

Balancers for exhaust hoses

BALANCER-200M/300M/350M series



EN

Installation and user manual

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EN | ORIGINAL INSTRUCTION

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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.







PREFACE

Using this manual

This manual is intended to be used as a work of reference for professional, well trained and authorised 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.
 	Personal protective equipment (PPE) Instruction to use eye protection and 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 that are not dealt with in this manual, please contact the supplier of the product. He will always be willing to help you. Make sure that you have the following specifications at hand:

- product name
- serial number

You can find these data on the identification plate.

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 Balancer is a mechanical device that is used to lift and balance the hose of a vehicle exhaust system. The housing contains a coiled spring with a steel wire attached to it. The wire stop has an integrated magnet to operate together with the balancer switch.

The Balancer is equipped with carabiners and a safety wire.

The Balancer is available in two versions:

Type	Description
BRM	Balancer
BRL	Balancer with an additional ratchet lock

Depending on the specific type, the Balancers are available with different wire lengths and spring forces. The spring force determines the load capacity of the Balancer (refer to Table I on page 8 for specifications).

1.3 Options and accessories

Art. no.	Description
<i>For use with a dropper system:</i>	
0000109643	Mounting plate to attach the safety wire
<i>To start/stop the fan of the Plymovent system automatically:</i>	
0000350777	Balancer switch

1.4 Product combinations

You can use the Balancer with the Plymovent systems that follow:



Type of system		Description
Rail system	SBT	Sliding balancer track
	STR	Straight rail system
	MRP	Mini rail profile (straight)
	VSRX	Verticle stack rail
Boom/hose drop system	FE	Fixed extractor
	FEF	Fixed extractor with fan
	FEB	Fixed exhaust dropper on boom arm

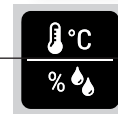
1.5 Technical specifications

Refer to Table I on page 8 for the technical specifications.



1.6 Ambient conditions

Operating temperature:	
- min.	-10°C (14°F)
- nom.	20°C (68°F)
- max.	60°C (140°F)
Max. relative humidity	80%
Outdoor use allowed	no



2 PRODUCT DESCRIPTION

2.1 Components

The product consists of the following main components and elements:

Fig. 2.1

- A Carabiner Ø 8 mm (5/16 inch)
- B Spring tension lock
- C Balancer locking cable (for use with a Magnetic Grabber only)
- D Balancer switch (option)
- E Wire stop with magnet
- F Steel wire
- G Carabiner Ø 8 mm (5/16 inch)
- H Safety wire
- I Balancer housing including spring

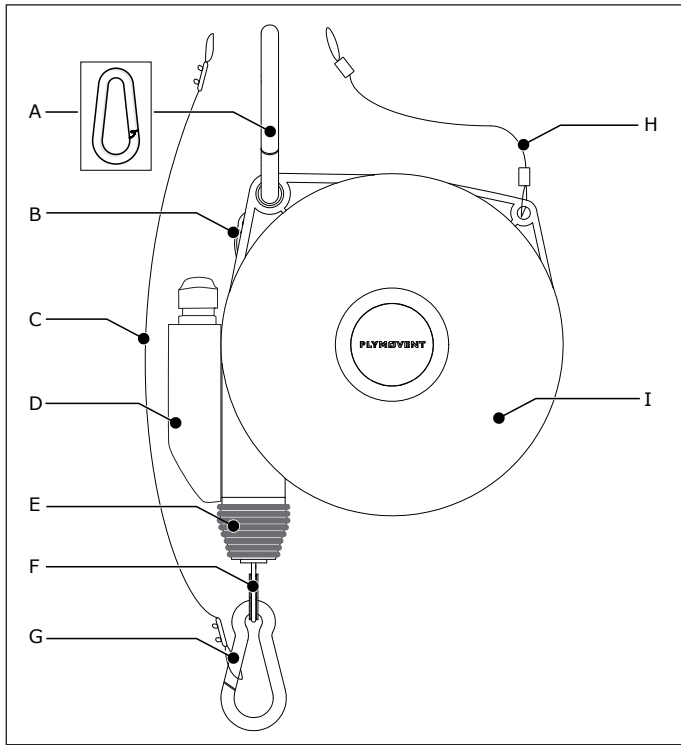


Fig. 2.1 Main components and elements

2.2 Operation

The Balancer keeps the hose of a vehicle exhaust system in a pre-set position to make the hose weightless during use. The spring inside the housing is adjusted to match the weight of the hose. When the hose is lifted, the spring tension provides a counterforce that effectively balances the weight of the hose.

The integrated safety wire is attached to the trolley, crab or mounting device of the exhaust system. It functions as an additional safety feature.

The balancer locking cable¹ controls the point of disconnection of the Magnetic Grabber. When the hose reaches its maximum desired length, the Magnetic Grabber is disconnected from the tailpipe of the moving vehicle.

The use of a Balancer keeps the risk of damage to the hose and surroundings to a minimum. At the same time, it enhances the operation of the vehicle exhaust system.

2.2.1 BRM | Balancer

This type of Balancer is mainly used in "FIRE" applications (fire stations).

2.2.2 BRL | Balancer with lock

This type is equipped with an additional ratchet lock to keep the hose in the desired retracted position.

It is mainly used in "VEX" applications (such as vehicle exhaust extraction in garages).

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



1. The balancer locking cable is used with a Magnetic Grabber only

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. Discontinue and 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.

Intended use²

The product has been designed exclusively to lift and balance the hose of a vehicle exhaust system. Using the product for other purposes is considered contrary to its intended use. The manufacturer accepts no liability for any damage or injury resulting from such use. The product has been built in accordance with state-of-the-art standards and recognised safety regulations. Only use this product when in technically perfect condition in accordance with its intended use and the instructions explained in the user manual.

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.
- 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 metres / 6½ ft. (local restrictions may apply).
- Do not install the product in front of entrances and exits that must be used for emergency services.
- Mind any gas and water pipes and electric cables.

2. "Intended use" as explained in EN-ISO 12100-1 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.

- 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.

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.
- 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.
- Use sufficient climbing gear and safety guards when working on a higher level than 2 metres / 6½ ft. (local restrictions may apply).
- Clean the area afterwards.

- Attach the carabiner (A) to the trolley (E).
- Install the safety wire (D) to the trolley (E). Fasten it with the supplied bolt M8x20, two washers and the hex nut 8 mm.
- Attach the carabiner (C) to the rubber saddle or steel elbow that supports the hose.

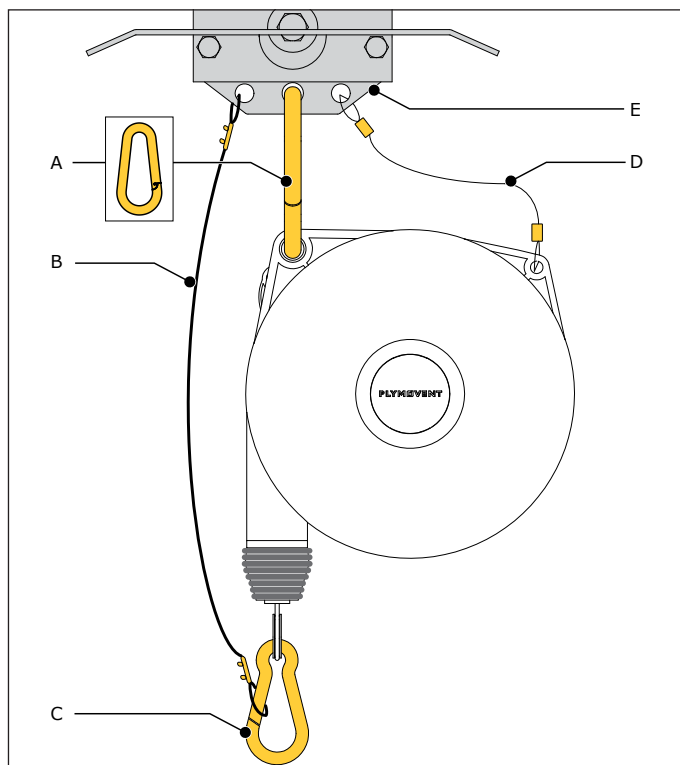


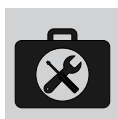
Fig. 4.1 Balancer to **SBT** system

4 INSTALLATION

4.1 Tools and requirements

You need the following tools and requirements to install the Balancer:

- basic tools



4.1.1 Recommended tool

Tool to adjust the spring tension of the Balancer:

- hexagonal socket 24 mm (art. no. 0000115762)

4.2 Unpacking

The package contains:

- Balancer, including safety wire and two carabiners
- mounting material



4.3 Mounting

You can attach the Balancer to different devices³.

For use with a **SBT**, **STR**, **MRP** or **VSRX** system:

- continue with § 4.3.1

For use with a **FE**, **FEF** or **FEB** system:

- continue with § 4.3.2

4.3.1 SBT, STR, MRP or VSRX system

In these systems the Balancer is connected to the **trolley**.

To install the Balancer, do the procedure that follows.

For the **SBT** system: refer to **Fig. 4.1**

For the **STR**, **MRP** or **VSRX** system: refer to **Fig. 4.2**

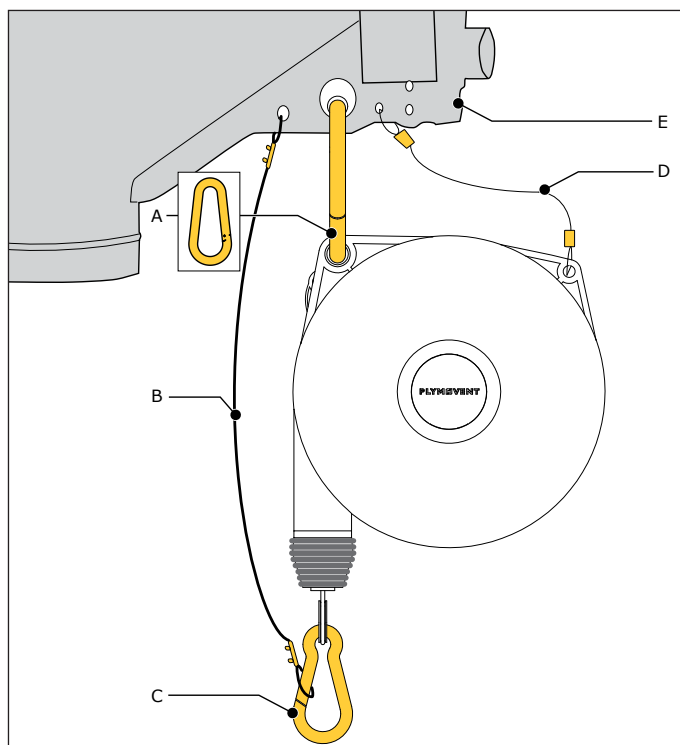


Fig. 4.2 Balancer to **STR**, **MRP** or **VSRX** system

To install the balancer locking cable⁴ (B):

- refer to the installation manual of the rail system

3. Also refer to § 1.4

4. For use with a Magnetic Grabber only

4.3.2 FE, FEF or FEB system

In these systems the Balancer is connected to the **hose drop**.

To install the Balancer, do the procedure that follows.

Fig. 4.3

- Attach the carabiner (B) to:
 - **FE**: the bracket ring (A)
 - **FEF**: the ring (A)
 - **FEB**: the trolley (A)
- Install the safety wire (F) to:
 - **FE** or **FEF**: the bolt (E) with the hardware of the FE/FEF system
 - **FEB**: the trolley (A). Fasten it with the supplied bolt M8x20, two washers and the hex nut 8 mm.
- Attach the carabiner (C) to the rubber saddle or steel elbow that supports the hose.

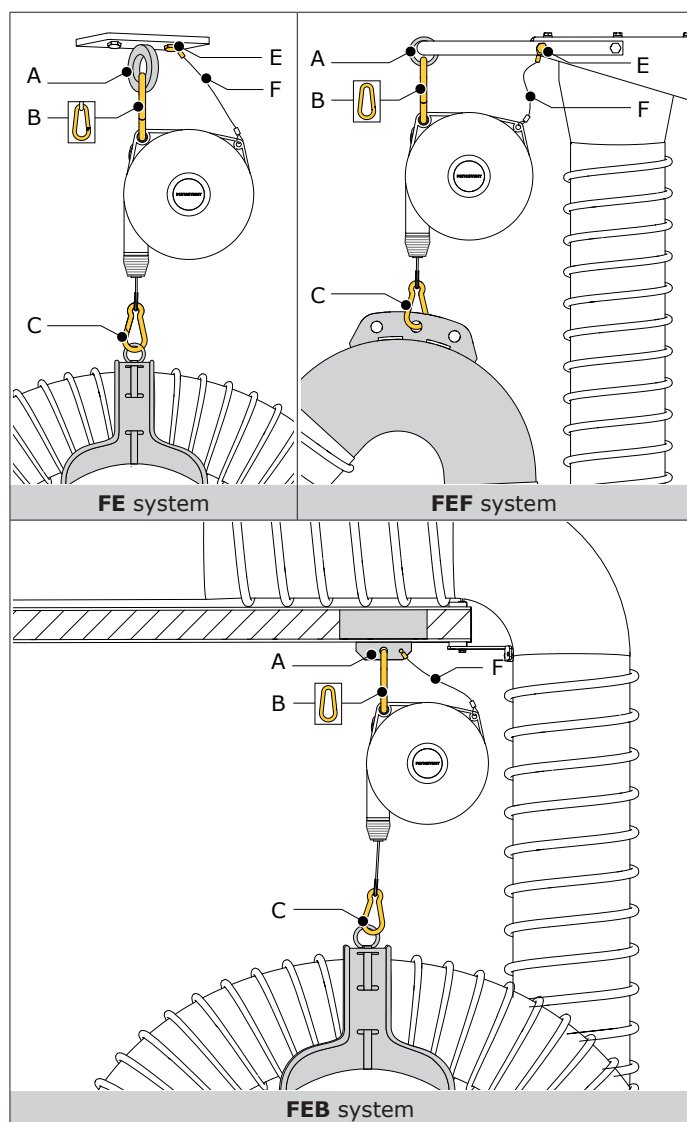


Fig. 4.3 Balancer to **FE**, **FEF** or **FEB** system

4.4 Balancer switch (option)

To install the balancer switch:

- refer to the instruction sheet that is supplied with the product

4.5 Functioning and setting

The Balancer is supplied from the factory with a pre-set spring tension. You must finish the entire installation to know if this tension is correct or if it needs adjustment.

When the entire installation is finished, do the procedure that follows.

- Check if the Balancer can lift and balance the connected hose.

If the hose drops on the floor or slowly moves down, you must **increase** the spring tension. In that case:

- continue with § 4.5.1

If the hose is lifted too high or slowly moves up, you must **decrease** the spring tension. In that case:

- continue with § 4.5.2.



CAUTION!

To avoid avoid serious damage to the Balancer, turn the cap of the housing **max. ½ revolution** at a time to adjust the spring tension.

Exception for **Balancer-200M**:

- Turn the cap of the housing **max. 1 revolution** at a time to adjust the spring tension.

4.5.1 Increasing the spring tension

Fig. 4.4

To **increase** the spring tension:

- Hold the Balancer in a stable position.
- Turn the cap of the housing **counterclockwise** (direction +) (A) with a hexagonal socket 24 mm.

4.5.2 Decreasing the spring tension

Fig. 4.4

To **decrease** the spring tension:

- Hold the Balancer in a stable position.
- Carefully release the spring tension lock (C) to enable rotation.
- Turn the cap of the housing **clockwise** (direction -) (B) with a hexagonal socket 24 mm.

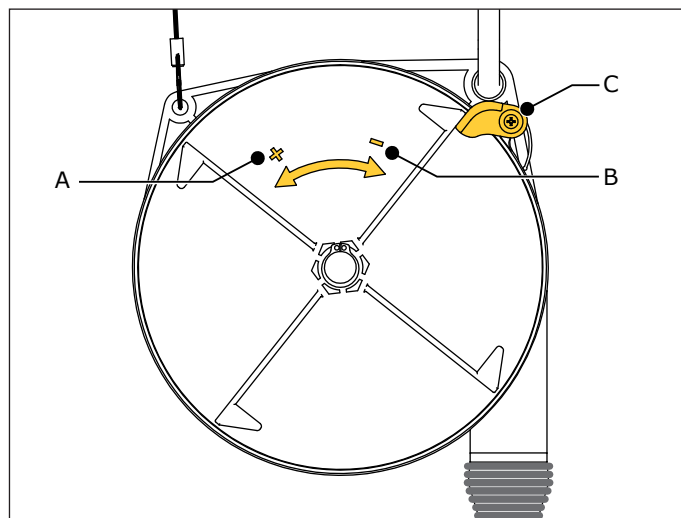


Fig. 4.4 Adjustment of the spring tension

4.6 Commissioning checklist



#	Check	Ref.	OK
1.	Is the safety wire installed?		
2.	Is the length of the balancer locking cable ⁵ adjusted? And is it installed?		
3.	Is the spring tension correct?	§ 4.5	

5 USE

The Balancer is used to keep the exhaust extraction hose clear of the ground, thus minimising the risk of damage to the hose and surroundings. It also enables easy operation of the exhaust extraction system.

5.1 Balancer

When the balancer is attached to the hose and the spring tension is correct, the balancer automatically lifts the hose during use and keeps it balanced.

5.2 Balancer with an additional ratchet lock

When the balancer is attached to the hose and the spring tension is correct, the balancer keeps the hose in a fixed position.

To lock the Balancer:

- Pull the hose in the desired position.

To release the Balancer:

- Pull the hose slightly down to unlock the position and quickly move the hose upward.

6 MAINTENANCE

6.1 Periodic maintenance



The product has been designed to function without problems for a long time with a minimum of maintenance. To guarantee this some simple, regular maintenance activities are required that are described in this chapter. The maintenance activities in the table below can be carried out by the user.

Component	Action	Frequency: every 6 months
Housing	Check for loose screws. If necessary: tighten the screws.	X
	Check for cracks and damages. Replace the Balancer if the housing is damaged.	
Steel wire	Check the wire for visible damage, e.g. broken threads. Replace if necessary.	X ^{*)}

^{*)} Before every use

6.2 Replacing the wire



WARNING!

The Balancer contains a powerful spring. You must remove the tension from the Balancer before you open the housing (refer to instructions below).



Personal protective equipment (PPE)

Use eye protection and protective gloves when you replace the wire.

To replace the wire, do the procedure that follows.

Fig. 6.1

- Carefully release the spring tension lock (D) to enable rotation.
- Turn the cap (B) $\frac{1}{4}$ revolution⁶ **clockwise** (direction \rightarrow) (B) with a hexagonal socket 24 mm and lock again. Repeat this step until the Balancer is free of tension⁷.
- Remove the yellow cap (I) from the housing.
- Remove the circlip (A) of the Balancer with a circlip pliers.
- Remove the spring tension lock (D).
- Remove the cap (B).
- Loosen the screw + washer (F) and remove the wire (C).
- Feed the beginning of the new wire through the tube (H)
- Install the new wire and attach it with the screw + washer (G).
- Put the wire spool (F) back in the housing (E) and install the cap (E).
- Install the spring tension lock (D).
- Lock the cap with the circlip (A).
- Install the yellow cap (I) on the housing.

To put the spring tension back on the Balancer:

- Do the procedure as described in § 4.5.1.

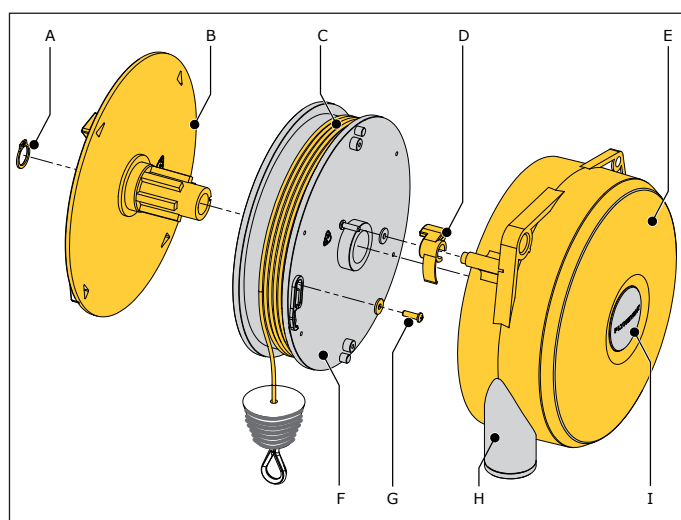


Fig. 6.1 Replacing the wire

5. For use with a Magnetic Grabber only

6. In case of a Balancer-200M: turn the cap max. 1 revolution at a time

7. In this situation the wire is not retracted anymore

7 TROUBLESHOOTING

If the product does not function (correctly), consult the checklist below to see if you can remedy the error yourself. Should this not be possible, contact your supplier.



WARNING

Obey the safety regulations that are written in chapter 3 when you carry out the activities below.

Symptom	Problem	Possible cause	Solution
The wire is not retracted when the nozzle is disconnected	The hose drops on the floor	The spring tension is too low	Increase the spring tension (refer to § 4.5.1)
		The wire is damaged	Replace the wire (refer to § 6.2)
		The spring is broken	Replace the Balancer
The nozzle disconnects from the tailpipe too early	Pollution of the working environment	The spring tension is too high	Decrease the spring tension (refer to § 4.5.2)
		The balancer locking cable*) is too short	Adjust (lengthen) or replace the locking cable
The kickback of the hose drop after disconnection is too powerful	Potential risk of damage to the working environment or personal injury	The spring tension is too high	Decrease the spring tension (refer to § 4.5.2)
		The balancer locking cable*) is too long	Adjust (shorten) the locking cable
		The balancer locking cable*) is missing	Install the locking cable
		The disconnect valve**) is not activated as intended	Adjust the position of the magnetic valve

*) In case of a Magnetic Grabber only

**) In case of a Pneumatic Grabber only

8 SPARE PARTS

The following spare parts are available for the product:

- refer to Fig. I on page 8 and the spare parts list



9 DISPOSAL

At the end of the product's life, dispose of all components in accordance with applicable federal, state, and local regulations.



Recycling

To support environmental sustainability and meet ESG standards, we recommend the recycling practises for key materials that follow:



Material	Recycling option
Steel	<i>Fully recyclable</i> - Deliver to a certified metal recycling facility.

Material	Recycling option
Plastic bearings (PA6 / nylon 6)	<i>PA6 is recyclable but typically requires specialized plastic recycling services.</i> - Check for local facilities that accept engineering plastics or industrial-grade nylons.

CE DECLARATION

CE & UKCA declaration of conformity for machinery



We, Plymovent Manufacturing B.V., Koraalstraat 9, 1812 RK Alkmaar, Netherlands, herewith declare, on our own responsibility, that the products:

- Balancer series 200/300/350

which this declaration refers to, are in accordance with the conditions of the following Directives:

- Machine Directive 2006/42 EC
- UKCA Supply of Machinery (Safety) Regulations 2008

and are in conformity with the following harmonized standards and/or other such normative documents + amendments, if any:

DIN EN 14238:2010

DIN EN 15112

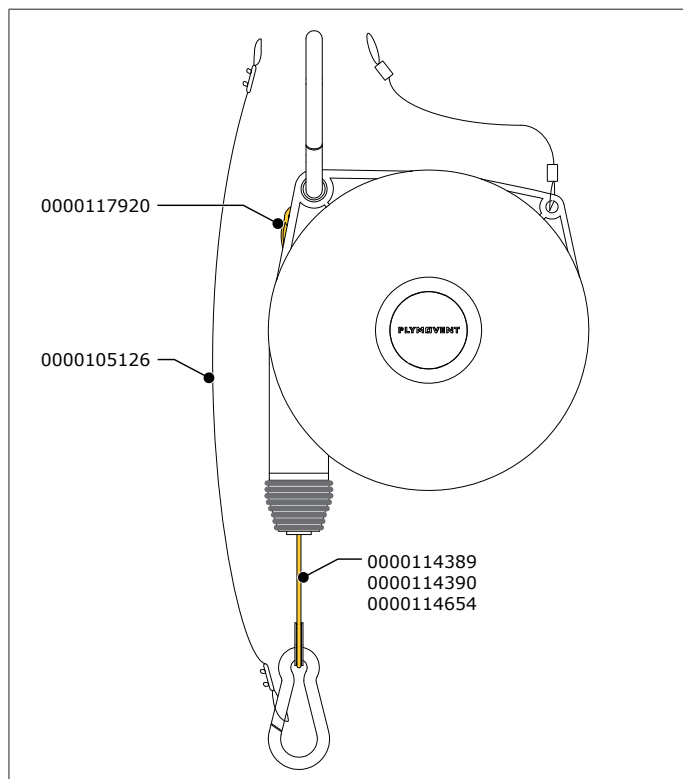
Signature:

Name: Kees Janssen
Position: Product Manager EE
Date of issue: 1st December 2025

Table I Specifications

Type	Balancer	200M/8-17	300M/7-12	300M/7-12 (316)	350M/5-14
	Balancer with an additional ratchet lock		300M with lock		350M with lock
Wire length		2 m (6½ ft.)	3 m (10 ft.)	3 m (10 ft.)	3,5 m (11½ ft.)
Spring force (highest force = max. load)		8-17 kg (18-37 lbs.)	7-12 kg (15-26 lbs)	7-12 kg (15-26 lbs)	5-14 kg (11-31 lbs.)
General					
Material:					
- housing		reinforced glass fiber (PA)	reinforced glass fiber (PA)	reinforced glass fiber (PA)	reinforced glass fiber (PA)
- wire		steel	steel	stainless steel (grade 316)	steel
Angle from plumb line		max. 45°	max. 45°	max. 45°	max. 45°

Fig. I Spare parts



Art. no	Description
General	
0000105126	Balancer locking cable ¹
0000117920	Spring tension lock BR200/300 (set of 5)
Balancer 200M series	
0000114654	Steel wire 2 m (6½ ft.), incl. wire stop
Balancer 300M series	
0000114390	Steel wire 3 m (10 ft.), incl. wire stop
Balancer 350M series	
0000114389	Steel wire 3,5 m (11½ ft.), incl. wire stop

1. For use with a Magnetic Grabber only

