

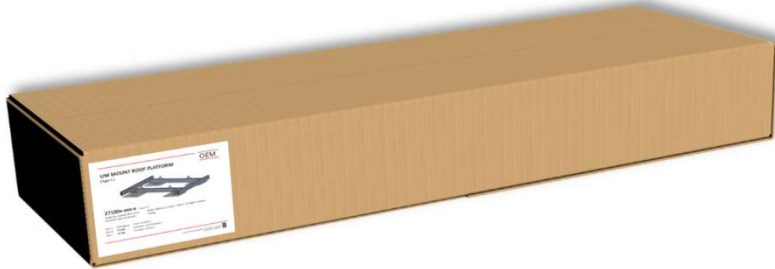
INSTALLATION GUIDE UNIMOUNT PLATFORM



UniMount Package Structure

UniMount Package A (Framing)

#2750 UniMount Framing for WPL15, 20 and 25



UniMount Package B (Roof Consoles, Anchors & Tools)

#2750-03-199-01 Roof Consoles for Cold Roof Rafter and Plywood

#2750-323-199-01 Roof Consoles for Warm Roof Concrete and Rafter

#2750-34-199-01 Roof Consoles for Warm Roof Trapez

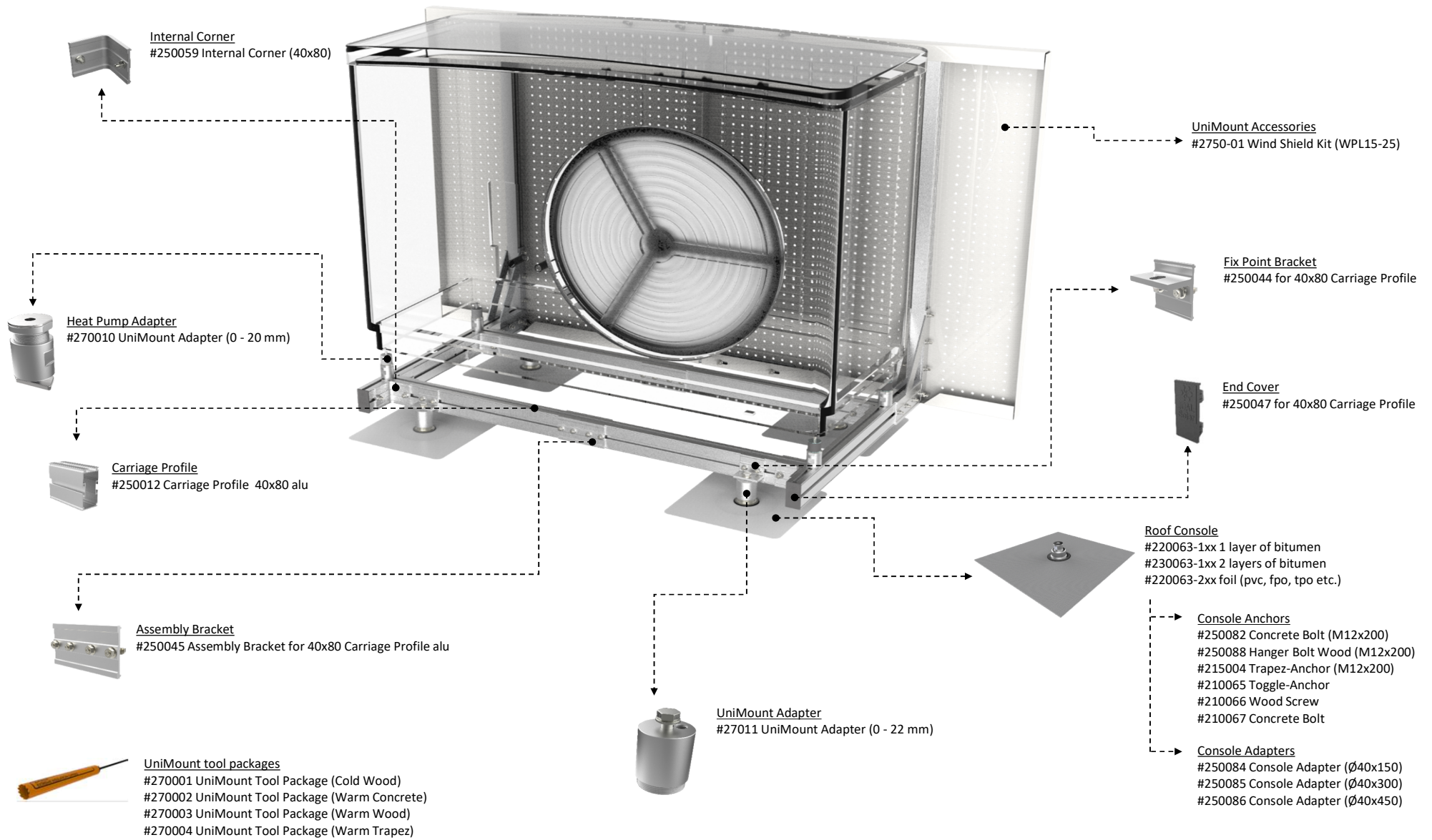


UniMount (Wind Shield Kit)

#2750-01 UniMount Wind Shield Kit (WPL15-25)



System Overview



Tools and symbol overview



Measuring Tape



Leveling device

Water pas



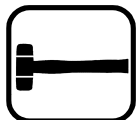
Impact wrench (13 mm socket)

Capacity: (100 - 120 Nm)



13 mm Socket incl. 1/4" adapter

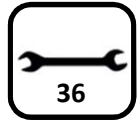
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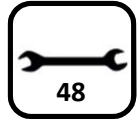
Soft hammer



Wrench (13 mm)



Wrench (36 mm)



Wrench (48 mm)

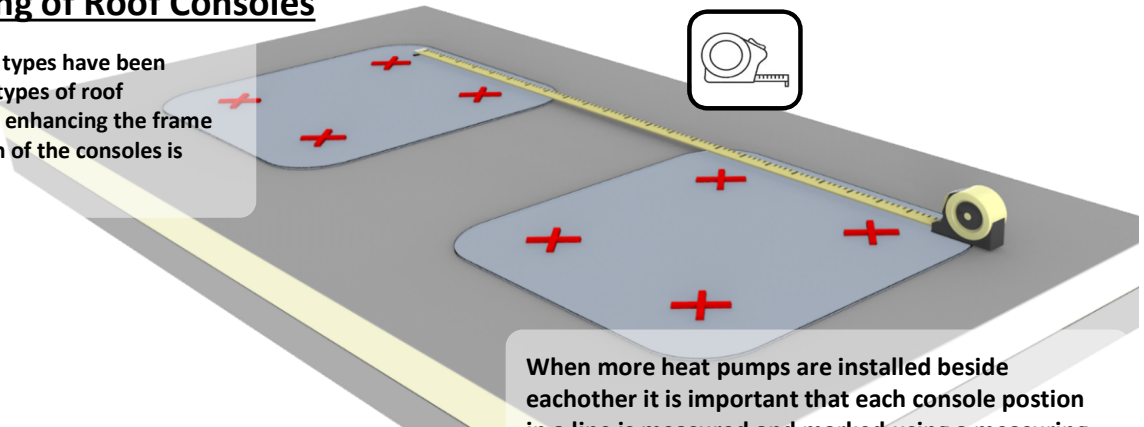


Hex key for impact wrench (4 mm)

UniMount Installation Guide

1. Positioning of Roof Consoles

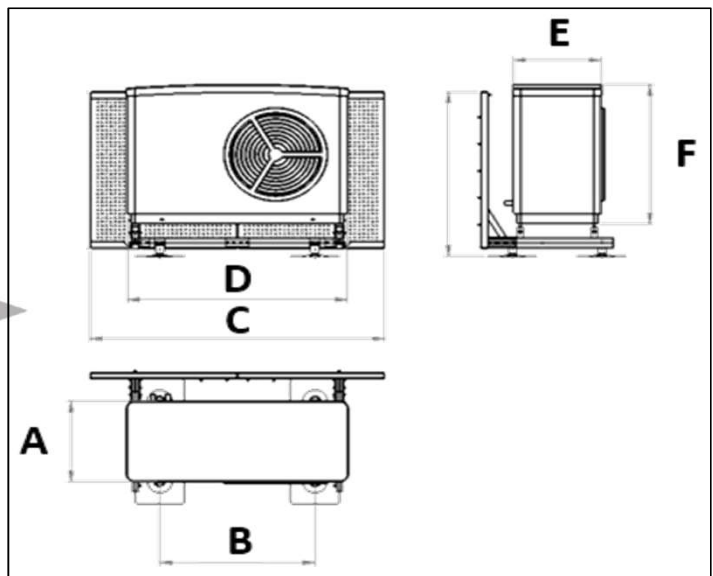
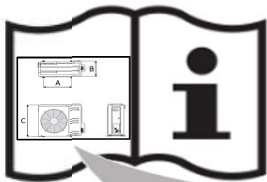
The UniMount frame types have been designed for various types of roof constructions and for enhancing the frame flexibility the position of the consoles is flexible.



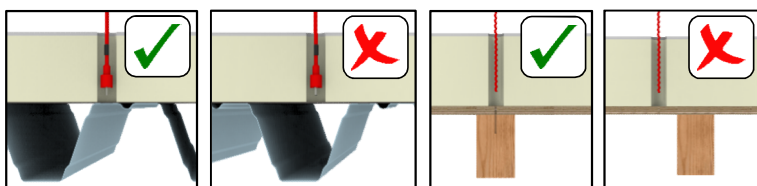
When more heat pumps are installed beside each other it is important that each console position in a line is measured and marked using a measuring tape or similar to avoid multiple tolerance occurrences.

The Roof Consoles must be positioned while paying attention to the following dimension table and the listed equipment foot print dimensions in the datasheet from the equipment manufacturer. Details about possible relevant roof construction details like, the direction of cms corrugation or the orientation of rafters should also be considered.

UniMount Type	A [mm]	B [mm]	C [mm]	D [mm]	E [mm]	F [mm]
WPL15	500±100	1000±100	1990	1490	593	1045
WPL25	500±100	1000±100	1990	1270	593	900



The illustration presents an example of the dimensions which must be derived from the equipment manufacturer data sheet. Where both A and B can refer to the dimension E in the table above.



The roof cross sections for warm trapez -and wood constructions to the left describe the anchor position element. Concrete or homogene roof deck types do not require these considerations.

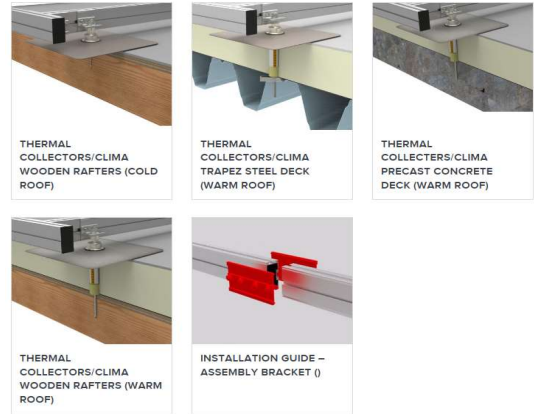
UniMount Installation Guide

2. Installation of Roof Consoles

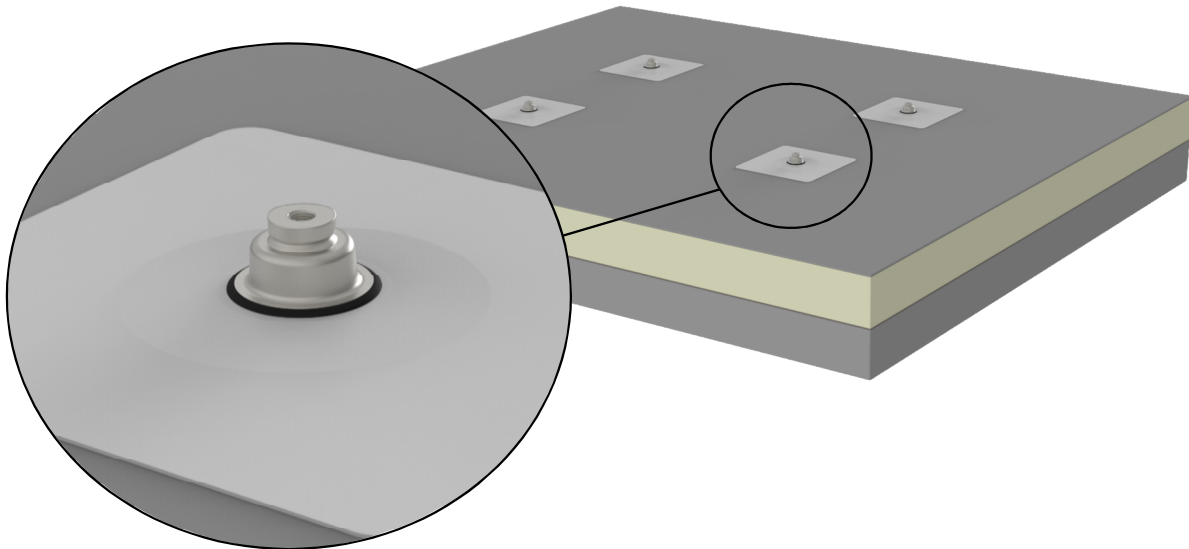
Details about how to install JUAL Solar Roof Consoles correctly are found in the separate installation guide lines available at www.jualsolar.dk under the heading "Thermal Collectors / Climate Products" Please note that each guide is specific for one roof type only.

The UniMount Roof Consoles come with an integrated piece of roofing membrane and in case of special project requirements for eg. bitumen or single ply membrane types the correct membrane must be specified in collaboration with JUAL Solar A/S or an authorized agent.

THERMAL COLLECTORS / CLIMA PRODUCTS



The illustration below presents a roof surface with installed Roof Consoles ready for the following installation of the UniMount Framing.



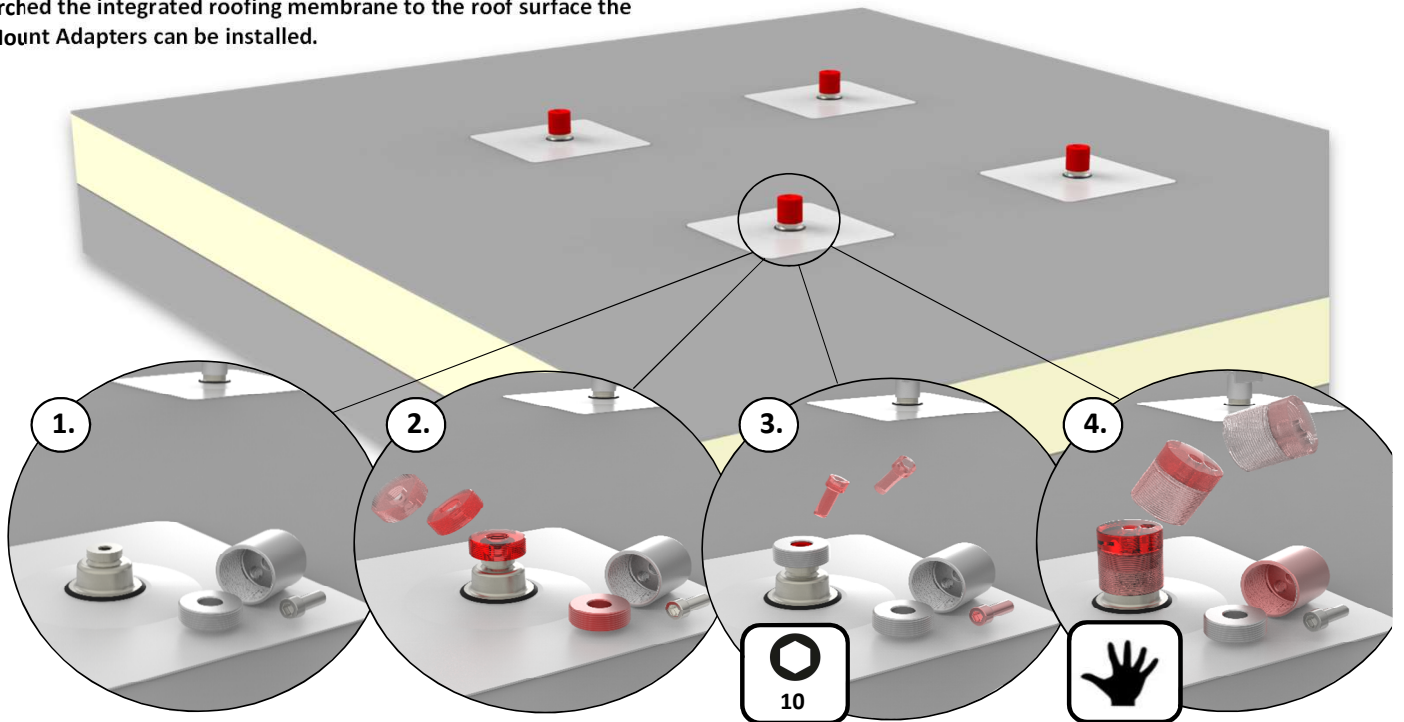
Specific Roof Console installation guide lines



UniMount Installation Guide

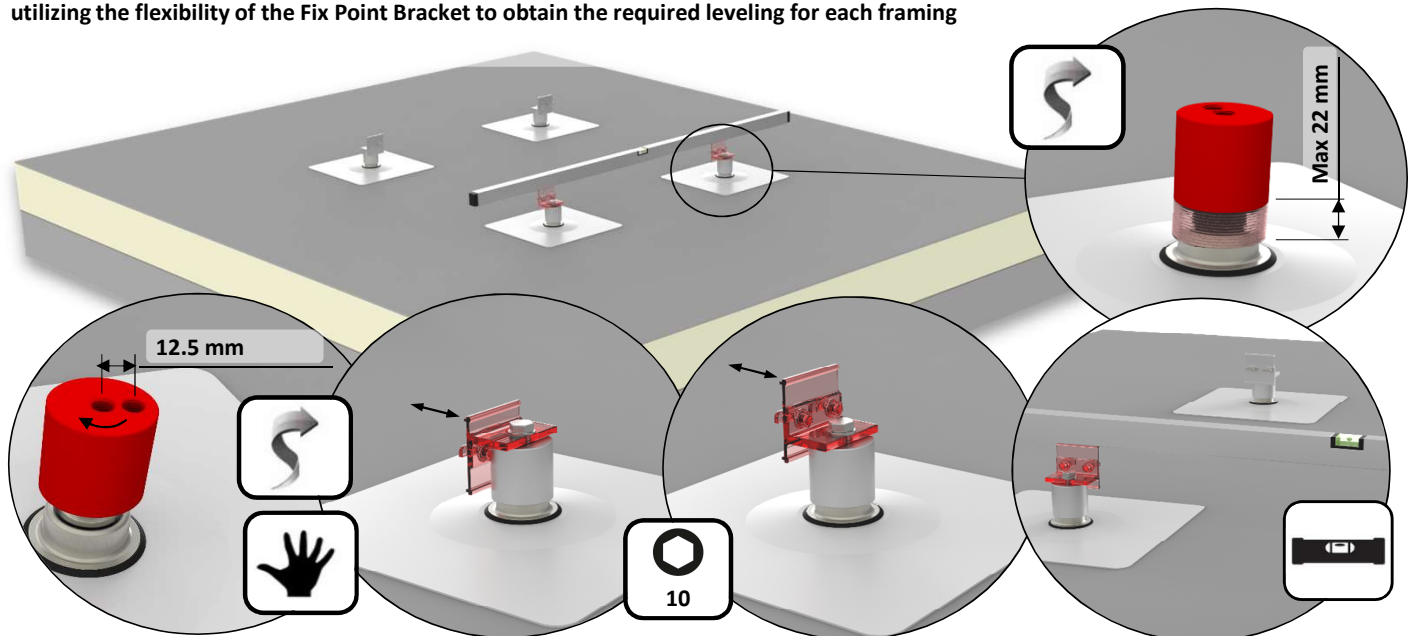
3. Fix Point Bracket flexibility and installation

Once the Roof Consoles have been Installed and after the Roofer has welded or torched the integrated roofing membrane to the roof surface the UniMount Adapters can be installed.



4. Rigid leveling of the UniMount Framing relativ to the surface of the roof

With the UniMount Adapters in place the height of each connection point must be leveled utilizing the flexibility of the Fix Point Bracket to obtain the required leveling for each framing



The UniMount Adapter top is made with both a concentric and an excentric thread hole and a reasonable installation tolerance is hereby acceptable.

The long hole in the Fix Point Bracket helps to provide horizontal flexibility for the following installation of Carriage Profiles.

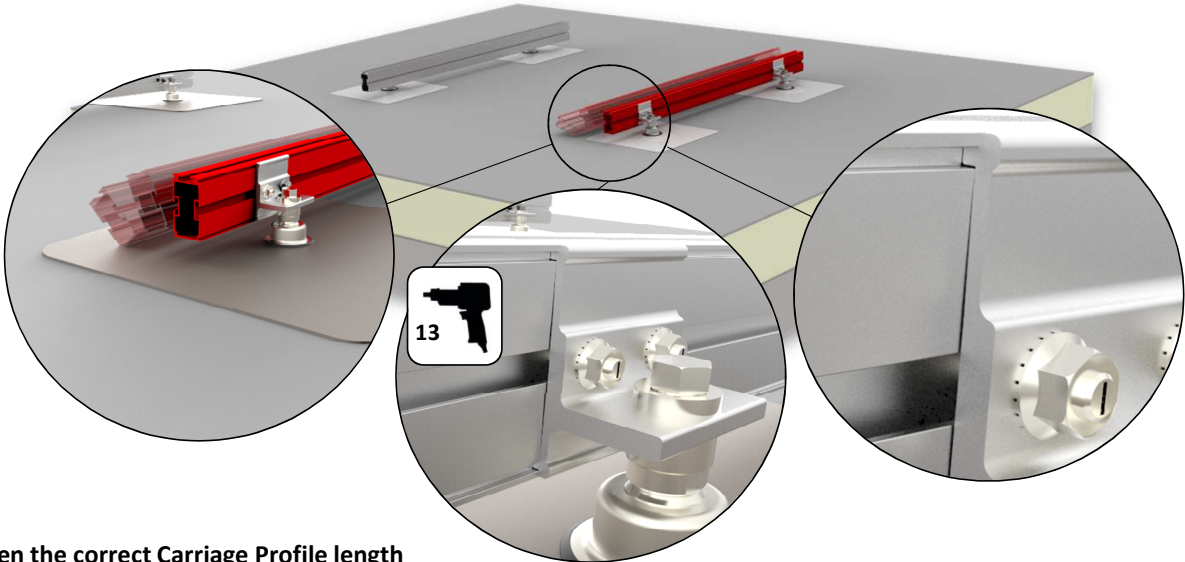
The Fix Point Bracket can be rotated and horizontally offset until the right height and position is reached.

The specific fix point orientation must be considered when leveling the UniMount Adapters

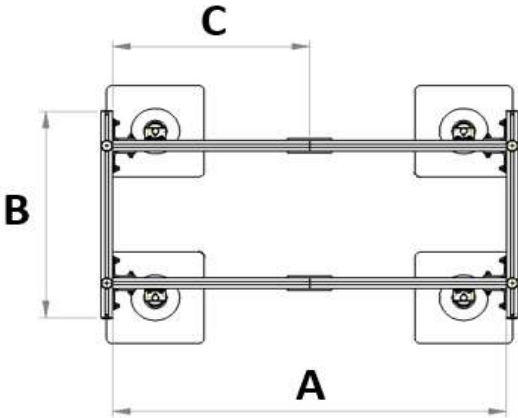
UniMount Installation Guide

5. Installation of Cross Beam Carriage Profiles

With the Fix Point Brackets installed in their intended positions the next step is to install the Cross Beam Carriage Profiles according to the dimensions in the table below.



When the correct Carriage Profile length has been found the profiles must be coupled to the corresponding Fix Point Brackets. The illustrations above present this process and the detailed close ups show how the directional tracks in each Profile must be aligned with the two reinforcement ribs on the Fix Point Brackets and finally how the Hammerhead bolts must be constrained with a cross oriented position mark.



UniMount Type	A [mm]	B [mm]	C [mm]
WPL15	1340	750	670
WPL25	1340	750	670

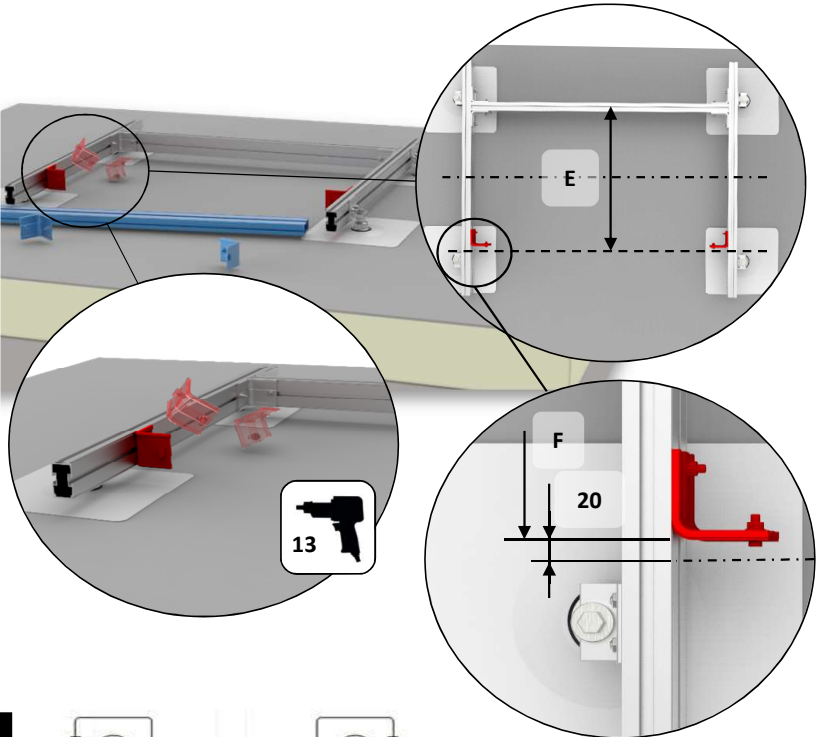
UniMount Installation Guide

6. Installation of Carriage Profiles

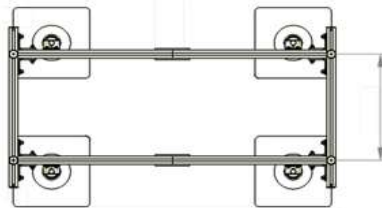
The installation process for the Carriage Profiles depends on the installation option.

The installation of the Carriage Profiles is done on to the Cross Beam Profiles by applying 4 Internal Corner Brackets per Cross Beam. The Internal Corner Bracket does as the Fix Point Bracket and Assembly Bracket include the reinforcement ribs which must be aligned with the corresponding tracks in the Carriage Profile. The following illustrations show the requirements for installing the Internal Corner Bracket as well as the Carriage Profiles.

The two Carriage Profiles must be positioned symmetric relative to the installed Cross Beams as illustrated above where the Fix Point position (F) is derived from the dimension (E)



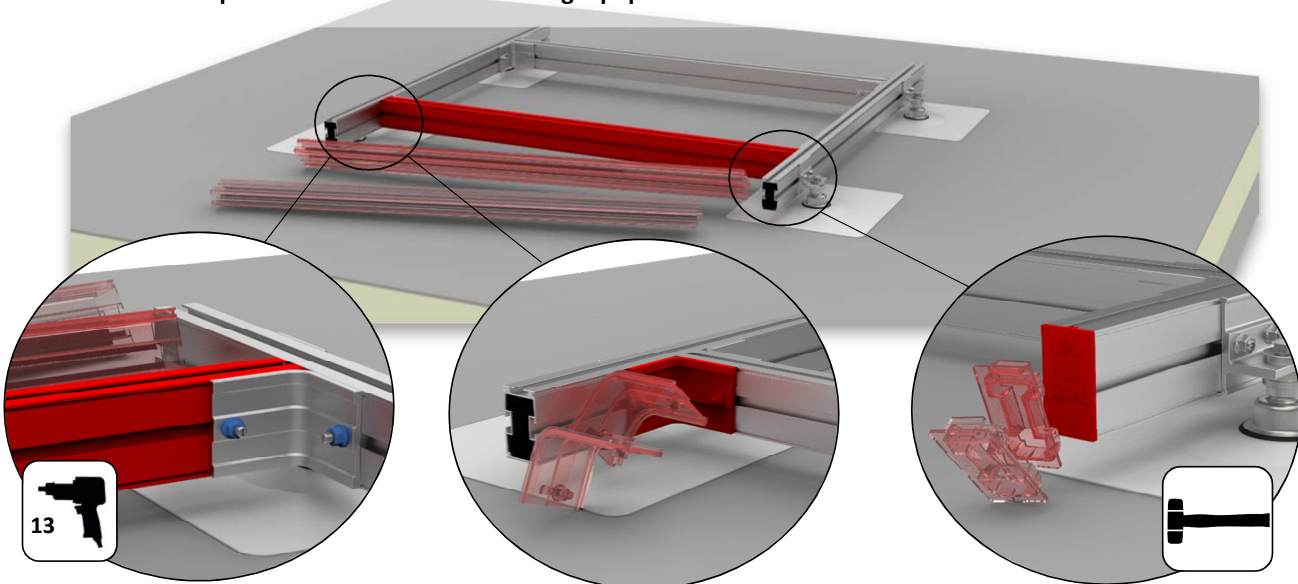
Installation of Carriage Profiles		
Type	Frame dimension E [mm]	Internal Corner distance [mm]
WPL15-25	500±100	E - 2 x 20



The distance between the two Internal Corner Brackets (F) is set according to the table.

7. Installation of Carriage Profiles (Fixation)

With the Internal Corner Brackets in position and fixed the final step in the installation of the Carriage Profiles is to fix these to the complete structure for the following equipment installation of 1 or more units.



The Carriage Profile is fixed to the installed Internal Corners by constraining the Hammer-head bolt while assuring that the position mark is oriented correctly. The final fixation is to apply the missing two Internal Corners 1 piece per profile end.

The illustration above shows the insertion of the Carriage Profile End Cover which is the final step in the basic platform installation.

8. Heat Pump Adapter

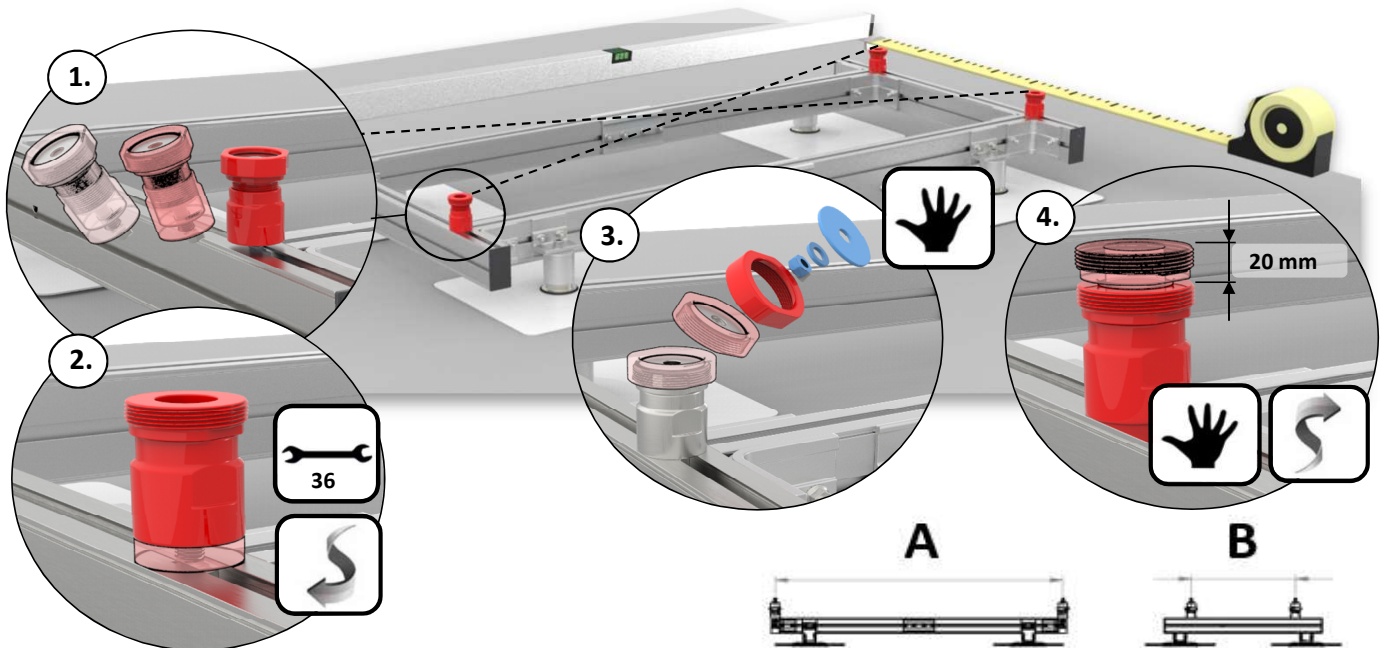
The Heat Pump Adapter is an assembly which will connect the rubber damper for the Heat Pump with the UniMount framing. The Adapter has been designed to enable a vertical adjustment for each of the Heat Pump connection points and hereby ensuring that the Heat Pump can be correctly leveled. The leveling feature will also be adjustable



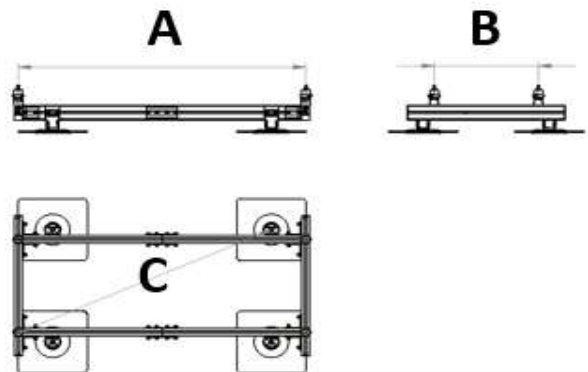
The following installation on to both the UniMount framing and on to the Heat Pump will be explained in two steps.

9. Installation of the Heat Pump Adapter (Step 1.)

The first step in the Heat Pump Adapter installation process is about fixing the base of the Heat Pump Adapter to the framing at the positions listed in the table below (pos. 1.).



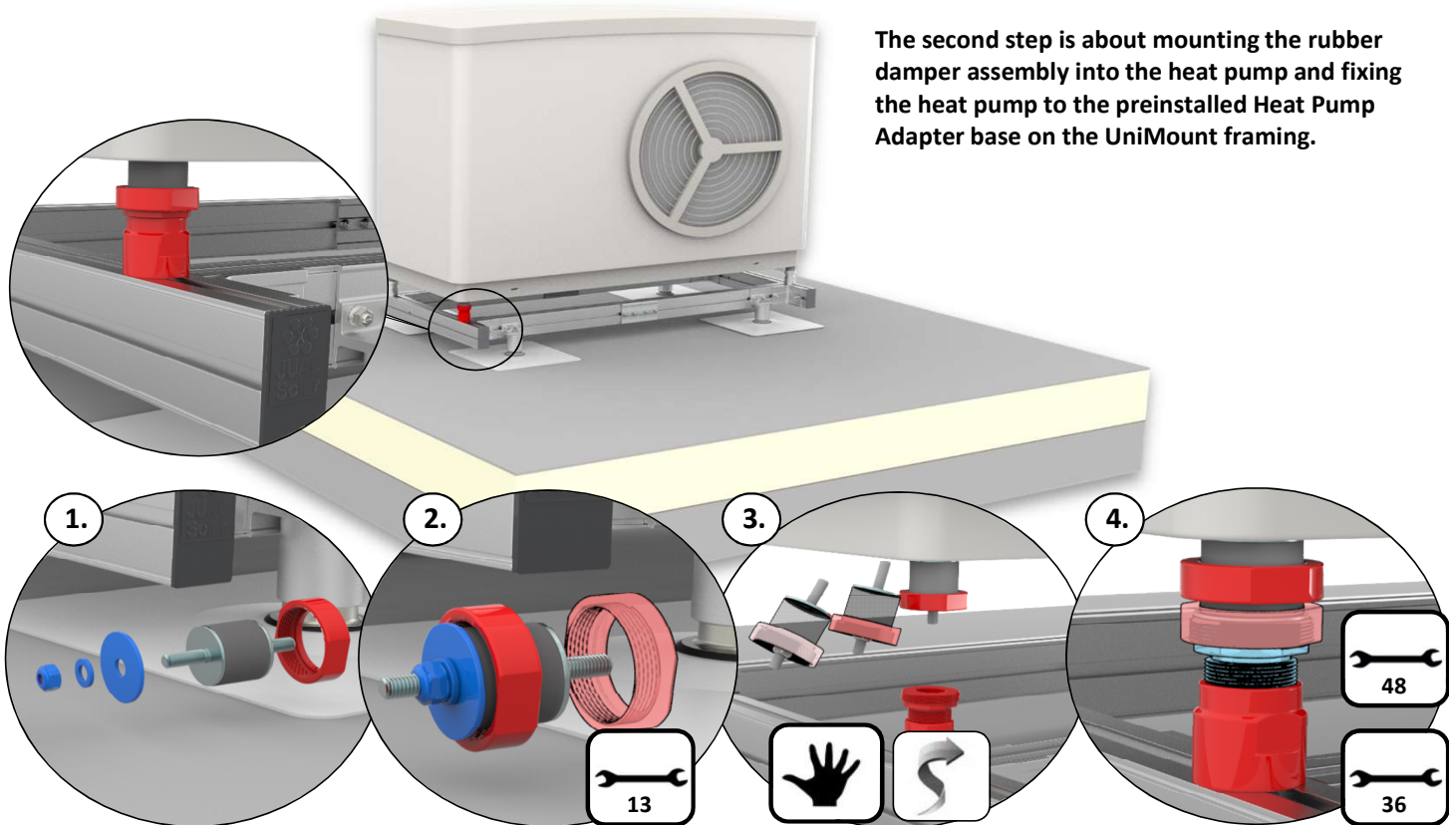
Installation of Heat Pump Adapters			
Type	A [mm]	B [mm]	C [mm]
WPL15	1160	490	1259
WPL20-25	1380	490	1464



At pos. 2. the UniMount Heat Pump Adapter is fixed to the framing by turning the mainbody of the adapter clockwise while the hammer head bolt in the bottom is engaged in the profil's longitudinal track. Pos. 3. shows that the Union Nut, washers and Nut is removed must be removed to prepare for step 2. Pos. 4 illustrates that all of the 4 Heat Pump connection points must be aligned by turning the Adapter Bolt counter clockwise until the intended height is reached.

10. Installation of the Heat Pump Adapter (Step 2.)

The second step is about mounting the rubber damper assembly into the heat pump and fixing the heat pump to the preinstalled Heat Pump Adapter base on the UniMount framing.



Pos. 1 shows the intended assembly position for each of the components that will make out the rubber damper assembly. At pos. 2. the Nut and washer is constrained and the Union Nut is positioned loosely on the rubber damper from the opposite side. The following process at pos. 3. is to mount the rubber damper assembly into the corresponding fix point holes in the Heat Pump. At last pos. 4. shows how the Union Nut is constrained by turning it onto the outside thread of the Adapter Bolt.