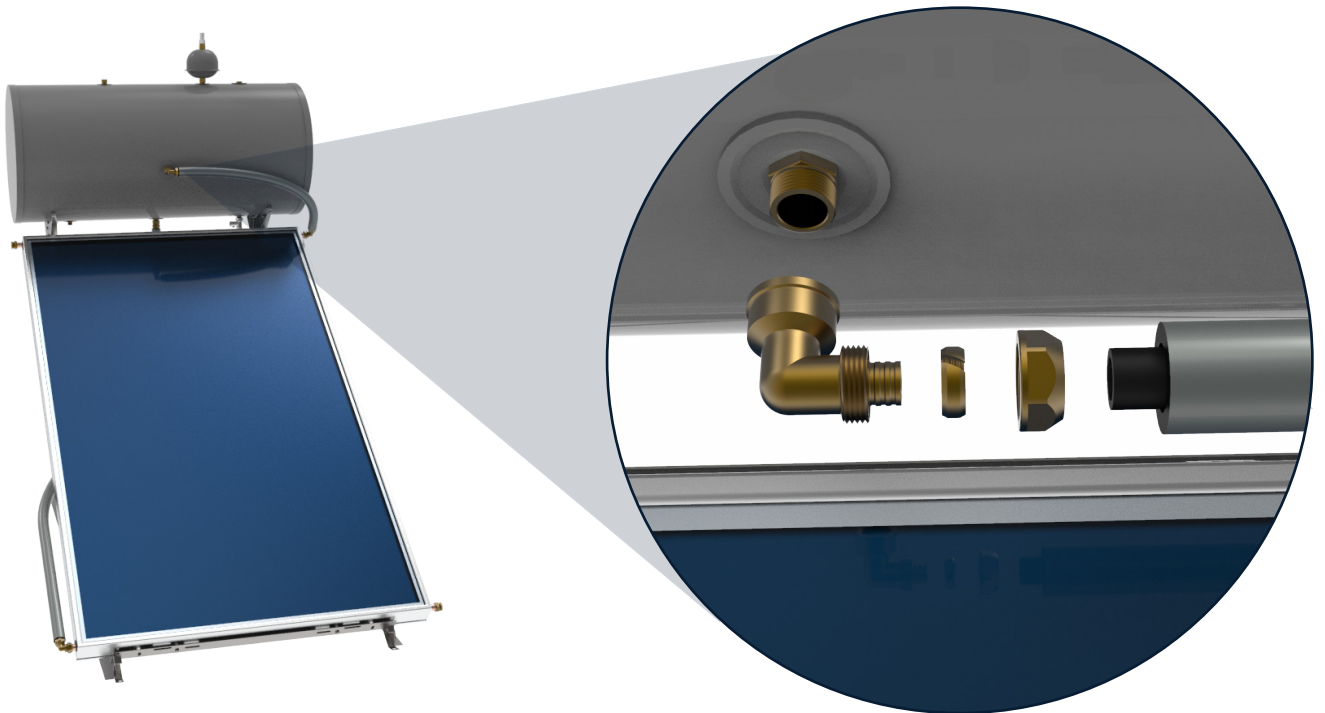




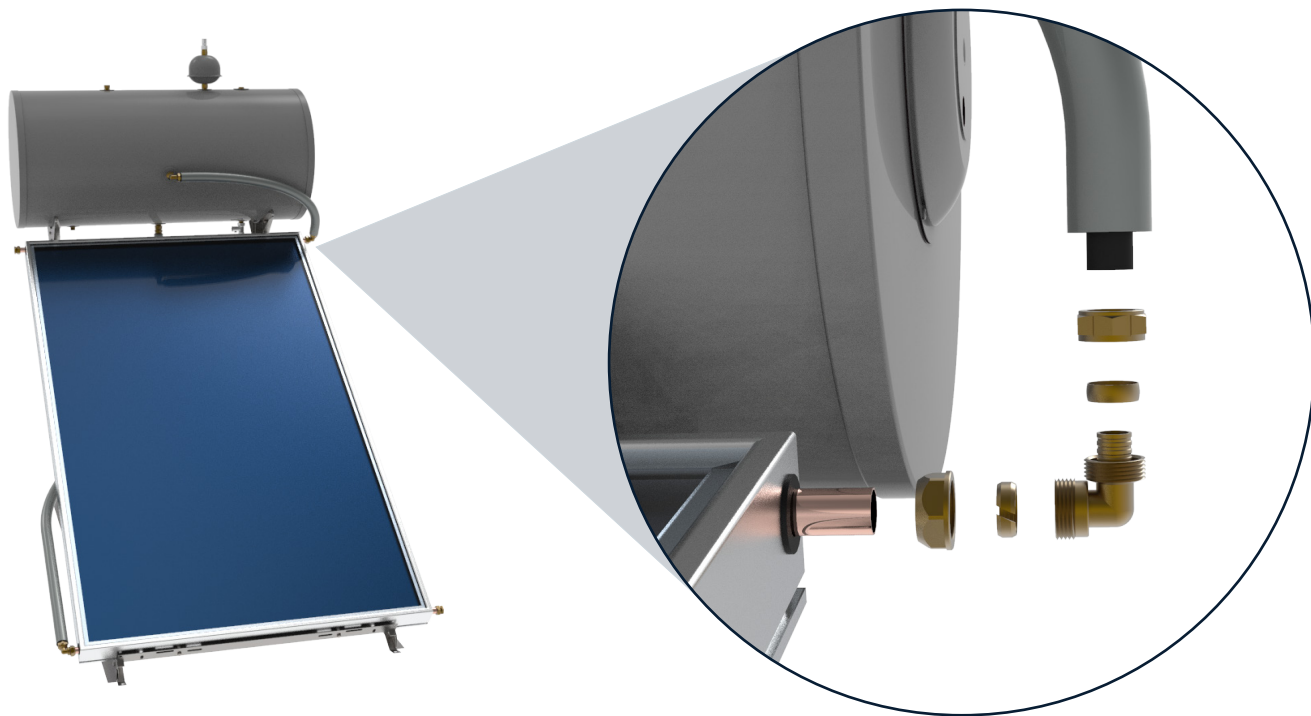
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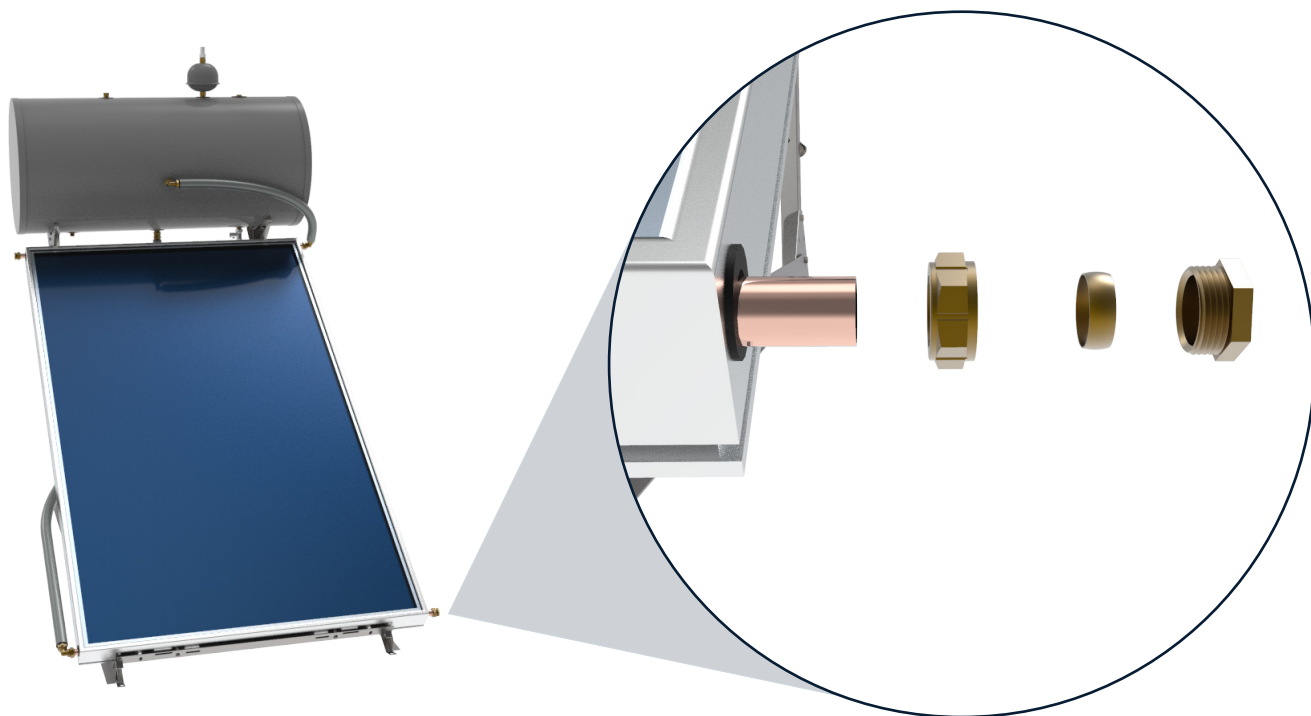
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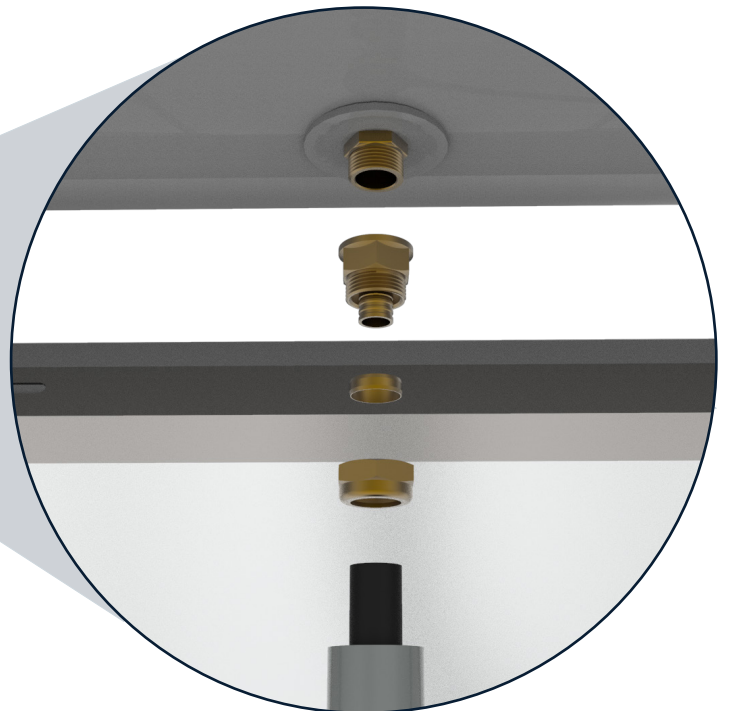
Step 14  32  
32



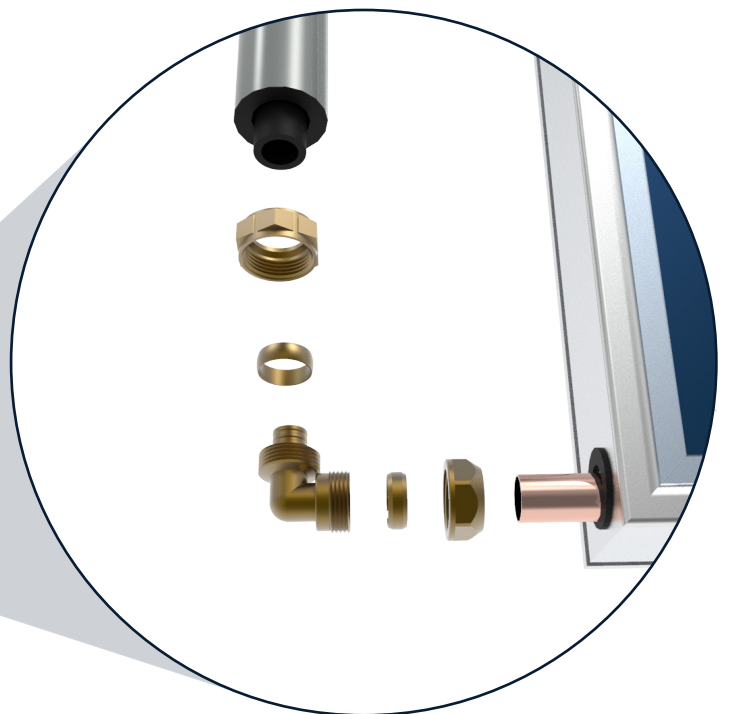
Step 15  32  32



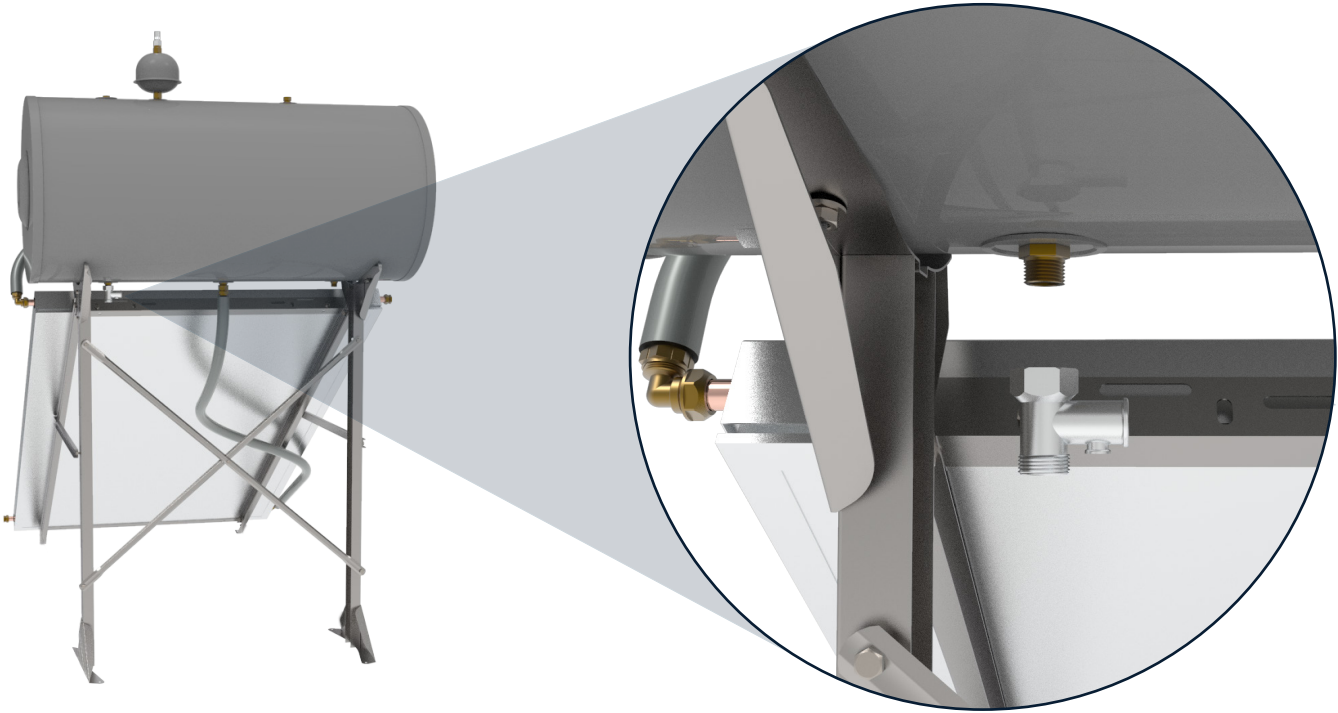
Step 16  28  32



Step 17  32  
32



Step 18  32  
32



Step 19  25



Step 20



Step 21

# SOLAR SYSTEM WITH SINGLE SOLAR PANEL - INSTALLATION GUIDE

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