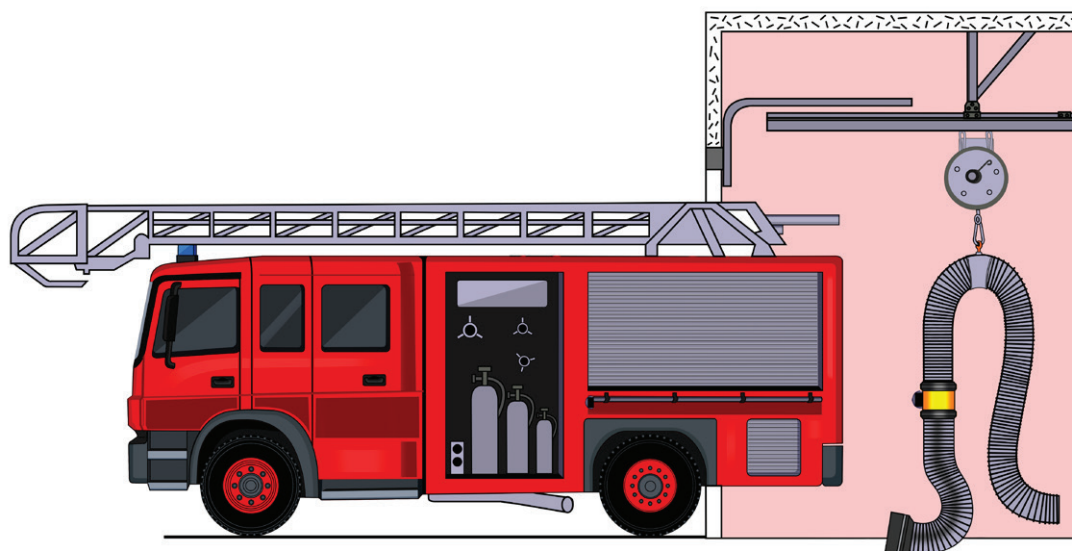




# **GEOVENT**

## INSTRUCTION MANUAL



## RAIL SYSTEM

MRS – Magnetic rail system



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### 1.0 General safety precautions

**IMPORTANT** – Please study all the instructions before mounting and use.

Please keep these instructions in a safe place and instruct all users in the function and operation of the product.

Do not dismantle any factory-mounted parts, since it impedes the use of the equipment.

All electrical installations must be carried out by an authorised electrician.

#### 1.1 Dangers

Danger of mutilation when dismantling the hose/nozzle from the exhaust. Be careful.

Hoses mounted with spring balance F/LR: Guide it slowly. If released it will accelerate out of control.

To minimize the risk of danger all instructions in this manual must be followed carefully.

#### 1.2 Field of application

Geovent Magtenetic rail system is developed for the extraction of exhaust. When installed correctly the Magnetic rail system allows a vehicle to be placed in position in a safe manner.

The hose is extended and fastened to the exhaust of the vehicle. The Magnetic rail system must not be used for extraction of aluminum dust, flour, textile and wood dust or other explosive media without written prior consent from Geovent.

When in doubt, contact Geovent A/S.

### 1.3 Technical Specifications

<b>Temperature extracted air:</b>	<b>Max. 170°C</b>
<b>Temperature, surroundings:</b>	<b>Min. 0 - 50°C</b>

If the extracted air is hotter than 170°C the standard hose will melt. To prevent this, several precautions can be taken. See trouble shooting in section 4.1.

#### Noise

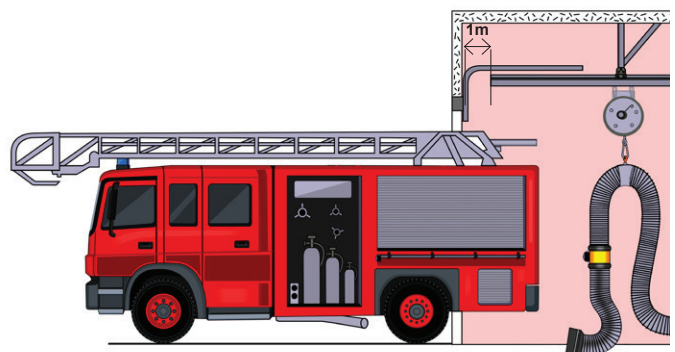
The Magnetic rail system in itself does not produce any noise. The noise level relies on a number of factors, primarily the diameter of the hose and the extracted air flow. If the hose is too narrow, noise will occur.

#### Optimal air flow

A number of factors must be taken into consideration when selecting the hose for the Magnetic rail system. An important factor is the air flow:

Hose ø125 mm	ca. 300 - 600 m <sup>3</sup> /h
Hose ø150 mm	ca. 600 - 1.000 m <sup>3</sup> /h

### 1.4 Construction



#### Magnetic rail system example

- A: Fan MSFG-200-3 1,1kW – can deliver up to 2.100 m<sup>3</sup>/h.
- B: Trolley with mounted spring balance.
- C: Connection for rail system. Rails come in lengths of 2 meter and can be combined to suit your needs.
- D: Suspension bracket for ceiling mounting.
- E: Decoupling switch.
- F: End stop

### 2.0 Installation

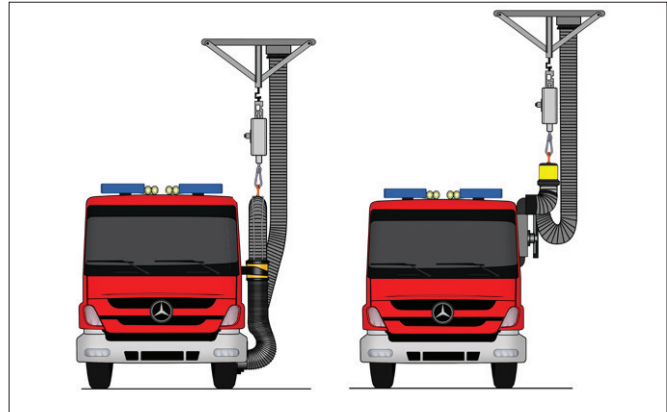
The Magnetic rail system is delivered in separate parts. The channel must be supported every 2 meters. Recommended height of installation is 3 to 5 meters.

Use one suspension bracket every 2 meters of alu profile. Installation should be carried out by a trained professional.

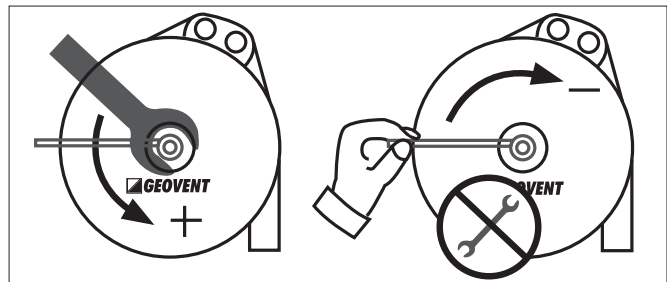
Before installing, consider the optimal placement for the

Magnetic rail system. Is there sufficient room and is it possible to perform duct work and service the system. The Magnetic rail system can be installed on both a plane and slanted ceiling. Depending on the individual solution some components may not be included.

The nozzle for exhaust pipes at high level has to be installed at a higher level than the exhaust pipe. The nozzle has to be pulled downwards at connection. Then the balancer will be activated.

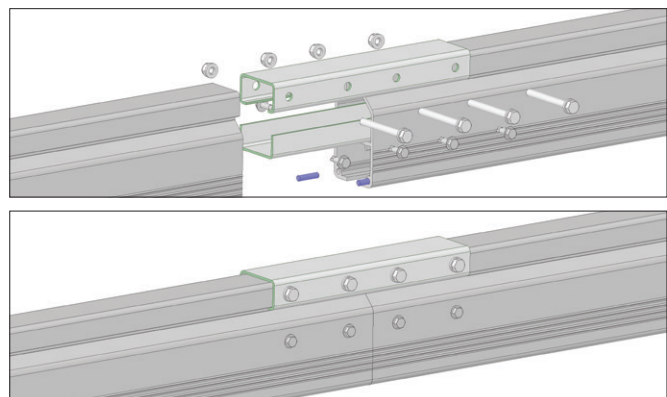


Upper nozzle and lower nozzle

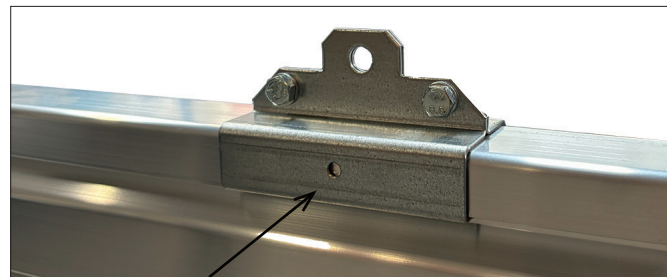


To adjust the spring balancer, adjust the spring in the balancer: To tighten it, turn it counterclockwise with a wrench. To loosen it, turn the spring piece clockwise with your fingers.

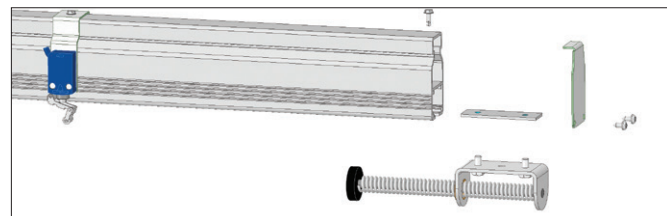
### Procedure:



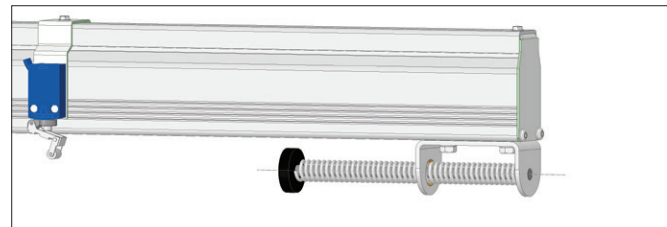
Place all the profiles on the floor and screw the profiles together with the extension bracket.



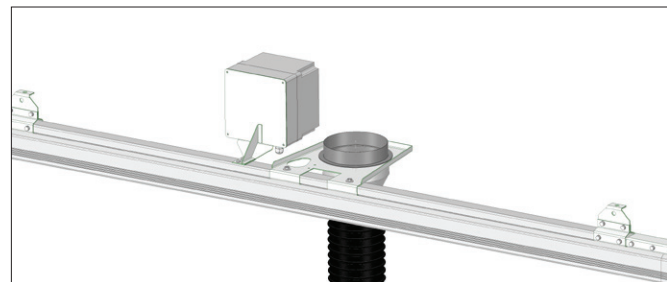
When the installation is complete, insert a self-tapping screw through the bracket and the rail. See arrow.



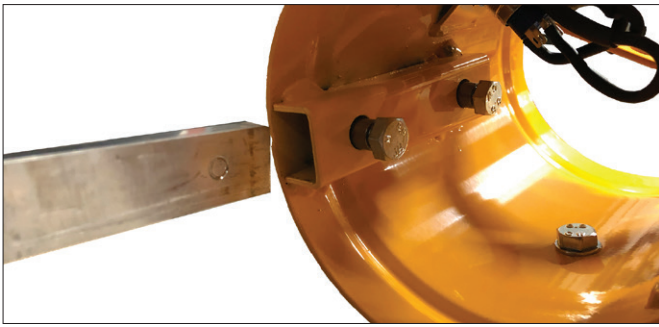
Insert the carabiner through the clamp on the suspension.



Mount the spring loaded stop and the end plate.



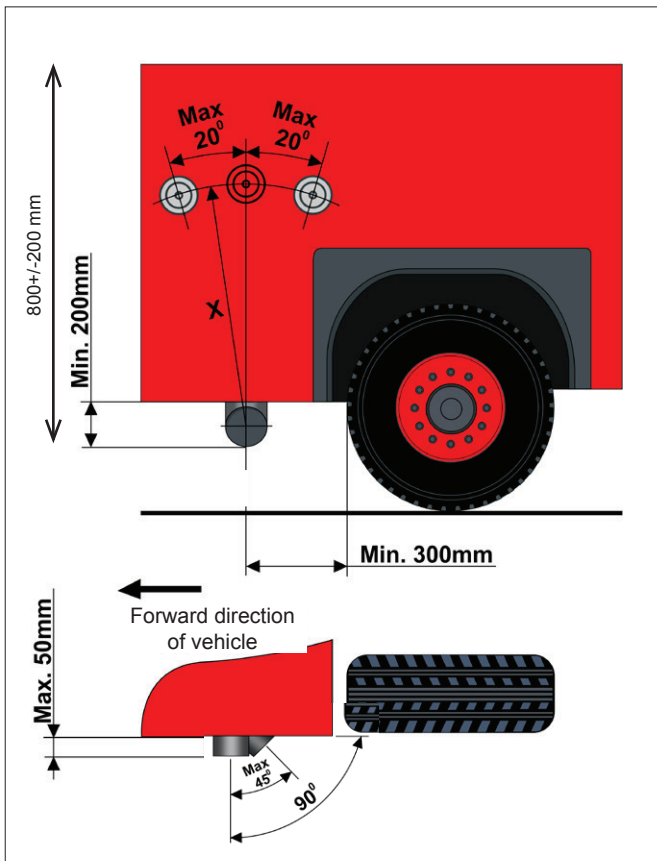
Mount the connection piece and the control system in the middle of the rail.



When mounting and adjusting the length of the nozzle, tighten the two M8 screws against the bar to secure it.



Fully assembled mouthpiece.



#### Plate for the nozzle

The plate for the nozzle is to be fitted to the side of the vehicle 600 mm or 900 mm from the exhaust pipe.

#### The exhaust pipe

The, side mounted exhaust pipe should be positioned according to the drawing and point at right angles or up to max. 45° backwards. The pipe should be straight and lie flush with or be slightly angled out from the side of the vehicle.

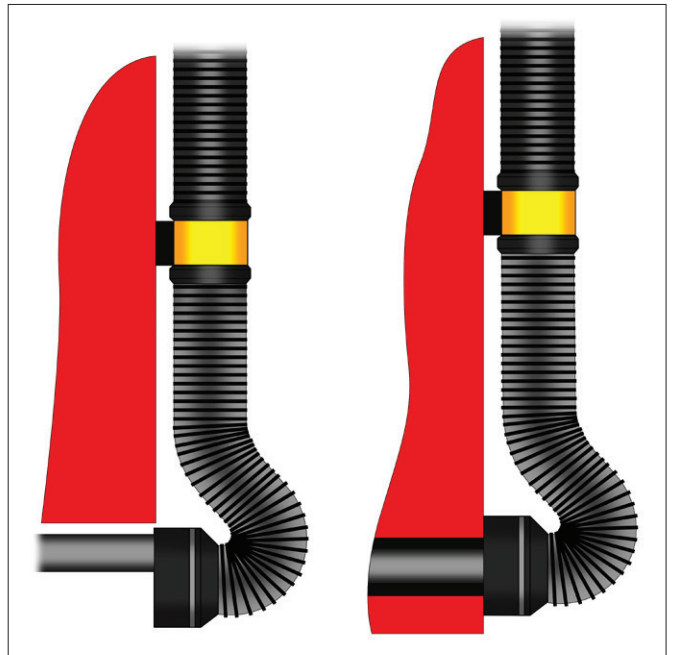
Be aware that it may be necessary to make modifications to the exhaust system of the vehicle to ensure the best possible position of the exhaust pipe.



Rubber for nozzle  $\varnothing 125$  LN extended approx. 300 mm for rail system.

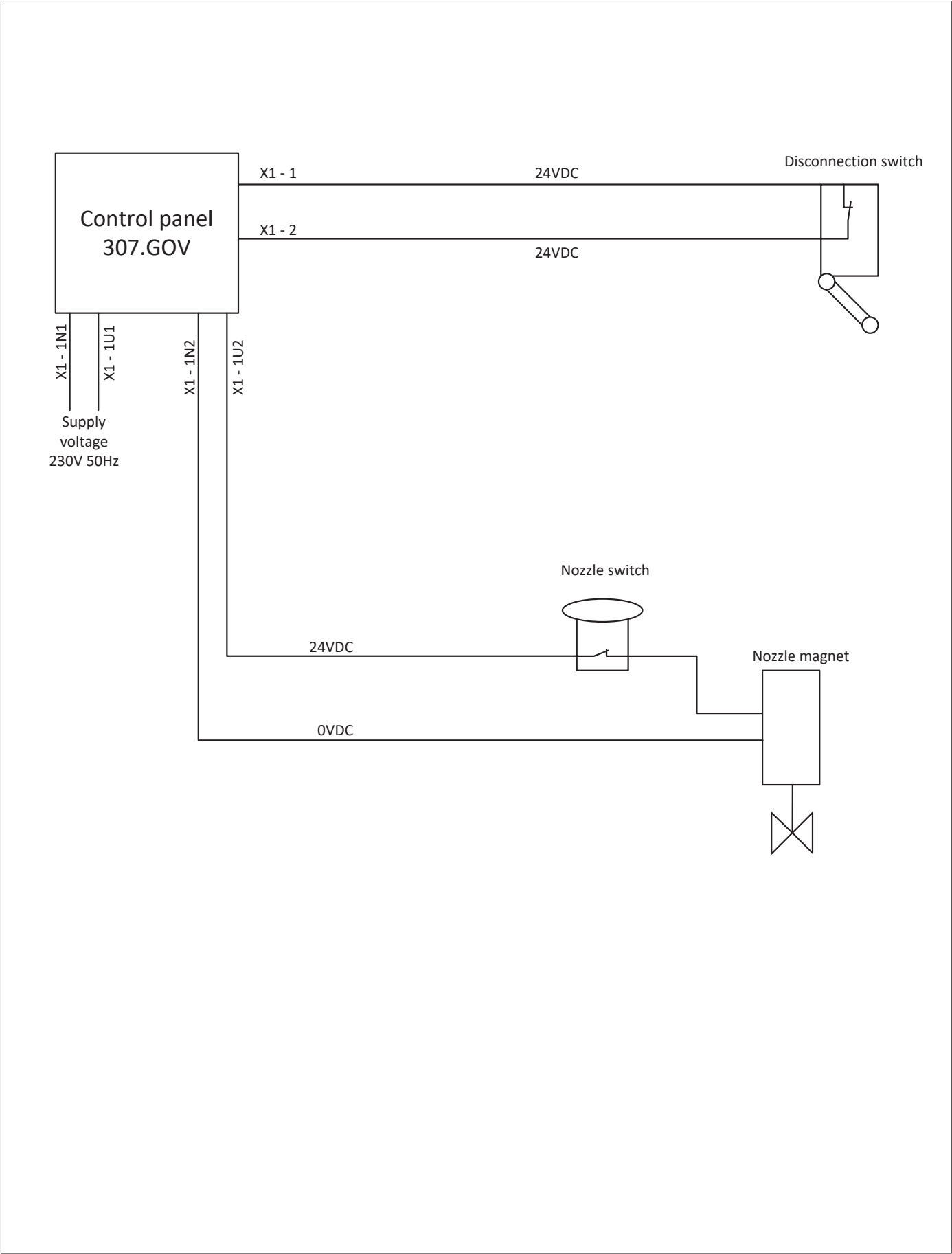


Press the button to remove the nozzle from the fire truck.



When the hose and the nozzle are connected to the vehicle the hose should form a bend as shown on the drawing above.

2.1 Coupling diagram

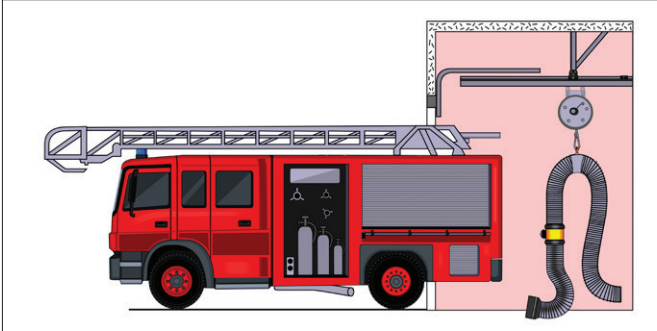




## 2.2 Test run

After installation, make sure that the trolley can move freely along the entire rail. Test that the nozzle stays attached to the vehicle while in motion and that it disconnects in time.

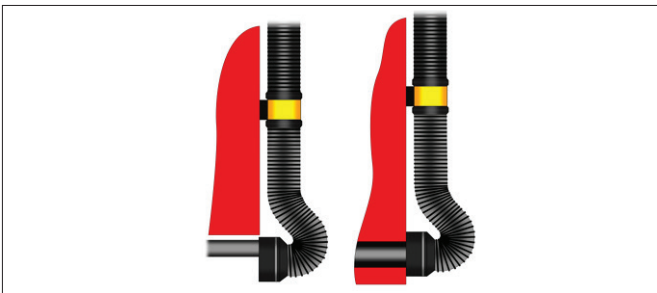
## 3.0 Daily usage – user instruction



- Open the station door and start the exhaust extraction fan (as an alternative the fan can be connected to an automatic start/stopsystem).
- Reverse the vehicle in so that the exhaust pipe is just outside the station door.



- Locate the nozzle of the flexible hose on the exhaust pipe. Fasten the electromagnetic unit onto the anchor plate located on the side of the vehicle.



- Reverse the vehicle into its parking space. The hose should always be connected to the exhaust pipe while the vehicle is parked in the station.

## Disconnection

- Make sure the extraction hose is connected to the exhaust pipe and that it is firmly fastened to the anchor plate on the vehicle's side.
- Start the fan and open the station door. Drive the vehicle straight out from the garage with a maximum speed of 20 km/h (12 mph). The hose automatically disconnects when the vehicle is driven out.

The Magnetic rail system will not work as intended if:

- Unauthorized parts are used on the rail system.
- The system is used for other purposes than described in this manual.
- The fan is turned off. (This will result in the hose melting.)

**The flexible hose can withstand 170 °C for continuous running. Use at higher temperatures will shorten the life of the product. Therefore, avoid tasks that require extended periods of continuous running which will generate high exhaust temperatures.**

## 4.0 Maintenance

### Periodic maintenance

- Maintain trolleys on suitable intervals for optimum performance.
- Avoid running over the hose to reduce wear and tear.
- Make sure that the hose is not bent right after the exhaust pipe.
- Measure the air flow on the Magnetic rail system at least once a year. If the air flow is too small the hose can melt.

The entire Magnetic rail system should be checked at least once a year by a trained professional.

### 4.1 Trouble shooting

In case of a problem with the Magnetic rail system check the following issues:

#### Typical problems when installing Magnetic rail system:

##### Noise problems

- The magnetic rail system is not properly fastened to the ceiling or the ceiling is not stable enough.
- More air is run through the system than intended. Use balancing damper.

##### Hose problems

- The hose melts near the nozzle. This will happen if the air flow is not sufficient or if the hose is bent too much and too close to the nozzle. In this case straighten the hose and/or increase air flow. Alternatively use a high temperature hose near the nozzle.

## 10.0 Dismantling, disabling and scrapping

Deactive the product by disconnection the electrical mains. Dismantle compressed air pipes and other pipes or wires etc.

Dismantle the filter cartridge by unscrewing the finger screws and remove the service hatch.

Turn the filter cartridge so that is loosens from the latches at the top of the cartridge.

Carefully remove the contaminated filter cartridge, place it in a plastic bag and seal the bag.

Dispose of it according to local regulations.

The inside of the product must be cleaned by means of a vacuum cleaner with a filter which suits the purpose.

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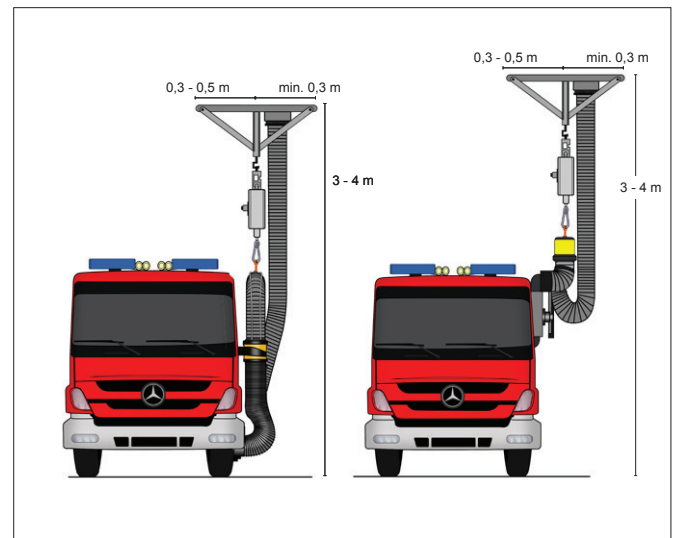
Dismantle the metallic parts by unscrewing screws and bolts. Afterwards cut the larger pieces into smaller pieces and dispose of it according to local regulation.

Dismantle plastic parts and dispose of it according to local regulations.

The packing material must be sorted according to local regulations in order to be able to reuse the material.

## 11.0 Dimensions

MRS – Magnetic rail system





## 12.0 Liability

### Warranty

Geovent A/S grants a warranty for products, which are defective, when it can be proved that the defects are due to poor manufacture or materials on the part of Geovent. The warranty comprises remedial action (reparation or exchange) until one year after the date of shipment.

No claims can be made against Geovent A/S in relation to loss of earnings or consequential loss as a result of defects on products from Geovent.

Wear on parts such as filter cartridges and hose is not included in the warranty.

### User liability

In order for Geovent to be capable of granting the declared warranty, the user/fitter must follow this instruction manual in all respects.

Under no circumstances may the products be changed in any way, without prior written agreement with Geovent A/S.

Please refer to the current sales and delivery conditions at [www.geovent.com](http://www.geovent.com)

## 13.0 Declaration of conformity

The manufacturer: GEOVENT A/S  
HOVEDGADEN 86  
DK-8831 LØGSTRUP

Hereby declares that:

The product: Rail system  
Models: MRS – Magnetic rail system

Complies with the relevant parts of the following directives and standards:

Directive 2006/42 / EC of the European Parliament and of the Council of 17 May 2006 on machines and amending directives 95/16 / EC.

This declaration is no more valid if changes are made to the product by others than the manufacturer.

Authorized to collect the technical file:

Lise Cramer

Date: 21.11.2024

Position: Director  
Name: Thomas Molsen



Signature: \_\_\_\_\_









***GEOVENT***

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