



## **DryExactpro / EcoMaticpro**

Code No. 99-97-3801 GB

Edition: 10/18

v. 3.3



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# 1 System description

This manual describes how to install the control software for the DryExact and EcoMatic dry feeding systems. Installation is basically identical for both systems. The instructions as well as the screenshots in the manual are based on DryExact. However, they are also applicable for EcoMatic. Any specific settings for DryExact and EcoMatic are marked accordingly and described separately.

## NOTICE!

The instructions including screenshots in this manual apply to both systems: DryExact and EcoMatic. System-specific settings are described separately.

### 1.1 DryExact

The DryExact dry feeding system is a computer-controlled tube feeder that forms a closed system directly from the silo delivery up to the individual feeding places. DryExact transports and dispenses dry feed in the form of meal, granulate or pellets, using weight-dependent feed valves. The DryExact system works with a weighed mixer that has a capacity of 100 litres. DryExact has been designed as a modular system and can be used for sow management, piglet rearing and pig finishing.

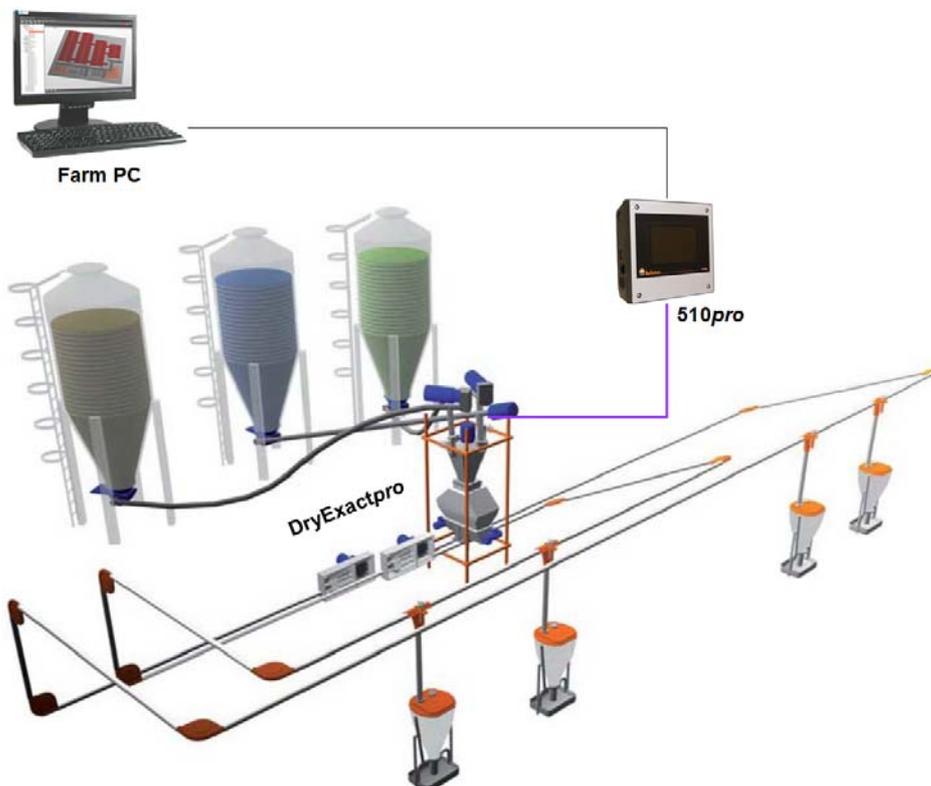


Figure 1-1: DryExact with two feed circuits

DryExact is controlled by the DryExactpro application with the BigFarmNet Manager software. The software allows configuring all necessary settings for the respective feeding process.

### 1.1.1 Requirements to install the DryExactpro application

The 510pro control computer is used for control with the DryExactpro application.

The following software licenses are **required**:

Code no.	BigFarmNet Manager license	Use
91-02-6604	License 510 – BigFarmNet DryExact	DryExactpro
91-02-6500	BigFarmNet Manager – Basic installation software	1 per BigFarmNet network

**Additionally**, a license for the Pig Manager and/or the Sow Manager is **necessary**:

Code no.	BigFarmNet Manager license	Use
91-02-6559	License BigFarmNet – Pig Manager	1 per BigFarmNet network
91-02-6555	License BigFarmNet – Sow Manager	1 per BigFarmNet network

The following software licenses are **optional**:

Code no.	BigFarmNet Manager license	Use
91-02-6551	License BigFarmNet – per additional PC/MC700	In case animal and system data in the BigFarmNet Manager is to be available on additional computers
91-02-6558	License BigFarmNet – sow management < 1000 sows	1 per BigFarmNet network
91-02-6566	License BigFarmNet – sow management 1000-3000 sows	
91-02-6567	License BigFarmNet – sow management > 3000 sows	
91-02-6564	License BigFarmNet – Web Access Pig	Access via the user's smartphone or tablet
91-02-6610	License 510 – BigFarmNet FarmFeeding	1 per BigFarmNet network

### 1.1.2 System limits

10,000	Sows
100,000	Finishing pigs

6	Feed circuits (but only 2 circuits simultaneously)
405	Feed valves (can be controlled)
4	Mineral dosing units (for medicines or minerals)
50	Feed curves
1,000	Components (32 feed components with DryExact system)
50	Recipes
150	Feeding times

## 1.2 EcoMatic

The EcoMatic dry feeding system is a computer-controlled tube feeder. EcoMatic dispenses each feed component according to volume, which means that a mixing tank is not required.

A speed-controlled auger is situated in the feed hopper under each silo and dispenses the amounts of components into the conveyor pipe as required. These components are mixed in the conveyor pipe to create the required recipe for a portion. The portion is then dispensed by valves or automatic feeders similar to the DryExact system. EcoMatic has been designed for use in pig finishing and sow feeding.

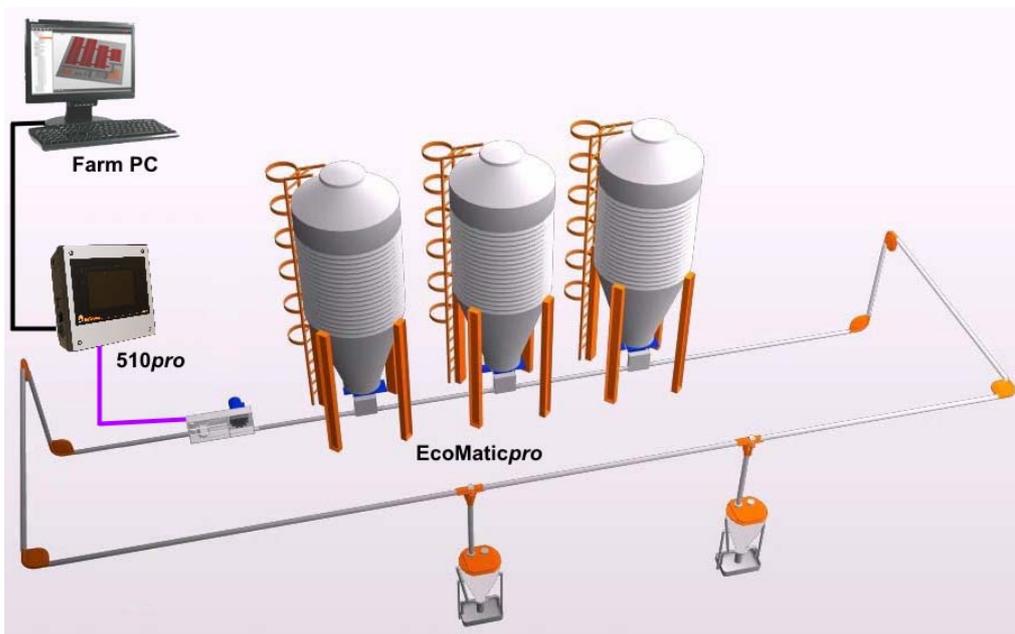


Figure 1-2: EcoMatic with three silos and removal unit under the silo

EcoMatic is controlled by the EcoMaticpro application with the BigFarmNet Manager software. The software allows configuring all necessary settings for the respective feeding process.

### 1.2.1 Requirements to install the EcoMaticpro application

The 510pro control computer is used for control with the EcoMaticpro application.

The following software licenses are **required**:

Code no.	BigFarmNet Manager license	Use
91-02-6603	License 510 – BigFarmNet EcoMatic	EcoMaticpro
91-02-6500	BigFarmNet Manager – Basic installation software	1 per BigFarmNet network

**Additionally**, a license for the Pig Manager and/or the Sow Manager is **necessary**:

Code no.	BigFarmNet Manager license	Use
91-02-6559	License BigFarmNet – Pig Manager	1 per BigFarmNet network
91-02-6555	License BigFarmNet – Sow Manager	1 per BigFarmNet network

The following software licenses are **optional**:

Code no.	BigFarmNet Manager license	Use
91-02-6551	License BigFarmNet – per additional PC/MC700	In case animal and system data in the BigFarmNet Manager is to be available on additional computers
91-02-6558	License BigFarmNet – sow management < 1000 sows	1 per BigFarmNet network
91-02-6566	License BigFarmNet – sow management 1000 - 3000 sows	
91-02-6567	License BigFarmNet – sow management > 3000 sows	
91-02-6564	License BigFarmNet – Web Access Pig	Access via the user's smartphone or tablet
91-02-6610	License 510 – BigFarmNet FarmFeeding	1 per BigFarmNet network

### 1.2.2 System limits

10,000	Sows
100,000	Finishing pigs
8	Feed circuits (simultaneously possible)
405	Feed valves (can be controlled)
16	Mineral dosing units (for medicines or minerals)
50	Feed curves

---

1,000	Components (12 feed components can be blended with EcoMatic system)
50	Recipes
150	Feeding times

## 2 Installation and configuration of the control computer

### **i** NOTICE!

Please contact the customer's IT administrator to determine the IP addresses in the network.

---

Carry out the following steps to install and configure the control computer:

1. Wiring, see the enclosed wiring diagram
2. Assigning a static IP address to the control computer, see chapter 2.1
3. Assigning a static IP address to the Manager PC, see chapter 2.2
4. Assigning a network card to the control computer, see chapter 2.3
5. Testing the connection to the control computer, see chapter 2.4
6. Installing the software on the control computer, see chapter 2.5



Figure 2-1: Control computer 510pro

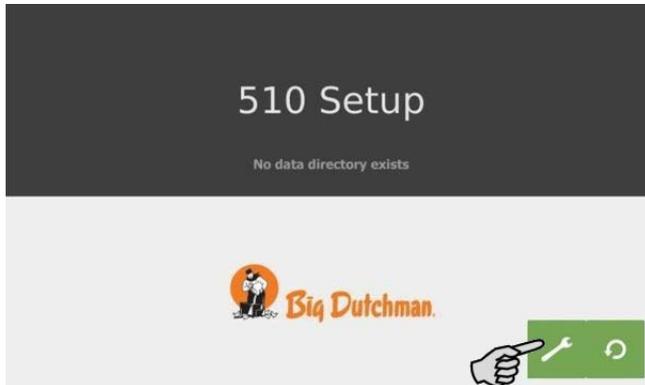
### **i** NOTICE!

Only service technicians may install and configure the control computer.

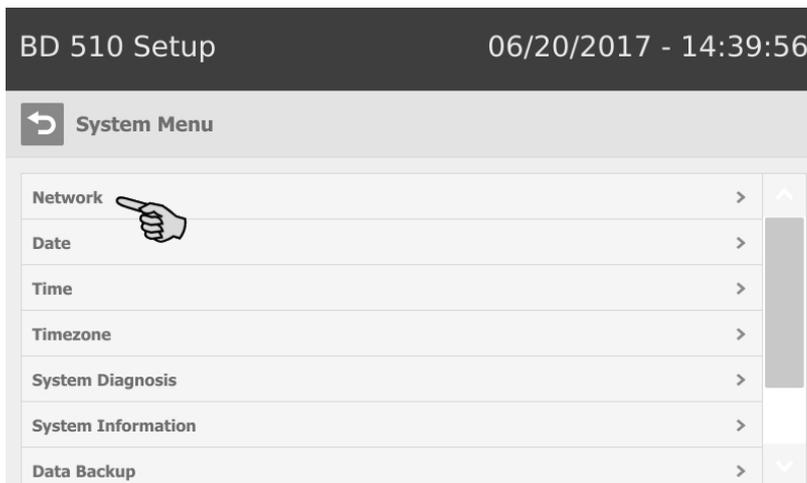
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## 2.1 Control computer: assigning a static IP address

1. Start the control computer.
2. Tap on the configuration button on the start screen.



3. Tap on "Network".

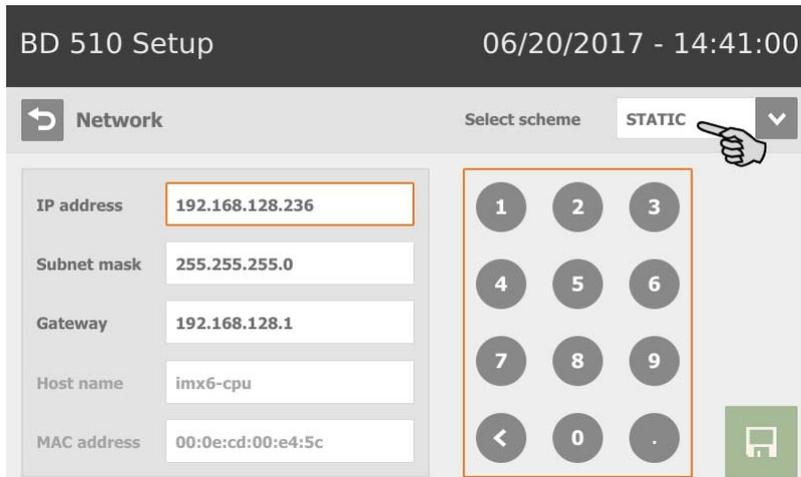


4. Enter the IP address, the subnet mask and the gateway.

### **NOTICE!**

The screenshots are examples only! **Do not** copy their data!

5. Make sure that you have selected "STATIC" for a static IP address under "Select scheme".



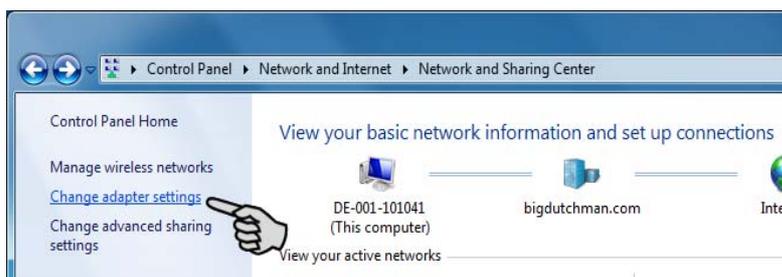
6. Save your inputs by tapping on .

## 2.2 Manager PC: assigning a static IP address

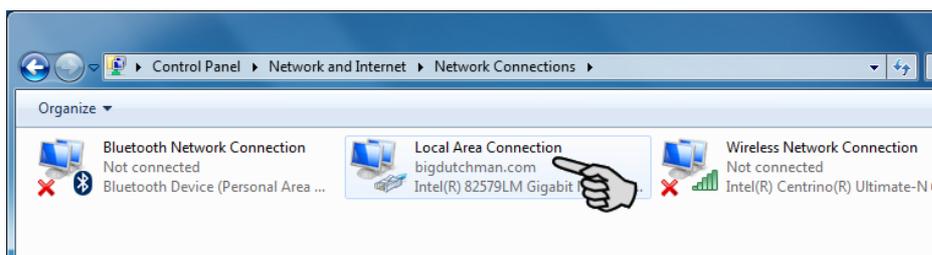
### 2.2.1 Windows 7

Assign a static IP address to the PC on which BigFarmNet Manager is installed or will be installed. The following steps correspond to the Windows 7 operating system.

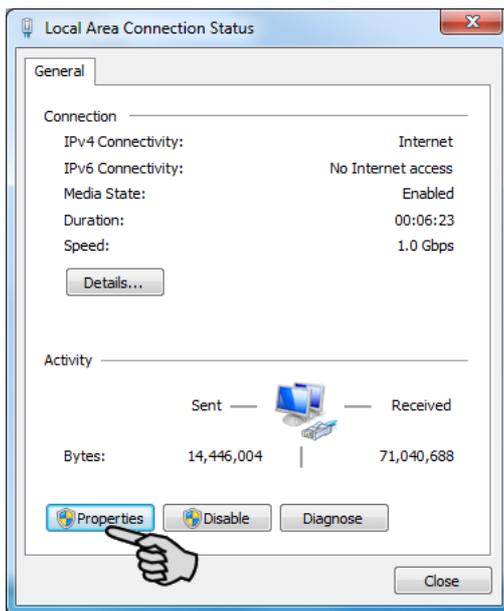
1. Click on "Control Panel" in the start menu .
2. Click on "Network and Sharing Center".
3. Click on "Change adapter settings".



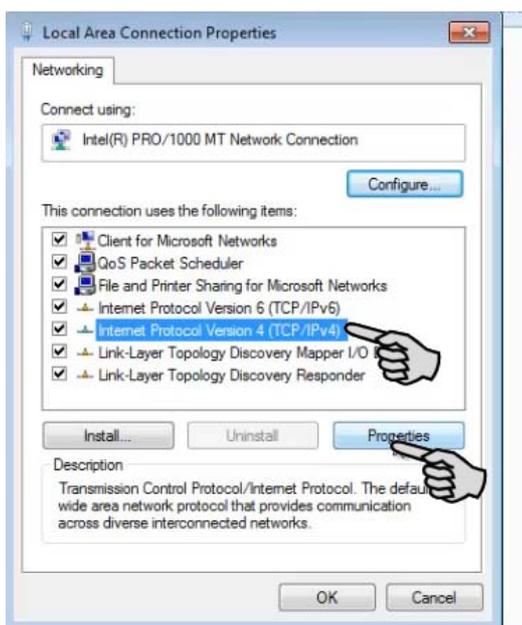
4. Double-click on "Local Area Connection".



5. Click on "Properties".



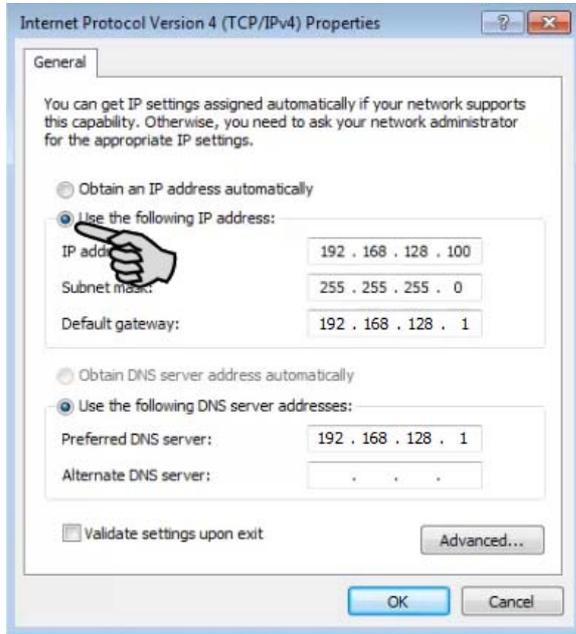
6. Select "Internet Protocol Version 4 (TCP/IPv4)" and click on "Properties".



7. Enter a static IP address.

**i NOTICE!**

The screenshot are examples only! **Do not** copy their data!

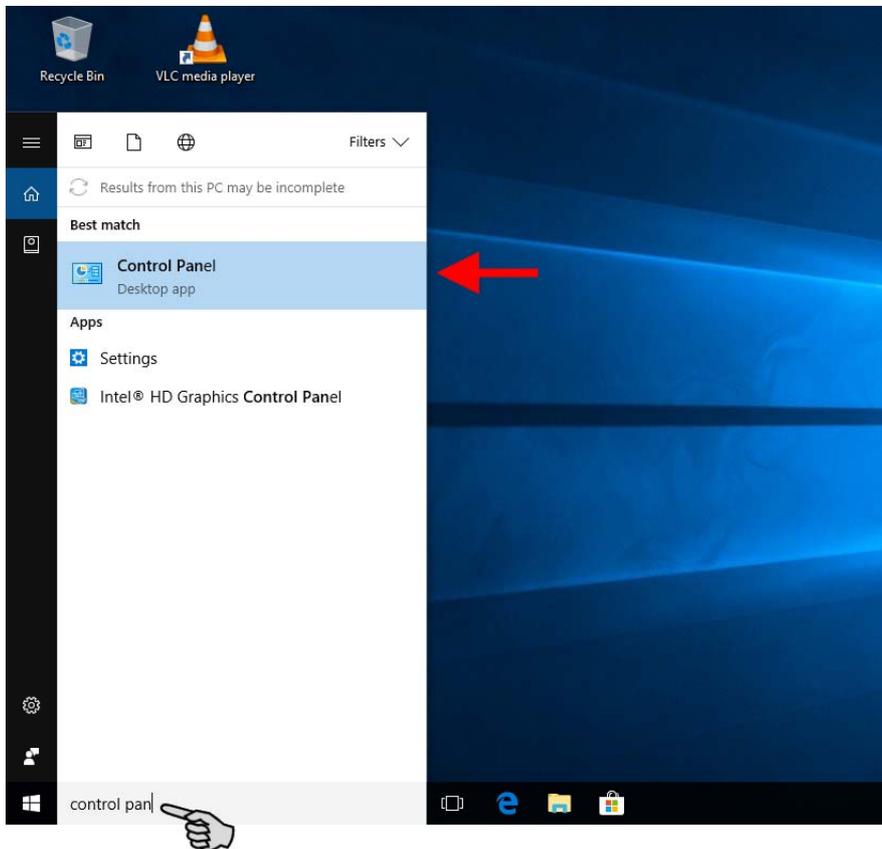


8. Accept these inputs by clicking on "OK".

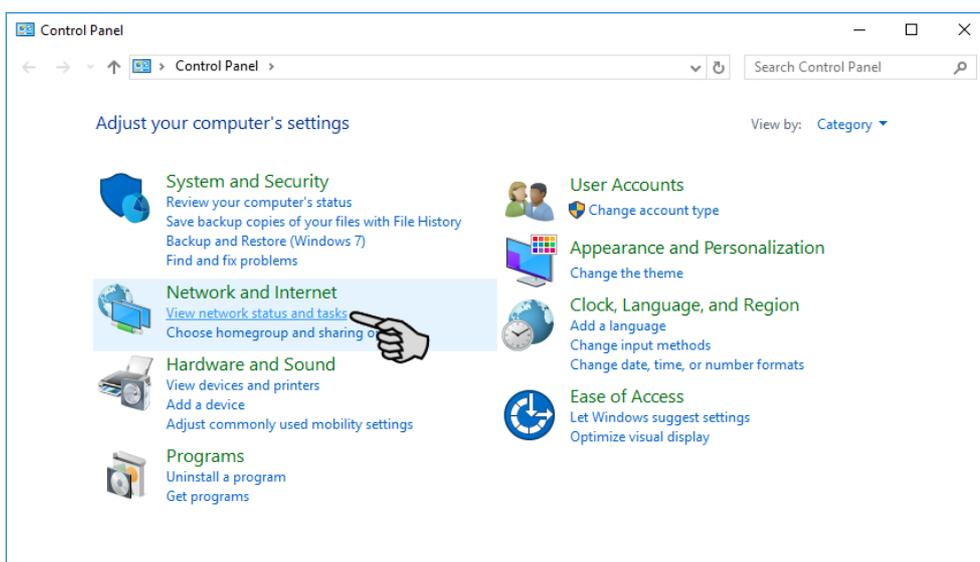
## 2.2.2 Windows 10

Assign a static IP address to the PC on which BigFarmNet Manager is installed or will be installed. The following steps correspond to the Windows 10 operating system.

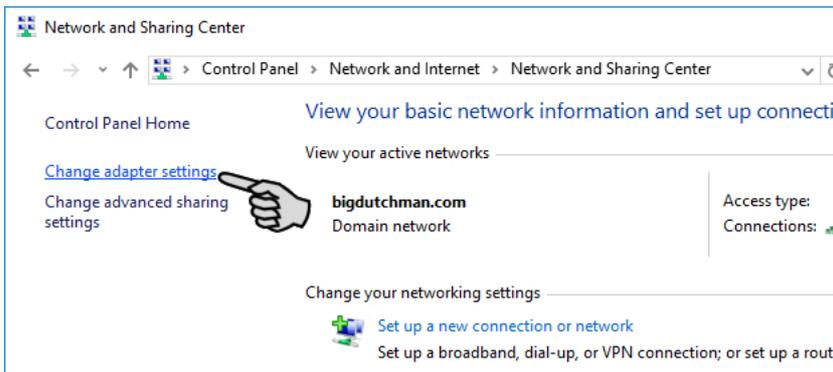
1. Open the Control Panel using the search field in the task bar.



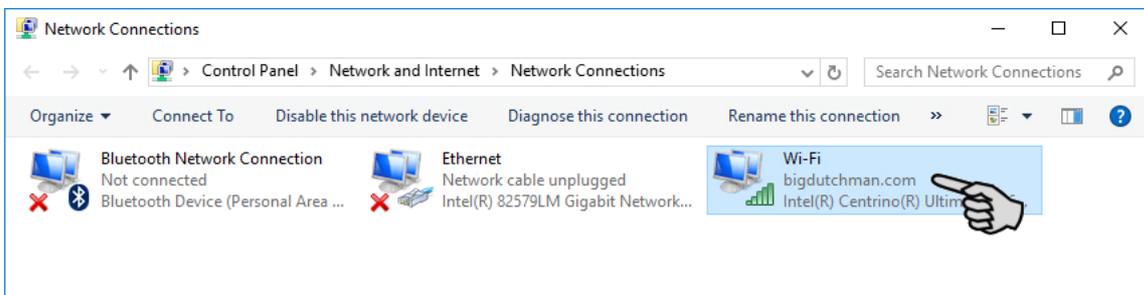
2. Click on "View network status and tasks" under "Network and Internet".



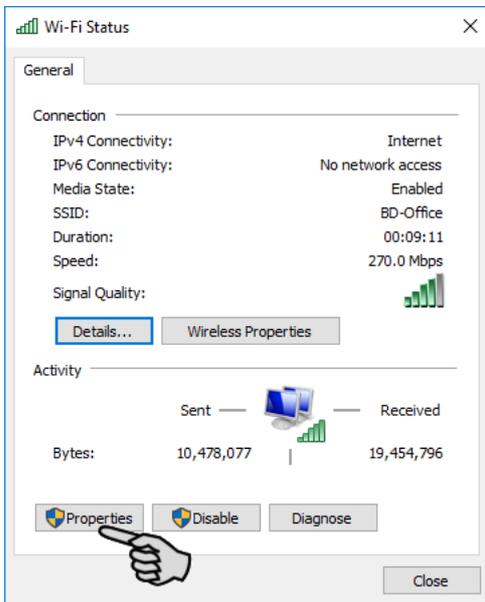
3. Click on "Change adapter settings".



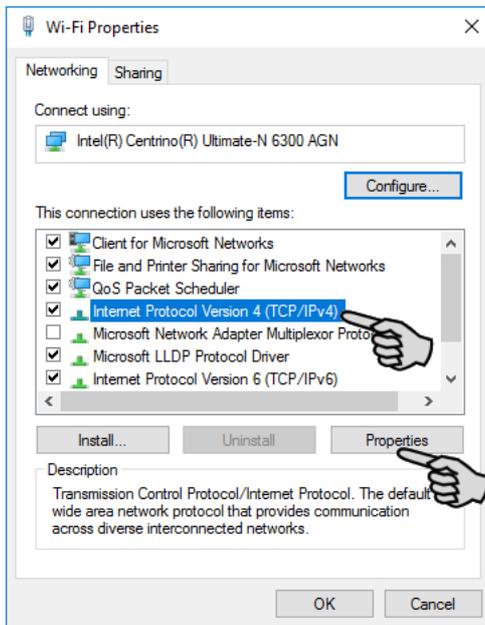
4. Double-click on "Wi-Fi".



5. Click on "Properties".



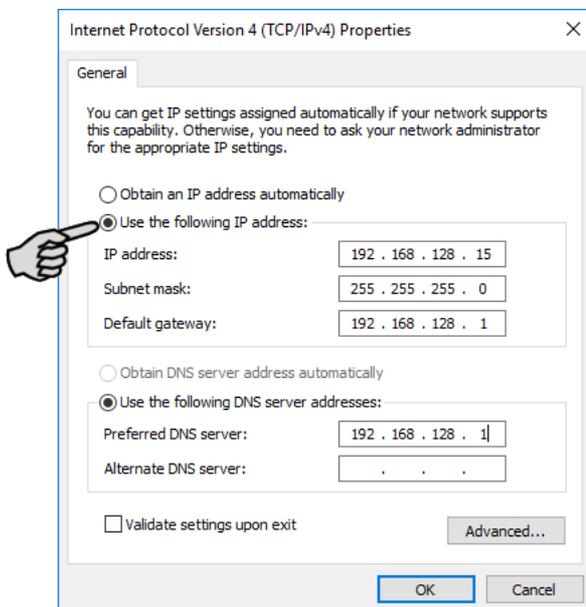
6. Select "Internet Protocol Version 4 (TCP/IPv4)" and click on "Properties".



7. Enter a static IP address.

**NOTICE!**

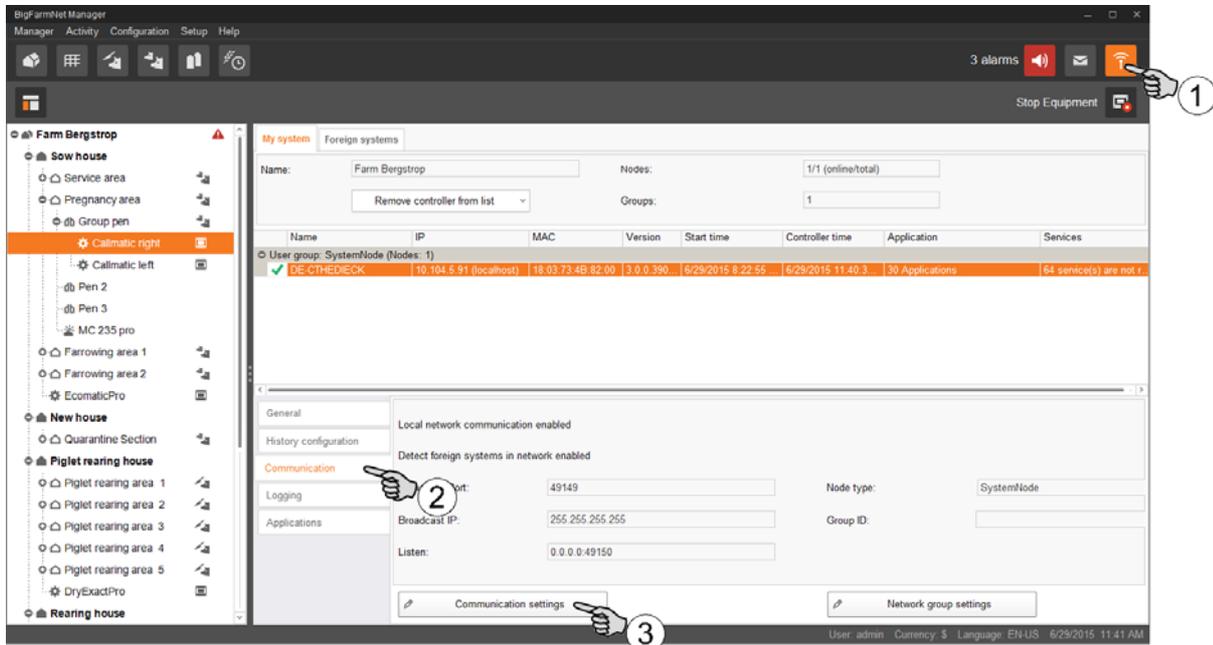
The screenshots are examples only! **Do not** copy their data!



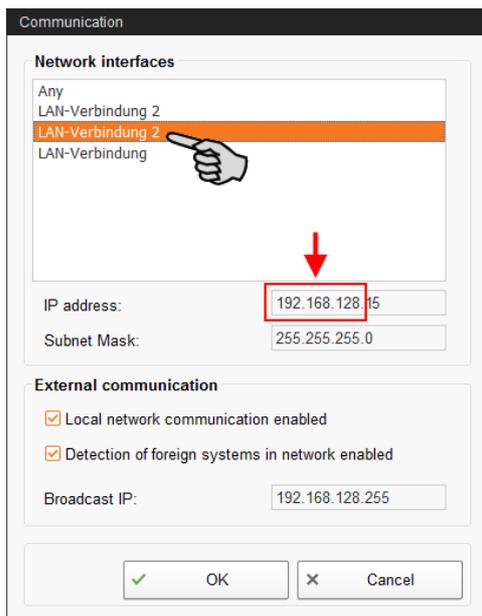
8. Accept these inputs by clicking on "OK".

## 2.3 Assigning a network card

Assign the network card in BigFarmNet Manager. Check the "BigFarmNet Manager – Installation/Configuration" manual for how to install BigFarmNet Manager.



1. Click on the network icon.
2. Click on "Communication".
3. Click on "Communication settings".
4. Select the correct network interface. The first three octets of the IP address must match those you have entered for the Manager PC beforehand, see chapter 2.2.



5. Click on "OK" to accept these settings.

## 2.4 Checking the connection to the control computer

### NOTICE!

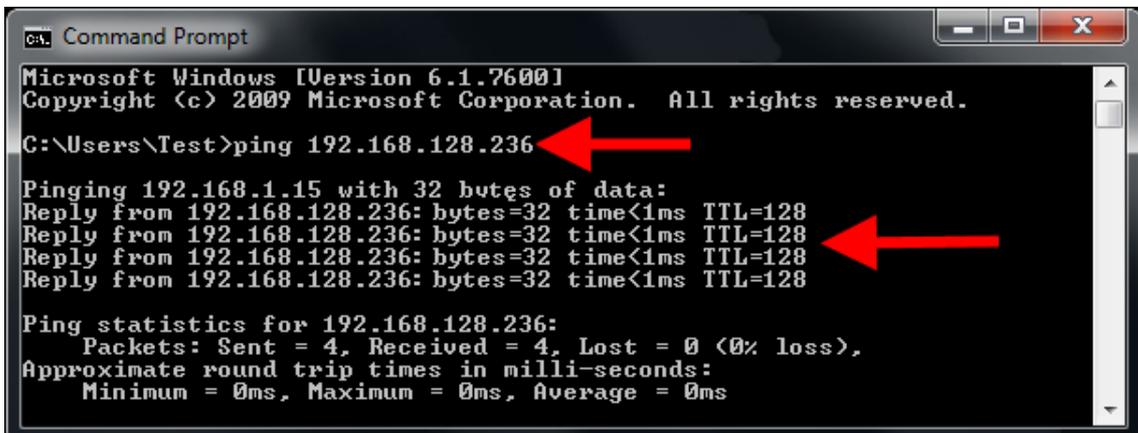
Use the "ping" command to check the connection to the control computer.

Enter the command into the console as follows: ping <IP address>

Example in the screenshot: ping 192.168.128.236

If the control computer replies, four lines with the following information will appear:

- IP address;
- packet size;
- required time;
- TTL (time to live).



```
Microsoft Windows [Version 6.1.7600]
Copyright (c) 2009 Microsoft Corporation. All rights reserved.

C:\Users\Test>ping 192.168.128.236

Pinging 192.168.1.15 with 32 bytes of data:
Reply from 192.168.128.236: bytes=32 time<1ms TTL=128

Ping statistics for 192.168.128.236:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 0ms, Average = 0ms
```

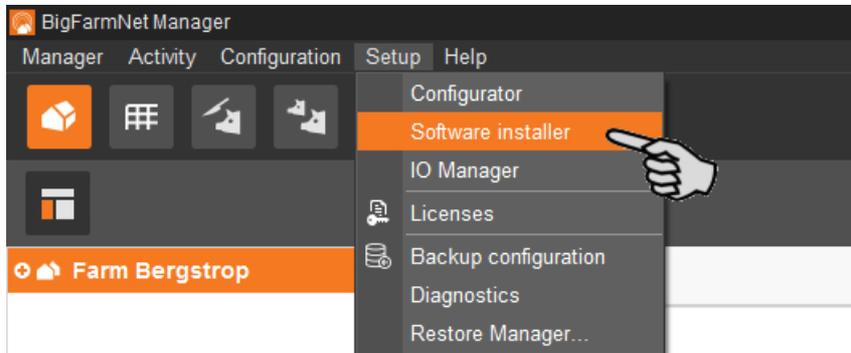
If the control computer replies, the software can be installed.

If the "ping" command fails and the control computer does not reply, contact the customer's IT administrator.

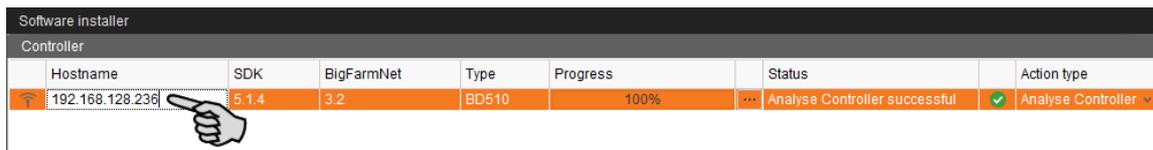
## 2.5 Installing the software on the control computer

Upon delivery, the control computer has an operating system pre-installed. The corresponding BigFarmNet software must be installed additionally.

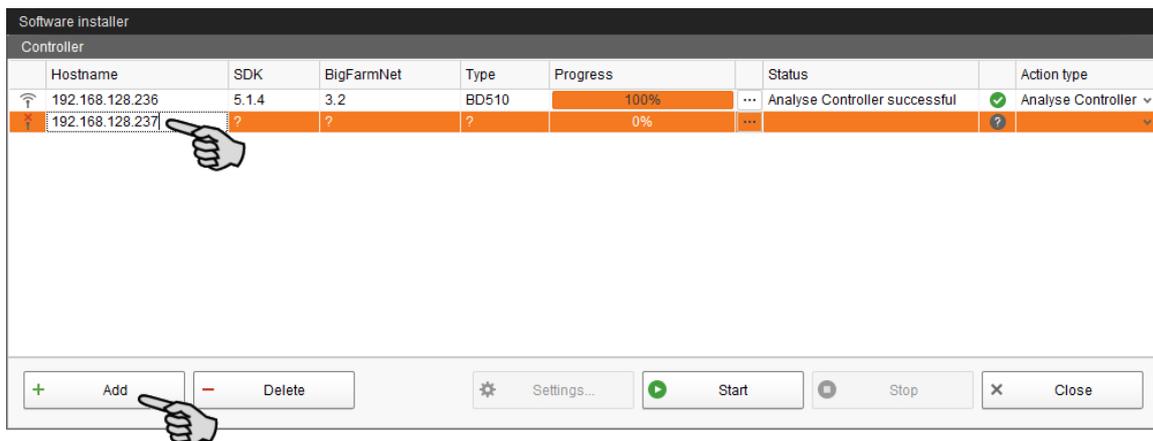
1. Click on "Software installer" in the "Setup" menu.



2. Enter the IP address of the control computer on which you want to install the software.

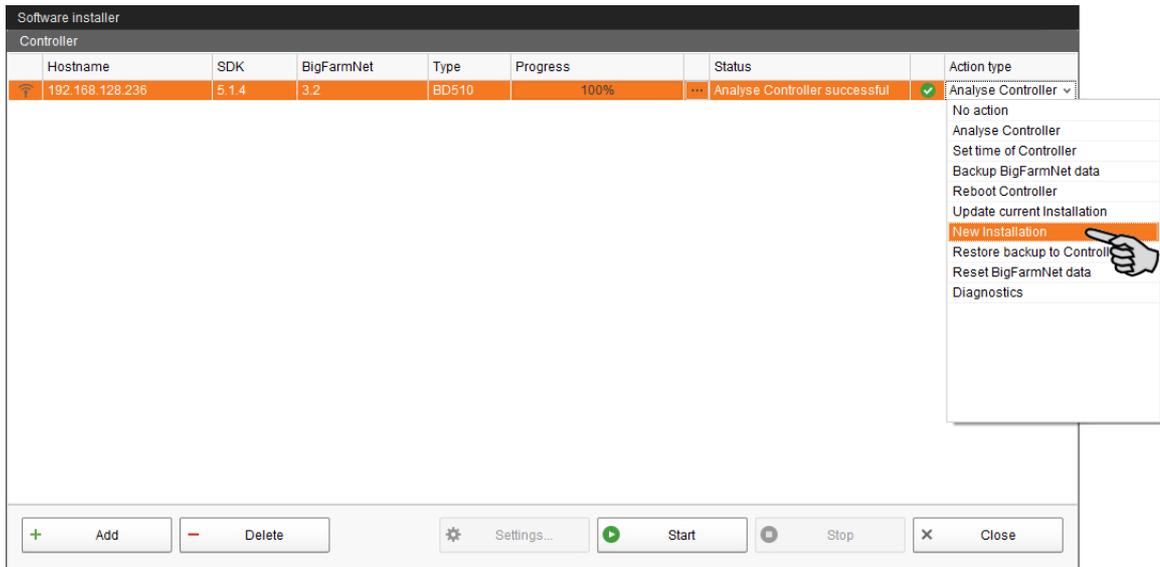


3. If necessary, add the desired number of control computers by clicking on "Add".  
This feature allows you to install the software simultaneously on multiple control computers. Each click on "Add" adds another control computer and the IP address increases by 1. However, you may change the IP address according to your wishes.



4. Click on a control computer to select it.

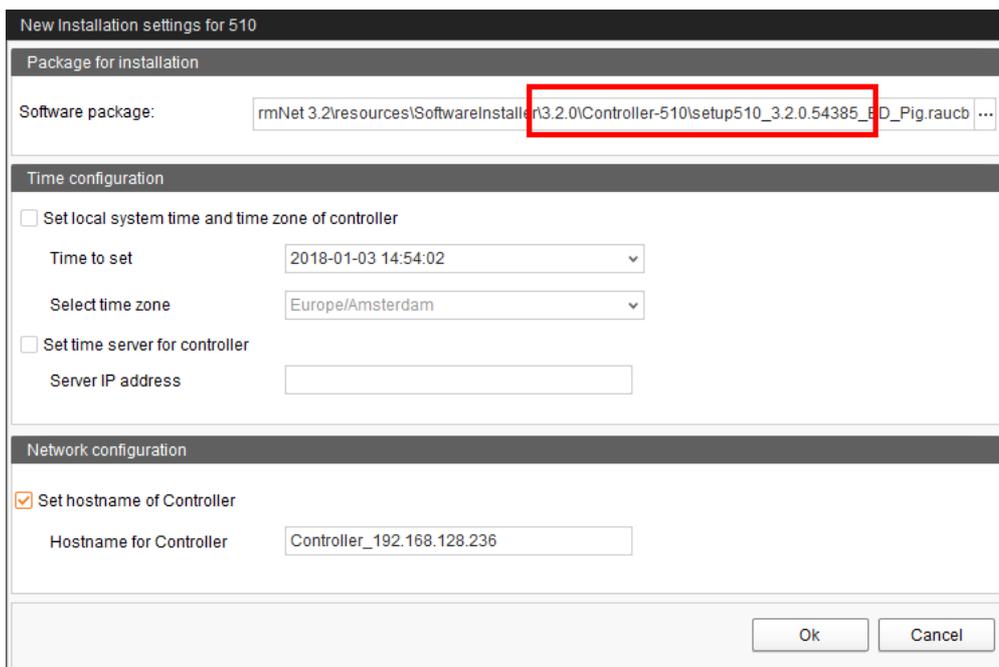
- Click into the respective input field under "Action type" and select "New Installation".



- Click on "Settings" in the lower command bar of the dialog window.
- Under "Software package", check whether the setup for the 510pro control computer is stored under the indicated path.

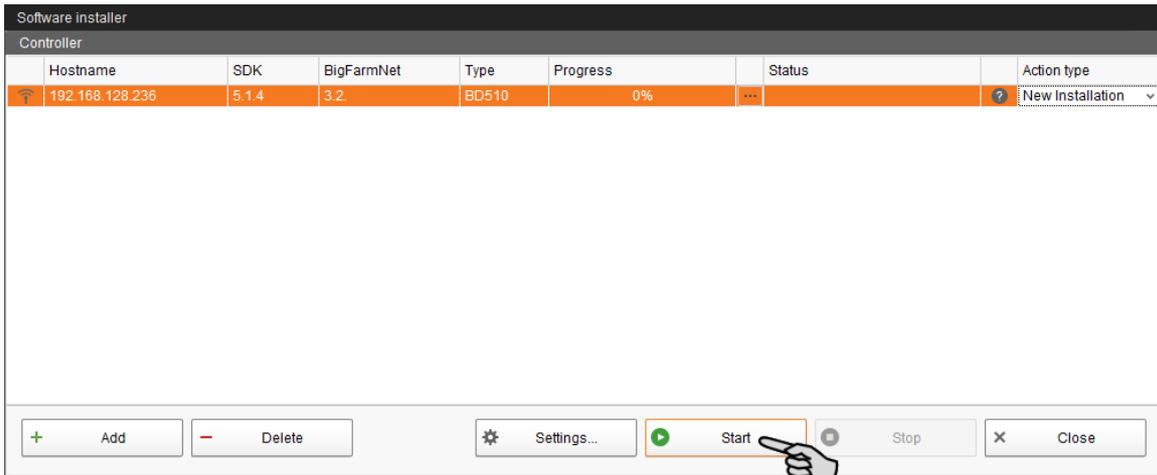
### NOTICE!

When updating, check whether the update's version number in the software package corresponds to the version you want to install.

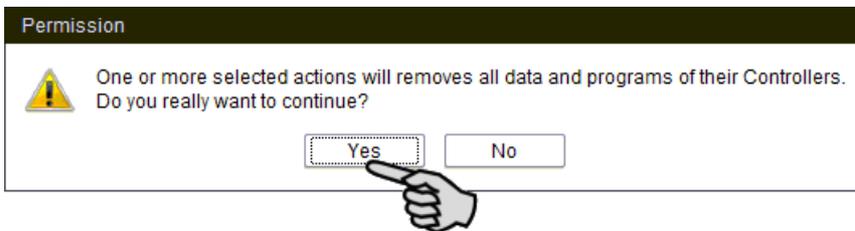


- Confirm the dialog by clicking on "OK".

9. Click on "Start".

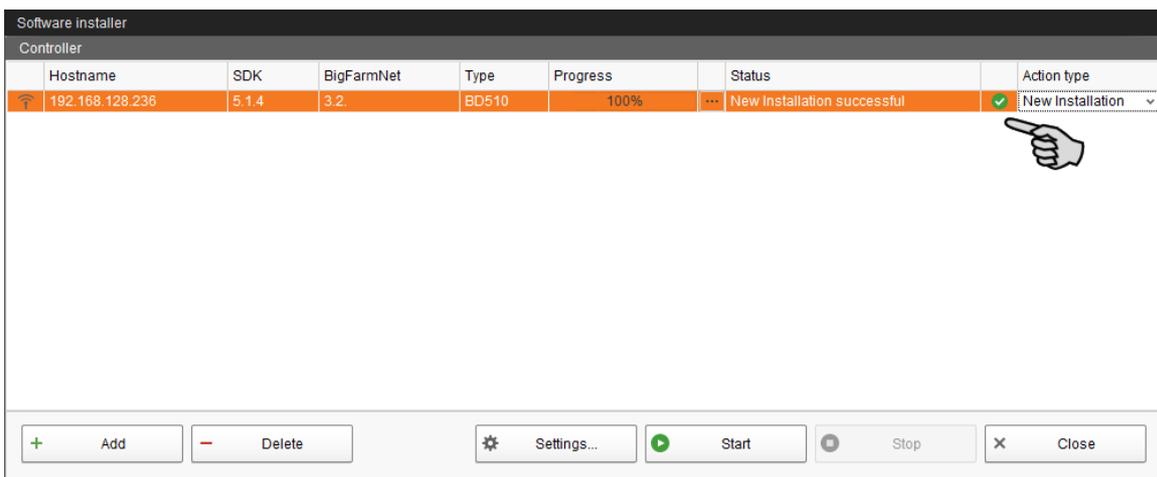


10. Confirm the prompt for confirmation.



The installation process may take a few minutes. Click on [...] to receive more information on the progress.

Successful installation is indicated by a checkmark ✓ in the "Status" column.



## 3 Configuration of the system

### 3.1 Adding the control computer and the application

Before the system can be configured in accordance with the mechanical situation, the respective control computer and the application must be added to your farm system.

#### NOTICE!

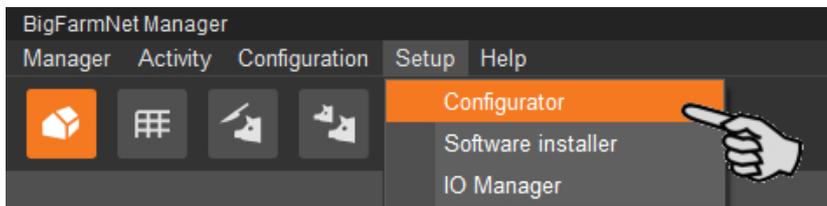
When you create your farm structure with houses, sections and pens, add the corresponding circuit and the valve to each pen name. Make sure that the counting order of the sections and pens is correct. Discuss the counting order with the customer beforehand.

To create a farm structure, please follow the instructions in the "BigFarmNet Manager – Installation/Configuration" manual.

Proceed as follows:

1. Click on "Configurator" in the "Setup" menu.

This opens the "Configurator" window.

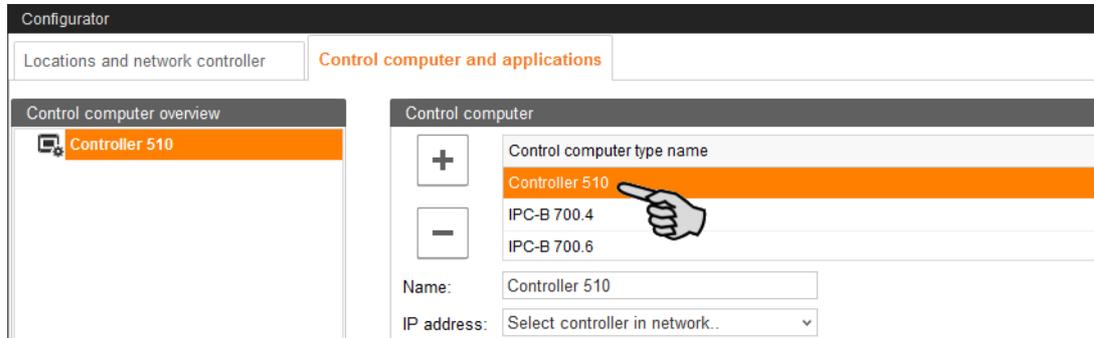


2. Click on the "Control computer and applications" tab.

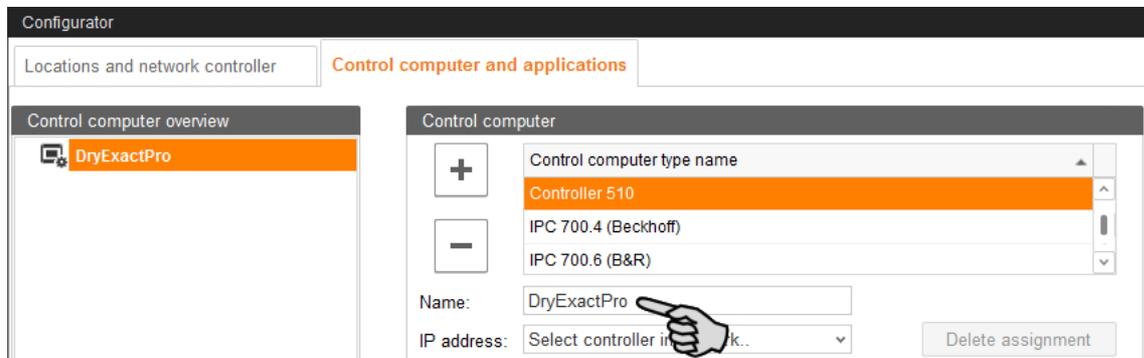


3. Select the correct control computer in the upper part of the window under "Control computer" and click on the plus button.

The control computer is now added on the left under "Control computer overview".



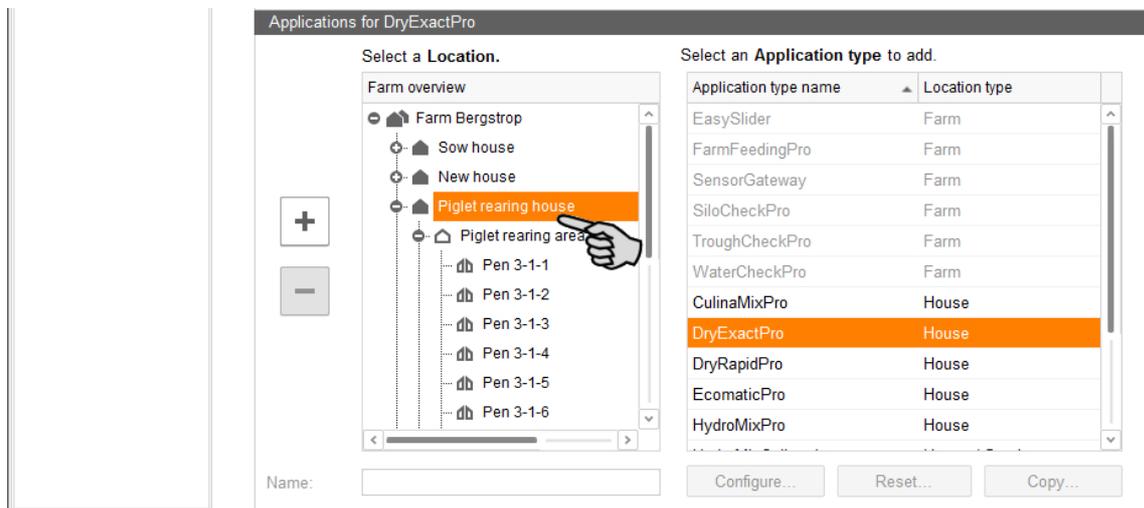
4. Enter a name for the control computer.



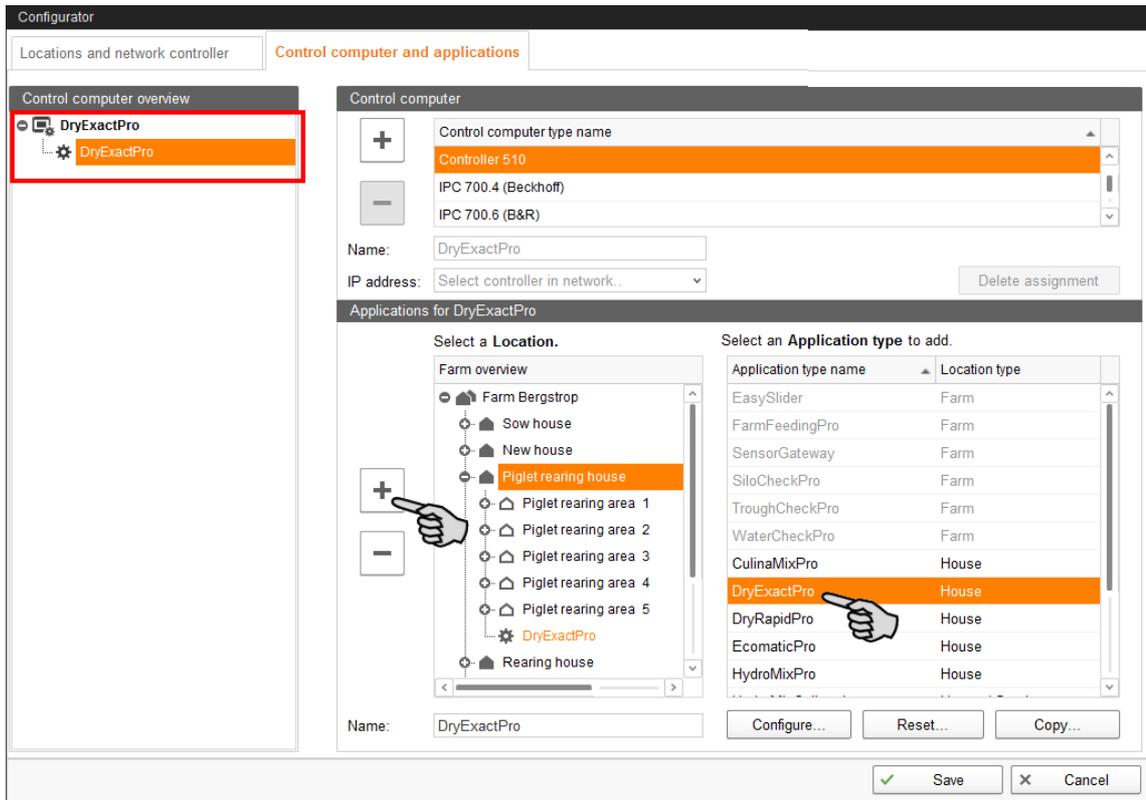
5. From the lower part of the window, select the location where the system is to be operated.

The applications available for selection depend on the selected location.

The DryExactpro / EcoMaticpro applications can only be added to the "House" level.

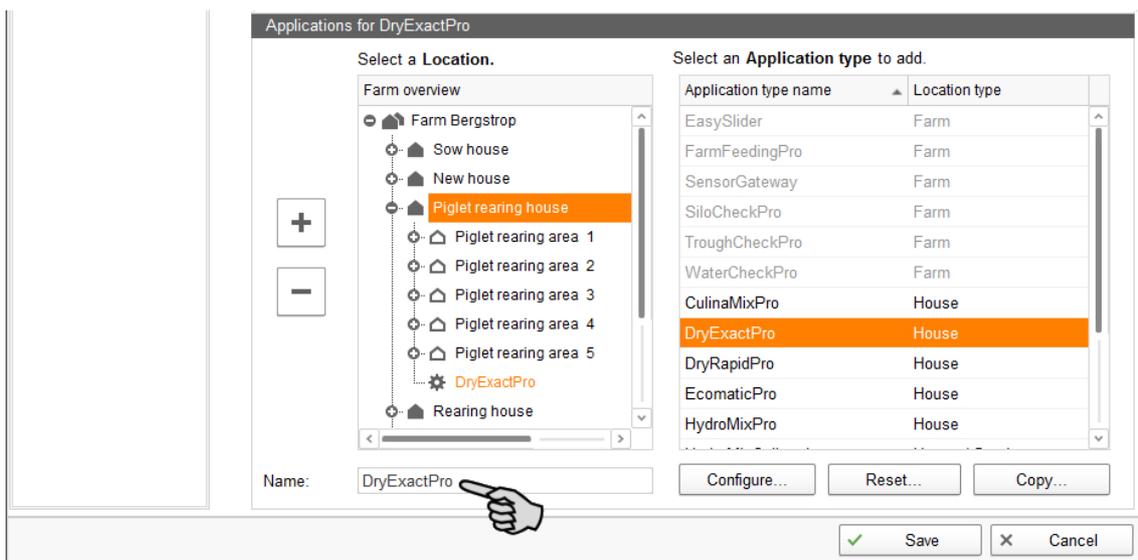


- Select the correct application in the table on the right and click on the plus button to the left.

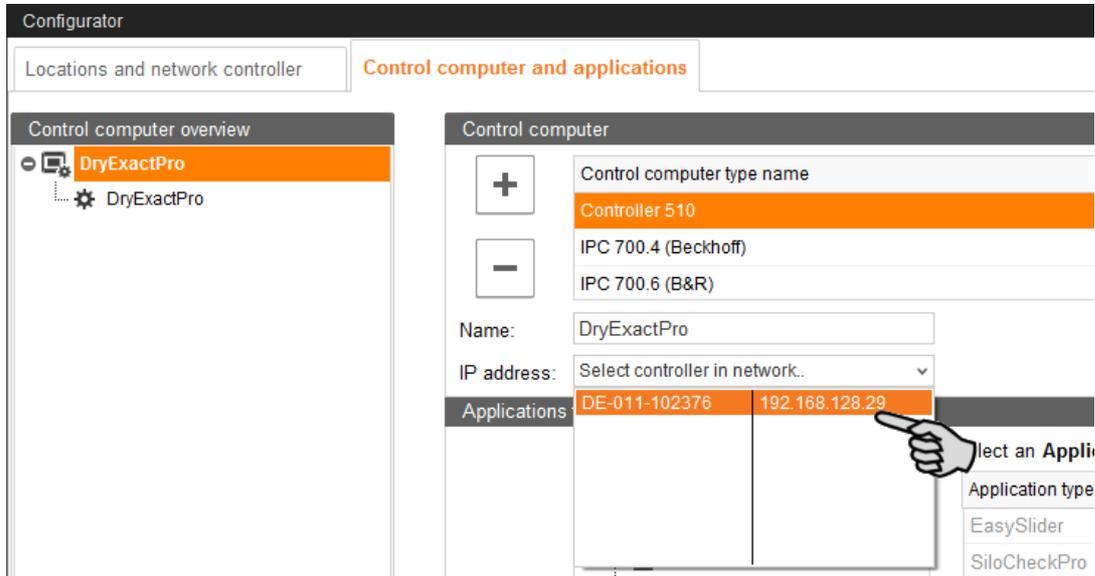


The selected application is assigned to the control computer on the left under "Control computer overview". In the structure, the control computer is displayed on the upper level and the respective application on the lower level.

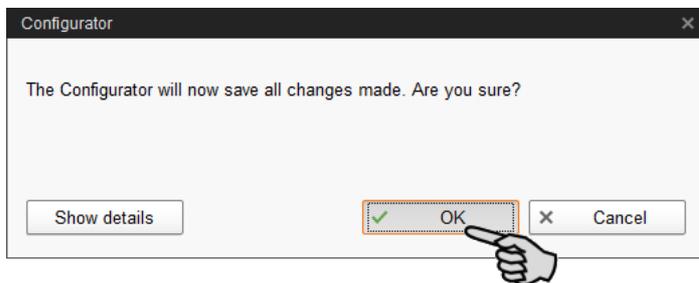
- Enter a name for the application.



8. Click on the level of the control computer in the left-hand part of the window under "Control computer overview".
9. Assign the corresponding IP address to the control computer, if known.  
If the IP address has not been set up yet, you will need to add it later on.



10. Click on "Save" in the bottom command bar of the "Configurator" window after having configured all settings.
11. Confirm these settings by clicking on "OK".



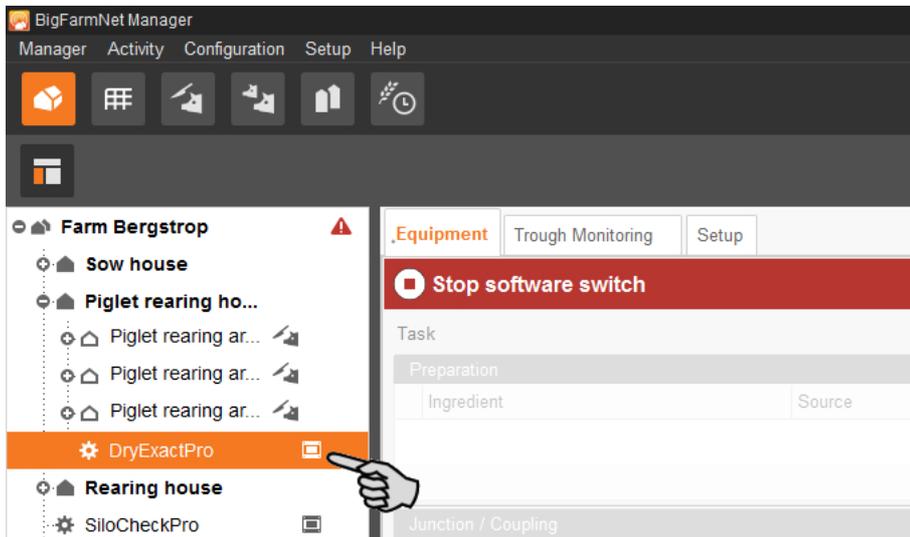
12. Confirm these settings again by clicking on "OK" in the next window.



## 3.2 Configuring settings in the Composer

The Composer is used to configure the system according to the mechanical situation. All functions of the installed system must usually be defined once here. Proceed as follows:

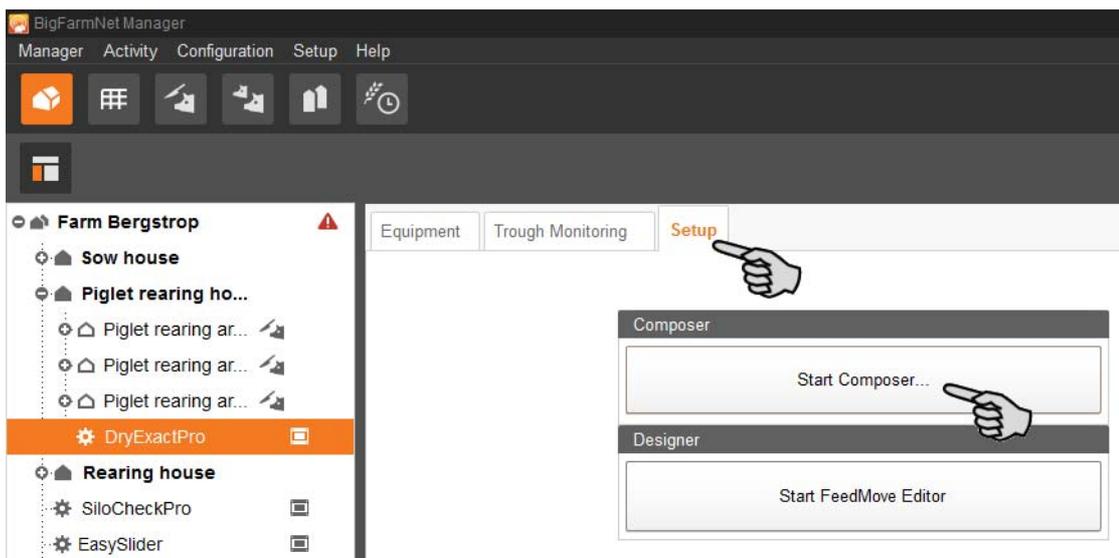
1. In the farm structure, click on the controller icon of the system you want to edit.



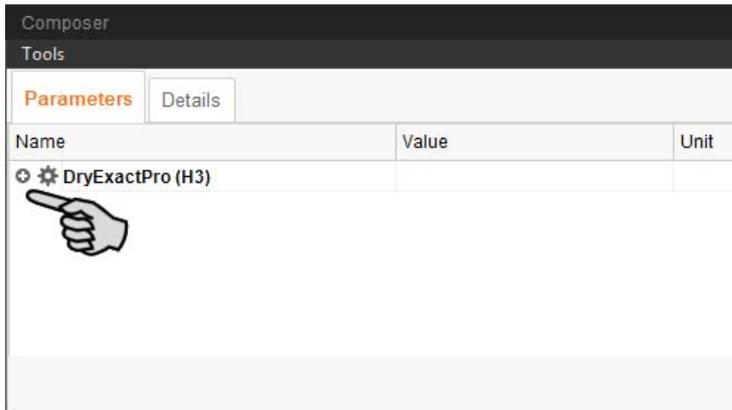
### **NOTICE!**

Check whether the application is running. Stop the application by clicking on  Stop in the upper bar.

2. In the "Setup" tab, click on the "Start Composer" button.



- Click on the plus icon to show hidden parameters.



- Configure the settings in accordance with the structure of the system. Change pre-set values, if necessary.

The column "Comment" contains information for setting of the values. The following explains some of the parameters:

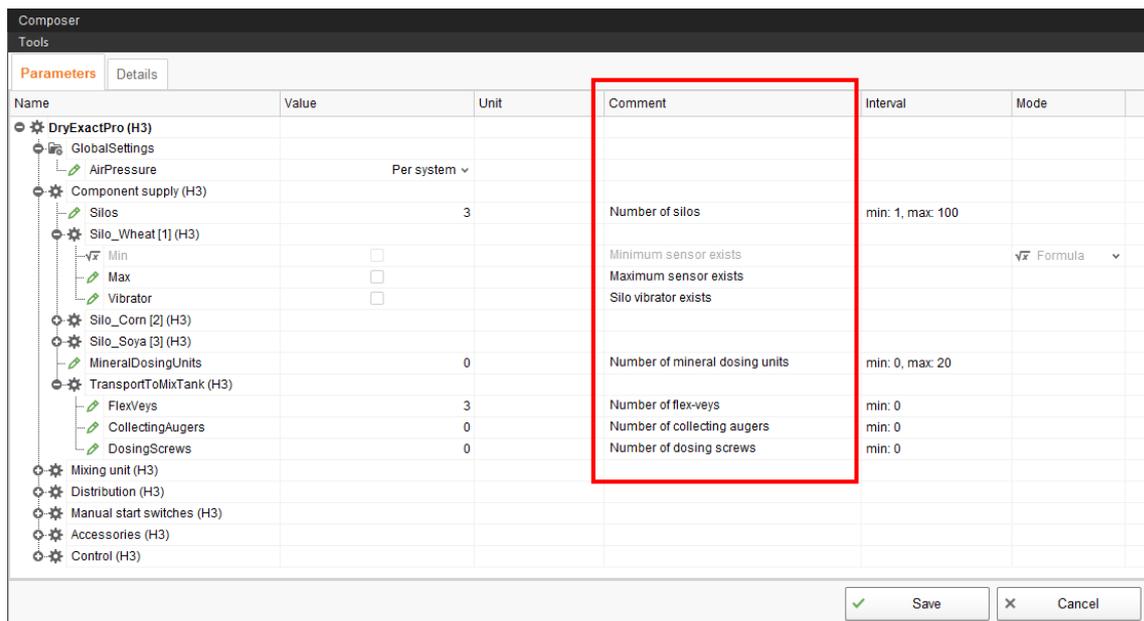


Figure 3-1: Composer DryExactpro

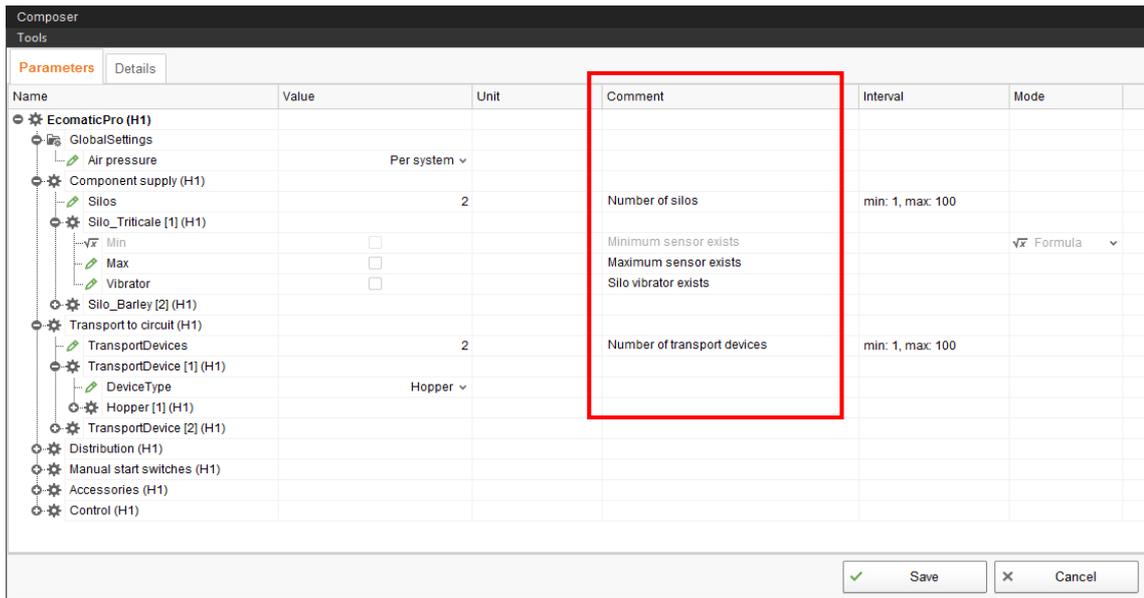
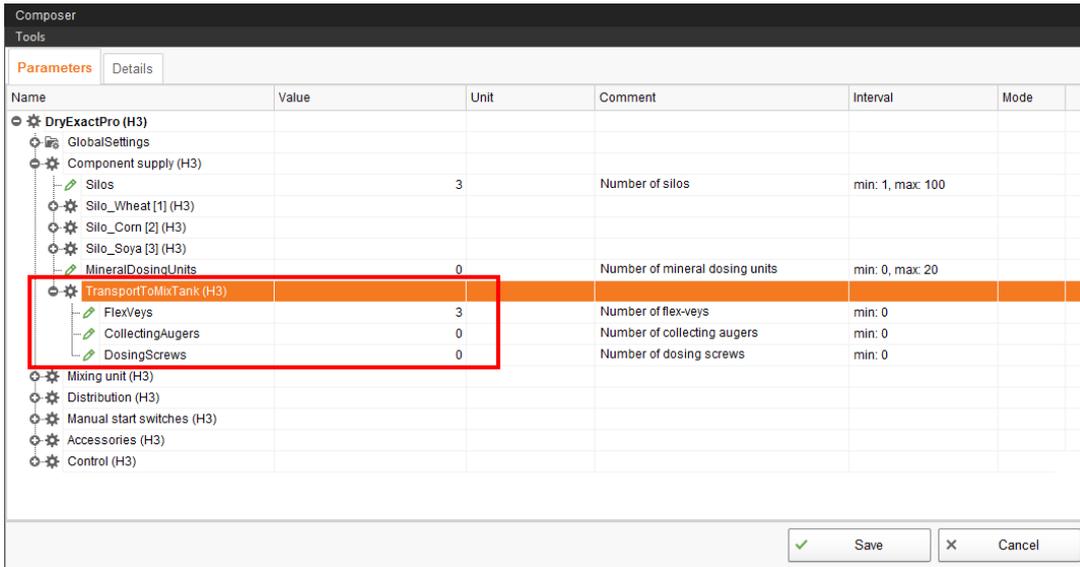


Figure 3-2: Composer EcoMaticpro

### NOTICE!

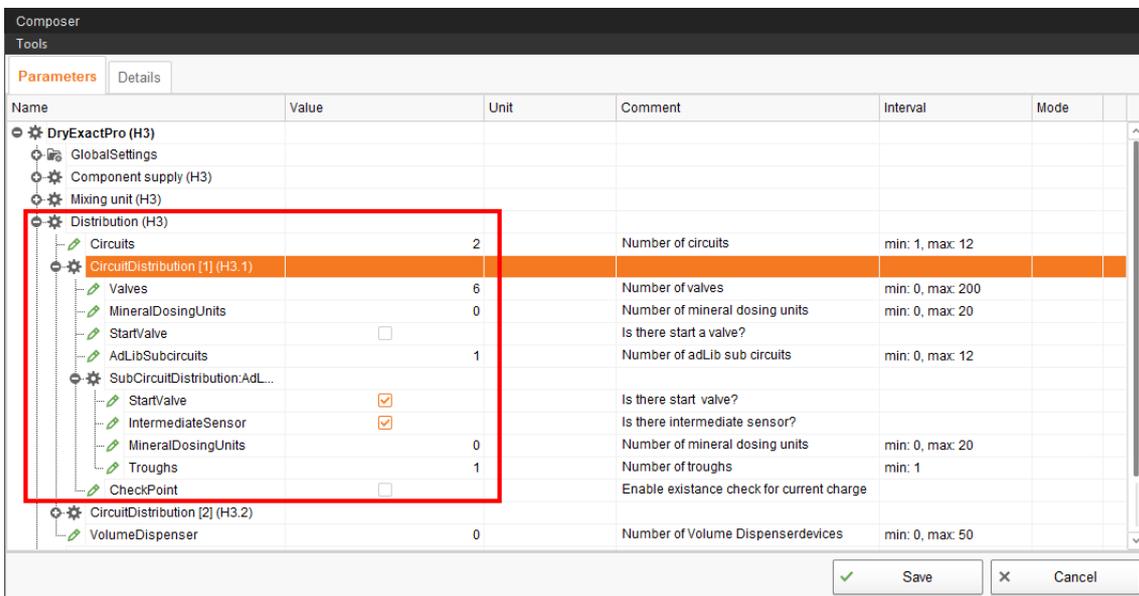
EcoMatic can now be operated without frequency inverter if feed is only transported and not blended.

- **Global Settings > Air pressure:**
  - "Per system": Multiple circuits have been configured in **one** building for the system.
  - "Per circuit": Multiple circuits have been configured in **multiple** buildings for the system.
- **Component supply > Transport to mixing tank: (only DryExact):**
  - **FlexVey** spirals are assigned directly to the silos and transport feed to collecting augers.
  - **Collecting augers** transport feed directly into the mixing tank and are supplied by FlexVey spirals and dosing augers.
  - **Dosing augers** are assigned directly to the silos and transport feed to collecting augers.



• **Distribution > Circuit distribution:**

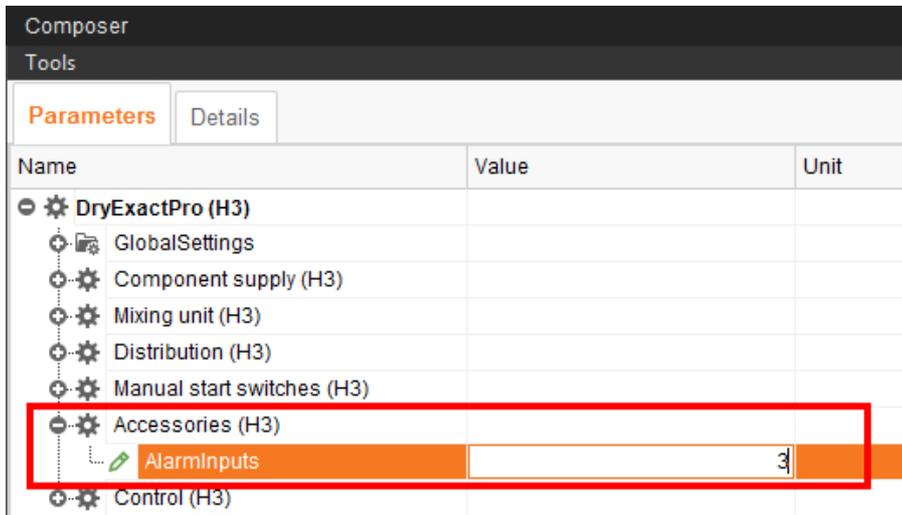
- **Start valve** is activated if the circuit is to be defined as subcircuit.
- With regard to the **ad lib subcircuit** (Subcircuit Distribution: AdLib), the **intermediate sensor** turns off the mixing unit and **troughs** are additionally generated pens/feeders.
- Check the box for **Check point** if a sensor to check the supply of the current feed batch is installed in the feed pipe.



- **Manual start switches** means the start sensor that is controlled either manually or by time. The start sensor is used for volume dispensers and ad lib circuits. Define the respective type of switching in the Task Manager, see see chapter 5.1.3 or chapter 5.1.5.

- **Accessories > Alarm inputs:**

Define additional inputs for alarms that are not configured by default in the system as alarm input, e.g. alarm for the motor protection of a mixing tank. These alarm inputs are linked to the IO cards in the IO Manager, as are the other functions. In the FeedMove Editor, the alarm inputs are only displayed for visualisation.

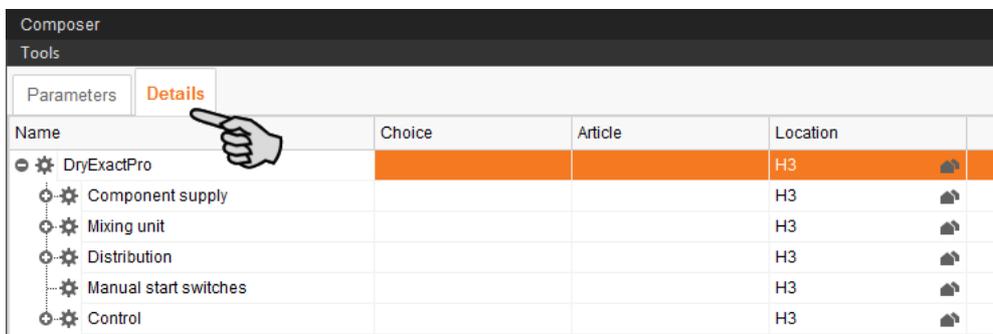


**NOTICE!**

Enter a name for the new alarm input under the tab "Details" (step 7. ). This will help you recognise the alarm should it occur. If such an alarm is triggered, the system will immediately go into error mode, as this is a critical hardware error.

The alarm name will appear in the "Alarm" window under "Alarm details", see chapter 7 "Alarms and warnings".

5. Click on the "Details" tab. Open the structure by clicking on the plus icon. The structure shows all location-related components of the system.



**NOTICE!**

If your farm works with multiple control computers, assign each control computer its own location.

6. Assign a location to each system component, e.g. circuits and valves.

For support, see chapter 3.2.2 "Example: Valves assigned according to the house plan", page 32:

**NOTICE!**

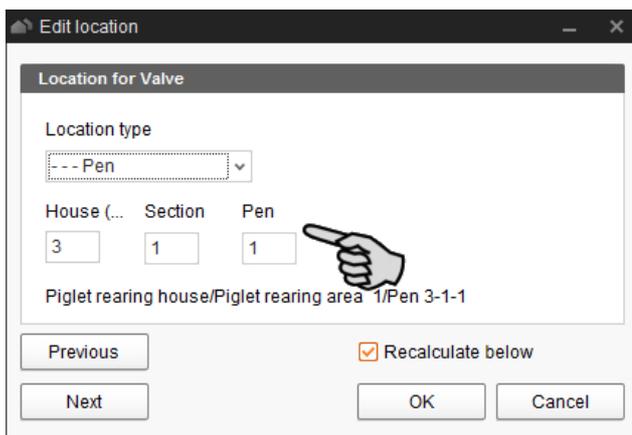
Make sure to refer to the counting order of the customer's house plan when assigning locations to the valves.

- a) Click on the house icon of the system component.



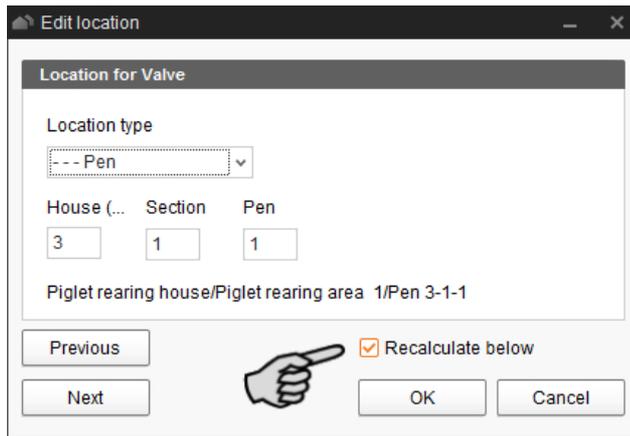
- b) In the next window, enter the number of the correct location.

The selected location is displayed in its entirety below the input field.

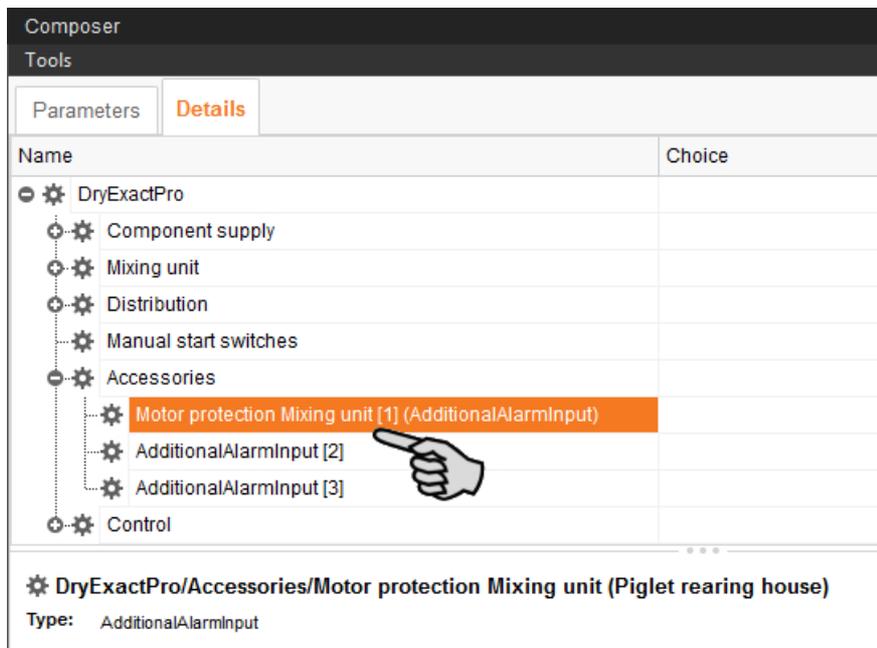


- c) If necessary, check the box "Recalculate below".

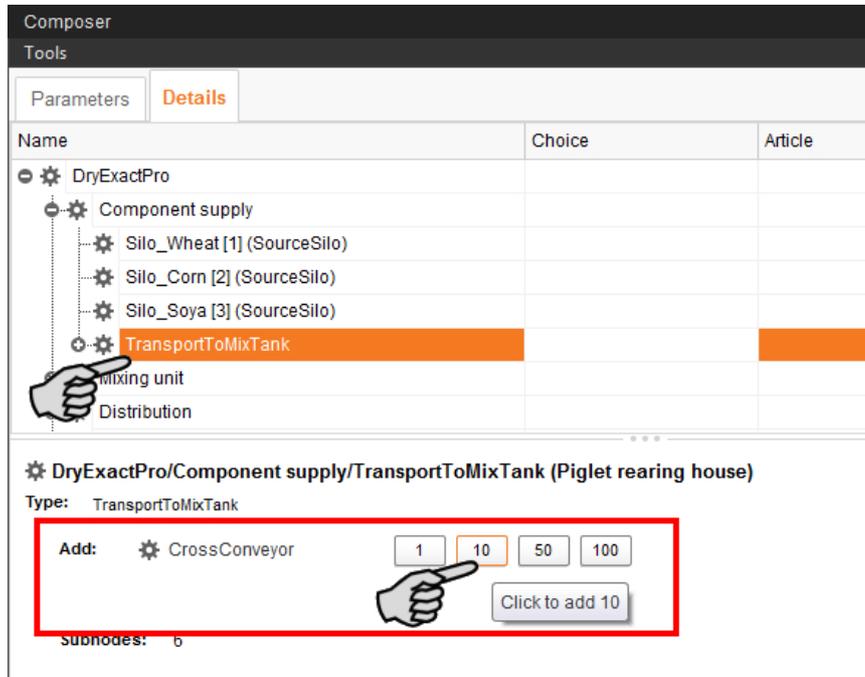
All below (subordinate) system components are then automatically assigned to the new location.



- d) Click on "Next" to continue assigning locations to the system components on the same level.
  - e) Click on "OK" after you have finished to accept the input.
7. Enter a name for the following system components so the assignment is clear.
- Silo:  
Click on the silo and add its location or the planned component, e.g. "Silo\_Wheat". Also refer to "Settings" in chapter 6.2 "Silo data".
  - Alarm input:  
Double-click on the alarm input and enter the new name. The pre-set name appears additionally in brackets.



8. You may add further technical parts for the following system components.
- Component supply > Transport to mixing tank: Cross conveyor
  - Distribution > Circuit distribution > Circuit: Sensor +24 V
  - Distribution > Circuit distribution > Circuit > Drive: Protective motor switch
  - Control > Control box: BDM frequency inverter



- a) Click on the plus icon to expand the structure until the correct system component is visible.

The lower part of the window shows the technical part that can be added.

- b) Click on one of the available numbers to select the desired quantity.

### **NOTICE!**

Check list Composer:

- Did you open all system components using the structure?
- Did you configure all settings according to the structure of the system?
- Did you assign all system components to the correct location (refer to the houseplan?)

9. Click on "Save" to accept all settings for the Composer.

### 3.2.1 Dosing from one to another limited circuit

It is possible to dispense feed from one limited circuit to another limited (sub) circuit. Two or more circuits are generated in the Composer and connected by means of the FeedMove Editor in this case. This allows even large distances to be realised.

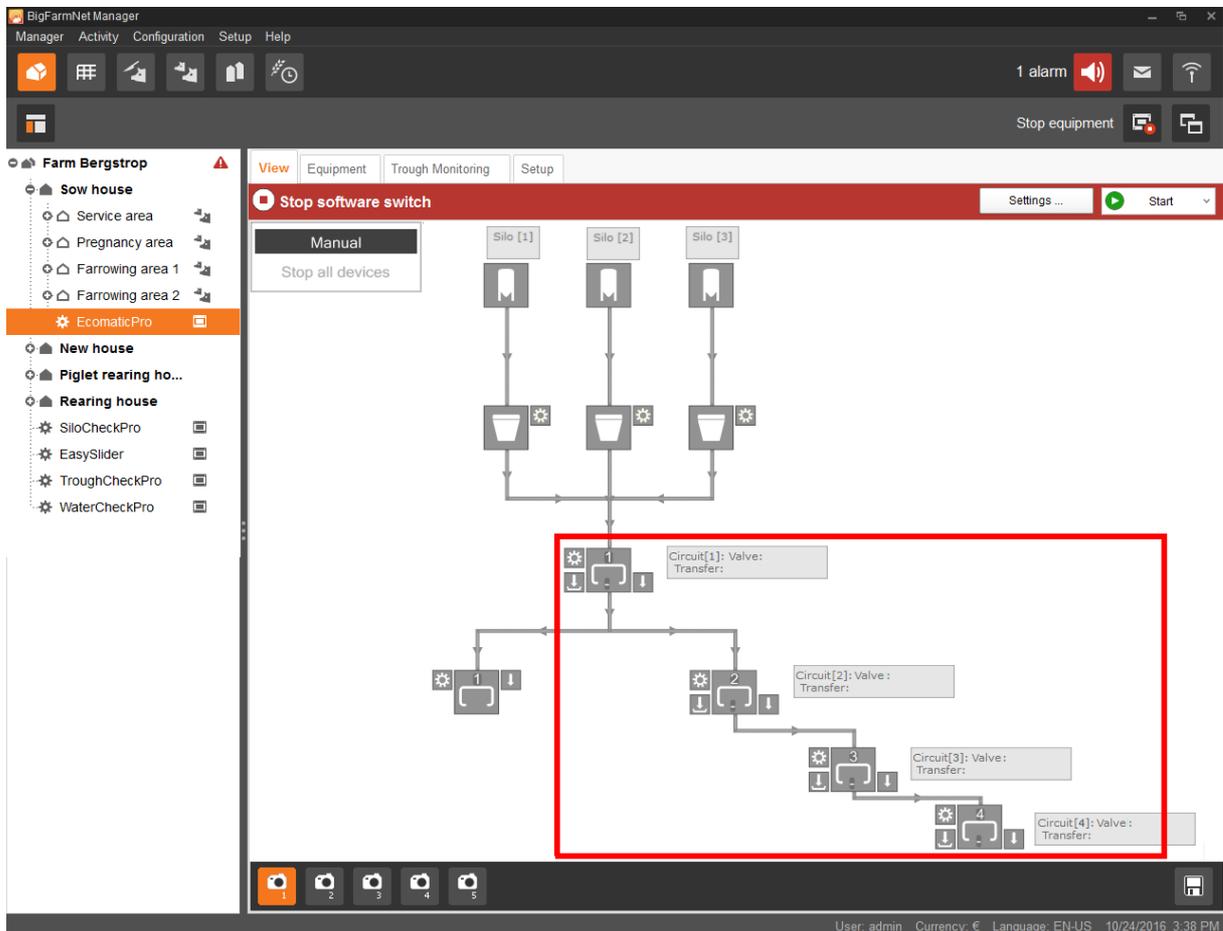


Figure 3-3: EcoMatic with three connected subcircuits

1. In the Composer, generate the desired number of circuits under **Distribution**, see chapter 3.2 "Configuring settings in the Composer", page 23.
2. Define specific circuits as subcircuits under the respective **Circuit distribution** by checking the start valve box. The start valve is the transfer valve of a subcircuit.
3. Use the FeedMove Editor to connect the circuits, thus creating subcircuits, see chapter 3.4.2 "Creating links", page 47.

### 3.2.2 Example: Valves assigned according to the house plan

In the BigFarmNet Manager, the valves in the feed circuit are assigned to pens (valve = pen). BigFarmNet Manager numbers the pens chronologically based on time of creation at each location. On actual farms, the specific order of sections and pens depends on how they are accessed and is thus based on a house plan, see figure 3-4.

The first valve is numbered valve 1, with the numbering continuing chronologically along the feed circuit (shown as a red line here) until the circuit returns to the drive. The numbering of the valves and the assigned location therefore differ. This means that in the BigFarmNet Manager, the valves must be assigned to the location (section and pen) according to the house plan.

figure 3-4 shows an example for a house plan with sections, pens and a feed circuit with valves:

- 6 sections with 8 pens each (pen numbers in the circles)
- 1 feed circuit (red line)
- 48 valves (numbers in the orange rectangles)

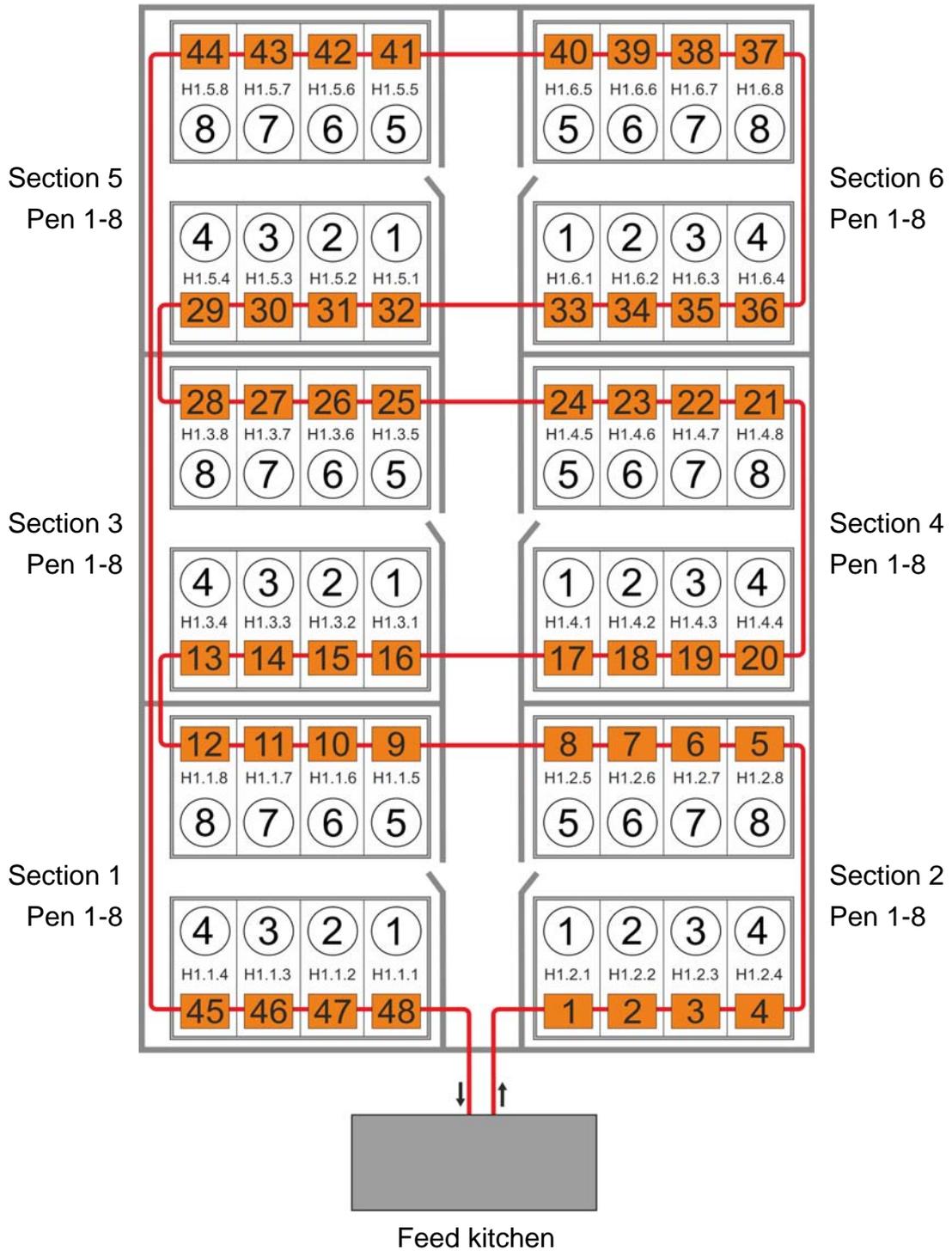


Figure 3-4: Example: house plan

The following figure shows the first 15 valves that have been assigned to the locations in accordance with the feed circuit and the house plan of figure 3-4:

- Valves 1-8 are assigned to the pens 1-4 and 8-5 in section 2.
- Valves 9-12 are assigned to the pens 5-8 in section 1.
- Valves 13-15 are assigned to pens 4-2 in section 3.

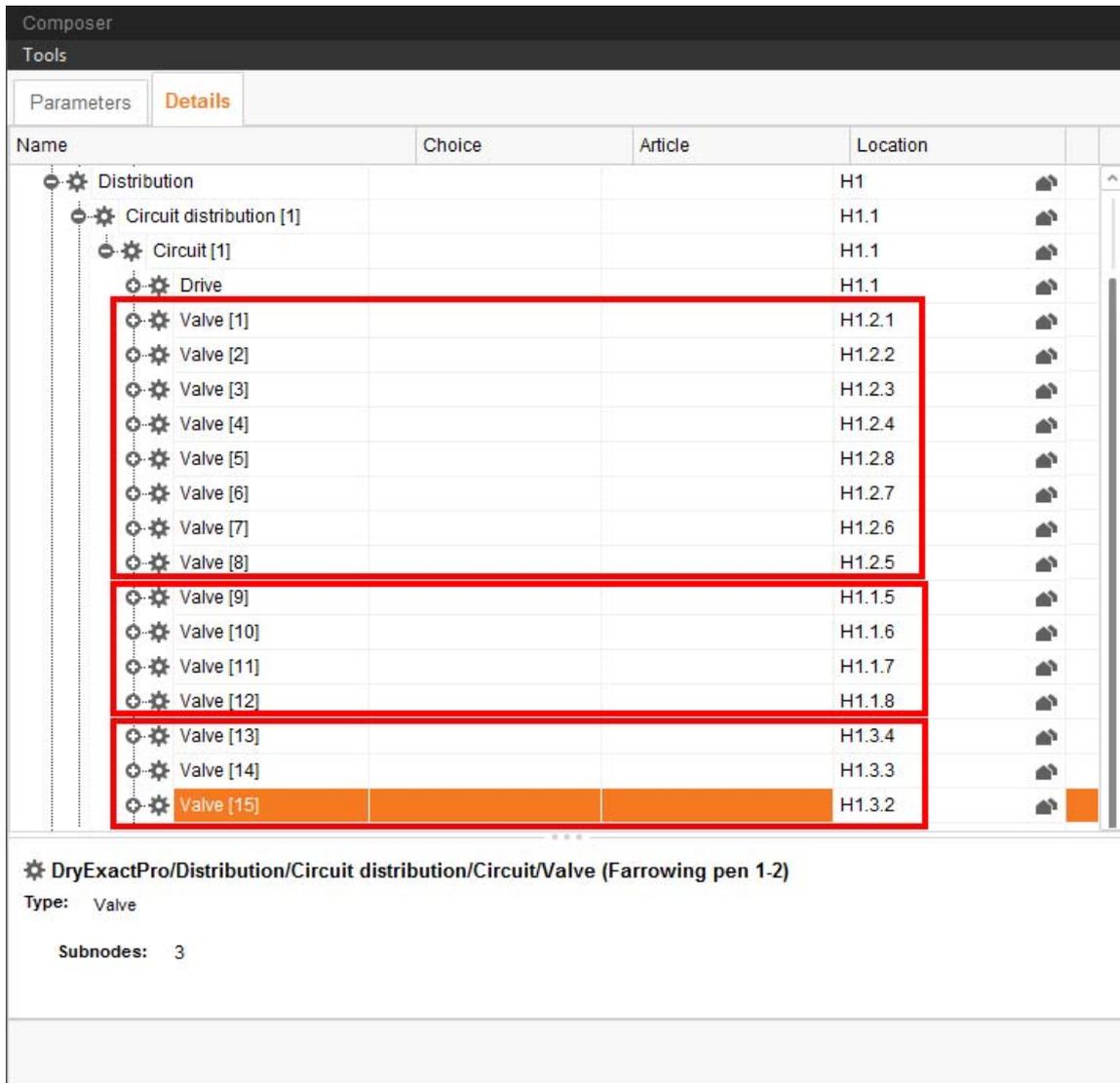


Figure 3-5: Assignment of valves according to the house plan

### 3.3 Depicting the system in the FeedMove Editor

The FeedMove Editor is a program used to edit the graphical depiction of the installed system. All system components you have created in the Composer are displayed as icons in the FeedMove Editor. In the FeedMove Editor, you can connect the individual system components according to the installed system. You thus define the route of the feed move.

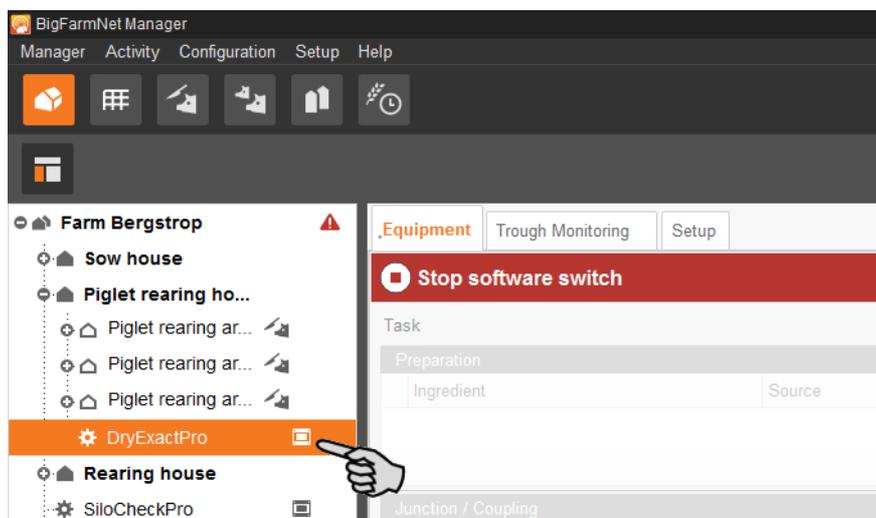
#### NOTICE!

Automatically generated feed moves must be edited!

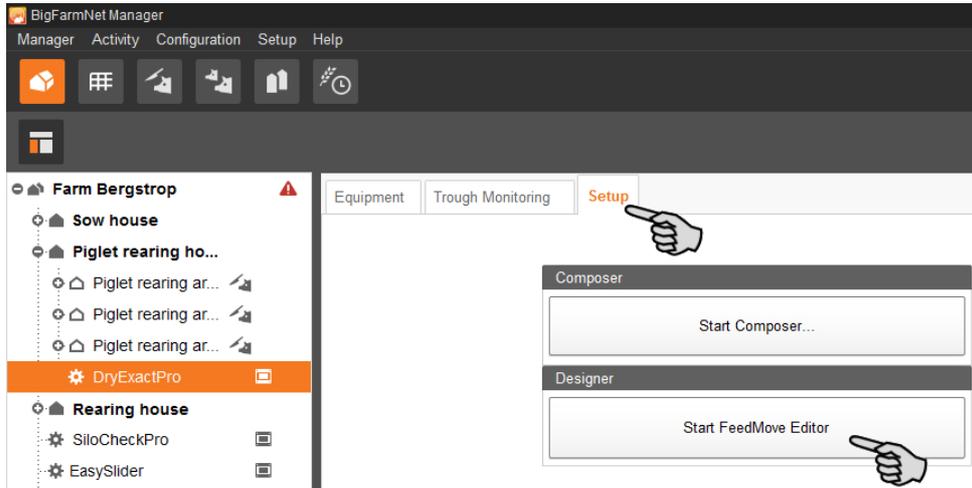
The final graphical depiction is shown in the application window under the new tab "View" later on. This graphical depiction provides you with an overview of the system functions running during operation. You can also operate the system manually with the BigFarmNet Manager, see chapter 3.5 "Manually controlling the system components", page 52.

Start the FeedMove Editor as follows:

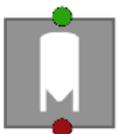
1. In the farm structure, click on the controller icon of the system you want to edit.



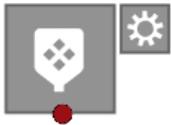
- In the "Setup" tab, click on the "Start FeedMove Editor..." button.  
The "FeedMove Editor" opens in a new window.



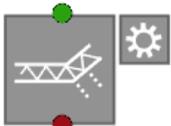
### 3.3.1 Icons of the system components



Silo



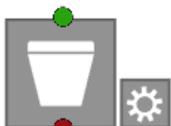
Mineral dosing unit



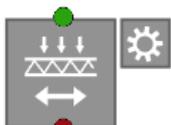
FlexVey



Mixing tank



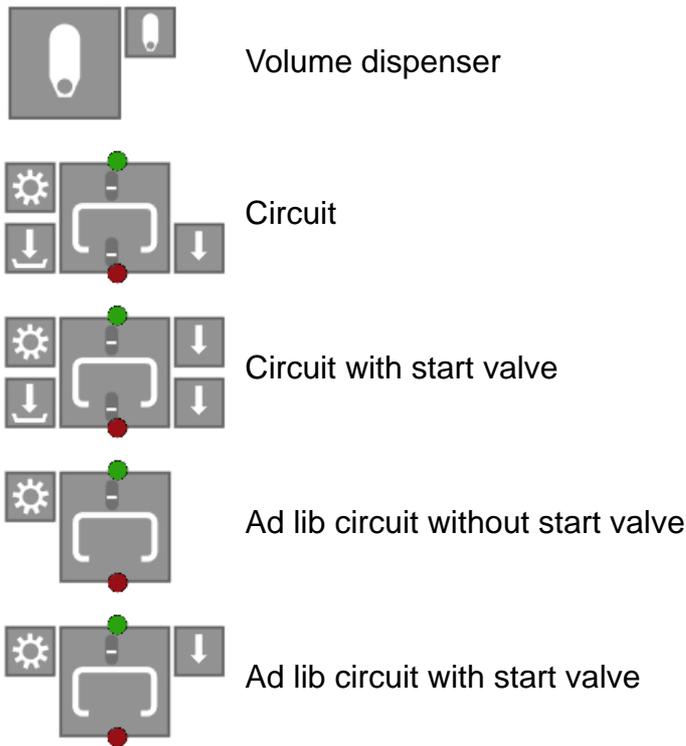
Feed hopper



Cross auger



Hopper flap



### 3.3.2 Tool bar

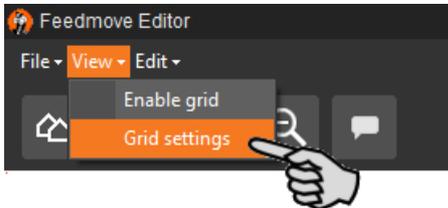


	View	Complete, enlarged view of the system
	Grid	Showing and hiding the grid lines in the drawing pane
	Zoom in/Zoom out	Zooming of the current view in the drawing pane
	Description	Showing and hiding the names of the individual system components
	Undo/redo	Undoing or redoing an action
	Cameras	Saving of different system views

### 3.3.3 Configuring the grid

If you want to align the system components based on a grid, click on . Adjust the size of the grid fields as follows, if necessary:

1. Click on "Grid settings" in the "View" menu.



2. Enter the correct values into the input fields or change them using the arrows pointing upwards and downwards.
3. Accept these inputs by clicking on "OK".

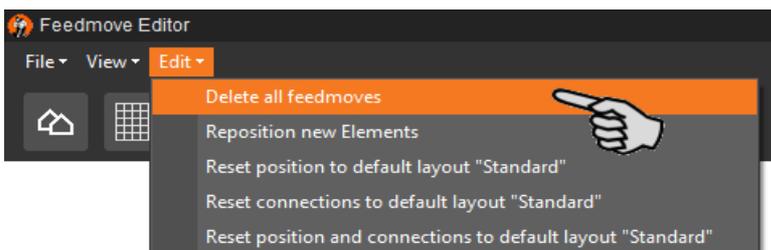
### 3.3.4 Linking system components

#### **NOTICE!**

If you would like to use the default feed moves, make sure that they are possible with the system you have installed.

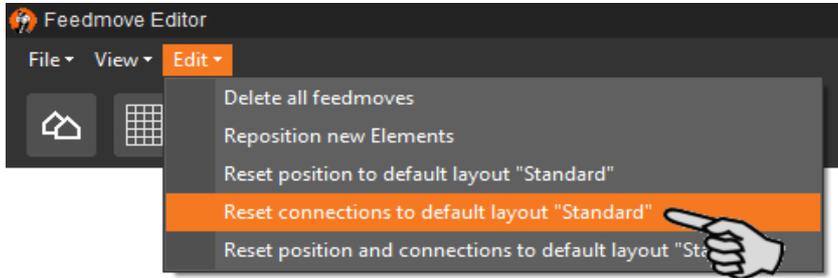
To link system components, you might have to delete existing links first.

- **Deleting individual links:**
  - a) Move the mouse pointer to the link you want to change.  
The mouse pointer will change its shape .
  - b) Click on the link.  
The colour of the link changes to orange.
  - c) Press the "Delete" key on your keyboard.  
The link is deleted.
- **To delete all links**, click on "Delete all feed moves" in the menu "Edit".



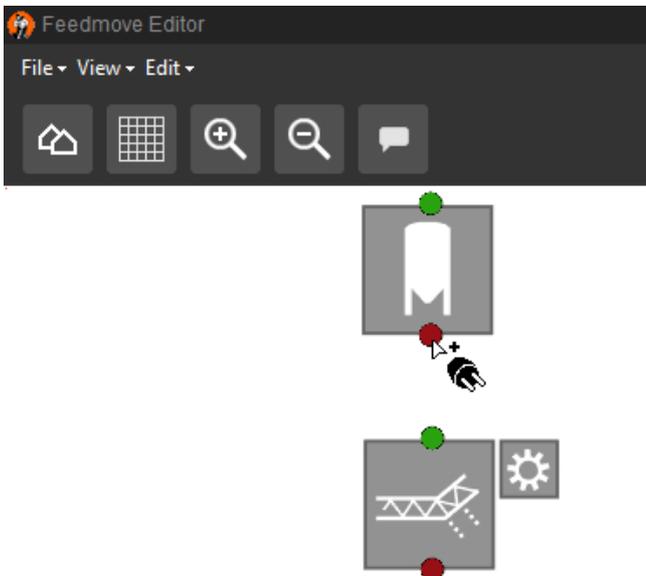
- **Resetting to default:** For EcoMatic, the system components are connected automatically by default links. If this configuration has been changed, you may reset the default links and continue using this default.

In the menu "Edit", click on "Reset connections to default layout 'Standard'".



4. Move your mouse pointer to the **red dot** of the specific system component.

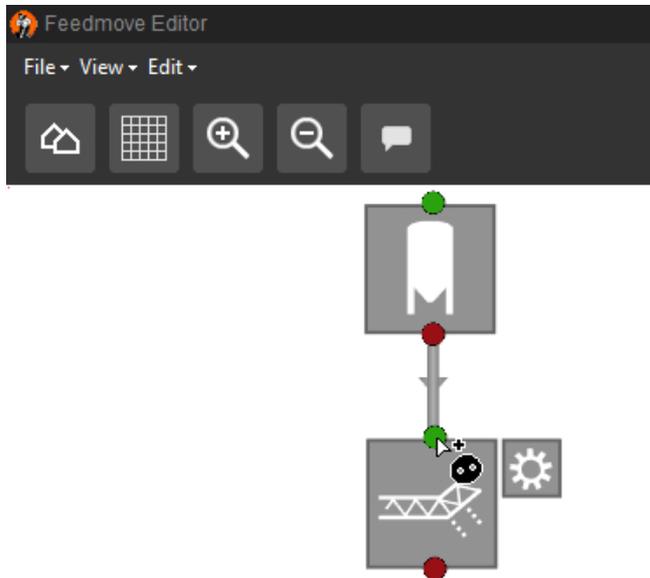
The mouse pointer will change its shape  .



5. Click on the red dot and hold the mouse button.

6. Move the mouse pointer over the icon of the system component to which you want to link the selected system component.

The mouse pointer will change its shape  and a line linking both components appears. The flow direction is indicated by an arrow within the line.



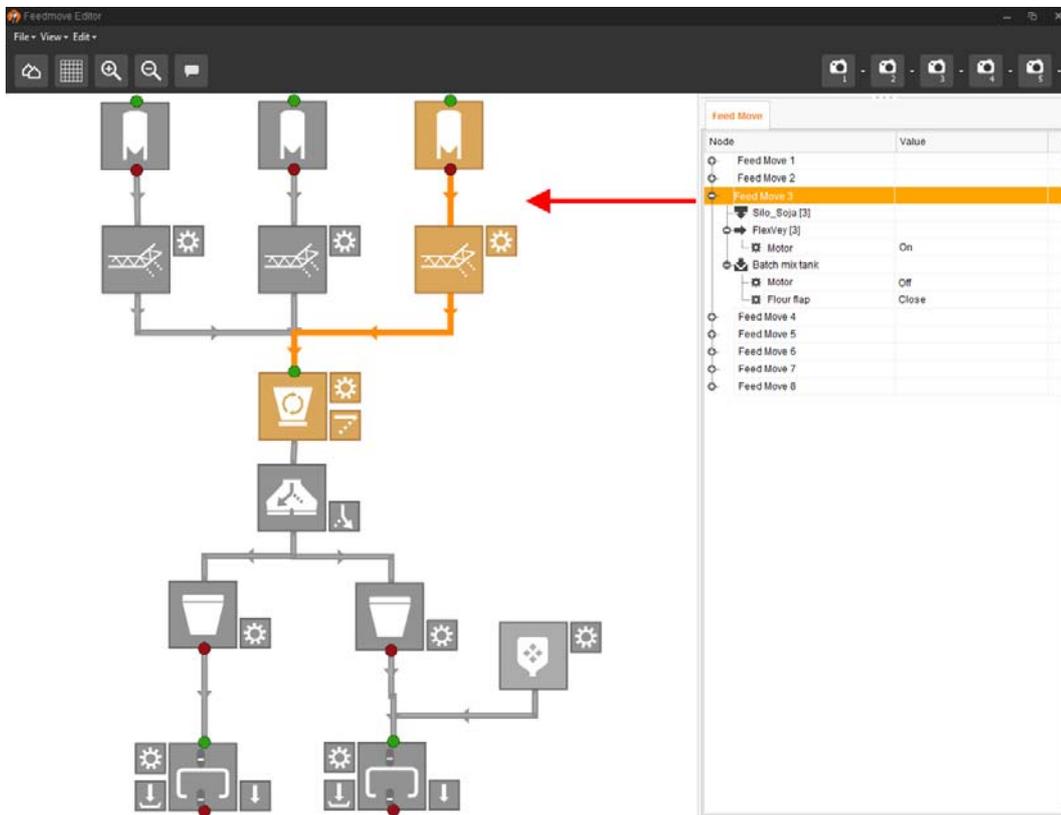
7. Release the mouse button.

The two system components are now linked. The corresponding feed move is created in the window to the right.

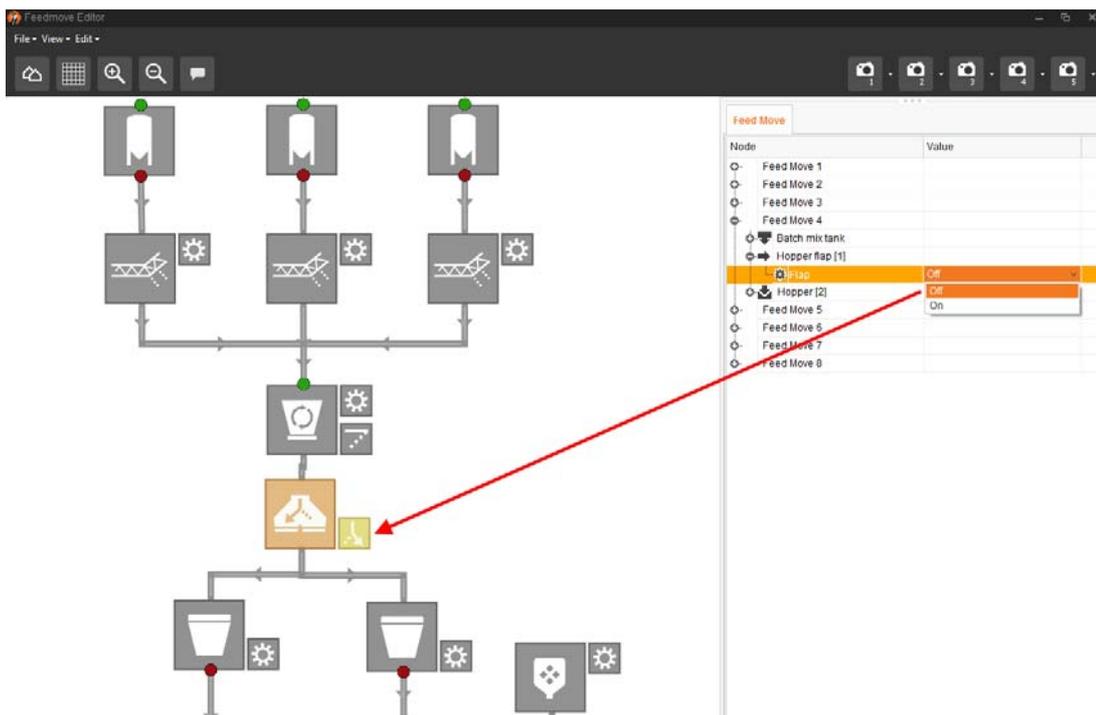
Linked system components without green or red dot cannot be linked further.

8. Continue linking all system components so that a complete feed move route from the silo to the circuit is created.

9. In the window on the right-hand side, click on a feed move to check the link. The corresponding part of the route is marked orange in the overview. Furthermore, the feed move structure opens and all technical elements belonging to this move are displayed.



10. Define the flap position for the selected part of the feed route.



### 3.3.5 Selecting and moving system components

1. Move the mouse pointer over the respective system component.

The mouse pointer will change its shape . The name of the system component is additionally displayed as tooltip for a moment.

2. Click on the system component and hold the mouse button.

The colour of the system component changes to orange.

3. Move the system component to the required position and release the mouse button.

Or:

1. Select multiple system components

- a) by drawing a rectangle over the system components while holding the left mouse button

Or:

by clicking on the different system components while holding the Ctrl key.

The colour of the selected components changes to orange.

2. Click into the selected area and hold the mouse button.

3. Move the system component to the required position and release the mouse button.

#### NOTICE!

You can also move objects that are marked orange using the arrow keys on your keyboard.

---

### 3.3.6 Adjusting and saving views

#### NOTICE!

The below mentioned functions of the mouse depend on how you have configured your mouse in Windows.

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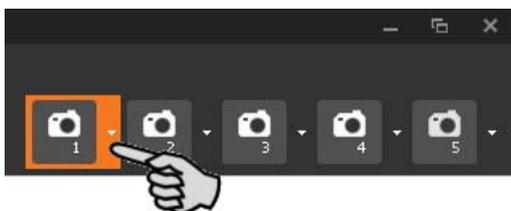
Adjust the desired view of the window as follows in the drawing pane:

- Zooming in and out:
  - Roll the scroll wheel of your mouse.
- Moving to the left and to the right:

- Hold down the scroll wheel and move the mouse to the right or to the left.  
OR  
Hold down the Shift key while rolling the scroll wheel of your mouse.
- Moving up and down:
  - Hold down the scroll wheel and move the mouse up or down.  
OR  
Hold down the Control (Ctrl) key while rolling the scroll wheel of your mouse.

Save specific views of the depiction. You can retrieve saved views later on in the application window under the "View" tab. You can save up to 5 different views: one view for each camera icon.

1. Adjust the view as required.
2. Click on the arrow pointing downwards at one of the camera icons.



3. Click on "Current view" in the context menu. The view is now saved.



4. If you would like to retrieve the saved view later on, click on the corresponding camera icon.

### 3.3.7 Closing the FeedMove Editor

To finish working in the FeedMove Editor, save and close the program:

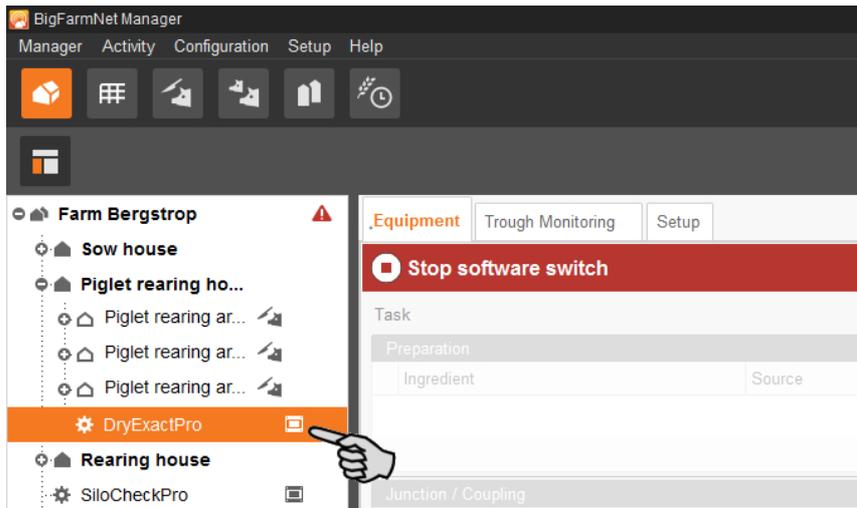
1. Save your work by clicking on "File" > "Save" and close the program by clicking on the X in the upper right corner.  
OR:  
Close the program directly by clicking on the X in the upper right corner.  
The software automatically recognizes unsaved changes and shows a warning.

2. Click on "Yes" to save your changes.

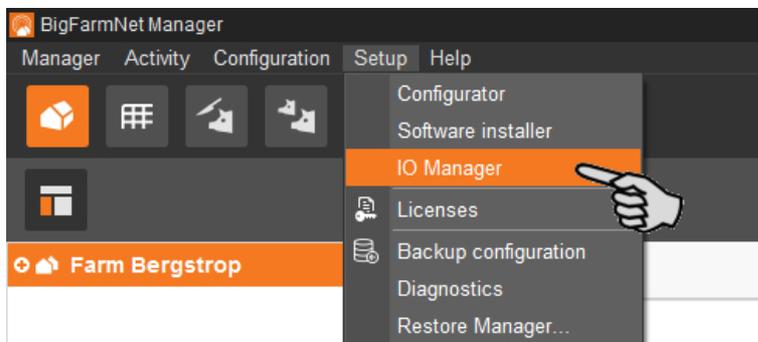
### 3.4 Configuring the IO Manager

The control is set up in the IO Manager. Assign the functions of the system that were defined in the Composer in the previous step to the IO cards.

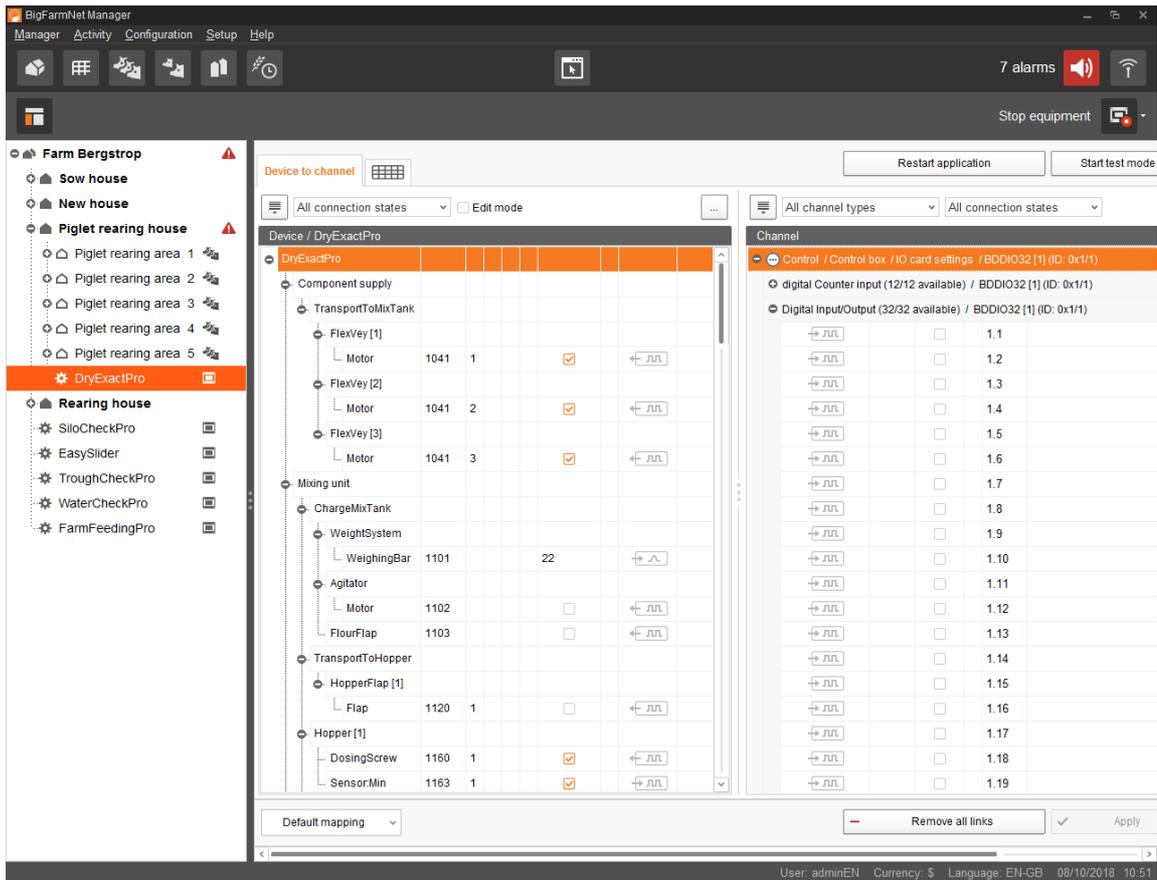
1. In the farm structure, click on the controller icon of the system you want to edit.



2. Click on "IO Manager" in the "Setup" menu.



The IO Manager opens in the application window. The left-hand part of the window shows the individual devices of the system under "Device". The right-hand part of the window displays the channels of the IO cards under "Channel".

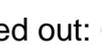


Adjust the view in the IO Manager as follows using the upper bar:



-  Expanding or collapsing the structure entirely
-  Displaying the device and/or channel according to the connection state
-  Showing the control cabinet number
-  Showing the channel according to the channel type

The interfaces of the devices and the IO cards are indicated by the following icons:

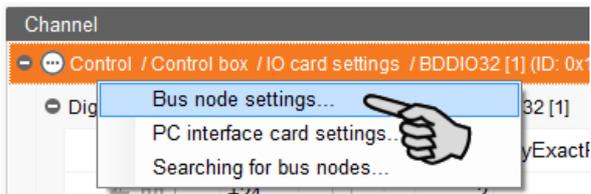
-  Digital output
-  Digital input
-  Analog output
-  Analog input
-  Counter input
-  Serial interface
- Linked interfaces are colored:  
- Non-linked interfaces are grayed out:  

### 3.4.1 Changing the node ID

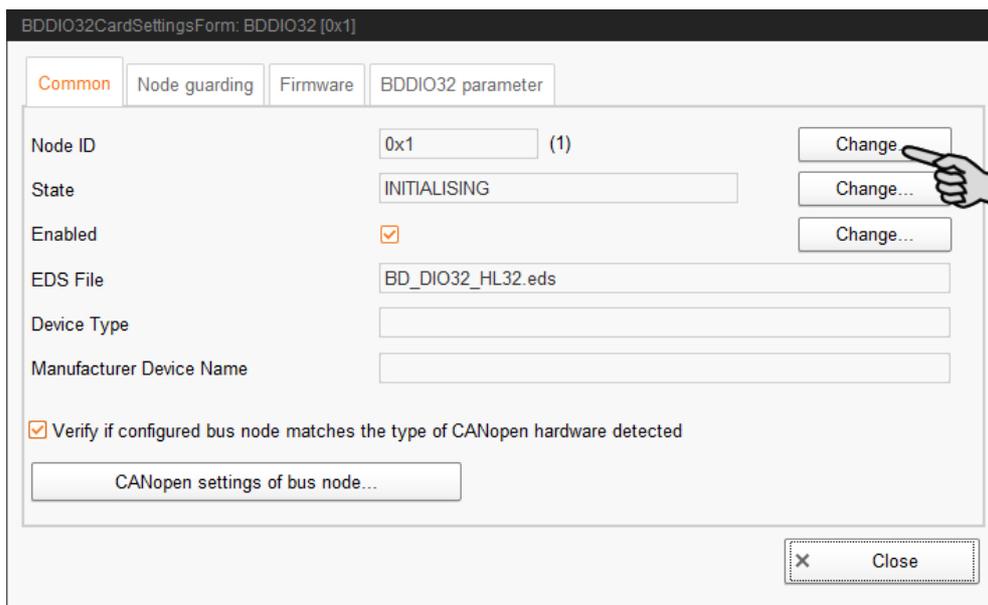
Please refer to the enclosed wiring diagram for information on the devices' CAN addresses. Assign the CAN addresses in accordance with the wiring diagram.

1. On the IO cards to be assigned, check to which CAN ID the rotary switch of each card is set (in the control box).
2. Open the context menu by right-clicking on the IO card (top level) and click on "Bus node settings...".

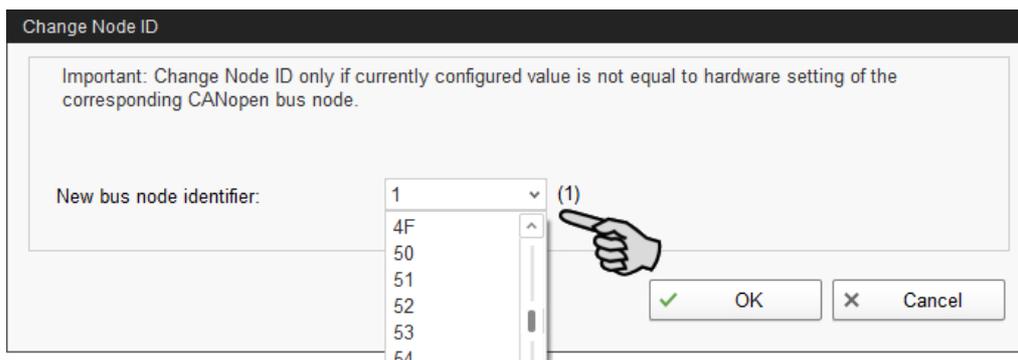
This opens a new dialog.



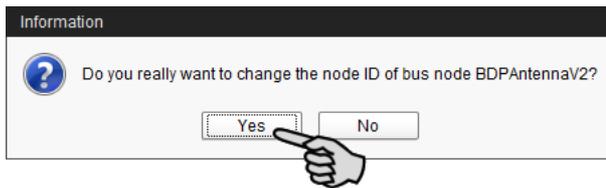
3. In the first tab, click on "Change..." next to "Node ID".



4. Select the new node ID and click on "OK".



5. Confirm the prompt for confirmation.



6. Click on "Close" to close the dialog.

### 3.4.2 Creating links

Link the different devices manually with the corresponding IO card. The system currently does not support the "Default mapping" function (button).

1. Change one or more inputs to outputs with the supply voltage +24 V in the "Channel" area, where necessary.

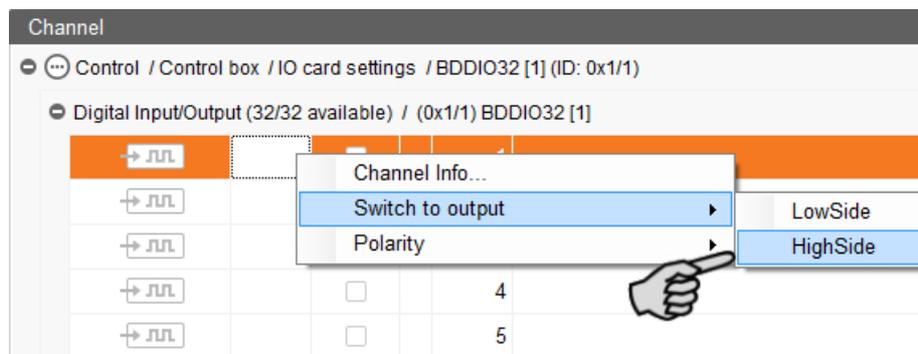
In the preset, only inputs are shown at first.

This function is only possible for BDDIO32 IO cards.

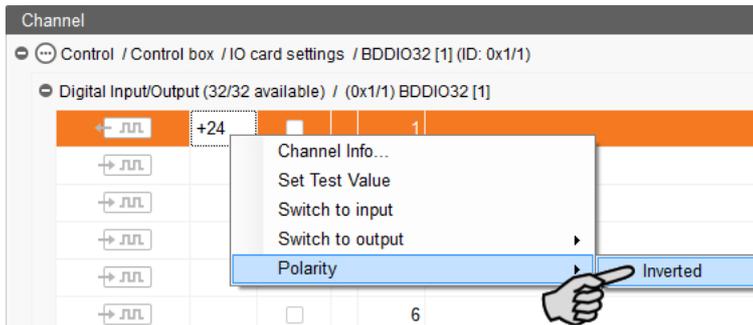
- a) Select one input or select multiple inputs by holding the Ctrl key.  
Multiple editing is only possible for channels of the same type.
- b) Right-click into the marked area.
- c) In the context menu, select "Switch to output" > "HighSide", if the new output should switch to high side (24 V).

Or:

In the context menu, select "Switch to output" > "LowSide", if the new output should switch to low side (ground).



- d) If necessary, you can invert the polarity of the signal by clicking on "Polarity" > "Inverted" in the context menu.

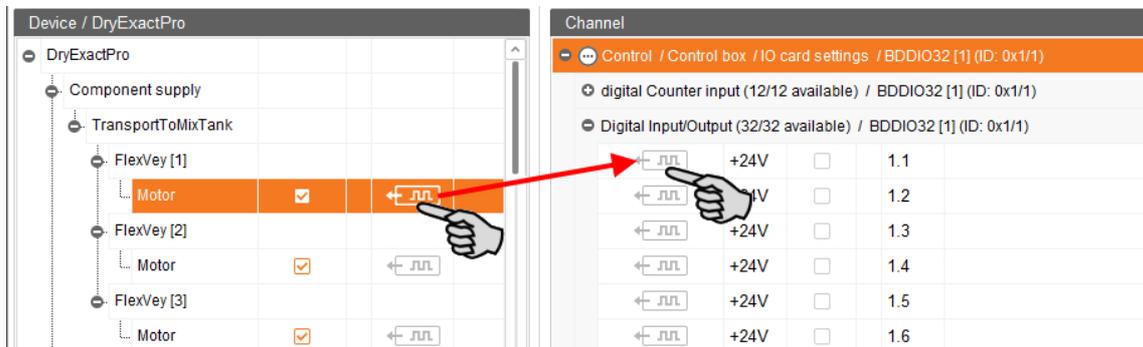


2. Select one of the following options to link the interfaces:

**Option 1:**

- a) Click on the interface of the respective system component and hold the mouse button.
- b) Hold the mouse button and move the mouse to the interface of the correct channel, then release the button.

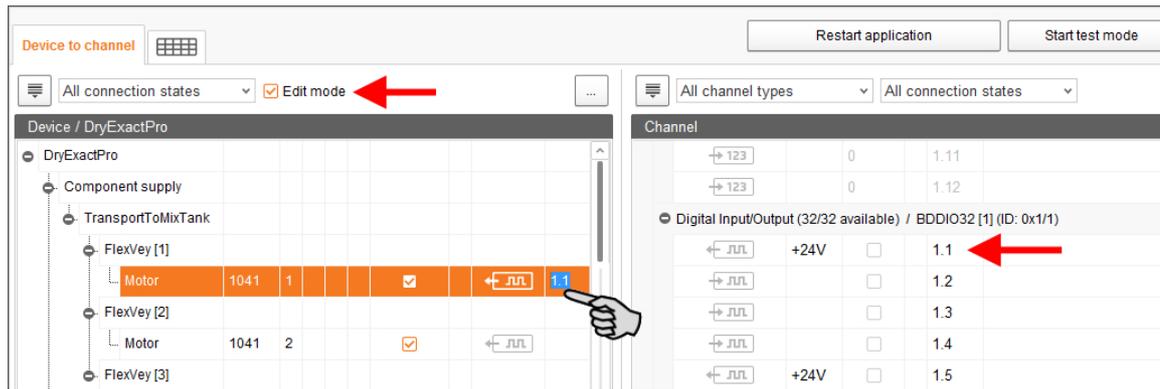
The system component and the channel are now linked. The icons are colored  .



**Option 2:**

- a) Activate the edit mode in the upper bar.
- b) The IO card interfaces have numbers. Enter the corresponding number for the system component's interface.

The system component and the channel are now linked. The icons are colored  .



3. If you have created an incorrect link, right-click on the corresponding linking icon. Click on "Delete connection" in the context menu.

### NOTICE!

Checking links:

Double-click on the respective device to mark the linked channel.

4. Click on "Save" in the bottom command bar after having established all links.
5. Click on "Restart application" at the top of the window to start the control.

### 3.4.3 Importing a wiring diagram

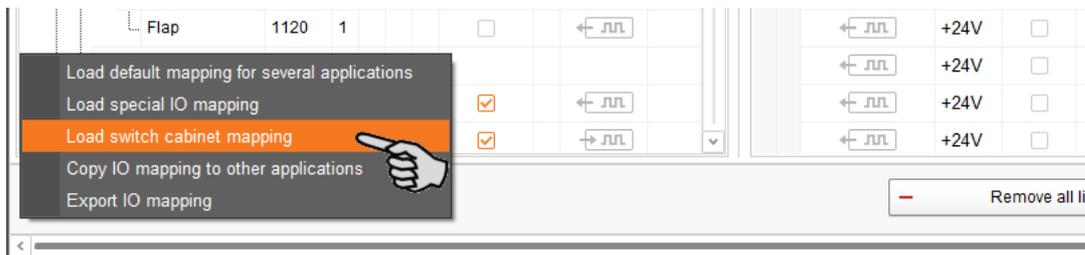
Wiring diagrams can be loaded in .csv format.

1. Click on the arrow pointing downwards next to the button "Default mapping" in the lower bar.

This opens a context menu.



2. Select "Load switch cabinet mapping".



### 3.4.4 Using the test mode

In the test mode of the IO Manager, all devices can be turned on and off to check the correct setup of the control before starting to operate the system.

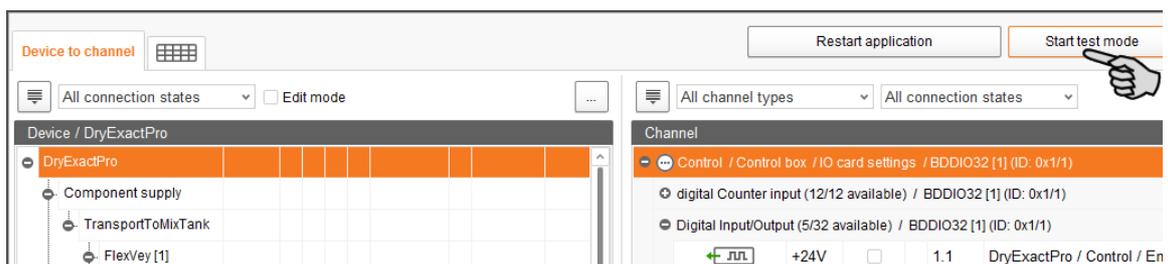
Proceed as follows:

#### **NOTICE!**

Only service technicians may use the test mode. Devices may start in case the system is connected. Make sure that no persons or animals are located in or around the station while using the test mode.

Deactivate the test mode when finished.

1. Click on "Start test mode" in the upper bar.



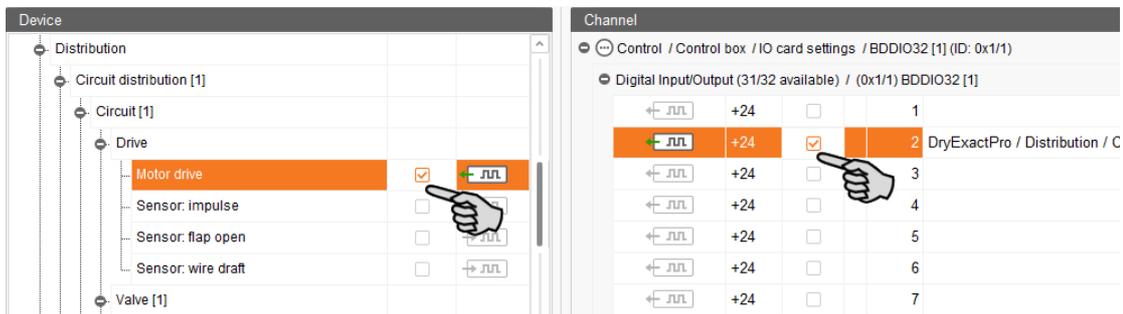
- In the "Device" part of the window, double-click on the interface of the device you want to turn on  .

The linked channel is marked accordingly.

- Click on the check boxes of the selected device and respective channel to activate them.

The actual device is now turned on.

If the actual device does not turn on or if another actual device is running instead, correct the links in the IO Manager or reconnect the outputs of the IO card. Always refer to the overview drawing of the IO card attached to the wiring diagram.



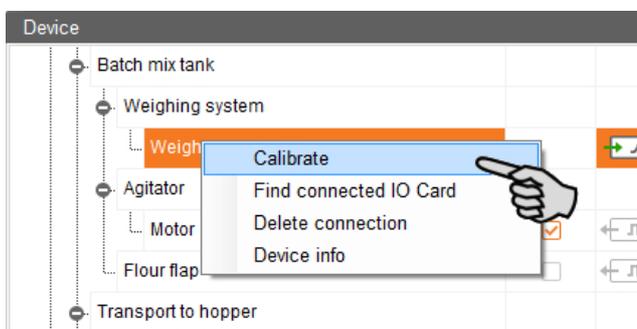
- Turn off the device by deactivating the check box.
- End the test mode by clicking on  in the upper bar.

### 3.4.5 Calibrating the scale

As soon as you have created a link between the weighing bars and the respective weighing box, you can calibrate the mixing tank's scale.

- In the "Device" area, right-click on "Weighing bar".
- In the context menu, click on "Calibrate".

This opens a new dialog window.



3. Click on the "Calibration" tab and set the values as follows:

Scale taring and calibration:

Actual values

Weight  Raw-Value

Taring Calibration

Start-Weight  Raw-Value

End-Weight  Raw-Value

Minimum scale value change

- a) Enter the start weight (usually the value 0) and confirm the value by clicking on the button "Set start raw value".
- b) Enter the end weight (the used calibration weight) and confirm the value by clicking on the button "Set end raw value".

We recommend using half the hopper weight as calibration weight.

4. Click on the "Calibrate" button to complete the calibration process.
5. Click on "Close" to close the dialog.

### 3.5 Manually controlling the system components

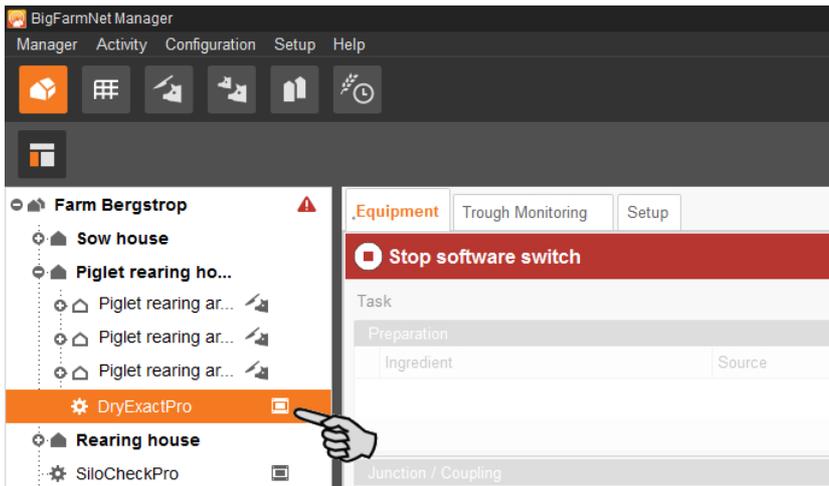
As soon as you have created your system in the FeedMove Editor (chapter 3.3 "Depicting the system in the FeedMove Editor"), the window "View" is created.

The system usually runs automatically, based on the configured settings. From the "View" window, you can operate the system manually with the BigFarmNet Manager. This means that you can manually activate or deactivate individual system components and their elements.

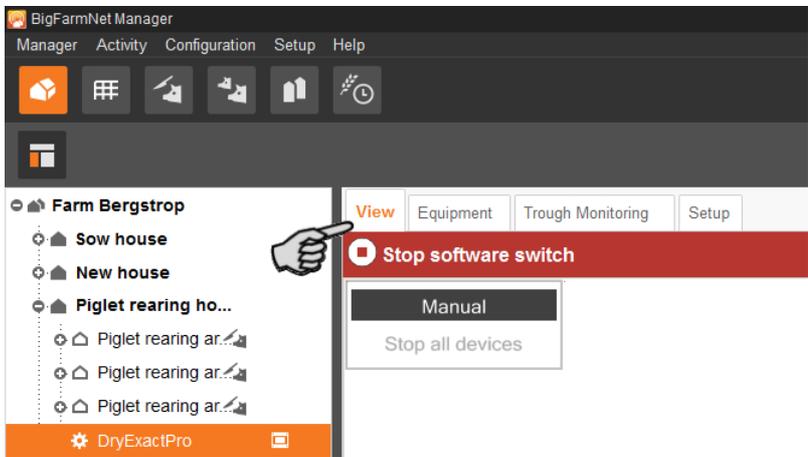
#### NOTICE!

Manual control of system components is done at your own risk and you are liable for any subsequent damage. The control software (application) no longer operates the system when using manual control!

1. In the farm structure, click on the controller icon of the system you want to edit.

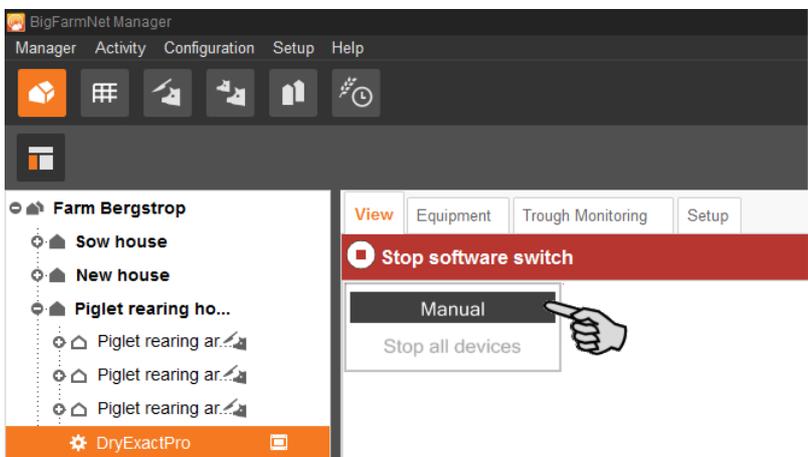


2. Click on the "View" tab.



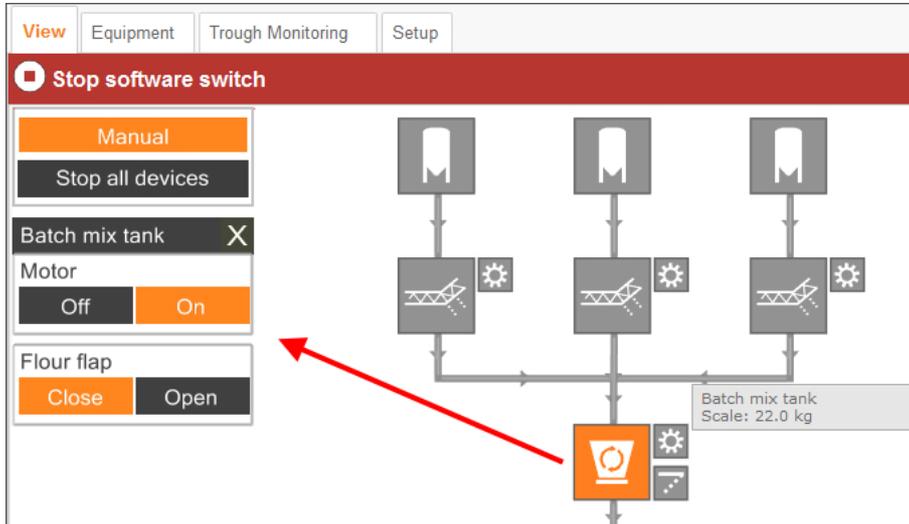
3. Adjust the view, if necessary, see chapter 3.3.6 "Adjusting and saving views", page 42, or retrieve one of your saved views using the camera icons.
4. Click on "Manual" in the upper left corner.

Manual control is now active.



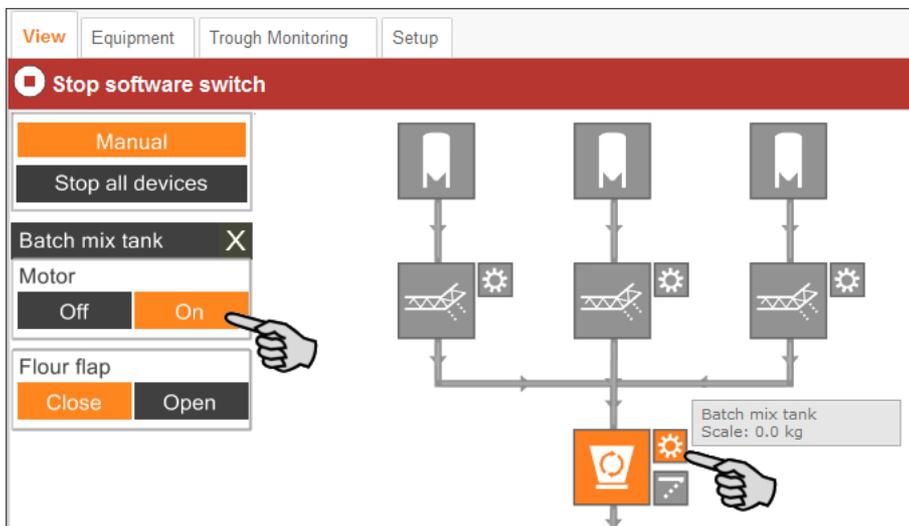
5. You can manually switch on or off functions of the system components as follows:
  - a) Click on the respective system component.

The colour of the system component changes to orange. The elements belonging to this component are displayed in the window to the left.



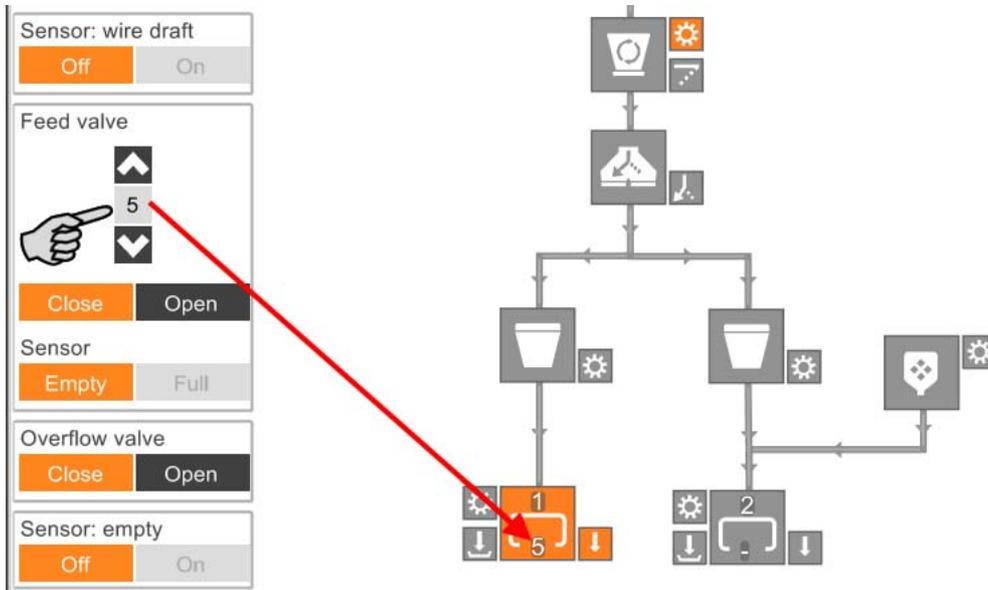
- b) Activate or deactivate the required element in the window to the left or by clicking directly on the element icon in the view.

Active elements are orange. Inactive elements are gray.



- c) If you want to open or close a specific valve in a circuit, select the respective valve using the arrows pointing up and down.

The selected valve is shown in the selected feed circuit in the view.



6. Move the mouse pointer over the different icons in the depiction to see the full name of the function or the system component.

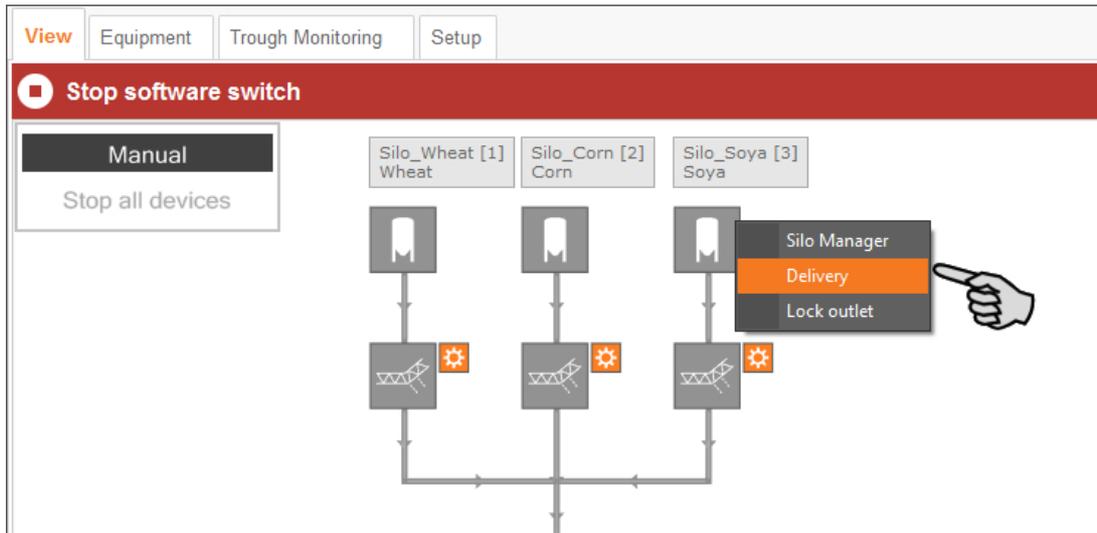
A tooltip shows the full name.



### 3.6 Quick access silos

In the "View" window, you can access the following functions by right-clicking on a silo:

- **Silo Manager:** Direct switch to the Silo Manager.
- **Delivery:** Direct access to the Delivery dialog.
- **Lock outlet:** The outlet is locked or unlocked immediately.



### 3.7 Stopping the system and canceling an action

You may stop the system during operation by clicking on "Stop" in the upper bar under "View" or "Equipment". If you click on "Start" again, the system continues to operate with the current action or task.



However, if you do not want to continue the current action, start the system again as follows:

Click on the arrow pointing downwards next to the "Start" button and select the correct option from the context menu.

- **End feeding tasks in progress:** The currently active feeding task is completed.
- **Start with recalculation:** The system checks all sensors. Feeding re-starts.

- **Discharge feeding system:** All feed batches currently in the feed pipes are moved to their targets. The feeding task is then completed.
- **Restore control process:** The control is re-started. This function is identical with the function "Restart application" in the IO Manager.
- **Close all open feeding tasks:** Currently active or not yet started feeding tasks are canceled or set to inactive.



### 3.8 View in the "Equipment" window

The "Equipment" window provides the following information based on the system's configuration:

- Batch mixer (mixing tank) with information on the mixture
- Junction / coupling of hoppers
- Circuits with information on distribution

This is simply a view without any options to configure settings.

View Equipment Trough Monitoring Setup

▶ In operation Settings ... ■ Stop

Task ("Piglet rearing"), planned at 7:00 AM Next task ("Piglet rearing"), planned at 12:00 PM (30%)

Preparation - Curve [Piglet rearing] - Day [21] - Circuit [1] - FeedValve [2]

Ingredient	Source	Amount (target)	Amount (curr...)	Amount (open)
✓ Piglet rearing 14,0 MJ	Silo_Mais [2]	0,60 kg	1,64 kg	0,00 kg
✓ Piglet rearing 14,2 MJ	Silo_Soja [3]	4,20 kg	4,34 kg	0,00 kg
		4,80 kg	5,98 kg	0,00 kg

5,98 kg

Junction / Coupling

Hopper [1]

Hopper [2]

Distribution

Charge no.	State	Curve / recipe	Curve day	Outlet no.	Distance...	Length	Amount	Circuit [1]
- Circuit no.: 1, "Circuit [1]"								
	1 Moving	Piglet rearing	21	Piglet rearing ...	9.4 m	3.9 m	4,80 kg	
	1 Moving	Piglet rearing	21	Piglet rearing ...	9.4 m	3.9 m	4,80 kg	
							9,60 kg	

### 3.9 Trough monitoring

The trough monitoring window provides information on the status (empty or not empty) of the sensor troughs. This window also has information on the last state request, the respective animal number and the last feeding according to the sensor. The diagram shows the state history of the current day and the past six days.

The screenshot displays the 'Trough Monitoring' window. At the top, there are tabs for 'View', 'Equipment', 'Trough Monitoring' (selected), and 'Setup'. Below the tabs is a 'Hide groups' checkbox. The main area is a table with columns: Trough, State at, State before feeding, Animals, Adjustment (%), and Feeding. The table lists various troughs under different pens and sections. A red arrow points to the 'State at' column for the first trough, which shows a blue block and the time '12:48 PM'. Below the table, there are two summary charts. The first, 'Overview - Pen 3-1-1', shows two circles: a blue one labeled 'Empty: 100%' and a green one labeled 'Not empty: 100%'. The second, 'Pen state history - Pen 3-1-1', is a horizontal bar chart showing the state of the trough over time from 02:00 to 00:00. A tooltip indicates a 'Recorded state' from 02:00:00 AM to 11:59:59 PM as 'Not empty'.

Even though the trough status is checked regularly, you can also check the current trough status manually at any time:

1. Click on the colored block of the correct trough in the **State at** column.

This opens the dialog window "Refresh trough state".



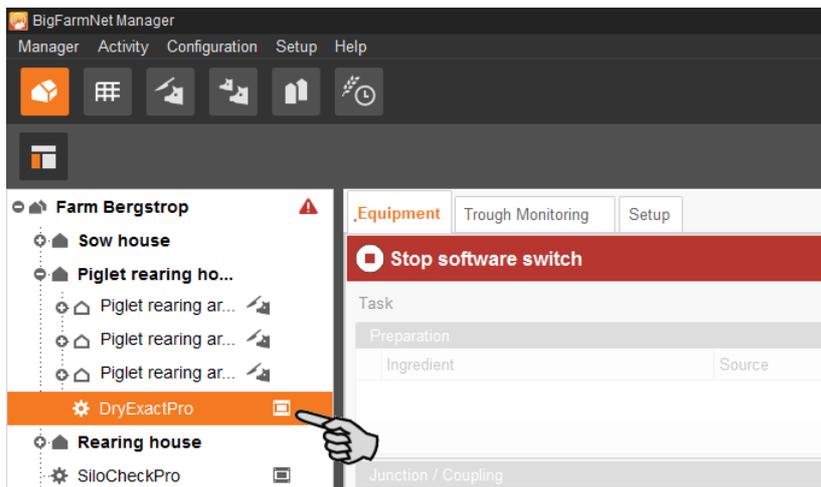
2. Confirm the dialog by clicking on "OK".

## 4 Configuration of the application

Settings regarding the application are configured under the "Equipment" tab. You may for example define the parameters for feed moves, feed distribution and dosing at the valves here. The setting parameters can be changed as required at any time.

Open the setting parameters as follows:

1. In the farm structure, click on the controller icon of the system you want to edit.



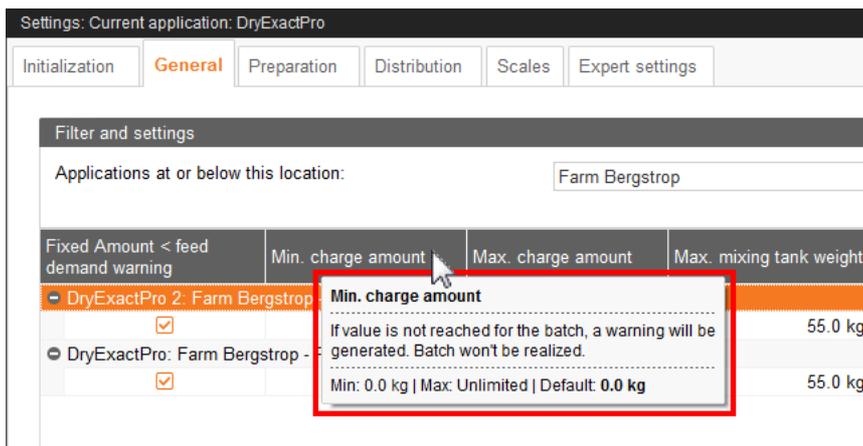
### NOTICE!

Check whether the application is running. Stop the application by clicking on  Stop in the upper bar.

2. In the upper right corner under the "Equipment" tab, click on "Settings...".



The settings dialog opens with multiple tabs. All settings for the system components you created beforehand in the Composer can now be edited in the different tabs. These parameters are described in the following chapters. Define the corresponding values for the parameters and change pre-set values, if required.



**NOTICE!**

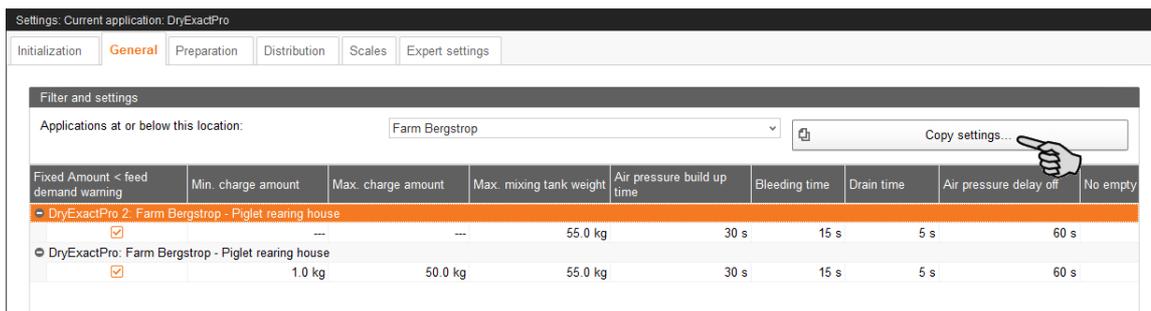
Tooltips available! Move the mouse pointer over the input fields or the parameters in the head line to see a more detailed description.

### 4.1 Copying the settings of a system

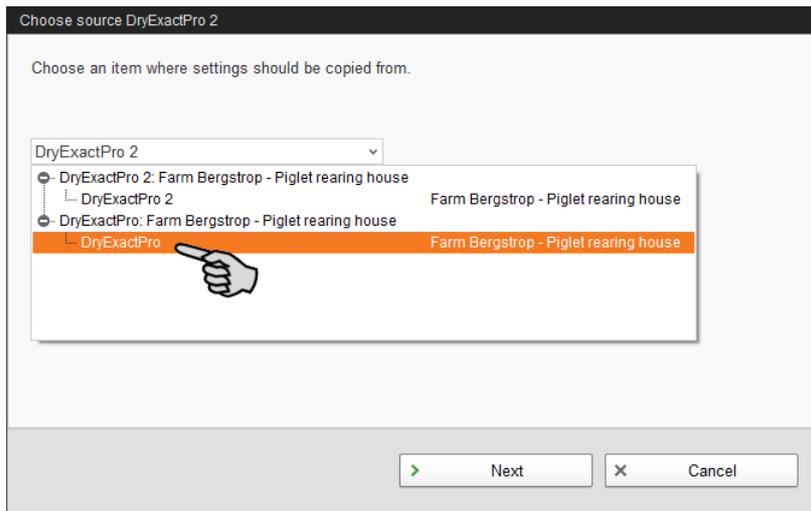
If multiple systems (applications) of the same type are to be configured with the same settings, you can define the settings for one system and copy them to other systems. The copy function is permanently available in the settings dialog.

Proceed as follows:

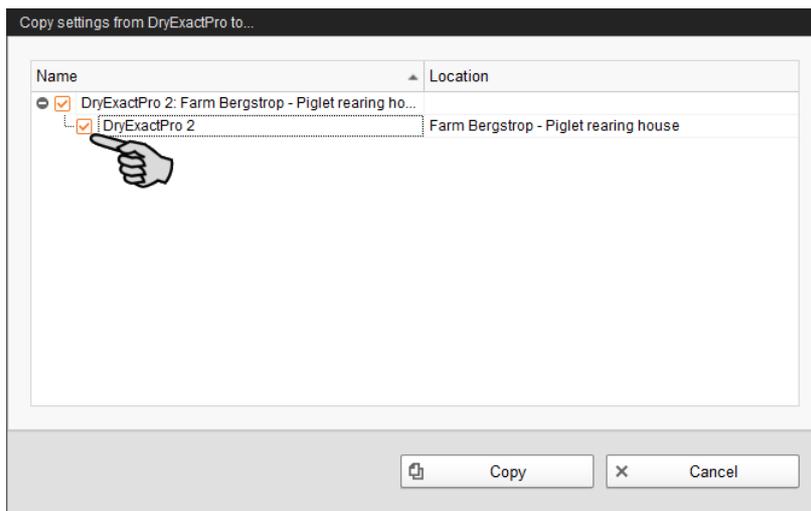
1. Configure the settings for one system.
2. Click on the button "Copy Settings..." in the top part of the window.



- In the next dialog window, select the system whose settings you want to copy.



- Click on "Next".
- Select all systems to which you want to transfer these settings in the next dialog window.



- Click on "Copy". The settings are now transferred to all selected systems.

### NOTICE!

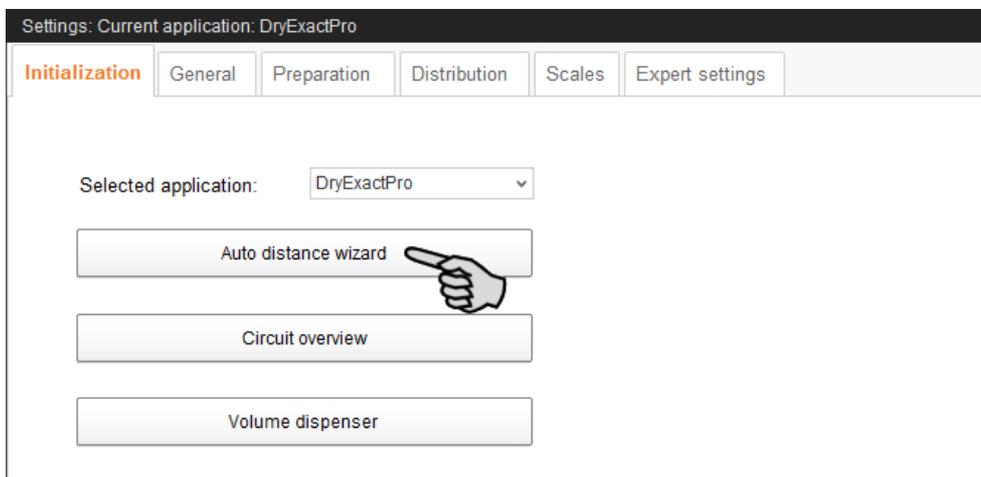
Only click on the "Save" button after having set all necessary parameters in the available tabs. Clicking on the "Save" button closes the entire settings dialog, which must be reopened to make further edits.

Saved changes are immediately applied to the respective system(s)!

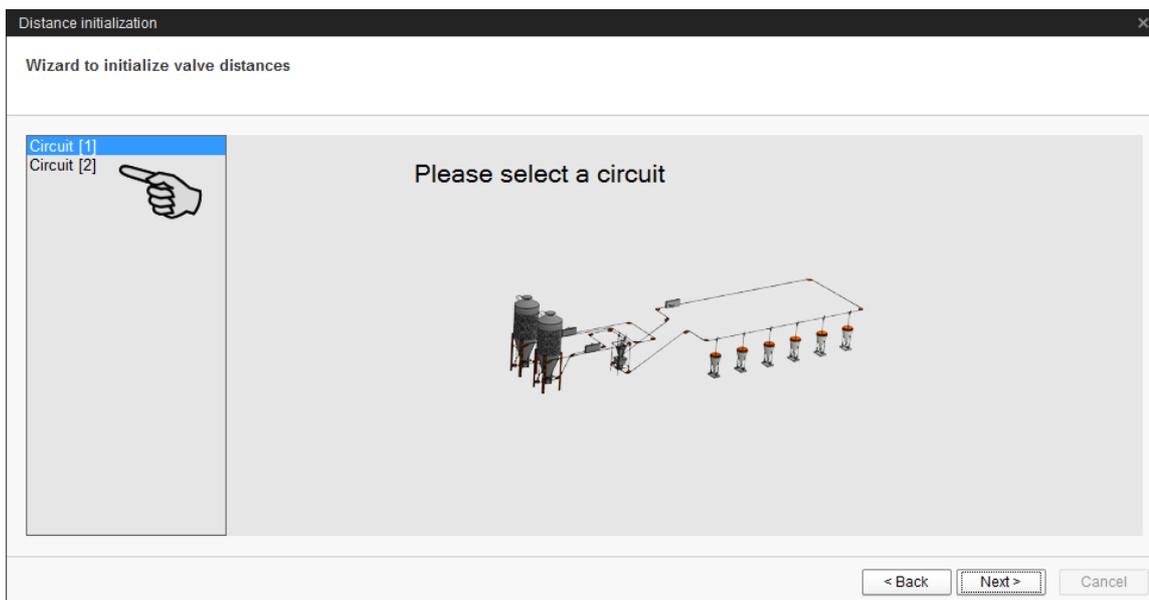
## 4.2 Initialization – Determining the valve distances

Use the Distance Wizard to define the distance between the hopper and the valves.

1. Click on the button "Auto distance wizard" to start the wizard.



2. Click on "Next".
3. Select the feed circuit in the left-hand part of the window.



4. Click on "Next".
5. Enter the distances between the hopper and the valves.

The following options are available for entering the distances:

- Manual actuation of the sensors at the feed valves, see chapter 4.2.1.
- "Manual trigger": This method must only be used if you can see all valves of the circuit from your position, see chapter 4.2.2.

- Manual measuring of the distances and input via the keyboard, see chapter 4.2.3.

Valve ID	Location	Location name	Pulse distance	Distance e...
Feed valve [1]	1.H3.1.1	Farm Bergstrop - Piglet rearing hous...	6	16.00 m
Feed valve [2]	1.H3.1.2	Farm Bergstrop - Piglet rearing hous...	10	24.00 m
Feed valve [3]	1.H3.1.3	Farm Bergstrop - Piglet rearing hous...	12	28.00 m
Feed valve [4]	1.H3.1.4	Farm Bergstrop - Piglet rearing hous...	7	18.00 m
Feed valve [5]	1.H3.1.5	Farm Bergstrop - Piglet rearing hous...	8	20.00 m
Feed valve [6]	1.H3.1.6	Farm Bergstrop - Piglet rearing hous...	14	34.00 m
Overflow valve	1.H3.1	Farm Bergstrop - Piglet rearing hous...	0	0.00 m

Impulse counter

0 0.000 m

START STOP

MANUAL TRIGGER

< Back Next > Cancel

#### 4.2.1 Input by manual actuation of the sensors

1. Click on the "Start" button.
2. Go to valve 1 in your house.
3. Remove the sensor at the drop pipe below the valve from its bracket.
4. Trigger the sensor by moving your hand over it.
5. The drive of the feed circuit will start.
6. Immediately move your hand over the sensor again when feed drops through the pipe.
7. The drive of the feed circuit will stop.
8. Return the sensor to its bracket.
9. Go to valve 2 and repeat the process.
10. Repeat the process for all other valves in the order set by the feed circuit.
11. Click on the "Stop" button.
12. The distances between the hopper and the target valves are displayed in the left-hand part of the window under "Distance entered".
13. Click on the button "Next" in the bottom part of the window.
14. In the next window, click on "Finish" to confirm the settings and to close the dialog.

#### 4.2.2 Input by "manual trigger"

1. Click on the "Start" button.
2. Click on the button "Manual Trigger".
3. The drive of the feed circuit will start.
4. Observe the drop pipe below valve 1.
5. As soon as feed drops through the pipe below valve 1, click on the "Manual Trigger" button again.
6. The drive of the feed circuit will stop.
7. Click on the "Manual Trigger" button again.
8. The drive of the feed circuit will start again.
9. As soon as feed drops through the pipe below valve 2, click on the "Manual Trigger" button again.
10. The drive of the feed circuit will stop.
11. Repeat the process for all other valves in the order set by the feed circuit.
12. Click on the "Stop" button.
13. The distances between the hopper and the target valves are displayed in the left-hand part of the window under "Distance entered".
14. Click on the button "Next" in the bottom part of the window.
15. In the next window, click on "Finish" to confirm the settings and to close the dialog.

### 4.2.3 Input by manual measuring

1. Measure the distances between the target valves and the hopper with a measuring tape and write down the results.
2. Click into the input field of the first valve in the table under "Distance entered".

Valve ID	Location	Location name	Pulse distance	Distance e...
Feed valve [1]	1.H3.1.1	Farm Bergstrop - Piglet rearing hous...	0	0.00 m
Feed valve [2]	1.H3.1.2	Farm Bergstrop - Piglet rearing hous...	0	0.00 m
Feed valve [3]	1.H3.1.3	Farm Bergstrop - Piglet rearing hous...	0	0.00 m
Feed valve [4]	1.H3.1.4	Farm Bergstrop - Piglet rearing hous...	0	0.00 m
Feed valve [5]	1.H3.1.5	Farm Bergstrop - Piglet rearing hous...	0	0.00 m
Feed valve [6]	1.H3.1.6	Farm Bergstrop - Piglet rearing hous...	0	0.00 m
Overflow valve	1.H3.1	Farm Bergstrop - Piglet rearing hous...	0	0.00 m

3. Use your keyboard to enter the distance (in meters) between the first valve and the feed hopper.
4. Click into the row with the next valve.  
The software automatically calculates the pulse distance for valve 1.
5. Enter the distance for the next valve.

#### NOTICE!

Always enter the distance between the respective valve and the hopper, never the distance between the valves themselves.

6. Click into the row with the next valve.  
The software again automatically calculates the pulse distance for valve 2.
7. Continue in this manner until you have entered the distances of all valves in this circuit.
8. Click on "Next" in the bottom part of the window.
9. In the next window, click on "Finish" to confirm the settings and to close the dialog.

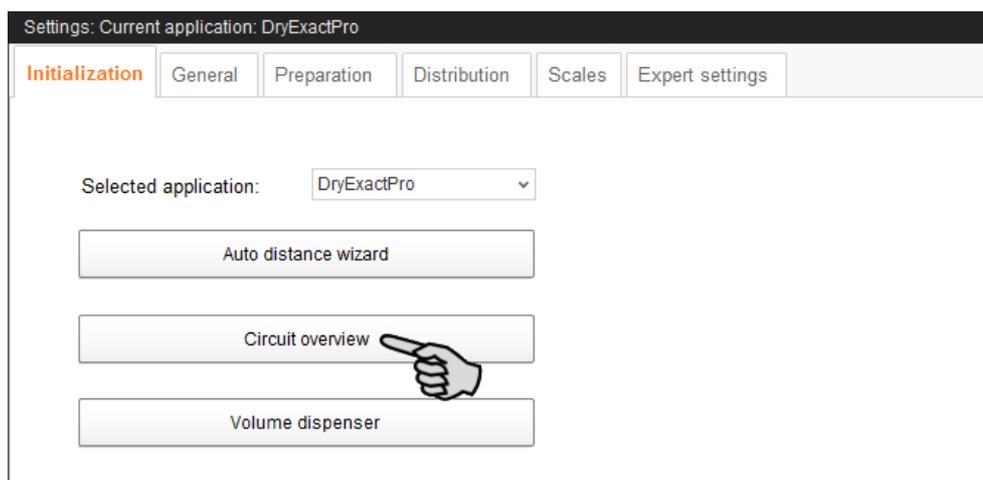
## 4.3 Initialization – Valve overview

Under "Circuit overview", you can configure multiple settings for the individual valves, define the distance between valves or carry out a valve test.

### 4.3.1 Distances between valves

1. Click on the button "Circuit overview".

This opens a new dialog window. The first tab is called "Valve overview".



2. If necessary, filter the valves you want to edit:
  - a) Under "Filter", select the correct circuit from the drop-down menu.
  - b) Use the buttons "Collapse" and "Expand" in the lower command bar to show or hide the circuits.
3. If necessary, change the view by grouping the valves according to location, circuit or IO card.

- Enter a positive or negative value in the column "+/-" to correct the value in the column "Distance in [m]" accordingly.

Valve dialog

Valve overview | Valve test

Filter

Circuit:

Grouping:  Location  Circuit  IO card  Without grouping

House	Section	Pen	Location	Valve	Distance in [m]	+ / - in [m]	Maximum feed amount	Trough sensor threshold	Volume
Circuit: Circuit [1]									
Piglet rearing...	Piglet rearing ar...	Pen 3-1-1	1.H3.1.1	Feed valve [1]	16.00	0.00	1,000.0 kg	0.0 kg	
Piglet rearing...	Piglet rearing ar...	Pen 3-1-2	1.H3.1.2	Feed valve [2]	24.00	2.00	1,000.0 kg	0.0 kg	
Piglet rearing...	Piglet rearing ar...	Pen 3-1-3	1.H3.1.3	Feed valve [3]	28.00	0.00	1,000.0 kg	0.0 kg	
Piglet rearing...	Piglet rearing ar...	Pen 3-1-4	1.H3.1.4	Feed valve [4]	18.00	0.00	1,000.0 kg	0.0 kg	
Piglet rearing...	Piglet rearing ar...	Pen 3-1-5	1.H3.1.5	Feed valve [5]	20.00	0.00	1,000.0 kg	0.0 kg	
Piglet rearing...	Piglet rearing ar...	Pen 3-1-6	1.H3.1.6	Feed valve [6]	34.00	0.00	1,000.0 kg	0.0 kg	
Piglet rearing...	Piglet rearing ar...		1.H3.1	Overflow valve	0.00	0.00			
Circuit: Circuit [2]									

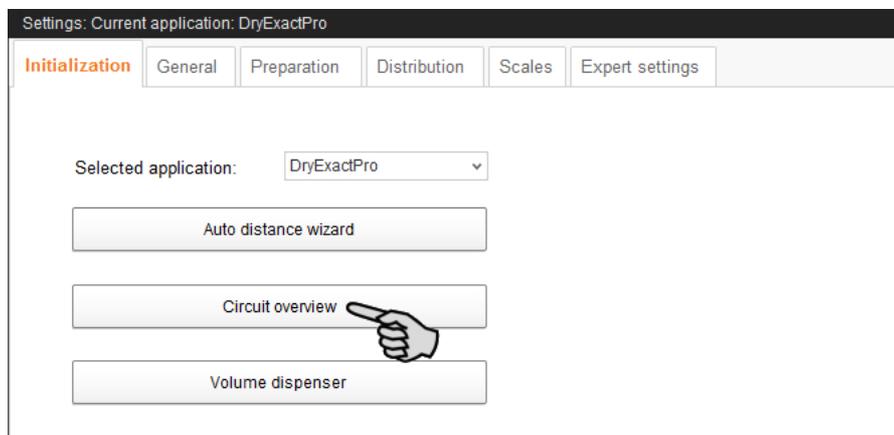
Buttons: Collapse, Expand, Pen => Valve, +/- => Distance, Save, Close

- Click on the button "+/- => Distance" in the bottom part of the window.  
The distance is corrected accordingly.
- Enter the maximum capacity of the feeder directly into the respective input field in the "Maximum feed amount" column.
- Enter the minimum feed amount for the sensor check into the respective input field in the column **Trough sensor threshold**.  
If the calculated feed amount is smaller than the defined minimum amount, no information is requested from the trough sensor.
- Click on "Save" to save all settings.
- Close the dialog by clicking on "Close".

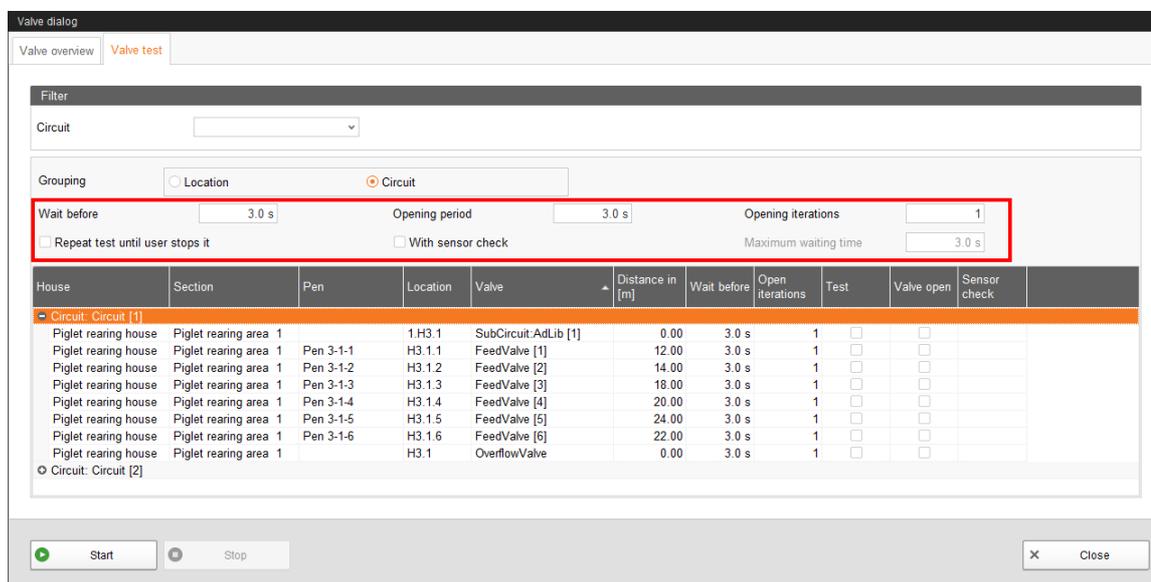
### 4.3.2 Valve test

1. Click on the button "Circuit overview".

This opens a new dialog window. The first tab is called "Valve overview".



2. Click on the "Valve test" tab.
3. Filter the correct circuit, if necessary.
4. If necessary, change the view by grouping the valves according to location or circuit.
5. Define the following additional settings for the valve test, if necessary:

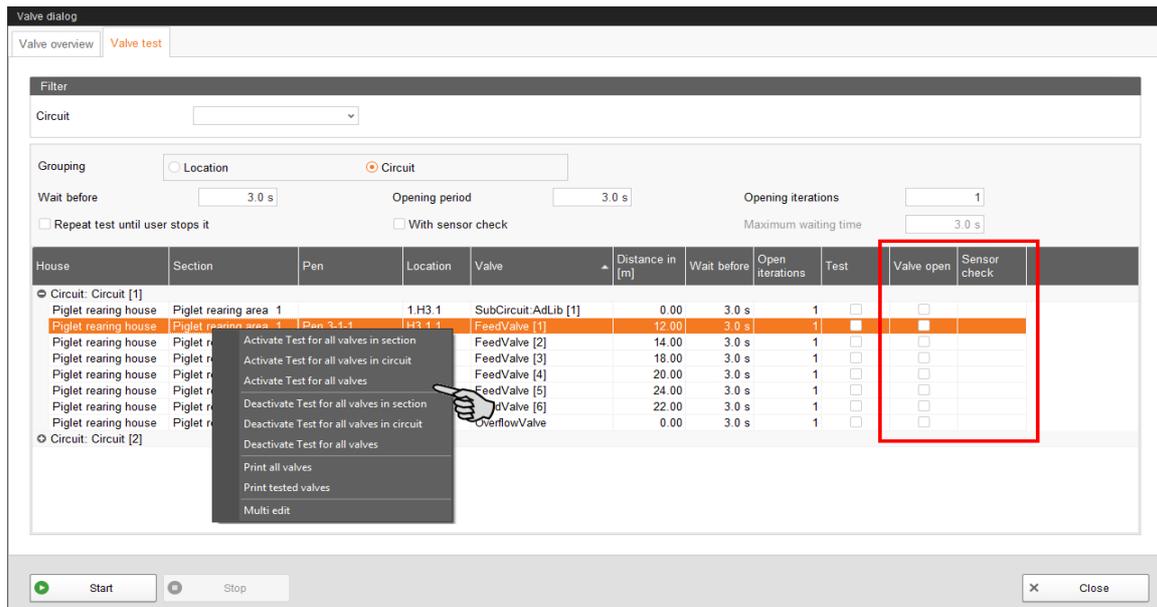


- **Wait before (Wait for):** Use this setting to define the waiting time for the switch between valves.
- **Opening period:** Duration for which the valves stay open.
- **Repeat test until user stops it:** If this setting is active, the test is repeated until the user presses the "Stop" button in the lower command bar.

- **With sensor check:** If this setting is active, the valve remains open until the sensor is triggered. The setting **Maximum waiting time** is activated.
  - **Maximum waiting time** until the sensor is triggered.
6. Activate the correct valves individually in the column **Test**.

OR

Activate multiple valves at the same time by right-clicking to open the context menu and selecting the correct valves.



**Valve open** and **Sensor check** only show the progress of the test. **Valve open** indicates the currently tested valve.

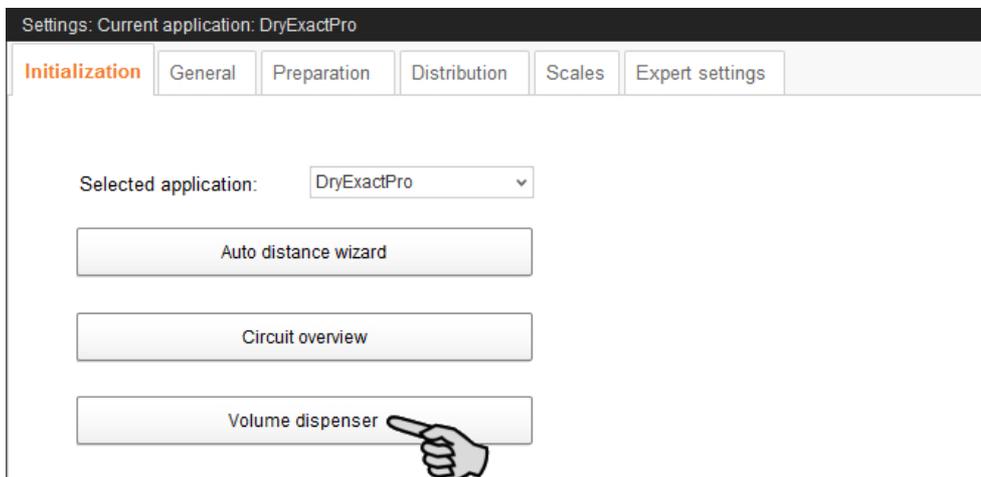
**Sensor check** shows the corresponding sensor value. The information under "Sensor check" is displayed if the function **With sensor check** has been activated.

7. Click on "Start" in the lower command bar to start the test.
8. Click on "Stop" in the lower command bar to stop the test.
9. Close the dialog by clicking on "Close".

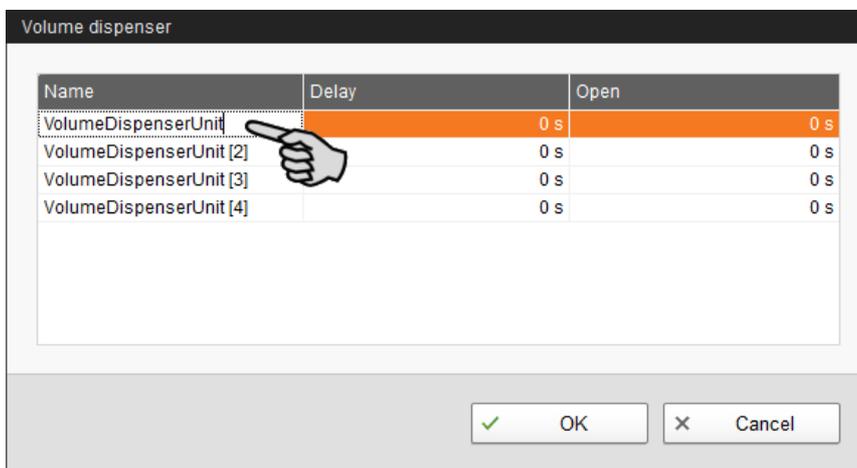
## 4.4 Initialization – Volume dispenser

To configure technical settings for volume dispensers, you must have created volume dispensers in the Composer beforehand, see chapter 3.2.

1. Click on the button "Volume dispenser".



2. Click into the respective input fields and
  - a) enter a name for the volume dispenser.
  - b) define the delay time (in seconds).
  - c) define the opening time (in seconds).



3. Click on "OK" to accept these settings.

## 4.5 General settings DryExact

Settings: Current application: DryExactPro

Initialization **General** Preparation Distribution Scales Expert settings

Filter and settings

Applications at or below this location: Farm Bergstrop

Fixed Amount < feed demand warning	Min. charge amount	Max. charge amount	Max. mixing tank weight	Air pressure build up time	Bleeding time	Drain time	Air pressure delay off	No empty
<input checked="" type="checkbox"/>	1.0 kg	50.0 kg	55.0 kg	30 s	15 s	5 s	60 s	

- **Fixed amount < feed demand warning:** A warning is issued immediately when the feed amount drops below the feed demand if this box is checked.
- **Min. charge (batch) amount:** If the calculated feed amount per valve does not reach the minimum batch amount, no feed is dispensed at the respective valve, see **Handling time**, chapter 4.9.2 "Hoppers".
- **Max. charge (batch) amount** is the maximum mixing amount for a feed batch. The maximum batch size corresponds to the capacity of the mixing tank.
- **Max. mixing tank weight:** This value must be greater than the **maximum batch amount**. The maximum batch amount is mixed in the mixing tank. The weight may increase due to the residual flow volume. This means that the maximum mixing tank weight includes the maximum batch amount plus a tolerance for the possible residual flow volume.

An alarm is generated when the maximum mixing tank weight is exceeded.

- **Air pressure build-up time**
- **Bleeding time**
- **Waiting time before compressor shut-off (Drain time):** If the compressor is not turned off via the switch, but disconnected from power supply completely by pulling the plug, the compressed air cannot escape. When the compressor is turned on again, the waiting time enables the compressed air to escape so the motor does not stall. This waiting time should be used for single-phase compressors.
- **Air pressure delay off**
- **No empty trough before feeding:** No warning is issued in case a trough is empty when this box is checked.

- **Trough empty warning after feeding:** If this box is checked, a warning is issued directly after the feed is dispensed at the valve. This function enables you to find out whether any feed has been dispensed at the valve. This does not influence the sensor check before the feeding.
- **Trough full warning:** If this box is checked, a warning because of a full trough is issued during the fill level inquiry before the feeding. No feed will then be dispensed at the troughs which have been indicated as full.
- **Sequential task**
- **Action after maximum pause time** can be set to be either an alarm, a warning or no action at all ("No").
- **Maximum pause time:** If the application does not run for a time longer than set here (pause or error), an alarm or a warning (depending on what is set for "Action after maximum pause time") is issued. If the time is set to 0 minutes, there is no maximum pause time.
- **Repeat action:** When this box is checked, the action (alarm, warning or no action) is repeated every time the maximum pause time expires.
- **Pulse counter check** is a time during which the system checks how often the pulse arrives (how much the pulse fluctuates).
- **Pulse alive check** determines how often the pulse must arrive within the time defined under **Pulse counter check**.
- **Activate simulation:** You need to restart the control process when you activate the simulation. The control process starts when you click on the button "Restart application" in the IO Manager. Mainly the scales, the sensors and the flow meters are simulated. For example, feeding or tank cleaning can be simulated without hardware with this function. When you deactivate the simulation, you need to restart the control again by clicking on the button "Restart application".
- **Hard reset:** Application reset

## 4.6 General settings EcoMatic

The screenshot shows the 'Settings: Current application: EcoMaticPro' window. It has tabs for 'Initialization', 'General', 'Preparation', and 'Distribution'. The 'General' tab is active. Under 'Filter and settings', there is a dropdown menu for 'Applications at or below this location:' set to 'Farm Bergstrop' and a 'Copy settings...' button. Below this is a table of settings for 'EcoMaticPro: Farm Bergstrop - Sow house'.

Fixed Amount < feed demand warning	Min. charge amount	Air pressure build up time	Bleeding time	Drain time	Air pressure delay off	No empty trough before feeding	Trough empty warning after
<input checked="" type="checkbox"/>	--	30 s	15 s	5 s	60 s	<input checked="" type="checkbox"/>	<input type="checkbox"/>

At the bottom right, there are 'Save' and 'Cancel' buttons.

- **Fixed amount < feed demand warning:** A warning is issued immediately when the feed amount drops below the feed demand if this box is checked.
- **Min. charge (batch) amount:** If the calculated feed amount per valve does not reach the minimum batch amount, no feed is dispensed at the respective valve, see **Handling time**, chapter 4.9.2 "Hoppers".
- **Max. charge (batch) amount** is the maximum mixing amount for a feed batch. The maximum batch size corresponds to the capacity of the mixing tank.
- **Air pressure build-up time**
- **Bleeding time**
- **Waiting time before compressor shut-off (Drain time):** If the compressor is not turned off via the switch, but disconnected from power supply completely by pulling the plug, the compressed air cannot escape. When the compressor is turned on again, the waiting time enables the compressed air to escape so the motor does not stall. This waiting time should be used for single-phase compressors.
- **Air pressure delay off**
- **No empty trough before feeding:** No warning is issued in case a trough is empty when this box is checked.
- **Trough empty warning after feeding:** If this box is checked, a warning is issued directly after the feed is dispensed at the valve. This function enables you to find out whether any feed has been dispensed at the valve. This does not influence the sensor check before the feeding.
- **Trough full warning:** If this box is checked, a warning because of a full trough is issued during the fill level inquiry before the feeding. No feed will then be dispensed at the troughs which have been indicated as full.

- **Sequential task**
- **Action after maximum pause time** can be set to be either an alarm, a warning or no action at all ("No").
- **Maximum pause time:** If the application does not run for a time longer than set here (pause or error), an alarm or a warning (depending on what is set for "Action after maximum pause time") is issued. If the time is set to 0 minutes, there is no maximum pause time.
- **Repeat action:** When this box is checked, the action (alarm, warning or no action) is repeated every time the maximum pause time expires.
- **Multi-circuit control:** Check this box if more than one circuit is supplied during one feeding task. The control will supply one circuit after another during feeding.
- **Replacement component empty:** Type of message shown when the replacement component has been used up. If this is set to "Alarm", feeding will stop. If this is set to "Warning", this component is ignored for the batch.
- **Silo empty:** Type of message shown when the silo is empty. If this is set to "Alarm", feeding will stop. If this is set to "Warning", this silo is ignored for the batch.
- **Silo vibrator:** The vibrator is activated when the silo is empty.
- **Pulse counter check** is a time during which the system checks how often the pulse arrives (how much the pulse fluctuates).
- **Pulse alive check** determines how often the pulse must arrive within the time defined under **Pulse counter check**.
- **Activate simulation:** You need to restart the control process when you activate the simulation. The control process starts when you click on the button "Restart application" in the IO Manager. Mainly the scales, the sensors and the flow meters are simulated. For example, feeding or tank cleaning can be simulated without hardware with this function. When you deactivate the simulation, you need to restart the control again by clicking on the button "Restart application".
- **Hard reset:** Application reset

## 4.7 Preparation DryExact

### 4.7.1 Silos

Settings: Current application: DryExactPro

Initialization | General | **Preparation** | Distribution | Scales | Expert settings

Silos | Mineral dosing units | Charge mixing tank

Filter and settings

Applications at or below this location: Farm Bergstrop

Name	Location	Forward time	Backlash mass	Max. backlash mass	Backlash factor	Backlash adjustment
DryExactPro: Farm Bergstrop - Piglet rearing house						
Silo_Wheat [1]	Farm Ber...	0 s	0.0 kg	0.0 kg	0	0
Silo_Corn [2]	Farm Ber...	0 s	0.0 kg	0.0 kg	0	0
Silo_Soya [3]	Farm Ber...	0 s	0.0 kg	0.0 kg	0	0

- **Name** of the component supply
- **Forward time:** During dosing in of an ingredient, the system checks for weight changes at the mixing tank scale. This check only starts after the forward time has expired. It is the time an ingredient needs to reach to mixing tank after the start. If the weight on the scale does not change after the forward time has ended, this is indicated by a message.
- **Backlash mass:** This is the amount that reaches the mixing tank even after the auger has been turned off.
- **Max. backlash mass:** If the residual flow volume exceeds this value, this is indicated by a message.
- **Backlash factor:** Use this setting to limit automatic changes to the residual flow volume considered by the program. Enter the number of previous residual flow volumes. These will be used as basis for calculating an average value. The effects of single extreme values on changes to the residual flow volumes are thus limited.
- **Backlash adjustment control disabled:** The residual flow volume is not adjusted when this box is checked.
- Enter the **Delivery rate** manually. If the box **Delivery rate adjustment control disabled** is checked, the manually entered value is used.
- **Delivery rate adjustment control disabled:** If this box is not checked, the **Delivery rate** value (see above) is calculated and set automatically by the control.

## 4.7.2 Mineral dosing units

Settings: Current application: DryExactPro

Initialization | General | **Preparation** | Distribution | Scales | Expert settings

Silos | **Mineral dosing units** | Charge mixing tank

Filter and settings

Applications at or below this location: Farm Bergstrop

Name	Location	Amount per second	Pulse length	Min. pause duration	Position	Resulting amount	Time calibration	Start calibration
DryExactPro: Farm Bergstrop - Piglet rearing house								
Preparation								
Mineral dosing units								
MineralDosingUnit [1]	Farm Ber	5.0 g/s	0 s	0 ms	0.00 m	0 g	0 s	Start

- **Name** of the feed hopper
- **Amount per second** is the delivery rate of the mineral dosing unit, displayed in grams per second.
- **Pulse length:** The pulse length and the **Minimum pause duration** are set in a way that the mineral dosing unit dispenses its amount evenly for the entire batch. If these settings are not configured, the entire mineral amount is dispensed at the beginning of the batch.
- **Minimum pause duration:** see **Pulse length**.
- **Position:** The distance between the mineral dosing unit and the hopper is displayed here in meters.
- The **Calibration** process is carried out as follows:
  - Define a period for which the mineral dosing unit should run, e.g. 10 seconds, under **Time calibration**.
  - Place a container underneath the mineral dosing unit to collect the dispensed amount.
  - Click on "Start" under **Start calibration** and the mineral dosing unit starts dispensing for the set time.
  - Weigh the dispensed amount after the mineral dosing unit has completed dosing.
  - Enter the weight under **Result amount**.

### 4.7.3 Batch mixing tank

Settings: Current application: DryExactPro

Initialization | General | **Preparation** | Distribution | Scales | Expert settings

Silos | Mineral dosing units | **Charge mixing tank**

Filter and settings

Applications at or below this location: Farm Bergstrop

Name	Location	Drain time	Drain delay time	Drain delay per weight	Level empty	Min. mass	Switch off agitator during filling	Flap closing time
DryExactPro: Farm Bergstrop - Piglet rearing house								
ChargeMixTank	Farm Ber...	15 s	3 s	0.0 s/kg	1.0 kg	0.0 kg	<input type="checkbox"/>	1.5

- **Name** of the batch mixer (mixing tank)
- **Drain time:** If the mixing tank has not been drained within this time, this is indicated by a message.
- **Drain delay time:** This time is necessary to close the outlet of the mixing tank after emptying.
- **Drain delay per weight:** This value is a variable. The drain delay per weight is calculated based on the mixing weight.
- **Level empty:** This amount may maximally be in the mixing tank when the scale is set to zero after emptying.
- **Min. mass:** This amount must minimally be in the mixing tank before the mineral dosing unit is activated. Small quantities are easier to mix this way.
- **Switch off agitator during filling**
- **Flap closing time:** The flap requires this time for closing. The next mixing process will only start after this time.

## 4.8 Preparation EcoMatic

Settings: Current application: EcoMaticPro

Initialization General **Preparation** Distribution

Transport to circuit

Filter and settings

Applications at or below this location: Farm Bergstrop

Name	Location	Outlet locked	Delivery rate	Min. frequency	Max. frequency	Pulse distance	Calibration duration	Calibration target	Start calibration
EcoMaticPro: Farm Bergstrop - Sow house									
Hopper [1]	Farm Ber...	<input checked="" type="checkbox"/>	18.000 kg/min	5.0 Hz	50.0 Hz	0.000 m	0 s		<input type="button" value="Start device for 0 s"/>
Hopper [2]	Farm Ber...	<input type="checkbox"/>	18.000 kg/min	5.0 Hz	50.0 Hz	0.000 m	0 s		<input type="button" value="Start device for 0 s"/>

- **Name** of the feed hopper
- **Outlet locked:** If this box is checked, this hopper or this silo are not used.
- **Delivery rate** indicates the amount conveyed at maximum frequency.  
A change to this parameter is only analysed during the start of a batch.
- **Min. frequency:** Minimum frequency for the frequency inverter
- **Max. frequency:** Maximum frequency for the frequency inverter

### NOTICE!

EcoMatic can now be operated without frequency inverter if feed is only transported and not blended.

- **Pulse distance:**
  - Enter a pulse distance of 0 for the first hopper in the circuit.
  - Enter the distance between the first and the second hopper for the second hopper in the circuit.
  - Enter the distance between the second and the third hopper for the third hopper.
- Use the **Calibration** to determine the conveyed amount of the speed-controlled auger:
  - Define a period for which the auger should run under **Calibration duration**.
  - Select a feed valve to which the feed should be transported under **Calibration target**.

- c) Place a container underneath the selected feed valve to collect the dispensed amount.
- d) Click on "Start device for ... s" under **Start calibration**. The auger starts running for the set time.
- e) Weigh the dispensed amount after the auger has stopped.
- f) Enter the weight under the hopper's **Delivery rate**.

 **NOTICE!**

Check whether the application is running. Stop the application by clicking on  in the upper bar.

---

## 4.9 Distribution DryExact and EcoMatic

### 4.9.1 Circuits

Name	Location	Chain progress per pulse	Open valve ahead	Idle constant	Idle factor	Buffer range	Max. diversion	Overflow alarm from x valves	Ma
DryExactPro: Farm Bergstrop - Piglet rearing house									
Circuit [1]	Farm Bergstrop - Piglet r...	0.429 m	2.1 m	0.9 m	0.100	0.0 m	12.9 m	5	
Circuit [2]	Farm Bergstrop - Piglet r...	0.429 m	2.1 m	0.9 m	0.100	0.0 m	12.9 m	5	

- **Name** of the feed hopper
- **Chain progress per pulse:** In the case of a computer-controlled dry feeding system, feed is transported by a conveyor chain to the valves in individual batches. The drive wheel creates pulses at each revolution so that the computer can calculate at any time where which feed batch is located and when feed valves have to be opened or closed by counting these pulses. Enter the length of the conveyor chain which runs through the drive between two pulses here.
- **Open valve ahead:** Distance between the feed batch and the target valve. If the batch is on its way to the target valve in the circuit and the distance to the valve is below this value, the valve is opened. Enter a value which ensures that the valve is completely open when the feed reaches the target valve.
- **Idle constant:** You may enter a so-called idle constant and an **Idle factor** so that feed entrainment is considered. The idle constant is entered as distance of the entrainment in meters. The idle factor is emitted once per drive wheel pulse.  

$$\text{Entrainment} = (\text{idle constant} + \text{distance to the target valve}) \times \text{idle factor}$$

The entrainment value is considered for the opening of the valves.

A change to this parameter is only accepted when the application is in stop mode.
- **Idle factor:** see **Idle constant**
- The **Buffer range** is the minimum distance between two feed batches within the circuit during feeding.
- **Max. diversion (entrainment):** If the calculated value for the entrainment exceeds this value, a warning is issued, see **Idle constant**.

- **Overflow alarm from x valves:** During feeding, the program checks if any feed is returning to the drive station. If this is the case, the feed is guided into a container placed under the overflow valve. If this error occurs repeatedly during one feeding task, feeding is stopped.

Enter the number of feed batches that may return before the system is stopped under this parameter.

A change to this parameter is only accepted when the application is in stop mode.

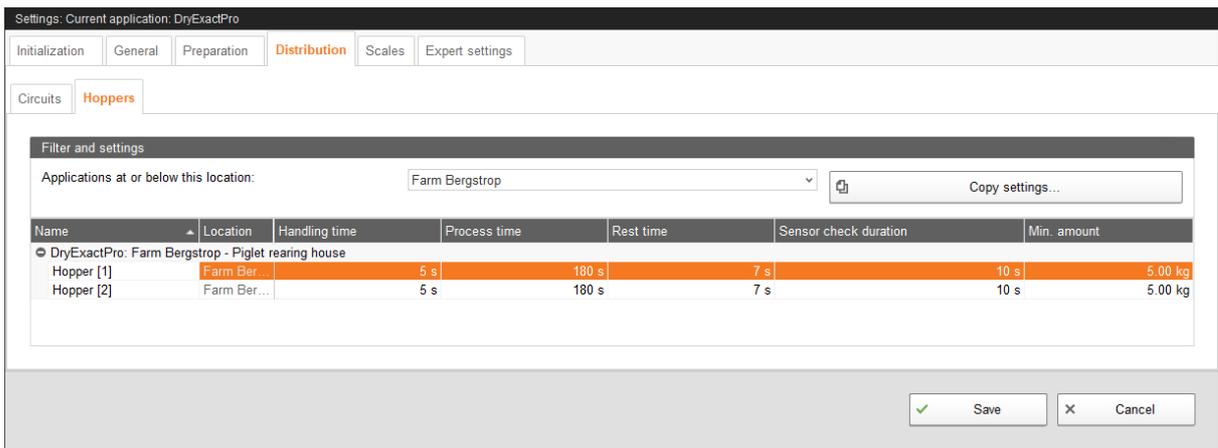
- **Maximum overflow:** An alarm is generated when this amount reaches the overflow valve.
- **Current overflow** is the amount that reached the overflow valve at the last overflow. You can reset this value by clicking on the "Reset" button.
- **Delivery rate** is the feed amount that can be transported per minute within the respective circuit.
- **Cover safety switch alarm with delay:** If this setting is activated, checking of the safety switch for the drive unit's cover is delayed at the start of the drive. Additionally, the delay time must be entered in ms in the next field.
- **Level check time** indicates how often the trough sensors should be checked.
- **Pulse alive check:** Define whether an alarm or a warning should be issued in case of an error.
- **Pulse frequency check:** Define whether an alarm or a warning should be issued in case of an error.
- **Invert pulse signal:** This value indicates the waiting time before the pulse output is inverted. If a time of 500 ms is entered here, for example, the total pulse length is 1000 ms (1 s).
- **Measured pulses per minute:** This parameter is displayed for viewing only. It shows the value currently measured by the control. The chain must have run for no less than one minute so the value can be displayed.
- **Minimum required charge (batch) amount:** This setting refers to the **Check point** that can be defined in the Composer under Distribution > Circuit distribution. If the system registers an amount lower than defined under this parameter, a warning is issued.
- **Max. number of charge (batch) warnings:** This setting refers to the **Check point** that can be defined in the Composer under Distribution > Circuit distribution. If more warnings than the defined number are issued, an alarm is generated and the control goes into error mode.

- **Independent sensor reading** indicates whether the sensors can be checked irrespective of the valves.

### NOTICE!

If the valves need to be opened for the sensor check, however, this setting must not be activated.

## 4.9.2 Hoppers

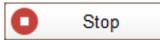


Name	Location	Handling time	Process time	Rest time	Sensor check duration	Min. amount
DryExactPro: Farm Bergstrop - Piglet rearing house						
Hopper [1]	Farm Ber...	5 s	180 s	7 s	10 s	5.00 kg
Hopper [2]	Farm Ber...	5 s	180 s	7 s	10 s	5.00 kg

The settings for the hopper are only applicable for **DryExact**.

The following shall apply for the parameters below:

### NOTICE!

Check whether the application is running. Stop the application by clicking on  in the upper bar.

- **Name** of the feed hopper
- **Handling time:** The handling time starts when the mixing tank is emptied. The minimum sensor in the feed hopper must become active within this period. If the sensor does not become active within the handling time, the alarm message "Hopper sensor is defect[ive]" appears.  
A change to this parameter is only accepted when the application is in stop mode.
- **Process time:** This is the maximum time for the hopper to transfer a batch to the circuit. When this time has expired, the alarm "Hopper is blocked" appears.  
A change to this parameter is only accepted when the application is in stop mode.

- **Rest time:** This is the time during which the remaining feed is dispensed, see **Sensor check duration**.

A change to this parameter is only accepted when the application is in stop mode.

- **Sensor check duration:** This time starts when the minimum sensor in the hopper becomes inactive. If the sensor does not return to being active within this time, the **Rest time** starts and the remaining feed is transferred to the circuit.

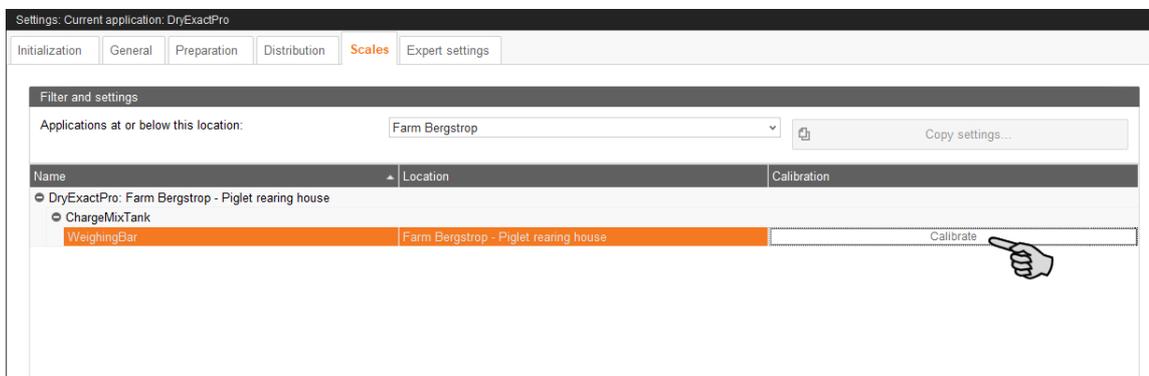
A change to this parameter is only accepted when the application is in stop mode.

- **Min. amount:** Starting with this minimum amount, the sensor in the hopper is considered. If the amount is smaller, the system does not wait for the reaction of the hopper's sensor. If a batch is larger than this amount, the system checks whether the sensor is active after the **Handling time**.

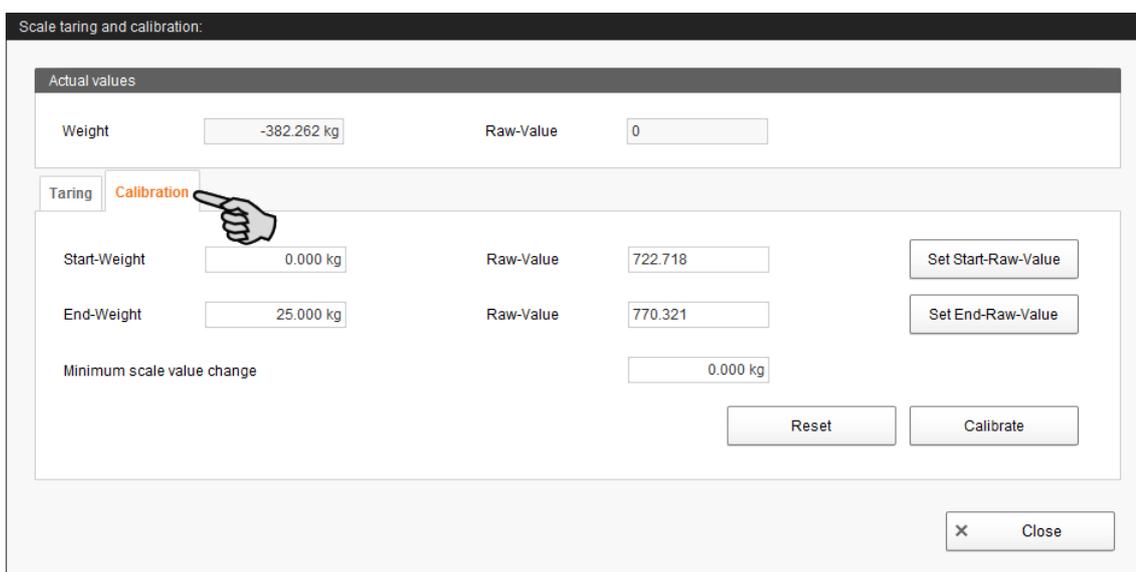
## 4.10 Scales

Use the tab **Scales** to tare and calibrate each mixing tank individually.

1. Click on "Calibrate" next to the correct mixing tank.



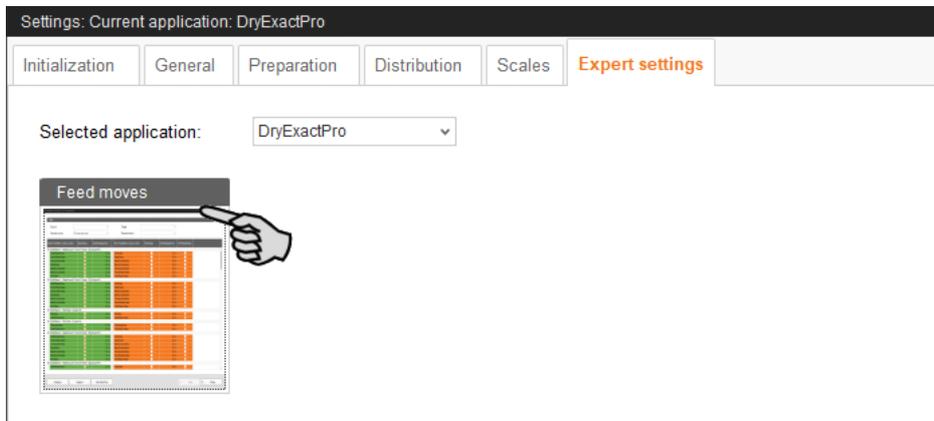
2. To calibrate, click on the "Calibration" tab.



3. Enter the start weight (usually the value 0) and confirm the value by clicking on the button "Set start raw value".
4. Enter the end weight and confirm the value by clicking on the button "Set end raw value".
5. Click on the "Calibrate" button to complete the calibration process.
6. Click on "Close" to close the dialog.

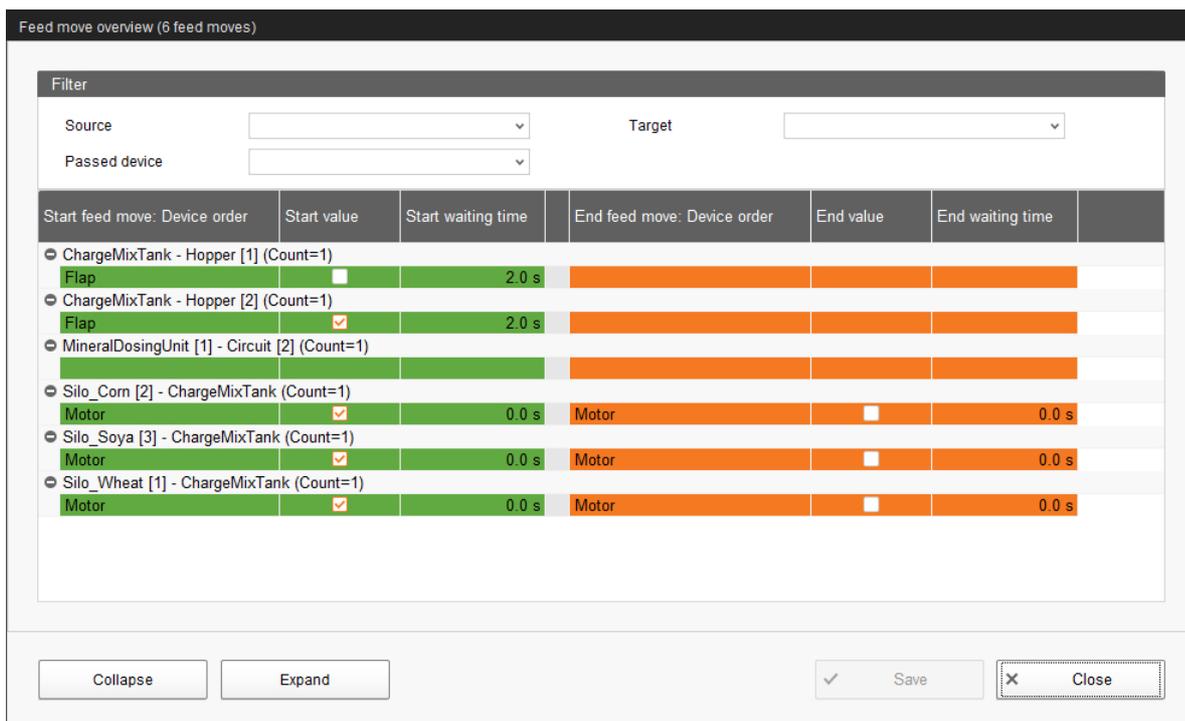
## 4.11 Expert settings

Define switch times and the switch order for feed moves under "Feed moves".



### NOTICE!

These settings should only be configured by a service technician.



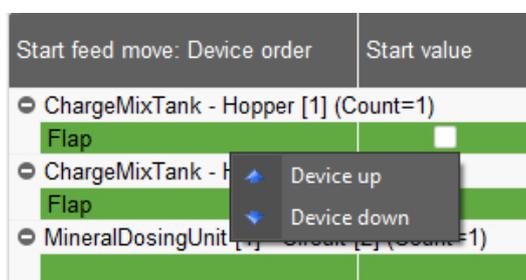
1. Filter the necessary feed moves, if required, e.g. for their start (source), target or device.

Use the buttons "Collapse" and "Expand" in the lower command bar to show or hide the devices included in the feed move.

2. Define new switch times by entering the times directly into the input fields under **Start waiting time** and **End waiting time**.

The values in the green area on the left refer to the start of the feed moves. The values in the orange area on the right refer to the end of the feed moves. The system moves from the first to the last device while starting and ending feed moves. After a device has been switched, the system waits for the waiting time before switching the next device.

3. If necessary, define a new switch order for the devices.
  - a) Right-click on the corresponding device.
  - b) Change the position of the device using the options "Device up" or "Device down".



4. Click on "Save" to save all settings.

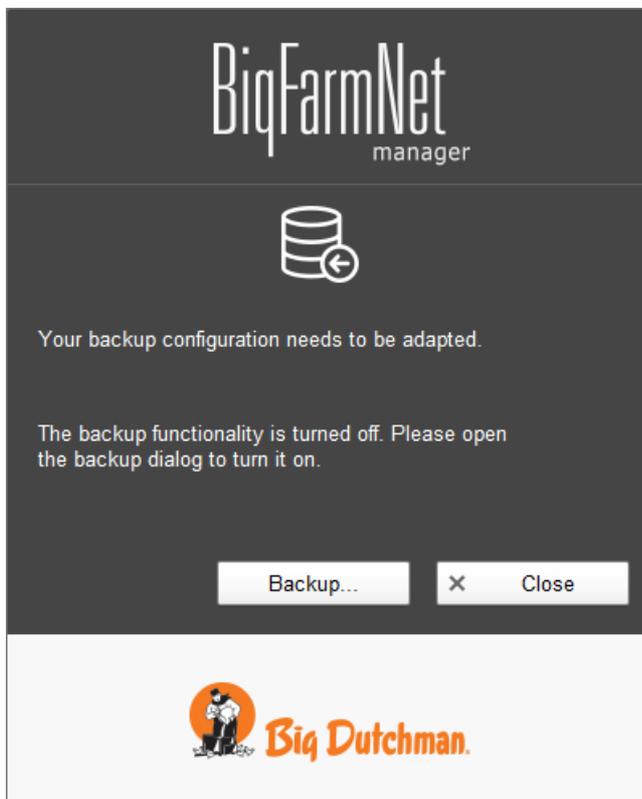
## 4.12 Data backup

From BigFarmNet Manager version 3.2.0, the following message regarding data backup configuration appears after installation or an update. If you only close this message, it will reappear after a short time.

### NOTICE!

The system requires an external storage location for data backup, e.g. a network drive, an external hard drive or a USB flash drive. As soon as an external storage location has been indicated, the message no longer appears, irrespective of whether automatic data backup has been enabled or disabled.

If an external storage location has already been defined before updating to version 3.2.0, the message does not appear at all.



We recommend data backups in regular intervals. In case of a data loss, the backup can then be used to retrieve saved data.

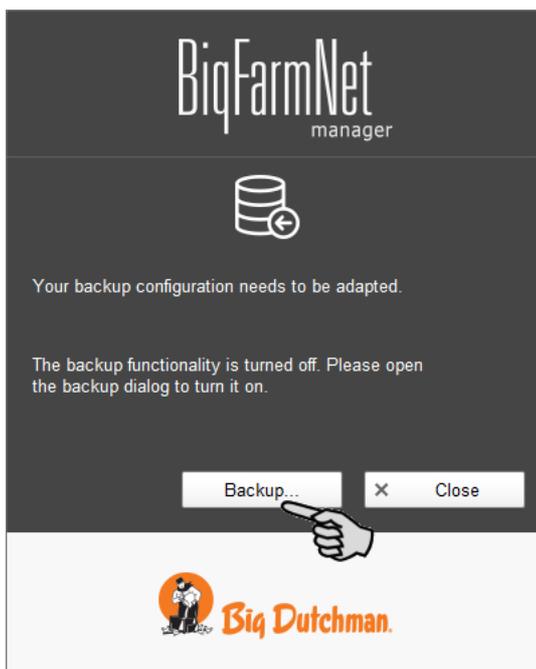
Remember that you can only retrieve the last data backup. Everything you have created or changed since then is not included in this backup. This means that the backup period should be determined depending on the amount of data you produce. You should find the ideal compromise between acceptable data loss and frequency of backups based on your individual needs.

The BigFarmNet Manager provides the following options for data backups:

- Manual backup, which you may carry out at any time when necessary.
- Automatic backup, for which you define a fixed backup period. The data is then backed up automatically according to the settings.

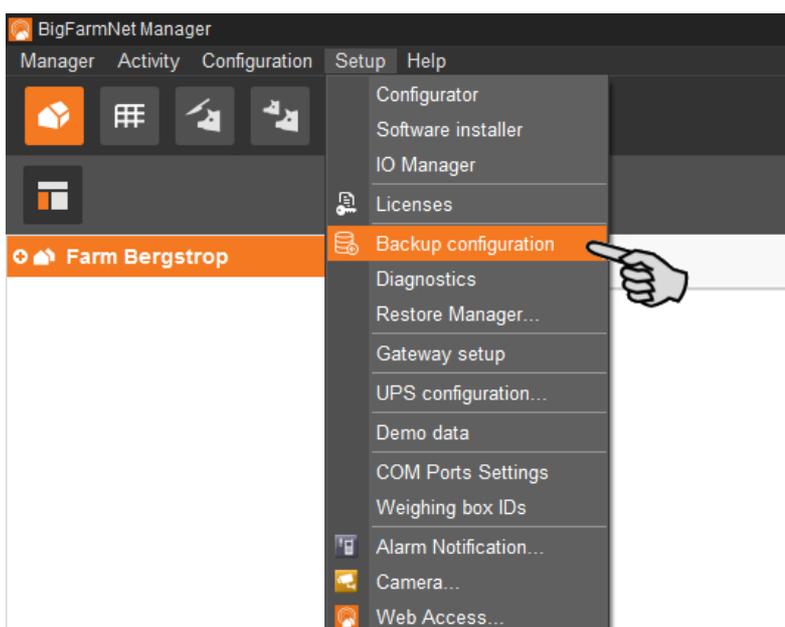
Open the settings dialog as follows:

1. Click on "Backup...".



OR

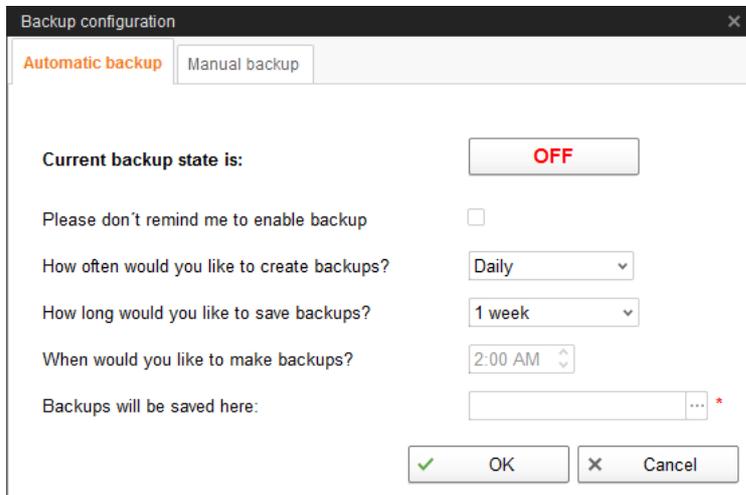
1. Click on "Backup configuration" in the "Setup" menu.



2. In the window "Backup configuration", select the desired process using one of the two tabs:

### Automatic backup

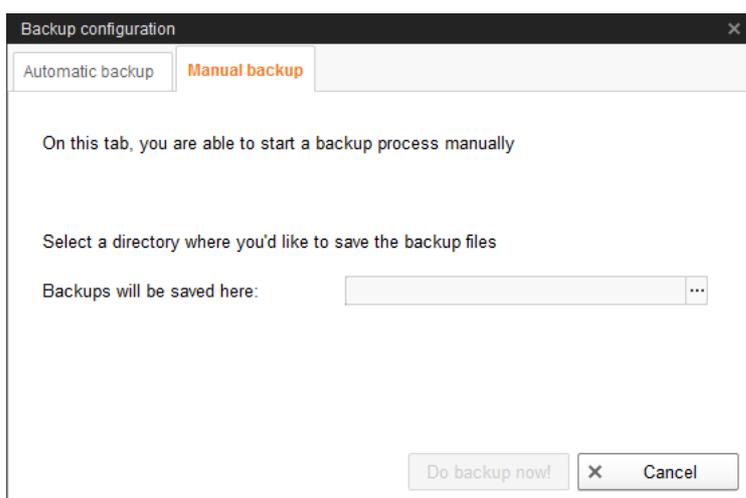
The automatic backup is pre-set to "OFF".



- Click on "OFF" to turn off the deactivation.  
The button then switches to "ON".
- Determine the backup period.
- Select an external storage location.
- Click on "OK" to accept these settings.

Or:

### Manual backup



- Select an external storage location.
- Click on the now active button "Create backup now!"

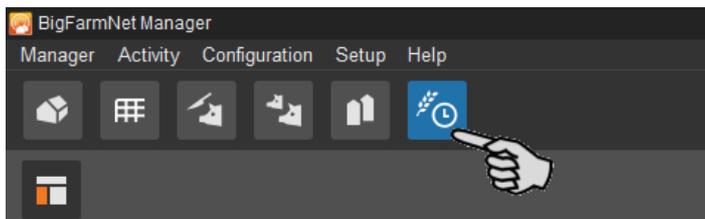
## 5 Task Manager

The task manager allows you to save feeding and cleaning tasks for your specific feeding system.

### 5.1 Defining a task

Depending on the feeding "strategy", you can define times and technical settings for the feeding in the "Feeding task" dialog.

1. Click on "Task Manager" in the management area.

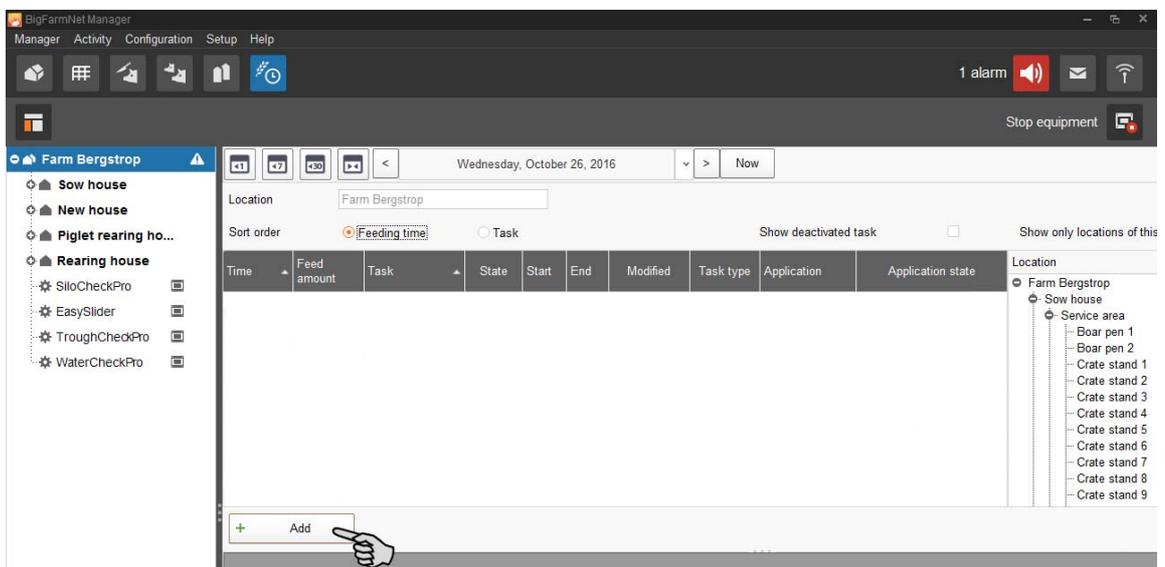


2. Click on the respective system in the farm structure to the left.

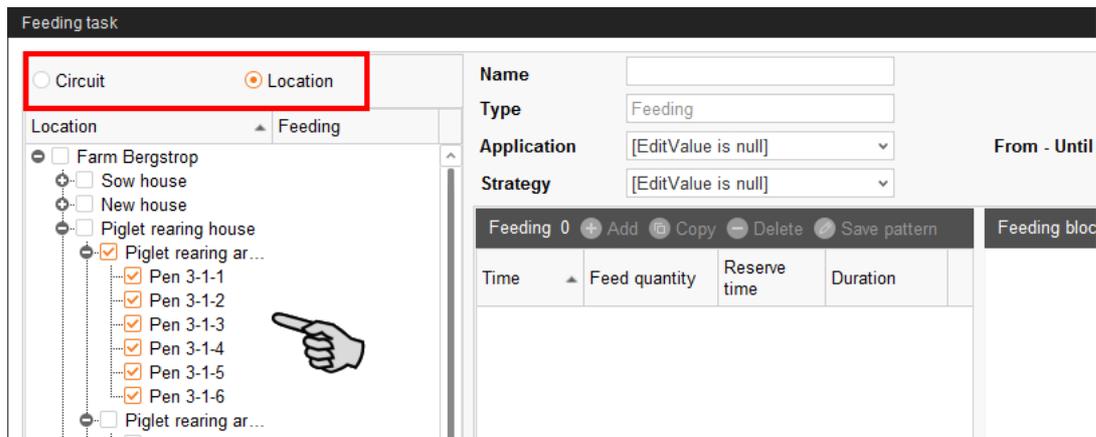
OR

Click on the farm level and select the system later on under the mandatory field "Application", see point 5.

3. In the application window, click on "Add".

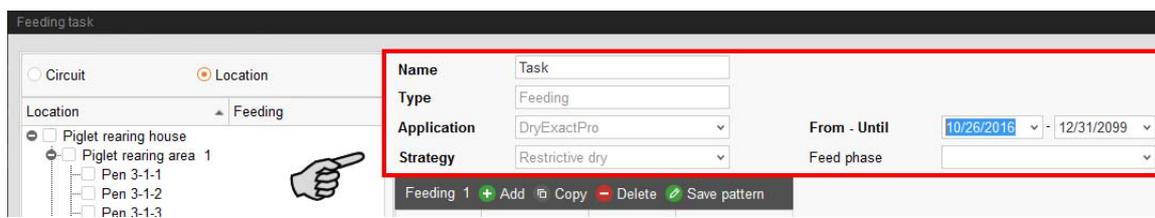


4. In the left-hand part of the "Feeding task" dialog window, select the correct location or circuit by checking the corresponding box.



5. Define information for the task at the top.

Fields with bold text are mandatory.



- **Name** of the task
- **Type** is pre-set to "Feeding".
- **Application**
- **Strategy** is the subject of the task.

The different strategies will be explained in the following chapters.

- **From – Until:** Time period for this task. The task will not be started outside of this time period.
- **Feed phase:** Select one or more feeding phases, if necessary, and click on "OK". Only the animal groups included in this feeding phase will receive feed.

All other settings depend on the selected "strategy". These settings are described in the following chapters.

### 5.1.1 Feeding: Restrictive dry

When feeding is restrictive (strategy "restrictive dry"), feed is mixed for the selected animals and then dispensed in a dosing process.

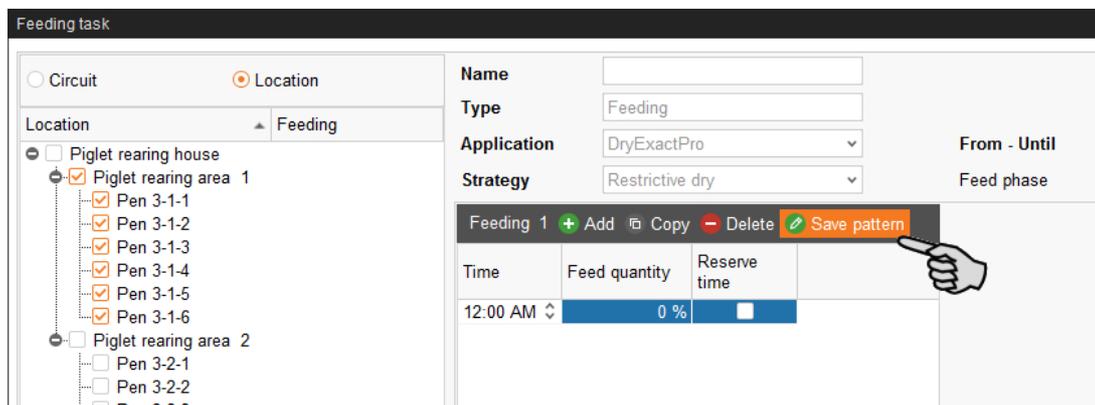
1. Carry out all introductory instructions in 5.1 "Defining a task".
2. Click on "Add" and provide the following information:

- **Time:** Start time of the feeding
  - **Feed amount:** Percentage of the daily demand; the shares may sum up to more than 100 %.
  - **Reserve time** (optional) is usually activated for the final feeding time. If the daily feed amount has not been dispensed entirely during the previous feeding time, a reserve time allows reaching this daily feed amount.
3. To add another feeding time, click on "Add" again.
  4. For each feeding time, configure the following settings in the lower part of the window under "Feeding detail":

- **Feed rest:** The following options are available for uneaten feed:
  - "Apply against": The available feed components are included in the currently running mixture.
  - "No consideration": The new feed components are added on top of the available feed components even though the flap is still open. This is the default setting.
  - "Clear container": The remaining feed is dropped onto the previous mixture.
- **Min. empty troughs:** This is the minimum number of troughs that must be empty before a new mixture is started.
- **Lights on time:** This is the time for which the lights are on.

5. Save the created task as template, if necessary:

- a) Click on "Save pattern".



- b) Define a code and a description in the window "Save pattern".
- c) Click on "OK" in the "Save pattern" window.

6. Click on "OK" after you have configured all settings.

### 5.1.2 PLC program

The "Program" strategy is used to start PLC programs. Starting with a start sensor (manual start) is currently not supported. Specific parameters are therefore inactive (grayed out).

1. Carry out all introductory instructions in 5.1 "Defining a task".
2. Click on "Add" and enter the time for the program.

The screenshot shows a form for defining a task. The 'Name' field is empty. The 'Type' is set to 'Feeding'. The 'Application' is 'DryExactPro'. The 'Strategy' is 'Program'. The 'From - Until' dates are '10/26/2016' to '12/31/2099'. Below these fields, there is a table with one row: 'Feeding 1'. To the right of this row are three buttons: '+ Add' (highlighted in orange), 'Copy', and '- Delete'. A hand icon is pointing to the '+ Add' button. Below the table, the 'Time' field is set to '12:00 AM'.

3. Configure the settings for the program in the lower part of the window under "Program detail".

The screenshot shows the 'Program detail' configuration window. The title bar says '12:00 AM Program'. The window contains several fields: 'Program' (dropdown), 'Start device' (text input), 'Cancel device' (text input), 'Start sensor' (dropdown), 'Only manual start' (checkbox), 'Time frame before' (text input with '0 min'), 'Pause time after' (text input with '0 min'), and 'Max feeding count' (text input with '1'). At the bottom right, there are 'OK' and 'Cancel' buttons.

- **Program** defines the PLC program that is to be started.
  - **Start device** defines the output that must be set to start the PLC program.
  - **Cancel device** defines the input that must be set to end the PLC program.
4. If necessary, add more feeding times for the program as described above.
  5. Click on "OK" after you have configured all settings.

### 5.1.3 Feeding: Ad lib dry

For ad lib feeding (strategy "Ad lib dry"), an ad lib circuit is supplied with feed at a specific time. Starting with the start sensor (manual start) is supported.

1. Carry out all introductory instructions in 5.1 "Defining a task".
2. Click on "Add" and enter the start time for the feeding.

3. To add another feeding time, click on "Add" again.
4. For each feeding time, configure the following settings in the lower part of the window under "Feeding detail":

- **Time calculation:** This parameter is currently inactive.
- **Feed rest:** The following options are available for uneaten feed:
  - "Apply against": The available feed components are included in the currently running mixture.
  - "No consideration": The new feed components are added on top of the available feed components even though the flap is still open. This is the default setting.
  - "Clear container": The remaining feed is dropped onto the previous mixture.
- **Min. empty troughs:** This is the minimum number of troughs that must be empty before a new mixture is started.

- **Start sensor:** Feeding can be started manually with the start sensor. Start sensors must be defined beforehand in the Composer under the parameter "Manual start switches", see chapter 3.2 "Configuring settings in the Composer".
  - **Only manual start:** When you activate this parameter, feeding only starts when you actuate the switch manually. The following parameters become active and can be edited in this case:
    - > **Pause time after:** Maximum waiting time for manual switch-on.
    - > **Max. feeding count:** Also defines the maximum waiting time for manual switch-on. The system waits for this maximum number of previous feeding tasks (of the same day).
  - **Time frame before:** The start sensor becomes active after this time has expired. Within this time period, the switch can also be actuated manually. The parameter remains inactive (grayed out) if the box **Only manual start** is checked.
5. Save the created task as template, if necessary.
- a) Click on "Save pattern".

The screenshot shows a configuration window for a task. The fields are as follows:

Name	<input type="text"/>		
Type	Feeding		
Application	DryExactPro	From - Until	10/26/2016 - 12/31/2099
Strategy	Ad lib dry	Feed phase	<input type="text"/>

Below the fields is a toolbar with the following items: Feeding 1, + Add, Copy, - Delete, and Save pattern (highlighted in orange). A hand cursor is pointing at the 'Save pattern' button. Below the toolbar is a table with a 'Time' column and a value of '12:00 AM'.

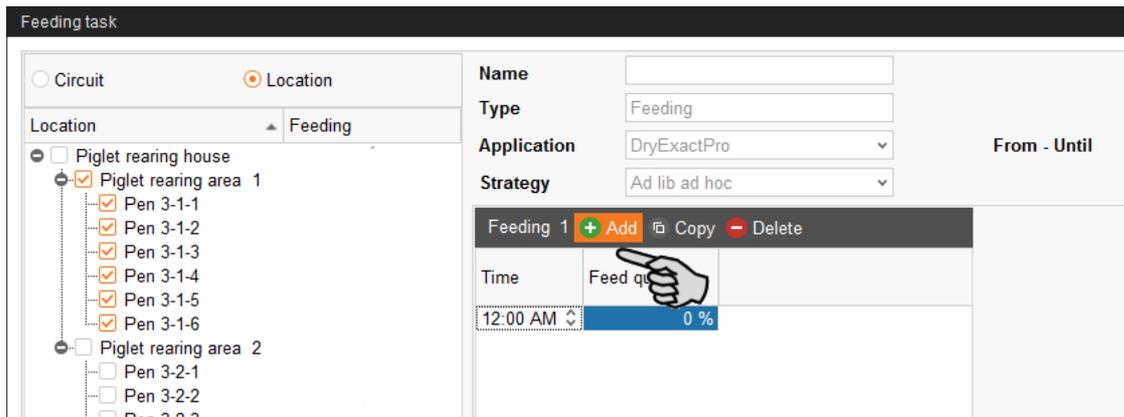
- b) Define a code and a description in the window "Save pattern".
- c) Click on "OK" in the "Save pattern" window.
6. Click on "OK" after you have configured all settings.

#### 5.1.4 Feeding: Ad lib ad hoc

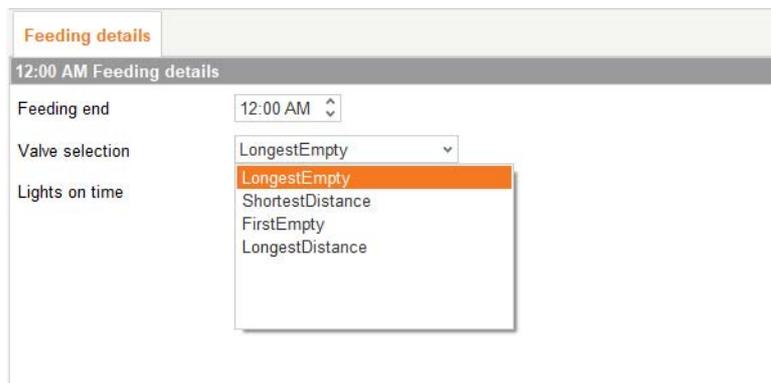
With the ad lib ad hoc strategy, a time period during which valves are checked continuously is defined. When a valve reports its status as "empty", the defined feed amount is immediately sent to the valve.

1. Carry out all introductory instructions in 5.1 "Defining a task".

- Click on "Add" and provide the following information:



- **Time:** Start time of the feeding
  - **Feed amount:** Percentage of the daily demand; the shares may sum up to more than 100 %.
- To add another feeding time, click on "Add" again.
  - For each feeding time, configure the following settings in the lower part of the window under "Feeding detail":



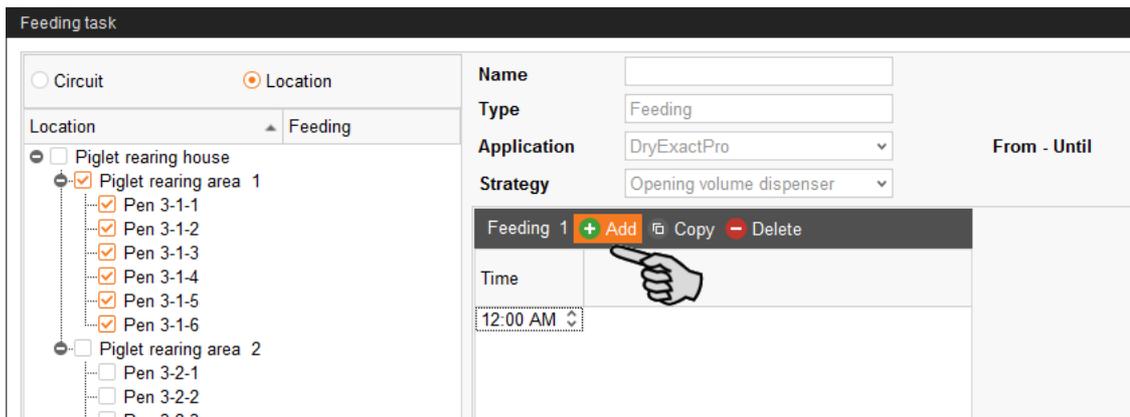
- **Feeding end:** End time of the feeding
- **Valve selection:** Define which valves of a feeder or intermediate tank that indicate empty receive the feed amount first based on the following characteristics:
  - "Longest empty": Valve whose trough has been reporting its status as empty for the longest time since the last supply.
  - "Shortest distance": Valve with the shortest distance to the feed kitchen.
  - "First empty": Valve whose trough has been reporting its status as empty as the first of all empty troughs.
  - "Longest distance": Valve with the longest distance to the feed kitchen.
- **Lights on time:** This is the time for which the lights are on.

- Click on "OK" after you have configured all settings.

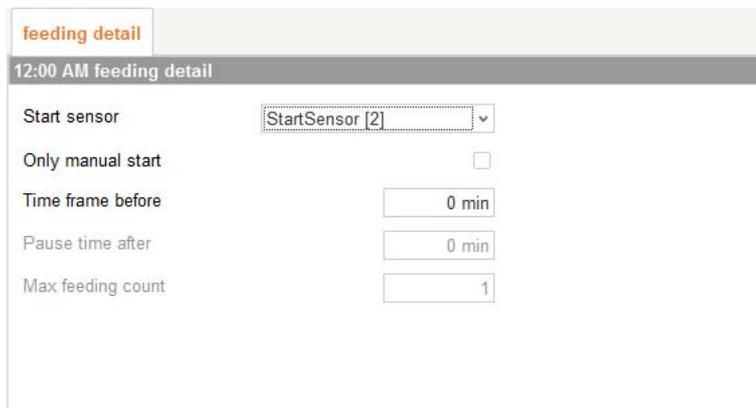
### 5.1.5 Opening volume dispensers

With this task, you can define times for opening the volume dispensers. You can create several of these tasks for the same time so they start simultaneously. Starting with the start sensor (manual start) is also supported.

- Carry out all introductory instructions in 5.1 "Defining a task".
- Click on "Add" and enter the time for opening.



- To add another feeding time, click on "Add" again.
- For each feeding time, configure the settings for manual start in the lower part of the window under "Feeding details":



- **Start sensor:** Feeding can be started manually with the start sensor. Start sensors are defined earlier in the Composer in the parameter "Manual start switches", see chapter 3.2 "Configuring settings in the Composer", page 23.

- **Only manual start:** When you activate this parameter, feeding only starts when you actuate the switch manually. The following parameters become active and can be edited in this case:
  - > **Pause time after:** Maximum waiting time for manual switch-on.
  - > **Max. feeding count:** Also defines the maximum waiting time for manual switch-on. The system waits for this maximum number of previous feedings (of the same day).
- **Time frame before:** The start sensor becomes active after this time has expired. Within this time period, the switch can also be actuated manually. The parameter remains inactive (grayed out) if the box **Only manual start** is checked.

5. Click on "OK" after you have configured all settings.

## 5.2 Editing a task

Feeding tasks are shown with their respective feeding details in the application window as soon as they have been created. The following functions are available:

The screenshot shows the BigFarmNet Manager interface. The main window displays a table of feeding tasks for the location 'Piglet rearing house' on Wednesday, October 26, 2016. The tasks are sorted by feeding time. The table has columns for Time, Feed amount, Task, State, Start, End, Modified, Task type, Application, and Application state. The selected task is at 12:00 PM with a 30% feed amount, 'NursePeriod' task, and 'DryExactPro' application. Below the table, there are buttons for 'Add', 'Edit', 'Disable', and 'Start'. The 'Start' button is highlighted with a red box and a circled '4'. The detailed view below shows parameters for all feedings at 12:00 PM o'clock all days, including feed quantity (30%), time calculation, and feedrest settings.

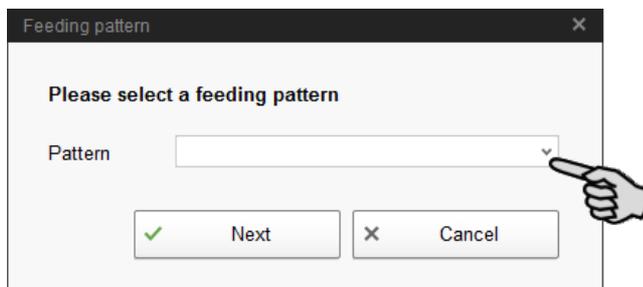
Time	Feed amount	Task	State	Start	End	Modified	Task type	Application	Application state
7:00 AM	20 %	NursePeriod	⊕					DryExactPro	⊕
12:00 ...	30 %	NursePeriod	⊕					DryExactPro	⊕
4:00 PM	20 %	NursePeriod	⊕					DryExactPro	⊕
6:00 PM	30 %	NursePeriod	⊕					DryExactPro	⊕

Parameter for all feedings at 12:00 PM o'clock all days

feeding detail

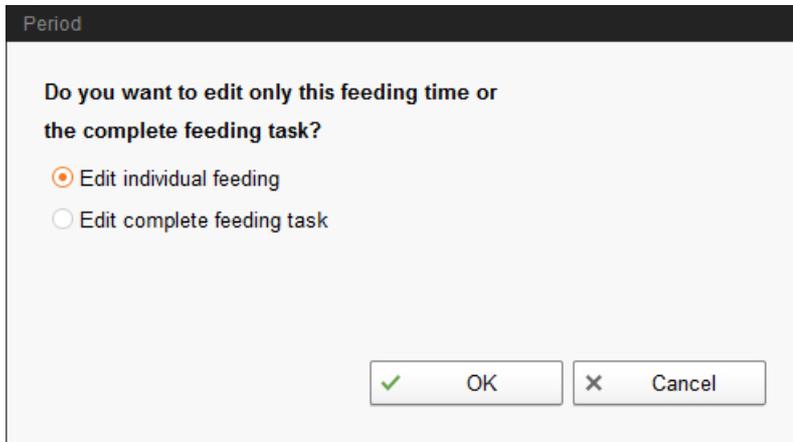
Feed quantity	30 %	Time calculation	<input type="checkbox"/>	Feedrest	No consideration
Reserve time	<input type="checkbox"/>	Time correction		Min. empty troughs	0
Feed phases					

1. If necessary, filter the tasks according to location using the farm structure. Click either on the respective location or directly on the system.  
On the farm level, all tasks of all systems are displayed.
2. Select a time period, if necessary.
  - Tasks of a specific day, week or month, respectively, can be shown.
  - You may also select individual days or a specific time period, as desired.
  - Click on "Now" to get back to the current day.
3. Modify the task view as required.
  - Sort the task order according to "Feeding time" or according to "Task".
  - Activate the function "Show deactivated task", if required.
  - Activate the function "Show only locations of this feeding time", if required.  
Drag the horizontal scroll bar at the bottom all the way to the right to see the hidden part of the window.
4. Use the following functions to edit individual feeding times. First, select the correct feeding time by clicking on it.
  - "Add": Add new tasks with this function.  
If you have created a template (pattern) at some point, you will be asked for a pattern. Select the correct pattern from the drop down menu, if applicable, or select "[Edit value is Null]" to create a new task. Click on "Next".



- "Edit": Use this function to either edit the selected feeding time or the entire task it belongs to.

Select the correct option and click on "OK".



Period

Do you want to edit only this feeding time or the complete feeding task?

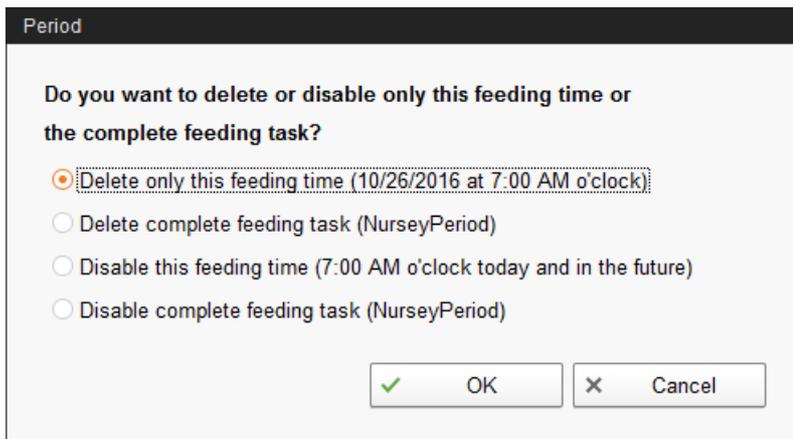
Edit individual feeding

Edit complete feeding task

✓ OK    ✕ Cancel

- "Disable": Use this function to disable or delete the selected feeding time or the entire task it belongs to.

Select the correct option and click on "OK".



Period

Do you want to delete or disable only this feeding time or the complete feeding task?

Delete only this feeding time (10/26/2016 at 7:00 AM o'clock)

Delete complete feeding task (NursePeriod)

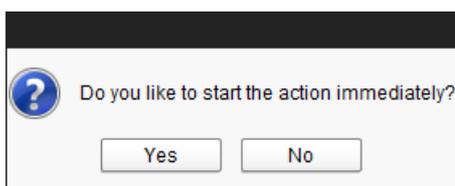
Disable this feeding time (7:00 AM o'clock today and in the future)

Disable complete feeding task (NursePeriod)

✓ OK    ✕ Cancel

- "Start": Use this function to start feeding immediately, even if a different feeding time has been saved for the task.

Confirm immediate start by clicking on "Yes".



?

Do you like to start the action immediately?

Yes    No

## 6 Silo Manager

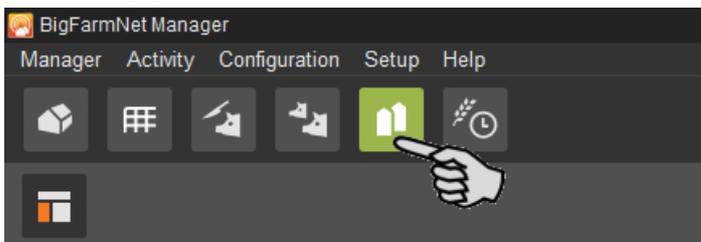
### 6.1 Overview

With the Silo Manager, you can monitor and manage the data of all your silos.

The Silo Manager offers the following functions:

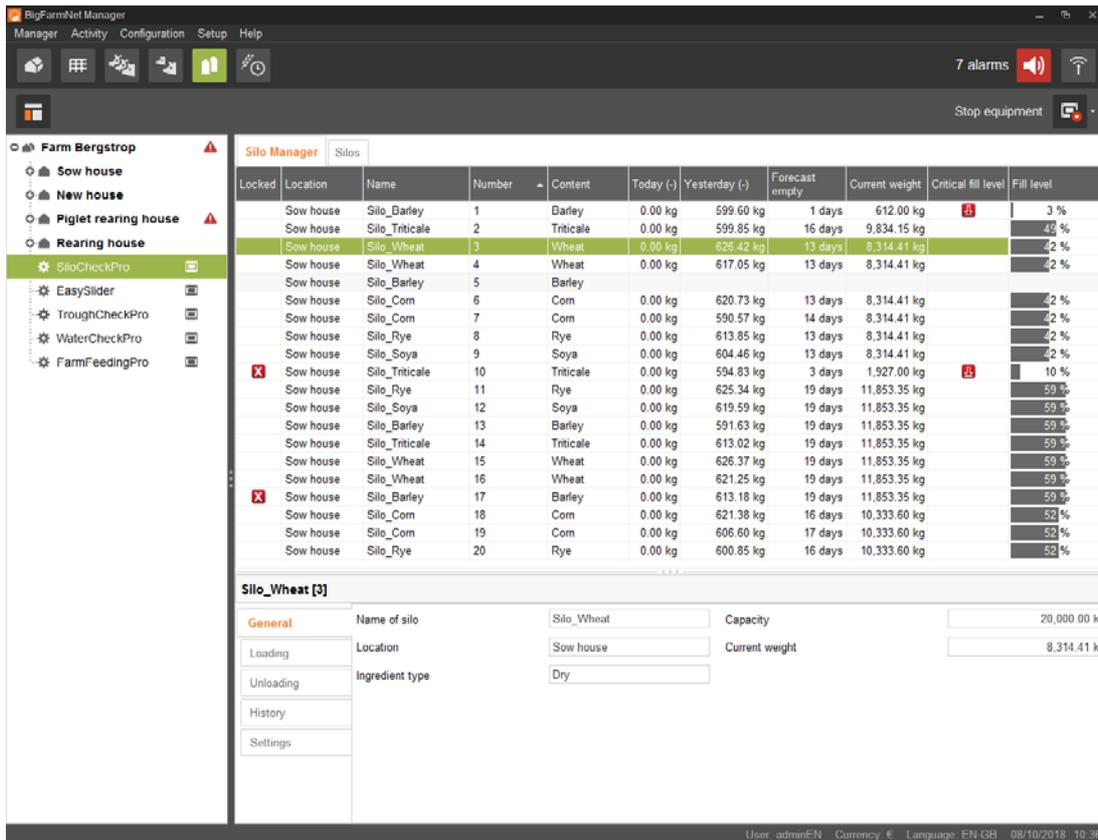
- register the amounts of feed unloaded from the silos
- calculate the expected storage duration of the silo contents
- receive a warning when a silo requires filling
- manage suppliers and prices for each feed component
  - BigFarmNet automatically calculates the total delivery amounts and your feed costs based on this information.

Open the Silo Manager by selecting the management area.



The tab "Silo Manager" opens in the application window. The table shows the current data for your silos:

- location and name of the silo
- the feed component contained in the silo
- the amounts of feed removed on the current day "Today" and the previous day "Yesterday"
- the time of the next expected silo filling under "Forecast empty"
- the current weight
- information on the fill level as a graph and as a percentage



Change the silo order in the table as a function of any of the parameters. If you click on "Forecast empty", for example, the silos are sorted in ascending order according to the time of the expected next loading, starting with the lowest number of days.

The silo locations were defined during configuration of the system. If you click on a house in the farm structure, you will only see the silos of this house.

### 6.2 Silo data

Additional silo data is displayed in the lower part of the application window based on the following categories:

- General
- Loading (delivery)
- Unloading (consumption)
- History
- Settings

In the categories "Loading" and "Settings", it is possible to edit the data of the individual silos.

## General

The "General" category shows general information on the selected silo.

Silo_Wheat [1]				
<b>General</b>	Name	Silo_Wheat	Capacity	20,000.0 kg
Loading	Location	Piglet rearing house	Current weight	14,870.8 kg
Unloading	Silo type	Dry feed	Priority	50
History				
Settings				

## Loading (delivery)

The category "Loading" shows the previous deliveries for the selected silos.

You may add, edit or delete deliveries here. You can also export the data as .csv or .xlsx file for further use if you click on the "Export" button.

Silo_Wheat [1]							
General	Date	Content	Supplier	Delivery number	Price	Total cost	Amount
<b>Loading</b>	1/24/2018 1:00 AM	Wheat	East Pig Food	10120	0.57 €/kg	5,430.77 €	9,531.0 kg
Unloading	1/16/2018 1:00 AM	Wheat	East Pig Food	10121	0.31 €/kg	3,113.81 €	9,923.0 kg
	1/8/2018 1:00 AM	Wheat	East Pig Food	10122	0.30 €/kg	3,076.95 €	10,357.0 kg
	12/31/2017 1:00 AM	Wheat	East Pig Food	10123	0.59 €/kg	6,208.51 €	10,452.0 kg
	12/18/2017 1:00 AM	Wheat	East Pig Food	10124	0.29 €/kg	2,763.68 €	9,425.0 kg

Proceed as follows to add a delivery:

1. In the table, click on the silo you want to edit.
2. Under the category "Loading", click on "Add".
3. Complete the information in the next window:
  - Supplier (mandatory)
  - Delivery number
  - Delivery date
  - Amount and component (mandatory)
  - Dry matter percentage
  - Price

- Total cost (calculated automatically if information on the price and amount is entered)

4. Click on "OK" to accept these settings.

### Unloading (consumption)

The "Unloading" category shows all quantities of feed removed from the selected silo up to now.

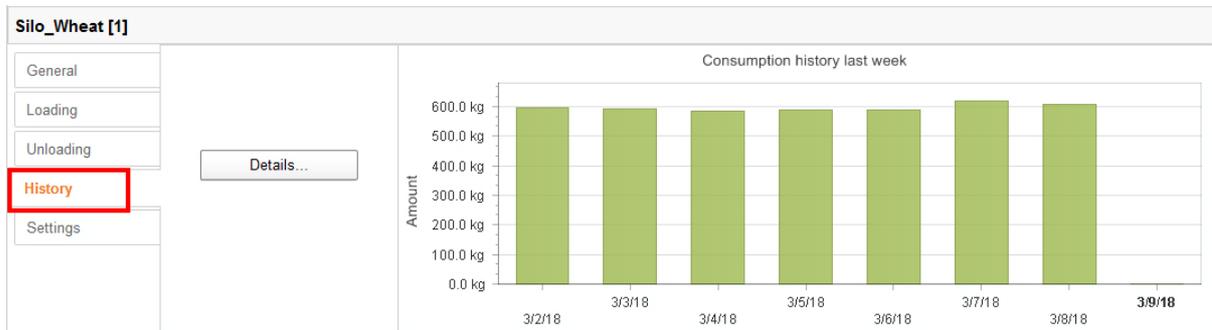
You may export the data as .csv or .xlsx file for further use if you click on the "Export" button.

Silo_Wheat [1]					
General	Date	Location	Content	Amount	
	3/8/2018 8:37 PM	Piglet rearing house	Wheat	302.7 kg	
Loading	3/8/2018 10:32 AM	Piglet rearing house	Wheat	302.7 kg	
	3/7/2018 7:18 PM	Piglet rearing house	Wheat	205.7 kg	
Unloading	3/7/2018 4:28 PM	Piglet rearing house	Wheat	205.7 kg	
	3/7/2018 10:48 AM	Piglet rearing house	Wheat	205.7 kg	
History	3/6/2018 7:58 PM	Piglet rearing house	Wheat	196.5 kg	
	3/6/2018 3:24 PM	Piglet rearing house	Wheat	196.5 kg	
Settings	3/6/2018 11:23 AM	Piglet rearing house	Wheat	196.5 kg	
	3/5/2018 8:14 PM	Piglet rearing house	Wheat	195.4 kg	

Export

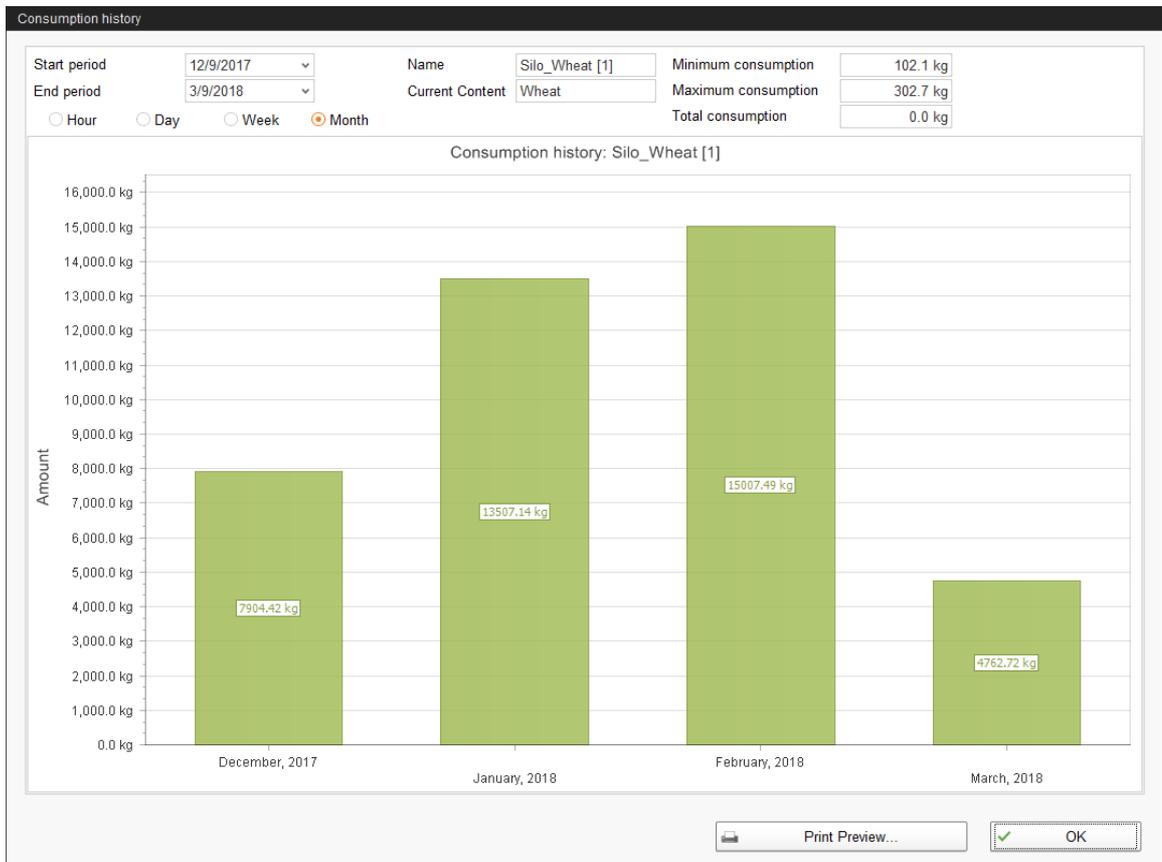
## History

All feed removed from the selected silo in the past seven days is displayed in the "History" category as a bar chart.



Clicking on the "Details" button opens the "Consumption history" window. You may select the time period for the consumption history freely and with more details in this window.

1. Under "Start time" and "End time", enter the desired dates.
2. Select a time period: Hour, day, week or month.
3. Clicking on the "Print Preview" button opens a print preview to print out the data.



## Settings

The "Settings" category show the basic data of the selected silo.

Proceed as follows to change the settings:

1. In the table, click on the silo you want to edit.
2. Under the category "Settings", click on "Edit".
3. Change the following settings, if necessary:
  - Name of the silo
  - Components or recipes mean the content of the silo
  - Capacity of the silo
  - Warning amount (relative) or warning amount (absolute): If you enter one of these values, the other one is calculated automatically.  
The relative warning amount refers to the silo's capacity.
  - If the silo weight falls below the (absolute) warning amount, an alarm for a critical fill level is generated.
  - Priority: Use this function to prioritize the silos. The higher the value, the earlier the system uses components from this silo.
  - "Tara" is used to set the weighing system of the silo to zero. This is only possible if the silo is completely empty.

Silo settings: Silo\_Wheat [1]

Name	Silo_Wheat	Capacity	20,000.0 kg
Components	Wheat	Warning amount (relative)	10.0 %
Recipes		Warning amount (total)	2,000.0 kg
Weighed	<input type="checkbox"/>	Create warning	<input type="checkbox"/>
Lock outlet	<input type="checkbox"/>	Priority	50
Unlock outlet automatically	<input type="checkbox"/>	Tara	Tara
		Last tara date	1/1/1970

OK Cancel

### NOTICE!

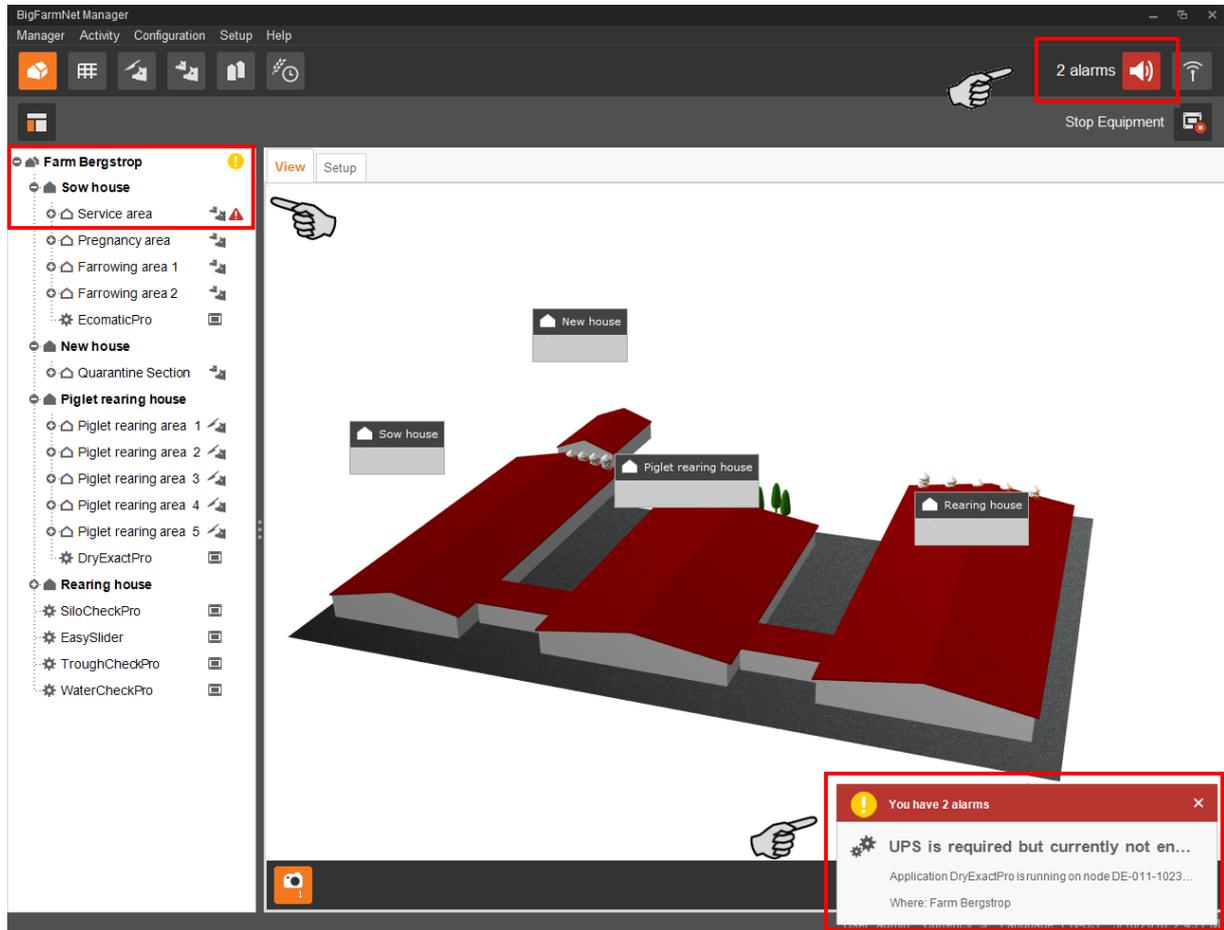
BigFarmNet automatically blocks a silo whose content has been completely used up. After each delivery, check whether the box next to "Block outlet" has been checked by BigFarmNet and if necessary remove the check.

4. Click on "OK" to accept these settings.

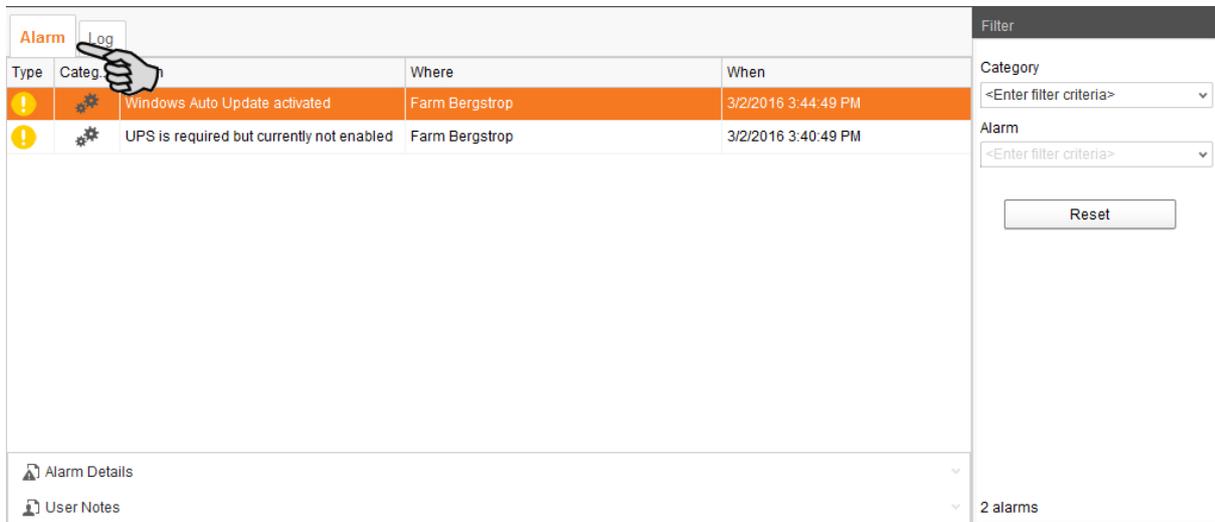
## 7 Alarms and warnings

An alarm or a warning are issued if defined values are not met or if malfunctions occur. Alarms and warnings are first registered by the control computer. The control computer then sends the message to the BigFarmNet Manager.

The BigFarmNet Manager indicates alarms as follows:



Clicking on the pop-up window or the alarm icon in the tool bar opens the window for alarms. The "Alarm" window lists all active alarms and warnings. Alarms and warnings are listed in the order of their occurrence.



When the window "Alarm" is open, you can use the farm structure to click on a location with alarm or warning icon to view errors that have occurred at this location only.

### Alarm types

Icon	Status	Description
	Active alarm	Not acknowledged: Cause still exists.
	Inactive alarm	Not acknowledged: Cause no longer exists.
	Deactivated alarm	Acknowledged: Cause still exists.
	Ended alarm	Acknowledged: Cause no longer exists.
	Active warning	Not acknowledged: Cause still exists.
	Ended warning	Acknowledged: Cause no longer exists.
	Info	Information about an incident that has occurred.

## Alarm categories

Icon	Category
	Climate: temperature, humidity
	Control, IO connection or test (system-specific)
	BigFarmNet system or CAN bus
	Dry feeding
	Liquid feeding
	SiloCheck system
	WaterCheck system

### NOTICE!

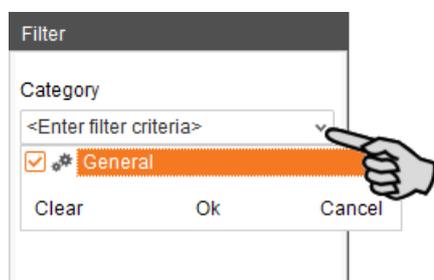
Always eliminate causes for alarms in the "Climate" category first.

## 7.1 Filtering alarms

Alarms can be filtered according to category as well as cause.

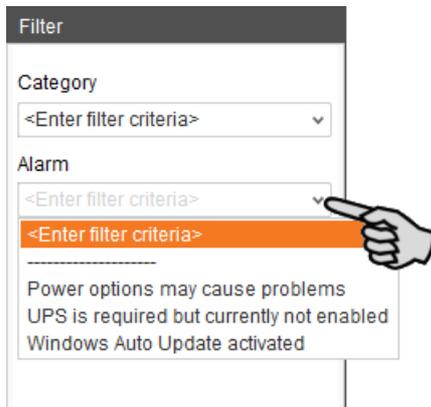
1. In the right-hand part of the window under "Filter", open the drop-down menu listing categories.

By default, all categories are selected.



2. Click on "Clear" to delete all check marks.
3. Check the boxes of the correct categories.
4. Click on "OK" to accept this selection.

- Under "Alarm", select the desired alarm cause from the drop-down menu.  
The table then shows the desired alarms.



- To deselect the alarms, click on "Reset".  
The table now lists all alarms.

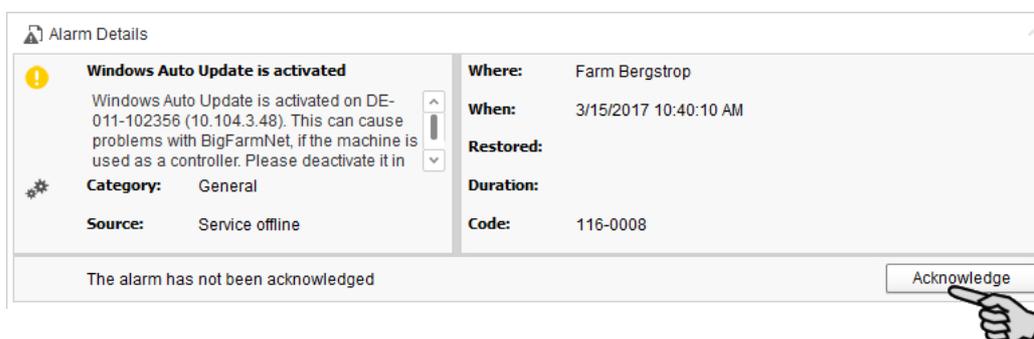
## 7.2 Acknowledging an alarm

Alarms can be acknowledged their cause has been eliminated. The alarm is marked with the corresponding icon (see alarm types) in the table and the system no longer requires action from the user.

- Click on the alarm you want to acknowledge to mark it.
- Click on "Alarm details" in the bottom part of the application window.



- Click on "Acknowledge".



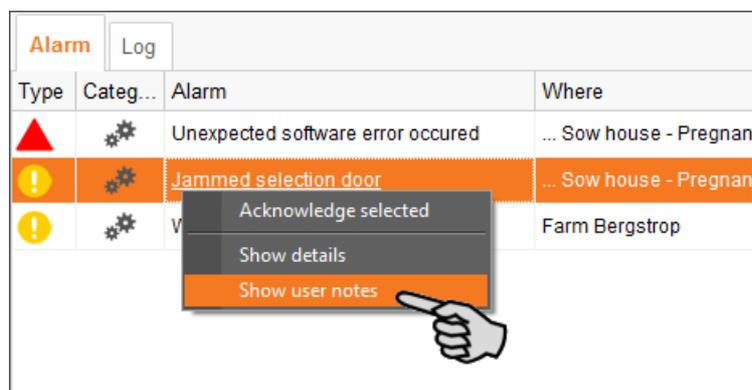
- Click on "Acknowledge" again in the next window.

5. If necessary, leave a note on the alarm.

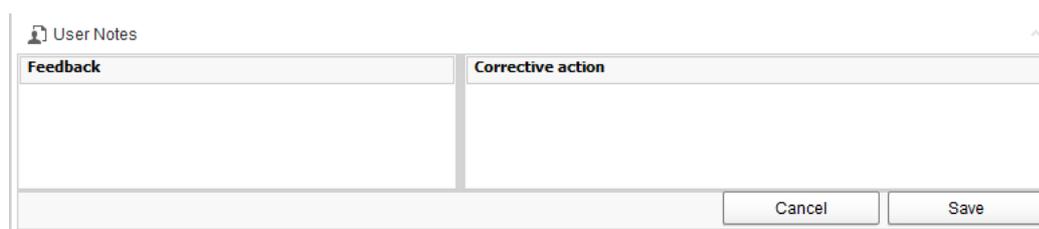
This note may be helpful to later eliminate similar alarms.

- a) Click on the alarm for which you want to leave a note to mark it.
- b) Right-click to open the context menu and click on "Show user notes".

The window "User notes" opens in the lower part of the application window.



- c) Enter your note into the field "Feedback" or "Corrective action".



- d) Click on "Save".

Or:

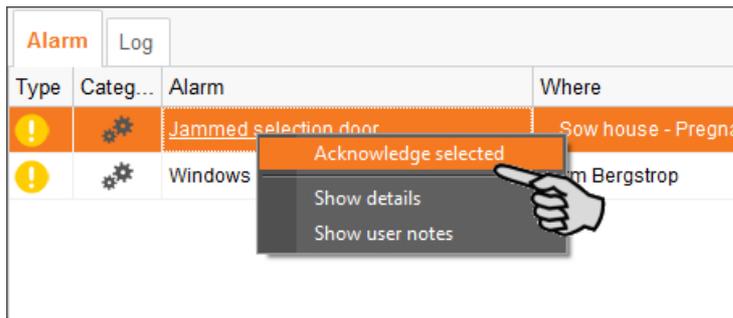
### NOTICE!

You can also acknowledge multiple alarms at the same time. Use the following key combination to select the respective alarms:

- To select a group of consecutive alarms: Click on the first alarm, press and hold the Shift key and then click on the last alarm you want to select.
- To select multiple alarms individually: Press and hold Ctrl and click on each alarm you want to select.
- To select all alarms: Press and hold Ctrl and then press A.

1. Select one or more alarms.

2. Right-click to open the context menu and click on "Acknowledge selected".



3. Click on "Acknowledge" in the next window.

### 7.3 Alarm log

The "Log" tab shows all alarms which have occurred since initial operation of the BigFarmNet Manager on your farm.

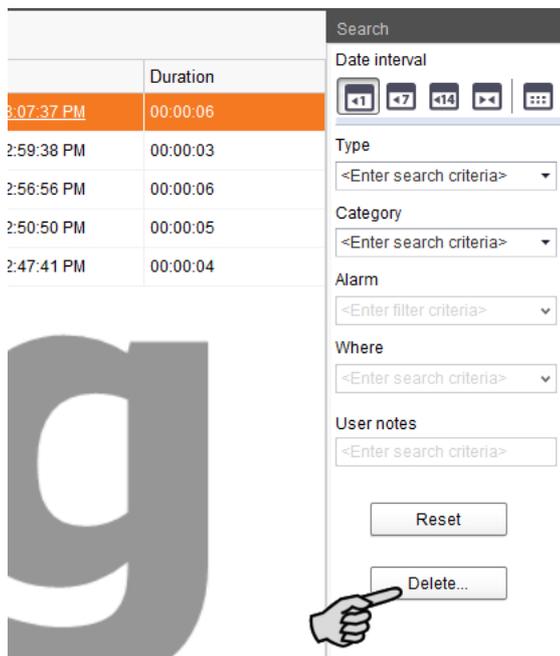
The screenshot shows the "Log" tab selected in the top navigation bar. A hand cursor points to the "Log" tab. Below the navigation bar is a table with columns: Type, Categ..., Ala..., Where, When, and Duration. The first row is highlighted in orange and contains a yellow warning icon, a gear icon, the text "UPS is required but currently not ...", "Farm Bergstrop", "3/18/2016 3:03:30 PM", and an empty duration field. The second row contains a yellow warning icon, a gear icon, the text "Windows Auto Update activated", "Farm Bergstrop", "3/18/2016 3:03:15 PM", and an empty duration field. A large "Log" watermark is overlaid on the table. To the right of the table is a search panel with the following sections: "Date interval" with navigation buttons, "Type" with a dropdown menu, "Category" with a dropdown menu, "Alarm" with a dropdown menu, "Where" with a dropdown menu, and "User notes" with a text input field. Below the search panel are "Reset" and "Delete..." buttons. At the bottom right of the search panel, it says "2 alarms".

Use the search function to view selected alarms in this tab. The following search options are available in the right-hand part of the window under "Search":

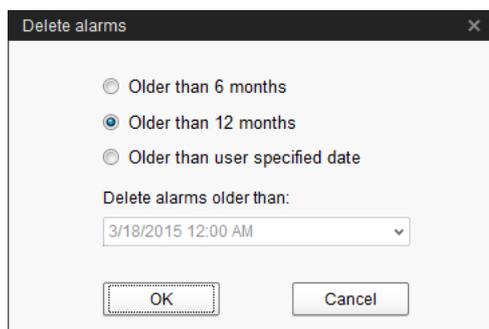
- Date interval: Time periods during which alarms may have occurred
- Type: Alarm type
- Category: Alarm category
- Alarm: Alarm cause
- Where: Location of the alarm
- User notes: provided user notes have been left

## Deleting alarms

1. Click on "Delete..." in the right-hand part of the "Log" tab.



2. Click on the desired time period or enter a date.



### NOTICE!

Only alarms older than six months can be deleted.

3. Click on "OK".

All alarms of the selected time period are deleted, irrespective of whether specific alarms are currently selected via the search function.

## 7.4 Alarm Notification

Alarm Notification is a service that sends alarms via email. Alarm notification via SMS is currently not supported.

To use the Alarm Notification service via email, configure the service in BigFarmNet Manager. The following technical conditions must be met for email notifications:

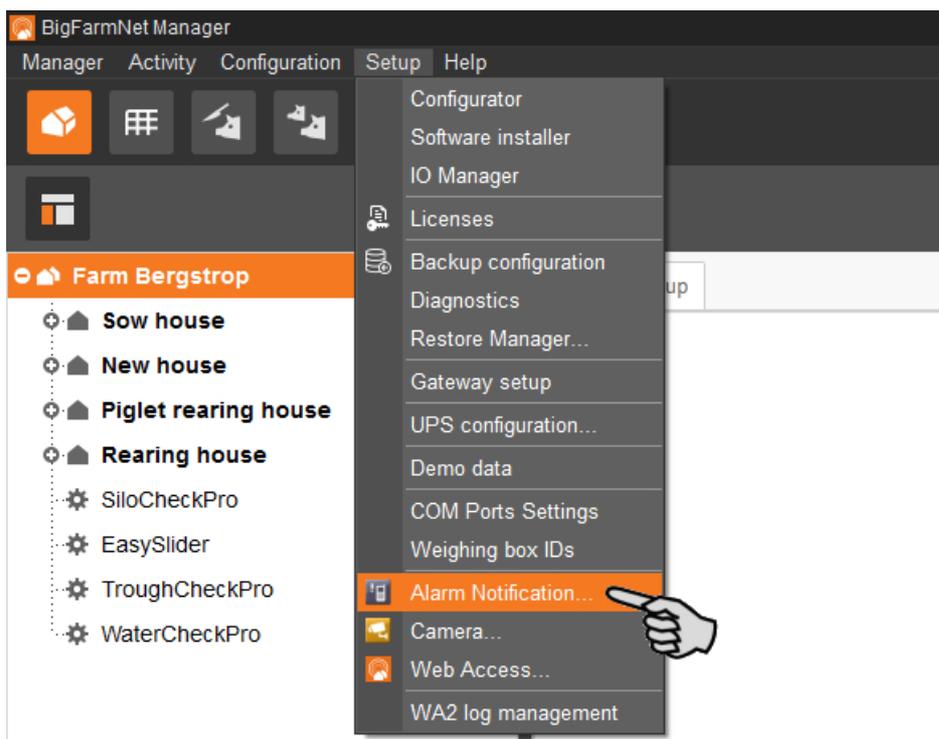
- Internet connection
- running BigFarmNet Manager

### NOTICE!

The Alarm Notification service cannot replace an autocaller! The service is merely an additional help.

Carry out the following steps to set up the Alarm Notification service:

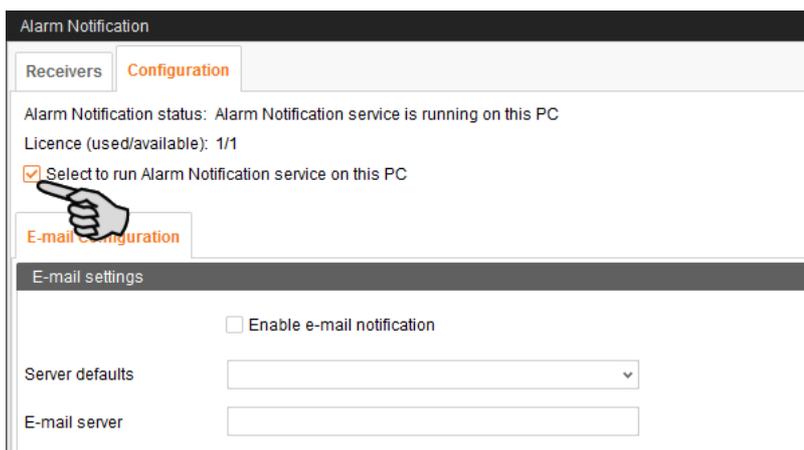
1. Click on "Alarm Notification" in the "Setup" menu.  
This opens the dialog window "Alarm Notification".



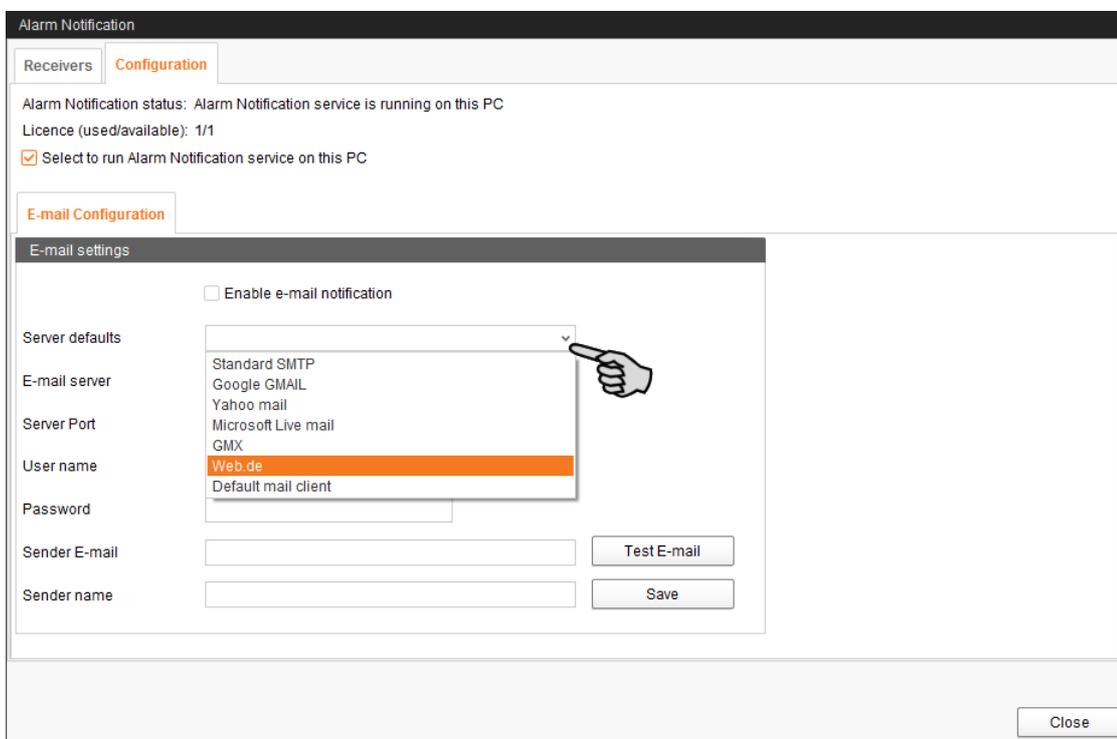
- Click on the "Configuration" tab in the dialog window.



- Check the box "Select to run Alarm Notification service on this PC".



- Click on the arrow pointing downwards next to "Server defaults" and select your server default from the drop-down menu.



As soon as you have selected a server default, the email server, the server port and the SSL are filled in automatically.

5. Enter the user name, the password and the sender email.
6. Check the box "Enable e-mail notification" to activate this function.

Alarm Notification

Receivers Configuration

Alarm Notification status: Alarm Notification service is running on this PC  
Licence (used/available): 1/1  
 Select to run Alarm Notification service on this PC

E-mail Configuration

E-mail settings

Enable e-mail notification

Server defaults: Web.de

E-mail server: smtp.web.de

Server Port: 587  Use SSL

User name: Test 1

Password: \*\*\*\*

Sender E-mail: Test@web.de

Sender name: Farm Bergstrop

7. Click on "Test E-mail" to check the configuration.

Alarm Notification

Receivers Configuration

Alarm Notification status: Alarm Notification service is running on this PC  
Licence (used/available): 1/1  
 Select to run Alarm Notification service on this PC

E-mail Configuration

E-mail settings

Enable e-mail notification

Server defaults: Web.de

E-mail server: smtp.web.de

Server Port: 587  Use SSL

User name: Test 1

Password: \*\*\*\*

Sender E-mail: Test@web.de

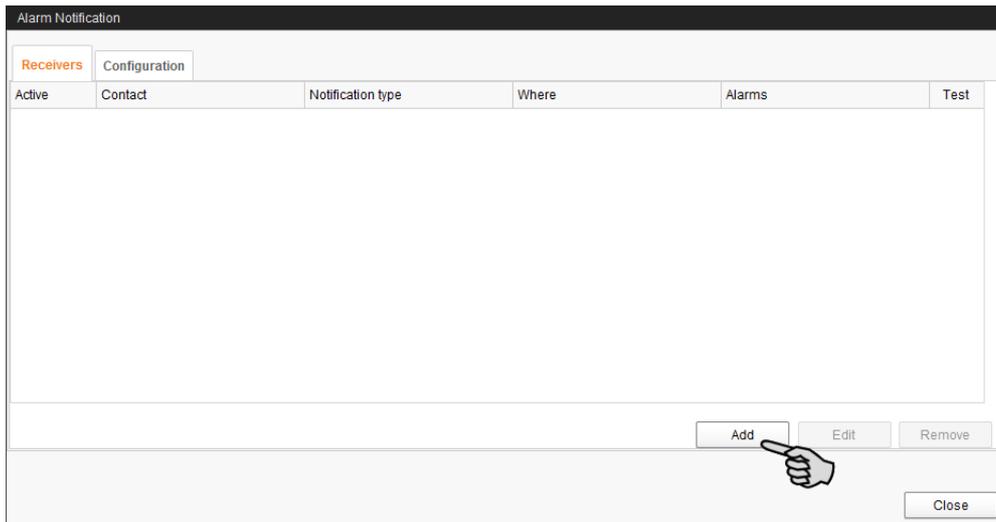
Sender name: Farm Bergstrop

8. Click on "Save" to accept all settings.

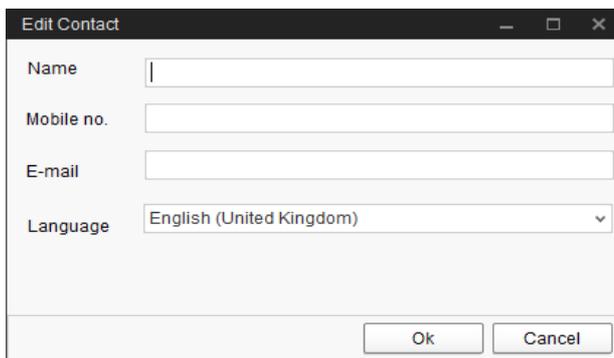
9. Click on the "Receivers" tab.



10. Click on "Add" to add a recipient.



11. Enter the contact details in the next dialog window and select the correct language.  
Alarm notifications via SMS are currently not supported.



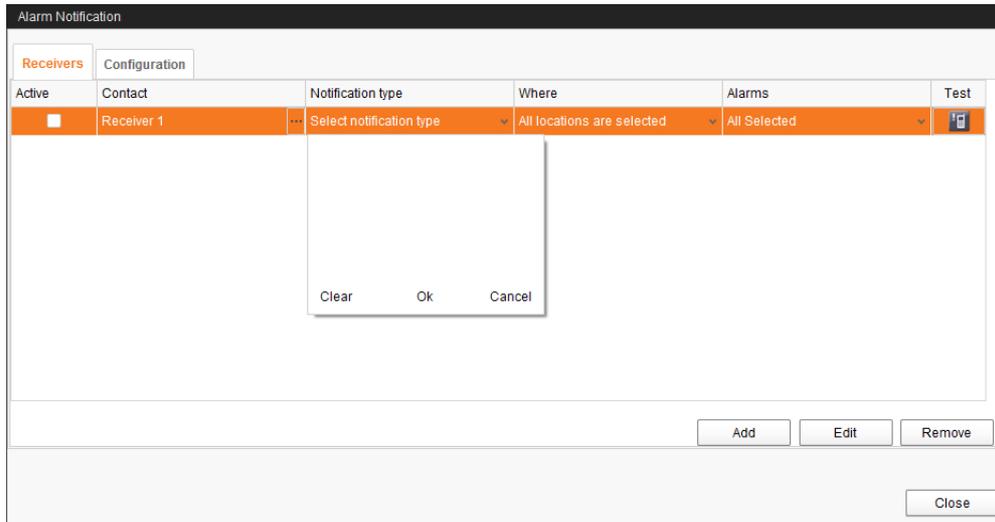
The screenshot shows the 'Edit Contact' dialog window with the following fields:

- Name:
- Mobile no.:
- E-mail:
- Language:

At the bottom, there are 'Ok' and 'Cancel' buttons.

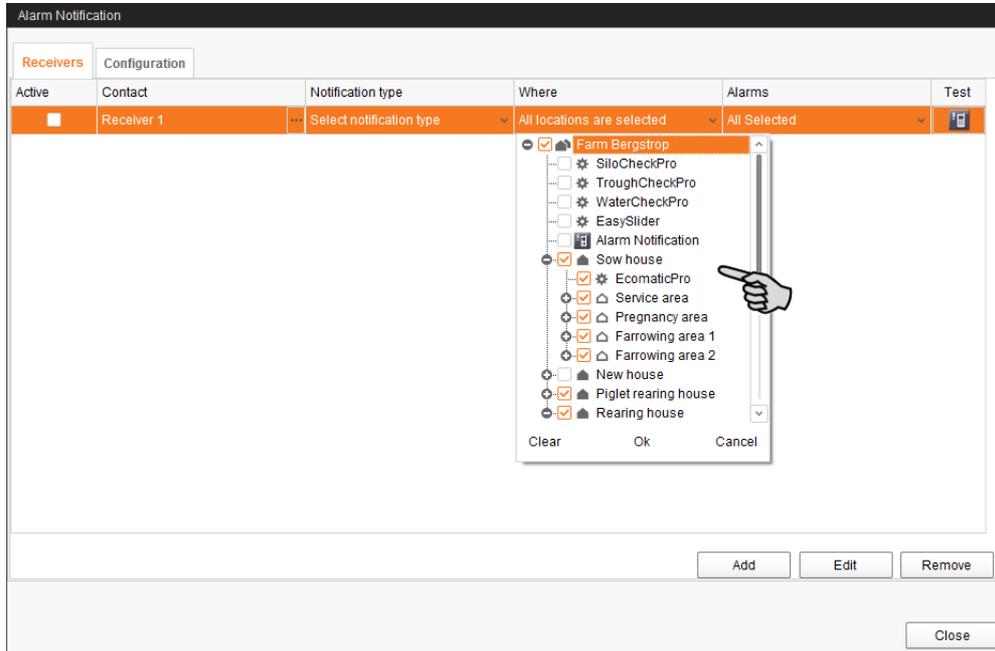
12. Confirm your input by clicking on "OK".

- Click into the input field below "Notification type" and select "E-mail" from the drop-down menu.



- Confirm your selection by clicking on OK at the bottom of the drop-down list.
- Click into the input field below "Where" and select the location for which you want to receive alarms.

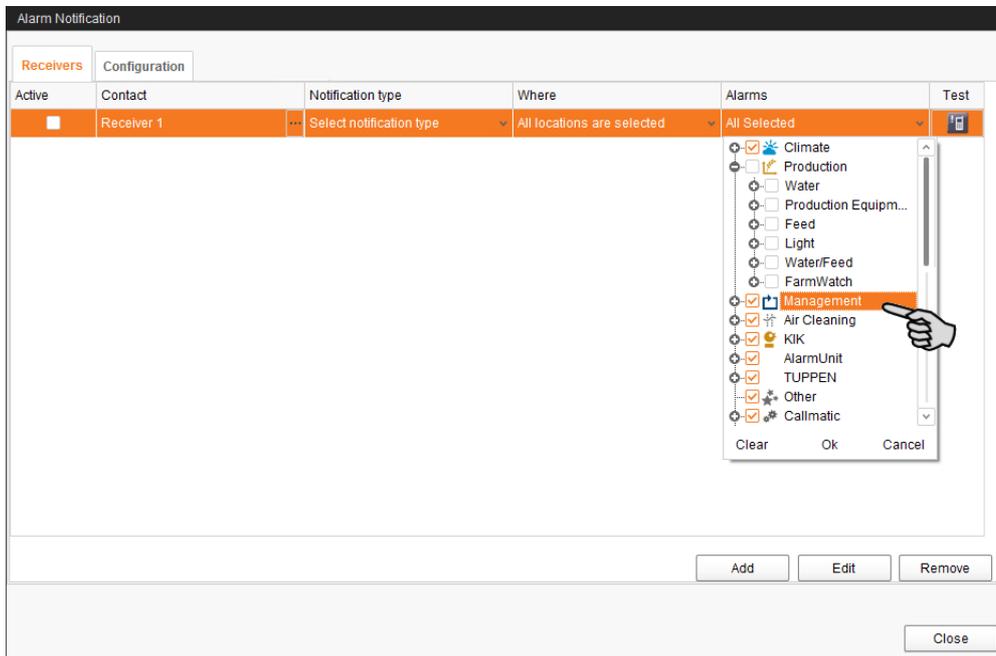
You may select multiple locations.



- Confirm your selection by clicking on OK at the bottom of the drop-down list.

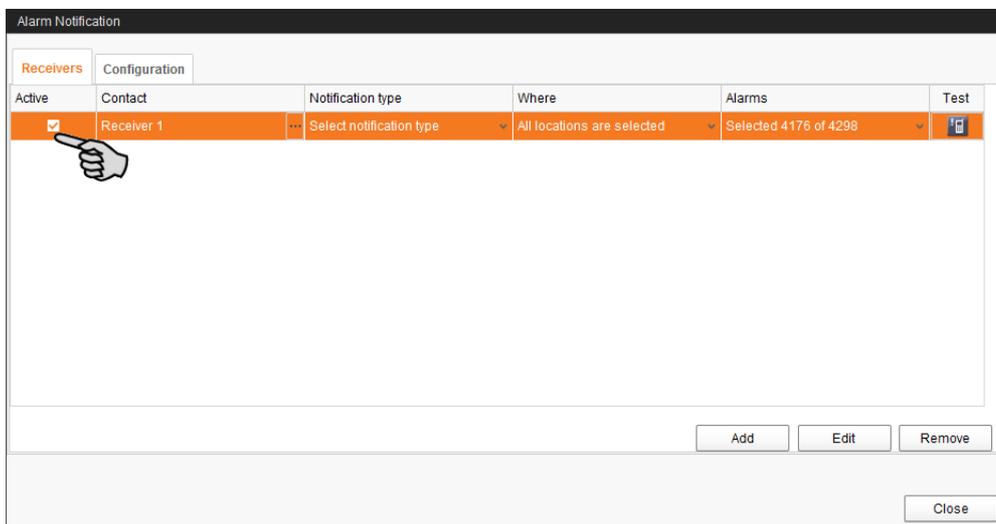
17. Click into the input field below "Alarms" and select which type of alarms the recipient should receive.

You may select multiple locations.

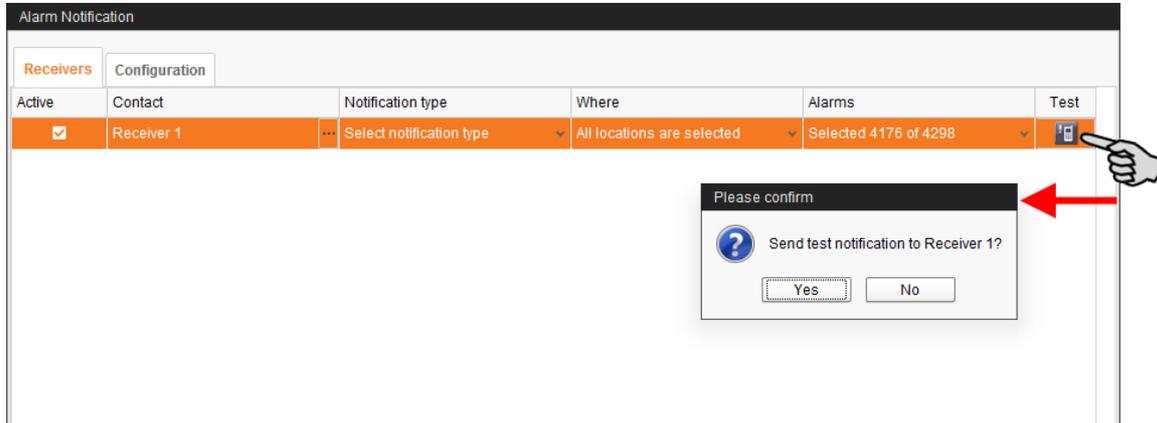


18. Confirm your selection by clicking on OK at the bottom of the drop-down list.

19. Activate the recipient for alarm notifications by checking the box below "Active"



20. Check the configuration of the recipient's data by sending the recipient a test notification:
- Click on the alarm notification icon.
  - Confirm the dialog for test notification by clicking on "Yes".



21. Click on "Close" after you have configured all settings.  
This closes the dialog window.

## 8 Operation of the control computer



The DryExact and EcoMatic dry feeding systems are controlled by the 510pro control computer. The 510pro can be operated either centrally through BigFarmNet Manager or locally.

Many settings can be configured directly at the 510pro, for example settings for preparation, distribution and feeding, but also for feeding times, which has an immediate effect on the current day only.

The control computer and the Manager PC are connected through the BigFarmNet software. This ensures permanent data exchange.

### NOTICE!

Operation of 510pro is identical for the applications DryExactpro and EcoMaticpro. The instructions are based on DryExactpro. They also apply to EcoMaticpro, however.

The screenshot are examples only! **Do not** copy their data!

### 8.1 Technical data

Dimensions (H x W x D)	381 mm x 400 mm x 170 mm
Protection degree according to EN60529	IP 54
Supply voltage	115 V, 200 V and 230 V/240 V AC +/- 10 %
Supply frequency	50/60 Hz
Power consumption	75 VA
Network	2 network interfaces, 10/100 BASE+TX RJ 45
USB	2 USB interfaces, USB 2.0 type A, max. 4 GB
Ambient temperature	-10 to +45 °C (+14 to +113 °F)
30 punch holes for metric cable gland M 25 x 1.5	
Code no.	91-02-4041

## 8.2 Icons



Overview / Start screen



You are currently in the overview.



Settings menu



You are currently in the settings menu.



Alarm



An alarm is active.



You are currently in the alarm menu.



Logout



Stop the equipment / system



Information on the settings parameter



Return to previous view



Open additional information or settings



Scroll up / down in selection





Expand structure



Collapse structure



Network configuration



Go to the next edit window / settings window



Save input



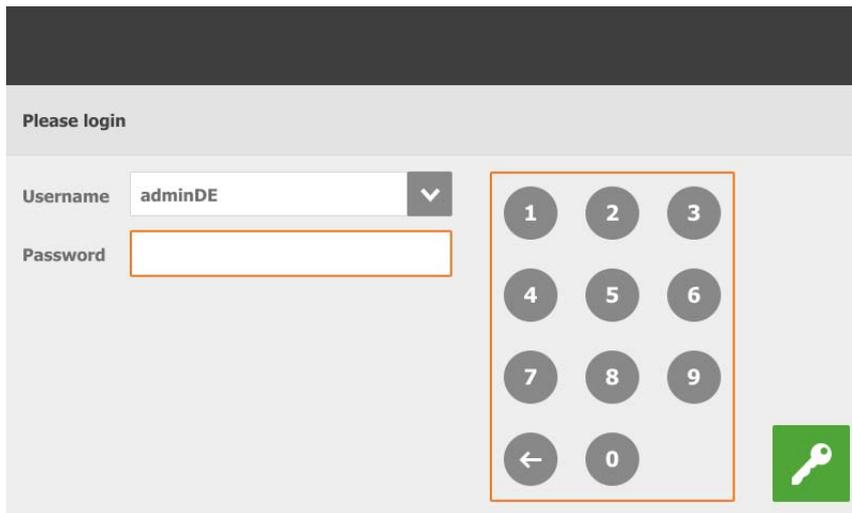
Login

## 8.3 Login

Log into the control computer using the login dialog.

The login dialog appears

- automatically after the software has been installed successfully, when the application starts;
- automatically after a specific time without activity (automatic logout); or
- if you actively log out of the control computer.

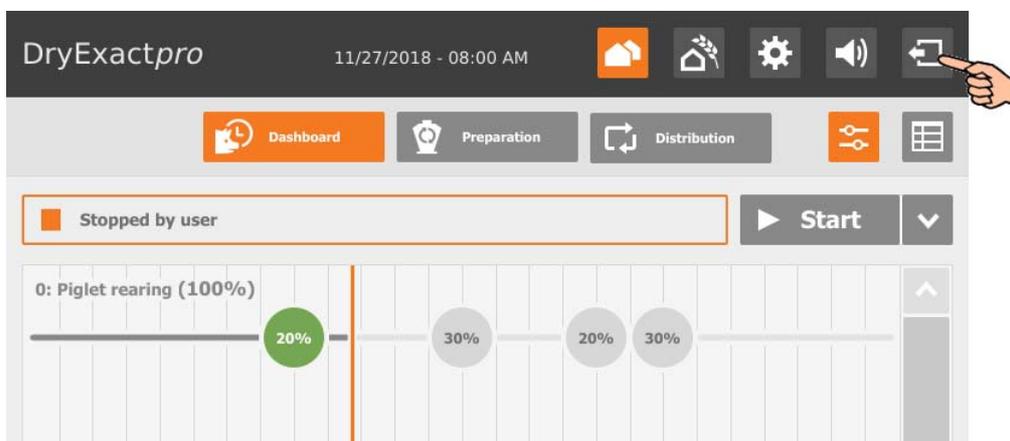


### NOTICE!

The user name and the password are the same as when logging into BigFarmNet Manager.

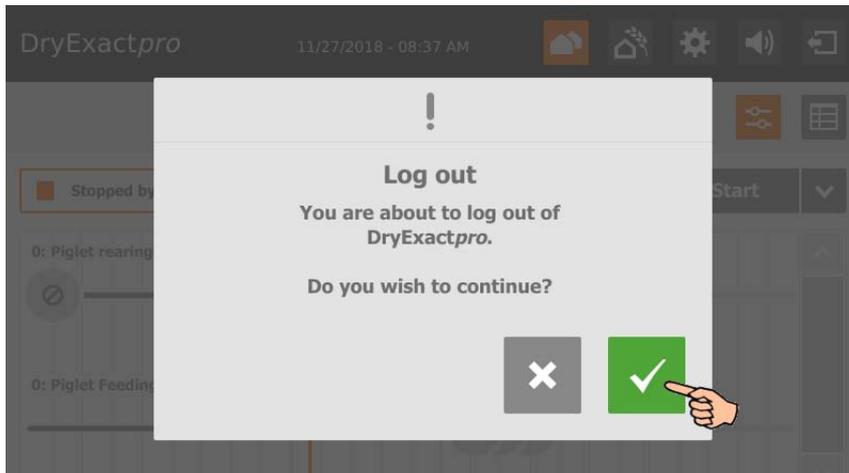
## 8.4 Logout

1. Tap on the "Logout" icon to log out.



2. Confirm that you are logging out.

The login dialog appears on the display again.



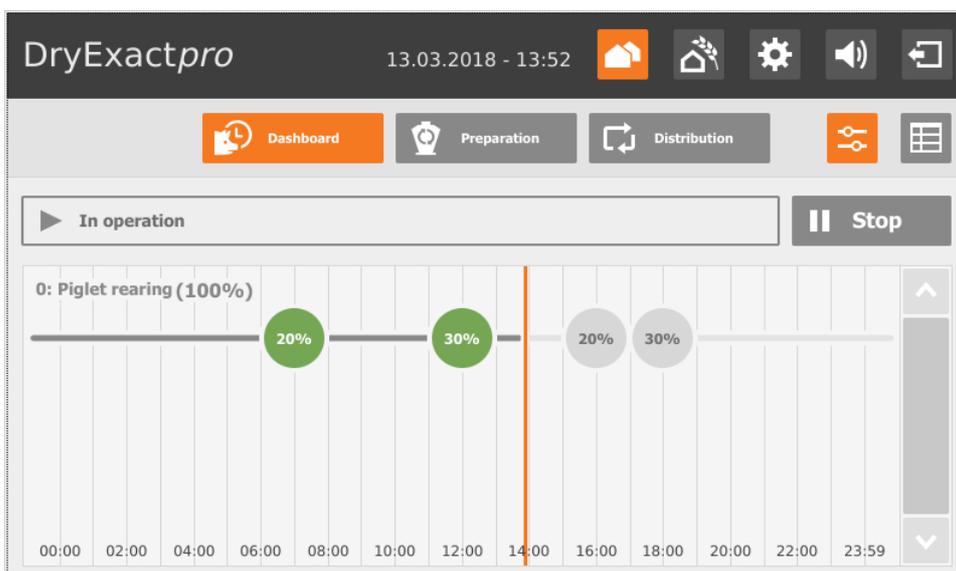
## 8.5 Dashboard start screen



This view appears as start screen after logging in, and offers the following information and functions:

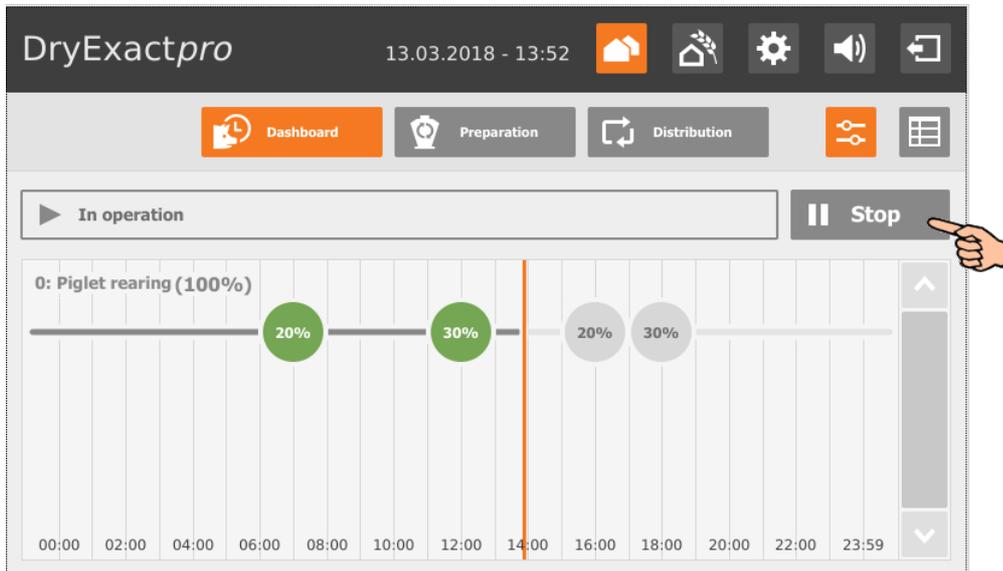
### 8.5.1 Feeding progress

The start screen shows a 24-hour timeline. The 24-hour timeline refers to the current day and shows the progress of one feeding task. If multiple tasks have been defined for the day, all of these tasks are displayed in the start screen.

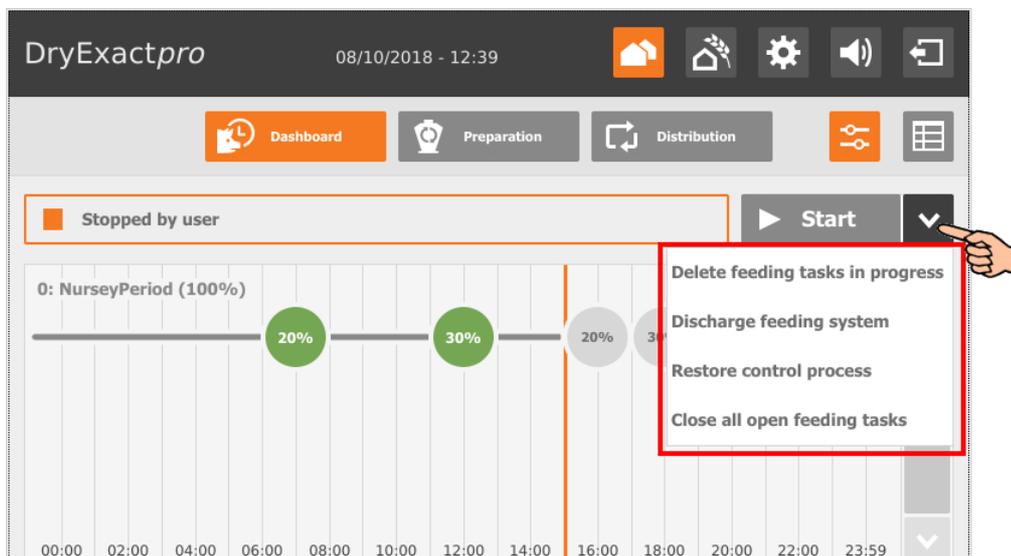


## 8.5.2 Stopping / starting the system

You may stop the entire system during operation by tapping on "Stop". If you tap on "Start" again, the system continues to operate with the current action or task.



However, if you do not want to continue with the current action, tap on the arrow pointing downwards next to the "Start" button and select the correct option from the context menu.



- **End feeding tasks in progress:** The currently active feeding task is completed.
- **Discharge feeding system:** All feed batches currently in the feed pipes are moved to their targets. The feeding task is then completed.
- **Restore control process:** The control is re-started. This function is identical with the function "Restart application" in the IO Manager.
- **Close all open feeding tasks:** Currently active or not yet started feeding tasks are canceled or set to inactive.

## 8.6 Dashboard Task Manager



Tap on the table icon in the "Dashboard" view to switch to the Task Manager. The table shows the different feeding times of one feeding task.

State	Start time	Task	Amount
✓	07:31 AM	0: Piglet rearing	20 %
✓	02:10 PM	0: Piglet Feeding	30 %
⏸	03:00 PM	0: Piglet Feeding	20 %
⏸	04:00 PM	0: Piglet Feeding	30 %

You may edit individual times **for the current day only**:

1. Tap on the time you want to edit.
2. Change the following settings or functions, if necessary:

Today's status > 0: Piglet rearing > 12:00 AM > Edit task

Start time: 12 : 00 AM

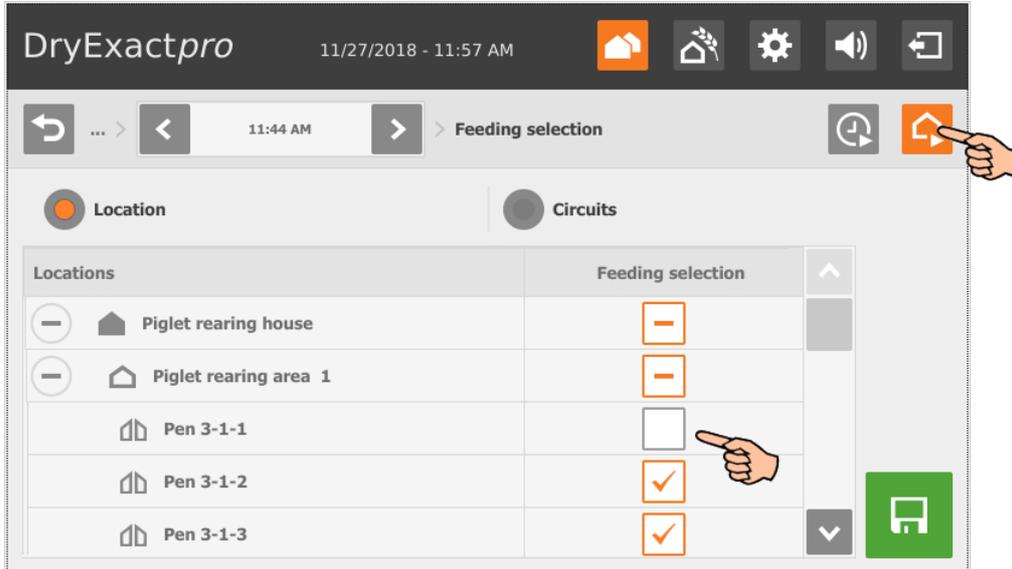
Amount: 20 %

Disabled:

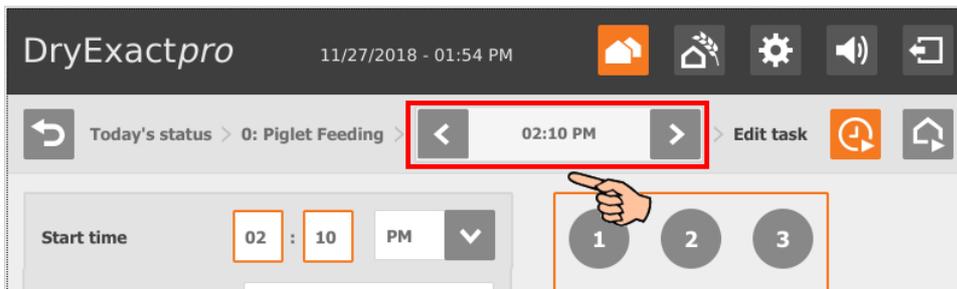
Start now

- **Start time**
- Percentage of the (feed) **amount**

- Checking the box **Disabled** deactivates the feeding time.
  - Tap on  to start the planned feeding task immediately.
3. Tap on  to select or deselect specific locations or circuits for the selected feeding time.



4. After you have configured all settings, tap on  to save the task. Tap on  to return to the table overview. You can switch to any other feeding time during editing.



## 8.7 Preparation – Overview

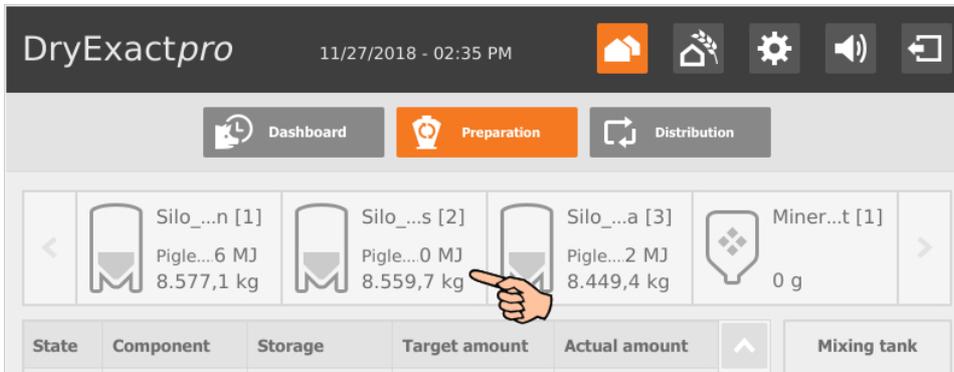
**DryExactpro** has the view "Preparation" for an overview of the silos and mineral dosing units. This view also shows the batch mixer (mixing tank) with the current mixing information.

State	Component	Storage	Target amount	Actual amount
✓	Pigle...,2 MJ	Silo_Soja [3]	7,20 kg	7,34 kg

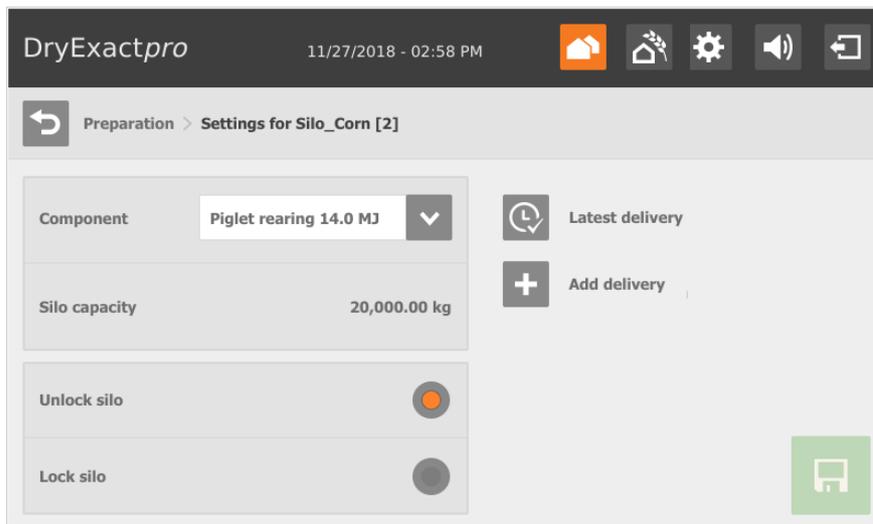
For **EcoMaticpro**, the view "Preparation" shows an overview of the silos.

### 8.7.1 Silo – Content and deliveries

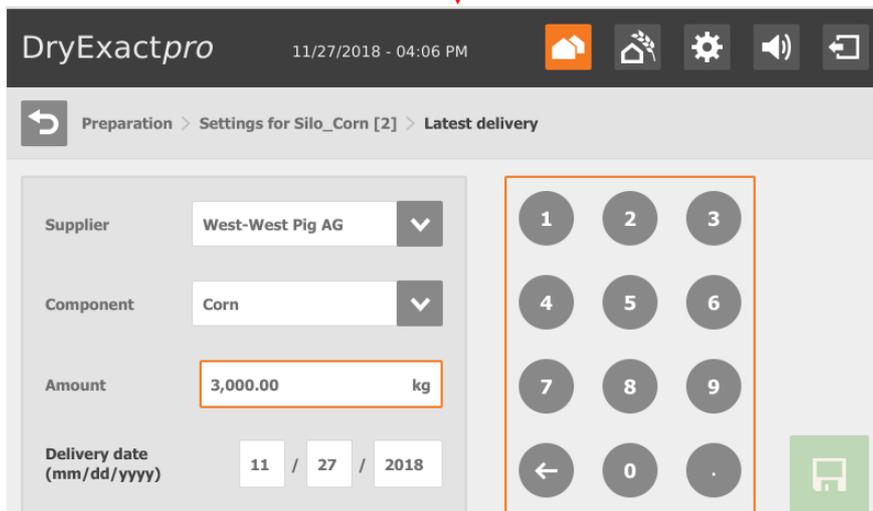
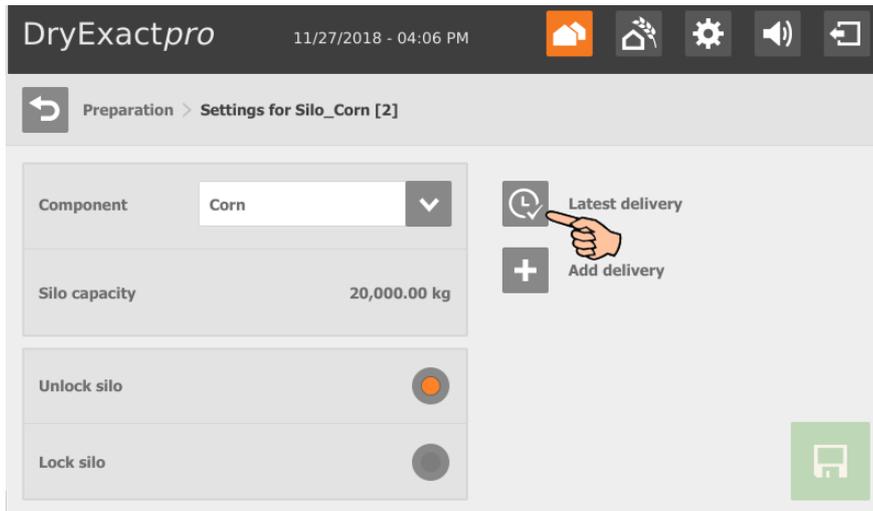
Tap on a silo to switch to the individual view, including the following information and functions:



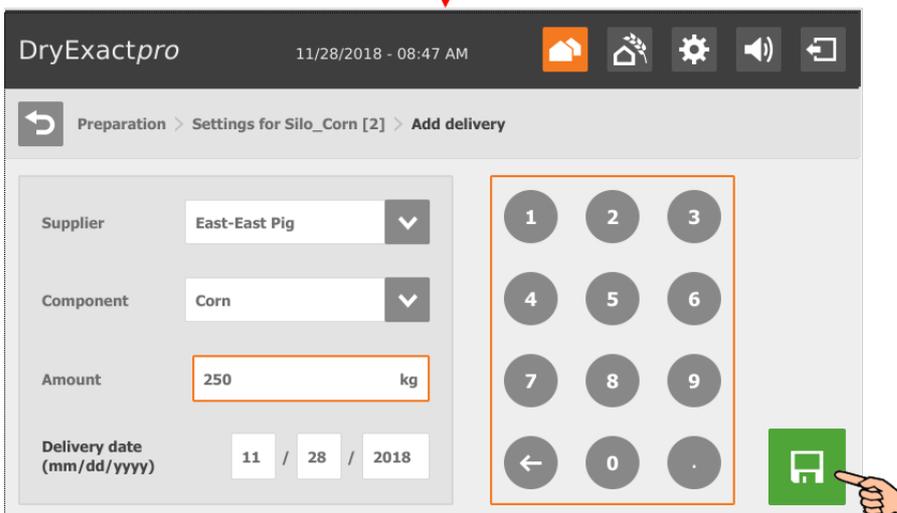
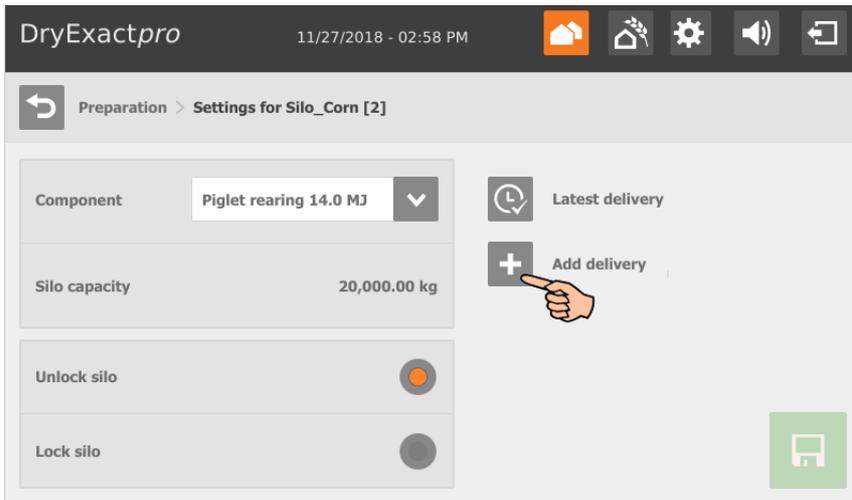
- The individual view shows the current data for the silo. You may change components and lock or unlock the silo.



- View the latest delivery by tapping on the "Latest delivery" icon. If necessary, edit the latest delivery and save new inputs.

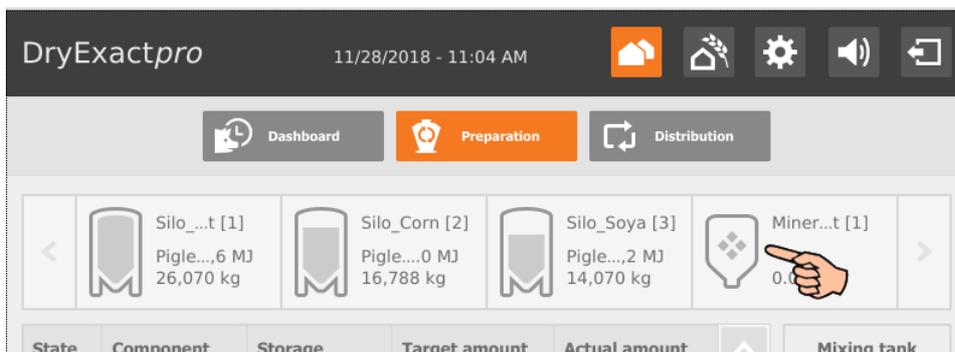


- Add a delivery by tapping on the "Add delivery" icon. Enter the necessary data and save the new delivery.

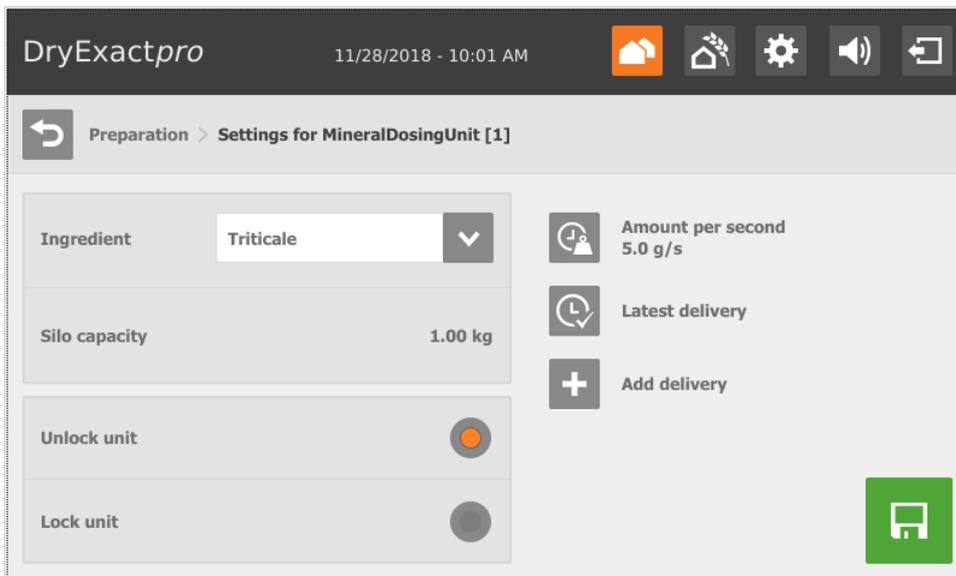


### 8.7.2 Mineral dosing units

Tap on a mineral dosing unit to switch to the individual view, including the following information and functions:

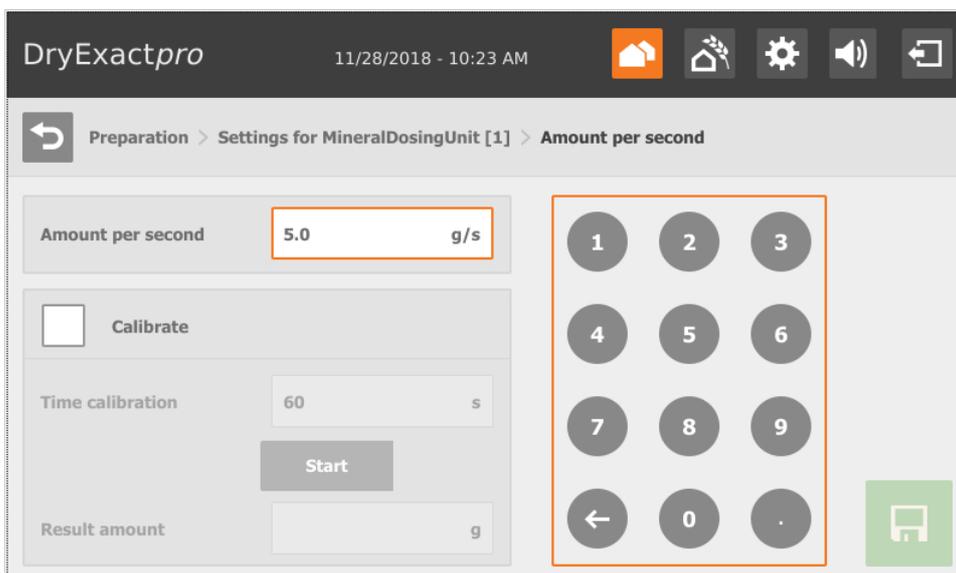


In the individual view of a mineral dosing unit, you can configure the following settings:



- **Ingredient** is the content of the mineral dosing unit.
- **Unlocking** or **locking** a mineral dosing unit.

Tap on  to define the delivery rate or to calibrate the mineral dosing unit in the next edit window.



- **Amount per second** is the delivery rate of the mineral dosing unit, displayed in grams per second.
- The calibration process is carried out as follows:
  - Tap on the box next to **Calibrate** to check it.
  - Define a period for which the mineral dosing unit should run, e.g. 10 seconds, under **Time calibration**.

- b) Place a container underneath the mineral dosing unit to collect the dispensed amount.
- c) Tap on "Start" and the mineral dosing unit starts dispensing for the set time.
- d) Weigh the dispensed amount after the mineral dosing unit has completed dosing.
- e) Enter the weight under **Result amount**.

## 8.8 Distribution

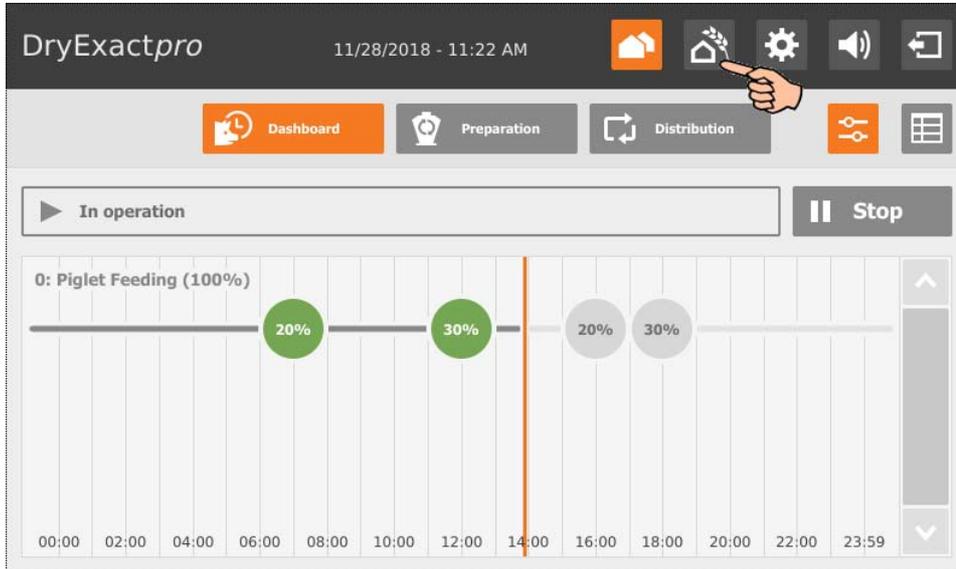
The view "Distribution" only displays information and shows circuits with their distribution for the current day.

Outlet	Dosing unit	Distance to outlet	Amount
▶ Circuit [1]			
Piglet rearing area 1 - Pen 3-1-1 (FeedValve)		9.9 m	6.90 kg
Piglet rearing area 1 - Pen 3-1-2 (FeedValve)		0.0 m	6.90 kg
Piglet rearing area 1 - Pen 3-1-3 (FeedValve)		0.0 m	6.90 kg

## 8.9 Feeding settings

You may adjust the feeding task for individual locations (pens) or change the feed curve.

1. Tap on the icon for the feeding settings.

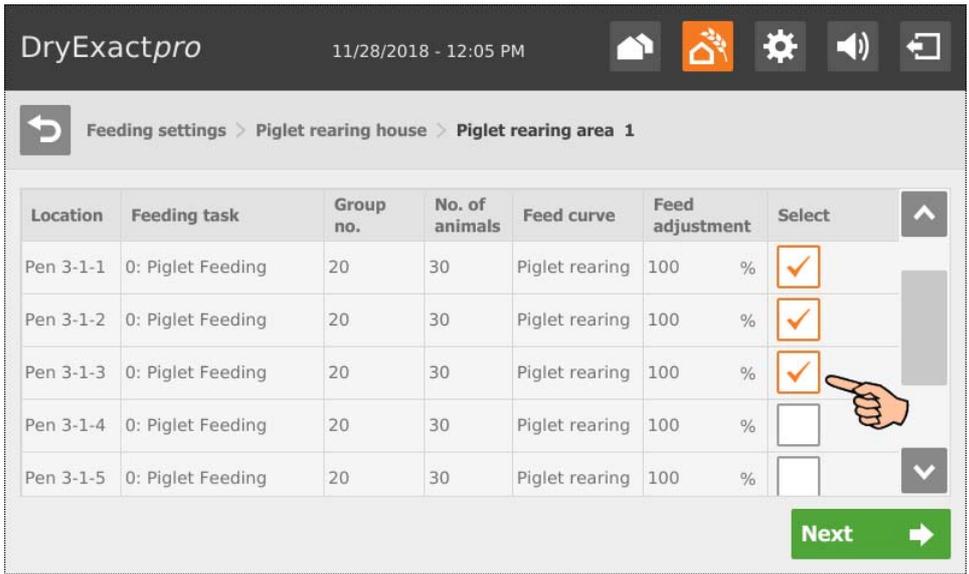


2. Tap on the correct section.

The screenshot shows the DryExactpro control interface with the 'Feeding settings' screen. At the top, there is a status bar with the text 'DryExactpro' and '11/28/2018 - 11:41 AM'. Below this is a navigation bar with icons for 'Home', 'Feeding settings', 'Settings', 'Speaker', and 'Refresh'. A hand icon points to the 'Feeding settings' icon. Below the navigation bar is a section titled 'Piglet rearing house'. The main area displays a table with the following data:

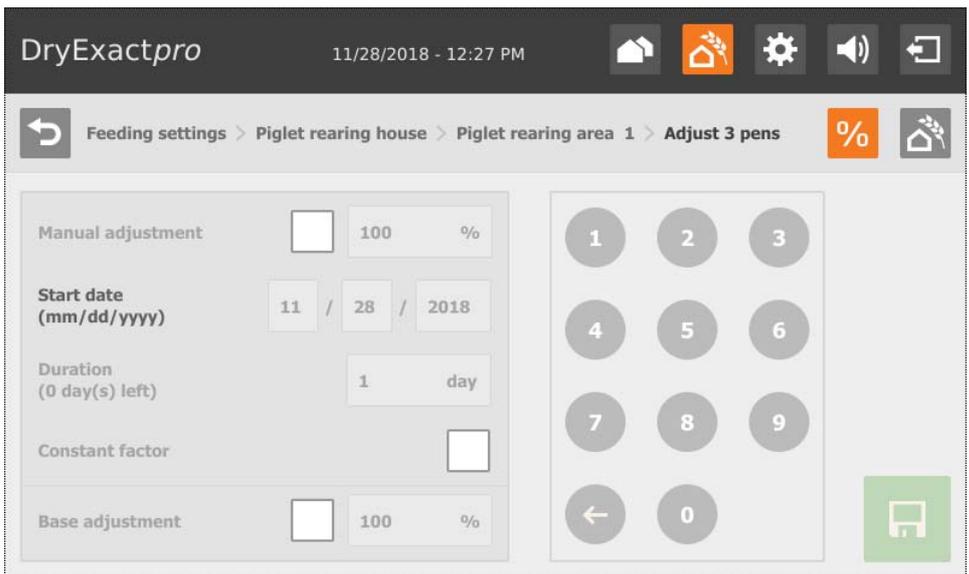
Location	Feeding task	No. of animals	Feed curve	Feed adjustment
Piglet rearing area 1	0: Piglet Feeding	180	Piglet rearing	100 %
Piglet rearing area 2		180	Piglet rearing	100 %

3. Select the correct pens by tapping on the boxes to check them.



4. Tap on "Next".

5. Configure the settings for a feed adjustment, if necessary:

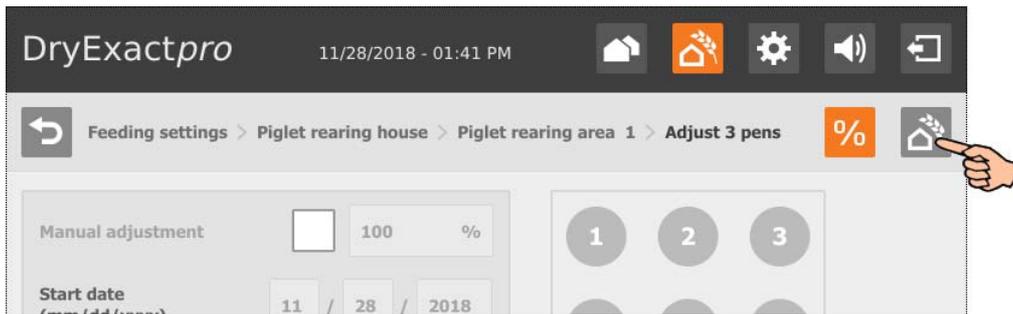


**Manual adjustment:** Define manually by how much (percentage) the daily feed amount should be increased. If you enter 120 %, the animals receive 20 % more feed on the **start date** than defined in the feed curve. Define the period for which the animals shall receive the increased feed amount under **Duration**. If the parameter **Constant factor** is not active, the increased feed amount percentage is reduced day by day until the animals receive the standard amount defined in the feed curve.

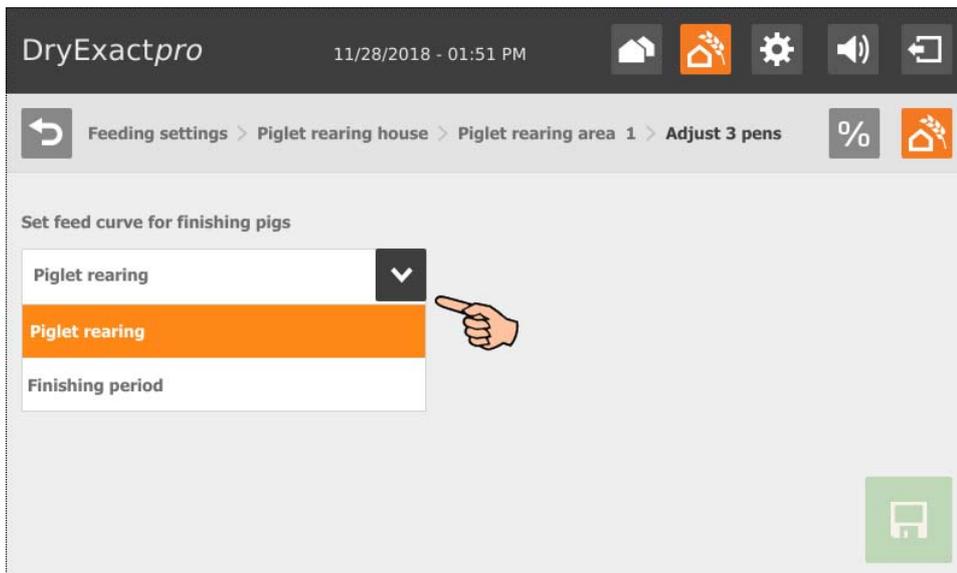
6. Save the settings by tapping on .

Tap on  to return to the table overview.

- To change the feed curve, tap on the icon for the feeding settings.



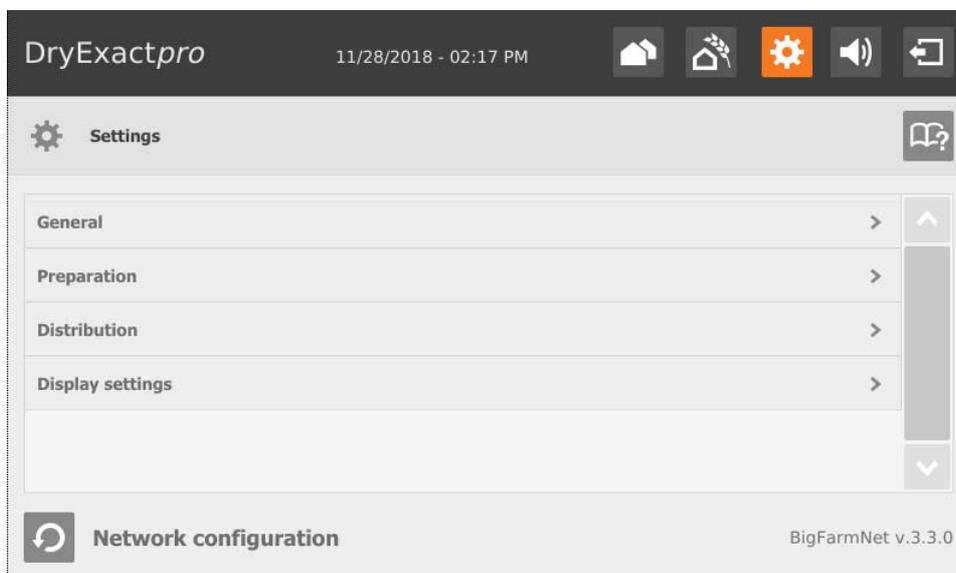
- Select the correct feed curve.



- Save the settings by tapping on  .  
Tap on  to return to the table overview.

## 8.10 Settings

Switch to the settings menu by tapping on the settings icon.



The settings for the respective application are defined in the following chapters:

### 8.10.1 DryExactpro

- **General:** see chapter 4.5 "General settings DryExact"
- **Preparation:** see chapter 4.7 "Preparation DryExact"
  - **Silo:** see chapter 4.7.1 "Silos"
  - **Mineral dosing units:** see chapter 4.7.2 "Mineral dosing units"
  - **Batch mixer:** see chapter 4.7.3 "Batch mixing tank"
- **Distribution:** see chapter 4.9 "Distribution DryExact and EcoMatic"
  - **Circuit:** see chapter 4.9.1 "Circuits"
  - **Hopper:** see chapter 4.9.2 "Hoppers"

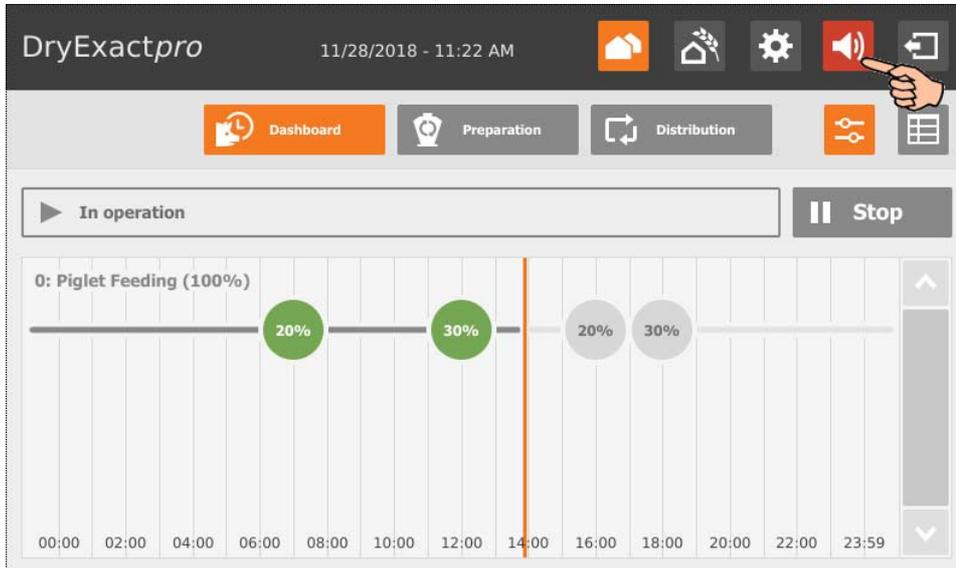
### 8.10.2 EcoMaticpro

- **General:** see chapter 4.6 "General settings EcoMatic"
- **Preparation:** see chapter 4.8 "Preparation EcoMatic"
- **Distribution:** see chapter 4.9 "Distribution DryExact and EcoMatic"

## 8.11 Alarms

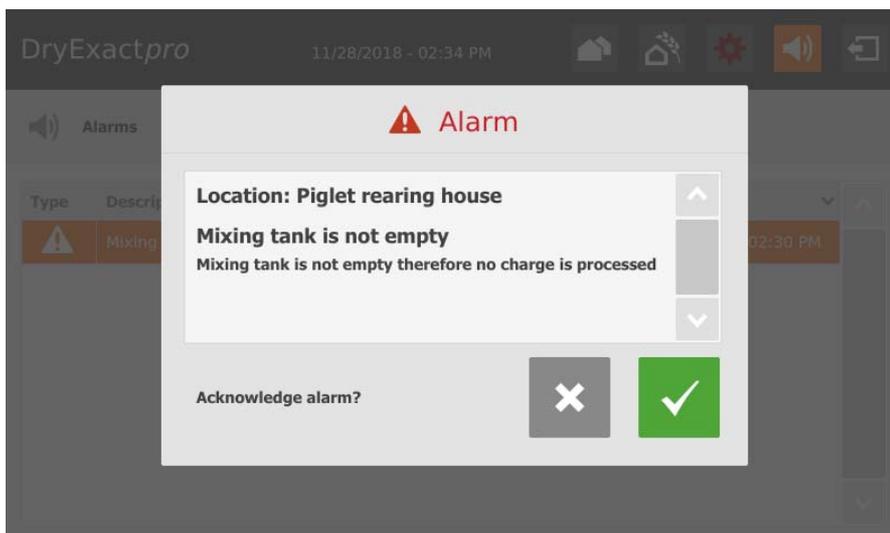
If there is an active alarm or warning, the alarm icon is colored.

1. Tap on the icon to open the alarm menu.



The different alarms and warnings are shown in a list and ordered depending on when they occurred. The table columns contain the following information:

- alarm type, see chapter 7 "Alarms and warnings"
  - alarm description
  - time of occurrence
2. Tap on the correct alarm to read the full description and to confirm / acknowledge the alarm by tapping on , if necessary.



**A**

Acknowledging an alarm 112  
Add delivery 134  
Adding the application 19  
Adding the control computer 19  
Alarm 109  
Alarm categories 111  
Alarm input 27  
Alarm log 114  
Alarm notification via email 116  
Alarm types 110

**C**

Calibration of the scale 51  
CAN Address 46  
CAN address 46  
Canceling an action 56  
Component supply 25  
Composer 23  
Configuring the system 19  
Control computer 2 4

**D**

Data Backup 88  
Deleting an alarm 115  
Display settings 140  
Distance Wizard 63  
Distribution 26

**F**

FeedMove Editor 35  
Flap position 41

**I**

IO Manager 44

**L**

Latest delivery 133  
License 2 4  
Loading (delivery) 105  
Locking a mineral dosing unit (510pro) 134

**M**

Manual control 52  
Manual start 26

**S**

Settings application 60  
Silo Management (510pro) 132  
Silo Manager 103  
Silo settings 108  
Start sensor 26  
Stopping / starting the system 128  
Stopping the system 56  
System description 1  
System limits 2 4

**T**

Task manager 91  
Technical data 510pro 123  
Test mode IO Manager 50  
Trough monitoring 59

**U**

Unloading (consumption) 106

**V**

Valve distance 63  
Valve test 67 69  
Volume dispenser 71 99

**W**

Warning 109