

IP68 RCP



**RESIN BUSBAR  
SOLUTIONS  
FOR ELECTRIC  
DISTRIBUTION**



Installation for **RCP**  
busbar systems.

 **legrand**<sup>®</sup>

**bticino**

A Group brand |  **legrand**

Rev. 13 - 07/2020

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## WARNINGS

These instructions are provided to ensure appropriate storage, correct installation, and efficient use of the system.

Note: carefully read these instructions upon receipt of the material and before installing the system, and putting it into operation.

The installation must be completed by competent and suitably trained personnel, as prescribed by CEI 11-27 and EN 50110-1 standards, corresponding international standards, or specific applicable standards of the individual countries of installation.

In order to guarantee the safety of personnel, the installation activities must only be carried out with the power voltage disconnected, unless otherwise stated.

### WARNING

**When working with electric systems, pay particular attention to the risk of electric shock. Electric shocks can cause serious injury, or even death.**

**NOTE: Do not tamper or perform modifications to products manufactured by BTicino S.p.A. without written authorization by manufacturer.**

**BTicino S.p.A. does not authorize any kind of repairs. All tampering, or modifications not authorized in writing by BTicino S.p.A. will void the product warranty.**

### WARNING

#### HAZARD OF CRUSHING, FRACTURES AND CHEMICAL EXPOSURE

- **Wear personal protective equipment when handling and installing the products (long sleeved jacket, trousers, gloves, safety shoes, helmet, and safety glasses).**
- **Only personnel who have been trained in safety regulations may work on construction sites to install cast resin busbar systems.**
- **Work with extreme caution and follow the instructions provided in the manual.**
- **Follow all the safety instructions described in the material safety data sheets while working with chemicals.**
- **Failure to follow these instructions can result in death, serious injury, or equipment damage.**



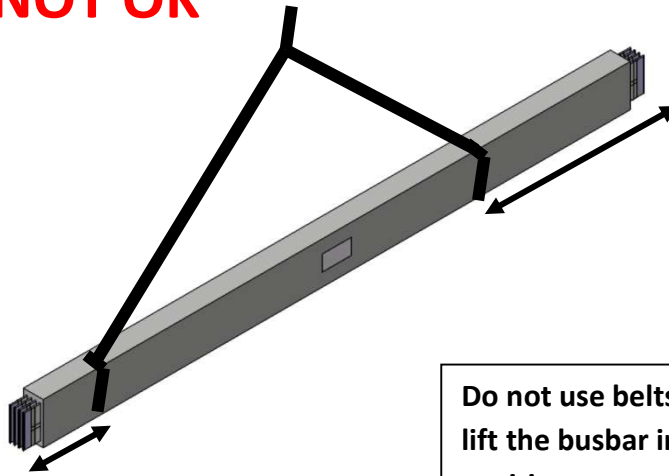
## HANDLING

When handling the material, comply with the regulations for safety in the workplace pursuant Leg. Decree No. 81 dated 09/04/2008 (Consolidated act on safety in the workplace).

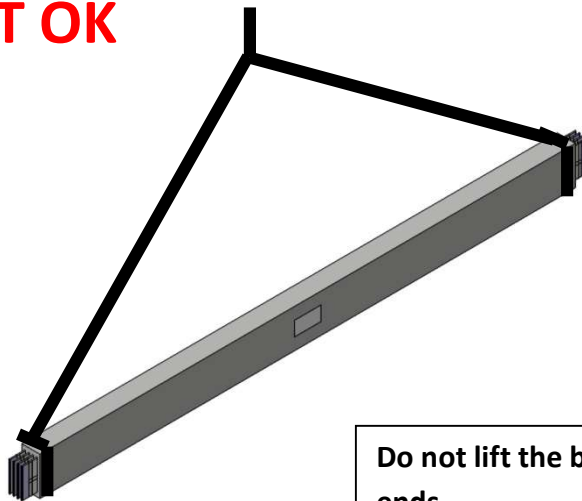
Follow the indications supplied to prevent damage to materials, or risks to personnel.

Below are the instructions to follow for a correct material handling.

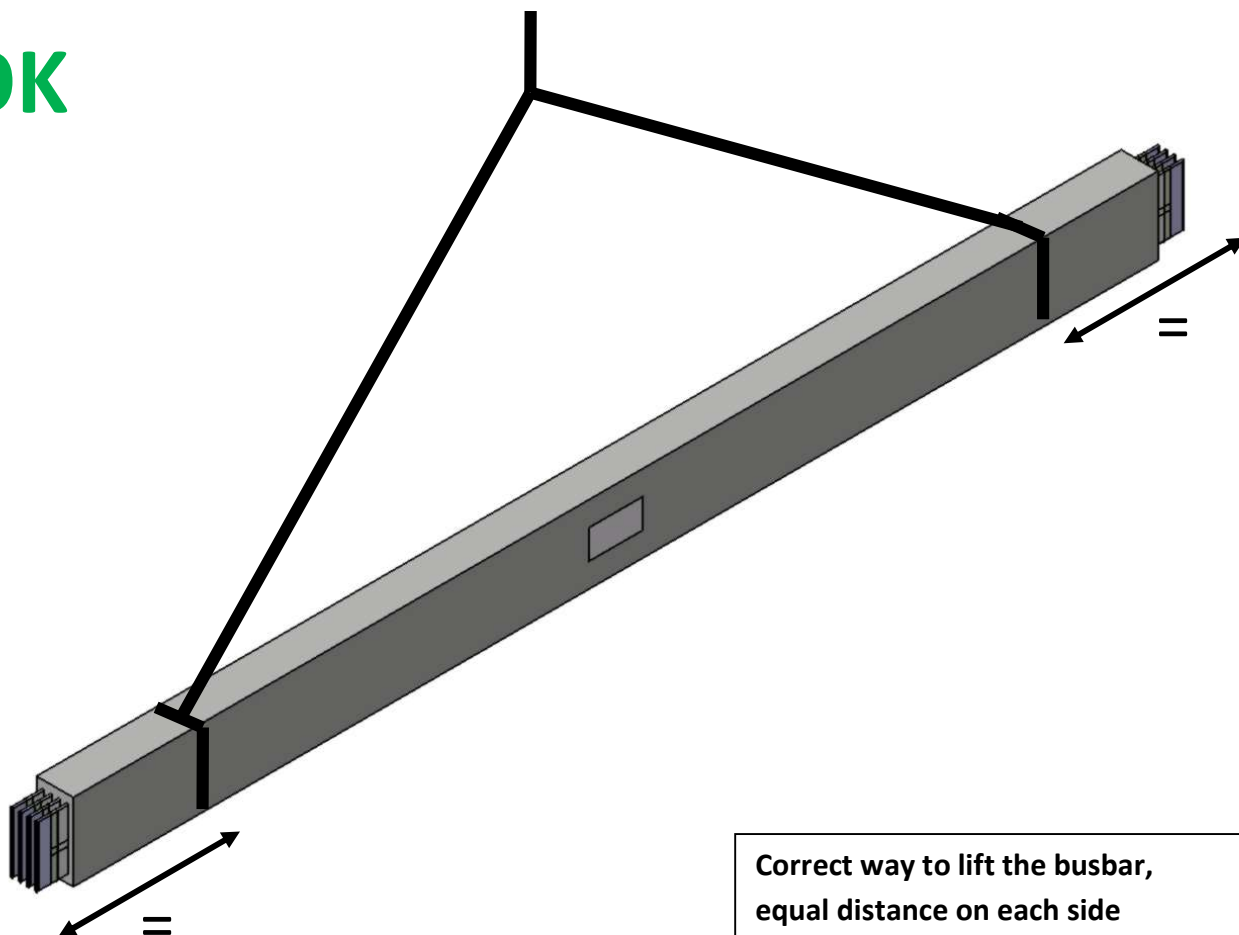
- 1 When opening the packaging, always pay the utmost attention and wear the correct PPE.
- 2 To open wooden cases, in which the materials are dispatched to protect them, use a claw hammer and correct personal protective equipment.
- 3 Handle the busbars with due care and attention. Do not subject busbars to torsions, dents, violent impact, or sharp movements that may damage their internal components.
- 4 Do not lift the busbars from their ends. This could not just damage the busbar, but also cause injury to the personnel carrying out the operation. When using a crane to install the busbar, use nylon slings to balance the weight.
- 5 When not installing the busbar immediately upon receipt, ensure appropriate storage for the time required before installation, following the storage instructions.
- 6 Do not drag the busbar along the floor. This could cause irreversible damage.
- 7 To correctly move busbars, cranes shall be used. These would enable to lift the busbars from the floor very easily.
- 8 Do not move already assembled busbars, as this would cause stress at the point of the electric joint.
- 9 The information regarding the disposal of the components necessary to make the junctions are indicated in the paragraph "Disposal kit" on page 31.

**NOT OK**

Do not use belts or other system to lift the busbar in unbalanced position.

**NOT OK**

Do not lift the busbars from their ends

**OK**

Correct way to lift the busbar,  
equal distance on each side

## GOOD RECEPTION

Upon receipt of the goods check the following:

- 1 integrity of the packaging, and the goods, if delivered in a see-through package
- 2 consistency of the material with the Delivery Note and the packing list, if supplied
- 3 consistency of the material with the order acknowledgement details

In case of any disclaims, please inform us in writing following the instructions found in the notifications section.

## NOTIFICATIONS

In case of any disclaim, please forward your official complaint to the [ITPostVenditaZucchini@bticino.it](mailto:ITPostVenditaZucchini@bticino.it) e-mail address.

Whenever possible, with each notification, attach photos of the items affected.

When notifying that a wrong item has been received, please indicate the item code no. found on the packaging, and the item code no. found on the part (if possible include a photo of the labels).

In case of damaged material, attach photos of the affected part and the packaging (if present).

In case of hidden damage (outer packing undamaged, material inside damaged), or if the transport was the responsibility of BTicino, please contact us immediately so that we may initiate a complaint procedure against the freight forwarder.

We remind you that the maximum limit for a hidden damage complaint is 7 days from the receipt of goods.

We recommend that upon receiving the goods, the integrity of the packaging is checked WITH THE FREIGHT FORWARDER PRESENT. If you find that the packaging has suffered damage and/or collisions of varying degree, please write MATERIAL RECEIVED DAMAGED on the Delivery Note, to enable us to initiate a complaint procedure against the freight forwarder. If the freight forwarder stops you from indicating on the Delivery Note that the goods have been received in damaged condition, or from performing the visual inspection, we suggest that you DO NOT ACCEPT THE DELIVERY. This procedure will enable us to immediately initiate the complaint procedure against the freight forwarder, and to quickly replace any damaged material received. If the transport is at your charge, we recommend that you immediately issue a complaint against the freight forwarder.

## STORAGE

Below are the instructions to follow for a correct storage of the materials. Failure to comply with the indications supplied may cause damage to the materials, and make the product warranties void.

Store the material in a dry place, protected from weather conditions such as rain and humidity, to prevent the formation of condensation inside the busbars.

Also ensure that the busbars are protected from smoke, water, soil, mud, dust, or dirt in general. Position the material in a way that prevents a physical damage to it. We recommend to not store the busbars outside.

It is recommended that the material is stored indoor, in a dry location. In case of storing the busbars outside for short-medium periods, ensure that it is appropriately protected, to avoid accidental infiltration of water, which will result in them being damaged.

The busbars can be transported and stored at a temperature between -25°C and +55°C. **Do not store the cast resin mix in direct sunlight, below 5 °C or above 40 °C.** (Prior to casting, store all the junction kit components at a temperature between 18°C and 25°C for at least 24h.)



## PRELIMINARY INSTALLATION INSTRUCTIONS

Before the installation, all material should be inspected for damage.

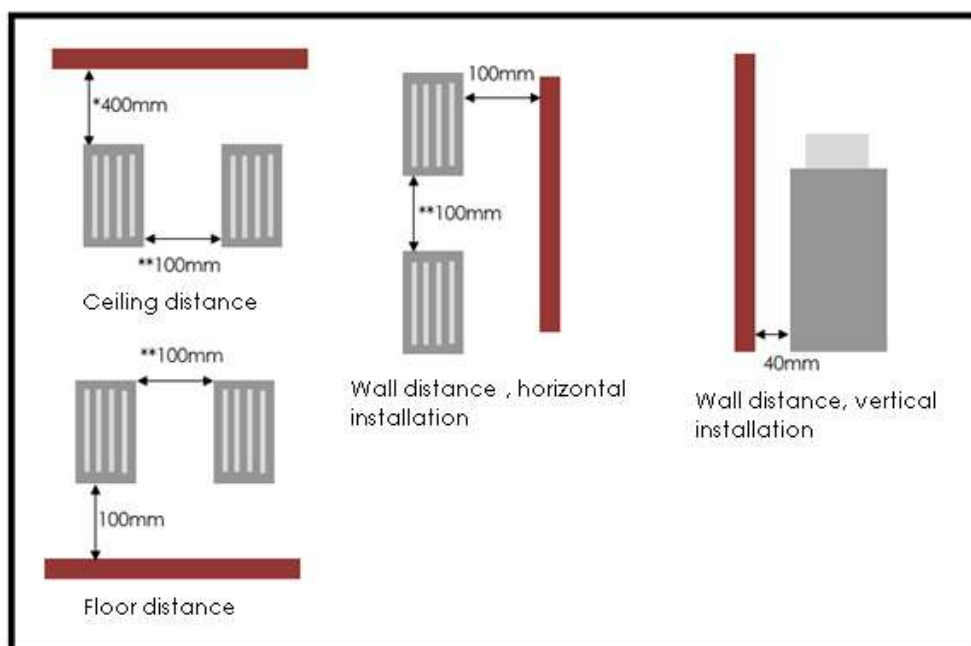
When installing the busbars comply with the following:

- 1** For the installation only use bracketing systems supplied by BTicino, and follow the instructions found in the catalogue or enclosed with the item.
- 2** Only use accessories supplied by BTicino.
- 3** Check that the element's position coincides with what indicated on the project drawing.
- 4** Check that the system operating current does not exceed the product rated current, downgrading it if required.
- 5** Check if the busbar capacity must be downgraded (for example due to high ambient temperature, presence of harmonics, etc.)
- 6** Before using the junction kit checks that the resin is clear and liquid. Do not use the resin if it is milky or crystallized. Check that the filler material/sand is dry.
- 7** The minimal temperature to pour the junction is 5°C.
- 8** Before start pouring the junction be sure that all the elements of the line are in the correct position.

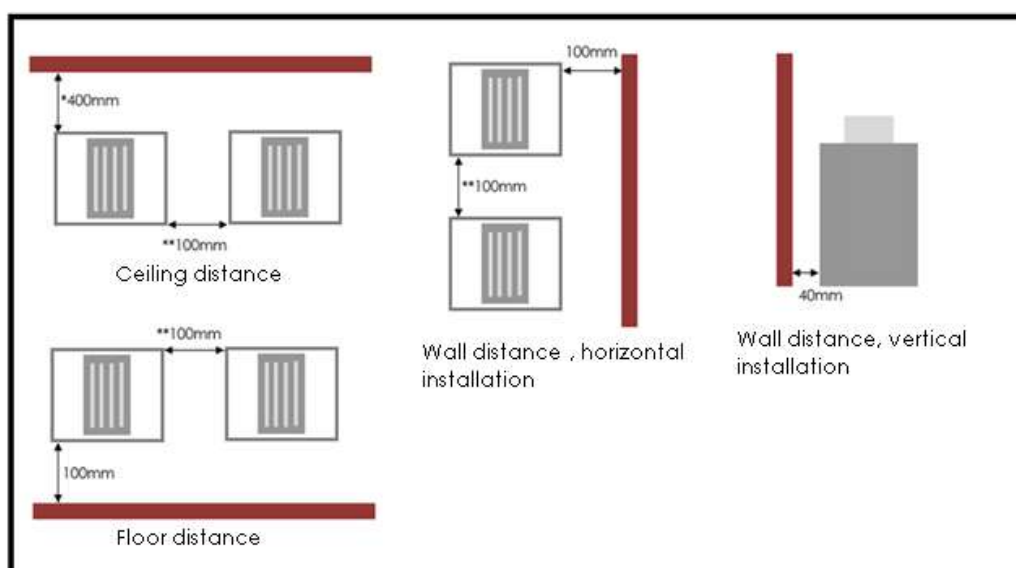
## Distances and dimensions

When positioning the elements, pay attention to the distances from the ceiling, wall and floor. The minimum distances indicated are essential to avoid problems when pouring the resin into the joint. The above distances apply to all current values of the RCP busbars (from 630A to 6300A). Below are the minimum distances

### Minimum distance for path elements



### Minimum distance for expansion



\*Minimum recommended distance to be able to pour the resin mixture in the junction

\*\* This distance can be reduced to 80mm if the supports are not installed one beside the other and NEVER with the solutions 5000A Al and 6300A Cu.

## Applications underground

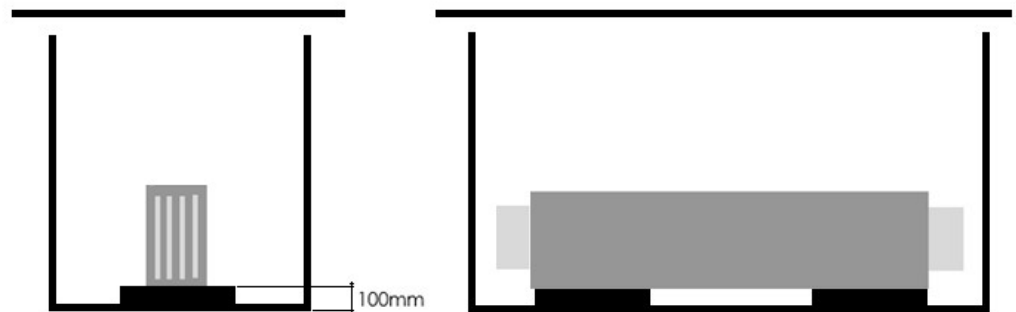
If the busbars are installed underground, it is mandatory to install them inside a duct.

The use of solid supports is recommended to support the busbars along its entire length.

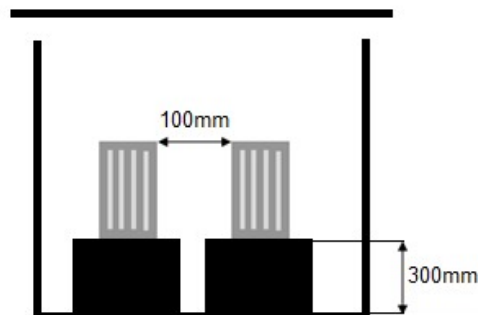
It is also suggested to provide a top cover.

With regard to the distances, it is mandatory to maintain the distances from the side walls and ceiling previously seen. For ground distances, follow the quotas below:

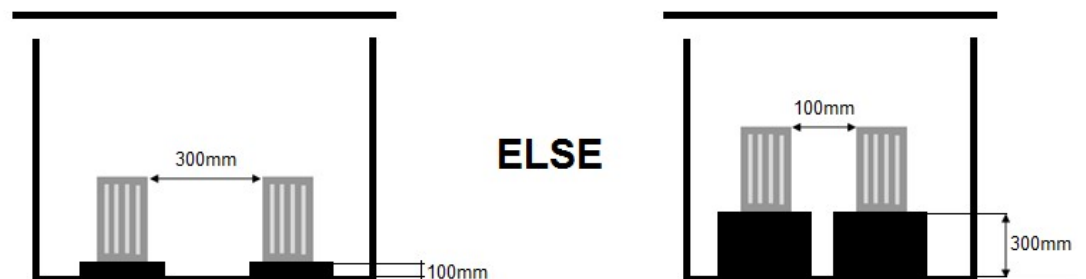
### Minimum distances for path and expansion elements



### Minimum distances for path elements and dilatations 5000A Al and 6300A Cu



### Minimum distances for path elements and expansions installed in parallel NOTICE



Pay attention to the positioning of the solid supports to prevent them from being positioned near the junctions where the joining castings must then be made.

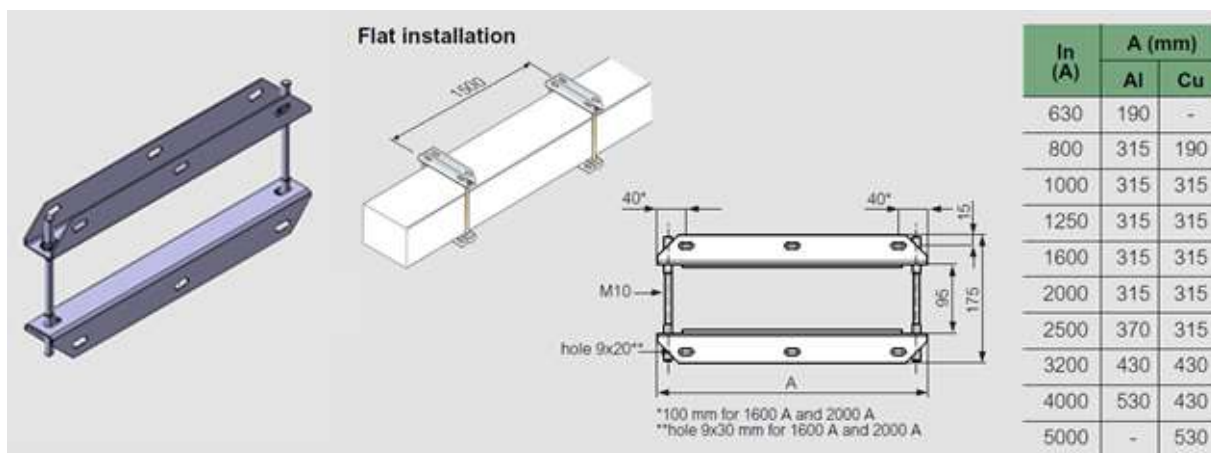
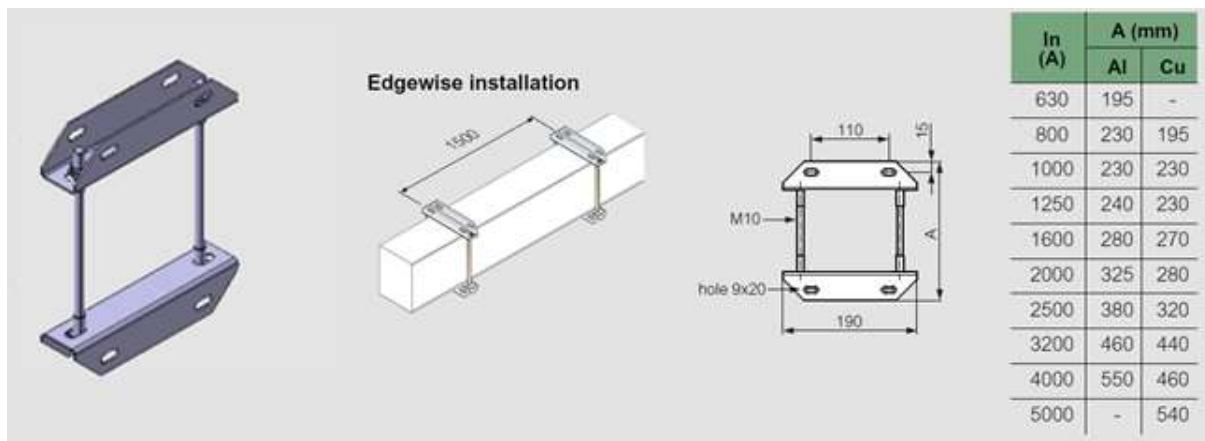
If the prescribed distances are not respected, the mold of the junctions kit can no longer be removed after casting.

## Types of supports

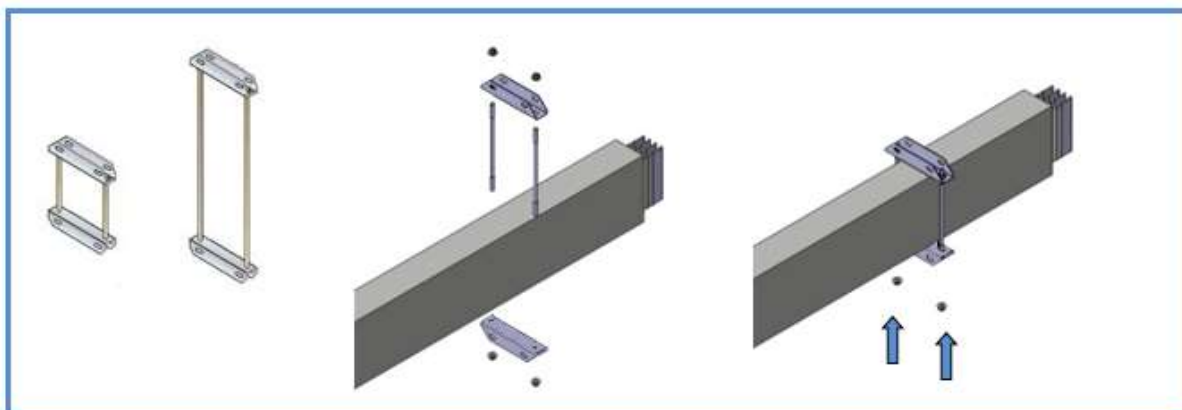
There are brackets for vertical and for horizontal suspension, on request we have brackets solution for aggressive environments.

### HORIZONTAL SUSPENSION BRACKET

The brackets enable sturdy installation of the busbar to the system support structures. The recommended installation distance between brackets is 1.5 meters



## ASSEMBLY

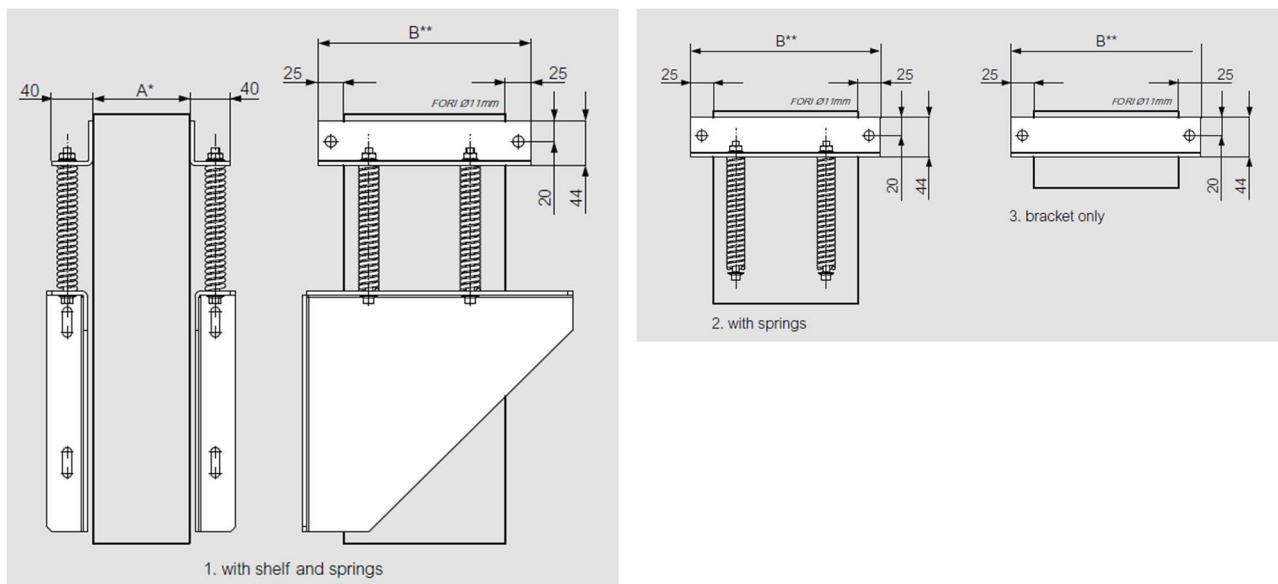
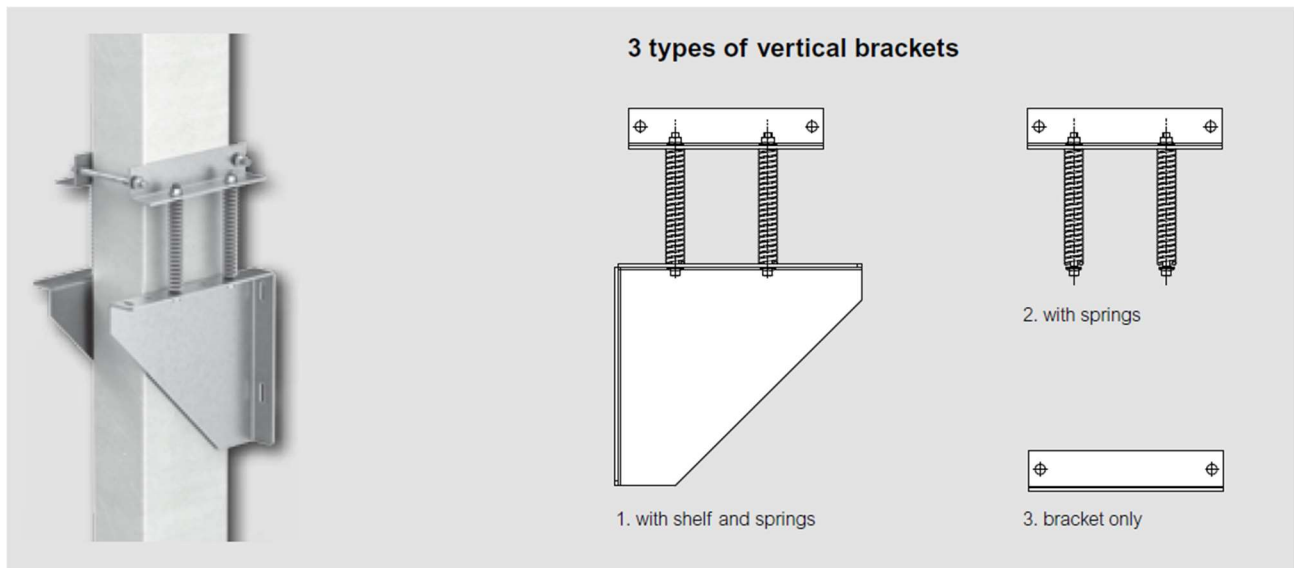


## NOTICE

Tighten the nuts to 25 Nm.

## VERTICAL SUSPENSION BRACKET

In case of rising mains, thanks to pre-load springs (see page 18), these brackets absorb the forces pressing on the busbar and direct any expansion in a precise direction. They therefore operate as a limitation, and support the traction and compression forces of the busbar trunking system.



A\*: Depending of the quantity of requested conductors

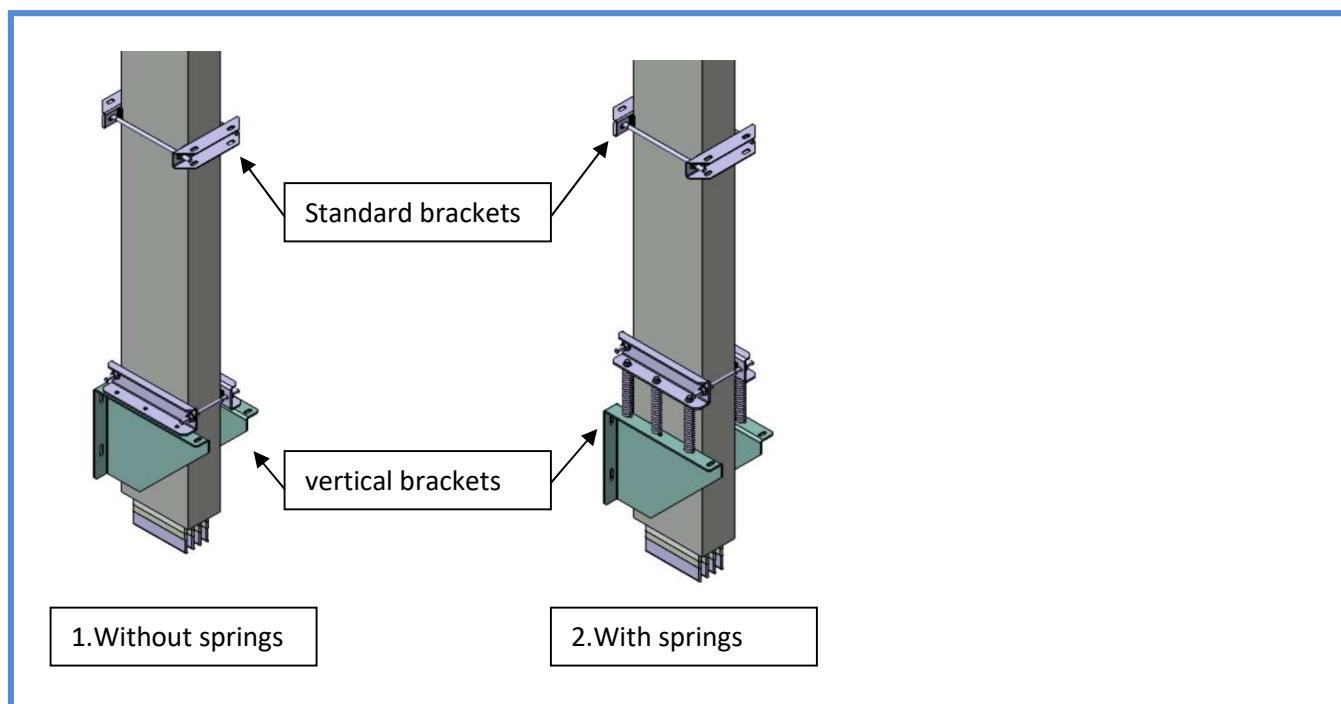
B\*\*: Depending of the rating of busbar

## Rules for supports installation

- 1 A support shall never coincide with a junction
- 2 For easier leveling, always use two supports for each element.
- 3 Always maintain a distance of at least **530 mm** between the center of junction and the support on one side of the junction to be able to assemble the junction kit.
- 4 The minimum distances between the installed elements, walls, and ceilings must be taken into account while installing the supports, as shown before ( distance and dimension Paragraph ).
- 5 Mount all supports on the wall in the corresponding locations before installing the cast resin busbar trunking system.
- 6 Mark the anchorage holes on the wall, using the support as a template.
- 7 Use the appropriate anchor bolts for the weight to be supported ( see the table below ).
- 8 Ensure the support has the correct number of springs ( see the table below ).

MATERIAL	RATING (A)	QUANTITY OF SPRINGS	MAX LOAD PER BRACKET (KG)
AL	630	4	300
	800	4	300
	1000	4	300
	1250	4	300
	1600	6	300
	2000	8	600
	2500	8	600
	3200	12	600
	4000	12	600
CU	800	4	300
	1000	4	300
	1250	4	300
	1600	6	300
	2000	6	300
	2500	8	600
	3200	8	600
	4000	12	600
	5000	12	600

There are two different configurations:

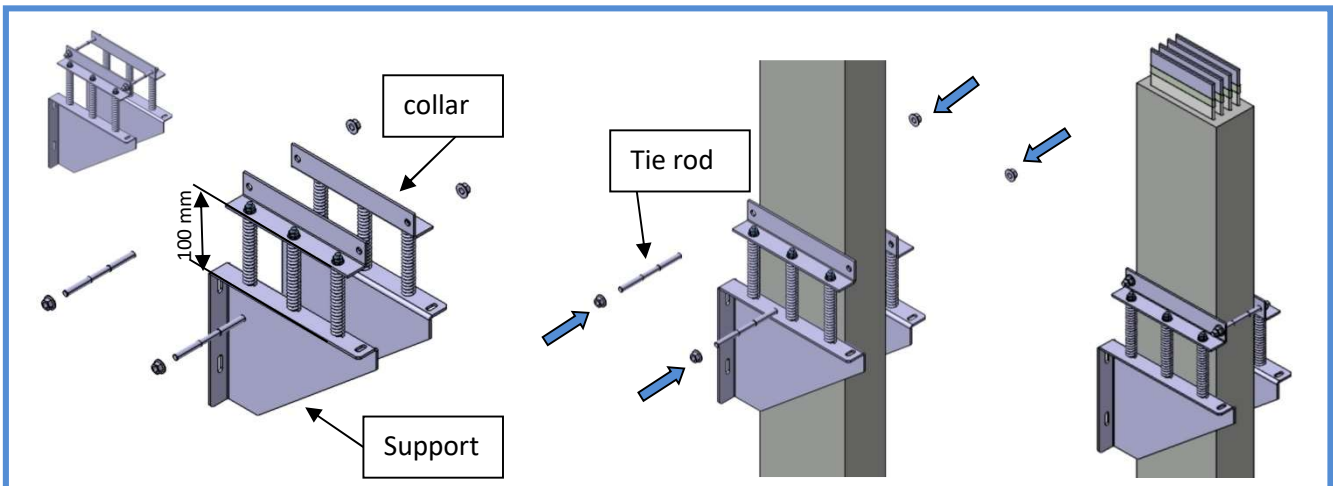


**Configuration 1** : use this configuration if the section line is between 2 and 4 meters. The vertical bracket must be secured to the wall; the standard bracket must be secured to shelves which can guarantee the load. The normal distance between standard brackets should be 1.5 meters.

**Configuration 2** : use this configuration if the section line is over 4 meters. The vertical bracket must be secured to the wall; the standard bracket must be secured to shelves which can guarantee the load. The normal distance between standard brackets should be 1.5 meters.



## ASSEMBLY

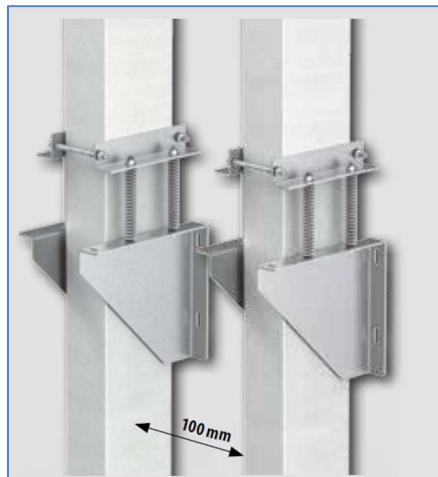


The brackets with springs for the vertical solution must be installed as shown in the previous figure and following the indications reported in their instruction sheet. In case vertical brackets without springs are used, it is first necessary to fix the tie rods and the collar to the bar and then fix the collar to the support. Tighten the nuts to 30 Nm.

## NOTICE

For the 5000 A (Al) and 6300 A (Cu) solutions, please take the following indications into account.

The minimum distance between two bars is 100 mm.



- Vertical solution:

the figure shows how to carry out a vertical installation for the two solutions 5000 A (Al) and 6300 A (Cu);

- Necessary brackets:

RCP 5000 A (Al) = consider 2 brackets of 2500 A (Al)

RCP 6300 A (Cu) = consider 2 brackets of 3200 A (Cu)

## ACCESSORIES

If you do not use supports supplied by Bticino to fix the busbar, you must verify the support capacity load of your supports. You can use the following technical data:

4P - (3P+N) without earth - STANDARD



4P - (3P+N)+Pe1



RCP – 4 CONDUCTROS – ALUMINIUM*												
		SINGLE BARS						DOUBLE BARS			2 x 2500 DOUBLE BARS	
Rating	A	630	800	1000	1250	1600	2000	2500	3200	4000	5000	
Weight (RCP Standard 4P)	Kg/m	29.2	35.4	35.4	37.5	46.9	57.6	72.7	91.2	110.3	72.7	72.7
Weight (4P+PE 1)	Kg/m	29.9	36.3	36.3	38.4	47.8	58.5	74.4	93	112.1	74.4	74.4

\*For more information contact us or check the RCP catalog

RCP – 4 CONDUCTROS – COPPER*												
		SINGLE BARS						DOUBLE BARS			2 x 3200 DOUBLE BARS	
Rating	A	800	1000	1250	1600	2000	2500	3200	4000	5000	6300	
Weight (RCP Standard 4P)	Kg/m	41.1	50.4	50.4	65.1	71.4	89	127	141	173.6	127	127
Weight (4P+PE 1)	Kg/m	41.9	51.3	51.3	65.9	72.3	89.9	129	143	175.4	129	129

\*For more information contact us or check the RCP catalog

RCP – 5 CONDUCTOS – ALUMINIUM*												
		SINGLE BARS						DOUBLE BARS			2 x 2500 DOUBLE BARS	
Rating	A	630	800	1000	1250	1600	2000	2500	3200	4000	5000	
Weight (RCP Standard 5C)	Kg/m	39	48.2	48.2	52.4	67.1	83.1	102	131	160.5	102	102
Weight (5C+PE 1)	Kg/m	39.8	49.1	49.1	53.3	68	83.9	104	133	162.3	104	104

\*For more information contact us or check the RCP catalog

RCP – 5 CONDUCTOS – COPPER*												
		SINGLE BARS						DOUBLE BARS			2 x 3200 DOUBLE BARS	
Rating	A	800	1000	1250	1600	2000	2500	3200	4000	5000	6300	
Weight (RCP Standard 5C)	Kg/m	48.2	59.3	59.3	76.7	84.5	105	150	166.6	205.7	150	150
Weight (5C+PE 1)	Kg/m	49	60.2	60.2	77.6	85.4	106	152	168.4	207.5	152	152

\*For more information contact us or check the RCP catalog

RCP – 3 CONDUCTOS – ALUMINIUM*												
		SINGLE BARS						DOUBLE BARS			2 x 2500 DOUBLE BARS	
Rating	A	630	800	1000	1250	1600	2000	2500	3200	4000	5000	
Weight (RCP Standard 3C)	Kg/m	23.9	28.8	28.8	30.4	38	46.6	59.1	74	89.3	59.1	59.1
Weight (3C+PE 1)	Kg/m	24.6	29.7	29.7	31.3	38.9	47.5	60.9	75.8	91.1	60.9	60.9

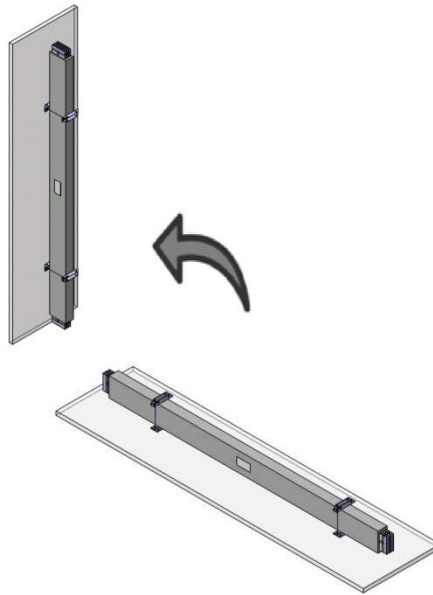
\*For more information contact us or check the RCP catalog

RCP – 3 CONDUCTOS – COPPER*												
		SINGLE BARS						DOUBLE BARS			2 x 3200 DOUBLE BARS	
Rating	A	800	1000	1250	1600	2000	2500	3200	4000	5000	6300	
Weight (RCP Standard 3C)	Kg/m	32.4	40.2	40.2	50	57.8	71.2	97.5	114.4	138.9	97.5	97.5
Weight (3C+PE 1)	Kg/m	33.2	41.1	41.1	50.9	58.7	72.1	99.3	116.2	139.88	99.3	99.3

\*For more information contact us or check the RCP catalog

## VERTICAL INSTALLATION

It's possible install busbars in vertical position



## JUNCTION INSTALLATION

### WARNINGS

- 1** Read all the instruction sheet (attached with mould kit) before starting the installation
- 2** Ensure that all contact surfaces are clean and free of impurities.
- 3** Ensure that the monoblock is exactly in-between two elements to be joined.
- 4** Do not knock or hit the junction block hard when you insert it. Instead, insert it carefully to avoid damaging the elements. A rubber hammer can be used as an aid.
- 5** Double check phase sequence on all terminal elements using a voltmeter.
- 6** Before casting, check the insulation resistance using an insulation tester with 1000 V rating. The insulation resistance for each element should be  $\geq 100 \text{ M}\Omega$ .
- 7** Prior to casting, store all the junction kit components at a temperature between 18°C and 25°C for at least 24h.
- 8** Before casting make sure that the element corresponds to the ones shown in the drawing (check item and reference present in the label).
- 9** Do not eat, drink, or smoke on the work site.
- 10** Use protective overalls, gloves, glasses, and masks.
- 11** In the event of unintentional spillage, clean with inert absorbent material (sand) and store the contaminated material in an appropriate container before disposal.
- 12** Ensure good ventilation of working areas and avoid inhalation of vapor.
- 13** Before mixing resin and hardener be sure resin is clear and without crystallization.
- 14** Do not cast at ambient temperature below 5°C or above 35°C.

**15** Delay casting if the required ambient temperatures cannot be maintained for a minimum of 6 hours.

**16** Wash hands thoroughly with soap and warm water after work.

**17** Before start pouring the junction be sure that all the elements of the line are in the correct position.

**18** To dispose of the joint kit, see the paragraph "DISPOSAL OF CONJUNCTION KIT" on page 32.

## PROCEDURE

Before starting ensure to have all the materials:

**0** Personal protective equipment as indicated on the SDS of quartz, resin and hardener

**1** Resin and hardener ( ZU-65200002R / ZU-65200003R\* ).

**2** Filler mix and bucket ( ZU-65200001R ).

**3** Mould kit with release agent.

**4** Rubber hammer and wrench

**5** Brush

**6** Industrial mixer (rated 750 W or above)

**7** Screwdriver

**8** Clamping tools ( only for vertical junction)

**9** Metallic rasp or grinding stone

\*For junction casting in environment temperature between 5°C to 18°C , you have to use the code ZU-65200003R

For junction casting in environment temperature between 18°C to 35°C , you have to use the code ZU-65200002R

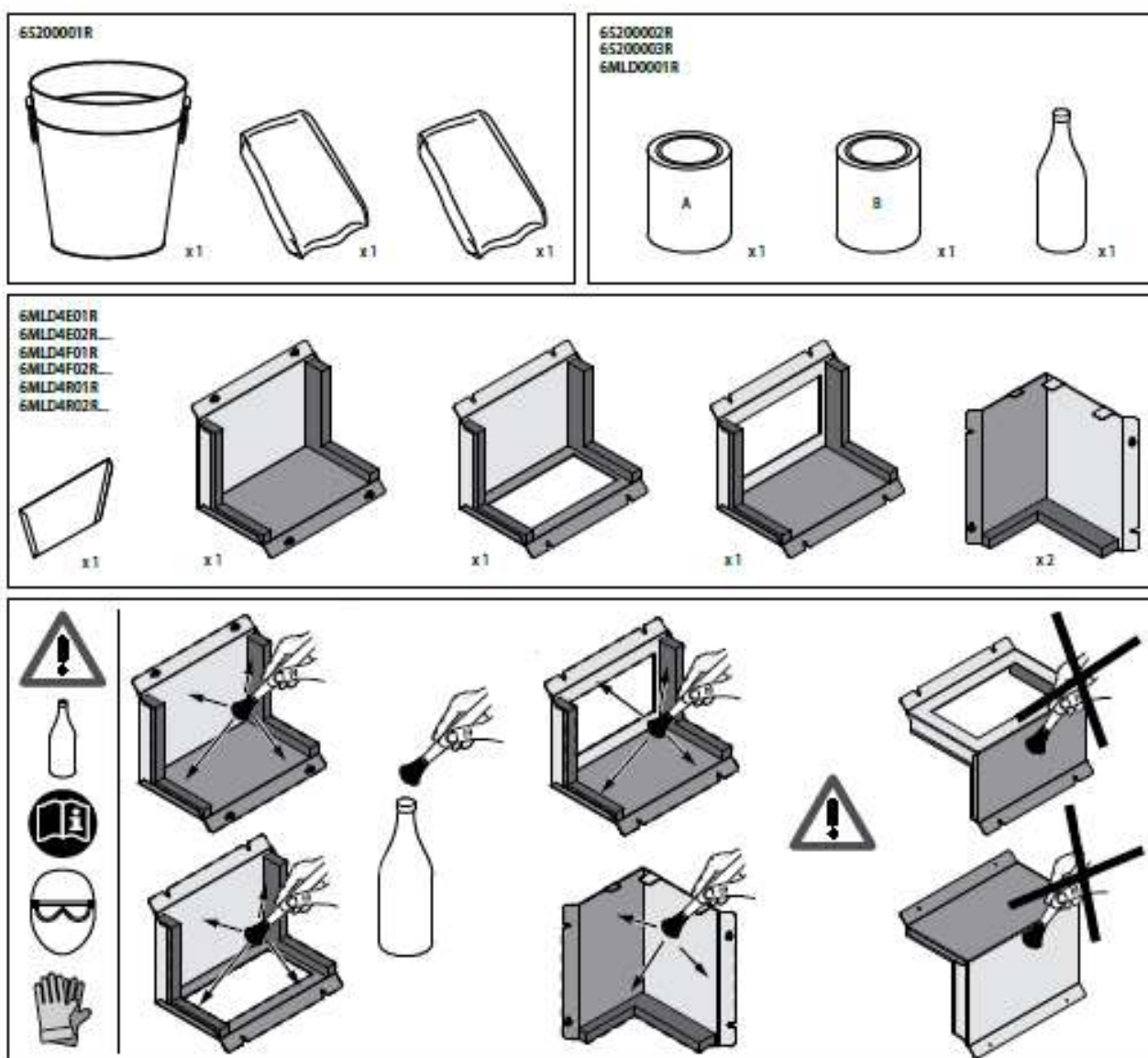
One junction kit ( resin + hardener + filler ) could be used for more than a junction, please check the tables below:

RCP 4 CONDUCTORS JUNCTION					
Material	Rating (A)	Number of junction per kit	Material	Rating (A)	Number of junction per kit
ALUMINIUM	630	2,50	COPPER	800	2,50
	800	2,65		1000	2,65
	1000	2,65		1250	2,65
	1250	2,70		1600	2,20
	1600	2,30		2000	2,30
	2000	1,90		2500	1,90
	2500	1,40		3200	1,15
	3200	1,15		4000	1,15
	4000	1,00		5000	1,00
	5000	0,70		6300	0,55

RCP 3 CONDUCTORS JUNCTION					
Material	Rating (A)	Number of junction per kit	Material	Rating (A)	Number of junction per kit
ALUMINIUM	630	3,00	COPPER	800	3,00
	800	3,00		1000	3,00
	1000	3,00		1250	3,00
	1250	3,00		1600	2,60
	1600	2,60		2000	2,60
	2000	2,15		2500	2,15
	2500	1,60		3200	1,30
	3200	1,30		4000	1,30
	4000	1,25		5000	1,25
	5000	0,80		6300	0,65

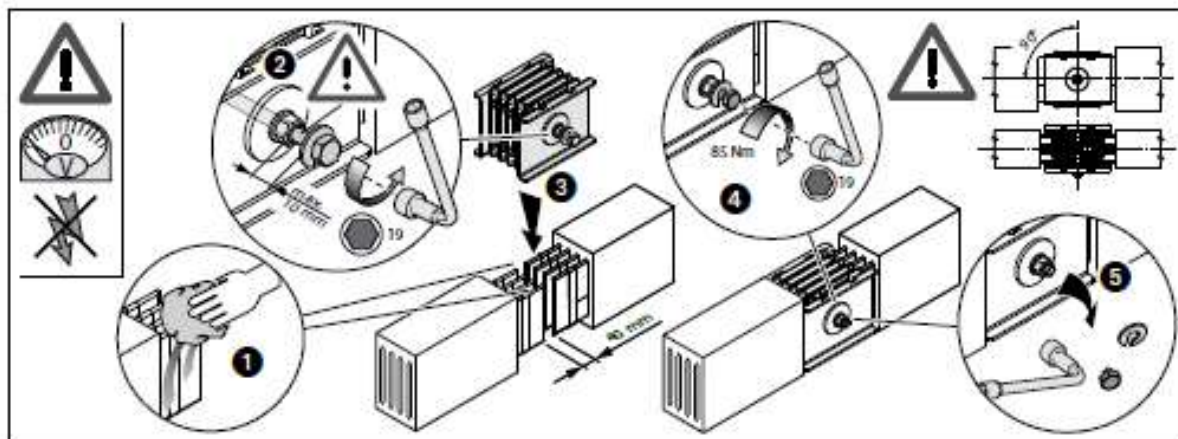
RCP 5 CONDUCTORS JUNCTION					
Material	Rating (A)	Number of junction per kit	Material	Rating (A)	Number of junction per kit
ALUMINIUM	630	2,40	COPPER	800	2,40
	800	2,50		1000	2,50
	1000	2,50		1250	2,50
	1250	2,60		1600	2,10
	1600	2,30		2000	2,20
	2000	1,85		2500	1,90
	2500	1,40		3200	1,10
	3200	1,10		4000	1,10
	4000	1,10		5000	1,00
	5000	0,70		6300	0,55

Make sure that the junction kit and the mould have not been damaged. Apply the release agent abundantly with a brush, covering all the internal surfaces of the mould and the rubbers.



Ensure the correct position of the RCP elements, the distance between bars must be 40mm. Clean the bar's surface, do not remove the surface treatment (if applied). Loosen the block screw/s. Fit the monoblock between the copper or aluminum conductors from above or below. **Align it so that it extends equally on all sides.** If necessary, gently knock the monoblock into place using a rubber hammer.

When the junction block is aligned, the connecting bolts tighten until braking up the nut.



## NOTICE

Dry possible wet parts with hot air at a temperature not higher than 80 °C and remove residues with mild reagents (e.g. trichlorethene) not corroding or creating abrasion on surface treatment (zinc, tin, silver coating) or on contact surface (copper).

Check that the conductive elements are perfectly in contact with the internal plates of the monoblock.

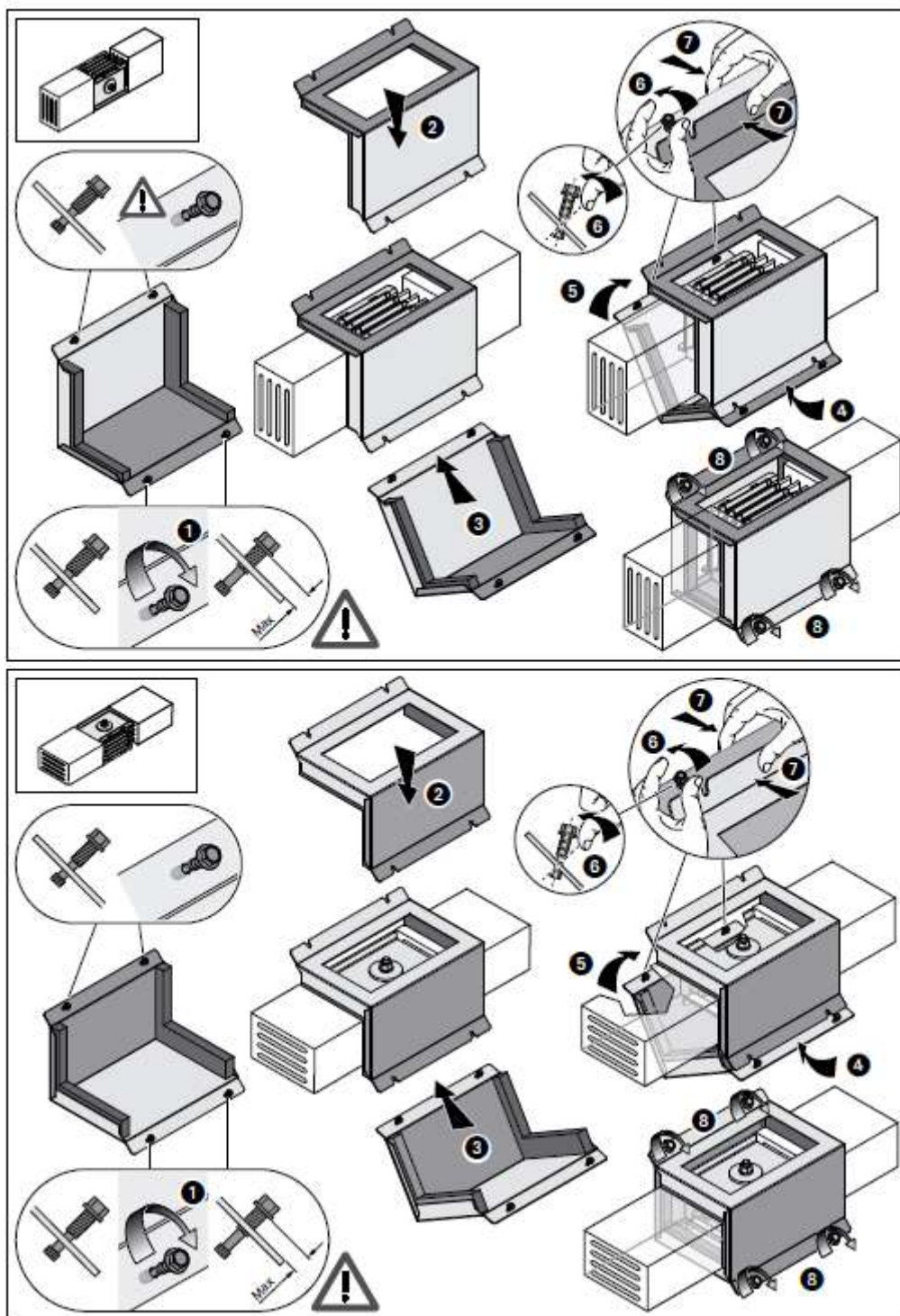
Insulation test at 1000V, with minimum value of 100 MΩ, for each element. The insulation test has to be carried out between phases, between phases and neutral, and between every single phase and the earth (when required ). If results are unsuccessful, identify the element and in case replace it or carry out further tests.



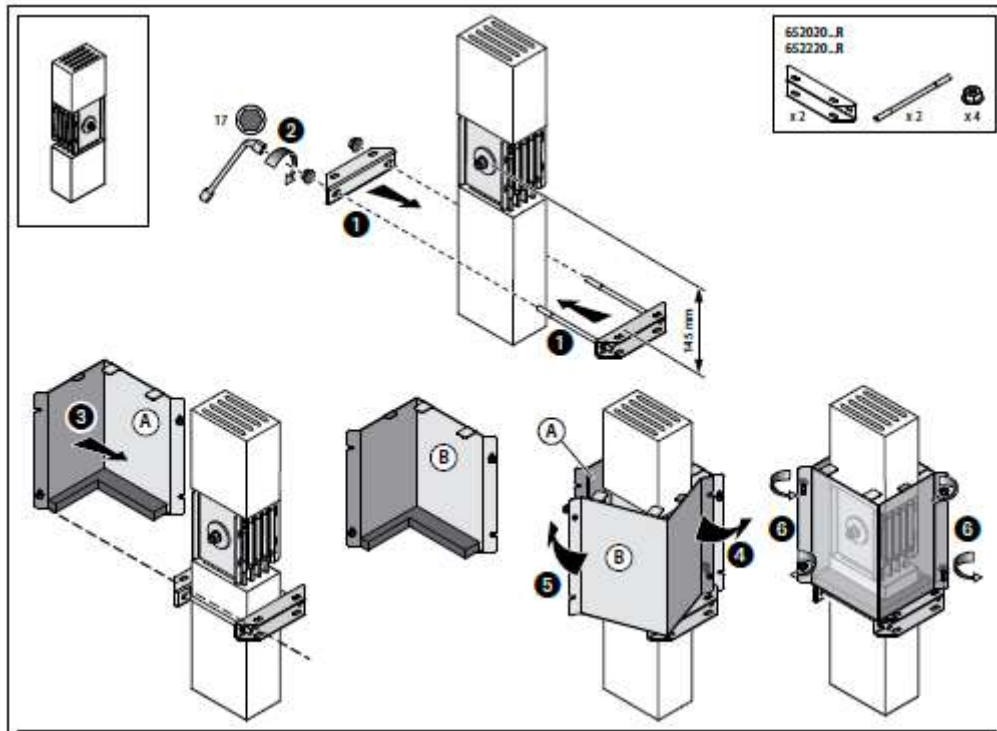
Don't remove screws from mould.

Place the mold without screws on top of the busbar near the mechanical junction and place the other part of the mold under the first part.

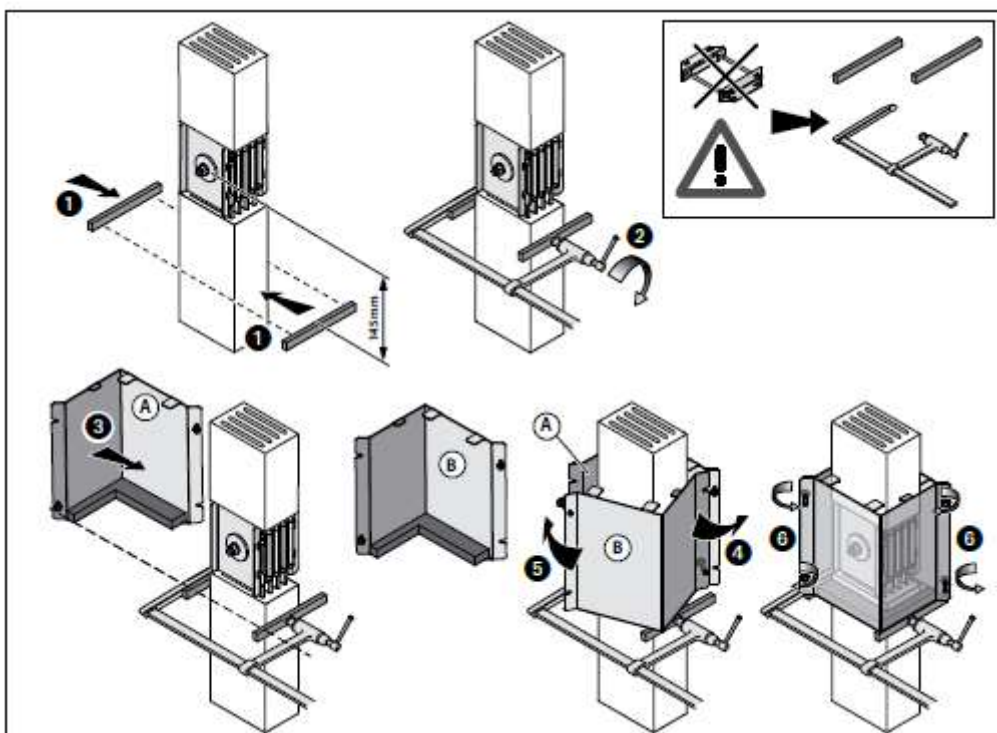
Hook the lower screws of the formwork and then move the upper screws with the fingers, completely hooking the two parts of the formwork. Finally tighten the four screws



In vertical junction use a bracket to keep the mould in the correct position (horizontal suspension bracket - edgewise installation )



If you do not have a bracket or you prefer it, you can use two blocks and one clamping tool to keep the mould in the correct position (in the second case make sure that the blocks do not damage the busbar's surface. We recommend using wooden blocks for this solution.):

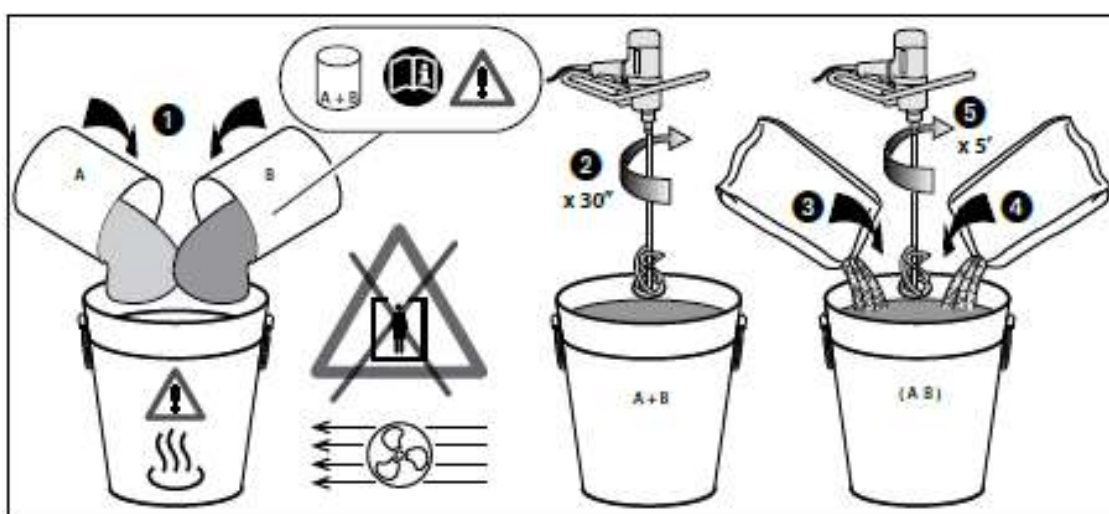


## NOTICE

When the mould have been completely assembled, check that there are no cracks along the sides in contact with the busbars and that the rubber adhere perfectly to them. If there were any spaces present, reposition the mould correctly.

Mix all the components, checking the correct sequences in the following figures.

During this operation, use PPE with a degree of protection as indicated on the safety data sheets of the components used. Perform the mixing operation in a ventilated and not confined space.

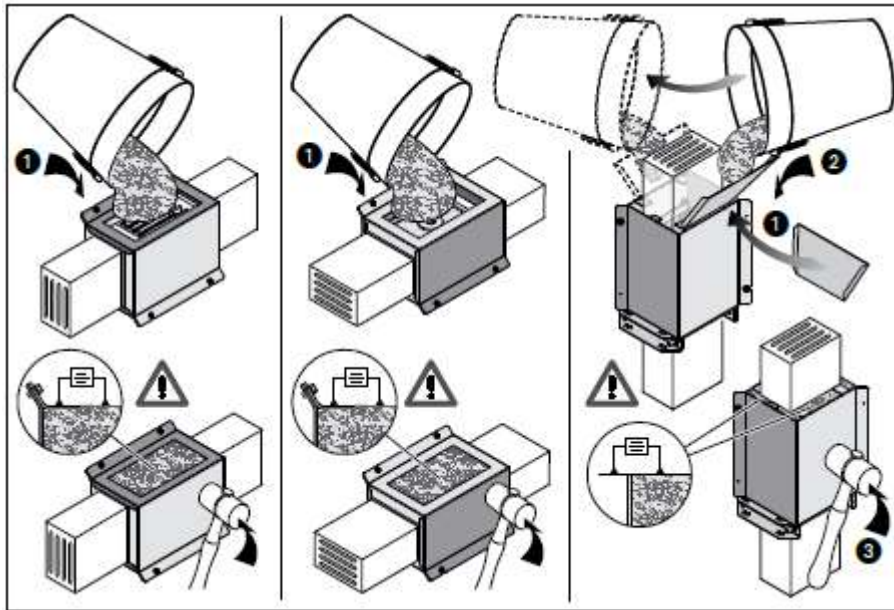


## NOTICE

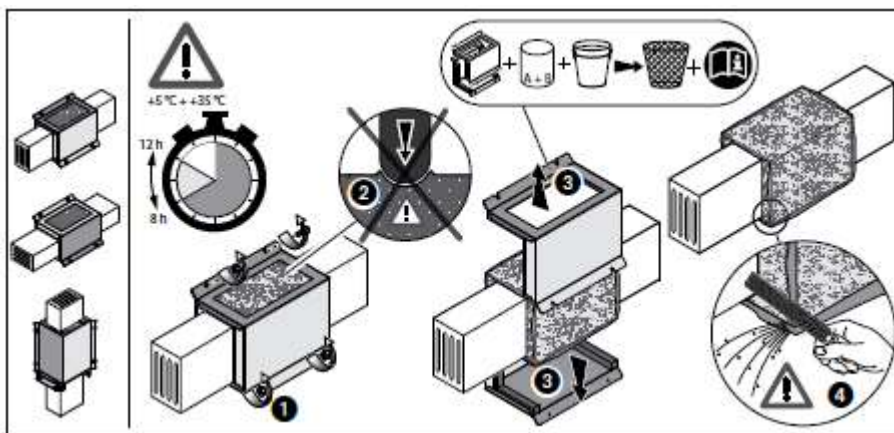
Heat may be generated during mixing.

During operation 3 and 4 gradually introduce the quartz and mix with the industrial mixer for at least 5 minutes, making circular movements and from top to bottom

Strain the mixture **slowly** and carefully. Use a rubber hammer to help eliminate air bubbles. Periodically check if the resin has settled but has not reached the correct level (it is visibly below the edge of the mould), in this case pour more resin until it reaches the edge.



Wait for the resin to harden (from 8 to 12 hours) and check that the visible surface is solidified and that there is no deformation to the touch. Gently remove the mould and use a metal rasp to clean the edges.



## KIT DISPOSAL

For the disposal of waste produced during the construction of the building and equipment, please refer to the provisions of national / local regulations in force.

For any residues of chemical products as such and the respective containers, see the relevant safety data sheets.



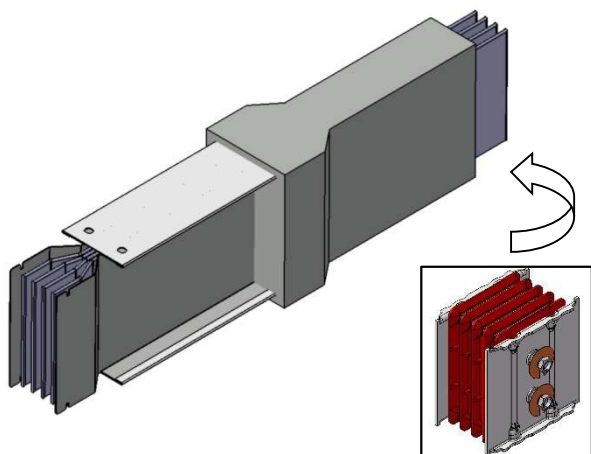
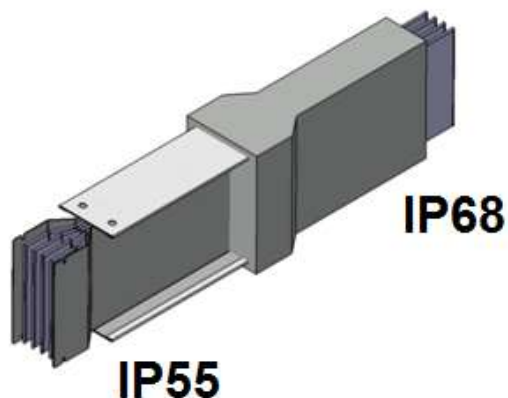
## Junction IP68-IP55

### RCP-SCP

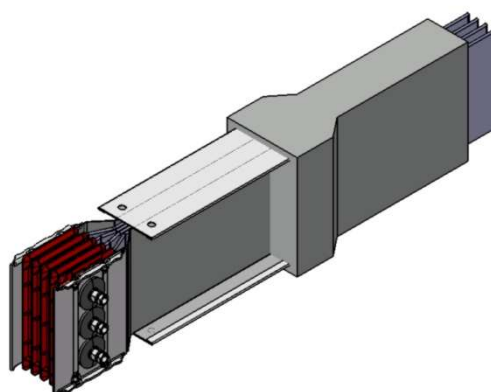
The RCP busbar system is compatible with SCP busbar system.

When you connect RCP with SCP the protection grade becomes IP55.

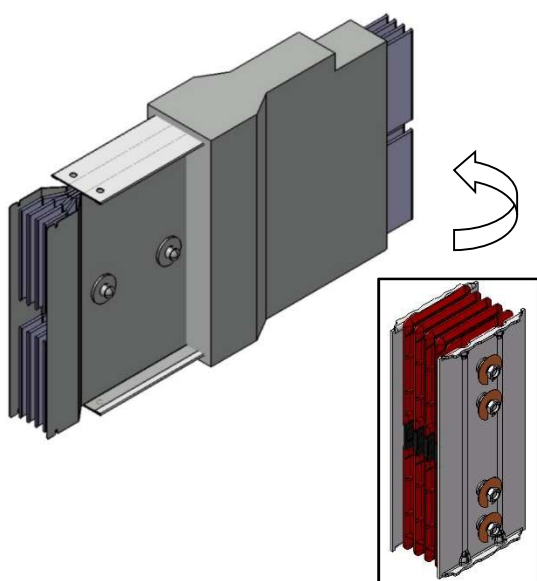
The connection is made with the appropriate RCP-SCP junction (as in the picture): just insert the RCP-SCP junction within the line in the desired section as if it is any element. There are four types of RCP-SCP junction



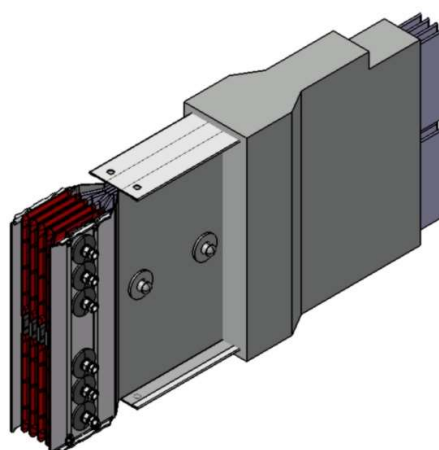
Right junction with single strikethrough



Left junction with single strikethrough



Right junction with double strikethrough



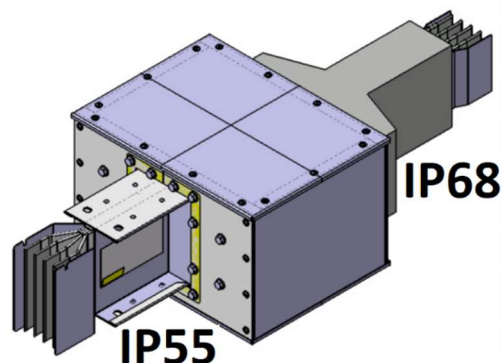
Left junction with double strikethrough

## RCP-XCPS

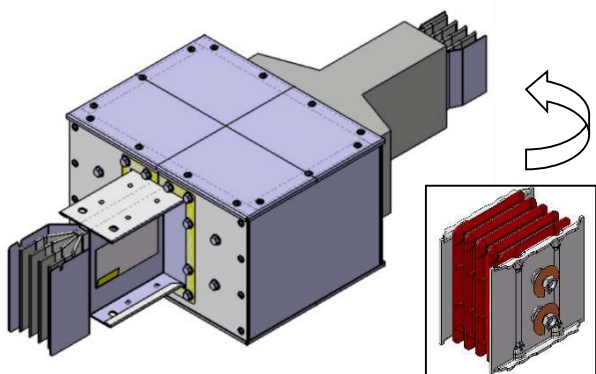
The RCP busbar system is compatible with XCP-S busbar system.

When you connect RCP with XCP-S the protection grade becomes IP55.

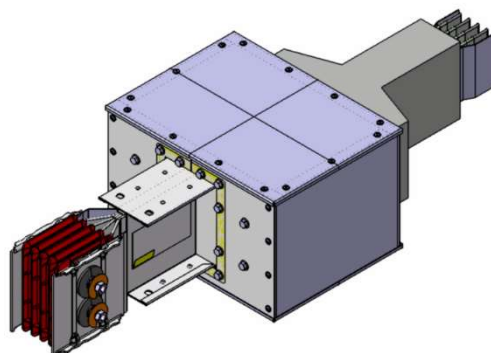
The connection is made with the appropriate RCP-XCPS junction (as in the picture): just insert the RCP-XCPS junction within the line in the desired section as if it is any element.



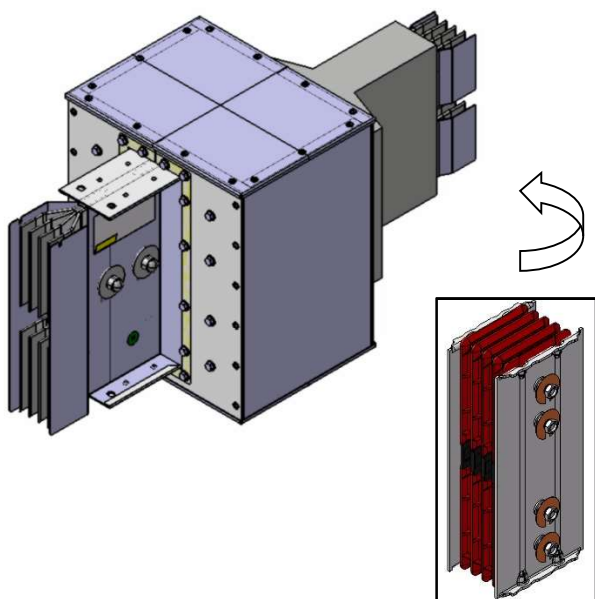
There are four types of RCP-XCPS junction



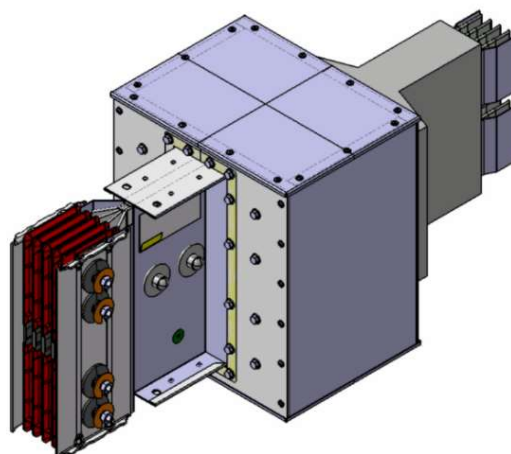
Right junction with single strikethrough



Left junction with single strikethrough



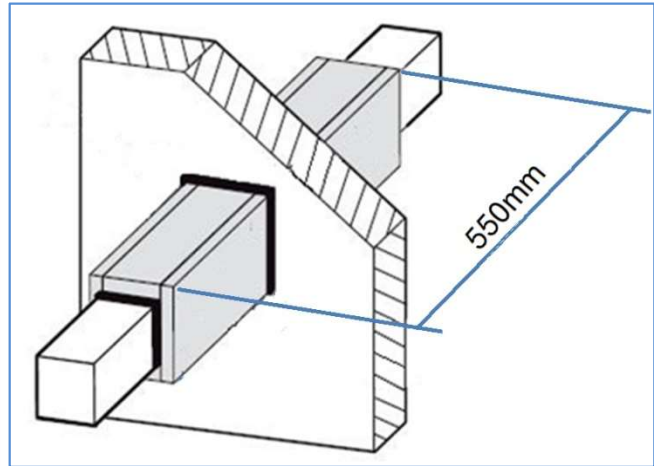
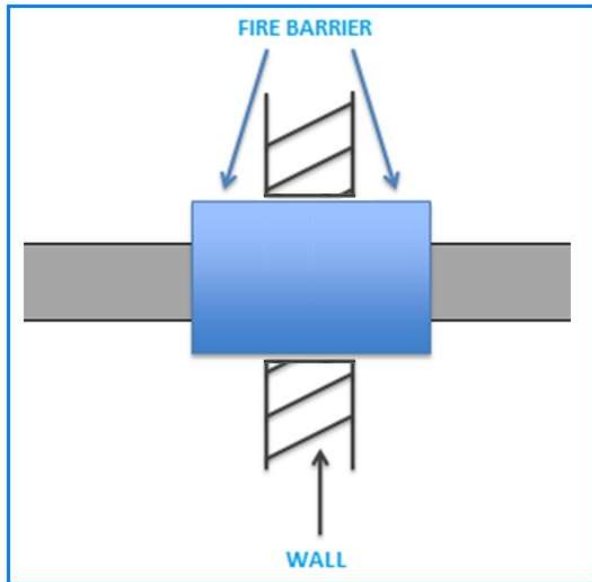
Right junction with double strikethrough



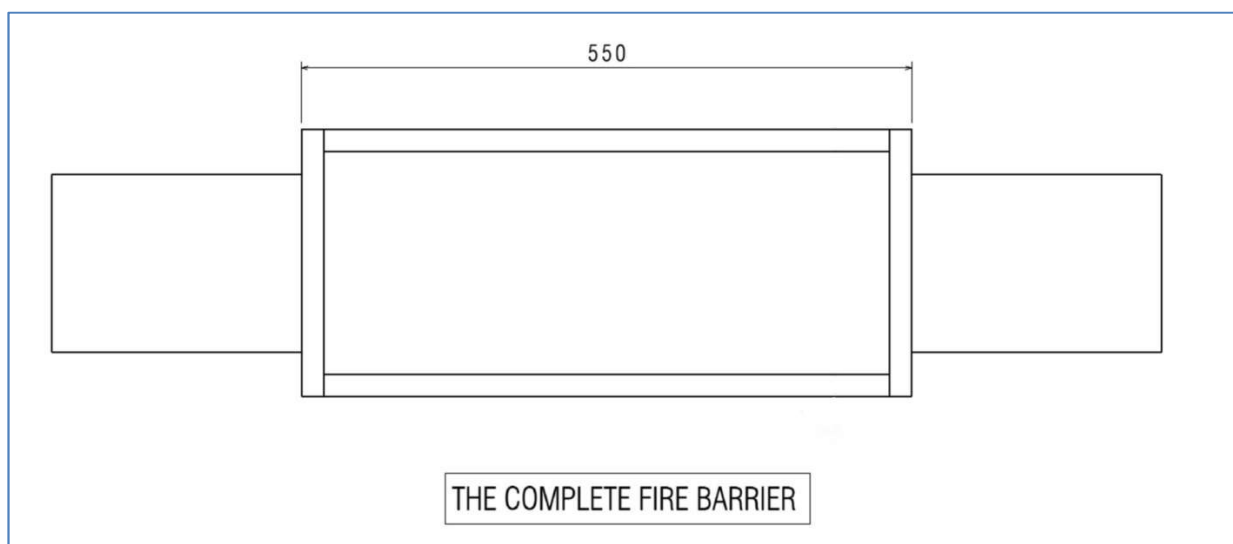
Left junction with double strikethrough

## Fire barrier

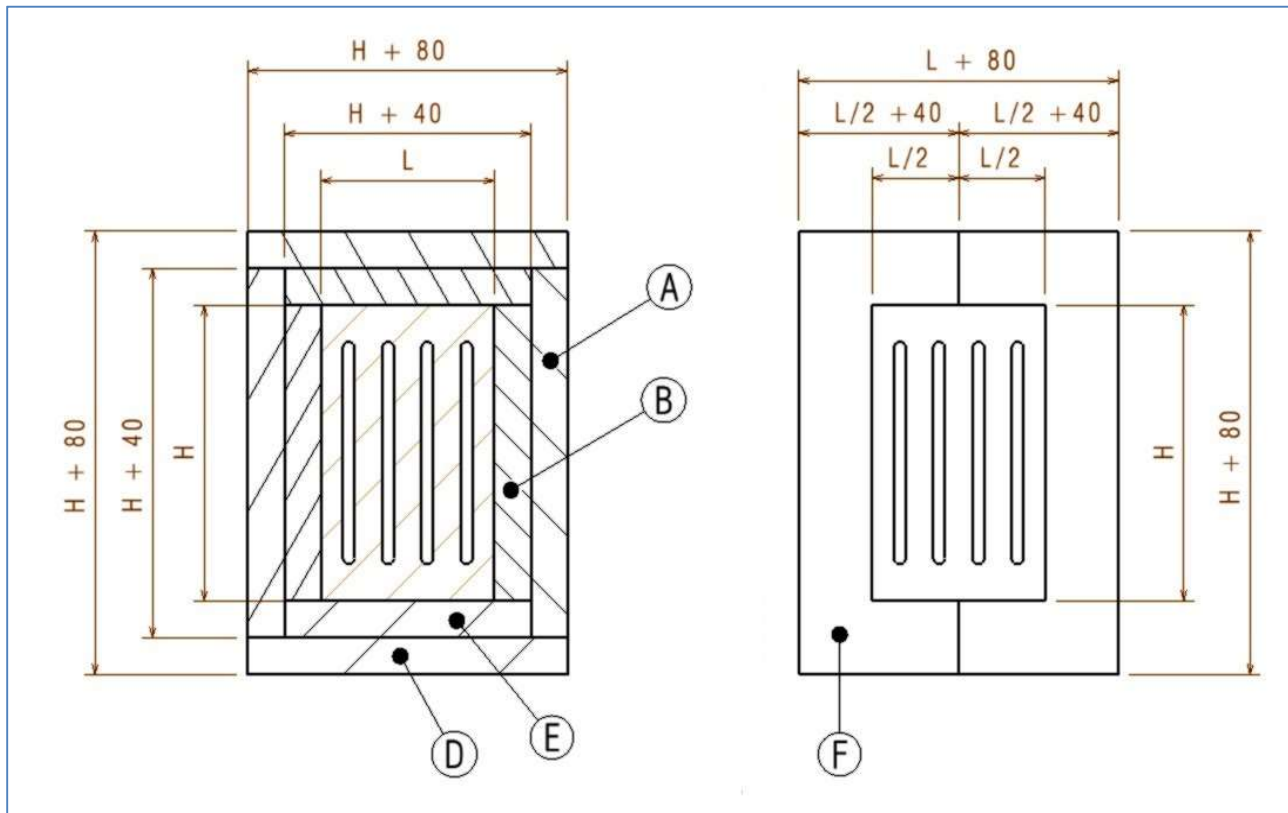
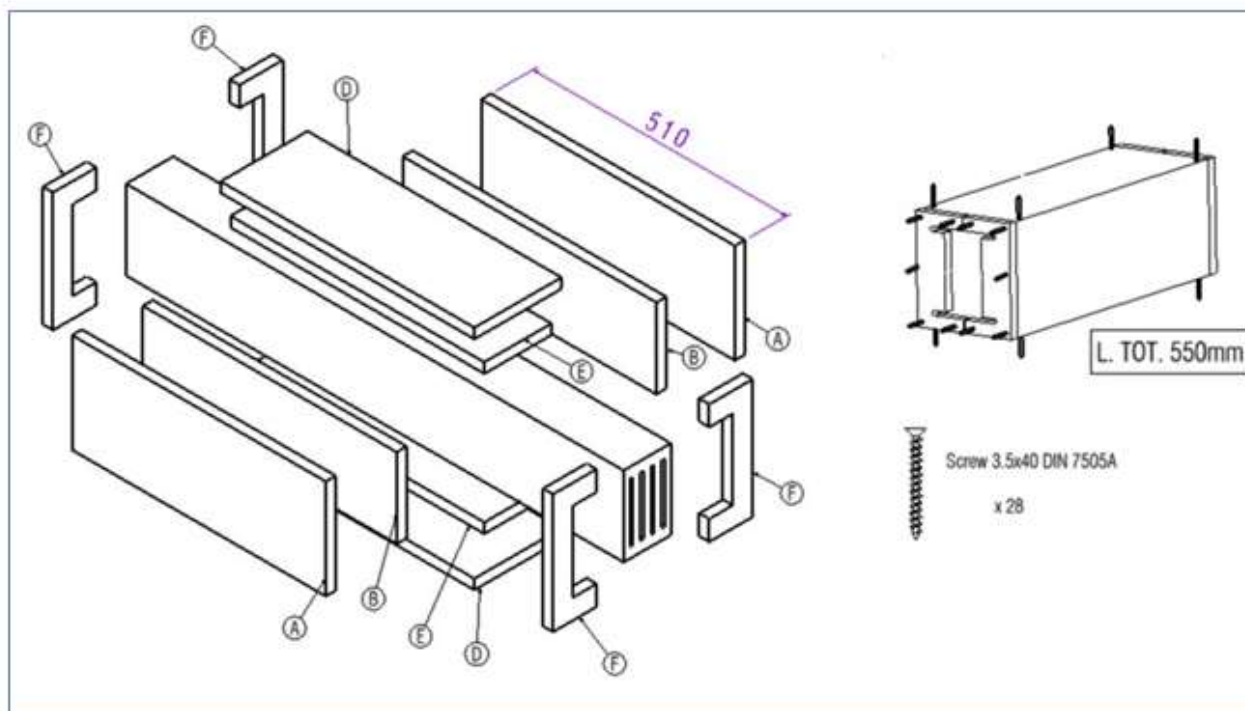
The fire barrier kit is composed of one part, through the wall.  
The total length is 550 mm.



In the fire barrier kit there are 12 panels of fire resistant material, screw and mastic to fix the fire resistant sheet to the wall and to the RCP.



Once the barriers are assembled with screws, fill all the joints between panels with the promaseal paste and then work it with a putty knife to obtain a smooth and homogeneous aspect.



\*Check the RCP catalog for L and H dimensions



## Switchboard connection

On switchboard connections verify that:

- 1 the air distances between bars with different potentials are over 40 mm wide. If it is not the case, contact Eng. Dept. Zucchini Brand to evaluate the employment of correct insulating material.
- 2 the torque moment of connecting screws is correct (required values: 85 Nm for M12, 100 Nm for M14, 120 Nm for M16, 170 Nm for M18, 25 Nm for M8 and 50 Nm for M10).

The above mentioned inspections have to be carried out by personnel with a proper technical background and with controlling function/responsibility in the installation activities.

## Final test and periodic inspections

### FINAL TEST

Insulation test at 1000V, with minimum value of 1 MOhm, for the line. The insulation test has to be carried out between phases, between phases and neutral, and between every single phase and the earth ( when required ).

After having run the plant at the maximum working current, and let it work for at least 6 hours, carry out a thermal test. Stick labels on the hottest parts and mark them with progressive numbers to identify the element. Carry out the thermal test again on the labels. Fill the attached form with the measured values, together with ambient temperature and working current.

Thermal tests can be carried out with contact temperature sensors, with optical pyrometers or thermal cameras.

### PERIODIC INSPECTIONS

After having run the plant at the maximal working current for at least 6 hours, carry out a thermal test, taking in particular consideration the points where labels had been stuck during installation. Fill in the attached form with the measured values, together with ambient temperature and working current. If the measured temperature (DT) is 55 K or 15 K higher than the temperature measured during installation, get in contact with Customer Care Zucchini.

This thermal test can be carried out with contact temperature sensors, optical pyrometers or thermal cameras.

Perform a visual inspection of the entire line and verify the absence of cracks and crevices.

<b>PERSON IN CHARGE OF INSPECTION</b>	
<b>COMPANY ( if different from installing company )</b>	
<b>INSPECTION DATE</b>	
<b>SIGNATURE</b>	

[illegible]

Dt = Measured T - Ambient T  
Ib = Working current

For further information or explanation please get in contact  
with Customer CareZucchini.

Tel: 0365 332811 Fax: 0365 31934  
E-mail: [IT-PostVenditaZucchini@bticino.it](mailto:IT-PostVenditaZucchini@bticino.it)

For information on chemical products get in contact  
E-mail: [msds.bticino@bticino.it](mailto:msds.bticino@bticino.it)