


CARPORT ARTOSI

MEASUREMENT

For the carport, always measure the outer envelope of the structure. The following is to be specified: total **width [S]**, total **length [L]**, and **headroom [H]** of each pole.

The perimeter frame of the carport must be horizontal after the assembly and right-angled in all directions. When taking measurements, take account of the heights of the individual anchor points for the poles and their flatness. The anchor points for the poles must be sufficiently load-bearing to withstand all loading transferred to them by the pole feet. Likewise, pay attention to the flatness and verticality of the individual adjacent structures to which the carport will be added. In case the perimeter frame of the carport is to be anchored to adjacent structures, these structures must have sufficient load-bearing properties to withstand all loading transferred to them by the perimeter frame. When adding the carport to or near adjacent structures, it is important to take into consideration that the carport is likely to be subjected to dimensional variations caused by ambient temperature (see Technical Manual for CARPORT ARTOSI).

	
ISOTRA a. s. Bílovecká 2411/1, CZ-74601 Opava, CZ 19	
EN 1090-1:2009+a1:2011 CARPORT ARTOSI	
Wind resistance: 6	Total solar transmittance factor g_{tot} : 0.03–0.6

LINEAR EXPANSION

When heated, aluminium exhibits a characteristic expansion, called heat dilatation. The coefficient of thermal expansion of an aluminium alloy is 23.5 [$\mu\text{m}/(\text{m}^*\text{K})$].

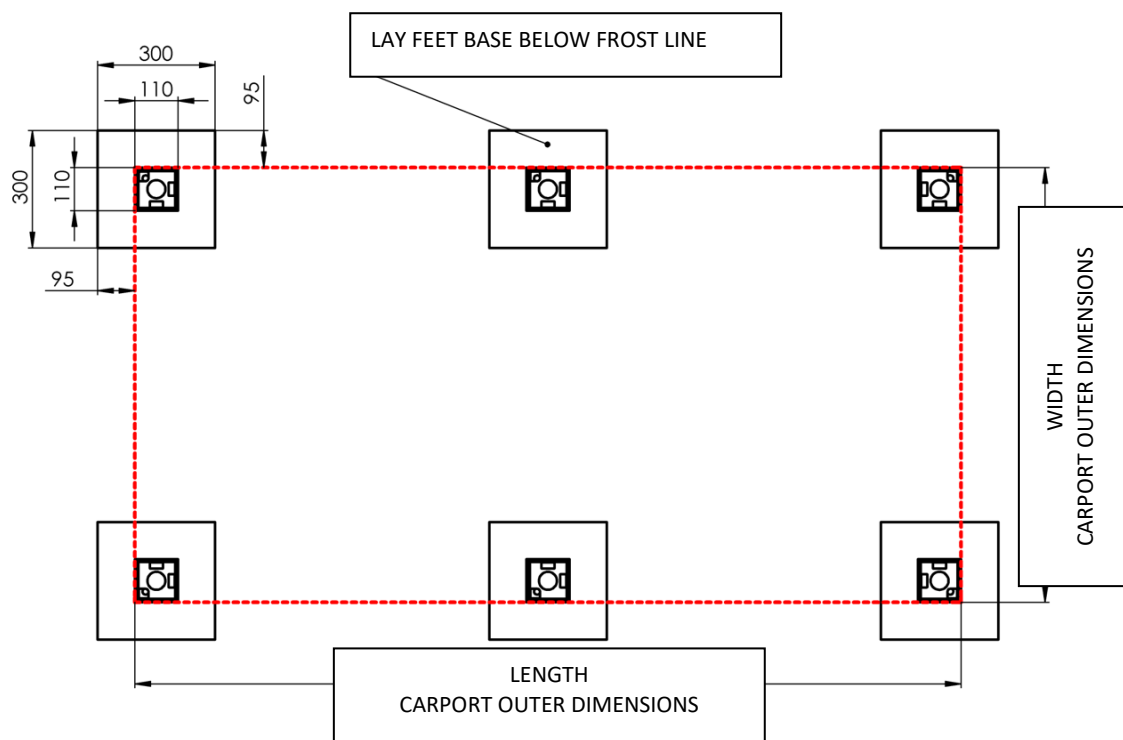
Example:

An aluminium profile measures 7,000 mm at 20 °C. If heated to 50 °C (a carport on a sunny day), it will measure 7,005 mm due to thermal expansion, i.e., the change in the aluminium temperature will translate to a +5 mm increase in length.

When adding the carport to or near adjacent structures, it is important to take into consideration that the carport is likely to be subjected to dimensional variations caused by ambient temperature

It is important to take into account thermal expansion of the aluminium profiles in relation to the ambient temperature when taking measurements and installing screen shutters to the carport. We recommend taking the measurements at an ambient temperature of 23 °C \pm 5 °C.

The foundation for anchoring the feet is not included in the offer and supply of the system. The foundation must be implemented with respect to the specific site conditions individually by each owner in cooperation with an authorised person (architect, building contractor, etc.).



ORDERING

The carport order must conform to the conditions specified in the Technical Manual for CARPORT ARTOSI. When ordering, it is necessary to use the ARTOSI Designer, available at the ISOTRA e-shop. This graphical interface will guide you through the process of selecting the individual elements, so that your carport is operational and fulfils its intended function.

TOOLS LIST











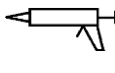







TOOLS NECESSARY FOR INSTALLATION

- Tape measure
- Spirit level (or laser level)
- Allen keys 4, 5, 6
- Ratchet wrench + 30 cm extension
- Sockets for ratchet wrench 5.5, 10, 17, 19
- Combination spanner 10, 15, 17
- Screwdriver Torx T15, T20
- Flat-bladed screwdriver
- Riveting pincers
- Utility knife
- Caulk applicator
- Sprayer with soapy water
- Cordless screwdriver
- Drill bits Ø 4 mm for metal / aluminium
- Plumber's pliers

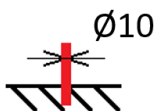
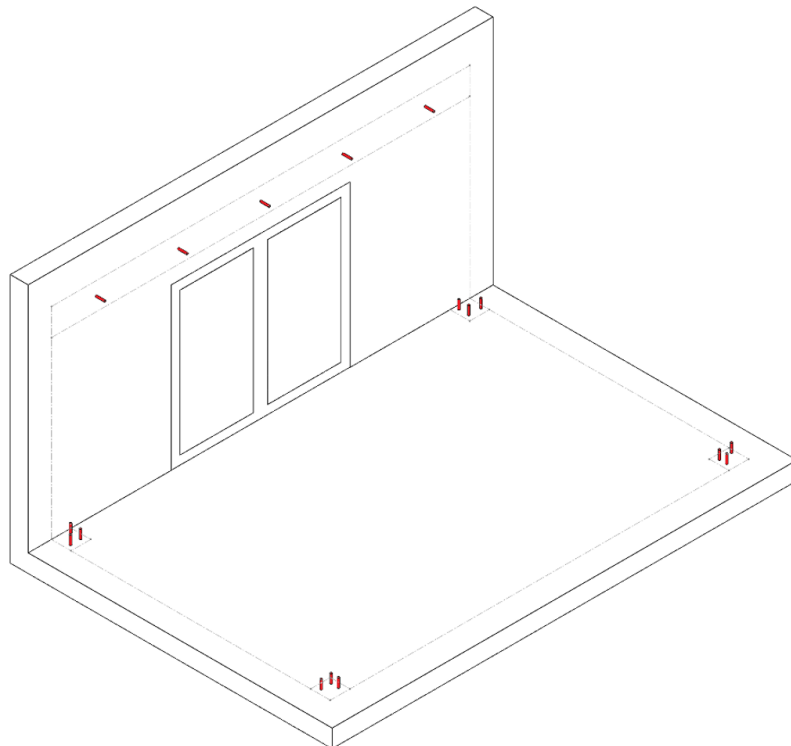
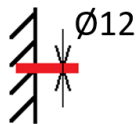
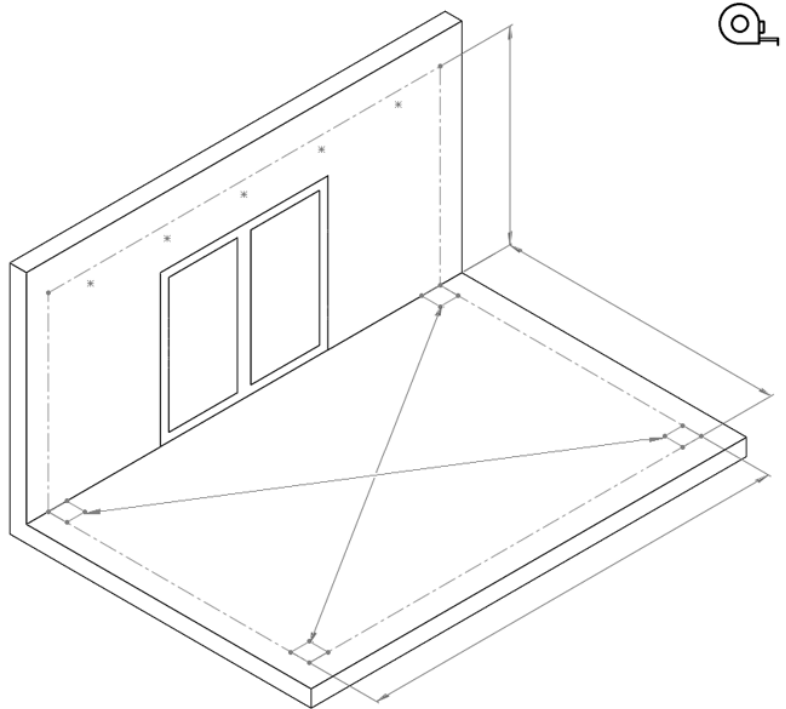
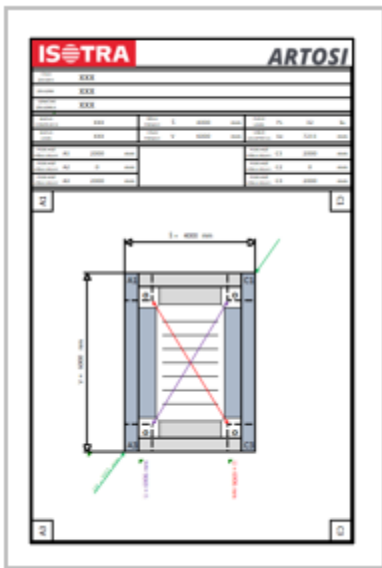
TOOLS RECOMMENDED FOR INSTALLATION

- Two ladders adjustable according to the carport height
- Bore hammer + drill bits
- Step drill bit
- Angle grinder + diamond disc
- Vacuum cleaner
- Garbage bags
- Compression tapes
- Bolts with sealing rubber

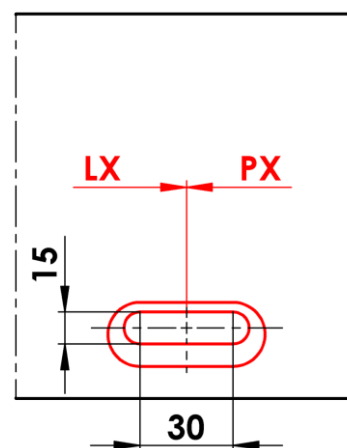
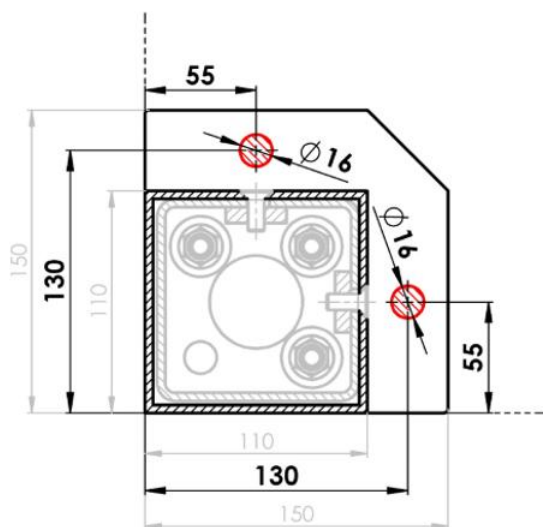
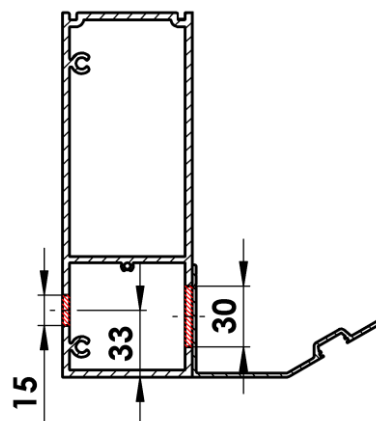
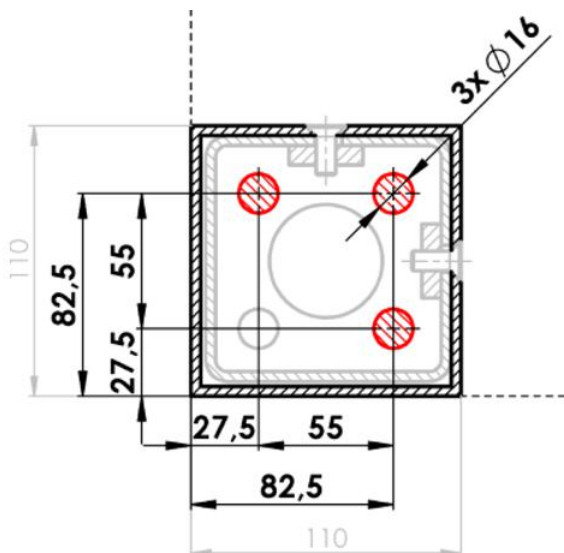
LIST OF SYMBOLS USED

	Measure		Prepare anchors for vertical structures. Anchor \emptyset .
	Tighten – slightly		Attach anchors to vertical structures
	Tighten – fully		Prepare anchors for horizontal structures. Anchor \emptyset .
	Level out		Attach anchors to horizontal anchor points
	Cut off		Water
	Apply caulk		Correct
	Smooth out caulk Remove excessive caulk		Incorrect
	Assembly		Caution
	Disassembly		
	Remove (vacuum) chips		

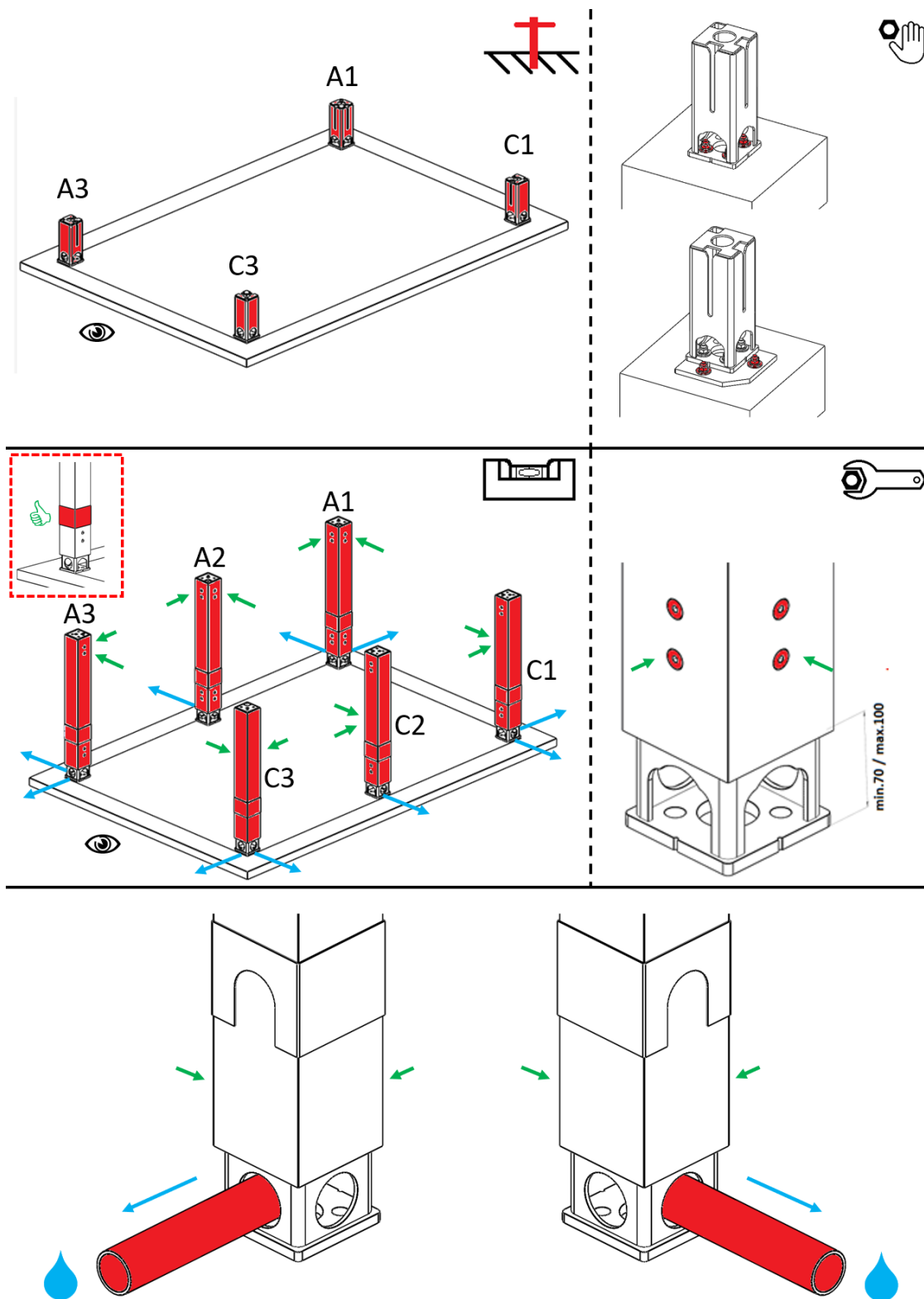
TAKING MEASUREMENTS



1:1 pages 29–30

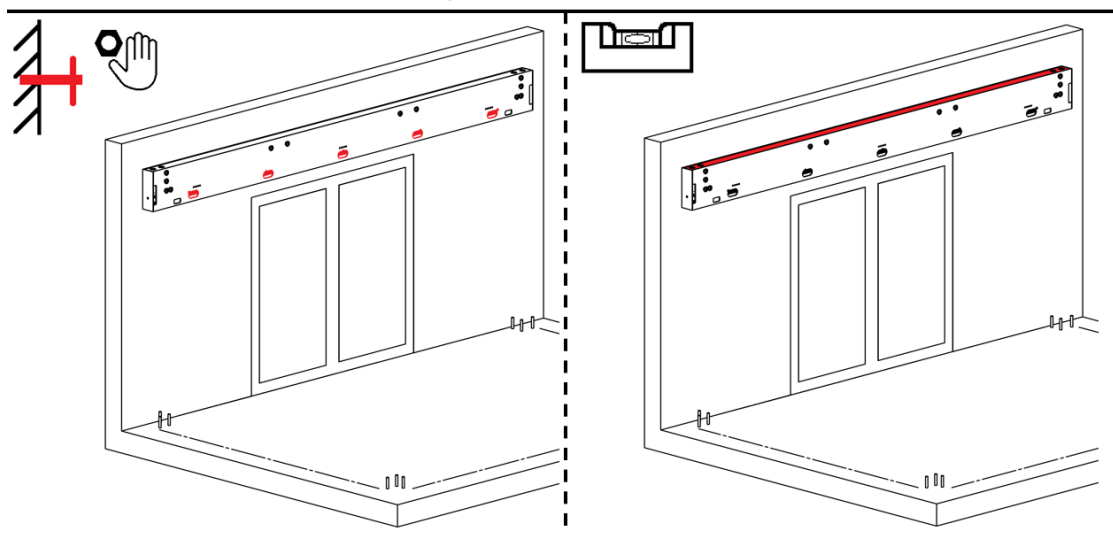
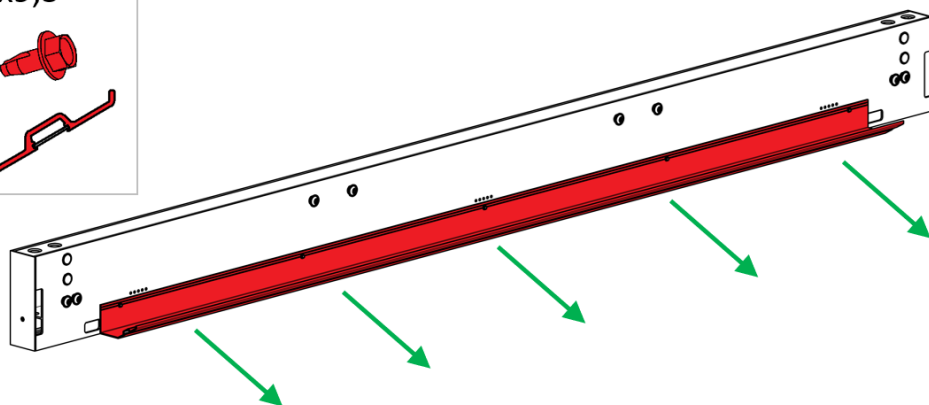
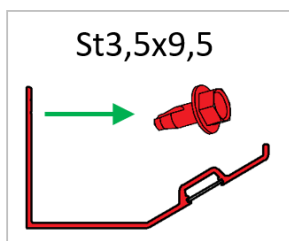


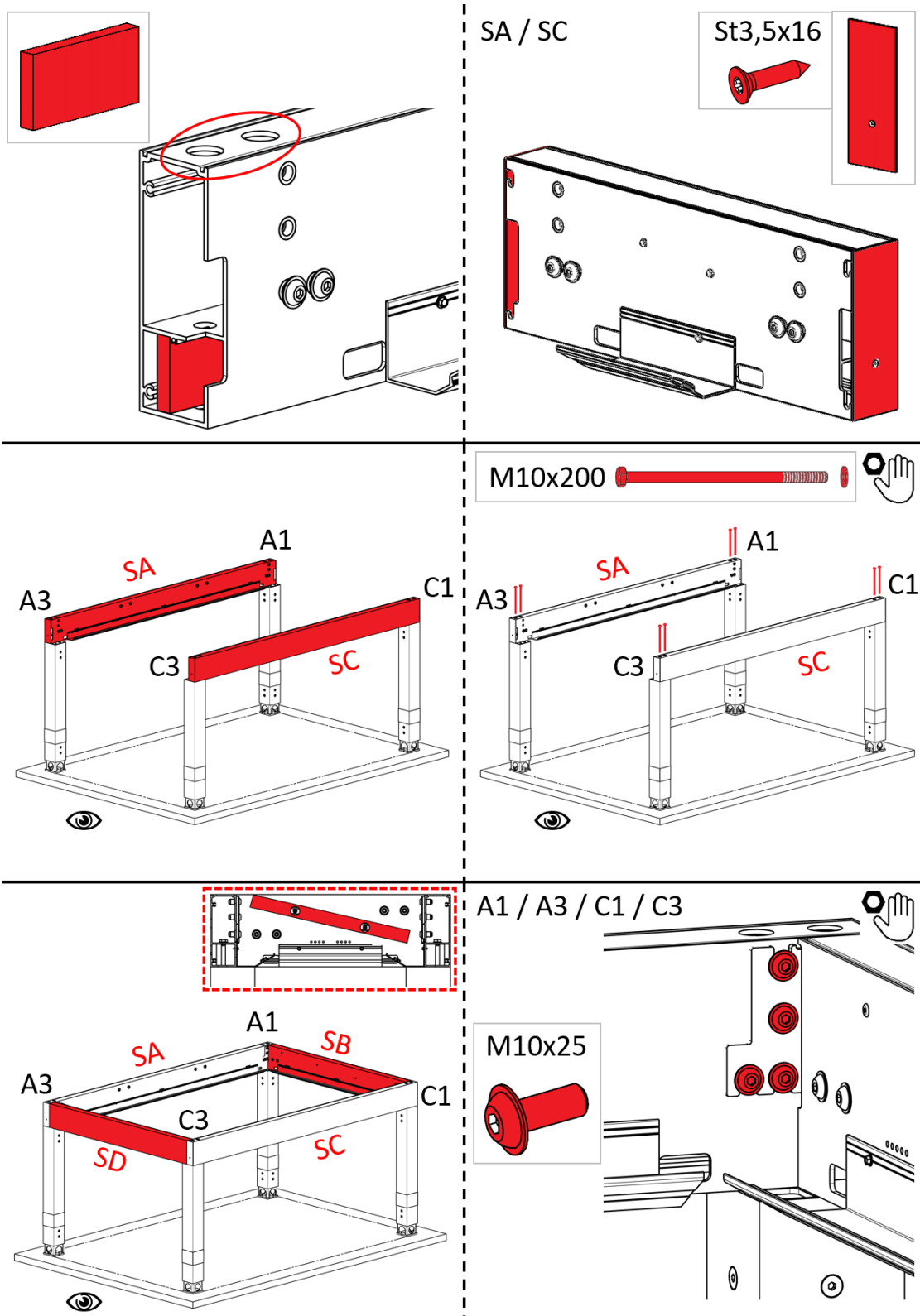
INSTALLATION – POLYCARBONATE / TRAPEZOIDAL – POLES

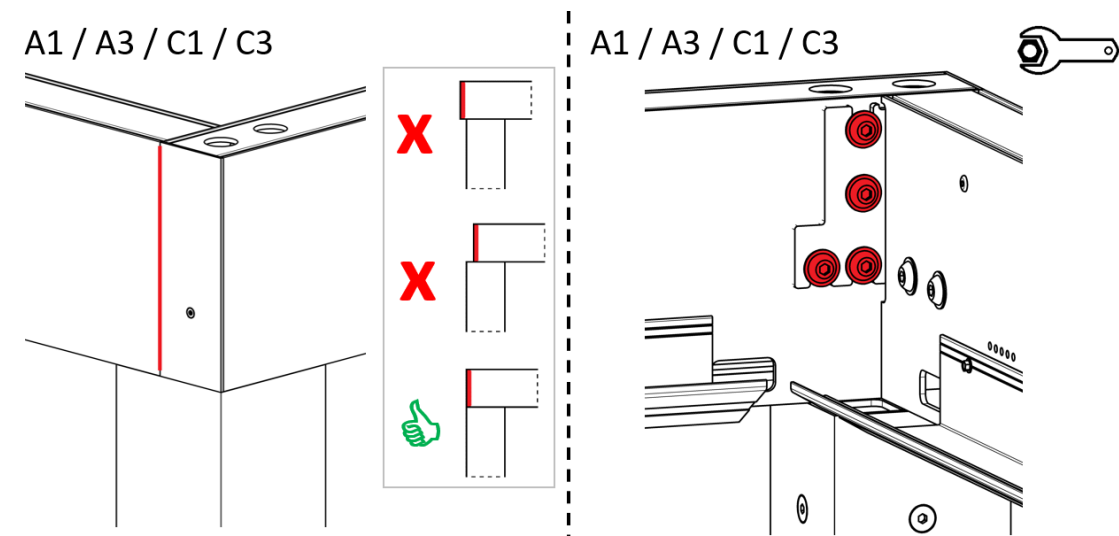


INSTALLATION – POLYCARBONATE / TRAPEZOIDAL – WALL PROFILE

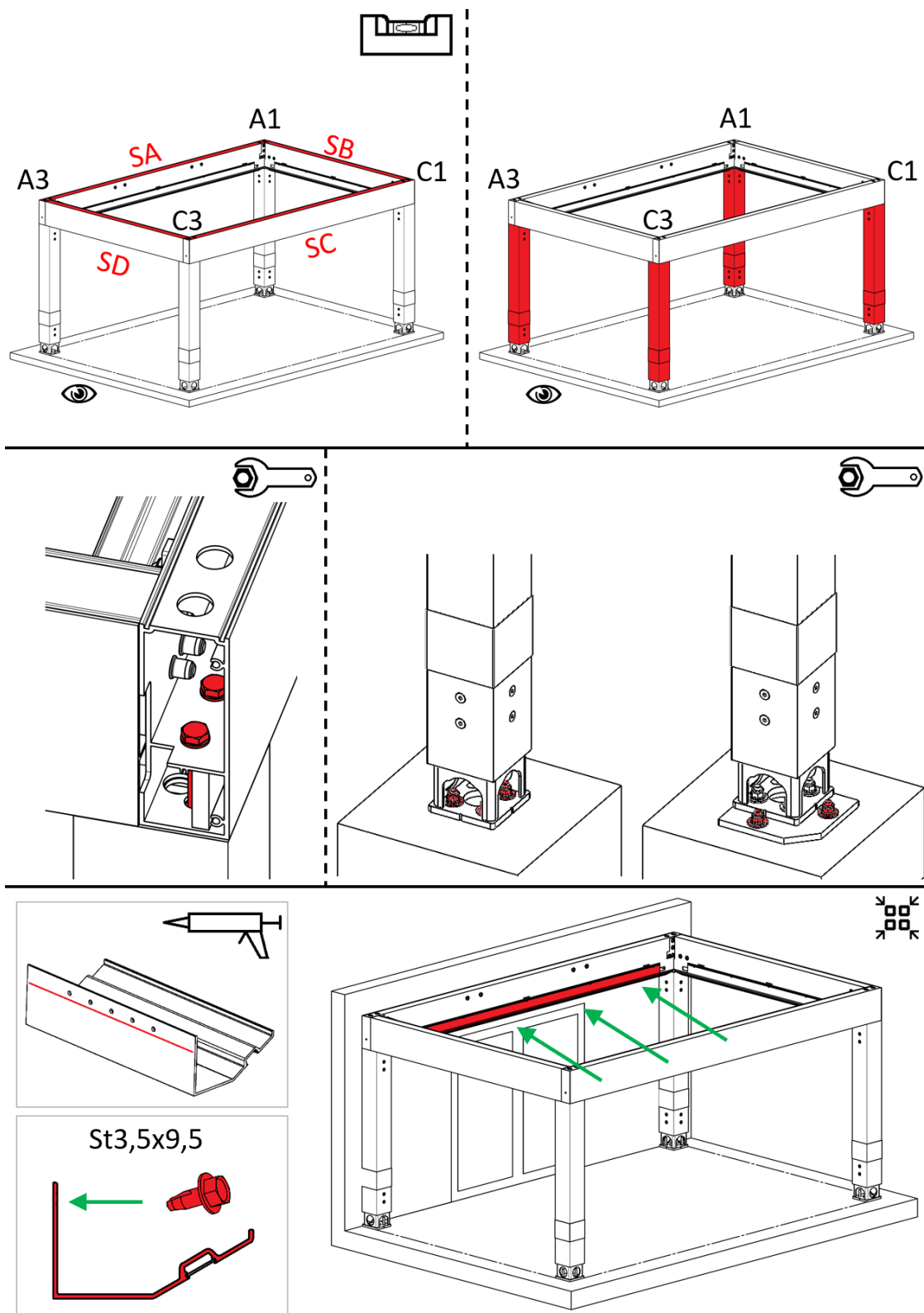
SA / SB / SC / SD

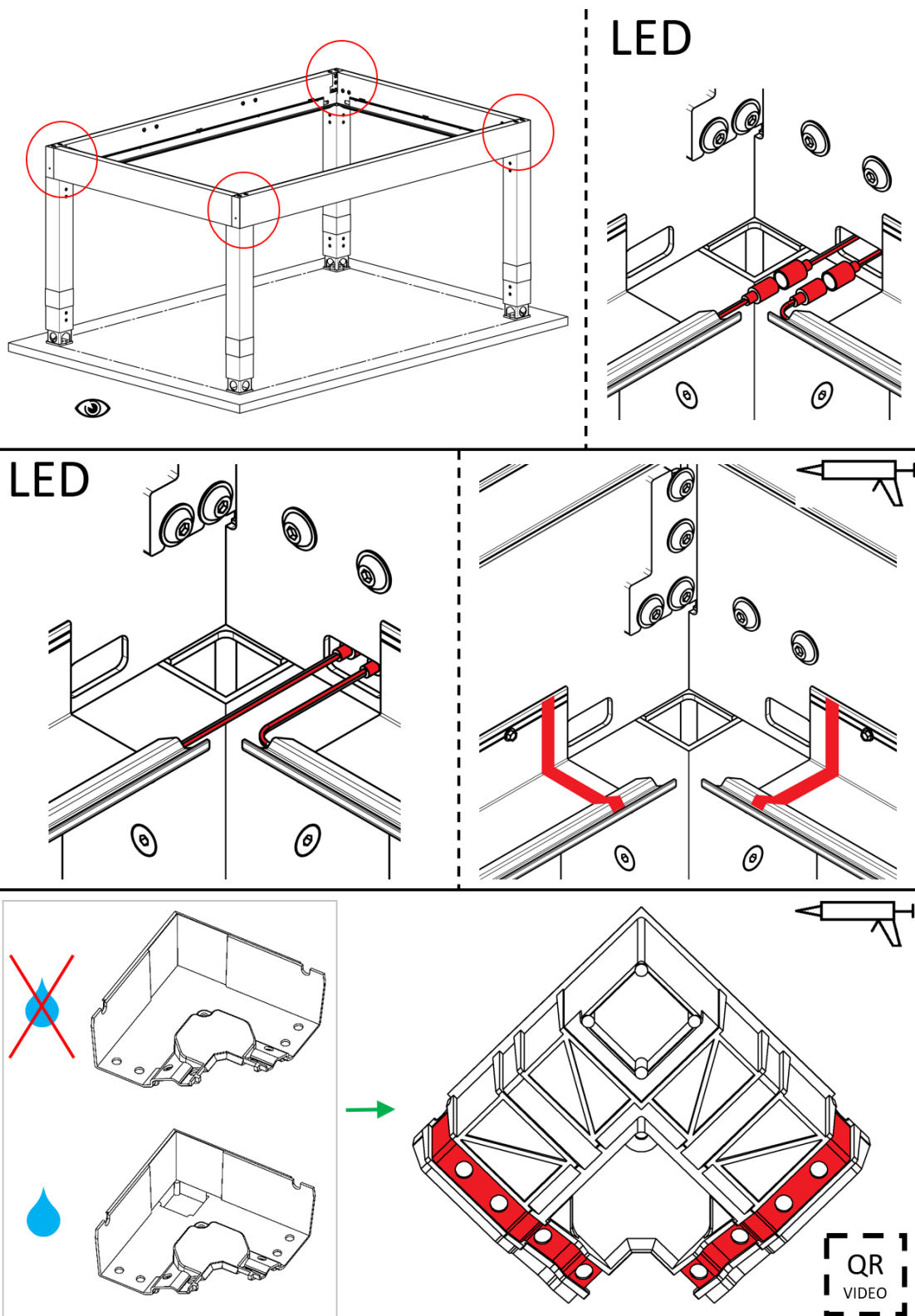


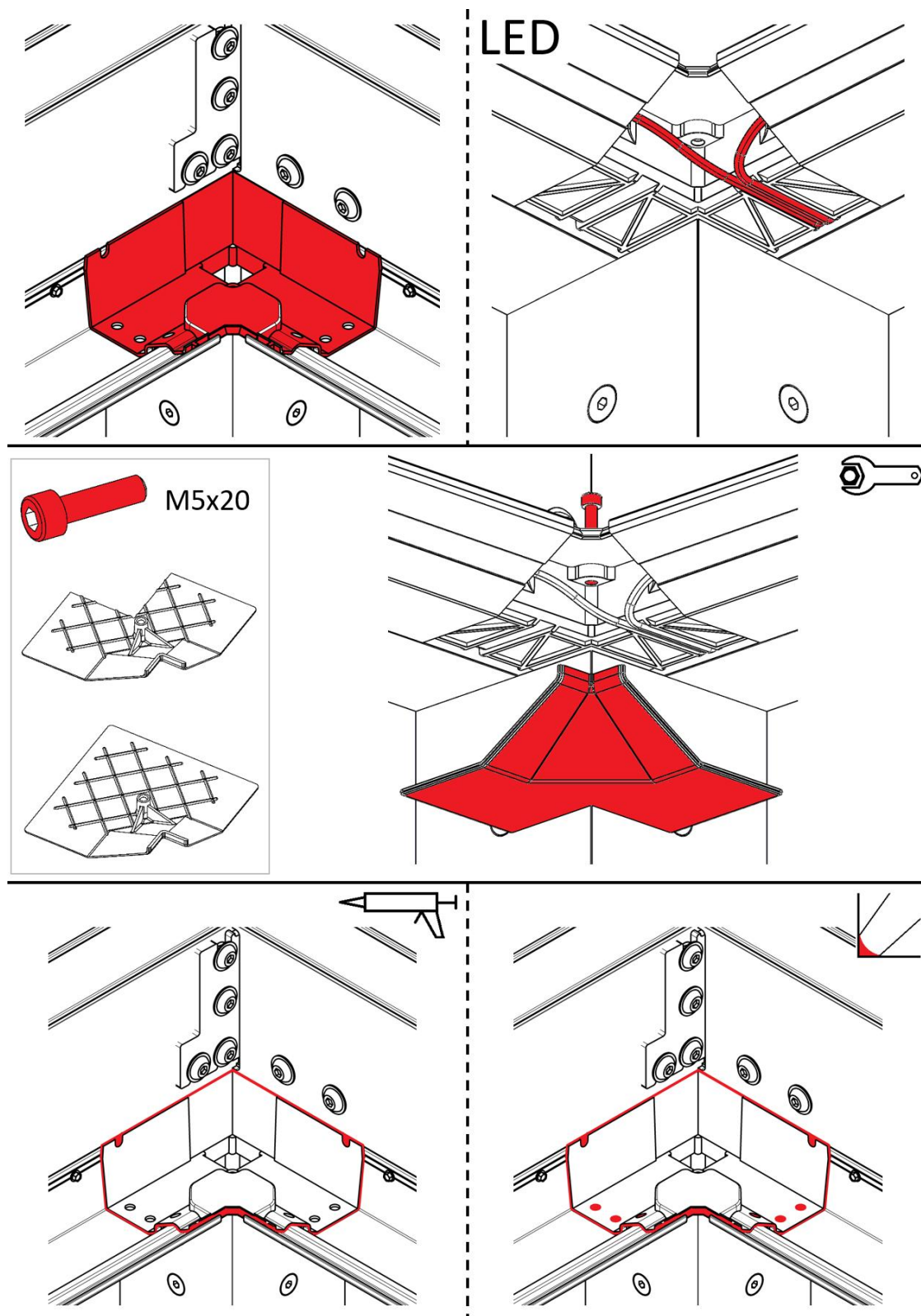
INSTALLATION – POLYCARBONATE / TRAPEZOIDAL – FRAME


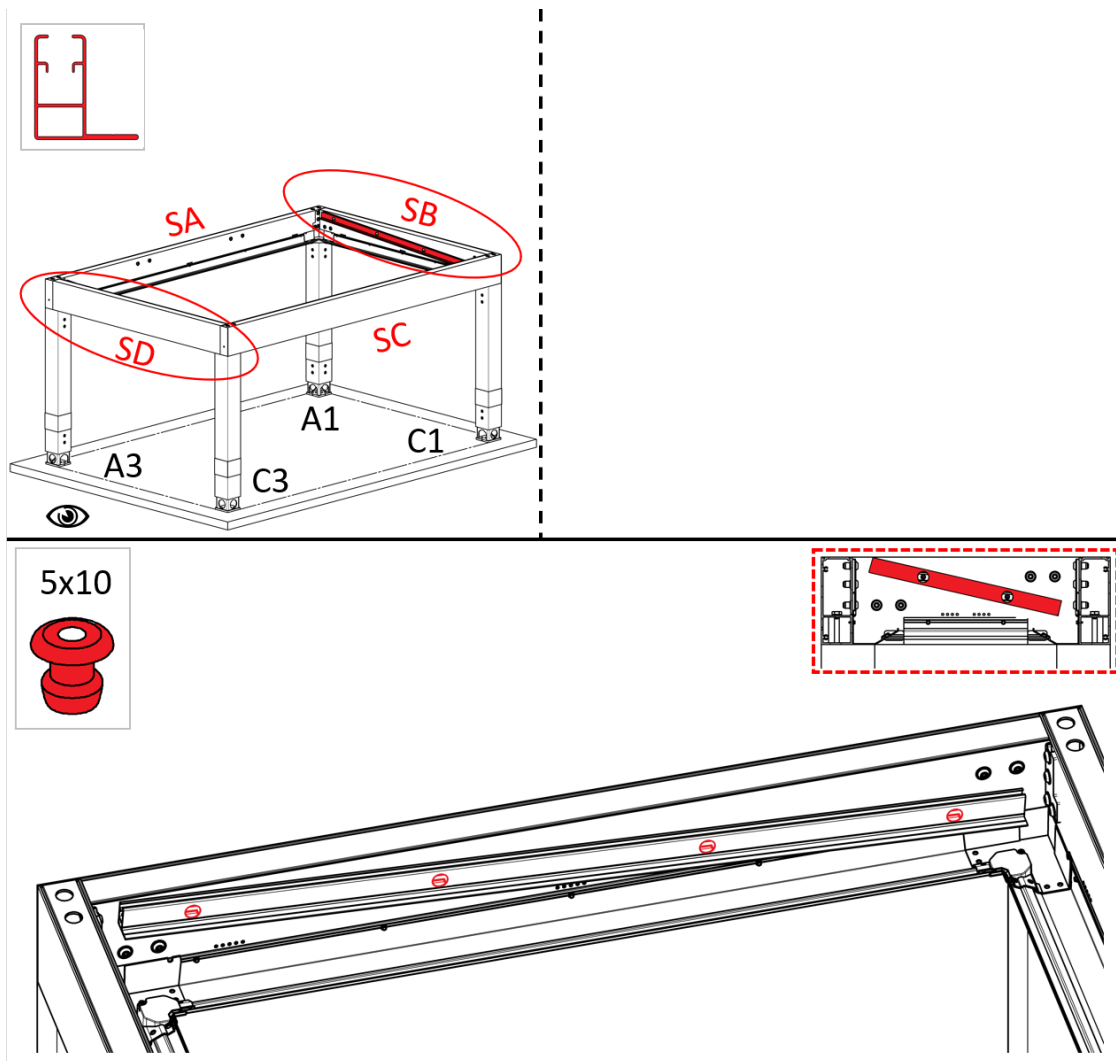
INSTALLATION – POLYCARBONATE / TRAPEZOIDAL – FRAME


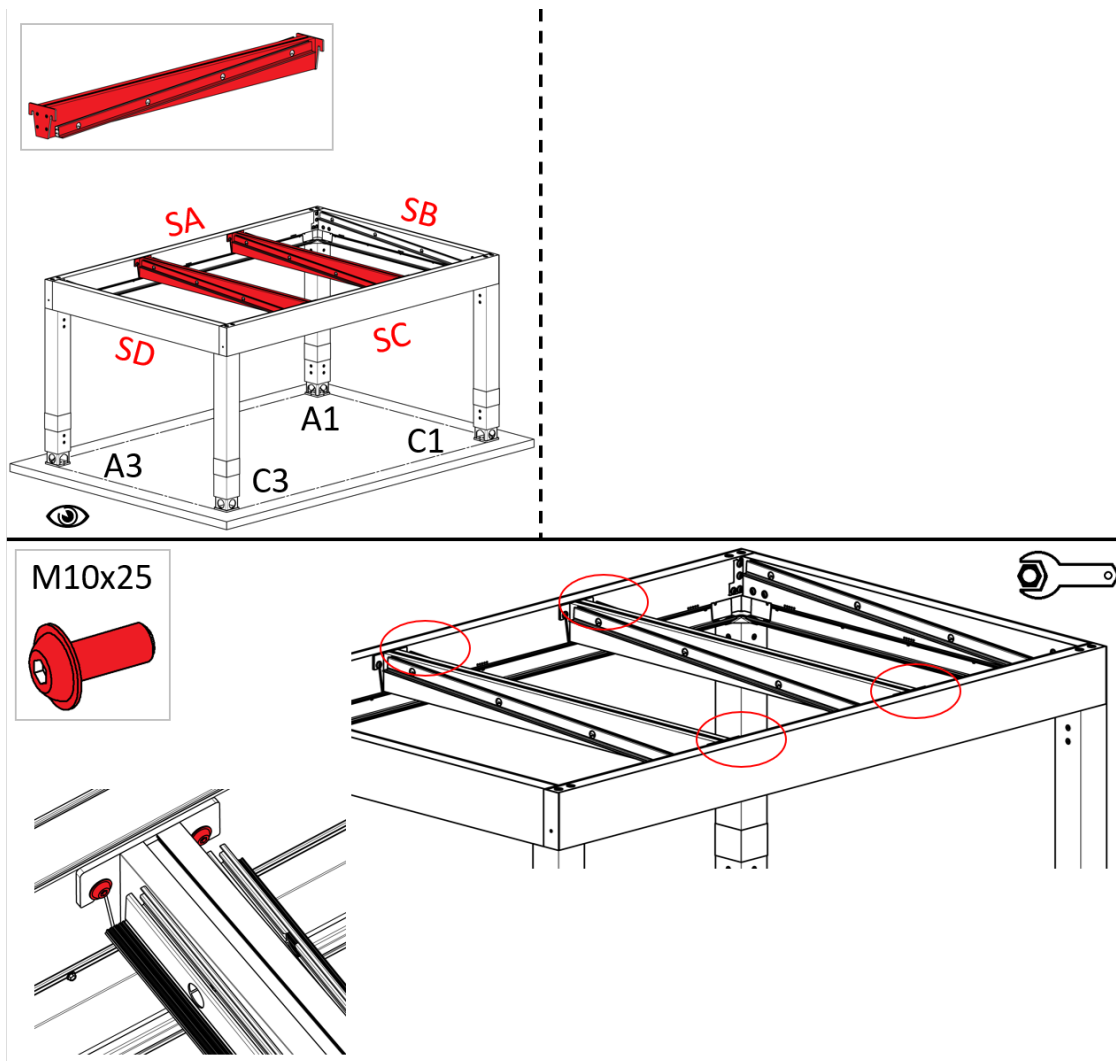
INSTALLATION – POLYCARBONATE / TRAPEZOIDAL – LEVELLING



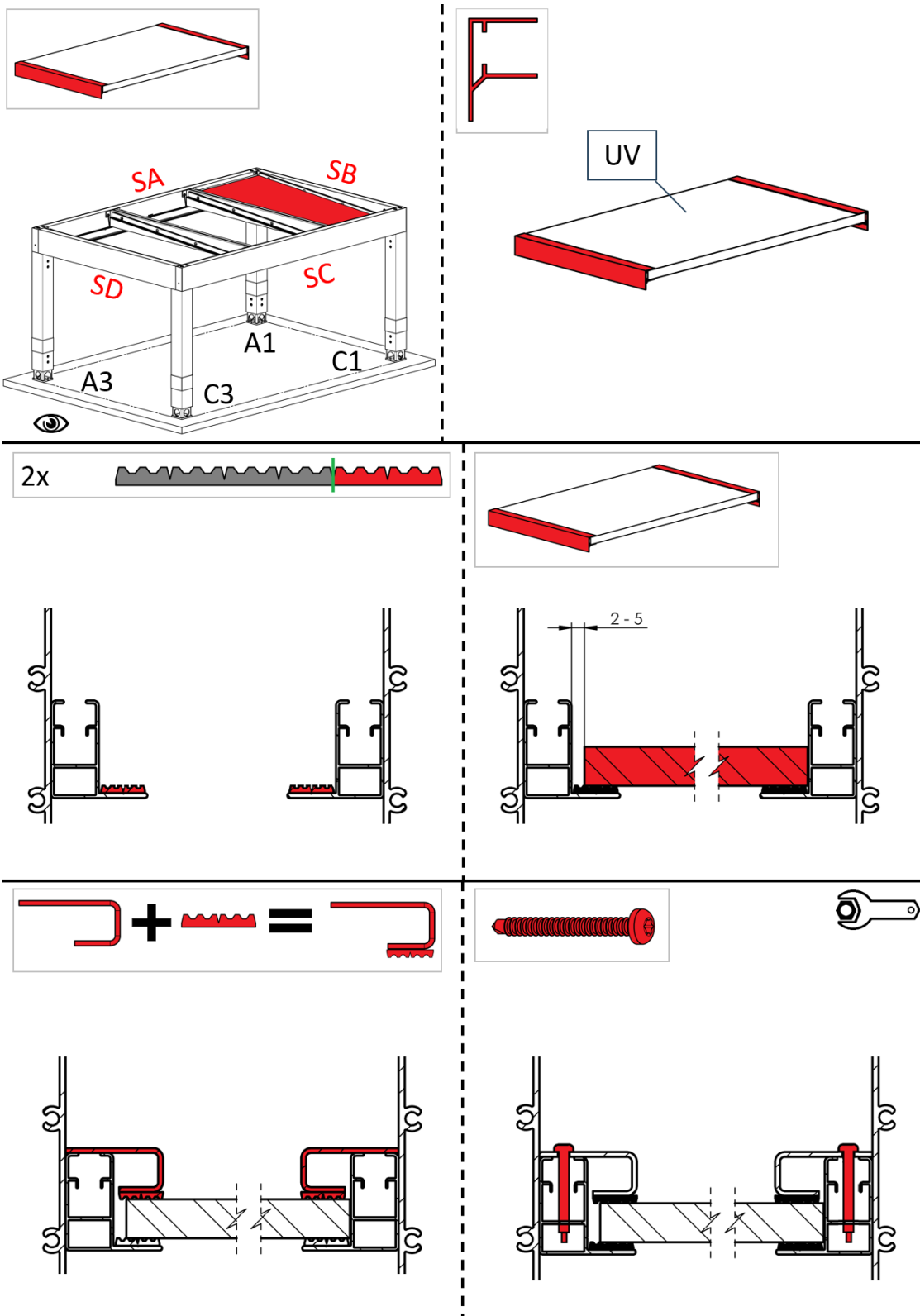
INSTALLATION – POLYCARBONATE / TRAPEZOIDAL – GUTTER CONNECTION


INSTALLATION – POLYCARBONATE / TRAPEZOIDAL – GUTTER CONNECTION


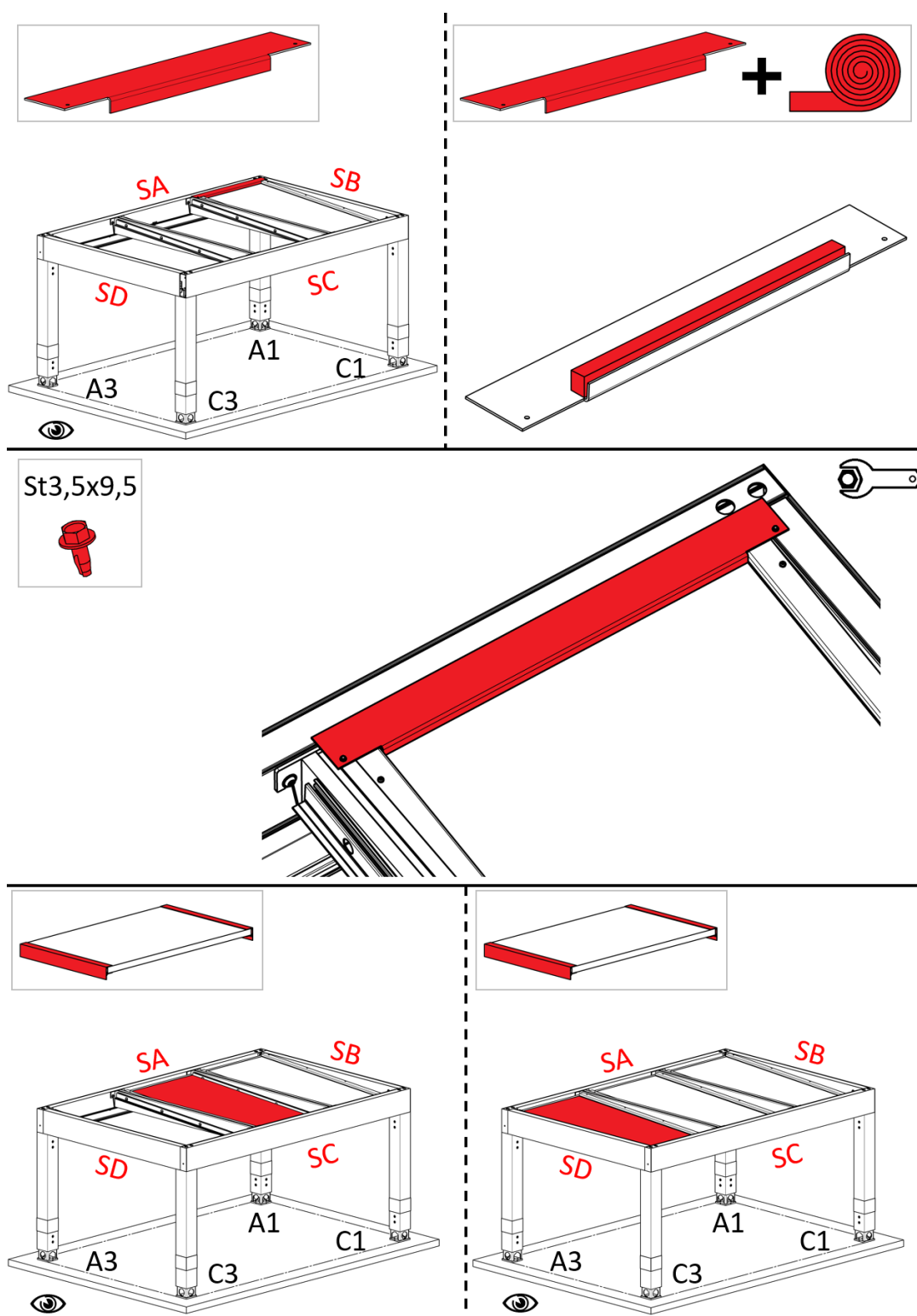
INSTALLATION – POLYCARBONATE – OUTER PROFILES


INSTALLATION – POLYCARBONATE – RAFTERS


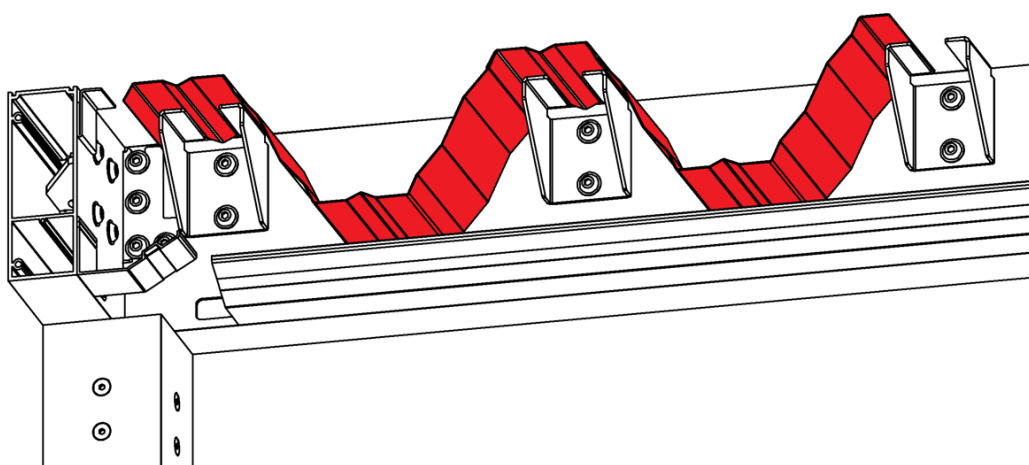
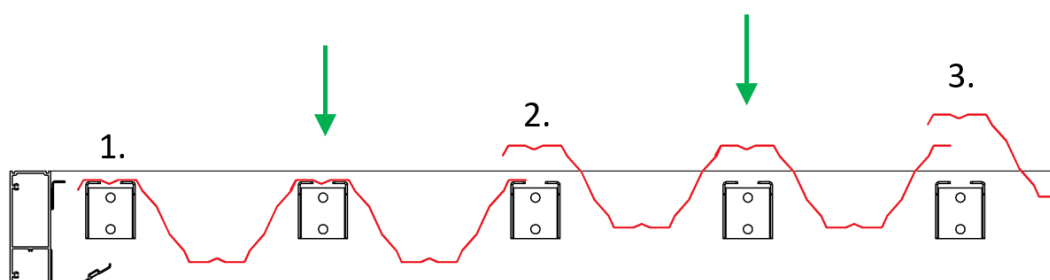
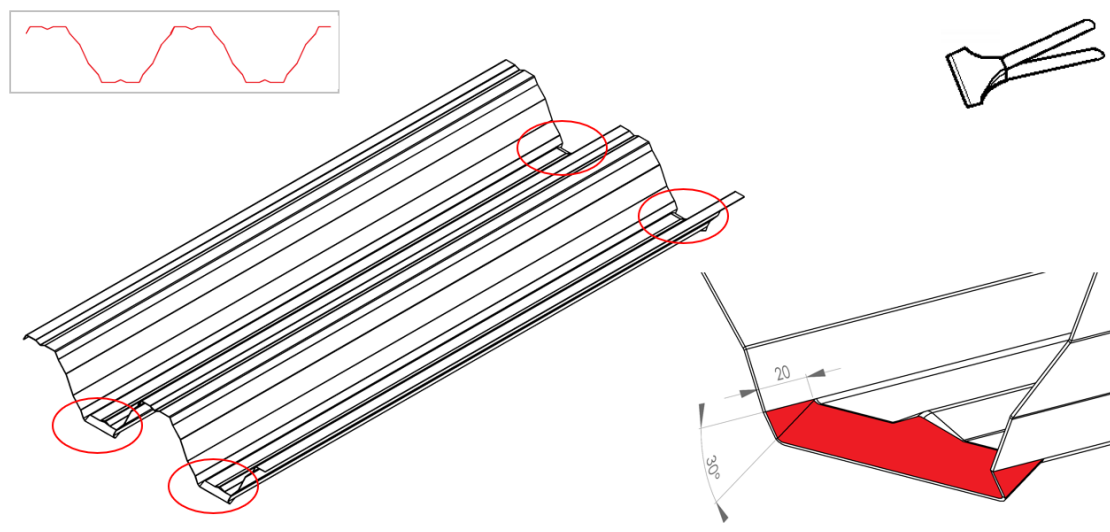
INSTALLATION – POLYCARBONATE – ROOFING



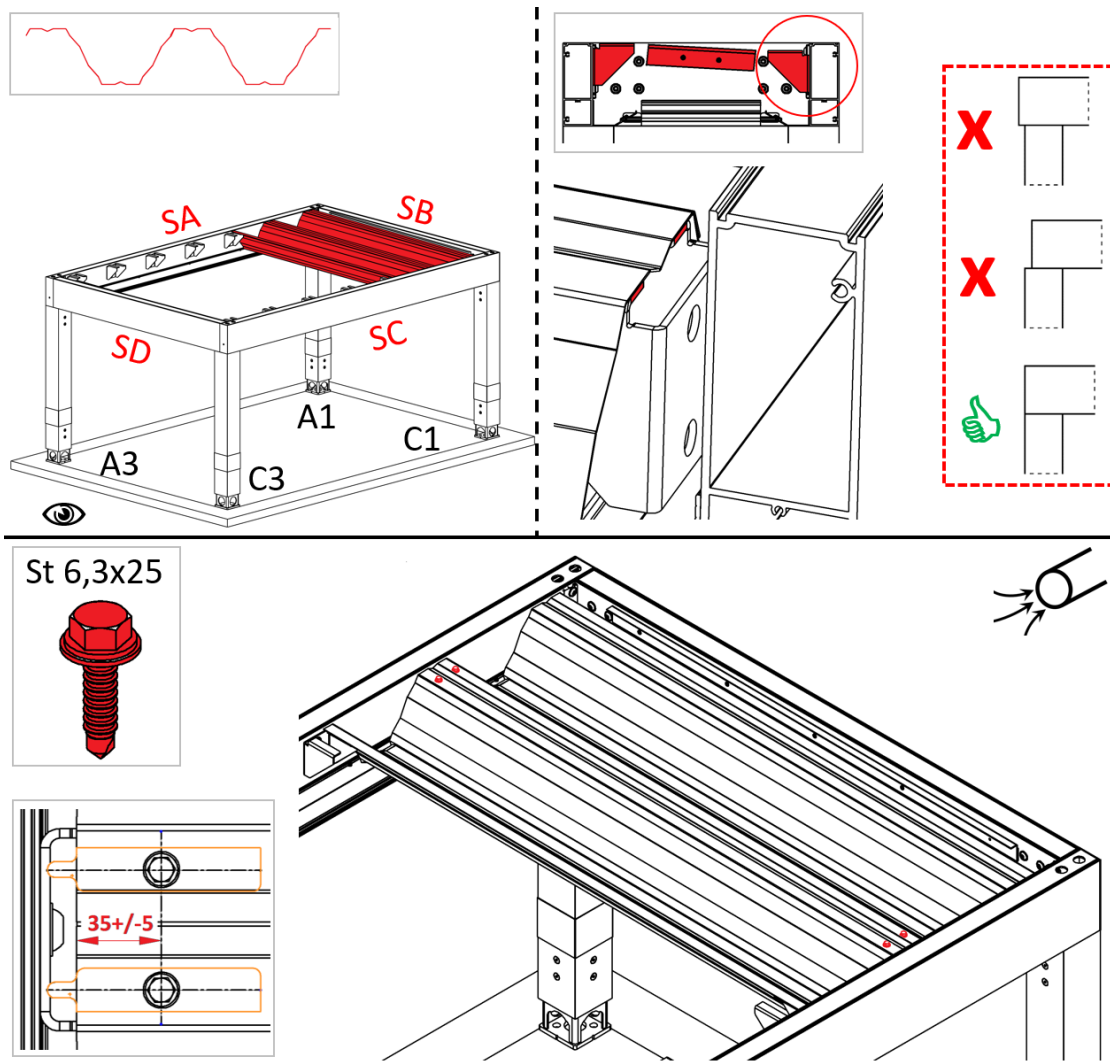
INSTALLATION – POLYCARBONATE – ROOFING



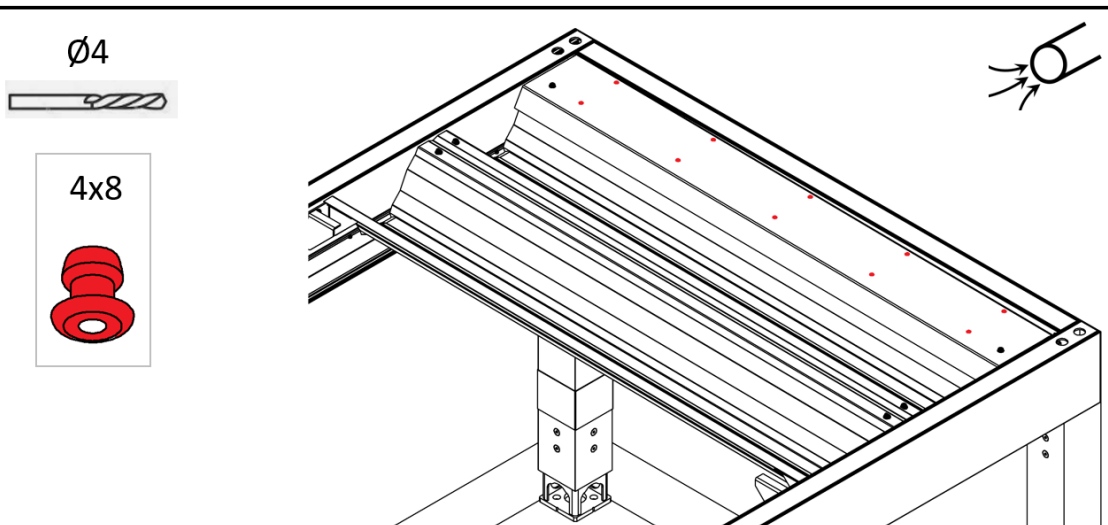
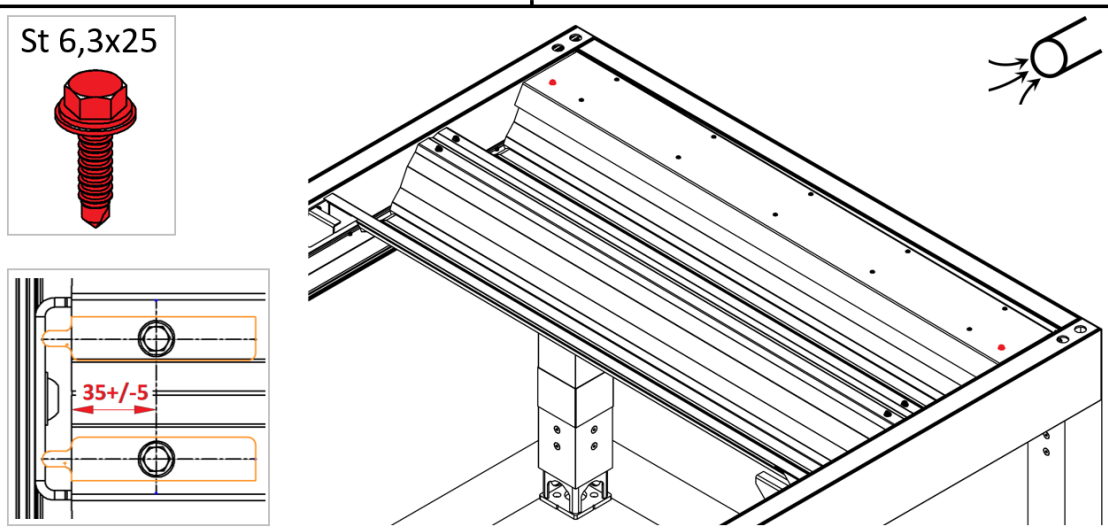
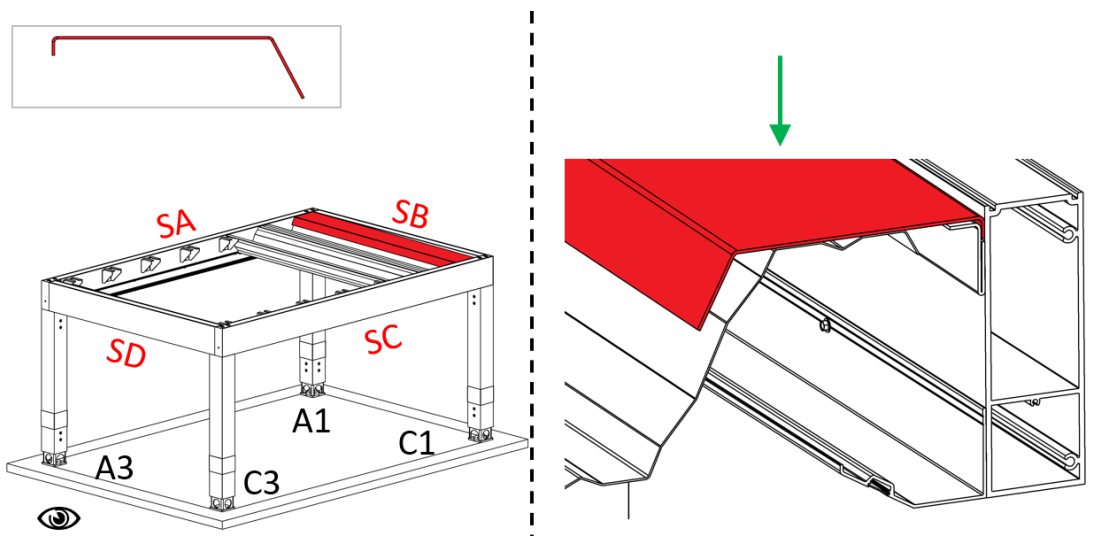
With every polycarbonate carport, we include a small pack of STRONG 38 mm aluminum tape (6-020030-0000) in case of damage during installation.

INSTALLATION – TRAPEZOIDAL – ROOFING


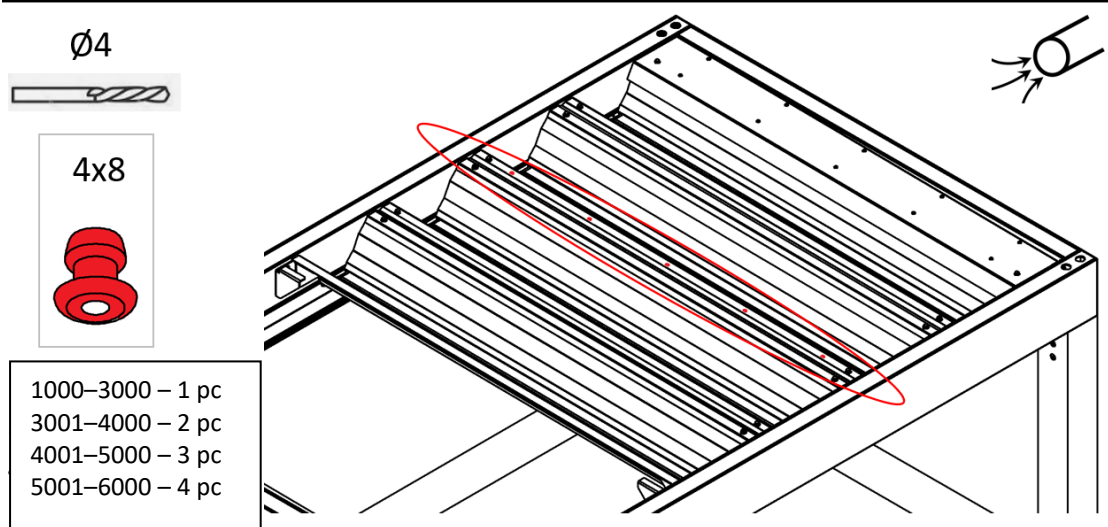
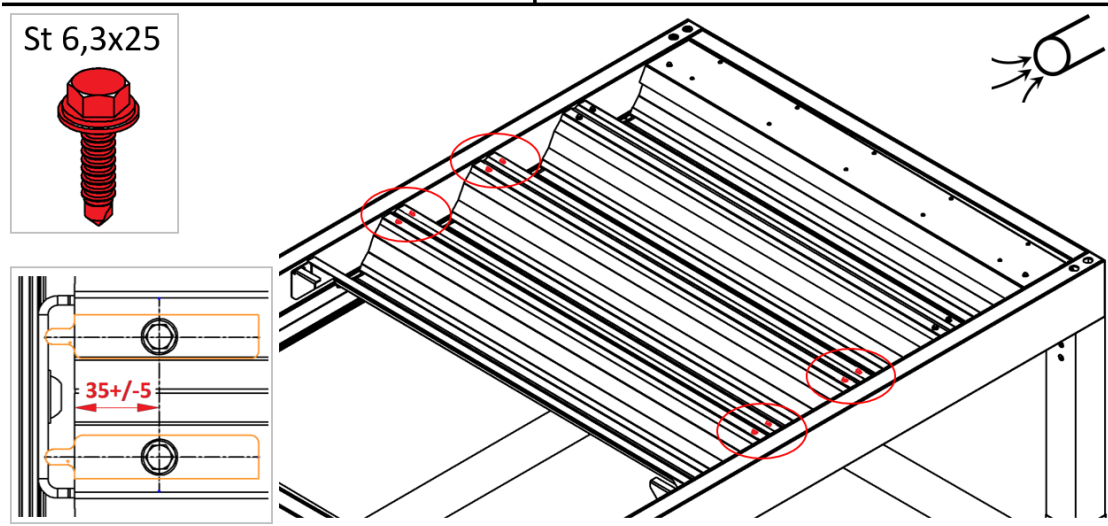
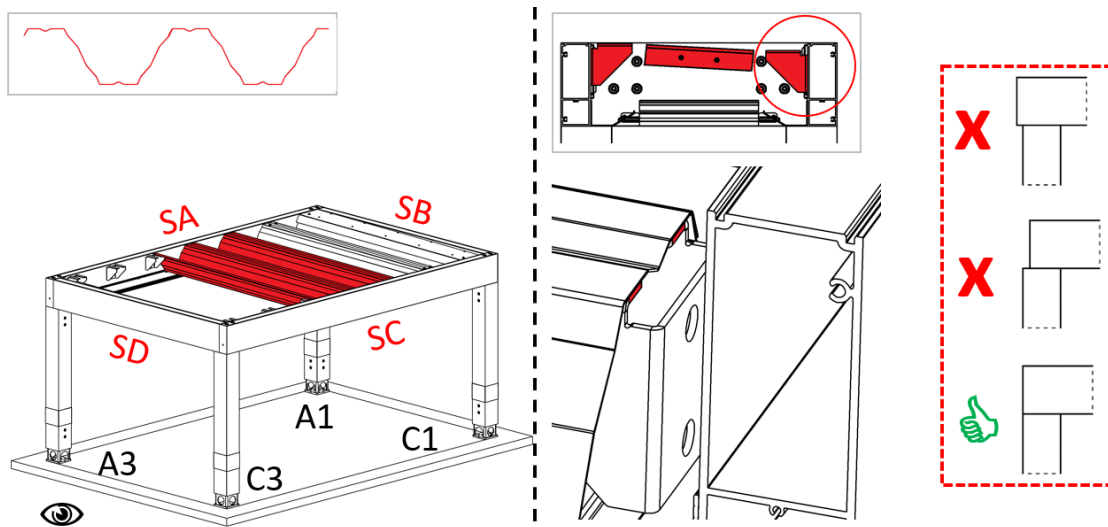
INSTALLATION – TRAPEZOIDAL – ROOFING



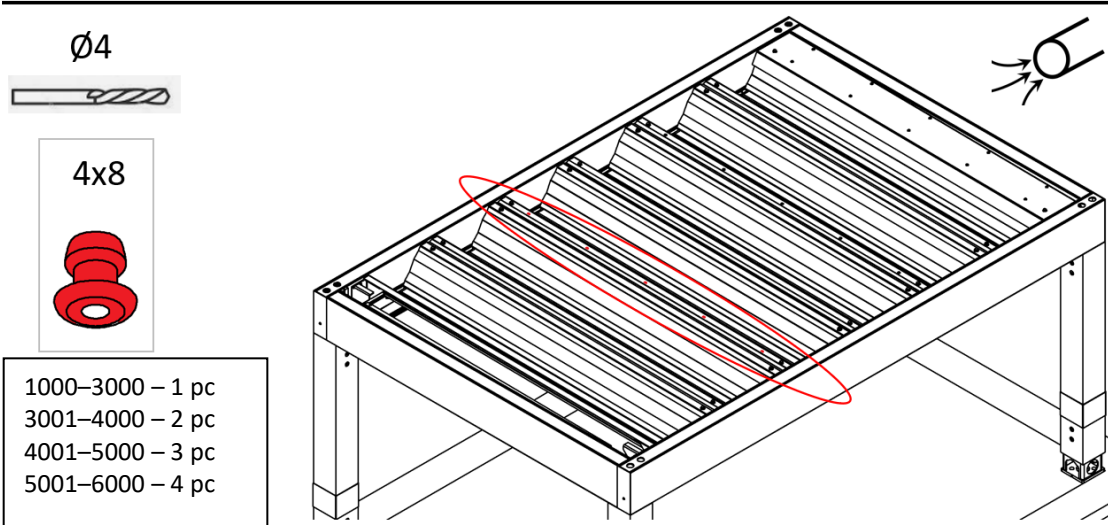
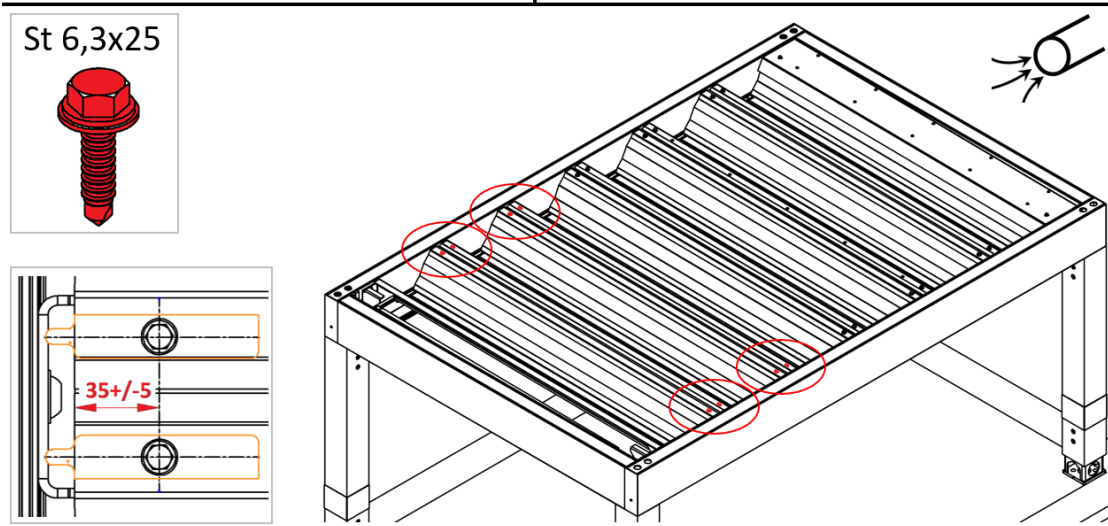
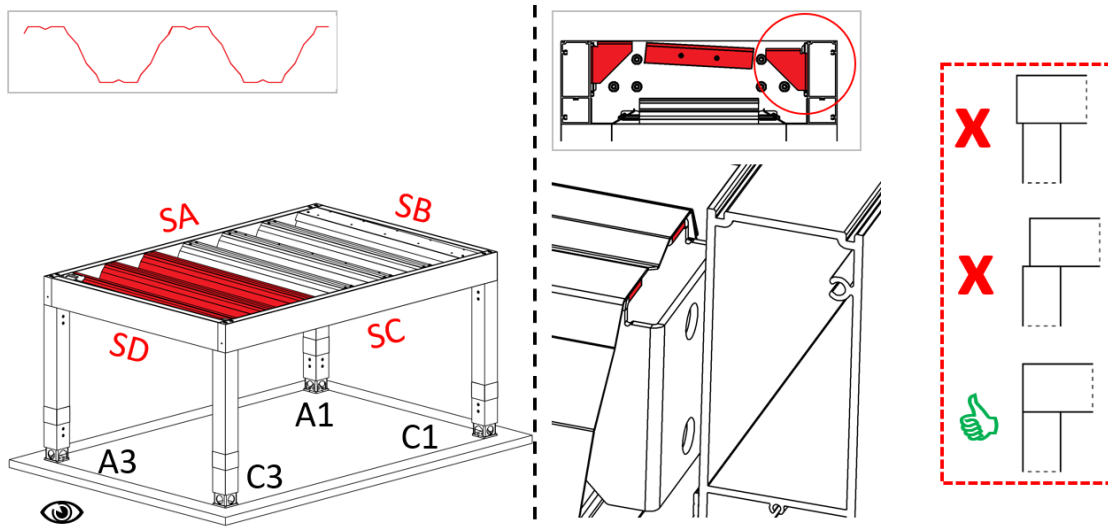
INSTALLATION – TRAPEZOIDAL – ROOFING



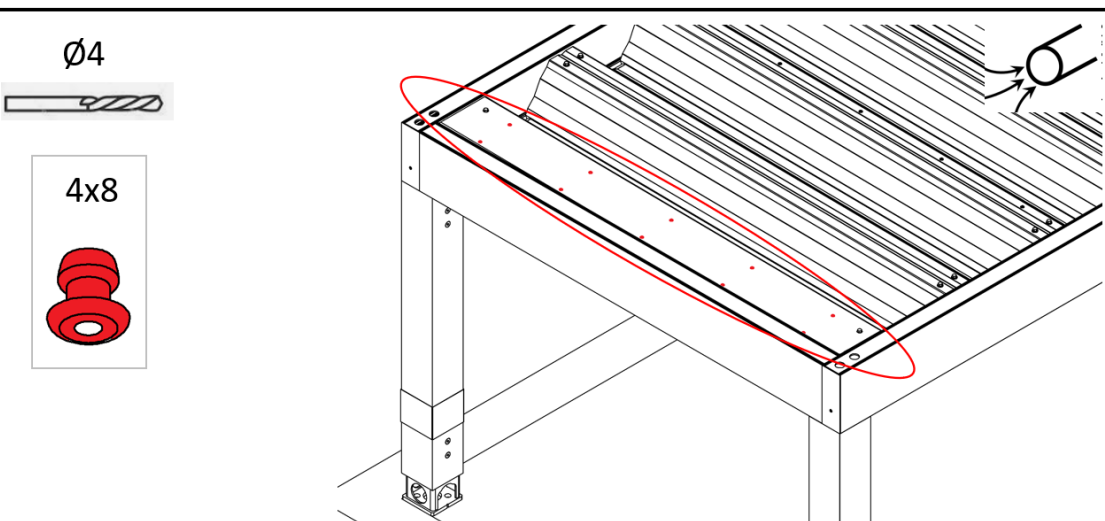
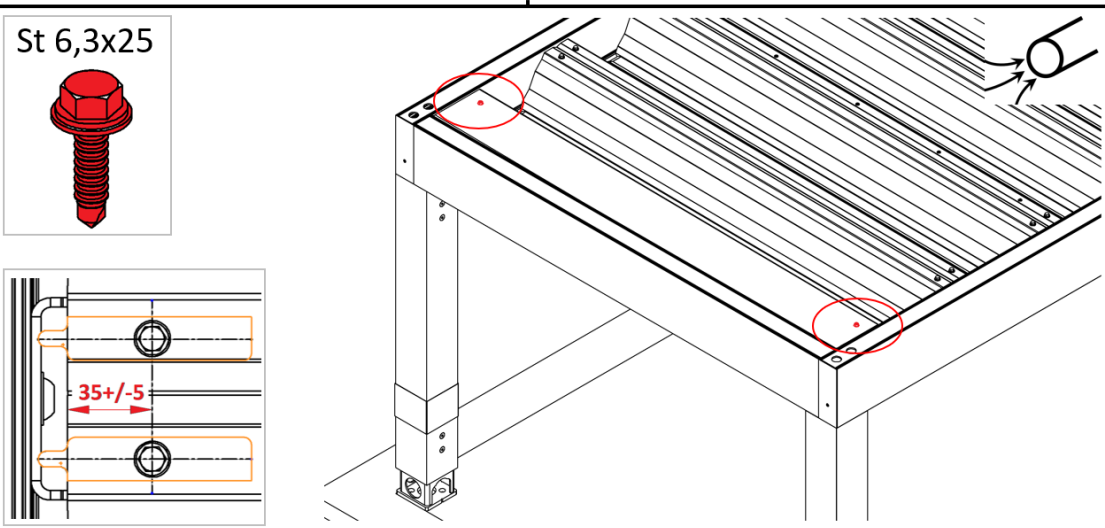
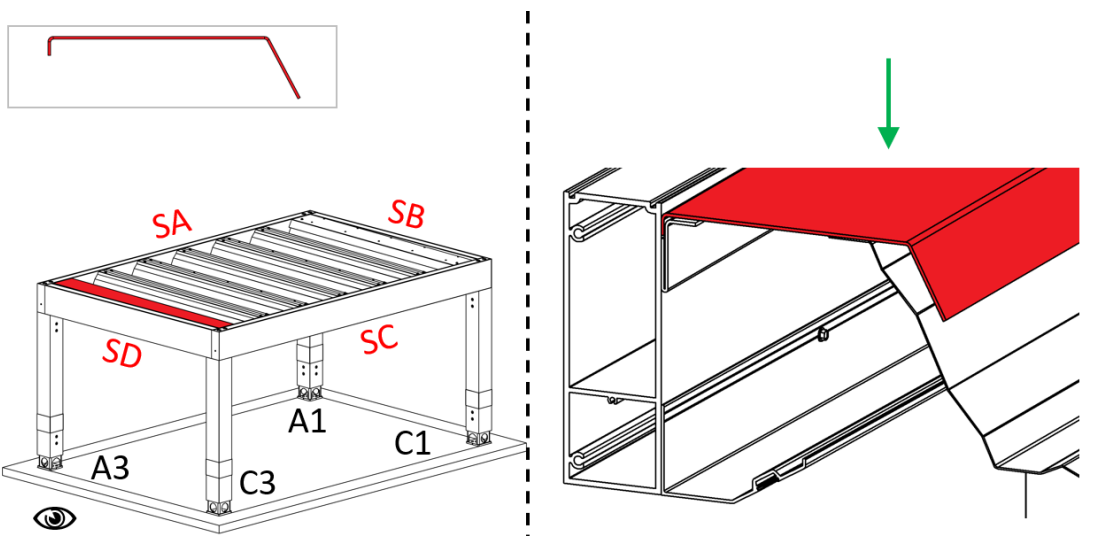
INSTALLATION – TRAPEZOIDAL – ROOFING



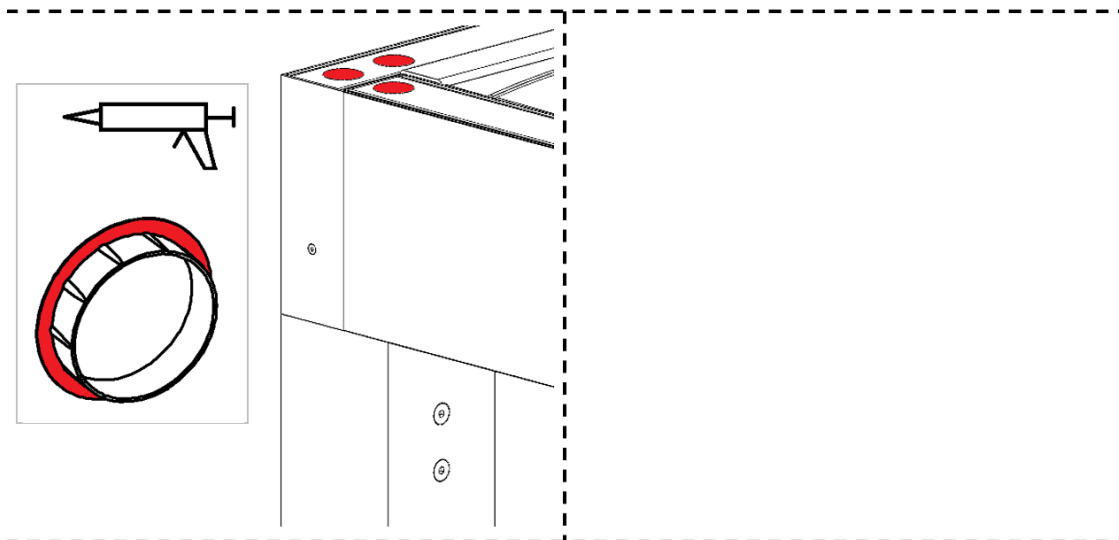
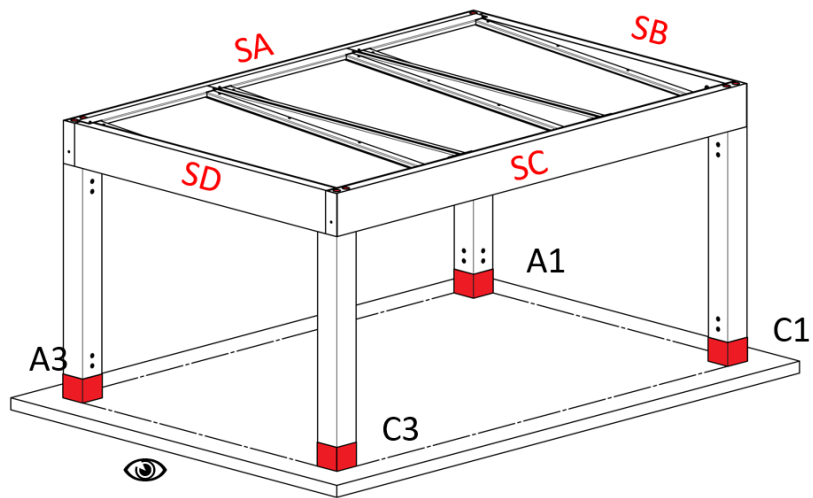
INSTALLATION – TRAPEZOIDAL – ROOFING



INSTALLATION – TRAPEZOIDAL – ROOFING

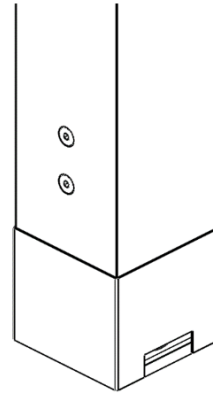
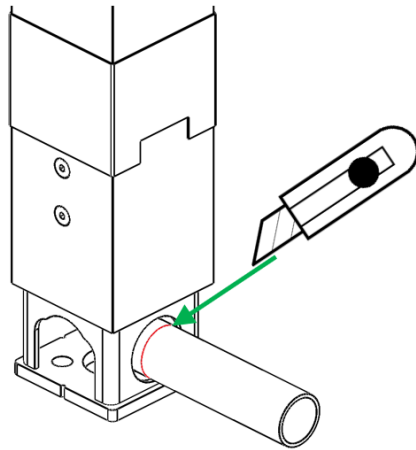


INSTALLATION – POLYCARBONATE / TRAPEZOIDAL – CAPS

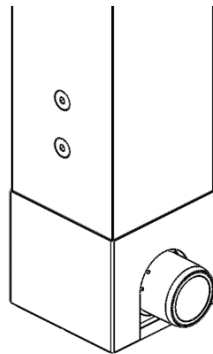
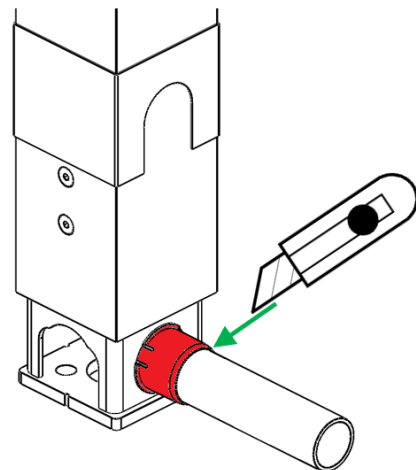
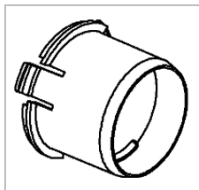


INSTALLATION – POLYCARBONATE / TRAPEZOIDAL – HEMS AND DRAINS


NO



RO



INSTALLATION – ELECTRICAL INSTALLATIONS

Electricity (230 V) must be provided in the carport for electrical appliances installed in the carport (LED lighting). The supply cable must be led to the selected access point, fitted with the supplied Hirschmann connector according to the wiring diagram provided, and connected to the respective Hirschmann connector for connecting the electricity supply.

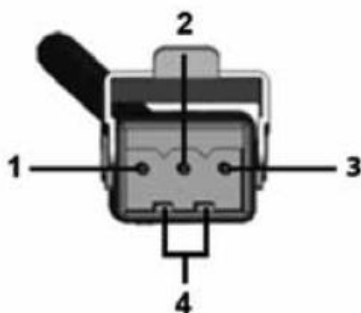
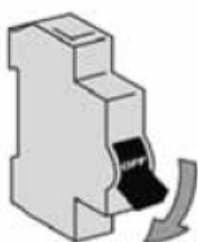
CAUTION: Wiring may only be carried out by a person qualified to do so, in accordance with local regulations.

Recommendation:

As the carport is metallic, we recommend connecting it to an earthing system in accordance with the standard ČSN 33 2000-4-41 ed.3. For wiring, you can use mounting bolts in the perimeter profile or the lower anchoring foot.

WT control

Lighting is controlled by phase switching (e.g., wall-mounted switch). The control elements are not included in the supply. It is necessary to install 1 pc of 3×1.5 CYKY supply cable with switched phase. The access point includes the mounting box with a Hirschmann connector and transformer for LED.

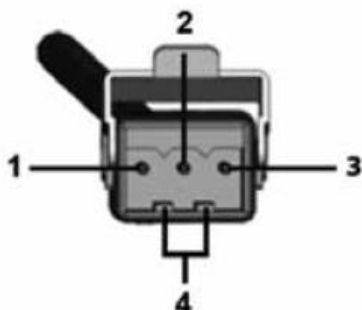
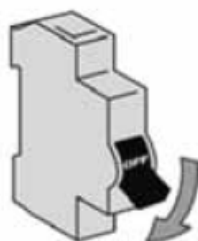


- 1 – Neutral conductor (N)
- 2 – Phase conductor (L)
- 3 – Not connected
- 4 – Protective conductor (PE)

IO control

Lighting is controlled by a remote controller with the Somfy IO protocol. It is necessary to install 1 pc of 3×1.5 CYKY supply cable. The access point includes the mounting box with the central power box with a Hirschmann connector for connecting the power supply cable, the IO receivers for LED and transformer for LED.

LED lighting is never paired with the controller. LED pairing is to be carried out according to the supplied manual for the LED receiver.



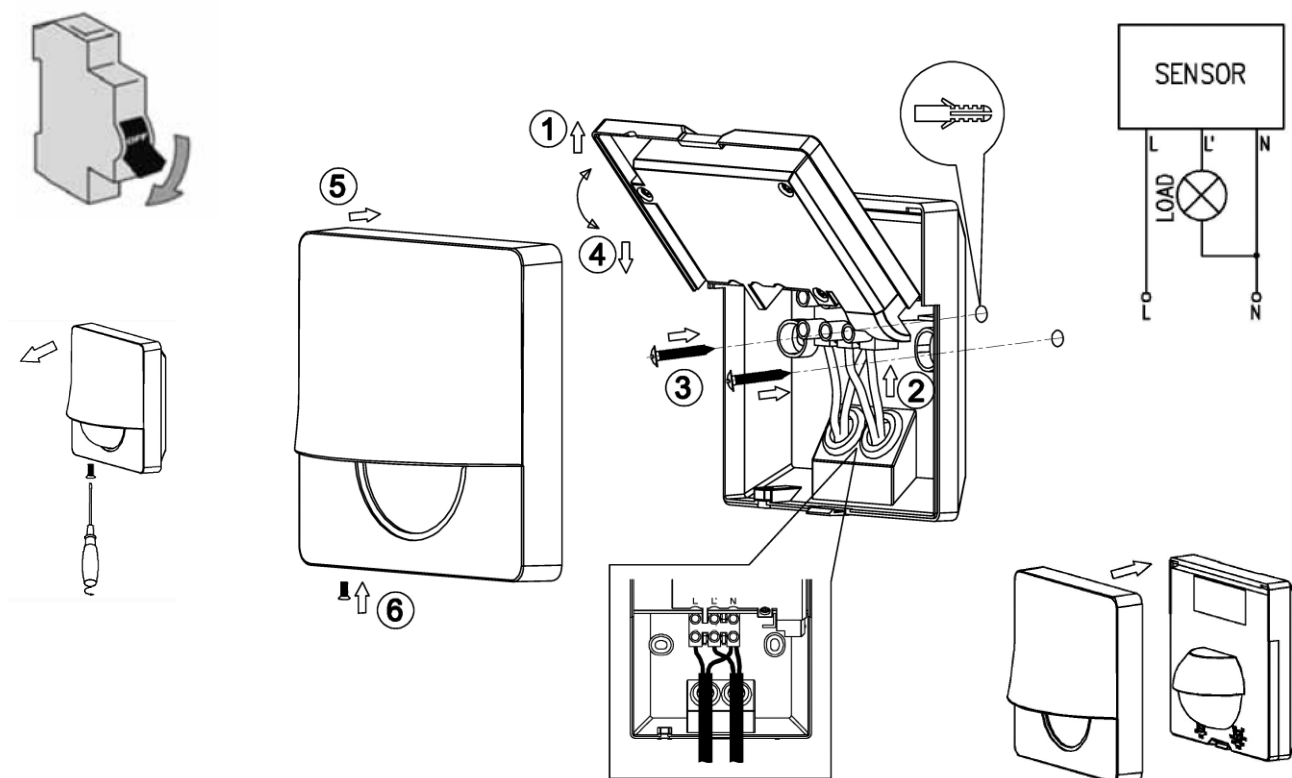
- 1 – Neutral conductor (N)
- 2 – Phase conductor (L)
- 3 – Not connected
- 4 – Protective conductor (PE)

Motion sensor control

Lighting is controlled by a motion sensor. The sensor detects movement and switches the phase. The sensor allows adjusting the ambient light intensity for switching (LUX) and the lighting time (TIME).

The sensor range is up to 12 m, we recommend considering its placement carefully with respect to the environment to prevent unwanted switching. Further recommendations: installation height: 1.8–2.5 m; sensing range: 1600 lx; lighting duration: 10–900 s.

Fit the sensor to its intended place and lead 3×1.5 CYKY supply cable to the sensor. Then connect the sensor to the central power box, installed in the access point with the mounting box. The central power box also includes a dimmer that allows adjusting the constant intensity of the product light intensity. This adjustment is performed upon the initial installation and remains the same throughout the period of use.



INSTALLATION OF SHADING ELEMENTS

We recommend installing the shading elements between the carport poles (mounting in the opening), as an exposed element. Installation between the carport pole and the wall of the installed structure is more complicated, not only as regards the measurement, but also mounting – attaching the guide rails to the wall. We do not recommend anchoring the guide rails to the building's heat-insulation system. In such a case, it is advisable to install the carport pole next to the wall and anchor the guide rail of the screen shutter to the pole. When installing our screen zipper shutters, we recommend using the guide rail type A838 at all times.

With respect to the dimensions of the CARPORT ARTOSI pole (110×110 mm), we recommend using the shutter box size of 110 mm for installing the screen shutters. If a larger shutter box is used and the shutters are installed in the carport corner joints, the rear parts of the boxes will interfere with each other and it will be impossible to install the shutters flush with the outer edge of the perimeter profiles!

Where the carport is installed in an existing structure and the screen shutters are ordered together with the carport, we recommend measuring the sloping away from the structure during the initial measurement. Indicate the measured values in the order form to specify the correct height of the screen shutter (possible different length of guide rails).

In case of an additional installation the shading elements (screen shutters) after a certain period of time after delivering the carport, it is necessary to carefully consider the wiring. It is necessary to carefully determine where openings would be drilled to prevent damaging the existing carport wiring and/or tightness. If the situation requires, cables can be installed to the upper part of the perimeter profile.

It is important to take into account thermal expansion of the aluminium profiles in relation to the ambient temperature when taking measurements and installing screen shutters to the carport. We recommend taking the measurements at an ambient temperature of 23 °C ±5 °C (see Technical Manual for CARPORT ARTOSI).

CARPORT PACKAGING AND STORING

Carport is supplied on a wooden pallet with a cover film or in a wooden crate. We therefore recommend unloading the packed carport from the means of transport using a fork-lift truck. If a fork-lift truck is not available, open the packaging, carefully remove the individual parts of the carport, and place them on a flat surface. In case the carport is not to be installed immediately after unloading, store the carport in its original packaging in a dry place and protect it from direct sunlight.

Prior to unpacking the carport from its original packaging, check that the packaging has not been damaged by transport. Immediately document any and all damage.

Proceed with caution when unpacking the carport, do not use sharp implements (to prevent damage to the varnish). Immediately document any and all damage.

MAINTENANCE AND SAFETY INSTRUCTIONS

MAINTENANCE

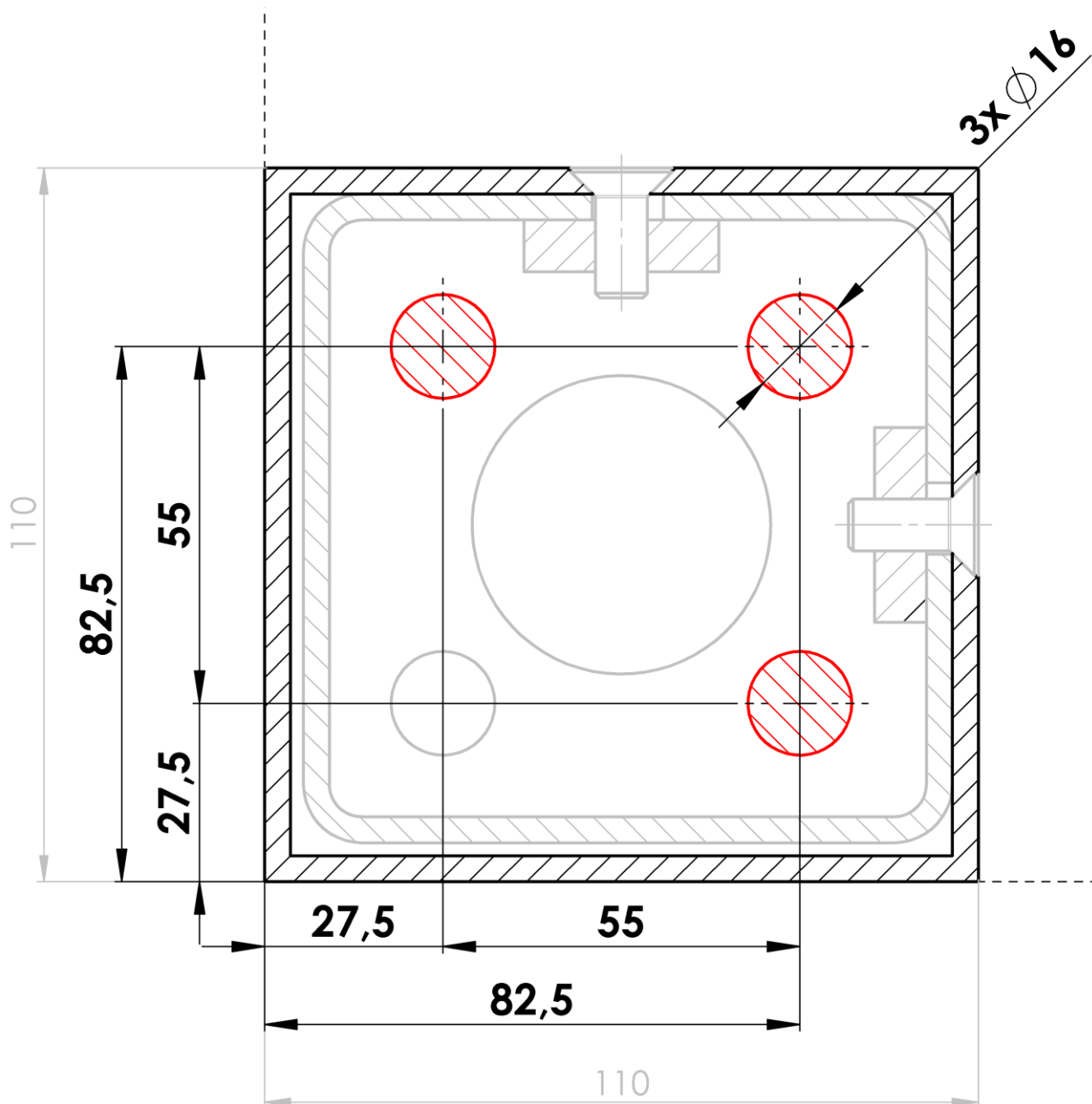
- Regularly remove coarse impurities (e.g., branches from the roof);
- Regularly clean the drain channels, especially remove leaves, to prevent clogging;
- Do not use aggressive cleaning products, such as organic thinners, solvents, scouring pastes and powders, for the cleaning of the structural elements;
- Do not clean by pressure water!

SAFETY INSTRUCTIONS

- If the carport is equipped with further shading elements, roll them up in case of adverse weather;
- Regularly check the carport for any damage;
- If you find any failure or damage, contact your system supplier.

Due to continuous product improvements, technical information stated herein do not necessarily correspond to the actual condition of the carport supplied.

FOOT, HIDDEN [1:1]



FOOT, EXTENDED [1:1]
