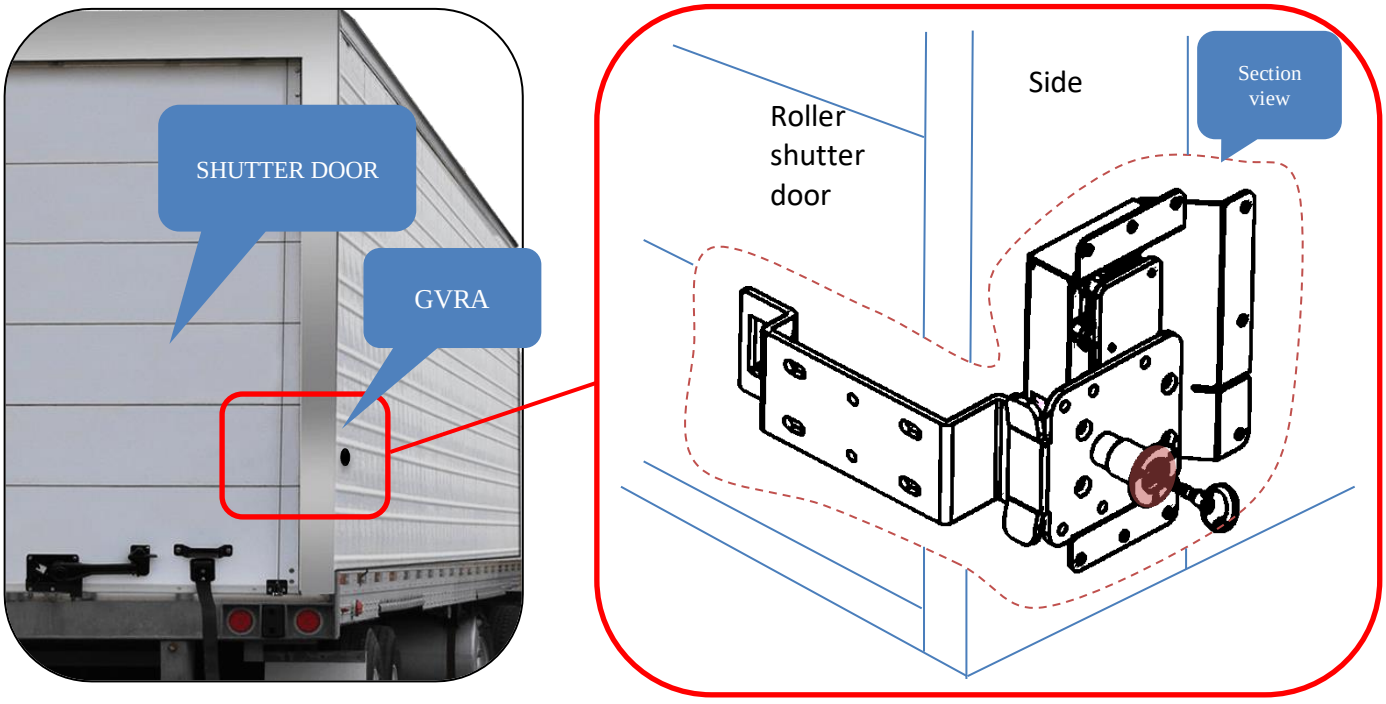
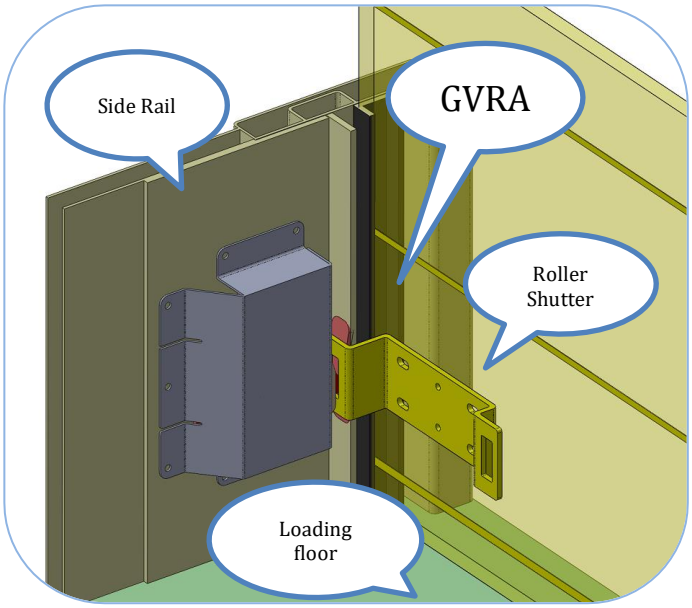
Art. GVRA

PROTECTION DEVICE
for SEMI-TRAILER ROLLERSHUTTER
(GatelockVan for Roll-Up Door mod. A)

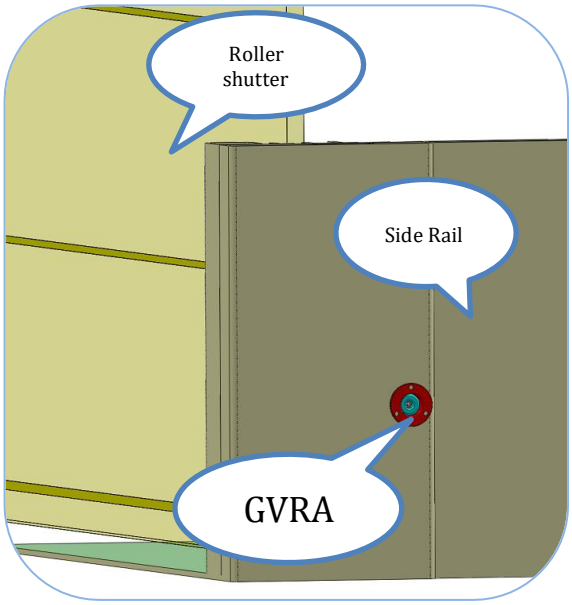
The device, applied to the side of the semi-trailer and inside it, acts directly on the roll up door through a locking plate that fits into the spring latch, preventing it from lifting and moving laterally.



The entire body of the padlock is located inside the semi-trailer and is only accessible from the outside through a cylindrical shield inside which the security cylinder for opening is located.

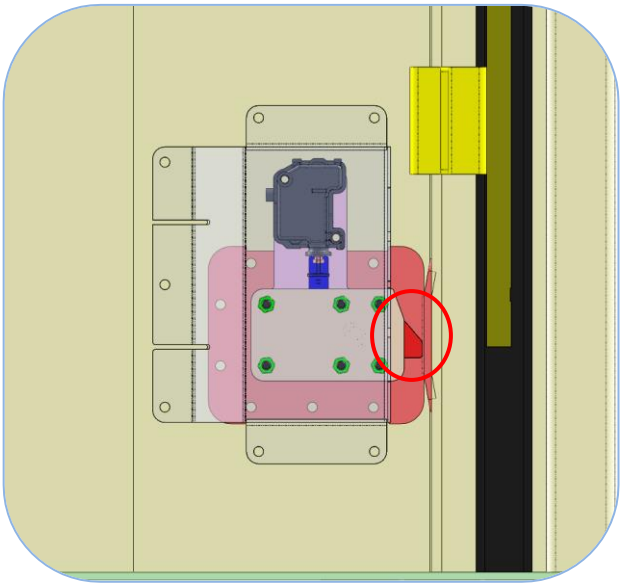


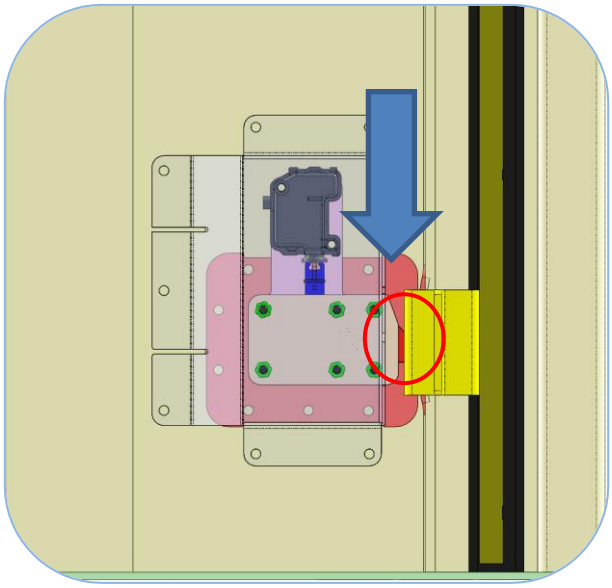
Internal view



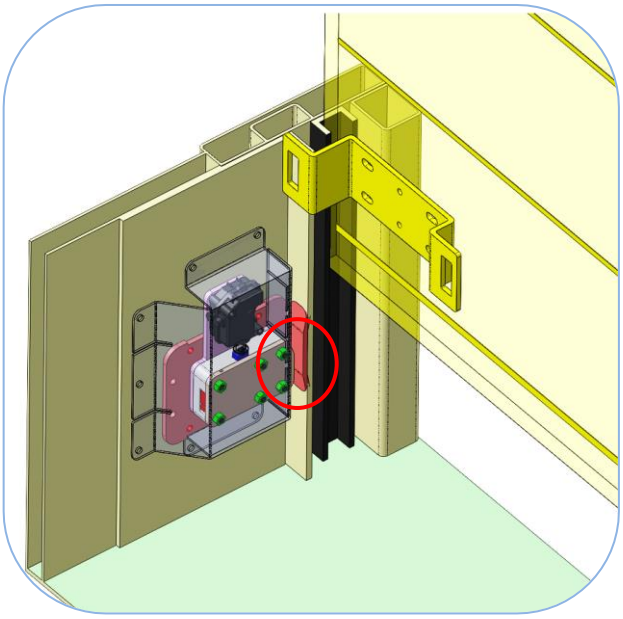
External view

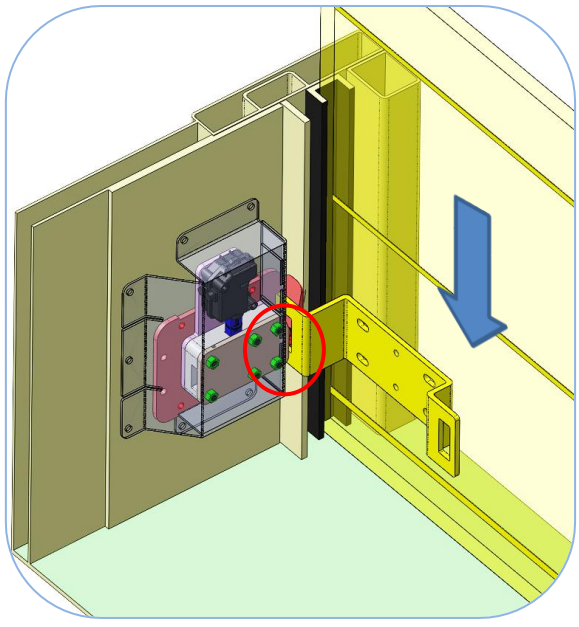
The principle of operation is very simple. The footboard, rigidly attached to the blind, engages the sliding spring latch and prevents it from being raised. Opening can be done by turning the mechanical security key or using one of the remote access devices (remote control, NFC, Bluetooth, consent of the operations center).





Roller Shutter Open **internal side view** **Roller shutter closed**

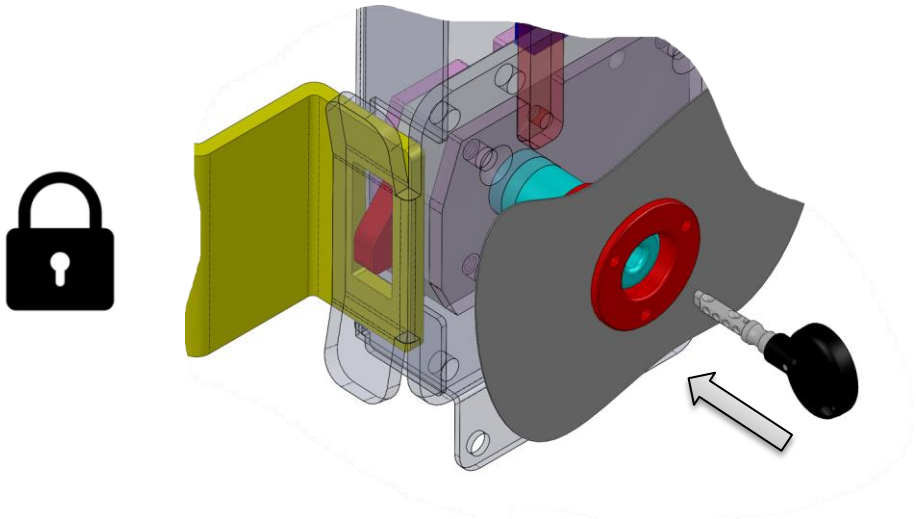




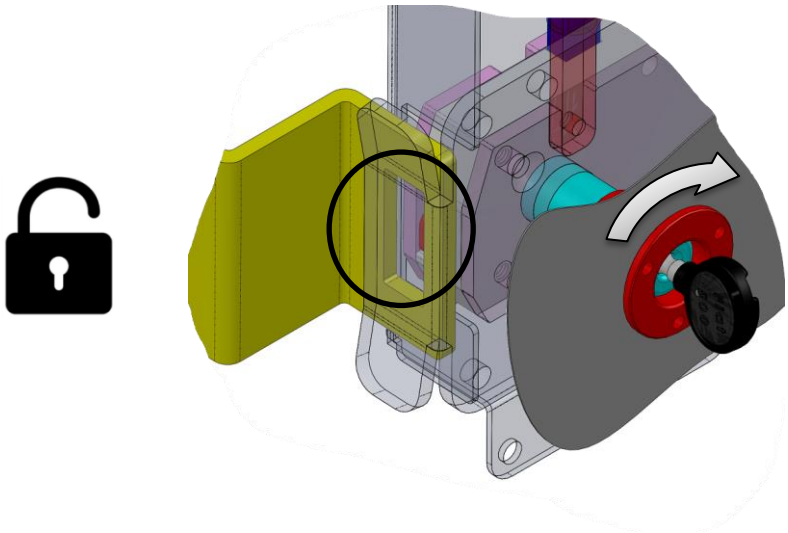
Roller shutter open **internal axonometric view** **Roller shutter closed**

FUNCTIONING

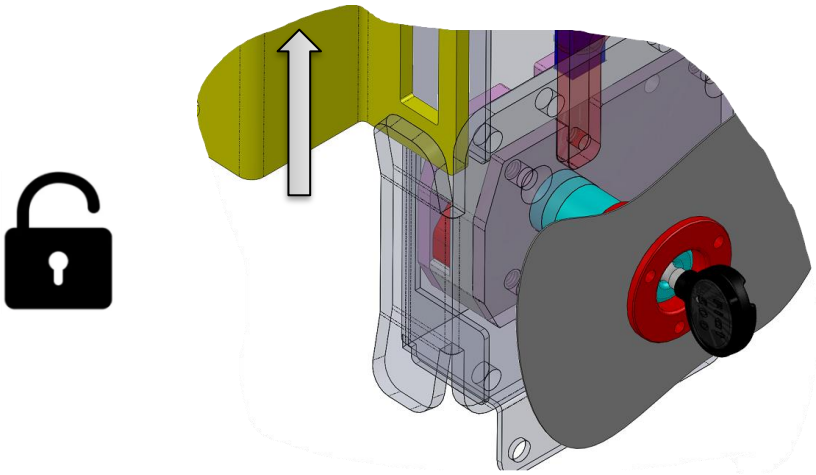
1. With the shutter closed, insert the key into the cylinder, accessible on the side panel through the shield.



2. Turn the key 180° (the latch retracts, releasing the locking bracket to raise the roller shutter).

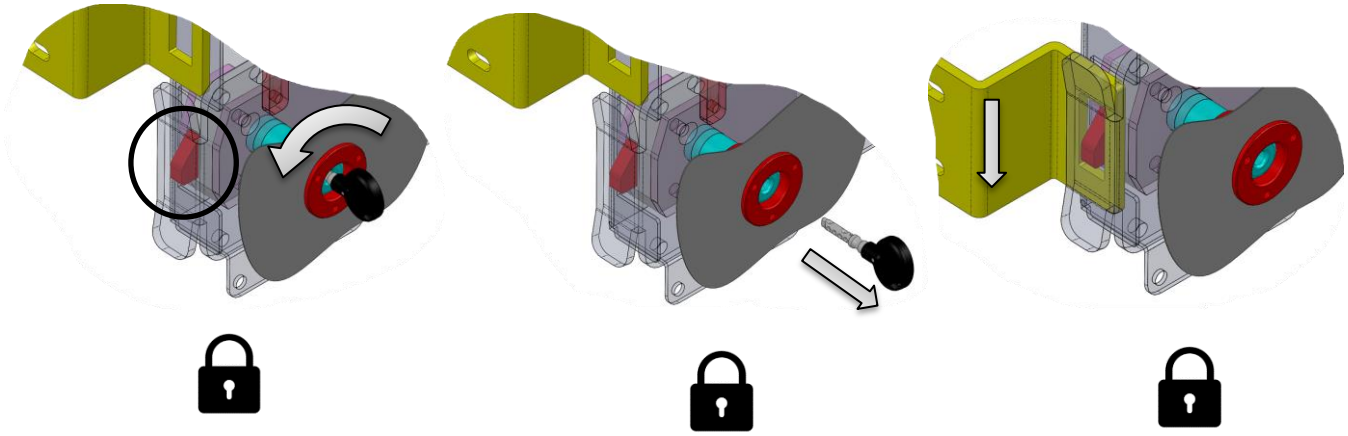


3. Open the door



The lock is now open and the Roller shutter is up.
After opening you can choose two different solutions.

a. **configure the automatic closing of the padlock when the blind is closed:** as soon as the door is lowered, the padlock prevents it from rising by automatically hooking into the locking bracket.

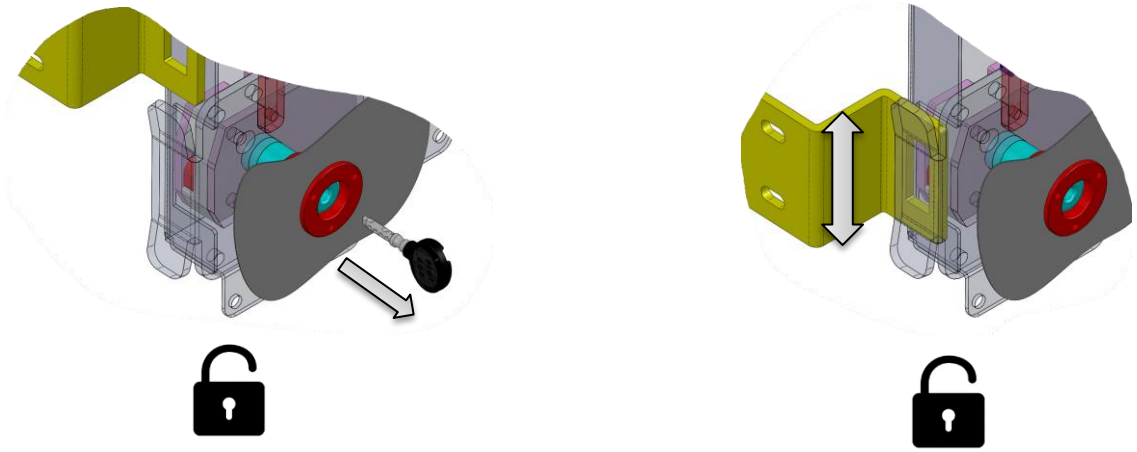


A1: Turn the key to 180 °

A2: Remove the key

A3: Close the door

b. **Leaving the padlock open (OFF or maintenance state) even after closing the shutter:** when the shutter is closed, the padlock does not block the support and the shutter can be opened again without having to operate the padlock (key removed).



b.1 Remove the key (open padlock)

b.2 close the door (the padlock will remain open)

Features and strengths:

1) **Internal positioning of the device to avoid** :
   - impurities (dust, fragments of soil, fragments of broken pallets,...)
   - Action of atmospheric agents (water, automotive fluids, salt fog,...)
   - Direct forcing (breaking action on the reinforcement),
   - tampering (actions to prevent the lock from working properly);

2) **Spring latch closure for maximum reliability:** Simple, robust system and not subject to deformation or damage due to wear or movement of the blind.

3) **Possibility of remaining in the open state (OFF or Maintenance) with both manual and electrical control.** The lock can remain open for the necessary time even when closing the shutter in case of unsafe transport, in case of prolonged parking or for maintenance

4) **High clearances to take into account oscillations of the vehicle structure.** Shutters can undergo considerable oscillations depending on the state of wear and performance. Therefore, even in the case of blinds that are not in perfect use, the lock will continue to function correctly.

5) **Fast, sealed, automobile-derived engine.** The servomechanism is made up of a simple and reliable motor, reversible and fast, as well as being characterized by high reliability (100,000 cycles).

6) **Opening with mechanical cylinder (mechanical version only) or emergency (electric version).** The cylinder with mechanical security key allows both the opening of the lock in the mechanical version and the opening in case of malfunction of the remote control in the electric version.

7) **Simple installation.** The lock is applied to the vertical column and not to the floor, in a controlled and accessible position. This simplifies fixing and any maintenance that must be carried out inside the semi-trailer.

8) **Convenient and direct access to the mechanical opening.** The key is guided by a compass located at a comfortable operating height and located on the side wall near the blind**.**

9) **Adaptability to different vehicles on both sides.** The lock structure is configured to adapt to different semi-trailer and roller shutter construction solutions.

10) **Compatibility with all control units already in use (lkey bt, nfc, tc).** Mechanical keyless operation can be achieved using all technologies developed for Gatelockvan series padlocks, including control services and telematics portal functions.

Installation kit includes:

a- 1x lock body
b- 3 x keys with warranty letter
c- 1x Protective coverage
d- 1x Locking bracket
e- 4 x M8 domed head bolts with square under head
f- 4 x M8 nut + M8 washer
g- 18 x D6 Rivets
h- 1x Emergency opening kit (cable clip + tube)
i- 1x compass shield
j- 3 x D4 rivets
k- 1x External adhesive

The electric version includes:

l- 1x Padlock body with integrated servomechanism
m- 1x motor connector
n- 1x Magnetic Reed Position Sensor

INSTALLATION

NB: Before proceeding with the installation, check the correct operation of the blind and the locking lever. In case of breakdowns or damage, restore the compliance of the damper and the coupling lever before proceeding with the installation.

FASE 1	VERIFY ELIGIBILITY	

To be able to use it safely, the lock should preferably be fixed on the right side of the semi-trailer. However, if for technical and structural reasons it is not possible to place the lock on the right side, it will be necessary to opt for the left, using the specific left version of the lock.

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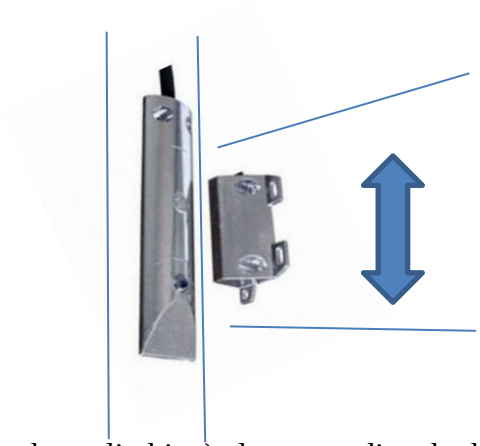
Before proceeding with assembly, check that:

1) **The blind open/close sensor (magnetic door contact) is positioned so that it does not interfere with the lock. In particular, if it is placed on the right side and when the blind is raised the locking bracket must interfere and impact the sensor, you should consider moving the sensor under the lock and therefore the locking bracket or on the left side.**

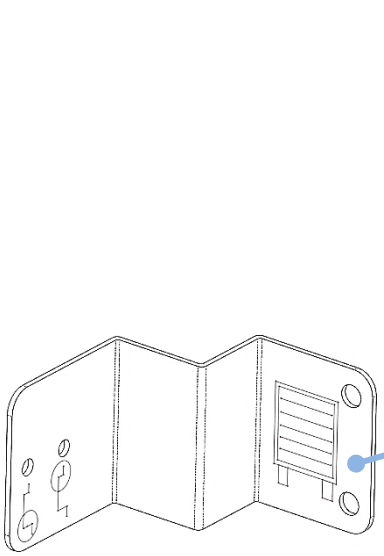


2) The fabric band on the handle (for the operator's grip when climbing) does not disturb the correct operation of the padlock
3) There are no impediments to the positioning height (**which should not be too high for comfortable use, approximately 1.50-1.80 m from the ground**).

FASE 2	POSITIONING	

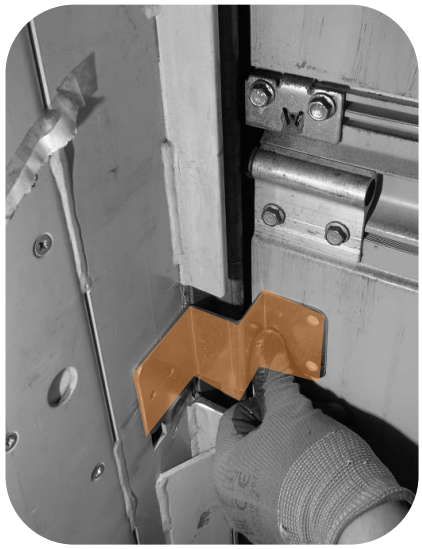
Only in the first assembly phase will 2 assembly operators be necessary: the first must position himself on the semi-trailer to position the drilling template and the second must close the blind and engage the closing lever to align and lock the blind. a safe condition.

Position the drilling template so that it adheres perfectly to the side panel and the center of the blind sash. Choose the band according to the following instructions



Attention: if the insole does not adhere perfectly to the cushioning strip, remove any impediment or move the insole to other areas.

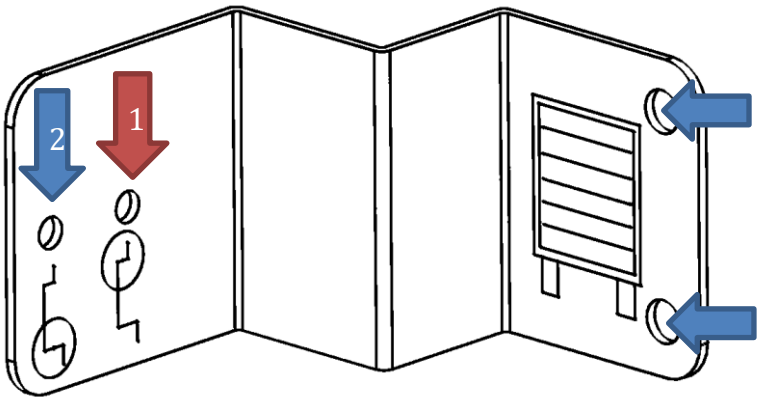
In the case described below, for example, it can be seen that the vertical rib prevents the correct alignment of the template with the blind for a few millimeters and, therefore, the interfering part has been cut.

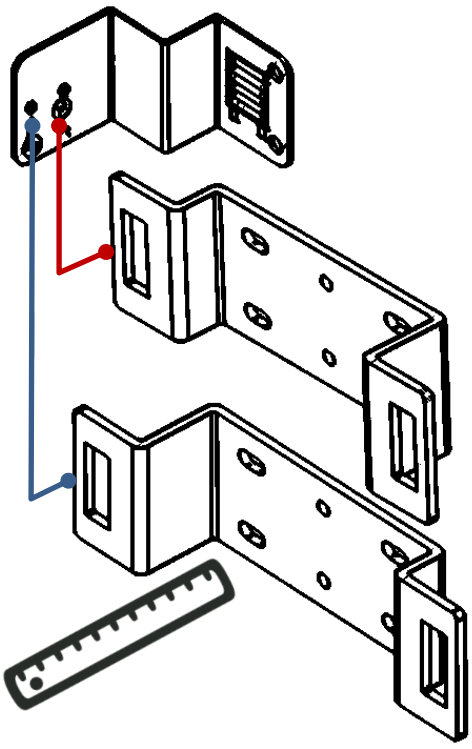


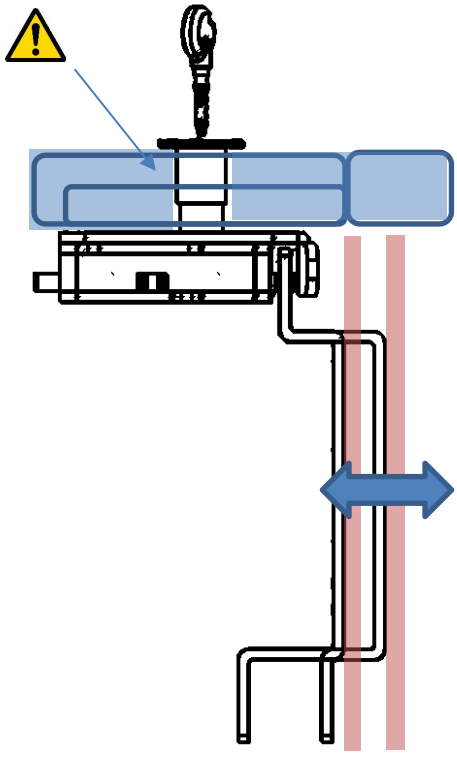
With a marker or a pin, mark the position of the fixing holes of the locking bracket on the blind and the hole of the padlock cylinder shaft.

ATTENTION: there are 2 holes in the template on the side of the side ONLY ONE SHOULD BE USED AS A REFERENCE. The one closest to the gate (1) is used for those gate models where the frame that houses the guide through which the gate slides is narrow while the furthest one (2) is used for the rest of the cases. This allows the padlock to be adapted to different constructive solutions for shutters.

Also, check that the aforementioned hole, which will immediately be enlarged to 26mm, does not interfere with internal boxes or ribs that may prevent easy drilling.







It is possible to cut off the portion of the locking bracket that is not used to attach to the padlock if it interferes with other internal parts of the semi-trailer..

FASE 3	DRILLING	

Drill the two marked points on the blind and the point on the side with a 7mm drill bit.

The shutter holes must be through if the locking bracket is to be fixed with the supplied pins; Otherwise, if you want to use rivets, simply drill through the first layer of sheet metal..

The hole in the side must go through and reach the outside of the side to mark the axis of the key.
Using a 26mm diameter hole saw, enlarge the side hole to 26mm throughout its depth (this will house the capsule containing the lock).

Attention: if for some structural reason the hole cannot be made regularly with a drill bit and cup cutter, it will be necessary to use a rotary grinder to create the shape of the step.

FASE 4	ALIGNMENT	

Apply the lock centering the 26th hole you just made.

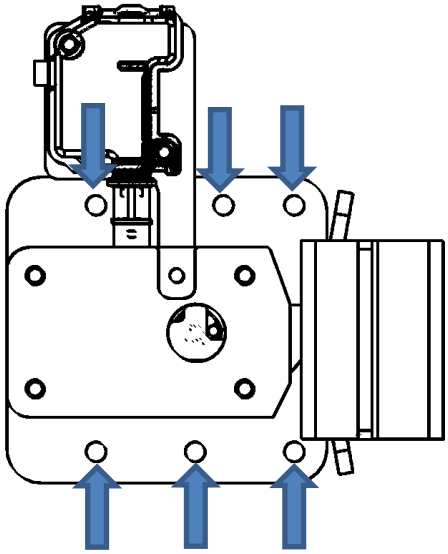
With the Shutter open, place the lock body to the side and apply two rivets to secure it. Do the same on the locking bracket using the center holes. In this way it will be possible to verify correct alignment and operation.

It is advisable to also apply an external shield to check if it is also aligned with the entire body of the lock and does not interfere with the hole that has just been made.

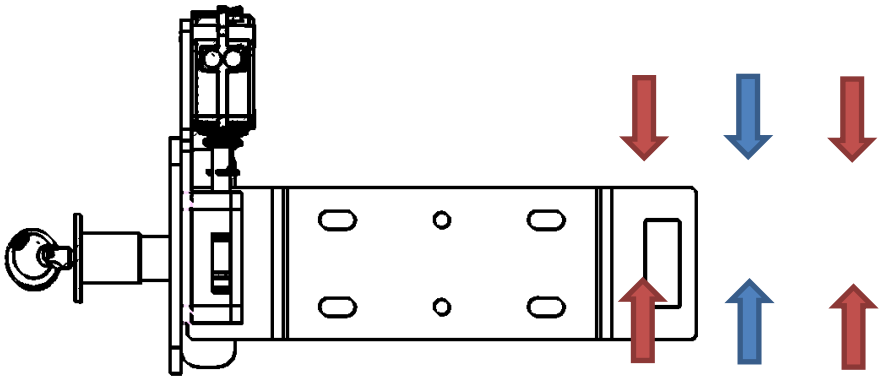
In case of irregular operation, remove the rivets and center the padlock better.

FASE 5	DRILLING AND COMPLETE FIXING	

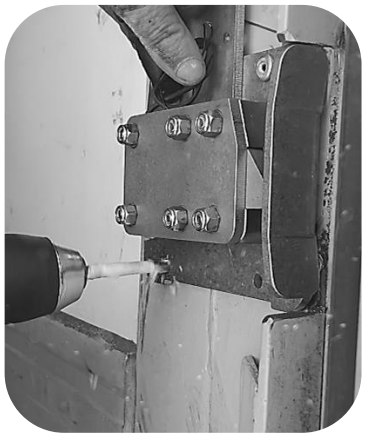
Mark all the holes necessary for fixing the lock plate (at least 4). The holes must be 7mm.



At the same time, mark the other holes on the locking bracket for fixing (at least 4).
The holes should be 8-9mm for the slotted pieces and 7mm for the central ones (intended for rivets).



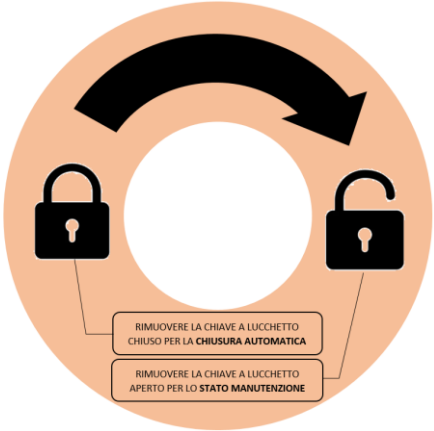
Proceed to drill the marked points.
Carry out the final fixation of all the rivets on the lock body and the pins (or rivets) supplied on the lock support.




FASE 6	APPLICATION OF THE EXTERNAL INDICATOR	

To mask the external hole that for obvious operational reasons could be irregular and of reduced aesthetic level, apply the compass shield by drilling three holes at 120° and applying the appropriate rivets.

Apply the appropriate sticker around the shield illustrating correct operation.

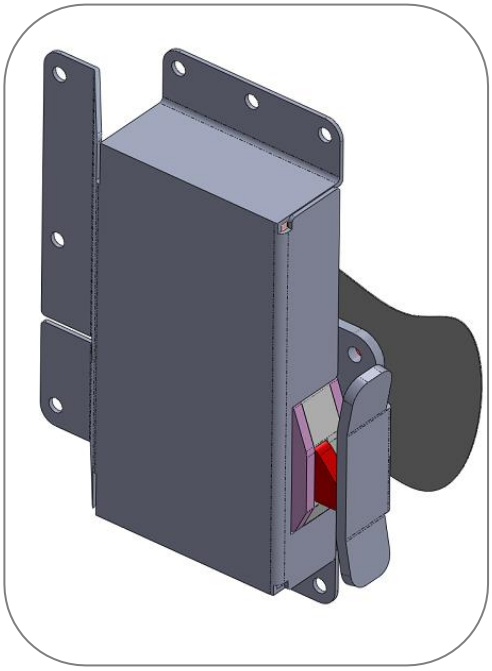


FASE 7	ELECTRIC Connection	

Only for the electromechanical version connect the motor and the sensor to the device management control unit.
In particular, the motor adopts a specific connector supplied with the lock while its wiring and protection guides must be prepared if necessary depending on the specific installation.
It is necessary to use a specific management control unit that operates the engine for less than 1 second. The motor is two-stage and therefore the stroke return must be controlled.
Additionally, the sensor consists of a magnetic tab that closes the contact when the latch is in the closed position (fully forward).

FASE 8	CRANKCASE APPLICATION	

Once assembly is complete, place the protective casing and secure it using the holes provided along the perimeter.
The centering must allow the correct passage of the latch and must not invade the passage area of the locking support.
Make the 7mm fixing holes and select the holes that guarantee the stability of the frame (at least 6) and are compatible with the profiles.
Pay attention to the passage of the emergency cable that must pass through the corresponding channel provided in the crankcase.



FASE 9	EMERGENCY CABLE	

For possible openings from the inside it is possible to use the appropriate cable, which must be cut in the part that exceeds the ease and safety of use.

Using the red tube and supplied cable clip, create a grommet for the cable