



# Translation of the original operating manual

H&L Milktaxi 3.0

## Dear Valued Customer,

Congratulations on your purchase of the H&L Milktaxi! You have selected a high-quality product from Holm & Laue.

This manual enables you to use the appliance safely and efficiently. Illustrations contained in the manual have been included for reference only and may differ from the exact version you are using.

To make your Milktaxi your reliable companion for many years, please read carefully and conform to the safety instructions in this booklet and the entire manual. The safety instructions are identified according to the corresponding hazard levels.

## Legal Notice

Translation of the original operating manual for the H&L Milktaxi

This manual is published under the responsibility of the company Holm&Laue.

It applies to following model versions:

- Milktaxi 100 L
- Milktaxi 150 L
- Milktaxi 260 L
- Milktaxi 260 L Trailer

It also applies to the following optional extras:

- Battery-powered pump and dispensing arm
- Remote control for dispensing arm
- Floor-installed heating foils
- Hot water-fired heating
- Integrated pasteuriser with cooling jacket
- EL-AN electrical drive
- Support frame for milk churn transport
- H&L cow drenching equipment

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# Contents

<b>1. Explaining the safety instructions</b> .....	<b>5</b>
1.1 General safety instructions .....	5
1.2 Intended Use .....	7
1.3 Unintended Use.....	7
<b>2. Technical Specifications</b> .....	<b>8</b>
2.1 Appliance dimensions.....	8
<b>3. Understanding the Appliance</b> .....	<b>9</b>
<b>4. Checking the Appliance out Prior to First Use</b> .....	<b>10</b>
<b>5. Switching the Milktaxi on</b> .....	<b>11</b>
5.1 Main Screen after Switching on.....	11
5.2 Control Panel .....	11
<b>6. Milktaxi Settings</b> .....	<b>13</b>
6.1 The Home Key .....	13
6.2 Basic settings.....	13
6.3 Statistics .....	14
6.4 Pump .....	14
6.5 Mixing.....	15
6.6 W-Heating .....	15
6.7 Cooling.....	16
6.8 Pasteurisation .....	16
6.9 Timer .....	16
6.9.1 Timer for Pasteurisation PA63/35 .....	17
6.9.2 Timer for Heat Treatment 60/60 .....	17
6.9.3 Timer for Milk Heating .....	18
6.10 Cleaning.....	19
<b>7. Dosing Milk Diet</b> .....	<b>20</b>
7.1 Technical Requirements.....	20
7.2 Safety and Warning Messages .....	20
7.3 Functional Description .....	20
7.3.1 Optional Dispensing Arm with Remote Control .....	21
7.3.2 Special Continuous Pumping Function.....	21
<b>8. Dissolving Milk Replacer using the Floor-mounted agitator</b> .....	<b>22</b>
8.1 Technical Requirements.....	22
8.2 Safety and Warning Messages .....	22
8.3 Functional Description .....	22
<b>9. Heating Liquid with the Heater below the Tank Floor</b> .....	<b>24</b>
9.1 Technical Requirements.....	24
9.2 Safety and Warning Messages .....	24
9.3 Functional Description .....	25

<b>10. Heating Liquid with the Hot Water-fired Heater .....</b>	<b>27</b>
10.1 Technical Requirements .....	27
10.2 Safety and Warning Messages .....	27
10.3 Functional Description .....	27
<b>11. Pasteurising Milk.....</b>	<b>28</b>
11.1 General Note.....	28
11.2 Technical Requirements.....	28
11.3 Safety and Warning Messages .....	28
11.4 Functional Description .....	30
11.4.1 Starting Pasteurisation Manually .....	31
11.4.2 Starting Timed Pasteurisation Automatically .....	32
11.4.3 Aborting Pasteurisation in Progress .....	32
11.4.4 Feedback .....	32
<b>12. Cooling Milk .....</b>	<b>33</b>
12.1 Technical Requirements.....	33
12.2 Safety and Warning Messages .....	33
12.3 Functional Description .....	33
<b>13. Using the Electrical Drive (EL-AN) .....</b>	<b>35</b>
13.1 Technical Requirements .....	35
13.2 Safety and Warning Messages .....	35
13.3 Functional Description .....	35
<b>14. Cleaning the Milktaxi.....</b>	<b>36</b>
14.1 Technical Requirements.....	36
14.2 Safety and Warning Messages .....	36
14.2.1 Preparing the Milktaxi for Cleaning .....	37
14.3 Cleaning the Milktaxi (manually) .....	37
<b>15. Using the Milktaxi's Cleaning Function .....</b>	<b>38</b>
15.1 Technical Requirements.....	38
15.2 Safety and Warning Messages .....	38
15.3 Functional Description .....	39
15.3.1 Preparing the Milktaxi for Cleaning .....	39
15.3.2 Cleaning Function .....	39
<b>16. Using the Milk Churn Support.....</b>	<b>41</b>
16.1 Technical Requirements.....	41
16.2 Safety and Warning Messages .....	41
16.3 Functional Description .....	41
<b>17. Drenching Cows with the Drenching Equipment.....</b>	<b>42</b>
17.1 Technical Requirements.....	42
17.2 Safety and Warning Messages .....	42
17.3 Functional Description .....	43
<b>18. Overview of Fault Messages.....</b>	<b>44</b>
<b>19. Disposal .....</b>	<b>46</b>
<b>20. Notes.....</b>	<b>47</b>

# 1. Explaining the safety instructions

Safety instructions are identified according to the following colour-coded hazard levels.

 <b>DANGER</b>
– This identifies a highly hazardous situation. Failure to conform to the safety instruction will result in severe, irreversible injury or death.
 <b>WARNING</b>
– This identifies a highly hazardous situation. Failure to conform to the safety instruction may result in severe, irreversible injury or death.
 <b>CAUTION</b>
– This identifies a highly hazardous situation. Failure to conform to the safety instruction may result in light to moderate injury.
<b>PLEASE NOTE</b>
– This identifies a hazard for hardware and materials. Failure to conform to the safety instruction may result in damage to assets.

## 1.1 General safety instructions

The safety instructions given below must be respected at any and all times.

**In addition, you must always heed the additional safety instructions given for the different functions!**

	 <b>DANGER</b>
	<p><b>Danger to life by failure to respect the user's manual</b></p> <ul style="list-style-type: none"> <li>– Ensure that persons operating the Milktaxi have read and understood the user's manual and the safety instructions.</li> <li>– The user's manual must be ready on hand close to the Milktaxi at all times.</li> </ul>
	 <b>DANGER</b>
	<p>This appliance can be used by <b>children</b> from the age of 8 years and upward onwards and by persons with reduced physical, sensory or mental capabilities or lack of experience and knowledge provided they are supervised or have been instructed on safe use of the appliance and understand the hazards this use can involve. <b>Children</b> must not play with the appliance. Cleaning and user maintenance must not be carried out by <b>children</b> without supervision.</p>
	 <b>DANGER</b>
	<p><b>Carrying people prohibited</b></p> <ul style="list-style-type: none"> <li>– It is strictly forbidden to use the Milktaxi for the transport of persons, animals or hazardous substances (chemicals).</li> <li>– In particular, it is forbidden to use the milk churn support frame for the transport of anything other than churns or buckets with milk or water in them.</li> <li>– Subjecting the milk churn support to any load of more than 35 kg (Milktaxi 100 L) or 70 kg (Milktaxi 150 L, 260 L, 260 L Trailer) is prohibited and will cancel and void the warranty for the Milktaxi as a whole.</li> </ul>

	<p style="text-align: center;"><b>⚠ WARNING</b></p> <p>The Milktaxi must be operated exclusively by persons who are able to operate it in a safe way.</p>	
	<p style="text-align: center;"><b>⚠ WARNING</b></p> <p><b>Beware of severe bruises by falling lid</b></p> <ul style="list-style-type: none"> <li>– While the appliance is pushed or driven, always keep the lid closed.</li> <li>– Secure the lid so it will not fall down when you are working with the lid open.</li> <li>– When you close the lid make sure that no part of your body is between the lid and the tank rim.</li> </ul>	
	<p style="text-align: center;"><b>⚠ WARNING</b></p> <p><b>Fire hazard</b></p> <ul style="list-style-type: none"> <li>– The lid of the Milktaxi may concentrate the sun’s rays when it is open because of its concave shape on the inside. In this case, the focal point of the lid may develop excessive heat.</li> <li>– Keep the lid closed at all times.</li> <li>– Never leave the Milktaxi unattended when it is outdoors.</li> </ul>	
	<p style="text-align: center;"><b>⚠ WARNING</b></p> <p><b>Hazard associated with the battery leaks</b></p> <ul style="list-style-type: none"> <li>– When the batteries of the Milktaxi are damaged, they may release acids and other substances. These substances may cause intoxication and burns.</li> <li>– Avoid any mechanical strain that may damage the battery.</li> <li>– Have the battery replaced only by a qualified/licensed shop.</li> <li>– Avoid the battery’s discharging completely, since the fact that it is more than normally flat will damage it. This is why we recommend recharging the Milktaxi for at least 6 hours every day.</li> </ul>	
	<p style="text-align: center;"><b>⚠ WARNING</b></p> <p><b>Hazard caused by exceeding the maximum speed with the tractor trailer</b></p> <ul style="list-style-type: none"> <li>– The maximum permissible speed of the Milktaxi 260 L Trailer is 6 km/h.</li> <li>– The Milktaxi 260 L Trailer is not approved for travel on public roads.</li> </ul>	
	<p style="text-align: center;"><b>⚠ CAUTION</b></p> <p><b>Danger by unwanted movement</b></p> <ul style="list-style-type: none"> <li>– The Milktaxis 100 L, 150 L and 260 L have a parking brake on the right-hand pivoting wheel. This brake avoids unwanted rolling of the Milktaxi. Whenever you leave the Milktaxi, the parking brake should be pulled.</li> <li>– The Milktaxi 260 L Trailer is always supplied with two wheel chocks which you must always use to secure the parked Milktaxi to prevent it rolling away out of control.</li> </ul>	

## 1.2 Intended Use

The H&L Milktaxi is designed for preparing and dosing calves' milk diet of commercial agricultural operations. Its drenching equipment also allows drenching cows. Do not fill anything other than water, whole milk, milk replacer or nutritional additives such as electrolytes into the tank.

The pasteurisation function is designed exclusively for the treatment of calves' milk diet and for heating water. Any other use or purpose cancels any and all warranty. Holm & Laue cannot be held liable for physical injury or material damage that is the result of improper use of the H&L Milktaxi.

The Milktaxi is to be cleaned after every use alternating between alkaline and acidic cleaning agents for milking machinery in order to remove deposits from the tank, the milk pump and the pipes. The cleaning program of the Milktaxi must be used for this.

## 1.3 Unintended Use

Any use other than those quoted above as intended uses is considered an **unintended use**.

Note in particular:

- Never pasteurise beestings/colostrum! The protein structure of colostrum is different from that of normal whole milk. The proteins beestings contain may become indigestible by the heat treatment, thereby putting the calves' health at risk. The loss of quality that the milk sustains can be seen from agglutinations and burnt milk deposited in the Milktaxi. Burnt milk, in turn, may damage the floor-installed heating element.
- Never put food which is intended for human consumption, such as soup, coffee, tea or water, into the tank.

Never put harmful or toxic solutions into the tank (the only exception being common cleaning agents for milking installations)! In no circumstances put any hard or pointed objects into the tank, and don't pour inhomogeneous or pasty liquid into it. All of these may damage the floor-mounted agitator, the heating foils installed on the floor and the pump.

Residues in the tank may contaminate the milk diet the calves are fed, thereby putting their health at risk, even when the tank was cleaned before being used again.

- Prepare your animals' milk diet according to the recommendations provided by the manufacturer of the milk replacer used.
- Avoid drinking temperatures in excess of 42°C, as they may cause scalding in the animals' mouth.
- Avoid too low milk diet temperatures (depending on the milk replacer used and the acid content in the milk), since they may cause undesired fermentation in the animals' digestive system.
- Clean the Milktaxi after every feeding, alternating between alkaline and acidic cleaning agents for milking machinery. Improper cleaning may cause increased bacteria growth, which would put the calves' health at risk. Insufficient cleaning may also result in deposits in the milk pump, which may damage it. Deposits on the floor of the tank may bake in and cause failure of the heater.
- When using cleaning agents, rinse after cleaning to ensure no residues remain in the tank, pump or hose of the Milktaxi.

## 2. Technical Specifications

Mains power supply options depending on electric equipment selected	230V 16A 50Hz (MTX100 only) 400V 16A 50Hz 230V 32A 50Hz 240V 32A 60Hz 200V 32A 55Hz
Heating capacity	MTX100: 3kW MTX150: 5kW MTX260: 6kW
Pump capacity	approx. 40L/min
Power of floor-mounted agitator	250W
Ingress protection	IP 54
Tyre size(s)	MTX 100, MTX 150, MTX 260
	Rear: 265mm
	Front: 400mm
	MTX 260 Trailer
	410mm
Tyre pressure	2.5 bar
Operating voltage(s)	230V (control and supply voltage when plugged into mains) 12V (main board, milk pump) 24V (EL-AN) *
Water supply nipple	½"
Min. storage temperature	+5°C
Pasteurisation temperature	+64°C
Max. load of milk churn support frame	MTX 100: 35kg MTX 150, 260, 260 Trailer: 70kg
Pressure at water supply inlet *)	min. 1 bar; max. 6 bar
Pressure at water connection outlet *)	Non-pressurised outlet (max. height diff. of head 3 m)

### 2.1 Appliance dimensions

Appliance type	Working tank capacity	Total tank capacity	Width cm	Length (cm)		Height (cm)
				Without milk churn holder	With milk churn holder	
MTX 100	100 L	120 L	62	118	141	120
MTX 150	150 L	180 L	75	127	154	120
MTX 260	260 L	290 L	78	127	154	135
MTX 260 Trailer	260 L	290 L	117	172	196	135

\*) Optional component(s)

### 3. Understanding the Appliance

On the following pages, the various functions and modes of operation of the Milktaxi are explained in detail. It's so easy we just want to wish you having fun feeding your calves with your new Milktaxi.

The standard version of all Milktaxis comprises the following equipments.

<b>Lid</b>	The handle on the tank doubles as a locking latch. In the normal operating mode, a sealing ring prevents liquid from splashing out of the tank.
<b>Control panel</b>	The control panel is located in the upper left-hand part of the Milktaxi. Depending on the exact configuration of the unit, only some keys on the control panel may be able to be activated.
<b>Handle</b>	The 100 L, 150 L and 260 L have solid handles. Depending on the configuration, the pump pushbutton and the movement impulse lever for the EL-AN electrical drive are incorporated into them.
<b>Draining tap</b>	The draining tap allows emptying the Milktaxi completely. To empty the hose in the process, also open the check valve of the dispensing arm and lift the hose manually.
<b>Parking brake</b>	The 100 L, 150 L and 260 L Milktaxis feature a parking brake on the right-hand pivoting wheel. This brake avoids unwanted rolling of the Milktaxi. Whenever you leave the Milktaxi, the parking brake should be pulled.
<b>Floor-mounted agitator</b>	Every Milktaxi is equipped with a agitator installed on the tank floor and driven at low voltage, with which you can, for instance, mix the milk replacer powder into the water to the optimum. The floor-mounted agitator can be used only while the Milktaxi is connected to mains power.
<b>Headlight</b>	Every 100 L, 150 L and 260 L Milktaxi features a headlight with LEDs powered at 12 V. It can be turned on or off as needed on the control panel.

## 4. Checking the Appliance out Prior to First Use

To ensure reliable operation, please conform to the following indications on the preparation of the milk room for it and the Milktaxi itself:

### Power supply



Depending on the configuration of the Milktaxi, you require connection to a power supply of:

400V / 16A, 50Hz with a CEE 5/16 6h socket or

230V / 32A, 50Hz with a CEE 3/32 socket or

230V / 16A, 50Hz with a CEE 3/16 socket

You can see the assignment of a CEE 5/16 6h connector with the assignment necessary for the Milktaxi and the sequence of supply connections in the adjacent illustration.

For other electric equipment contact your service partner or qualified local electrical engineer. Do not attempt to make any changes to the electrical connections on your own if you are not qualified to do so.

The Milktaxi must be earthed through its connection to power supply. This means that the Milktaxi must be connected to the mains with a power socket with protective contact in compliance with all applicable rules (TN-C-S System). Other configurations may lead to damage to the electric consumers. Damage to the socket or the power supply installation may result in consequential damage sustained by your Milktaxi!

### Water supply

We recommend that you install a hot and cold water connection. If the water tap is fitted at a height of 1.45 m above the floor, it is possible to push the Milktaxi directly under the tap, making filling easy. To drain remaining milk and rinsing water in a controlled way, we recommend having a drain fitting in the floor.

### Environment

To avoid damage by frost to the Milktaxi, the storage room and the room where the calves' milk diet is prepared must be frost-proof. The minimum operating temperature of the Milktaxi when charging the battery is 5°C. The maximum operating temperature is +40°C.

When in operation, the Milktaxi must stand on a level floor or surface.

### Cleaning the Milktaxi

Rinse the Milktaxi thoroughly prior to using it for the first time in order to remove any solvent or cleaning agent residues in the tank.

### Battery charging

The battery for your Milktaxi was charged completely and tested in the factory. During storage and transport, however, the battery can discharge slightly.

First of all, connect the Milktaxi to mains power through the supply cable provided. As soon as this connection is made, the battery charges up. It is not necessary to switch the Milktaxi on for this.

When charging the battery for the first time, charge it for at least 4 hours. We recommend leaving the Milktaxi connected to mains whenever it is not in use. This extends the life of the batteries, and you will have the Milktaxi ready for use whenever needed. The battery level is depicted on the display when the Milktaxi is switched on (see page 11 in the user's manual).

If you are not going to use your Milktaxi for a prolonged period of time (> 1 month), we recommend connecting it to the mains permanently or charging it for at least 6 hours every week.





### **Cleaning cycle**

The Clean key is used to start the cleaning cycle, which includes running the agitator at intervals and heating up the water. The temperature for the cycle can be set in the settings according to the instructions given by the cleaning agent manufacturer. Please note that this function does not clean the inside of the tank, only the pump, milk hose and dispensing arm. This function can be used only when the Milktaxi is connected to mains power.



### **Home key**

The Home key is your access to the control and maintenance menu, and your way of quitting it after it was accessed. In addition, the key is used in the control and maintenance menu, for instance to return to the last level.



### **Pumps**

The Pump key switches the pump on (continuous operation) or off. Timed pumping is enabled by pushing the pushbutton on the handle of the appliance. As soon as the pump is running, the status LED lights up. If dosing is started via the optional remote control on the dispensing arm, the LED in the key also lights up briefly as the pump runs.



### **Heat key (optional function \*)**

Pressing the Heat key will switch on the heating foils installed below the tank floor. The milk is then heated to the preset temperature. The status LED in the top left-hand corner lights up as soon as the heating is switched on. This function can be used only when the Milktaxi is connected to mains power.



### **Cool key (optional function \*)**

The Cool key starts manual milk cooling. The function is only available together with an optional pasteuriser. The status LED in the top left-hand corner lights up as soon as the cooling is switched on. This function can be used only when the Milktaxi is connected to mains power.



### **Driving speed (optional function \*)**

The speed selector key is used to select one out of two speeds of the electrical drive motor. The lower, right-hand status LED indicates that the lower gear is active, the upper, left-hand LED is for the higher gear. By default, the low gear is selected when the Milktaxi is switched on. The function is available only when an optional EL-AN electrical drive is available.



### **Headlight**

Pressing the Headlight key will switch the headlight fitted to the front of the Milktaxi on or off. The status LED in the upper left-hand corner is lit when the headlight is on.



### **Pasteurise key (optional function \*)**

Pressing the "Pa" key will start the preset pasteurisation cycle. The status LED in the upper left-hand corner lights up as soon as this function is activated. This function can be used only when the Milktaxi is connected to mains power.



### **Agitator key**

Pressing the Agitator key will start the agitator installed on the tank floor. The status LED in the upper left-hand corner lights up as soon as this function is activated. This function can be used only when the Milktaxi is connected to mains power.



### **Navigation keys**

The OK key in the centre of the Navigation keys is used to acknowledge various functions or functions in the control and maintenance menu. The cursor keys can be used to navigate through the menu and to select various functions.

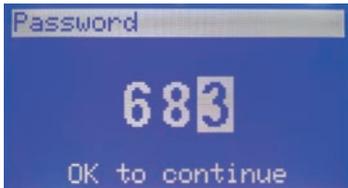
\* Optional function: If a certain optional function is not installed in your particular appliance, the message "not available" will appear on the screen when you press the respective key.

## 6. Milktaxi Settings



### 6.1 The Home Key

Pressing the Home key on the control panel of your Milktaxi opens the settings of the appliance. The settings of your Milktaxi are protected by a password, in order to avoid any unauthorised or inadvertent changes.



The password for your Milktaxi is **683** and cannot be changed. To enter the password, proceed as follows:

Use the cursor keys **↑** and **↓** to make the relevant number appear in the selected field. The cursor keys **←** and **→** can be used to move between the fields. To confirm your input when done, press the OK key.



Depending on the configuration of your Milktaxi, the options in the settings menu will differ. You can use the cursor keys **↑** and **↓** to select the relevant entry. To confirm your selection, press the OK key.

### 6.2 Basic settings

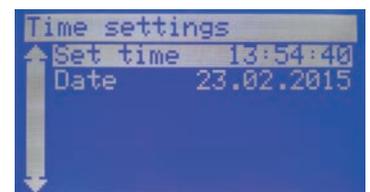
You can use the cursor keys **↑** and **↓** to select the relevant entry. To confirm your selection, press the OK key. The Basic Settings menu option allows the following settings to be made:

**Language:** Selection of the language used for appliance control and menu entries

**Temperature:** Switching between the temperature units °C and °F

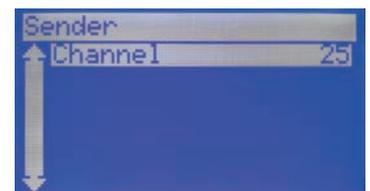
**Light:** Changing the time the headlight is switched on. The headlight switches off automatically when the time period set has expired.

**Time setting:** Here you can set the date, time of day and week-day. Press the OK key to access the settings screen. These settings are particularly relevant for the statistics function.



**Battery:** The current voltage of your 12V battery in the Milktaxi is shown here. If your Milktaxi is equipped with an EL-AN drive, the voltage of the 24V battery for the EL-AN is shown on the first line.

**Sender:** You can change the transmission channel for your dispensing remote control here in case there should be any problems with reception between the remote control and the Milktaxi.



**Display:** Adjustment of the contrast and brightness of the display to your needs.

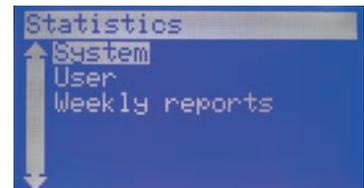
**Default values:** This is where you can reset all the changes made to the factory settings. To avoid resetting the settings by mistake, you must confirm this command again by pressing the OK key.

Use the cursor keys **↑** and **↓** to select the entry you require. Then confirm by the OK key that you want to change this entry.

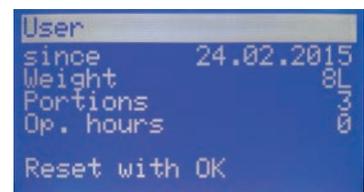
## 6.3 Statistics

The Statistics menu allows you to retrieve information about the overall runtime of your Milktaxi as well as the quantities fed per day recorded in the weekly reports. If this menu item is not available, please contact your service partner and arrange for him to install an SD card.

**System:** Here you can see the total quantities, portions and operating hours of your Milktaxi. You cannot change these settings.



**User:** Just like in the System view, you can see the total quantities, portions and operating hours of your Milktaxi here, but can also reset these statistics in order to record the operating data over a certain period, for example.



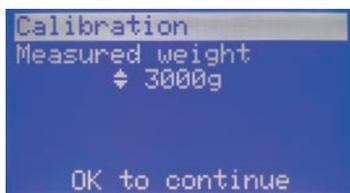
**Weekly reports:** The weekly reports provide a day-by-day overview of the feeding, cleaning and pasteurising which has been carried out during the week. Use the cursor keys to select the required entry and confirm your selection with the OK key. You will then be given a detailed list of the respective feeding, cleaning and pasteurising processes.

Weekly reports							CW08	
	M	T	W	T	F	S	S	Sum
Feed	2	2	3	2	2	2	2	15
Clea	2	2	2	2	1	2	2	13
Past	2	2	2	2	2	2	2	14

## 6.4 Pump

The Pump menu allows the following settings to be made:

**Calibration:** Before you can program individual dosing quantities, you must calibrate the filling quantity. First, fill as much milk or water into the Milktaxi as you would normally want to feed. Have a container of about 5 litres e.g. a bucket ready. Make sure that this container is at approximately the same height as the buckets into which you will dispense the diet. If it is at a different height, the calibration result may be biased.



When you press the OK key, the pump delivers liquid from the tank for a short time. Measure the weight. Then use the cursor keys **↑** and **↓** to enter the weight you measured. Confirm the value you just entered by pressing the OK key.

**Dosing level:** This parameter allows the quantities (or levels) to dispense when feeding the calves.

You have a total of 9 levels available. Five of these have been preset in the factory: 1.6L, 2.5L, 3.5L, 6.0L and 11.5L. Use the cursor keys **↑** and **↓** to select the level you want.

Dosing level		
Level	1	1.6L
Level	2	2.5L
Level	3	3.5L
Level	4	6.0L
Level	5	11.5L
Level	6	--L

Then confirm by the OK key that you want to change it. The value will start to flash. Use the cursor keys **↑** and **↓** to change the value. When the desired value is displayed on the screen, confirm it by pressing the OK key again. The new dosing level has now been saved to system memory.

To delete a dosing level, use the cursor key **↓** to set 0.0L. When this is the displayed quantity and you confirm it by pressing OK, the screen will change to --, and this dosing level will be hidden. The dosing levels are sorted in ascending order automatically by the system, so the smallest quantity to dispense will always be assigned to level 1.

## 6.5 Mixing

The Mixing menu allows the mixing time to be adapted for the agitator.

Mixing	
Mix time	5min
Mix. break	15min

Use the cursor keys **↑** and **↓** to select the entry you require. Then confirm by the OK key that you want to change this entry.

**Mix. time:** This parameter defines the time during which the floor-mounted agitator will run when you press the Agitator key on the control panel. The maximum mixing time that you can set is 60 minutes. After the OK button has been pressed, the time indication starts flashing. Use the cursor keys **↑** and **↓** to set the required time. Confirm this entry with the OK key. The new value is now stored.

**Mix. break:** Here you can specify for how long the milk should not be stirred during the holding phase (for example after cooling). The maximum adjustable pause time is 99 minutes. The default is a value of 15 minutes. After the OK button has been pressed, the time indication starts flashing. Use the cursor keys **↑** and **↓** to set the required time. Confirm this entry with the OK key. The new value is now stored.

## 6.6 W-Heating

W-Heating	
ELH start	70°C
WWH stop	10°C
WW Messint	10min

This menu enables the settings to be made for the hot water-fired heater. If there is no hot water-fired heater available, this menu item is hidden.

**ELH start:** This allows the definition of the temperature from which the electric heating foils below the floor of the tank should do the heating rather than the hot water-fired heater. This temperature must be lower than the maximum temperature in the hot water circuit. For safety reasons, the temperature of the hot water circuit must not exceed 72°C.

**WWH stop:** This parameter specifies the difference in temperature between the hot water at the inlet and the temperature in the tank. If the difference in temperature falls short of this value, the hot water-fired heater is switched off and the electric heater switches itself on.

**WWH Messint:** With this parameter you can define the time period after which the increase in temperature in the tank should be measured again. After the time set here it is checked whether the temperature in the tank has increased within the time set, which would indicate that your hot water-fired heating is still working efficiently. If this is not the case, the hot water-fired heater is switched off and the electric heater switches itself on.

You can use the cursor keys **↑** and **↓** to select the required menu item. Then confirm by the OK key that you want to change this value. The value will start to flash. Use the cursor keys **↑** and **↓** to change the preset value. When the desired value is displayed on the screen, confirm it by pressing the OK key again. The new value specification is now stored.

## 6.7 Cooling

This menu enables the settings to be made for the cooling function. If the pasteurising option is not available, this menu item is hidden.

**Cool. t-out:** In case of an unsuccessful attempt to start cooling (no drop in temperature in the tank), the time-out, or interval, defined here is observed before the next attempt is made to start the cooling program. The check and attempt will be repeated three times. If the temperature in the tank has still not dropped after this, cooling is aborted.

**Delay:** This menu item is used to define the delay after which cooling should start once the minimum fill level has been reached in the tank. If this value remains at the default value of 00:00, cooling starts immediately after the minimum fill level has been reached.

**Stop before PA:** Here you define how many minutes before pasteurising the cooling function is to stop.

**Recooling:** Here you can define the temperature difference (increase in temperature) in the tank at which the cooling system should resume cooling.

## 6.8 Pasteurisation

With this menu item you can set the temperature to which the calves' milk is to be cooled following manual pasteurisation. This is usually the same time at which you will want to dispense the milk. You will find a detailed description of the pasteurising process from page 28 onwards.

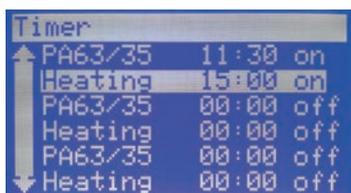
If the pasteurising option is not available, this menu item is hidden.

## 6.9 Timer

This menu item allows the definition of up to 6 different heating and pasteurisation cycles (timers) and the starting of programmed timed cycles. The first screen is for the selection of the timed program you want to change or activate.

**Please note: The timers for pasteurisation/heat treatment are only available when your Milktaxi is equipped with an optional pasteurisation unit.**

The overview screen shows you at a glance which timers are enabled and which start times are defined for them.



Timer	Start Time	Status
PA63/35	11:30	on
Heating	15:00	on
PA63/35	00:00	off
Heating	00:00	off
PA63/35	00:00	off
Heating	00:00	off

Use the cursor keys **↑** and **↓** to select the desired timer and then press the OK key to open the entry. The currently enabled timers are marked "ON." If more than one timer is marked "ON" at the same time, the timers are run by ascending order of start times. This means that the order of timers on the overview screen is not necessarily the order of running.

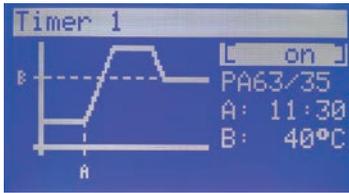
The timers for pasteurisation cycles are identified by the designation "PA64/35" whereas timed milk heating cycles are called "Heating." Heat treatment is designated "WB60/60". As soon as you set a timer to "ON," it starts the cycle it represents automatically at the programmed start time.

## 6.9.1 Timer for Pasteurisation PA63/35

If the pasteurising option is not available, this menu item is hidden.

After selecting the desired pasteurisation cycle, you have the possibility of editing it.

You can set or edit the desired start time for the pasteurisation cycle and the temperature at which the diet should be fed after it. After you have selected a parameter using the cursor keys  $\uparrow$  and  $\downarrow$  and confirmed your selection by pressing the OK key, the value will start to flash. To help you understand what is meant, the point on the chart that is being edited flashes as well.



**Point A:** This point in the chart is the desired start of the pasteurisation cycle. To change this value, proceed as follows:  
By pressing the OK key on the control panel, you access the hours of the time of day. This segment starts to flash, showing that you have accessed it. Use the cursor keys  $\uparrow$  and  $\downarrow$  to set the hour value. Then confirm your setting by pressing the OK key, which also moves the display to the minutes of the time of day. Again, use the cursor keys  $\uparrow$  and  $\downarrow$  to set the minutes value you require and confirm by pressing the OK key.

**Point B:** This point on the chart is the desired final temperature to which the milk should be cooled after the pasteurisation cycle. To change this value, proceed as follows:  
By pressing the OK key on the control panel, you access the temperature setting. This segment starts to flash, showing that you have accessed it. Use the cursor keys  $\uparrow$  and  $\downarrow$  to set the desired temperature. Then confirm your setting by pressing the OK key

Once you have programmed a given time sequence in this manner, you can use this timer at any point later on.

## 6.9.2 Timer for Heat Treatment 60/60

If the pasteurising option is not available, this menu item is hidden.



Heat treatment means that the milk is heated to 60°C and that this temperature is kept for 60 minutes. This is expressly not a pasteurisation process.

After selecting the desired heat treatment cycle, you have the possibility of editing it.

You can now set or edit the desired start time for the heat treatment and the temperature at which the diet should be fed after it. After you have selected a parameter using the cursor keys  $\uparrow$  and  $\downarrow$  and confirmed your selection by pressing the OK key, the value will start to flash. To help you understand what is meant, the point on the chart that is being edited flashes as well.

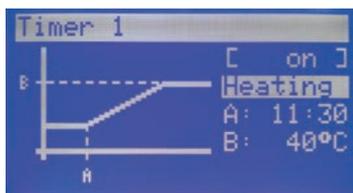
**Point A:** This point in the chart is the desired start of the heat treatment cycle. To change this value, proceed as follows:  
By pressing the OK key on the control panel, you access the hours of the time of day. This segment starts to flash, showing that you have accessed it. Use the cursor keys  $\uparrow$  and  $\downarrow$  to set the hour value. Then confirm your setting by pressing the OK key, which also moves the display to the minutes of the time of day. Again, use the cursor keys  $\uparrow$  and  $\downarrow$  to set the minutes value you require and confirm by pressing the OK key.

**Point B:** This point on the chart is the desired final temperature to which the milk should be cooled after the heat treatment cycle. To change this value, proceed as follows:  
By pressing the OK key on the control panel, you access the temperature setting. This segment starts to flash, showing that you have accessed it. Use the cursor keys **↑** and **↓** to set the desired temperature. Then confirm your setting by pressing the OK key.

Once you have programmed a given time sequence in this manner, you can use this timer at any point later on.

### 6.9.3 Timer for Milk Heating

After selecting the required timed program, you have the possibility of editing it.



You can set or edit the desired start time of the heating and the temperature to which the diet should be heated. After you have selected a parameter using the cursor keys **↑** and **↓** and confirmed your selection by pressing the OK key, the value will start to flash. To help you understand what is meant, the point on the chart that is being edited flashes as well.

**Point A:** This point in the chart is the desired start of the heating. To change this value, proceed as follows:  
By pressing the OK key on the control panel, you access the hours of the time of day. This segment starts to flash, showing that you have accessed it. Use the cursor keys **↑** and **↓** to set the hour value. Then confirm your setting by pressing the OK key, which also moves the display to the minutes of the time of day. Again, use the cursor keys **↑** and **↓** to set the minutes value you require and confirm by pressing the OK key.

**Point B:** This point on the chart is the desired final temperature to which the milk should be heated. To change this value, proceed as follows:  
By pressing the OK key on the control panel, you access the temperature setting. This segment starts to flash, showing that you have accessed it. Use the cursor keys **↑** and **↓** to set the desired temperature. Then confirm your setting by pressing the OK key

Once you have programmed a given time sequence in this manner, you can use this timer at any point later on.

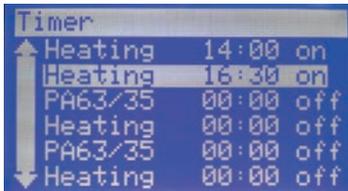
To enable the selected timed program, select the menu item "[OFF]" on the screen and press the OK key. The display changes from "[OFF]" to "[ON]."

Combining these three settings allows you to prepare difference sequences of heat treatment/pasteurisation.

**Example:** You want to pasteurise the milk at 14:00 h and then cool it down to 11°C, then to feed it at 18:00 h at a drinking temperature of 42°C.

This will require two timers.

1st timer:	Type	PA63/35	
	A:	14:00	(start time for pasteurisation)
	B:	11°C	(cooling down to 11°C)
2nd timer:	Type	Heating	
	A:	16:30	(start time for heating)
	B:	42°C	(drinking temperature)



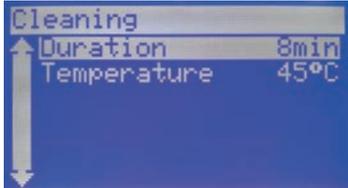
Both timers are set to [ON], which gives you two enabled timers in your timer list.

These two timers are actuated in the sequence of their start times.

**Note:** With the tank full the Milktaxi needs approx. 1 to 1½ hrs to heat the milk to drinking temperature (~40°C). The actual duration depends, among other things, on the start temperature of the milk in the tank and the outside temperature.

## 6.10 Cleaning

This menu enables the settings to be made for the cleaning function.



Use the cursor keys **↑** and **↓** to select the entry you require. Then confirm by the OK key that you want to change this entry.

**Duration:** With this setting, you define how long the cleaning/rinsing function will remain on after the preset cleaning temperature is reached.

**Temperature:** This parameter defines the temperature to which the cleaning/rinsing water should be heated. Always heed the specifications of the cleaning agent manufacturer.

**Note:** Please remember that the Milktaxi must be connected with the mains power supply for cleaning to be actuated.

## 7. Dosing Milk Diet



### 7.1 Technical Requirements

- The fill level inside the Milktaxi tank must be sufficient.

### 7.2 Safety and Warning Messages

PLEASE NOTE	
	<ul style="list-style-type: none"><li>– Ensure that the check valve of the dispensing arm closes tightly. Residual straw or similar may cause milk to drip out of the dispensing arm.</li><li>– There is also a risk of air penetrating into the hose, thereby lowering the milk column in the hose, which may result in a bias in the amount of dispensed milk diet.</li></ul>

### 7.3 Functional Description

You can start dosing in one of the following ways:

- Dosing pushbutton at the left-hand side of the pushing handle
- Dosing button on the remote control (only in conjunction with “dispensing arm with remote control”)

A precondition for being able to dose milk diet into the nursing buckets or feed bowls is a sufficiently high fill level inside the tank. If there is not enough liquid in the tank, the error message below appears on the display when dosing is attempted:



If your Milktaxi does not have a sufficiently high battery capacity, it stops pumping during operation or does not even start operation. This is indicated by the following message:



This ensures the batteries last longer. Eliminate this problem by connecting the Milktaxi to the mains power supply.

If the liquid level in the tank is sufficient and the battery capacity allows, the main screen is replaced with the dosing screen when milk diet dosing is started:



At the left-hand edge of the screen, you see the current temperature inside the tank. The central icon represents the pumping function. At the right-hand edge the display shows the current dosing quantity in the middle. The next preset dosing quantities, higher and lower, are displayed above and below the current one, respectively, and are updated automatically.

Press the cursor keys **↑** and **↓** on the control panel to select the quantity you want to dispense into the buckets, which you previously stored in the settings. See the explanations on page 14 of this manual for how to adapt the dosing quantities.

Start dosing by pressing the pump pushbutton in the Milktaxi pushing handle or by pressing the button on the optional alternative control on the dispensing arm. Pressing the key again will stop the dosing process in progress.

At the end of the dosing process, the screen changes back to the main screen.

### 7.3.1 Optional Dispensing Arm with Remote Control



The optionally available dispensing arm with remote control allows you to change the quantity that is going to be dispensed by pressing the “+ key” on the remote control. However, the screen of the remote control on the dispensing arm does not show the actual quantity that is going to be dispensed in litres, but only the identifier number of the respective dosing level. Unlike making changes at the display, the remote control only allows the dosing level/quantity to be changed in one direction (ascending). When the highest dosing level/quantity is displayed, the next button press will make it return to Level 1.

Pushing the Pump key on the remote control will send the preset and selected quantity of milk diet to distribute into the bucket or bowl.

### 7.3.2 Special Continuous Pumping Function

When the Dosing key on the control panel of the appliance is pressed, the pump does not run to send a preset and selected quantity into the bucket or bowl; rather, it runs continuously for 10 minutes. When this period has elapsed, the pump switches itself off and the LED in the Dosing key on the panel starts flashing. The LED switches off when the Dosing key is pressed again. Continuous pumping can be stopped at any time by pressing the Dosing key again briefly.

Setting or editing the time period for continuous pumping is not possible.

## 8. Dissolving Milk Replacer using the Floor-mounted agitator



### 8.1 Technical Requirements

- The Milktaxi must be connected to a power supply that matches the requirements detailed in this manual.
- The fill level inside the Milktaxi tank must be sufficient.

### 8.2 Safety and Warning Messages

	<b>⚠ WARNING</b>
	<p><b>Danger of injury by moving parts of the appliance.</b></p> <ul style="list-style-type: none"><li>– Prior to starting milk replacer mixing with the agitator, close the Milktaxi lid and then press the Agitator key.</li><li>– Never put your hand into the tank while the agitator is running.</li><li>– Wait to check whether all replacer powder is properly dissolved until the agitator has come to a complete standstill.</li></ul>

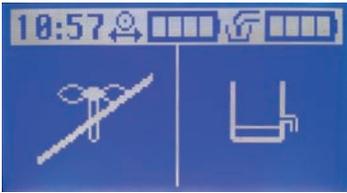
	<b>PLEASE NOTE</b>
	<ul style="list-style-type: none"><li>– Make sure that the milk replacer manufacturer's indications on mixing temperature are respected in all cases.</li><li>– Please remember that particularly in the winter, the milk may cool down in the nursing buckets that the calves are fed with.</li><li>– Finally, check if the milk diet has been heated to the desired temperature and readjust it with hot water or cold water and milk replacer as required.</li><li>– Do not fill any solid objects into the tank. These can damage the agitator and the temperature sensor.</li></ul>

	<b>PLEASE NOTE</b>
	<ul style="list-style-type: none"><li>– Milk replacer powder that is not totally dissolved may cause health issues in the calves. Adjust the mixing time of the agitator depending on the quantity in the tank and the solubility of the replacer. Make sure that the milk replacer is fully dissolved.</li></ul>

### 8.3 Functional Description

The mixing function is available only when the Milktaxi is connected to a power supply and sufficient liquid is in the tank. Pressing the Agitator key on the control panel causes the screen on your display to switch from the main screen to the mixing screen. The LED lit in the Agitator key on the panel is an additional indicator for the function being active.

If there is not enough liquid in the tank, the error message below appears on the display:



If your Milktaxi is not connected to the mains power supply, the following error message appears:



If the level of liquid in the tank is sufficient and the Milktaxi is connected to the mains power supply, the agitator is started. To enhance the mixing result, the floor-mounted agitator does not run continuously but rather at intervals, with regular short breaks.

At the left-hand edge of the screen, you see the current temperature inside the tank. The icon in the centre represents a stylised agitator vane. At the right-hand edge the display shows the currently remaining mixing time. This parameter can be adjusted to what is needed in your operation in the general settings of the Milktaxi.



At the end of the mixing time, the floor-mounted agitator switches itself off and the screen changes back from the mixing screen to the main screen.

#### **To dissolve milk replacer:**

1. Connect the Milktaxi to the power supply.
2. Fill the desired quantity of hot water into the Milktaxi tank.
3. Then pour the desired quantity of milk replacer into the tank.
4. Switch the Milktaxi on at the main switch.
5. Close the lid of the Milktaxi.
6. Press the Agitator key on the control panel to start the floor-mounted agitator.
7. When the agitator has come to a complete stop, check whether or not the milk replacer has sufficiently dissolved.

#### **If the powder has not sufficiently dissolved:**

1. Close the lid of the Milktaxi.
2. Restart the floor-mounted agitator with the Agitate key of the control panel.

## 9. Heating Liquid with the Heater below the Tank Floor



### 9.1 Technical Requirements

- The Milktaxi must be equipped with the heating foils below the tank floor.
- The Milktaxi must be connected to a power supply that matches the requirements detailed in this manual.
- The fill level inside the Milktaxi tank must be sufficient.

### 9.2 Safety and Warning Messages

	<p style="text-align: center;"><b>⚠ WARNING</b></p> <p><b>Danger of injury by moving parts of the appliance.</b></p> <ul style="list-style-type: none"><li>– During heating, the floor-mounted agitator starts automatically at regular intervals. Do not put your hand into the tank.</li><li>– Prior to heating the milk, close the tank lid and then press the Heat key.</li></ul>
	<p style="text-align: center;"><b>⚠ CAUTION</b></p> <p><b>Danger of injury because of burns and scalding.</b></p> <ul style="list-style-type: none"><li>– Do not put your hand into the tank while heating is in progress</li><li>– During the heating process the surfaces and the milk hose of the Milktaxi will also become hot.</li><li>– Prior to heating the milk, close the tank lid and then press the Heat key.</li></ul>
	<p style="text-align: center;"><b>PLEASE NOTE</b></p> <ul style="list-style-type: none"><li>– Please take the time it will take to heat the milk into account. When the tank is full to the nominal capacity, it will take approx. 30 minutes for your Milktaxi to increase the temperature of the milk by 10°C.</li><li>– Please remember that particularly in the winter, the milk may cool down in the nursing buckets that the calves are fed with.</li><li>– While heating is in progress, the agitator on the floor of the tank is switched on at regular intervals for a couple of seconds.</li></ul>
	<p style="text-align: center;"><b>PLEASE NOTE</b></p> <ul style="list-style-type: none"><li>– Use of the heating element may result in small deposits of milk on the floor of the tank. Following every cycle of using the Milktaxi, the tank must be cleaned with a suitable cleaning agent (e.g. TaxiClean available from Holm &amp; Laue) and a brush. Such deposits may damage the heater. Refer also to the cleaning instructions included on page 19 of this manual.</li></ul>

### 9.3 Functional Description

The heating function is available only when the Milktaxi is connected to a power supply and sufficient liquid is in the tank. Pressing the Heat key of your control panel causes the screen to switch from the main screen to the heating screen. The LED lit in the Heat key on the panel is an additional indicator for the function being active. The heating element heats the entire tank floor. The floor-mounted agitator is activated at regular intervals to prevent excessive heat development which could lead to the milk burning and sticking to the tank.

If there is not enough liquid in the tank, the error message below appears on the display:



If your Milktaxi is not connected to the mains power supply, the following error message appears:



If the level of liquid in the tank is sufficient and the Milktaxi is connected to the mains power supply, the heater is started.



At the left-hand edge of the screen, you see the current temperature inside the tank shown in large figures. The set target temperature is displayed in small figures above it. The icon in the centre represents a thermometer.

When the set temperature is reached, the heating element stops automatically. If the milk cools to below the set temperature, the heating element automatically re-heats the milk. Please note that certain tolerance ranges are given here to prevent the heating element switching on and off too frequently.

While heating is in progress, the floor-mounted agitator stirs the milk periodically. This enhances the Milktaxi's heating performance and reduces the risk of burnt milk. The time during which the floor-mounted agitator is activated depends on the level of liquid in the tank and can thus vary.

You may go on dosing and distributing milk while heating is in progress.

**To heat liquid:**

1. Connect the Milktaxi to the power supply.
2. Switch the Milktaxi on at the main switch.
3. Switch the heater on by pressing the Heat key on the control panel.
4. Use the cursor keys **↑** and **↓** to set the desired target temperature. This target temperature is displayed above the current tank temperature and is stored by pressing the OK key. Temperature can be increased in steps of 1°C / 1°F. The maximum pre-set temperature possible is 55°C / 131°F.
5. The temperature setting is saved to memory and available even after the Milktaxi has been switched off; there is no need to repeat this setting procedure every time the heater is started.

**Switching the heating process off early:**

1. Press the Heat key on the control panel briefly to switch the heating element off. The LED goes off and heating stops. The main screen appears again.

## 10. Heating Liquid with the Hot Water-fired Heater

### 10.1 Technical Requirements

- Your Milktaxi must be equipped with a pasteuriser and the optional hot water-fired heater.
- The Milktaxi must be connected to a power supply that matches the requirements detailed in this manual.
- The fill level inside the Milktaxi tank must be sufficient.

### 10.2 Safety and Warning Messages

	<b>⚠ CAUTION</b>
	<b>Danger of injury because of burns and scalding.</b> <ul style="list-style-type: none"><li>– When the hot water-fired heater is running, the outside surface of the tank heats up to the temperature of the hot water.</li><li>– Water draining out of the hot water-fired heater may cause scalding.</li></ul>

	<b>PLEASE NOTE</b>
	<ul style="list-style-type: none"><li>– The temperature of the supplied hot water must not exceed 72°C. A pre-mixer tap may be needed to control and reach the appropriate temperature.</li></ul>

**In addition, all safety instructions given for heating liquid with the heating element below the tank floor must be observed too.**

### 10.3 Functional Description

By using the hot water-fired heater, the electrical energy needed for warming the milk can be reduced substantially. Provided the hot water temperature is high enough, the electrical heating element does not kick in at all. If the hot water temperature is too low (that is, the difference between the hot water temperature and the desired drinking temperature is too small), then the electrical heating element below the tank floor takes over automatically.

For the steps of setting/programming the required parameters, refer to page 15 of this user's manual.

# 11. Pasteurising Milk



## 11.1 General Note

The pasteurisation function is designed exclusively for the treatment of calves' milk diet. Any other use or purpose cancels any and all warranty. Holm & Laue cannot be held liable for physical injury or material damage that is a result of improper handling and/or use of the pasteurisation function.

## 11.2 Technical Requirements

- Your Milktaxi must be equipped with a pasteuriser.
- The Milktaxi must be connected to a power supply that matches the requirements detailed in this manual.
- The Milktaxi must be connected to a cold water supply.
- The fill level inside the Milktaxi tank must be sufficient.

## 11.3 Safety and Warning Messages

	<p style="text-align: center;"><b>⚠ WARNING</b></p> <p><b>Danger of injury by moving parts of the appliance.</b></p> <ul style="list-style-type: none"><li>- During heating, the floor-mounted agitator starts at regular intervals. Do not put your hand into the tank.</li><li>- Prior to heating the milk, close the tank lid and then press the Pa key.</li></ul>
	<p style="text-align: center;"><b>⚠ CAUTION</b></p> <p><b>Danger of injury because of burns and scalding.</b></p> <ul style="list-style-type: none"><li>- Do not put your hand into the tank while heating is in progress</li><li>- During the heating process the surfaces and the milk hose of the Milktaxi will also become hot.</li><li>- Prior to heating the milk, close the tank lid and then press the Pa key.</li></ul>
	<p style="text-align: center;"><b>PLEASE NOTE</b></p> <p><b>Using colostrum for pasteurisation is prohibited</b></p> <ul style="list-style-type: none"><li>- The protein structure of colostrum is different from that of normal whole milk. These proteins may denature under the influence of heat. This, in turn, leads to reduced milk quality and may result in attaching agglutinations and burnt milk in the Milktaxi. Such deposits will overstress the heating element and may lead to its failure. Therefore do not use colostrum with a dry matter content of in excess of 15% in your H&amp;L Milktaxi.</li></ul>

**PLEASE NOTE**

**Repeated pasteurisation of milk prohibited**

- Pasteurisation slightly lowers the pH of the milk. Repeated milk pasteurisation may result in substantial quality loss. For instance, the milk proteins may precipitate and thereby cause considerable deterioration of milk ingredients. The milk may also sustain mechanical-technical damage. If any damage is the result of precipitation from the milk, this will void any and all warranty.

**PLEASE NOTE**

- Please take the time it will take to heat the milk into account. When the tank is full to the nominal capacity, it will take approx. 30 minutes for your Milktaxi to increase the temperature of the milk by 10°C.
- Please remember that particularly in the winter, the milk may cool down in the nursing buckets that the calves are fed with.
- While heating is in progress, the agitator on the floor of the tank is switched on at regular intervals for a couple of seconds.

**PLEASE NOTE**

- Use of the heating element may result in small deposits of milk on the floor of the tank. Following every cycle of using the Milktaxi, the tank must be cleaned with a suitable cleaning agent (e.g. TaxiClean available from Holm & Laue) and a brush. Such deposits may damage the heater. Refer also to the cleaning instructions included on page 19 of this manual.

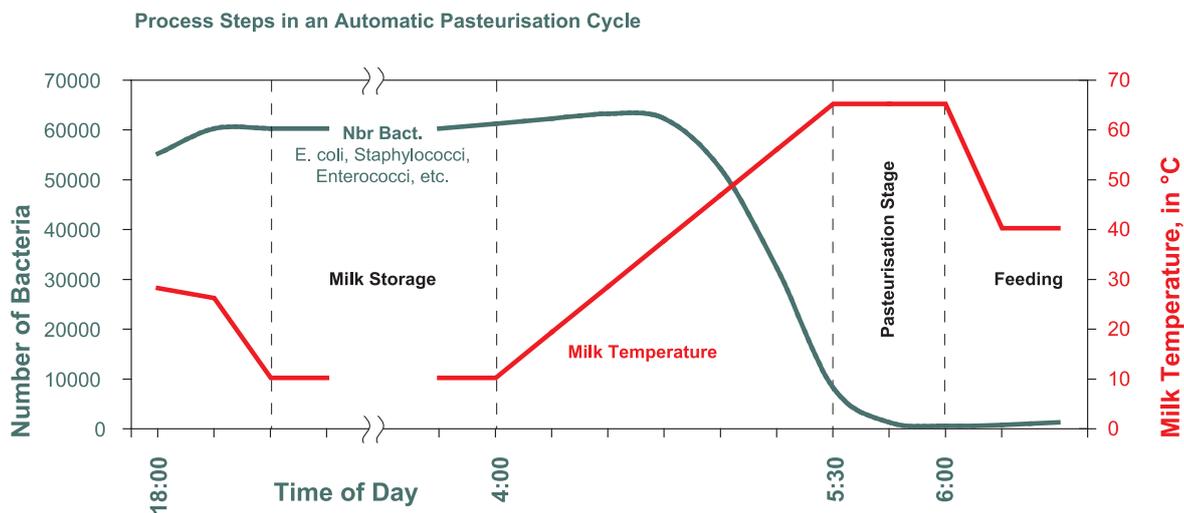
**PLEASE NOTE**

- The cooling jacket is equipped with a pressure relief valve. If the pressure in the cooling jacket exceeds the threshold value of 1 bar, the valve opens to drain water in order to avoid damage to the jacket.

## 11.4 Functional Description

If your Milktaxi is equipped with a pasteurisation unit, you have the possibility of reducing the bacteria load of the milk substantially. Pasteurisation kills up to 99.5% of the bacteria present. This is the basis for very healthy calf rearing.

The Milktaxi pasteuriser works in the form of a batch pasteuriser, i.e. it pasteurises the total amount of milk in one go at 63°C in a period of 35 minutes. This time sequence cannot be changed, since successful pasteurisation directly depends upon the proper relationship of temperature and process duration. You do not need any additional containers or fixtures to store, transport, and dose the milk. The following graph shows a typical development of bacteria load in relation to the pasteurisation process.



The full pasteurisation cycle, including heating, pasteurisation and cooling stages, may take anywhere from 1.5 to 3 hours, depending on the liquid level in the tank. As a rule of thumb, think of 30 minutes as the time it takes for the heating element to increase the temperature in the tank full of liquid (irrespective of the model version) by 10°C.

If there is not enough liquid in the tank, the error message below appears on the display:

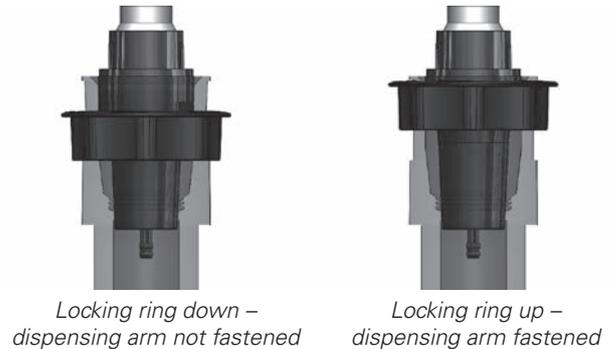


## 11.4.1 Starting Pasteurisation Manually

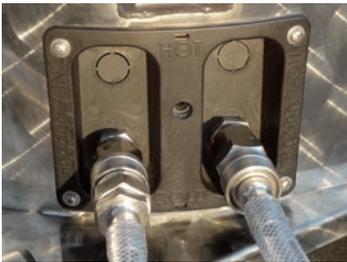
1. Place the hose tightly around the Milktaxi. The hose holder at the back of the Milktaxi is provided to ease this process.



2. Fit the dispensing arm tightly with its check valve end into the return line funnel of the tank and fasten it by pushing the locking ring of the rubber bushing up until it is flush with the upper edge.



3. Connect the cold water supply to the **COLD IN** hose fitting on the connector panel and open the water tap fully. Connect the hose for the drain to the **COLD OUT** hose fitting. Make sure that the cooling water can flow freely through this drain hose to the drain. To do so, verify that the hose is not kinked and that flow is not restricted in any other way.



In the photograph, the **COLD IN** connector is the one on the left, the **COLD OUT** connector, the one on the right.

4. Switch the Milktaxi on at the main switch.
5. Switch the pasteurisation on by pressing the Pa key on the control panel.



During pasteurisation, the main screen changes to the pasteurisation view and indicates the remaining time. The target temperature is shown above the current temperature in the tank. When the cycle reaches the cooling stage, the target temperature is shown below the current temperature in the tank.

During the pasteurisation cycle, the LEDs on the Pasteurise, Heat and, at intervals, Agitator keys are lit when appropriate. The recirculation of the milk starts as soon as the holding phase begins. During recirculation, the Pump key LED lights up briefly.

6. At the end of the holding phase, cooling starts automatically to bring the milk to the preset cooled temperature at the end of the cycle.

## 11.4.2 Starting Timed Pasteurisation Automatically

1. Perform steps 1 to 4 described for manual pasteurisation from page 31 onwards.
2. Select one of the timers available from the main menu. Refer to page 16 of these instructions for details on how to define the parameters.
3. As soon as automatic pasteurisation begins, the main screen changes to the pasteurisation screen. This is described in the "Manual pasteurisation" section on page 31.
4. At the end of pasteurisation time, cooling kicks in automatically to bring the milk to the preset, desired drinking temperature.

## 11.4.3 Aborting Pasteurisation in Progress

To stop pasteurisation which is in progress, press the Pa key. After you have pressed the key, a confirmation query will appear on the screen. You must confirm by pressing the OK key.

## 11.4.4 Feedback

If pasteurisation has been carried out correctly, you will receive confirmation after the cooling process has been completed. If a timer is then started, this confirmation will disappear. If a low temperature should occur over 5 minutes during the holding phase, a pasteurisation fault is signalled. These entries can then be found in the Statistics menu.

**Note** When cooling has been completed, the appliance will drain the water from the cooling jacket. Draining is automatic, through a valve in the floor of the tank. Therefore it is always necessary for the Milktaxi to be in an area with a drain in the floor while the cooling process is running.

Feeding calves is impossible while a pasteurisation cycle is in progress. While the cycle is running, the dosing function is also temporarily disabled.

## 12. Cooling Milk



### 12.1 Technical Requirements

- Your Milktaxi must be equipped with a pasteuriser option.
- The Milktaxi must be connected to a power supply that matches the requirements detailed in this manual.
- The Milktaxi must be connected to a cold water supply.
- The fill level inside the Milktaxi tank must be sufficient.

### 12.2 Safety and Warning Messages

	<b>WARNING</b>
	<b>Danger of injury by moving parts of the appliance.</b> <ul style="list-style-type: none"><li>– During cooling, the floor-mounted agitator starts at regular intervals. Do not put your hand into the tank.</li><li>– Prior to cooling, close the tank lid first and then press the Cool key.</li></ul>

	<b>PLEASE NOTE</b>
	<ul style="list-style-type: none"><li>– Do not set the required storage temperature too low. If the difference between the desired milk temperature and the temperature of the cooling water is too small (less than 5°C) the Milktaxi may require substantial amounts of water to perform the cooling operation.</li><li>– If the temperature difference is too small altogether, the desired cooled temperature cannot be achieved. In this case, cooling is aborted automatically after a certain time.</li></ul>

### 12.3 Functional Description

If your Milktaxi is equipped with a pasteuriser, it is not only possible to pasteurise the milk but also to cool it down.



To start this function, press the Cool key. The main screen now switches to the cooling screen. At the left-hand edge of the screen, you see the current temperature inside the tank. The icon in the centre represents the cooling function. Generally speaking, a temperature of 15°C is usually sufficient to keep the calves' milk diet fresh for 12 hours.

When the preset temperature is reached, the system resumes cooling automatically as soon as the temperature rises above the desired, preset temperature.

While cooling is in progress, the floor-mounted agitator stirs the milk periodically. This enhances the Milktaxi's cooling performance. The interval between two stirring cycles depends upon the fill level of the tank and can thus vary. While cooling is in progress, milk diet can still be dosed from the tank.

If there is not enough liquid in the tank, the error message below appears on the display:

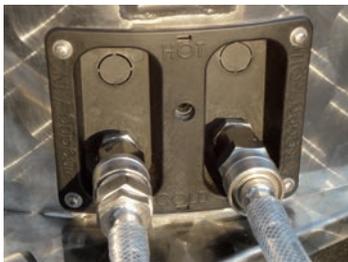


If your Milk taxi is not connected to the mains power supply, the following error message appears:



### To cool milk:

1. Connect the Milk taxi to the power supply.
2. Fit the dispensing arm tightly with its check valve end into the return line funnel of the tank and fasten it by pushing the locking ring of the rubber bushing up until it is flush with the upper edge.
3. Connect the cold water supply to the **COLD IN** hose fitting on the connector panel and open the water tap fully. Connect the hose for the drain to the **COLD OUT** hose fitting.



In the photograph, the **COLD IN** connector is the one on the left, the **COLD OUT** connector, the one on the right.

4. Switch the Milk taxi on at the main switch.
5. Switch the cooling function on by pressing the Cool key on the control panel.
6. Use the cursor keys **↑** and **↓** to set the desired target temperature. This target temperature is displayed below the current tank temperature and is stored by pressing the OK key. Temperature decrease can be determined in steps of 1°C or 1°F.
7. The temperature setting is saved to memory and available even after the Milk taxi has been switched off; there is no need to repeat this setting procedure every time the cooler is started.

### Switching the cooling process off early

1. To stop a cooling cycle that is running, press the Cool key on the control panel. The LED goes off and cooling stops. The main screen appears again.

### Automatic filling of the Milk taxi (for instance, when used with a robotic milker)

If the Milk taxi is filled automatically by a milking system\* (e.g., from the withheld milk line of a robotic milker), cooling can also be started with no liquid level in the tank. In this case, the Milk taxi “waits” for the first instalment of milk to arrive in the tank and then starts cooling according to the delays and parameters described on page 16. Shortly before the next pasteurisation cycle, cooling is stopped automatically.

For more details of parameter setting see the Milk taxi settings on page 16.

\*) The filling option must be set up by the user on site at the milking installation.

## 13. Using the Electrical Drive (EL-AN)



### 13.1 Technical Requirements

- The Milktaxi must be equipped with the optional electrical drive system.

### 13.2 Safety and Warning Messages

 <b>WARNING</b>	
	<p><b>Hazard of injury if the Milktaxi tilts over</b></p> <ul style="list-style-type: none"><li>– The tank may tilt over if the ground is not level, then affecting persons present. This may result in bruises, cuts and other injuries.</li><li>– The powerful drive may cause problems of stability particularly while driving through a bend.</li><li>– Make sure the path that the Milktaxi will travel is level and solid, ideally paved. Potholes and soft ground (sand, gravel or snow) are likely to hamper the movement of the Milktaxi.</li></ul>

<b>PLEASE NOTE</b>	
	<ul style="list-style-type: none"><li>– As long as the Milktaxi is connected to mains power with the power supply cord, the EL-AN drive is disabled and it is impossible to use it.</li></ul>

### 13.3 Functional Description

If your Milktaxi is equipped with the EL-AN electrical drive, you can easily move the Milktaxi even uphill. This drive is mounted on the front axle and powered by a 24 V battery.

The electrical drive allows forward and reverse movement at two different speeds. When you switch the Milktaxi on at the main switch, the slower gear is selected automatically. The driving speed selector key on the control panel allows you to switch back and forth easily between slow and fast gear. The appropriate LED on the selector on the control panel indicates the active gear (refer to page 12, the explanation of the driving speed selector key). The high gear is designed to achieve a maximum speed of travel of approx. 6 km/h.

The movement impulse lever on the right-hand handle is for selecting the direction of movement. When you push this lever to the front, the Milktaxi advances. When you pull this lever to the rear, the Milktaxi reverses. The movement impulse lever is also an infinitely variable speed regulator, adjusting the effective speed depending how far you push or pull the lever.

The drive axle is motor-braking. This means that the Milktaxi will stop immediately, even on a gradient, when the movement impulse lever is not actuated.

The drive features integrated battery protection to avoid the battery discharging too quickly. As soon as the battery charge is too low, the Milktaxi automatically switches to the low gear. The higher gear can only be used again after the battery has been charged. If you are driving uphill at top speed with the battery losing charge, the Milktaxi may throttle the speed and you may only be able to continue moving in the low gear. If the high gear can be switched on again after a few seconds, you can try

moving at a slower speed in the high gear (do not push the movement impulse lever forward completely). Quite often, you will then be able to move at top speed on level ground again until the battery charge has been reduced too much and the high speed is blocked generally.

### Disabling the Motor Brake



If you want or need to move the Milktaxi manually, you must disable the motor brake. To do this, remove the round cap on the front of the axle cover and release the brake using the lever behind it by pressing this upwards.

Then, to be able to push the Milktaxi without the help of the electrical drive, you must switch it off (main switch to OFF).

## 14. Cleaning the Milktaxi

### 14.1 Technical Requirements

- The Milktaxi must be connected to a power supply that matches the requirements detailed in this manual.
- The fill level inside the Milktaxi tank must be sufficient.

### 14.2 Safety and Warning Messages

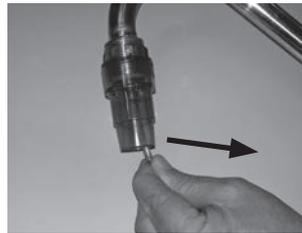
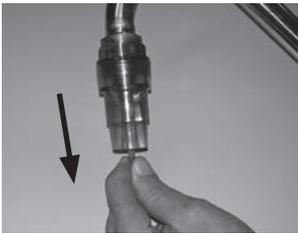
	<p><b>⚠ WARNING</b></p>
	<p><b>Danger of burns by the cleaning chemicals</b></p> <ul style="list-style-type: none"> <li>- Whenever using chemical cleaning agents, be sure to comply with all safety indications and processing instructions accompanying the product.</li> <li>- Always use the personal protective equipment (PPE) prescribed by the manufacture when using chemical cleaning agents.</li> </ul>
	<p><b>PLEASE NOTE</b></p>
	<ul style="list-style-type: none"> <li>- The Milktaxi must be cleaned after every use alternating between alkaline and acidic cleaning agents for milking machinery.</li> </ul>
	<p><b>PLEASE NOTE</b></p>
	<ul style="list-style-type: none"> <li>- During cleaning, pay special attention to the slim temperature sensor in the lower tank wall. This can become damaged under excessive mechanical strain. This in turn would lead to malfunctions.</li> <li>- Never use a high-pressure cleaner to clean the Milktaxi. The pressure could damage sealing rings. This can lead to consequential damage to your Milktaxi which would not be covered by the warranty.</li> </ul>

## PLEASE NOTE

- The Milktaxi tank must be properly cleaned. Milk or cleaning agent residues may put your calves' health at risk.
- Solid residues on the floor of the tank must be eliminated completely. These may form accumulated deposits over time and stick to the bottom. Solidified deposits on the floor may lead to excessive load on the electrical heater and cause the heating foils to fail.

### 14.2.1 Preparing the Milktaxi for Cleaning

1. Empty the tank of all remaining milk. This can be done by opening the ball valve tap on the Milktaxi. The very design of the Milktaxi ensures that its inside has a slight slope when it is standing on a level surface, so complete draining is easily possible.
2. Empty the hose. To do this, you will have to open the check valve of the dispensing arm:



Pull down the pin inside the dispensing arm outlet and tilt it slightly. While it is in this position, the valve remains open and the remaining milk in the hose flows back through the hose to the tank. When done, close the valve again by returning the pin to its normal position.

### 14.3 Cleaning the Milktaxi (manually)

1. To clean the Milktaxi, put hot water at the temperature instructed by the cleaning agent manufacturer, and cleaning agent, again as instructed by its manufacturer into the tank. Ensure that the liquid level in the tank is high enough to cover the liquid level sensor of the Milktaxi. We recommend that you alternate between alkaline and acidic cleaning agents for milking machinery to be certain that deposits are reliably removed.
2. Fit the dispensing arm tightly with its check valve end into the return line funnel of the tank and fasten it by pushing the locking ring of the rubber bushing up until it is flush with the upper edge.
3. Press the Pump key to circulate the cleaning solution for at least 5 minutes. This will also clean the pump, the hose and the dispensing arm.
4. Empty the tank and the hose completely.
5. Use clear water to rinse the cleaning agent residue out of the system. Here too, we recommend circulating the water for some time by switching the pump on.
6. Check the cleaning outcome and, if needed, manually clean those areas inside the tank which might not be perfectly clean.
7. After every use, remove the milk filter set into the drain hole (see photograph) and rinse it thoroughly. Failure to do this is likely to result in hindered or blocked milk flow.



## 15. Using the Milktaxi's Cleaning Function



### 15.1 Technical Requirements

- The Milktaxi must be connected to a power supply that matches the requirements detailed in this manual.
- The fill level inside the Milktaxi tank must be sufficient.

### 15.2 Safety and Warning Messages

	<b>! WARNING</b>
	<p><b>Danger of burns by the cleaning chemicals</b></p> <ul style="list-style-type: none"> <li>– Whenever using chemical cleaning agents, be sure to comply with all safety indications and processing instructions accompanying the product.</li> <li>– Always use the personal protective equipment (PPE) prescribed by the manufacture when using chemical cleaning agents.</li> </ul>

	<b>! WARNING</b>
	<p><b>Danger of injury by moving parts of the appliance.</b></p> <ul style="list-style-type: none"> <li>– During cleaning, the floor-mounted agitator starts at regular intervals. Do not put your hand into the tank.</li> <li>– Prior to cleaning, close the tank lid and then press the Clean key.</li> </ul>

	<b>! CAUTION</b>
	<p><b>Danger of injury because of burns and scalding.</b></p> <ul style="list-style-type: none"> <li>– Do not put your hand into the tank while heating is in progress</li> <li>– During the heating process the surfaces and the milk hose of the Milktaxi will also become hot.</li> <li>– Prior to cleaning, close the tank lid and then press the Clean key.</li> </ul>

	<b>PLEASE NOTE</b>
	<ul style="list-style-type: none"> <li>– The Milktaxi must be cleaned after every use alternating between alkaline and acidic cleaning agents for milking machinery.</li> </ul>

	<b>PLEASE NOTE</b>
	<ul style="list-style-type: none"> <li>– During cleaning, pay special attention to the slim temperature sensor in the lower tank wall. This can become damaged under excessive mechanical strain. This in turn would lead to malfunctions.</li> <li>– Never use a high-pressure cleaner to clean the Milktaxi. The pressure could damage sealing rings. This can lead to consequential damage to your Milktaxi which would not be covered by the warranty.</li> </ul>

## PLEASE NOTE

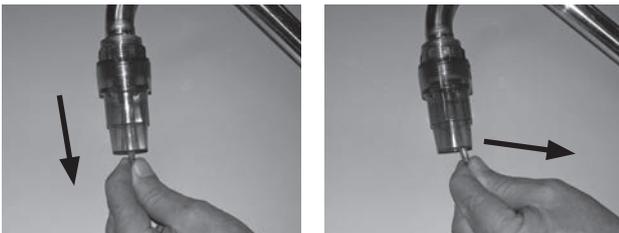
- The Milktaxi tank must be properly cleaned. Milk or cleaning agent residues may put your calves' health at risk.
- Solid residues on the floor of the tank must be eliminated completely. These may form accumulated deposits over time and stick to the bottom. Solidified deposits on the floor may lead to excessive load on the electrical heater and cause the heating foils to fail.

### 15.3 Functional Description

The Clean key is used to start the cleaning cycle, which includes running the agitator at intervals and heating up the water. The temperature for the cycle can be set in the settings of the Milktaxi (see page 19) to comply with the instructions given by the cleaning agent manufacturer. Please note that this function does not clean the whole inside of the tank. While cleaning is in progress, the system alternately actuates the agitator and the pump to enhance the cleaning performance.

#### 15.3.1 Preparing the Milktaxi for Cleaning

1. Empty the tank of all remaining milk. This can be done by opening the ball valve tap on the Milktaxi. The very design of the Milktaxi ensures that its inside has a slight slope when it is standing on a level surface, so complete draining is easily possible.
2. Empty the hose. To do this, you will have to open the check valve of the dispensing arm:



Pull down the pin inside the dispensing arm outlet and tilt it slightly. While it is in this position, the valve remains open and the remaining milk in the hose flows back into the tank. When done, close the valve again by returning the pin to its normal position.

#### 15.3.2 Cleaning Function

1. To clean your Milktaxi, put hot water and cleaning agent, as instructed by its manufacturer, into the tank. Ensure that the liquid level in the tank is high enough to cover the liquid level sensor of the Milktaxi. We recommend that you alternate between alkaline and acidic cleaning agents for milking machinery to be certain that deposits are reliably removed.
2. Fit the dispensing arm tightly with its check valve end into the return line funnel of the tank and fasten it by pushing the locking ring of the rubber bushing up until it is flush with the upper edge.
3. Press the Clean key on the control panel. The cleaning process will now start using your preset settings. The display initially shows the heating process and then the time remaining until the end of the cleaning process.



If there is not enough liquid in the tank, the error message below appears on the display:



4. Empty the tank and the hose completely.
5. Use clear water to rinse the cleaning agent residue out of the system. Here too, we recommend circulating the water for some time by switching the pump on.
6. Check the cleaning outcome and, if needed, manually clean those areas inside the tank which might not be perfectly clean.
7. After every use, remove the milk filter set into the drain hole (see photograph) and rinse it thoroughly. Failure to do this is likely to result in hindered or blocked milk flow.



## 16. Using the Milk Churn Support

### 16.1 Technical Requirements

- Your Milktaxi is equipped with a milk churn support.

### 16.2 Safety and Warning Messages

	<p style="text-align: center;"> <b>DANGER</b></p> <p><b>Carrying people and/or other objects is prohibited.</b></p> <ul style="list-style-type: none"><li>– It is forbidden to use the milk churn support frame for the transport of anything other than churns or buckets with milk or water in them.</li><li>– Subjecting the milk churn support to any load of more than 70 kg or 35 kg (for the MTX 100) is prohibited and will cancel and void the warranty for the Milktaxi as a whole.</li></ul>
	<p style="text-align: center;"> <b>WARNING</b></p> <p><b>Hazards for person in the vicinity</b></p> <ul style="list-style-type: none"><li>– When moving the Milktaxi, bear in mind that its behaviour while it travels changes when the loaded milk churn support is being used.</li><li>– Remember that the Milktaxi needs more space to turn when the milk churn support is tilted down.</li></ul>

### 16.3 Functional Description

The milk chain support is located on the front of the Milktaxi. To tilt it down into position, first lift it a little in order to release its locking mechanism. You can then fold it down and put milk churns on it. After use, simply tilt it back up. It locks itself automatically as soon as it is in the upright position.

# 17. Drenching Cows with the Drenching Equipment

## 17.1 Technical Requirements

- Your Milktaxi must be equipped with a H&L drenching probe and a pump.
- The fill level inside the Milktaxi tank must be sufficient.

## 17.2 Safety and Warning Messages

	<p style="text-align: center;"><b>⚠ WARNING</b></p> <p><b>Danger of injury for the animal caused by the drenching probe</b></p> <ul style="list-style-type: none"><li>- Before using a drenching probe, consult with your veterinarian on its necessity.</li><li>- When the probe is being inserted, there is a risk of the cow's gullet being injured.</li><li>- After insertion of the probe into the rumen, a smell test must be performed (a slightly sour smell should flow out of the probe) to check the positioning.</li><li>- Before using a drenching probe, consult with your veterinarian on its necessity.</li><li>- Always conform to any national laws and regulations.</li><li>- Have your veterinarian explain the handling of the probe to you in detail.</li></ul>
	<p style="text-align: center;"><b>⚠ WARNING</b></p> <p><b>Danger of injury for the animal caused by the drenching probe</b></p> <ul style="list-style-type: none"><li>- Throughout the pumping operation, the cow must be closely observed at all times. Stop immediately if anything unexpected happens.</li></ul>
	<p style="text-align: center;"><b>PLEASE NOTE</b></p> <ul style="list-style-type: none"><li>- Depending on the feed additives used, the sealing rings of the floor-mounted agitator and the pump may be exposed to increased wear. Therefore the Milktaxi should be inspected and serviced by your service partner every 6 months.</li></ul>

## 17.3 Functional Description

In order to prevent milk fever in the cow after calving, it may be indicated to administer a specific mineral solution (calcium etc.) to her; this should be done within the first 4 hours, better still, the first 2 hours, after calving. The solution should be prepared lukewarm and in line with the recommendations given by the producer of the used additive.

The heater and the agitator of the Milktaxi can be used to prepare the drenching solution. Consult the instructions on using the floor-mounted agitator and the heating element in this user's manual.

### Drenching cows with the Milktaxi

1. Connect the H&L drenching probe to the Milktaxi.
2. Block the cow that needs drenching with the headlock.
3. Carefully insert the drenching probe through the mouth into the gullet of the cow. Then fasten the probe in place by attaching the nostril clip, so that the fixture will remain undisturbed in the gullet.

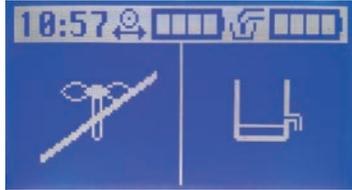
**Note:** A smell test can be used to ascertain the proper position of the probe in the rumen. If no slightly sour odour escapes through the fixture immediately, blow into the probe with your mouth. A second person listening at the hunger groove will usually be able to recognise the distinctive bubbling inside the rumen.

At first, pump only a small quantity of liquid (approx. 5 l). If the cow behaves unexpectedly (e.g. chokes), the position of the probe must be checked again.

4. If all is well, pump the drenching solution into the rumen of the cow.

## 18. Overview of Fault Messages

If a fault occurs, a two-line fault message will appear on the display. On the left-hand side you will see a pictogram indicating the faulty function, and on the right a pictogram indicating the possible reason for the fault. The following combinations are possible:

Pictogram		Cause of the fault	
		Mains supply	Insufficient fill level
Function	Heating		
	Mixing		
	Pasteurisation		
	Cleaning		
	Dosing		
	Cooling		

Certain critical faults have a pictogram showing that the Service department must be contacted. In these cases, there is also a fault code under the picture. Fault number 1003 is shown here as an example.



In such cases, please contact your Service partner and report the fault code. You will then receive expert help.

The following fault can occur in several processes for which mixing is required:



It shows that a fuse has tripped on the agitator. First, check whether the tank is filled with a liquid of very high viscosity or if there is an object blocking it. If so, remove this. Then press the fuse back in (located under the on/off switch) and try to mix again. If the fault should occur repeatedly although there are no blocking parts in the tank, contact your Service partner.

## 19. Disposal

PLEASE NOTE	
	<ul style="list-style-type: none"><li>– Do not remove the battery. This will be done by the disposal agent or other specialised staff.</li><li>– Do not dispose of any parts of the Milktaxi as household waste.</li></ul>



Please dispose of the packaging after sorting it and preparing any material for disposal through the appropriate disposal and recycling circuit. If you decide to discontinue operation of your Milktaxi, dispose of it in compliance with applicable laws and rules in force. Please contact your local disposal or collecting agent. Proper disposal and recycling avoids harm to the environment and to health.





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