

23rd August 2011

Original Operating Manual

MilchMobil

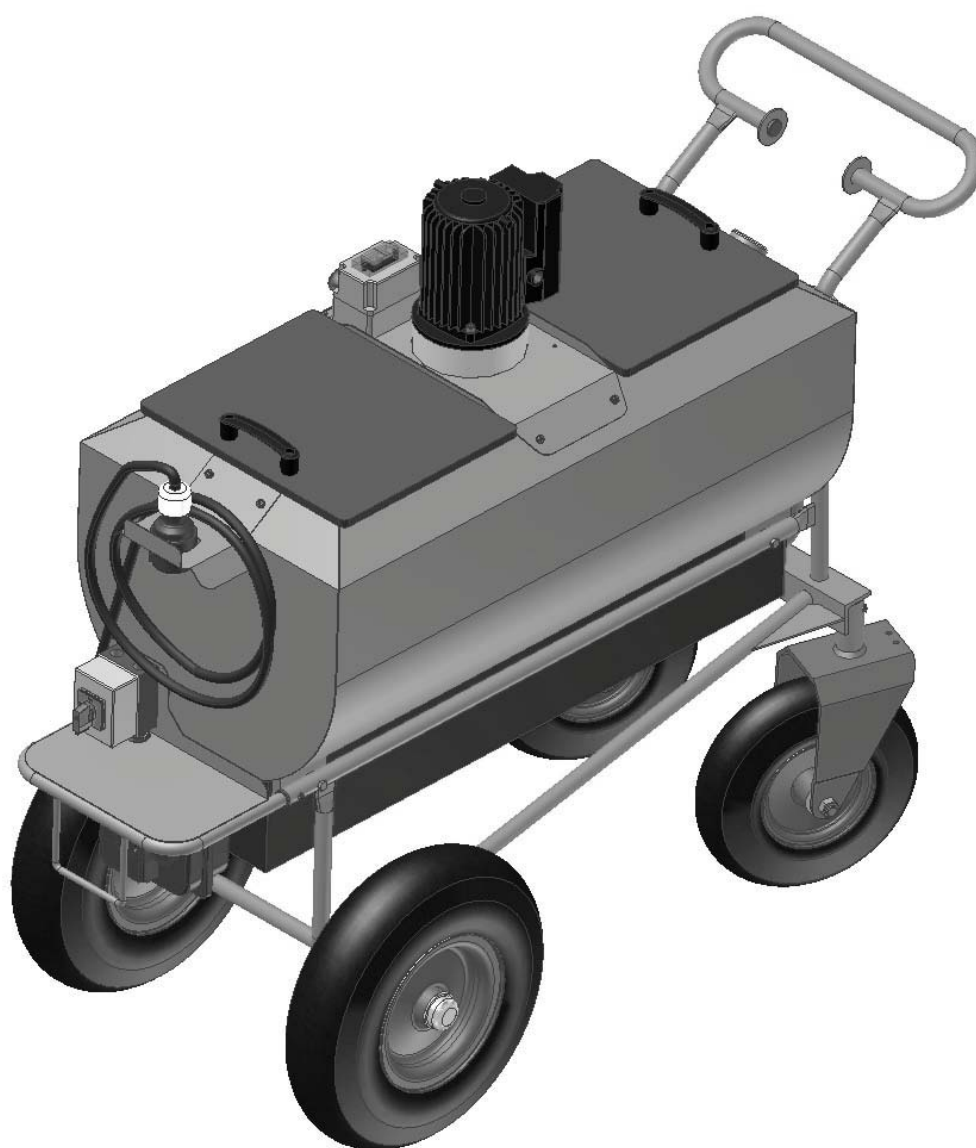


Table of contents

1	Introduction	5
1.1	Versions of the MilchMobil	5
1.2	Copyright	5
1.3	Disposal	6
1.4	Transport	6
1.5	Contact details of the manufacturer	6
2	For your safety	7
2.1	Target group	7
2.1.1	Necessary qualifications of the owner	7
2.1.2	Necessary qualifications of the service technician	7
2.2	Intended use of the MilchMobil	7
2.3	Improper use of the MilchMobil	7
2.4	Safety signs on the machine	7
2.5	Indication of hazards	10
2.6	Residual risks	10
2.7	Safety devices at the MilchMobil	17
2.8	Obligations of the owner	18
2.9	Obligations of the operator	19
2.9.1	Required personal protective equipment	20
2.10	Period of application of the MilchMobil	20
2.11	Structural alterations	21
3	MilchMobil components	23
3.1	Rear side, general	23
3.2	Front side, general	24
3.3	Front side with dosing pump	25
3.4	Front side with dosing pump with portion control	26
3.5	Heating	27
3.5.1	Main switch for heating	27
3.5.2	Heating thermostat	27
3.5.3	Heating expansion vessel	28
3.5.4	Safety temperature limiter	28
3.6	Mixer	29
3.6.1	Motor circuit breaker	29
3.6.2	Beater	30
3.7	Thermometer	30
3.8	Parking brake	30
3.9	Outlet tap	31
3.10	Filling level scale	31
3.11	Dosing pump	32
3.11.1	On/off switch for pump	32
3.12	Portion control	33
3.12.1	Selector switch	33
3.12.2	Start button for the pump	33
3.12.3	On/off switch for portion control	33
3.13	Rechargeable battery	34
3.14	Charging device	34
4	Functional description	35

5	Technical data	37
5.1	MMT1-100, MMT1-180	37
5.2	MMM1-100-37/55, MMM1-180-37	37
5.3	MMH1-100-00-03, MMH1-180-00-10, MMH1-180-00-03	37
5.4	MMK1-100-37-03, MMK1-180-37-10, MMK1-180-37-03	37
5.5	Heating	38
5.6	Mixer	38
5.7	Pumps	38
5.8	Charging device	39
5.9	Lead-gel rechargeable battery	39
5.10	Total weight	39
5.11	Name plates	39
6	Putting the MilchMobil into and removing it from service	41
6.1	Electrical connection provided by the customer	41
6.2	Measures for putting the MilchMobil into service	41
6.2.1	Charging the rechargeable battery	41
6.2.2	Cleaning the MilchMobil	42
6.2.3	Calibration	42
6.2.4	Filling the water bath of the heating	44
6.3	Place of operation of the MilchMobil	45
6.4	Removal from service	46
7	Operation	49
7.1	Safety instructions	49
7.2	Reference values for the heating time for fresh milk	50
7.3	Preparing and dispensing liquid animal feed	51
7.3.1	When using fresh milk only	51
7.3.2	When using milk substitute and water	56
7.3.3	When using fresh milk, milk substitute and water	61
7.4	Setting the program with the selector switch	66
8	Cleaning	67
8.1	Specifications for cleaning the MilchMobil	67
8.2	Cleaning procedure	68
8.2.1	General safety instructions	68
8.2.2	Cleaning procedure without dosing pump/dosing pump with portion control	70
8.2.3	Cleaning procedure with dosing pump	70
8.2.4	Cleaning procedure with dosing pump with portion control	72
9	Maintenance	75
9.1	Safety instructions	75
9.2	Maintenance intervals and activities	77
9.2.1	Each time prior to use	77
9.2.2	Once a month	77
9.2.3	Every 3 months	77
9.2.4	In compliance with national regulations	78

1 Introduction

This operating manual puts you in the position to operate the MilchMobil safely as intended.

- > Please read the operating manual carefully before putting the MilchMobil into service.
- > Keep this operating manual readily available at all times and pass it on to the next user.
- > Observe all of the warnings and safety instructions in this operating manual at all times.

1.1 Versions of the MilchMobil

The MilchMobil is available in the following versions:

- **MilchMobil tank trolley (MMT)**
- **MilchMobil mixer trolley (MMM):** This version consists of the MilchMobil tank trolley and a mixer.
- **MilchMobil heating trolley (MMH)**
- **MilchMobil combined trolley (MMK):** This version consists of a MilchMobil heating trolley and a mixer.

All of the above versions can be refitted with a dosing pump or a dosing pump with portion control.

This operating manual is based on the MilchMobil as combined trolley with dosing pump and dosing pump with portion control, since this version is fully equipped. It is referred to as **MilchMobil** in the following.

If your MilchMobil is not fully equipped, only the descriptions of your equipment will be relevant to you.

1.2 Copyright

The copyright for this operating manual is reserved by Förster-Technik.

1.3 Disposal

All components, liquids and solids must be disposed of in compliance with the official local regulations for waste prevention and appropriate waste recycling or disposal which apply in the your country. Observe also the corresponding safety data sheets.

1.4 Transport

The MilchMobil is delivered on a europallet with the dimensions 80 x 120 cm.

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

1.5 Contact details of the manufacturer

Please get in touch with us if you have any questions on our products or require technical support!

Please note down the device data specified on the type plate of your device in the following to have them readily available whenever you make a call.

TYPE:

NO.

Our contact details:
Förster-Technik GmbH
Gerwigstr. 25
D-78234 Engen, Germany
Phone: +49 / (0)7733 / 9406 - 0
Fax: +49 / (0)7733 / 9406 - 99
info@foerster-technik.de
www.foerster-technik.de

2 For your safety

2.1 Target group

2.1.1 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.

2.1.2 Necessary qualifications of the service technician

Only trained service technicians are authorised to install the MilchMobil, put it into service and subject it to maintenance and repairs.

Service technicians are electricians with appropriate qualifications, i.e. 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. This also includes the knowledge of relevant accident prevention regulations, generally accepted safety regulations, EU guidelines and country-specific standards and provisions.

2.2 Intended use of the MilchMobil

The MilchMobil should be used only for the preparation, heating, dosage, portioning and transport of liquid animal feed for young animals.

2.3 Improper use of the MilchMobil

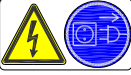
The MilchMobil must not be used for the preparation, heating, dosage, portioning and transport of liquid food for consumption by humans.


2.4 Safety signs on the machine


The safety signs on the machine are an important part of the safety concept and help prevent accidents.


They indicate danger areas at the machine and warn against residual risks.


Keep all safety signs completely in legible condition and renew them if they become unreadable.


	<p>Danger due to live electrical components!</p> <p>Danger of death by electric shock!</p> <ul style="list-style-type: none"> • Always pull all mains plugs before carrying out any work on the MilchMobil.
---	---


	<p>Danger due to hot surfaces!</p> <p>The surfaces of the heating tub and stainless steel tank can become hot and cause severe burns.</p> <ul style="list-style-type: none"> • Do not touch the heating tub or stainless steel tank. • Set the heating thermostat to max. 65 °C.
---	---


<p>Danger due to dry running of the heating!</p> <p>The heating may run dry and become damaged if the water level in the expansion vessel of the heating is below the min. mark.</p> <ul style="list-style-type: none"> • Make sure there is always a sufficient amount of water in the expansion vessel of the heating.

	<p>Danger due to rotating tools!</p> <p>Limbs, untied long hair and loose clothing can become pulled in when reaching into the catchment area of the indicated points, resulting in serious bodily harm or even death.</p> <ul style="list-style-type: none">• Never reach into the catchment area of the indicated points as long as parts are able to move there.• Always wear tight-fitting clothing.• Tie long hair.• Remove any jewellery or rings.• Always pull all mains plugs before carrying out any work on the MilchMobil.
---	--

	<p>Not suitable for food!</p> <p>The MilchMobil is suitable for animal feed only. Do not therefore use the MilchMobil for food intended for consumption by humans (e.g. consumer milk).</p>
---	--

	<p>Do not spray-wash!</p> <p>Water (liquids) can damage electrical components.</p> <ul style="list-style-type: none">• Do not spray-wash the MilchMobil. Do not use any high-pressure cleaners or similar equipment either.• To clean the MilchMobil, wipe the respective components only with a damp cloth.
---	--

	<p>Wear safety shoes!</p> <p>The operator must wear appropriate safety shoes at all times during operation.</p>
---	--

2.5 Indication of hazards

Dangers are indicated by a key word and a corresponding sign, depending on the severity and probability:



Danger!

For an imminent danger, resulting in serious injuries or death.



Warning!

For a potentially dangerous situation which may cause serious injuries or even death.



Caution!

For a potentially dangerous situation which may cause minor injuries or material damage.

Attention

For a potentially harmful situation in which the product or an item can become damaged within its environment.


Note

For application notes and other useful information.

However, it is just as important to observe any other notes and information which are not highlighted to avoid failures which, in turn, may cause direct or indirect injuries or material damage.

2.6 Residual risks

The MilchMobil is state of the art and has been designed in accordance with approved safety-related rules. Hazards and adverse effects may nevertheless arise when using the MilchMobil.

	<p>Warning!</p> <p>Serious head injuries or death may be the consequence of the below residual risks!</p>
---	--

Hazard:

Lethal electric shock

Danger point:

Electrical equipment

Measures:

- Always pull all mains plugs before carrying out any work on the MilchMobil.
-

Hazard:

Breakdown

Danger point:

Electrical equipment

Measures:

- The MilchMobil must be checked regularly for electrical safety in compliance with national regulations (repeated inspection).
-

Hazard:

Indirect contact, short circuit

Danger point:

Electrical equipment

Measures:

- Fuse protection of 16 A, for USA/Canada 15 A (provided by the customer) and an earth leakage circuit breaker (ELCB) of 30 mA need to be installed in compliance with local regulations for the MilchMobil.

Hazard:

Short circuit and other effects of electric current

Danger point:

Electrical equipment

Measures:

- Remove all metallic items of jewellery, e.g. rings, bracelets and necklaces, before beginning with work on/with the MilchMobil.
-

Hazard:

Direct contact to live parts

Danger point:

Charging device

Measures:

- Only electricians are allowed to open the cover of the charging device.
 - An earth leakage circuit breaker (ELCB) of 30 mA should be installed by the customer.
-

Hazard:

Access to/contact with moving and rotating parts. Parts can be hurled away or limbs caught and pulled in.

Danger point:

Mixer rod with beater, pump

Measures:

- Do not reach into the danger area as long as parts are able to move within it.
 - Always wear tight-fitting clothing.
 - Tie long hair.
 - Remove any jewellery or rings.
 - Maintenance work on the pump should be carried out by specialists only.
-

Hazard:

Ergonomic hazards

Danger point:

Mixer, rechargeable battery, moving the MilchMobil

Measures:

- Observe the industrial safety regulations for lifting loads and the weight of the corresponding assemblies.
- To comply with the accident prevention regulations, observe the specifications on the period of application of the MilchMobil in "Period of application of the MilchMobil", page 20 ff and on the application of the parking brake in "Application of the parking brake for the MilchMobil", page 21.

- Rewind all cables and hoses after use.

Hazard:

Corrosion

Danger point:

Mixer rod with beater, pump and hoses, tank trolley

Measures:

- Use only those cleaning agents which are suitable for the materials used in the MilchMobil. See "Cleaning", page 67 ff.
-

Hazard:

Poisoning, infection, explosion, breathing difficulties

Danger point:

Pump and hoses, tank trolley

Measures:

- Observe the specifications of the manufacturer of the cleaning agent used for cleaning.
- Always wear your personal protective equipment when dealing with cleaning agents.
- Remove all coolants and lubricants completely in accordance with the cleaning specifications in "Cleaning", page 67 ff when putting the MilchMobil into service for the first time.
- Check whether the animal feed is in perfect microbiological condition and give it swiftly to the animals after preparing it. Additionally observe the specifications in "Cleaning", page 67 ff.
- Do not use the MilchMobil for consumer milk.

Hazard:

Chemical reactions, other material/substance hazards

Danger point:

Rechargeable battery

Measures:

- Use only lead-gel rechargeable batteries.
 - Observe the manufacturer's specifications when dealing with rechargeable batteries.
-

Hazard:

Explosion, fire

Danger point:

Rechargeable battery

Measures:

- The rechargeable battery may be charged only in well ventilated rooms.
-

Hazard:

Burns, fire, unintentional/unexpected start-up

Danger point:

Radiator, tank trolley

Measures:

- Use the heating only for heating liquids.
- Never operate the heating dry.

- Set the heating thermostat always to max. 65 °C.
-

Hazard:

Other thermal hazards

Danger point:

MilchMobil

Measures:

- Check the water level at the expansion vessel each time you use it.
-

Hazard:

Being knocked down

Danger point:

MilchMobil

Measures:

- To comply with the accident prevention regulations, observe the specifications on the period of application of the MilchMobil in “Period of application of the MilchMobil”, page 20 ff and on the application of the parking brake in “Application of the parking brake for the MilchMobil”, page 21 ff.

Hazard:

Crushing

Danger point:

MilchMobil wheels

Measures:

- The operator must wear safety shoes at all times during operation.

2.7 Safety devices at the MilchMobil

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 without observing the corresponding safety instructions.
- Put the machine into service only once all safety devices have been applied and are in protection position!

Safety temperature limiter

The heating of the MilchMobil is equipped with a safety temperature limiter which is triggered in the event of overheating and consequently shuts down the heating.

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



1 Safety temperature limiter with rubber cap

Attention The heating must be checked by a service technician if the safety temperature limiter is triggered.

2.8 Obligations of the owner

The owner is obliged to:

- Rule out misuse by children.
- Carefully read and understand this operating manual before putting the MilchMobil into service.
- Allow only operating personnel to work with/on the MilchMobil who:
 - Are familiar with the basic operational safety and accident prevention regulations.
 - Have been instructed in working with/on the MilchMobil.
 - Have read and understood this operating manual.
- Operate the MilchMobil only as intended.
- Keep all safety signs on the MilchMobil in legible condition and renew damaged ones.

- Not change the design or functions of the MilchMobil.
- Operate the MilchMobil only in perfect functional condition.
- Subject the MilchMobil to regular visual inspection for possible damage and have it rectified by a service technician if necessary.
- Check the safety devices applied to the MilchMobil regularly for perfect working order.
- Make sure the MilchMobil is operated only with installed safety devices.
- Provide the required personal protective devices for the operator.
- Make sure the mains sockets of the MilchMobil and the power supply provided by the customer are easy to access at all times.
- In those countries where other mains plugs are used than those which are installed, be sure that these standard mains plugs are properly replaced by the prescribed plugs. If the MilchMobil is delivered without mains plug, be sure that the plug prescribed in the corresponding country is properly installed.
- Make sure the MilchMobil is always parked at a dry, clean, frost-free place, separated from the animal area (e.g. milk chamber).
- Check the animal feed to be fed to the animals for perfect microbiological condition to avoid impairing the health of the animals.
- Protect the MilchMobil and all corresponding cables from exposure to sunlight.

2.9 Obligations of the operator

Before beginning work, the operator is obliged to:

- Observe the basic operational safety and accident prevention regulations.
- Read and understand this operating manual.
- Observe all the safety information and instructions included in this operating manual.

2.9.1 Required personal protective equipment

Furthermore, the operator is obliged to:

- Wear safety shoes at all times during operation.
- Wear safety glasses and protective gloves when using cleaning agents for cleaning.

The compulsory accident prevention regulations which apply at the operation site in the country of use and the technical rules for safety-related and specialist work must also be observed by all means in addition to the protective equipment mentioned above.

2.10 Period of application of the MilchMobil

Make sure you observe the following in order to comply with the accident prevention regulations:

Period of application of the 100-litre MilchMobil

- The MilchMobil with a capacity of 100 litres may be used by one adult person a maximum of one hour up to a maximum inclination of 3 % in pushing mode and at full capacity.
- It may be used for longer than one hour at lower capacity.
- The MilchMobil should not be used in pulling mode.

Period of application of the 180-litre MilchMobil

- The MilchMobil with a capacity of 180 litres may be used by one adult person no longer than one hour up to a maximum inclination of 3 % in pushing mode when filled with 140 litres.

- At full capacity, it may be used by only two adults simultaneously up to a maximum inclination of 3 % in pushing mode.
- The MilchMobil should not be used in pulling mode.

Application of the parking brake for the MilchMobil

- The parking brake is designed solely for the fixation of the MilchMobil at full capacity on a firm surface up to a maximum inclination of 3 %. The parking brake is not a service brake which can be used when moving.
- At low capacity, the parking brake may be used up to a maximum inclination of 7 %.
- The stability of the MilchMobil must be checked after engaging the parking brake.

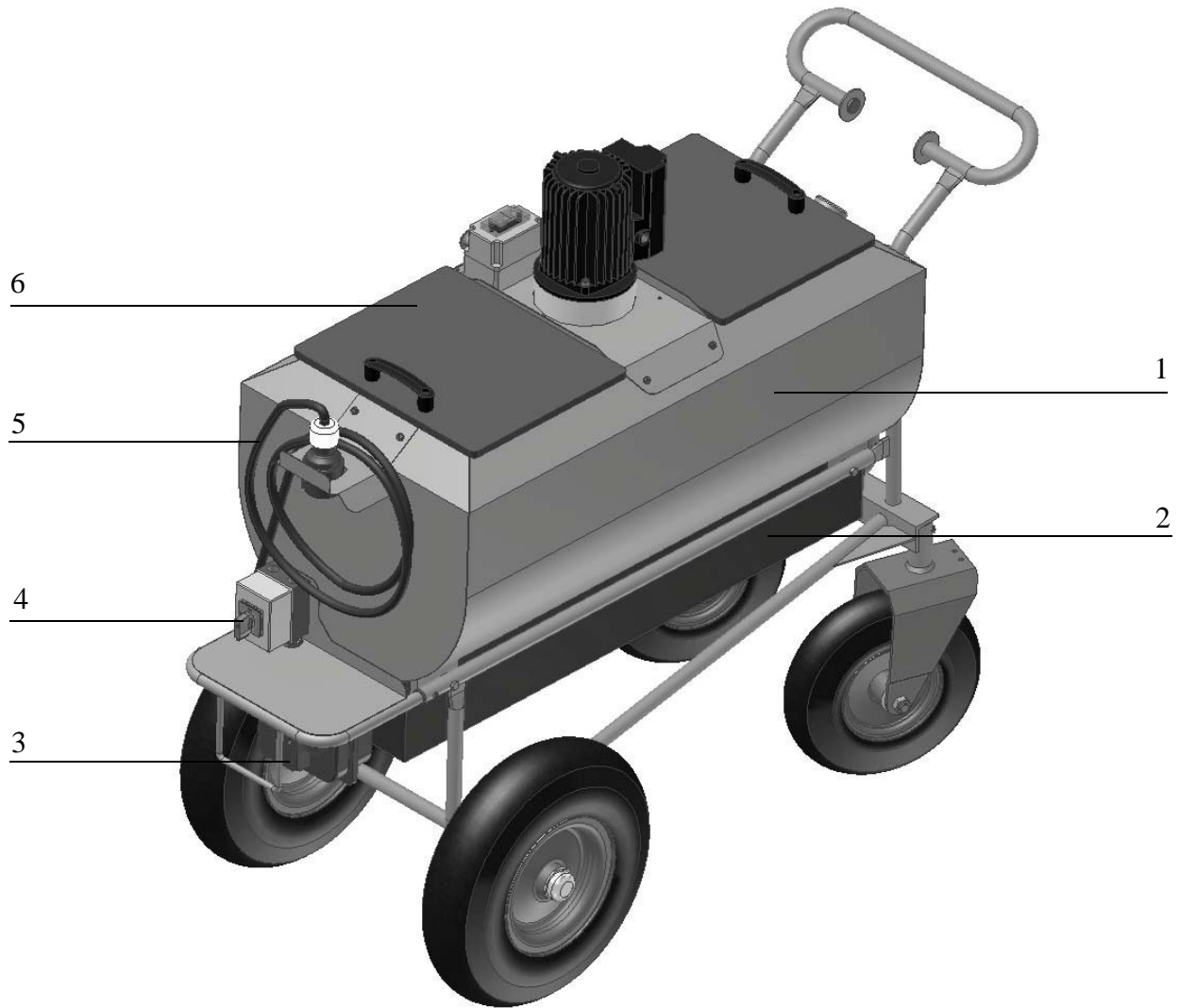
2.11 Structural alterations

The MilchMobil must not be subjected to any unauthorised alterations at any time.

Only original spare parts, wear parts and accessories may be used, since any warranty claims will otherwise expire.

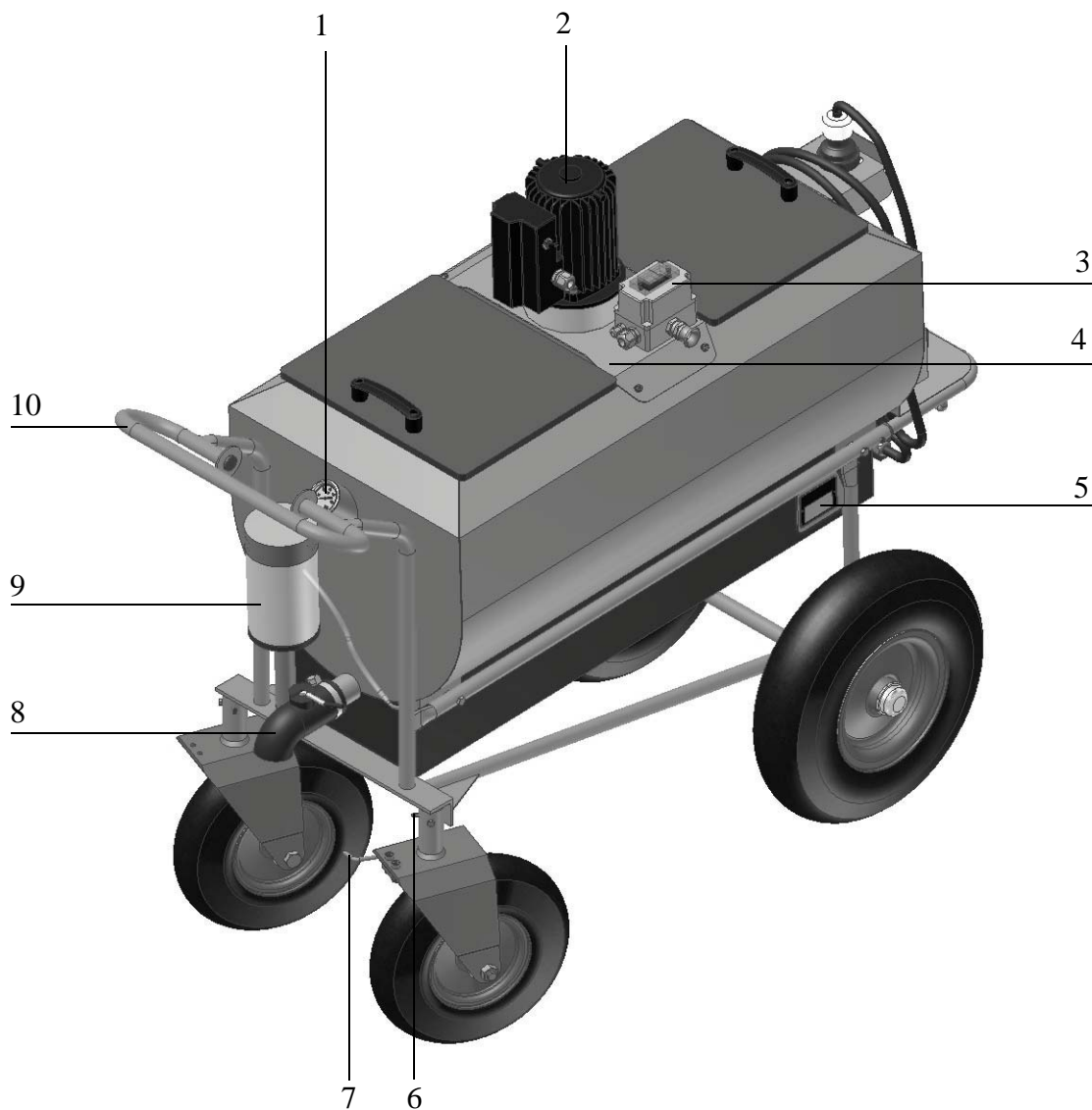
3 MilchMobil components

3.1 Rear side, general



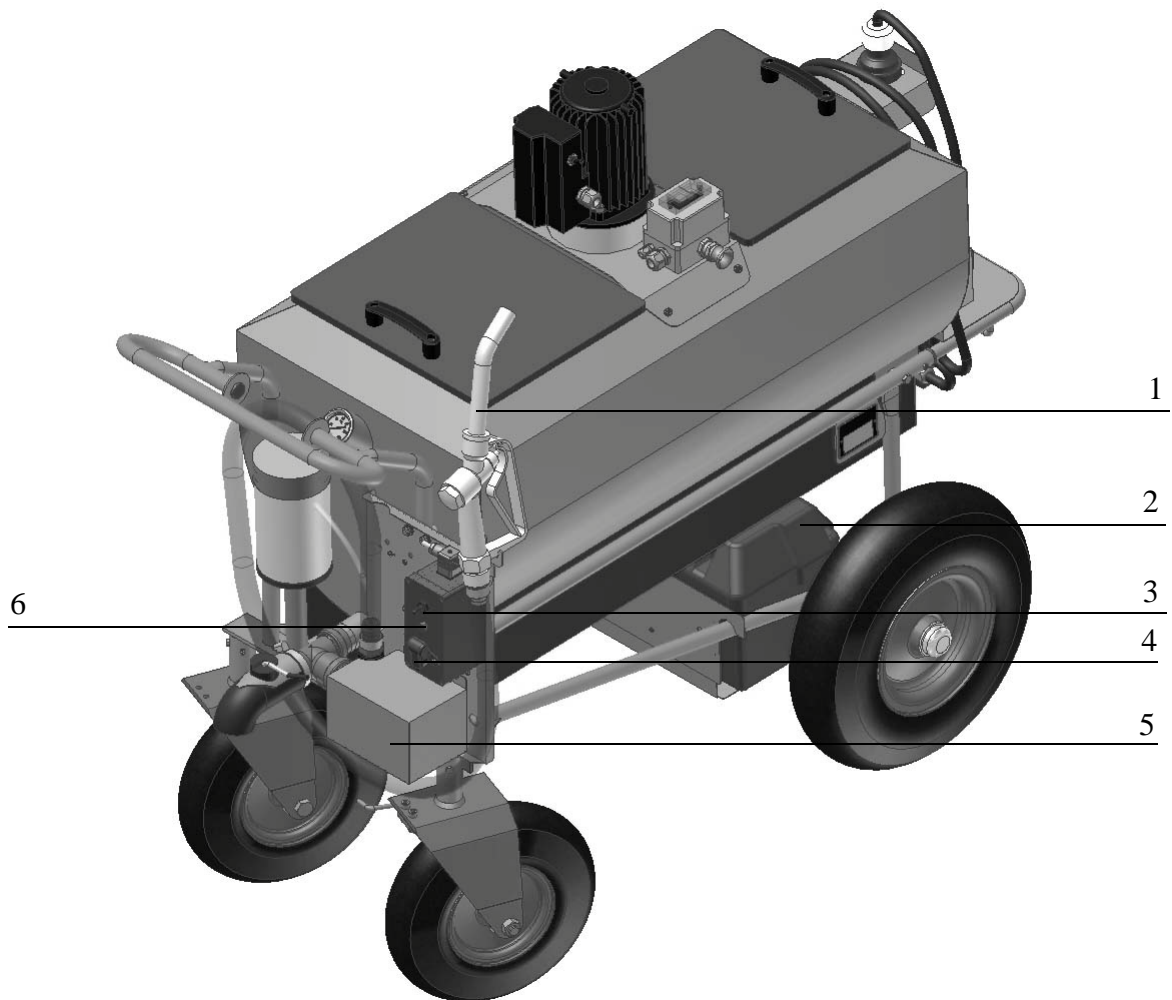
1. Stainless steel tank	4. Main switch for heating
2. Heating tub	5. Power cable for heating
3. Heating thermostat	6. Lid (optional)

3.2 Front side, general



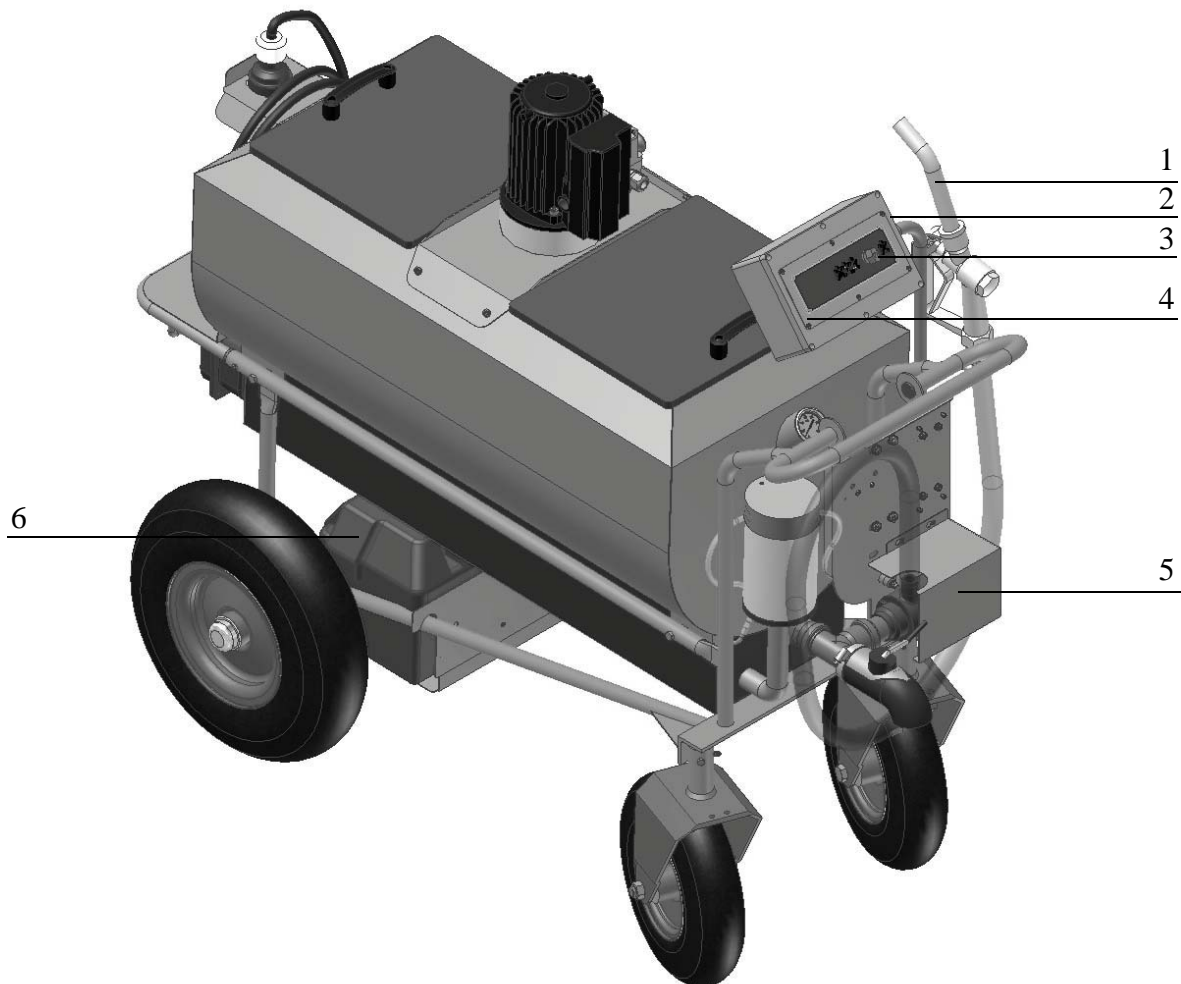
1. Thermometer	6. Lubrication nipple
2. Mixer	7. Parking brake
3. Motor circuit breaker	8. Outlet tap
4. Mixer bridge	9. Heating expansion vessel
5. Name plate	10. Handle

3.3 Front side with dosing pump



1. Filling pistol	4. Charging plug
2. Charger with rechargeable battery + standard 20 A motor vehicle blade fuse	5. Pump
3. On/off switch for pump	6. Microfuse, 5 x 20 mm, M10A

3.4 Front side with dosing pump with portion control



1. Outlet hose	4. Portion control
2. Charging plug (not illustrated)	5. Pump
3. Selector switch	6. Charger with rechargeable battery + standard 25 A motor vehicle blade fuse

3.5 Heating

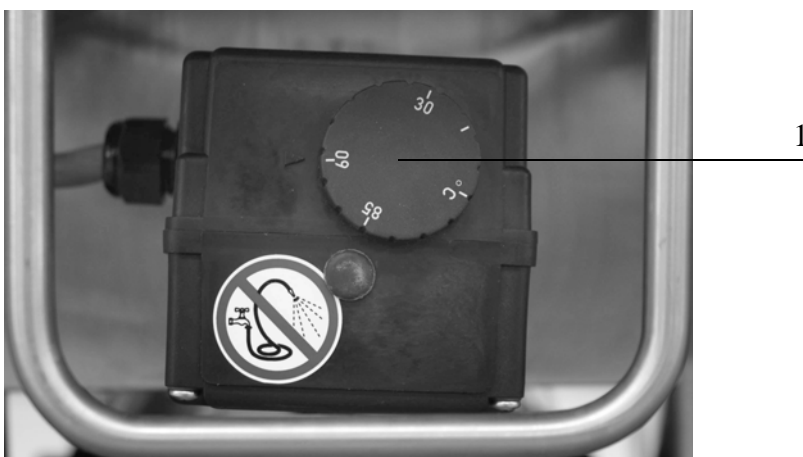
The heating ensures the correct output temperature of the liquid animal feed thanks to a water bath installed underneath the stainless steel tank. The temperature of the water bath can be regulated by means of a heating thermostat.

3.5.1 Main switch for heating



The main switch is used to switch the heating ON or OFF. It can be secured with a lock to prevent misuse by unauthorised persons.

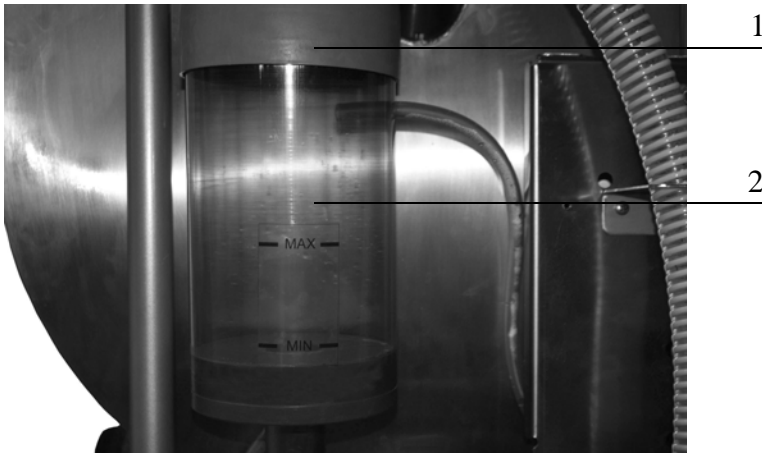
3.5.2 Heating thermostat



1 Heating thermostat

The heating thermostat is used to regulate the water temperature in the water bath of the heating. It must be set to 65 °C.

3.5.3 Heating expansion vessel



- | | |
|---|--------------------------|
| 1 | Expansion vessel lid |
| 2 | Heating expansion vessel |

You can check whether there is enough water in the water bath on the filling level indicator of the expansion vessel. You can find out how to refill with water if necessary in “Filling the water bath of the heating”, page 44.

3.5.4 Safety temperature limiter



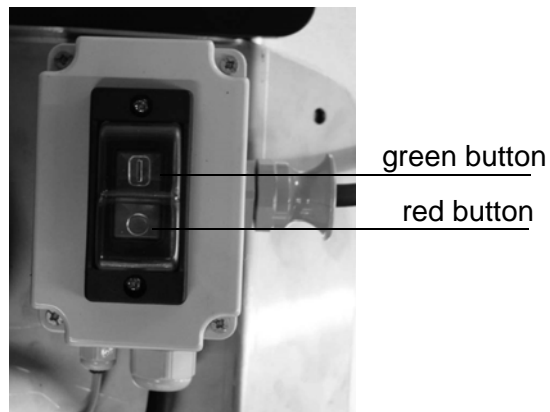
- | | |
|---|---|
| 1 | Safety temperature limiter without rubber cap |
|---|---|

The heating of the MilchMobil is equipped with a safety temperature limiter which is triggered in the event of overheating and consequently shuts down the heating.

3.6 Mixer



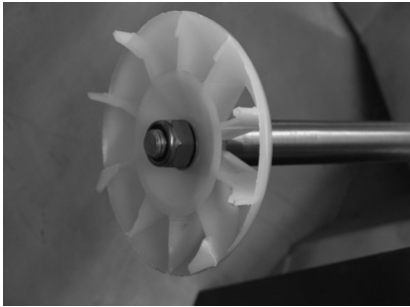
3.6.1 Motor circuit breaker



The mixer motor is switched on and off by means of a motor circuit breaker. The motor circuit breaker consists of a green and a red button. Red = OFF (0). Green = ON (I).

The motor circuit breaker is triggered in the event of overcurrent or power interruptions. The motor is shut down in the process and not automatically switched on again. The motor circuit breaker is restarted by pressing the green button.

3.6.2 Beater



A beater is attached to the mixer rod to prevent the formation of lumps when mixing the liquid animal feed.

3.7 Thermometer



The thermometer is installed in the stainless steel tank. The temperature of the liquid animal feed can be monitored at any time thanks to the ideal arrangement.

3.8 Parking brake



1 Parking brake

The MilchMobil is equipped with a parking brake on the right steering wheel.

Note	Observe the information in “Application of the parking brake for the MilchMobil”, page 21.
-------------	--

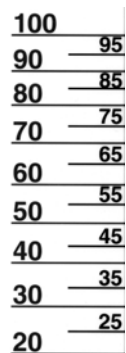
3.9 Outlet tap



The MilchMobil is equipped with an outlet tap which allows you to discharge the prepared liquid animal feed from the stainless steel tank into any container.

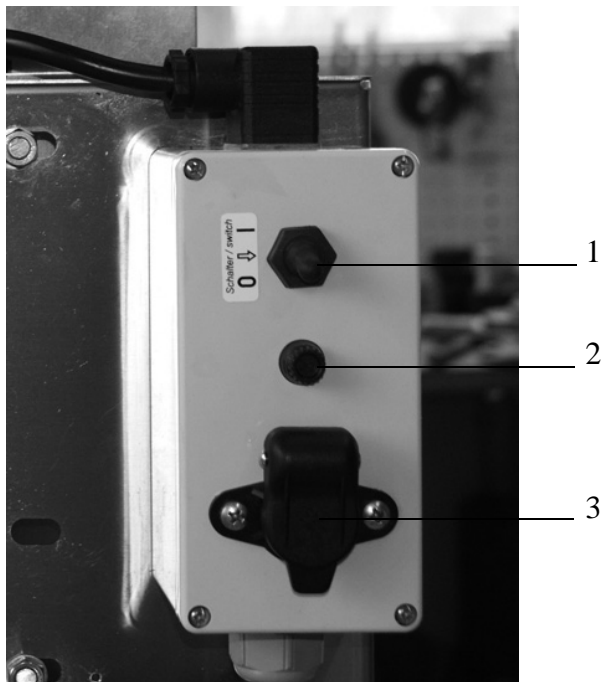
3.10 Filling level scale

Each stainless steel tank is equipped with an easily readable filling level scale.



Note	The MilchMobil must be in a horizontal position when reading the scale.
-------------	---

3.11 Dosing pump

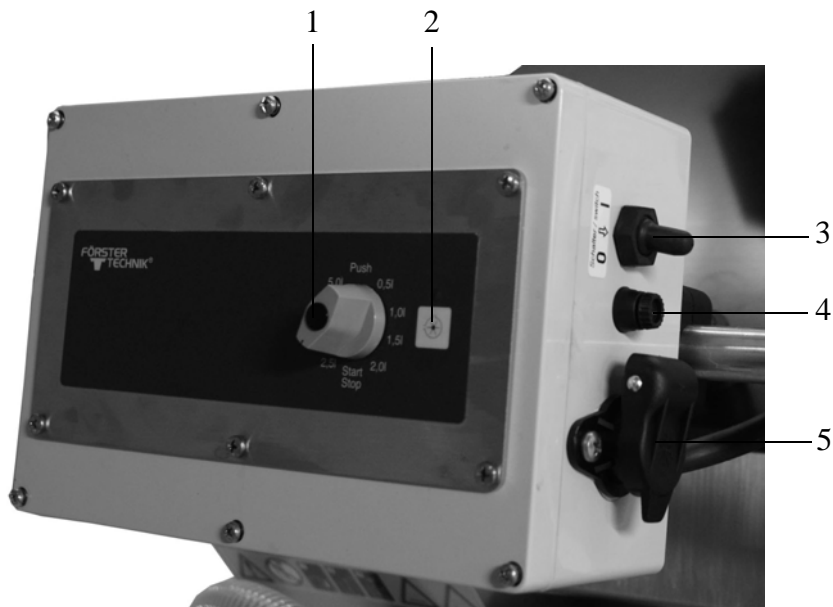


1. On/off switch for pump	3. Charging plug
2. Microfuse, 5 x 20 mm, M10A	

3.11.1 On/off switch for pump

You can use the pump's on/off switch to start dosing the liquid animal feed.

3.12 Portion control



1. Selector switch	4. Microfuse, 5 x 20 mm, M10A
2. Start button for the pump	5. Charging plug
3. On (I)/off (O) switch for portion control	

3.12.1 Selector switch

You can use the selector switch to set the amount of litres you wish to dispense.

Detailed information on the "Push" and "Start/Stop" functions can be found in "Setting the program on the selector switch", page 44.

3.12.2 Start button for the pump

You can use the start button to start dosing the liquid animal feed.

3.12.3 On/off switch for portion control

You can use the on/off switch to switch the portion control on and off.

3.13 Rechargeable battery

The dosing pump and the dosing pump with portion control are equipped with a lead-gel rechargeable battery.

Note	Observe the information and safety instructions on the data sheet supplied with this operating manual.
-------------	--

3.14 Charging device



1. 230 V safety plug
2. 12 V DC connector
3. Charging device

The charging device allows you to charge the rechargeable battery.

Note	Observe the manufacturer's specifications when dealing with rechargeable batteries.
-------------	---

4 Functional description

The MilchMobil is used for the preparation, heating, dosing, portioning and transport of liquid animal feed for young animals.

It is equipped with a mixer which is able to mix suitable powdery substances (e.g. easily soluble milk powder) with liquids or merely homogenise liquids.

Furthermore, the MilchMobil is equipped with a heating which ensures an ideal feed temperature thanks to a water bath installed under the stainless steel tank. The temperature can be monitored constantly on the thermometer within the operator's field of vision.

The dosing pump with portion control is supplied with voltage by a rechargeable battery under the stainless steel tank. You therefore do not have to rely on a power supply connection for the dosing process and can quickly dispense the preset amount of liquid feed into an appropriate container, e.g. feed bucket, anywhere via an outlet pipe.

5 Technical data

5.1 MMT1-100, MMT1-180

	MMT1-100	MMT1-180
Tank capacity	100 litres	180 litres
Length in cm	95	140
Width in cm	67	67
Height in cm	100	110
Dead weight in kg	37	57
Gross weight in kg	137	237

5.2 MMM1-100-37/55, MMM1-180-37

	MMM1-100-37/55	MMM1-180-37
Tank capacity	100 litres	180 litres
Length in cm	95	140
Width in cm	67	67
Height in cm	120	130
Dead weight in kg	50	72
Gross weight in kg	150	252

5.3 MMH1-100-00-03, MMH1-180-00-10, MMH1-180-00-03

	MMH1-100-00-03	MMH1-180-00-10	MMH1-180-00-03*
Tank capacity	100 litres	180 litres	180 litres
Length in cm	110	150	150
Width in cm	67	67	67
Height in cm	100	110	110
Dead weight in kg	50	72	70
Gross weight in kg	173	290	288

5.4 MMK1-100-37-03, MMK1-180-37-10, MMK1-180-37-03

	MMK1-100-37-03	MMK1-180-37-10	MMK1-180-37-03*
Tank capacity	100 litres	180 litres	180 litres
Length in cm	110	150	150
Width in cm	67	67	67
Height in cm	120	130	130
Dead weight in kg	62	86	84
Gross weight in kg	185	304	302

* only for USA/Canada

5.5 Heating

	3 kW/400 V	10 kW/400 V	3 kW/230 V	3 kW/240V*
Mains connection provided by the customer	CEE socket, 16 A, 5-pole; 400 V nominal voltage, 3/N/PE/50 Hz; 30 mA earth leakage circuit breaker (ELCB)		Push socket, 16 A, nominal voltage 230 V/N/PE/50 Hz; 30 mA earth leakage circuit breaker (ELCB)	15A, nominal voltage 240V/L1/L2/GRD/60Hz; 30 mA earth leakage circuit breaker (ELCB)
Voltage	400 V	400 V	230 V	240V
Current consumption	4.35 A	14.4 A	13 A	13 A
Frequency	50 Hz	50 Hz	50 Hz	60 Hz
Power	3 kW	10 kW	3 kW	3 kW
Weight in kg	10	12	10	10

5.6 Mixer

	0.37 kW	0.55 kW	0.37 kW*
Mains connection provided by the customer	15A push socket, nominal voltage 240V/L1/L2/GRD/60Hz; 30 mA earth leakage circuit breaker (ELCB)		15A, nominal voltage 240V/L1/L2/GRD/60Hz; 30 mA earth leakage circuit breaker (ELCB)
Voltage	230 V	230 V	240V
Current consumption	2.76 A	4 A	3.6 A
Frequency	50 Hz	50 Hz	60 Hz
Power	0.37 kW	0.55 kW	0.37 kW
Speed	1400 rpm	1340 rpm	1670 rpm
Weight in kg	13	13	13

5.7 Pumps

	For dosing pump	For dosing pump with portion control
Voltage	12 V DC	12 V DC
Current consumption	7.4 A	15 A
Flow rate	90 l/min	49 l/min
Pressure	0.15 bar	1 bar
Connection	1½"	1½"

* only for USA/Canada

5.8 Charging device

	16 A	15 A*
Mains connection provided by the customer	16 A push socket, nominal voltage 230 V/N/PE/50 Hz; 30 mA earth leakage circuit breaker (ELCB)	15 A push socket, nominal voltage 115 V/60 Hz; 30 mA earth leakage circuit breaker (ELCB)
Voltage	100...240 V	100...240 V
Current consumption	Max. 1.2 A	Max. 1.2 A
Frequency	50/60 Hz	50/60 Hz
Charging voltage	13.8...14.7 V	13.8...14.7 V
Charging current	4 A	4 A

* only for USA/Canada

5.9 Lead-gel rechargeable battery

Voltage	12 V DC
Capacity	50 Ah
Length in cm	19.7
Width in cm	16.9
Height in cm	17.0
Weight in kg	13.8

5.10 Total weight

Dosing pump assembly: 25 kg

Dosing pump with portion control assembly: 26.5 kg

5.11 Name plates

Each MilchMobil is equipped with its own name plate. An example of a name plate for the MilchMobil combined trolley (MMK) is illustrated in the following:

FÖRSTER TECHNIK®		CE	
Förster Technik GmbH · www.foerster-technik.de Gerwigstr.25 · D-78234 Engen · Tel.07733/9406-0			
Typ	MMK1-100-37-03		
Nr.	Bauj.		
U	230/400 V	P max	3660 W
f	50 Hz	I max	2,85/4,33 A
1/3 Phasen	I -□□□-	4,33	A
MADE IN GERMANY			

6 Putting the MilchMobil into and removing it from service

6.1 Electrical connection provided by the customer

- Have the electrical connection (provided by the customer) installed by a qualified electrician.
- Observe the local regulations and protective measures.
- A 30 mA earth leakage circuit breaker (ELCB) in the power supply (provided by the customer) is compulsory for the operation of the MilchMobil.
- The nominal voltage and nominal frequency must be observed. The supply voltage specified on the name plate of the device must correspond to that of the mains supply.
- Have overvoltage protectors installed by a qualified electrician in your power supply (provided by the customer) (lightning protection measure).
- Protect the MilchMobil and all corresponding cables from exposure to sunlight.

6.2 Measures for putting the MilchMobil into service

6.2.1 Charging the rechargeable battery

The rechargeable battery must be charged for 6 to 8 hours before putting the MilchMobil into service.

The rechargeable battery must also be charged each time after use.

**Warning!**

Danger of death!

An explosive gas mixture may arise when charging the rechargeable battery.

The rechargeable battery may therefore be charged only in well ventilated rooms.

Also observe the manufacturer's specifications when dealing with rechargeable batteries.

Proceed as follows when charging:

1. Connect the 12 V DC connector to the charging plug of the dosing pump or dosing pump with portion control.
2. Plug the 230 V safety plug into a 230 V socket.

Attention

The rechargeable battery must not be deep discharged, since it may otherwise become damaged.

6.2.2 Cleaning the MilchMobil

For reasons of hygiene, the MilchMobil must be cleaned thoroughly with cleaning agent before putting it into service to completely remove any existing coolant or lubricant residue. See "Cleaning", page 67 ff.

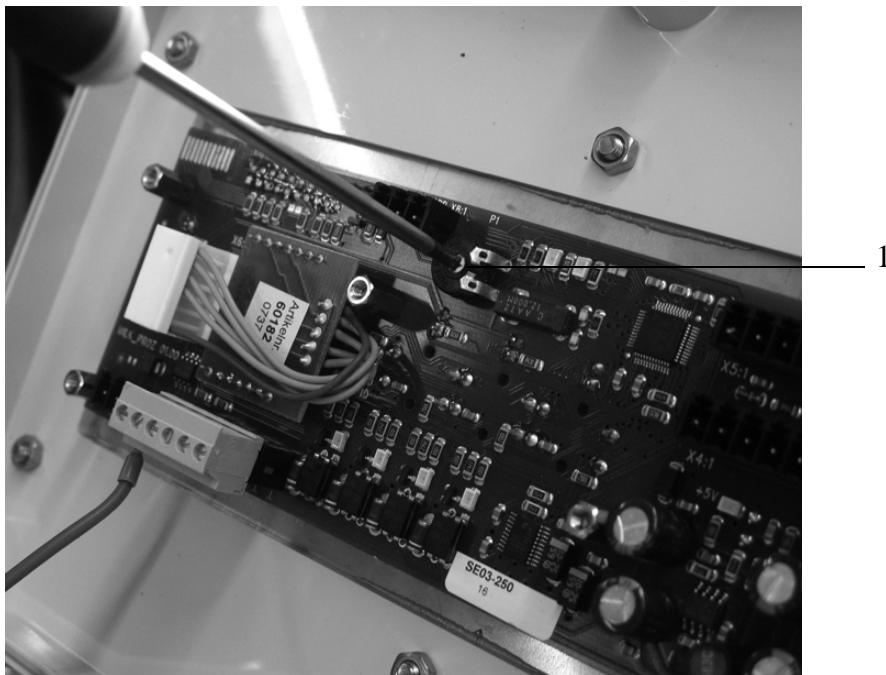
6.2.3 Calibration

If your MilchMobil is equipped with a dosing pump with portion control, you must calibrate it before putting it into service.

**Warning!**

Risk of overheating and short circuits!

Remove all metallic items of jewellery, such as rings, bracelets or necklaces, before opening the cover of the portion control or working on the rechargeable battery.



1. Potentiometer on the PCB of the portion control

Proceed as follows when calibrating:

1. Fill at least 20 litres of water into the stainless steel tank.
2. Press the start button of the pump to start the pump. The outlet hose is filled in the process.
3. Set the selector switch to 2 litres.
4. Unhook the outlet hose and hold it always in the same position.
5. Dose the water in a measuring cup.
6. If the desired amount has not been dispensed, adjust the amount on the potentiometer. Use a screwdriver for this purpose. See figure above.
7. Repeat the procedure until the desired amount is dispensed.
8. Set the selector switch to 5 litres. Proceed now in the same way as for 2 litres.

9. The calibration procedure is over as soon as the desired amount of water is dispensed.

6.2.3.1 Setting the program on the selector switch

There are two ways of dispensing without setting a fixed amount of litres:

First way: selector switch set to Push

- > Dispensing is performed as long as you press the start button.

Second way: selector switch set to Start/Stop

- > The dispensing process is started by pressing the start button briefly.
- > It is finished by pressing the start button again.
The dispensing process is automatically switched off after three minutes if no other function is selected.

6.2.4 Filling the water bath of the heating

The MilchMobil is delivered without water in the water bath. Fill the water bath with sufficient water before putting the MilchMobil into service. You can read the water level off the marks of the expansion vessel.



- | |
|------------------------|
| 1 Expansion vessel lid |
| 2 Expansion vessel |

	<p>Warning!</p> <p>Make sure the MilchMobil is on a level surface and the parking brake is engaged before filling the heating.</p>
---	---

<p>Attention</p>	<p>The heating may be used only to heat liquid and must never be operated dry since it will otherwise be destroyed.</p> <ul style="list-style-type: none">• Check the water level in the expansion vessel each time before using the MilchMobil. This inspection may be conducted only if the MilchMobil is switched off and the water cooled down.• If the water level is below the min. mark, refill with water up to the max. mark.
-------------------------	---

Proceed as follows when filling:

1. Engage the parking brake.
2. Make sure the MilchMobil is de-energised.
3. Pull off the expansion vessel lid.
4. Fill cold water up to the max. mark in the tank.
5. Re-apply the expansion vessel lid.

You can find out how to operate the MilchMobil in the section “Operation”, page 49 ff.

6.3 Place of operation of the MilchMobil

- Install the MilchMobil at a clean, dry and frost-free place, separated from the animal area (e.g. milk chamber).
- Protect the MilchMobil from dirt and flies.

6.4 Removal from service

You must remove the MilchMobil from service if you do not intend to operate it for a long period of time.

Proceed as follows to remove the MilchMobil from service:

1. Make sure the MilchMobil is on a firm and level surface.
2. Make sure the parking brake is engaged.
3. Pull all mains plugs.
4. Empty the stainless steel tank by completely opening the outlet tap.
5. Perform the cleaning process thoroughly. See also "Cleaning", page 67 ff.
6. Close the outlet tap after cleaning.
7. Drain the water from the hoses.
8. Remove the rechargeable battery and store it in a frost-free room.

**Caution!**

Injuries to the locomotor system may be caused by the weight and installation position of the rechargeable battery.

To avoid this, observe the weight of the assembly in the section "Lead-gel rechargeable battery", page 39 and the industrial safety regulations.

9. Empty the water bath of the heating. Proceed as follows:
 - 9.1 Remove the drain plug from the bottom of the heating tub.
 - 9.2 Allow the water to flow into an appropriate container.
 - 9.3 Screw the drain plug back in again after emptying the bath to protect the heating from dirt.

10. Cover the MilchMobil and store it at a level, clean, dry and frost-free place with the parking brake engaged.

Attention	Do not store the rechargeable battery for longer than six months since it will otherwise be deep discharged and may be damaged in the process.
------------------	--

7 Operation

7.1 Safety instructions

**Warning!**

The surfaces of the heating tub and stainless steel tank can become hot and cause severe burns.

- Do not touch the heating tub or stainless steel tank.
- Set the heating thermostat to max. 65 °C.

- To comply with the accident prevention regulations, you may use the MilchMobil only for the period specified in “Period of application of the MilchMobil”, page 20 ff to minimise fatigue, injuries to the locomotor system and other consequences which may arise from lack of concentration, such as stumbling or falling.
- To minimise the risk of being knocked down, you must observe the specifications in “Period of application of the MilchMobil”, page 20 ff and “Application of the parking brake for the MilchMobil”, page 21 ff.
- Rewind all cables and hoses after use to avoid stumbling over them.
- Wear safety shoes at all times during operation.
- Always wear personal protective equipment (e.g. safety glasses, protective gloves) when handling cleaning agents. Observe also the specifications of the safety data sheet for your cleaning agent.
- Charge the rechargeable battery each time after using it, since it may otherwise be destroyed. Make sure you observe the procedure and safety instructions in “Charging the rechargeable battery”, page 41 ff. Also observe the specifica-

tions of the manufacturer when dealing with rechargeable batteries.

- Pull all mains plugs of the MilchMobil and wind them up before moving the MilchMobil.
- To avoid infections, check whether the animal feed is in perfect microbiological condition and give it swiftly to the animals after preparing it.
- Clean the MilchMobil each time after using it. Observe the cleaning specifications in “Cleaning”, page 67 ff.
- Check the water level only if the MilchMobil is switched off and the water cooled down.
- Provide a cover for the MilchMobil for the transport of the liquid animal feed.
- Prepare the animal feed always at a dry, clean, frost-free place, separated from the animal area (e.g. milk chamber).
- Park the MilchMobil always at a level, clean, dry and frost-free place, separated from the animal area (e.g. milk chamber), each time after using it.

7.2 Reference values for the heating time for fresh milk

The following specifications for the heating time of fresh milk are empirical values based on an ambient temperature of 20 - 25°C with the heating thermostat set to 65 °C.

Fresh milk at milking temperature is based on an initial temperature of approximately 35 °C and a target temperature of approximately 42 °C.

Cooled fresh milk is based on an initial temperature of approximately 5 °C and a target temperature of approximately 42 °C.

For fresh milk at milking temperature

MMH or MMK	Filling quantity (litres)	Pre-heating time (min)	Heating time (min)	Total time (min)
100 l, 3 kW	50	20	45	65
	100	20	65	85
180 l, 10 kW	50	10	25	35
	100	10	35	45
	150	10	45	55

For cooled fresh milk

If you use cooled fresh milk, you should equip your MilchMobil with a heating capacity of 3 kW or 10 kW with an auxiliary heat exchanger (VEW 5 kW).

MMH or MMK	Filling quantity (litres)	Pre-heating time (min)	Total heating time (min)
100 l, 3 kW + VEW 5 kW	50	0	30
	100	0	50
180 l, 10 kW + VEW 5 kW	50	0	25
	100	0	40
	150	0	60

7.3 Preparing and dispensing liquid animal feed**7.3.1 When using fresh milk only**

In this case, make sure you proceed in the order described in the following:

1. Make sure the MilchMobil is on a level surface. This ensures ideal stability of your MilchMobil.
2. Engage the parking brake.

**Warning!**

To avoid injuries, observe the section “Application of the parking brake for the MilchMobil”, page 21.

3. Make sure the main switch of the heating and the toggle switch of the mixer are set to O (OFF).
4. Make sure the outlet tap is closed.
5. Check the water level of the heating in the expansion vessel.

Note

Check the water level only if the MilchMobil is switched off and the water cooled down.

The water level must reach up to the MIN. mark at least. If water is missing, fill it up to no higher than the MAX. mark.

Proceed as follows when refilling:

- Pull off the expansion vessel lid.
 - Fill cold water up to the max. mark in the tank.
 - Re-apply the lid on the expansion vessel.
6. Plug the mains plug of the heating into the appropriate socket.
 7. Before switching on the heating, make sure the heating thermostat is set to max. 65 °C.
 8. Switch on the heating with the main switch (ON) and pre-heat the water bath of the heating. Observe the reference values in “Reference values for the heating time for fresh milk”, page 50 ff.
 9. Fill the amount of fresh milk you wish to feed to the animals into the stainless steel tank.
 10. Check whether the desired feed temperature has been reached on the thermometer.

11. Switch off the heating with the main switch (OFF) after reaching the desired temperature.
12. Pull all mains plugs and wind them up for transport.
13. Disengage the parking brake while holding the MilchMobil by the handle.
14. Move the MilchMobil to the place of operation.

**Warning!**

To avoid injuries, observe the specifications on the application period in "Period of application of the MilchMobil", page 20 ff.

15. Make sure the MilchMobil is on a level surface and engage the parking brake.

**Warning!**

To avoid injuries, observe the section "Application of the parking brake for the MilchMobil", page 21.

Further procedure without dosing pump/dosing pump with portion control

1. Place a container (e.g. feed bucket) under the outlet tap.
2. Open the outlet tap and fill the container.
3. Close the outlet tap.
4. Once the entire feeding procedure is over, disengage the parking brake while holding the MilchMobil by the handle.
5. Move the MilchMobil to its parking place and engage the parking brake.

**Warning!**

To avoid injuries, observe the specifications on the application period in “Period of application of the MilchMobil”, page 20 ff and the section “Application of the parking brake for the MilchMobil”, page 21.

6. Clean the MilchMobil each time after using it.

**Warning!**

Make sure you observe the cleaning specifications in “Cleaning”, page 67 ff.


Further procedure with dosing pump

1. Set the on/off switch of the pump to position I to start the pump
2. Press the lever on the handle of the filling pistol to start dispensing the liquid animal feed into a feed bucket, for example.
3. To stop the dispensing process, let go of the lever on the handle of the filling pistol.
4. Once the dispensing process is over, set the on/off switch of the pump to position 0. The pump is now switched off.
5. Once the entire feeding procedure is over, disengage the parking brake while holding the MilchMobil by the handle.
6. Move the MilchMobil to its parking place and engage the parking brake.


**Warning!**

To avoid injuries, observe the specifications on the application period in “Period of application of the MilchMobil”, page 20 ff and the section “Application of the parking brake for the MilchMobil”, page 21.

7. Clean the MilchMobil each time after using it.

	<p>Warning!</p> <p>Make sure you observe the cleaning specifications in “Cleaning”, page 67 ff.</p>
---	--

8. Charge the rechargeable battery.

	<p>Warning!</p> <p>Make sure you observe the procedure and safety instructions in “Charging the rechargeable battery”, page 41 ff.</p>
---	---

Further procedure with dosing pump with portion control

1. Set the on/off switch of the portion control to position I to start the portion control.
2. Set the desired amount with the selector switch
or
3. Start the desired program (Start/Stop or Push). See “First way: selector switch set to Push”, page 66 or “Second way: selector switch set to Start/Stop”, page 66.
4. Press the start button of the pump to start the dispensing process.
5. Once the dispensing process is over, set the on/off switch of the portion control to position 0. The portion control is now switched off.
6. Once the entire feeding procedure is over, disengage the parking brake while holding the MilchMobil by the handle.
7. Move the MilchMobil to its parking place and engage the parking brake.

**Warning!**

To avoid injuries, observe the specifications on the application period in “Period of application of the MilchMobil”, page 20 ff and the section “Application of the parking brake for the MilchMobil”, page 21.

8. Clean the MilchMobil each time after using it.

**Warning!**

Make sure you observe the cleaning specifications in “Cleaning”, page 67 ff.

9. Charge the rechargeable battery.

**Warning!**

Make sure you observe the procedure and safety instructions in “Charging the rechargeable battery”, page 41 ff.

7.3.2 When using milk substitute and water

In this case, make sure you proceed in the order described in the following:

1. Make sure the MilchMobil is on a level surface. This ensures ideal stability of your MilchMobil.
2. Engage the parking brake.

**Warning!**

To avoid injuries, observe the section “Application of the parking brake for the MilchMobil”, page 21.

3. Make sure the main switch of the heating and the toggle switch of the mixer are set to O (OFF).

4. Make sure the outlet tap is closed.
5. Plug the mains plug of the mixer into the appropriate socket.
6. Fill at least enough hot water into the stainless steel tank to cover the beater. The temperature of the water must allow an easily soluble milk substitute to be completely dissolved. Observe the specifications of the manufacturer.
7. Check whether the desired mixing temperature has been reached on the thermometer.
8. Switch on the mixer (position I) once the desired mixing temperature has been reached.
9. Add the milk substitute evenly to the water. Observe the concentration specifications of the manufacturer, taking into account the desired total mixing amount.
10. As soon as the milk substitute has been completely dissolved, add hot water until the desired amount of litres is achieved. You can read it off the litre scale in the stainless steel tank.

Note	The temperatures of the water and liquid feed must be coordinated so that the mixed feed is approximately 37 - 39°C when ingested by the calf.
-------------	--

11. Switch off the mixer with the toggle switch (position 0).
12. Pull all mains plugs and wind them up for transport.
13. Disengage the parking brake while holding the MilchMobil by the handle.
14. Move the MilchMobil to the place of operation.

**Warning!**

To avoid injuries, observe the specifications on the application period in “Period of application of the MilchMobil”, page 20 ff.

15. Make sure the MilchMobil is on a level surface and engage the parking brake.

**Warning!**

To avoid injuries, observe the section “Application of the parking brake for the MilchMobil”, page 21.

Further procedure without dosing pump/dosing pump with portion control

1. Place a container (e.g. feed bucket) under the outlet tap.
2. Open the outlet tap and fill the container.
3. Close the outlet tap.
4. Once the entire feeding procedure is over, disengage the parking brake while holding the MilchMobil by the handle.
5. Move the MilchMobil to its parking place and engage the parking brake.

**Warning!**

To avoid injuries, observe the specifications on the application period in “Period of application of the MilchMobil”, page 20 ff and the section “Application of the parking brake for the MilchMobil”, page 21.

6. Clean the MilchMobil each time after using it.

**Warning!**

Make sure you observe the cleaning specifications in “Cleaning”, page 67 ff.

Further procedure with dosing pump

1. Set the on/off switch of the pump to position I to start the pump.
2. Press the lever on the handle of the filling pistol to start dispensing the liquid animal feed into a feed bucket, for example.
3. To stop the dispensing process, let go of the lever on the handle of the filling pistol.
4. Once the dispensing process is over, set the on/off switch of the pump to position 0. The pump is now switched off.
5. Once the entire feeding procedure is over, disengage the parking brake while holding the MilchMobil by the handle.
6. Move the MilchMobil to its parking place and engage the parking brake.

**Warning!**

To avoid injuries, observe the specifications on the application period in “Period of application of the MilchMobil”, page 20 ff and the section “Application of the parking brake for the MilchMobil”, page 21.

7. Clean the MilchMobil each time after using it.

**Warning!**

Make sure you observe the cleaning specifications in “Cleaning”, page 67 ff.

- Charge the rechargeable battery.



Warning!

Make sure you observe the procedure and safety instructions in “Charging the rechargeable battery”, page 41 ff.

Further procedure with dosing pump with portion control


- Set the on/off switch of the portion control to position I to start the portion control.
- Set the desired amount with the selector switch
or
- Start the desired program (Start/Stop or Push). See “First way: selector switch set to Push”, page 66 or “Second way: selector switch set to Start/Stop”, page 66.
- Press the start button of the pump to start the dispensing process.
- Once the dispensing process is over, set the on/off switch of the portion control to position 0. The portion control is now switched off.
- Once the entire feeding procedure is over, disengage the parking brake while holding the MilchMobil by the handle.
- Move the MilchMobil to its parking place and engage the parking brake.




Warning!

To avoid injuries, observe the specifications on the application period in “Period of application of the MilchMobil”, page 20 ff and the section “Application of the parking brake for the MilchMobil”, page 21.

- Clean the MilchMobil each time after using it.

	<p>Warning!</p> <p>Make sure you observe the cleaning specifications in “Cleaning”, page 67 ff.</p>
---	--


9. Charge the rechargeable battery.

	<p>Warning!</p> <p>Make sure you observe the procedure and safety instructions in “Charging the rechargeable battery”, page 41 ff.</p>
---	---

7.3.3 When using fresh milk, milk substitute and water

In this case, make sure you proceed in the order described in the following:

1. Make sure the MilchMobil is on a level surface. This ensures ideal stability of your MilchMobil.
2. Engage the parking brake.

	<p>Warning!</p> <p>To avoid injuries, observe the section “Application of the parking brake for the MilchMobil”, page 21.</p>
---	--

3. Make sure the main switch of the heating and the toggle switch of the mixer are set to O (OFF).
4. Make sure the outlet tap is closed.
5. Check the water level of the heating in the expansion vessel.

<p>Note</p>	<p>Check the water level only if the MilchMobil is switched off and the water cooled down.</p>
--------------------	--


The water level must reach up to the MIN. mark at least. If water is missing, fill it up to no higher than the MAX. mark.

Proceed as follows when refilling:


- Pull off the expansion vessel lid.
 - Fill cold water up to the max. mark in the tank.
 - Re-apply the lid on the expansion vessel.
6. Plug the mains plug of the heating into the appropriate socket.
 7. Make sure the heating regulator is set to max. 65 °C before switching on the heating.
 8. Switch on the heating with the main switch (ON) and pre-heat the water bath of the heating. Observe the reference values in "Reference values for the heating time for fresh milk", page 50 ff.
 9. Plug the mains plug of the mixer into the appropriate socket.
 10. Fill at least enough hot water into the stainless steel tank to cover the beater. The temperature of the water must allow an easily soluble milk substitute to be completely dissolved. Observe the specifications of the manufacturer.
 11. Check whether the desired mixing temperature has been reached on the thermometer.
 12. Switch on the mixer (position I) once the desired mixing temperature has been reached.
 13. Add the milk substitute evenly to the water. Observe the concentration specifications of the manufacturer, taking into account the desired total mixing amount.
 14. As soon as the milk substitute is completely dissolved, add fresh milk of milking temperature and, if necessary, hot water until the desired amount of litres is reached. You can read it off the litre scale in the stainless steel tank.

Note	The temperatures of the water and liquid feed must be coordinated so that the mixed feed is approximately 37 - 39 °C when ingested by the calf.
-------------	---

15. Switch off the mixer with the toggle switch (position 0).
16. Switch off the heating with the main switch (OFF) after reaching the desired temperature.
17. Pull all mains plugs and wind them up for transport.
18. Disengage the parking brake while holding the MilchMobil by the handle.
19. Move the MilchMobil to the place of operation.

	Warning! To avoid injuries, observe the specifications on the application period in "Period of application of the MilchMobil", page 20 ff.
--	--

20. Make sure the MilchMobil is on a level surface and engage the parking brake.

	Warning! To avoid injuries, observe the section "Application of the parking brake for the MilchMobil", page 21.
---	---

Further procedure without dosing pump/dosing pump with portion control

1. Place a container (e.g. feed bucket) under the outlet tap.
2. Open the outlet tap and fill the container.
3. Close the outlet tap.

4. Once the entire feeding procedure is over, disengage the parking brake while holding the MilchMobil by the handle.
5. Move the MilchMobil to its parking place and engage the parking brake.

**Warning!**

To avoid injuries, observe the specifications on the application period in “Period of application of the MilchMobil”, page 20 ff and the section “Application of the parking brake for the MilchMobil”, page 21.

6. Clean the MilchMobil each time after using it.

**Warning!**

Make sure you observe the cleaning specifications in “Cleaning”, page 67 ff.

Further procedure with dosing pump

1. Set the on/off switch of the pump to position I to start the pump.
2. Press the lever on the handle of the filling pistol to start dispensing the liquid animal feed into a feed bucket, for example.
3. To stop the dispensing process, let go of the lever on the handle of the filling pistol.
4. Once the dispensing process is over, set the on/off switch of the pump to position 0. The pump is now switched off.
5. Once the entire feeding procedure is over, disengage the parking brake while holding the MilchMobil by the handle.
6. Move the MilchMobil to its parking place and engage the parking brake.

**Warning!**

To avoid injuries, observe the specifications on the application period in “Period of application of the MilchMobil”, page 20 ff and the section “Application of the parking brake for the MilchMobil”, page 21.

7. Clean the MilchMobil each time after using it.

**Warning!**

Make sure you observe the cleaning specifications in “Cleaning”, page 67 ff.

8. Charge the rechargeable battery.

**Warning!**

Make sure you observe the procedure and safety instructions in “Charging the rechargeable battery”, page 41 ff.

Further procedure with dosing pump with portion control

1. Set the on/off switch of the portion control to position I to start the portion control.
2. Set the desired amount with the selector switch
or
3. Start the desired program (Start/Stop or Push). See “First way: selector switch set to Push”, page 66 or “Second way: selector switch set to Start/Stop”, page 66.
4. Press the start button of the pump to start the dispensing process.
5. Once the dispensing process is over, set the on/off switch of the portion control to position 0. The portion control is now switched off.

6. Once the entire feeding procedure is over, disengage the parking brake while holding the MilchMobil by the handle.
7. Move the MilchMobil to its parking place and engage the parking brake.



Warning!

To avoid injuries, observe the specifications on the application period in “Period of application of the MilchMobil”, page 20 ff and the section “Application of the parking brake for the MilchMobil”, page 21.

8. Clean the MilchMobil each time after using it.



Warning!

Make sure you observe the cleaning specifications in “Cleaning”, page 67 ff.

9. Charge the rechargeable battery.



Warning!

Make sure you observe the procedure and safety instructions in “Charging the rechargeable battery”, page 41 ff.

7.4 Setting the program with the selector switch

There are two ways of dispensing without setting a fixed amount of litres:

First way: selector switch set to Push

- > Dispensing is performed as long as you press the start button.

Second way: selector switch set to Start/Stop

- > The dispensing process is started by pressing the start button briefly.

- > It is finished by pressing the start button again.
The dispensing process is automatically switched off after three minutes if no other function is selected.

8 Cleaning

8.1 Specifications for cleaning the MilchMobil

What has to be cleaned?

The inside of the tank and all parts which come into contact with liquid animal feed must be cleaned thoroughly at normal water pressure each time after use.

Attention	Never use a high-pressure cleaner or similar equipment for cleaning, since the MilchMobil may otherwise become damaged.
------------------	---

How often does the MilchMobil have to be cleaned?

The MilchMobil must be cleaned with alkaline cleaning agents at least once a day. A cleaning cycle with acidic cleaning agent should also be performed if necessary.

Which cleaning agents are allowed to be used?

We recommend the cleaning agent **HyClean K45** for cleaning the MilchMobil. You can obtain it from us.

However, commercially available alkaline or acidic cleaning agents which meet the following requirements may also be used:

- > The cleaning agents must be able to be used within a temperature range of 40 to 50 °C.
- > The ingredients must not have a corrosive effect on the materials used by Förster-Technik. The cleaning agents must be free from chlorine, in particular, since chlorine corrodes stainless steel, damaging it in the process.

Note	Find out from your cleaning agent supplier whether your cleaning agent is suitable for this type of use. Observe the instructions of the cleaning agent supplier included on the technical data sheet, in particular the dosing instructions and safety regulations.
-------------	--

Which materials are used in the MilchMobil?

The following materials are used in the MilchMobil:

- > PA66 polyamide 66
- > PP polypropylene
- > PVC polyvinyl chloride
- > Stainless steel V2A
- > Rubber (neoprene)

8.2 Cleaning procedure

8.2.1 General safety instructions

- Before beginning cleaning, make sure all electrical connections are safely disconnected from the mains supply and the rechargeable battery is fully charged.
- Always wear personal protective equipment (e.g. safety glasses, protective gloves) when handling cleaning agents. Observe also the specifications of the safety data sheet for your cleaning agent.

**Warning!**

Risk of injury due to rotating tools!

Limbs, untied long hair and loose clothing can become pulled in when reaching into the catchment area of the indicated points, resulting in serious bodily harm or even death.

- Never reach into the catchment area of the indicated points as long as parts are able to move there.
- Always wear tight-fitting clothing.
- Tie long hair.
- Remove any jewellery or rings.
- Always pull all mains plugs before beginning cleaning.

- Observe the exact cleaning water temperature and concentration specifications of the manufacturer.
- Never mix alkaline and acidic cleaning agents.

**Warning!**

Risk of injury and death!

Never mix alkaline and acidic cleaning agents, since this may cause a dangerous chemical reaction. Dangerous gases may be created and cause serious breathing difficulties. They may also cause explosions.

- Make sure there is sufficient water in the container when rinsing or cleaning the optional dosing pump/dosing pump with portion control to prevent dry running of the pumps.
- Make absolutely sure no undiluted or large quantities of cleaning agent are drained into the ground water, waterbodies or the sewage system. No undiluted or unneutralised cleaning agents may enter the sewage or receiving water. Ob-

serve the provisions of your local disposer and the safety data sheet for your cleaning agent.

8.2.2 Cleaning procedure without dosing pump/dosing pump with portion control

1. Make sure the MilchMobil is on a level surface and engage the parking brake.
2. Disconnect all electrical connections from the mains supply.
3. Open the outlet tap completely to empty the stainless steel tank.
4. Rinse the stainless steel tank with clean hot water.
5. Close the outlet tap.
6. Fill approximately 5 litres of water into the stainless steel tank.
7. Add the appropriate amount of cleaning agent if desired.
8. Clean the stainless steel tank and, if available, the mixer with mixer bridge thoroughly.
9. Open the outlet tap completely to empty the stainless steel tank.
10. Rinse the stainless steel tank with clear water until the cleaning agent residue is completely removed.
11. Allow the stainless steel tank to dry.
12. Bring the MilchMobil, if necessary, to its level and frost-free storage place and engage the parking brake.
13. Cover the cleaned MilchMobil.

8.2.3 Cleaning procedure with dosing pump

1. Make sure the MilchMobil is on a level surface and engage the parking brake.
2. Disconnect all electrical connections from the mains supply.

3. Open the outlet tap completely to empty the stainless steel tank.
4. Rinse the stainless steel tank with clean hot water and drain the water via the outlet tap.
5. Close the outlet tap.
6. Fill approximately 5 litres of water into the stainless steel tank.
7. Set the on/off switch of the pump to position I.
8. Press the lever on the handle of the filling pistol and let the water flow out of the filling pistol into the drain.
9. Switch off the pump (position 0) when the stainless steel tank is empty.
10. Fill approximately 5 litres of water into the stainless steel tank.
11. Add the appropriate amount of cleaning agent as required.
12. Clean the stainless steel tank and, if available, the mixer with mixer bridge thoroughly.
13. Set the on/off switch of the pump to position I.
14. Hold the filling pistol into the stainless steel tank.
15. Press the lever on the handle of the filling pistol for approximately three minutes to create a cleaning cycle.
16. Set the on/off switch of the pump to position 0 to switch off the pump.
17. Open the outlet tap completely to empty the stainless steel tank.
18. Rinse the stainless steel tank with clear water until the cleaning agent residue is completely removed.
19. Close the outlet tap.
20. Fill approximately 5 litres of water into the stainless steel tank.

21. Set the on/off switch of the pump to position I.
22. Press the lever on the handle of the filling pistol until no more water is in the tank and let the water flow out of the filling pistol into the drain.
23. Switch off the pump (position 0) when the stainless steel tank is empty.
24. Open the outlet tap.
25. Allow the stainless steel tank to dry.
26. Bring the MilchMobil, if necessary, to its level and frost-free storage place and engage the parking brake.
27. Cover the cleaned MilchMobil.

8.2.4 Cleaning procedure with dosing pump with portion control

1. Make sure the MilchMobil is on a level surface and engage the parking brake.
2. Disconnect all electrical connections from the mains supply.
3. Open the outlet tap completely to empty the stainless steel tank.
4. Rinse the stainless steel tank with clean hot water.
5. Close the outlet tap.
6. Fill approximately 5 litres of water into the stainless steel tank.
7. Switch on the portion control (position I).
8. Set the selector switch to "Push" position.
9. Press the pump's start button and keep it pressed until all residue in the hoses and pump have flown out of the outlet hose.
10. Fill approximately 5 litres of water into the stainless steel tank.
11. Add the appropriate amount of cleaning agent as required.

12. Clean the stainless steel tank and, if available, the mixer with mixer bridge thoroughly.
13. Set the selector switch to "Start/Stop" position.
14. Hold the outlet hose into the stainless steel tank.
15. Press the pump's start button. The water is pumped in a circle for approximately 3 minutes.
16. Open the outlet tap completely to empty the stainless steel tank.
17. Rinse the stainless steel tank with clear water until the cleaning agent residue is completely removed.
18. Close the outlet tap.
19. Fill approximately 5 litres of water into the stainless steel tank.
20. Set the selector switch to "Push" position.
21. Press the pump's start button and keep it pressed until all residue in the hoses and pump have flown out of the outlet hose.
22. Switch off the portion control (position 0).
23. Open the outlet tap.
24. Allow the stainless steel tank to dry.
25. Bring the MilchMobil, if necessary, to its level and frost-free storage place and engage the parking brake.
26. Cover the cleaned MilchMobil.
27. Charge the rechargeable battery. Make sure you observe the procedure and safety instructions in "Charging the rechargeable battery", page 41 ff.

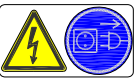
Attention	Make sure there is always a sufficient amount of water, since otherwise the pump may run dry and become destroyed.
------------------	--


9 Maintenance

The visual and functional inspection of the components can be conducted by the owner/operator.

Repair work must **always** be performed by a service technician.

9.1 Safety instructions

	<p>Warning!</p> <p>Live electrical components. Danger of death by electric shock!</p> <ul style="list-style-type: none">• Always pull all mains plugs before carrying out any work on the MilchMobil.
---	--

	<p>Warning!</p> <p>Risk of overheating and short circuits! Serious bodily harm or even death may be the consequence.</p> <p>Remove all metallic items of jewellery, such as rings, bracelets or necklaces, before opening the cover of the dosing pump or working on the rechargeable battery.</p>
--	---

**Warning!**

Risk of injury and death due to rotating tools!

Limbs, untied long hair and loose clothing can become pulled in when reaching into the catchment area of the indicated points, resulting in serious bodily harm or even death.

- Never reach into the catchment area of the indicated points as long as parts are able to move there.
- Always wear tight-fitting clothing.
- Tie long hair.
- Remove any jewellery and rings.
- Always pull all mains plugs before carrying out any work on the MilchMobil.

- It may be necessary to remove certain assemblies, such as the rechargeable battery, mixer, dosing pump, portion control, for repair work. Observe the industrial safety regulations for lifting loads to avoid injuries to the locomotor system. The weight specifications of the respective assemblies can be found in "Technical data", page 37 ff.
- The heating may be used only to heat liquids and must not be operated dry.
- Always set the heating thermostat to max. 65 °C and do not touch the stainless steel tank and heating tub to avoid burns.
- To keep other thermal hazards to a minimum, check the water level at the expansion vessel each time after use.
- Use only lead-gel rechargeable batteries.

9.2 Maintenance intervals and activities

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

9.2.1 Each time prior to use

Visual inspection of the components

All mechanical and electrical components must be subjected to visual inspection for damage and deposits each time before they are used. If any damage is detected during the visual inspection, the faulty components have to be replaced by a service technician before work can be resumed with the MilchMobil. Any deposits should be removed.

9.2.2 Once a month

Check the tire pressure and, if necessary, pump up the tires.

Tire pressure, front wheel: 30 - 40 psi; 2 - 2.8 bar

Tire pressure, rear wheel: 40 - 50 psi; 2.8 - 3.5 bar

9.2.3 Every 3 months

Conduct a functional inspection

The calibration, the temperature regulator and all switches must be subjected to functional inspection every three months.

If any faults are detected during the functional inspection, they must be rectified by a service technician.

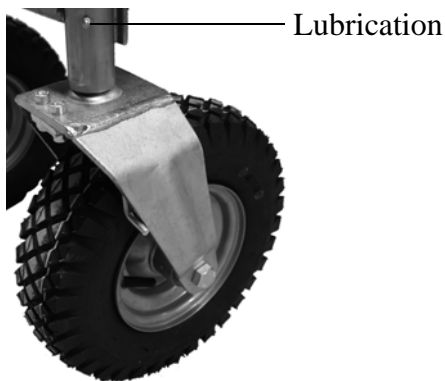
Clean the outlet tap

For reasons of hygiene, the outlet tap must be cleaned thoroughly every three months. For this purpose, the outlet tap has to be removed. Proceed as follows:

1. Loosen the hose clip on the outlet tap.
2. Pull off the outlet tap.
3. Clean the outlet tap thoroughly with a suitable brush.
4. Re-apply the outlet tap and screw the hose clip tight again.

Grease the steering wheels

Both steering wheels must be greased every three months by means of the lubrication nipple. This interval may vary, depending on the place of operation.



9.2.4 In compliance with national regulations

Inspection of components by means of measurements

This inspection may be conducted **only** by a service technician!

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 is detected during the inspection, the faulty components have to be replaced by a service technician before work can be resumed with the MilchMobil.