May 23, 2018

Original Operating Manual

ECO automatic lamb feeder

Program version 01.01 and higher

TAP5-EZ2-32-F4 / TAP5-EZ2-50-F4

Table of contents

1. Introduction

This operating manual puts you in the position to operate this automatic feeder machine safely as intended.

- Read through this operating manual carefully before commissioning the automatic feeder and ask your service technician to explain anything you have not understood during the initial commissioning.
- Only commission the automatic feeder if you have read and understood the safety chapter (see 2. "Important safety instructions"). Resolve any questions with your service technician before commissioning the feeder.
- Keep this operating manual and the safety data sheets for the cleaning agent readily available at all times and pass them on to the next user.
- Observe all of the warnings and safety instructions in this operating manual at all times.

1.1 Transport

The automatic feeder is delivered on a pallet with the dimensions 810 mm x 620 mm.

- Check the goods for visible signs of damage upon delivery and report them to the carrier immediately.

1.2 Components, automatic feeder

1 Storage container with attachment for milk substitute
2 Main switch
3 Screw for potential equalization
4 Handle
5 Control unit
6 On the right in the machine housing: Water valve, electronic boiler, overheating protection
7 Water connection
8 Height-adjustable feet
9 Mixer (mixer jar + mixer motor)
10 Hose connections
11 Mixer heating system (optional)
12 Rod electrode
13 Milk powder discharge
14 Water outlet
15 Name plate (not shown)

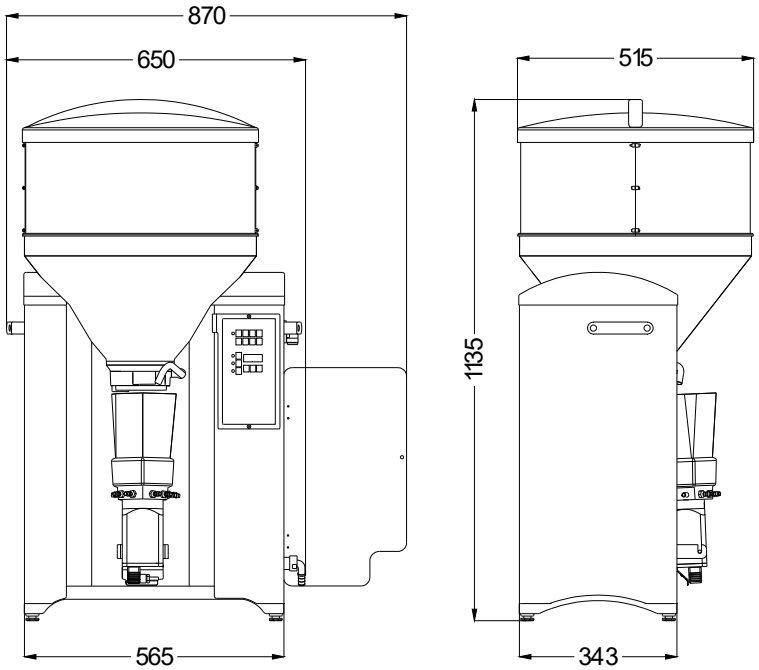
1 Lid hanger

1.3 Technical data

1.3.1 Electrical connection

Note: The data for the electrical connection can be found on the name plate on the left side of the base frame.

1.3.2 Dimensions



1.3.3 Weight

approx. 34 kg

1.3.4 Water connection

½ inch hose with ¾ inch screwed connection.
The water pressure on site must be between 2.5 and 6 bar or between 250000 and 600000Pascal.

NOTICE!

The water must be of drinking water quality.

► Please bear in mind that high calcium, iron and manganese concentrations can cause premature wear of the components. In these cases it makes sense to install appropriate filtration systems.

1.3.5 Boiler

Boiler content: approx. 7 liters

1.3.6 Milk powder container

Capacity with attachment: approx. 35 kg

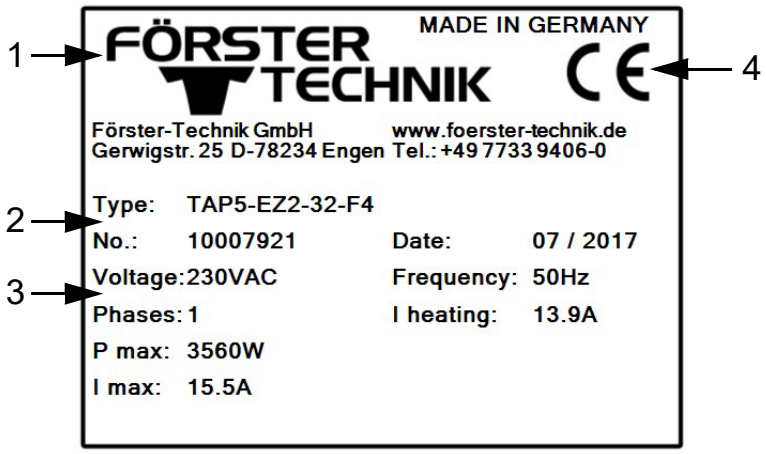
1.3.7 Number of feeding stations and animals

TAP5-EZ2-50-F4: up to 8 feeding stations with 25-30 lambs each

TAP5-EZ2-32-F4: up to 6 feeding stations with 25-30 lambs each

1.3.8 Name plate

The name plate is located above the left side door on the outside of the automatic feeder. It contains information about the manufacturer, type and number of the automatic feeder, information about connecting the feeder to the power supply as well as its certification. An example of a name plate is shown below.



1 Name and address of the manufacturer
2 Type and number of the automatic feeder
3 Information on the connection to the power supply
4 Certifications of the automatic feeder

1.4 Manufacturer's contact details

Please contact us if you have any questions about our products or require technical support. When you contact us, always specify the model, serial number and program version of your automatic feeder so that we can tailor our service to your unit.

The device number and model are located on the name plate on the left of the automatic feeder housing. When commissioning your automatic feeder, ask your service technician for the device number, series type and program version.

You can note the device type, serial number and program version in the fields provided.

Device type.

Serial number:

Program version:

Our contact details:

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Gerwigstrasse 25

78234 Engen, Germany

Phone: +49/ (0)7733/ 9406- 0

Fax: +49/ (0)7733/ 9406- 99

info@foerster-technik.de

www.foerster-technik.de

2. Important safety instructions

2.1 Intended use

The automatic feeder should only be used for the automatic preparation, heating and dosage of liquid animal feed for young animals.

2.2 Target group

2.2.1 Necessary qualifications of the owner

The owner must be a trained farmer or have good practical experience in farming. He must know the relevant accident prevention regulations and generally accepted safety regulations.

2.2.2 Necessary qualifications of the service technician

Only trained service technicians are authorized to install the automatic feeder, put it into service and perform maintenance and repairs on it.

Service technicians are specialists with appropriate qualifications. They are able to assess the work assigned to them and detect potential risks on the basis of their technical training as well as their knowledge of the relevant standards. They have knowledge of relevant accident prevention regulations, generally accepted safety regulations and country-specific standards and provisions.

2.3 Residual risks

Hazards to health caused by the automatic feeder:

⚠ WARNING!

Danger from electric current

The automatic feeder is powered by electricity

► You must observe the general precautions for handling electrical equipment.

- Read the operating manual before operating the automatic feeder.
- Keep children away from the automatic feeder.
- Do not touch any moving parts of the automatic feeder, for example the mixer blades.
- Only use genuine spare parts from the manufacturer.
- Turn off the automatic feeder and disconnect the power plug before carrying out any maintenance or cleaning work on the automatic feeder.
- If you are operating the automatic feeder outside of closed spaces, you must protect it against rain and moisture, for example with a roof.
- Do not operate the automatic feeder outdoors.
- If there is a connection to a drinking water system, then the system must be protected from back siphonage.

- The following specific hazards are associated with the automatic feeder's electrical system:
  - **Electrical discharge**. If there is an electrical or voltage discharge, electric current flows through parts of the automatic feeder that are normally insulated. Touching the unit can cause a fatal electric shock. The automatic feeder must be checked regularly for electrical safety in compliance with national regulations (repeated inspection). Make sure that a 30 mA residual current device (RCD) is installed.
  - **Short circuit, indirect contact**. If there is a short circuit, current at many times the level of the operating current can flow. Touching the unit can cause a fatal electric shock. Make sure you install a fuse (provided by the customer) corresponding to the rating on the name plate and a 30 mA residual current device (RCD) in compliance with local regulations.
- The solenoid valves and the pipes to the valves can reach temperatures of up to 70°C. Touching it can cause burns. Do not touch the solenoid valves and pipes during operation.
- Liquid at temperatures of up to 70°C can spray out of the pipes to the valves. This can cause scalding. Do not touch the pipes during operation. Carry out the recommended maintenance on the hoses.
- The mixer and powder supply may start up unexpectedly. Never reach into the area of the mixer or powder supply while the automatic feeder is in operation. Only use the scraper supplied to clean the powder discharge opening.
- **Chemical burn**. The cleaning agent used to clean the automatic feeder contains caustic substances. They can cause severe injuries to your hands or eyes. Avoid direct contact and always wear chemical-proof protective gloves and goggles when handling the cleaning agent.
- **Excessive physical strain**. The automatic feeder weighs 34 kg. Never attempt to carry it by yourself as this can cause excessive physical strain.

Material damage caused by the automatic feeder

The automatic feeder can cause the following types of material damage:

- **Infection**. Improper cleaning or incorrect operation can result in animals becoming infected by pathogens from the automatic feeder. This can lead to medical costs or cause the death of the animals.
- **Corrosion**. Improper cleaning or maintenance can result in the automatic feeder ceasing to function correctly.
- **Loss of stability**. The automatic feeder must be set up on a level surface. Otherwise, the automatic feeder can tip over and suffer damage.

2.4 Your duties

- Prevent misuse by children.
- Keep children, teenager, physically, sensory and mentally handicapped persons away from the automatic feeder.

- Carefully read the operating manual before starting to use your automatic feeder and ask your service engineer to explain anything that you do not understand before you use it for the first time.
- Follow the health and safety and accident prevention regulations.
- Only operate the automatic feeder at an ambient temperature in the range of 2-40°C. The maximum humidity is 80%.
- Observe the manufacturer's recommendations for the animal feed used.
- When cleaning the automatic feeder, observe the safety instructions stipulated in the safety data sheet for the cleaning agent.
- Wear the safety equipment specified in the safety data sheet for the cleaning agent, such as goggles and chemical-proof protective gloves, when cleaning the automatic feeder.
- Only operate the automatic feeder if it is in faultless condition and is fully functional.
- Only operate the automatic feeder if the safety equipment is fitted and intact.
- Regularly check the fitted safety equipment to ensure that it is working properly. You can find a care and maintenance schedule in the appendix (see 11.2 "Maintenance intervals and activities"), which provides recommendations on how often you should check different safety devices.
- Visually inspect the automatic feeder for possible damage. You can find a care and maintenance schedule in the appendix (see 11.2 "Maintenance intervals and activities"), which provides recommendations on how often you should check different parts of the automatic feeder.
- Repair any damage to the automatic feeder, or if you are not authorized to or capable of doing this yourself, have it repaired by a service engineer.
- Never carry out any unauthorized modifications to the automatic feeder.
- Keep all safety labels on the automatic feeder in a legible condition. Replace any damaged or illegible safety signs immediately. You can order new safety signs from Förster-Technik GmbH.
- Only use genuine accessories, spare parts, and wearing parts. They are available from your dealer.
- Do not use the automatic feeder at elevations above 5000 metres.

2.5 How am I warned of hazards?

Hazards are indicated directly on the automatic feeder by safety labels (warning signs, instruction and prohibition notices), and in the operating manual by specially marked hazard descriptions.

The warnings for hazards that can cause death or injury to people are emphasized more than those for material damage, for example through the colors, hazard words or symbols used.

Safety labels are an important element of the overall automatic feeder safety concept. They provide warnings about hazards and explain how to avoid them.

Make sure that all the specified safety labels are fitted to your automatic feeder and that they are in a legible condition. If the safety labels are difficult to read, replace them immediately. New safety labels are available from Förster-Technik GmbH.

2.5.1 What are the components of a hazard description?

A hazard description always consists of the following elements:

- Hazard word (danger, warning, caution, attention)
- Type of hazard (what can happen?)
- Location of hazard (where can it happen?)
- Actions necessary for preventing the hazard (what should I do?).

2.5.2 Potentially fatal hazards or health hazards

Depending on their severity and the probability of them occurring, hazards that can cause death or injury to people are indicated by a hazard symbol ⚠ (warning triangle with exclamation mark) and the following hazard words:

⚠ DANGER!

The word DANGER indicates an imminent hazard that will lead to death or serious injury.

Warning signs in the operating manual: **DANGER** (white text on red background).

⚠ WARNING!

The word WARNING indicates a potentially hazardous situation that could lead to death or serious injury.

Warning signs in the operating manual: **WARNING** (black text on orange background).

⚠ CAUTION!

The word CAUTION indicates a potentially hazardous situation that could lead to minor injury.

Warning signs in the operating manual: **CAUTION** (black text on yellow background).

2.5.3 Material damage

NOTICE!

The word ATTENTION indicates possible material damage. The automatic feeder or an object in its vicinity may be damaged, for example a lamb.

Prohibition notice on the automatic feeder: a pictogram crossed out in red in a white circle with a red border indicates something you are not allowed to do.

Operating manual: white text on blue background

2.6 Safety signs

Different safety notices are attached at the hazardous points on the automatic feeder. Warning signs, prohibition and instruction notices.

What are warning signs?

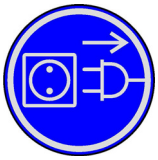
Warning signs consist of:

- A pictogram in a yellow triangle illustrating the potential hazard.

What are prohibitory signs?

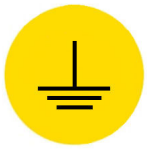
Prohibitory signs have a pictogram of the prohibited action in a red circle with a line through it. See the adjacent example. They graphically depict the prohibited action. In this example, the hose with a line through it means that you may not use high-pressure cleaners.

What are instruction notices?



Instruction notices show a pictogram of what you are being instructed to do in a blue circle. They illustrate what you have to do. In the example, the pictogram means that you must always disconnect the plug first.

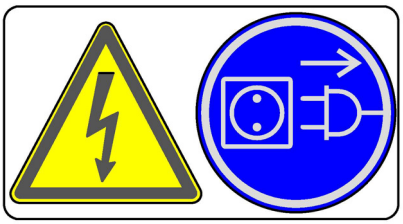
Other signs



Grounding symbol. This symbol is placed in the locations where you must perform potential equalization.

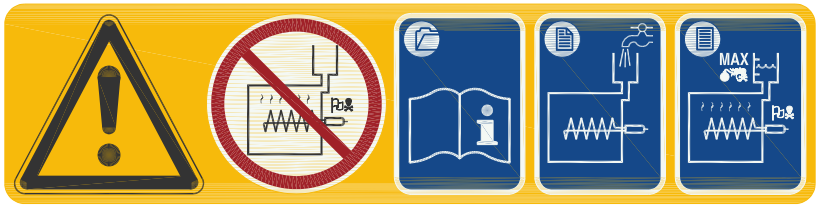
2.6.1 Warning signs on the machine

Danger of death by electric shock

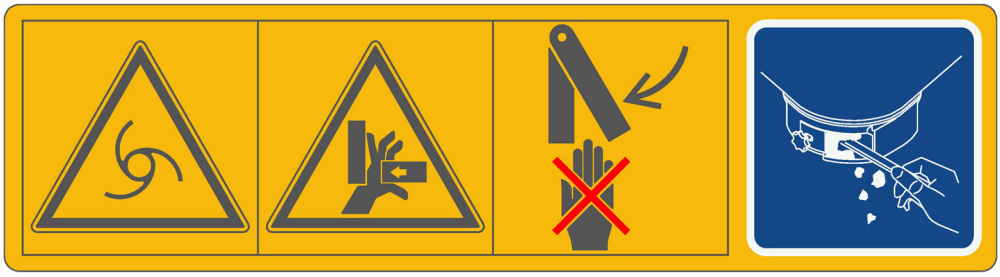


Burning/scalding

Danger due to dry run of the heating system

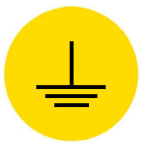


Automatic startup



No spraying

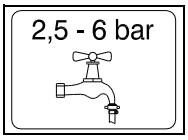
Grounding symbol



2.6.2 Signs on the machine

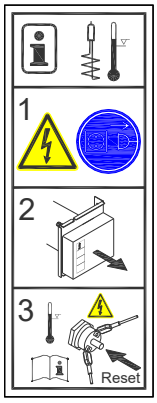
The meanings of the individual signs attached to the outside or inside of the machine are described below.

Permitted water pressure



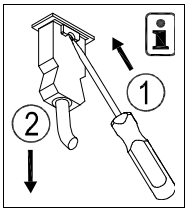
This sign indicates that the permitted water pressure should be between 2.5 and 6 bar.

Reset safety temperature limiter



This sign explains how you can safely activate the safety temperature limiter. You can find the exact procedure in chapter

Interrupt boiler current supply



This sign shows you how you should properly pull the plug.

2.7 Safety devices

The automatic feeder may only be operated if the safety equipment is complete and intact. The automatic feeder has the following safety equipment:

- Safety signs (warning signs, instruction and prohibition signs).
- The heater's safety temperature limiter. This shuts down the heater in the event of overheating (temperature rises above 70°C). The heater may only be reactivated by a service engineer.
- Safety grid for the powder hopper attachment. The safety grid prevents people from being injured by the rotating tools in the hopper, for example when adding milk powder. It must always be installed when the unit is operating.
- The scraper next to milk powder discharge. The powder discharge opening may only be cleaned with the scraper. This prevents finger and hand injuries caused by the powder conveyor starting up automatically.

The safety devices at the machine are an important part of the safety concept and help prevent accidents.

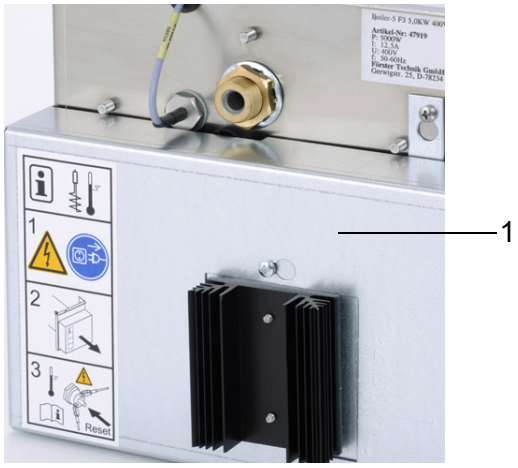
- Do not remove or change the safety devices unless the corresponding safety instructions have been complied with.
- Put the machine into service only once all safety devices have been fitted and are in the guard position!

Safety temperature limiter

The automatic feeder's heating system is equipped with a safety temperature limiter that will be triggered in the event of overheating (70°C) and that will then shut down the heating system.

The safety temperature limiter is triggered if the water gets too hot or if the heating system is running dry. You can find out how to reactivate the safety temperature limiter in chapter 9.1.4 "Heating system does not react (E--4)" .

The safety temperature limiter can be found behind the cover illustrated below.



1 Cover of the safety temperature limiter

NOTICE!

The heating system must be checked by a service technician if the safety temperature limiter is triggered more than once.

Protective grid for powder hopper attachment

The protective grid for the powder hopper attachment prevents you from being injured by the rotating tools in the powder hopper, for example, when pouring in milk powder.

1 Protective grid

⚠ WARNING!

There is a risk of injury due to rotating tools.

The safety grid must always be installed when the unit is operating.

Scraper next to milk powder outlet

The powder discharge opening may only be cleaned with the scraper. This prevents finger and hand injuries caused by the mixer starting up automatically.

⚠ WARNING!

There is a risk of injury due to automatic start-up

Do not reach into the hazardous area of the powder discharge opening. The powder dosing can start up automatically at any time, crushing or cutting off your fingers.

► Always turn off the automatic feeder using the main switch and disconnect the power plug. Only use the scraper supplied to clean the powder discharge opening.

3. Hygiene

As a farmer with experience in raising lambs, you understand how unhygienic conditions affect the health of your lambs. Diarrhea and respiratory infections are frequently occurring infectious diseases in lambs.

Every sick lamb involves additional costs, for example for veterinarians and medication, and requires extra time for care.

The younger the lamb, the weaker its immune system, and the more prone to infection it will be.

The possibility of infection can never be completely eliminated, but it can be minimized by taking measures to ensure good hygiene.

Maintaining cleanliness is one important and easy measure that helps prevent infectious diseases.

Through proper cleaning at regular intervals, every lamb-raising business can reduce the risk of infection for its lambs and save money as a result.

Measures to ensure hygienic conditions save time and money.

What are infections? An infection occurs when germs invade and multiply in a host.

Germs are all around us. However, they are not dangerous until they multiply in great numbers. The risk of infection increases with the number of germs.

When germs get into your animal feed, such as milk, they can spoil the feed and make it inedible.

When germs attack your lambs, for example from infected feed or other infected lambs, your lambs can become sick and die.

Both situations result in costs that you can minimize by taking measures to ensure hygienic conditions.

As a farmer, it is your job to identify sources of infection and bring them under control.

So how do you prevent infections? By keeping animals in good conditions, with good drinking water and feed quality and, most importantly, through cleanliness.

Proper cleaning is an important way of ensuring hygienic conditions and also prevents infections.

If the automatic feeder is not cleaned or is cleaned improperly, germs, which are abundant in the environment, can enter the nutrient-rich feed and multiply. When they drink the feed, your lambs can become infected, sick and even die.

Proper cleaning of the automatic feeder reduces the number of germs and therefore the risk of infection.

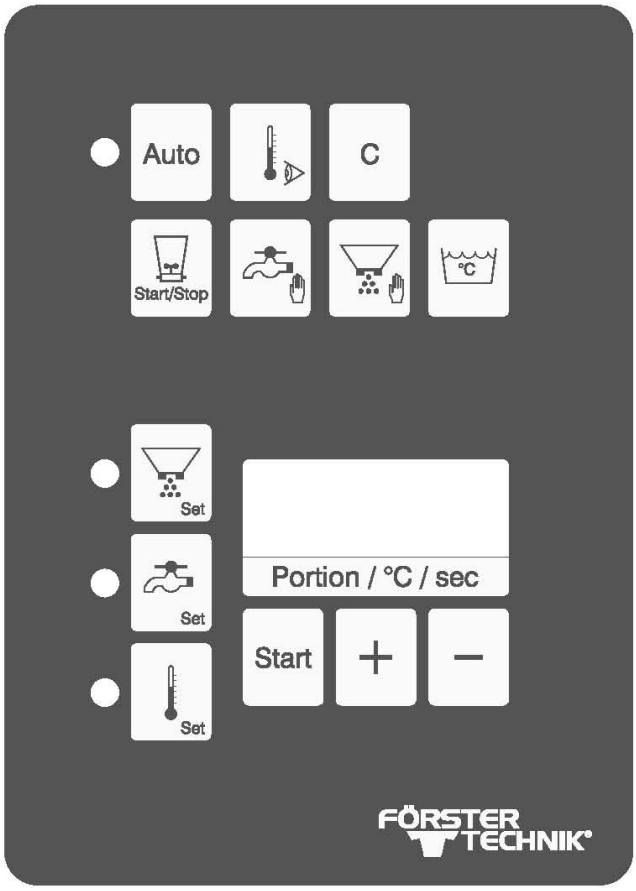
The cleaning chapter (see 7. "Cleaning") explains how to clean the automatic feeder properly. The appendix contains a table of suggestions of how to clean the different parts of the automatic feeder (see 11.2 "Maintenance intervals and activities").

4. Operation

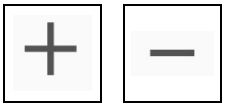
4.1 The keypad

In this operating manual, only the keypad symbols are used for instructions and not their designations.

Keypad symbol	Function
Auto	**Automatic mode**
	Temperature control of boiler/portion counter
C	**Reset portion counter**
Start/Stop	**Start/stop mixer**
	Manual function water
	Manual function MP
°C	**Heat up cleaning water**
Set	**MP quantity setting**
Set	**Water quantity setting**
Set	**Boiler temperature setting**



Start



Correction keys

4.2 Operating controls

4.2.1 Auto

Press this key to switch the automatic feeder on and off.

4.2.2 Temperature query of boiler/portion counter

Press this key to query the boiler temperature. Press this key again to query the number of positions.

4.2.3 Delete

Press this key to set the portion counter to 0.

4.2.4 Start/stop mixer

Press this key to start/stop the mixer (maximum running time 3 minutes).

4.2.5 Manual functions

Press these keys to dispense water or MP directly into the mixer.

4.2.6 Cleaning

Press this key to heat the cleaning water up to the cleaning temperature (55°C) once

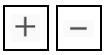
4.2.7 Setting keys

Press these keys to set the dosing quantity of MP, water or the boiler temperature.

4.2.8 Start key

Press this key to start actions.

4.2.9 Correction keys



Press these keys to correct the values in the display.

4.3 Operating modes

The feeder knows the two operational modes **automatic mode** and **offline mode**. If the feeder is in automatic mode, the animals will be fed. The offline mode is used to perform actions that cannot be carried out in regular operation, such as setting the feed components or washing the mixer.

4.3.1 Automatic mode

If you have made settings in the program in offline mode and want to return to **automatic mode**, press Auto.

Note: The automatic feeder is in automatic mode if the **diode on the left next to Auto is lit**.

If you press Auto for example to set the dosing quantity of the MP, the automatic mode is interrupted.

4.3.2 Offline mode

If the automatic feeder is in offline mode, the feeding is interrupted. If you want to return to automatic mode, you must press Auto. The lit diode next to the **Auto** key signals the automatic mode.

Note: If the automatic feeder is in offline mode and no control unit key is pressed for 5 minutes, **the diode on the left next to Auto will flash**. Delete the warning by pressing Auto.

5. Commissioning

- The automatic feeder may only be put into service by a service technician.
- When returning the automatic feeder to service, proceed as described in “putting into server”.

The appendix contains a checklist with all points you have to observe during commissioning or recommissioning (see 12.1 "Checklist for commissioning and recommissioning").

5.1 Electrical connection provided by the customer

The automatic feeder needs its own power supply.

- Have the electrical connection (provided by the customer) installed by a qualified electrician.
- The power supply must meet the voltage and frequency specifications. The supply voltage specified on the name plate of the device must correspond to that of the power grid.
- A 30 mA earth leakage circuit breaker (ELCB) in the power supply (provided by the customer) is compulsory for the operation of the automatic feeder.
- If there is a danger of overvoltage, have overvoltage protectors installed by a qualified electrician in your power supply (provided by the customer) (lightning protection measure).
- Comply with the local regulations and safety measures.

Potential equalization

To protect the animals and prevent electrical faults, subject all metallic objects, such as water pipes, feeding station and automatic feeder to potential equalization. The connecting screw to ground the automatic feeder is on the right-hand side of the machine housing, directly next to the electrical connection cable. Connect this screw to the local ground via a short, flexible copper cable (minimum cross-section of 4mm²).

Lightning protection

Since it is not technically possible to protect such a system separately against lightning, you must provide appropriate lightning protection (e.g. lightning protection system for the entire building). We recommend the conclusion of a lightning protection insurance policy.

5.2 Setting up the feeder

⚠ CAUTION!

Beware of the health hazards caused by lifting heavy loads.

The automatic feeder weighs 34 kg.

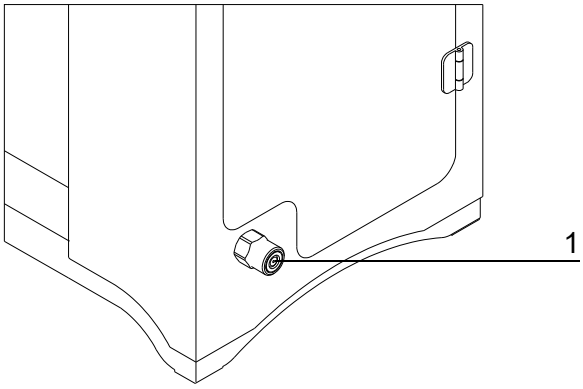
► Never carry the automatic feeder by yourself.

- When setting up the automatic feeder, observe the occupational safety measures.
- It is recommended that the automatic feeder be set up in a dry, clean, frost-free place, separated from the animal area.

- Set up the automatic feeder in a location where the temperature cannot exceed 40°C and the humidity cannot exceed 80%.
- Always set up the automatic feeder on an even surface.

  Note: Using its adjustable feet, if necessary, you can level the automatic feeder.
- Make sure that there is a drain where the automatic feeder is set up, for the cleaning water.
- It is recommended that a drain be fitted at the feeding station below the teat for draining of extra feed and cleaning water.
- Protect the automatic feeders and all corresponding cables from exposure to sunlight.

5.3 Water connection



1 Water connection

- When connecting the automatic feeders, observe the national regulations about the protection of drinking water.
- Use a separate water shutoff valve to supply water to the automatic feeder.
- Make sure the water pressure is consistent.
- The water pressure must be at least 2.5 bar and must not exceed 6 bar. If the water pressure of 2.5 bar cannot be insured, then retool the water tank (optional).

  Note: If you retool the water tank, the standard water valve of the automatic feeder is replaced by a low-pressure valve. For this reason, after retooling has been carried out, the automatic feeder must be supplied with water via the water tank.

  Note: The water pressure may fall during operation if the cross-section of the water pipe is small. The same applies to water pipes from which water is extracted simultaneously at different points.

NOTICE!

Please bear in mind that high calcium, iron and manganese concentrations can cause premature wear of the components. In these cases it makes sense to install appropriate filtration systems.

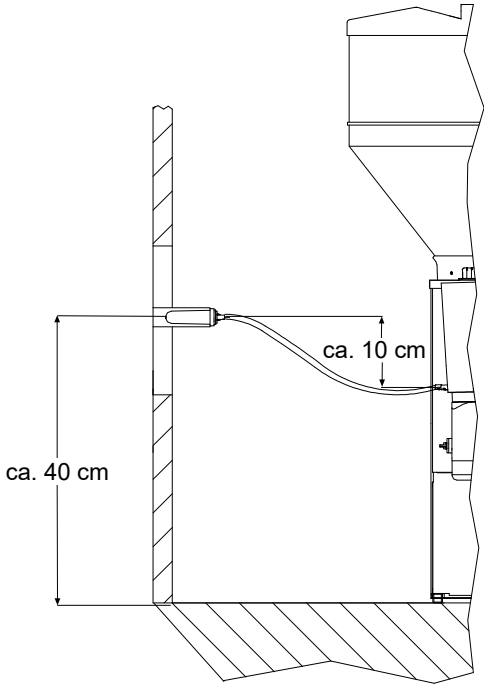
5.4 Opening hose fittings

There are eight hose fittings on the automatic feeder mixer. Two of them are open and six are closed with a plug.

1. With an appropriate tool, press the plug of the hose fitting you would like to open into the mixer jar.
2. Remove the plug from the mixer jar and store it in an appropriate place so that you can seal the hose fitting again if necessary.

5.5 Installing feeding station

- Install the teat at its intended location on the front plate, approx. 10 cm above the suction hose connection of the mixer and the resulting 40 cm above the lamb's floor level.



NOTICE!

The suction hose must not be longer than 2 meters.

This can lead to malnutrition. Malnutrition can cause impaired growth and development, increased susceptibility to illness or even death of the animals.

NOTICE!

There is a risk of infection due to feed building up in the hose.

The hose between the teat and the mixer jar must not sag and must be installed at a gradient to the automatic feeder (see illustration above).

5.6 Installing the suction hose bracket for cleaning

- Attach the suction hose bracket for cleaning the automatic feeder in the vicinity of the feeding station.

NOTICE!

The suction hose bracket must be installed higher than the position of the mixer so that the cleaning water cannot flow out of the hoses.

5.7 Installing the safety grid for the powder hopper attachment

The protective grid for the powder hopper attachment prevents you from being injured by the rotating tools in the powder hopper, for example when pouring in milk powder.

⚠ WARNING!

To avoid injuries, the protective grid must always be mounted during operation

1 Opening on the powder hopper attachment for screwing in a self-tapping screw

Proceed as follows for the installation of the protective grid:

1. Turn off the automatic feeder using the main switch and disconnect the power plug.
2. Remove the bag with the small parts and hoses as well as the operating manual from the powder hopper.
3. Insert the safety grid for the powder hopper attachment.
4. Screw the three self-tapping screws into the holes provided for this purpose.
5. Fill the powder container with milk powder (see 6.1 "Filling the powder container").

5.8 Filling the boiler

- Plug in the power plug and turn the main switch clockwise to **ON**.

  Note: After the control unit has been switched on, the program version and the portion count appear briefly in the display before the automatic feeder carries out a test routine. Do not press any buttons on the control panel during these initial routines.

  Note: After the initial routine has concluded, water runs into the mixer automatically for up to 180 seconds. As soon as the mixer electrode is covered, the boiler is filled and the automatic feeder switches into automatic operation.

5.9 New installation

When commissioning and re-commissioning the automatic feeder, the program must be completely reinstalled. This will remove superfluous data as well as no longer current or incorrect settings from the memory.

- Press Start and C and keep the keys pressed down when you switch on the feeder. All set values will be reset to the default values.

5.10 Cleaning

For hygienic reasons, you must completely remove any coolant and lubricant remnants from the system before commissioning. To do this, execute the cleaning cycle. (see the **Cleaning > Cleaning cycle** chapter in the operating manual for the automatic feeder).

⚠ WARNING!

Beware of chemical burns from cleaning agents.

The cleaning agent can cause chemical burns to your eyes or hands.

► Always wear goggles and chemical-proof protective gloves when using cleaning agents. Follow all the safety instructions listed in the safety data sheet for the cleaning agent and wear the specified safety equipment.

5.11 Setting the target temperature

During commissioning the target temperature of the water in the boiler must be set. The minimum temperature is always 3°C below the target temperature and cannot be set.

1. Exit automatic mode by pressing Auto.
2. Press Set, the LED next to the key lights up and a set temperature appears in the control unit display.
3. Set the target temperature by pressing + or −.

	Target temperature	Minimum temperature
Default value:	40°C	39°C
Permitted range of values:	10°C to 44°C	3°C below the target temperature

Note: The values you have entered for the target temperature are converted to the target and minimum temperature of the boiler water. If the temperature of the boiler water falls below the minimum temperature, the feed preparation will be interrupted until the target temperature has been reached again.

Recommendations for the temperature settings

NOTICE!

Feed temperatures that are too low can cause digestion problems. Excessively high feed temperatures can, for example, cause inflammations of the mucous membranes in the abomasum.

The temperature of the feed in the mixer jar must correspond to the mixing temperature specified by the MP manufacturer.

► Keep to the feed temperatures recommended in this operating manual.

5.12 Setting portion

So that the automatic feeder can dose and mix the components water and MP exactly, the dosages must first be determined and set manually.

Note: To set the portion sizes, please keep the following objects on hand: To set the **water** you need a graduated cylinder with mL calibration. To set **MP** a gram-exact scale is needed.

5.12.1 Setting the water

1. Press Auto to exit automatic mode.
2. Press  . The LED next to the key lights up.
3. Hold an empty measuring vessel under the water outlet and press Start. In the time that is indicated in the control unit display, a certain amount of water is dispensed.
4. Measure the collected quantity.
5. Using + or − change the time as needed so that the desired amount is dispensed into the measuring vessel.
6. Press Start again and measure the dispensed amount.
7. Repeat the procedure until the desired amount has been precisely dispensed.

5.12.2 Setting the milk powder

1. Press Auto to exit automatic mode.
2. Press  . The LED next to the key lights up.
3. Hold an empty measuring vessel under the powder outlet and press Start. In the time that is indicated in the control unit display, a certain amount of MP is dispensed.
4. Measure the collected amount.
5. Using + or − change the time as needed so that the desired amount is dispensed into the measuring vessel.
6. Press Start again and weigh the dispensed amount.
7. Repeat the procedure until the desired amount has been precisely dispensed.

6. Operation

6.1 Filling the powder container

- Only pour in milk powder that is suitable for lamb feed and automatic feeders.

NOTICE!

Make sure that no paper or other foreign bodies enter the powder container.

Otherwise, the dosing mechanism could be damaged or the dosage accuracy impaired. As a result, your animals could receive insufficiently concentrated feed and might not receive adequate feed or any feed at all. This can lead to malnutrition, which can cause impaired growth or development, increased susceptibility to illness or even the death of your animals.

NOTICE!

If the powder hopper is empty, no warning is displayed.

Feeder operation is continued without a milk substitute. This may mean that the animals receive only water and are not supplied with adequate feed or any feed at all. This can lead to malnutrition, which can cause impaired growth and development, increased susceptibility to illness or even the death of your animals.

6.2 Feed preparation

During feed preparation, water is dispensed first, which is conducted to the mixer jar via the boiler, causing it to heat up.

If the mixer jar is filled up to the rod electrode with water, milk substitute (MP) will be dispensed from the powder container into the mixer jar.

When the lab sucks the feed, the mixed feed in the mixer is conveyed to the teat via the suction hoses.

6.3 Feed distribution

The animals receive feed **ad lib**, meaning that they themselves determine when and how much they drink. A portion will be prepared whenever the rod electrode is free.

If a portion is left in the mixer, the feed will be remixed every 5 minutes.

6.4 Portion sizes

The portion sizes were set by the service technician during commissioning.

To change the portion sizes, the dosages must first be determined and set manually.

Note: To set the portion sizes, please keep the following objects on hand: To set the **water** you need a graduated cylinder with mL calibration. To set **MP** a gram-exact scale is needed.

6.4.1 Setting the water

1. Press Auto to exit automatic mode.
2. Press Set. The LED next to the key lights up.
3. Hold an empty measuring vessel under the water outlet and press Start. In the time that is indicated in the control unit display, a certain amount of water is dispensed.
4. Measure the collected quantity.
5. Using + or − change the time as needed so that the desired amount is dispensed into the measuring vessel.
6. Press Start again and measure the dispensed amount.
7. Repeat the procedure until the desired amount has been precisely dispensed.

6.4.2 Setting the milk powder

1. Press Auto to exit automatic mode.
2. Press Set. The LED next to the key lights up.
3. Hold an empty measuring vessel under the powder outlet and press Start. In the time that is indicated in the control unit display, a certain amount of MP is dispensed.
4. Measure the collected amount.
5. Using + or − change the time as needed so that the desired amount is dispensed into the measuring vessel.
6. Press Start again and weigh the dispensed amount.
7. Repeat the procedure until the desired amount has been precisely dispensed.

7. Cleaning

In order to maintain the required hygienic status, all parts of the automatic feeder or the assemblies that are attached to it that could come into contact with liquid or powdered perishable animal feed or additives must be cleaned, such as mixer jar and suction hoses.

Remember:

- You must follow all safety instructions in the safety data sheet for the cleaning agent you are using.
- You must always wear the protective gear, such as protective goggles and gloves, specified in the safety data sheet for the cleaning agent you are using.
- Undiluted cleaning agent may not be drained into the ground water or sewage system. Observe the recommendations in the safety data sheet for your cleaning agent and contact your water utility company and your sewage disposal company to find out which regulations apply to you.
- Observe the cleaning intervals recommended by the manufacturer of the cleaning agent as well as those recommended in this operating manual (see 11.2 "Maintenance intervals and activities").
- Only use the cleaning agents recommended in this operating manual.
- Observe the manufacturer's guidelines regarding the amount, temperature and concentration of cleaning agent used.
- Do all of the cleaning recommended in this operating manual.

NOTICE!

Never use cleaning agents containing chlorine, as they can attack the materials of the automatic feeder and impair its function.

(see 12.2 "Materials list") If this happens, your animals might not receive enough feed. This can lead to malnutrition, which can cause impaired growth and development, increased susceptibility to illness or even the death of your animals.

NOTICE!

Water (liquids) can damage electrical components.

► Do not spray-wash the automatic feeder. Do not use any high-pressure cleaners or similar equipment either. If you want to clean the automatic feeder, only use a damp cloth to wipe the respective components.

7.1 Cleaning agents

⚠ WARNING!

Beware of chemical burns from cleaning agents.

The cleaning agent can burn your eyes or hands.

► Always wear safety glasses and protective gloves when using cleaning agents for cleaning. Follow the safety instructions in the safety data sheet of the cleaning agent and wear the safety equipment required by the instructions.

7.2 Preparing for cleaning

⚠ WARNING!

Beware of chemical burns from cleaning agents.

The cleaning agent can burn your eyes or hands.

► Always wear safety glasses and protective gloves when using cleaning agents for cleaning. Follow the safety instructions in the safety data sheet of the cleaning agent and wear the safety equipment required by the instructions.

1. Pour the cleaning agent into containers intended for its use.

   Note: Observe the cleaning agent manufacturer's dosage recommendations. We recommend scheduling the cleaning in a time when there is not much feed entitlement.
2. If you are manually putting in the cleaning agent, have the respective cleaning agent amount ready in order the reach the desired concentration in the main cleaning cycle.

7.2.1 Water and detergent amounts in the main cleaning cycle

- Water amount: approx. 1.3 liters
- Detergent amount for manual putting in of detergent and a target concentration of 1%: 13 ml/cleaning cycle

7.3 Cleaning the mixer jar

The cleaning of the mixer should be carried out at least every two days and is performed manually with or without detergent.

⚠ WARNING!

Chemical burns due to the cleaning agents used.

The cleaning agent can cause chemical burns to your eyes or hands.

► Always wear safety glasses and protective gloves when using cleaning agents. Follow all the safety instructions listed in the safety data sheet for the cleaning agent and wear the specified safety equipment.

The mixer is intensively cleaned by a cleaning cycle. This cleaning cycle consists of:

- Pre-cleaning
- Main cleaning with the addition of cleaning agent
- Rinsing with clear water

If rinsing is to be carried out with cleaning agent, the cleaning agent must be added manually at the beginning of the main cleaning cycle. Empty the cleaning water by draining it via the suction hoses or tipping out the mixer jar.

⚠ WARNING!

Risk of injury due to automatic start-up!

The mixer can start up unexpectedly.

► Never reach into the mixer jar as long as parts are able to move within it.

NOTICE!

Make sure that no lambs are sucking on the teat during the cleaning cycle.

For manual cleaning of the mixer jar, proceed as follows:

1. Exit automatic mode for the automatic feeder.
2. Disconnect the suction hoses on the teat and attach the hose ends in the suction hose brackets provided for this purpose.
3. For pre-cleaning, press  . Fill the mixer completely with water and drain it via the suction hoses.

   Note: You will achieve a better cleaning result if for pre-cleaning you also start the mixer interval by pressing  .
4. Press  and allow the cleaning water to pre-heat to the cleaning temperature (55°C).
5. Press  . Dispense about 1 liter of water (approx. 2/3 of the mixer jar is filled) and add the appropriate amount of cleaning agent.
6. Start the mixer interval by pressing  .

   6.1. While the interval is running add water to the mixer until it is full and add the appropriate amount of cleaning agent.
7. After the mixer interval has ended, switch off the automatic feeder at the main switch and clean the mixer jar thoroughly with a soft brush or a sponge.

NOTICE!

Never use a high-pressure cleaner or similar, since this can damage the automatic feeder.

8. Switch the automatic feeder back on and tip out the cleaning water or drain it via the suction hoses.
9. For rinsing press  . Fill the mixer jar with water and empty it via the suction hoses.

   Note: You will achieve a better cleaning result if for rinsing you also start the mixer interval by pressing  .
10. Reconnect the suction hoses to the teats and make sure that there is no water remaining in the suction hoses.
11. Switch the automatic feeder back to automatic mode.

7.4 Cleaning the suction hose

To clean the suction hose, a cleaning sponge is pressed through the suction hose with water pressure using the hose cleaning pistol. Perform the hose suction cleaning as needed.

1 Water hose connection
2 Cleaning sponge
3 Cleaning sponge injector with suction hose connection
4 Quick coupling

To clean the suction hose, proceed as follows:

1. Exit automatic mode for the automatic feeder.
2. Remove the suction hose from the teat and hang the end in a container.
3. Undo the cleaning sponge injector from the hose cleaning pistol and insert the cleaning sponge.
4. Reattach the cleaning sponge injector to the hose cleaning pistol.
5. Remove the other end of the suction hose on the mixer and connect it to the hose cleaning pistol.

6. Connect the hose cleaning pistol to the water hose and press the cleaning sponge through the suction hose with water pressure by actuating the hose cleaning pistol.
7. Drain the cleaning water from the suction hose.
8. Reattach one end of the suction hose to the teat and the other end to the mixer.
9. Remove the cleaning sponge from the container.

   Note: Thoroughly clean the cleaning sponge after use and store it in a dry place.
10. Switch the automatic feeder back to automatic mode.

7.5 Cleaning the powder discharge opening

The powder discharge opening must be checked **daily** for milk powder remnants and manually cleaned if necessary.

⚠ WARNING!

Risk of injury due to automatic start-up!

The powder dosing can start up automatically at any time, crushing or cutting off your fingers.

► Never reach into the danger area of the indicated points as long as parts are able to move there.

1. Switch off the automatic feeder.
2. Clean the powder discharge with the tool supplied in the delivery. Catch the loosened deposits and milk powder and dispose of them.
3. Switch the automatic feeder on again and put it into automatic mode.

7.6 Thorough cleaning of the powder container with the dosing unit

A thorough cleaning of the powder container with dosing unit is done as needed, but no later than when the automatic feeder is temporarily taken out of service, for example, for seasonal lambing. When this is done, milk deposits in the inside of the powder container and the dosing unit are removed.

NOTICE!

Never use a high-pressure cleaner or similar, since this can damage the automatic feeder.

1. Switch off the automatic feeder.
2. Remove the screws holding the safety grid on the powder container. Remove the safety grid.
3. Drain the milk powder container and remove the dosing tongue.
4. Clean the dosing tongue and dry it if need be.
5. Use a dry brush and the cleaning scraper to remove the milk powder deposits in the powder container and at the powder discharge opening.

6. Reinstall the dry dosing tongue.
7. Insert the protective grid for the powder hopper attachment and tighten the three screws in the holes provided for this purpose.
8. Only fill with milk powder when the feeder is to be used again.
9. Switch the automatic feeder on again and set the milk powder dosage (see 6.4.2 "Setting the milk powder").

8. Shutdown

You can shut down the automatic feeder temporarily or permanently.

To make the procedure easier and ensure that you do not miss any steps, see the check list **Shutting down the automatic feeder** in the appendix (see 12.3 "Shutdown checklist").

8.1 Temporary shutdown

You can temporarily shut down the automatic feeder, for example from the end of one lambing season to the start of the next.

If you are shutting down the automatic feeder for a prolonged period of more than one year, you should store the feeder in an upright position in a clean, dry and frost-free location.

In addition, observe the following rules when transporting the automatic feeder:

⚠ CAUTION!

Beware of the health hazards caused by lifting heavy loads.

The automatic feeder weighs 34 kg.

► Never carry the automatic feeder by yourself.

- The automatic feeder must always be transported in an upright position.

To ensure that the automatic feeder does not become a breeding ground for germs, which could endanger the health and life of your animals when you restart the feeder, you must thoroughly clean the automatic feeder before shutting it down.

Clean the mixer, the suction hoses and the powder container.

After cleaning, you must disconnect the power and water supply and empty the boiler.

⚠ WARNING!

Chemical burns due to the cleaning agents used.

The cleaning agent can cause chemical burns to your eyes or hands.

► Always wear safety glasses and protective gloves when using cleaning agents. Follow all the safety instructions listed in the safety data sheet for the cleaning agent and wear the specified safety equipment.

To shut down the automatic feeder, proceed as follows:

1. Clean the mixer jar and the suction hoses (see 7.3 "Cleaning the mixer jar").

⚠ DANGER!

Fatal electric shock.

The electrical components of the automatic feeder are live.

► Before continuing, always turn off the automatic feeder using the main switch and disconnect the power plug.

1. Turn off the automatic feeder using the main switch and disconnect the power plug.
2. Drain any water from boiler to prevent frost damage to the automatic feeders.

NOTICE!

Beware of damage to the automatic feeder.

Frozen water expands and can damage automatic feeder components that contain water, such as the solenoid valves.

2.1. Close the water tap that supplies water to the automatic feeder.
2.2. Disconnect the water hose between the solenoid valve for water and the boiler.
2.3. Open the vent screw on the cover of the boiler. As soon as air flows in, the water will drain.
2.4. Let the water drain completely.
2.5. Once the boiler has been completely drained, reattach the water hose and tighten the vent screw.

3. Disconnect the water hose from the water tap that supplies the automatic feeder with water and from the water connector on the automatic feeder.
4. Dispose of the water hose. New hoses are available from your dealer.

NOTICE!

Beware of the risk of infection.

To prevent infections, use a new hose when recommissioning the unit.

5. Disconnect the hose that leads from the teat to the mixer jar.
6. Dispose of the hose. New hoses are available from your dealer.

NOTICE!

Beware of the risk of infection.

To prevent infections, use a new hose when recommissioning the unit.

7. Disconnect the hose on the automatic feeder that leads to the drain channel.
8. Remove the screws holding the safety grid on the powder container. Remove the safety grid.
9. Empty the powder container.
10. Clean the powder container and the dosing unit (see 7.6 "Thorough cleaning of the powder container with the dosing unit"). To do this, use the scraper supplied.
11. Clean the outside of the automatic feeder using a damp cloth.

NOTICE!

Pressure washers can damage the automatic feeder.

► Only clean the automatic feeder by hand using a damp cloth.

12. Cover the automatic feeder with a tarpaulin. This will protect it from dirt.

8.2 Permanent shutdown

If you are going to permanently shut down the automatic feeder, you must dispose of it in accordance with the law. To find out which regulations apply to you, contact your waste disposal company or a waste disposal center listed in the yellow pages.

In the appendix of the operating manual, you will find a list of the materials used to make the automatic feeder (see 12.2 "Materials list").

1. Perform steps 2 to 13 of the shutdown (see 8.1 "Temporary shutdown"). You do not have to perform step 1 - cleaning.
2. Dispose of any residual cleaning agent. See the data sheet of the cleaning agent for information on the disposal of the cleaning agent.

⚠ **WARNING!**

Chemical burns due to the cleaning agents used.

The cleaning agent can cause chemical burns to your eyes or hands.

► Always wear safety glasses and protective gloves when using cleaning agents. Follow all the safety instructions listed in the safety data sheet for the cleaning agent and wear the specified safety equipment.

3. Dispose of the automatic feeder as described in the disposal chapter (see 10. "Disposal").

9. Faults and warnings

9.1 Faults

In the event of a **failure**, automatic mode is interrupted and no feed is prepared. Respond immediately to the failure and ensure that your animals are supplied with feed using an alternative method as long as the automatic feeder is out of service.

NOTICE!

An interruption in feeding operation means that your animals will not receive any feed. This can lead to malnutrition.

Malnutrition can cause impaired growth and development, increased susceptibility to illness or even the death of your animals.

► You must use an alternative method to supply your animals with feed as long as the automatic feeder is out of service.

9.1.1 Water shortage (E--1)

If there is a water shortage, the message **E--1** appears in the display.

- Press  and allow water to pour into the mixer jar until the mixer electrode is covered.
  Note: If the mixer electrode is covered with water, a decimal point will appear in the control unit display next to the boiler temperature.

9.1.2 Overheating (E--2)

If overheating occurs, the message **E--2** appears in the display.

- Press  and remove water from the boiler until the **target temperature** is reached.

9.1.3 Safety temperature limiter of the boiler (E--3)

If there is a short circuit or a breakage of the safety temperature limiter, the message **E--3** appears in the display.

- The safety temperature limiter should **only** be replaced by a service technician.

9.1.4 Heating system does not react (E--4)

If the heating system does not react, the message **E--4** appears in the display.

1. Make sure that there is enough water in the boiler.
2. Press  to turn the heating system on. Check whether the displayed temperature increases.
   Note: If you press  after heating the cleaning water up to 55°C, the LED next to the Auto key and the displayed boiler temperature will flash in the control unit display. For instructions on eliminating this fault, see 9.2.1 "Temperature in the boiler is too high" .

Only for service technicians

Possible causes and measures:

- **The heating rod is defective.**
  Check the heating rod for continuity.
- **The temperature sensor is defective.**
- **No voltage is applied to the heating system.**
  Check the customer's fuses.
- **The safety temperature limiter has been triggered.** Reactivate as follows:

⚠ DANGER!

Fatal electric shock.

The electrical components of the automatic feeder are live.

► Always turn off the automatic feeder using the main switch and disconnect the power plug before you reactivate the safety temperature limiter.

1. Turn off the automatic feeder using the main switch and disconnect the power plug.
2. Open the right side door of the automatic feeder.
3. Remove the metal cover under which the safety temperature limiter is located.
4. Press the red reset button in order to reset the safety temperature limiter.
5. Attach the metal cover and close the side door.
6. Reinsert the power plug and turn the main switch back to the ON position.

9.1.5 Boiler not filled (E--5)

If the boiler is not filled, the message **E--5** appears in the display.

- Press  and allow water to pour into the mixer jar until the mixer electrode is covered.

9.2 Warnings

In the case of a **warning**, automatic mode will not be interrupted and the feeder operation will continue.

9.2.1 Temperature in the boiler is too high

If the temperature of the water in the boiler is too high, the LED next to the Auto key and the displayed boiler temperature will flash in the control unit display.

- Press  and remove water from the boiler until the **target temperature** is reached.

10. Disposal

All automatic feeder components, liquids and solids must be disposed of in compliance with the applicable official regulations for proper waste recycling and disposal in your country. If you are not certain which regulations apply to you, ask your service technician and use the Internet or the yellow pages to find out which government agency is responsible for your jurisdiction. Contact the appropriate authorities and find out which regulations apply to you.

Always observe the safety data sheets supplied with some components, liquids and solids.

Before you dispose of the automatic feeder, you must shut it down.

10.1 Disposing of cleaning agent residues.

Dispose of any residual cleaning agent. See the cleaning agent manufacturer's technical data sheet for more information on the disposal of the cleaning agent.

⚠ WARNING!

Chemical burns due to the cleaning agents used.

The cleaning agent can cause chemical burns to your eyes or hands.

► Always wear safety glasses and protective gloves when using cleaning agents. Follow all the safety instructions listed in the safety data sheet for the cleaning agent and wear the specified safety equipment.

10.2 Disposing of hoses

Dispose of hoses as controlled waste or municipal waste, depending on the material. Read the disposal instructions on the packaging of the hoses, or contact your waste disposal center for instructions.

10.3 Disposing of cables

Dispose of cables as controlled waste or municipal waste, depending on the material. Read the disposal instructions on the packaging of the cables, or contact your waste disposal center for instructions.

10.4 Disposing of the circuit board

The automatic feeder contains a circuit board. You must dispose of this component separately. Ask your waste disposal company where you can dispose of electronic waste.

10.5 Disposal of the automatic feeder

For disposal instructions, contact the appropriate authorities, such as your waste disposal company or local government agency.

See the appendix for an overview of the materials in the automatic feeder.

Dispose of the automatic feeder.

11. Care and maintenance schedule/routine tasks

This chapter covers regular maintenance work and functional inspections on the automatic feeder as well as its accessories. These ensure that the required hygienic standards are maintained. Maintenance work includes, for example, calibration, hygiene-related cleaning as well as scheduled replacement of wearing parts.

The visual and functional testing of components as well as the replacement of simple wear parts, such as the suction hose, can be carried out by the owner/operator.

Repair work as well as the replacement of wear parts at or in the automatic feeder may **only** be performed by a service technician.

11.1 Safety instructions

⚠ DANGER!

Fatal electric shock.

The electrical components of the automatic feeder are live.

► Always turn off the automatic feeder with the main switch first and disconnect the power plug before carrying out any work on the automatic feeder.

⚠ WARNING!

Risk of burns due to hot surfaces.

The solenoid valves can reach temperature of up to 100° C during operation or malfunctions. This can cause severe burns.

► Never touch the solenoid valves when they could be hot.

⚠ WARNING!

There is a risk of injury due to automatic start-up.

The automatic feeder automatically prepares a feed portion. The stirring blades in the mixer jar start automatically and can crush or cut off your hand or fingers.

► Always turn off the automatic feeder with the main switch and disconnect the power plug before carrying out any work on the mixer. Only clean the powder discharge opening with the scraper supplied.

⚠ WARNING!

There is a risk of injury due to automatic start-up.

The powder mixing unit can start up automatically at any time, crushing or cutting off your fingers.

► Do not reach into the hazardous area of the powder mixing unit. Turn off the automatic feeder with the main switch and disconnect the power plug before reaching into the powder container.

⚠ WARNING!

Chemical burns due to the cleaning agents used.

The cleaning agent can cause chemical burns to your eyes or hands.

► Always wear safety glasses and protective gloves when using cleaning agents. Follow all the safety instructions listed in the safety data sheet for the cleaning agent and wear the specified safety equipment.

NOTICE!

An interruption in feeding operation means that your animals will not receive any feed.

This can lead to malnutrition. Malnutrition can cause impaired growth and development, increased susceptibility to illness or even the death of your animals.

► You must use an alternative method to supply your animals with feed as long as the automatic feeder is out of service.

11.2 Maintenance intervals and activities

Note: If you detect any faults or damage to the automatic feeder between the maintenance intervals recommended below, you must make sure they are rectified immediately by a service technician as required.

	Care/maintenance interval			
	Daily	Weekly	4 months	12 months
Inspection of the lambs	✓			
Intensive mixer				
• Visually check the correct functioning of electrodes and mixer blades	✓			
• Visually inspect mixer for leaks	✓			
• Visually inspect the effectiveness of the cleaning cycles	✓			
Suction hose and teat				
• Visually check the suction hose and teat for damage and wear and clean them if necessary (see 7.4 "Cleaning the suction hose")	✓			
• Replace all milk hoses from the mixer to the feeding station				✓
Powder conveyor				
• Check powder discharge opening for foreign bodies	✓			
• Check MP dosage and set if necessary, but at least for every new MP delivery (see 6.4.2 "Setting the milk powder")			✓	
• Empty the powder conveyance and check for correct operation				✓
• Carry out basic cleaning (see 7.6 "Thorough cleaning of the powder container with the dosing unit")				✓
Water supply				
• Check water dosage and set if necessary (see 6.4.1 "Setting the water").			✓	

11.3 Checking components for compliance with national regulations

All electrical components must be checked regularly for electrical safety in accordance with the intervals and test methods defined in the national regulations.

If any faults or damage are detected during the inspection, the faulty components have to be replaced before the automatic feeder can be used again.

12. Appendix

12.1 Checklist for commissioning and recommissioning

Note: You must carefully read the instructions in the operating manual, in particular the safety instructions, and observe them before putting the automatic feeder into service.

Commissioning	**OK?**
Tell end users that the automatic feeder must be installed so that it is frost-proof.	☐
Tell end users that the automatic feeder must be protected from rain and moisture.	☐
Tell the end user that the water should be of drinking water quality. Excessive calcium and/or iron and/or manganese concentrations may cause premature wear.	☐
Tell end users that the feeder and cables must be protected against exposure to sunlight.	☐
Set up the automatic feeder on an even surface.	☐
Electrically ground the automatic feeder.	☐
Connect water supply.	☐
Install the feeding station.	☐
Install suction hoses.	☐
Install the suction hose bracket for cleaning.	☐
Install safety grid for the powder hopper attachment.	☐
Fill MP container.	☐
Connect power supply.	☐
Switch on automatic feeder.	☐
Fill boiler with water.	☐
New installation.	☐
Perform the cleaning.	☐
Set the target temperature of the heating system	☐
Set the portion sizes.	☐

Setting the portion sizes	**OK?**
Boiler temperature	☐
MP	☐
Boiler water	☐

12.2 Materials list

The materials used in the automatic feeder include:

- Brass, Enzidor
- Silicon carbide
- Carbon
- V2A, V4A
- Plastics: PET, TPE, silicone, PVC, NBR, ABS, PUR
- Viton
- Vulcanized fiber, graphitized
- Rubber

12.3 Shutdown checklist

	OK?
Pull the power plug	☐
Drain water from boiler • Remove the water hose between the water solenoid valve and the boiler and open the vent screw on the cover of the boiler to allow the water to flow out. Once the boiler has been completely drained, reattach the water hose and tighten the vent screw.	☐
Disconnect and dispose of the water hose and suction hoses	☐
Empty the milk powder container	☐
Basic cleaning of the powder container and dosing unit	☐
Clean the outside of the automatic feeder with a damp cloth	☐
Store automatic feeder in a dry and frost-free location	☐

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EC declaration of conformity

according to the EU Machinery Directive 2006/42/EG, Annex II, 1.A

Manufacturer:
Förster-Technik GmbH,
Gerwigstr. 25
78234 Engen

Person residing within the Community authorised to compile the relevant technical documentation:
Müller Barbara
Förster-Technik GmbH,
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Description and identification of the machinery:

Make:	Automatic feeder
Type:	TAP0-EZ1-28-M, TAP0-EZ1-32-M, TAP0-EZ1-38-M, TAP0-EZ1-50-M, TAP1-EZ1-32-M, TAP1-EZ1-38-M, TAP5-EZ2-50-F3, TAP5-EZ2-32-F3, TAP5-EZ2-28-F3, TAP5-EZ2-50-F4, TAP5-EZ2-32-F4, TAP5-EZ2-28-F4
Function:	Automatic preparation, heating, and dosing of liquid feeds for young animal feeding

It is expressly declared that the machinery fulfils all relevant provisions of the following EU Directives:

2006/42/EG	Directive 2006/42/EG of the European Parliament and of the Council of 17 May 2006 on machinery, and amending Directive 95/16/EG (recast)
2014/30/EU	Directive 2014/30/EU of the European Parliament and of the Council of 26 February 2014 on the harmonisation of the laws of the Member States relating to electromagnetic compatibility (recast)

Reference to the harmonised standards used, as referred to in Article 7(2):

EN ISO 12100:2010-11	Safety of machinery - Electrical equipment of machines - Part 1: General requirements (ISO 12100:2010)
EN 60335-1:2012/A11:2014	Household and similar electrical appliances - Safety - Part 1: General requirements IEC 60335-1:2010 (modified)
EN 61000-6-2:2005/AC:2005	Electromagnetic compatibility (EMC) - Part 6-2: Generic standards - Immunity for industrial environments
EN 61000-6-3:2007/A1:2011/ AC:2012	Electromagnetic compatibility (EMC) - Part 6-3: Generic standards - Emission standard for residential, commercial and light-industrial environments

Engen, 11.01.2018

Place, date

Signature
Markus Förster
CEO