

Lely Astronaut A5 Milking Robot



Safety and Warranty Information

EN-US – English Original

5.1005.8648.0 J





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List of included amendments

Issue Date (yy/mm)	Revision	Chapter(s)	Remarks
2018/05	B		Initial release.
2020/02	C	Several.	Added: <ul style="list-style-type: none"> • Basic Operating Instructions/Chemical Supply
2022/06	D	Preface.	<ul style="list-style-type: none"> • Added applicable type numbers. • New type and serial number plate.
2022/09	E	5	UKCA and CE Declarations of conformity added.
2023/03	F	2,3	<ul style="list-style-type: none"> • Updated Central Unit. • New Lely Control Plus (Android) app.
2024/01	G	1,2,3	<ul style="list-style-type: none"> • New web interface. • Updated feed unit.
2024/07	H	2,3	<ul style="list-style-type: none"> • Chemical safety updated. • Exchange a large chemical packaging with CDS coupler added.
2025/01	J	1, 2, 3.	<ul style="list-style-type: none"> • Changed T4C to Horizon.

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Preface

Manual Contents

This manual contains the safety information and basic operation instructions necessary to operate the Lely Astronaut A5 Milking Robot.

The information in this manual is for operators. A full version of the operation instructions is available at www.lely.com/techdocs/.



Study and understand this information thoroughly before you operate the machine. Failure to do so could result in damage to equipment or personal injury (see on page 2-1). Please consult your local Lely service provider if you do not understand the information in this manual, or if you need additional information. Store this manual in a safe place for future reference.

All information in this manual has been compiled with care. Lely shall not be liable for errors or faults in this manual. The recommendations are meant to serve as guidelines. All instructions, pictures and specifications in this manual are based on the latest information that was available at the time of publication. Your machine may comprise improvements, features or options that are not covered in this manual.

Applicability

The table below shows the type numbers of the milking robot for which this manual is applicable.

Model designation

Model	Type number
Astronaut A5 robot unit right-hand (RH)	5.1005.0010.x
Astronaut A5 robot unit left-hand (LH)	5.1105.0010.x
Astronaut A5 robot unit right-hand (RH)	5.1005.0020.x
Astronaut A5 robot unit left-hand (LH)	5.1105.0020.x
Astronaut A5 robot unit right-hand (RH)	5.1005.0021.x
Astronaut A5 robot unit left-hand (LH)	5.1105.0021.x
Astronaut A5 central unit	5.1005.2700.x
Astronaut A5 central unit	5.1005.0030.x
Astronaut A5 central unit	5.1005.0031.x

Standard Torque Loading of Parts

All the nuts, bolts and screws used on the machine are torque tightened to standard torque loadings applicable to the construction materials used.

If a part has a non-standard torque loading, it is specified in the applicable part of the manual.

Registration

The location of the type and serial number plate is:

- In the robot control room above the beam of the milk jar (see figure 2 on page 8).
- In the central unit on the front side behind the right door under the bottom hinge (see figure 3 on page 9).

Always include the type and serial numbers of your milking robot when you contact your local Lely service provider or order spare parts.

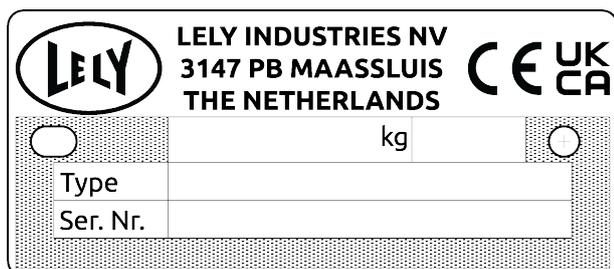


Figure 1. Type and serial number plate

We suggest that you complete the table below with the type and serial numbers of your machine. This makes sure that you can easily find the information.

Type number	
Serial number	

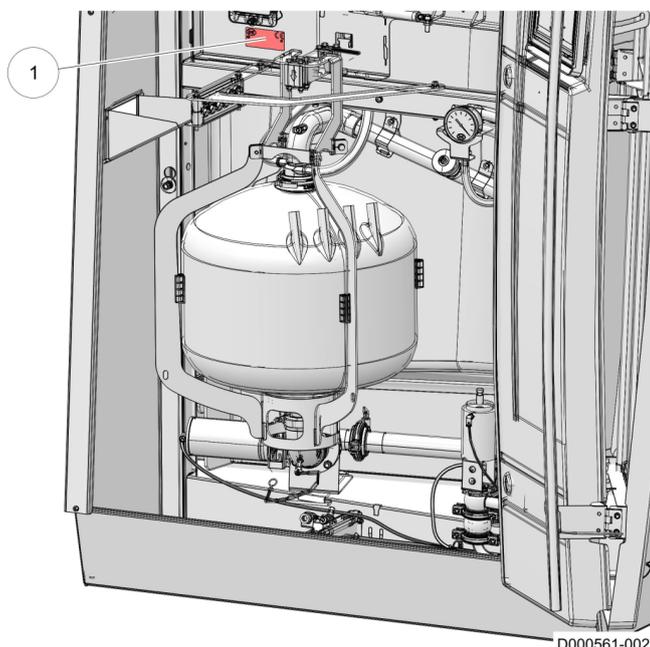
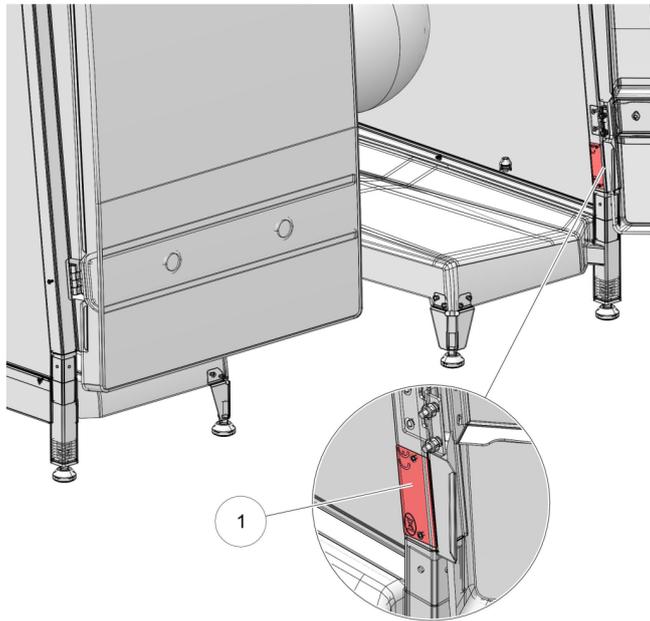


Figure 2. Location type and serial number plate robot unit

KEY: 1. Type and serial number plate



D000562-003

Figure 3. Location type and serial number plate central unit

KEY: 1. Type and serial number plate

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Personnel Requirements



Risk of accident from insufficiently qualified personnel. Unqualified personnel working on or in the danger zone of the machine can be the cause of serious injuries and considerable damage to material.

- ***All activities must only be carried out by qualified personnel.***
- ***Keep unqualified personnel away from the danger zones.***
- ***Only persons who can be expected to carry out their job reliably are authorized as personnel. Persons whose reactions are impaired, e.g. by drugs, alcohol medications are not authorized to work with the machine.***

Maintenance Authorization



***Risk of accident from uncertified technicians.
Uncertified technicians doing maintenance on the machine can be the cause of serious injuries and considerable damage to material.
Only technicians certified by Lely Industries are authorized to do maintenance on the machine, except for the maintenance done by the operator as indicated in the operator manual. If people who are not certified by Lely Industries do maintenance on the machine, the warranty on the machine becomes invalid.***

At the end of each visit, all work done on the Astronaut A5 must be written in the logbook and the logbook must be signed by the certified technician. The logbook must always be kept near the Astronaut A5 for the entire life of the product. The information in the logbook must include:

- The maintenance done (includes also the parts exchanged).
- The date of the maintenance.
- The name of the technician.
- The certification level and ID of the technician.

Technician Training

All the technicians certified by Lely International have completed an approved training program, and passed written and practical examinations during and at the end of the training program. The training is given by a product specialist. The examinations are done under supervision of a master product specialist and include troubleshooting and corrective maintenance of the Astronaut A5.

There are four certification levels:

- (IT) Installation Technician (certification valid for two years).
- (SL1) Service Engineer (certification valid for two years).
- (SL2) Senior Service Engineer (certification valid for two years).
- (PS) Product Specialist (certification valid for two years).

All the technicians certified by Lely International for the A4 needs to have completed an additional training to be certified for the A5.

During training, a trainee is permitted to work for up to a maximum of six months under close supervision of a certified technician. A trainee can only do work on the Astronaut A5 in the presence of an A5 certified technician.



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1 Lely Astronaut A5

1.1 The Lely Astronaut A5 Milking Robot

The milking robot is part of an automated milking system that milks, feeds, and monitors the health of cows. The milking system also examines the quantity and quality of the milk received from the cows, and if necessary, it separates milk that is contaminated or is not according to the correct standard.

A transmitter on each cow enables the system to identify the cow via a unique number and a management system maintains specific records for each cow. The milking system uses these records to manage the milking and feeding of a cow when it enters the milking robot.

The milking system has four primary parts:

- Milking robot (one or more).
- Milk storage tank.
- Control system.
- Compressor.

A milking robot has two primary parts:

- A central unit that supplies power, water, cleaning solutions, regulates pressurized air and applies a vacuum.
- One or two robot units where the cows are milked.

The automated milking system has five operator interfaces:

- The E-Link to control the milking robot.
- The CRS user interface to control and monitor the cleaning and reporting system of all connected milking robots.
- Lely Horizon, the farm management application to manage the herd and to manage and control the milking system and all connected devices.
- The Lely Control Plus (Android) app to operate the central unit.
- The web interface to operate the central unit.

1.2 Intended Use

The milking robot is used for the milking of dairy animals, especially of dairy cattle.

Intended use also implies that the instructions and rules prescribed by the manufacturer are observed.



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2 Safety

This chapter contains safety instructions you must obey when you install, use, or do maintenance on the machine. It also explains the safety decals on the machine.

2.1 Safety Instructions

YOU are responsible for the SAFE operation and maintenance of your machine. YOU must make sure that you and anyone else who is going to operate, maintain or work in the vicinity of the machine knows all the related SAFETY information in this manual.

YOU are the key to safety. Good safety practices protect you and the people around you. Make these practices a working part of your safety program. Make sure that EVERYONE who operates, maintains or works near the machine obeys the safety precautions. Do not risk injury or death by ignoring good safety practices.

- Owners must train operators before they operate the machine. This training must be repeated at least annually.
- The operator must read, understand and obey all safety and operating instructions in the manual.
- A person who has not read and understood all safety and operating instructions is not permitted to operate the machine.
- Do not modify the equipment in any way. Unauthorized modification may impair the function and/or safety and could affect the life of the equipment and persons.
- Only use approved spare parts and make sure that they are only installed by authorized technicians.

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The hazards in the operating zone and working area pose a risk of fatal injury to unauthorized persons.

Unauthorized persons who do not satisfy the requirements described herein are not aware of the hazards in the work area. Unauthorized persons are therefore at risk of serious or fatal injury.

- ***Keep unauthorized persons away from the operating zone and work area.***
- ***If in doubt, approach unauthorized persons and ask them to leave the operating zone and work area.***
- ***Stop work as long as unauthorized persons are within the operating zone and work area.***

2.1.1 General Safety

- Read and understand the manual and all safety signs before you connect power supplies to operate, maintain or adjust the machine.
- Only trained persons are permitted to operate the machine.



- Only use the robot unit to milk cows. Do not use the robot unit for other purposes, such as medical treatment.
- A first-aid kit must be available near the central unit and the robot unit(s). Store in a highly visible place.
- A carbon dioxide or foam fire extinguisher must be available near the central unit and robot unit(s). Store in a highly visible place.
- Install all protective covers and guards before you operate the machine.
- Wear the correct protective clothing and equipment. SWITCH OFF the machine, disconnect and isolate the electrical power supply, release pneumatic pressure and wait for all moving parts to stop before you clean or do maintenance on the machine.
- Know the emergency medical center number for your area.
- Contact your nearest Lely service provider if you have any questions.
- Review safety related items with all operators frequently (annually).
- Industrial electronic equipment may cause interference with household electronic equipment. In such an event the affected equipment must be removed.

2.1.2 Electrical Safety

- Only an authorized electrician must install the electrical power supply for the machine.
- Make sure the electrical grounding of the electrical system and all parts of the machine meet the local rules and regulations.
- Cows are very sensitive for stray voltage and stray voltage can be hazardous for cows. To prevent stray voltage from occurring, make sure you have sufficient grounding and have the grounding examined regularly by an authorized electrician.
- Make sure all electrical switches are in the OFF position before you switch on the electrical power supply.
- Prevent damage by vermin.
- Replace any damaged electrical lines, conduits, switches and components immediately.
- Isolate the electrical power supply at the master panel before you open the electrical panel to work on the electrical system.

2.1.3 Chemical Safety

- Read the safety instructions on the cans or large chemical packaging. The safety data sheets of the Lely products are available at <https://www.lely.com/techdocs/consumables/>.
- To prevent exchange of chemicals (udder care and cleaning detergent), make sure the correct tube is connected to the correct cleaning detergent can. Severe damage to the live stock, humans and parts of the robot can occur when chemical products are exchanged.
- Each chemical has a color code. Each chemical inlet tube has a color corresponding with the chemical. Each chemical inlet tube has a disk with the name of the chemical.
- When ordering chemicals, keep the capacity of the spill trays in mind. Make sure that you keep acids and alkalis separately.

- The system uses chemicals for cleaning and disinfection purposes. The large chemical packaging in use and the stock must be stored in the chemical storage room (acid based liquid, alkaline based liquid and brush cleaner liquid). There is space in the central unit to store the small jerrycans for the chemicals
- The stock of each chemical must be stored according to local rules and regulations. Contact your local Lely service provider for more information.
- Always wear protective gloves and safety goggles when you do work on parts where a chemical product flows through.
- We always recommend to use the Lely chemical consumable products for cleaning and disinfection, as their use in the Lely system is proven and does not harm or damage the Lely equipment.
- Do NOT use chlorine, or other acids than phosphor and citric acid products in the cleaning system.
- Lely Industries N.V. is not liable for, and does not cover under warranty, any damage or harm due to the use of other cleaning products not meeting the Lely specifications.
- Do NOT mix up the chemical products when you replace the jerrycans. Use only the correct chemicals for a hot cleaning.
- For large chemical packaging (200l - 1000l):
 - Do NOT mix up the chemical products when you replace the containers. Use only the correct chemicals for a hot cleaning.
 - Ensure compliance with local legislation, regulations, instructions and precautions concerning the use, storage and disposal of chemicals.
 - All chemical storage facilities are restricted to authorized personnel only.
 - All containers of hazardous chemicals must be properly labeled with the identity of the hazardous chemical(s) and appropriate hazard warnings.
 - It is not allowed to store and use flammable chemicals.
 - Open flames, smoking and localized heating units are not permitted.
 - The storage of chemicals should be at ground level.
 - Do not store chemicals on the floor (even temporarily).
 - Make sure that stored items do not block escape and traffic routes.
 - Spill trays must always be used to store chemicals.
 - Keep sufficient space clear at the front and left and right sides of the chemical storage room. The chemical storage room must be accessible to deliver and carry away a large chemical packaging (200l – 1000l) with the appropriate tools. The transport route to the chemical storage room must have a flat surface.
 - Store the minimum stock levels of chemicals that is reasonable for the level of usage.
 - The chemicals are used in a closed dosing system (do not manually handle chemicals).

2.1.4 Operating Safety

- Read and understand the applicable manual and all safety signs before you connect power supplies to operate, maintain or adjust the machine.
- Only trained persons are permitted to operate the machine.
- Do NOT use chlorine products in the cleaning system. Lely Industries N.V. is not liable for, and does not cover under warranty, any damage or harm due to the use of other cleaning products in the cleaning

system which do not meet the Chemicals Specifications, see <https://www.lely.com/techdocs/consumables>.

- Do NOT mix up the chemicals when you replace the jerrycans.
- Install all covers and guards before you operate the machine.
- Keep hands, feet, hair and clothing away from all moving parts.
- Keep unauthorized persons, especially small children away from the machine at all times.
- Before the pneumatic pressure is supplied to the machine, make sure all parts are tight and that all hoses and fittings are in good condition.
- Make sure the cow detection camera is free of dirt and debris.
- Do not enter the operating area of the robot arm.
- Do not block the robot arm. It can move with sufficient force to cause injury to you and/or the cow.
- Do not help the machine when it is attaching the teat cups to the cow.
- All cows that can enter the milking robot, must have a tag. The cow data must be entered in Lely Horizon with correct reproduction status and up to date health treatment information.
- Always be alert for unexpected movement of the cow. Cows can transmit large forces to parts of the machine.
- Do not look directly into the laser light of the TDS II. Keep the working area as clean and as dry as possible.
- Contact your nearest Lely service provider if you have any questions.
- Review safety related items with all operators frequently (annually).

2.1.5 Maintenance Safety

- Read and understand the applicable manual and all safety signs before you connect power supplies to operate, maintain or adjust the machine.
- Only trained persons are permitted to maintain the machine. Technicians working on the machine must be certified by Lely Industries N.V. The required level is at least Service Level 1.
- SWITCH OFF the machine, disconnect and isolate the electrical power supply, release pneumatic pressure and wait for all moving parts to stop before you do work on the machine.
- Take extreme care when you work near or with high-pressure pneumatic systems. If possible, depressurize the system before you do work on it.
- Wear protective clothing and safety goggles when you do work on the pneumatic system.
- Wear protective gloves and safety goggles when you do work on parts where disinfective and cleaning fluids flow through.
- The handling of udder care requires correct labeling and cleaning before use. Make sure the correct chemical is used.
- Make sure all covers and guards are installed when maintenance work is complete.
- Some parts (vacuum pump, pura, parts where cleaning fluid flows through) can have a hot surface. Make sure they are cooled down before you do maintenance.
- Do not climb on the machine.
- Always use a proper scaffold or a double sided ladder when you do maintenance on the machine.

- Block the cow traffic to the robot unit when you do maintenance on the cow side of the robot unit.

2.1.6 Acid based



Corrosive liquid.
Risk for serious burns to fingers or hands.
Obey all applicable health and safety rules. Avoid contact between the liquid and your skin or eyes. Wear gloves, safety goggles and protective clothing. If the liquid comes into contact with your eyes: rinse immediately with water and get medical advice.



NOTICE

The safety data sheets of the Lely products are available at <https://www.lely.com/techdocs/consumables/>.

2.1.7 Brush Disinfectant



Corrosive liquid.
Risk for serious burns to fingers or hands.
Obey all applicable health and safety rules. Avoid contact between the liquid and your skin or eyes. Wear gloves, safety goggles and protective clothing. If the liquid comes into contact with your eyes: rinse immediately with water and get medical advice.



NOTICE

The safety data sheets of the Lely products are available at <https://www.lely.com/techdocs/consumables/>.

2.1.8 Alkaline based



Corrosive liquid.
Risk for serious burns to fingers or hands.
Obey all applicable health and safety rules. Avoid contact between the liquid and your skin or eyes. Wear gloves, safety goggles and protective clothing. If the liquid comes into contact with your eyes: rinse immediately with water and get medical advice.



NOTICE

The safety data sheets of the Lely products are available at <https://www.lely.com/techdocs/consumables/>.

2.2 Signal Icons

Note the use of the signal words DANGER, WARNING and CAUTION with the safety messages. The signal word for each message uses the following guidelines:



Danger
Indicates a hazardous situation which, if not avoided, will result in death or serious injury.



Warning
Indicates a hazardous situation which, if not avoided, could result in death or serious injury.



Caution
Indicates a hazardous situation which, if not avoided, could result in minor or moderate injury.

NOTICE

Notice
Is used to address practices not related to physical injury e.g. property damage.

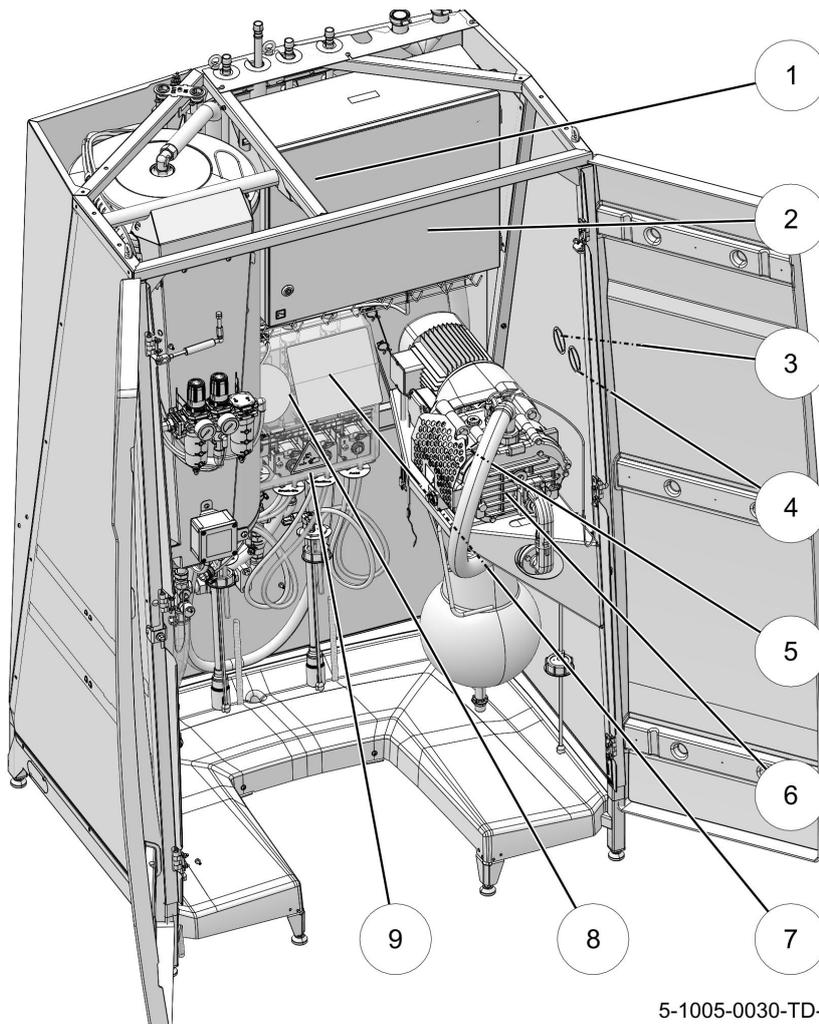


Tip
Indicates information that may help the reader, but not hazard related.

2.3 Safety Decals

2.3.1 Location of the Safety Decals

2.3.1.1 Central Unit



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Figure 4. Location of the safety decals central unit

KEY: 1. Fill the boiler with water before use - 2. Electrocution hazard - 3. Do not use hammer - 4. No fluids in vacuum pump - 5. Temperature hazard - 6. Temperature hazard - 7. Chemical replacement instruction - 8. Wear safety goggles - 9. Chemical hazard

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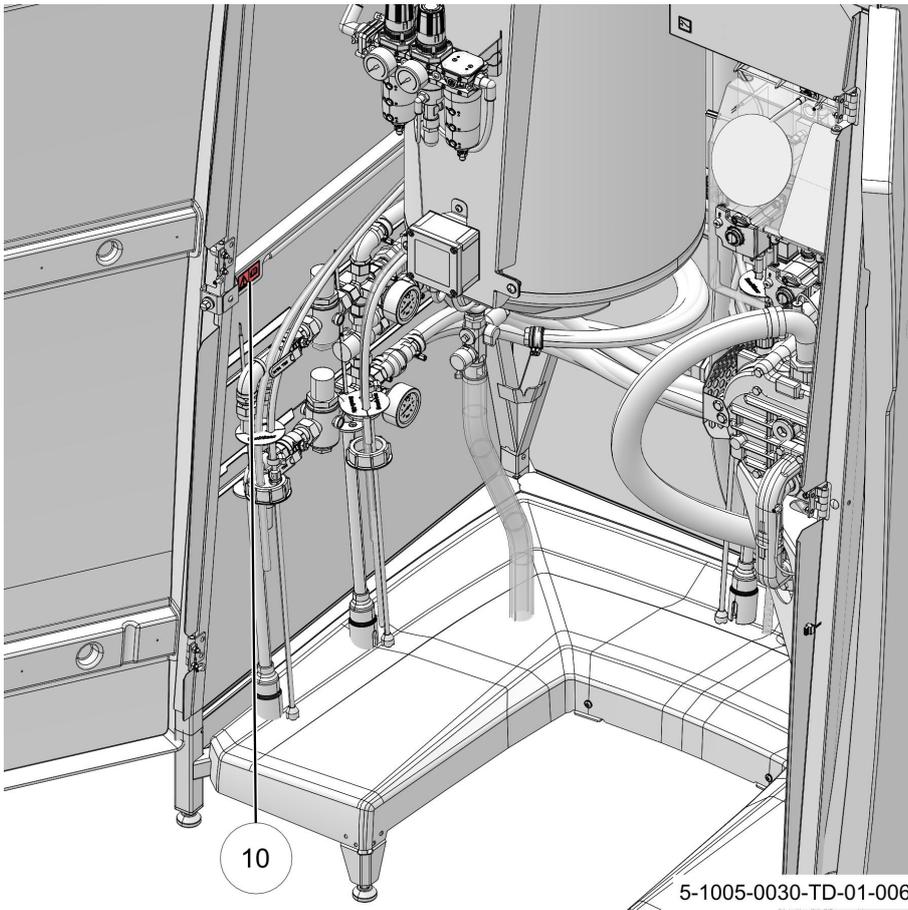
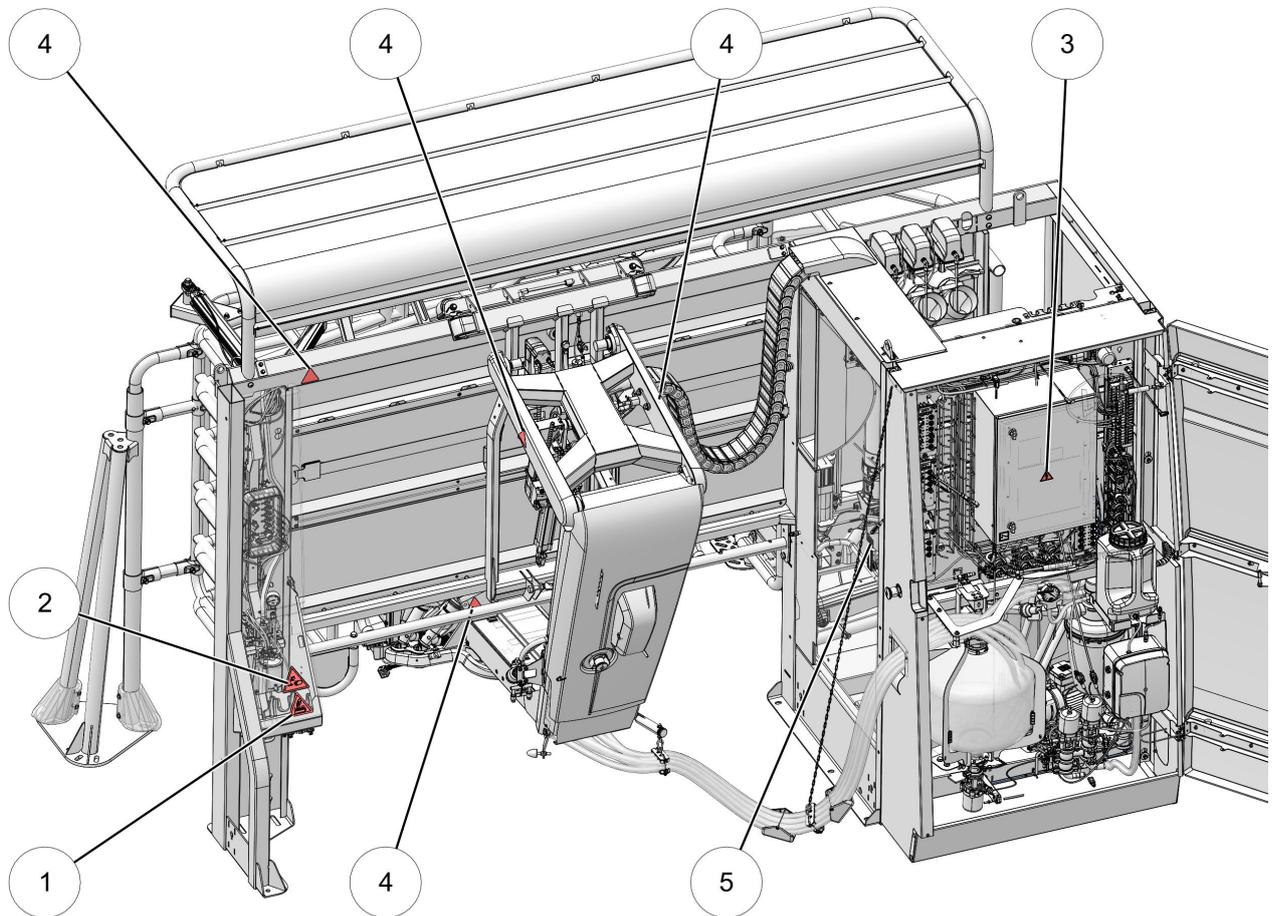


Figure 5. Location of the safety decals central unit

KEY: 10. Read the manual -

2.3.1.2 Robot unit



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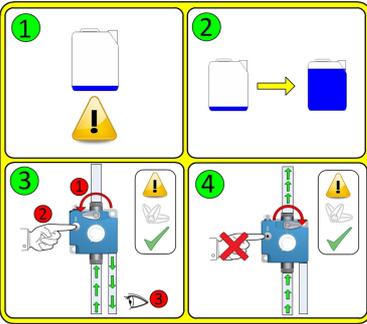
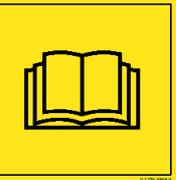
Figure 6. Robot unit

KEY: 1. Temperature hazard - 2. Chemical hazard - 3. Electrocutation hazard - 4. Pinching hazard - 5. Read the manual

2.3.2 Explanation of safety Decals

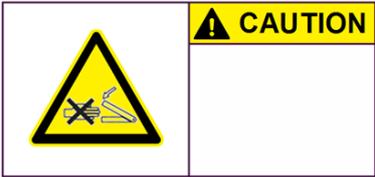
2.3.2.1 Central Unit

Central Unit (see page 2-8).		
	Decal	Explanation
1		<p>WARNING</p> <p>Boiler must be completely filled with water before switching on circuit breaker switch 3.</p>
2	<p>Hazardous voltage decal (except Canada and USA)</p> <p>Hazardous voltage decal (Canada and USA)</p>	<p>Danger: Hazardous voltage</p> <p>Contact will cause electric shock or burn. Disconnect power before servicing.</p>
3		<p>Notice: Risk for material damage</p> <p>Do not use a hammer on the rotor blades of the vacuum pump.</p>
4		<p>Notice: Risk for material damage</p> <p>No additional fluids allowed in the vacuum pump.</p>
5,6	<p>Hot surface (except Canada and USA)</p>	<p>Caution: Hot surface</p> <p>Contact with skin may cause burns. Do not touch.</p>

Central Unit (see page 2-8).		
Decal	Explanation	
  <p>Hot surface (Canada and USA)</p>		
<p>7</p> 	<p>Safety Instructions: Chemical replacement Shows how to replace the chemicals.</p>	
<p>8</p> 	<p>Notice Wear safety goggles.</p>	
<p>9</p>  <p>Corrosive liquid (except Canada and USA)</p>  <p>Corrosive liquid (Canada and USA)</p>	<p>Warning: Corrosive liquid Risk for serious injury. Obey all applicable health and safety rules. Avoid contact between the liquid and your skin or eyes. Wear gloves, safety goggles and protective clothing.</p>	
<p>10</p>  	<p>WARNING Read and understand the operator manual before using this machine. Failure to follow operating instructions could result in death or serious injury.</p>	

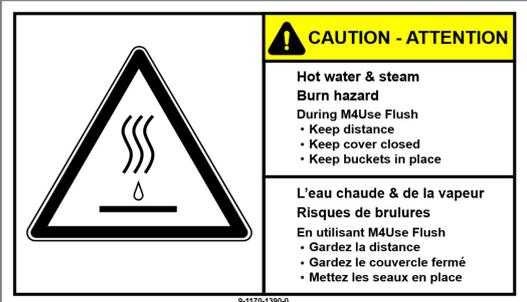
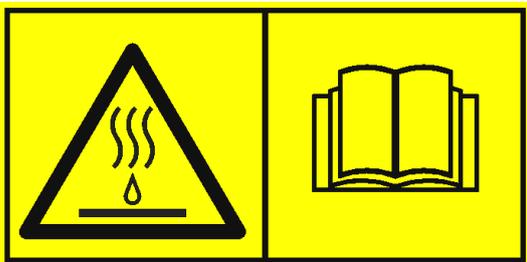
2.3.2.2 Robot unit

Robot unit (see page 2-10).		
	Decal	Explanation
1	<p>Hot surface (except Canada and USA)</p> <p>Hot surface (Canada and USA)</p>	<p>Caution: Hot surface Contact with skin may cause burns. Do not touch.</p>
2	<p>Corrosive liquid (except Canada and USA)</p> <p>Corrosive liquid (Canada and USA)</p>	<p>Warning: Corrosive liquid Risk for serious injury. Obey all applicable health and safety rules. Avoid contact between the liquid and your skin or eyes. Wear gloves, safety goggles and protective clothing.</p>
3	<p>Hazardous voltage decal (except Canada and USA)</p> <p>Hazardous voltage decal (Canada and USA)</p>	<p>Danger: Hazardous voltage Contact will cause electric shock or burn. Disconnect power before servicing.</p>

Robot unit (see page 2-10).	
Decal	Explanation
<p>4</p>  <p>Pinch point (except Canada and USA)</p>  <p>Pinch point (Canada and USA)</p>	<p>Caution: Pinch point Moving parts can crush or cut. Keep hands clear.</p>
<p>5</p> 	<p>WARNING Read and understand the operator manual before using this machine. Failure to follow operating instructions could result in death or serious injury.</p>

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2.3.2.3 M4use (optional)

M4use (optional) (see page 2-11).		
No.	Decal	Explanation
1	 <p>Hot surface (except Canada and USA)</p>  <p>Hot surface (Canada and USA)</p>	<p>Caution: Hot water and steam</p> <p>Contact with hot water and steam may cause burns. Before M4use flush starts, make sure that all buckets are placed in the M4use and that the cover is closed. During the M4use flush, keep the cover closed and stay away from the M4use.</p>
2		<p>WARNING</p> <p>Read and understand the operator manual before using this machine. Failure to follow operating instructions could result in death or serious injury.</p> <p>Hot water and steam. Contact with hot water and steam may cause burns. Before M4use flush starts, make sure that all buckets are placed in the M4use and that the cover is closed. During the M4use flush, keep the cover closed and stay away from the M4use.</p>

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2.3.2.4 Other Safety Decals

Other safety decals	
Decal	Explanation
	<p>Warning: Risk for personal injury</p> <p>Authorized persons only. Only persons who have read and understood all applicable safety instructions are allowed to enter the area.</p>

2.3.3 Installation of Safety Decals

1. Make sure that the installation surface is clean and dry.
2. Make sure that the temperature of the mounting surface is not less than 5 °C (41 °F).
3. Find the correct position for the decal before you remove the backing paper.
4. Remove a small part of the cover paper.
5. Put the decal in the correct position on the installation surface and carefully push the small part of exposed adhesive surface of the decal onto the installation surface.
6. Slowly remove the cover paper and attach the rest of the decal to the installation surface.
7. Puncture small air pockets in the decal with a pin and use the cover paper to smoothen the decal.

2.3.4 Safety Decal Maintenance

Safety decals on the machine display important and useful information that will help you safely operate and maintain the machine.

Obey the instructions below to make sure all the decals stay in the correct position and condition.

- Keep the safety decals clean and legible at all times. Clean the safety decals with soap and water. Do not use mineral spirits, abrasive cleaners or other similar agents that may damage the safety decals.
- Replace safety decals that are missing or are illegible.
- Safety decals can be purchased from your local Lely service provider.

2.4 Emergency Stop Buttons

Central unit

In case of an emergency, remove the power supply plug from the wall socket or switch off the main switch.

Robot unit

Two emergency stop buttons are installed on the robot unit (see figure 8 on page 2-18):

- On the rear of the robot arm.
- On the side of the robot control room cover.

When one of these buttons is pressed, the robot unit immediately stops operation and there is no movement of the robot arm. The switched power on the robot unit is switched off.



Risk of personal injury.

When one of the emergency stop buttons is pressed the electrical and pneumatic power supply are still partially supplied to the milking robot.

Make sure you switch off the electrical and pneumatic power supplies on the central unit immediately after an emergency stop button is pressed.

To reset an emergency stop button, turn the button to the direction of the arrow shown on the button and pull it out until it unlocks. The robot unit must be reset and the robot arm must be re-calibrated before it can operate.

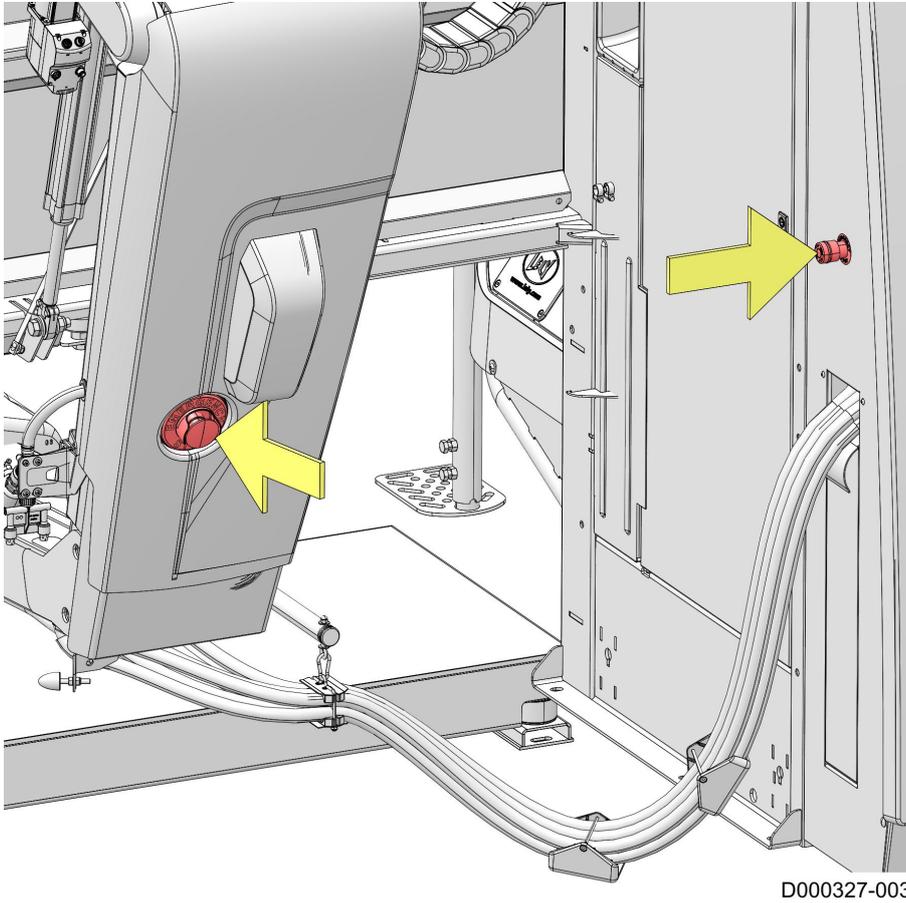


Figure 8. Location of the emergency stop buttons

3 Basic Operating Instructions

3.1 Start Up and Reset

3.1.1 Put the Robot Unit in Operation

3.1.1.1 Put the Robot Unit in Operation with the E-Link

1. On the E-Link select:

1. At the right down corner of the display, button .

When the milking robot is in operation, button  (stop) is displayed.

3.1.1.2 Put robots in a cluster in operation with the CRS web interface



A cluster is in operation when all robot units in the cluster are put in operation locally and the cluster is put in operation with the CRS web interface.

In Lely Horizon select:

1. Button **Manage**.
2. Tab **Devices**.
3. Button **Device Configuration**.
4. Find the CRS and click on the URL. The CRS web interface opens; log in is done automatically.
5. Tab **Farm overview**.
6. In the field **Cluster overview** the applicable cluster.
7. Button **on**. A pop-up window appears that displays the question **Going in operation. Start a cluster rinse?**
8. Button:
 - **OK** or
 - **Cancel**.



Use **Cancel** to skip the cluster rinse. The cluster will be put in operation.

3.1.2 Take the Robot Unit Out of Operation

A single robot unit can be taken out of operation with the E-Link. All robot units in a cluster can be taken out of operation with the CRS.

3.1.2.1 Take One Robot Unit Out of Operation with the E-Link

1. On the E-Link select:

1. At the right down corner of the display, button . When the milking robot is out of operation,

button  (start) is displayed.

3.1.2.2 Take Robots in a Cluster out of Operation with the CRS Web Interface

1. In Lely Horizon select:

1. Button **Manage**.
2. Tab **Devices**.
3. Button **Device Configuration**.
4. Find the CRS and click on the URL. The CRS web interface opens; log in is done automatically.

2. In the CRS web interface select:

1. Tab **Farm overview**.
2. In the field **Cluster overview** the applicable cluster.
3. Button **Off**.
The selected cluster is taken out of operation.

3.1.3 Take the Central Unit Out of Operation

NOTICE

Use the Lely Control Plus (Android only) app or the web interface.

3.1.3.1 Use the Lely Control Plus (Android only) app

Take the Central Unit Out of Operation with the Lely Control Plus App

NOTICE

The Lely Control Plus app is not available for iOS.

1. (see Take One Robot Unit Out of Operation with the E-Link on page 3-2) .
2. Open the doors of the central unit.
3. (see Start the Lely Control Plus App on the Smartphone on page 3-3) .
4. (see Take the Central Unit Out of Operation on page 3-3).

Start the Lely Control Plus App on the Smartphone



Make sure the machine and the smartphone are paired before you start the Lely Control Plus app.

1. Start the Lely Control Plus app. If:
 - No machine is connected, the **Find machine** screen is displayed.
 - A machine is already connected and the home screen is displayed, tap the return button of the smartphone to enter the **Find machine** screen.

2. In the **Find machine** screen tap  to scan for available machines.

3. Tap the line of the applicable machine to connect to it. When the machine is connected, the home screen is displayed.

Take the Central Unit Out of Operation

1. Open the Lely Control Plus app on the smartphone.

2. On the home screen tap button **Online**  .

3. The message 'Set CU out of operation' appears. Tap button  .

On the smartphone display the Operations status is **Offline** and the color changes from red to grey.

Offline 

3.1.3.2 Use the web interface

Take the central unit out of operation with the web interface

1. Take the robot unit(s) connected to the central unit out of operation with the E-Link. For more information, see Take One Robot Unit Out of Operation with the E-Link (see page 3-2).
2. Open the doors of the central unit.
3. Connect to the CU 2.1 web interface (see page 3-4).
4. Take the central unit out of operation (see page 3-4).

Connect to the CU 2.1 web interface

NOTICE

Do not refresh the web interface on your iPhone.

After using refresh the web interface will not be available for a few minutes.

Try closing all tabs and reconnect with wifi to speed up the reconnecting time.

1. If you use a smartphone, connect with the wifi network of the CU 2.1 (CU-LDN).
Use the password 'centralunit'.
2. Open the Firefox browser.
3. Go to: 10.4.1[LDN]:3000.

You are connected. You should see the operational state of the CU 2.1.

Take the central unit out of operation

1. Open the web interface.
2. Press **Operations** to change the status to **Offline**.

3. The message 'Set CU out of operation' appears. Press .

The operations status is **Offline**.

Offline

3.1.4 Reset the Robot Unit

1. Take the robot unit out of operation with the E-Link (see Take One Robot Unit Out of Operation with the E-Link on page 3-2).

2. On the E-Link select:



1. Button .
2. Tab **System**.
3. Tab **Status**.
4. Button **Shutdown**.
3. Wait until the status of all services except 'AGS' and 'ECS' is not **Running**.
4. Select button **Reset all**.
5. Wait until:
 - The status of 'AGS' is not **Running**.
 - The status of 'ECS' is not **Running**.
 - The status of the other services is **Init**.
6. Select button **Start**.
7. The calibration procedure window is displayed.



***Moving robot arm.
Risk of being hit by the robot arm.
Keep obstacles away from the robot arm.***

8. Select button **Start**.
9. Make sure the robot arm moves down and up and right and left.
10. Make sure the robot arm stops at the fully forward position.
11. Select button **Accept** and make sure the robot arm moves to the home position.
12. If applicable, put the robot unit in operation with the E-Link (see Put the Robot Unit in Operation with the E-Link on page 3-1).

3.1.5 Calibrate the Robot Arm

1. On the E-Link select:



1. Button .
2. Tab **Actions**.
3. Tab **Calibrations**.
4. Tab **Robot arm**.
5. Button **Calibration robotarm**.



*Moving robot arm.
Risk of being hit by the robot arm.
Keep obstacles away from the robot arm.*

6. Button **Start**.
7. Make sure the robot arm moves down and up, in and out, right and left.
8. Make sure the robot arm stops at the jetterbox.
9. Select button **Accept**, the teat cups are set straight.
10. Put the robot unit in operation with the E-Link (see Put the Robot Unit in Operation with the E-Link).

3.1.6 Switch ON/OFF the Robot Unit and the Central Unit

3.1.6.1 Switch OFF the Robot Unit

1. Take the robot unit out of operation with the E-Link (see Take One Robot Unit Out of Operation with the E-Link on page 3-2).
2. On the E-Link select:
 1. Button .
 2. Tab **System**.
 3. Tab **Status**.
 4. Button **Shutdown**.
3. Wait until the status of all services except 'AGS' and 'ECS' is not **Running**.
4. Open the robot control box.

5. Set the circuit breakers one by one in the OFF position from right (1) to left (4) (see figure 9 on page 3-7).
6. Set the power supply switch (6) in the OFF position.
7. Install a padlock (5) on the main power supply switch (6) of the robot unit.

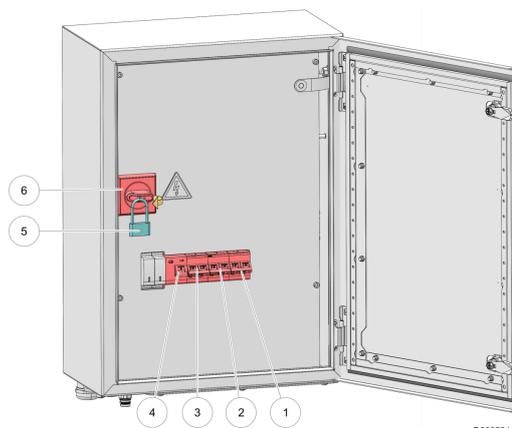


Figure 9. Main power supply switch RU

KEY: 1. Milk pump circuit breaker - 2. Pura circuit breaker - 3. Circuit breaker 24V PSU / UPS (APSU) - 4. Ground-fault circuit interrupter (Safe life switch) - 5. Padlock - 6. Main power supply switch RU

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NOTICE

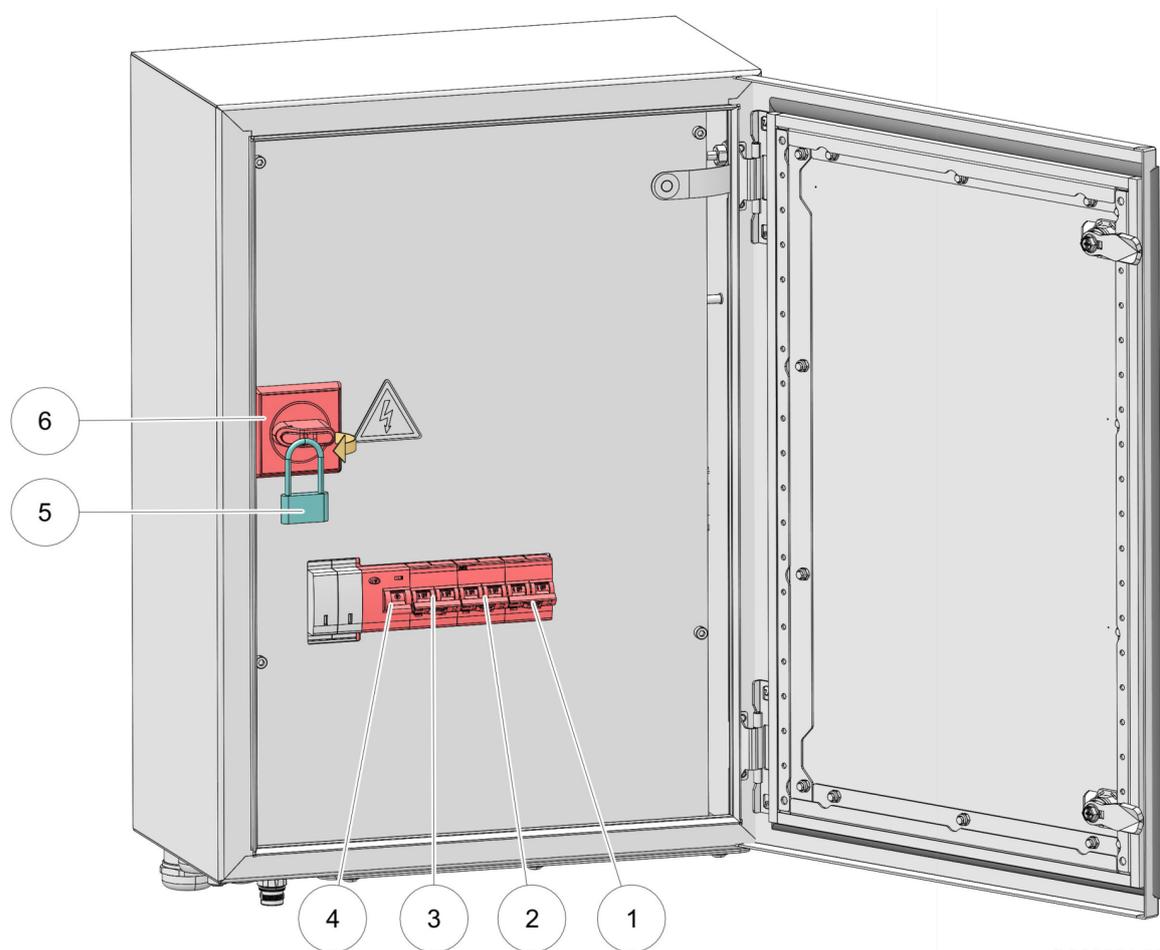
The air pressure remains in the robot until you release it.

3.1.6.2 Switch OFF the Central Unit

Switch off all robot units connected to the central unit:

1. Take the robot unit out of operation with the E-Link (see Take One Robot Unit Out of Operation with the E-Link on page 3-2).
2. On the E-Link select:
 1. Button .
 2. Tab **System**.
 3. Tab **Status**.
 4. Button **Shutdown**.
3. Wait until the status of all services except 'AGS' and 'ECS' is not **Running**.
4. Open the robot unit power box.

5. Set the circuit breakers one by one in the OFF position from right (1) to left (4).



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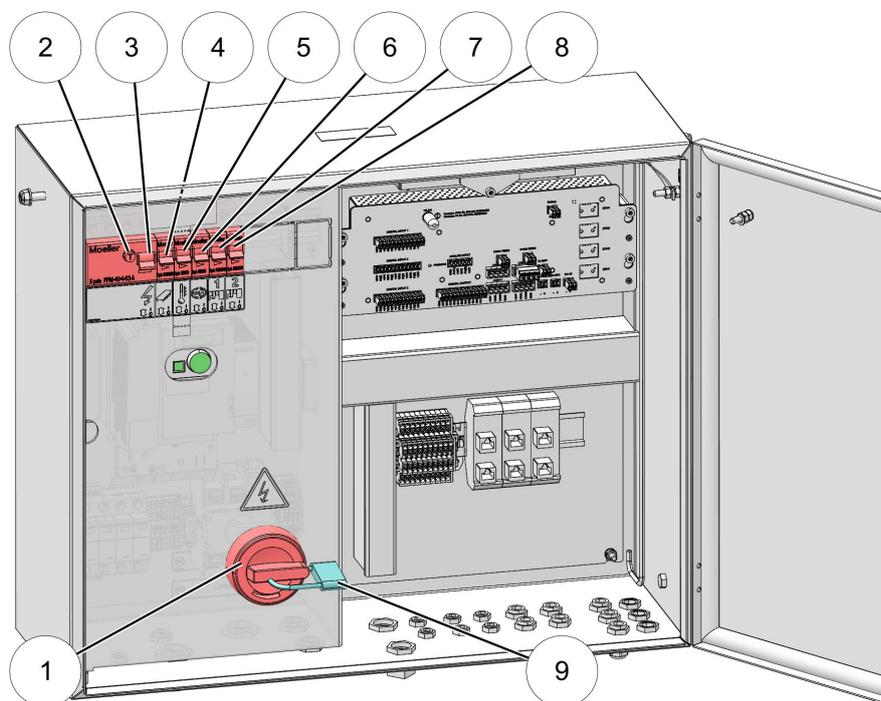
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Figure 10. Main power supply switch RU

KEY: 1. Milk pump circuit breaker - 2. Pura circuit breaker - 3. Circuit breaker 24V PSU / UPS (APSU) - 4. Ground-fault circuit interrupter (Safe life switch) - 5. Padlock - 6. Main power supply switch RU

6. Set the main power supply switch (6) in the OFF position.
7. Install a padlock (5) on the main power supply switch (6) of the robot unit.
8. Open the central control box in the central unit.

9. Set the circuit breakers in the OFF position, one by one from right (8) to left (3).



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Figure 11. Main power supply switch CU

KEY: 1. Main power supply switch CU - 2. Test button save life switch - 3. Save life switch - 4. 24 Vdc power supply switch - 5. Boiler switch - 6. Vacuum pump switch - 7. Robot unit 1 switch - 8. Robot unit 2 switch - 9. Padlock

10. Set the main power supply switch (1) in the OFF position.
11. Install a padlock (9) on the main power supply switch (1) of the central control box.

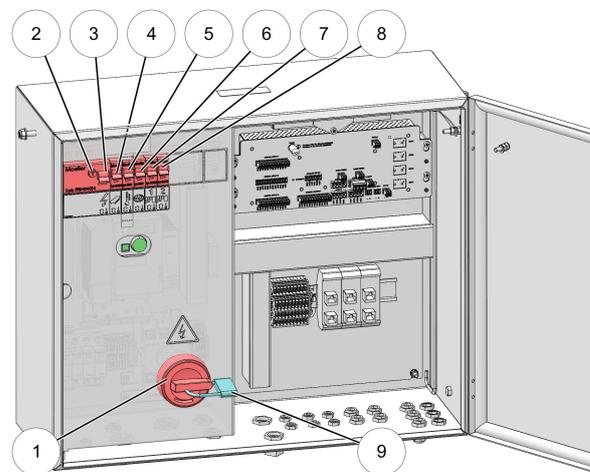
NOTICE

The air pressure remains in the central unit and the robots until you release it.

3.1.6.3 Switch ON the Central Unit

1. Open the door of the central unit.
2. In the central unit make sure:
 - The main power supply is available and correctly connected.
 - The main water supply is available and correctly connected.
 - The compressed air supply is available and correctly connected.
 - The milking robot is correctly connected to the product network.

3. Open the central control box.
4. Remove the padlock (9) from the main power supply switch (1) of the central unit.
5. Set the main power supply switch (1) in the ON position.
6. Set the automatic circuit breakers in the ON position, one by one from left (3) to right (8).
7. Close the central control box.
8. Close the central unit.
9. Start up the robot unit(s).



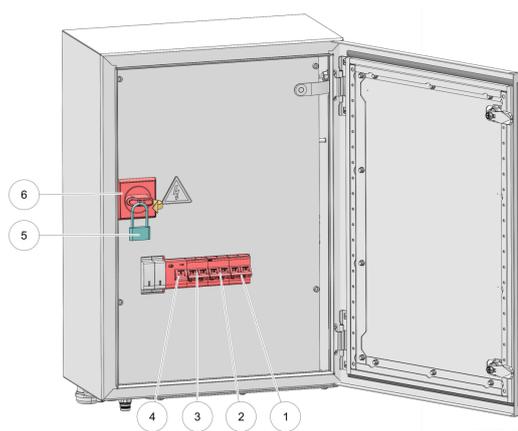
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Figure 12. Main power supply switch CU

KEY: 1. Main power supply switch CU - 2. Test button save life switch - 3. Save life switch - 4. 24 Vdc power supply switch - 5. Boiler switch - 6. Vacuum pump switch - 7. Robot unit 1 switch - 8. Robot unit 2 switch - 9. Padlock

3.1.6.4 Switch ON the Robot Unit(s)

1. If not switched ON, switch ON the power supply from the central unit (see Switch ON the Central Unit on page 3-9).
2. Open the door of the robot unit.
3. Open the robot control box.
4. Remove the padlock (5) from the main power supply switch (6) of the robot unit (see figure 13 on page 3-10).
5. Set the main power supply switch (6) in the ON position.
6. Set the automatic circuit breakers in the ON position, one by one from left (4) to right (1) (only with a Pura).
7. Wait until the E-Link displays the **Startup Astronaut** screen. This takes approximately 30 seconds.
8. Make sure:
 - the status of the AGS = **Running**.
 - The status of ECS shows blank.
 - The status of MB_CCS shows blank.
 - The status of the other services is **Init**.



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Figure 13. Main power supply switch RU

KEY: 1. Milk pump circuit breaker - 2. Pura circuit breaker - 3. Circuit breaker 24V PSU / UPS (APSU) - 4. Ground-fault circuit interrupter (Safe life switch) - 5. Padlock - 6. Main power supply switch RU

9. Select button **Start** At **Robot status** make sure:
 - **Power up** turns green.
 - **Init** turns green.
 - The robot arm calibration window is displayed.



***Moving robot arm.
Risk of being hit by the robot arm.
Keep obstacles away from the robot arm.***

11. In the calibration window, select button **Start**.
12. Make sure the robot arm moves down and up and right and left.
13. Make sure the robot arm stops at the fully forward position.
14. Select button **Accept** and make sure the robot arm moves to the home position.
15. Close the robot control box.
16. Close the door of the robot unit.
17. Put the robot unit in operation with the E-Link (see Put the Robot Unit in Operation with the E-Link on page 3-1).
18. If a second milking robot is connected to the central unit repeat the procedure for the robot unit.

3.2 Interrupt a visit

On the E-Link in the screen **Milking**:



1. Select button .
2. The pop-up window **Interrupt visit** appears:
 - If the visit succeeded, select button **Succeeded**.
 - If the visit did not succeed, select button **Failed**.



If a milking is manually interrupted and the milking is stopped as a successful milking, the teat coordinates of this milking in Lely Horizon and the milking robot are overwritten with the teat coordinates of this specific milking.

3.3 Interrupt Pre-Treatment

On the E-Link In the screen **Milking**:



1. Select button .
2. The pop-up window **Skip pretreatment** appears:
 - Select button **Interrupt** to stop the pre-treatment.

3.4 Holding Gates



Do not use setting **Cancel rinse for cows in waitingroom** in combination with a calf milk line.



All milk will be separated until the robot unit has completed a rinse.

On the E-Link, in the main milking screen:



1. Select button .
2. Close the applicable gate(s) with the button **Close**.
3. Select the number of cows in the waiting area with the  and  buttons.
4. At **Cancel rinse for cows in waitingroom** swipe to the right to set to **Yes**.

The set number of cows is milked without rinsing. When the last cow is milked a rinse is done.

3.5 Alarm Handling

3.5.1 Alarm Handling on the E-Link

3.5.1.1 Confirm Alarms

Non critical alarms



When a non critical alarm occurs the button  appears in the left top corner of the E-Link screen. The circle with the number in the icon indicates the number of currently active alarms. The robot stays in operation.

On the E-Link:



1. Select button .
2. Confirm the alarm on the pop-up window with button **OK**. The robot removes the alarm from the list of current alarms and adds it to the list of history alarms.
3. Remove the cause of the alarm.

Critical alarms

When a critical alarm occurs a pop-up screen appears on the E-Link screen. The robot goes out of operation.

On the E-Link:

1. Confirm the alarm on the pop-up window with button **OK**. The robot removes the alarm from the list of current alarms and adds it to the list of history alarms.
2. Remove the cause of the alarm.

3.6 Chemical Supply

3.6.1 Examine the Quantity of Chemicals



Corrosive liquid.
Risk for serious burns to fingers or hands.
Obey all applicable health and safety rules. Avoid contact between the liquid and your skin or eyes. Wear gloves, safety goggles and protective clothing. If the liquid comes into contact with your eyes: rinse immediately with water and get medical advice.



NOTICE

Do NOT mix up the chemicals when you replace the jerrycans.

Each chemical uses external suction tubes with a specific color. Make sure you connect the external suction tube to the correct chemical supply jerrycan:

- Green tube to the Brush-Dis jerrycan.
- Blue tube to the Alkaline jerrycan.
- Red tube to the Acid jerrycan.
- Yellow or green tube to the Sanitizer jerrycan (USA).

Do NOT use chlorine, or other acids than phosphor and citric acid products in the cleaning system. Lely industries N.V. is not liable for, and does not cover under warranty, any damage or harm due to the use of products not specified in the chemical specifications in the cleaning system. See chemical specifications (see Acid based on page 2-5).

The chemical supply jerrycans must be stored and installed AWAY from the udder care drum.

1. Open the doors of the central unit.
2. Weigh the chemical supply jerrycans:
 - If a jerrycan weighs 2 kg (4.4 lb) or more, there is still sufficient chemical in the jerrycan.
 - If a jerrycan weighs less than 2 kg (4,4 lb), replace the chemical supply jerrycan (see on page 3-15).
3. Make sure the external suction tubes reach the bottom of the chemical supply jerrycans.
4. Make sure there is a spare jerrycan of each type of chemical available.
5. If not, order a new chemical supply jerrycan.
6. Close the doors of the central unit.

3.6.2 Replace a Chemical Supply Jerrycan



Corrosive liquid.
Risk for serious burns to fingers or hands.
Obey all applicable health and safety rules. Avoid contact between the liquid and your skin or eyes. Wear gloves, safety goggles and protective clothing. If the liquid comes into contact with your eyes: rinse immediately with water and get medical advice.



NOTICE

Do NOT mix up the chemicals when you replace the jerrycans.

Each chemical uses external suction tubes with a specific color. Make sure you connect the external suction tube to the correct chemical supply jerrycan:

- Green tube to the Brush-Dis jerrycan.
- Blue tube to the Alkaline jerrycan.
- Red tube to the Acid jerrycan.
- Yellow or green tube to the Sanitizer jerrycan (USA).

Do NOT use chlorine, or other acids than phosphor and citric acid products in the cleaning system. Lely Industries N.V. is not liable for, and does not cover under warranty, any damage or harm due to the use of products not specified in the chemical specifications in the cleaning system. See chemical specifications (see Acid based on page 2-5).

The chemical supply jerrycans must be stored and installed AWAY from the udder care drum.

Preparation

1. Take the robot unit(s) connected to the central unit out of operation with the E-Link (see Take One Robot Unit Out of Operation with the E-Link on page 3-2).
2. Open the doors of the central unit.
3. Remove the transparent cover.

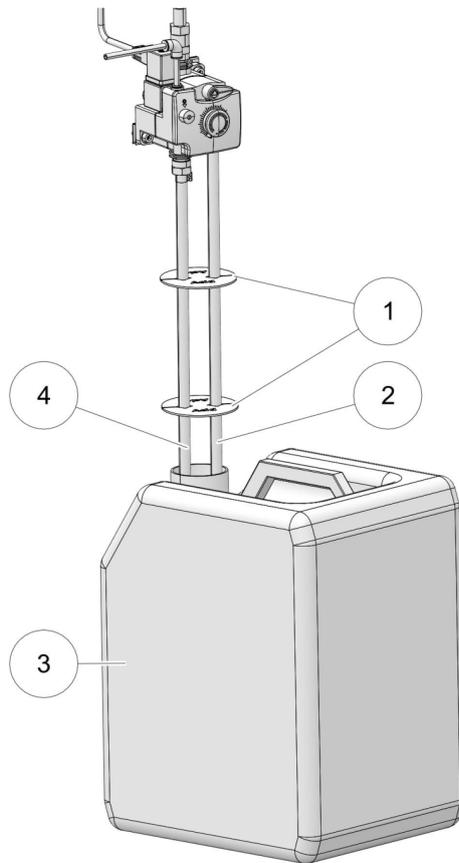
Replace

1. Turn the cap and disconnect the suction tube (4) (see figure 14 on page 3-17) and the return tube (2) from the chemical supply jerrycan (3).

2. Turn the Switch (3–1) (see figure 15 on page 3-17) of the chemical supply pump to the left.
3. Examine for water flow at the return tube (3–3).
4. If there is water flow through the return tube:
 1. Turn the switch (4) to the right.
 2. Replace the non-return valve on the water pipe.
5. Remove the chemical supply jerrycan.
6. Position a new chemical supply jerrycan of the correct chemical in the central unit.
7. Remove the cap from the chemical supply jerrycan.
8. Connect the return tube (2) (see figure 14 on page 3-17) and the suction tube (4) to the corresponding chemical supply jerrycan (3).
 - The green tube to the brush disinfectant jerrycan (see Brush Disinfectant on page 2-5).
 - The blue tube to the alkaline based liquid jerrycan (see Alkaline based on page 2-6).
 - The red tube to the acid based liquid jerrycan (see Acid based on page 2-5).
 - The yellow or green tube to the sanitizer liquid jerrycan (USA) (see Brush Disinfectant on page 2-5).
9. Tighten the cap.
10. Make sure the suction tube touches the bottom of the chemical supply jerrycan.
11. Tighten the gland nut of the chemical supply jerrycan.
12. Bleed the basic pump as follows (see figure 15 on page 3-17):
 1. Turn the switch (3–1) to the left.
 2. Push the button (3–2) several times to suck in the fluid and push the air out of the pump.
 3. Stop when fluid runs back into the chemical supply jerrycan (3).
 4. Turn the switch (4) to the right.

Close-up

1. Install the transparent cover.
2. Close the doors of the central unit.
3. Put the robot unit(s) in operation with the E-Link (see Put the Robot Unit in Operation with the E-Link on page 3-1).
4. Make sure there is a spare jerrycan of each type of chemical available.
5. If not, order a new chemical supply jerrycan.



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Figure 14. Chemical pump with chemical supply jerrycan

KEY: 1. Discs - 2. Return tube - 3. Chemical supply jerrycan - 4. Suction tube

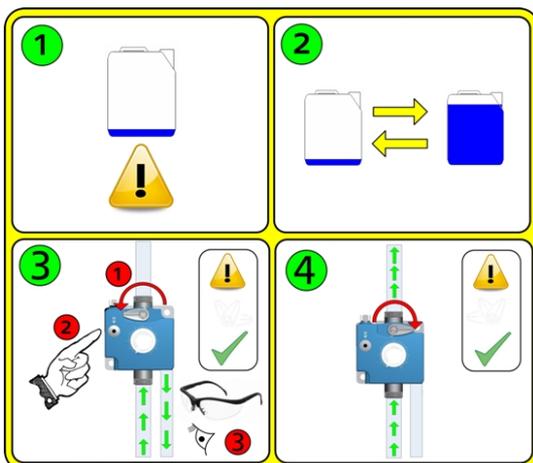


Figure 15. Chemical supply pump



3.6.3 Exchange a large chemical packaging with CDS coupler

This procedure applies to large chemical packaging where the packaging is exchanged and the suction lance is transferred from the empty package to the full package:

- Acid.
- Alkaline.

When you exchange a large chemical packaging with CDS coupler for Brush-dis or sanitizer the new suction lance is pre-installed in the new packaging and should not be exchanged.

WARNING

Corrosive liquid.

Risk of severe skin burns or eye damage.

Obey all applicable health and safety rules. Avoid contact between the liquid and your skin or eyes. Wear gloves, safety goggles and protective clothing. If the liquid comes into contact with your eyes: rinse immediately with water and get medical advice.

- **Operator must be trained for safe handling of large chemical packaging (200l - 1000l).**
- **Use the proper lifting tools with sufficient load capacity to lift and transport a large chemical packaging. For instance a drum lifting trolley.**
- **Lift the large chemical packaging only as high as strictly necessary while driving and prevent the packaging from falling.**
- **Make sure the transport route has a flat surface.**
- **Never drive off a slope with the load in the forward direction.**
- **Make sure the large chemical packaging is stable before you start driving.**
- **The large chemical packaging must be stored and connected in the chemical storage room.**
- **As a result of leakage, corrosive liquid can accumulate in the chemical storage room.**
- **In case of leakage always contact Lely to determine the cause.**
- **Repairs to the suction lance must be done by an authorized technician.**
- **Do not pour-over residual chemicals from the empty large chemical packaging to the new packaging.**



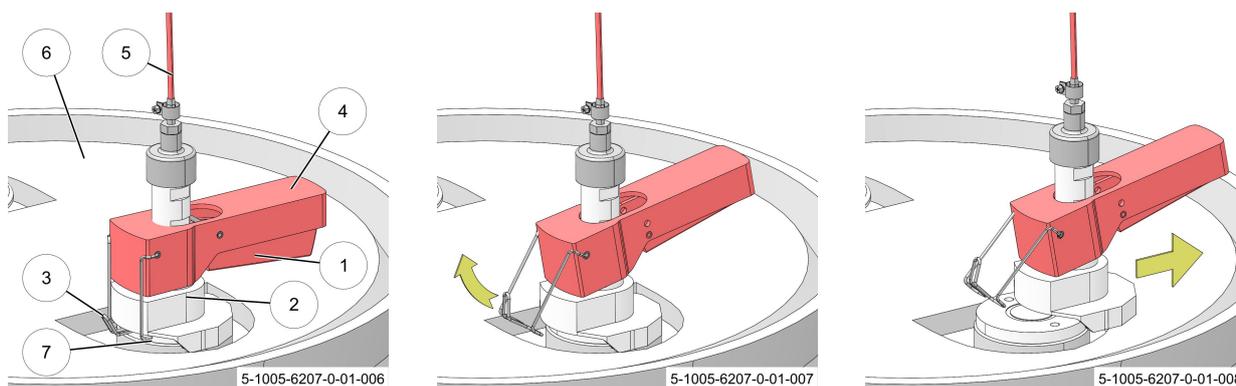
Always store the Safety Data Sheet (SDS) in the vicinity of the large chemical packaging. In case of an emergency, follow the safety precautions mentioned in the SDS. In case of a small spillage, wash away the chemicals with an excessive amount of water. In case of a large amount of spillage, call the emergency number of your area. Only use chemicals prescribed by Lely.

Large chemical packaging of 200 litres are delivered to the farm on a pallet with a maximum of three drums per pallet.

1. Transport the pallet with the large chemical packaging(s) to the chemical storage room. Use the correct tool for transport, for instance a forklift.

2. Disconnect the CDS coupler from the empty chemical packaging:

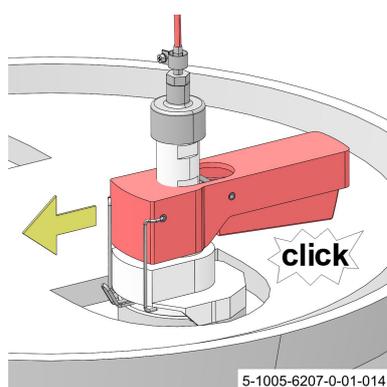
1. Squeeze the knob (1) and handle (4) of the CDS coupler and tilt it slightly up.
2. Disconnect the metal clamp (3).
3. Slide the base plate (2) of the CDS coupler from the counter coupler (7) on the chemical supply container (6).



KEY: 1. Knob - 2. Base plate - 3. Metal clamp - 4. Handle - 5. Chemical supply line - 6. Chemical supply packaging - 7. Counter coupler

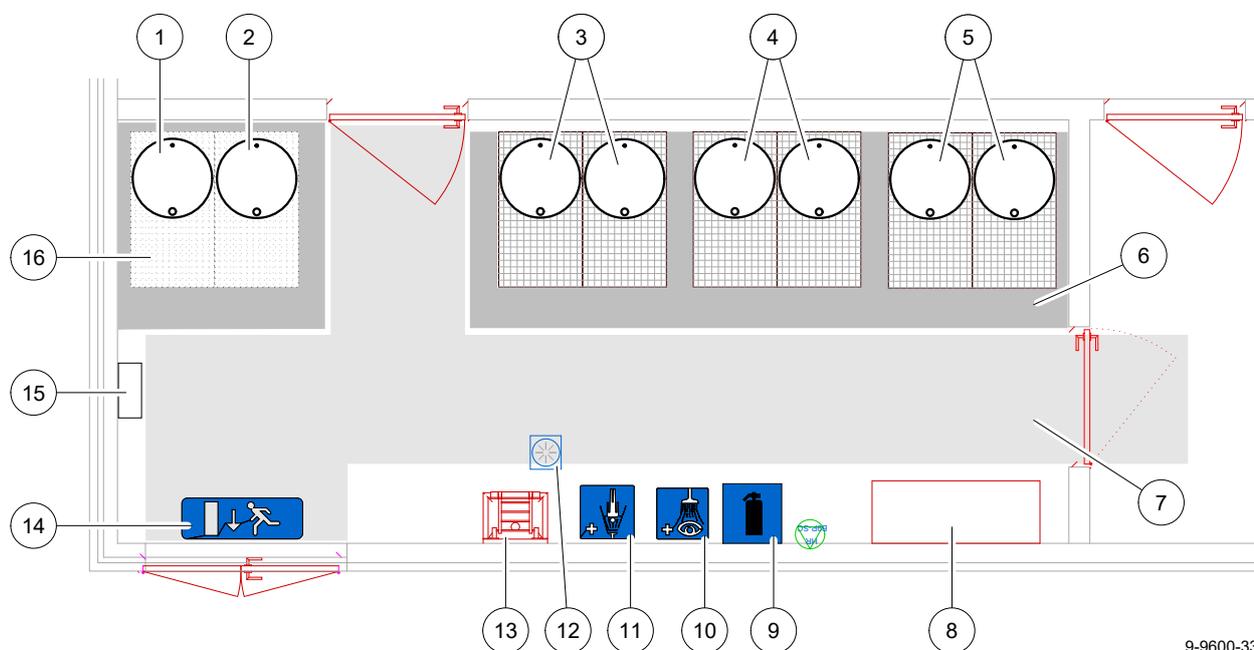
3. Connect the CDS coupler to the prepared full chemical supply packaging:

1. Slide the base plate of the CDS coupler onto the counter coupler of the chemical packaging.
2. Connect the metal clamp.
3. Squeeze and lower the knob until it clicks.



4. Take the drum(s) from the pallet with the correct lifting tool, for instance a drum lifting trolley.

5. Position the chemical packaging on the correct location in the chemical storage room. Examine the label on the packaging to make sure the correct chemical packaging is on the correct position. Never move an opened large chemical packaging. Store the same type of large chemical packaging in a pair next to each other for easy exchange when a packaging is empty. Store different types of chemical packaging separately to avoid chemical reactions due to leakage.



9-9600-3346-0

Figure 16. Chemical storage room overview with large chemical packaging and spill trays

KEY: 1. Udder care packaging - 2. Meteor care packaging - 3. Alkaline packaging - 4. Acid packaging - 5. Brush-dis packaging - 6. Sufficient free space for the supply and removal of large chemical packaging - 7. Aisle - 8. Chemical cabinet - 9. Fire extinguisher - 10. Eye wash station - 11. Emergency safety shower - 12. Lockable floor drain - 13. Sink with drainage facility - 14. Emergency exit - 15. Personal safety equipment cabinet - 16. Spill trays (110% of largest packaging unit)

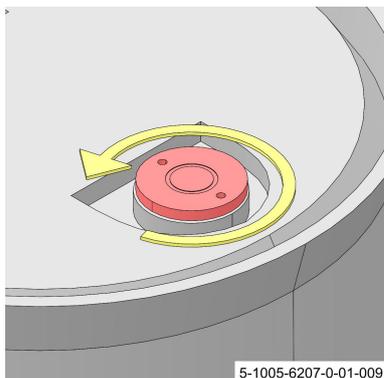
6.

NOTICE

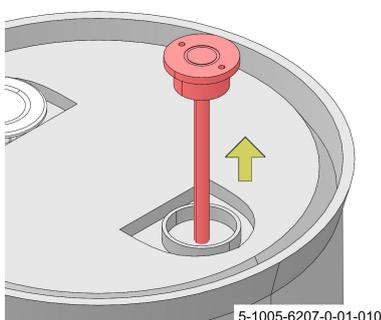
Only exchange the suction lance of acid and alkaline chemical packaging. For Brush-dis or sanitizer the new suction lance is pre-installed in the new packaging and should not have to be exchanged.

Install the suction lance from the empty packaging to the new (full) chemical packaging:

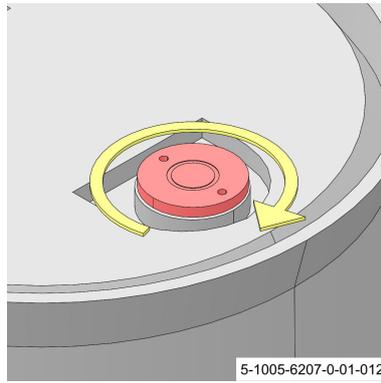
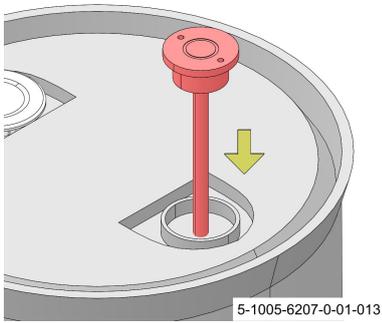
1. Rotate the cap counter clockwise to remove it from the new chemical supply container. Make sure to store the cap at the chemical supply container. The cap must be reinstalled to dispose the chemical supply container once it is empty.
2. Unscrew the suction lance from the empty chemical supply container.



3. Remove the suction lance from the empty chemical supply container. Let residual chemicals drip from the suction lance inside the chemical supply container as much as possible. Use a bucket underneath the lance to make sure no chemicals drip onto the chemical supply container or the floor when you move the lance from the empty to the full container.



4. Carefully install the suction lance into the new chemical supply container. Rotate the coupler of the lance clockwise to fixate it to the container.



5. Install the cap to the empty container to prepare it for safe disposal.
6. Rinse the bucket to make sure no chemicals are left behind.



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4 Disposal

Disposing this product correctly will help save valuable resources and prevent any potential negative effects on human health and the environment, which could otherwise arise from inappropriate waste handling.

Decommissioning and disassembly of the product can be dangerous and must be done only by qualified recycling organizations. All components must be disposed in compliance with the local rules and regulations.

Lubricants and fluids must be disposed correctly to prevent pollution of the environment. Read the safety data sheets of the used lubricants and fluids for correct disposal. All lubricants, chemicals and fluids must be disposed in compliance with the local rules and regulations.



Disposal to sewer of cleaning water with concentrated chemicals may cause damage to health and the environment and must always be prevented.

Contact your local authority or local Lely service provider for further details.



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5.1005.8648.0 J

5 Declarations of Conformity

5.1 CE Declaration of Conformity – Milking Robot

EC DECLARATION OF CONFORMITY
EG-KONFORMITÄTSERKLÄRUNG
DECLARATION DE CONFORMITÉ AUX NORMES DE LA CE
DICHIARAZIONE CE DI CONFORMITÀ
CERTIFICADO DE CONFORMIDAD CEE
DECLARAÇÃO DE CONFORMIDADE CE
DEKLARASJON EU MASKINDIREKTIV
VAATIMUSTENMUKAISUUSVAKUUTUS
EU-KONFORMITÄTSERKLÄRUNG
EG-FÖRSÄKRAN OM ÖVERENSSTÄMMELSE
CB – SAMRÆMISYFIRLÝSING



— innovators in agriculture —
ΔΗΛΩΣΗ ΣΥΜΜΟΡΦΩΣΗΣ Ε.Ε.
DECLARAȚIE DE CONFORMITATE CE
EU MEGFELELŐSÉGI NYILATKOZAT
ES-PROHLÁŠENÍ O SHODĚ
DEKLARACJA ZGODNOŚCI WE
ES – PREHLÁSENIE O ZHODE
VASTAVUS EU DIREKTIVIDELE
ES ΑΤΙΤΙΚΤΕΣ ΔΕΚΛΑΡΑCΙΑC
ЗАЯВЛЕНИЕ О СООТВЕТCТВИИ НОРМАМ ЕС
EG - POTVRDA O SUKLADNOSTI
ES IZJAVA O SKLADNOSTI

Wij fabrikant

We manufacturer
Der Hersteller
Nous, soussignés, le fabricant
fabricante
fabricante
producent
valmistaja
produsenten
tillverkare
framleiðandi

Lely Industries N.V.
Cornelis van der Lelylaan 1 • 3147 PB Maassluis • The Netherlands
tel. +31 (0)88 - 12 28 221 • fax +31 (0)88 - 12 28 222
www.lely.com

Εμείς, ο κατασκευαστής
fabricant
gyártó
výrobce
producent
výrobca
tootja
gamintojas
производитель
proizvođač
naziv proizvajalca

verklaren geheel onder eigen verantwoordelijkheid dat de machine:
herewith declare, on our own responsibility, that the machinery:
erklärt hiermit eigenverantwortlich, dass die Maschine:
déclarons que les machines désignées ci-après :

productbeschrijving

description of product
Produktbezeichnung
description du produit
descrizione del prodotto
nombre del producto
designação de produto
produktnavn
tuotenimi
produktnavn
produktnamn
vörulysing

Lely Astronaut A5

περιγραφή του προϊόντος
descrierea produsului
termék megnevezése
označení produktu
opis produktu
označenie výrobku
toote kirjeldus
gaminio aprašymas
наименование изделия
naziv proizvoda

typenummer

model number
Typnummer
numéro de modèle
numero di modello
modelo
número do modelo
modellnummer
mallinnumero
modellnummer
gerðarnúmer

RU 5.1005.0020-XXX
5.1105.0020-XXX
5.1005.0021-XXX
5.1105.0021-XXX
CU 5.1005.0030.XXX
5.1005.0031-XXX

αριθμός μοντέλου
numărul modelului
típus száma
numer modelu
typové číslo
tüübi number
modello numeris
номер модели
broj modela
števila artikla

waarop deze verklaring betrekking heeft, in overeenstemming is met de bepalingen van de volgende Richtlijn(en):
which this declaration refers to, is in accordance with the conditions of the following Directive(s):
worauf sich diese Erklärung bezieht, hergestellt ist gemäß den Bestimmungen der Richtlinie(n):
auxquelles la présente déclaration se rapporte, sont conformes aux dispositions de la ou des directives suivantes :

è conforme alle direttive
de acuerdo con las directivas
de acordo com a directiva
opfylder følgende direktiver
täyttää seuraavien direktiivien vaatimukset
opfylder følgende direktiver
uppfyller följande direktiv
uppfyllir eftirfarandi tilskipanir

Machinery directive 2006/42/EC
Low voltage directive 2014/35/EU
Electromagnetic compatibility 2014/30/EU

conform cu directivele
rendelkezeseknek megfeleleően
podle směrnice
zgodny z dyrektywą
v zhode so smernicami
direktiviide järgi
pagal direktivas
соответствует требованиям директив
po smjernicama
v skladu z direktivo

en in overeenstemming is met de volgende normen of andere normatieve documenten :
and is in conformity with the following standard(s) or other such specifications :
und den folgenden Normen oder vergleichbaren Spezifikationen entspricht:
et aux normes et autres spécifications suivantes :

è conforme alle norme
de acuerdo con las normas
de acordo com as normas
opfylder følgende standarder
täyttää seuraavien standardien vaatimukset
opfyller følgende standarder
uppfyller följande standarder
uppfyllir eftirfarandi staöla
πληροί τις προδιαγραφές

EN-ISO 12100:2010, EN 60204-1:2018
EN 61000-6-2:2016, EN 61000-6-4:2018
ISO 20966:2007, ISO 5707:2007
ISO 6690:2007

în conformitate cu standardele
megfelel a szabványoknak
odpovídá normám
zgodny z normą
zodpovedá normám
normidele vastavus
atitinka standartus
соответствует стандартам нормам
v skladu sa standardima
v skladu s standardi

handtekening en datum

signature and date
Unterschrift und Datum
signature et date
firma e data
firma y fecha
assinatura e data
underskrift og dato
allekirjoitus ja päiväys
signatur og dato
underskrift och datum
undirskrift og dagsetning

S. Loosveld
Director Product Development
Lely Industries N.V.

J.W. Rodenburg
Manager Product Safety & Compliance
Lely Industries N.V.

7/12/2022

υπογραφή και ημερομηνία
semnătura și data
aláírás és dátum
podpis a datum
podpis i data
podpis a dátum
allkirji ja kuupäev
parašas ir data
podpis i data
potpis i datum
podpis in datum

5.2 UKCA Declaration of Conformity – Milking Robot



We manufacturer

Lely Industries N.V.

Cornelis van der Lelylaan 1 • 3147 PB Maassluis • The Netherlands
tel. +31 (0)88 - 12 28 221 • fax +31 (0)88 - 12 28 222 • www.lely.com

Authorised representative in the UK:

Lely Atlantic Limited • Unit 7 Quartz Point Stonebridgeroad • Coleshill • Birmingham • B46 3JL • United Kingdom

herewith declare, on our own responsibility, that the machinery:

Description of product

Lely Astronaut A5

Model number

RU	5.1005.0020-XXX
	5.1105.0020-XXX
	5.1005.0021-XXX
	5.1105.0021-XXX
CU	5.1005.0030.XXX
	5.1005.0031-XXX

which this declaration refers to, is in accordance with the conditions of the following Directive(s):

Supply of Machinery (Safety) Regulations 2008 (UK)
Electrical Equipment (Safety) Regulations 2016 (UK)
Electromagnetic Compatibility Regulations 2016 (UK)

and is in conformity with the following standard(s) or other such specifications :

EN-ISO 12100:2010, EN 60204-1:2018
EN 61000-6-2:2005, EN 61000-6-4:2007
ISO 20966:2007, ISO 5707:2007
ISO 6690:2007

Signature and date



J.W. Rodenburg
Manager Product Safety & Compliance
Lely Industries N.V.

7/12/2022

5.1005.8501.9

5.1005.8648.0 J

5.3 CE Declaration of Conformity – Power Cabinet

innovators in agriculture

EC DECLARATION OF CONFORMITY
EG-KONFORMITÄTSEKLRÄRUNG
DÉCLARATION DE CONFORMITÉ AUX NORMES DE LA CE
DICHIARAZIONE CE DI CONFORMITÀ
CERTIFICADO DE CONFORMIDAD CEE
DECLARAÇÃO DE CONFORMIDADE CEE
DEKLARASJON EU MASKINDIREKTIV
VAATIMUSTENMUKAISUUSVAKUUTUS
EU-KONFORMITETSEKLRÆRING
EG-FÖRSÄKRAN OM ÖVERENSSTÄMMELSE
CB – SAMRÆMISYFIRLÝSING



ΔΗΛΩΣΗ ΣΥΜΜΟΡΦΩΣΗΣ Ε.Ε.
DECLARAȚIE DE CONFORMITATE CE
EU MEGFELELŐSÉGI NYILATKOZAT
ES-PROHLÁŠENÍ O SHODĚ
DEKLARACJA ZGODNOŚCI WE
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VASTAVUS EU DIREKTIVIDELE
ES ATITIKTIES DEKLARACIJA
ЗАЯВЛЕНИЕ О СООТВЕТСТВИИ НОРМАМ ЕС
EG - POTVRDA O SUKLADNOSTI
ES IZJAVA O SKLADNOSTI

Wij fabrikant

We manufacturer
Der Hersteller
Nous, soussignés, le fabricant
fabbricante
fabricante
producent
valmistaja
produsenten
tillverkare
framleiðandi

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www.lely.com

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fabricant
gyártó
výrobce
producent
výrobca
tootja
gamintojas
производитель
proizvođač
naziv proizvajalca

verklaren geheel onder eigen verantwoordelijkheid dat de machine:
herewith declare, on our own responsibility, that the machinery:
erklärt hiermit eigenverantwortlich, dass die Maschine:
déclarons que les machines désignées ci-après :

productbeschrijving

description of product
Produktbezeichnung
description du produit
descrizione del prodotto
nombre del producto
designação de produto
produktnavn
tuotenimi
produktnavn
produktnamn
vörulýsing

Power cabinet European
Network cabinet

περιγραφή του προϊόντος
descrierea produsului
termék megnevezése
označení produktu
opis produktu
označenie výrobku
toote kirjeldus
gaminio aprašymas
наименование изделия
naziv proizvoda

typenummer

model number
Typnummer
numéro de modèle
numero di modello
modelo
número do modelo
modelnummer
mallinnumero
modellnummer
gerådnumér

5.1004.6874 . x
5.1004.6877 . x

αριθμός μοντέλου
numărul modelului
típus száma
numer modelu
typové číslo
tüübi number
modelo numeris
номер модели
broj modela
številka artikla

waarop deze verklaring betrekking heeft, in overeenstemming is met de bepalingen van de volgende Richtlijn(en):
which this declaration refers to, is in accordance with the conditions of the following Directive(s):
worauf sich diese Erklärung bezieht, hergestellt ist gemäß den Bestimmungen der Richtlinie(n):
auxquelles la présente déclaration se rapporte, sont conformes aux dispositions de la ou des directives suivantes :

è conforme alle direttive
de acuerdo con las directivas
de acordo com a directiva
opfylder følgende direktiver
täyttää seuraavien direktiivien vaatimukset
opfylder følgende direktiver
uppfyller följande direktiv
uppfyllir eftirfarandi staðla
πληροί τις προδιαγραφές

Low voltage directive 2014/35/EU
Electromagnetic compatibility 2014/30/EU

conform cu directivele
rendelkezeléseknek megfelelően
podle směrnice
zgodny z dyrektywą
v zohod so smernicami
direktiivide järgi
pagal direktyvas
соответствует требованиям директив
po smjernicama
v skladu z direktivo

en in overeenstemming is met de volgende normen of andere normatieve documenten :
and is in conformity with the following standard(s) or other such specifications :
und den folgenden Normen oder vergleichbaren Spezifikationen entspricht:
et aux normes et autres spécifications suivantes :

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de acuerdo con las normas
de acordo com as normas
opfylder følgende standarder
täyttää seuraavien standardien vaatimukset
opfylder følgende standarder
uppfyller följande standarder
uppfyllir eftirfarandi staðla
πληροί τις προδιαγραφές

EN 60204-1:2006/AC:2010

în conformitate cu standardele
megfelel a szabványoknak
odpovídá normám
zgodny z normą
zodpovedá normám
normidele vastavus
atitinka standartus
соответствует стандартам нормам
u skladu sa standardima
v skladu s standardi

handtekening en datum

signature and date
Unterschrift und Datum
signature et date
firma e data
firma y fecha
assinatura e data
underskrift og dato
allekirjoitus ja päiväys
signatur og dato
underskrift och datum
underskrift og dagsetning

S. Loosveld
Director Product Development
Lely Industries N.V.

J.W. Rodenburg
Manager Product Safety & Compliance
Lely Industries N.V.

υπογραφή και ημερομηνία
semnătura și data
aláírás és dátum
podpis a datum
podpis i data
podpis a dátum
allkirji ja kuupäev
parašas ir data
подпись и дата
potpis i datum
podpis in datum

24-Nov-16

5.1004.8504.9

5.4 UKCA Declaration of Conformity – Power Cabinet



We manufacturer

Lely Industries N.V.

Cornelis van der Lelylaan 1 • 3147 PB Maassluis • The Netherlands
tel. +31 (0)88 - 12 28 221 • fax +31 (0)88 - 12 28 222 • www.lely.com

Authorised representative in the UK:

Lely Atlantic Limited • Unit 7 Quartz Point Stonebridgeroad • Coleshill • Birmingham • B46 3JL • United Kingdom

herewith declare, on our own responsibility, that the machinery:

Description of product

Power cabinet European
Network cabinet

Model number

5.1004.6874.x
5.1004.6877.x

which this declaration refers to, is in accordance with the conditions of the following Directive(s):

Electrical Equipment (Safety) Regulations 2016 (UK)
Electromagnetic Compatibility Regulations 2016 (UK)

and is in conformity with the following standard(s) or other such specifications :

EN 60204-1:2006/AC:2010

Signature and date



J.W. Rodenburg
Manager Product Safety & Compliance
Lely Industries N.V.

09-Dec-21

5.1004.8504.9

5.1005.8648.0 J

5.5 CE Declaration of Conformity – Power Box

EC DECLARATION OF CONFORMITY
EG-KONFORMITÄTSEKLRÄRUNG
DÉCLARATION DE CONFORMITÉ AUX NORMES DE LA CE
DICHIARAZIONE CE DI CONFORMITÀ
CERTIFICACÃO DE CONFORMIDADE CEE
DECLARAÇÃO DE CONFORMIDADE CE
DEKLARASJON EU MASKINDIREKTIV
VAATIMUSTENMUKAISUUSVAKUUTUS
EU-KONFORMITETSERKLÆRING
EG-FÖRSÄKRAN OM ÖVERENSSTÄMMELSE
CB – SAMRÆMISYFIRLÝSING



ΔΗΛΩΣΗ ΣΥΜΜΟΡΦΩΣΗΣ Ε.Ε.
DECLARATIE DE CONFORMITATE CE
EU MEGFELELŐSÉGI NYILATKOZAT
ES-PROHLÁŠENÍ O SHODĚ
DEKLARACJA ZGODNOŚCI WE
ES – PREHLÁSENIE O ZHODE
VASTAVUS EU DIREKTIVIDELE
ES ATITIKTIES DEKLARACIJA
ЗАВЯВЛЕНИЕ О СООТВЕТСТВИИ НОРМАМ ЕС
EG - POTVRDA O SUKLADNOSTI
ES IZJAVA O SKLADNOSTI

Wij fabrikant

We manufacturer
Der Hersteller
Nous, soussignés, le fabricant
fabbricante
fabricante
producent
valmistaja
produsenten
tillverkare
framleiðandi

Lely Industries N.V.
Comelis van der Lelyaan 1 • 3147 PB Maassluis • The Netherlands
tel. +31 (0)88 - 12 28 221 • fax +31 (0)88 - 12 28 222
www.lely.com

Εμείς, ο κατασκευαστής
fabricant
gyártó
výrobce
producent
výrobca
tootja
gamintojas
производитель
proizvodac
naziv proizvajalca

verklaren geheel onder eigen verantwoordelijkheid dat de machine:
herewith declare, on our own responsibility, that the machinery:
erklärt hiermit eigenverantwortlich, dass die Maschine:
déclarons que les machines désignées ci-après :

productbeschrijving

description of product
Produktbezeichnung
description du produit
descrizione del prodotto
nombre del producto
designação de produto
produktnavn
tuotenimi
produktnavn
produktnamn
vörulýsing

Auxiliary Power Box

περιγραφή του προϊόντος
descrierea produsului
termék megnevezése
označení produktu
opis produktu
označenie výrobku
toote kirjeldus
gamnio aprašymas
наименование изделия
naziv proizvoda

typenummer

model number
Typnummer
numéro de modèle
numero di modello
modelo
número do modelo
modellnummer
mallinnumero
modellnummer
gerðarnúmer

5.1004.7114.0

αριθμός μοντέλου
numărul modelului
típus száma
numer modelu
typové číslo
tüübi number
modello numeris
номер модели
broj modela
številka artikla

waarop deze verklaring betrekking heeft, in overeenstemming is met de bepalingen van de volgende Richtlijn(en):
which this declaration refers to, is in accordance with the conditions of the following Directive(s):
worauf sich diese Erklärung bezieht, hergestellt ist gemäß den Bestimmungen der Richtlinie(n):
auxquelles la présente déclaration se rapporte, sont conformes aux dispositions de la ou des directives suivantes :

è conforme alle direttive
de acuerdo con las directivas
de acordo com a directiva
opfylder følgende direktiver
täyttää seuraavien direktiivien vaatimukset
opfylder følgende direktiver
uppfyller följande direktiv
uppfyllir eftirfarandi tilskipanir

Low voltage directive 2014/35/EU

conform cu directivele
rendelkezeseknek megfeleleőn
podle směrnice
zgodny z dyrektywą
v zhode so smernicami
direktivide jērgi
pagal direktyvas
соответствует требованиям директив
po smernicama
v skladu z direktivo

en in overeenstemming is met de volgende normen of andere normatieve documenten :

and is in conformity with the following standard(s) or other such specifications :
und den folgenden Normen oder vergleichbaren Spezifikationen entspricht:
et aux normes et autres spécifications suivantes :

è conforme alle norme
de acuerdo con las normas
de acordo com as normas
opfylder følgende standarder
täyttää seuraavien standardien vaatimukset
opfylder følgende standarder
uppfyller följande standarder
uppfyllir eftirfarandi staðla
ηλποοί τις η ροδιογραφές

EN 60204-1:2006/AC:2010

în conformitate cu standardele
megfelelő a szabványoknak
odpovídá normám
zgodny z normą
zodpovedá normám
normidele vastavus
atitinka standartus
соответствует стандартам нормам
u skladu sa standardima
v skladu s standardi

handtekening en datum

signature and date
Unterschrift und Datum
signature et date
firma e data
firma y fecha
assinatura e data
underskrift og dato
allekjoitus ja päiväys
signatur og dato
underskrift och datum
undrskrift og dagsetning

S. Loosveld
Director Product Development
Lely Industries N.V.

J.W. Rodenburg
Manager Product Safety & Compliance
Lely Industries N.V.

un oypapfi kai ημερομηνία
semnătura și data
aláírás és dátum
podpis a datum
podpis i data
podpis a dátum
allkir ja kuupäev
parašas ir data
подпись и дата
podpis i datum
podpis in datum

28-Aug-18

5.1004.8506.9

5.6 UKCA Declaration of Conformity – Power Box



We manufacturer

Lely Industries N.V.

Cornelis van der Lelylaan 1 • 3147 PB Maassluis • The Netherlands
tel. +31 (0)88 - 12 28 221 • fax +31 (0)88 - 12 28 222 • www.lely.com

Authorised representative in the UK:

Lely Atlantic Limited • Unit 7 Quartz Point Stonebridgeroad • Coleshill • Birmingham • B46 3JL • United Kingdom

herewith declare, on our own responsibility, that the machinery:

Description of product

Auxiliary Power Box

Model number

5.1004.7114.0

which this declaration refers to, is in accordance with the conditions of the following Directive(s):

Electrical Equipment (Safety) Regulations 2016 (UK)

and is in conformity with the following standard(s) or other such specifications :

EN 60204-1:2006/AC:2010

Signature and date



J.W. Rodenburg
Manager Product Safety & Compliance
Lely Industries N.V.

09-Dec-21

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