

# System LactoCorder T-T Operating Manual



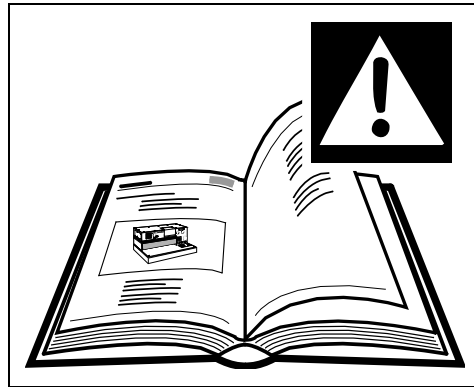
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## 2 Introduction

### 2.1 Note



**Read these operating instructions before unpacking and before commissioning the device and pay close attention!**

**The device may only be used by persons familiar with the operating instructions and the applicable regulations on occupational safety and accident prevention.**


### 2.2 Uses Abbreviations

LC T-T= LactoCorder T-T

The following names or signs are used in the operating instructions for particularly important information:

	<p><b>Attention</b></p>	<p><b>Indications of risk of injury to persons or risk of damage to equipment parts</b></p>
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## 2.3 Special provisions

	<b>Attention</b>	<p>The LactoCorder T-T is an electronic high-tec measuring instrument that has to be treated with care.</p> <p>The following actions and applications are <b><u>prohibited</u></b> and release the manufacturer from any warranty:</p> <ol style="list-style-type: none"> <li>1. Immersion or cleaning with high pressure cleaning equipment, compressed air and direct water jet (IP 64)</li> <li>2. Use of solvents or solvent-based substance and non-standard cleaning products not approved for milking machines</li> <li>3. Separate mechanical or chemical cleaning of the probes (e.g. brushes with abrasives or similar)</li> <li>4. Mechanical force effects due to impacts and improper handling</li> <li>5. Falls and transport damage</li> <li>6. Processing of the equipment different from the maintenance and repair instructions</li> <li>7. Tighten screws without paying attention to the pre-written torques (Ncm)</li> </ol>
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## 2.4 Care notice

The following care instructions are required to maintain the functionality of the LC T-T.

After measuring carry out internal cleaning with the cleaning program.  
Then remove the blowpipe and clean it separately.

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## **2.5 Appropriate use**

The LC T-T is only used to check the quality and quantity of animal milk.

Any other use or in excess is considered improper as intended. The resulting damages the manufacturer is not liable. The user bears the risk alone.

The intended application also includes the observance of instructions and compliance with the inspection and Maintenance conditions.

## **2.6 Transport**

### **2.6.1 Packaging**

Keep the carton and packaging material for a later transport so that the device can be transported safely.

### **2.6.2 Unpacking / Entrance Control**

The shipping container for machines and equipment keeps normal stresses during transport on roads, rails and in the air.

Before you put the device into operation, check whether the parts listed on the delivery note are completely and undamaged in the scope of delivery. If the scope of delivery is faulty - please contact our customer service.

### **2.6.3 Transport Damage**

For damage caused during transport, the transport company is responsible. A full report that assesses the damage described in detail, the transport company must be submitted to them and serves as the basis for the claim for damages.

Damage or loss of the goods delivered by us are to be reported to us immediately and has to be confirmed by a copy of the above-mentioned report.

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## **2.7 Safety**

### **2.7.1 General**

The design of the LC T-T corresponds to the current state of technology and is reliable.

The individual modules as well as the complete device are tested by our quality assurance.

Only use the device when it is in perfect condition and in accordance with its intended purpose, consciously taking into account the operating instructions.

Faults that may affect operational safety, eliminate immediately.

### **2.7.2 Special note**

Before commissioning the device, read the operating instructions carefully.

Lack of knowledge about the operation and support of the system can cause damage to the LC T-T.

Keep the operating instructions always at the place of use!

Changes or modifications to the device are not permitted without the approval of the supplier.

No program changes (software) to programmable control systems!

### **2.7.3 Selection of operating personnel**

Work on the LC T-T may only be carried out by well-instructed personnel.

Use only well-trained personnel. Regulate the responsibility of the staff for equipping, operating, maintenance, and repairing clearly.

### 3 TEST FLUID FOR WATER TESTS

To preserve the test liquid for the water tests, mix 45 ml Neoagrar with 15 l Water. This mixture should have a conductivity between 5.5 and 6.5mS.

### 4 SETTING THE LC T-T IN STABLE

The LC T-T can be hung with hanging brackets or plug-in brackets or positioned in the stable.

The devices should hang as vertically as possible.

The hose guide is important. The hoses should be as short as possible. The Milk must always be able to drain completely. Standing milk would distort the result of the measurement of the LC T-T.

### 5 One-time setting

The following settings must be made once.

- 5.1 Turn on LC T-T
- 5.2 Put in the USB stick on the LC T-T
- 5.3 In the main menu, press the button "9" twice in quick succession. → It appears the password entry for the hidden service menu.
- 5.4 Enter the six digits password (complementary value 9) to the device number  

e.g.:	LC T-T Device number: 070086
	Password: 929913
- 5.5 Confirm with the "ENTER" button.
- 5.6 Press the "3" button (settings).

#### Activate measurement online data

- 5.7 Press button "1" (Online b. Measurement). → The selection appears if you want to measure with or without online data.  
In the first line appears the selected option.
- 5.8 Press button "2" (with online data).

#### Activate cleaning online data

- 5.9 Press button "2" (Online b. Clean)
- 5.10 Press button "2" (with online data) or button "1" (without online data)

#### Setting language

- 5.11 Press button "4" (select language)
- 5.12 Press button "1" (German) » Select your language
- 5.13 Press the "CLEAR" button, Back to the settings menu
- 5.14 Switch to the next menu with the "ENTER" button

LC T-T empty after each measurement

- 5.15 Press button "5" (empty after measurement)  
 Select if the LC T-T should be emptying or not after each measurement.  
 (Our proposal is to choose for milk quantity measurement without emptying)  
 Press the "1" button (without emptying), the LC T-T will not be emptied.

Enter a weighted quantity of milk for online measurement

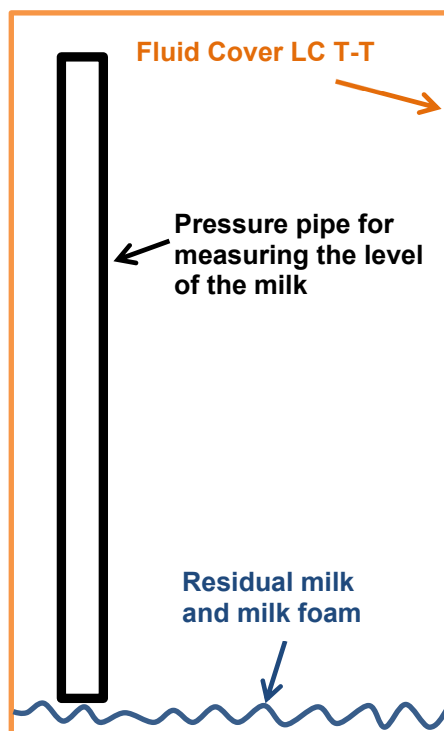
- 5.16 Press button "8" (weighted milk quantity)
- 5.17 Press button "2"
  
- 5.18 Switch to the next menu with "ENTER".

Enter the sampling during online measurement

- 5.19 Press button "9" (Enter sample)
- 5.20 Press the "2" button

Then, press four times "CLEAR" to get back to the main menu.

**6 Problem of a not completely empty LC T-T**



Very low levels cannot be measured exactly, as the output of the pressure pipe is not completely covered with liquid. After emptying, an empty LC T-T is assumed. If the LC T-T is not empty at the start of the measurement, errors in the milk quantity measurement will result.



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## 7 Add the amount of the gap to the total quantity of milk?

It depends on the measurement procedure if the content of the sampling may be added on the LC T-T for the total or not.

### 7.1 Milk quantity measurement and sampling at the same time

Where sampling and milk quantity measurement are carried out jointly, the amount of milk split off from LC T-T may be added to the quantity of milk.

### 7.2 Checking the quantity of milk

The test of the quantity of milk may be carried out without sampling.

If the milk quantity measurement is carried out with sampling, usually the milk in the sampler will be emptied in the bucket of the current milking. In this case, the addition of the release quantity to the quantity of milk must be active.

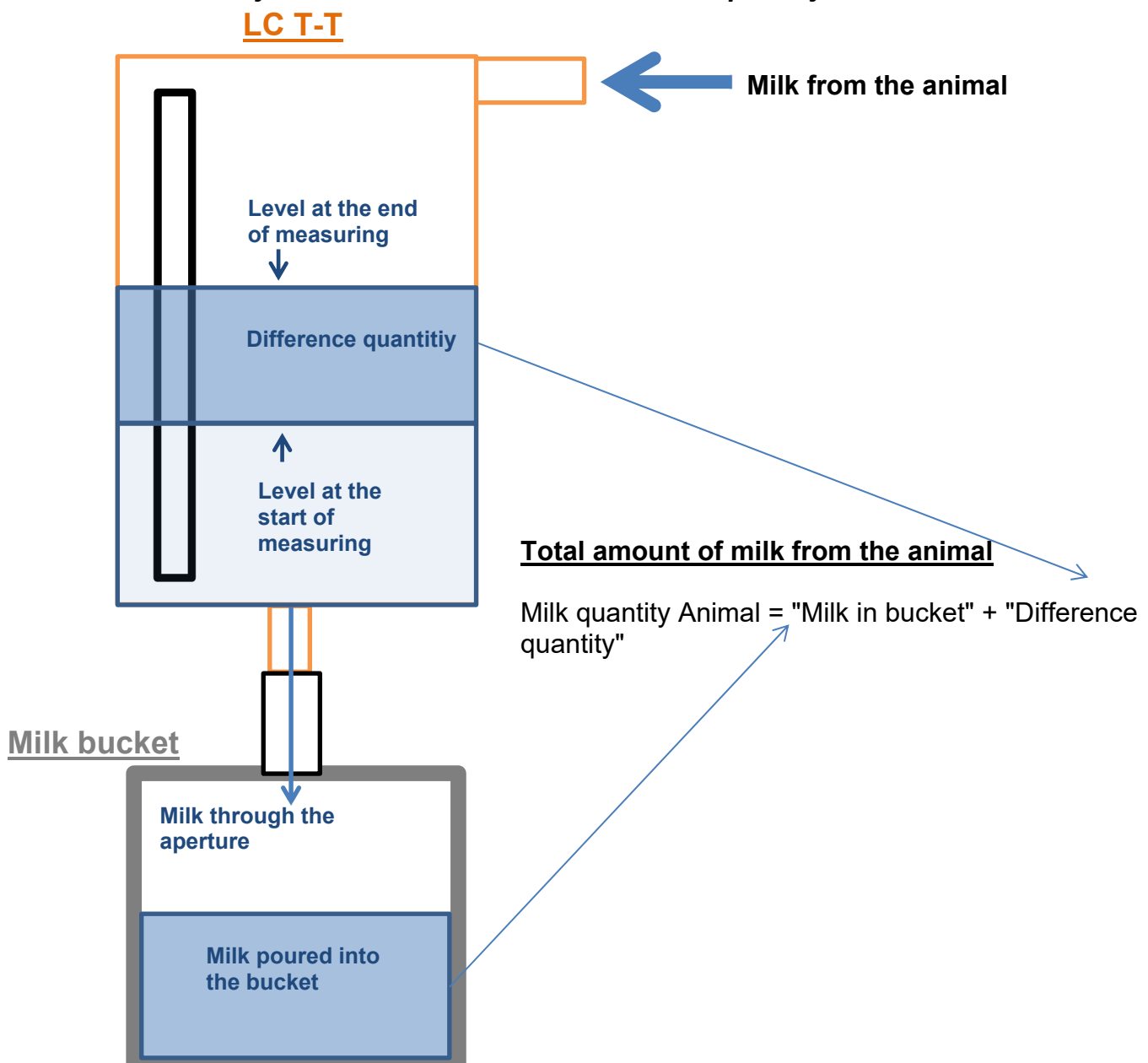
## 8 Calculation of the amount of milk when measured without emptying

If the milk quantity measurement is checked without emptying, the remaining volume (difference volume) in the LC T-T has to be taken into account.

The storage level in the LC T-T is always different at the end of a measurement. This milk quantity difference that must be taken into account.

The LC T-T measures the storage level of the milk at the beginning (starting level) and at the end of the Measurement (final level). In this manner the weight of the milk, which remain in the LC T-T, will be added to the amount in the bucket. When counterweighing, it is necessary to add this milk, which is left inside in the LC T-T, is taken into account in order to guarantee the effective quantity of milk from the animal. The LC T-T quantity and the weigh can be compared as follows:

***Lc T-T Quantity = "milk in a bucket" + difference = quantity of milk of the animal***



## 9 Battery management

The LC T-T uses a lithium-ion battery with 4400 mAh. The battery indicator above on the right provides information about the capacity state of the battery.

The following states are distinguished:





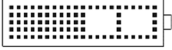


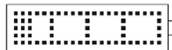
Icon	Battery condition	Measures
	Battery 100% charged	No measures
	Battery 85% charged	No measures
	Battery 75% charged	No measures
	Battery 60% charged	No measures
	Battery 50% charged	No measures
	Battery 35% charged	Replaced and charged battery on occasion
	Battery 25% charged	Replace the battery after milking and Load
	Battery 10% charged	Immediately replace and charge the battery no more milking

Table 1: Battery capacity indicator

## 10 Possible errors and their solution

### 10.1 Error: No filter inserted. Measurement not possible without filter

This error is displayed when starting up and starting the measurement when in the LC T-T no filter is inserted. Either the filter is missing or the magnet in the filter is not inserted.

### 10.2 Display by measurement: Storage Online. Failed!

For computing capacity reasons, the LC T-T does not have the option of making a PC error in USB communication. Therefore, it may be possible that a USB stick on the PC can still be read, but the LC T-T displays an error message. In this case, the USB stick should be replaced.

If there is an error when writing the online data to the USB stick, it must be repeated or canceled. If this has been aborted, it can be transferred to the measurement data on the USB stick. Only then new online data can be recorded.

### 10.3 Cleaning takes longer than there is space in the online data

A maximum of 90 min. online values can be recorded during a cleaning process. If a cleaning takes more than 90 min. it will indicate that a RAM overflow has occurred and that the online readings are not complete. In this case, the first 90 min. of the cleaning were recorded. This only applies to online values. Cleaning continues normally.

## 11 Data transfer to LactoPro

The measured data can be analyzed in LactoPro. This should be used with LactoPro version 6.0.90. This version can be obtained from WMB or from the website: [www.wmb.ch/LCT-T/lactopro](http://www.wmb.ch/LCT-T/lactopro)

### 11.1 Data on the USB stick

The measurement data from the LC T-T is displayed on the USB stick in the folder "LCS measurement data". If this folder is not already available, the LC T-T will automatically create one. The measurement data file is made up of the abbreviation MD for measurement data, the operating number and the date when operating data was written to the LCS. If no operating data has been used, 0 is entered.

e.g.: MD\_1234567890123456\_121115.DAT

MD:	Identification for a measurement data file
1234567890123456:	Operating number
121115:	On 12/11/2015 the operating data on the LC T-T were loaded

### 11.2 Transferring data to the PC

The desired measurement data file must be copied manually in the LactoPro folder in the following path:

".. "LactoPro\Daten\Datapack"LCS\_Messdaten"

The LCS\_Messdaten folder must be created manually once.

The program "LactoPro" can then be started. The reading of the LC T-T measurement data is now the same as reading data from a data pack.

Under "Data- Telepack -> Measurement and Operating Data DP -->PC"

The LC T-T data can be viewed like the data from the LactoCorder in LactoPro.

The following values are currently stored correctly:

- Operating number
- Animal number 2
- Bottle ID
- Device number
- Time
- Date
- Milking place number

- 
- expected milk quantity
  - Battery status (0: full, 1: 2/3, 2: 1/3, 3 almost empty, 4 empty)
  - Total milking
  - Species

### **11.3 Write data to USB stick:**

- 11.3.1 Turn on LC T-T
- 11.3.2 Insert the USB stick on the LC T-T
- 11.3.3 Switch to the next menu with the "Enter" button
- 11.3.4 Button "5" (data transfer)
- 11.3.5 Button "2" (data write)