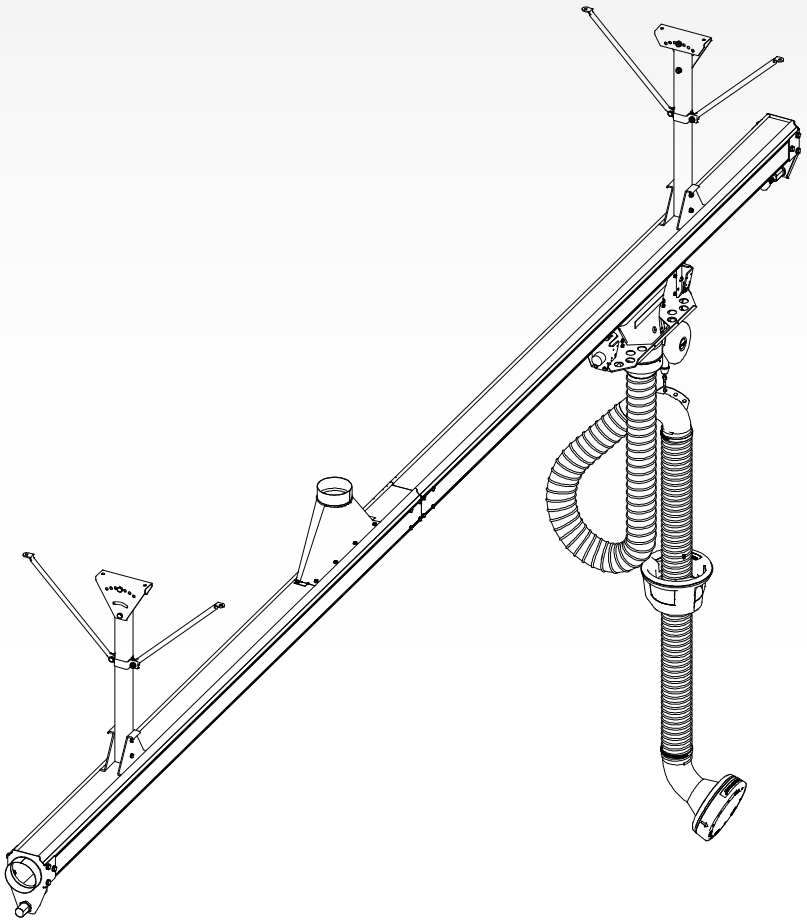
PLYMOVENT®
clean air at work

MRP



Installation and user manual

EN – ORIGINAL INSTRUCTION

 The information given in this document has been collected for the general convenience of our clients. It has been based on general data pertaining to construction material properties and working methods known to us at the time of issue of the document and is therefore subject at any time to change or amendment and the right to change or amend is hereby expressly reserved. The instructions in this publication only serve as a guideline for installation, use, maintenance and repair of the product mentioned on the cover page of this document. This publication is to be used for the standard model of the product of the type given on the cover page. Thus the manufacturer cannot be held responsible for any damage resulting from the application of this publication to the version actually delivered to you. This publication has been written with great care. However, the manufacturer cannot be held responsible, either for any errors occurring in this publication or for their consequences.

To improve comprehension for people whose first language is not English, we have written parts of this manual in Simplified Technical English (STE). STE is a controlled language originally developed for aerospace industry maintenance manuals. It offers a carefully limited and standardized subset of English, along with specific writing rules.

TABLE OF CONTENTS

PREFACE

Using this manual

Pictograms and symbols

The following pictograms and symbols are used in this manual:

	**TIP** Suggestions and recommendations to simplify carrying out tasks and actions
	**ATTENTION** A remark with additional information for the user. A remark brings possible problems to the user's attention.
	**CAUTION!** Procedures, if not carried out with the necessary caution, could damage the product, the workshop or the environment.
	**CAUTION** Denotes risk of electric shock.
	**WARNING!** Fire hazard! Important warning to prevent fire.
	**WARNING!** Explosion hazard! Important warning to prevent explosions.
	**Personal protective equipment (PPE)** Instruction to use respiratory protection when you do service, maintenance and repair jobs, as well as during functional testing. We recommend to use a half-face respirator according to DIN EN 141/143, protection class P3.
	**Personal protective equipment (PPE)** Instruction to use protective gloves when you do service, maintenance and repair jobs.

Text indicators

Listings indicated by "-" (hyphen) concern enumerations.
Listings indicated by "•" (bullet point) describe steps to perform.

Service and technical support

For information about specific adjustments, maintenance or repair jobs which are not dealt with in this manual, please contact the supplier of the product. He will always be willing to help you. Make sure you have the following specifications at hand:
- product name
- serial number

You can find these data on the identification plate.

Product indications

Unless specifically stated, the contents of this manual applies to the MRP.

1 INTRODUCTION

1.1 Identification of the product

The identification plate contains, among other things, the following data:

- product name
- serial number
- supply voltage and frequency
- power consumption

1.2 General description

The mini rail system is a FIRE system designed to be connected to a vehicle's tailpipe to capture and remove the exhaust emissions. The MRP is fully automatic, from the fan activation to the automatic nozzle release from the exiting vehicle. It is easy in use with only a one-step connection to the system as the vehicle enters the facility.

1.3 Technical specifications

■ Physical dimensions and properties	
Material • rail • rubber seal	 • aluminum • rubber coated with UHMW (with low friction layer)
Length	20 - 65 ft. (6 - 20 meters)
Color	silver/black
■ Ambient conditions	
Operating temperature:	all ambient conditions allowed
Max. relative humidity	80%
Outdoor use allowed	no
■ Scope of supply	
MRP magnetic	
Aluminum profile* *Crab and hose package to be ordered separately	
■ Options and accessories	
MRP MG	MIC-100 | IC | Hose package

2 PRODUCT DESCRIPTION

2.1 Product components

The product consists of the following main components and elements:

A Adjustable mounting kit
The kit includes two similar brackets. They can also be used if the roof is angled and they can be mounted in both directions.
Maximum angle is 30 degrees. It also includes two MRP brackets for mounting the MRP rail to the support leg.

B Side brace
There are three different lengths available:
20 in. (500 mm), 30 in. (750 mm) and 6 ft (1800 mm).
The brace can be mounted separately or in pairs using the same brackets.

C Support leg

D MRP rail
The MRP track is delivered in 2 lengths:
- MRP-Track - 19.6 ft (5,8 m)
- MRP-Track 1/2 - 9.5 ft (2,9 m)

E MRP end caps (with hydraulic shock absorber)
Pending on how the extraction of exhaust air will be organized both end caps can be closed or with low ceilings open at one end.

F Crab trolley

The ventilated sliding crab runs inside of the rail and can be positioned anywhere along the rail.

G Balancer BR-200 series

The non-locking spring recoil balancer has a lifting capacity of 17.6 - 37 lbs (8 - 17 kg) with a cable length of 6.6 ft (2.2 m).
The main function of the Balancer Locking Cable (BLC) is to control the point of disconnection. As the hose reaches it's maximum length, the BLC will bottom out, in turn pulling the Magnetic Grabber nozzle from the moving vehicle.

H Steel saddle (part of the hose kit)

I Hose connection kit

The different hose packages contain the following parts:
- Transition parts
- Exhaust removal hose with clamps
- Hoses: upper, mid and lower hose
- Steel elbow
- Safety disconnect handle
- Magnetic Grabber® nozzle
- Magnetic Grabber® conical tailpipe adapter
(available in 3, 3.5, 4, 5, 6 and 7 in. (75, 90, 100, 125, 150 and 175 mm))

J Duct connection 5 in. (125 mm)

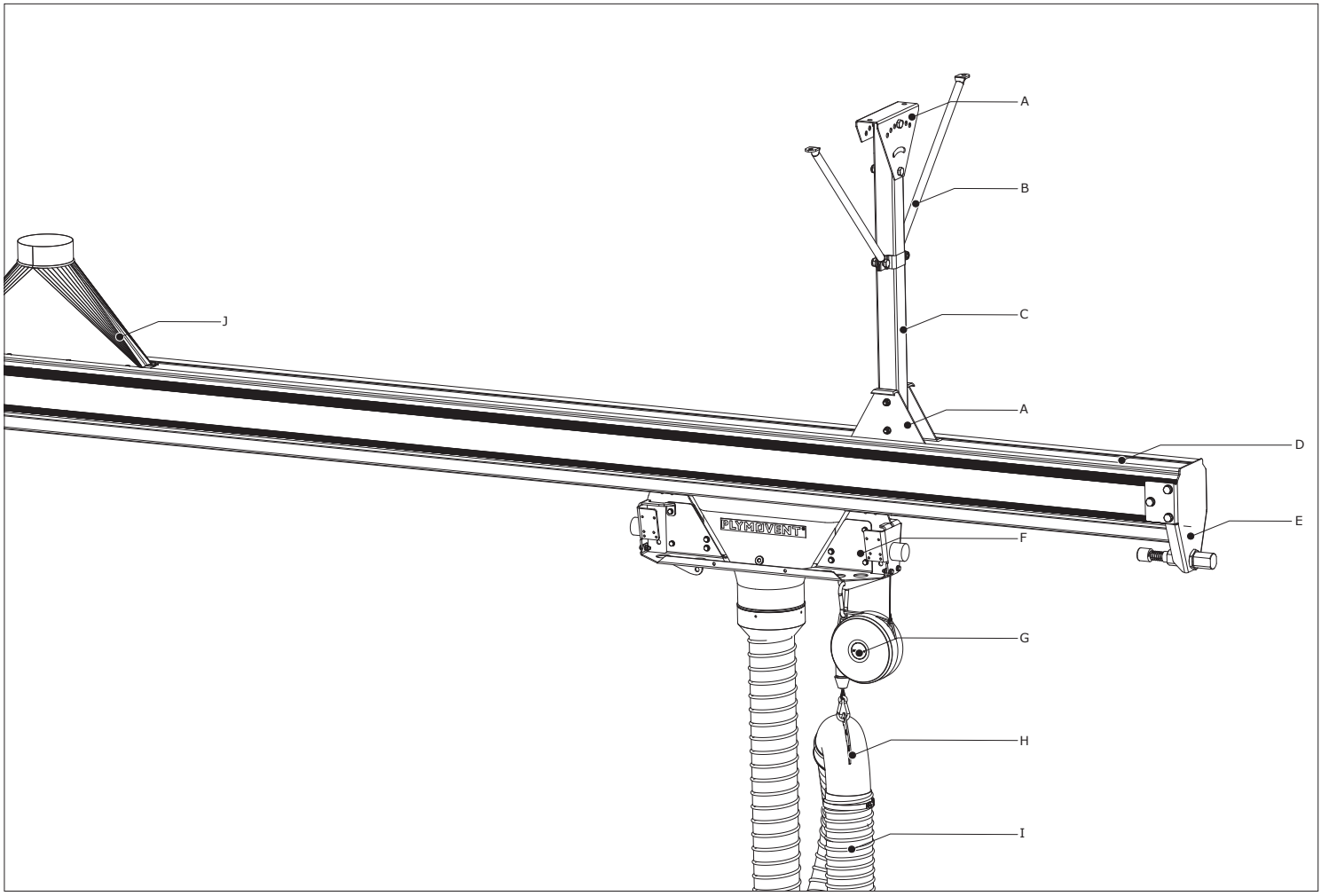


Fig. 2.1 Product components

3 SAFETY INSTRUCTIONS

General

The manufacturer does not accept any liability for damage to the product or personal injury caused by ignoring of the safety instructions in this manual, or by negligence during installation, use, maintenance, and repair of the product mentioned on the cover of this document and any corresponding accessories. Specific working conditions or used accessories may require additional safety instructions. Immediately contact your supplier if you detect a potential danger when using the product.

The user of the product is always fully responsible for observing the local safety instructions and regulations. Observe all applicable safety instructions and regulations.

User manual

- Everyone working on or with the product, must be familiar with the contents of this manual and must strictly observe the instructions therein. The management should instruct the personnel in accordance with the manual and observe all instructions and directions given.
- Do not change the order of the steps to perform.
- Keep the manual with the product.

Users

- The use of this product is exclusively reserved to authorised, trained and qualified users. Temporary personnel and personnel in training can only use the product under supervision and responsibility of skilled engineers.
- Stay alert and keep your attention to your work. Do not use the product when you are under the influence of drugs, alcohol or medicine.
- The product is not to be used by children or persons with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction.
- Children must be supervised not to play with the product.

Technical specifications

Do not change the specifications given in this manual.

Modifications

Modification of (parts of) the product is not allowed.

Installation

- The installation of this product is exclusively reserved to authorised, trained and qualified engineers.
- The electric connection must be executed in accordance with the local codes and requirements. Ensure compliance with the EMC regulatory arrangements.
- During installation, always use Personal Protective Equipment (PPE) to avoid injury. This also applies to persons who enter the work area during installation.
- Use sufficient climbing gear and safety guards when working on a higher level than 2 meters (local restrictions may apply).
- Do not install the product in front of entrances and exits which must be used for emergency services.
- Mind any gas and water pipes and electric cables.
- Make sure that the workspace is well illuminated.
- Stay alert and keep your attention to your work. Do not install the product when you are under the influence of drugs, alcohol or medicine.
- Air containing particles such as chromium, nickel, beryllium, cadmium, lead etc., should never be recycled. This air must always be brought outside the working area.

Use

- Inspect the product and check it for damage. Verify the functioning of the safety features.
- Check the working environment. Do not allow unauthorised persons to enter the working environment.
- Protect the product against water and humidity.
- Make sure the room is always sufficiently ventilated; this applies especially to confined spaces.
- Make sure that the workshop, in the vicinity of the product, contains sufficient approved fire extinguishers (suitable for fire classes ABC).

Service, maintenance and repairs

- Obey the maintenance intervals given in this manual. Overdue maintenance can lead to high costs for repair and revisions and can render the guarantee null and void.
- Always use Personal Protective Equipment (PPE) to avoid injury. This also applies for persons who enter the work area.
- Make sure the room is sufficiently ventilated.
- Use tools, materials, lubricants and service techniques which have been approved by the manufacturer. Never use worn tools and do not leave any tools in or on the product.
- Clean the area afterwards.

4 INSTALLATION

4.1 Preparation

- Determine the installation height of the rail (measured from the bottom of the rail). Refer to the installation table on the next page.
- Determine the recommended distance from the end stop to the door in the installation table below.
- Determine the recommended balancer locking cable (BLC) length in the installation table below.*
- After installation, fine tune the BLC if the disconnection point is not close enough to the door.*

*Only applicable when using a magnetic MRP system.

Installation table			
Rail height		Distance end stop - door	Length BLC
Feet (m)		Feet (m)	Inch (mm)
12 (3 m)	min.	5.5 (1,7 m)	26 (660 mm)
	recommended	6 (1,8 m)	30 (760 mm)
	max.	7 (2,1m)	32 (810 mm)
13 (4 m)	min.	6.5 (2 m)	26 (660 mm)
	recommended	7 (2,1 m)	30 (760 mm)
	max.	8 (2,4 m)	32 (810 mm)
14 (5 m)	min.	7.5 (2,3 m)	26 (660 mm)
	recommended	8 (2,4 m)	30 (760 mm)
	max.	9 (2,7 m)	32 (810 mm)

NOTE: The rail can be installed at the same height as the apparatus if required.

4.2 Back-in measurements

Determine the position of:

- Exhaust pipe
- Garage / exit door.
- Distance from exit door to the tailpipe.

- Determine the location of the exhaust pipe (1) on the vehicle:
  - Which side of the vehicle is the tailpipe positioned?
  - Where does the exhaust exit the vehicle?
  - What is the diameter of the tailpipe?

- Measure the height and width of the garage (2). Determine the type of bay doors:
  - Rollup door
  - Segmented panel overhead door (four-fold doors)
  - Other type

- Determine the height of the rail that can be installed under the door when fully raised.The height should be in line with the specifications indicated in this manual in order to ensure correct product performance.

- Measure the distance between the door and the exhaust pipe (3). This is the minimum length of the MRP rail. Check before installation that this is the minimum required length of the MRP back-in application.
- The distance from the end of the rail to the door(s) must be in line with the installation table above.

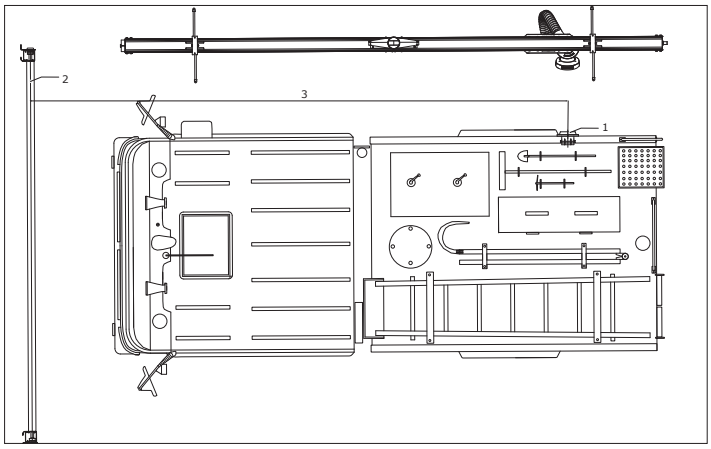


Fig. 4.2.1 Distance from the end of the rail to the door

CAUTION!
Be sure to order the right grabber dimension. If a incorrect version is used on the tailpipe, the system could be damaged or will not properly remove exhaust from the facility.

4.3 MRP rail location

1. MRP Rail
2. Tailpipe
3. Bay door
4. Rail height
5. Distance to vehicle
6. Distance to exit door

- The MRP rail (1) is mounted at a height (4) between 12 and 14 ft (3,7 and 4,3 m) over the floor on the side in which the tailpipe (2) is located.

  The first rail hanger leg should be approximately 4 to 5 ft max. (1.2 to 1.5 m max.) from the end of the MRP rail.
- The rail should be mounted 18 to 24 in. (460 to 610 mm) from the body of the vehicle (5), and positioned on the tailpipe side of the vehicle. Preferably the rail is on or within the boundaries of the exit door. Measure the garage door and truck width in order to determine the rail mounting position.
- The rail should be mounted immediately under a sectional door with a clear height from the track to the door of 4 to 6 in. (100 to 150 mm).
- The recommended distance from the end of the rail to the door(s) (6) can be found in the installation table on page 6.

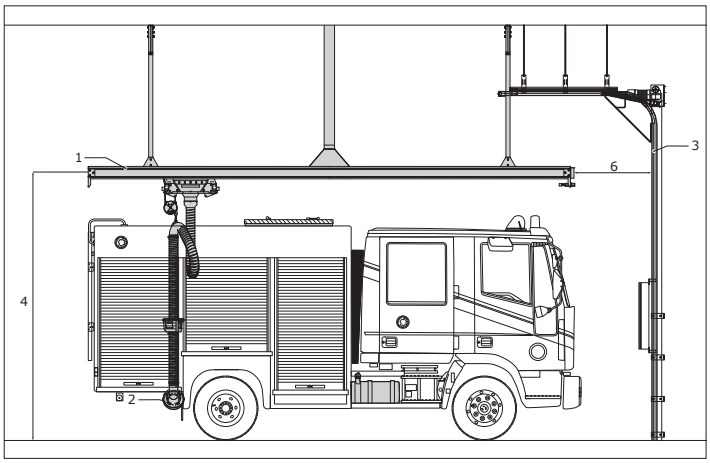


Fig. 4.3.1 Rail location side view

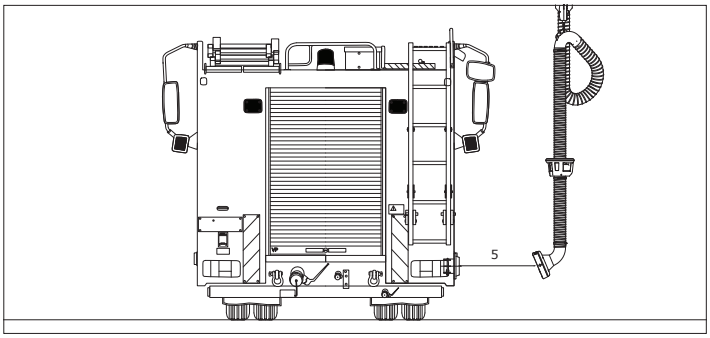


Fig. 4.3.2 Rail location end view

ATTENTION
Based on the door height and distance from end of the rail, a cantilever under the door may be required, so that the vertical hanger leg does not obstruct the door track. Typically, the cantilever is required once in a back-in-system and twice on a drive-through-system.

4.4 Splicing two rails

To splice two rails, position the rail sections on saw horses.

- Insert and center a splice plate 4 in. (100 mm) inside the rail, clamp in place with a C-Grip and drill 2 Ø 0.42 in. holes on top of the rail, 2 in. (50 mm) from the top and bottom of the rail (refer to fig. 4.4.1.) that are 2 in. (50 mm) apart.
- Drill 2 Ø 0.42 in. on each side of the rail, 2 in. (50 mm) from the top and bottom of the rail and 3 in. (75 mm) apart (refer to fig. 4.4.2.)
- Do the same for the other rail section.

The splice is mounted together with 12 pcs of 3/8" X 1.25 (M10 x 25 mm) bolts.*

Remove debris and clean the rail before mounting the parts together.

- Insert the bolts but leave them loose.
- Silicone the joint and slide the other rail section onto the splice. Line up straight in both directions and clamp.
- Tighten the bolts in sequence - first tighten the top bolts, and then the remaining bolts on the sides.

*Fastening material is included in the splice package.

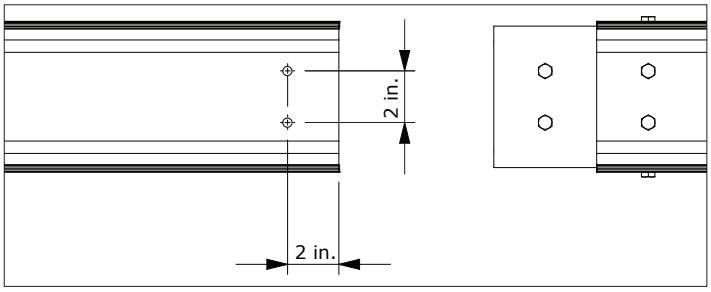


Fig. 4.4.1 Measuring the holes for splicing the rail (top of the rail).

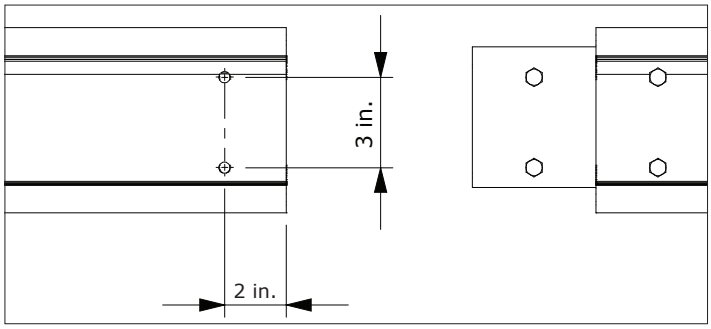


Fig. 4.4.2 Measuring the holes for splicing the rail (side of the rail).

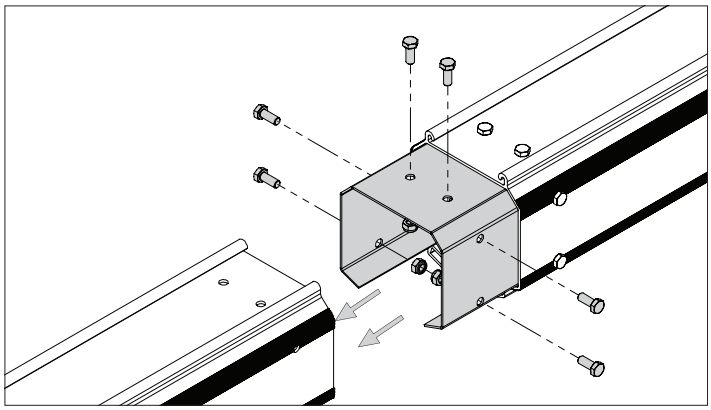


Fig. 4.4.3 Drilling holes in the splice plate.

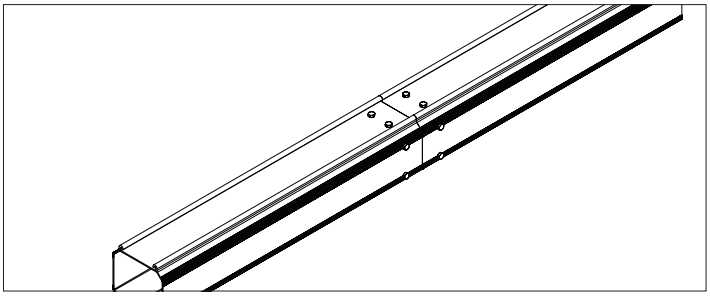


Fig. 4.4.4 Two rail sections mounted together.

ATTENTION
Make sure the spliced rails are straight and the rail channels are lined up. This will ensure that the rubber seal can be inserted properly.

4.5 Assemble the legs and the rail

Support legs can be attached to the following:
- Steel beems
- Drywall ceiling with wood framing
- Poured or Pre-Cast Concrete

- Mount the support leg to the roof or to beams. The first leg should be 4 to 5 ft max. (1.2 to 1.5 m max.) from the end of the rail. Leg assemblies will need to be placed every 10 to 12 ft. (3 to 3,6 m) and braced side to side using the appropriate length (20, 30 or 72 in.) side brace kit.

  Note: Longer braces can be made out of ¾ in. EMT conduit and attached to the leg using the Plymovent leg/brace mounting kit. You should have at least one long brace running front to back.

- Mount the top suspension to the ceiling.
- Fasten the top suspension upper bracket to the support leg. Predrill 0.2 in (5 mm) and then 0.42 in. (10,5 mm) that align with the holes in the bracket. Position the bracket on the leg so it is centered, then drill the third hole in the leg. Refer to fig. 4.5.1.
- Add bolts and nuts but do not tighten, as you will need to cut the support leg.

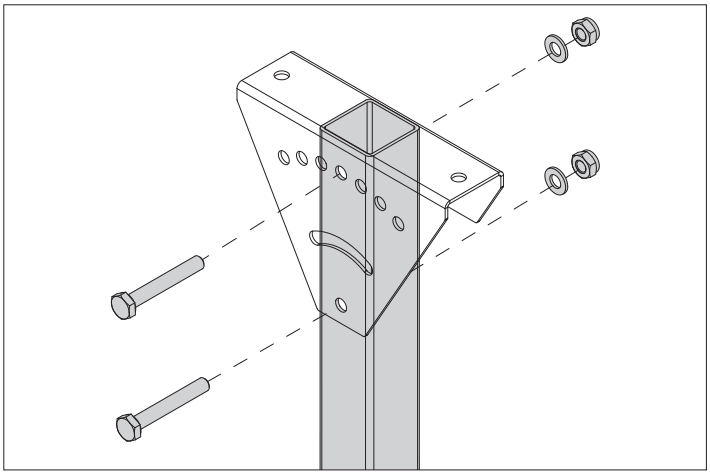


Fig. 4.5.1 Drill the holes in the support leg (ceiling mounting).

- To calculate the leg length, determine the mounting height of the rail, then subtract that dimension from the bottom of the strut. Cut the support leg to this length.

- Side suspension: determine the position of the supports and attach the side suspensions to the rail. Center a triangular foot and drill 2- 13/32 in. holes to attach the foot. Mount top suspension lower bracket to the support leg without tightening the bolts. Attach the leg assembly to the strut on ceiling using 3/8 in. strut hardware. Attach the side brace kit. Refer to fig. 4.5.2.
- For multiple legs, turn the side braces perpendicular to the rail and install one long front to back brace. Repeat for each leg assembly.

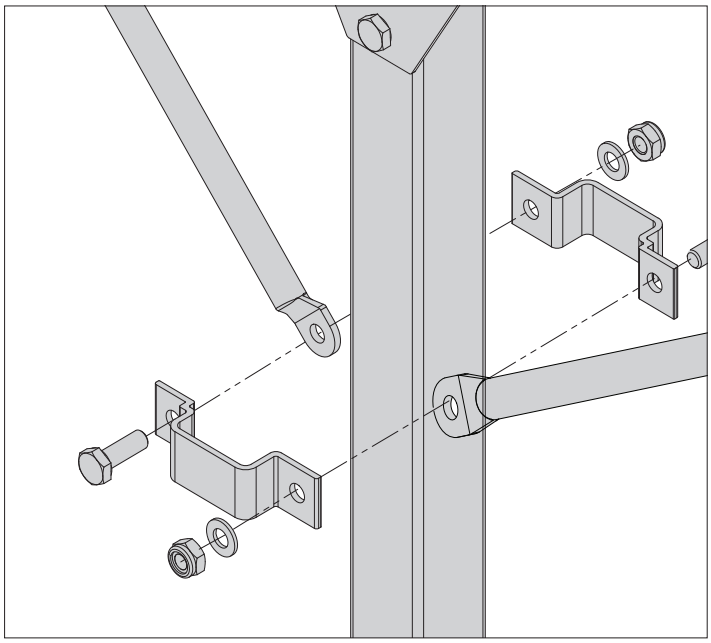


Fig. 4.5.2 Mount the side suspensions.

4.6 Inserting the rubber seal

- Turn the rail profile with the opening upwards. Place the rail on saw horses. The rubber lip seal can be easily installed before hanging the rail from the support legs.
- The rubber lip seals are flat and the smooth telfon coated side must be installed towards the inside of the rail. Refer to fig. 4.6.1. With the rail still on saw horses, install the rubber lip. To make this easier, spray the lip and aluminum channel with a soapy solution.
- Cut the ends at a 90 degree flush with the end of the rail. Repeat for the other side.

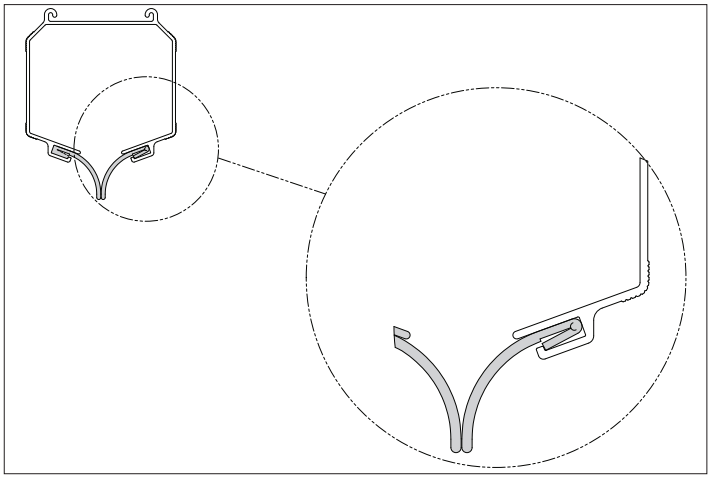


Fig. 4.6.1 Inserting the rubber seal.

4.7 Lift the rail and connect to duct

- On the top of the rail, lay out 3/8 in. holes for the leg mounting feet locations, to match the distances between the leg assemblies previously hung from the ceiling. The maximum end of rail to the first hanger leg should be 4 to 5 ft (1,2 to 1,4 m). A cantilever under the garage door may be required.
- Pre drill these holes. Raise the pre-assembled rail using multiple scissor lifts or lifting mechanisms such as a chain fall. Position rail under leg assemblies and attach with hardware.
- Plymovent recommends lifting a continuous length of rail up to 65 ft (20 m) maximum, in which the maximum distance between the lifting points is 33 ft (10 m).

Top suspension:

- Lift the rail according to the instruction.
- The lower brackets need to be inserted in the rib on the top of the rail on each side. Refer to fig. 4.7.3.

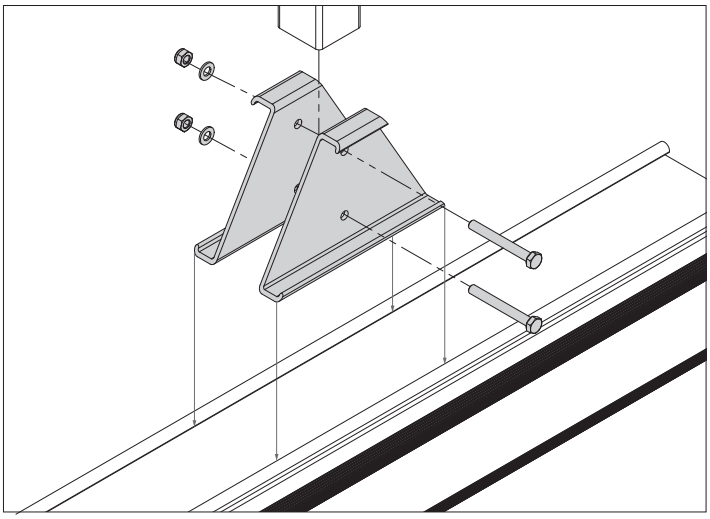


Fig. 4.7.1 Mounting the top suspension on the rail.

- When the rail is in the right position fix the suspensions with the bolts (fig. 4.7.2.).
- Fasten the suspensions with the security bolt.

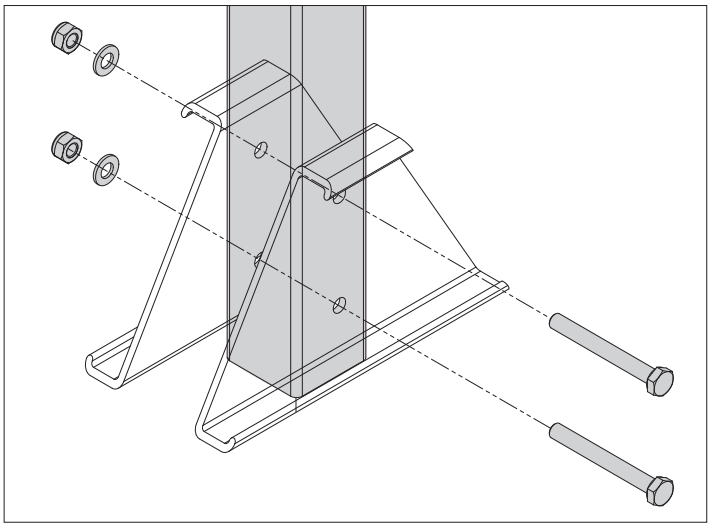


Fig. 4.7.2 Fasten the lower bracket to the support leg.

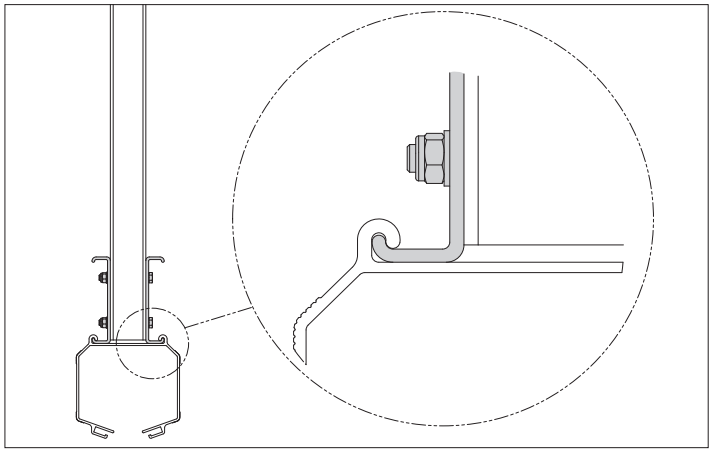


Fig. 4.7.3 Top suspension connected to the rail.

Duct connection:

- Adjust the rail both vertically and horizontally until it is level.
- Tighten the couplings thoroughly and screw a safety bolt, which is required.
- To connect the rail to the fan and the duct system by the connection socket, cut a 20 in (500 mm) x 2 in. (50 mm) hole in the top of the rail profile. Refer to fig. 4.7.4.
- The duct connection socket has to be mounted in the rib on top of the rail. Refer to fig. 4.7.5.
- Apply silicone sealeant to the bottom flange of the duct connector and attach the connection socket with the provided self-drilling screws.
- Repeat this step if you are using multiple duct connections on longer rails.*

* A minimum of one take off is required per hose drop.

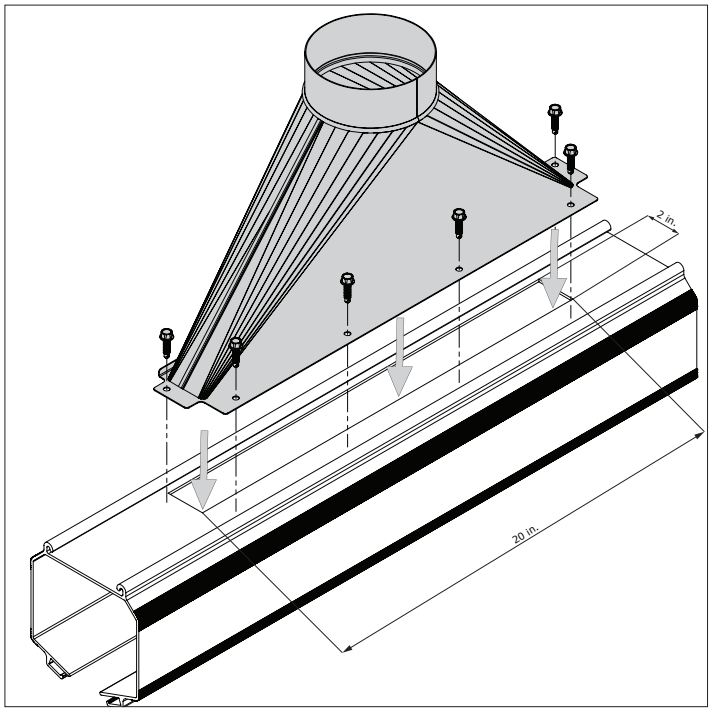


Fig. 4.7.4 Cutting a hole in the rail.

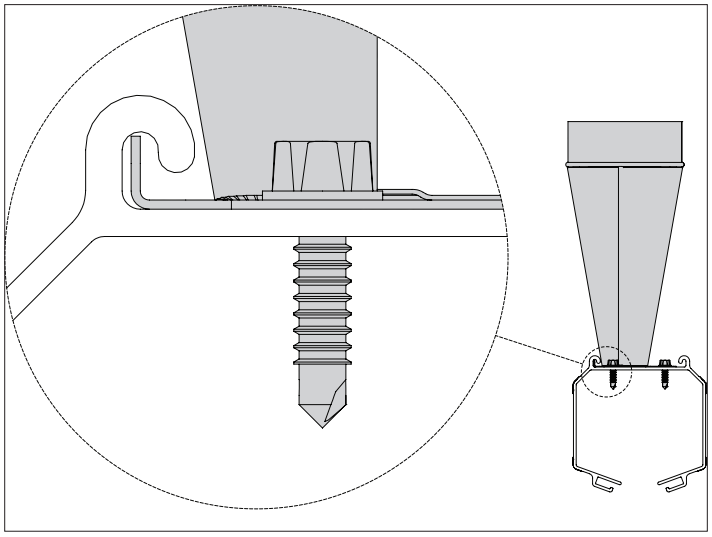


Fig. 4.7.5 Mouting the connection socket in the grid of the rail.

4.8 Assemble and hang the hose/grabber

1. Upper hose
2. Saddle
3. Balancer
4. Safety Cable
5. Locking Cable
6. Mid Hose
7. Safety Disconnect Handle

Follow these steps to assemble and align the exhaust hose assembly:

- Mount the upper hose (1) to the trolley using a hose clamp.
- Attach the upper hose to the short side (from the tab) of the metal saddle (2). You may need to twist the hose to to have the u-bend or loop positioned away from the vehicle in the 3 o'clock position if looking down at the crab trolley, with the balancer at the 12 o'clock position.

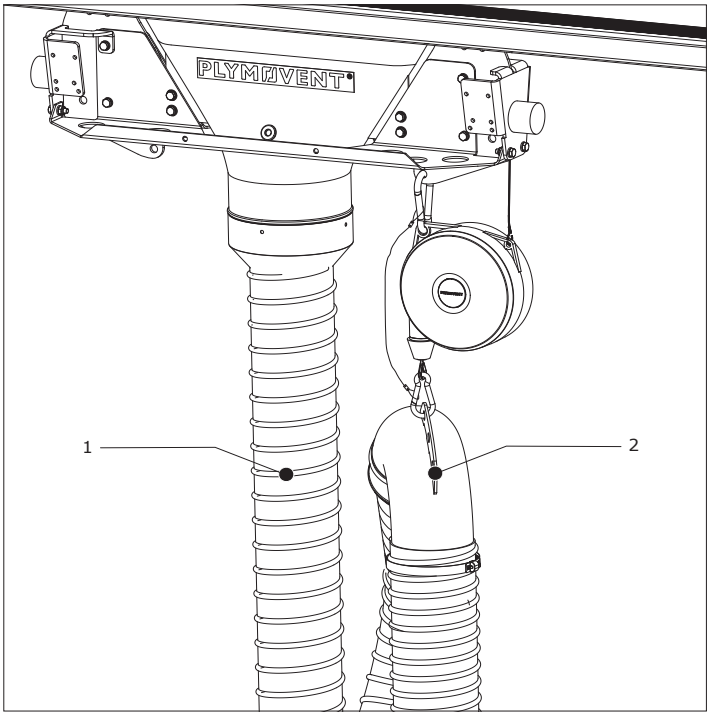


Fig. 4.8.1 Connecting the hose

- Install the balancer (3) using the caribiner hook and safety cable (4), and attach the Balancer Locking Cable (BLC) to the carabiner which is attached to the trolley (5). Assemble the BLC using the length listed in the Installation Table on page 10. Ideally, 6 in. (15 cm) of the Balancer cable should be exposed when the Grabber nozzle is connected to the vehicle.

Install the BLC so that it is on the back side of the balancer and away from the adjustment locking clip. This will keep the BLC from coming into contact and potentially breaking the locking clip. The balancer snap hook should be oriented with the catch or door of the hook on the same side of the balancer as the locking clip. This will ensure that the BLC does not open the snap hook, allowing the BLC to come loose.

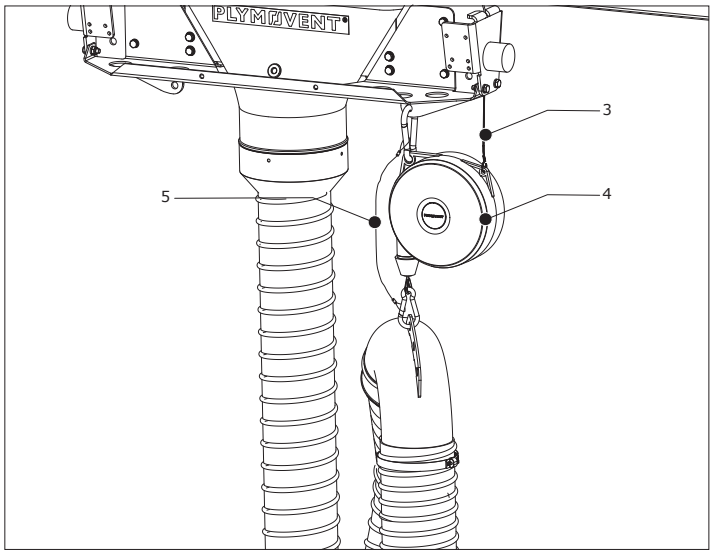


Fig. 4.8.2 Installing the balancer

- Attach the mid hose (6) to the long side of the metal saddle with the supplied hose clamp. The ST mid hose is directional, so install with directional arrow pointing up or with the airflow.
- With the balancer holding the hose all the way up cut the mid hose at approx 4 ft (1,2 m) from the floor and attach to the Safety Disconnect Handle with the supplied hose clamp (7).

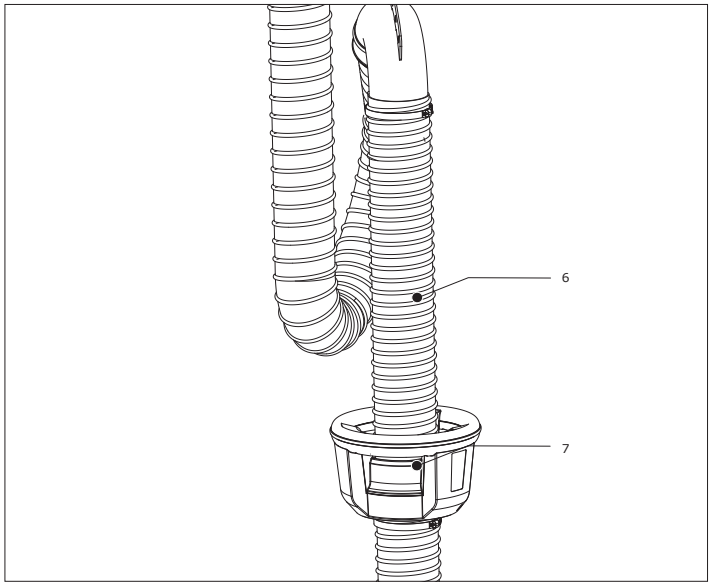


Fig. 4.8.3 Installing the SDCH

- Make sure the height of the Grabber nozzle is between 14 in. and 18 in. (35,5 to 45,7 cm) from the finished floor.
- Slide the completed trolley in the rail with the balancer facing the driving direction / exit door.

4.9 Installing the end caps

- Mount the end cap where the hydraulic shock absorber will be attached at the exit side. Mount the end cap with cover or end cap with duct connection with 3 pcs of M8x20 bolts and nuts that are provided. Do not use self-drilling tech screws.
- Repeat for the other end cap, but do not install until the rail is hung, so you can install the crab/trolley.
- Install the hydraulic shock absorber on the end cap at the exit side.
- After installation, fine tune the BLC if the disconnection point is not close enough to the door.

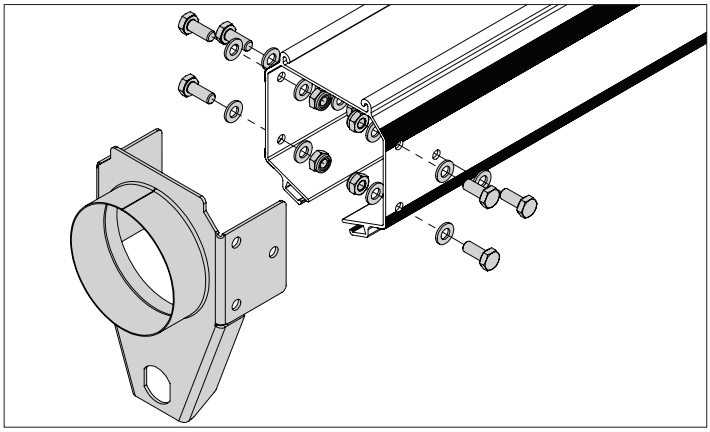


Fig. 4.9.1 Mounting the end cap.

4.10 Install the PC-500 pressure switch

Please refer to the separately delivered manual for installation.

4.11 Install the tailpipe connector

- The distance between the middle point of the tailpipe and the body of the vehicle (1) must be at least:
  - 3 in. (75 mm) in all directions for a 3 in. (75 mm) system
  - 4 in. (100 mm) in all directions for a 4 in. (100 mm) system
  - 5 in. (125 mm) in all directions for a 5 in. (125 mm) system

  This should be checked before the conical tailpipe connector is attached.

- The end of the tailpipe (2) must be cut in a 90° angle and all sharp edges must be ground off.
- The conical tailpipe adapter (3) is positioned on the tailpipe. When attached the minimum space between the tailpipe connector and the body of the vehicle should now be at least 0.6 in. (15 mm) from the top and both sides of the tailpipe adaptor.
- The tailpipe support/hanger (4) must be positioned within 20 in. (500 mm) from the exhaust pipe end (2). If not, the optional tailpipe bracket must be installed. (see: option: installing the tailpipe brackets)
- The exhaust pipe must be in a 90° angle to the truck body with a max inclination of 5°.
- The distance between the exhaust pipe and the wheel must be a minimum 12 in. (300 mm).
- The tailpipe adapter must be installed flush with the body of the vehicle in accordance to NFPA1500 (5).

- Make sure you meet EN-1846-2 requirements related to minimal clearance to the road.

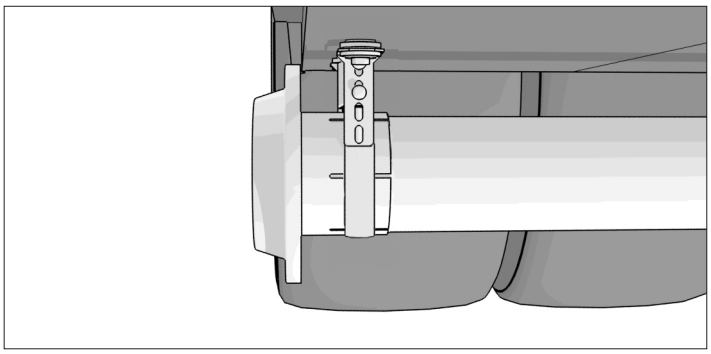


Fig. 4.11 Connecting the tailpipe adapter

4.12 Modify the tailpipe

In case you want to install a 5 in. (125 mm) conical tailpipe adapter and the vehicle uses a 4 in. (100 mm) tailpipe, you will have to install a tailpipe reducer. The tailpipe reducer is a part that adapts the 4 in. (100 mm) tailpipe into a 5 in. (125 mm) tailpipe so the conical tailpipe adapter can be installed. The tailpipe reducer is positioned over the existing tailpipe and fixed using a 4 in. (100 mm) tailpipe clamp. Product number: Refer to your FIRE Price list for specific product numbers.

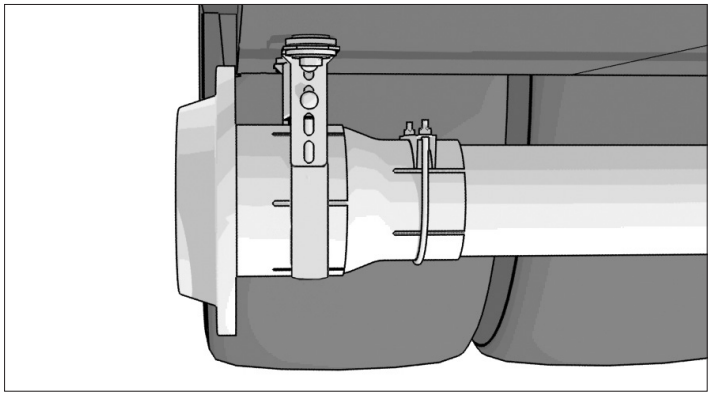


Fig. 4.12 Modifying the tailpipe

4.13 Check the balancer tension

The balancer is delivered from the factory with pre-tension already set. After every component of the system is installed, you may need to adjust the balancer pre-tension to its final setting, to ensure that the balancer is functioning properly. Increase or decrease the spring tension until the rubber stop loosely hits the balancer housing and cable is retracted.

It is possible the balancer tension needs to be fine-tuned after the total system is installed and a test run is done.

ATTENTION
The balancer is delivered under tension. Be careful when unwinding this balancer.

4.14 Safety Disconnect Handle

Function:
The safety coupling disconnect opens in case of missue of the systemor failure of the disconnection and can always be re-used.

Adjustment:
The Safety Disconnect Coupling is delivered completely assembled with a preset tension. The standard setting on delivery gives you a release force of 100 lbf (nominal) (450N) and a reconnection force of 35 lbf (150N).

Release force:
You can adjust the safety coupling disconnect by using different springs available from Plymovent. These are not included, so please contact your Plymovent authorized distributor.

ATTENTION
After the Safety Disconnect has released please check if all spring blocks in the product are free of damage and functioning correctly. Any damaged parts should be replaced and the correct functioning should be verified. If the Safety Disconnect is not functioning correctly, it can potentially cause damage to person or property.

4.15 Tailpipe modification options

Tailpipe Reducer
The tailpipe adaptor is used when an exhaust tailpipe needs to be converted from a smaller size to a larger size to allow the conical tailpipe adapter to be installed.

Tailpipe reducer packs
The tailpipe reducer pack enables vehicles with different tailpipe sizes to connect to the Plymovent Magnetic Grabber tailpipe connector. This product can be used in combination with the Magnetic Grabber tailpipe bends as well as direct onto the Magnetic Grabber tailpipe connector. The tailpipe reducer pack allows a wide range of exhaust pipes to connect to the Plymovent system.

Tailpipe support bracket
The tailpipe support bracket can be used for various dimension exhaust tailpipes and ensures a secure connection between the tailpipe and body / chassis. In some cases, you may need to divert the exhaust flow from the tailpipe to the side of the vehicle. The Magnetic Grabber® connector can then be installed to this modification.

When a tailpipe modification is needed, Plymovent recommends you consult the manufacturer of the vehicle, to ensure a correct and sturdy installation of the Magnetic Grabber® connector.

5 USE

The MRP is an automatic, magnetic exhaust gas extraction system designed for the exhaust extraction of fire and rescue vehicles with low level, undercarriage exhaust pipes. The system is used to remove harmful vehicle exhaust emissions from the facility by capturing and removing the exhaust at the emission source, the exhaust pipe.

As a vehicle moves within the facility, the nozzle must be connected to the vehicle. The connection of the nozzle to the tailpipe will activate the fan. The extraction hose connected to the nozzle moves along with the vehicle.

Exhaust gases pass from the nozzle through the extraction hose and into the ducting and extraction fan before escaping to the atmosphere.

As the vehicle exits the facility, the trolley moves along to the end of the rail. The balancer locking cable prevents the balancer

from unwinding and pulls the nozzle from the tailpipe, allowing it to disconnect.

5.1 Operating the Magnetic Grabber®

5.1.1 Connecting the Magnetic Grabber

Please ensure that, on the side of the vehicle where the system is installed, no persons are present in an area of 3 ft (1 m) under and / or around the MRP system and /or between the vehicle and the entry / exit door when the vehicle exits the building. This way possible injuries can be avoided by a possible backwards motion of the Grabber in the direction of the station and park position.

When a vehicle returns to its bay the Magnetic Grabber nozzle can easily be attached to the conical tailpipe adapter.

The Magnetic Grabber nozzle must be placed straight onto the conical tailpipe adapter, but to connect it is easiest to first attach the top of the Magnetic Grabber and then press down on the safety disconnect in order to attach the lower part of the Magnetic Grabber.

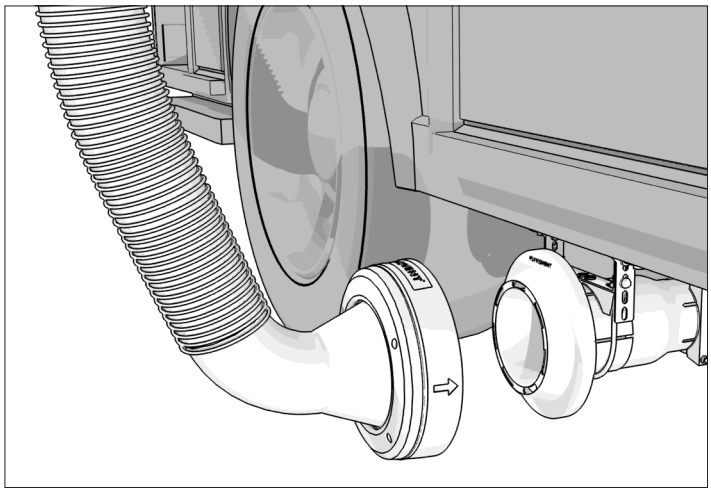


Fig. 5.1.1 Magnetic Grabber

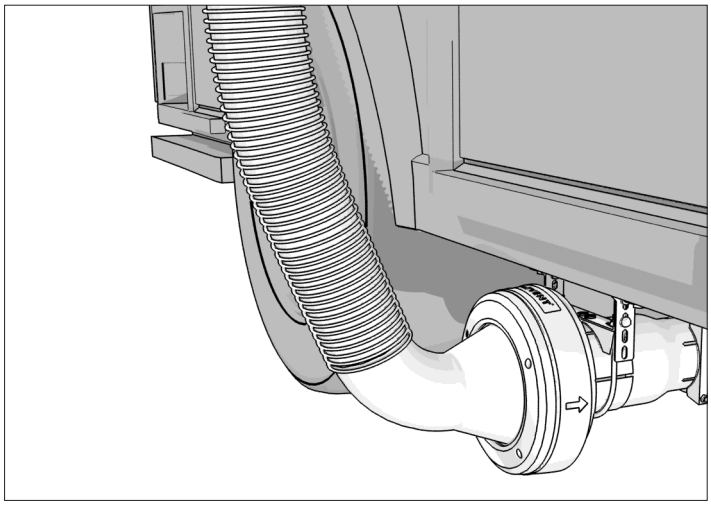


Fig. 5.1.2 Connecting the Magnetic Grabber

6 MAINTENANCE

6.1 Periodic maintenance

The product has been designed to function without problems for a long time. In order to guarantee this some simple, regular maintenance activities are required which are described in this chapter.

The maintenance activities in the table below can be carried out by the user.

Component	Action	Frequency: every X months	
		X=6	X=12
Hose	Check the hose for any defects	X*	
Nozzle	Check if the nozzle is still tightly fixed to the hose	X*	
	Clean the connection parts of the nozzle		X
Trolley	Check if the trolley runs smoothly through the rail and stops correctly at the end stop	X	
	Clean the trolley	X	
Rubber seal	Clean the inside of the rubber seal		X
Balancer	Check the balancer locking cable and support wire. Adjust tension when needed.	X	

* Before every use.

ATTENTION
Do not use solvents to clean the system.

7 TROUBLESHOOTING

Problem	Possible cause	Solution
The nozzle does not connect tightly to the tailpipe (adapter).	The magnets in the Grabber cannot make a clear connection.	Clean the tailpipe adapter from any soot or dirt.
The swing-back of the hose drop after disconnection is too extreme.	The balancer pre-tension is too strong.	Decrease the balancer pre-tension.
	The BLC is too long.	Shorten the BLC.
	The distance between the vehicle and the standard hose position is not correct.	Make sure the vehicle and rail are positioned correctly.
	The end stop is located too far from the door.	Reposition the rail closer to the entry door.
The swingback of the hose drop after disconnection is too extreme.	The balancer pre-tension is too strong.	Decrease the balancer pre-tension
	The end stop is located too far from or too close to the door.	Reposition the end stop.
	The distance between the vehicle and the standard hose position is incorrect.	Rightly position rail and vehicle.

8 DISPOSAL

After life of the product, dispose it of in accordance with federal, state or local regulations.

9 SPARE PARTS

Pos.	Art. no.	Description	Note
1	-	Internal crab	For article numbers and prices please refer to the price list.
2	-	Hose	For article numbers and prices please refer to the price list.
3	-	Balancer	For balancer spare parts please refer to the balancer manual.
4	0000114045	Steel saddle 4 in. (100 mm)	
4	0000114046	Steel saddle 5 in. (125 mm)	
5	-	SDCH	For article numbers and prices please refer to the spare part price list.
	-	Magnetic Grabber	For article numbers and prices please refer to the price list.
	-	Tailpipe adapter	For article numbers and prices please refer to the price list.

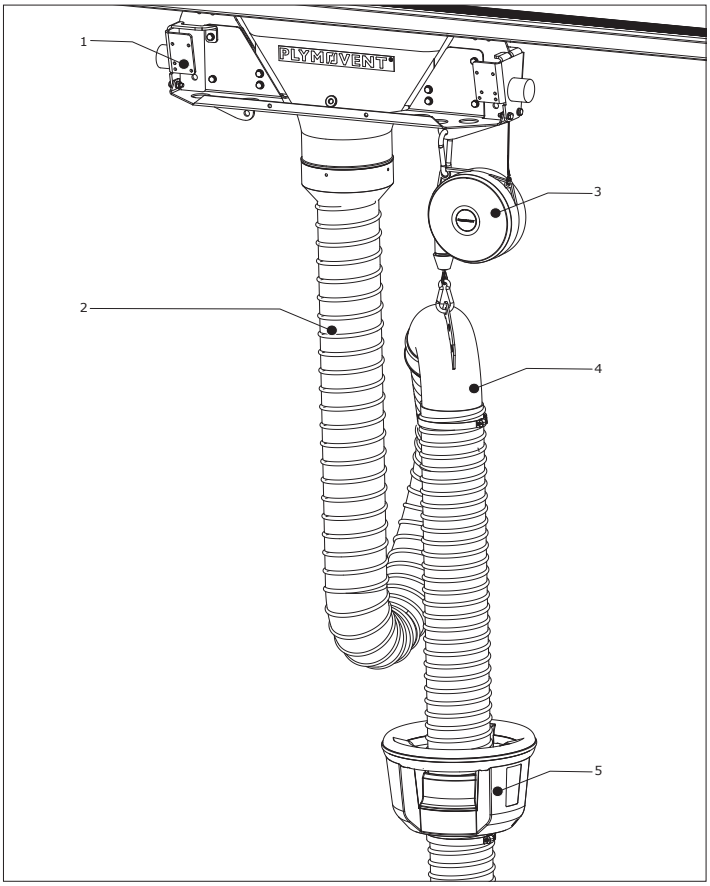


Fig. 9.1 Spare parts

PLYMOVENT®
clean air at work

0000119594/200520/0 MRP manual