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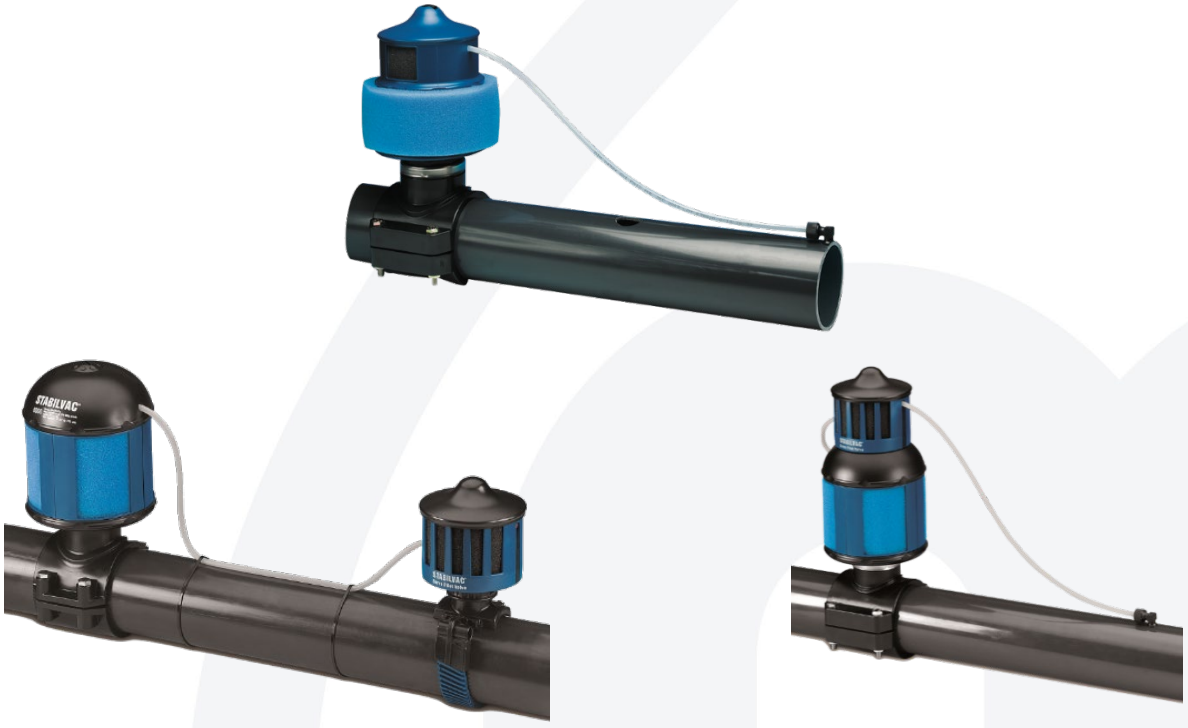
Stabilvac



Precision

Technician and User Instruction Manual

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1 GENERAL INFORMATION

1.1 Manufacturer

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1.2 Copyright

2 GENERAL WARNINGS

2.1 General information and safety warnings

2.1.1 Important warnings

To safeguard the operator and prevent any damage to the equipment, before carrying out any kind of operation it is important to have read and fully understood the instruction manual.

2.1.2 Symbol used in this manual

The following symbols are used in this manual to highlight indications and warnings which are of particular importance:

WARNING
This symbol indicates health and safety regulations designed to protect operators and/or any exposed persons.

CAUTION
This symbol indicates that there is a risk of causing damage to the equipment and/or its components.

NOTE
This symbol is used to highlight useful information.

2.1.3 Rules and regulations for the user

WARNING
Any failure to observe the warnings provided in this manual may lead to equipment malfunctions or damage to the system.

2.1.4 Limitation of liability

InterPuls S.p.A. declines all liability for damage to persons, animals and/or things caused by incorrect use of the equipment.

2.2 Prior using the product

2.2.1 Requirements and rules for personnel and Safety Rules

WARNING
This appliance can be used by person aged from 8 years and above and persons with reduced physical, sensory or mental capabilities or lack of experience and knowledge if they have been given supervision or instruction concerning use of the appliance in a safe way and understand the hazards involved

WARNING
Before using the device, the operator must carefully read the manual.
During the assembly and activation of the device, follow the instructions in the manual and rules and regulations applying to health and safety at the workplace.

WARNING
Children shall not play with the appliance.
Cleaning and user maintenance shall not be made by children without supervision.

2.3 Disposal

2.3.1 General regulation

Since the device is a EEE product, it must not be disposed of as urban waste, but must be managed by a separate waste connection centre through specific WEEE waste collection systems.
Proper disposal of the product will contribute to protecting the environment.

2.4 Fire prevention

2.4.1 Fire prevention

NOTE
The machine is not equipped with fire extinguishers.
The operator must make sure that the place in which the appliance is installed is equipped with an adequate number of suitable fire extinguishers. The extinguishers must be positioned where they are clearly visible and protected from damage and improper use.

2.4.2 Safety regulations

WARNING
It is strictly prohibited to extinguish fires involving electrical equipment with water!

2.4.3 Characteristic of extinguishers

Use powder, foam or halogen extinguishers which must be positioned next to the device.
Operating personnel must receive adequate instruction on how to use the extinguishers.

2.5 Normative references applied

Europe:

- Regulation (CE) No 1907/2006– concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH)

UK:

- UKCA (UK Conformity Assessed)

3 DESCRIPTION OF THE DEVICE

Vacuum regulation valves are devices that allow you to calibrate the vacuum level of the system and keep it stable during milking and washing sessions. There are various models that differ in construction details and working range.

3.1 General characteristics – Stabilvac 1500 – 3600 – 3600 Separate

Servo control (SPV)
This is the sensor that detects the vacuum level of the system and comparing it with the settled value. Transmits a signal to the "Main Valve" via a separate line.

Master Valve (MCV)
It is the valve that regulates the vacuum level by dosing the incoming air flow according to the signal transmitted by the sensor ("Servo control").

SENSITIVITY
In a correctly sized system, Stabilvac vacuum regulators, thanks to the patented principle, can maintain the set vacuum level with an oscillation of 0.1 kPa (0.03" Hg) between the vacuum level measured with no group and all groups in operation.

AIR CONSUMPTION
Stabilvac regulators can completely close the Main Valve already with a difference of -0.7 kPa (-0.2” Hg) from the set vacuum level (working vacuum). Furthermore, referring to ISO regulations, the air consumption recorded at –2 kPa (-0.6” Hg) from the working vacuum is equal to 0 l/min (0 cfm).

APPLICATIONS

Stabilvac 1500
Suitable for pumps from 350 l/min (12 cfm) up to 750 l/min (27 cfm).
Working range 36÷50 kPa (11÷15 “Hg)

Stabilvac 3600
Suitable for pumps from 750 l/min (27 cfm) up to 1500 l/min (53 cfm).
Working range 36÷50 kPa (11÷15 “Hg)
N.B. the valve can also work with pumps with a flow rate of 2200 l/min (working range 36÷50 kPa): it is necessary to remove the red spacer inside the body (Ref. Exploded view 048).

Stabilvac 3600 Separate
Suitable for pumps from: 1000 l/min (12cfm) up to 2000 l/min (71cfm).
Consumption equal to 0 l/min according to ISO 6690 at 50 kPa.
Optimal operating condition with flow rate of 1750 l/min (62cfm) at 50 kPa.

Stabilvac 4000
Suitable for pumps from 1000 l/min (35 cfm) up to 2200 l/min (77 cfm) flow rate at 50 kPa.
Working range 36÷50 kPa (11÷15 “Hg).

Stabilvac 6000
Suitable for pumps from 1500 l/min (53 cfm) up to 3500 l/min (124 cfm) flow rate at 50 kPa.
Working range 36÷50 kPa (11÷15 “Hg).

4 TECHNICAL FEATURES

General technical features – Stabilvac 1500 – - 3600 - 3600 Separate	
Model	Stabilvac 1500 - 3600
Vacuum consumption	At –2 kPa (-0.6” Hg) since operative vacuum at 0 l/min (0 cfm).
Connection type	1” Gas male
Weight	0,415 Kg
Dimensions	LxWxH 131x131x181 mm.
General technical features – Servocontrol (SPV)	
Model	Servocontrol
Connection type	1/2” Gas male
Weight	0,210 Kg
Dimensions	LxWxH 108x108x114 mm.
General technical features – Stabilvac 4000 – 6000 – Separate (MCV)	
Model	Stabilvac 4000 – 6000 Separate
Vacuum consumption	At –2 kPa (-0.6” Hg) since operative vacuum at 0 l/min (0 cfm).
Connection type	1-1/2” Gas male
Weight	1,150 Kg
Dimensions	LxWxH 140x140x237 mm
General technical features – Stabilvac 4000 – 6000 – Monoblock (SPV+MCV)	
Model	Stabilvac 4000 – 6000 - Monoblock
Vacuum consumption	At –2 kPa (-0.6” Hg) since operative vacuum at 0 l/min (0 cfm).
Connection type	1-1/2” Gas male
Weight	1,360 Kg
Dimensions	LxWxH 140x140x325 mm

5 FORESEEN AND UNFORESEEN USE

5.1 Foreseen use

All indicated in Chapter 3.

5.2 Unforeseen use

All not indicated in Chapter 3.

6 ASSEMBLY– Stabilvac 1500 – 3600 – 3600 Separate

6.1 INSTALLATION Stabilvac 1500 – 3600

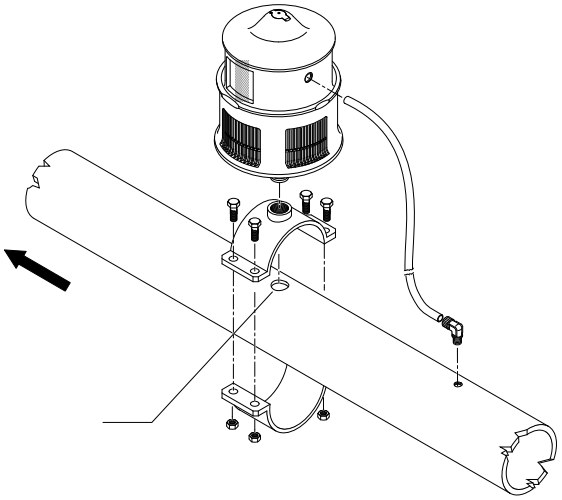
We recommend compliance with the following installation rules:

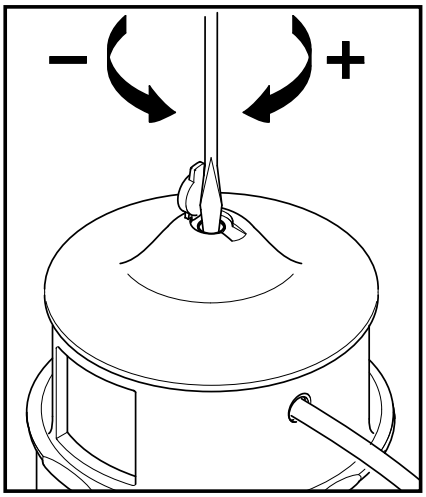
- Easily accessible position, away from dust and humidity
- away from any possible source of disturbance to the air flow.
- Optimal position is near the hygienic separator, between the hygienic separator and the vacuum balancing tank.
- Valves can be installed along both horizontal and vertical pipelines
- Pipe diameter of 50 mm (2”), 63 mm (2-1/2”), 76 mm (3”) or 90 mm (3-1/2”).
- It is necessary to maintain a distance equal to at least ten times the diameter of the pipe from bends, "T" fittings and reductions
- The hole made on the pipeline for installing the Valve must be equal to 28mm (1-1/8”).
- It is not necessary to use tools to fix the valve to the line. Screw the valve in manually.

6.2 INSTALLATION Stabilvac 3600 Separate

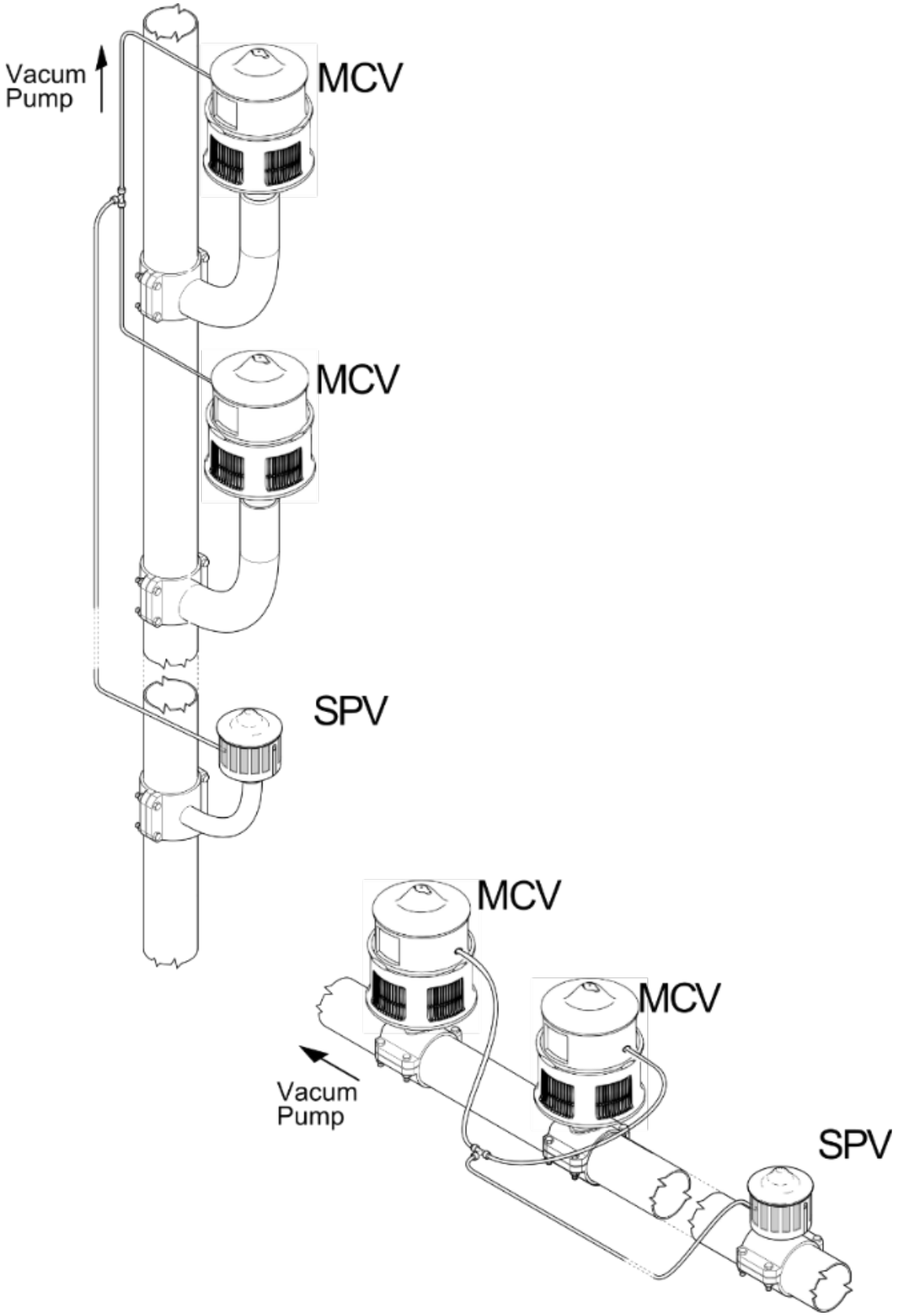
We recommend compliance with the following installation rules:

- installing the servocontrol near the hygienic separator
- the valve between the servo control and the vacuum balancing tank
- the two valves must be connected through a pipe suitable for signal transmission (MAX length 10m) and the distance between them must be between 1 and 10 m.
- Pipe diameter: 50mm (2”) –63mm (2-1/2”) –76mm (3”)–90mm (3-1/2”).
- Holes: SPV ◊ min 10mm (3/8”)
- Stabilvac holes ◊ equal to 28mm (1-1/8”).
- It is not necessary to use tools to fix the valve to the line. Screw the valve in manually.





- Stabilvac 3600 Separate



6.3 INSTALLATION Stabilvac 4000 - 6000

We recommend compliance with the following installation rules:

- Stabilvac vacuum regulators must be mounted in an easily accessible position,
- away from dust and humidity, near the hygienic separator.
- An optimal adjustment of the vacuum level is achieved by installing
  - or the Servocontrol near the hygienic separator
  - or the Master Valve between the Servo Control and the vacuum balance tank.
- The two valves must be connected through a tube suitable for signal transmission. The maximum length of the pipe is 10 m.
- Stabilvac vacuum regulators can be installed along both horizontal and vertical 76 mm (3”) or 102 mm (4”) pipelines.
- Installation must take place far from any possible source of disturbance to the air flow.
- In particular, it is necessary to maintain a distance equal to at least ten times the diameter of the pipe from bends, "T" fittings, reductions, etc.
- The hole made on the pipeline for installing the servocontrol must not be less than 10mm (3/8”).
- The hole made on the pipeline for installing the Valve must not be less than 45mm (1-3/4”).
- It is not necessary to use tools to fix the valve to the line. Screw the valve in manually.

VACUUM LEVEL SETTING

The vacuum level can be easily set adapting it to specific needs. It is essential to use a calibrated vacuum gauge to check the vacuum value reached during the operation.

- Lift the cover located on the valve body.
- Turn the adjustment screw:
  - or clockwise to increase the vacuum level.
  - or counterclockwise to lower the vacuum level.
- Close the lid.

ATTENTION

It is recommended to check and adjust the system vacuum at each milking.

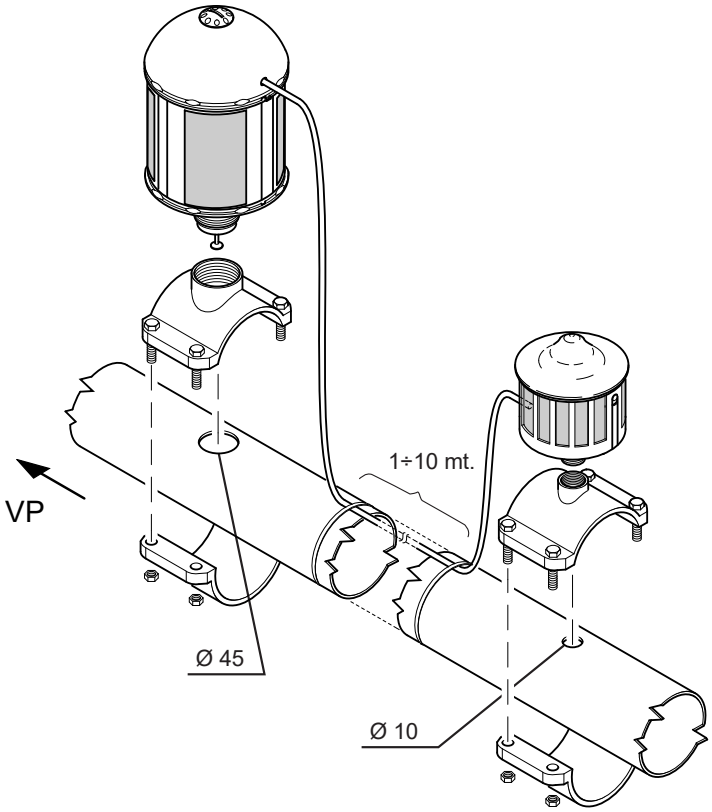
IMPORTANT

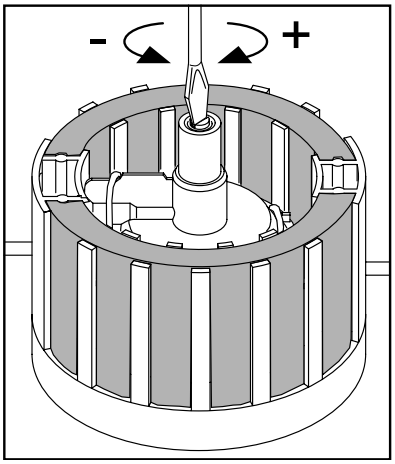
The vacuum level is a very important operating parameter in a system and must be checked at every milking. It is therefore advisable to install at least two vacuum gauges (one near the regulator and one in the milking parlor) to make it easier for the milker to control the vacuum level.

Given the importance of their function, vacuum gauges must be periodically calibrated. Any change in the vacuum level set in the absence of a calibrated vacuum gauge is strongly discouraged.

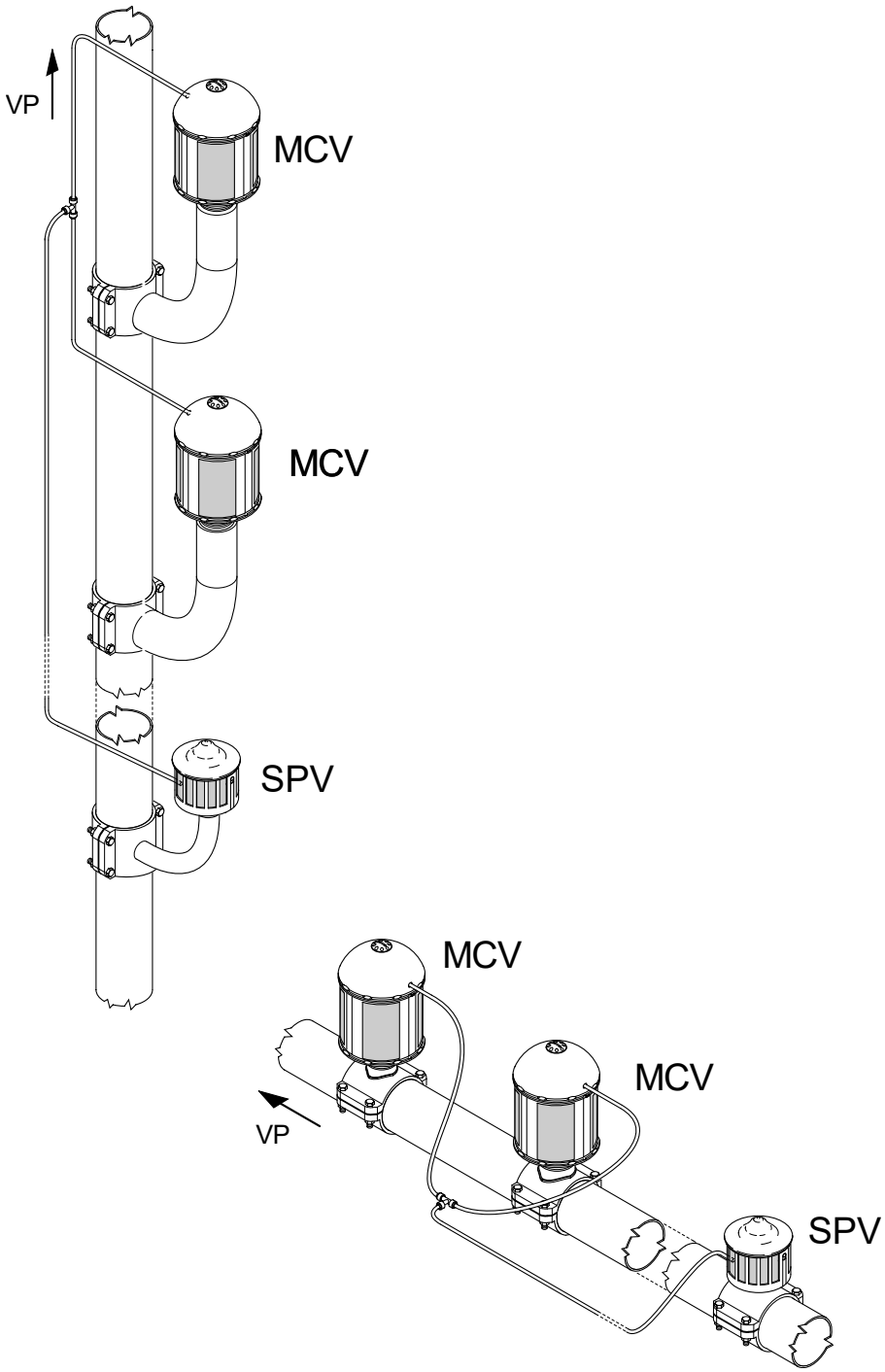
Do not vary the vacuum level by more than 1 kPa (0.3” Hg) without first consulting the service centre.

Stabilvac 4000 – 6000

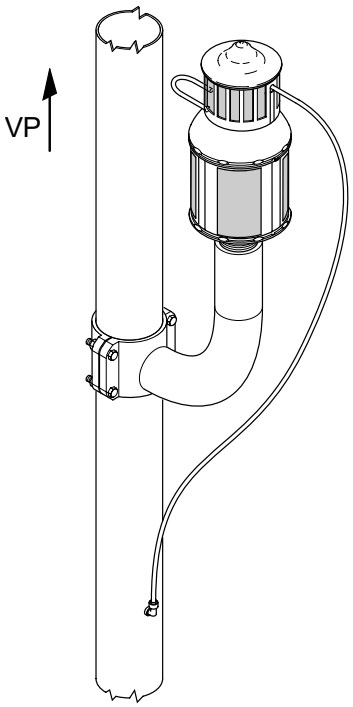




Separate



Monoblock



7 MAINTENANCE

7.1 Requirements for storage

Keep components out of direct sunlight and away from equipment that produces high concentrations of ozone.

7.2 Cleaning

Refer to periodical maintenance table.

WARNING

Don’t lubricate the part.

7.3 Regular maintenance

Part	Description	Action	Frequency
//	Check air filter	Wash with warm water and neutral detergent. Replace if damaged.	Once a month
//	Check signal tube	Remove any condensation from the control pipes and check that there are no siphons. Replace hoses if damaged	Once a month
//	Servo control	Remove the 2 screws (Explosion Ref. 009 and 010 SPV), remove the dirt by blowing with compressed air and clean all the plastic parts with a damp cloth	Every 12 month
//	Check and clean the Main Valve closing cone	Check the integrity of the cone surface, remove dirt by blowing with compressed air and clean all plastic parts with a damp cloth	Every 12 month
S001 - S002	Service kit	Replacements of parts subject to wear	2 year / 9000 h
S003	Service kit	Replacements of parts subject to wear	1 year / 9000 h

NOTE

Regularly inspect all components for cracks or wear.

Replace damaged parts immediately with original milkrite spare parts | InterPuls.

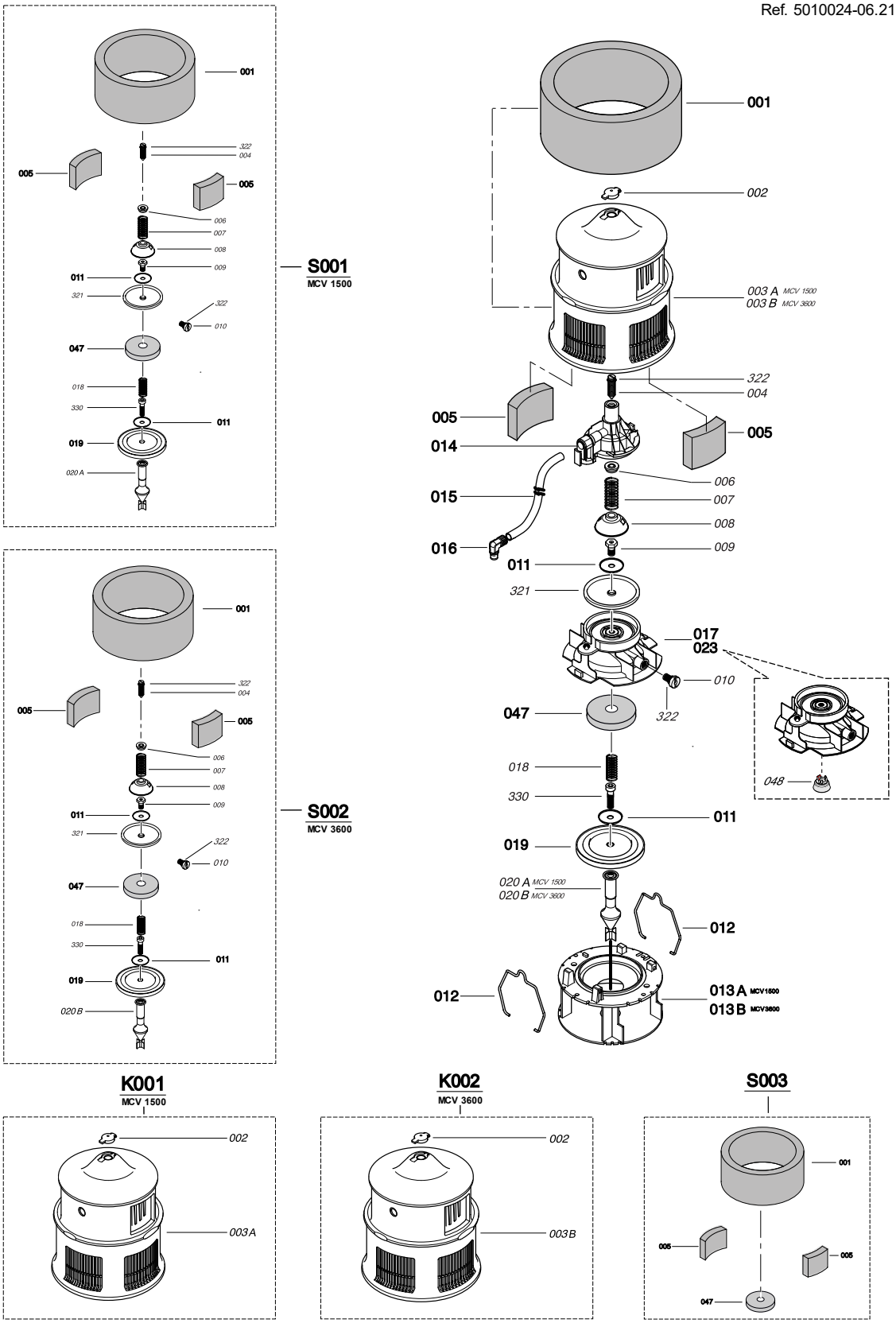
After replacing components, it is necessary to start a washing phase to remove any impurities. The user is responsible for maintenance and correct installation.

If assistance is required, please contact your local dealer.

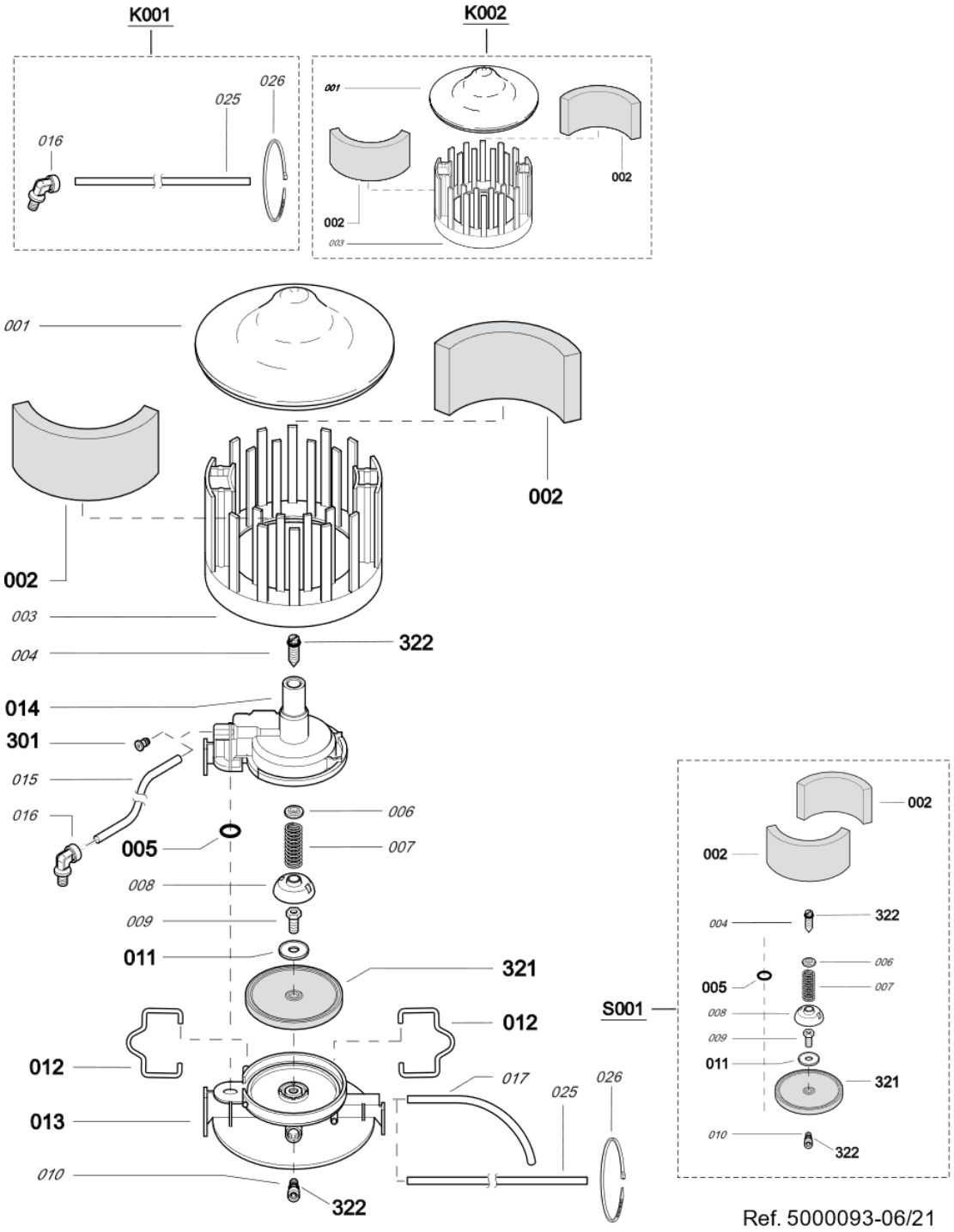
8 SPARE PARTS DIAGRAM

8.1 Stabilvac 1500 – 3600

Ref. 5010024-06.21



8.2 SPV



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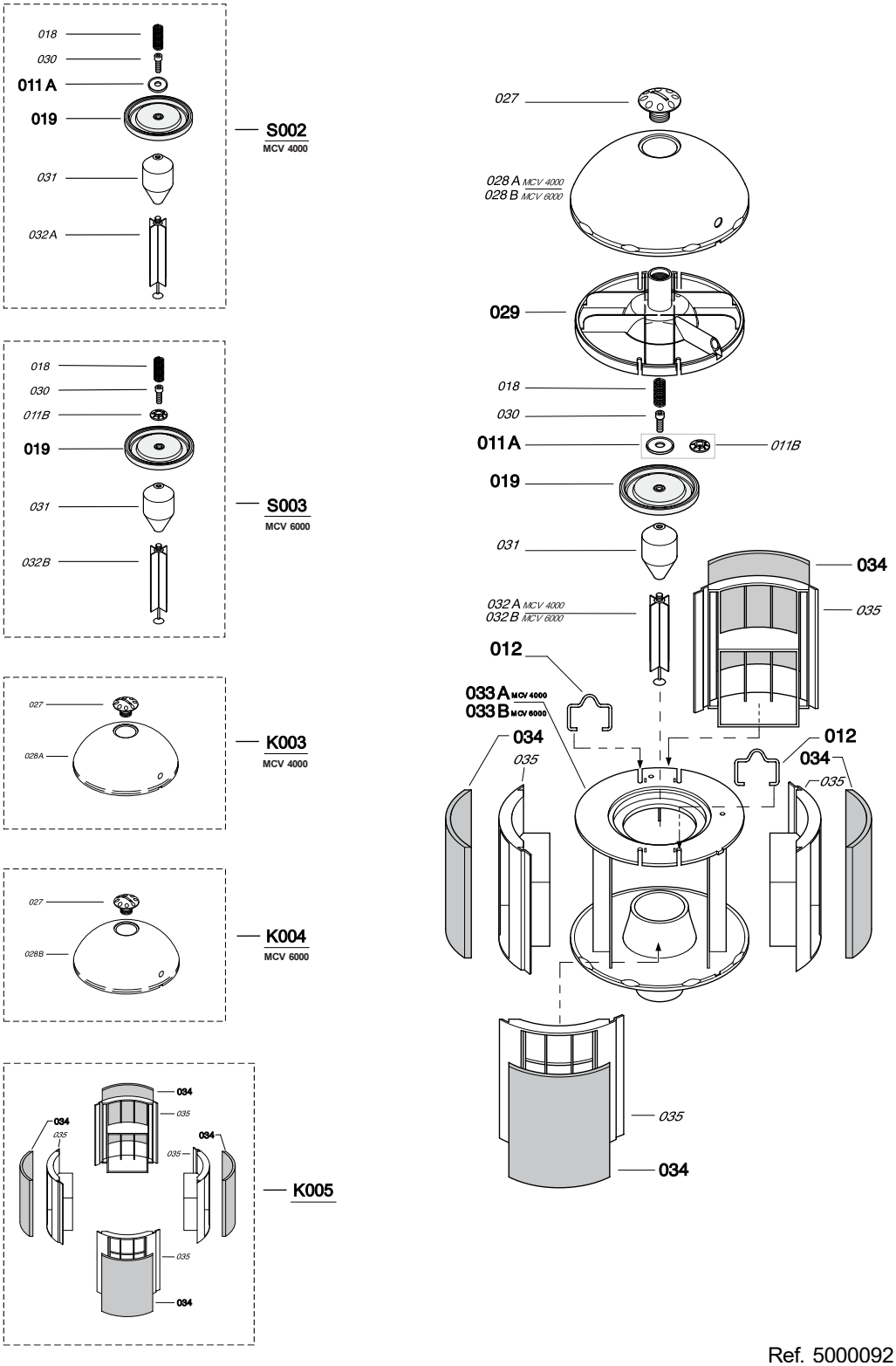
8.3 Stabilvac 4000 – 6000 (MCV)



Ref. 5000092 - 06/21

9 TROUBLESHOOTING

Problem detected	Possible cause	Solution
Increased vacuum level	Leaks in signal transmission tubes	Exchange tube
	Membrane Brocken	Exchange membrane
	Dirt in filter	Wash with warm water and neutral detergent. Replace if damaged
	Hole clogging	Clean with compressed air
	Brocken OR	Exchange screw and OR
Lowering of the vacuum level	Servo pilot hole clogged	Clean.
	Brocken spring	Adjust vacuum level
Very high vacuum level	Disconnected / brocken tube	Reconnext / exchange the tube
	Brocken membrane	Exchenge membrane
Irregular vacuum fluctuations	Clogged filter	Exchange filter

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