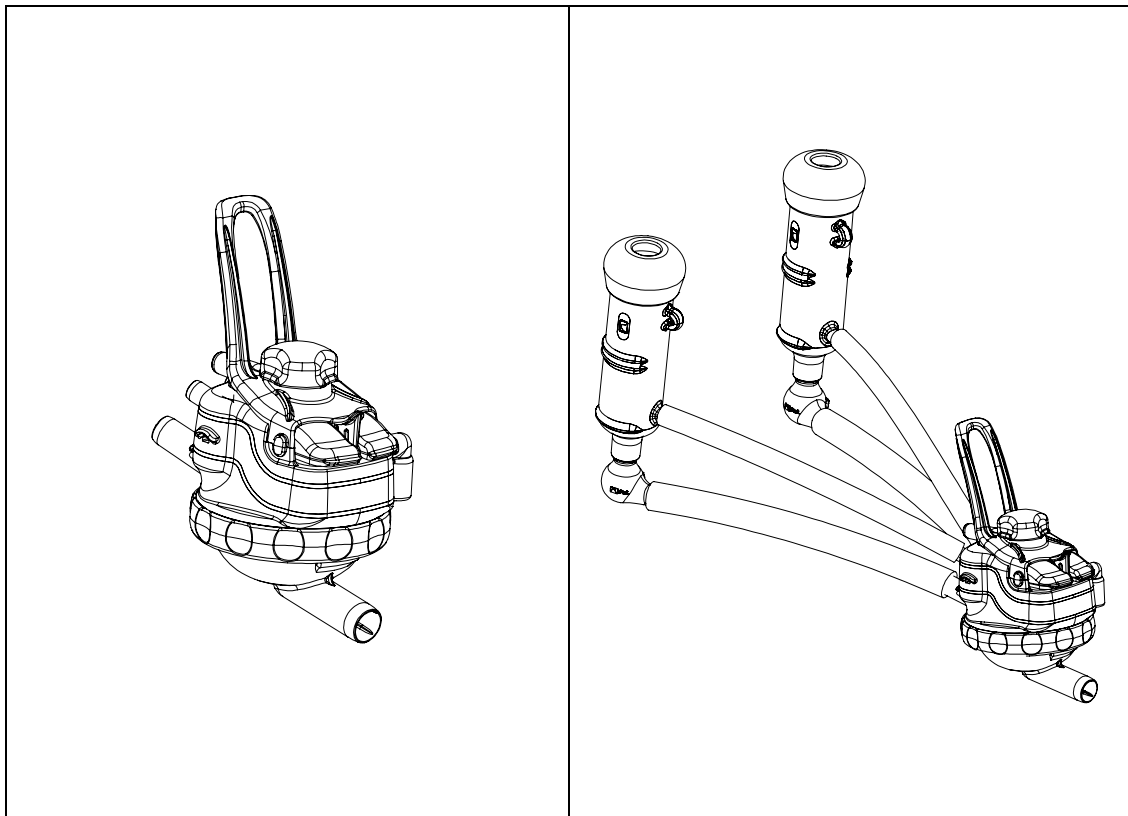


User Guide & Owner Manual  
Original Instructions

# ITP206® Milking Claw & ITP206® Milking Cluster



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TYPE OF DOCUMENT	User Guide & Owner Manual
DOCUMENT REF. CODE	2060029_MI_01.02.13
EDITION	Rev.01.02.12
PRODUCT MODEL	ITP206® Milking Claw & ITP206® Milking Cluster
YEAR OF MANUFACTURE	2011

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## 1. GENERAL GUIDANCE AND SECURITY WARNINGS

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### Important instructions

To ensure the safety of the operators and to avoid possible damage to the machinery, it is essential to acknowledge what is outlined in this instruction manual before performing any activities.

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### Symbols used in the manual

The following symbols will be used in this manual to highlight instructions and warnings which are particularly important:



#### **ATTENTION**

**This symbol indicates accident prevention methods for operators and/or other people at risk.**



#### **WARNING:**

***This symbol indicates the possible damages which can be caused to the machinery and/or the component parts.***



#### **NOTE:**

*This symbol indicates useful information.*

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### Rules of usage



#### **ATTENTION**

**Non-compliance with the warnings presented in this manual can lead to the malfunctioning of the machinery or damage to the system.**

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### Disclaimer

InterPuls S.p.A. denies any liability for damages caused to persons, animals or objects through the misuse of the machinery.

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## 2. GENERAL PRODUCT DESCRIPTION

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### Intended use - ITP206<sup>®</sup> Milking Claw

The ITP206<sup>®</sup> Milking Claw is a claw which can be operated manually or automatically, developed to milk small ruminants such as goats and sheep and suitable for both high- and low-line milking plants.

ITP206<sup>®</sup> incorporates two independent push-buttons to open/close the milk lines.

During hand-milking the push-buttons can be activated independently, allowing the extraction of milk from a solitary teat.

To ensure proper functioning, claws without air vents should be fastened to appliances with air admission holes. These appliances must be connected to the milking cluster and be positioned between the teat cup shells and the claw.

In milking plants with automatic shut-off mechanisms, ITP206<sup>®</sup> can be connected to the channel in front of the Control Valve (CV), via the side nipple provided. The CV regulates the cluster shut-off mechanism (closure of the shut-off and withdrawal of the cluster via the cylinder). The CV is operated by a control panel which is in turn attached to a sensor which detects the production of milk (HFS).

When the machine is activated the valves are “normally closed” to avoid leaks.

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### Intended use - ITP206<sup>®</sup> Milking Cluster

The ITP206<sup>®</sup> Milking Cluster is a cluster which can be operated manually and automatically, to milk small ruminants such as goats and sheep and suitable for both high- and low-line milking plants. It is comprised of:

- 1 ITP206<sup>®</sup> Milking Claw;
- 2 teat cup shells complete with teat cup liners;
- 2 short milk tubes which connect the teat cup liners to the milking claw;
- 2 connectors which connect the teat cup liners to the short milk tubes.



#### NOTE

*The connectors are equipped with calibrated openings which emit a controlled stream of atmospheric air inside the tubes. This airstream enables the quick drainage of the milk flow. The internal chamber works as a vacuum which allows the drainage of even elevated flows of milk without the cluster detaching itself from the animal. This, as well as for more critical rates of flow, is possible thanks to the constant vacuum applied near to the teat.*

- 2 small pulsation tubes connecting the teat cups to the claw pulsation hoses which emit pulsation signals received from the pulsator.
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### Unforeseen usage

The machinery, as outlined in this manual, must not be used for purposes other than those foreseen and indicated in the "Intented Use" section.



#### **WARNING**

*Please avoid fastening claws with air valves to clusters with vents, such as automatic valves. If this were so, the cluster's consumption of air would be greater than that foreseen by the regulatory standards.*



#### **ATTENTION**

All other usage, other than that for which the machinery was designed and as is outlined in this manual, as well as alterations not authorised by the manufacturer, are considered "IMPROPER USE"; to this end InterPuls S.p.A. declines any responsibility for damages caused to persons, animals, objects or to the machinery itself.

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### Discouraged usage

The use of the ITP206<sup>®</sup> Milking Cluster in conjunction with automatic valves is **discouraged** given this would create a simultaneous double opening and closing system of the milk lines within the same cluster, with the drawback of having leftover portions of milk outside of the cluster which could be split during the withdrawal phase.

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### 3. INSTRUCTIONS FOR USE

#### Precautionary measures for use

The ITP206® Milking Claw was conceived as part of the ITP206® Milking Cluster, and is equipped with apposite connectors complete with air valves.

The teat cup liner connectors, together with the short milk tubes, must be correctly angled as shown in the following diagram:



The washing processes must be carried out periodically as detailed in section 8 "MAINTENANCE".

### 4. TECHNICAL SPECIFICATIONS

#### ITP206® Milking Claw

Capacity	120 cc
Weight	240 g
Milk inlet tubes	10 x 14 mm
Milk outlet tubes	14 x 18 mm
Pulsation tubes	7,5 x 10 mm
Dimensions of high-line version (L x W x H)	111 x 100 x 173 mm
Consumption (only claw) – version without air vent	0 l/min
Consumption (only claw) – version with air vent	8÷10 l/min
Vacuum consumption	36 ~ 50kPa
<b>ITP206® Milking Cluster</b>	
Weight goats/sheep	760 / 670 g
Consumption	8÷10 l/min
Vacuum consumption	36 ~ 50kPa
<b>Models</b>	
	ITP206® High-line
	ITP206® Low-line

## 5. ITP206® MILKING CLUSTER APPLICATIONS

### 5.1. AUTOMATIC CLUSTER REMOVAL (ACR) WITH PULSATION INTERRUPTION

#### Characteristics

This structure foresees the use of one pulsator for every milking cluster.

This allows:

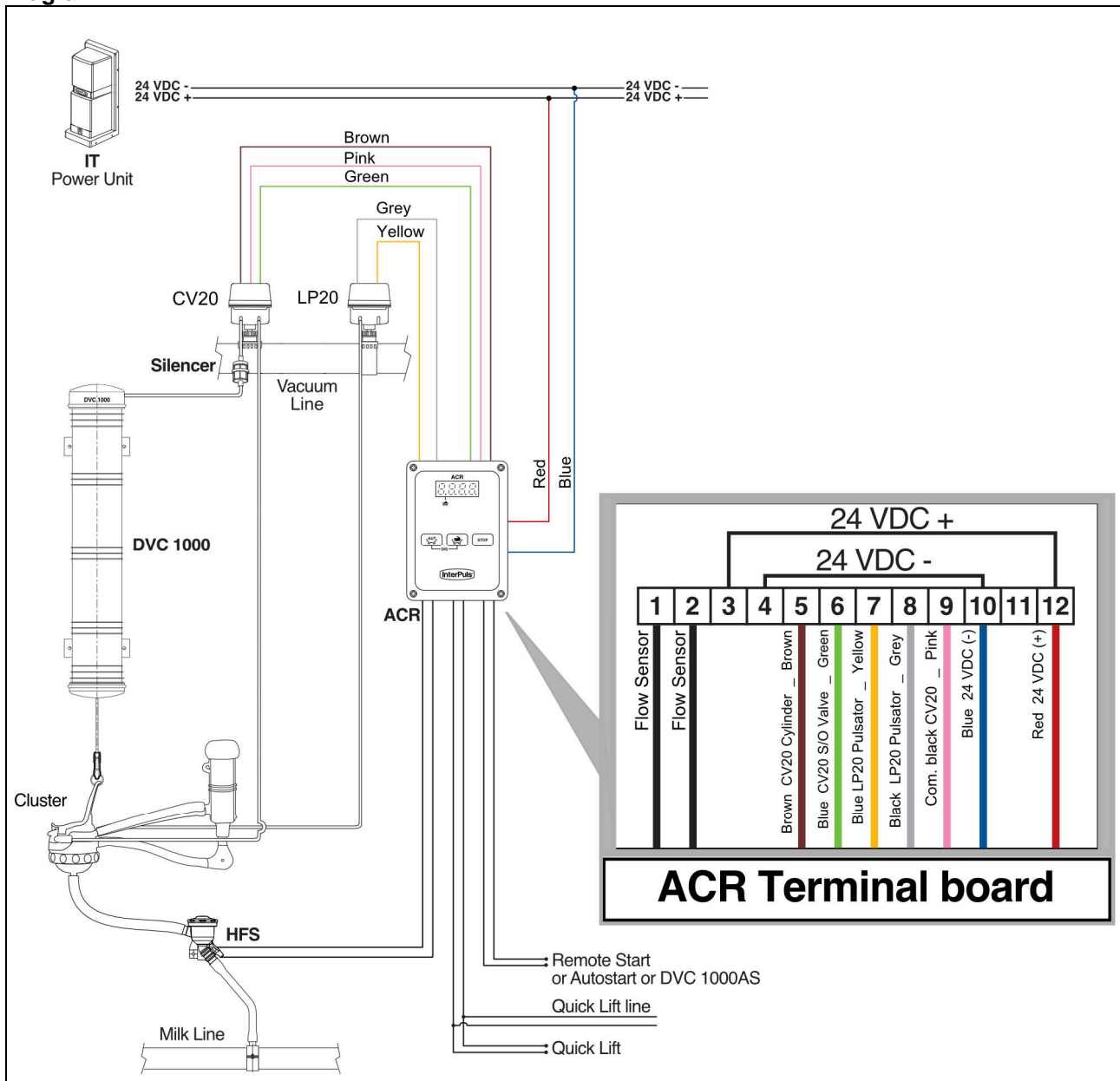
- automatic cluster removal upon termination of the milking process;
- interruption of the pulsations upon termination of the milking process.



#### NOTE

*The unused pulsator nipple must be blocked.*

#### Diagram





## 5.2. AUTOMATIC CLUSTER REMOVAL (ACR) WITHOUT PULSATION INTERRUPTION

### Characteristics

This structure foresees the use of one pulsator for every two milking clusters. This allows:

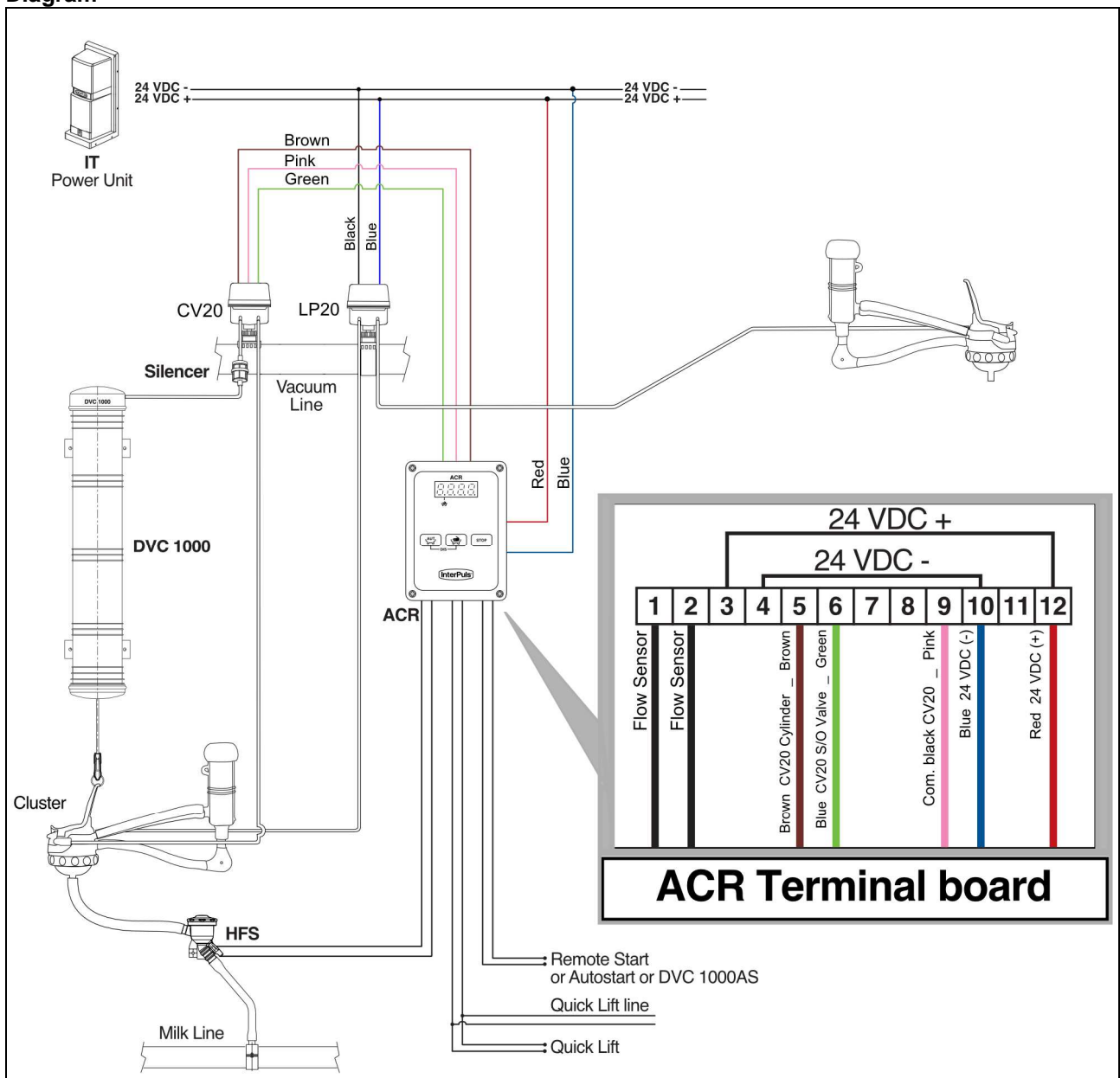
- automatic cluster removal upon termination of the milking process.



#### NOTE

*There is no pulsation interruption upon termination of the milking process.*

### Diagram



### 5.3. AUTOMATIC CLUSTER REMOVAL (ACR) WITH LC30

#### Characteristics

This structure foresees the use of a LC30 for every milking cluster. This allows:

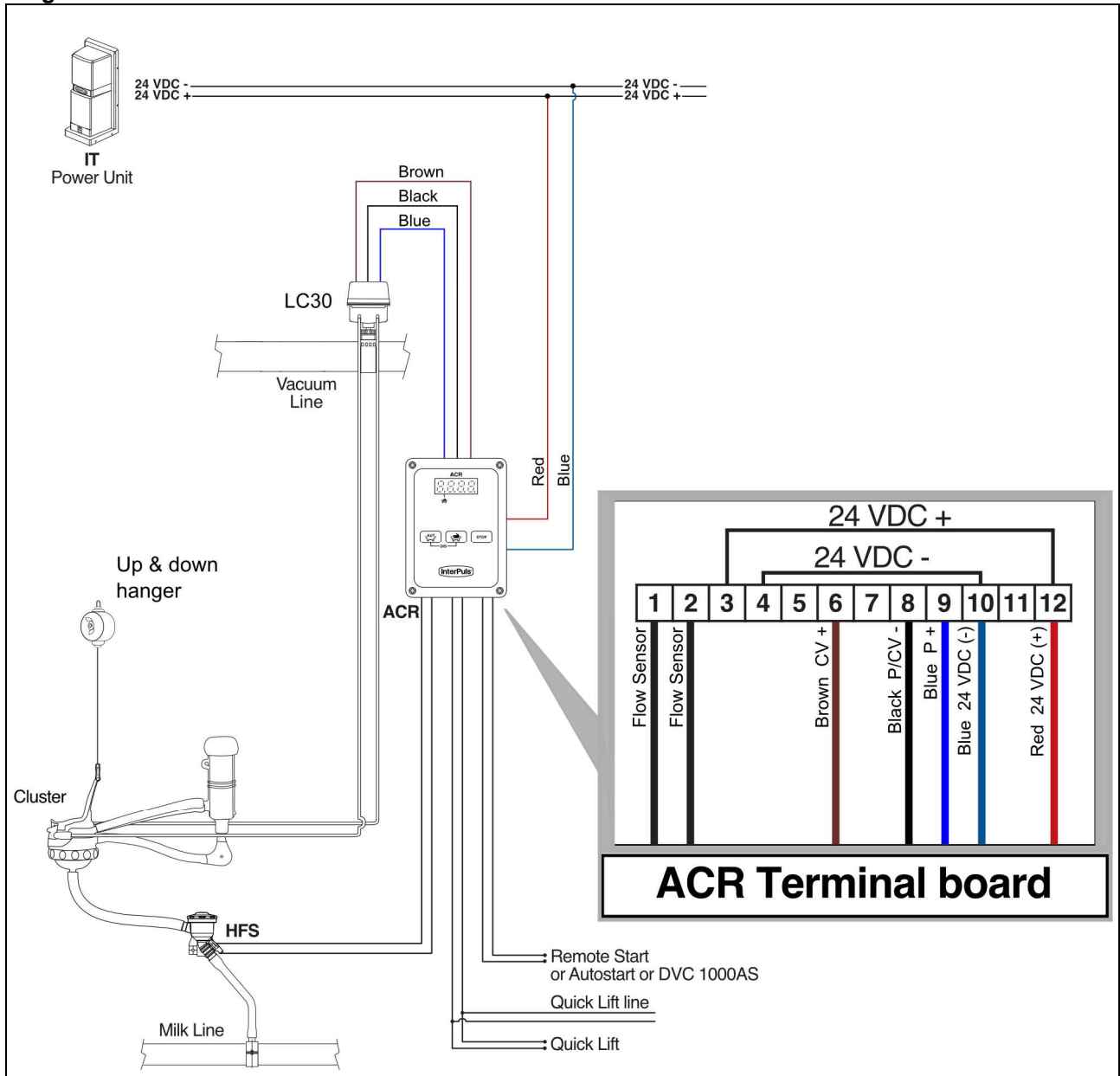
- automatic shut-off of the vacuum upon termination of the milking process;
- interruption of the pulsations upon termination of the milking process.



**NOTE**

*The detachment of the milking cluster must be done by hand.*

#### Diagram



## 5.4. AUTOMATIC CLUSTER REMOVAL (ACR) WITH PULSATOR

### Characteristics

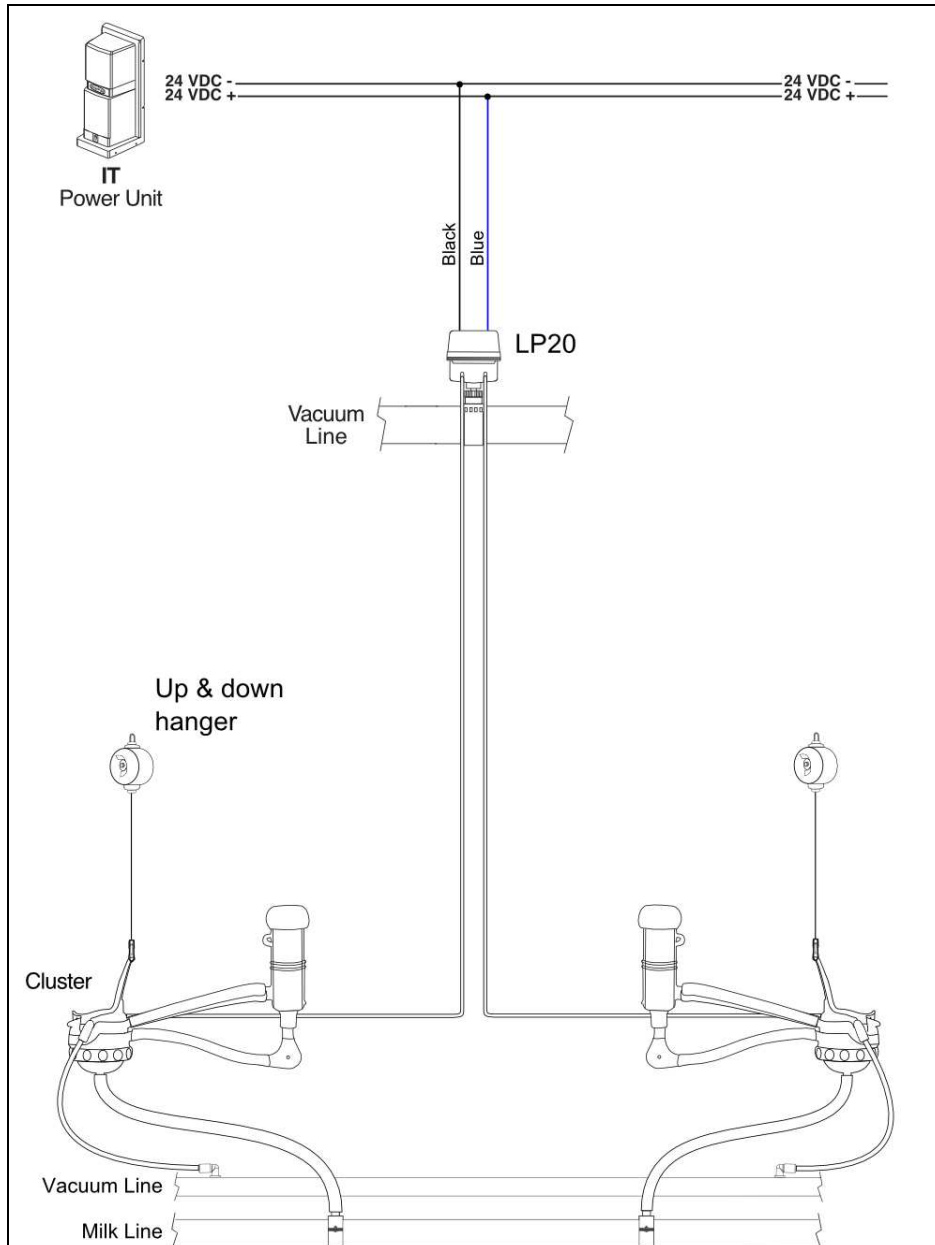
This structure foresees the use of a pulsator to control 2 to 4 milking clusters simultaneously.



#### NOTE

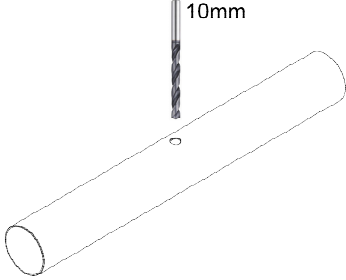
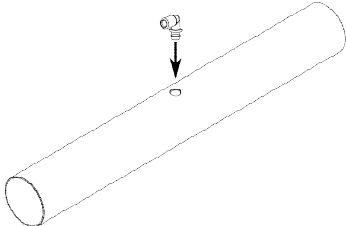
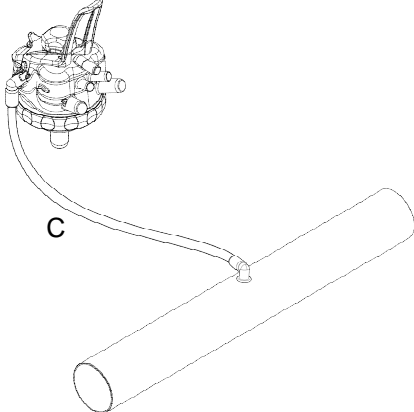
*The removal of the milking cluster must be done by hand.*

### Diagram



## 5.5. INSTALLATION OF THE ITP206<sup>®</sup> MILKING CLUSTER – OPERATIONAL INSTRUCTIONS

To be adopted in manual-type systems

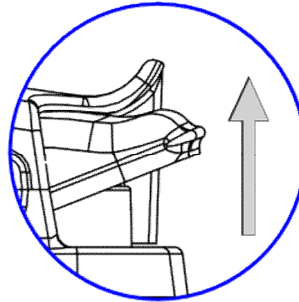
Step	Description	
1	<p>Drill the vacuum line with a 10mm drill piece. The hole must be made on the upper part of the tube or alternatively to the side as shown in Fig.1.</p> <p><b>!</b> <b>WARNING</b>  <i>Avoid drilling the underside of the tube to prevent potential condensation entering the vacuum line.</i></p> <p><b>!</b> <b>WARNING</b>  <i>Upon completion, carefully sand the hole to avoid damage to the gaskets which will be attached.</i></p>	 <p>Fig. 1</p>
2	<p>Insert the nipple in the tubing.</p>	 <p>Fig. 2</p>
3	<p>Connect the milking claw to the nipple via the vacuum line (C).</p>	 <p>Fig. 3</p>

## 6. OPERATIONAL INSTRUCTIONS FOR MILKING

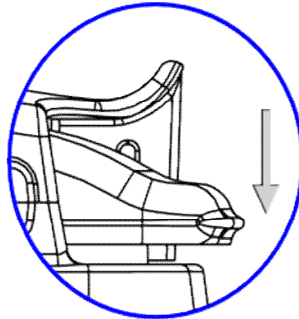
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### Hand-milking

Before beginning the milking process, verify that the push-buttons are raised (valves closed).



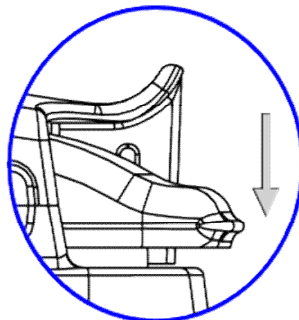
Lower the push-buttons (valves open) before attaching the milking cluster to the animal.



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### Automatic milking

Before beginning the milking process, verify that the push-buttons are lowered (valves open).



## 7. WASHING PROGRAM

After every milking session the milking claw/milking cluster must be washed with:

- a quantity of water and a suitable detergent sufficient to fill the product.

It is advisable to wash the milking claw/milking cluster 2 to 3 times per week with a solution of:

- water + nitric or phosphor-nitric acid (concentration no greater than 3%).

## 8. MAINTENANCE


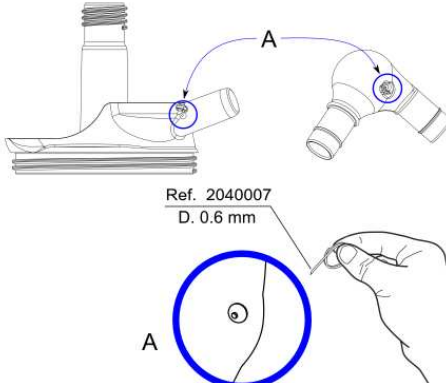
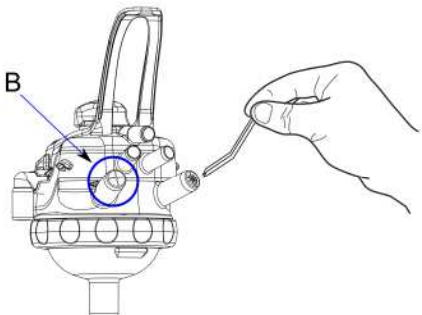
### Preliminary remark

The ITP206<sup>®</sup> Milking Cluster and ITP206<sup>®</sup> Milking Claw require the following maintenance interventions on a periodic basis.



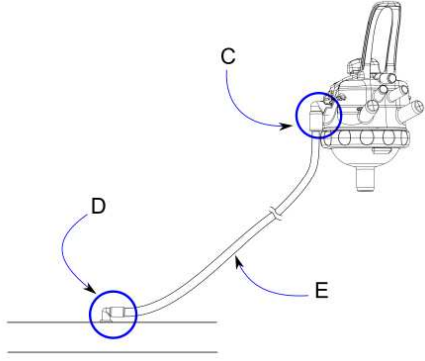
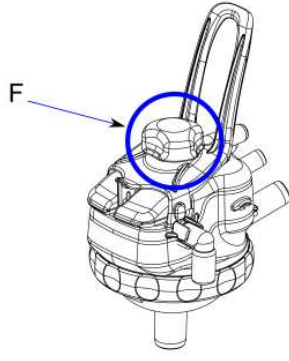
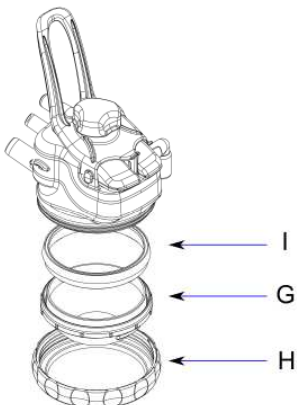
### WARNING

**Ensure that the gaskets are reassembled the correct way up.**

Recommended service program	Frequency	Diagram
<p><b><u>Washing of the milking claws and connector valves</u></b></p> <p>Check the cleanliness of the air admission hole (A) in:</p> <ul style="list-style-type: none"> <li>- each connector;</li> <li>- each milking claw (only versions with air vents).</li> </ul> <p>In the instance the air vents are blocked they must be thoroughly cleaned.</p> <p> <b>WARNING</b>  <i>The cleaning must be carried out using pins with a diameter of 0.6mm (cod.2040007).</i></p>	<p><b><u>Ongoing</u></b></p>	
<p><b><u>Cleaning of milk inlet tubes</u></b></p> <p>Ensure that the milk inlet tubes are not blocked by hay or wool.</p> <p>In case of blockage:</p> <ul style="list-style-type: none"> <li>- unthread the short milk tubes;</li> <li>- remove the hay or wool attached to the white diaphragm (B);</li> <li>- reconnect the short milk tubes.</li> </ul>	<p><b><u>Ongoing</u></b></p>	

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<p><b><u>Cleaning of the vacuum nipple and line</u></b></p> <p>Check there are no blockages in:</p> <ul style="list-style-type: none"> <li>- the vacuum line supplying the push-buttons (C);</li> <li>- the vacuum line nipple (D);</li> <li>- the vacuum line (E).</li> </ul> <p>When reassembling the components ensure the connectors are well fastened to the vacuum line.</p> <p><b>!</b> <b>WARNING</b> <i>Potential airstreams could impede the correct movement of the shutters.</i></p>	<p><b><u>Ongoing</u></b></p>	
<p><b><u>Check the seal of the locking valve plug</u></b></p> <p>Ensure the upper locking valve plug is well sealed. If it is loose it must be tightened.</p> <p><b>!</b> <b>WARNING</b> <i>The locking valve plug must be tightened manually without the use of any other equipment. Excessive tightening could cause the malfunction of the moveable components.</i></p>	<p><b><u>Every 6 months</u></b></p>	
<p><b><u>Replacement of the bowl gaskets (I)</u></b> Exploded view drawing ref. 025.</p> <p>To replace the bowl gaskets:</p> <ul style="list-style-type: none"> <li>- unscrew the ring nut (H) and bowl gasket;</li> <li>- remove the gasket (I) from the bowl;</li> <li>- insert the new gasket (I) in the bowl (G), ensuring there are no fissures;</li> <li>- screw the ring nut (H) along with the bowl gasket onto the milking claw.</li> </ul>	<p><b><u>Every 6 months</u></b></p>	

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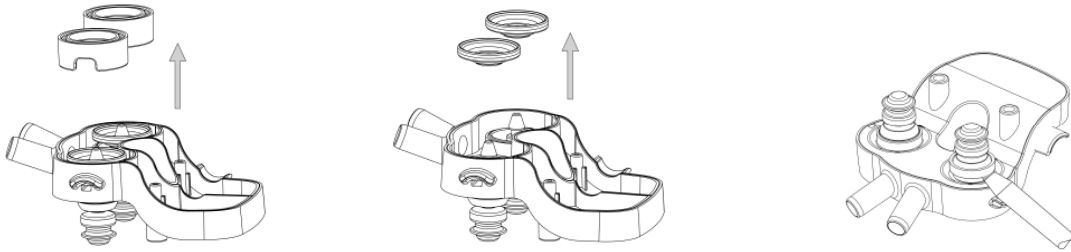
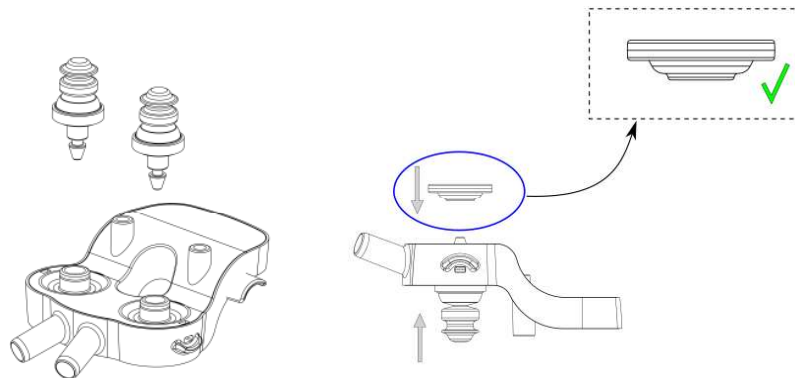
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<p><b>Replacement of gaskets</b> To replace the gasket, refer to the exploded view drawing ref. 010-021.</p>	<p><b>Every 6 months</b></p>	
<p><b>Replacement of bellows</b> To inspect and replace the bellows, refer to the exploded view drawing ref. 019-020.</p>	<p><b>Every 6 months</b></p>	
<p><b>Stage 1</b></p>		

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**Stage 2****Stage 3****Replacement of teat cup liners**

Replace the teat cup liners using the following method:

- unthread the pulsation hoses from the teat cups connecting the claw pulsation hoses;
- unthread the teat cup shells and liners from the connectors of the short milk tubes;
- remove the liners from the teat cup shells;
- insert new liners in the shells ensuring that the head of the liners are correctly aligned with the shells and that the fastening grooves are aligned with the shell mouth.

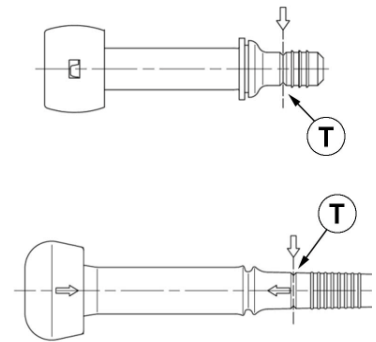
**WARNING**

**For “goat” versions ensure that the arrows marked on the liners are aligned.**

**For “sheep” versions ensure the liners are not twisted on themselves.**

- cut the liners along the fastening grooves as indicated by the dotted line (T) in the diagram shown to the right;
- re-insert the connectors in the teat cups ensuring they are flush.

**At the end of every milking season or after 850 to 2500 hours of milking**

**WARNING**

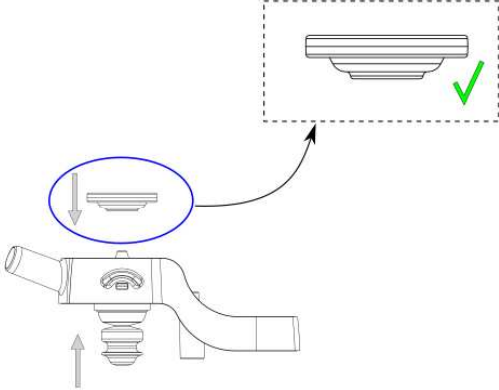

**Avoid the use of lubricants during assembly.**

- Re-insert the pulsation hoses into the shell nipple; if necessary moisten the parts with silicone.

**WARNING**

**Should a liner break, the milking claw must be dismantled and washed internally.**

## 9. PROBLEMS & SOLUTIONS

Problem encountered	Solution
<p><b>Blocked shutters at low temperatures</b></p>	<p>When the cleaning process is carried out at very low temperatures, a build-up of ice can form in the milk chambers which link to the shutters, impeding their opening during the subsequent milking process. It is advisable to inject hot water via the liners until it reaches the milk chambers and melts the ice.</p>
<p><b>The valve will not close following the replacement of the bellow.</b></p>	<p>Ensure the 012 membranes have been installed correctly and the right-way up.</p> 
<p><b>Absence of vacuum in the teat cup liners when push-button lowered</b></p>	<p>A) Ensure the milk tubes are not blocked. B) If the milk tubes are not obstructed, block the teat cup liner where the vacuum is absent with your hand. C) If the above suggestions do not resolve the problem do the following:</p> <ul style="list-style-type: none"> <li>- open the milking claw;</li> <li>- ensure the bellow and 012 membrane are undamaged. If the latter is broken, replace it as detailed in the bellow replacement diagram in section 8 "MAINTENANCE";</li> <li>- manoeuvre the bellows;</li> <li>- close the milking claw.</li> </ul> <p> <b>NOTE</b> <i>If the problem is resolved as indicated in point B it is nevertheless advisable to carry out step C after use to avoid that the problem recurs.</i></p>

### 10. EXPLODED VIEW DRAWING OF THE ITP206® MILKING CLUSTER AND ITP206® MILKING CLAW

