



# **milkrite | InterPuls**

*Improving every farm we touch*

## **Automatic valve ITP208**



**Interface**

**Technician and User Instruction Manual**



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# 1 GENERAL INFORMATION

## 1.1 Manufacturer

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## 1.2 Copyright

milkrite | InterPuls is a trademark owned by milkrite | InterPuls Limited

The information contained in this document is not binding and can be modified without notice. References in this document to manufacturer trademarks are for identification only. Certain company and product names used throughout the document are trademarks of their respective owners.

## 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 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

The appliances must be disposed of only and exclusively by specially authorized waste disposal companies in accordance with all relative legislation and prescriptions.

The packaging must be consigned to the relative authorized companies to be recycled.

## 2.4 Fire prevention

### 2.4.1 Fire prevention

**NOTE**

The product 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

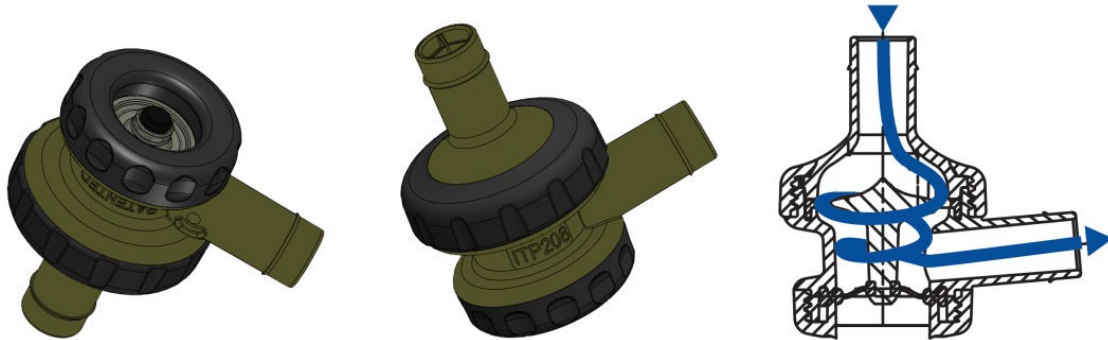
**Europe:**

- Regolamento (EC) n. 1907/2006 - Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH)
- Directive no. 1935/2004/EC Food Safety Regulation - related to materials and articles intended to come into contact with foodstuffs
- Directive no. 10/2011/EC Food Safety Regulation - related to plastic materials and articles intended to come into contact with foodstuffs
- Regulation (CE) n. 2023/2006 dated 22<sup>nd</sup> December 2006 (Good Manufacturing Practice)

### 3 DESCRIPTION OF THE DEVICE

#### 3.1 General features

The ITP208 device was designed by milkrite | InterPuls to allow automatic attachment of the milking cluster to the animal (small ruminants, such as goats and sheep) preserving the vacuum reserve in the system and the health of the teat by preventing the ingress of excessive macro impurities from the outside environment, as well as the possibility to easily exclude a teat from milking when necessary.



Evolution of the ITP205 model (normally open and equipped with a stainless steel shutter requiring manual locking during washing), the new ITP208 is normally closed and lighter thanks to its main diaphragm capable of automatically opening the internal plastic shutter as required, regardless of milking or washing, reducing the farmer's manual labour.

With ITP208, washing is fully automatic.

Versatile for any milking plant, the ITP208 design ensures optimal fluid dynamics to prevent excessive pressure drops:

- ✓ Ensuring rapid milk evacuation
- ✓ Limiting foam formation

The transparent main body allows the correct milk flow to be checked at any time.

The high performance of the materials used make the ITP208 device suitable for even the most critical working environments.

The more advanced ITP203 Vanguard has been designed rather to mirror the typical characteristics of big animals claws by collecting the milk into a wider interim chamber which maintains a higher vacuum level under the teats, then a faster and smoother milk evacuation from the animal.

The transparent bowls allow to see the milk from the outside and thanks its high performance plastic material the ITP203 Vanguard claw is suitable even for the most critical environments.

#### 3.2 Operation

The ITP208 device is designed to exert a precise vacuum consumption during preparation of the animal, where the milking cluster is in a detached condition.

The moment the single liner is applied to the animal's teat, the calibrated vacuum rapidly ejects the volume of air contained within it, automatically switching the diaphragm, which in turn opens the internal shutter allowing milking to begin.

At the end of milking, when milking is complete, the device closes automatically.



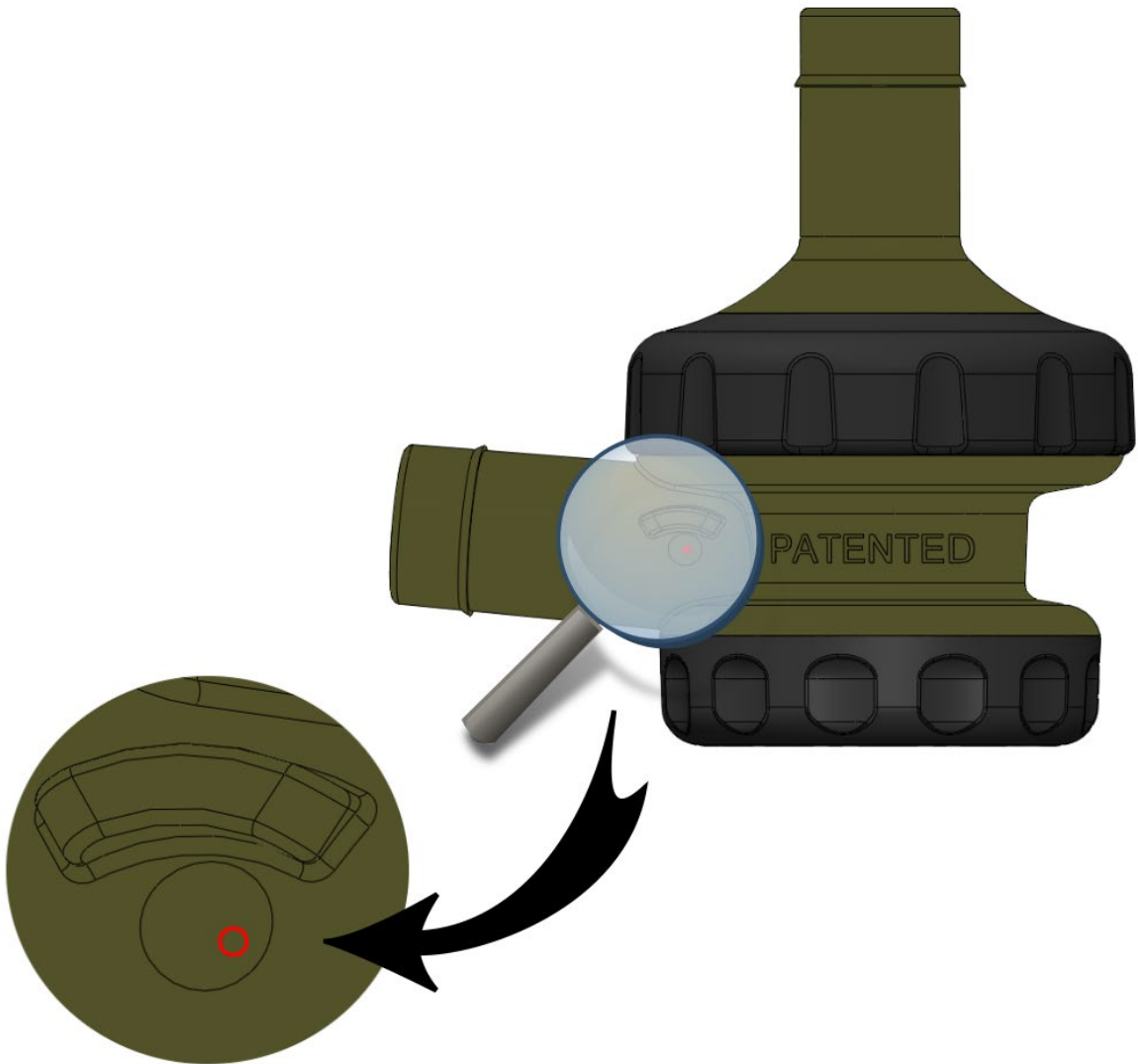
#### CAUTION

**The same automatism occurs during washing operations, make sure that the milking cluster is correctly positioned on the distributor and that the liners are properly sealed.**

3.3 Installation

The ITP208 device is available in two versions:

|                       | Ventilated teat | Ventilated claw |
|-----------------------|-----------------|-----------------|
| ITP208 ventilated     | X               | X               |
| ITP208 non-ventilated | ✓               | ✓               |

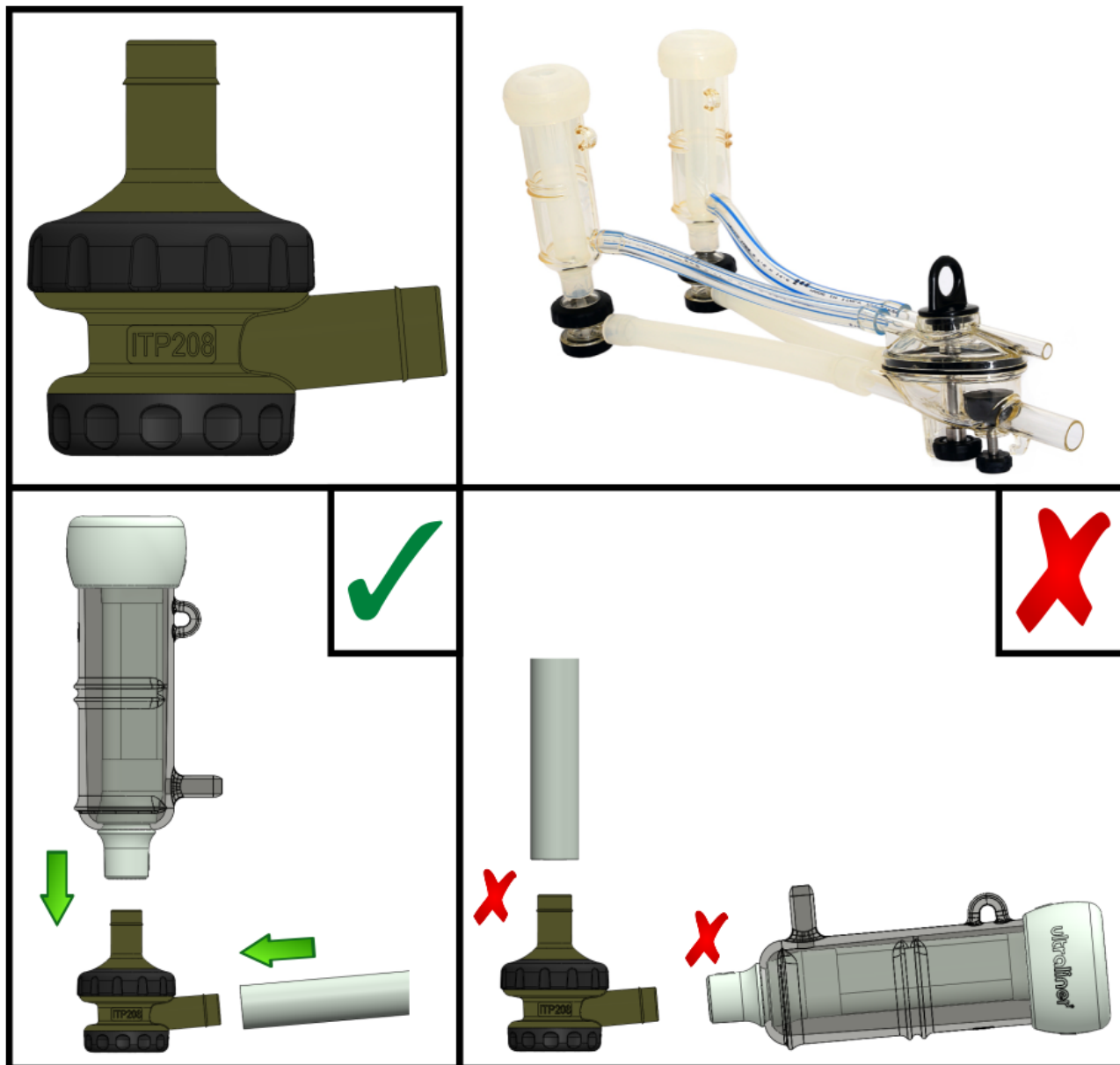


**CAUTION**  
Excessive air ingress into the claw can compromise evacuation quality during milking.  
Please contact your local dealer for more information.



Before installation, carefully inspect the device, checking that the ferrules are not loose and that the diaphragm is not damaged.

The ITP208 device must be installed carefully, interposing it between the complete teat and the short milk tube, paying particular attention to correct orientation.

**CAUTION**

After installation of ITP208, ensure that the liners are not twisted, preventing damage to the teat during milking.

## 4 TECHNICAL FEATURES

| General technical features           |  |   |
|--------------------------------------|--|---|
| Models                               | ITP208 (ventilated / non-ventilated)   |   |
| Weight                               | 30 g (0.07 lbs)  |   |
| Capacity                             | 20 cc (0.67 fl oz)   |   |
| Dimensions                           | 65 x 65 x 45 mm (2.56 x 2.56 x 1.77 inch)  |   |
| Milk pipes (inlet and outlet)        | ID 11mm - OD 14 mm (ID 0.43 inch - OD 0.55 inch)   |   |
| Operating vacuum                     | 36 ÷ 50 kPa (10.63 ÷ 14.76 in hg)  |   |
| Vacuum limit                         | MAX 60 kPa @ 25°C (MAX 17.72 in hg @ 77°F)   |   |
| Operating temperatures (environment) | +5 ÷ +45°C (+41 ÷ 113°F)   |   |
| Transport/storage temperatures       | -20°C ÷ +70°C (-4 ÷ 158°F)   |   |
| Washing temperatures (limit)         | MAX 100°C (MAX 212°F)  |   |
| Evacuation capacity in washing       | 15 ± 1 l/min (50kPa) [3.96 ± 0.26 gpm (14.765 in hg)]  |   |
| Vacuum consumption (detachment)      | <b>ITP208 ventilated</b>   | <b>ITP208 non-ventilated</b>  |
|                                      | 19.0 ± 2 l/min (50kPa) [5.02 ± 0.53 gmp (14.76 in hg)]<br>17.0 ± 2 l/min (36kPa) [4.49 ± 0.53 gmp (10.63 in hg)] | 14.5 ± 2 l/min (50kPa) [3.83 ± 0.59 gmp (14.76 in hg)]<br>14.0 ± 2 l/min (36kPa) [3.7 ± 0.53 gmp (10.63 in hg)] |
| Vacuum consumption (milking)         | 4.0 ± 1 l/min (50kPa) [1.06 ± 0.26 gmp (14.76 in hg)]<br>3.5 ± 1 l/min (36kPa) [0.93 ± 0.26 gmp (10.63 in hg)]   | ---   |

## 5 FORESEEN AND UNFORESEEN USE

### 5.1 Foreseen use

All those specified within Chapter 3.

### 5.2 Unforeseen use

All those not specified within Chapters 3.

## 6 START-UP OPERATIONS

### 6.1 Pre-washing

After the first installation a pre-washing routine is required to remove any impurity.

## 7 MAINTENANCE

### 7.1 Requirements for storage

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

### 7.2 Cleaning

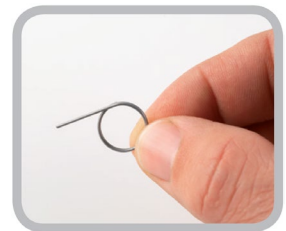
The ITP208 device (all versions) needs to be thoroughly washed after each milking session.

This should be done in accordance with industry standard recommendations, ensuring the routine is followed with the correct cleaning solution concentrations, temperatures and durations.



#### CAUTION

**Before each milking, ensure that all devices are in good condition and the vents are not occluded. In this case, delicately remove the impurities with calibrated pins D. 0,6mm. For more information please contact your local dealer.**



### 7.3 Periodical maintenance

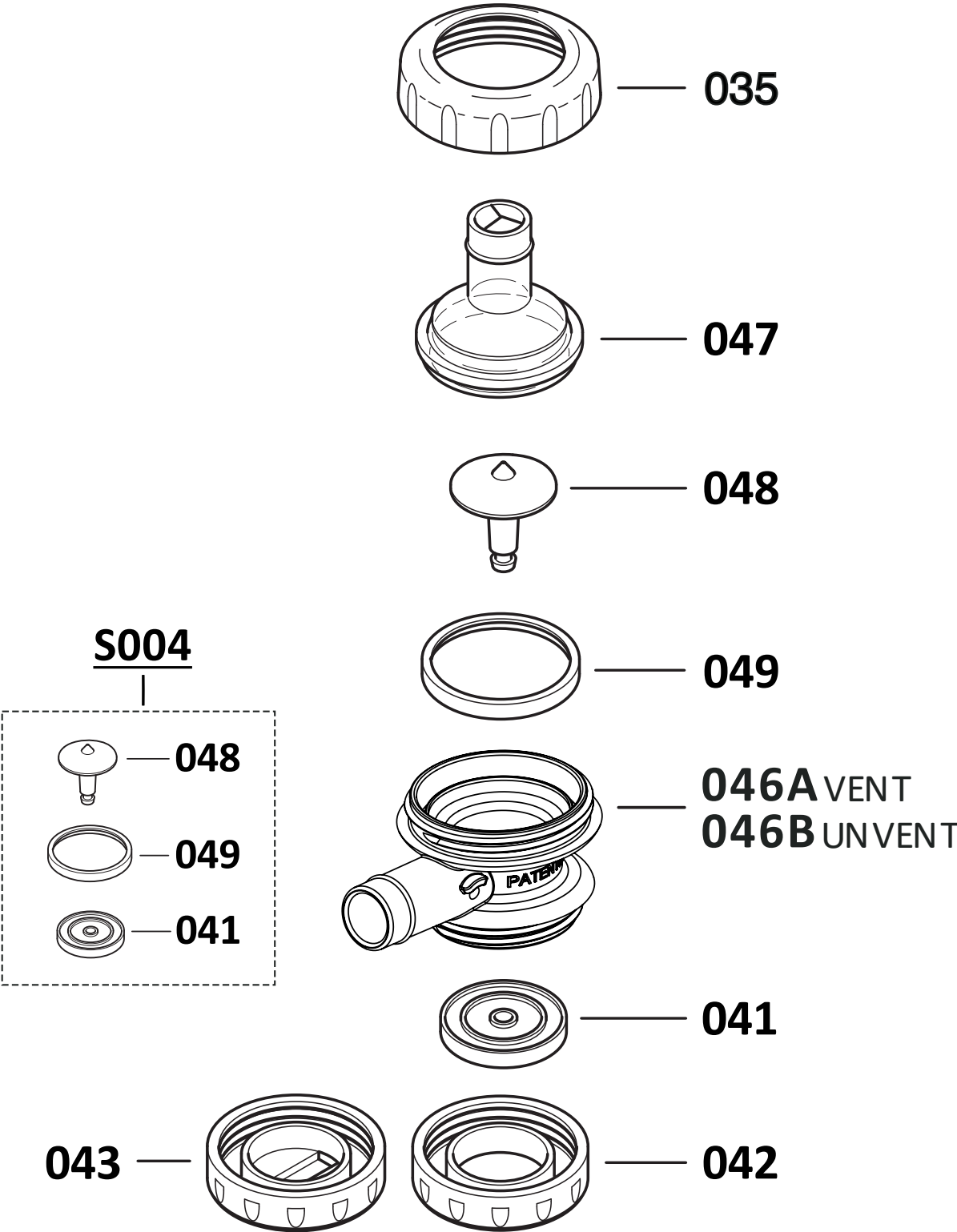
| Spare part reference  | Description | Action  | Interval                             |
|-----------------------|-------------|---------|--------------------------------------|
| --                    | ITP208      | Clean   | Every milking routine                |
| S004<br>(service kit) | Shutter     | Replace | Once a year or 4.500 operating hours |
|                       | Gasket      |         |                                      |
|                       | Diaphragm   |         |                                      |



#### NOTE

**Inspect all components for signs of damage and/or wear at regular intervals.  
Replace damaged parts immediately using only original milkrite | InterPuls spare parts.  
After replacements a pre-washing routine is required to remove any impurity.  
The user retains responsibility for correct installation and maintenance.  
Please contact your local milkrite | InterPuls dealer or sales representative for assistance if required.**


8 SPARE PARTS DIAGRAM



Ref. 2080033 - 04/22

## 9 TROUBLESHOOTING

| Problem detected   | Possible cause                         | Solution  |
|--|--|---|
| Damaged parts  | --                                     | Replace damaged parts.  |
| Milk or air leaks  | Gasket assembly/integrity              | Check the correct insertion direction of the gasket, replace if damaged   |
|  | Loose ferrules                         | Check that the ferrules are fully tightened   |
| Frequent rupture of the diaphragm  | Excessive use, max. end of life        | Comply with the periodic maintenance frequency indicated in the manual  |
|  | Excessive ingress of impurities        | Ensure that the animal's teats are properly cleaned before milking, limiting the ingress of macro-impurities capable of abrading and damaging the diaphragm   |
| The device does not correctly switch the shutter (open/close) during milking | Gasket assembly/integrity              | Check the correct insertion direction of the gasket, replace if damaged   |
|  | Diaphragm assembly/integrity           | Check the correct insertion direction of the diaphragm, replace if damaged  |
|  | Vent occlusion                         | Remove impurities using calibrated pin D. 0.6 mm  |
|  | Loose ferrules                         | Check that the ferrules are fully tightened   |
|  | Device orientation                     | Check the correct orientation of the ITP208 device  |
| The device does not correctly switch the shutter (opening) during washing    | Milking cluster position, vacuum leaks | Ensure that the unit is correctly positioned and that there are no vacuum leaks between the liners and the washing distributor used   |
|  | Vacuum level in the system             | Check that there are no vacuum leaks in the system, excessive pressure drops and that the minimum vacuum reserve is adequate.<br>If necessary, increase the vacuum level; if the problem persists, the shutter can be opened by pressing it with a finger (outer diaphragm side). |
|  | Device orientation                     | Check the correct orientation of the ITP208 device  |

|  |                |  |
|--|----------------|--|
| The device switches continuously during washing (shutter opens/closes) | High flow rate | <p>Gradually reduce the flow rate by adjusting the settings on the washing distributor in use.</p> <p> It is normal for the shutter to repeatedly open/close when the flow rate through the device is close to the maximum value. As long as the device does not block completely, allowing the washing solution to escape, its operation is still compliant. Please contact your local dealer for more information.</p> |
|--|----------------|--|

10 RELATED PRODUCTS

10.1 ITP203

Dedicated documentation can be found at the following links



[Link ITP203](#)

10.2 ITP205

Dedicated documentation can be found at the following links



[Link ITP205](#)



