KFV-6400

DRY FEED COMPUTER FOR PIGS

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Copyright

1 General Introduction

The manual is intended for the user of this device. It contains all the information necessary for operating and cleaning this product. Please read all information and instructions carefully before using the product.

Symbols mark warnings, important notes, tips, etc. in this manual.

Stienen has compiled this manual with all due care. If you find any errors, please let us know.

1.1 Symbols and definitions


Risk of injury by dangerous electric shock. Danger to people and animals.


Warning indicating danger to product, people and animals if procedures are not strictly complied with.


Warning indicating damage to products if procedures are not strictly complied with.


Pressure cleaning is not allowed.


Collect as separate flows


Important note


Additional information


Example of a concrete application of the functionality described.


Example calculation


Manual control


Tips and advice


Screenshot


Application note

1.2 Customer service

If you have any questions, please contact your installer. Be sure to have all the necessary data handy. You should also always write down the cause of a fault and the circumstances that occurred during the fault. This will enable you to avoid any ambiguities and it will enable your installer to deal with any faults quickly and effectively.

2 Safety instructions and warnings

Read the general safety instructions in this chapter carefully before using the device. A certified installer must install the device and resolve any faults, in accordance with the applicable guidelines. If this product is installed and used in any other way, the warranty will not apply.

2.1 Sound, independent alarm system

Although we have designed and built our control equipment with the greatest care possible, technical faults can never be ruled out. Insurance requirements in many countries are becoming increasingly stringent. This requires the alarm contacts of the various control computers to be connected a central alarm unit.


We recommend also installing a sound independent alarm system, for example a min/max thermostat.


We advise you to manually test the alarm at least once a week.

2.2 During use

The people who operate the device have read the manual carefully. They are aware of potential hazards that may arise from improper use and maintenance of the product.


The device must only be opened by authorized personnel.


Do not switch off the control computer while the house is empty, but switch it to *Off* mode. This will prevent condensation caused by the equipment cooling down.


Check the device for any damage at regular intervals. A damaged device is unsafe. Always report any damage to your installer.


Electronic equipment is splash-proof and must not be cleaned using a pressure cleaner.


If any emergency has occurred, write down: the circumstances under which the emergency occurred, installation settings, software date, software version number and possible causes.

2.3 Disposal

The EU has set up systems for the separate collection of waste electrical and electronic equipment and batteries (Directive 20212/19/EU). If you do not dispose of the device properly, you risk a fine.


Electrical and electronic equipment must be collected separately at the end of its life.

3 Operation

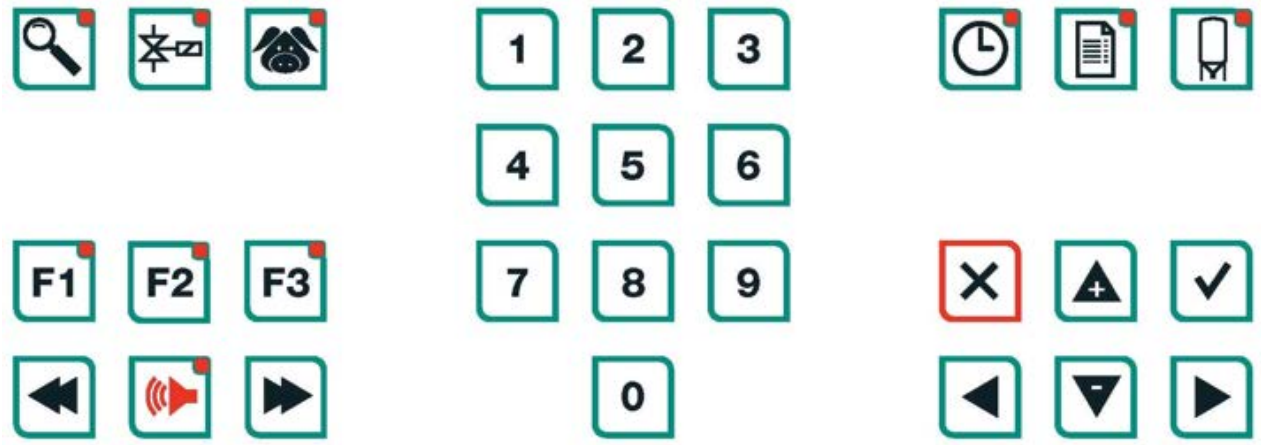
3.1 Display

If the text extend beyond the screen, appears in the title bar.
Use to reach the remaining settings/measurements.

If is shown in the title bar and you press function key F3, the settings will be displayed graphically. The dot (●) in the graph indicates the calculated value. Pressing F3 again turns off the graphical display.

Due to the growth curve and/or offsets, the calculated setting may differ from the value set by the user.

3.2 Keyboard



Every time a key is pressed, the screen lights up for a few seconds. In a dark pig house, settings and measurements are then clearly visible.

Operate the keys with your fingertips and not with sharp objects, such as a pen or screwdriver.

Changing language

F1 ▶ = select next language

F1 ◀ = select previous language

Press and hold F1 and press the cursor key to select the next or previous language.

Numeric keys (0 - 9)

The numeric keys allow you to enter a screen number, valve number, value or text.

Key	Character
0	_0
1	. ,1'-:+
2	abcäàâç2ABCÄÁÀÂÇ
3	defëéèê3DEFËÈÊ
4	ghiïîìî4GHIÏÎÌÎ
5	jkl5JKL
6	mnoöóòô6MNOÖÓÒÔ
7	pqrs7PQRS
8	tuvüúùû8TUVÜÚÙÛ
9	wxyz9WXYZ

Text input

Use 2 - 9 to change the name of a recipe, timer, external alarm (max. 15 characters including spaces). The character is shown in a little box. Press the numeric key repeatedly until the character to be selected is shown. To enter a punctuation mark, press 1 repeatedly. Use 0 to insert spaces.

2 : Press once for a, twice for b etc.
Use ◀ and ▶ to move the text cursor.

For example, for menu choices, the text automatically starts with a capital letter.

Navigation keys

◀ ▶ In control mode, press and hold to move cursor left/right.
In edit mode, move cursor left/right.

▲ ▼ In control mode, move cursor up/down.
In edit mode, decrease/increase value.

Other keys

✓ Confirming menu selection, starting edit mode and confirming change.

✕ Cancelling menu selection or change. Press and hold to return to the main menu.

Shortcut to alarm screen.

Selecting valve, see page 34.

Shortcut to valve screen, see page 8.

Shortcut to animal data, see page 32.

Shortcut to timers, see page 31

Shortcut to dosage and recipes, see page 17.

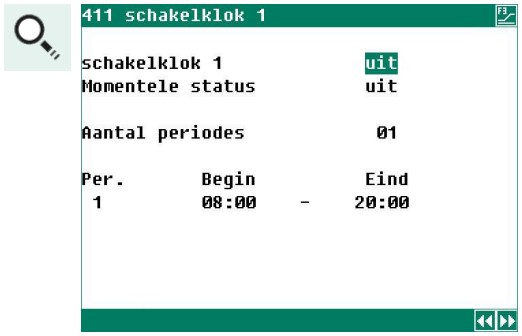
Shortcut to feed weighing system, see page 19.

3.3 Programming function keys

Menu number range: 1.. 5.. 4.. 2.. 3..

The five function keys above can be linked to screens from the corresponding menu selections:

1. Select the menu screen to be linked to the corresponding function key.
2. Hold down the F1 and press ✓. The function key is now programmed.
3. When you press the programmed function key, the associated screen appears.



We are going to program menu screen *411 Timer 1* (4xx menu series) under the corresponding function key

1. Go to the main menu.
2. Press successively 4 1 1 .
3. Hold down F1 and press ✓.
4. Press . Screen 411 appears on the display.

Deprogramming function keys

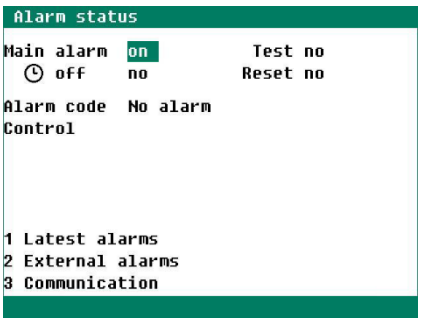
Press and hold F1 and press the function key to be deprogrammed. In the example above, hold down F1 and press .

Inserting/removing breakpoint or period

1. Press ✓ to enter edit mode.
2. Hold down function key F1 and press:
   ▲ to insert a breakpoint/period (provided that the maximum value for periods/breakpoints has not been reached)
   ▼ to remove a breakpoint/period (provided that there is at least one period/breakpoint)
3. The number of breakpoints/periods is adjusted automatically.

3.4 Alarm key

Shortcut for alarm screen. The LED in the alarm key lights if one of the controls has an alarm situation.



In this screen you can switch the main alarm on and off. If the main alarm is off, the alarm LED flashes evenly. No alarms will be generated then. Hardware alarms cannot be switched off.

Test Here you can test the operation of the alarm relay (siren).
yes = switch on alarm relay (siren) for 10 seconds.
no = delete alarm test time.

off Temporarily disable the alarm (siren). This does not apply to hardware alarms. The main alarm will be switched off for 30 minutes; the alarm LED will flash evenly. After 30 minutes, the main alarm automatically turns back on. If the alarm cause has not been eliminated, the alarm relay de-energizes again (alarm). *No* = delete alarm delay time.

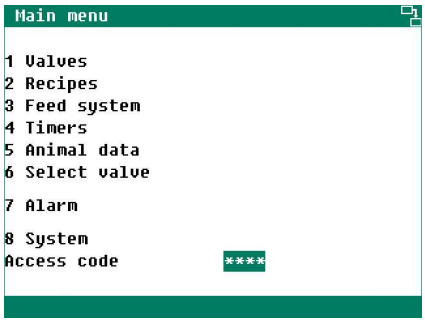
3.5 Terminal numbering

The terminal number of an input / output consists of the module address (2 digits), the input/output type (letter) and a 2-digit serial number.

Letter	Input/output type	Description
A	0-10V output	Analog output with a range of 0-10V or 10-0V
B	Relay output	Relay contact output (not alarm relays, digital outputs, etc.)
C	Digital Output	Optocoupler output (max. 35Vdc 30mA), e.g. kg-pulse output
D	Open/close output	n.a.
F	30-230Vac output	n.a.
G	2-10V output	n.a.
K	Temperature sensor	n.a.
L	0-10V input	Analog input with a measurement range of 0-10V
M	Digital input	Contact and counter inputs, etc.
N	Meteo station	n.a.
R	Pressure sensor	n.a.

4 Main menu and access code

4.1 Main menu



As soon as one access code is active, you can only change the setting by entering the correct access code. Therefore, select *Access code* and enter the correct code.

The access code remains active until the *Discharge system status* screen is selected. To be able to change a setting after selecting this screen, you will have to enter the access code again.

If an access code is used, it is a good idea to write down the code and keep it somewhere safe. The access code is required in order to be able to change any settings.

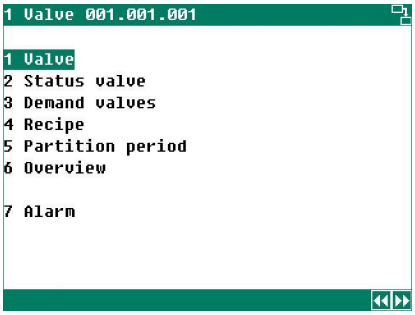
4.2 Access code

You can set an access code (four digits) to prevent unauthorized persons from changing settings. Your installer can set up to six access codes for you.

You can set a separate access code for the status screen. If you only set an access code for the status screen, it applies to all user screens.

5 Valves

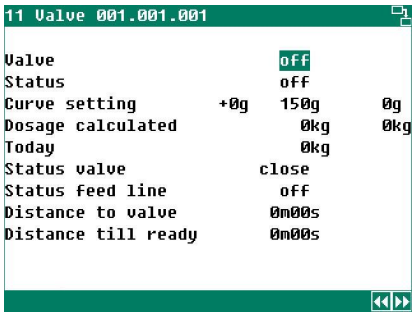
5.1 General



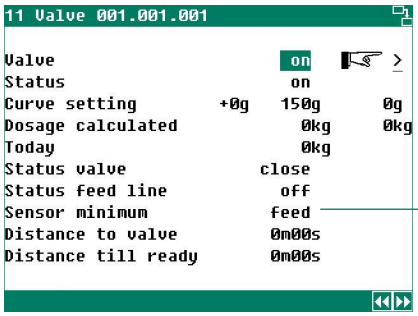
Partition period:

Fill method = clock
Dosage = Yes
Auto. partition period = Yes or Perc. (%)

With management and with dosage curve



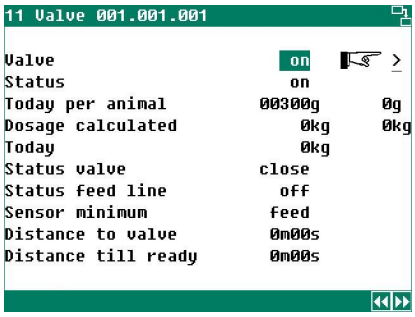
Without feed sensor



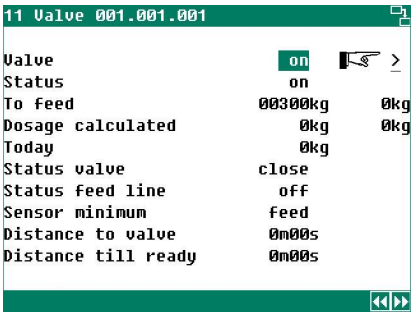
With feed sensor

Sensor minimum	*no feed*
Sensor maximum	*no feed*
Demand sensor	*no feed*

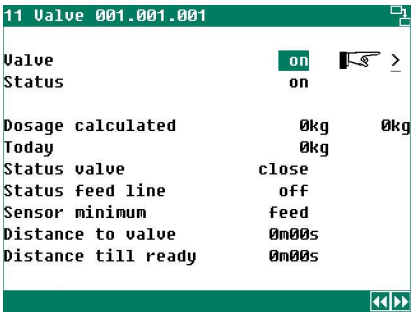
With management and *Without dosage curve or Dosage curve off*



Without management and *without dosage curve*



Without dosage curve



Valve	Turning the valve on and off. The installer can change the valve number. *001.001.001* = barn number 001, room number 001 and valve number 001.
Status	The current valve status. If the valve or the fill timer is off, the (current) status changes from *on* to *off*.
Curve setting	Screen 143 *Cor. dosage valve xxx.xxx.xxx* allows you to correct the calculated curve quantity (grams per animal) by entering a positive or negative number at *Dosage correction*. The entire curve can be increased or decreased by this value. A temporary correction of the curve is usually implemented if, for example due to illness, the feed intake should be temporarily adjusted. *+00g = no correction*.

If the valve works with dosage curves and the current status is on (see curve options), the calculated dosage will depend on:

- the curve settings,
- the day number,
- the correction,
- the number of animals, belonging to the displayed animal group.

The value listed for the feed dosage calculated from the curve is today's amount fed so far, in grams per animal.

Today per animal — If the curves have not been switched on by the installer or if the dosing curve for the valve is off, the setting *Today per animal* will appear. This setting and the number of animals present is used to calculate the total amount to be dosed. The amount to be dosed is automatically distributed over the feed cycles.

To feed — Enter the total quantity to be fed here for the valve which is displayed. The amount to be fed is automatically divided among the feed cycles (the *To feed* setting only shows if the installer has set the *Management* setting to *no* in the installation settings).

Without dosage — In this case, the hopper under the valve will be filled with the *Maximum content* for the hopper set by your installer.

Dosage calculated — The first number indicates the total dosage for “today”, the second number indicates the dosage in this cycle (see also *Partition period* screen 15).

! If the KFV-16 feed weigher has been installed and the calculated dosage is smaller than the *Minimum portion size* set on the KFV-16, dosing will not start and dosing by the KFV-6400 is immediately *ready*.

Today — The current feed amount transported to the selected valve so far.

Status valve — Current valve status: *open* or *closed*.

Status feed line — The feed line ensures that the feed at the bottom of the feed hopper is delivered at the right valve. Therefore the time needed to transport the feed from feed weigher to selected valve (*Distance to valve*) and the time needed to dose all the feed at the valve in question (*Distance till ready*) is also important.

Demand sensor — The current demand sensor status. If there is a feed demand, the hopper will be filled with the *Maximum content*. Every feed demand from the valve will be complied with until the *daily dosage* has been reached.

Sensor minimum — The minimum sensor status is checked first. If feed covers the sensor, the alarm message *Valve not free* will appear. If the fault is resolved before it is this valve's turn, the valve will be included in the feed cycle as usual. However, if it has already been this valve's turn, the valve will be skipped in this feeding period, resulting in a *dosing alarm* at the end of the day.

Sensor maximum — If a maximum sensor has been installed, this line will show whether the maximum sensor detects feed or not. If the maximum sensor detects feed, dosing will stop and the current feeding period (for the valve displayed) will be aborted.

Distance to valve — The time needed to transport the feed from feed weigher to valve. This is a fixed time set by the installer. The distance can also be measured in pulses instead of time.

Distance till ready — This variable time which depends on several factors, including the calculated dosage, the feed supply speed, the portion size of the feed weigher, the transport speed, etc. The distance can be expressed in pulses and in time.

Residual feed detection — The time it takes for the feed tail to reach the residual feed detection sensor.

What happens when you turn off a valve?

Management = yes

If an active valve is switched off, then:

1. the started weighing cycle will be completed.
2. the dosing will be stopped and the calculated dose will be set to 0%.

   ▪ *Recheck demand at period end = active*

   The valve is reactivated at the end of the current feeding period:

   – If you switch the valve back *on* in the meantime, the amount to be fed will still be dosed.

   – If you increase the dosage in the meantime, the difference will still be dosed.

   If the valve is no longer switched *on*, a *dosage alarm* will be generated due to the valve being switched off.

   ▪ *Recheck demand at period end = not active*

   The valve will not be reactivated in the current feeding period, even if you switch the valve back *on*.

   A *dosage alarm* is generated because the valve was switched off.

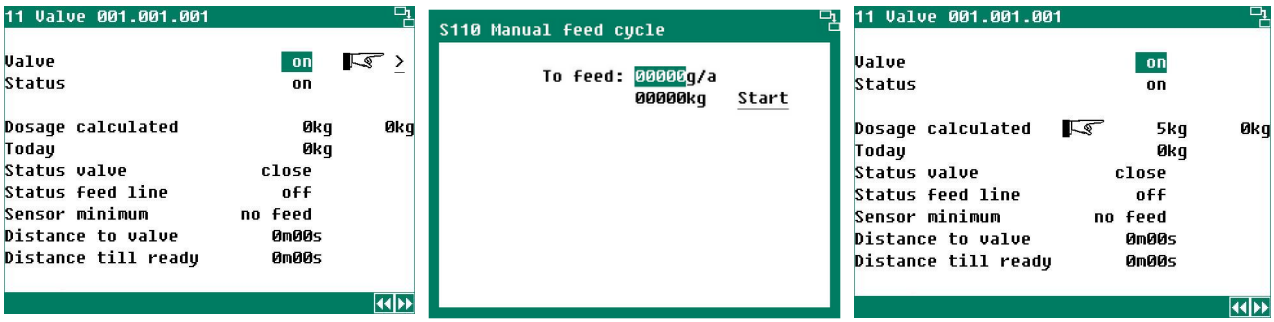
If an inactive valve is switched off, then:

3. set the calculated dose to 0%.
4. the dosage is recalculated if the *fill method* is set to *on* and the *valve* is switched on gain. If the valve is not switched on, a *dosage alarm* will be generated as a result of the valve being switched off.

Management = no

If you set an active valve to *off*, the started weighing cycle will be completed. Afterwards, another valve will be activated.

5.2 Starting a feeding cycle manually



We distinguish two situations:

1. Not all feeding periods have elapsed. The amount of feed you feed manually will be deducted from the remaining daily dosage.
2. All feeding periods have taken place, so you are going to feed extra. The feed amount of the manual feeding is added to the total daily dosage.

Feed supplements

If feed supplements are used, they will be administered proportionately during the manual operation, unless:

- *During portion* = no
- *During period* = *no* (see screens 1431 . . 1434) or
- *Feed supplements* = *off* (see screen 14).

Procedure to start a feeding cycle manually

1. Select ≥ (behind ☞) and press ☑. The *Manual Feed cycle* screen appears.
2. At *To feed,* enter the amount to be fed manually (per animal or total). If you enter a feed quantity that does not fit in the hopper under the valve, the quantity entered will be corrected to the hopper capacity.

   ⓘ If a KFV-16 is used and the *To feed* amount is less than the *Minimum portion size* setting (default = 10 kg) on the KFV-16, this amount will not be fed.
3. The hand ☞ will appear behind the dosage calculated to show that the manual feed cycle has started.

5.3 Aborting a feeding cycle manually

Abort current feed cycle

Fill method is automatically switched to off

Switch the fill method back to on

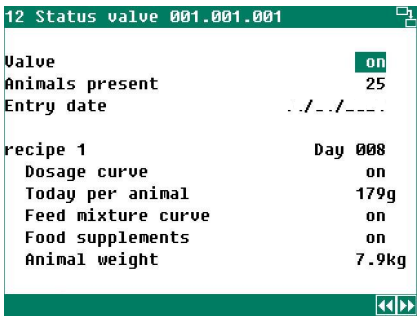
If the installer has set *Start system* at *manual*, the *Start* setting will be placed between the *Fill method* and *Period action* setting.

Procedure to abort a feeding cycle manually

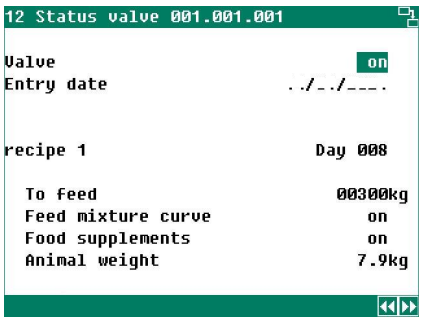
1. Change the *Period action* to *abort* (screen 32). The (manual) feeding session will be aborted.
2. Turn the *Fill Method* back to *on*

   ! Do not forget this, otherwise it will not be fed.
3. The hand ☞ is now back behind *valve x*. A new manual feeding cycle can be started, if required.

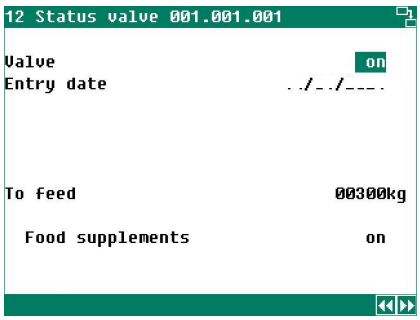
5.4 Status valve



With management



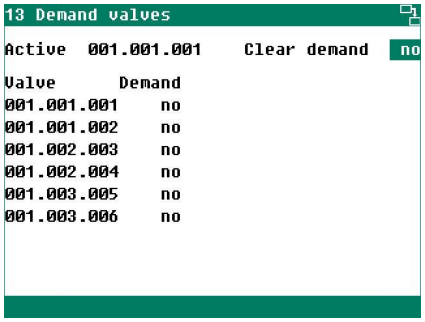
Without management



Without a feed mixture curve

The status of each valve can be queried. In addition to the number of animals present and the entry date, the associated curve settings can also be changed, if applicable.

5.5 Feed demand valves

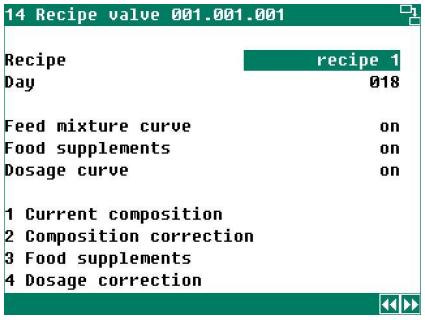


This overview indicates for each valve whether the valve has a *feed demand*: *yes* = feed demand*; no* = it is or has been the valve's turn, or the valve is off, or there is no feed demand.

Active The active valve is displayed.

Clear demand You can delete the feed demand for all valves by setting *Clear demand* to *yes*. All statuses will be set to *no* and they will not be returned to *yes* until the next feed demand.

5.6 Recipe valve



Recipe A recipe consists of a list of ingredients and a curve with the feed mixture. Set the desired recipe for the valve at *Recipe*.

Day The current day number. If you use a curve, the day number will be used to calculate the correct curve setting.

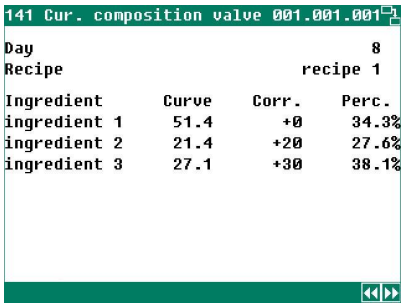
Feed mixture curve If you switch the *Feed mixture curve* off, you will have to set the mixture yourself. This line will only appear if there is more than one feed type and the curve is on.

Feed supplements If you do not wish to administer any feed supplements, set this setting to *off.*

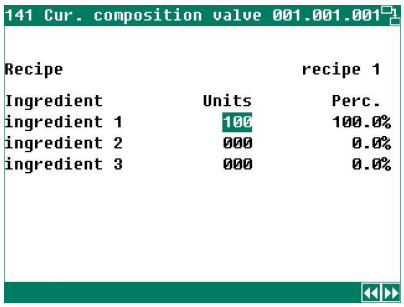
Dosage Curve If you want to use the feed dosage curve that goes with the recipe, fill in *yes* at *Dosage curve*. If the dosage curve is on, the *Dosage correction* will be viewed and you can correct the dosage, if necessary.

Current Composition

Recipe with feed mixture curve



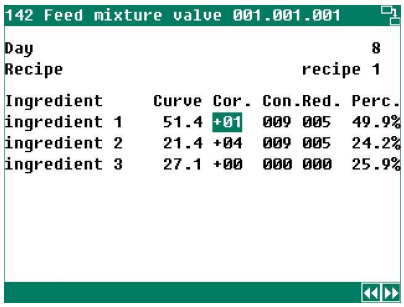
Recipe without feed mixture curve

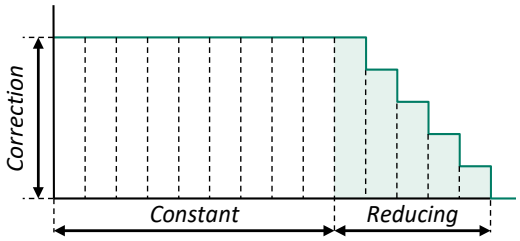


You can set the dosing ratios of the different ingredients.
The percentage is calculated automatically on the basis of the rations set. Furthermore you can change the recipe in this screen.

To change the curve settings, see page 17.

Correcting the composition

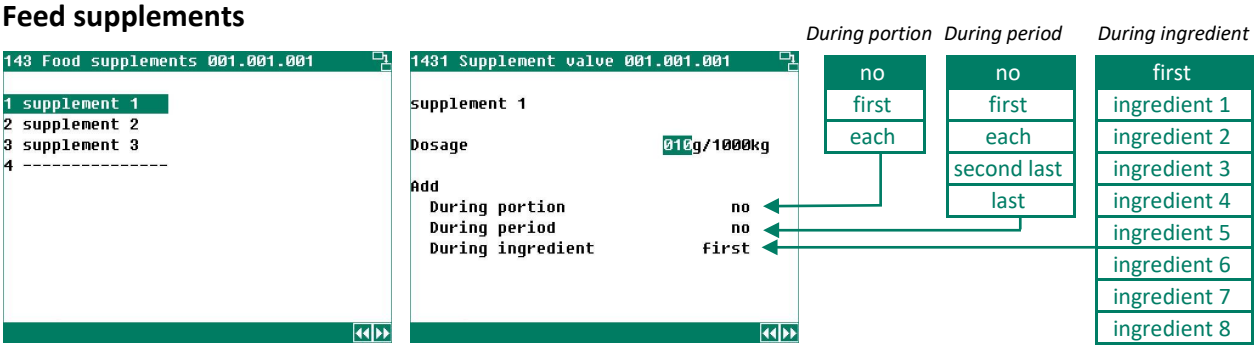




9 days *Constant* and *Reducing* in 5 days.

Day	Current day number, used to determine the current feed mixture.
Recipe	The recipe matching the feed mixture.
Ingredients	The ingredients included in the recipe.
Curve/Cor.	The values shown in the *Curve* and *Corr.* (*Correction*) columns show the mutual dosing rations of the different Ingredients. These values do not show their percentage of the total mixture. The percentage in the mixture is calculated automatically for every ingredient on the basis of the ratios set. In addition to the *Correction* of the dosage (see previous screen), the feed mixture can also be corrected. The correction can be used to positively or negatively influence the feed mixture.
Con.	If you enter a value at *Con. (Constant* for xxx days), the correction will be constant for the number of days set. If you enter 000 for *Con.* and *Red.,* the correction will be continuously constant.
Red.	If you enter a value at *Red. (Reduction in* xxx *days*), the correction will be controlled back to 0 within the number of days set. This reduction will not start until *Con.* has become 000.
Perc.	The amount of the ingredient in the recipe, expressed as a percentage. Since the percentages shown in the *Perc.* column are rounded values, these can differ approx. 0.1% from the actual calculated percentages.

Feed supplements



1. A feed cycle can consist of several rations.
2. There can be several feed cycles on one day.
3. The feed can consist of several ingredients.

If one of the two selections, *During portion* or *During period*, is set to *no*, no feed supplement will be added.

Dosage Here you set the number of grams of feed supplement per 1000kg (tons) that should be added to the calculated dosage. The combination of this setting, the speed at which the feed supplement is administered and the total amount of feed to be dispensed is used to calculate the *Dispenser on* time.

Add

During portion = no → no feed supplement added
During portion = first → feed supplement added only when preparing first portion
During portion = each → feed supplement added to all cycles

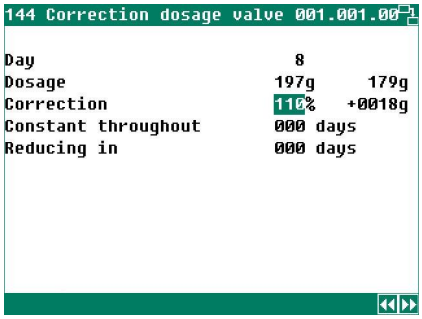
During period = no → no feed supplement added
During period = first → feed supplement added only during the first cycle
During period = each → feed supplement added to all cycles
During period = second last → feed supplement is only added during the one but last cycle
During period = last → feed supplement is only added during the last cycle

During ingredient = first → feed supplement added only while dosing first ingredient
During ingredient = ingredient x → feed supplement added only while dosing set ingredient

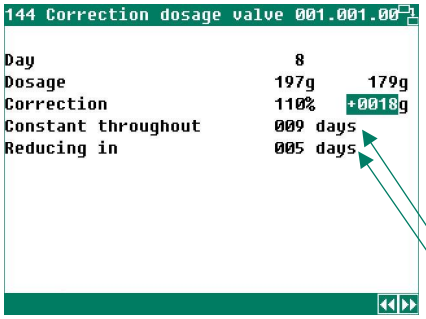
! If an ingredient has been filled in at *During ingredient* and the ingredient is not part of the dosage or the ingredient has run out, no supplements will be added, *not even* if an alternative ingredient has been filled in.

! In case of *supply alarm,* the dispensers (adding feed supplements) do not stop.

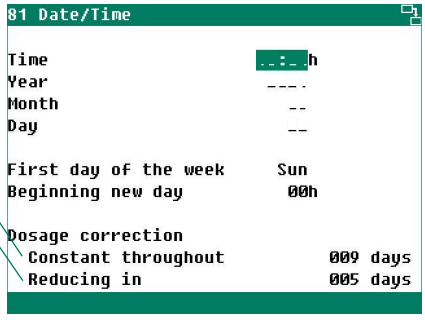
Dosage correction



Correction as a percentage (%)



Correction in grams (g)



Day Current day number. If you use curves, this day number will be used to calculate the curve setting.

Dosage The current dose is calculated from the recipe set (see screen 211) and the day (number).

Correction The correction can be used to positively or negatively correct the dosage (the amount of feed per animal). Both the percentage and the number of grams can be changed. However, the percentage is always used as the starting point for the correction (the number of grams is calculated and can vary daily).

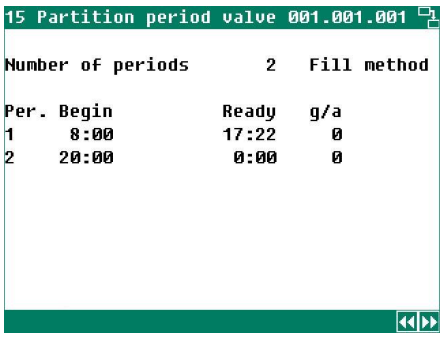
If you change one of these two values, *Constant throughout xxx days* and *Reducing in xxx days* will be filled with the default values entered in the *Date/Time* screen. If 000 is filled in for *Constant throughout xxx days* and *Reducing in xxx days,* the correction will be continuously constant.

Date and time

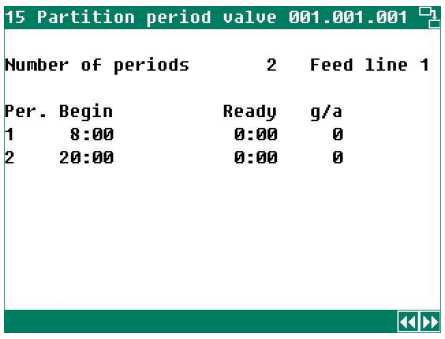
Constant throughout xxx days If a value is entered at *Constant throughout xxx days,* the correction will be constant for the number of days entered.

Reduce in xxx days If a value is entered at *Reducing in xxx days,* the correction will be controlled back to 0 within the number of days set. This reduction will not start until *Constant throughout xxx days* has become 000.

Partition period (fill method or feeding line)



Copy of screen 32



Copy of screens 331 to 338.

Number of periods The number of feeding periods.

Per. Feeding period number.

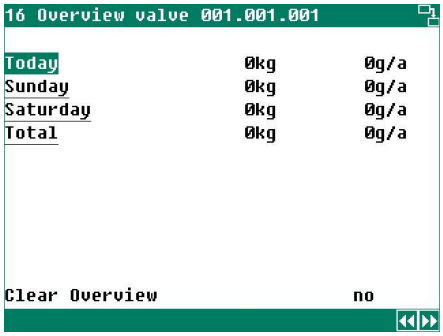
Start *fill method:* The start time of the feeding period, see: *Fill Method,* page 20.
feed line x: The start time of the feeding period, see: *Feed line x,* page 22.

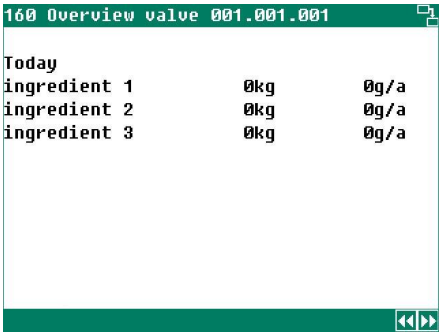
Ready Time at which the calculated period dosage has been reached.

g/a The amount fed in grams per animal, appears only if *management* is activated.

- The hopper is filled no more than 1x per feeding period (the maximum capacity of the hopper is set by the installer as part of the installation codes for the valve number shown).
- If feed is manually dosed before the end of the last feeding period, this amount will be deducted from the daily dosage.
- If manual dosing takes place after the end of the last feeding period, this will have no effect on the daily dosage (since this had already been achieved).
- If too much has been fed in previous feeding periods (e.g. because the curve has changed, because a manual correction has been carried out or for any other reason), dosing will stop and the hopper of the valve in question will no longer be filled.

Overview





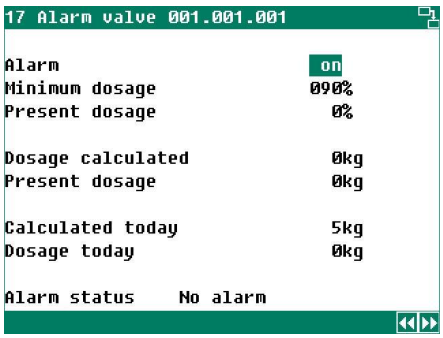
Today + a maximum of 2 days

Clear overview All amounts fed, and stored in the memory, for the selected valve (including today's amount fed) are deleted.

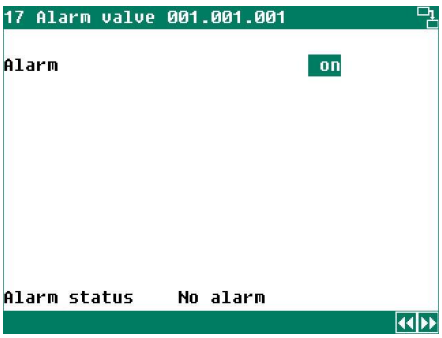
! When clearing the overview, today's data is also deleted.

Alarm

The Alarm status can be cleared by switching the alarm off and then on again in this screen.



With dosage

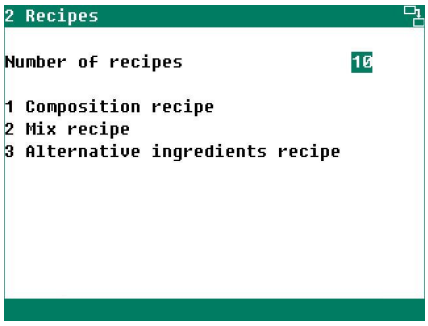


Without dosage

Feed alarm In case of a *Supply alarm*, the emptying time, the *Distance to valve* time and the *Distance till ready* time will be 'frozen' and the dry feed computer for pigs will not continue the process until the fault has been remedied.

Dosage alarm The amount to be fed is determined by the number of feeding periods and the amount in the hopper under the valve. If 4 periods have been set or the filling timer and the capacity of the hopper of valve 1 is 25kg, *a maximum of* 100kg will be dosed at valve 1 that day. If valve 2 has a 15kg container, the *maximum amount* dosed that day at valve 2 will be 60 kg, etc. If, at the beginning of the feeding cycle, it is established that the amount to be fed cannot be achieved in the number of periods set, a *Dosage too low* alarm will be generated as early as at the start of the first feeding period.

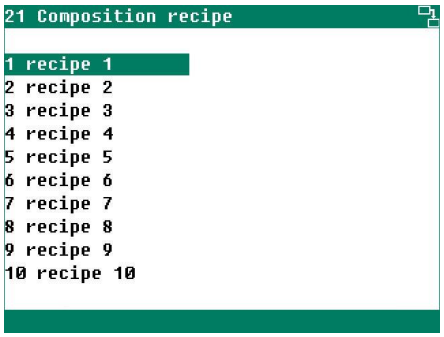
6 Recipes

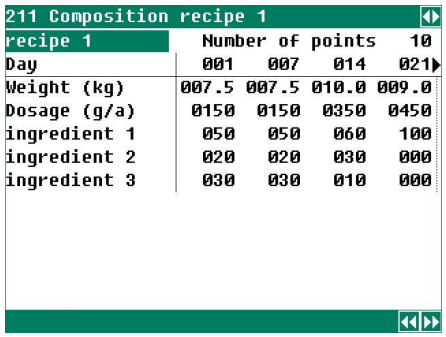


Number of recipes = max. 10

Mix recipe Only if:
- *feed weigher = KFV-16* and
- *mix = adjustable or mix after ingredient*

6.1 Recipe composition

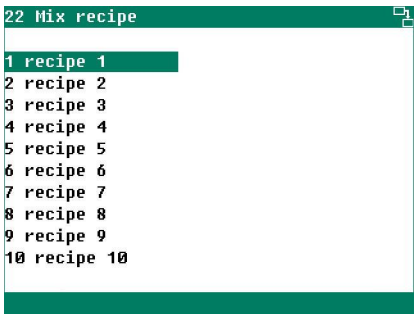


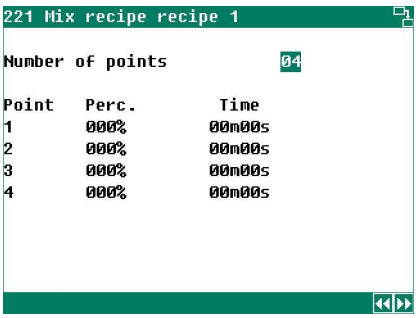


- The day numbers in the curve must be consecutive.
- If the current day number is smaller than the day number of the first breakpoint, then the settings of the first breakpoint are retained.
- At the time "Start new day" the current day number is incremented.
- The settings coming from a curve are calculated depending on the current day number.

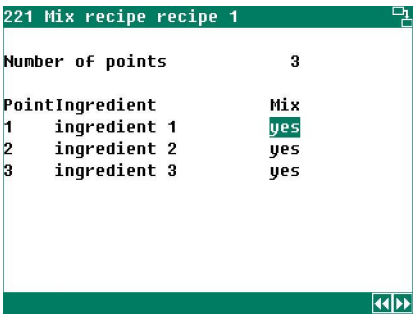
Recipe	The numerical keys 2..9 can be used to edit the name of a recipe.
Number of points	The number of breakpoints in the curve.
Day	The day number of the breakpoint in the curve.
Weight (kg)	Animal weight curve; this curve can be used, for example, to check that the dosage settings are correct.
Dosage (g/a)	Dosage curve on. The daily amount of feed per animal is calculated from these curve settings depending on the animals' age (day number).
Ingredient x	The dosage ratios of the various ingredients are set here (for each breakpoint).

6.2 Mix recipe





Adjustable



Ingredient

Mixing = Adjustable

Number of points The number of points at which the mixing process should be started.

Perc. Percentage at which the mixing time (mixer) is started.

Mixing Time The time the mixer is active. The *Mixing Time* starts after the set percentage has been reached. After the mixing time, the feed weigher will continues filling the mixing silo.

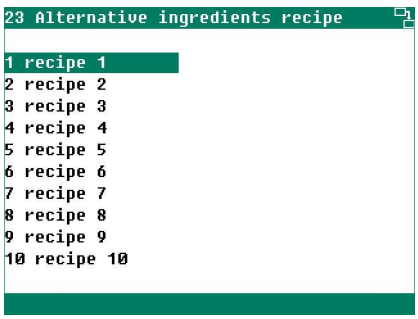
Mixing = ingredient

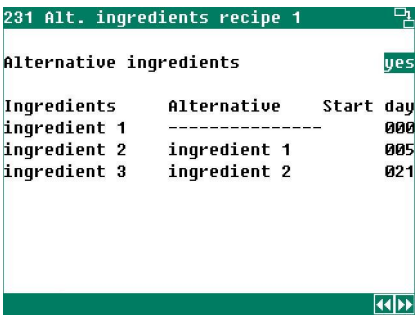
Number of points The number of ingredients (see screen *362 Ingredient names*, page 25).

Mix If you set the *ingredient* to *yes*, the feed will be mixed while dosing of the ingredient.

6.3 Alternative recipe ingredients

Alternative ingredients can be used in order to still achieve the amount of feed to be dosed (see also page 18).

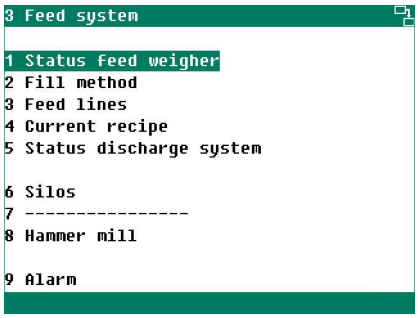




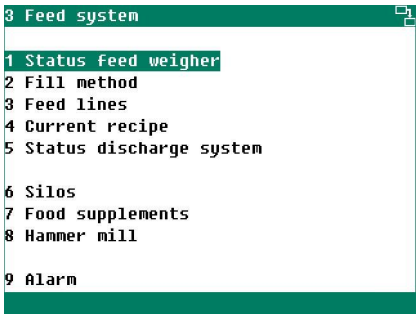
Alternative If an alternative ingredient is set with an ingredient and there is a supply alarm for the ingredient in question, the computer will automatically switch to the alternative ingredient, provided that the current day number is equal to or higher than the *Start day* setting for the ingredient.

Start day Enter the first day on which the alternative ingredient may be chosen when the original ingredient has run out here.

7 Feeding System

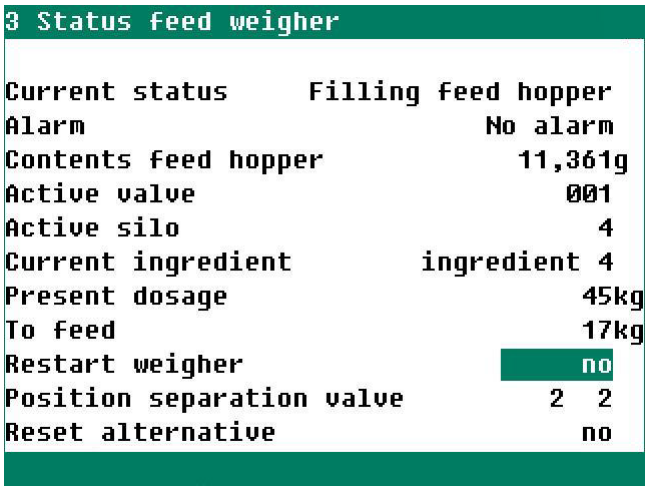


PFB-35/70



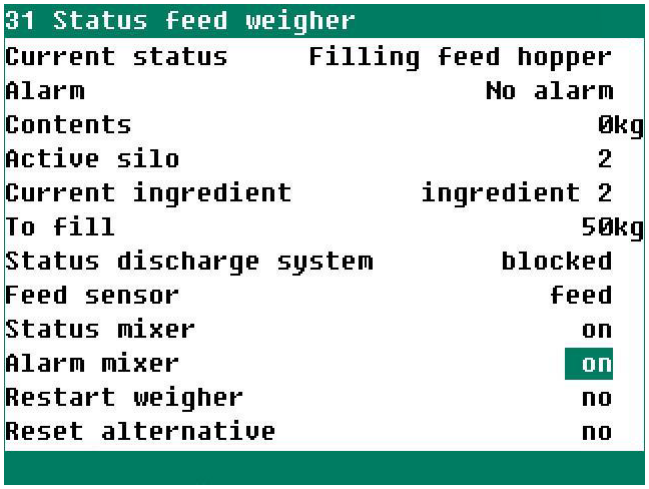
KFV-16 + supplements

7.1 Feed weigher status



PFB-35/70

← See the “Current status” table below
← See also the alarm codes on page 36
← Kg is shown here for a KFV-16
← Active valve
← Current silo number (0 = Error in search sequence)
← The current ingredient name displayed
← Already dosed
← To be fed in the current cycle
← Restart weigher (no, restart, abort)
← Target and current separation valve positions (only PFB)
← An alternative ingredient is fed instead of the original ingredient (see corresponding recipe)



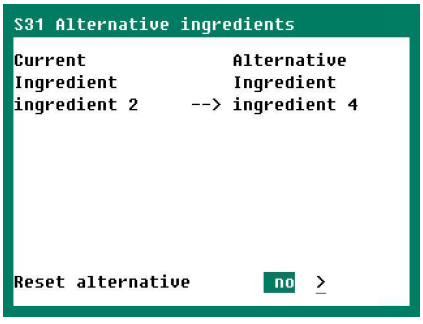
KFV-16

← See the “Current status” table below.
← See also the alarm codes on page 36.
← Mixer content.
← Current silo number (0 = Error in search sequence).
← The current ingredient name displayed.
← Amount to be filled in the current cycle.
← The status changes to free as soon as the discharge auger
← Mixer feed sensor (feed => mixer full).
← Current mixer status.
← Mixer alarm status, see also the alarm codes on page 36.
← Restart weigher (no, restart, abort).
← An alternative ingredient is fed instead of the original ingredient (see the corresponding recipe).

Current status	
Weigher standby	The weigher is waiting for a start command before starting a new weighing cycle.
Wait for release	The feed weigher cannot start a new weighing cycle because there is feed in front of the feed sensor.
Closing discharge hatch	The weighing cycle starts again after the discharge hatch has been closed until the feeding cycle has been completed.
Calculating dosage	The amount to be dosed per ingredient is determined on the basis of the feed mixture.
Taring feed hopper	The empty feed weighing hopper is tared.
Filling feed hopper	After taring the feed weighing hopper, the silo auger is started and the weighing hopper is filled with the Ingredients indicated.
Discharging feed hopper	The discharge hatch is opened after filling the weighing hopper with the right amount of every ingredient.
End of weighing cycle	The feeding cycle has been completed.
Restart weighing cycle	You may have to restart the feeding cycle after a fault (alarm; see also “PFB-35/70 feed weigher / KFV-16 feed weigher alarm”).

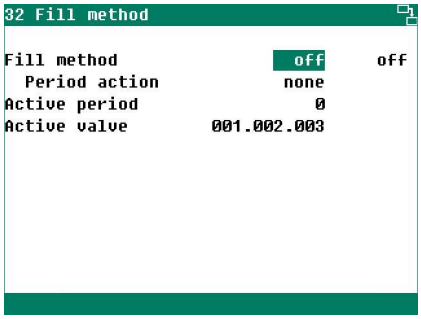
If during alarm *Restart weigher* is set to *Restart* or *Abort*, then:
- the active alarm will be disabled (reset)
- *Restart* = an attempt is made to still finish the active portion.
- *Abort* = the active weighing cycle is aborted (reset), then a new weighing cycle is started.

7.2 Alternative Ingredients

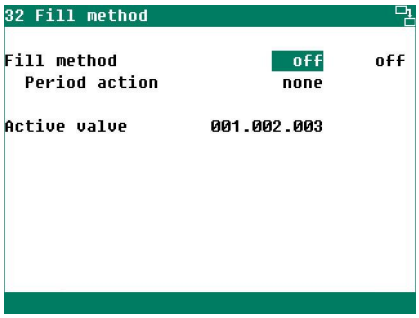


If you have set an alternative ingredient for an ingredient and there is a supply alarm for the ingredient in question, the computer will automatically switch over to the alternative ingredient. You can use the *Reset alternative* setting to clear all alternative ingredients (all statuses will be set to *off*). After a reset, it may take some minutes for feeding to start again (the new feed mixture must be determined). Filling in *yes* and clicking on the link (≥) deletes the alternative ingredients. Press the ✕ key to immediately return to the previous screen.

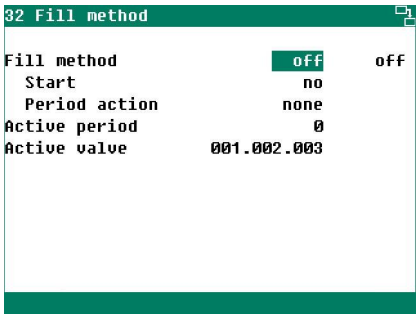
7.3 Filling Method



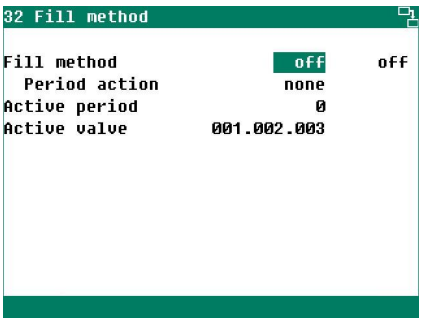
Fill method = local



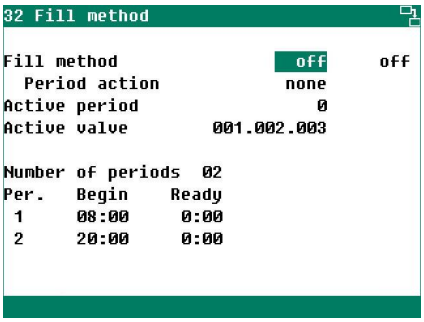
Fill method = demand



Fill method = manual



Fill method = pulse



Fill method = timer

Filling method (feeding system)

local The feed times are determined by the feed timer of the corresponding feed line, provided that the feed line is set to clock. A valve is assigned to a feed line by your installer.

demand The valves are filled based on feed demand. If a feed timer is used, any feed demand will only be complied with if it occurs within the feeding period of the corresponding feed timer.

pulse The valves are *filled* based on a start pulse. If a feed timer is used, any feed demand (start pulses) will only be complied with if it occurs within the feeding period of the corresponding feed timer.

manual The feeding times are started if *yes* is entered at *Start*.

timer Set the starting time from which feeding is allowed for each period. The valves actually determine what and how much may be fed (recipe and dosage). All valves are selected once in every period.

! If the next period starts before all valves have been selected, dosage alarms may occur.

A valve is skipped when:

- the valve is off or
- the maximum sensor is covered with feed.

Filling method (valve)

Fill method

on The feeding system is switched on; the current status of the feeding system is shown behind the setting.

off / pause The current state is maintained (the feeding process is 'frozen'). The *Emptying* time, the *Distance to valve*, the *Distance till ready* time are stopped. The feed weigher completes its cycle. If you then switch the *Fill method* back to *on*, the dry feed computer for pigs will continue the feeding process from the point where you had 'frozen' the process.

Period action

abort The active period is aborted. The *Emptying* time, the *Distance to valve*, the *Distance till ready* time are cleared and the feed weigher immediately aborts its cycle. In this situation, you should ensure that there is no feed left in the feeding system. If you then switch the *Fill method* back to *on*, the dry feed computer for pigs will continue dosing feed from the point where you had stopped and any previously fed amounts will be taken into account.

restart The active period is aborted. The feed weigher completes its cycle. The feeding system is emptied and the feed is transported to the valves. If you then switch the *Fill method* on again, the dosing of feed will begin again, starting at the first valve with feed demand, taking into account the total amounts already fed. The feed demand is set to *no* for all valves.

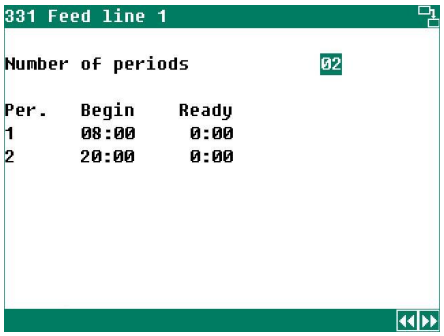
clear The active period is aborted and all feed measurements are deleted. The feed weigher immediately breaks its cycle. Make sure that no feed is left in the feeding system in this situation.

After switching on the *Filling Method,* the next feed dosage starts at the beginning of a new period. After restarting, this is immediately after you have set the Filling *Method* to *on*.

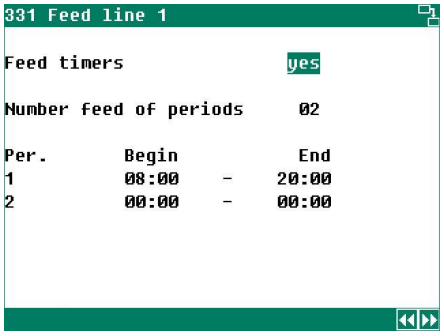
Active period	The active period is shown here.
Active valve	The active valve number is listed here.
Number of periods	The number of *Begin* periods of the fill timer.
Start	Start time of feeding period.
Ready	Time at which the dosing of the last valve (of the feed line) has been completed.

- Aborting and/or restarting may result in multiple dosage alarms.
- *Beginning new day* must not be within the periods set.
- If the *Ready* time of one of the periods is later than *Beginning a new day,* the active period will be aborted. All outstanding feed demands are deleted. This may result in several dosing alarms.

7.4 Feed lines



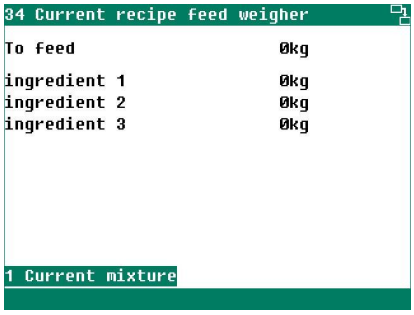
Number of periods Set the feed cycle start times here if all the valves are *Ready*. The ready times for the valves listed will be filled. See also *Partition period,* page 15.

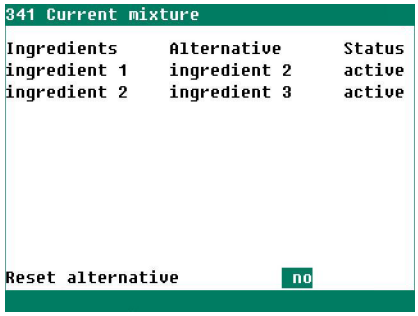


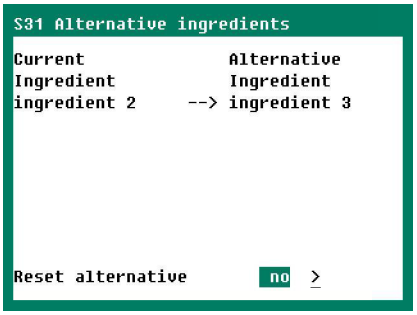
Feed timers *no* = All feed demands are processed (24/7)
Yes = Only a feed demand that is within the period set will be processed

7.5 Current recipe

This screen shows the proportion of each ingredient in the current recipe.

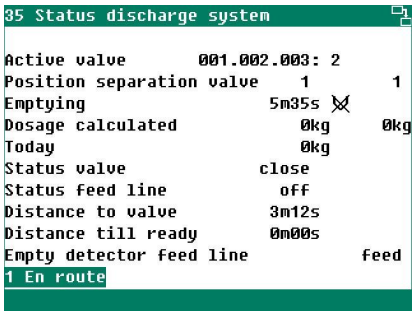


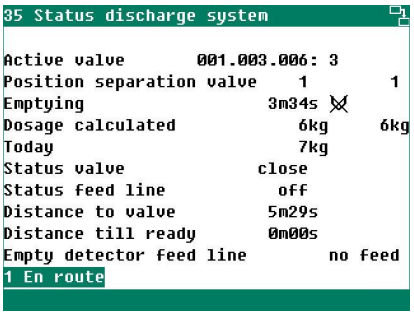




Filling in *yes* and clicking on the link (≥) deletes the alternative ingredients. Press the ✕ key to immediately return to the previous screen.

7.6 Discharge system status





The symbol after emptying / waiting time indicates that the discharge hatch should not open yet, e.g. because there is still feed in the hopper.

The discharge system ensures that the feed lying at the bottom of the hopper of the feed weigher is delivered at the right valve. Therefore the time needed to transport the feed to the selected valve from under the feed weigher *Distance to valve* and the time needed to dose all the feed at the valve in question *Distance till ready* is also important.

Active valve — This lists the valve number which is currently in use (see also Valve demand page 12).

Position separation valve — The current position of the separation valve is displayed. If the hopper of the separation valve is full, the symbol will be placed next to the target position of the separation valve.

Emptying — This is the maximum time it takes for the discharge system to transport away the feed lying at the bottom of the hopper of the weigher (hopper empty). This time can vary for the individual feed lines.

Waiting time — The waiting time until it is the next valve's turn (depending on the lead and lag times of the valve). The weighing hopper can already be refilled during the waiting time.

Dosage calculated — The amount to be fed is automatically divided among the feed cycles. The first number after *Dosage calculated* indicates the total dosage for this *period*, the second number indicates the amount already dosed during this cycle (see also *Partition period,* page 15).

In case of a manual feed cycle, the *Dosage calculated* text is followed by the symbol.

Today — The feed amount that has currently been transported to the valve stated.

Status valve — Current valve status: *open* or *closed.*

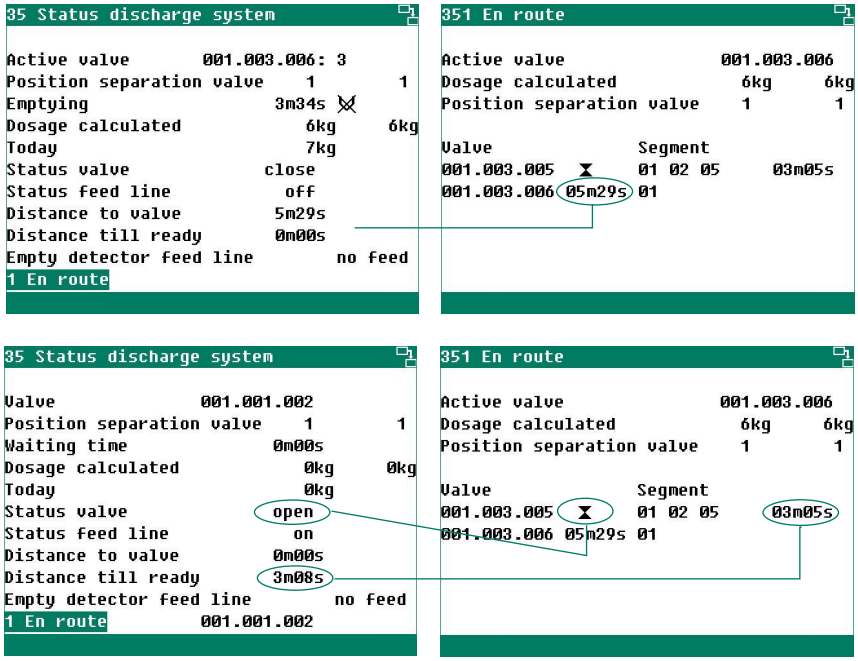
Distance to valve The time needed to transport the feed from the feed weigher to the valve. This is a fixed time and is set by your installer. Instead of time, the distance can also be measured in pulses.

Distance till ready This time is variable and depends on: the calculated dosage, the feed supply speed, the portion size of the feed weigher, the transport speed of the feeding system, etc. Instead of time, the distance can also be measured in pulses.

Empty detector feed line Current feed line status: *feed* or *no feed.*

7.7 En route

This screen shows the feed transport for each valve and each segment. Depending on the distance between the valves and the feed amount, several valve and segment numbers can be shown here.



Active valve This lists the valve number which is currently in use.

Dosage calculated The amount of feed to be fed in this cycle.

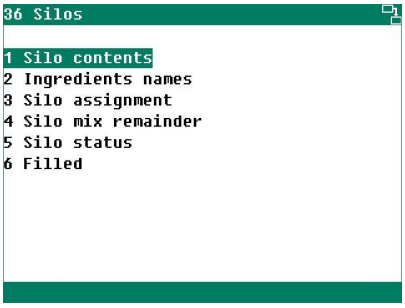
Position separation valve If a separation valve has been installed, this line will show the target and current positions of the separation valve (= full feed hopper).

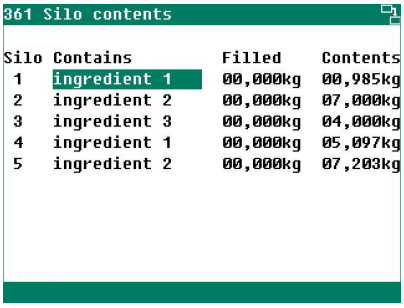
Valve The active valves are listed under *Valve*.

Segment The active segments for each valve are listed under *Segments*. This is followed by the *Distance till ready*. If this time is *0m00s,* the valve will be removed from the overview.

8 Silos

8.1 Silo Content





Which ingredient is in the silo and what the current silo contents are (stock or shortage) is indicated for every silo. You can also enter the filled volume per silo; the silo content value will be updated with this volume immediately and the filled counter will be reset to 0 automatically.

With nine or more silos, the symbol appears in the title bar. This symbol indicates that the other silos can be called up using the keys.

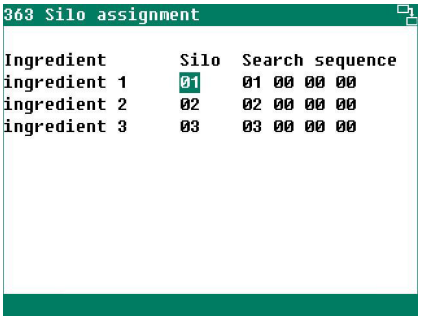
If a silo is connected to a silo weigher, the *Contents* column will show the silo contents measured. Changes do not affect the measurement.

8.2 Ingredient names

You can use the keys 0.. 9 to change the ingredient names, see page 4.

If more types of ingredients have been set than the number of silos available and you change the ingredient in a silo, you also have to change the feed mixture, the curve settings, the silo contents and the silo assignment. If you fail to do this, the *Ingredient not in silo* error message will be displayed in the alarms screen.

8.3 Silo assignment

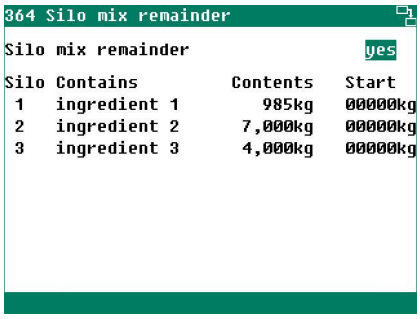


The *Silo* column shows the active silo from which the ingredient is dosed.

If more ingredients of the same type are present, you can fill in the numbers of the silos containing the same type of ingredient in the search sequence. Should a silo get blocked for any reason due to, for example, a silo alarm or if the current silo number from which the ingredient is to be dosed is set as 0, the program will automatically look for a silo containing the same ingredient. If you do not fill in a sequence and a silo gets blocked, the *Invalid silo* alarm will be displayed.

! Always fill in the search order. This table is stored in the memory.

8.4 Silo mix remainder



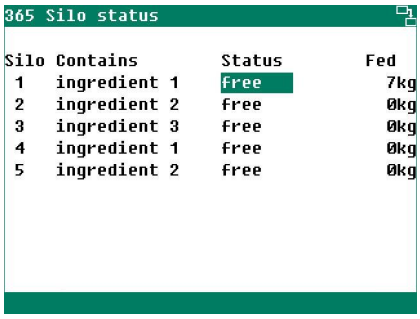
If the silo is nearly empty, the remainder in the silo will be mainly made up of salts, minerals and finely ground feed.

With nine or more silos, the symbol appears in the title bar. This symbol indicates that that the other silos can be called up using the keys.

If the silo weight drops below the preset value, the feed computer will try to mix the remainder. However, *Silo mix remainder* must then be active and there must be a similar type of ingredient in another silo.

If this is the case, the remainder will be mixed on the basis of *50% remainder + 50% other silo*.
Otherwise, the remainder will be mixed on the basis of *50% remainder + stop* (find the same ingredient) + *50% remainder*.

8.5 Silo status



In addition to the current silo status, the amount of feed dosed from the silo today is shown as well. You can change the status shown (e.g. from *free, empty* or *blocked* or vice versa). It may take tens of seconds before the status is transferred to the feed weigher.

With nine or more silos, the symbol appears in the title bar. This symbol indicates that the other silos can be called up using the keys.

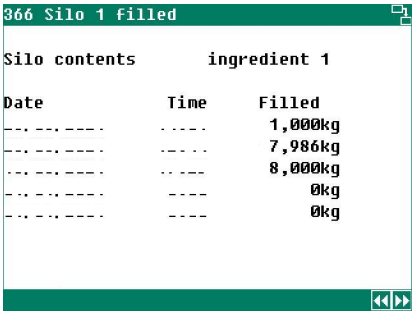
The status changes to *empty,* if:
- the status is manually changed
- no ingredient comes from the silo selected
- the feed supply is too slow

The *empty* status is cancelled, if:
- the status is manually changed
- at *Beginning new day*
- after restarting the feed weigher (see screen 31 page 19)
- after briefly pressing the *Reset* button on the PFB-35/70 feed weigher
- after resetting alternative ingredients (see screen 31 page 19)

The status changes to *blocked,* if:
- the status is manually changed to *blocked*. Feeding from a blocked silo is not possible. You have to set an alternative ingredient (feed type) to continue feeding.

The *blocked* status will be cancelled, if:
- the status is manually changed
- the status manually changed to *free* or *empty.*

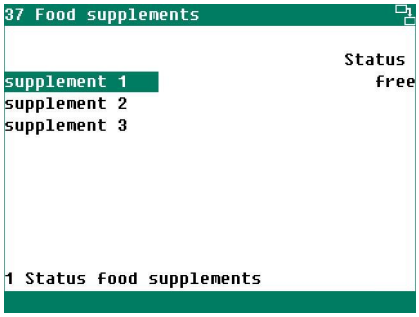
8.6 Silo filled



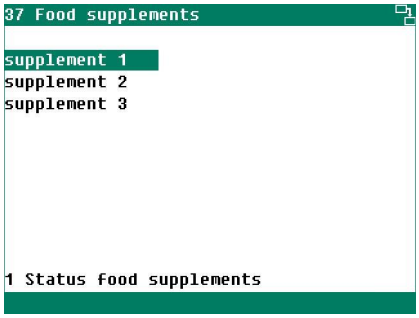
For each silo, a summary appears showing the last five times you entered bulk data in screen 361 *Silo Contents*. In addition to the amounts, the dates and times of filling are shown. It is important that you enter this data immediately after filling and before the next feeding period.

The details of silos 2 to 16 can be retrieved in a similar manner.

8.7 Feed supplements (KFV-16 only)



With status feedback



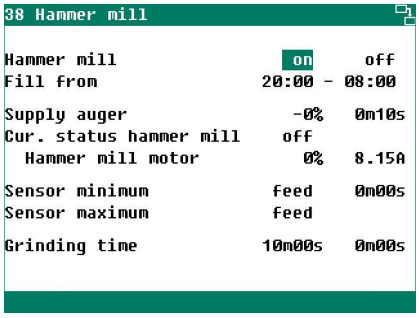
Without status feedback

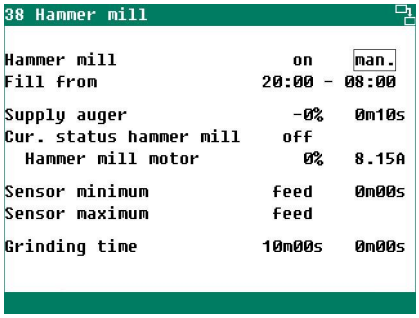
The numerical keys 2..9 can be used to edit the name of the supplement.

Status The status of the associated supplement input, if installed.

8.8 Hammer mill

A hammer mill is ideal for crushing (grinding) matter, e.g. grains, into smaller particles.





Hammer mill Switching the hammer mill on/off. If the night time period is not active and the maximum sensor detects *no feed,* a manual cycle can be started. The *manual* status immediately changes back to *off* and *Cur. status hammer mill* is switched to *on*.

! Switching off the *Hammer mill* resets the *Grinding time*.

Fill from Night time. If the hammer mill is on and the maximum sensor detects *no feed,* the supply auger and the hammer mill will start. The process stops when the maximum sensor detects *feed* or when the fill period has ended.

Supply auger The supply auger start percentage is fixed at 40%. After the switch-on delay time has elapsed, the supply auger is controlled to 100%.
0% = supply auger off.

Cur. status hammer mill The current hammer mill status.

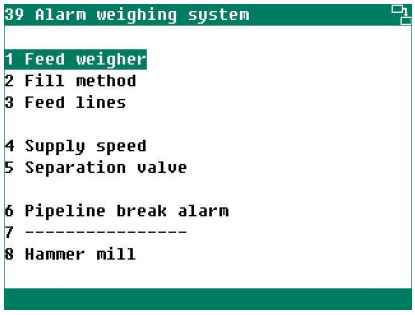
Hammer mill motor The current motor operation percentage and current power consumption.

Sensor minimum Indication of the presence of any 'crushed grains' in the hammer mill.

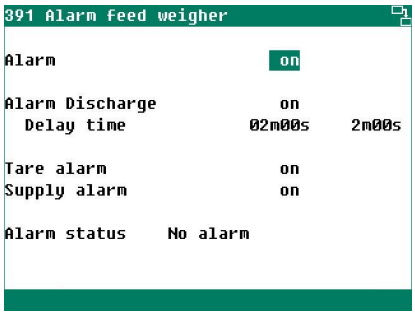
Sensor maximum As soon as the maximum sensor detects *feed*, the hammer mill switches off.

Grinding timer If the hammer mill is on and it is not the night time period and the minimum sensor detects *no feed* or if the hammer mill was started manually, the hammer mill will be switched on for the *Grinding time*.

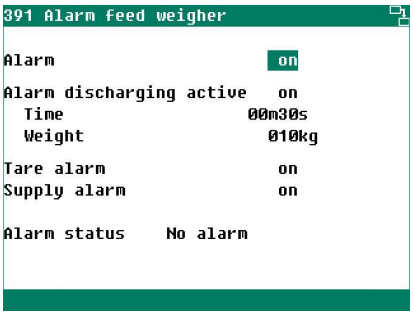
8.9 Alarm weighing system



Alarm feed weigher



PFB-35/70



KFV-16

This screen enables you to switch the feed weigher alarm on or off. If you switch the alarm off, the alarm will no longer be passed on to the main alarm and the alarm relay will not trip if there is a feed weigher malfunction.

Alarm If the alarm is switched off, the KFV-6400 will no longer respond to alarms from the feed weigher. The main alarm on the feed weigher is also switched off (the "alarm" LED on the feed weigher flashes).

! For safety, always turn on all alarms.

Alarm discharge

Delay Time The *Discharge alarm* detects whether the feed at the bottom of the feed weigher is actually being discharged. If the discharge auger is actuated and the sensor detects feed during the *Delay Time,* a Discharge *alarm* will be generated after the *Delay Time has* passed. If the discharge conveyance is slow and therefore a *Discharge alarm* is generated and you are sure that the feed is being conveyed out of the bottom of the feed weigher, then you may consider turning off the *Discharge Alarm*. In this case, check the discharge transport regularly.

Alarm discharging active If the mixer weight does not decrease by the weight set (010 kg) within the time set (00m30s), the *No weight reduction* alarm will be generated.

If you switch off the *Alarm discharging active* alarm (e.g. because the necessary decrease in weight cannot be achieved within the time set), the KFV-6400 will no longer respond to any discharging active alarm from the silo weigher. The *Alarm discharging active* alarm on the KFV-16 silo weigher is also switched off.

Tare alarm If you disable the tare alarm, the KFV-6400 will no longer respond to the tare alarm from the feed weigher. The tare alarm on the feed weigher will also be switched off. If you deactivate the tare alarm and, for example, there is doming in the

weigher, the amount actually dosed will differ from the amount calculated, resulting in too little feed being dispensed for the animals. An example of a reason for a tare alarm can be that the feed weigher vibrates too much during while filling (in that case, check the feed weigher hopper at regular intervals).

Supply alarm

! If you switch the supply alarm “off”, this will have the following effects:

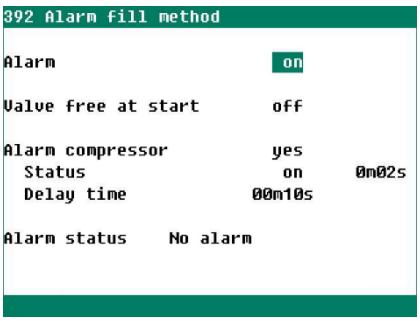
- You will not get a *dosage alarm* until the end of the feed period. If there is feed demand, the dosage alarm will not occur until the start of the new day.
- An *alternative ingredient* will no longer be selected automatically simply because *supply alarms* no longer occur.

The dispensers (to add supplements) do not stop.

Alarm status Readout of the alarm cause.

The KFV-6400 takes over control of the alarm key of the feed weigher, which basically means that you can no longer switch the alarm on the feed weigher on or off. You can only still do this on the KFV-6400 dry feed computer then.

Alarm fill method



In this screen, you can turn on and off the alarm of the filling method and the compressor (if installed). If you switch off the alarm, the alarm will no longer be passed on to the main alarm and the Alarm relay will not trip if there is a fill method malfunction.

Alarm status shows the alarm cause.

! For safety reasons, always switch on all alarms.

Valve free at start By default, this check is off (no dosage alarm at the end of the feeding period). If this is set to "on", all valves (which have been switched on) will be checked to see if they are free before the feeding period starts. If this is not the case, the alarm will be “generated” directly (installation: valve fill method = timer or pulse, start feed line = fill method).

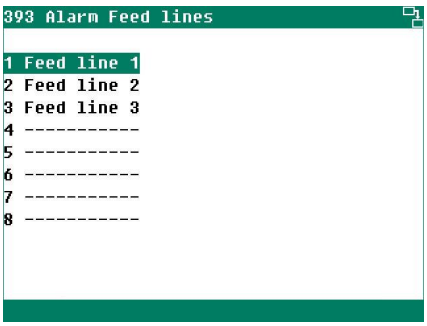
Compressor alarm Switching the compressor alarm on and off.

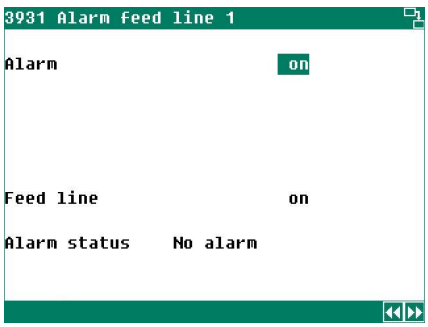
Status The current status of the pressure input. Behind it is the current alarm delay time of the pressure measurement (installer setting).

Delay time Switch-on delay time of the pressure measurement.

⚠ If you turn off the compressor alarm when the pressure is too low, the feed lines will not activate.

Alarm feed line





Per feed line, you can turn the alarm *on* or *off*. If you turn the alarm off, it will no longer be transmitted to the main alarm.

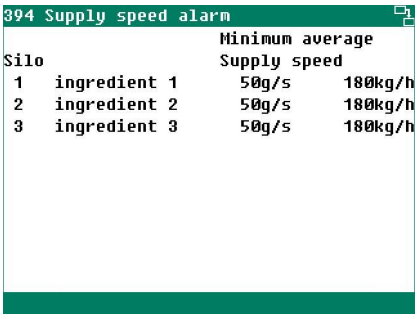
Alarm status shows the alarm cause.

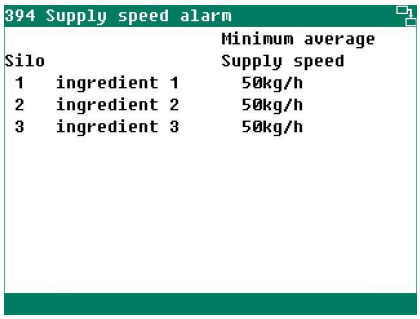
! For safety reasons, always switch on all alarms.

Central point

An overflow auger can be mounted at the end of the feed lines to transport all the residual feed to one central point with only one *bucket cut-off device*. The time displayed is the time during which the overflow auger is driven after the sensor has detected residual feed.

Supply speed alarm

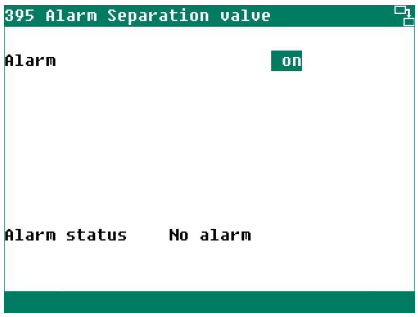




PFB-35/70 *KFV-16*

This screen shows the minimum average feed supply rate per silo. If the average feed supply rate is less than the value displayed for 60 seconds, the *Feed weigher - Alarm silo x* alarm will be given.

Alarm separation valve

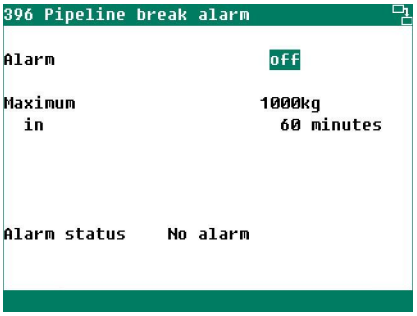


The separation valve alarm can be switched on or off here. If the alarm is switched off, the alarm will not be passed on to the main alarm any longer.

Alarm status shows the alarm cause.

! For safety reasons, always switch on all alarms.

Pipeline break alarm

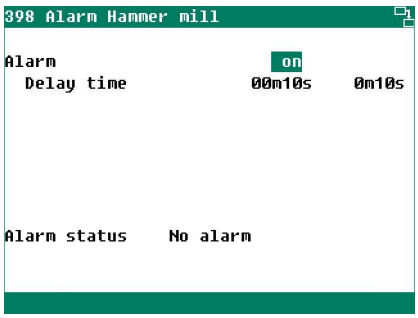


To be able to detect possible broken pipes in time, this screen enables you to set the maximum amount of feed that can flow through the supply pipes during the preset period before an alarm is generated.

Alarm status shows the alarm cause.

! For safety reasons, always switch on all alarms.

Alarm hammer mill

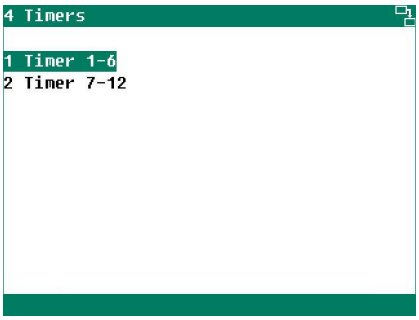


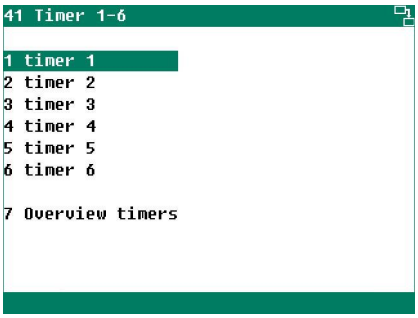
Here you can turn the alarm of the hammer mill on and off. You can also change the *Delay time* of the *minimum sensor*. The delay time prevents the hammer mill from switching on and off each time the minimum sensor briefly sees *no feed*.

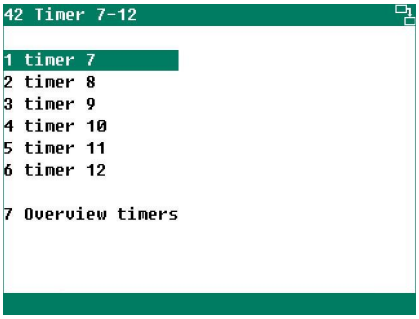
Alarm status shows the alarm cause.

! For safety, always turn on all alarms.

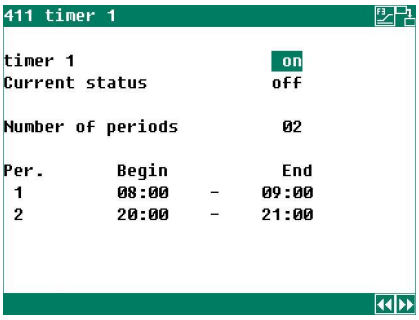
9 Timers







9.1 Setting periods



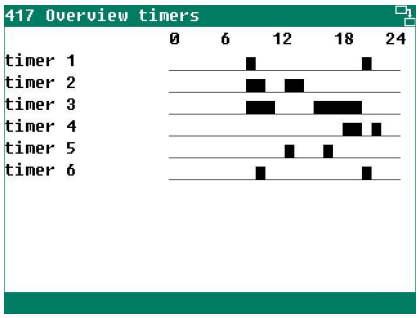
You can set up to 24 periods per timer:

- All times must be consecutive;
- The difference in time between any two times should be at least 1 minute.

! Checking the times may take a few seconds.

The times of timers 2 to 12 can be set in a similar manner.

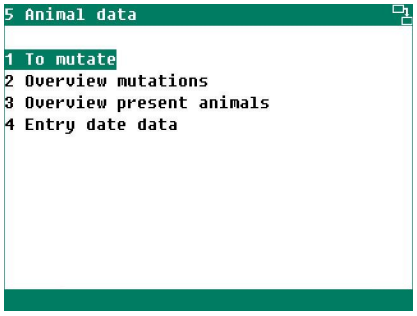
9.2 Timer overview



A graphic overview of the timers is displayed on the screen. Only the on/off times of the timers which have been activated are shown.

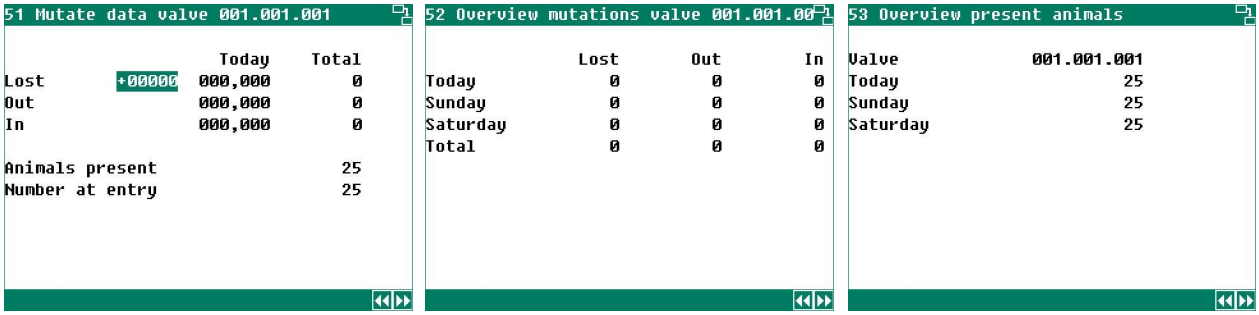
10 Animal data

10.1 General



You can use ◀◀ ▶▶ to select the previous/next valve.

10.2 Mutations and overviews



Lost	Here you can enter the number of animals that have died. *Today's* mortality (or death rate) is lowered automatically by the value entered after which the entry is erased. If you have entered an incorrect value, you can correct this by entering a positive value.
Lost today	Today's total mortality.
Lost total	*Total* shows the total mortality calculated using the mortality of the previous days and of *Today*.
Out	If animals are removed in the meantime, you can enter the number of animals removed at *Out*.
Total out	The *Total* number of animals removed.
In	If in the meantime more animals are put in, you can enter the number of animals added at *In*.
Total in	The *Total* number of animals added.
Animals present	= *Number at entry – Total Lost – Total Out + Total In*.
Number at entry	This is the number of animals originally placed in the house.

Mutations overview

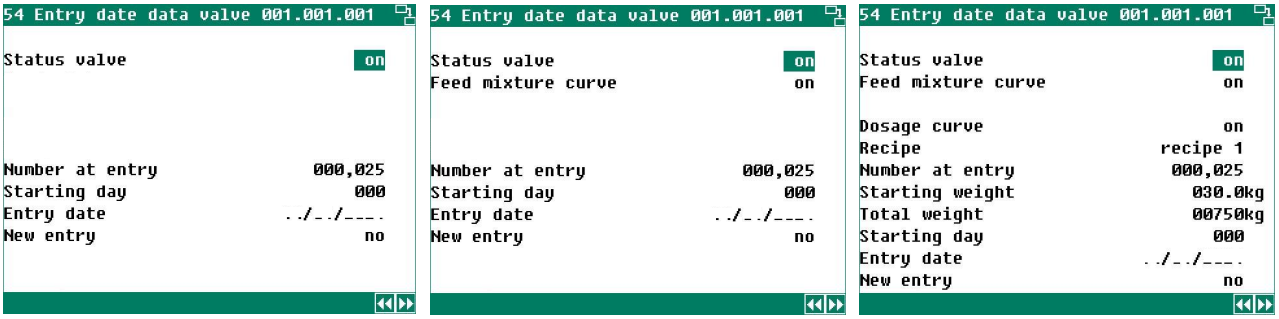
An overview of the daily mortality, the daily number of animals removed (out) and the daily number of animals (of the last 2 days and today) added (in) is shown.

Overview of present animals

Overview of the remaining number of animals (of the previous 2 days and today) is shown per day.

Entry date

The data in this screen has to be entered when new animals are entered (i.e. at the start of a new round). The dry feed computer for pigs uses this data to calculate the remaining number of animals, the feed dosage, etc.



The entry date is used to determine the age of the animals. The entry date is also used to fill the mortality table that is related to the animals' age. The dry feed computer for pigs can store the details of the past 3 days.

Status valve — Current valve status. Set the status to on when entering new animals.

Feed mixture curve — The feed mixture curve can be switched on or off here. The text will not be shown once the curve has been switched on.

Feed supplements — If feed supplements were switched off, this can be switched on again here. If the feed supplements are on or are switched on, the text will disappear.

Dosage curve — Before changing any animal entry data (animal weight and entry date are determined using the dosage curve, the matching animal weight curve and other data), you should first switch on the dosage curve.

Recipe — Set the recipe that should be used when new animals are entered.

Number at entry — This is the number of animals originally placed in the house.

Starting weight — The average animal weight at the set-up. If the *Starting weight* is changed, the *Total weight* and the *Entry date* will be determined again using the *Starting weight*.

Total weight — To determine the total weight, the starting weight, i.e. the weight at entry and the number of animals are used. If the *Total weight* is changed, the *Starting weight* and the *Entry date* will be determined again using the *Total weight*.

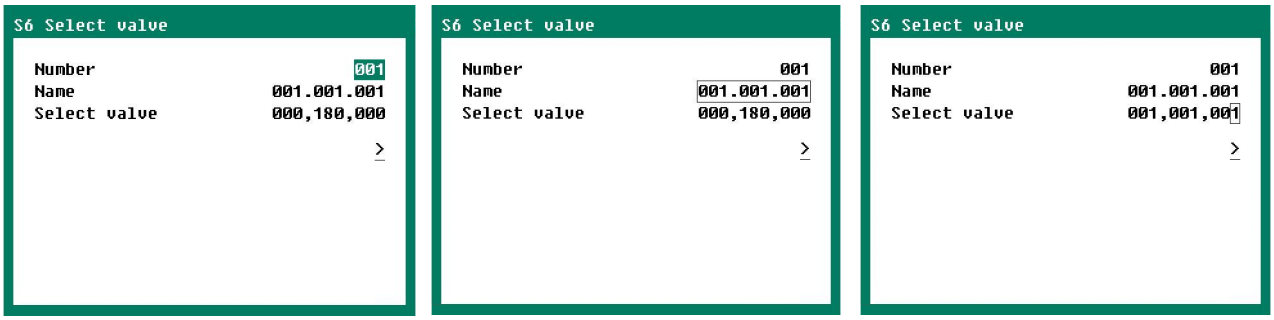
Starting day — The age of the animals according to the *animal weight curve*. If the *Entry date* is changed, the *Starting weight* and the *Total weight* will be determined again using the *Starting day* (provided that the *Starting day from curve* option has been activated by your installer).

Entry date — The entry date is filled in automatically if *New entry* is set to *Yes*.

New entry — If *Yes* is entered for *New entry*:

- The table of lost animals will be erased;
- The entry date will be filled;
- Feed dosing will be started (if a feeding cycle is active).

11 Selecting a valve



You can select a valve as follows:
1. Enter the valve number directly;
2. Select the appropriate valve from a list of names;
3. Enter your own list name.

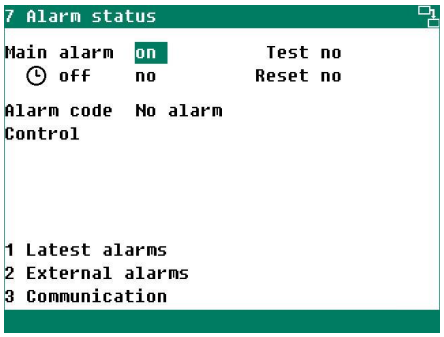
If menu option 6 is selected from the main menu, the above *Select valve* pop-up window will appear in which a valve can be selected (the number will be remembered temporarily). If a window containing valve data is selected next, the data for the selected valve will show in the window.

If you are in a screen that relates to a valve and you press the function key, the above pop-up window (*Select valve*) will appear. You can quickly select another valve in this window.

- The options are: *Number, Name* or *Select valve;*
- Press ✓ ;
- Select the relevant valve;
- Press ✓ again to confirm your selection; the cursor will automatically go to the link ≥;
- Press ✓ again. The data of the valve selected will appear on the display.

12 Alarm

12.1 General



You can switch the main alarm on or off in this screen. If the main alarm is off, the LED will blink at a steady frequency. No alarms will be generated then, except installation error alarms which cannot be disabled.

Test This enables you to test the operation of the alarm relay (siren). If you set *Test* to, the alarm relay (siren) will be switched on for 10 seconds.

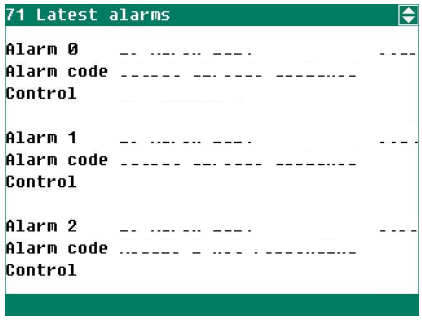
You can clear the alarm test time by setting *Test* to *No*.

off This enables you to temporarily switch off the alarm (siren). This does not apply to the hardware alarms; they cannot be switched off temporarily. The main alarm is switched off for 30 minutes (the lamp will flashes irregularly). The main alarm is switched on automatically again after 30 minutes. If the cause of the alarm has not been removed, the alarm relay will de-energize again, causing an alarm.

You can clear the temporary alarm deactivation time by setting *off* to *no*.

Never forget to turn an alarm back on when you have turned it off for troubleshooting. Preferably use the *off* function for troubleshooting.

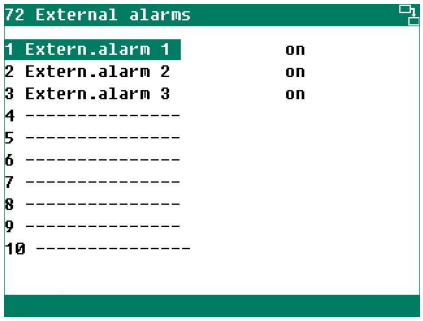
12.2 Latest alarms

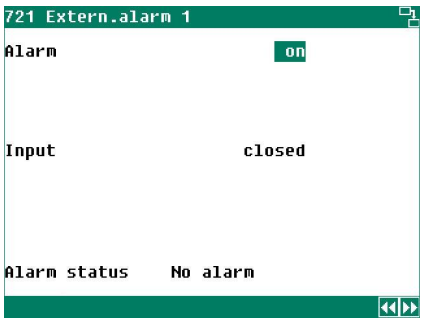


The last 5 alarm causes which caused the alarm relay to de-energize are stored. The dates and times of the alarms are displayed in addition to their causes. Press down arrow key to display the data of the previous alarms.

Alarm 0 The cause of the *most recent alarm* is displayed at *Alarm 0,* in addition to the time until which the alarm has been/was active.

12.3 External alarms

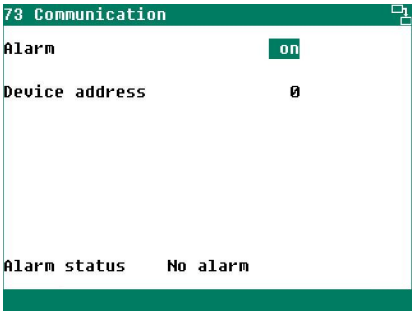




Switching the external alarms on / off.

Your installer can change the names of the external alarms into any name of your choice (max. 15 characters).

12.4 Communication alarm



Enabling and disabling the communication alarm.

A communication alarm can only occur with a KFV-6400 set as the main station.

If the main station does not receive data from a device in the same communication loop, a communication alarm occurs.

12.5 Alarm codes

Installation alarm codes	
Load cell x faulty	▪ Load cell x: Not connected. ▪ Load cell x: The voltage between E- and S+ and/or between E- and S- is not between 2.0 V and 3.0 V. Check the voltage. Check the wiring. ▪ Check the load cell operation.
Communication error	▪ No communication with device (TxD/RxD LEDs do not flash). ▪ Faulty communication address. ▪ Poor connection with the feed weigher.
Module x changed	Module configuration (inputs/outputs etc.) changed. Read in the module number again.
Wrong input type	The input type set does not match the input type based on which the control can control.
Wrong output type	The output type set does not match the output type that the control can control.
Wrong terminal setting	Faulty assignment. The function that you have assigned to the terminal is not supported by the module.
No communication address	Device address for dry feed computer for pigs and/or feed weigher missing.
No input assigned	No input terminal number entered.
No PFB-35/70	An input/output refers to the PFB-35/70 feed weigher but no PFB-35/70 has been installed.
No KFV-16	An input/output refers to the KFV-16 but no KFV-16 feed weigher is installed (go to screen 9311 and check the “Feed weigher present” setting).
No output assigned	No output terminal number entered.
No feed weigher	The *Feed weigher present* setting is *no*. A feed weigher should always be installed.
Input already assigned	The input has been assigned to two or more controls.
Module x not installed	The module number set for the terminal does not exist.
Module x not responding	Module address not found, check the settings on the module.
Module x reset alarm	Module continues to reset due to a fault, check the module.
Unknown terminal type	This type of terminal does not exist.
Invalid valve	The valve number you have assigned to an animal group is not *active* (the selected valve is set to *off*).
Invalid input	The input number does not exist on the module.

Installation alarm codes (continued)	
Invalid position valve	The separation valve position has not been filled in for the discharge system shown (*Position separation valve* is 0).
Invalid output	The output number does not exist on the module.
Invalid silo output	The output number does not exist on the module.
Invalid feed line	The feed line number with a valve is higher than the number of feed lines set. The number of feed lines has been decreased but the feed line number at the valve has not been changed.
Silo already assigned	The silo number set has already been assigned to another silo.
Invalid silo weighing comput	The software version in the silo weighing computer is not up to date. Contact the supplier of the equipment. Update the software.
Tare: fluctuating value	The weight measured is unstable (due to a 'rocking' weighing hopper, for example). Vibrations from the surrounding environment influence measurements.
Tare: value too high	The value measured after taring is too high.
Tare: value too low	The value measured after taring is too low.
Output already assigned	The output has been assigned to two or more controls.
Valve not assigned	The valve number has not been assigned to any animal group.
Valve already assigned	▪ The valve number has been assigned to the same animal group several times. ▪ The same valve number has been entered for several animal groups. ▪ The number of valves of the animal group exceeds the total number of valves.
Feed weigher (xx)	xx = alarm code received from the PFB-35/70 feed weigher; see the PFB-35/70 manual for more information about the causes of the alarm of the PFB-35/70.
Invalid feed weigher	Software version too low: The software version in the FB-35/70 feed weigher should be at least software version 1.44.

Feed system alarm codes	
Discharge alarm Hopper full	The contents of the feed weigher/mixing silo have not decreased/increased during the last 60 seconds although the discharge system has been sent (a) drive command(s) (doming of feed in the hopper under the feed weigher, auger broken etc.).
Alarm external house	Alarm in another house - only if a communication loop is present. This alarm does not trigger the alarm contact of the dry feed computer for pigs.
Alarm unknow (xxxx)	This alarm code cannot be translated into a text. Note down the number that is displayed and contact your supplier.
Alarm silo x	Silo number x is blocked. Supply speed too low, check that there is still feed in the silo, check the silo auger.
Beginning day in period	The *Beginning day in period* time is in a period; this is not allowed. The *Beginning day in period* time must NOT be IN a period.
Capacity silo too low	KFV-16: The calculated dosage is greater than the maximum amount of feed that fits in the silo. Adjust the amount to be dosed.
Compressor	The compressor pressure is too low. Check that the compressor is on.

Feed system alarm codes (continued)	
Dosage too high	The calculated dosage is the sum of the capacities of the hoppers of the valves belonging to the animal group. If the total amount of feed is calculated on the basis of the management data, it will be obvious that the hoppers must be large enough to enable the calculated amount to be fed within the number of feeding periods set. If it is apparent in advance that this can never be achieved, a dosage alarm will be issued in advance, see *Alarm* page 16.
Dosage too low	The amount of feed or water dosed is less than the preset minimum amount to be dosed, see *Alarm* page 16.
No weight reduction	KFV-16: Discharging is active and the weight reduction set has not been achieved within the preset time (only displayed if *Alarm discharging active* is *on*).
Ingredient not in silo	▪ The silo number is 0. This is not allowed: you should always fill in a valid silo number for an active ingredient. ▪ The silo contents show the silo with the selected ingredient as blocked, see page 26. ▪ The ingredient is not in the silo selected, see page 25. ▪ The ingredient has not been assigned to a silo, but a value has been entered for the mixture behind the ingredient, see feed mixture. ▪ The ingredient assigned to the silo according to the silo contents displayed is not what should be in the silo according to the silo assignment. ▪ The silo assignment features a silo number after an ingredient in the first column which no longer contains a previously specified ingredient, see page 25.
Propagation time expired *Invalid position valve*	The separation valve has been sent to a new position but the valve failed to reach this position within the running time set. The current position of the separation valve is different from the valve position required (*you have not entered a separation valve position at the auger yet*). Check the position of the separation valve. Separation valve has been set to manual operation. Check the contents of the hopper. Check the contact input (the M-input LED will illuminate!).
Discharge hatch closed	The hatch has not opened after 10 seconds although it was sent a drive signal to close.
Discharge hatch opened	The hatch has not closed after 10 seconds although it was sent a drive signal to open.
Maximum supply alarm	Pipeline break alarm The counter exceeds the maximum setting within the time set, see also page 32.
Mixer not empty	KFV-16: There is too much remaining feed in the mixer when filling the mixer. Check the cause (feed encrustation etc.), and manually discharge the mixer. Then restart the feeding system.
Invalid mix percentages	KFV-16: The preset mixing percentages, where the mixer is active for a short time, must be ascending (i.e. must go up). Check the mixing percentages.
Invalid module 0	Faulty bottom PCB, contact the supplier of the KFV-6400.
Invalid period x	The times set for a timer must be ascending and the difference between *Begin* and *End* must be at least 1 minute.
Invalid mixture	The mixture is on -0.0% for all ingredients, although an amount to be dosed is calculated.

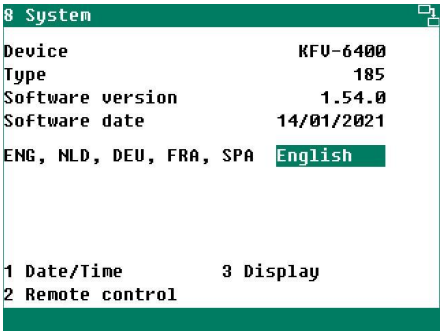
Feed system alarm codes (continued)	
Invalid silo	▪ The ingredient is not in the silo selected, see page 28. ▪ An ingredient has not been assigned to a silo, but there is a value for the ingredient in the mixture. ▪ Mixing the silo remainder is active, but no silo contains the same ingredient.
Invalid search sequence	▪ Silo number does not exist. ▪ Silo assignment changed. ▪ The silo number has been set to 0; the active ingredient must always be followed by a valid silo number. ▪ A non-existent silo number has been entered for the ingredient.
Conflicting periods	The 'Conflicting periods' error message occurs if 1 or more feed dosing timers have to be active at the same time.
Period skipped	If a feed cycle has not been completed and fully overlaps the next feed cycle, the *Period skipped* error message will be generated.
Control unknown (xxxx)	This internal control number cannot be translated into a text. Note down the number that is displayed and contact your supplier.
Residual feed detection	Not all feed has reached the valves, the residual feed detector detects feed. This can be caused by a valve being faulty, the feed being too sticky or the feed being dosed to an *empty house*, etc. You can switch off the alarm at the valve (see: *Alarm* page 16) or at the feed line (see: *Alarm* page 29).
Feed detected by sensor	The feed sensor is covered by feed at the moment when the discharge hatch opens.
Silo already assigned	The same number has been entered a number of times in the silo assignment search sequence, see page 25.
Supplement empty	The external dispenser (for the feed supplement) indicates that a dispenser error has occurred. Check the external dispenser control.
Valve not free	The hopper under the valve has a minimum sensor which detects feed at the beginning of a feeding period. Remove the feed from the hopper of the valve shown.
Feed line	The alarm input of the feed line is a multifunctional input. The input can be used to connect, for example, the chain breakage detection of the feed line, or the bucket cut-off device, the residual feed detection, the thermal contact of the motor etc.

Never forget to switch the alarm back on when you have switched it off for troubleshooting. Preferably use the *off* function for troubleshooting.

Installation errors such as *Output already assigned, Faulty output type*, *Input already assigned*, etc. have to be solved before putting the system into operation.

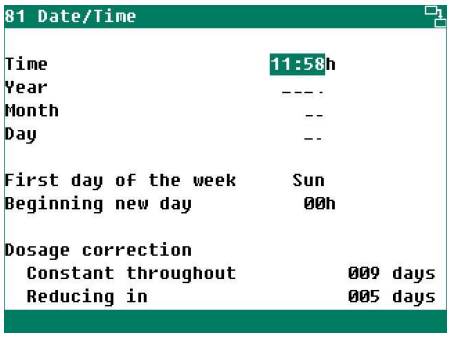
13 System

13.1 General



Device	Device type name, KFV-6400.
Type	Device type number: 185 = KFV-6400.
Software version	Software program version number.
Software date	Software program date.
ENG, NLD, DEU, FRA, SPA	Set the interface language for the screens here. Set the language to ENG for this manual. The language can also be changed by pressing and holding functional key F1 while simultaneously pressing the left or right cursor key.

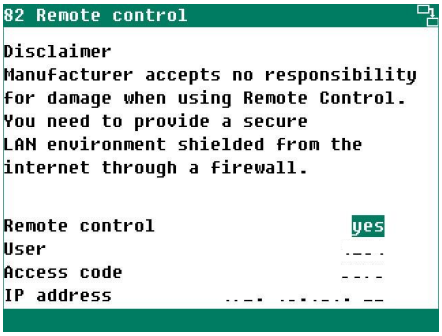
13.2 Date and time



Besides the date and time, you can also set the beginning of a new day by entering the time at which the new day should begin behind *Beginning new day.*

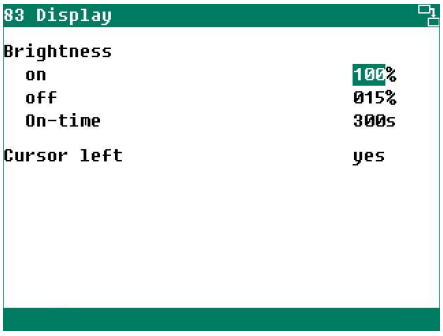
First day of the week	The *First day of the week* is used to determine the weekly totals. E.g. if the *First day of the week* is set to Sun (Sunday), the weekly totals are calculated on Sunday.
Beginning new day	Time at which a new day begins, at this time: ▪ All day-dependent data is pushed back one day, after which today's data will be deleted. ▪ The day number is incremented. ▪ All data resulting from of a curve will be re-determined. ! If the *Start New Day* falls within a feeding period, the error message *Start New Day in Period* will appear on the screen and you must change the *Start New Day* time or the feeding period
Dosage correction *Constant throughout* *Reducing in*	The number of days entered in *Constant on* and *Decrease in* is used as the default value in screen 144 *Cor. dosage valve xxx.xxx.xxx*. If you change the correction in screen 144, these settings will automatically be filled with the set values from screen 72.

13.3 Remote Control



Note-Remote-N-EN00001

13.4 Display



Brightness

on	Shows the ratio between the *colors*.
off	You can set the light intensity of the background lighting here.
On-time	Number of seconds during which the screen is lit after the last time a key is pressed.

Cursor left — *yes* = when changing a setting, the cursor is placed on the digit which is the furthest to the left.
No = when changing a setting, the cursor is placed on the digit which is the furthest to the right.