23rd September 2010

Original Operating Manual

Half-body scales

Versions: Half-body scales 3.03 / Device: from H 5.00 and higher

M5.1e

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1 Introduction

This operating manual puts you in the position to operate the half-body scales safely as intended.

> Please read the operating manual carefully before putting the half-body scales into service.

> Keep the operating manual readily available at all times and pass it on to the next user.

> Observe all warnings and safety instructions in this operating manual at all times.

1.1 Copyright

1.2 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.

1.3 Transport

The half-body scales is delivered in a box with the dimensions

81 x 62 x 22.5 cm.

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

1.4 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 stated on the type plate of your device to have it ready and 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 be familiar with 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 half-body scales, 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 half-body scales

Only use the half-body scales to weigh young animals, in combination with an automatic feeder or concentrate feeder. The mass to be weighed must not exceed 200 kg.

2.3 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.

	Danger due to live electrical components! Danger of death by electric shock! • Always disconnect the mains plug, before starting work on the control system.

2.4 Indication of hazards

Hazards 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.

2.5 Residual risks

The half-body scales 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 half-body scales.

Warning!
Serious head injuries or death may be the consequence of the residual risks stated below!

Hazard:

Lethal electric shock

Danger point:

Control

Measures:

- Always disconnect the mains plug, before starting work on the control of the half-body scales.
- Only electricians are allowed to open the cover of the control.
- An earth leakage circuit breaker (ELCB) of 30 mA should be installed by the customer.

Hazard:

Breakdown

Danger point:

Electrical equipment

Measures:

- The half-body scales 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 (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 half-body scales.

2.6 Safety devices on the half-body scales

The safety devices on the machine are an important part of the safety concept and help to 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 attached and are in protection position!

2.7 Obligations of the owner

The owner is obliged to:

- Rule out misuse by children,
- Carefully read and understand this operating manual before putting the half-body scales into service.
- Only allow operating personnel to work with/on the half-body scales who:
    - Are familiar with the basic operational safety and accident prevention regulations,
    - Have been given instructions on work with/on the half-body scales,

- Have read and understood this operating manual,

- Operate the half-body scales only as intended,
- Keep all safety signs on the half-body scales in legible condition and renew damaged ones,
- Do not change the design or functions of the half-body scales,
- Operate the half-body scales only in perfect functional condition,
- Subject the half-body scales to regular visual inspection for possible damage and have it rectified by a service technician if necessary,
- Check the safety devices applied to the half-body scales regularly for perfect working order,
- Make sure the half-body scales is operated only with installed safety devices,
- Make sure the all cable connections are installed outside the animal area,
- Make sure the mains sockets of the half-body scales and the power supply provided by the customer are easy to access at all times,
- Protect the half-body scales and all corresponding cables from exposure to sunlight,

2.8 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 Structural alterations

The half-body scales 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.

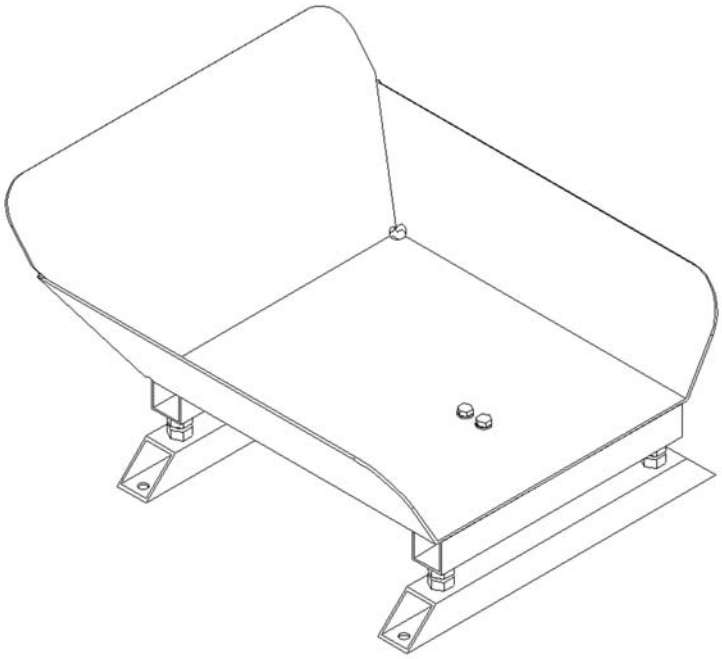
3 Functional description

When feeding, the calf automatically stands with its forefeet on the half-body scales. The determined partial calf weight is transferred from the weighing cell via a data line to the processor of the automatic feeder, where a special factor is used to calculate the total weight.

By the automatic registration of the animal weight, the half-body scales is for continuous performance monitoring (weight, increase, utilisation of feed) and is also a management aid for the assessment of the animal's health and development.

4 Technical data

4.1 Illustration and dimensions of the half-body scales



The weighing unit, consisting of mounting frame and weighing platform, has the following clearance dimensions:

Height:	220 mm
Width:	357 mm
Depth:	418 mm

4.2 Weighing range and accuracy

Permitted weighing range: from 0 to 200 kg

Resolution of the scales: 100 g

Note	Due to its design, the half-body scales cannot be gauged. Therefore do not use the scales for weighing in the context of legal transactions, such as the selling or slaughtering of animals.

4.3 Maximum number of scales and animals

You can equip up to 24 feed or concentrate pens with one half-body scales each. Two scales are addressed by a separate control unit. 25 to 30 animals can be supplied with feed or concentrate at each of these pens and weighed at the same time.

4.4 Maximum distances

Distance between scales control and automatic feeder

Since the controls of the forefoot weighing system(s) and of the automatic feeder are connected via CAN bus, the distance between the individual control units or between the control unit and the automatic feeder can be selected as desired. The length of the CAN bus cables, which must not exceed 400 m in total, is the limiting factor.

Distance between scales control and weighing platform

The length of the data cable between the weighing platform and the corresponding control unit is three metres.

4.5 Scope of delivery

The following parts are included in the scope of delivery:

- Half-body scales
- Control box with data and mains cables

5 Putting the machine into service

5.1 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 half-body scales.
- The nominal voltage and nominal frequency must be observed. The supply voltage stated 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 half-body scales and all corresponding cables from exposure to sunlight.

Warning!

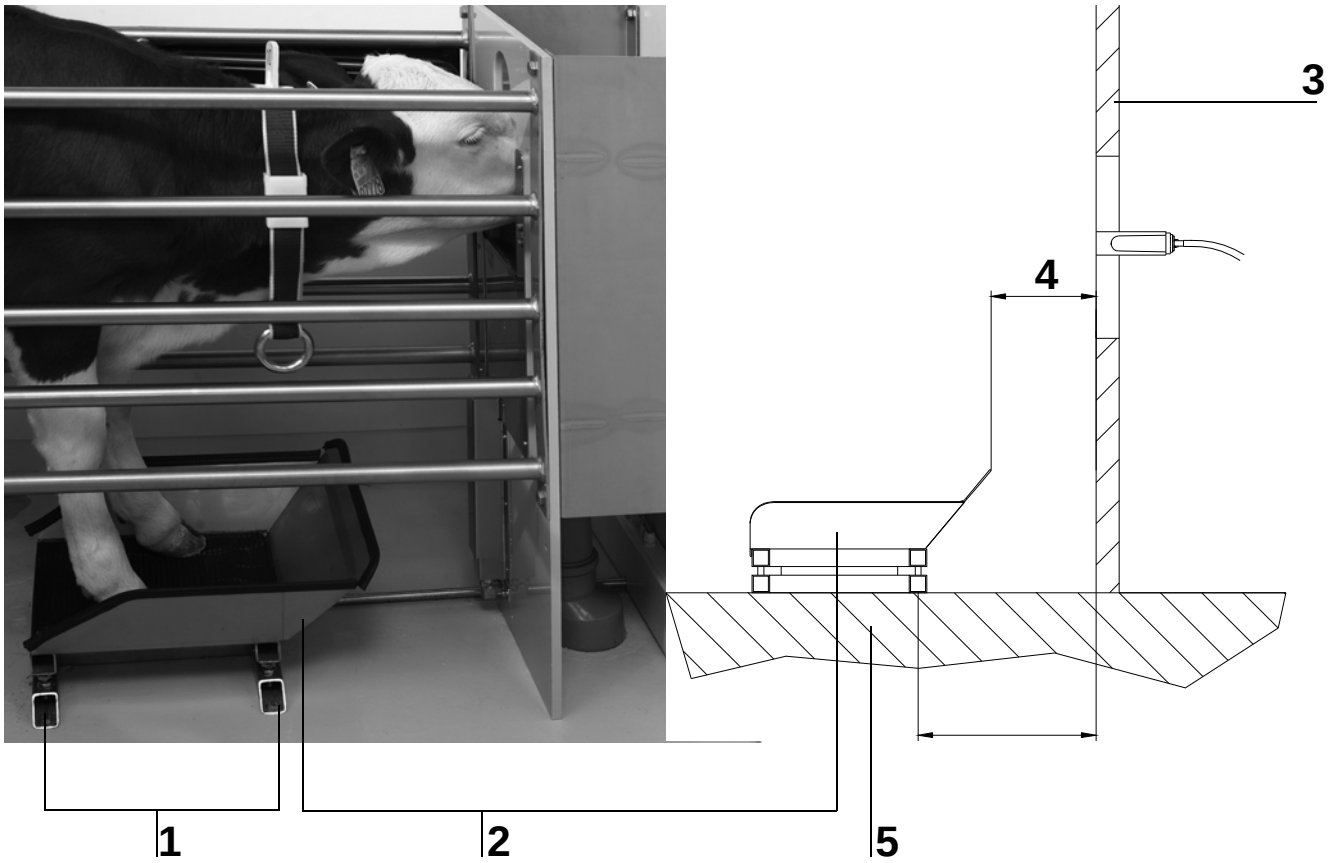
Risk of injury and death!

Make sure that all electrical cables are installed outside the animal area to prevent them from being damaged. Otherwise, high material damage could result as well as serious injuries to animals and humans or even death.

5.2 Fastening options in the feed or concentrate station

To fasten the half-body scales, we recommend:

- Dowels: Ø 10 mm, L: 50 mm or Ø 12 mm, L: 60 mm
- Wood screws: Ø 8 mm



1	Half-body scales (mounting frame)
2	Half-body scales (weighing platform)
3	Front plate, feeding station
4	Distance between the front upper edge of the half-body scales and the front plate: depending on the size of the animal, approx. 180 mm
5	Installation space

Attention	The scales must stand on a flat and firm surface, never on a deep litter mattress or similar. Damage or/and measuring faults could be the result.

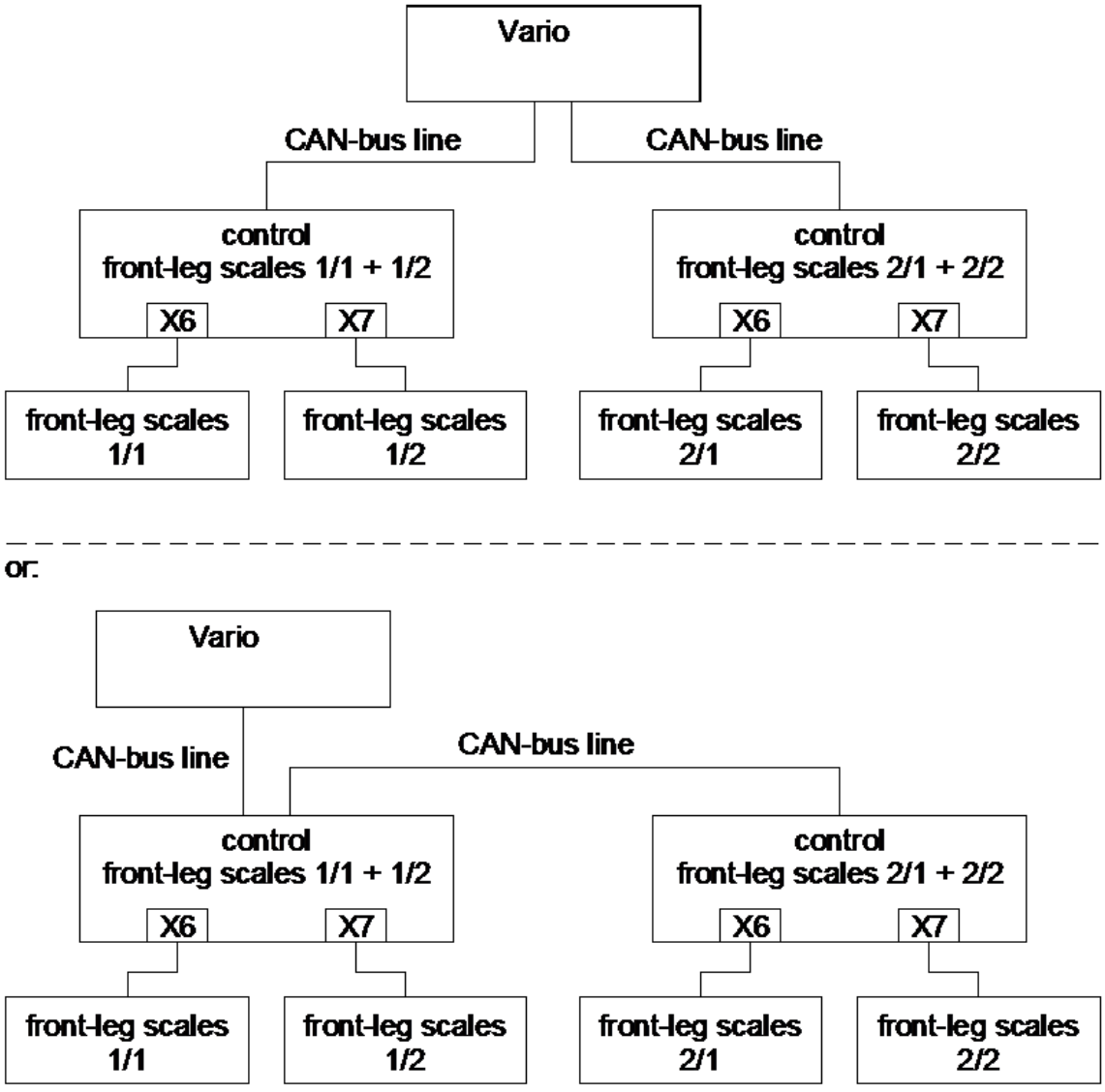
1. Install the half-body scales on the installation space for the feed or concentrate station with corresponding distance from the teat or the feed pan - depending on the size of the animals transferred to the barn (approx. 18 cm).
2. Draw four holes for the mounting frame on the installation space.

Attention	Never unscrew the weighing platform from the mounting frame, not even to fasten the scales to the installation space as that could damage the scales.

5.3 Connection to the automatic feeder

5.3.1 Connection via CAN bus

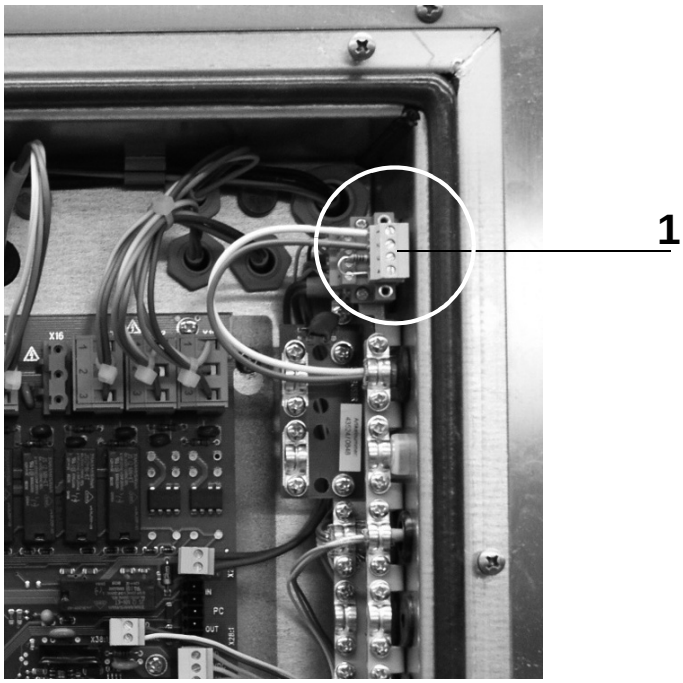
5.3.1.1 Connection diagram



5.3.1.2 CAN bus interface on the control PCB

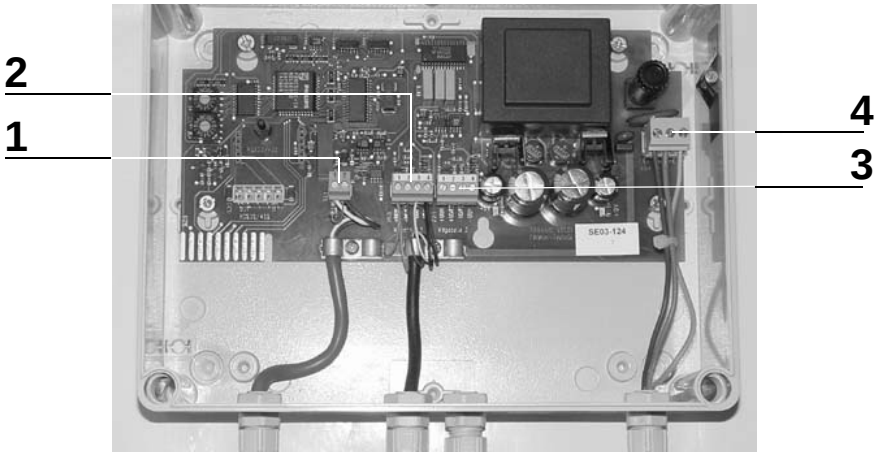
Vario

The scales control must be integrated in the existing CAN bus as another CAN node. For this, please make use of the circuit diagram for the **CAN bus**, which is enclosed with the original operating manual for your automatic feeder.



1	CAN bus interface, Vario

5.3.1.3 Control box for half-body scales with CAN bus interface



1	CAN bus interface
2	Plug with data line to scales 1
3	Plug with data line to scales 2 (if available)
4	Mains connection

5.4 Electrical connection

> Plug the mains plug of the control box for the half-body scales into the socket.

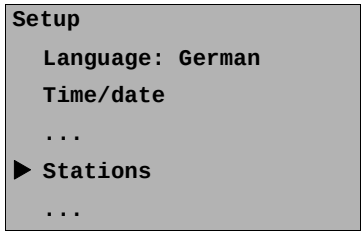
Attention	Observe the electrical power ratings (see Chapter "Technical data", page 15).

5.5 Registering the scales at the automatic feeder

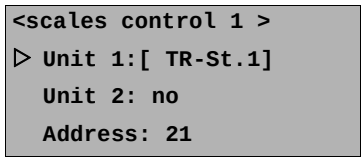
5.5.1 Activating the scales control

1. Switch off the device first. Press  and keep this key pressed while you switch the device back on again. After a short while, the Setup menu appears on the display, from which you select:

   Setup > Stations > Animal scales



2. Select the **Unit 1** line and set the value to the desired feed or concentrate station (here: feed station 1). **Unit 1** for the first weighing platform is activated. Also activate **Unit 2** if two weighing platforms are connected to the control.



The value entered in the **Address** lines specifies the CAN address of the scales control. This value must correspond to the value set using the two **DIP switches** on the control PCB of the half-body scales (see the **circuit diagram for the half-body scales** in the appendix of this operating manual).

Note	On delivery, address 21 is assigned to the scales control via the DIP switch. By default, this address is also assigned to the first scales control in the setup settings of the automatic feeder. To connect the first control unit, no further adjustments are required. Values 22, 23 etc. are used for further control units. The DIP switches of the other controls need to be changed accordingly.

Note	Disconnect the mains plug of the scales control before you adjust the DIP switch on the PCB of the scales control to change the CAN address of the scales control. Adjusting the DIP switches with the scales control switched on will have no effect!

4. To exit setup, press Esc repeatedly until this message appears on the display. Confirm this message with Enter. The machine is then restarted.

5.6 Calibration

For the scales to provide exact weighing results, it must be calibrated before initial operation. This calibration should be repeated on an annual basis. During the **calibration**, the parameters are configured, which are used to determine the weighing results. The corresponding menu is available via the following menu path:

> **Calibration**

Note	For initial operation or configuration of the automatic feeder, the calibration of the scales is enforced.

5.6.1 Starting the calibration process

Note	Taring of the scales is performed before the actual calibration (see Chapter “Tare half-body scales”, page 34).

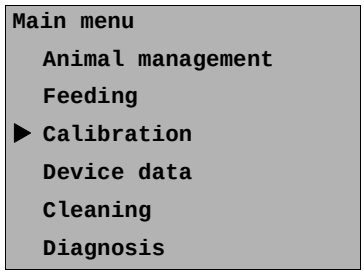
Calibration, either in the context of reinstallation or as a routine operation, consists of the following steps:

> Block access to the station by animals and make sure that the weighing platform is unloaded. Before calibration, remove any dirt or excrement from the weighing platform.

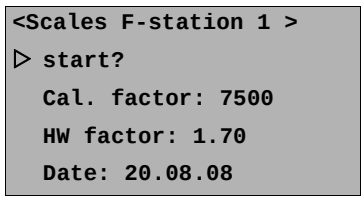
> Select the following menu path:

> **Calibration**

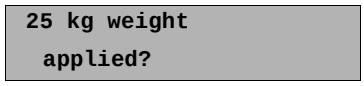
> Use [>] or [<] to scroll to the right or lift until you find the list item for the calibration of the scales in question.



Since the first menu item, **start?**, is already selected, you can press [Enter] directly. Wait until taring is complete, which is in progress now. A corresponding message informs you that taring is in progress.



A menu appears where you need to enter the reference weight in kilograms that you require for calibration. Use [▼] or [▲] to adjust the corresponding value (default: 25 kg) in this menu.



Place the reference weight on the scales and then press [Enter] to start the calibration process. A final message informs you whether calibration was successful or not.

Note	If the last calibration was more than 12 months ago, a warning will request that the farmer re-calibrates the scales on a regular basis.

To ensure that calibration was successful, you can perform a test weighing operation with the scales still unloaded (see Chapter “Test weighing”, page 33), the result of which should be a weight value that corresponds to the weight used.

5.6.2 Weighing parameters

To determine the weight of the animals, a half-body scales factor and the calibration factor are used to calculate the result. Both are described below.

5.6.3 Half-body scales factor

With half-body scales, only the weight of the front half of the calf is determined. To be able to calculate the actual animal weight,

the half-body scales factor is applied. The half-body scales factor is defined as the ratio between animal weight and front half weight:

$$\text{Half-body scales factor} = \frac{\text{Weight of front half}}{\text{Animal weight}}$$

Note	Normally you can apply the default value of 1.70 as the half-body scales factor. However, you can also change the half-body scales factor manually, if desired.

5.6.4 Calibration factor

The calibration factor is also used to determine the weight. It takes scales-specific parameters into account. The calibration factor is reset for each calibration process.

Note	You should not change the calibration factor by entering it directly via the keyboard, but always only indirectly by way of the re-calibration of the scales.

6 Animal monitoring and weaning

6.1 Monitoring the animal weight

You can monitor the weight of each individual animal under **Animal monitoring**. You also have the option of defining the weight of the animal for its transfer to the barn and, if required, of correcting the value defined in the device for the calf's reference weight.

6.1.1 Monitoring weight and increase values

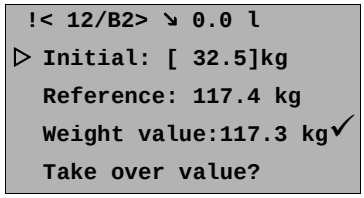
1. Select the following menu item:
   > **all**
2. Use or to access the individual animal you want to check. The weight of the animal today and yesterday is displayed in the **Weight kg** line. Press the **Increase** Enter line to open a submenu with more detailed information on the animal's weight development.

```
!< 12/B2> ↘ 0.0 l
 !cons.%: 100 100
  Break off: 0 0
  Suction speed%: 100 100
  Visit: 0 4
  Weight kg: 117 116
▶ Increase: 600 400
  Feeding day: 77
```

3. The plan tendency and the feed entitlement for the current day are displayed in the first line of the display, next to the animal number. The second line, **Weight kg**, lists today's and yesterday's animal weight again. The third line specifies the **increase** in weight of the animal during the entire feeding period in kilograms since transfer to the barn. This value is the calculated difference between the current animal weight and the weight for transfer to the barn. The current daily increase in weight in grammes for today and yesterday is displayed in the fourth line, **Increase**. The fifth line, **Ø increase**, provides information on the average daily increase in weight of the animal during the entire feeding period (barn transfer date until today's feed day), calculated in grammes per day.

```
!< 12/B2> ↘ 0.0 l
▶ Weight kg: 117 116
  Increase: 83 82
  Increase g: 1400 1300
  Ø increase: 1085 1081
```

6.1.2 Viewing the calculation basis for the values

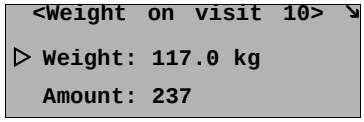


If you press Enter in the **Weight kg** line, another submenu opens with information on the calculation basis for the weight and increase values. The first line shows the **weight for animal transfer to the barn** in kg. The animal weight determined on the second or third day is automatically applied as the transfer-to-barn weight. The value listed in the line underneath for the **reference weight** is used to define a value range of ± 5 kg for the plausibility check of today's weight value. A weight value within this range is considered to be valid and is applied as the reference value when the next day arrives. However, if the weight value is missing or not within the value range when the next day arrives, the reference value is increased by a value between 0.9 and 1.2 %. Press Enter in the **Apply value?** line to apply the current weight value as reference value.

Note	Normally, you will not need to change the reference value of an animal.

Note	The tick next to the reference value or the weight value indicates whether the weighed value is within the permissible range of values or not.

6.1.3 Viewing details of today's weight value

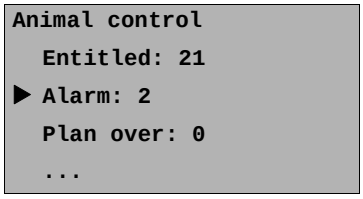


If you press Enter in the **Weight value** line, another submenu appears. For every visit of the calf that took place today, the **weight value** stored during the corresponding visit and how many individual values (**Amount** line) were used for the calculation of this value are displayed in this menu.

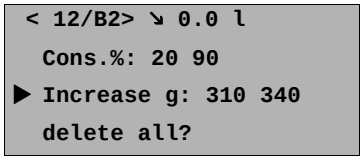
Note	To switch between the detailed information on the individual visit weights, use < or >.

6.2 Alarm messages

Alarm messages are for drawing your attention to certain individual animals that require special attention. To check animals, for which an alarm message was emitted, proceed as follows:

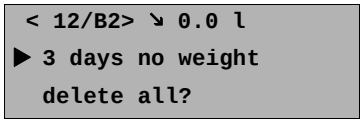


1. Select the following menu item:
    > **Alarm**
2. Use  or  to scroll through the list with the individual animals for which an alarm message was emitted. Each line under the first line with the animal number represents an individual alarm message. In addition to weight-specific alarms, there may also be alarms of other categories, e.g. in the context of feed or concentrate consumption of the individual animal. Press Enter in the line with the respective alarm message to open a menu with details on the corresponding message.



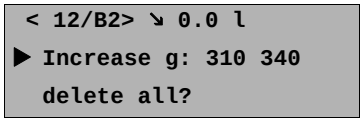
6.2.1 Missing weight values

If no weight value was registered for an animal for a period of several days, an alarm is triggered due to missing weight values (see Chapter “Alarm levels”, page 30).



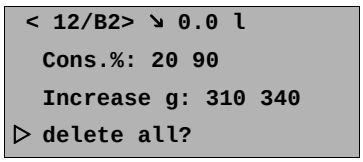
6.2.2 Insufficient increase

An animal becomes an alarm animal if, on the previous day, the specified limit value for the daily weight increase is fallen short of (see Chapter “Alarm levels”, page 30).



6.2.3 Deleting alarm messages

Navigate to the last line with **delete all?** under all alarm or animal expire messages and press Enter. All available alarms or animal expire messages for the corresponding animal are deleted.



6.3 Alarm levels

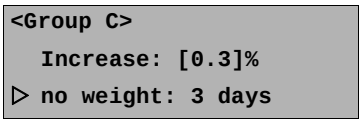
You use the alarm levels to determine the time or value that triggers an alarm. Alarm levels are defined in groups.

In the context of the scales, there are alarm levels for the **daily increase in weight** and for **missing weight values**. The alarm levels are adjusted as follows:

1.  > **Feeding** > **Alarm level > animal scales**

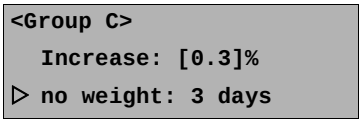
2. Select the desired group for which the alarm level is to apply (here: group C).

   Enter the desired percentage value for the current calf weight in the **Increase** input field.



   Example: For a calf with a current weight of 60 kilograms, on the previous day a weight increase (= weight difference to the previous day) of 150 grammes is determined. An alarm is triggered due to insufficient increase, because the increase is below the threshold value for triggering the alarm, which is 180 grammes (60 kg x 0.3 % = 180 g).

4. Enter how many consecutive days without any weight value to wait for before an alarm is triggered in the input field of the **no weight** line.



Note	If the value **0** is entered in the **no weight:** line, all weight alarms are generally deactivated.

	Increase	no weight
Default value:	0.3 %	3 days
Possible range of values:	0 to 1 %	0 to 5 days

6.4 Weaning

You can wean the animals in groups, either according to the feed plan or their weight development.

1.  > **Feeding** > **Plans** > **Feed > Wean**

   If you want to wean the **animal group according to the feeding plan**, do not change the default setting (**Plan**).

   ```
   <Group A>
   ▷ Mode: [ Plan]
   ```

   If the **animal group is to be weaned according to the current animal weight**, the **weight** value must be set in the **Mode** line.

   ```
   <Group A>
   ▷ Mode: [Weight]
     Start: 65 kg
     Factor: 0.25 l/kg
     Increase: no
   ```

2. If the animal group is weaned according to the individual animal weight, the corresponding feed plan is reduced in length automatically. A calf is weaned when its weight exceeds the value set in **Start**. For every additional kilogram of weight increase, the feed quantity is reduced by the value entered in the **Factor** field (here: 0.25 l/kg). That links the actually dispensed feed quantity to the animal's weight development.

3. Enter in **Increase** whether an individual animal is to receive more food in the event of negative increase or whether the current feed quantity is generally not to be increased any more during the weaning phase. If this value is set to **yes**, the feed quantity is increased according to the reduction of the animal's weight. The animal never receives more feed than assigned to it in the feed plan for the corresponding day.

Values in the weaning plan according to the animal weight

	Start	Factor
Default value:	65 kg	0.25 l/kg
Possible range of values:	50 to 250 kg	0.01 to 1.00 kg

7 Diagnosis

The **Diagnosis** menu is for checking the scales and its correct operation. This menu is available via the following menu path:

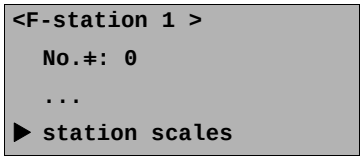
> **Diagnosis** > **Stations** > **Feed** or **Concentrate**

Note	The functions provided via this menu item are used during initial operation and for troubleshooting. These functions are not required during normal operation of the scales.

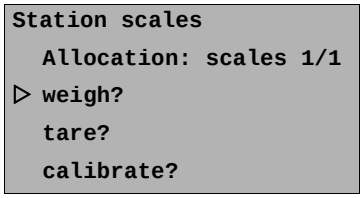
7.1 Test weighing

During a test weighing operation, you weigh an object and check the plausibility of the weighing result.

1. Place an object on the scales, the weight of which is known to you (e.g. a test weight of 25 kg).
2. Select the following menu path:
   > **Diagnosis** > **Stations** > **Feed** or **Concentrate**
3. Use < or > to select the desired box that is equipped with the scales.

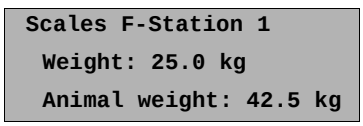


4. Use ▼ or ▲ to select the **station scales** menu item and press Enter.
5. Since **weigh?** has ready been selected, you can press Enter directly.



Note	Scales 1/1 means that it is the first weighing unit controlled by scales control 1.

6. Check the plausibility of the weight indicated on the display.



Note	The current weight (here: 25.0 kg) is displayed in the first line. Since it is not identical to the animal weight – when calves are weighed, they only stand on the scales with their forefeet – the animal's weight is displayed additionally in the second line (here: 42.5 kg). The latter is calculated by multiplying the weight value with what is called the half-body scales factor (see Chapter “Half-body scales factor”, page 24).

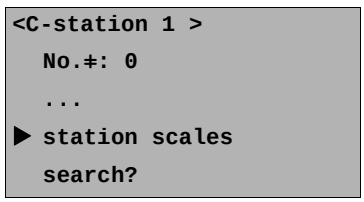
7.2 Tare half-body scales

Regular taring of the scales is for avoiding systematic measuring faults. Such faults may occur due to the accumulation of dirt and excrement on the weighing platform.

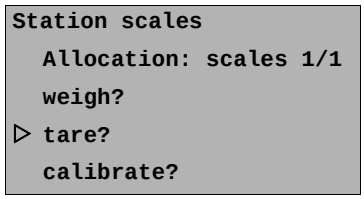
Note	The scales has an automatic tare function. Manual taring is therefore only necessary if the scales was reconfigured or if a malfunction was detected, but not during the normal operation of the scales.

For manual taring, proceed as follows:

1. Make sure the weighing platform is not loaded. Before taring, remove any dirt or excrement from the weighing platform.
2. Select the following menu path:
   > **Diagnosis** > **Stations > Feed** or Concentrate
3. Use < or > to select the desired stations that is equipped with the scales.



4. Use ▼ or ▲ to select **tare?** and press Enter.



A corresponding message informs you that taring is in progress.

```
Scales F-Station 1
 taring in progress!
```

7.3 Calibrating the half-body scales

How to calibrate the half-body scales is described in Chapter “Calibration”, page 23ff.

7.4 Determining the program version of the scales

If faults occur, it might be helpful to know the ID and version of the program that controls the scales. To determine the program version, proceed as follows:

1. Select the following menu item:
    > **Diagnosis** > **Version** > **Peripheral device** > **Animal scales**
2. Use  or  to select the scales of which you want to determine the program version.
3. The desired values are displayed in the **type** and **version** lines.

```
<scales control 1 >
▷ type: scales
  version: 03.03
```

8 Faults and warnings

8.1 Fault in the event of a calibration not performed

During **initial operation** or after **reinstallation** of the automatic feeder, it is essential that you calibrate all scales connected. This message is displayed on the display of the automatic feeder. In addition, the LED with the **Auto** caption flashes on the hand terminal of the automatic feeder.

```
Fault
▶ Calibration
```

> Calibrate the feeder according to the instructions in Chapter “Calibration”, page 23ff.

Note	As long as this fault has not been rectified, the automatic feeder cannot be used to feed animals.

8.2 Warnings

Warnings indicate problems that do **not interrupt the automatic mode of the automatic feeder**. Warnings are indicated by the LED flashing on the hand terminal of the automatic feeder.

Some warnings disappear when the fault has been rectified. Some need to be (additionally) deleted by pressing C.

8.2.1 Scales connection problems

The warning on the right is displayed if the connection between the automatic feeder and the scales is faulty.

```
Warning
▶ animal scales
```

```
<scales control 1 >
▷ No connection
```

> Check the CAN bus cable for damage.

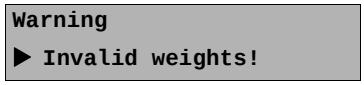
> Check the scales' power supply.

> Check the CAN bus address used for the scales.

> Check if the two ends of the CAN bus are terminated via a terminating resistor.

8.2.2 Invalid weights

The warning on the right is displayed after the daily calculation, if more than half of the weight values recorded on the previous day are declared to be invalid. This message indicates the faulty calibration of the scales or a significant drift of the weight values.



8.2.3 Double address

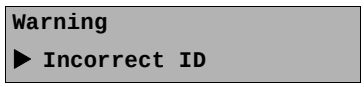
The warning on the right is displayed if the same address was assigned to two CAN nodes in the CAN system.

> If this warning is displayed, please consult the original operating manual for your automatic feeder.

Note	The CAN address of the scales is defined via two DIP switches on the PCB of the scales control. There is no search mode, such as for IFS controls.

8.2.4 Incorrect ID

Like all CAN nodes, the scales has an ID that identifies the device as a scales. It enables correct communication with the feeder. The warning shown here is displayed if a scales was defined in setup at the selected CAN address and the addressed peripheral device does not identify itself with the ID of a scales.



> If this warning is displayed, please consult the original operating manual for your automatic feeder.

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

	Danger due to live electrical components! Danger of death by electric shock! • Always disconnect the mains plug, before starting work on the control of the half-body scales.

9.2 Maintenance intervals and activities

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

9.2.1 Daily

Visual inspection of the components

All mechanical and electrical components must be subjected to visual inspection for damage and deposits every day. 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 half-body scales.

9.2.2 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 are detected during the inspection, the faulty components have to be replaced by a service technician before work can be resumed with the half-body scales.

9.3 Care

You should have dirt removed from the half-body scales from time to time. However, soiling does not have any negative effects on the weighing results since the scales is re-tared each time after weighing a calf.

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,
Gerwigstr. 25
78234 Engen

Description and identification of the machinery:

Make:	Peripheral device
Type:	KFA3-MA2, KFA3-MA3, KFA3-SL2, KFA3-SL2-L VEW1-30-2, VEW1-50-2, VEW1-50-2 für MilchMobil, VEW1-50-2 Compact Half-body animal scales

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

EN ISO 12100-1:2003-11	Sicherheit von Maschinen - Grundbegriffe, allgemeine Gestaltungsleitsätze - Teil 1: Grundsätzliche Terminologie, Methodologie
EN ISO 12100-2:2003-11	Sicherheit von Maschinen - Grundbegriffe, allgemeine Gestaltungsleitsätze - Teil 2: Technische Leitsätze
EN ISO 14121-1:2007	Sicherheit von Maschinen - Risikobeurteilung - Teil 1: Leitsätze (ISO 14121-1:2007)
EN 60204-1:2006-06	Sicherheit von Maschinen - Elektrische Ausrüstung von Maschinen - Teil 1: Allgemeine Anforderungen

Engen, 2011.01.03

Place, date

Signature
Markus Förster
Geschäftsführer