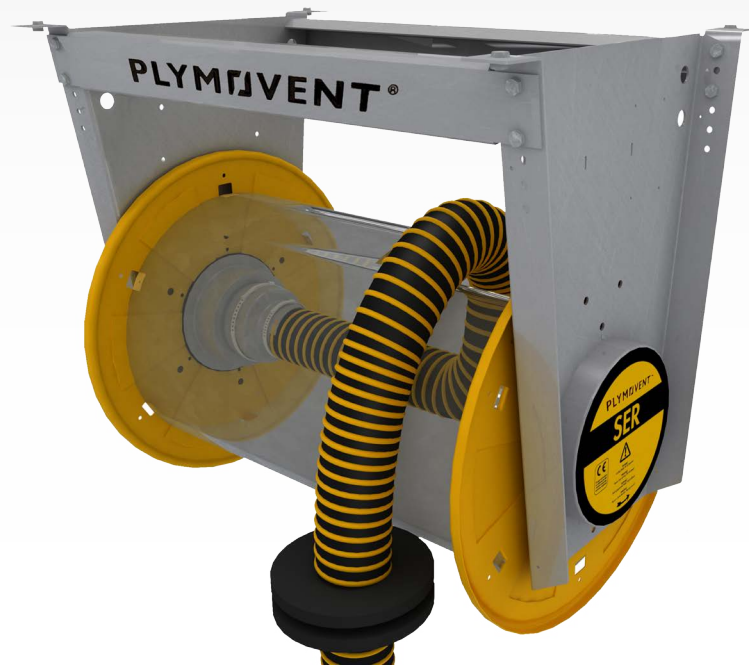


EN Spring Operated Exhaust Hose Reel

SER



EN - ORIGINAL INSTRUCTION

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GENERAL PRECAUTIONS

IMPORTANT USER INFORMATION

Read this document in entirety before you install, configure, operate, or maintain this product. Users are required to familiarize themselves with installation and wiring instructions in addition to requirements of all applicable codes, laws and standards.

Activities including installation, adjustments, putting into service, use, assembly, disassembly, and maintenance are required to be carried out by suitably trained personnel in accordance with applicable code of practice.

If this equipment is used in a manner not specified by the manufacturer, the protection provided by the equipment may be impaired.

In no event will Plymovent be responsible or liable for indirect or consequential damages resulting from the use or application of this equipment.

The examples and diagrams in this manual are included solely for illustrative purposes. Because of the many variables and requirements associated with any particulate installation, Plymovent cannot assume responsibility or liability for actual use based on the examples and diagrams.

No patent liability is assumed by Plymovent with respect to use of information, circuits, equipment, or software that may be described in this manual. Throughout this manual, when necessary, notes may be used to make you aware of safety considerations.

The operation of exhaust extraction systems can be affected by various factors including but not limited to proper design of the system, operating procedures, service and maintenance. Fume exhaust exposure levels should be checked upon installation and periodically thereafter to ensure that they fall within applicable regulations and exposure limit values.

Plymovent systems are made code compliant, please ensure the system is properly designed, operated, serviced and maintained.



WARNING!

Identifies information about practices or circumstances that can cause an explosion in a hazardous environment, which may lead to personal injury, death, property damage, or economic loss.



ATTENTION

Identifies information about practices or circumstances that can lead to personal injury or death, property damage, or economic loss. Attentions help you identify a hazard, avoid a hazard, and recognize the consequent.



SHOCK HAZARD

Labels may be on outside or inside of fans and control boxes used in the exhaust removal system, to alert people that dangerous voltage may be present.



ARC FLASH HAZARD

Labels may be on outside or inside of the equipment, for example control box, to alert people to potential Arc Flash. Arc Flash will cause severe injury or death. Wear proper Personal Protection Equipment (PPE). Follow ALL regulatory requirements for safe work practices and for Personal Protective Equipment (PPE).

BE SURE THAT ALL INSTALLATION, OPERATION, MAINTENANCE AND REPAIR PROCEDURES ARE PERFORMED ONLY BY QUALIFIED INDIVIDUALS.

IMPORTANT

Identifies information that is critical for successful application and understanding of the product.







PREFACE

Using this manual

This manual is intended to be used as a work of reference for professional, well trained and authorized users to be able to safely install, use, maintain and repair the product mentioned on the cover of this document.

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.
	WARNING! Procedures which, if not carried out with the necessary caution, may damage the product or cause serious personal injury.
	CAUTION! Risk of electric shock.
	WARNING! Fire hazard! Important warning to prevent fire.

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

1 INTRODUCTION

1.1 Identification of the product

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

- product name
- serial number

1.2 General description

The Spring Operated Exhaust Hose Reel (SER) removes exhaust gas fumes from a facility and prevents extraction hoses from trailing over the workshop floor. SER takes up a small space, can be mounted to the ceiling or on a wall, and functions best in workshops with fixed working areas. SER includes either one or two heavy-duty springs that are factory installed to the outside

of the reel assembly; an operator pulls the hose down to a convenient position, which locks the hose in place; when no longer needed, the operator recoils the hose by pulling down on the hose, allowing the hose to recoil in a controlled manner.

1.3 Product combinations

The SER can be used in central systems or with a direct mount fan kit. It is designed to operate with hose diameters of 4, 5, 6, and 8 in. (100, 125, 160 and 200 mm).

Note: Direct Mount fans are NOT available for the 8 in. (200 mm) version.

1.4 Technical data

SER contains a high-quality sealed coil spring cassette (an additional cassette can be factory installed to increase lifting capacity), which is enclosed in a sealed metal casing. The spring cassette is located on the outside of the hose reel assembly to simplify replacement, if needed. The maximum length of the hose depends on the weight as well as the installation. The SER maximum lifting capacity is 40 lbs (18,2 kg) with a single spring cassette, and 75 lbs (34 kg) with two spring cassettes.

Note: The optional second spring cassette is available for 850, 1050 and 1050-200 models only.

- A. Hose reel drum provides a secure and space-friendly storage location for the hose:
 - smooth, zinc-plated drum on which the hose rolls;
 - drum end plates are powder-coated yellow.
- B. Console - zinc-coated steel frame provides support and strength for longevity and robustness.
- C. A-frame - primed and powder-coated steel.
- D. Ratchet lock (not shown) holds the hose in the required position. The hose is released at the next pull.
- E. Hose - must be ordered separately; the MAS kit must be ordered separately and includes a hose stop-ring with clamp so that the hose stop can be positioned for adequate height on return.
- F. High quality sealed coil spring cassette (an additional cassette can be factory installed to increase lifting capacity), which is enclosed in a sealed metal casing.

Note: The 8 in. (200 mm) reel has a 8 in. (200 mm) duct connection fitting.

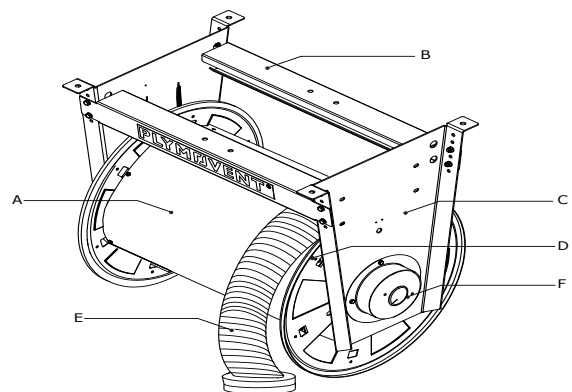


Fig. 1.1 SER hose reel with hose

1.4.1 Maximum hose length

The maximum hose length that SER supports is dependent on these factors:

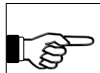
- the specific version of SER hose reel ordered;
- the type and size of the hose;
- the nozzle.

For example, a 6 in. (150 mm) standard hose can be wrapped around the drum for a maximum of five rotations, which would equal 27 ft (8,2 m). The table below demonstrates the total weight of the Plymovent EF2 hose, REGD nozzle and rubber hose stop. Each system's total weight will vary.

Component	Weight calculation	Total weight
6 in. (150 mm) Hose	1.04 lbs/ft (1,55 kg/m)	28 lbs (12,7 kg)
Rubber nozzle REGD-150-160	4.4 lbs (2 kg)	4.4 lbs (2 kg)
Rubber hose stop	6 lbs (2,7 kg)	6 lbs (2,7 kg)
Total weight of hose and components:		38.8 lbs (17,4 kg)
SER lifting capacity (single cassette):		40 lb (18,2 kg)

1.4.2 Weight of SER unit without components

Product	Hose diameter	Maximum hose length on reel	Weight without components
SER-450-75	Ø 3 in. (75 mm)	24 ft (7,5 m)	97 lbs (44 kg)
SER-450-100	Ø 4 in. (100 mm)	20 ft (6 m)	97 lbs (44 kg)
SER-650-100*	Ø 4 in. (100 mm)	33 ft (10 m)	108 lbs (49 kg)
SER-650-125*	Ø 5 in. (125 mm)	25 ft (7,5 m)	108 lbs (49 kg)
SER-850-100	Ø 4 in. (100 mm)	32.8 ft (10 m)	119 lbs (54 kg)
SER-850-125	Ø 5 in. (125 mm)	36.1 ft (11 m)	119 lbs (54 kg)
SER-850-150	Ø 6 in. (150 mm)	32.8 ft (10 m)	119 lbs (54 kg)
SER-1050-100	Ø 4 in. (100 mm)	41 ft (12,5 m)	123 lbs (56 kg)
SER-1050-125	Ø 5 in. (125 mm)	41 ft (12,5 m)	123 lbs (56 kg)
SER-1050-150	Ø 6 in. (150 mm)	41 ft (12,5 m)	123 lbs (56 kg)
SER-1050-200	Ø 8 in. (200 mm)	32.8 ft (10 m)	123 lbs (56 kg)



If a second spring cassette is included, add 17 lbs (7,7 kg) to the product weight.

1.5 Dimensions

Refer to Section 4.2 and 4.3 for dimensions and weights.

1.6 Transport of the unit

The manufacturer cannot be held liable for any transportation damage after shipment of the unit. Always handle the unit and the accompanying options and/or accessories, if any, with care.

The hose reel is bolted on a skid and delivered with a ceiling or wall mounting bracket. Based on SER being ordered, the duct connection includes either a Ø 6.5 in. (165 mm) with reducer to 6 in. (160 mm) or a Ø 8 in. (200 mm) duct connection collar.

*650 models are not available in USA and Canada.

2 PRODUCT DESCRIPTION

2.1 Operation

SER works according to the "blind" principle. The operator pulls the hose to lock it into the required position and pulls a second time to recoil the hose on the reel. The hose stopper is set to the required height when returning the hose to the reel.



WARNING!

The sealed spring cassette contains a powerful spring and must not be opened. Be careful when servicing the SER product. If you have any questions about the content in this manual, please contact Plymovent or your Plymovent authorized distributor. Be careful when operating the hose reel so as to avoid damage to persons and property.

3 SAFETY

General

The manufacturer does not accept any liability for damage to the product or personal injury caused by ignoring 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.

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.
- Never change the order of the steps to perform.
- Always keep the manual with the product.

Pictograms and instructions on the product (if present)

- The pictograms, warning and instructions attached to the product are part of the safety features. They must not be covered or removed and must be present and legible during the entire life of the product.
- Immediately replace or repair damaged or illegible pictograms, warnings and instructions.

Users

The use of this product is exclusively reserved to authorized, trained and qualified users. Temporary personnel and personnel in training can only use the product under supervision and responsibility of skilled engineers.

Intended use¹

The product has been designed to extract exhaust gases. Using the product for other purposes is considered contrary to its

¹ "Intended use" as explained in EN-ISO 12100 is the use for which the technical product is suited as specified by the manufacturer, inclusive of his directions in the sales brochure. In case of doubt it is the use which can be deduced from the construction, the model and the function of the technical product which is considered normal use. Operating the machine within the limits of its intended use also involves observing the instructions in the user manual.

intended use. The manufacturer accepts no liability for any damages or injury resulting from such use. The product has been built in accordance with state-of-the-art standards and recognized safety regulations. Only use this product when in technical perfect condition in accordance with its intended use and the instructions explained in the user manual.

Technical specifications

The specifications given in this manual must not be altered.

Modifications

Modification is not allowed.

Installation

- The installation of this product is exclusively reserved to authorized, well-trained and qualified engineers.
- Inspect the product and check it for damage. Verify the functioning of the safety features.
- Never install the product in front of entrances and exits which must be used for emergency services.
- Make sure that the workshop, in the vicinity of the product, contains sufficient approved fire extinguishers.

Please note that additional tools and machines may be needed depending on the installation situation (installation height, space available etc).

Use

- Check the working environment. Do not allow unauthorized persons to enter the working environment.
- Protect the product against water and humidity.
- Use common sense. 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.
- Make sure the room is always sufficiently ventilated; this applies especially to confined spaces.

Operating the system

- With SER, an operator pulls the hose down, which releases the ratchet lock; the operator connects the nozzle and when the hose is no longer needed, the operator pulls down on the hose to release the ratchet lock and guides the hose back to its rest position, which is determined by the hose stop-ring.

Service, maintenance and repairs

- This manual contains instructions for replacing the hose, replacing the cassette and replacing bearings. Refer to the Maintenance section in this manual for details.



WARNING!

Maintenance should only be performed by authorized, qualified and trained persons (skilled) using appropriate work practices.

4 INSTALLATION

4.1 Assembly

Tools

These tools are needed to install SER:

- Power Drill/Electric Screw gun
- General hand tools/wrenches
- Screw drivers

Complete these steps to install the SER hose reel, as shown in *fig. 4.1a*:

- Set the tension on the exhaust reel according to the Pre-Tension table below. Turn the drum in the direction of the arrow; see arrow on the sticker of spring housing.
- Dismantle drum lid A (not needed for SER-1050-200 version)
- Mount MAS Kit.
- Mount hose to the socket inside the drum using clamp (E).
- Bend hose into a natural soft curve and fasten it using clamp (B).
- Re-mount the drum lid (A).
- Mount the edge protection (C) at the opening of the drum where the hose protrudes.
- Mount hose stop-ring (D) with clamp so that the hose stops at a convenient height when it is reeled in.
- The console holes are pre-set for the correct diameter hose, as shown in *fig. 4.1b*.

Note: For the SER-1050-200 version, the MAP kit is not needed, as it uses a different hose mounting method for the 8 in. (200 mm) hoses. The SER-1050-200 reel console holes are pre-set for the correct diameter hose.

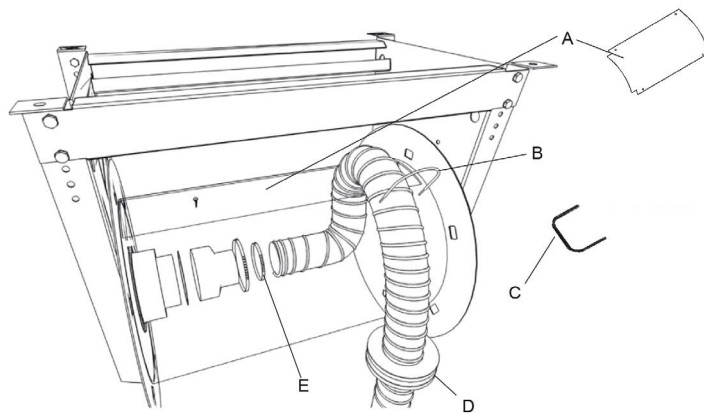


Fig. 4.1a Hose reel assembly

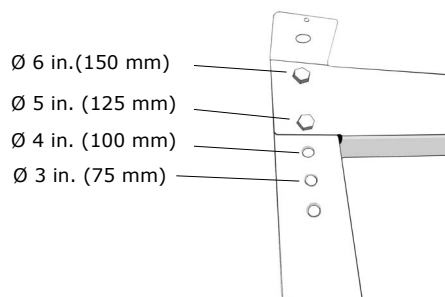


Fig. 4.1b Console holes

SER pre-tension table		
Hose Ø	Hose length	Pre-tension
4 in. (100 mm)	16 ft (5 m)	5 turns
	25 ft (7,5 m)	6 turns
	33 ft (10 m)	7 turns
5 in. (125 mm)	16 ft (5 m)	6 turns
	25 ft (7,5 m)	7 turns
	33 ft (10 m)	8 turns
6 in. (150 mm)	16 ft (5 m)	7 turns
	25 ft (7,5 m)	8 turns
	33 ft (10 m)	10 turns
8 in. (200 mm)	16 ft (5 m)	4 turns
	25 ft (7,5 m)	5 turns
	33 ft (10 m)	7 turns

Note: The pre-tension turns in this table may vary based on the type of hose being used. We recommend you set up one reel and test for performance. Then tension the other reels as needed.

4.2 Height and dimensions

4.2.1 Wall mounting maximum height

Use the Reach and mounting height chart for specific hose lengths and maximum hose reach.

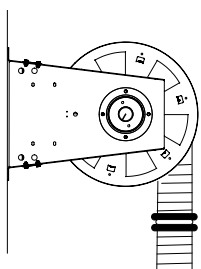


Fig. 4.2.1 Mounting hose reel on wall

4.2.2 Ceiling mounting maximum height

Use the Reach and mounting height chart for specific hose lengths and maximum hose reach.

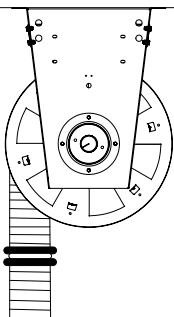


Fig. 4.2.2 Mounting hose reel on ceiling



WARNING!

After installation, operators must be made aware that a “quarter turn” of the hose should always remain on the drum, as shown in fig. 4.2.2a.

If the hose is pulled down completely, and the entire hose is removed from the drum, the recoil mechanism will be locked, and the hose reel will no longer retract the hose. If this occurs, the drum must be turned manually for the recoil mechanism to release.

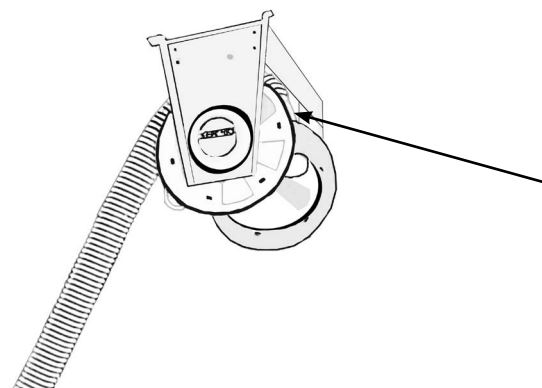


Fig. 4.2.2a Example of SER showing that at least a quarter turn of hose must remain on drum to prevent recoil mechanism from locking.



ATTENTION

When horizontally mounting a reel that contains either a 6 in. or 8 in. (150 mm or 200 mm) hose, it is recommended that you attach the hose so that it rotates around the “front” of the hose reel drum (away from the column or wall), as shown in Fig. 4.2.1.

This will prevent the hose from scraping the horizontal “console” bar, or colliding with any items attached to the column or wall below the reel.



CAUTION!

When the reel is mounted to a rigid structure like an iron beam or concrete, then use the dimensions provided. However, when the reel is being mounted to porous or otherwise doubtful materials like hollow brick, threaded rod, lightweight concrete, plaster etc., please consult a Plymovent expert.

4.2.3 Reach and mounting height

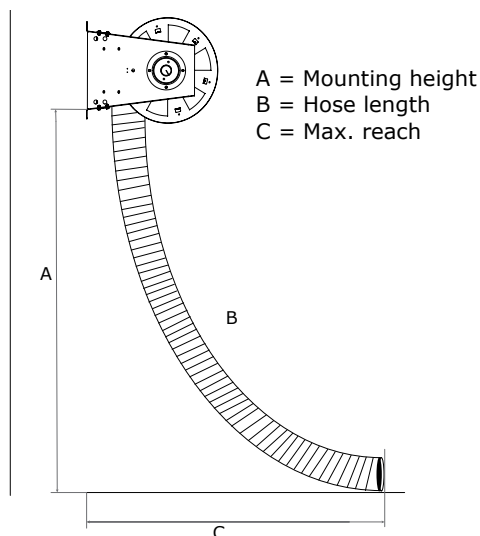


Fig. 4.2.3 Hose reel reach and mounting

Hose length	Mounting height	Maximum reach
25 ft (7,5 m)	9.8 ft (3 m)	20.4 ft (6,2 m)
	11.5 ft (3,5 m)	19.4 ft (5,9 m)
	13.1 ft (4 m)	18 ft (5,5 m)
	15 ft (4,5 m)	17.1 ft (5,2 m)
	16.4 ft (5 m)	15.5 ft (4,7 m)
33 ft (10 m)	11.5 ft (3,5 m)	28 ft (8,5 m)
	13.1 ft (4 m)	27.3 ft (8,3 m)
	15 ft (4,5 m)	26.3 ft (8 m)
	16.4 ft (5 m)	25.3 ft (7,7 m)
	18 ft (5,5 m)	24.3 ft (7,4 m)
42 ft (12,5 m)	16.4 ft (5 m)	35 ft (10,6 m)
	18 ft (5,5 m)	34 ft (10,3 m)
	19.7 ft (6 m)	33 ft (10 m)
	21.4 ft (6,5 m)	32 ft (9,7 m)
	23 ft (7 m)	31 ft (9,4 m)

Note: Remember to consider the hose reel's lifting capacity when mounting at higher elevations, factoring in the total weight of the hose, nozzle and rubber hose stop.

4.2.4 Hose reel dimensions (nominal)

	SER-450	SER-650	SER-850	SER-1050	SER-1050-200
A	24.8 in. (630 mm)	32.7 in. (830 mm)	40.5 in. (1030 mm)	48.4 in. (1230 mm)	49.4 in. (1255 mm)
B	19.7 in. (500 mm)	19.7 in. (500 mm)	19.7 in. (500 mm)	19.7 in. (500 mm)	20.7 in. (527 mm)
C	22.6 in. (574 mm)	30.5 in. (774 mm)	38.3 in. (974 mm)	46.2 in. (1174 mm)	54 in. (1374 mm)
D	Ø 6.3 in. (160 mm)	Ø 6.3 in. (160 mm)	Ø 6.3 in. (160 mm)	Ø 6.3 in. (160 mm)	Ø 8 in. (200 mm)
E	31.1 in. (790 mm)	31.1 in. (790 mm)	31.1 in. (790 mm)	31.1 in. (790 mm)	38 in. (965 mm)
F*	25.6 in. (650 mm)	33.5 in. (850 mm)	38.5 in. (978 mm)	50 in. (1270 mm)	51 in. (1295 mm)
G	23.6 in. (600 mm)	23.6 in. (600 mm)	23.6 in. (600 mm)	23.6 in. (600 mm)	29 in. (737 mm)
H	21.7 in. (552 mm)	21.7 in. (552 mm)	21.7 in. (552 mm)	21.7 in. (552 mm)	22.7 in. (578 mm)
I	19.2 in. (489 mm)	19.2 in. (489 mm)	19.2 in. (489 mm)	19.2 in. (489 mm)	23.2 in. (590 mm)

*If a second spring cassette is added to the SER 850 or 1050 reel, add 2.5 in. (63,5 mm).

Note: In US and Canada, SER 4-6 in. (100-150 mm) hose models include a 6 to 6.25 in. (150 to 160 mm) duct connection reducer.

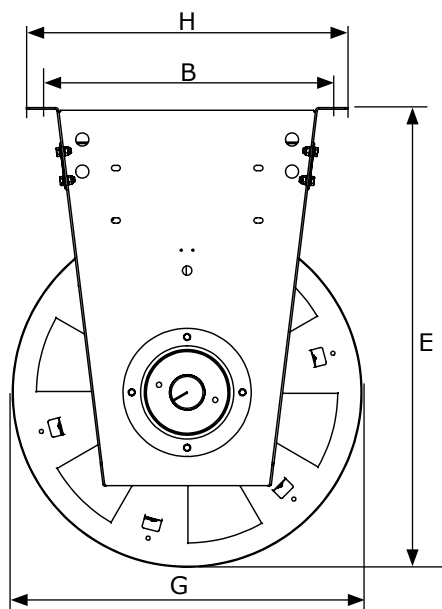


Fig. 4.2.4a Hose reel side view

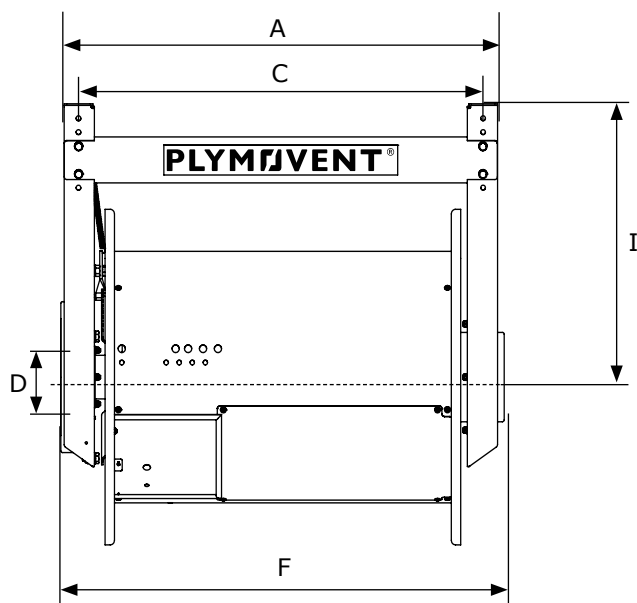


Fig. 4.2.4b Hose reel front view

4.3 Mounting options

4.3.1 Direct mount fan

The SER includes ceiling or wall mounting attachment foot. All SER versions except for 1050-200 can be connected to a central exhaust system or fitted with a fan.

First, mount the fan with the reel upside down on the floor and then mount the complete reel to its intended position, as shown in *fig. 4.3.1a* through *fig. 4.3.1d*.

- With Hose reel securely installed in position or placed on a level working surface, insert the DMF Bracket with the bolts and hand tighten the nuts into position (A).
- Place rubber collar on the inlet spigot of fan so the creased portion faces away from housing (B).
- Align fan bolt holes with the holes in the fan bracket. Insert bolts and tighten slightly. Slide the bracket up and down parallel to the A-frame center to align with the hose reel outlet. Tighten bolts to ensure the unit is properly secured (C).
- Unfold the rubber collar over the reel's spigot (For North America customers, a synthetic rubber-coated sleeve is applied with two hose clamps) (D).

Note: Direct mount fans are PV Model FUA-1800, 2100 or 2700. Refer to FUA product data sheet for more details.

4.3.2 Micro Switch MSR-24/2

- Insert the circuit-breaker's feeler (A) into the hole (B).
- Secure circuit-breaker using enclosed screws (C).
- Check that the circuit-breaker can move freely in both directions.
- Pull out the hose and obtain 4 notches on one of the lock segments.
- Mount the operating springs (D) on the drum by loosening two of the screws (E) that hold the drum.
- Refasten screws.
- For electrical installation, refer to the electrical connection schematic in the manual for the specific controller that is used in the installation.

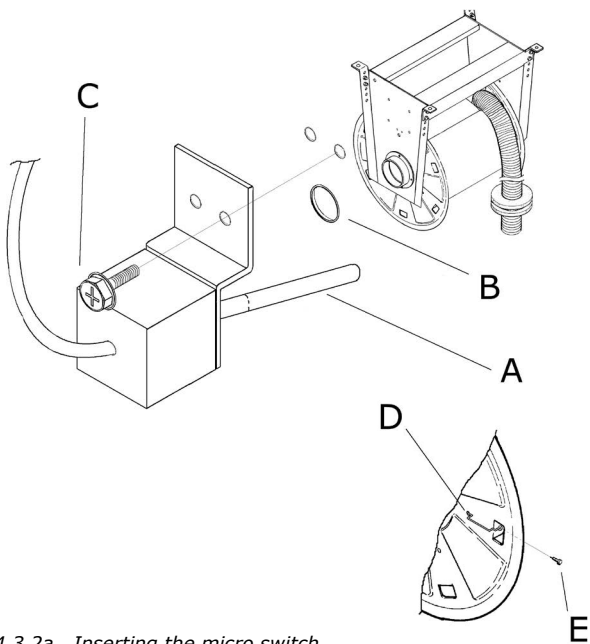


Fig. 4.3.2a Inserting the micro switch

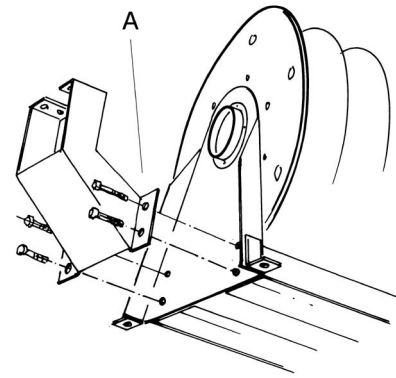


Fig. 4.3.1a Inserting the DMF Bracket into the hose reel

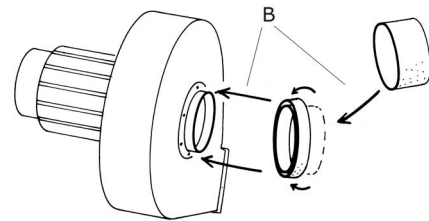


Fig. 4.3.1b Inserting the DMF Bracket into the hose reel

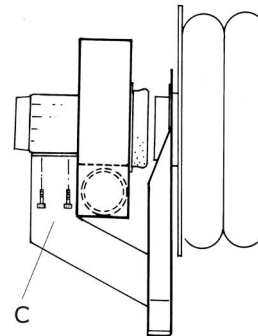


Fig. 4.3.1c Tightening the bolts on the DMF bracket

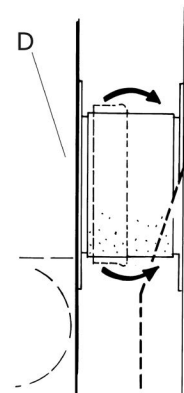


Fig. 4.3.1d Mounting the operating springs on the hose reel drum

4.3.3 SER on a boom

Note: The boom arm cannot be used with the SER-1050-200 hose reel.

Product No.	Reach ft (mm)	Max stretching/ bolt ft. lbs. (kp)	Torque demands/ bolt ft. lbs. (kp)
EB-3.5	11.5 (3500)	1430 (650)	4299 (1950)
EB-4.5	14.7 (4500)	1984 (900)	5952 (2700)

Follow these steps to install the articulated arm:

- Bolt mounting bracket to wall or steel column (A); to ensure a level mounting, level to the pivot pin on the wall bracket, and not the edge of the steel plate.
- If included, mount the fan (B) with a MB-FUA-C1/C2 bracket (also referred to as the FUK bracket).
- Mount the extractor arm (C). Tighten to torque values noted in the table above.
- Set friction by tightening the bolt at swivel joint, until the arm remains in one position; this is done while attaching the reel and duct (D).
- Mount hose reel to boom arm.
- Mount spiro-tubing and hose on the extractor arm (E).
- Mount ducting bend to hose reel, then mount the hose to the ducting bend (F).
- Readjust friction as needed (G).

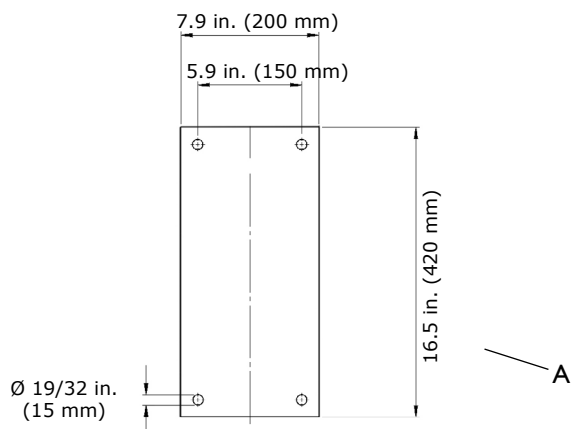


Fig. 4.3.3a Mounting bracket for EB-3.5, EB-4.5

4.3.4 Factory-installed mechanical damper

Based on the facility design requirements, a sealed closing damper may have been factory installed on the duct portion of the hose reel. In a facility that includes multiple hose reels, this built-in mechanical damper allows airflow only through hose reels currently in use, reducing energy costs. The damper opens automatically when the hose is lowered (2 drum rotations), and closes when the hose is raised by the operator.

This damper is typically used when there are no other dampers installed in the duct work, and no electronic control units are being installed.

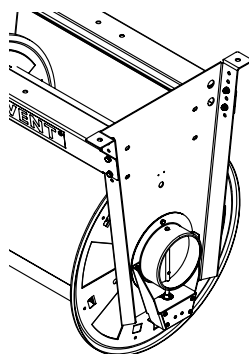


Fig. 4.3.4 Mechanical damper

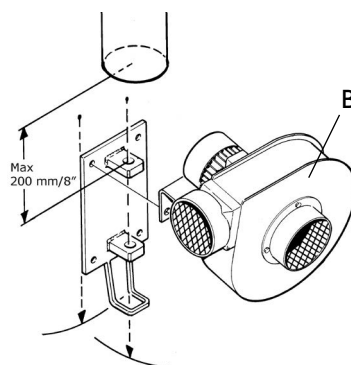


Fig. 4.3.3b Mounting the fan to the bracket

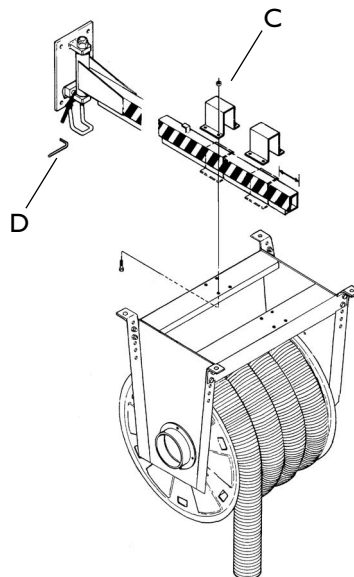


Fig. 4.3.3c Mounting the reel to the boom arm

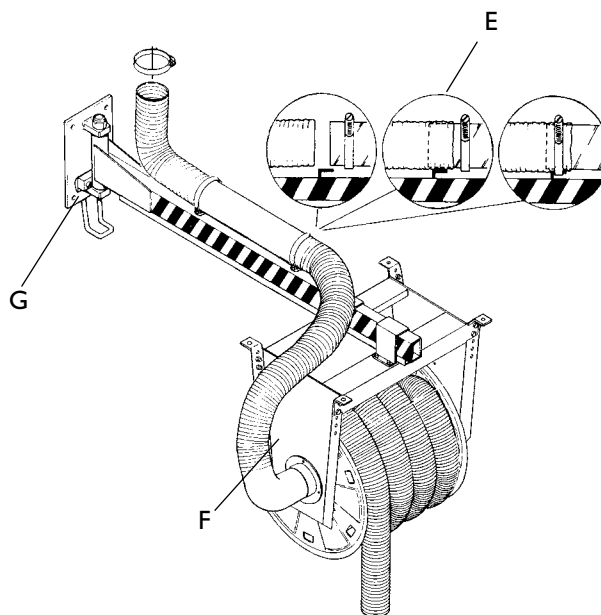


Fig. 4.3.3d Mounting duct to the boom arm

5 MAINTENANCE

5.1 Replacing the exhaust hose

- Uncoil hose completely and lock reel in its most extended position.
- Dismantle edge list (C), drum lid (A), and clamp (B).
- Loosen hose clip (E) on the connecting socket and remove the old hose.
- Attach new hose, bend it into a natural soft curve and fasten it using clamp (B).
- Re-mount the drum lid (A).
- Re-mount the edge protection (C) at the opening of the drum where the hose protrudes.
- The reel is now ready for use.

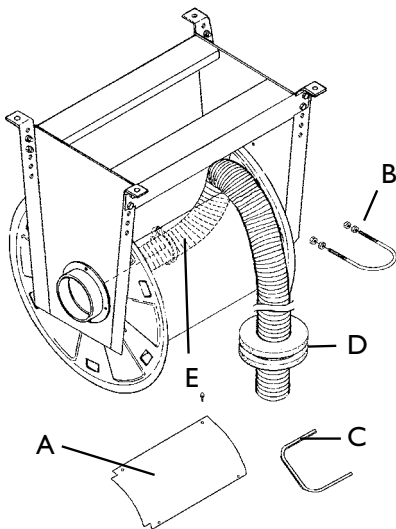
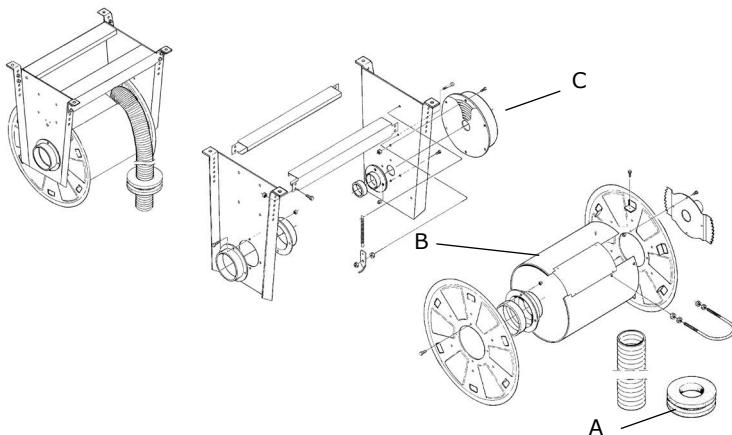


Fig. 5.1 Replacing the exhaust hose

5.2 Replacing the spring cassette

- Take off the hose stop-ring (A) and tailpipe adapter and allow the hose to completely coil onto the reel (B).
- Revolve the reel about four revolutions "backwards" in order to equalize the spring-tension (if the spring still functions).
- Unscrew all socket head cap screws at the spring casing (C). Mark the position of the spring casing.
- Put the new spring casing in position. Tighten the bolts evenly.
- "Pre-tension" the reel about seven revolutions. Put the hose stopper in position.



5.3 Replacing the plastic bearings

To safely perform this operation, it is recommended that you remove the reel from the structure and stand it on the floor.

- Remove the hose stop-ring and allow the hose to coil onto the reel.
- Unwind the hose in a slow and controlled manner. Count the number of winds on the reel, and make note of it, as you will need to know this number when you re-assemble the unit.
- Place a support under the drum and loosen the four bolts holding the spring side (A) A-frame leg on the unit. Once the bolts have been removed, carefully remove the spring side A-frame leg from the unit, and ensure the drum is safely and securely supported to prevent damage.
- Carefully remove the drum (B) from the unit, and place in a safe area, to prevent any damage or dents.
- Remove the three bolts holding the spring cassette (C) onto the unit. Prior to lifting the spring off, take note of the spring's orientation. Once the spring cassette has been removed, remove the three bolts securing the plastic bearing housing to the A-Frame leg. Use a screwdriver to gently pry the bearing from the seat. (E)
- To replace the bearing on the opposite side, follow the steps above, but also remove the drum lid, then loosen and remove the hose. Using a wrench and socket, remove the bolts securing the metal flange that connected to the duct or hose.
- Install the new bearing by pressing it into place.
- Re-assemble the unit by reversing these instructions.

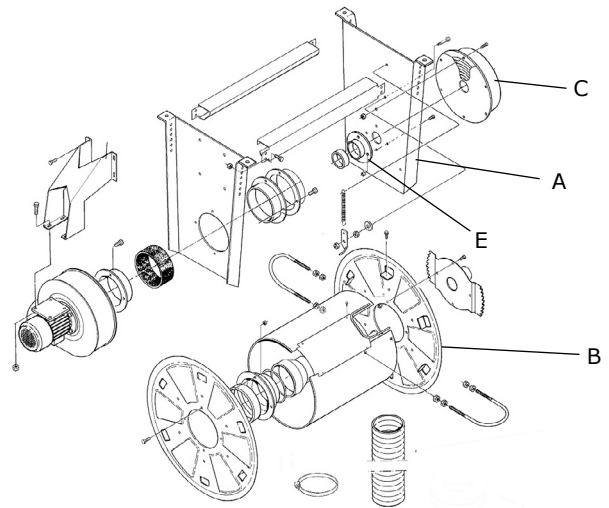


Fig. 5.3 Replacing the plastic bearings

Fig. 5.2 Replacing the spring cassette

6 DISPOSAL

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

7 PRESSURE LOSS CALCULATION

The fall of pressure in a air duct system or in a hose is mainly determined by the air velocity in that system.

The higher the velocity is, the higher the pressure loss will be. And the higher the pressure loss is, the less air the fan will extract. Use the Pressure loss chart below (*fig. 7.1*) to identify a suitable fan regarding the relationship between airflow and pressure loss.

In a ventilation system with many extraction devices and long suction ducts, you can minimize pressure loss by increasing the size of the ducting. This will also ensure even velocity throughout the system.

When 700 to 800 cfm (1200 to 1350 m³/h) is needed, Plymovent recommends a 6 in. (150 mm) hose. A 8 in. (200 mm) hose can be used for larger applications, as it supports larger engines operating under load. For those cases, the exhaust flow and temperature increase dramatically.

Air velocity in ducting: 3500 to 4500 fpm (17,8 - 22,9 m/s).

The chart below shows the pressure loss in the hose reels a different airflows. Refer to the Airflow volume: general guidelines table below for the vehicle, airflow and hose diameter guidelines. The curves show these combinations of hose reel/hose diameter/hose length (uncoiled position).



We recommend that you confirm existing exhaust temperatures to ensure proper hose, fan and airflow selection.

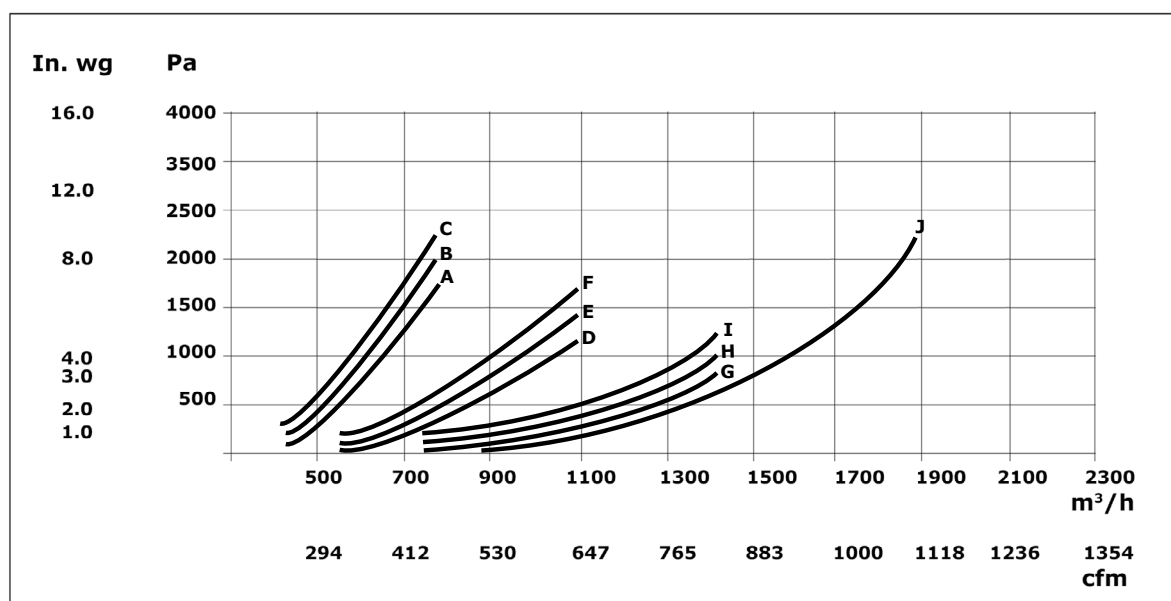


Fig.7.1 Pressure loss chart

	Hose diameter	Length
A	Ø 4 in. (100 mm)	length 24.7 ft (7,5 m)
B	Ø 4 in. (100 mm)	length 33 ft (10 m)
C	Ø 4 in. (100 mm)	length 41 ft (12,5 m)
D	Ø 5 in. (125 mm)	length 24.7 ft (7,5 m)
E	Ø 5 in. (125 mm)	length 33 ft (10 m)
F	Ø 5 in. (125 mm)	length 41 ft (12,5 m)
G	Ø 6 in. (150 mm)	length 24.7 ft (7,5 m)
H	Ø 6 in. (150 mm)	length 33 ft (10 m)
I	Ø 6 in. (150 mm)	length 41 ft (12,5 m)
J	Ø 8 in. (200 mm)	length 33 ft (10 m)

Note: 3 in. (75 mm) hoses are not available in North America.

Airflow Volume: General Guidelines

Vehicles serviced	cfm (m ³ /h)	Hose diameter
Automobile	270-300 (460-510)	Ø 4 in. (100 mm)
Motorcycle	600-650 (1020-1105)	Ø 6 in. (150 mm)
Trucks (Public Works, Rental Fleets, etc.)	500-550 (850-935)	Ø 5 in. (125 mm)
Heavy Duty Trucks	650-800 (1100-1360)	Ø 6 in. (150 mm)
Off-Road (Constr., Compressor Tests, etc.)	1000-1400 (1700-2400)	Ø 8 in. (200 mm)



How to order spare parts:

At this time, Plymovent is reviewing spare parts for this hose reel. Please contact your authorized distributor to discuss the spare part that you need. You can identify your authorized distributor at <https://www.plymovent.com> - click the "Contact Plymovent" link and then click "Sales Offices."

CE DECLARATION

CE declaration of conformity for machinery

We, Plymovent, Koraalstraat 9, 1812 RK Alkmaar, the Netherlands, herewith declare, on our own responsibility, that the product(s):

- Spring Operated Exhaust Hose Reel (SER)

is in conformity with the following harmonized standard(s)
and/or other such normative documents + amendments, if any:

EN ISO 12100:2010

Alkmaar, the Netherlands, October 23th, 2018

Kees Janssen
Product Manager EE

