

Frigowall 2D & 3D Mounting Instruction v1.1



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1 INTRODUCTION

1.1 PREFACE

This operating manual is an essential aid for the correct and safe use of the insulation partition walls.

This manual contains important information for reliable, proper and efficient use of the insulating partitions. Adherence to the manual helps to avoid dangers, reduce repair costs and downtime and increase the reliability and the lifetime of insulating walls.

The instructions must be available to the operating personnel at all times. Any person who is authorized to use the insulating walls reads the operating instructions before use and then applies them accordingly.

1.2 COMMON INFORMATION

Do not expose the Frigowall to outside weather conditions, extreme temperatures and direct sunlight.

Any change to the product makes the CE marking invalid. Please contact the manufacturer if a modification of the product is necessary.

Loadlok reserves the right, if not being met to the requirements, to withdraw the guarantee of their product partially or entirely.

At the end of the lifecycle:

The end user can deliver the multi temp product to Loadlok. Loadlok provides environmentally sound disposal of their product and recycles parts if these are fit for reuse.

1.3 NOTES TO THE OPERATOR

This manual is an essential part of the insulating walls. The customer shall ensure that the operator adheres these instructions. Please check our website www.loadlok.com for additional information such as user manuals. Or scan the QR code to find us on YouTube:



Note that in addition to the instructions, the laws of the country of the place of use are applicable and approved rules for accident prevention alongside with approved technical regulations for safe and professional work shall apply.

Any change to the product makes the CE marking invalid. Please contact the manufacturer if a modification of the product is necessary.

The Frigowall is not a load securing device!

1.4 READING INSTRUCTIONS



WARNING:

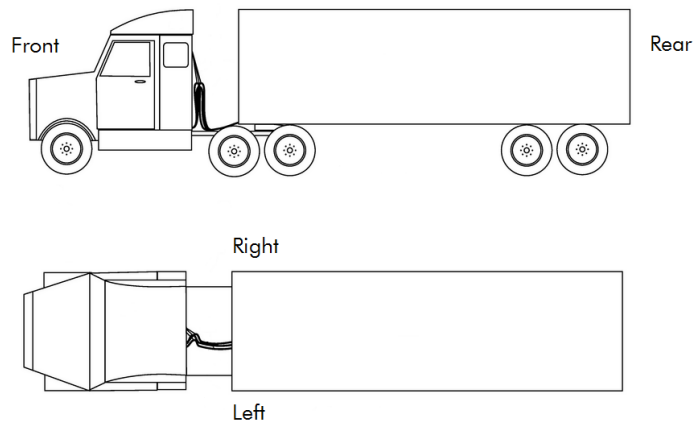
This is a warning of a potentially hazardous situation, resulting in moderate or minor injury and / or property damage if the appropriate instruction is not followed exactly.



ATTENTION:

This is a reference to useful information for the safe and effective use.

Orientation





1.5 LIST WITH ABBREVIATIONS




Frigowall track J-formed rail with locking holes to guide the Frigowall into the trailer. (Type 3062)

2 SAFETY

2.1 SIGNS ON THE PRODUCT

 <p>Frigowall Patent nr EP 99 200267 5 Manufactured by ISOLOCK International BV The Netherlands Tel: 0031-(0)186-64 98 85 I.D.-nr: 10476 ISOLOCK - a division of the Loadlok group of companies</p>	<p>Type designation sign Common information of the Frigowall</p>
 <p>Dient NICHT zur Ladungssicherung! Do NOT use for load securing!</p>	<p>Warning sign Do not use the Frigowall as a load securing device!</p>
<p>WARNING COIL SPRING UNDER HIGH TENSION <small>Untrained personnel must not attempt to open or tamper with this mechanism, injury could result.</small></p> <p>ACHTUNG LEBENSGEFAHR! <small>Nur durch Fachpersonal zu öffnen!</small></p> <p>PAS OP VEER ONDER SPANNING! <small>Alleen door vakkundig personeel te openen!</small></p>	<p>Warning sign The balancer is a spring activated device.</p>


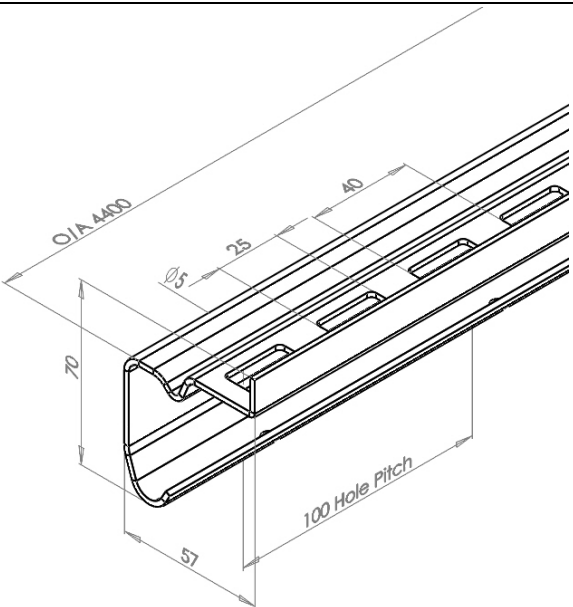

2.2 SIGNS IN THE MANUAL

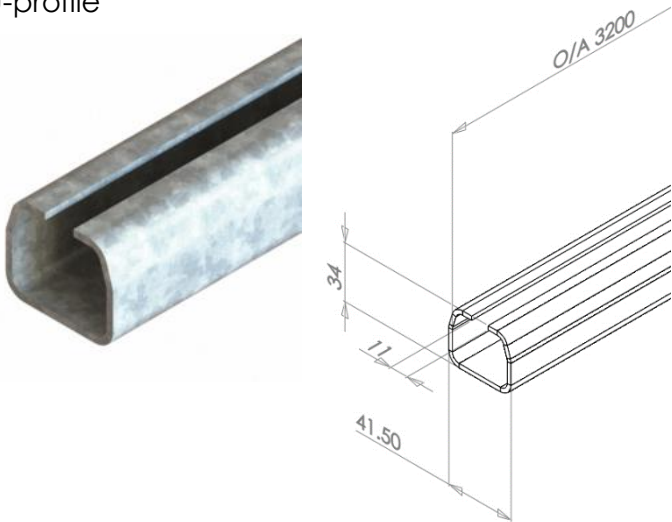


	<p>WARNING:</p> <p>This is a warning of a risk of danger, with the possible consequence serious injury or death if the designated instruction is not exactly is followed.</p>
	<p>WARNING:</p> <p>This is a warning of a potentially hazardous situation, resulting in moderate or minor injury and / or property damage if the appropriate instruction is not followed exactly.</p>
	<p>ATTENTION:</p> <p>This is a reference to useful information for the safe and effective use.</p>

3 MOUNTING THE FRIGOWALL TRACK




3.1 PARTS NEEDED



3.1.1 Mandatory parts



Material	Measurements	Article number / Description
Frigowall-track 		10011288 3062 SS304 3200 Frigowall Track
Alternative article numbers with descriptions:		
10011291	10009470	
3062 PRE GALV 4400 Frigowall Track	3062 SS304 3200 CS Frigowall Track	
10011289	10011290	
3062 SS304 4400 Frigowall Track	3062 SS430 3200 Frigowall Track	
	10010708	
	3061 PG 3200 Frigowall Track	
Notes:		
Rubber end stop 		11060164 Rubber endstop extra hole
Notes: To be fitted on all ends. Is not accompanied with fasteners.		



Material	Measurements	Article number / Description
U-profile		<p>12009613</p> <p>Track U profile L=3000mm pre-galv</p>
Double roller with thread		<p>12009514</p> <p>Double roller with thread</p>
Locking for Frigowall 2D and 3D		<p>12009516</p> <p>Locking for Frigowall 2D and 3D</p>
Notes:		

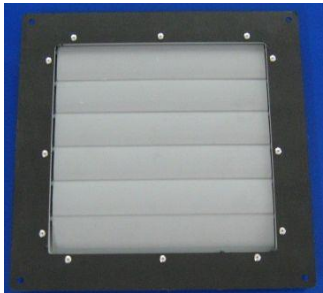


3.1.2 Optional parts

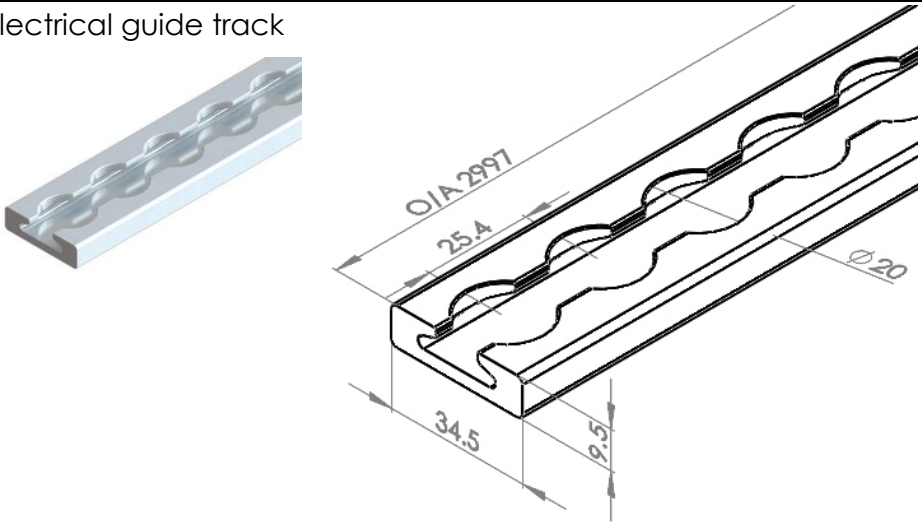
Material	Measurements	Article number / Description
<p>Steel stopper right side</p>  <p>Notes: Is delivered without fasteners</p>		<p>14003348</p> <p>Steel stopper rightside for Bulkheads</p>
<p>Steel stopper left side</p>  <p>Notes: Is delivered without fasteners</p>		<p>14003346</p> <p>Steel stopper leftside for Bulkheads</p>
<p>Steel stopper right side</p>  <p>Notes: Is delivered without fasteners</p>		<p>14003349</p> <p>Steel stopper rightside for Bulkheads</p>
<p>Steel stopper left side</p>  <p>Notes: Is delivered without fasteners</p>		<p>14003347</p> <p>Steel stopper leftside for Bulkheads</p>

Material	Measurements	Article number / Description
<p>Roller wheels on a short axle</p>  <p>Notes:</p>		<p>12009541</p> <p>Roller wheels axle 48mm</p>
<p>Roller wheels on a long axle</p>  <p>Notes:</p>		<p>12009540</p> <p>Roller wheels axle 119mm MK1</p>


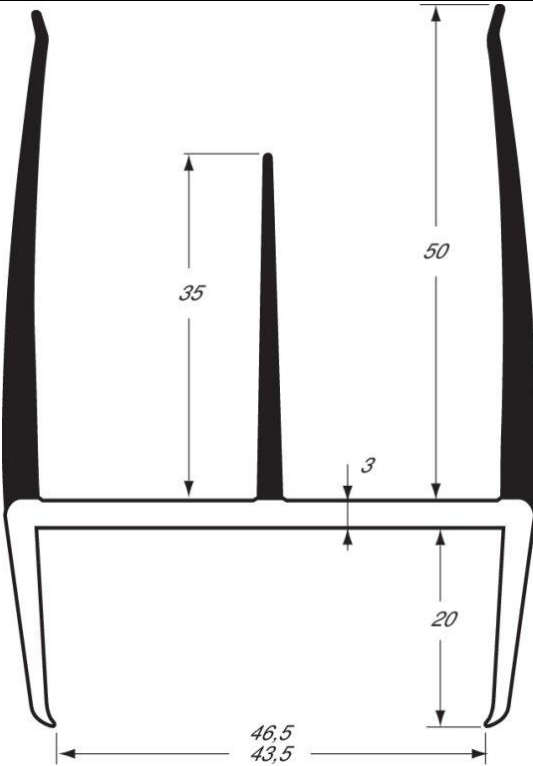


Material	Measurements	Article number / Description
Floorstopper recessed 		11060149 Stainless steel floorstopper
Notes: Parking assistant 		12009651 Parking assistant MK4
Notes: It is advisable to mount 2 parking assistants in the Frigowall for stability of the construction		

Material	Measurements	Article number / Description
Build on Floorstopper		12009425 Build on Floorstopper
		
Notes:		
Temperature controlled fan		11060179 Frigowall 12V Fan Digital with switch. (24V optional)
		
Notes: If the temperature-controlled fan is built-in by Loadlok the connecting rod between the balancers will be electrically insulated.		

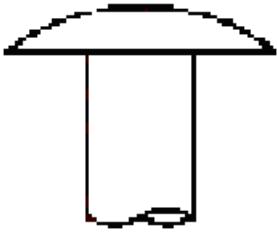
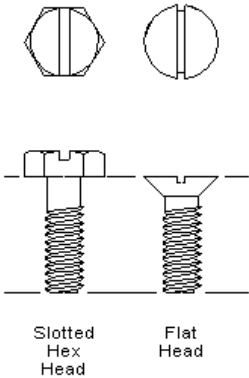
Material	Measurements	Article number / Description
Air vent 		11060155 Blind plate square
Notes: Slider for power supply temperature-controlled fan 		12009428 Stainless steel sliding contact
Notes: If the temperature-controlled fan is built-in by Loadlok the connecting rod between the balancers will be electrically insulated. Slider for power supply temperature-controlled fan 		12010053 Power Supply Kit Multitemp 25+1 (25 isolators + 1 sliding connector)
Notes: If the temperature-controlled fan is built in by Loadlok the connecting rod between the balancers will be electrically insulated.		

Material	Measurements	Article number / Description
Electrical guide track		<p>10010709 Aluminium Captive Track 2997mm</p> <p>10009933 5002 AL 3000 CS 5.5 FH POWERTRACK</p>
Notes: These tracks are used in combination with the power pack.		

3.1.3 Consumables

Material	Measurements	Article number / Description
Rubber seal 		12009404 Doorseal profile L=2,7m PVC spec
Notes:		
Foot floorstopper 		11060150 Stainless steel foot with rubber
Notes:		
Stainless steel bolt 		12009264 Stainless steel bolt M10x100 DIN 912
Notes: This bolt is used to mount and to adjust the foot floorstopper.		

3.1.4 Parts to be supplied by yourself

Material	Measurements	Article number / Description
Rivets 	5 or 8 mm diameter	N.A.
Notes: The length of the rivet is subject to the composition of the insulation wall of the trailer. This article is not in the delivery program of LoadLok.		
Screw bolt 	5 or 8 mm diameter	N.A.
Notes: The length of the screw is subject to the composition of the insulation wall of the trailer. Flathead optional: holes counter sunk for flush mounting. If this is a preference for mounting the Frigowall track, the mounting holes can be made counter sunk. This article is not in the delivery program of LoadLok.		

3.2 TOOLS NEEDED

Blind rivet pliers



Wrench



Spirit level tool



Allen key



Measuring tape



Extended wrench

24mm hex

1/2 inch

SAP 20000812



Pipe wrench



Socket wrench



4 MOUNTING THE TRACK

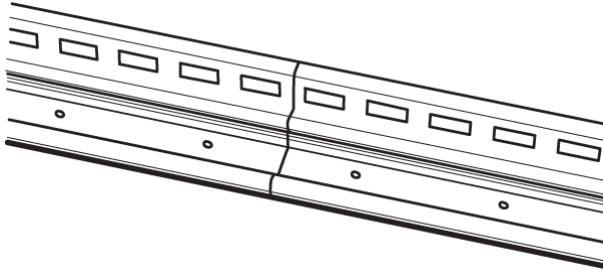


ATTENTION:

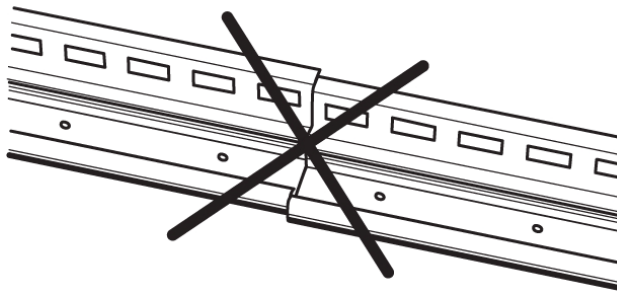
The procedure as described here must be performed twice, once on the left-hand side and once on the right-hand side of the trailer.

1. Measure the effective length of track to be used.

2.



For smooth running of the balancer trolley wheels over several tracks LoadLok advises to weld the tracks in the joining point in such way the balancer or trolley wheels never can interfere with the weld.



Make sure that the end edges of the rails are straight, so that the wheels of the vehicle can run continuous smoothly.

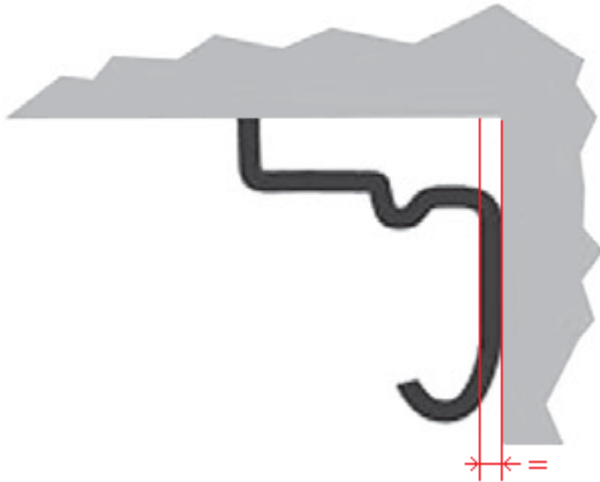
3. If the Frigowall-track is to be shortened, please leave enough material length in order to fasten the rubber end-stop with its steel cover plate.



ATTENTION:

Loadlok advises to use adhesive between the Frigowall track and side walls which is fit for this purpose.

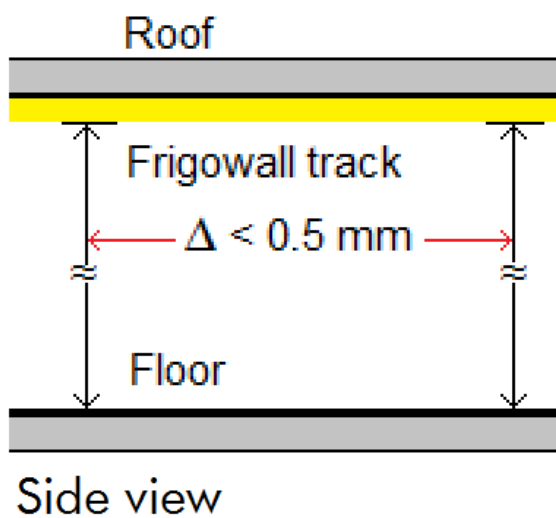
4.



Insert the guide rails in the outer left or right side of your vehicle.

Install the rails vertical (both to the wall and also to the ceiling).

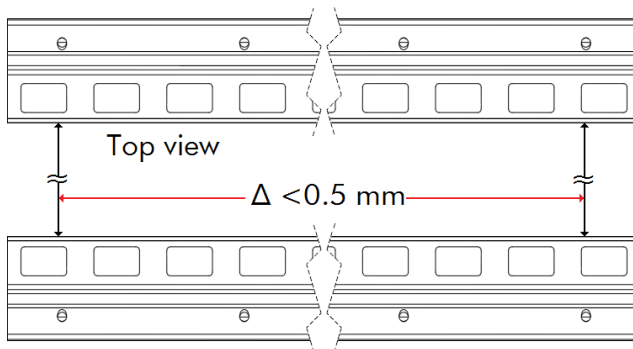
5.



Measure the distance from the floor to the Frigowall track on both ends of the track.

The difference must be less than 0.5 mm as is shown in illustration.

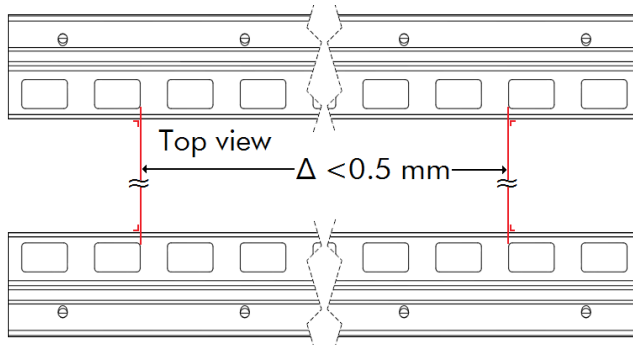
6.



Measure the distance between the tracks in the vehicle, like is shown in illustration.

The difference must be less than 0.5 mm.

7.



The locking holes **must** be parallel.

The difference must be less than 0.5 mm.



ATTENTION:

Maintain the Frigowall-track on level!
The tolerance for smooth running is < 0.5 mm!

8. Use **all** mounting holes with a rivet or a screw bolt.



ATTENTION:

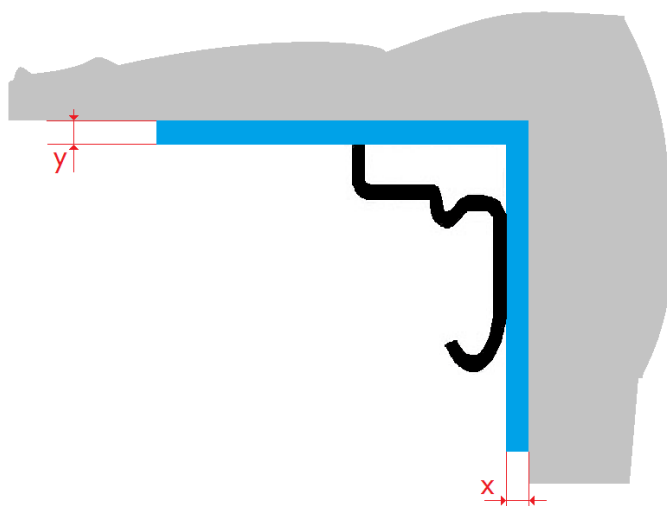
When using rivets:
Please fasten the Frigowall track to a minimum length of 750 mm with bolts for maintenance purposes of the Frigowall door. These sections must be opposite to each other!



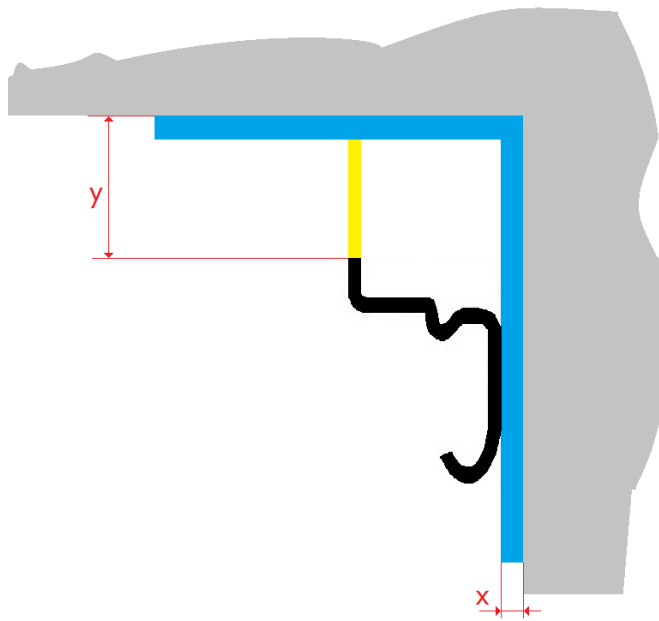
ATTENTION:

Wait until the adhesive is fully hardened. Only then proceed with rolling the Frigowall assembly into the track.

9. In the case the trailer is reinforced in the edges with corner profiles:



The corner profile is shown in blue colour.



LoadLok advises to fill the gap between the roof and the Frigowall-track. (shown in the figure in yellow)



ATTENTION:

The X and Y values are vital when ordering the Frigowall!



ATTENTION:

Note that the locking holes must remain free of obstacles

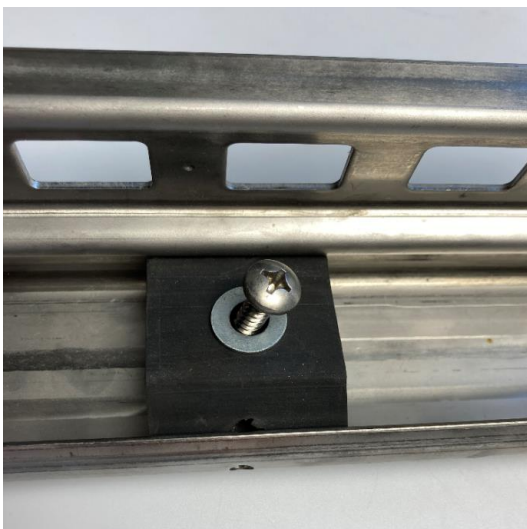
10. Mount the end stops at the bulkhead side (front) of the track. (As is shown on position 11 or 12).

11.

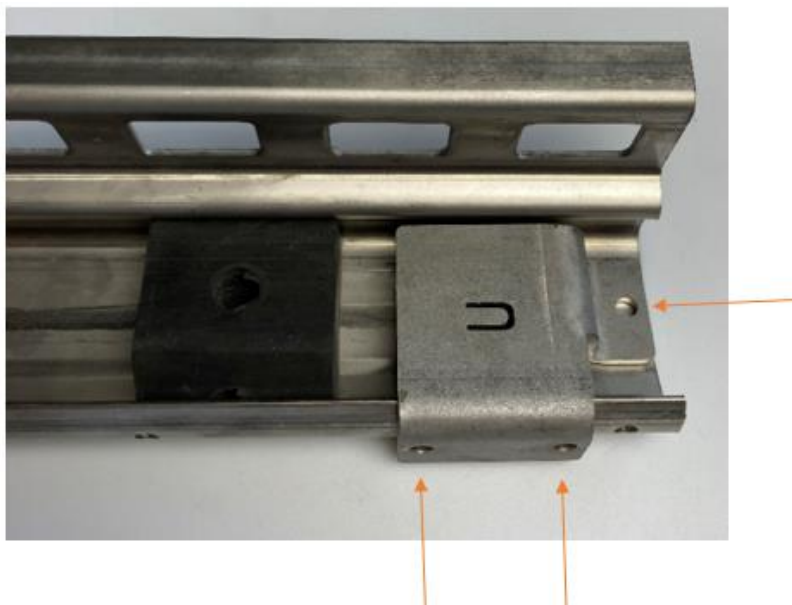
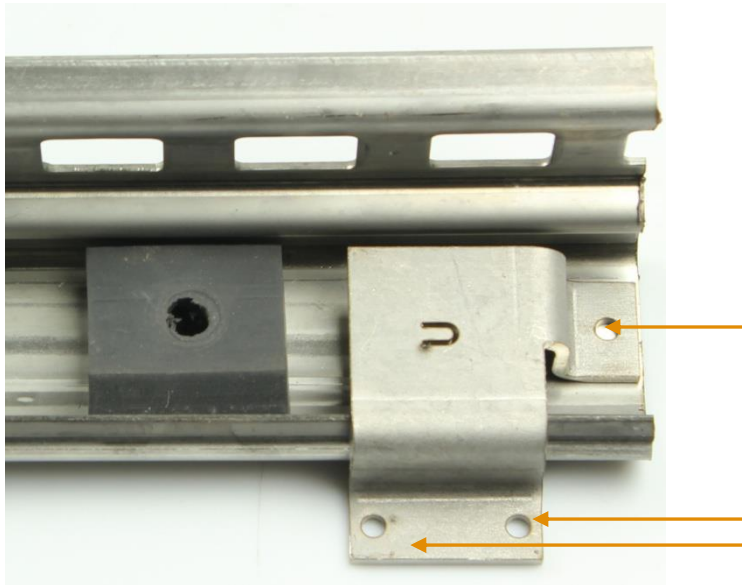


Mount / attach the end stop.

Possibilities are to use a M5 x 30 bolt and use the drain hole, a M8 bolt with thread or a big screw. Choose the option that suits your needs best. Mounting materials are not included.

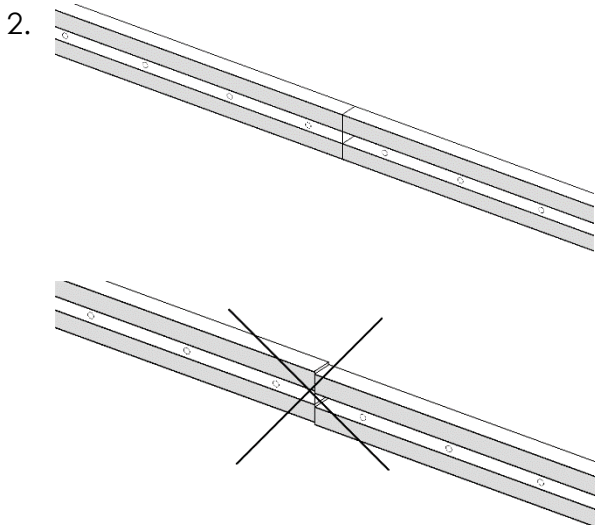


12. Optional mounting of the steel stopper as shown in the figure. The hole in the Frigowall track must be drilled.
In total 3 holes must be drilled!



4.1 MOUNTING THE U-PROFILE (2D / 3D)

1. Measure the effective length of U-profile to be used.



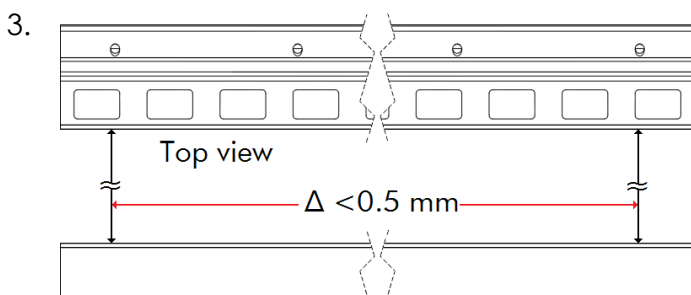
For smooth running of the double roller trolley wheels over several tracks LoadLok advises to weld the tracks in the joining point in such way the balancer or trolley wheels never can interfere with the weld.

Make sure that the end edges of the rails are straight, so that the wheels of the vehicle can run continuous smoothly.



ATTENTION:

Loadlok advises to drill holes in the U-profile every 100 mm.



Measure the distance between the Frigowall track and the U-profile in the vehicle, like is shown in the figure.

The difference must be less than 0,5 mm.



ATTENTION:

Maintain the Frigowall-track on level!
The tolerance for smooth running is < 0,5 mm!

4. Use **all** mounting holes with a rivet or a screw.



ATTENTION:

Loadlok advises to use glue between the U-profile and the roof which is fit for this purpose.



ATTENTION:

Wait until the adhesive is fully hardened. Only then proceed with rolling the Frigowall assembly into the track.

5 INSTALLATION OF THE FRIGOWALL IN THE VEHICLE



WARNING:

Ensure that the vehicle is positioned on a horizontal plane before continuing with the installation!



WARNING:

Severe injuries are possible due to the falling wall.
Use a lashing strap to secure the wall on the forks of the forklift to avoid falling.



ATTENTION:

Cover the lifting equipment as a precaution with soft material, in order to prevent damaging the Frigowall.

1. Secure the Frigowall with a lashing strap on the forks of the forklift to avoid falling.

2.



Lift the complete Frigowall with a forklift with extended forks (min. 1.85 m long) or other lifting tools (e.g. scissor lift).



ATTENTION:

The center of gravity of the Frigowall is on the balancing device.



WARNING:

Severe injuries are possible due to a falling wall.
Use a lashing strap to secure the wall on the forks of the forklift to avoid falling.

3. Unscrew the middle trolley in such way that the middle trolley has maximum clearance.

4. Carefully lift the Frigowall against the opening of the mounted guide rails and insert the wheels of the trolleys into the rail.



ATTENTION:

The center of gravity of the Frigowall is on the balancing device!

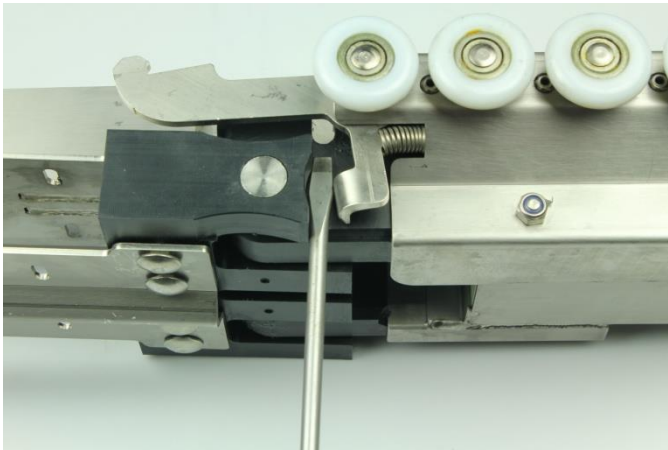


ATTENTION:

Do not forget to align the middle trolley into the U-rail!

5. Slide the Frigowall as far into the vehicle as possible so that the Frigowall cannot roll out of the **unsecured** rails.

- 6.



Override the brake with a screwdriver on both sides.

7. Push the Frigowall at least so far in the trailer that the locking finger is located in a brake hole.



WARNING:

Severe injuries are possible due to a falling wall.
Remove the override and assure that the locking finger is in a brake hole!

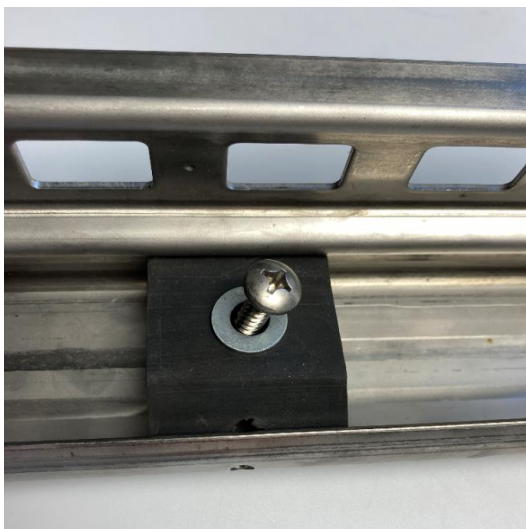
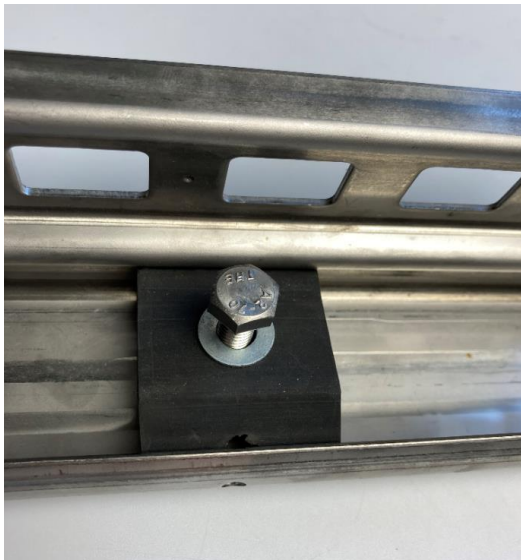


ATTENTION:

The wheels are freely movable sideways up to 10mm to compensate for differences in vehicle width.

8. Mount the end stops at the rear doors side (rear) of the track. (As is shown on position 9 or 10).

9.

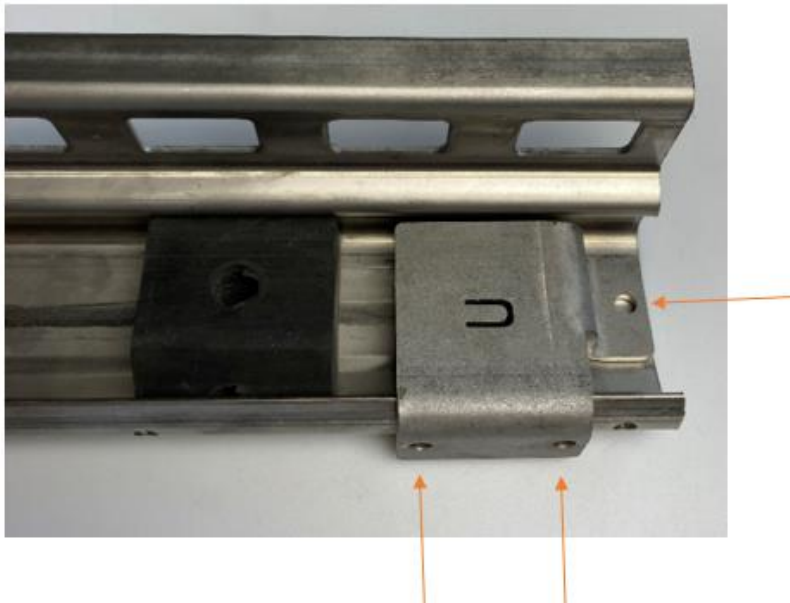
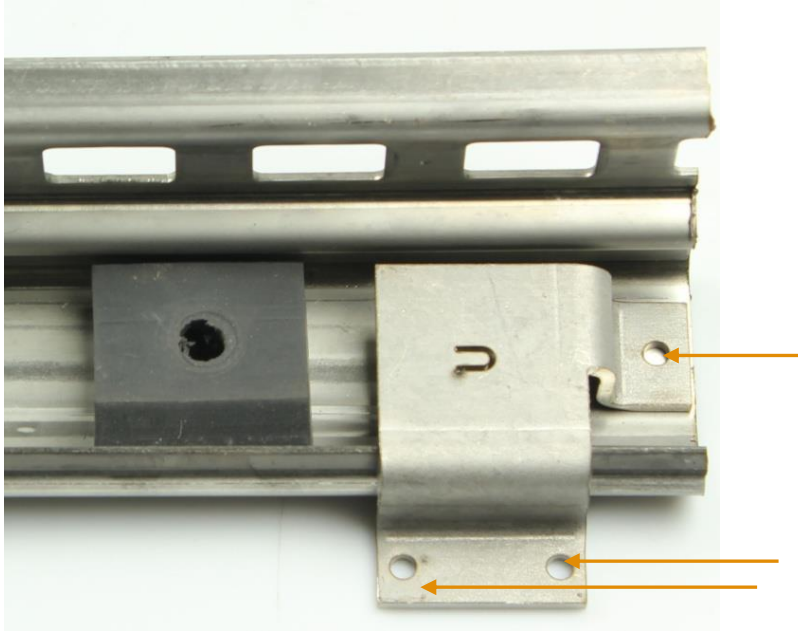


Mount / attach the end stop.

Possibilities are to use a M5 x 30 bolt and use the drain hole, a M8 bolt with thread or a big screw. Choose the option that suits your needs best. Mounting materials are not included.

10. Optional mounting of the steel stopper as shown in the figure. The hole in the Frigowall track must be drilled.

In total 3 holes must be drilled!



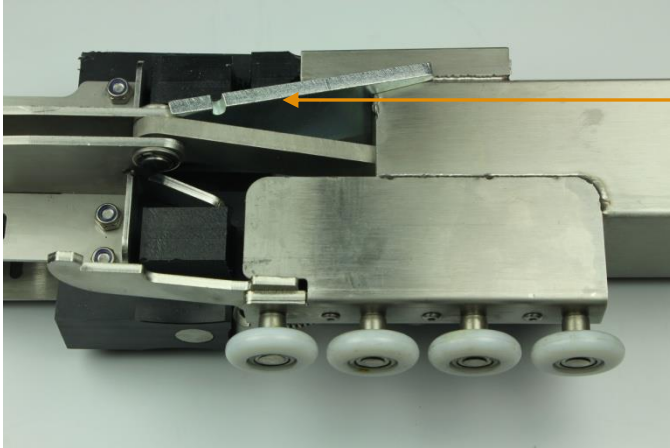
11.



ATTENTION:

Repeat step 8 also for the other side of the trailer!

12



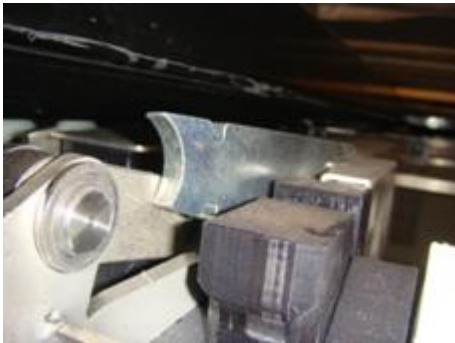
The wall is secured to the balancing device by a transport safety device.

13



Carefully pull the wall a bit down at an angle of 45 ° using a belt.

14



Close the Frigowall a little bit.

Remove the transport safety device from **each** balancer.

15



Please dispose the transport safety device on environmentally responsible manner.

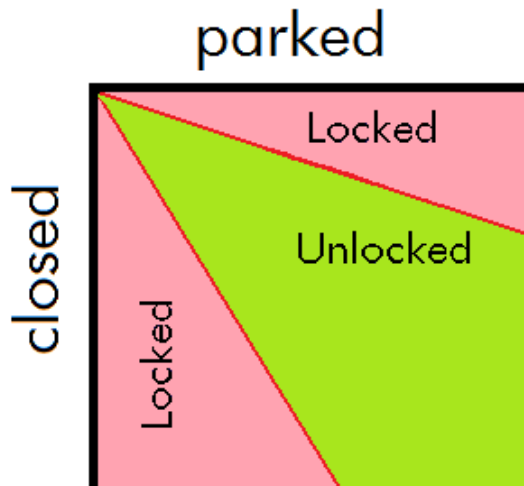
16 Put the Frigowall in horizontal position again.

17 Adjust the middle trolley in the U-rail in such way that the wheels of the middle trolley touch the U-rail in a firmly manner.

18



Carefully pull the wall down at an angle of 45 ° using a belt.



When the Frigowall is in an angle within the green area the Frigowall can be moved freely along the Frigowall track.

19 Unlock the floor stopper.

20 Set the Frigowall in vertical position.

6 CHECK THE FUNCTIONALITY OF FRIGOWALL

6.1 FLOORSTOPPER RECESSED

1. Close the levers. The rubber feet must reach the floor.
2. Open the levers. The rubber feet may not touch the floor.
3. Check if you must apply some force to close the Frigowall.
4. Check if you can open the Frigowall with closed levers. (You may not succeed!!)
- 5.



If necessary, adjust the ground stops using an Allen key (10 mm) at the bottom.

6.2 ADJUST SPRING TENSION

1. Open the Frigowall now to approx. 45°.
2. Push Frigowall up to the roof.
3. If the Frigowall is not resting in a **parallel** position then:

4.  Remove the plastic cap on the back of the balancing device.

5.  The bolt which holds the spring is visible.
The spring tension is at its minimum when the door is delivered.

6.  Measure the depth of each balancer.
Make sure each balancer has exact same distance which means same spring tension.

7.



Use an extended tube wrench (24 mm).

This tool is available at Loadlok (SAP nr 20000812).



WARNING:

Do **not** use an electric or pneumatic tool!

8. Maximum of 10 mm per side.



ATTENTION:

When the nuts are tightened too far, the mechanism may be damaged!

9. Check if the Frigowall does go smoothly when opening.

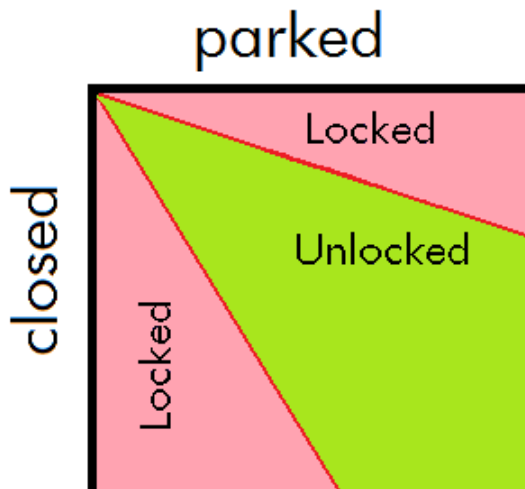
If the Frigowall "bangs" against the roof the tension is too tight. Loosen the bolts slightly.

10. Repeat steps 6 to 9, until the Frigowall opens smoothly.

11. Attach the plastic cap at the rear of the balancing device on both sides.

6.3 CHECK THE BRAKE FUNCTIONALITY

1.

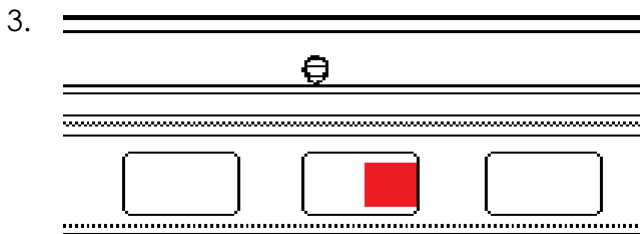


This picture shows the side view of the working area of the Frigowall.

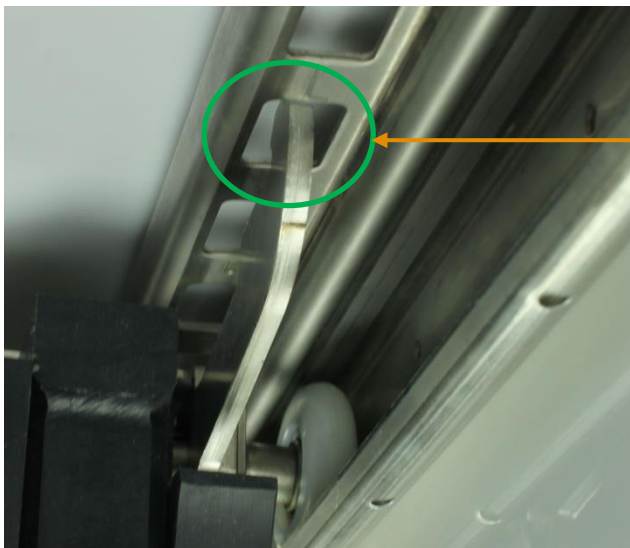
The green area in which the Frigowall is unlocked and can be moved freely along the guide rails.

The red areas show where the Frigowall is locked. This area is about 20° from the horizontal and the vertical.

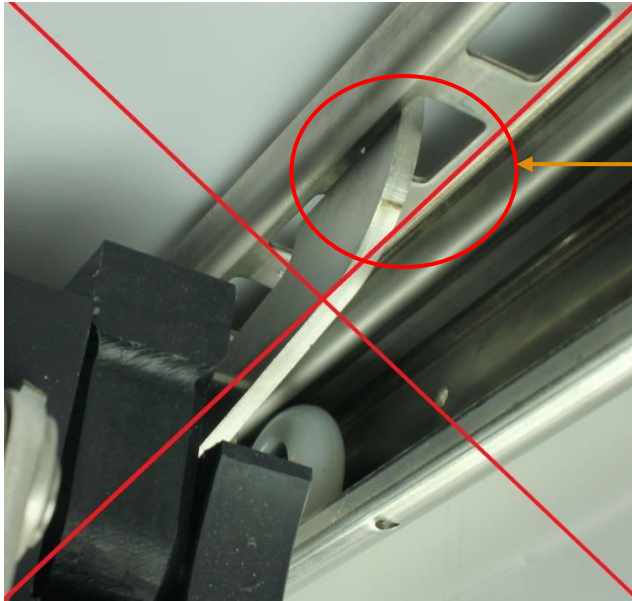
2. Lift the Frigowall into such an angle that it is in the area which is coloured red.



The break locks must be positioned in the middle of the breaking hole (as shown in red).



Correct position of the brake in the Frigowall track.



Incorrect position of the brake in the Frigowall track.

4. If this is not the case bend the break lock until it does!

5.



WARNING:
Check both sides!



WARNING:
If the functionality of the breaking locks cannot be assured:

- Contact Loadlok immediately!
- Do not release the vehicle until fault rectified!

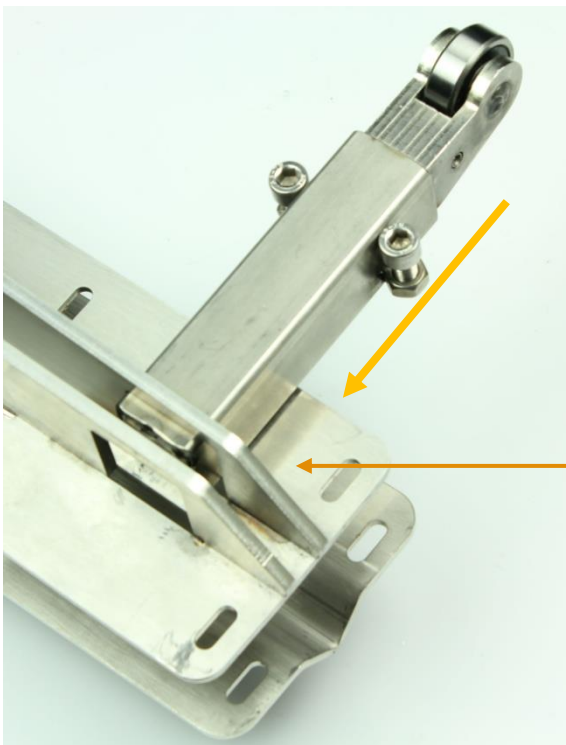
6.4 PARKING ASSISTANT (OPTIONAL)

1.



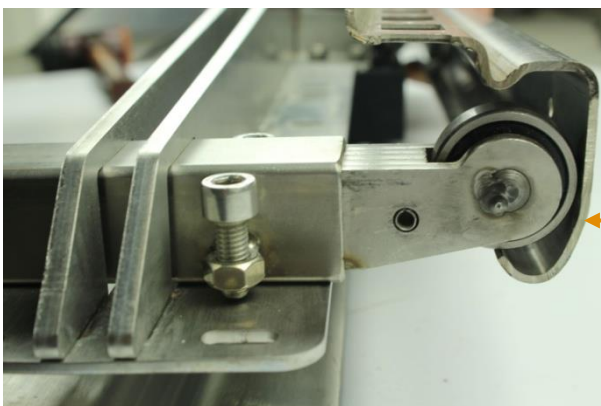
If the Frigowall will be longer stored on the roof, Loadlok offers a parking assistant which is easy to be attached on the balancer.

2.



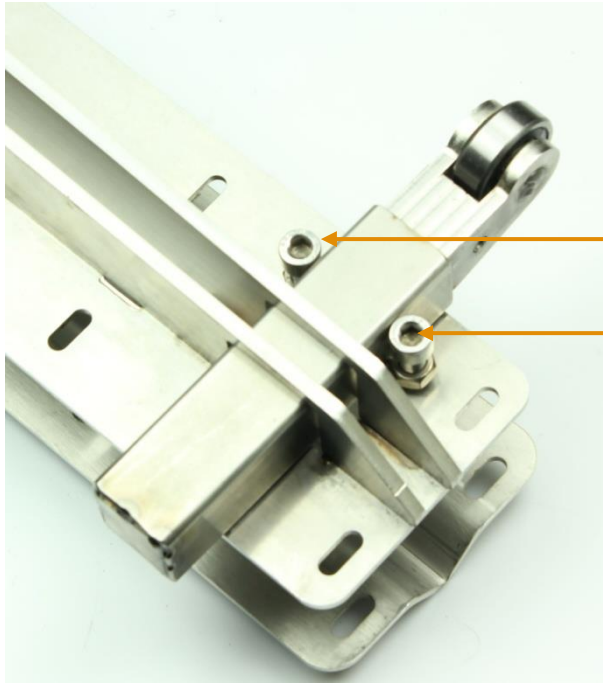
Insert the parking assistant in the predefined hole.

3.



Adjust the wheel so that it rests in the Frigowall track as shown in the picture.

4.



Tighten the bolts with an M8 Allen key.

Please note that access to the balancer is required. The park assistant can only be mounted when the bulkhead is not mounted yet, or if the bulkhead can be moved far enough to the back of the vehicle so it can be accessed.

6.5 CONNECTING THE BUILT-IN FAN

6.5.1 Without the power supply kit

1.



This slider is mounted by LoadLok, if a fan is built in the Frigowall. The power to the fan is to be supplied via the Frigowall track.

In this case connect:

- Left side to the power supply, the cable is coloured red.
- Right side to the trailers earth, the cable is coloured black.



WARNING:

In the case of:

- Possibility of short circuit

Use the power supply kit!

Make sure the power supply is secured with a 10A fuse.

6.5.2 With the power supply kit



WARNING:

In the case of:

- Possibility of short circuit

Use the power supply kit!

1.



This slider must be mounted on the balancer after the Frigowall door is set in its place according the instructions in paragraph "Mounting the track".

In this case connect:

- Left side to the power supply, the cable is coloured red.
- Right side to the trailers earth, the cable is coloured black.



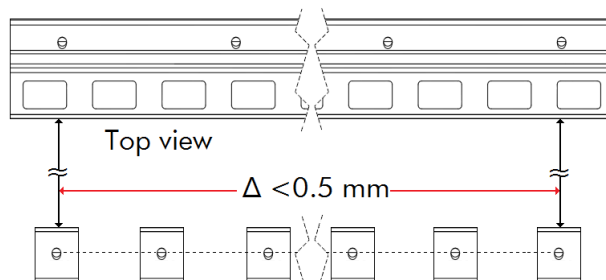
WARNING:

In the case of:

- Possibility of short circuit

Use the power supply kit!

2.



Mount the isolator strips parallel to the Frigowall track.

3. Every 500 mm an isolator bracket is to be mounted with the tolerance shown in step 2.
4. Slide the aluminum track into the isolator brackets. Make sure that every joint is electrically connected.



ATTENTION:

Check if there is a short circuit before continuing with the installation activities!

5. Connect the power supply to the aluminum rail.
6. Connect the earthing to the right side.
7. Make sure the power supply is secured with a 10A fuse.

6.6 DOUBLE DECKING SYSTEMS AND FRIGOWALL

1.



In order to minimize the height loss, the double deck rail ends within the Frigowall track.

This is shown in the figure here.

2.



The wheels on the balancer are extended as show in this figure.

Loadlok builds these type of balancers when ordering the double decking systems.

3. As both pictures are showing the end result, the fitting of the Frigowall track has to be performed as described in the paragraph "Mounting the track".



ATTENTION:

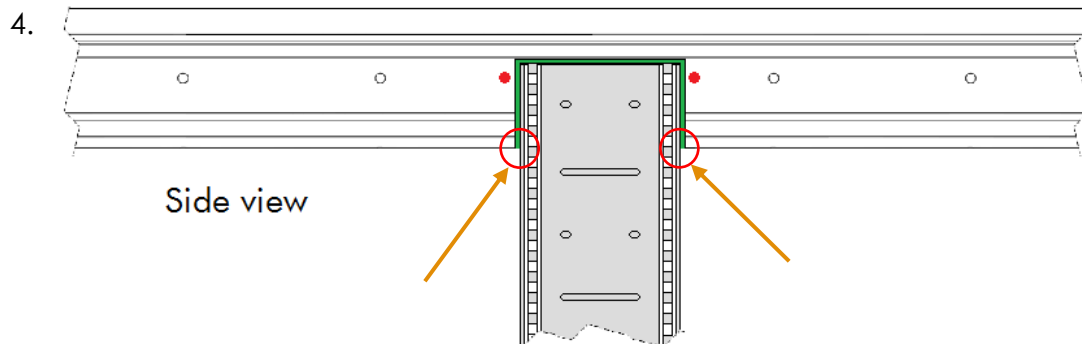
The notch in the Frigowall track where the double deck rail has to be mounted should be a minimum of 4 mm (2 mm on each side) wider than the chosen double deck rail.



WARNING:

The Frigowall track loses some rigidity when notches are present.

Despite this loss of rigidity, keep the tolerances smaller than 0,5 mm!



This picture shows a schematic view of how to build the double deck system (vertical rail recessed) into the Frigowall track (horizontal rail).

The tolerance should be a minimum of 2mm at each side (green colour).

Drill extra mounting holes in the Frigowall track (red dots), if required.



ATTENTION:

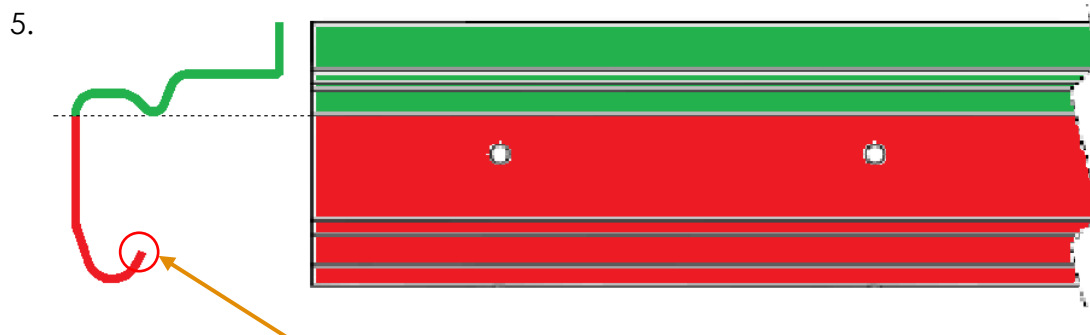
Loadlok advises to bend the Frigowall track open slightly, for a better guidance of the balancer wheels!

Sections are marked with a red circle in the picture above and in the following picture



ATTENTION:

If the double deck rail cannot be recessed then Loadlok advises not to cut out the Frigowall track!



The maximum cutout (intersection) as side and front view



WARNING:

When creating room for the double deck guidance rails, keep in mind the tolerances for the guidance and locking systems!

7 MAINTENANCE

Maintenance table			
Manifestation of the failure	Possible cause or procedure to detect the failure	Solution	Performed by (unskilled till certified)
Leaking cold Rubber seal is not flexible anymore Seal is broken	Icing on the sidewall is evident	Replace seal of the Frigowall in the same way as encountered.	Mechanic
The Frigowall is not easily going in to a horizontal or vertical position	Spring tension is not correct	Adjust the spring tension according paragraph "Adjust spring tension"	Mechanic
The brake fingers are not locking in the center of the brake hole		Adjust the breaking fingers according paragraph "Check the brake functionality"	Mechanic
Floorstopper rubber is worn out	Floorstopper is not working as expected	Adjust the floor stopper according paragraph "Floorstopper recessed"	Driver / Mechanic

If the Frigowall is inspected on a regular basis on above mentioned inspection points the product lasts a vehicle lifetime.

8 DOCUMENT INFORMATION

Principal	Contractor	Digital file name
LoadLok International	Foxiz BV	Frigowall 2D & 3D Mounting Instruction v1.0 September 2020

Remarks, corrections or suggestions are welcomed by the technical department.