

INSTALLATION MANUAL

FRAME SCREEN

LEONARDO FR37



ORIGINAL INSTRUCTIONS IN ITALIAN LANGUAGE
Translation into English language

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In order to guarantee the best performances of your screen, please
READ CAREFULLY this installation manual.

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1.0 GENERAL INFORMATION

1.1 FRAME SCREEN DESCRIPTION

The frame screen LEONARDO FR37 is entirely manufactured in Italy, with high quality materials and projection cloths that guarantee to your system excellent quality performances in compliance with CE legislation.

The screen is designed specifically for home cinema or professional projections. The LEONARDO FR37 screen is available in different formats and with different projection surfaces.

1.2 MANUFACTURER'S RIGHTS

Copyrights of this installation manual are exclusively of:

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1.3 CONTENTS AND MAP OF THIS MANUAL

This installation manual contains the description of "frame screen" as it is produced by the manufacturer. This manual contains information about installation, use and maintenance of the screen.

It also contains the information about the technical features and safe use of the product.

The installation manual is composed from:

- 1.0 General information
- 2.0 Frame screen description
- 3.0 Assembly
- 4.0 Installation

1.4 WARNINGS

Before assembling and installing the frame screen read carefully the installation manual. Please, store this installation manual so that you can consult it whenever necessary.

When opening the screen packaging, **USE VERY CAREFULLY EVENTUAL CUTTERS OR SHARP TOOLS** that can damage its content. It is recommended to wear working gloves during the opening of the packaging and the installation of the product.

According to the weight of the product it has to be handled by two or three or more people, based on the relation KG/PERSON: MALE 25 kg. - FEMALE 15 kg.

Install the screen in a location with a temperature between 20°C and 24°C.

The manufacturer does not take responsibility for any damage to property or personal injury if the screen is used outside of recommended specifications or in case of incorrect/poor quality installation.

1.5 WARRANTY - GENERAL INFORMATION

This projection screen is guaranteed 2 years from the purchase date for manufacturing defects.

Responsibility is limited to repairing or substitution of the defected components and without any other charge at our expense.

Warranty is officially voided if the screen has been dismantled or it is returned with collision damage or defective due to incorrect installation. Repairs must be carried out by an Approved ScreenInt Certified Engineer.

Warranty is officially voided if (all the following cases are including but not limited):

- 1) defects not due to deficiencies in the material or workmanship;
- 2) amendments, alterations, repairs or disassembling of the Product not previously authorized in writing by ScreenInt;
- 3) installation, use or maintenance of the Product not in compliance with ScreenInt's instructions as set forth in this Installation Manual and/or in any other technical documentation supplied together with the Product;
- 4) bad and/or improper and/or not in compliance installation, maintenance, negligence, improper use;
- 5) use of non-original spare parts or not authorized in writing by ScreenInt;
- 6) normal wear and tear;
- 7) the screen has been damaged in transit;
- 8) the sticker regarding the serial number of the product has been altered, deleted, removed or tampered.

DO NOT install this screen nearby or over heating or air conditioning systems, because PVC is a plastic material which dilates and remains damaged if it is subjected to heat and/or cool air.

DO NOT install this screen either facing direct sun light or blocking a window as PVC could be damaged and make waves for the explanations given above.

The PVC cloth is very sensitive to temperature range. We advise to mount the screen in environments with an ambient temperature in the range of 20°-25°C.

We advise you to WAIT 3 HOURS for the SCREEN to ACCLIMATISE BEFORE MOUNTING the screen after delivery, especially if screen arrives from a cold temperature.

THE SCREEN HAS TO BE STOCKED AND TRANSPORTED ALWAYS IN HORIZONTAL POSITION, otherwise there could appear waves on the projection cloth.

DO NOT WASH the projection surface with alcohol or solvent nor with commercial cleaners. Every now and then dust the surface with a dry and clean duster.

Please, be very careful because any kind of stain on projection surfaces is inerascable.

When the screen is not completely rolled down (as by factory setting), flatness of the cloth is NOT guaranteed and therefore not covered by warranty.

DO NOT HANG TO THE SCREEN and DO NOT HANG ANY OBJECT to it. Please take care that children DO NOT PLAY with the screen as they can get severely injured.

The manufacturer will not accept returns of screens for repair without manufacturer's authorization (RMA number) and without a suitable packaging.

1.6 SCREEN LABELS

This screen is equipped with product identification labels that indicate its essential technical specifications.

1.6.1 Label n. 01

It provides the following information:

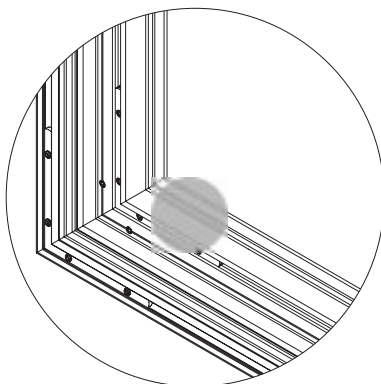
- A) Serial number
- B)* Motor power
- C)* Operating frequency
- D)* Power consumption

* Not applicable to frame screens.



1.6.2 Label position

Looking at the screen from the front it. The label is stuck on the rear side of the frame, on the bottom corner.

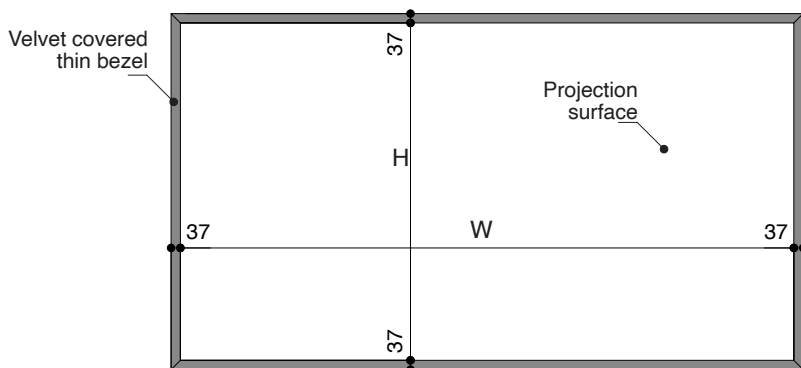


2.0 FRAME SCREEN DESCRIPTION

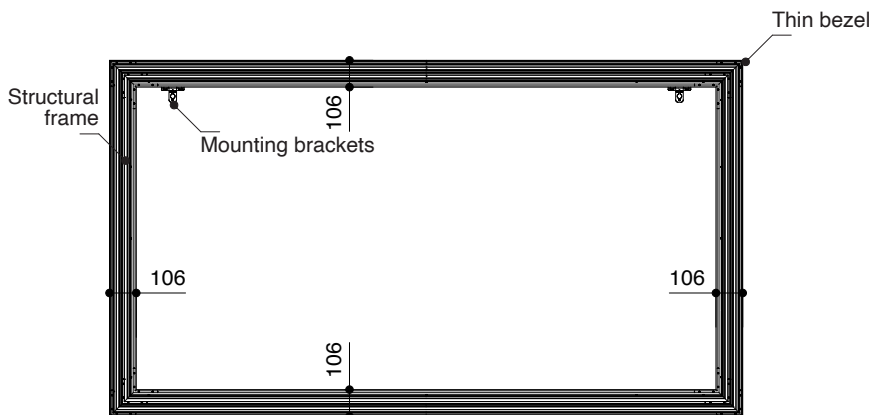
2.1 GENERAL DESCRIPTION

The figures below describe the main elements of the product.

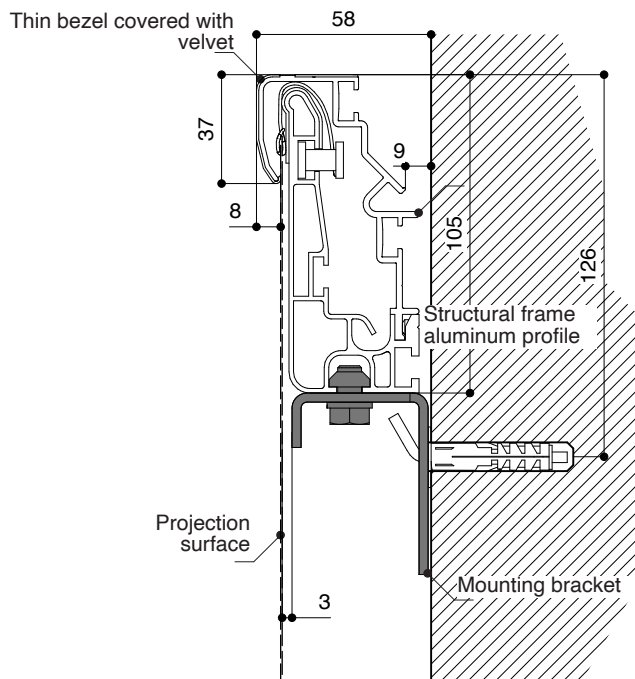
Front view



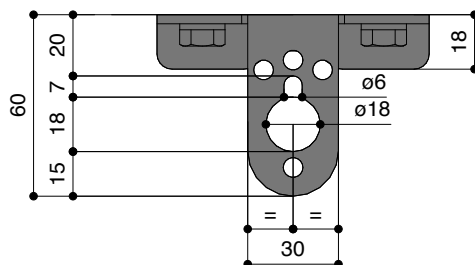
Rear view



Profiles combination



Rear view mounting bracket

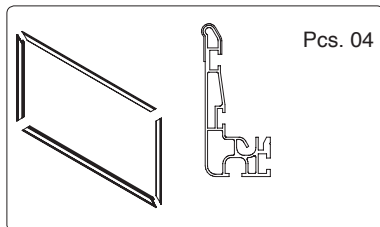


3.0 ASSEMBLY

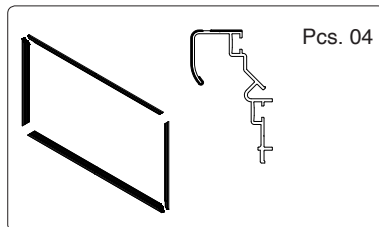
3.1a LEONARDO FR37 WITH OYSTER SURFACE PACKAGING CONTENT:

Inside the packaging, there will be the following components.

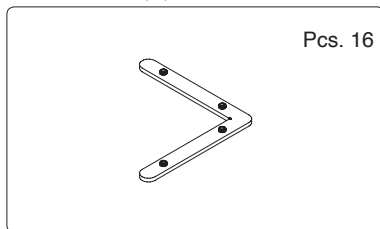
Structural frame segments (A)



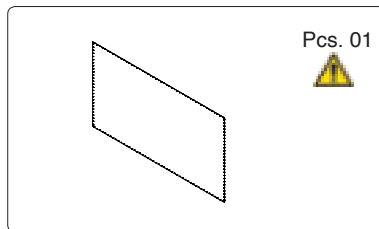
Thin bezel segments (B)



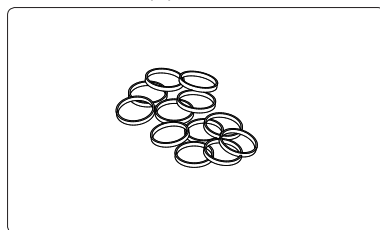
Metal corners (C)



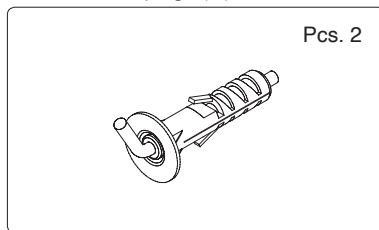
Projection surface (D)



Rubber bands (E)



Screws + wall plugs (G)



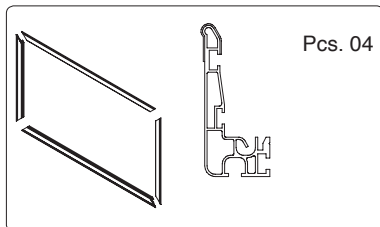
The manufacturer declares that the projection surface Oyster cannot be mounted in environment with 70% or more of humidity rate, because humidity can cause waves on the cloth.



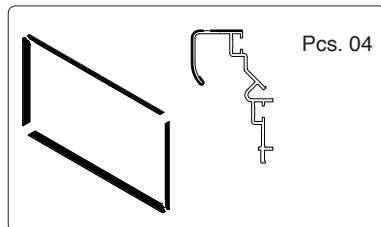
3.1b LEONARDO FR37 WITH OTHER PROJECTION SURFACES (DIFFERENT FROM OYSTER) PACKAGING CONTENT:

Inside the packaging, there will be the following components.

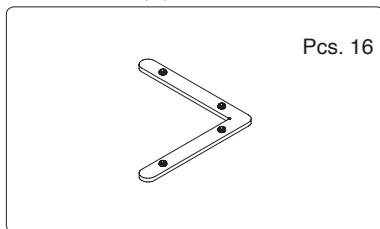
Structural frame segments (A)



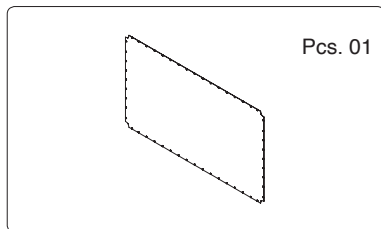
Thin bezel segments (B)



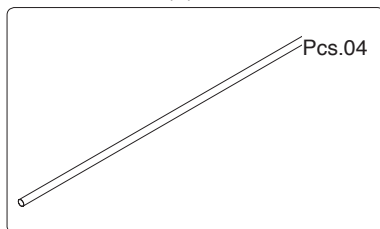
Metal corners (C)



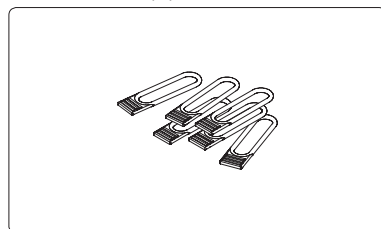
Projection surface (D)



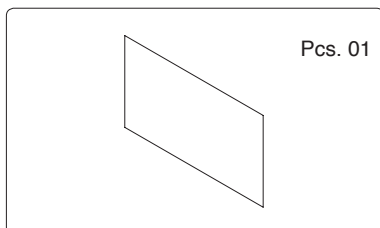
Galvanized rods (E)



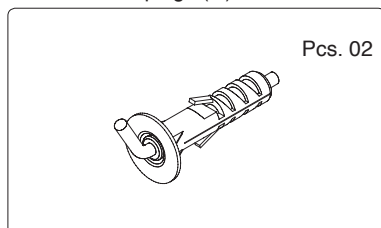
Rubber bands (E)



Protective cloth



Screws + wall plugs (G)

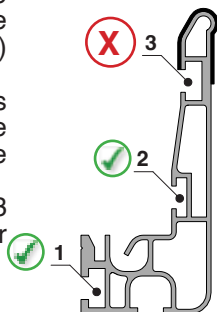


3.2 STRUCTURAL FRAME ASSEMBLY

The first step of Leonardo FR37 screen installation consists in assembling the structural frame.

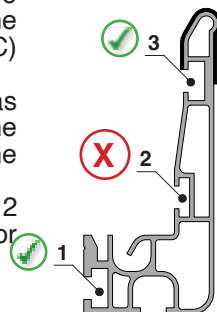
OYSTER Surface

The slots to be used to insert the metal corners (C) are n. 1 and n. 2 as shown in the drawing on the right. Do not use slot n. 3 because this is for the cursors only.



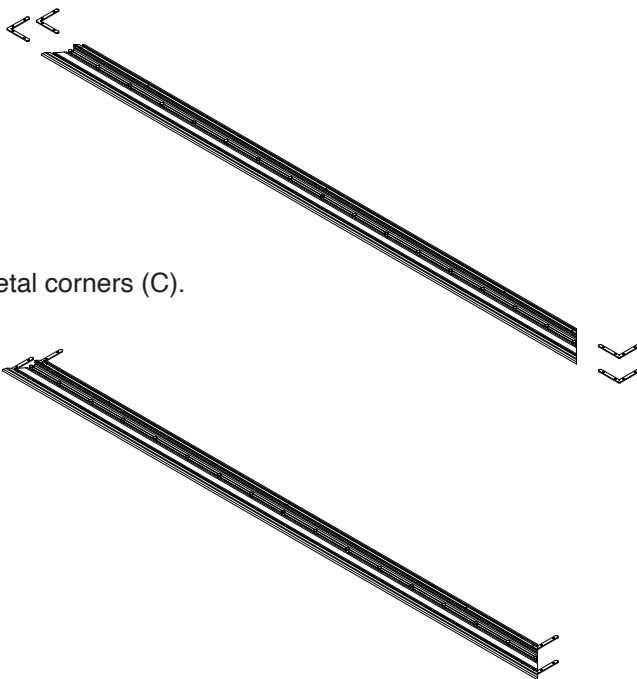
PVC Surface

The slots to be used to insert the metal corners (C) are n. 1 and n. 3 as shown in the drawing on the right. Do not use slot n. 2 because this is for the cursors only.



Step 1a

Place the metal corners (C) near the slots of one long structural frame segment (A).

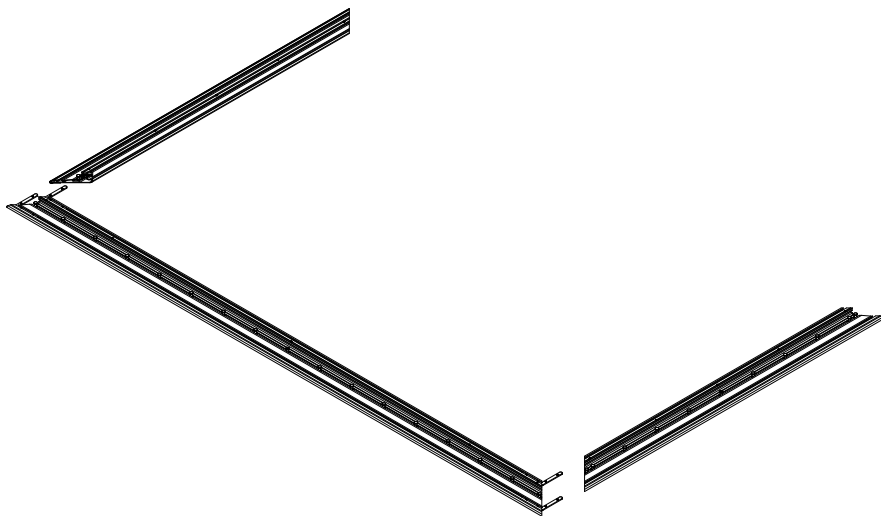


Step 1b

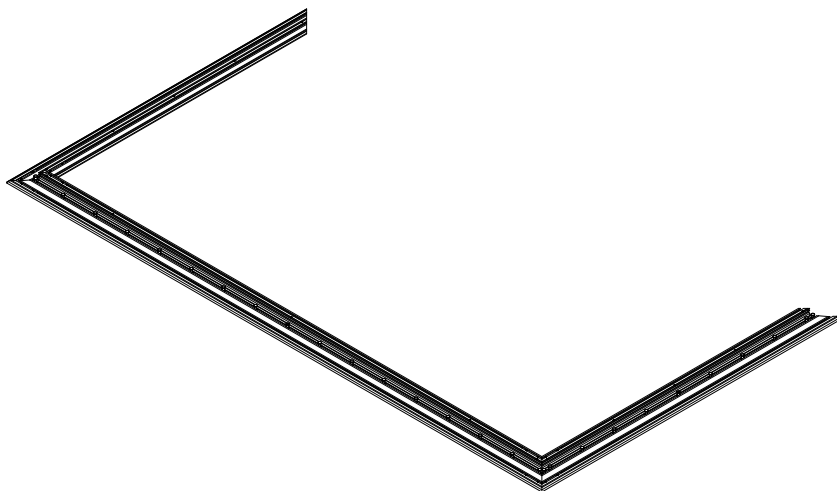
Insert the metal corners (C).

Step 2a

Put the short structural frame segments (A) close to the metal corners (C).

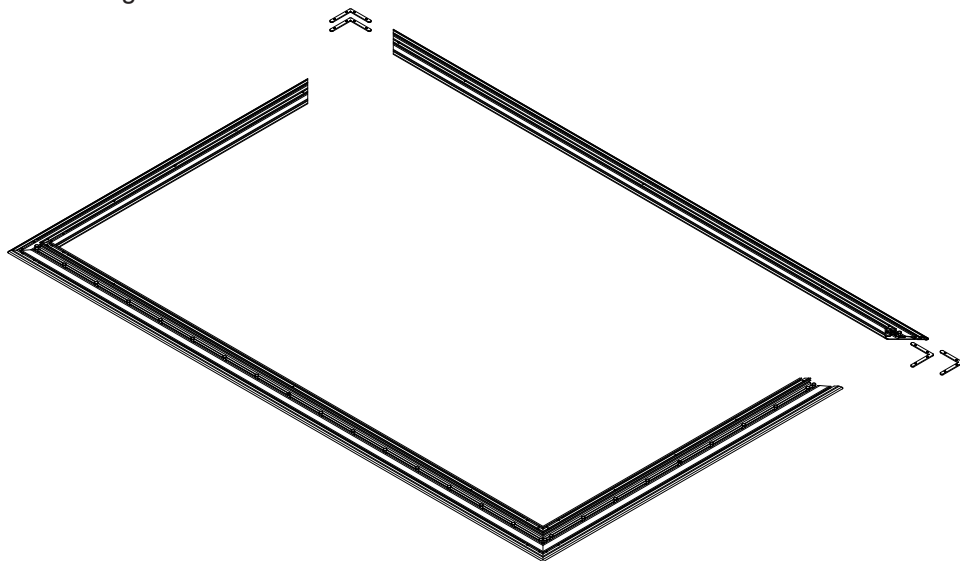
**Step 2b**

Insert the short structural frame segments (A).

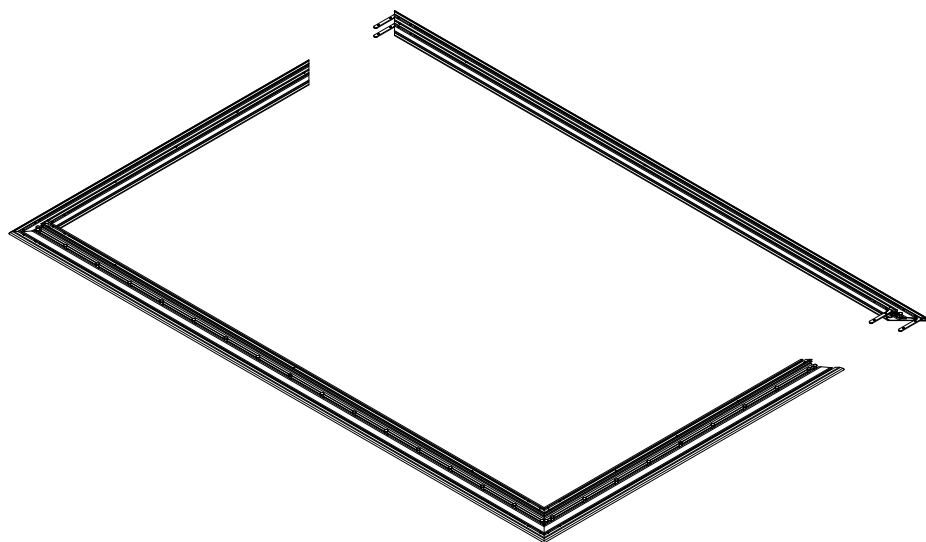


Step 3a

Place the remaining metal corners (C) close to the remaining long structural frame segment.

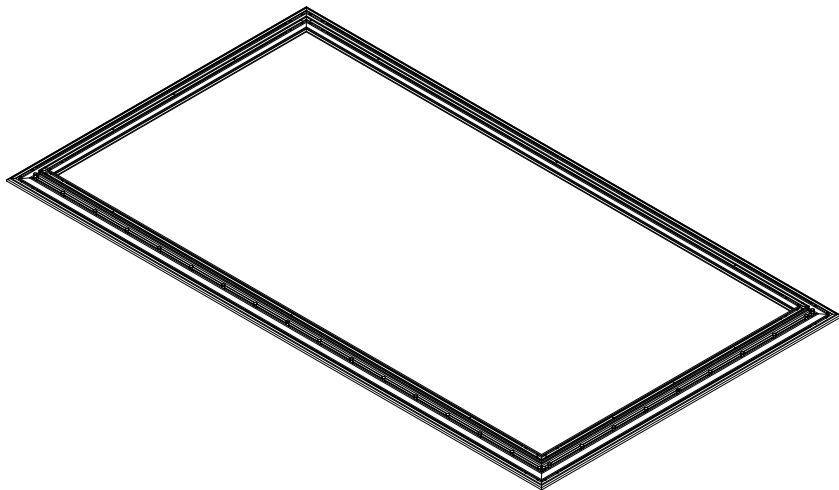
**Step 3b**

Insert the metal corners (C) to this frame segment.

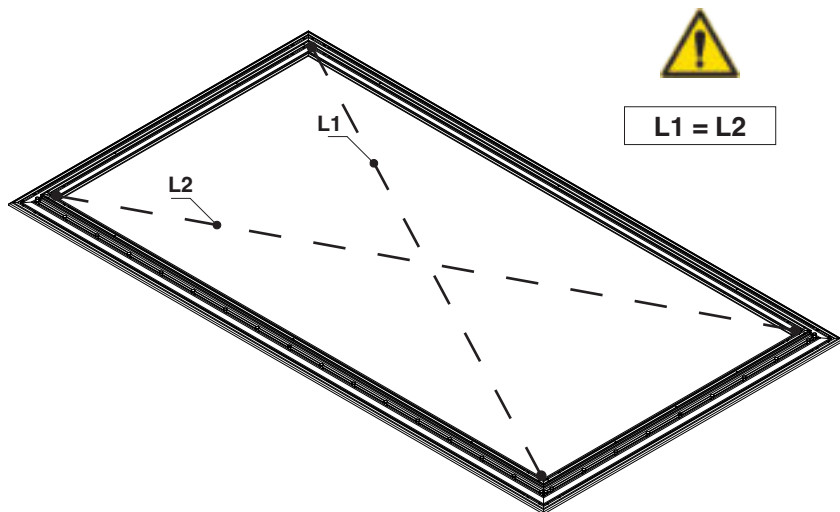


Step 4a

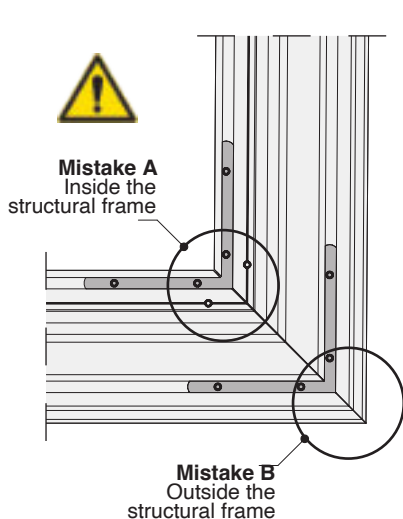
Insert the long remaining structural frame segment, in order to complete mounting of the frame.

**Step 4b**

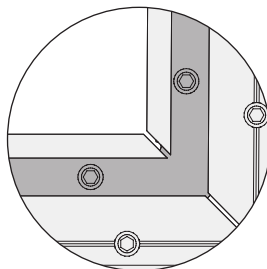
Before tightening all the dowels, in order to perfectly close the metal corners to the structural frame segments, check that the measurements L1 and L2 are the same. The maximum tolerance is 2 mm.



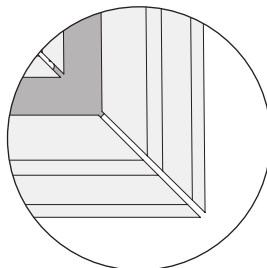
For a perfect assembly, it is necessary to check carefully the fixing of the metal corners (C), because, as shown in the figures below, mistakes will **COMPROMISE** the whole installation, causing permanent damages to the cloth.



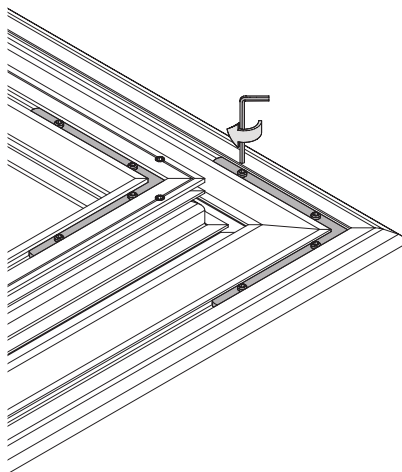
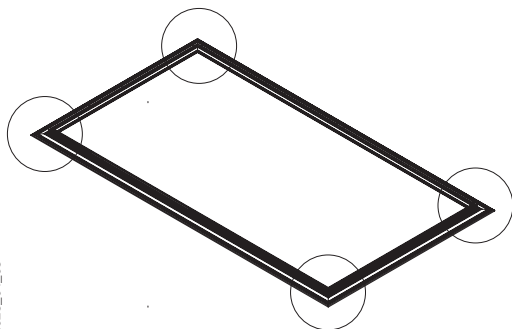
Mistake A
Internal corner
OPEN



Mistake B
External corner
OPEN



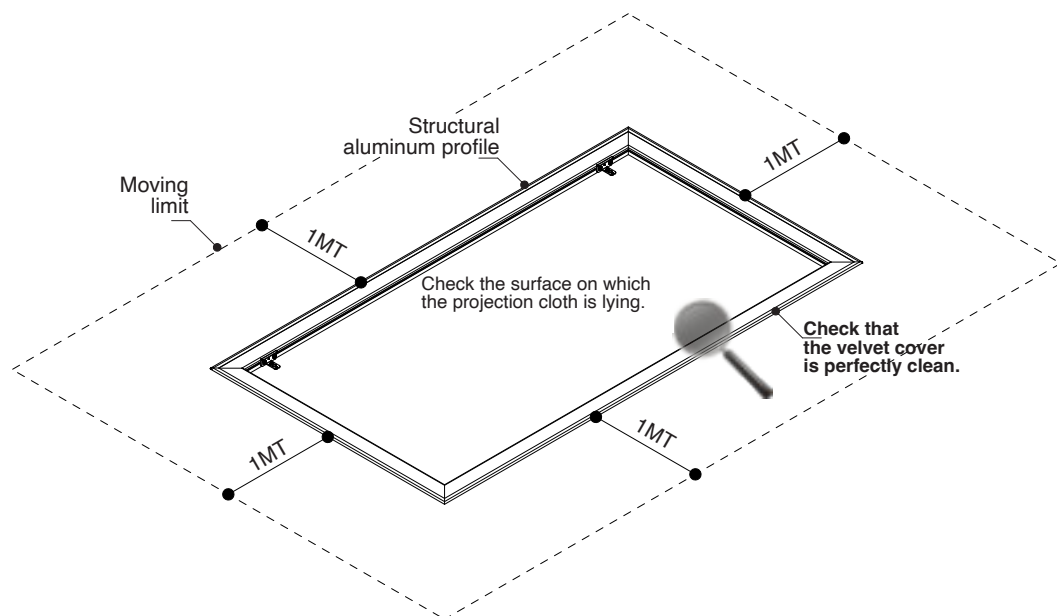
Check carefully as above and proceed with tightening the dowels on each corner.



3.3 PROJECTION SURFACE MOUNTING

3.3a OYSTER SURFACE MOUNTING

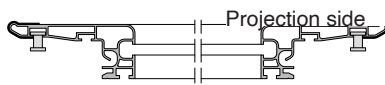
Before fixing the cloth, make sure to have enough moving space for all the operations, as indicated by the figure below. Before laying the projection surface down, make sure that the **floor where you will lay the surface is perfectly clean and smooth**. It is mandatory to lay a protective cloth on the floor, before laying on it the projection surface.



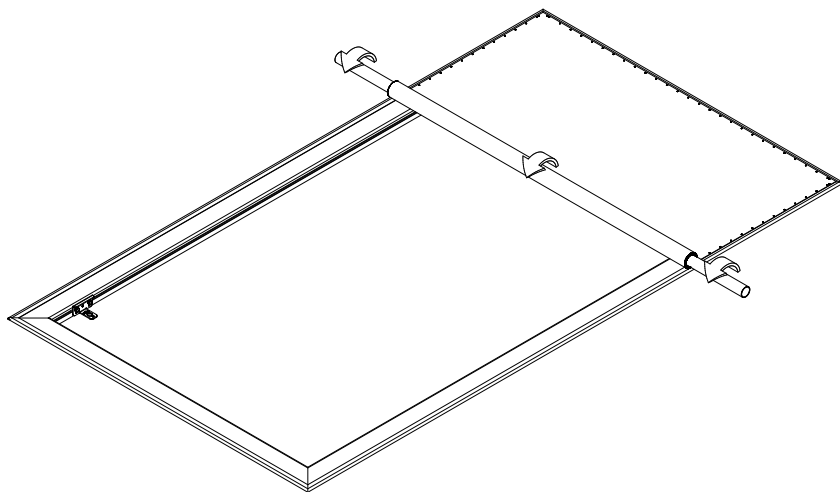
Wrong position
cursors facing downwards



Correct position
cursors facing upwards

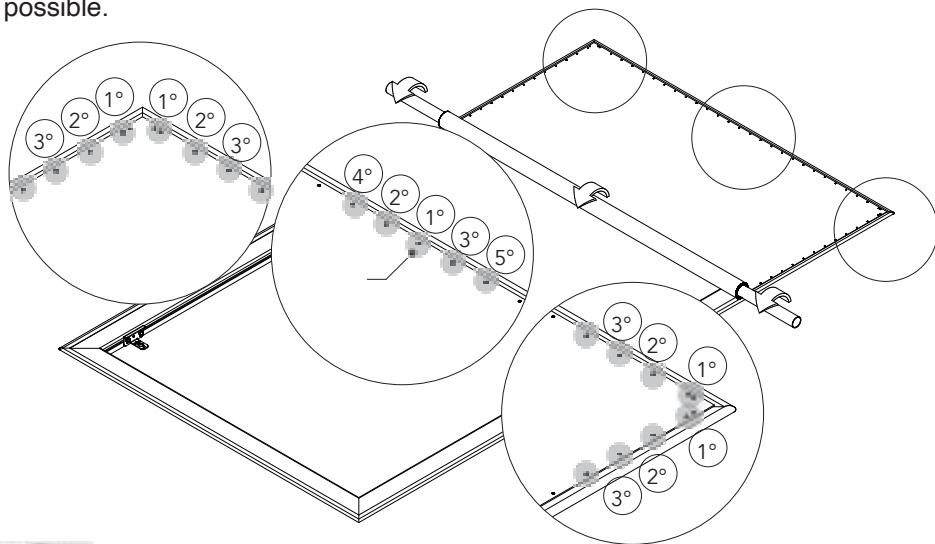


Handling of the projection surface **has to be carried out by at least two people**. The surface has to be layed down with the projection side facing upward. We advise to check that, while laying down the projection surface, this one is layed at least at 1 cm. from the structural aluminum profile.

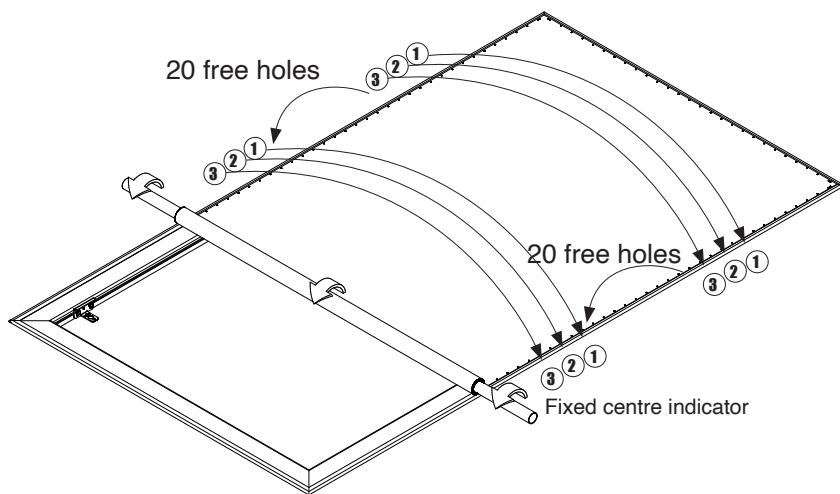


DO NOT UNROLL THE PROJECTION SURFACE COMPLETELY. Before doing that, fix some rubber bands **in order to avoid that the surface collapses in the middle of the structural aluminum frame**. As shows the drawing below, we advise to fix n. 3 rubber bands for each corner and n. 5 rubber bands in the middle of each short vertical frame part.

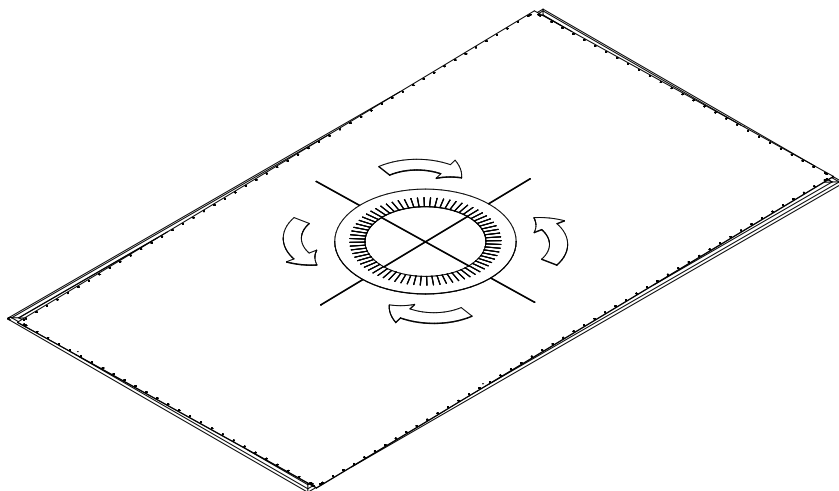
DO NOT FIX ALL THE RUBBER BANDS on each side but alternate fixing on the different sides, in order to better center the projection surface the most precisely possible.



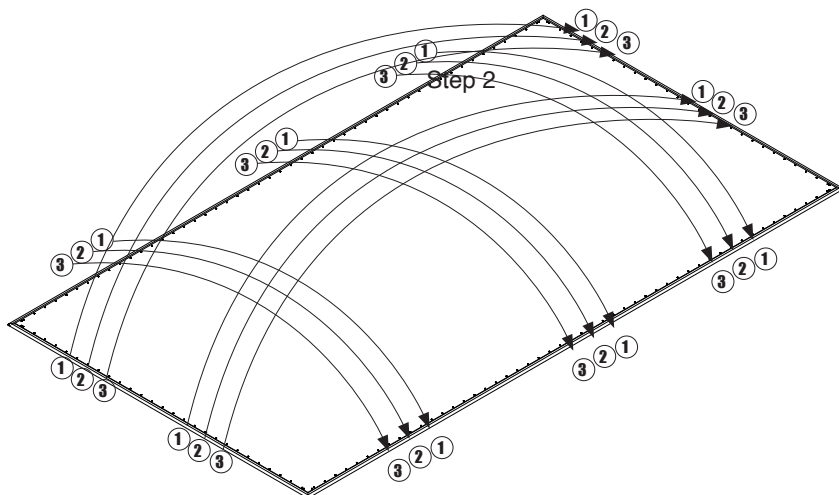
Keep unrolling the surface leaving 20 holes free and fixing 3 rubber bands for each long frame side till the surface is completely unrolled. Now, fix n. 3 rubber bands for each corner and n. 5 rubber bands for each short frame side, starting from the middle of the frame (see drawing at p. 16).



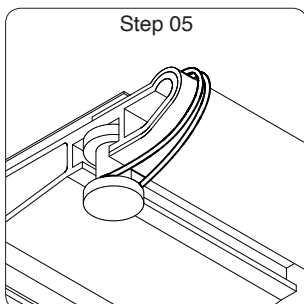
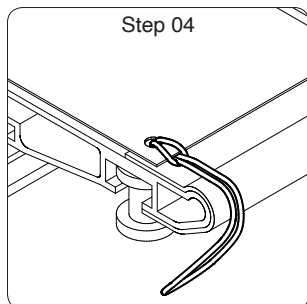
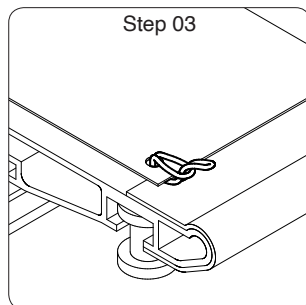
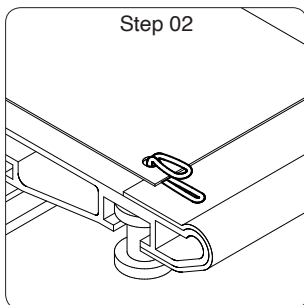
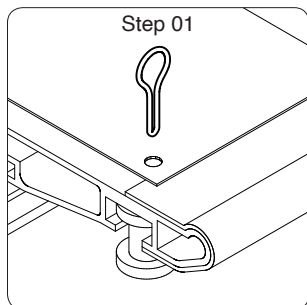
Now you can proceed centering the projection surface in the most precisely way. In case it is difficult to center the surface, remove some rubber bands in order to release a bit the tension on the surface.



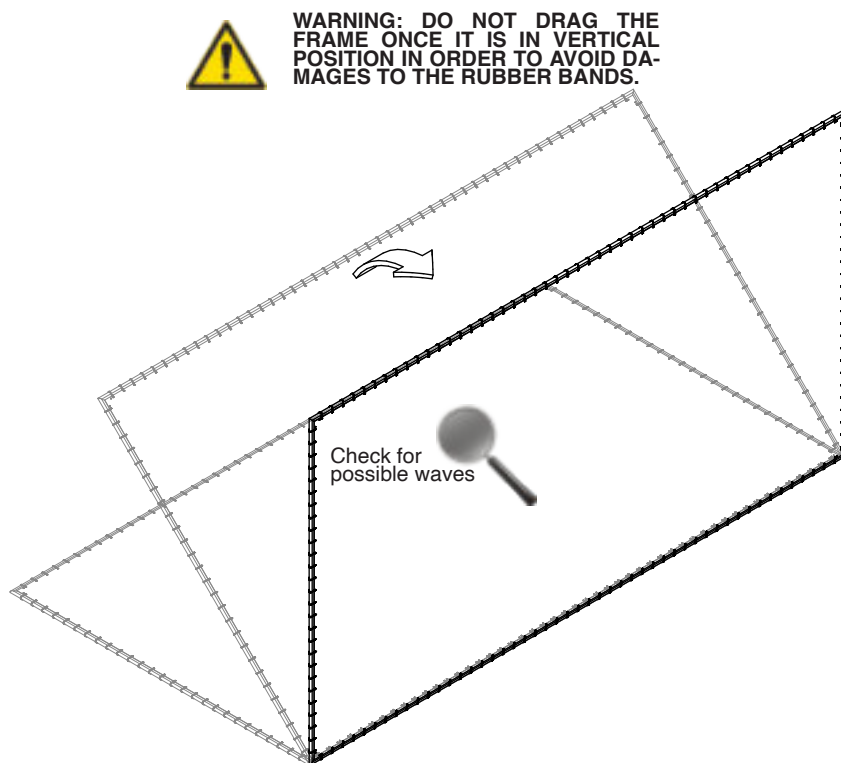
After having centered the surface, fix all the remaining rubber bands keeping in mind to fix them alternatively on each side, as shown in the drawing below.



In the drawings below, it is shown how the rubber bands have to be fixed to the cursors.



After having fixed the cloth to the structural frame, lift the screen in vertical position, as shown by the figure below and check that there are not waves or folds on the projection surface. If there are waves it is enough to detach and fix again the rubber bands.

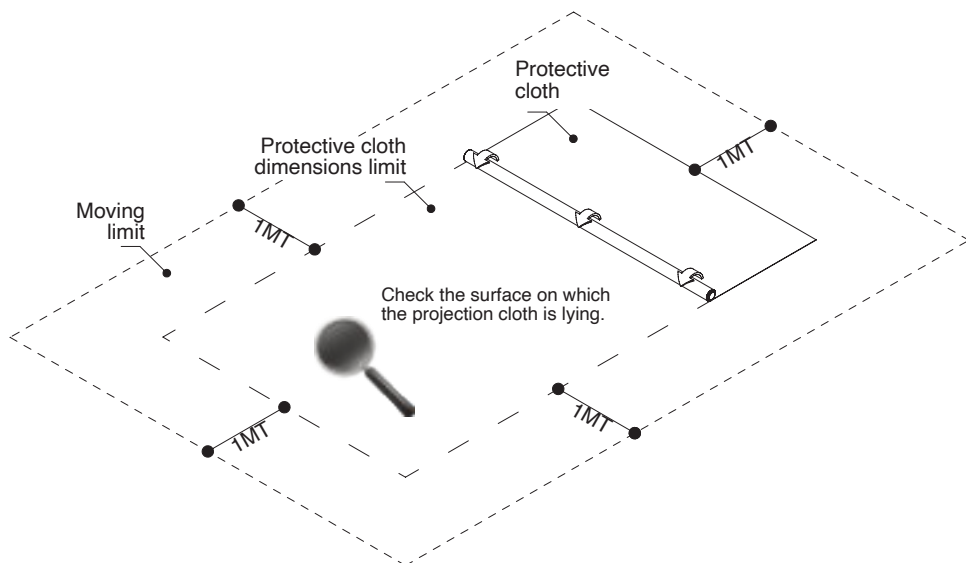


Before proceeding with the bezel assembly, it is important to wait for about 10 minutes. During this time, both the screen and the bands have time to settle. This time is necessary because, after the bezel is mounted on the structural frame, it is not possible to make adjustments on the rubber bands any more.

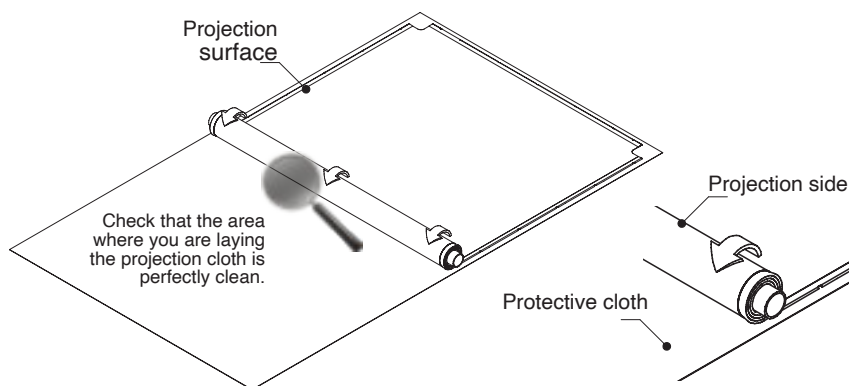
Proceed to chapter 3.4 at page 26.

3.3 b OTHER PROJECTION SURFACES MOUNTING

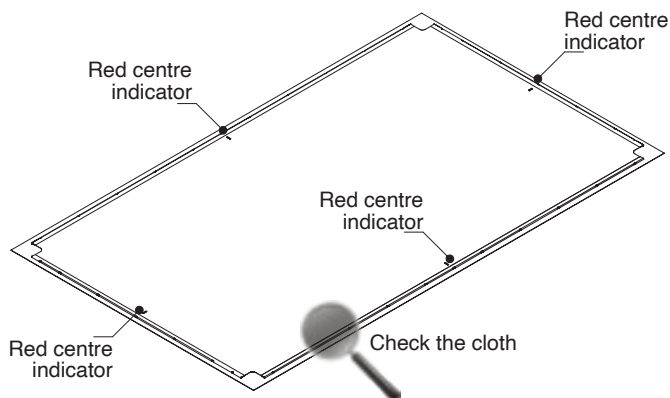
Before fixing the cloth, make sure to have enough moving surface for all the operations, as indicated by the figure below. Before laying the projection cloth down, make sure that the **floor where you will lay the surface is perfectly clean and smooth**. It is mandatory to lay a protective cloth on the floor, before laying on it the projection surface.



Handling of the projection surface has to be carried out by at least two people. The surface has to be layed down with the projection side facing downward. **Do not move the projection surface once it is layed down.**



After laying the protective cloth, make sure that the projection surface is not damaged. Moreover, it is advised to leave the cloth layed down for at least 10 minutes, before proceeding with fixing it to the pre-assembled structural frame, as per chapter 3.2.

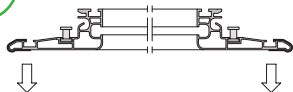


Check that every red centre indicator on each frame corresponds to the central ring on the projection surface.

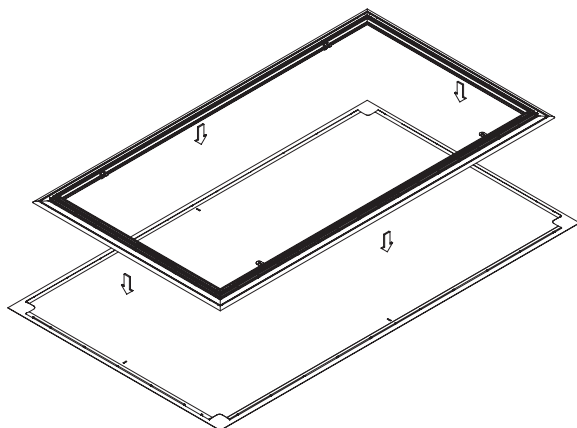
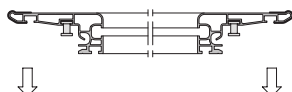
Now, lay the pre-assembled structural frame on the projection surface, making sure that the rear side of the frame is facing upwards.



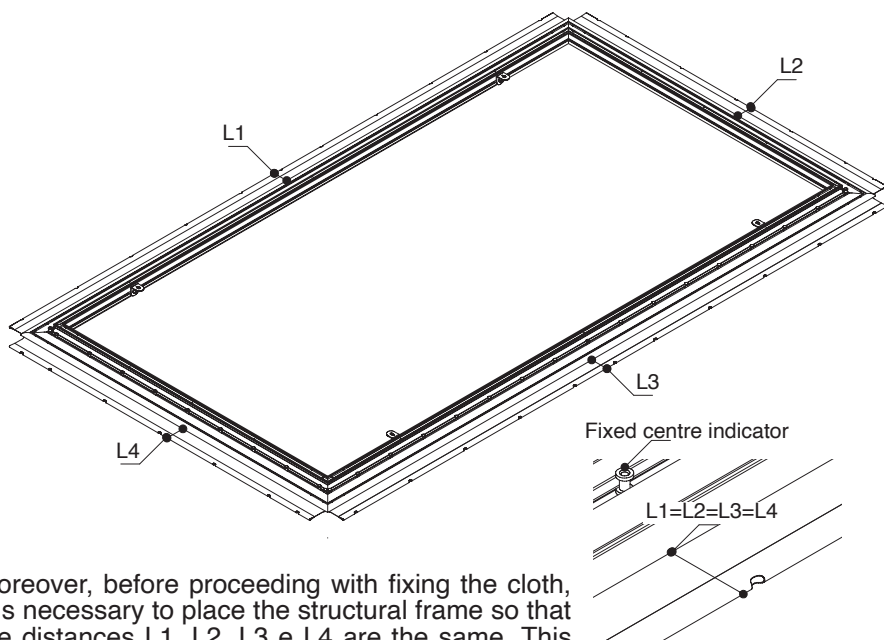
Correct position
cursors facing upwards



Wrong position
cursors facing downwards

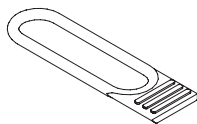


For an easy installation of the projection surface to the structural frame, this frame has to be centered in the most precise way, pairing the red centre indicators applied on the cloth and the fixed centre indicator.

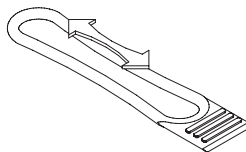


Moreover, before proceeding with fixing the cloth, it is necessary to place the structural frame so that the distances L1, L2, L3 e L4 are the same. This guarantees that the frame is centered compared to the cloth.

Now we are ready to fix the first 4 rubber bands. In order to soften them, **it is necessary to stretch them** as shown in the figures below.



Press strongly the rubber bands extremities



Stretch the rubber band moving it from the centre to the extremities

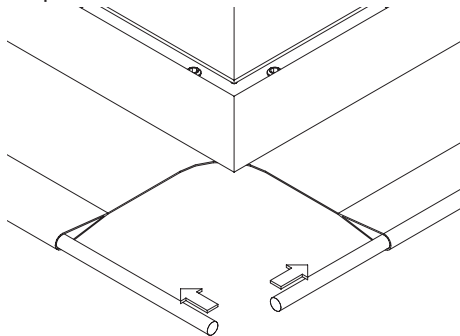
At the end of this procedure, you will notice that the rubber band is softer and its length is increased of about 5 mm.

This procedure has the aim to make the screen fixing and eventual regulations easier.

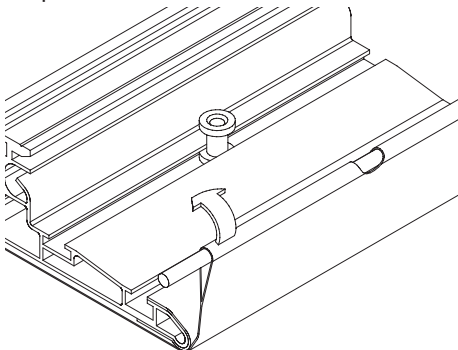
Proceed now with fixing the screen to the structural frame.

The drawings below describe how to fix the galvanized rods and the rubber bands. **This operation has to be carried out by at least two professional people, taking care that the surface is very delicate and any damage on it will be permanent.**

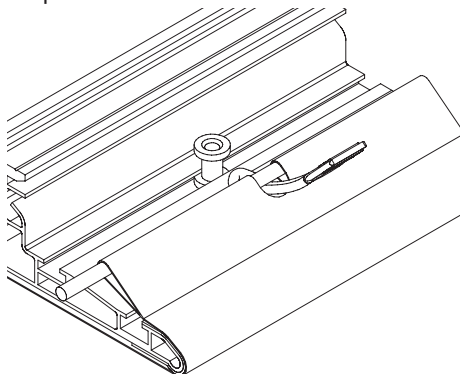
Step 1



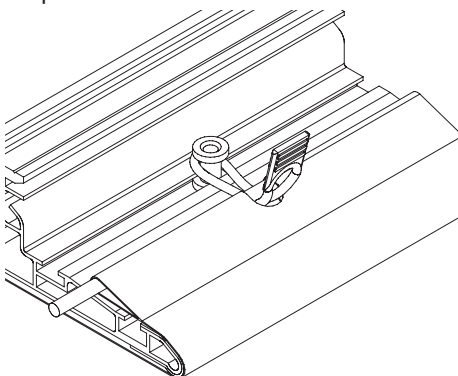
Step 2



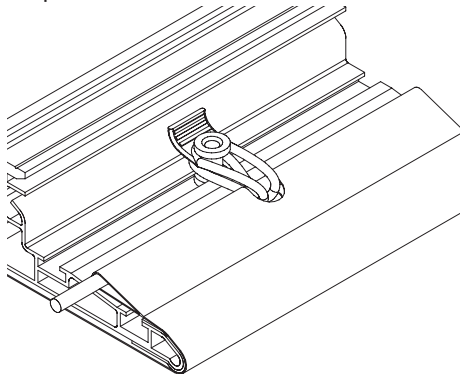
Step 3



Step 4



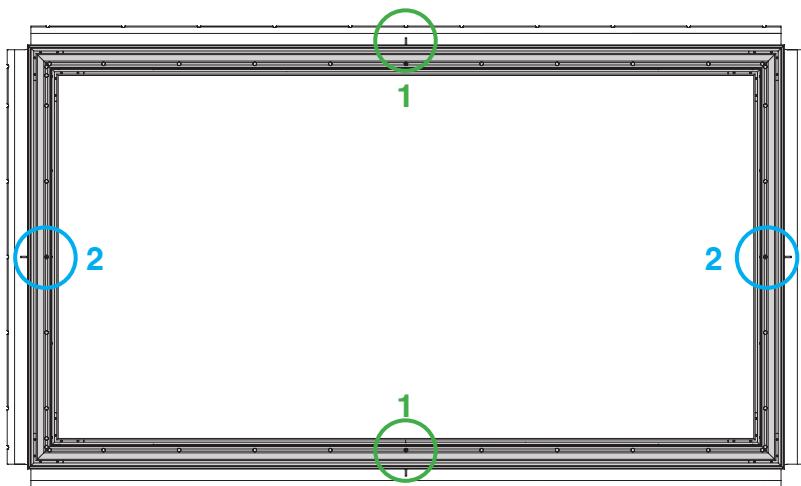
Step 5



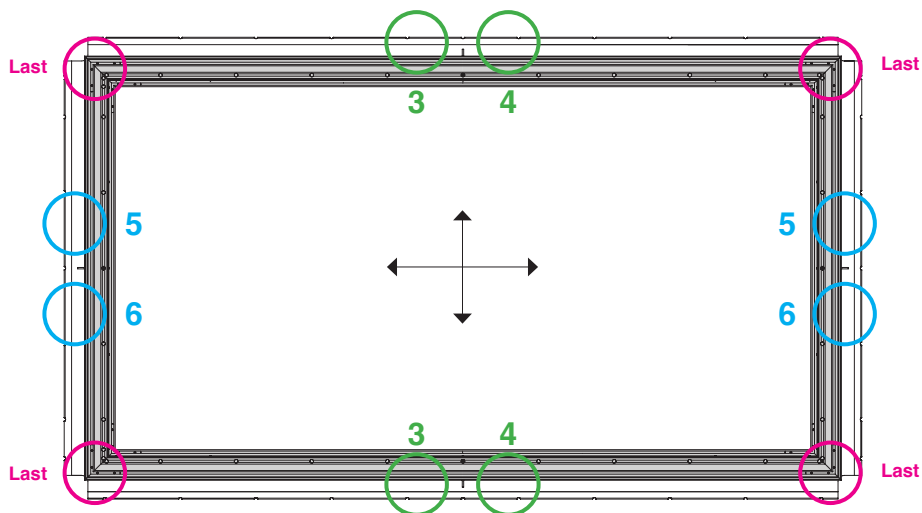
IMPORTANT:

The **sequence for fixing the rubber bands** is shown below.

The first rubber bands that have to be fixed are those necessary for centring the cloth. It is important that fixing is **carried out simultaneously** starting from the opposite sides because this defines the exact central position of the cloth.



After having checked the exact centre, proceed with fixing all the rubber bands, following the sequence indicated below: from the centre outwards and the rubber bands on the corner have to be fixed as last ones.

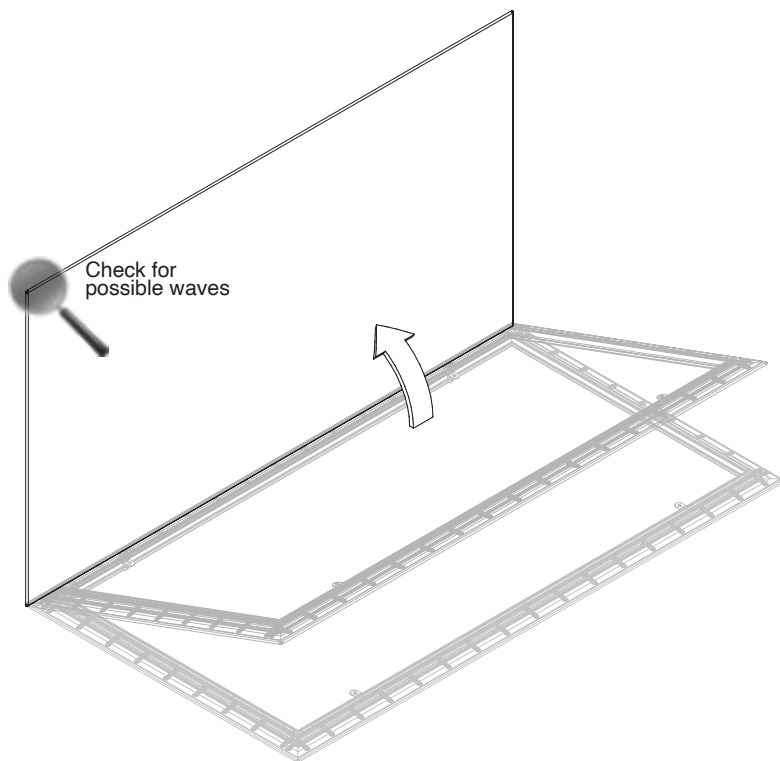


After having fixed the cloth to the structural frame, lift the screen in vertical position, as shown by the figure below and check that there are not waves or folds on the projection surface.

If there are waves it is enough to detach and fix again the rubber bands.

Waves can appear because of different factors, among the others the wrong centring and the wrong sequence of the rubber bands fixing.

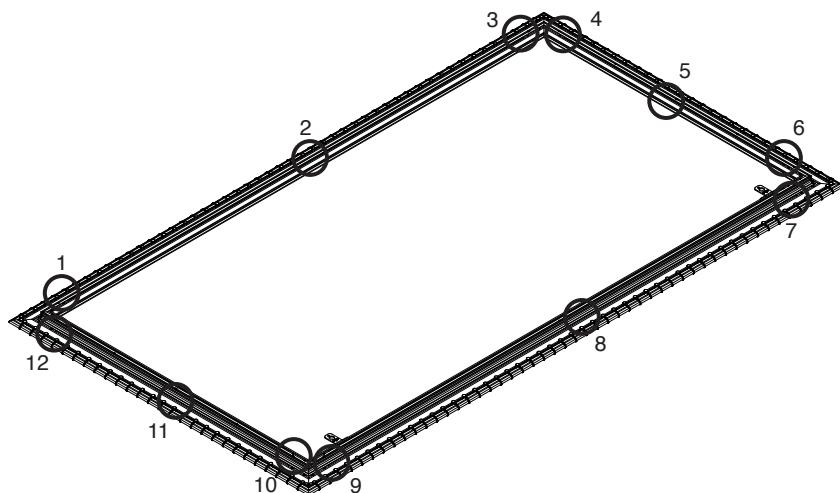
For example: waves can appear, if the sequence of rubber bands fixing is carried out from the sides towards the centre.



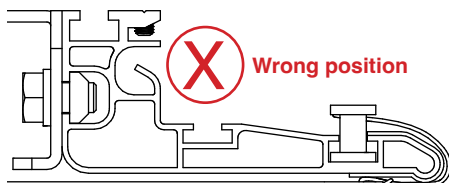
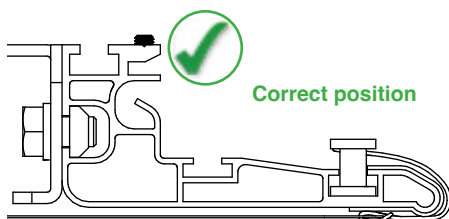
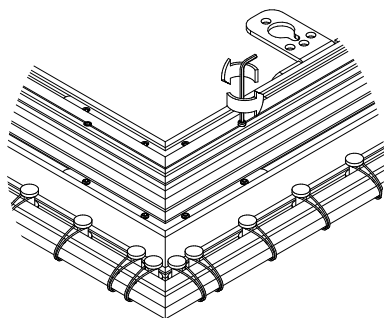
Before proceeding with the bezel assembly, it is important to wait for about 10 minutes. During this time, both the screen and the bands have time to settle. This time is necessary because, after the bezel is mounted on the structural frame, it is not possible to make adjustments on the rubber bands any more.

3.4 THIN BEZEL ASSEMBLY

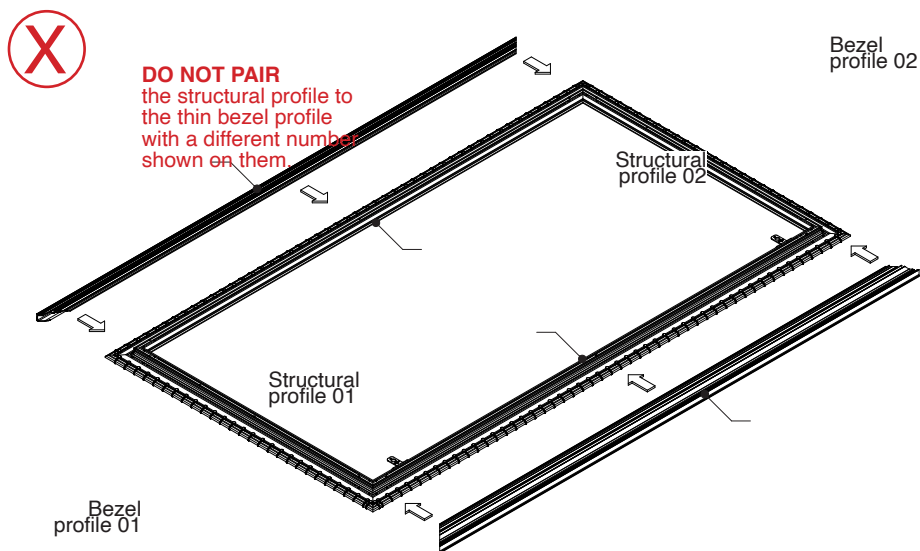
Before proceeding with mounting the thin bezel segments (B), loosen the pre-mounted dowels on the structural profile, in order to assemble easily the structural frame to the thin bezel segments. Depending on the size of the screen, the dowels will always be on the extremities and in the centre of the profile at the distances shown in the figure below.



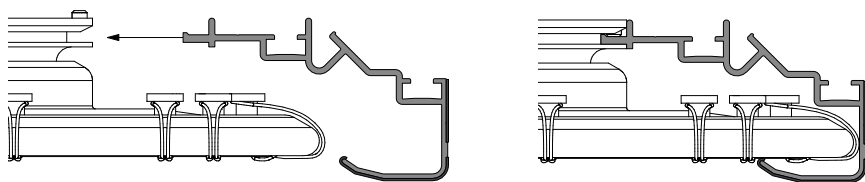
With a suitable Allen key, loose the dowels turning counterclockwise.



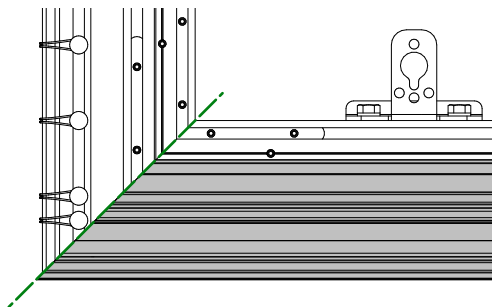
Now, proceed with fixing the short thin bezel segments.
Take the thin bezel segments with the same number and move them close to the structural profile and insert them. To insert them, lift gently the side on which you are working.



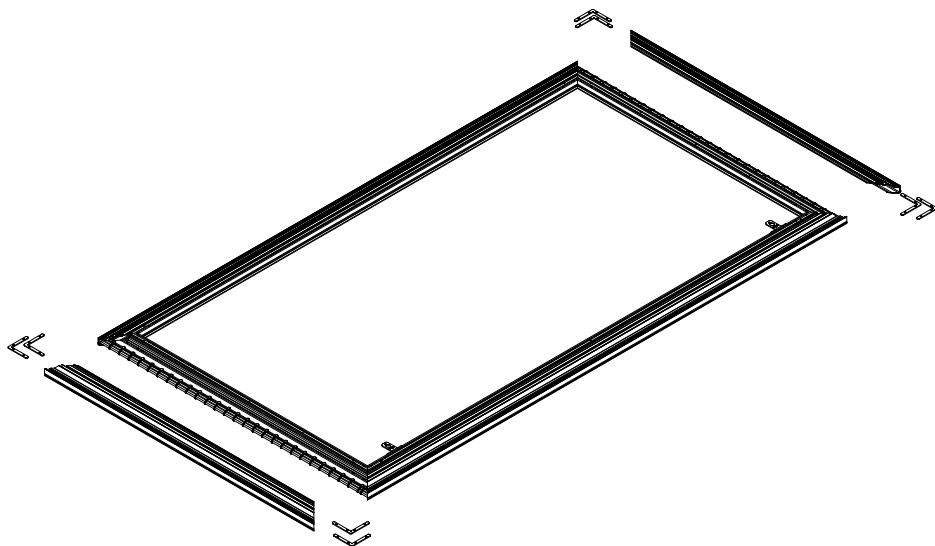
The figure below indicates how to fix the thin bezel profile to the structural profile.



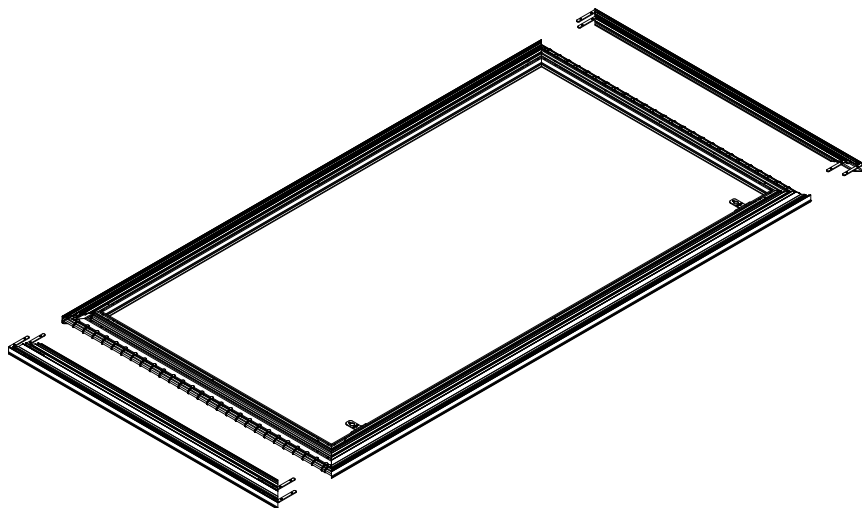
Before fixing the thin bezel, make sure that it is **PERFECTLY** aligned with the structural frame.
Now tighten the dowels.



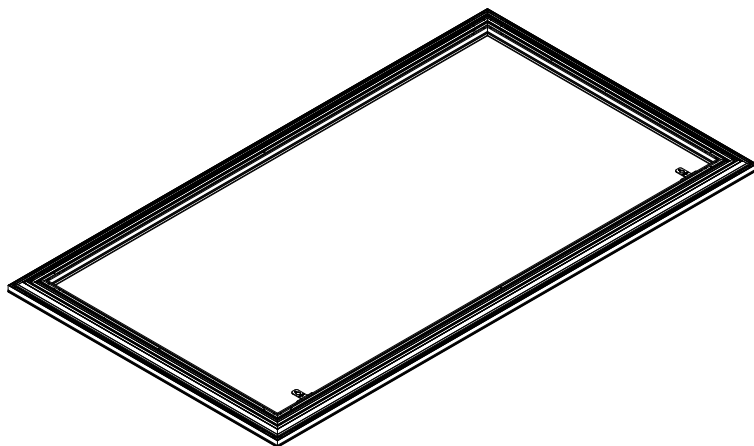
Once the short bezel segments are placed and fixed, proceed with taking the long thin bezel segments and prepare the metal corners (C) to be fixed.



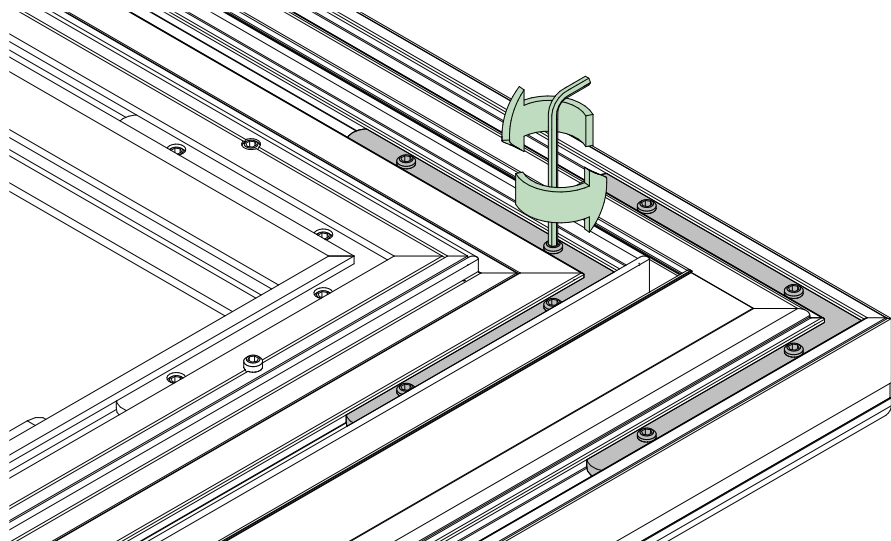
Insert the metal corners without tightening them, making sure that the dowel is loose and but not completely unscrewed.



Insert the metal corners carefully to the short sides and place the long thin bezel profiles close in order to complete the frame mounting.



At this point, screw the dowels tightly.

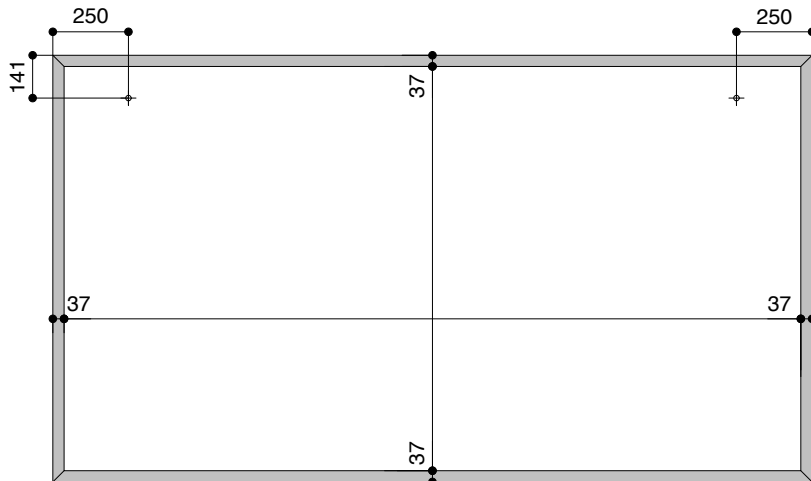


4.0 INSTALLATION

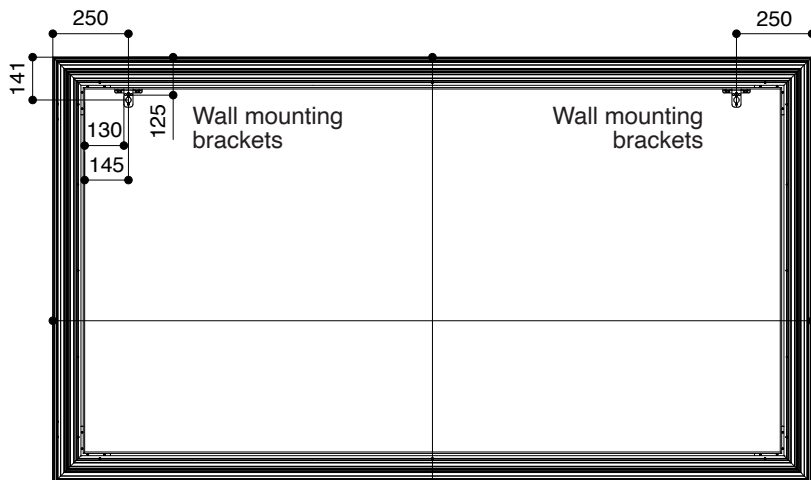
4.1 WALL MOUNTING

The wall mounting brackets are already fixed to the structural profile, in order to ease the installation. Fix the wall plugs with the screws to the wall and hang the screen.

Front view



Rear view



Produttore/Manufacturer/Hersteller/Produtor
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