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freemotion 8

VISIONAUTE

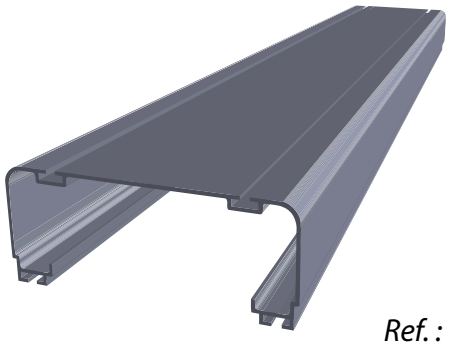
INSTALLATION MANUAL
RAILDOME FREEMOTION 8

www.raildome.com

09/02/2023

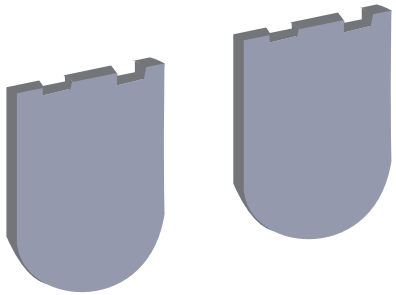
DESCRIPTION OF RAILDOME COMPONENTS

Aluminium rail extrusions in 3 m sections



Ref. : VZC-RAIL3

Rail end-cap

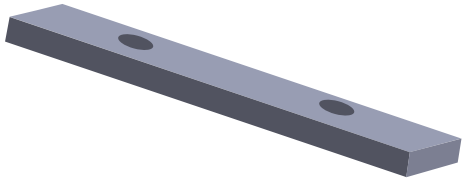


Ref. : VZC-EB6

Mirror-finish cover + gloves

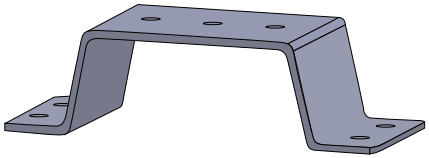
Ref. : VZC-CPT3

Connecting fishplate



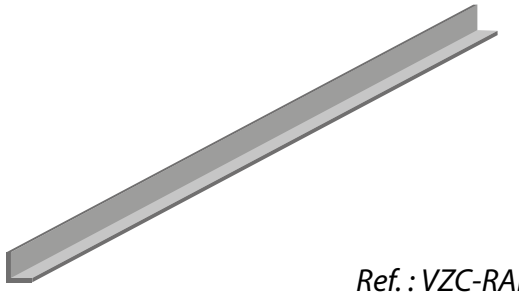
Ref. : VZC-ECLIS6

U attachment bracket



Ref. : VZC-SUPU

Power rail



Ref. : VZC-RAE

Hardware

M6 washers
Ref. : VZC-RM6

Bolt 6x8 mm
Ref. : VZC-VIS608

Bolt 6x12 mm
Ref. : VZC-VIS612

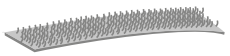
M6 nut
Ref. : VZC-ECRM6

Clip
Ref. : VFM-CLIP

Gland
Ref. : VZC-PE

T-nut
Ref. : VZC-ECRT

Female Velcro (loops)
for the cover
Ref. : VZC-BFF



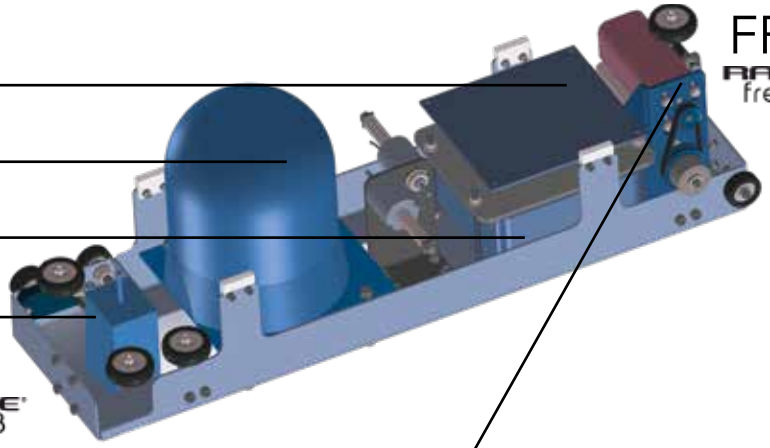
Male Velcro (hooks)
for the rail
Ref. : VZC-BFM

Electrical junction clip

Ref. : VFM-CJR

DESCRIPTION OF ELEMENTS COMPONENTS RAILDOME

The camera slider



Ref. : RA-CHA8

Elements weights

Camera slider : 8.00 kg

Rail bar (3 m) : 14.90 kg

Extremity bumper Rail

Ref. : RA-EXTAR

Power Plate

Ref. : RA-ALIMD

Remote control

Ref. : RA-TCE

Positioners Magnetic

Ref. : RA-CME

Interface keyboard (optional)

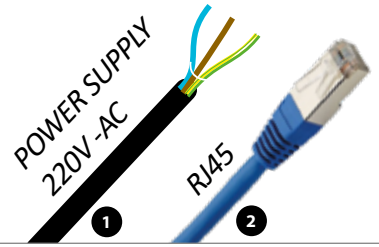
Ref. : VZ-CPN-IP

Extremity bumper Rail Start Power supply

Ref. : RA-EXTDA

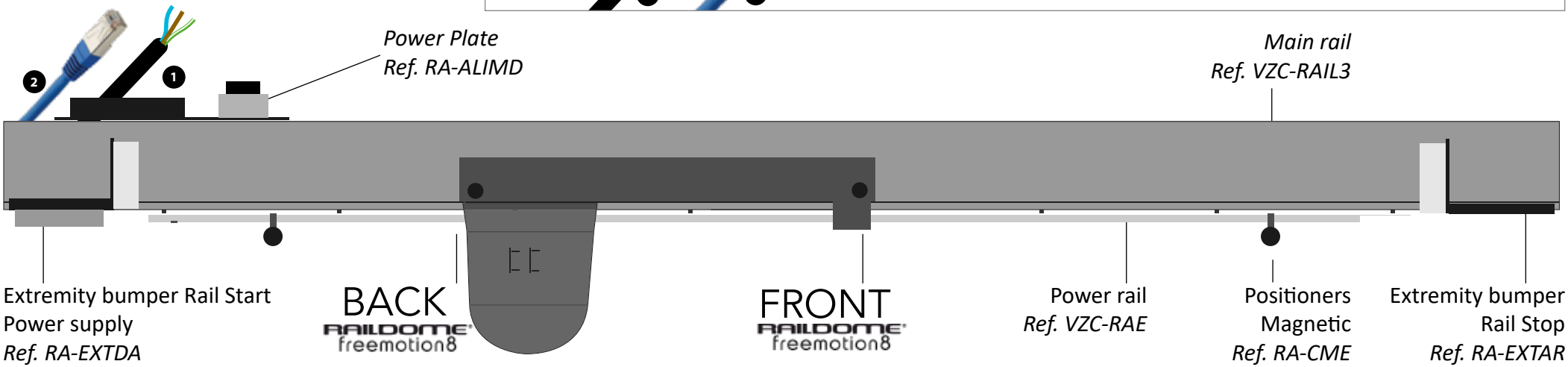
GENERAL INSTALLATION DIAGRAM

Connection to the outside environment

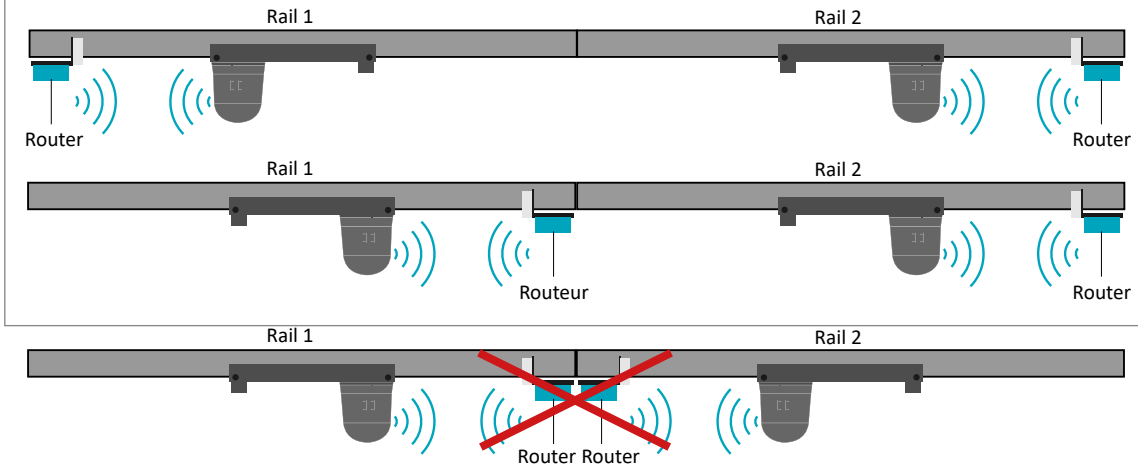


The Raildome is connected with:

1. A 220V 2 amp power supply
2. A cable RJ45



Optimal scheme for installing routers with two Rails connected



PERFECT

OK

FORBIDDEN

Attention :

The direction of the carriage changes depending on the position of the router.

LIST OF TOOLS REQUIRED FOR INSTALLATION:

- Metal hole saws : 20 mm ..... ☐

- Spanners and sockets:
  - 2x10 spanners (for the threaded rods) ..... ☐
  - 2x13 spanners (for the threaded rods) ..... ☐

- Allen keys: ..... ☐
- Deburring file..... ☐
- Metal saw..... ☐
- Resistant gloves,..... ☐
- Flashlight,..... ☐
- Measuring tape, ... ☐
- Multimeter, ... ☐
- 2 meter aluminum ruler (important to align the rail), ... ☐
- Pliers ..... ☐

SUPPLIES :

- Sandpaper (for deburring)..... ☐
- 8 mm threaded rod or steel cable with the Gripple system (for suspending the rail) ..... ☐
- Slings ..... ☐

Recommended equipment

IP, HD-SDI, WIFI TESTER :
Ref : VZ-TESTFIP

- 7inch color touch screen
- 800x600 resolution (RGB)
- Control camera of IP, PTZ and Wifi
- Control cameras HD-SDI
- Battery with USB 5V DC output
- UTP/IP cable tester RJ45
- 12V DC power output
- Photo and video recording on SD card
- POE tester
- Test pattern generator (for monitor and DVR control)
- Connection interface for LAN/WAN networks

RAILDOME INSTALLATION PROCEDURE

Installation steps :

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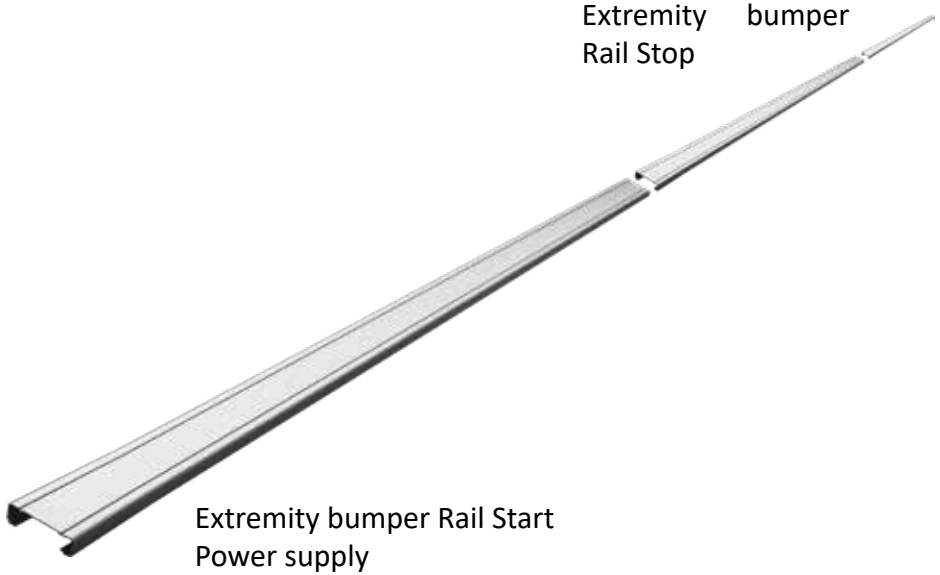
PHASE I - ON GROUND PREPARATION

1. LAY OUT ALL OF THE RAIL SECTIONS ON THE GROUND.

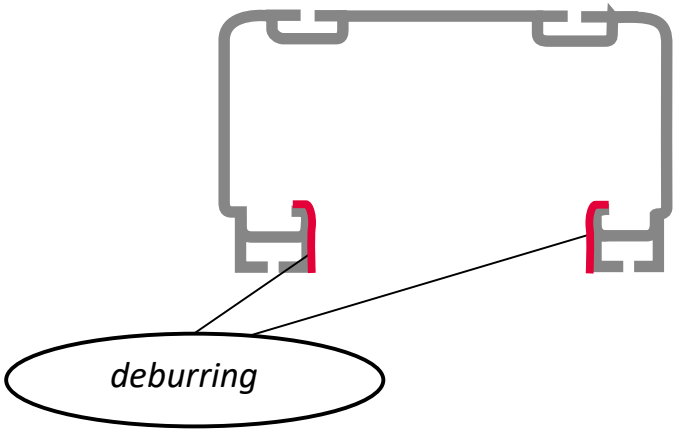
To start the installation, lay out all of the rail sections on the ground.

For reference during the installation, we label the two Raildome ends : “Extremity bumper Rail Start Power supply” and “Extremity bumper Rail Stop”.

The Extremity bumper Rail Start Power supply side is the end of the Raildome which will be connected to the power supply.



Ensure that the truck slides properly in the rail.
If necessary, very lightly sand the area shown below.

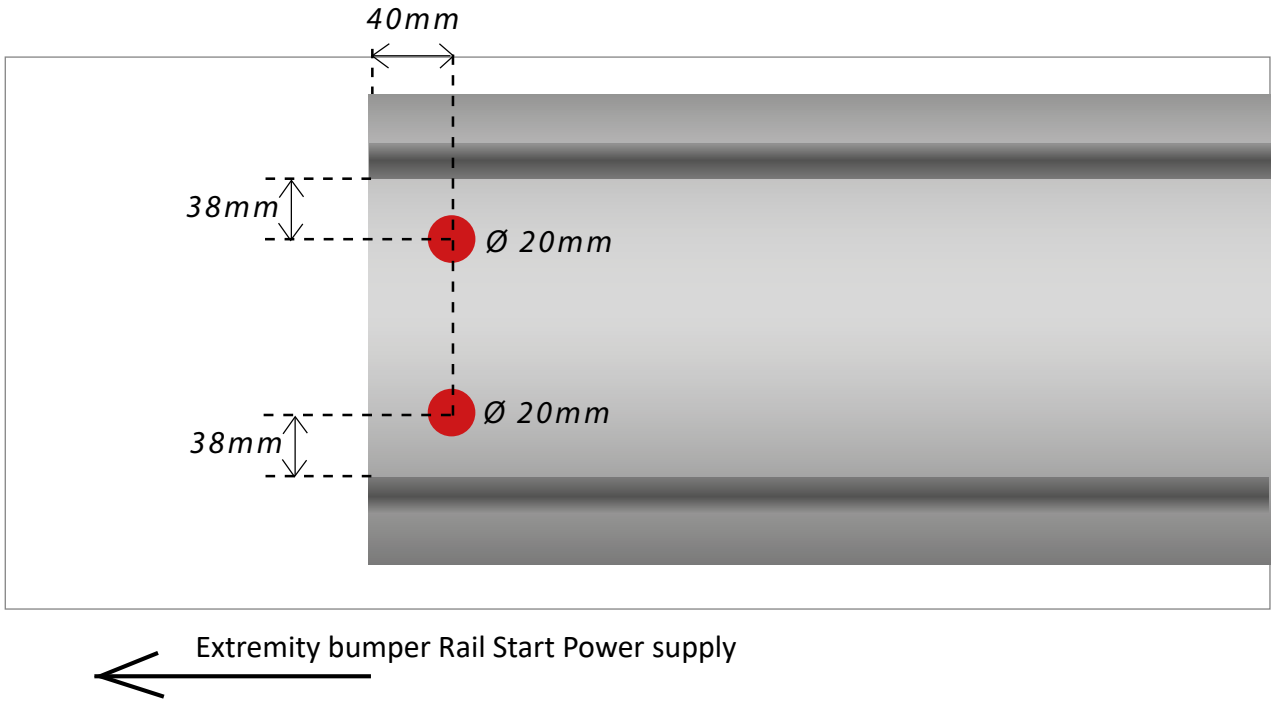


2. 2. DRILL THE RAIL FOR INSTALLATION OF THE GLANDS

Phase I - 2/5

The use of glands for electrical cable crossings requires you to drill two holes 20 to 40 millimetres from the end of the rail on the side 1.

Top view



3. CLEAN THE RAIL

Phase I - 3/6

Important : clean the rail to remove any drilling swarf.

Do not use corrosive or abrasive products to clean the rail.

4. STICK THE VELCRO ROUGH SIDE (HOOK) TO THE RAIL

A one-way mirror panel is positioned along the rail to hide the optical system. It will be called «mirror cover». It is fixed with Velcro strips positioned on the edge of the rail sections.

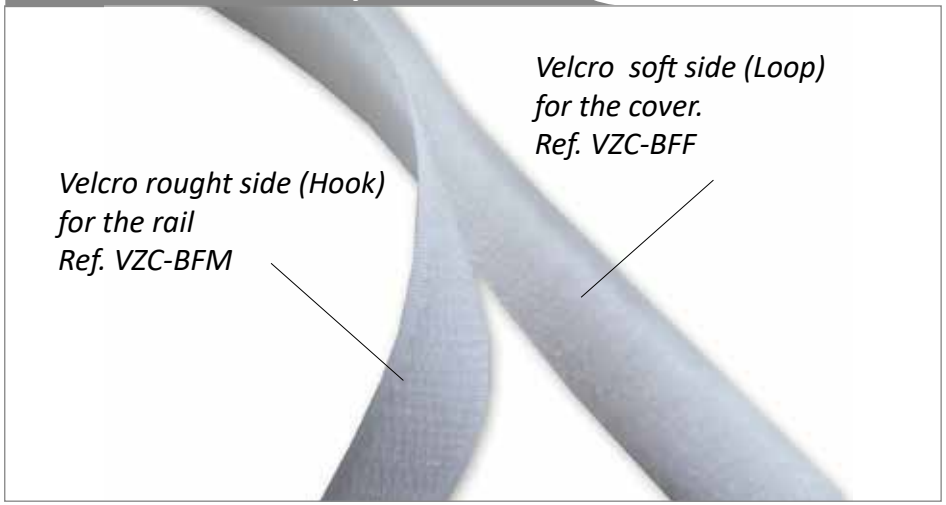
Carefully wipe the surface of the rail where the Velcro strips will be attached with a soft cloth.

Do not use corrosive or abrasive products to clean the rail.

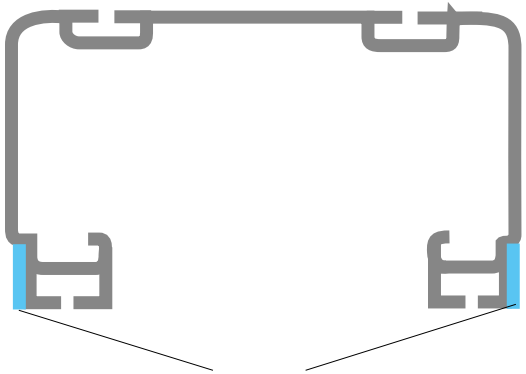
Stick the Velcro rought side (Hook - Ref. VZC-BFM) on the rail edges at the location provided without stretching the Velcro :

Capotage miroir

Velcro hook and loop fastener



Velcro position on the rail



Important:
To be performed on the ground.

Instal Velcro hook side under the indentation

WARNING :

Do not inverse the Velcro Hook and Loop. The double-sided glue is specific to each material.
The loop side is to be located on the cover and the hook side is to be located on the rail.

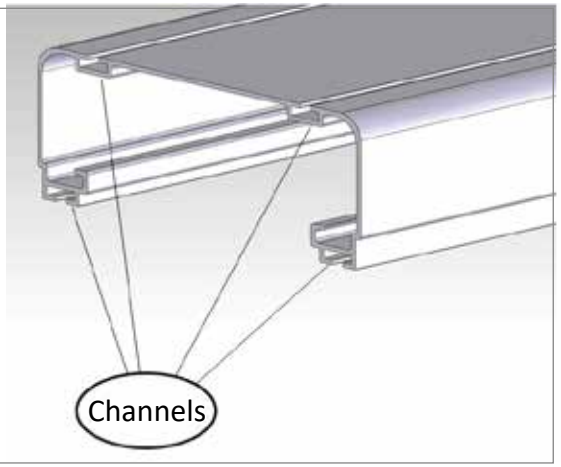
5. POSITION THE JUNCTION FISHPLATES AND THE U ATTACHMENT BRACKETS IN THE RAIL SECTION CHANNELS

Phase I - 4/5

Rail channels

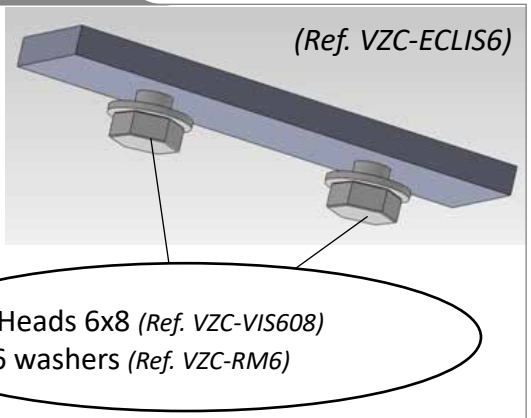
Four channels are used to connect the rail profiles with two types of elements: the connection fishplates and the U mounting brackets.

Each rail section must be joined using four fishplates and one U mounting bracket



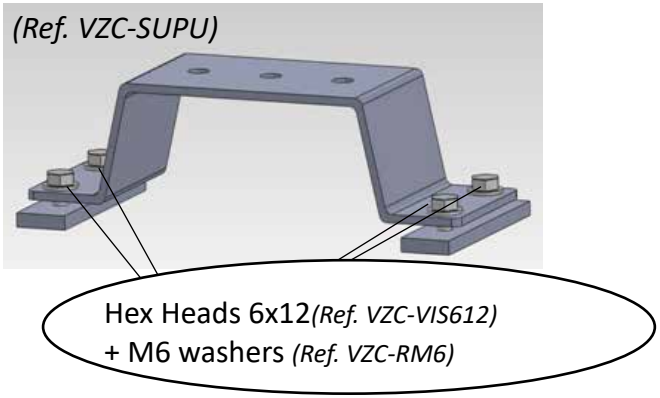
Connection fishplates

Install the pack (hex heads + M6 washers) at each connection inside the channels.

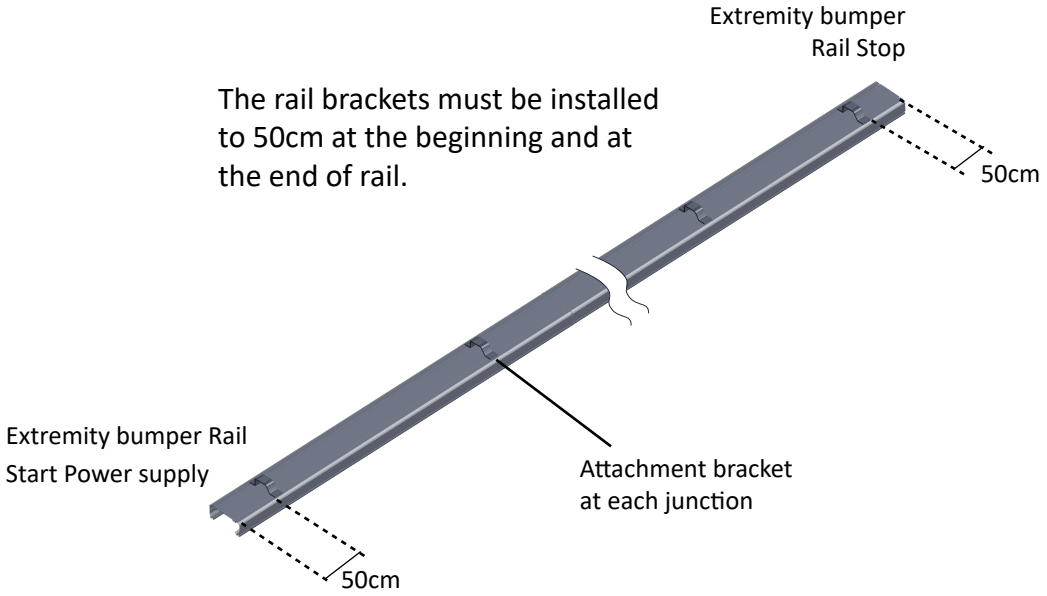


The mounting brackets : U brackets

Assemble this pack (hex head + M6 washers) every 3 meters at each rail section connection.



The rail brackets must be installed to 50cm at the beginning and at the end of rail.

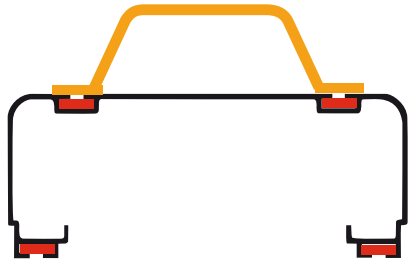


6. POSITION THE JUNCTION FISHPLATES AND THE U ATTACHMENT BRACKETS IN THE RAIL SECTION CHANNELS

Phase I - 5/5

For the standard attachment version, we supply :

- **One U bracket** for attachment and two fishplates (for the 2 upper channels) for each connection.
- Two fishplates (for the 2 upper channels) for each connection with the corresponding hardware.

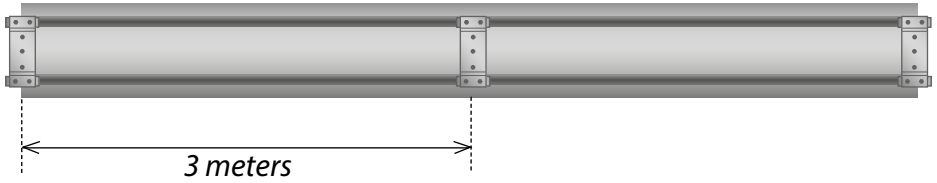


In the case where the attachments do not correspond with these connections, move the U brackets and fishplates in the upper part.
In this case, order extra U brackets and/or fishplates. See the example below.

Examples :

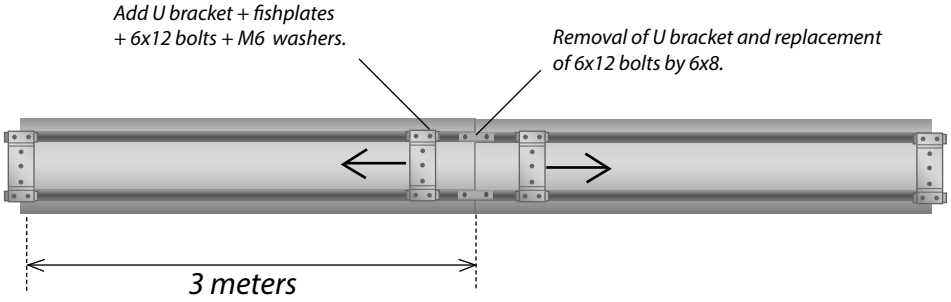
Top view of rail : standard case.

e.g. : 12 fishplates (above and inside the rail), 3 U brackets.



Top view of rail : locating the attachment brackets at the connection impossible ---> Add a U bracket and 2 fishplates

If the U-brackets have to be offset from the rail joints for reasons of rail fastening, the brackets can be fastened with hammerhead nuts instead of the joint plates. Screws and nuts are to be added to the order.



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PHASE II - Rail assembly

1. ATTACH THE RAIL SECTIONS TO THE CEILING USING THE U MOUNTING BRACKETS AND THE CONNECTION FISHPLATES.

Phase II - 1/11

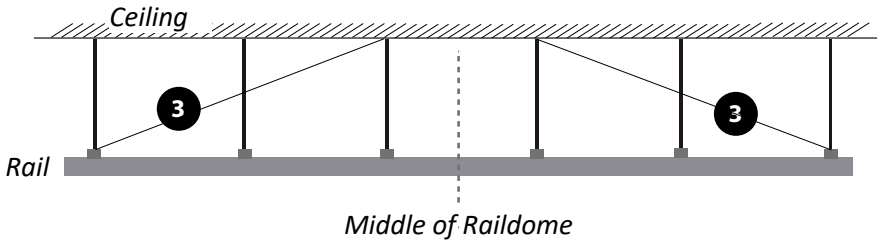
Assemble the sections by tightening the connection fishplates.

When tightening the fishplates, make sure the rail is perfectly aligned. 1

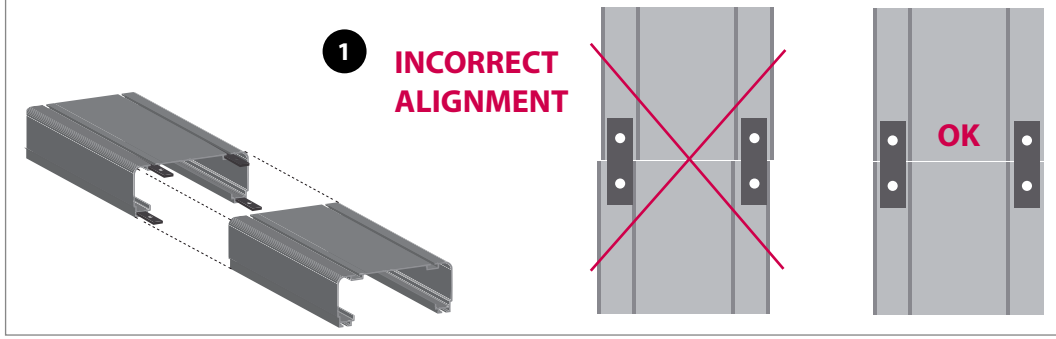
The U attachment brackets have three holes for 8mm diameter threaded rods.
It is recommended to use a central fixation.
If there is no support for the rail alignment, use steel cable with a Gripple wire system. 2

It is important to add, in addition to these attachments, some slings to avoid rocking effects, particularly in the longitudinal direction, due to movement of the slider and camera. 3

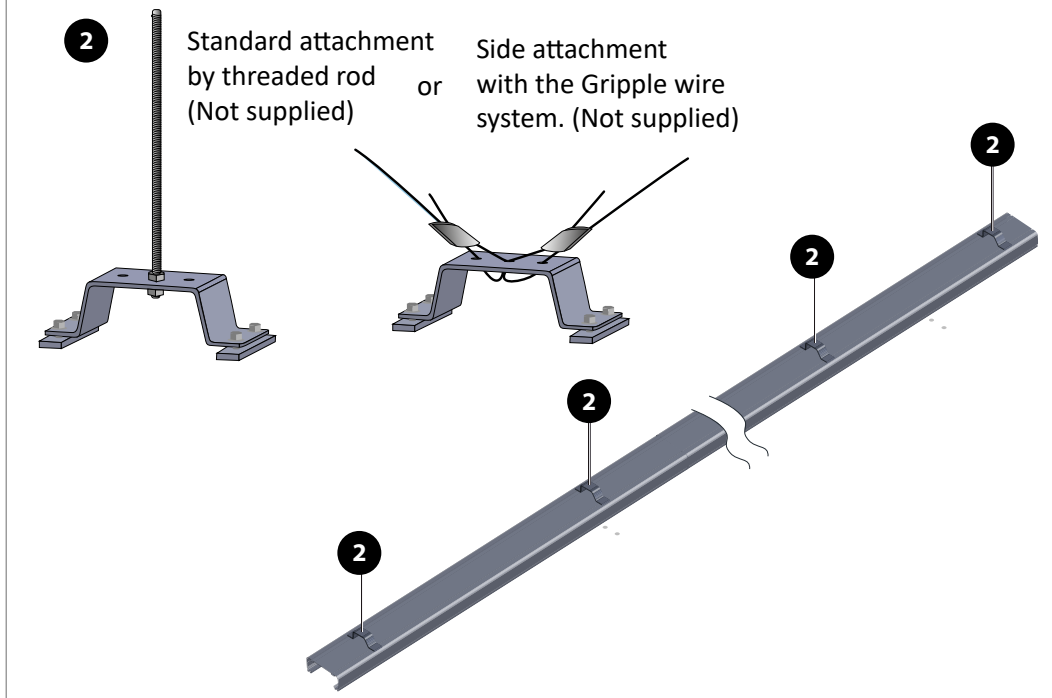
Brace each end of the rail with slings to ensure rigidity and avoid swaying:



Alignment of rail profiles



Fixation des profilés rail

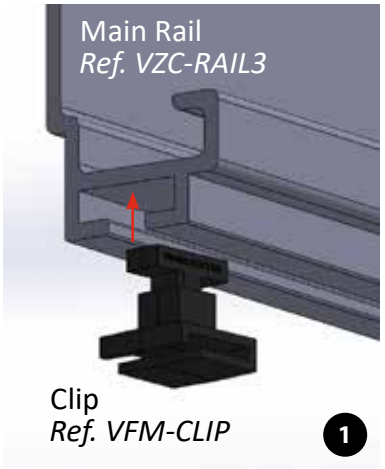


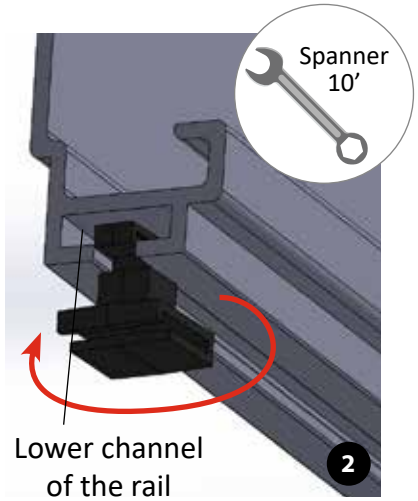
The electrical power supply rails of Raildome are installed under the main rails using a clip (ref. VFM-CLIP). The shape of the clip allows it to be inserted in the lower channel of the rail ❶ and to be locked with a clockwise rotation of a 1/4 turn using a 10' spanner.❷

The clips must be positioned 30cm from the beginning and end of each rail section (Ref. VZC-RAIL3) ❹. Between each clip, the space to be respected is 80 cm.

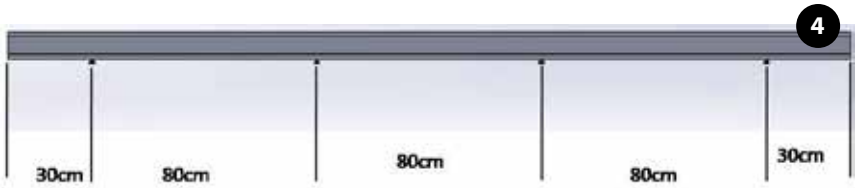
Once the clips are in place, ❺ you can insert the power supply rail (Ref. VZC-RAE) into the clips. Leave a 20cm at the beginning of the main rail ❻ and 5cm at the end ❼.

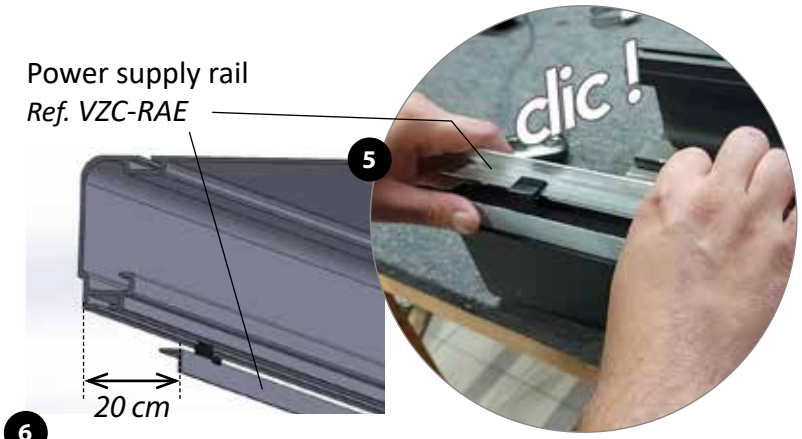
Fastening of the retaining clips for the electrical power rail

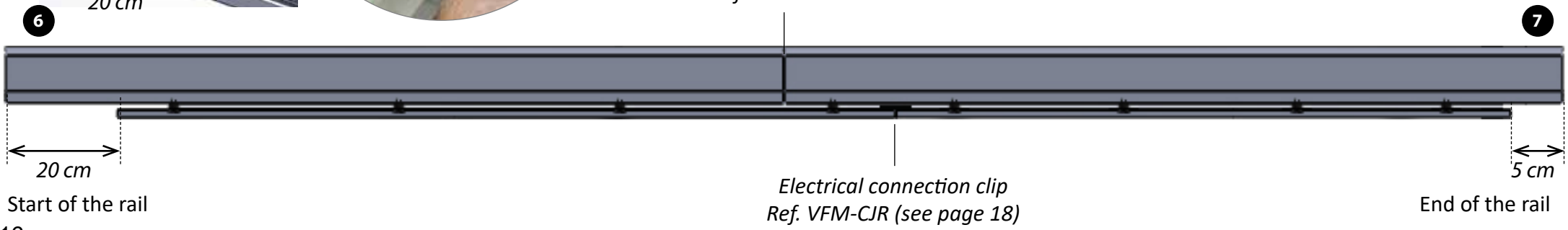




Position the first and last clip (VFM-CLIP) 30cm from the beginning and end of the rail (VZC-RAIL3). Then continue to insert the clips every 80 cm.

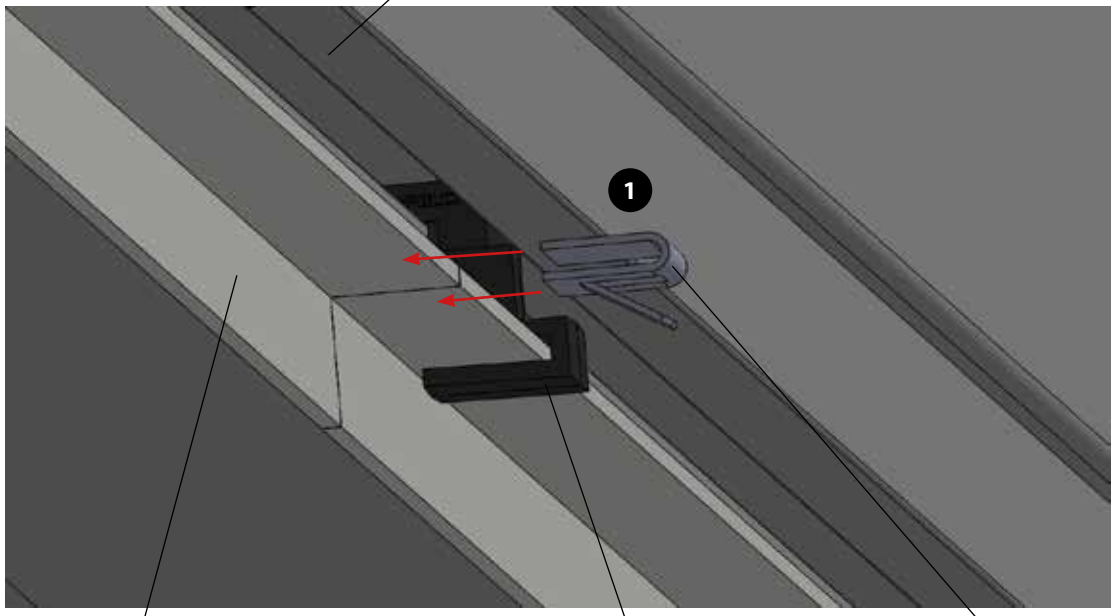






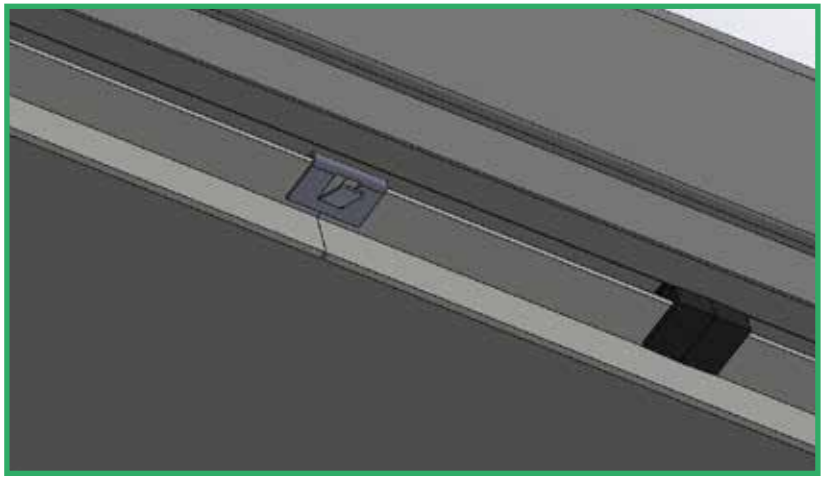
An electrical connection clip (Ref. VFM-CJR) must be added between each rail connection to link them together using a multi-grips. ❶. The rails will be powered along their entire length and will allow to recharge the Raildome.

After the installation of each power rail, use a multimeter to check that there is no electrical continuity between the conductor bar and the rail.



❶

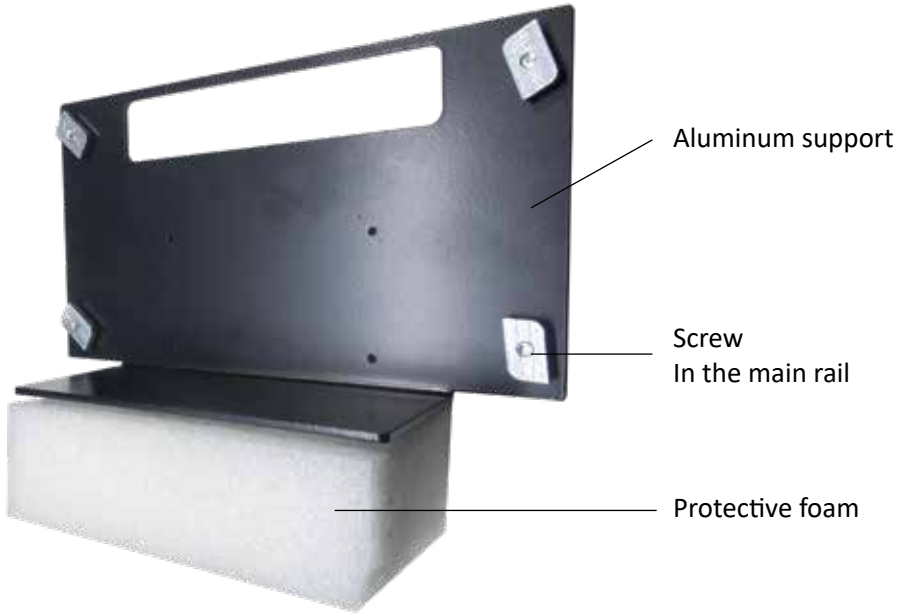
To insert the electrical connection clip, you will need a pair of pliers.



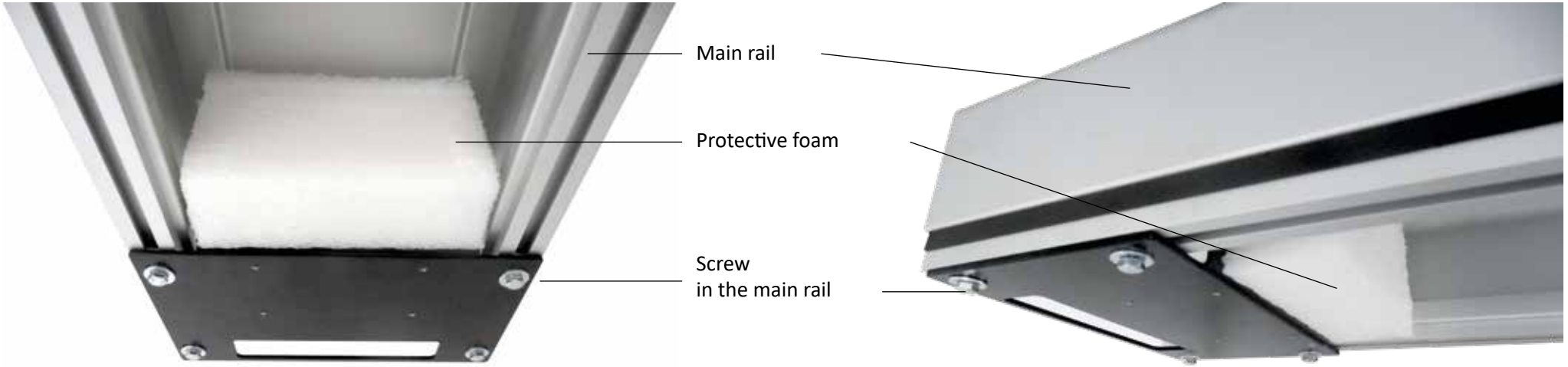
The base «Extremity bumper Rail Stop» is composed of an aluminum support on which is glued a foam on the carriage side to dampen in case of shock of the chartiot.

The aluminum plate is fastened to the rails with fastening screws and nuts that will slide into the lower rail of the main rail.

Composition of Extremity bumper Rail Stop



Attaching the extremity bumper on the rail

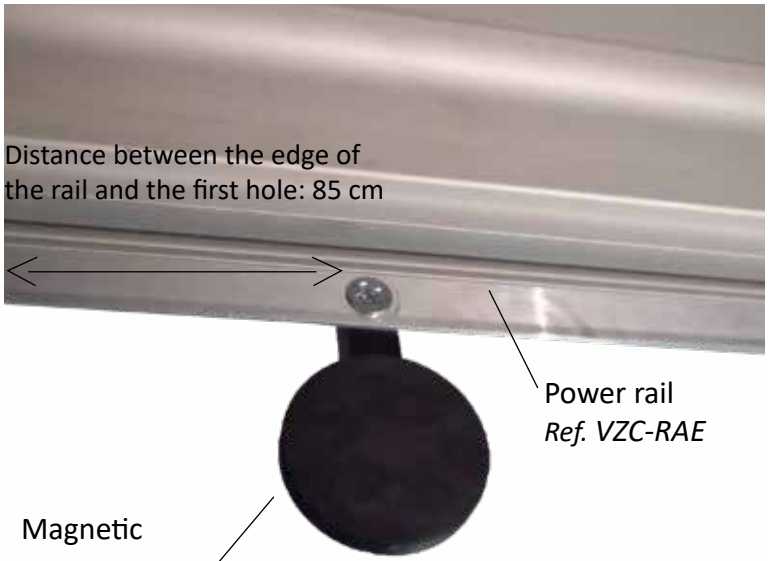


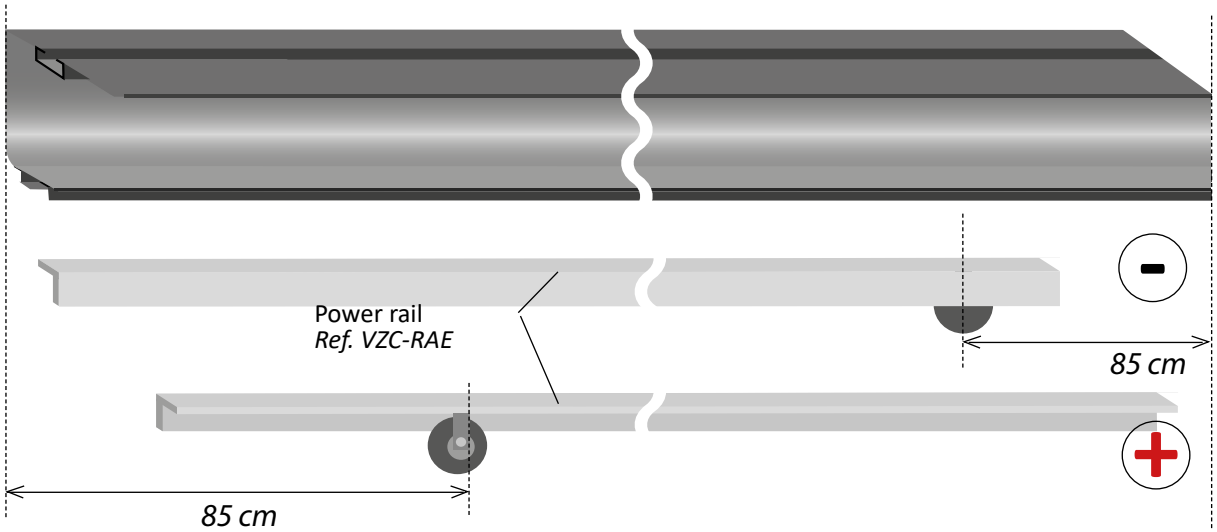
Magnetic sensors are to be placed on each side of the rail. They indicate to the slider when it must stop.

These positioners are screwed on the supply rails. The first one is placed at 85 cm from the edge of the main rail by piercing the supply rails (see position below). The second one is to be placed on the other side of the main rail, 85 cm from the edge. **1**

The operation is to be done at each end of the rail.

Magnetic sensors
Ref. RA-CME



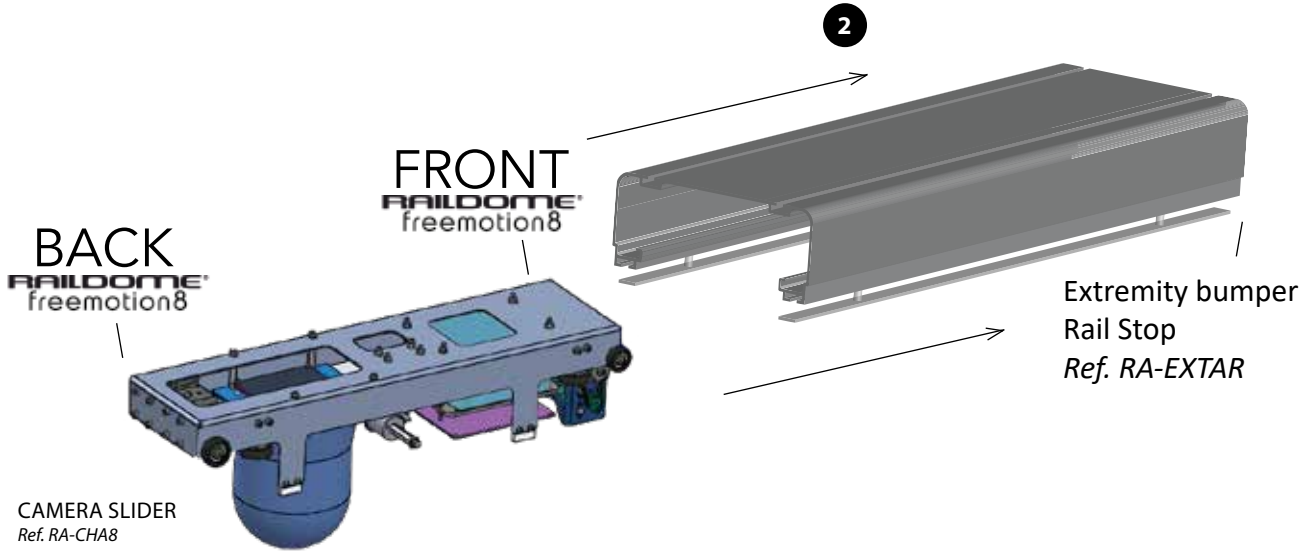


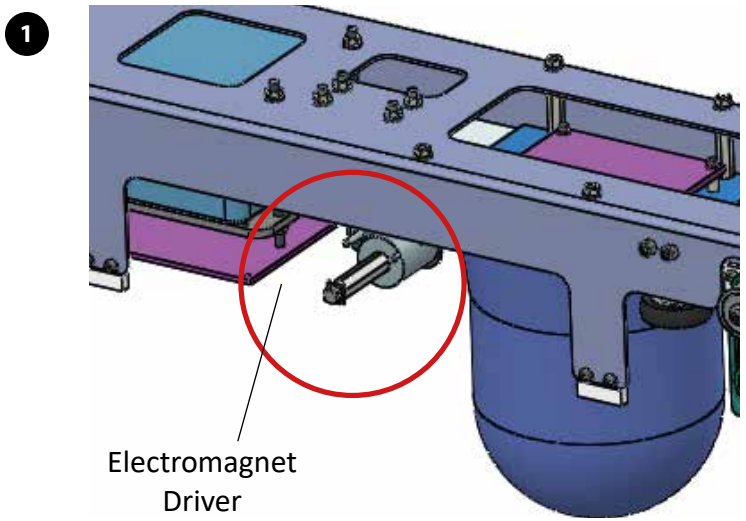
Before placing the camera slider into the rail is important to **plug in the battery**. This allows the two drivers of the slider to return automatically to their positions to prevent damage. 1

Insert the camera carriage into the rail, respecting the direction indicated on the diagram. The front of the slider is directed towards bumper rail stop. 2

Caution: Push the cart more than 2.40m from the edge to avoid any inconvenience.

If you disconnect the battery, wait one minute before reconnecting it. However, if you reconnect the battery quickly, the dome may not reset. In this case, disconnect the battery for at least 15 minutes before connecting it again.



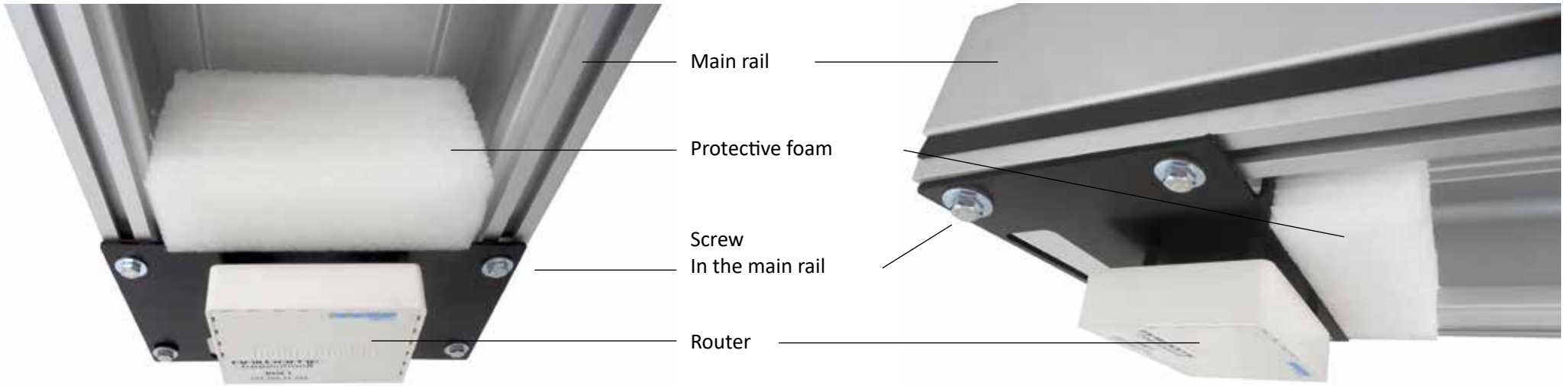


The base «Extremity bumper Rail Start Power supply» is composed by a router to connect the RJ45 cable, and an aluminum support. This support is glued to a foam facing the slider to protect in case of shock.

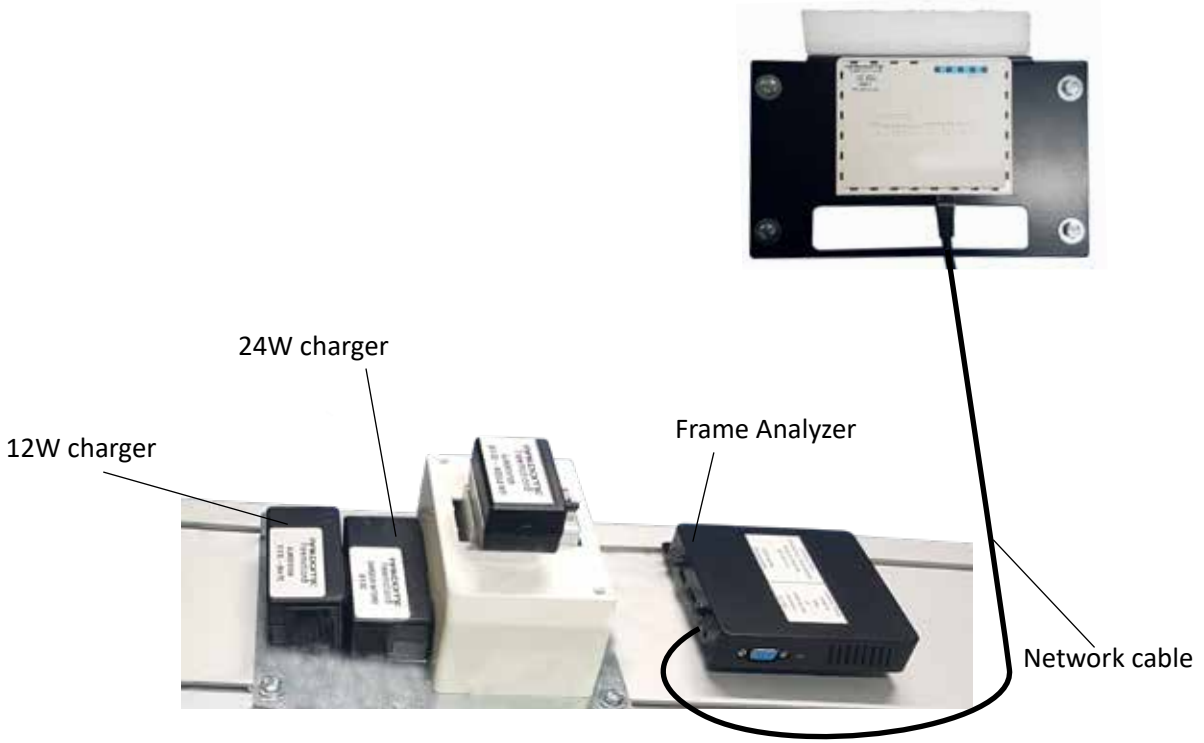
The aluminum plate is fixed on the rails with screws and nuts that will slide into the lower channel of the rail.

Composition of Extremity bumper Rail Start Power supply

Attaching the extremity bumper on the rail



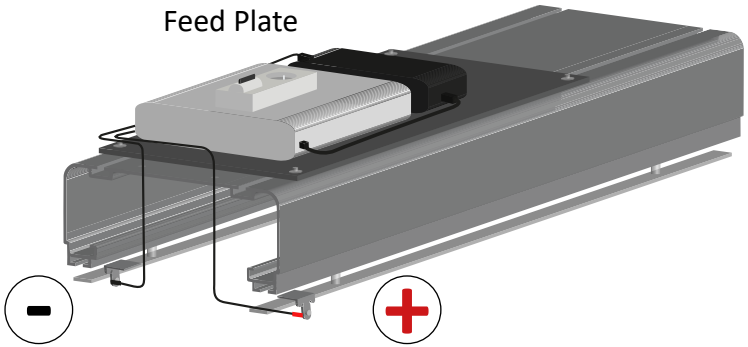
The feed plate is to be placed above the main rail «Extremity bumper Rail Start Power supply» next to the U-shaped mounting bracket. It is fixed by means of screws and T-nuts which are inserted in the upper channels of the main rail and which will lock automatically when tightened.



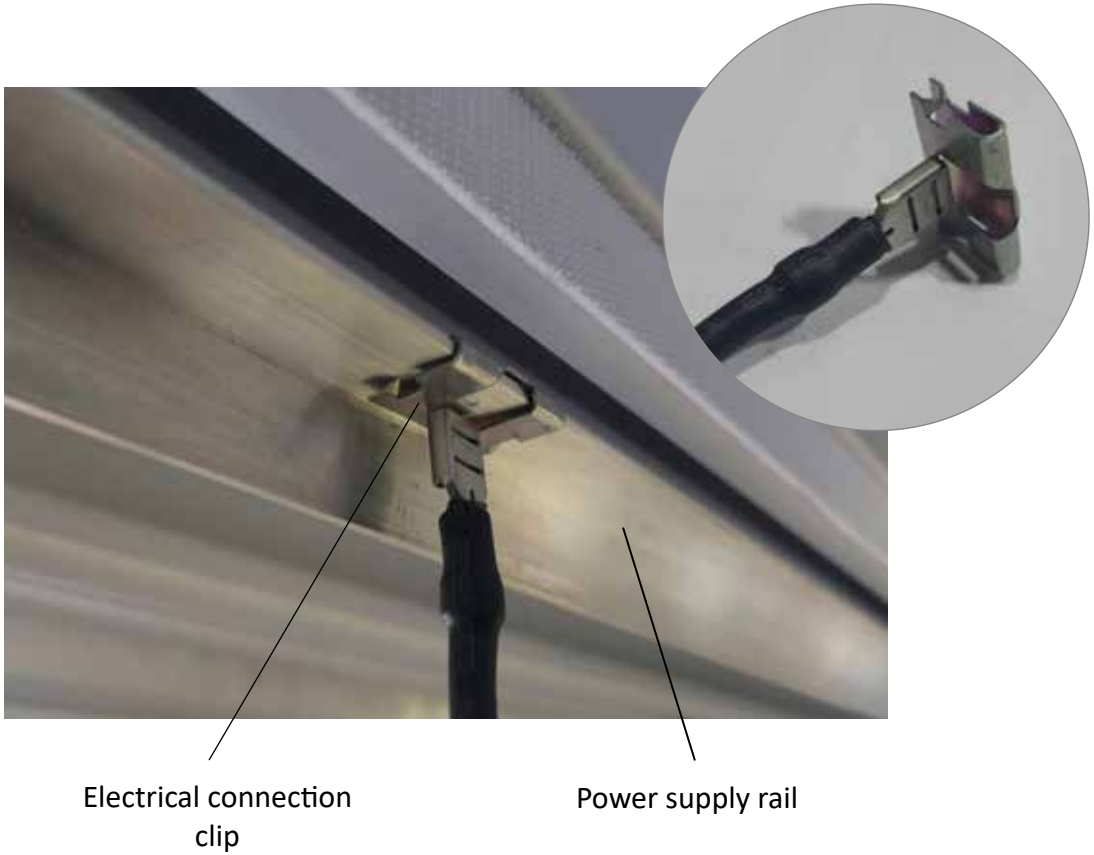
The connection of the supply rails is done using the electrical connection clips (VFM-CJR) ❶ joined to the supply plate ❷ (Ref. RA-ALIMD). All you need to do is clip them to each of the power supply rails as shown in the photos below.

WARNING : to make sure the polarity is correct

❷



❶



To insert the electrical junction clip, you will need a pair of pliers.

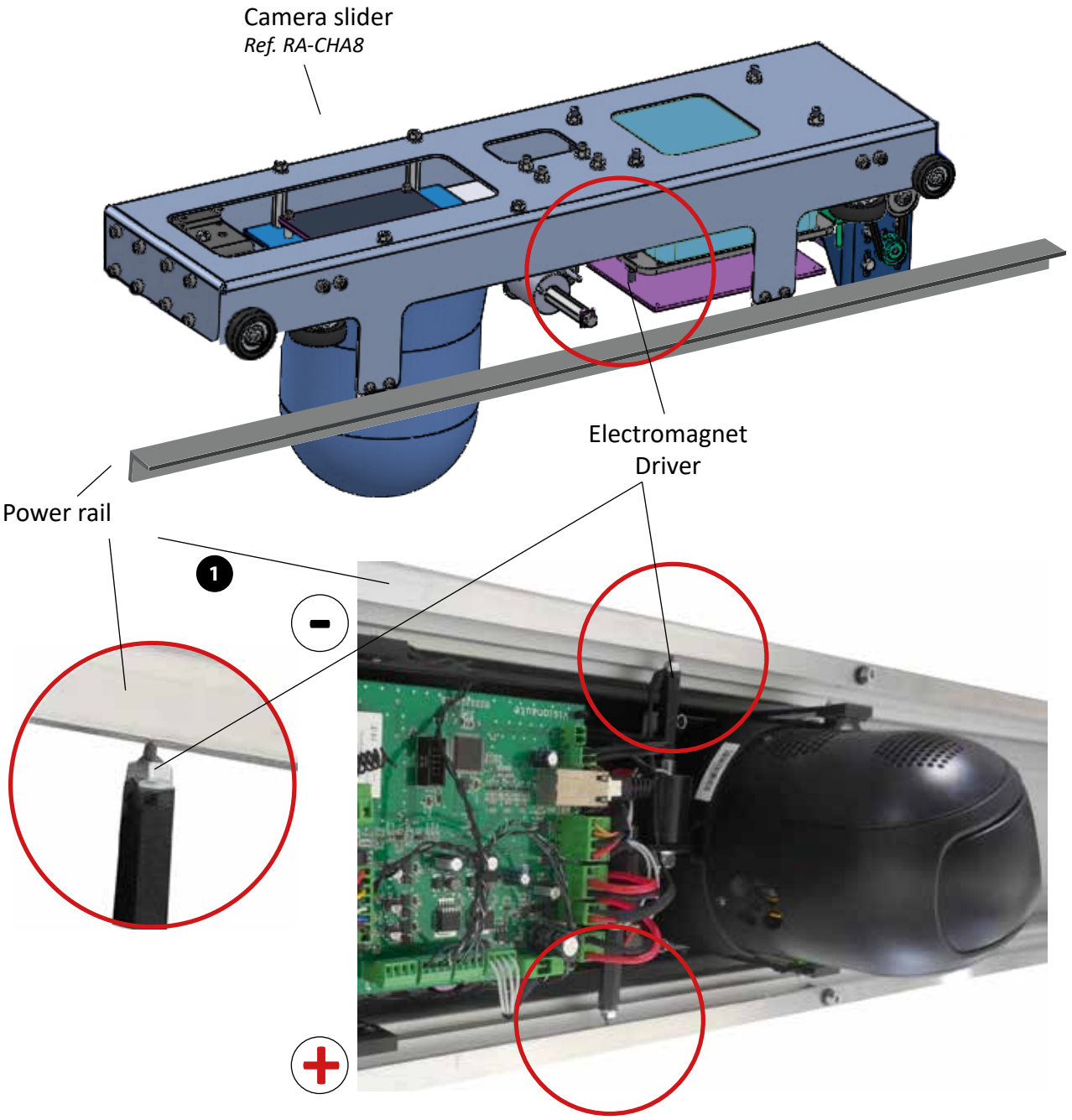
9. CHECK THAT THE SLIDER'S BATTERY IS RECHARGING

Recharging the Raildome battery only occurs when the truck is no longer moving.

When the Raildome is inactive, two conductors controlled by an electromagnet come to the plate to allow the battery to be recharged. 1

As soon as the carriage is again urged the conductors are withdrawn allowing the dome to move without stress and without friction.

Check that the charging light turns red when the conductors are clamped. 2



TO BE DONE AT THE END OF THE INSTALLATION

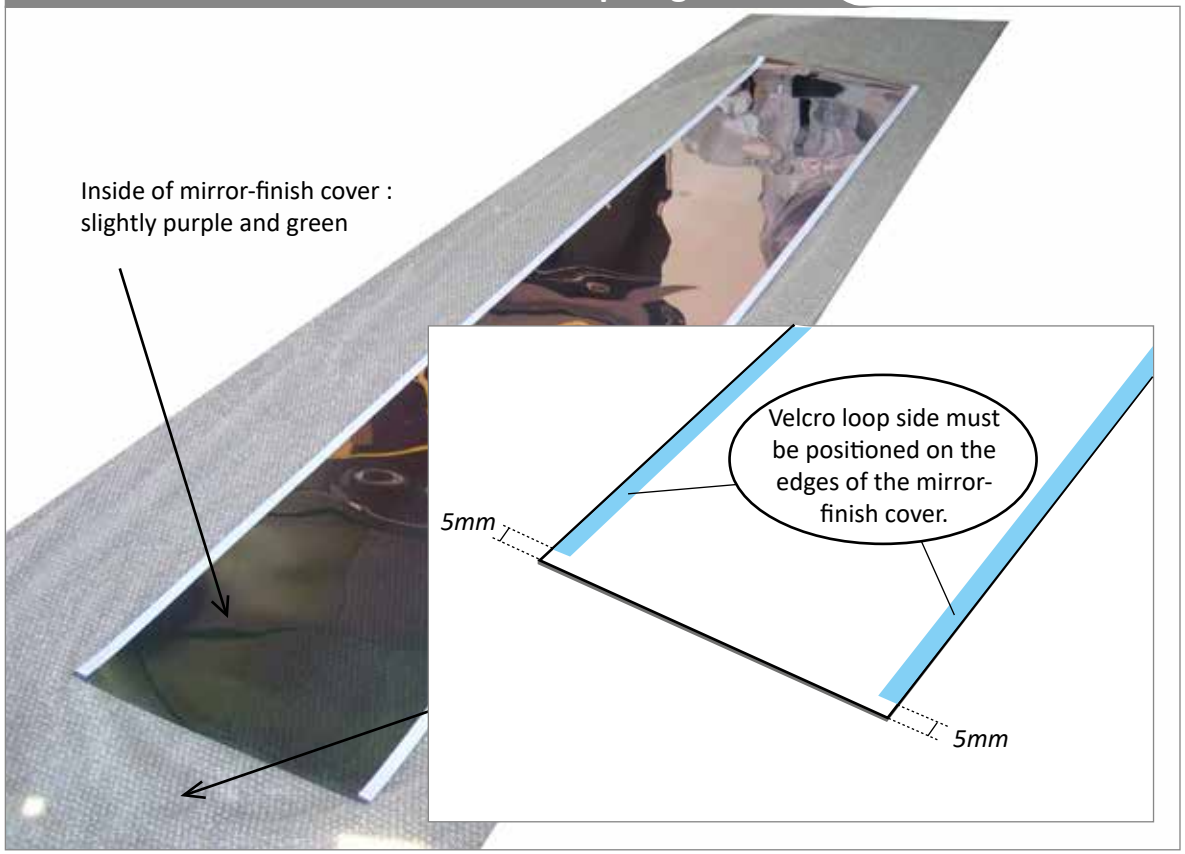
Lay out the mirror-finish cover sheets on a clean surface to avoid scratching them. Use the gloves provided to avoid finger marks on the mirror-finish cover.
Stick the Velcro strips, loop side (loops - Ref. VZC-BFF) to each edge of the panel on the inside of the non-reflective side (slight purple/green appearance).

The panels are delivered in sections of approximately 3.03 metres long. A slight overlap of about 5mm will allow a perfect connection without harming the inside visibility (installation diagram below).

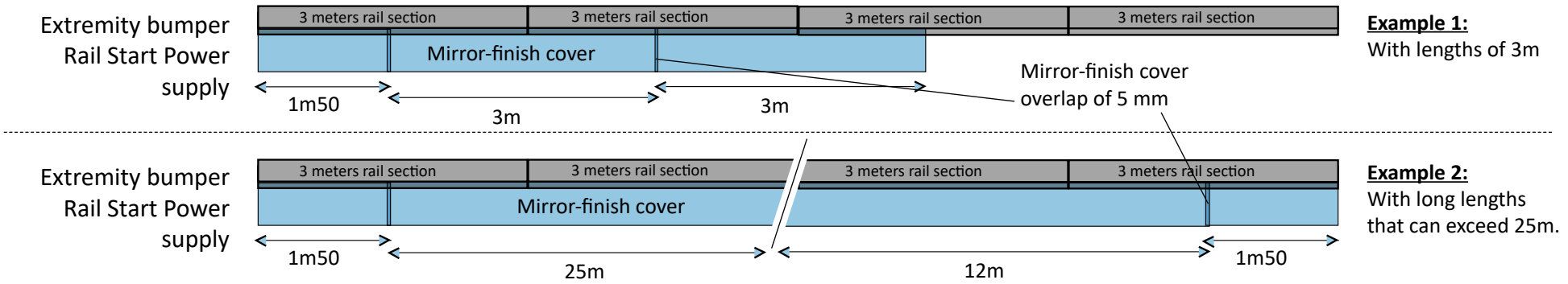
Note : for easier access, use a 1.5 metre section under the Side 1 ! (cut a piece in half).

WARNING : Do not inverse the Velcro Hook and Loop. The double-sided glue is specific to each material. The loop side is to be located on the cover and the hook side is to be located on the rail.

Placement du Velcro femelle sur le capotage



Cover side view



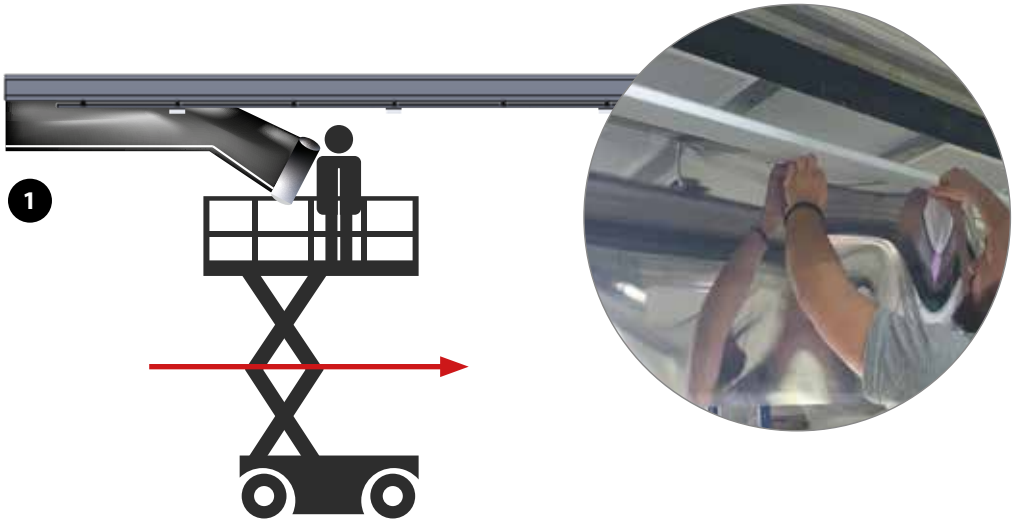
ATTACH THE MIRROR COVER (REF. VZC-CPT3)

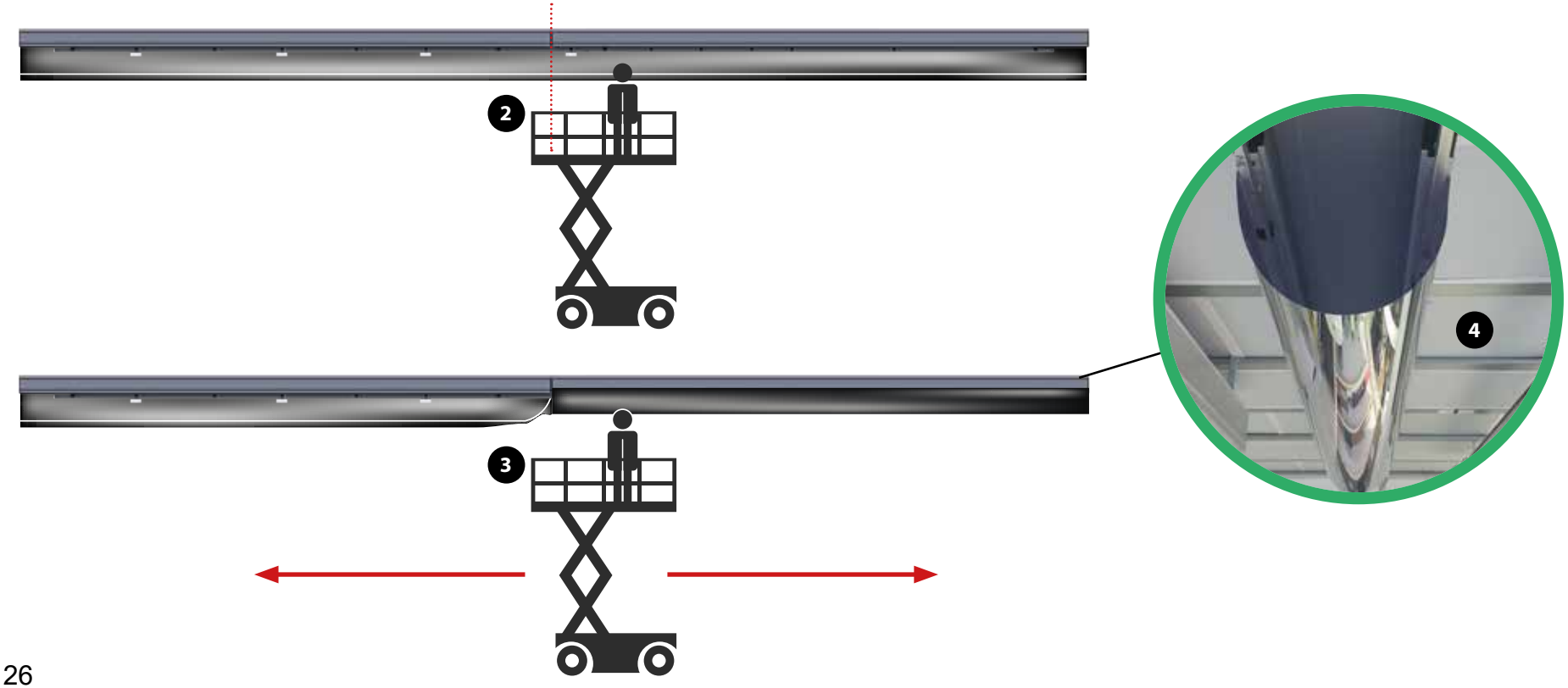
Start at one end of the rail and attach one side of the cover with Velcro. Unroll the entire roll of cover on one side of the rail 1.

Once the cover is attached to one side of the rail, stand in the center opposite the cover strip you just attached 2.

From the center, 3 attach the other side of the mirror cover with the velcro and continue to the right. Once the operation is completed, return to the center and repeat the operation to the left. Repeat the process for all your rolls.

Your cover is installed and should make a «U» shape 4.





RAILDOME®
freemotion8

PHASE III - SETTINGS

Only operates on camera numbers 1 to 4 and saving pre-positions 1 to 10.

Each movement command is active as long as the key is held down.
The remote control works with a 9V battery (slot on the back - battery supplied).

ACTIONS

INITIAL PLAN

COMMAND	
①	SELECTS CAMERA 1
②	SELECTS CAMERA 2
③	SELECTS CAMERA 3
④	SELECTS CAMERA 4
◀◀	RAIL, BACKWARD MOVEMENT
▶▶	RAIL, FRONT MOVEMENT

DOME SETUP

ACCESS THE WEB INTERFACE

Access the dome’s web interface by entering its IP address in your web browser.

To log in, access data and passwords will be will be delivered together with the material.

LAUNCH

Configure the dome in your supervision software. Use the «Focus +» & «Focus -» keys to move the dome in the rail.

STARTING CONDITIONS

WARNING :

The camera slider cannot be initialized if the battery voltage is below 26 V.

VISIONAUTE

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