BigFarmNet manager

CulinaMix*pro*

Code No. 99-97-3621 GB

Edition: 01/2018

v 3.2

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1 System description

This manual describes how to install and operate the control software for the CulinaFlex feeding system for suckling pigs. The CulinaFlex system automatically and continuously supplies milk replacers, prestarters or starter feed to piglets in the farrowing pen. The feed is supplied by a feed valve (time-controlled). When feeding is completed, air under pressure can squeeze the flexible hose inside the feed drop pipe, which thus functions as a pinch valve, to push all remaining feed out of the hose. The hose remains pressed together until the next feeding. This creates an anaerobic environment in which bacteria cannot multiply. The compressed air escapes from the pipe when the next feeding starts. The feed can now drop from the hose inside the feed pipe into the trough. This requires that the feed drop pipe is designed as a pinch valve.

CulinaFlex is controlled by the CulinaMix*pro* application with the BigFarmNet Manager software. One application can control up to 3 tanks, which run separately. This means that if one tank goes into error mode (no system alarm!) or is in idle mode, the other tanks continue to provide feed.

1.1 Licenses

The CulinaMix*pro* application uses the 510*pro* control computer to control the CulinaFlex feeding system for suckling pigs. The CulinaFlex feeding system can be controlled independently of BigFarmNet Manager by the 510*pro* control computer. This means that only the following software license is **required**:

Code no.	BigFarmNet Manager license	Use
91-02-6602	License 510 – BigFarmNet CulinaMix	1 per control computer

If no BigFarmNet Manager software is installed but the operator wants to monitor the system with BigFarmNet Manager, the optional basic installation software license is required.

The following software licenses are **optional**:

Code no.	BigFarmNet Manager license	Use
91-02-6500	BigFarmNet Manager – Basic installation	1 per BigFarmNet network
	software	
91-02-6551	BigFarmNet Manager per additional PC/	In case animal and system
	MC700	data in the BigFarmNet
		Manager is to be available
		on additional computers

1.2 System limits

1 to 3	Mixing tanks
600	Feed valves
32	Feed components
10	Feeding times per mixing tank
10	Silos per mixing tank
4	Mineral dosing units per mixing tank



2 Installation and configuration of the control computer

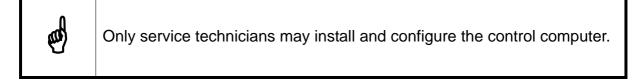




Figure 2-1: Control computer 510pro

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



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

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".

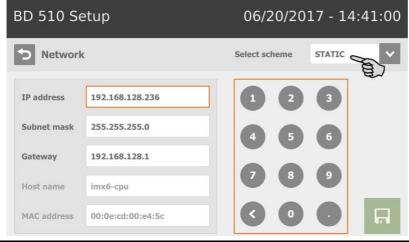
BD 510 Setup	06/20/2017 - 14:39:56
System Menu	
Network	> ^
Date	>
Time	>
Timezone	>
System Diagnosis	>
System Information	>
Data Backup	> ~

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



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

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





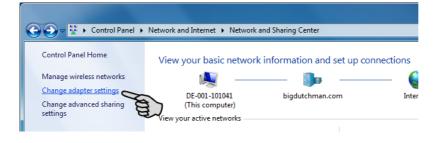
6. Save your inputs by tapping on 🗔

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.

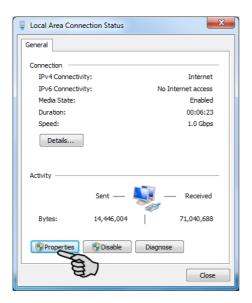
- 1. Click on "Control Panel" in the start menu
- 2. Click on "Network and Sharing Center".
- 3. Click on "Change adapter settings".



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

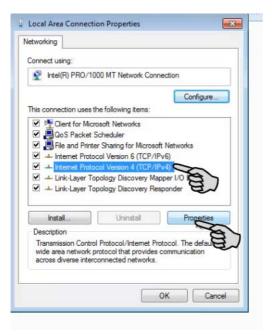


5. Click on "Properties".





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



7. Enter a static IP address.



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

Seneral	
	igned automatically if your network supports you need to ask your network administrator ngs.
💿 Obtain an IP address	automatically
Use the following IP a	ddress:
IP add	192 . 168 . 128 . 100
Subnet maak:	255 . 255 . 255 . 0
Default gateway:	192.168.128.1
Obtain DNS server ad	denne andread a
Use the following DNS	
Preferred DNS server:	192 . 168 . 128 . 1
Alternate DNS server:	
Validate settings upo	n exit Advanced

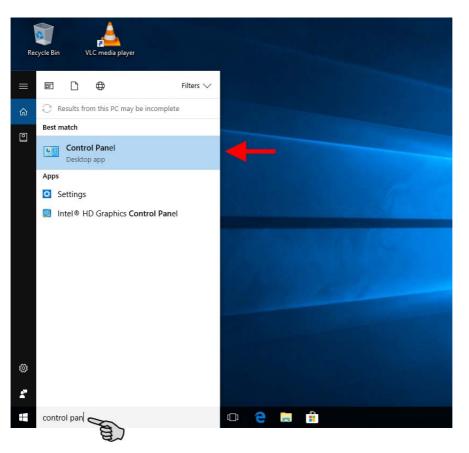
8. Accept these inputs by clicking on "OK".



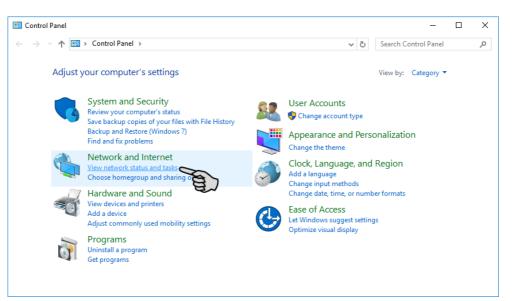
2.2.2 Windows 10

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.

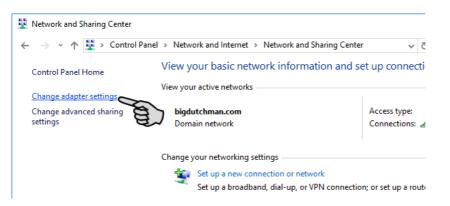


2. Click on "View network status and tasks" under "Network and Internet".

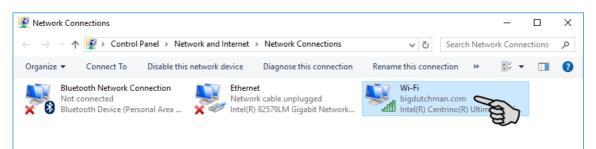




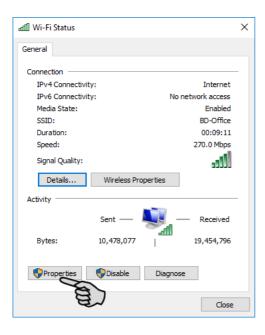
3. Click on "Change adapter settings".



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

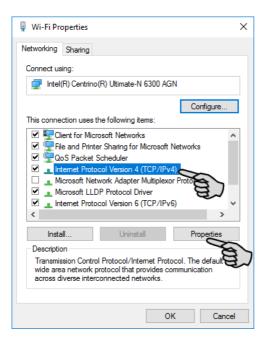


5. Click on "Properties".

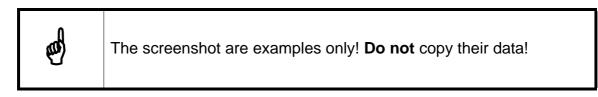




6. Select "Internet Protocol Version 4 (TCP/IPv4)" and click on "Properties".



7. Enter a static IP address.



	Internet Protocol Version 4 (TCP/IPv4)	Properties	×			
	General					
	You can get IP settings assigned autor this capability. Otherwise, you need to for the appropriate IP settings.					
	Obtain an IP address automatical	ly				
_	 Use the following IP address: 					
É	IP address:	192 . 168 . 128 . 15				
~5	Subnet mask:	255.255.255.0				
	Default gateway:	192.168.128.1				
Obtain DNS server addre	Obtain DNS server address auton	ss automatically				
	• Use the following DNS server add	resses:				
	Preferred DNS server:	192 . 168 . 128 . 1				
	Alternate DNS server:					
	Validate settings upon exit	Advanced				
		OK Cancel				

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.

BigFarmNet Manager										_ O X
Manager Activity Configuration	Setup	Help								
🔹 🏛 🐴	1	[#] O								3 alarms 🚺 🖬 💦
•										Stop Equipment
ං ආ Farm Bergstrop		A 🔒	My system Fore	eign systems						
🗢 🌰 Sow house		- 11				1		and the second		
O △ Service area	44	- 11	Name:	Farm Bergstrop		Nodes:		1/1 (online/total)	
	44	- 11		Remove controller from	list v	Groups:		1		
O db Group pen	44	- 11								
🌣 Calimatic right			Name	IP	MAC	Version	Start time	Controller time	Application	Services
‡ Callmatic left			 User group: Sys DECIDED 	temNode (Nodes: 1)	ocalhost) 18:03:73	4B 82.00 3.0.0.390	6/29/2015 8 22 55	6/29/2015 11:40:3	30 Applications	64 service(s) are not r.,
db Pen 2		- 11								
db Pen 3		- 11								
볼 MC 235 pro		- 11								
o 🛆 Farrowing area 1	44	- 11								
O C Farrowing area 2	44	- 18								
-ICF EcomaticPro		- 11	()	(- 3
🗢 🌰 New house		- 11	General	Local natwork con	nmunication enabled					
O 🛆 Quarantine Section	44	- 11	History configura		information enabled					
🗢 🌰 Piglet rearing house		- ii	Communication	Detect foreign sys	tems in network enab	bled				
o	4			A Out	4914	9		Node type:		SystemNode
o ch Piglet rearing area 2	4		Logging	E~(2)						
o 白 Piglet rearing area 3	4		Applications	Broadcast IP:	255.2	55.255.255		Group ID:		
o	4			Listen:	0.0.0	0:49150				
o	4									
DryExactPro										
🗢 🏛 Rearing house				Ø Com	munication settings	23		0	Network group s	ettings
						e (3)		User; adm	in Currency: \$ L	anguage: EN-US 6/29/2015 11:41 AM

- 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.

Any _AN-Verbindung 2	
AN-Verbindung 2 AN-Verbindung	
	¥
IP address:	192.168.128. <mark>1</mark> 5
Subnet Mask:	255.255.255.0
xternal communication	n ————
Local network communication	unication enabled
Detection of foreign sy	ystems in network enabled

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



2.4 Checking the connection to the control computer



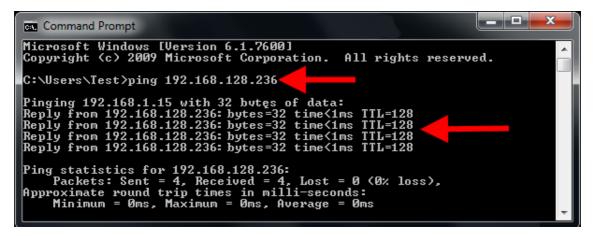
Use the "ping" command to check the connection to the control computer.

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).



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

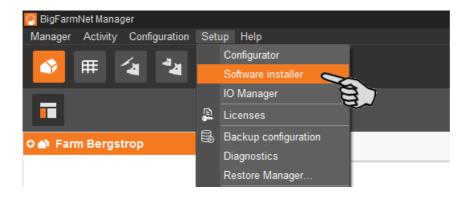
If the "ping" command fails and the control computer does not reply, contact the customer's IT administrator.



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.

Software installer									
Co	ntroller								
	Hostname	SDK	BigFarmNet	Туре	Progress		Status		Action type
Î	192.168.128.236	5.1.4	3.2	BD510	100%	•••	Analyse Controller successful		Analyse Controller 👻
	8	7							
	D)	~							

 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.

Software installer										
Controller										
	Hostname	SDK	BigFarmNet	Туре	Progress		Status		Action type	
$\widehat{\widehat{1}}$	192.168.128.236	5.1.4	3.2	BD510	100%	•••	Analyse Controller successful	0	Analyse Controller v	
× 1	192.168.128.236 192.168.128.237	?	?	?	0%			3	×	
	8]								
	ų,	~								
+	Add	Delete		🌣 Se	ettings D Sta	art	O Stop	x	Close	
	Ser.									
_						_		_		

4. Click on a control computer to select it.



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

Software installer								
Controller								
Hostname	SDK	BigFarmNet	Туре	Progress	Status			Action type
192.168.128.236	5.1.4	3.2	BD510	100%	Analyse Contro	ller successful		Analyse Controller 🗸
					,			No action
								Analyse Controller
								Set time of Controller
								Backup BigFarmNet data
								Reboot Controller
								Update current Installation
								New Installation 🧲
								Restore backup to Control
								Reset BigFarmNet data
								Diagnostics
+ Add	- Dele	te	.⇔	Settings 🕞	Start O	Stop	×	Close

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

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

New Installation settings for 51	0
Package for installation	
Software package:	rmNet 3.2\resources\SoftwareInstaller\3.2.0\Controller-510\setup510_3.2.0.54385_8D_Pig.raucb
Time configuration	
Set local system time and ti	me zone of controller
Time to set	2018-01-03 14:54:02 🗸
Select time zone	Europe/Amsterdam 🗸
Set time server for controller	r
Server IP address	
Network configuration	
Network conliguration	
Set hostname of Controller	
Hostname for Controller	Controller_192.168.128.236
	Ok Cancel

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

a



9. Click on "Start".

Software installer										
Controller										
Hostname	SDK	BigFarmNet	Туре	Progress		Status		Action type		
192.168.128.236	5.1.4	3.2.	BD510	0%			3	New Installation 🗸		
+ Add -	Delete		🌣 s	ettings 🖸 St	art (Stop	×	Close		
						8				

10. Confirm the prompt for confirmation.

Permis	ssion
	One or more selected actions will removes all data and programs of their Controllers. Do you really want to continue?
	Yes No
	E)

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.

Туре	Progress	Status	Action type
BD510	100% ·	 New Installation successful 	📀 New Installation 🗸
			face
🔅 Se	ettings	Start Stop	× Close
	BD510	BD510 100% -	BD510 100% New Installation successful



3 Configuration of the system

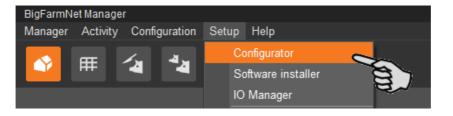
3.1 Adding the control computer and the application

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.

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.

 Configurator
 Control computer and applications

 Control computer overview
 Control computer fype name

 Controller 510
 Control computer type name

 Controller 510
 IPC-B 700.4

 IPC-B 700.6
 IPC-B 700.6

 Name:
 Controller 510

 IP address:
 Select controller in network..

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



4. Enter a name for the control computer.

Configurator		
Locations and network controller Control	ol computer and	applications
Control computer overview	Control com	puter
🖳 CulinaMixPro	+	Control computer type name
		Controller 510
		IPC-B 700.4
		IPC-B 700.6
	Name:	CulinaMixPro
	IP address:	Select controller in k v

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

The applications available for selection depend on the selected location.

The CulinaMix*pro* application can only be added to the "House" level.

	Farm overview		Application type name	Location type
	• A Farm Bergstrop	-	EasySlider	Farm
	Sow house		FarmFeedingPro	Farm
	o 🛆 Service area	<u>></u>	SiloCheckPro	Farm
	o- 🛆 Pregnancy area	~	TroughCheckPro	Farm
	💁 🛆 Farrowing area 1	- H	WaterCheckPro	Farm
	🛈 🛆 Farrowing area 2	- H	CulinaMixPro	House
-	💁 🌰 New house	- H	DryExactPro	House
	🗘 🛕 Piglet rearing house	- H	EcomaticPro	House
	🔆 🛕 Rearing house		HydroMixPro	House
			HydroMixCallmatic	House / Section
		~	CallInn	Pen
			L	_
Name:			Configure	Reset Copy



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

Configurator				
Locations and network controller Control	ol computer and	applications		
Control computer overview	Control com	puter		
CulinaMixPro	+	Control computer type name Controller 505		▲ ^
	_	Controller 510		1
	Name:	CulinaMixPro		~
	IP address:	Select controller in network	¥.	Delete assignment
	Applications	for CulinaMixPro		
		Select a Location.	Select an Application type	to add.
		Farm overview	Application type name	 Location type
		🗢 🕋 Farm Bergstrop	EasySlider	Farm
		🖕 💼 Sow house	FarmFeedingPro	Farm
		🔶 🛆 Service area	SiloCheckPro	Farm
		🗢 🛆 Pregnancy area	TroughCheckPro	Farm
	+~	 A Farrowing area 1 	WaterCheckPro	Farm
	<u>ک</u> ر لنا ا	Farrowing area 2	CulinaMixPro	House
	-	CulinaMixPro 1	DryExactPro	House
		🗴 📥 New house	EcomaticPro	House
		💁 📥 Piglet rearing house	HydroMixPro	House
		🔆 🛖 Rearing house	HydroMixCallmatic	House / Section
		· · · · · · · · · · · · · · · · · · ·	CallInn	Pen
	Name:	CulinaMixPro	Configure	Reset Copy
			· · · · · · · · · · · · · · · · · · ·	Save X Cancel

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.

7. Enter a name for the application.

Select a Location.		Select an Application type to add.				
Farm overview	*	Application type name	 Location type 			
🗢 🕋 Farm Bergstrop	^	EasySlider	Farm			
🖕 📥 Sow house		FarmFeedingPro	Farm			
o- 🛆 Service area	- H.	SiloCheckPro	Farm			
Pregnancy area	- H.	TroughCheckPro	Farm			
📕 o 🛆 Farrowing area 1	- H.	WaterCheckPro	Farm			
o 🛆 Farrowing area 2	- H.	CulinaMixPro	House			
CulinaMixPro 1	- H.	DryExactPro	House			
o 📥 New house	- H.	EcomaticPro	House			
🗢 🛕 Piglet rearing house		HydroMixPro	House			
🗢 🌰 Rearing house		HydroMixCallmatic	House / Section			
	~	CallInn	Pen			
	¥		-			
Name: CulinaMixPro		Configure F	Reset Copy			

- 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.

Configurator					
Locations and network controller	control computer and	applications			
Control computer overview	Control com	puter			
CulinaMixPro	+	Control computer ty	/pe name		
CulinaMixPro		Controller 505			
		Controller 510			
		IPC-B 700.4			
	Name:	CulinaMixPro			
	IP address:	Select controller in	network 🗸		
	Applications	imx6-cpu	192.168.128.236		
		DE-011-102356	localhost	lect an Appli	
				Application type	
				EasySlider	
		~	1	FarmFeedingP	

- 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.

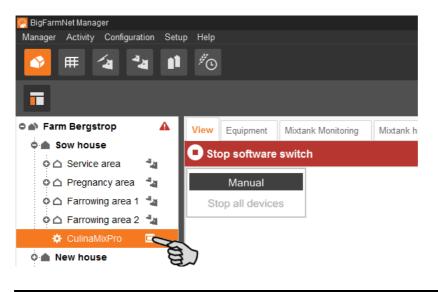




3.2 Configuring settings in the Composer

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.





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

🮅 BigFarmNet Manager				
Manager Activity Configuration Se	tup Help			
🔮 🎟 省 🌯 🕯	Ĩ [#] ⊙			
•				
ି 🗥 Farm Bergstrop 🔒	Equipment Mixtank Monitori	ng Mixtank history log	Subcircuit overview	Setup
🗢 🌰 Sow house				B
o 🛆 Service area 🛛 🐴				
o 🛆 Pregnancy area 🛛 🐴				_
o 🗅 Farrowing area 1 🐴		omposer		
🌣 CulinaMixPro 🔲		Start C	omposer	
🔿 🌰 New house				
0 🌰 Piglet rearing ho		esigner		
🗅 🌰 Rearing house		Start Fee	dMove Editor	
SiloCheckPro				
EasySlider				



- 3. Click on the plus icon to see the different parameters.
 - a) Also open subordinate parameters by clicking on the respective plus icon.

Composer Tools			
Parameters [Details		
Name		Value	Unit
and the second			

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

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

arameters De	tails					
me		Value	Unit	Comment	Interval	Mode
CulinaMixPro	(H1)					
– 🖉 MixTanks		1		Number of mix tanks	min: 1, max: 3	
- 🖉 Connectio	nType	Shared ~		Type of sub circuit group connections		
- 🖉 SubCircuit	Groups	1		How many sub circuit groups	min: 1	
- 🖉 Remaining	FeedTanks	0		Number of rest tanks	min: 0	
- 🖉 SlurryTank				Is there slurry tank?		
– 🤌 SecurityLo	ck	One for entire system 🗸		Is there only one security lock for the entire system or has each tank its own security lock?		
- 🖉 WithProtec	tiveGrid			Have all tanks a protective grid? If yes, the caps of all tanks can be opened while the agitator runs.		
o-☆ MixUnit [1]	(H1)					
SubCircuit	Group [1] (H1)					
o 🌣 Accessorie	es (H1)					
O 🔅 Control (H	1)					

 Mixing tank: Each mixing tank has its own component supply it does not share with any other tank. This means that the silo only supplies the mixing tank it was assigned to, and no other tank.

Define the number of feed components that are added manually and the cleaning agents under **Bunker silo**.



arameters Details						
me	Value	Unit	Comment	Interval	Mode	
🕸 CulinaMixPro (H1)						
- 🖉 MixTanks	3	3	Number of mix tanks	min: 1, max: 3		
- 🖉 ConnectionType	Shared ~		Type of sub circuit group connections			
- 🖉 SubCircuitGroups	1		How many sub circuit groups	min: 1		
- 🖉 RemainingFeedTanks	0)	Number of rest tanks	min: 0		
- 🖉 SlurryTank			Is there slurry tank?			
- 🖉 SecurityLock	One for entire system ~		Is there only one security lock for the entire system or has each tank its own security lock?			
- 🖉 WithProtectiveGrid	V		Have all tanks a protective grid? If yes, the caps of all tanks can be opened while the acitator runs.			
Ģ-☆ MixUnit [1] (H1)						
🖉 FeedPumps	1			min: 1, max: 2		
G- 🔅 FeedPumpGroup [1] (H1)						
🗢 🌣 ComponentSupply (H1)						
🔗 Silos	1		Number of silos?	min: 0		
🗘 🌣 SiloUnit [1] (H1)						
- 🖉 LiquidSilos	0)	Number of liquid silos?	min: 0		
- 🖉 DryMineralDosingUnits	0)	Number of dry mineral dosing units?	min: 0		
- 🖉 LiquidMineralDosingUnits	0)	Number of liquid mineral dosing units?	min: 0		
BunkerSilos	2	2	Number of bunker silos?	min: 0		
o-☆ MixTank (H1)						
🖉 Agitator	DirectSwitchOn ~		Control type of agitator			
- 🖉 Foggers	1		How many foggers?	min: 0, max: 2		
/ InputFlaps	1		How many input flaps?	min: 0, max: 2		

Connection type:

"Shared" = One subcircuit takes feed from all mixing tanks.

"Separated" = One subcircuit takes feed from one mixing tank.

 Subcircuit groups: Divide the number of main circuits by the number of mixing tanks to calculate the number of subcircuit groups. Define the number of subcircuits for each subcircuit group, and the number of troughs for each subcircuit.

ne		Value	Unit	Comment	Interval	Mode
🛱 Culina	MixPro (H1)					
	Tanks	3	1	Number of mix tanks	min: 1, max: 3	
- Ø Co	nnectionType	Shared v		Type of sub circuit group connections		
- 🖉 Su	bCircuitGroups	2		How many sub circuit groups	min: 1	
-Ø Re	mainingFeedTanks	0	(Number of rest tanks	min: 0	
	urryTank			Is there slurry tank?		
- 🧷 Se	curityLock	One for entire system 🗸		Is there only one security lock for the entire system or has each tank its own security lock?		
- <i>o</i> wi	thProtectiveGrid			Have all tanks a protective grid? If yes, the caps of all tanks can be opened while the agitator runs.		
o-¢÷ Mix	(Unit [1] (H1)					
o-☆ Mix	(Unit [2] (H1)					
O-🔅 Mix	(Unit [3] (H1)					
Ģ-¢≱ Su	bCircuitGroup [1] (H1)					
🔶 🌣 Su	bCircuitGroup [2] (H1)					
-0	SubCircuits	5	j.	Number of sub circuits	min: 1	
ο¤	SubCircuitDistribution [1] (H1.1)					
L	🔗 Troughs	8	1	Number of troughs	min: 1	
οø	SubCircuitDistribution [2] (H1.1)					
¢¢	SubCircuitDistribution [3] (H1.1)					
οø	SubCircuitDistribution [4] (H1.1)					
οø	SubCircuitDistribution [5] (H1.1)					
Ó-☆ Ac	cessories (H1)					
0 🔅 Co	ntrol (H1)					



- Remaining feed tank: The remaining feed tank is a container into which feed can be pumped e.g. before cleaning. Feed from the remaining feed tank can still be provided to the animals.
- Security lock: Information regarding the security locks depends on whether the state of the tank lid ("open" or "closed") is queried simultaneously for all mixing tanks or individually for each mixing tank.
- With protective grid: This parameter is active by default and means that the mixing tanks are equipped with a protective grid. The agitator then continues running even when the tank lid is open. Deactivate this parameter box if you want to remove protective grids.
- Accessories: Add additional system components such as valves, pumps and augers subsequently below "Accessories".
- Control: Define, for example, the number of junction boxes 16 outputs 18 inputs as a function of the number of feed valves as well as the start and end valves under "Control" > "Control box". These junction boxes are not installed in the control box, however, but in the central aisle.

Also define the frequency inverters used to control the pumps.

- 5. Proceed as follows to delete system components:
 - a) Enter the new quantity (a lower number or 0) and press Enter.

This opens a new dialog window that shows the system components with their assigned locations.

b) Select the object(s) you wish to delete and click on "Next".

Deleting objects	
Please select 1 object(s) to d	elete and click Next
Object	Location
m MixUnit [1]	H1
MixUnit [2]	H1
MixUnit [3]	H1
B	
A.	
	> Next X Cancel



c) In the next window, confirm that you want to delete the object(s) shown by clicking on "Delete".

oject	Location
MixUnit [3]	H1
ComponentSupply	H1
SiloUnit [1]	H1
O BunkerSiloUnit [1]	H1
BunkerSiloUnit [2]	H1
• FreshWaterSupply	H1
CleaningValve	H1
FillValve	H1
MixTank	H1
SmallCircuitValve	H1
EmptyingTankValve	H1
EmptyingTankPipeConnector	H1
FeedPumpGroup [1]	H1
PumpPipeConnector1	H1
TransferValve	H1
TransferPipeConnector1	H1
TransferPipeConnector2	H1
AcknowledgeSensor	H1

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

Settings under "Details"

If a system is integrated into an existing BigFarmNet network, the system and/or the system component is assigned to the correct location in the "Details" tab. If the BigFarmNet network is installed at the same time as the system (application), the location does not need to be adjusted.

1. Click on the "Details" tab. Expand the structure by clicking on the plus icon.

The structure shows all location-related components of the system.

Composer Tools				
Parameters Details				
Name E	Choice	Article	Location	
🗢 🌣 CulinaMixPro			H1	a
o dixUnit [1]			H1	a `
💠 🌣 MixUnit [2]			H1	A
o			H1	
🗘 🔅 SubCircuitGroup [1]			H1	A
o-☆ SubCircuitGroup [2]			H1	A
¢-☆ SlurryUnit			H1	A
TransferPipeConnectors [1]			H1	*



2. Click on the house icon of the system component.

Composer				
Tools				
Parameters Details				
Name	Choice	Article	Location	
- 🌣 Start valve			H4	A
Small circuit			H4	A
🗘 🔅 Feed phase line group [1]			H4	A
o 🔅 Main circuit [1]			H4.1	A
Branch line distribution [1]			H4.1	A
Pipe connector			H4.1	A
Pre valve branch line [1]			H4.1	A
🖕 🌣 Branch line [1]			H4.1	A
💠 🔅 Feed valve [1]			H4.4.1	
o ↔ Feed valve [2]			H4.4.2	
o ↔ Feed valve [3]			H4.4.3	۲ ش
O-# Feed valve [4]			H4 4 4	A

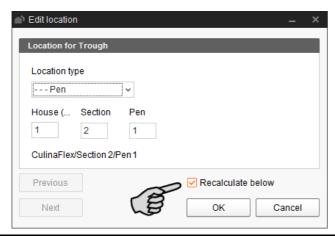
3. In the next window, enter the number of the correct location.

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

Edit location	_ ×
Location for Trough	
Location type	
House (Section Pen	~
CulinaFlex/Section 2/Pen 1	
Previous	Recalculate below
Next	OK Cancel

4. If necessary, check the box "Recalculate below".

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





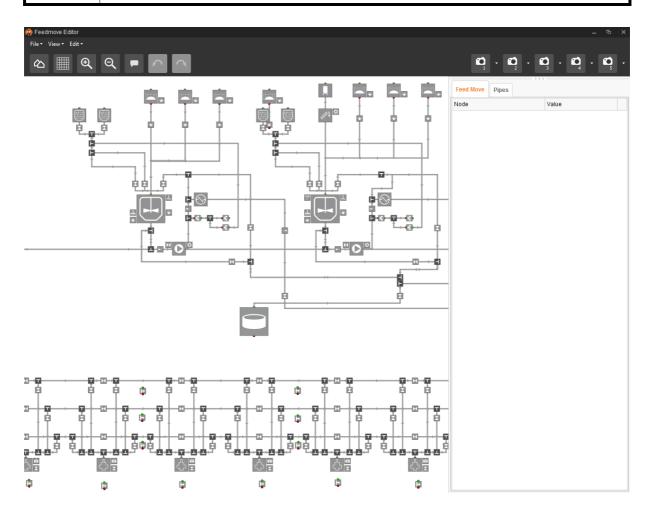
- 5. Click on "Next" to continue assigning locations to the system components on the same level.
- 6. Click on "OK" after you have finished to accept the input.

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.



Feed moves are automatically generated for CulinaMix*pro* and cannot be edited. Adding additional valves is not possible either.

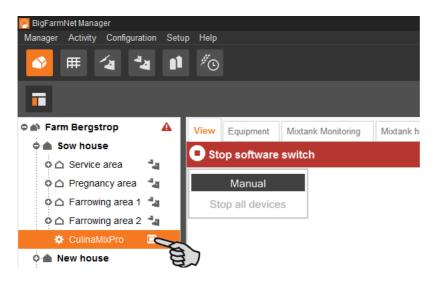




The final graphical depiction is shown in the application window under the new tab "View" later on. This graphical depiction provides you with an overview of the system functions running during operation. You can also operate the system manually with the BigFarmNet Manager, see chapter 3.6 "Manually controlling the system components", page 44.

Start the FeedMove Editor as follows:

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

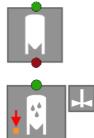


In the "Setup" tab, click on the "Start FeedMove Editor..." button.
 The "FeedMove Editor" opens in a new window.

🥂 BigFarmNet Manager					
Manager Activity Configuration Setu	ip Help				
💁 🎟 👍 🏜 🗈	[#] ©				
•					
🗢 📣 Farm Bergstrop 🔒	Equipment	Mixtank Monitoring	Mixtank history log	Subcircuit overview	Setup
🗢 🌰 Sow house		5	, .,		a
o 🛆 Service area 🛛 🐴					A.
o 🛆 Pregnancy area 🛛 🐴		Comp	0001	_	
o 🛆 Farrowing area 1 🐁		Comp	0361		
🌣 CulinaMixPro 📃			Start Co	mposer	
🗢 🌰 New house					
🗅 🌰 Piglet rearing ho		Desig	ner		
🗅 🌰 Rearing house			Start Feed	Move Editor	
SiloCheckPro				- A	
EasySlider				A~	/



3.3.1 Icons of the system components



Silo dry

Liquid add-on unit, agitator and minimum sensor



Mineral dosing unit dry



Mineral dosing unit liquid



MedilNJECT



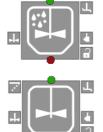
ССМ



Bunker silo



Fresh water tank



Used water tank

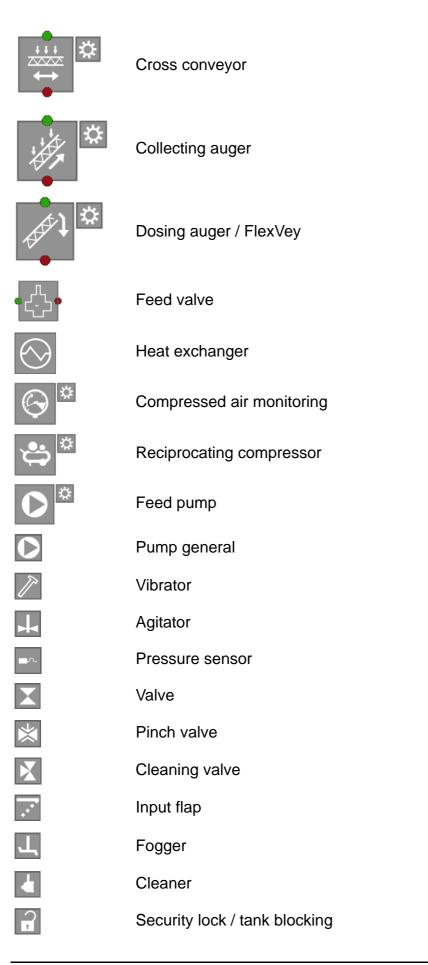




Mixing tank

CulinaMixpro Edition: 01/18 M 3621 GB





4	Blade CCM
	Slope auger CCM
*	Drive unit
т	Pipe connector

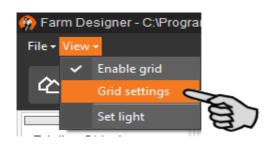
3.3.2 Basic functions

@ Ⅲ @	Q = ^ ^	
仑	View	Complete, enlarged view of the system
	Grid	Showing and hiding the grid lines in the drawing pane
⊕ Q	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

You can align system components with a grid, "Showing and hiding the grid lines", see chapter 3.3.2 "Basic functions". The default grid setting is a line-to-line distance of 1 m. Adjust the size of the grid as follows, if necessary:

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



2. Enter the desired value into the input fields next to "X-Steps" and "Y-Steps" to change the size of the grid.

Or:

Click on the arrows pointing upwards and downwards on the right of the input field to change the value.

Grid settings	
X-Steps:	1 🗘 m
Y-Steps:	1 🗘 m
🗸 ок	× Cancel

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



3.3.4 Adjusting and saving views



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

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.



3.3.5 Selecting and moving system components

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

The mouse pointer will change its shape 4. The name of the system component is additionally displayed as tooltip for a moment.

- 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.



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

3.3.6 Closing the FeedMove Editor

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

 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.

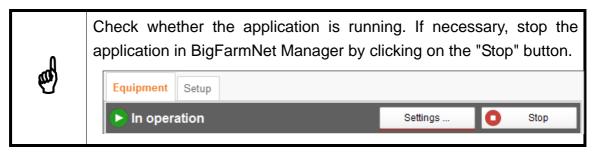


3.4 Changing settings in the Composer

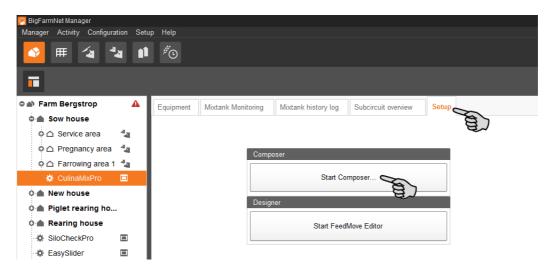
Usually, all functions of the installed system are defined once in the Composer. If necessary, the Composer can be opened as follows for subsequent modifications:

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





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





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

For explanations on the selected parameters, see chapter 3.2 "Configuring settings in the Composer".

rameters Details					
ne	Value	Unit	Comment	Interval	Mode
CulinaMixPro (H1)					
🖉 MixTanks	1		Number of mix tanks	min: 1, max: 3	
- 🖉 ConnectionType	Shared 🗸		Type of sub circuit group connections		
- 🖉 SubCircuitGroups	1		How many sub circuit groups	min: 1	
- 🖉 RemainingFeedTanks	0		Number of rest tanks	min: 0	
- 🖉 SlurryTank			Is there slurry tank?		
- 🖉 SecurityLock	One for entire system v		Is there only one security lock for the entire system or has each tank its own security lock?		
− Ø WithProtectiveGrid	V		Have all tanks a protective grid? If yes, the caps of all tanks can be opened while the agitator runs.		
- 🌣 MixUnit [1] (H1)					
SubCircuitGroup [1] (H1)					
Accessories (H1)					
Control (H1)					

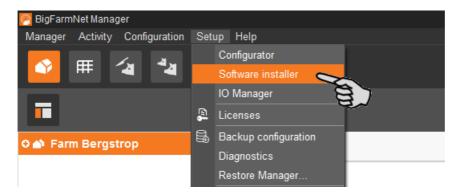
4. Click on "Save" to accept all settings for the Composer.

The next dialog window prompts you to restart the control computer.

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

Composer	×
Please reastart the corresponding controller to activate the new cont	iguration.
ОК	

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



7. Click on the control computer to select it.



8. Click into the corresponding input field under "Action Type" and select "Reboot Controller".

Hostname SDK BigFarmNet Type Progress Status Action type	Software installer							
192.188.128.236 5.1.4 3.2 BD510 100% Malyse Controller successful Analyse Controller No action Analyse Controller BD510 100% Malyse Controller successful No action Analyse Controller Backup BigFarmNet data Rebot Controller Backup BigFarmNet data Restore Backup Controller Restore backup to Controller Restore backup to Controller	Controller							
No action Analyse Controller Backup BigFarmNet data Rebote Controller Update current Installation New Installation Restore backup to Controll Reset BigFarmNet data	Hostname	SDK	BigFarmNet	Туре	Progress		Status	Action type
Analyse Controller Backup BigFarmNet data Rebott Controller Update current Installation New Installation Rest BigFarmNet data	192.168.128.236	5.1.4	3.2.	BD510	100%	•••	Analyse Controller successful	Analyse Controller 🗸 🗸
Backup BigFarmNet data Rebot Controller Update current installation New Installation Restore backup to Controll Rest BigFarmNet data								No action
Rebot Controller Update current Installation New Installation Restore backup to Controll Reset BigFarmNet data								Analyse Controller
Update current installation New Installation Restore backup to Controll Reset BigFarmNet data								Backup BigFarmNet data
New Installation Restore backup to Controll Reset BigFarmNet data								Reboot Controller 🛛 🥿
Restore backup to Controll Reset BigFarmNet data								
Reset BigFarmNet data								
Diagnostics								
								Diagnostics
					🌣 Settings		Start Stop	 × Close

9. Click on "Start".



This process may take a few minutes!

10. Start the FeedMove Editor again to accept the changes to the feed moves, see chapter 3.3.



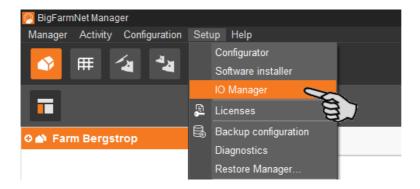
3.5 Configuring the IO Manager

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".

♥ 冊 ′₄ ⁴₄	1	, O						4 alarms 📢
3								Stop equipment
Farm Bergstrop	Loc	ation / Device	Sow house / CulinaMixPro			Link view	Device to chann	el v
🔺 Sow house 🖌	L Dev	ice connection		~		Channel connection		*
o 🛆 Service area 🛛 🐴						Channel type		~
o 🛆 Pregnancy area 🛛 🐴	De	evice				Channel		
o 🛆 Farrowing area 1 🐴		CulinaMixPro			^	= - Control / Control bo	x / Digital module E	
o 🛆 Farrowing area 2 🔩		- MixUnit [1]			Ī			0x1/1) Digital_module_BDDIO32 [1]
🌣 CulinaMixPro 🔲		FreshWater	Supply				0	1
🔺 New house		ColdWat				+ 123	0	2
Piglet rearing ho		T T	VaterValve		+ .ur.]	+ 123	0	3
🔺 Rearing house		WarmWa			1 101	+ 123	0	4
SiloCheckPro		-	WaterValve		+ nn }	+ 123	0	5
🕸 EasySlider 🔳		- CleaningVa			< <u></u>	+ 123	0	6
TroughCheckPro II		- FillValve	ve		* .nr	+ 123	0	7
A WaterCheckPro		MixTank 1			1- 101	+ 123	0	8
	:	Scale		0	+~	+ 123	0	9
		 Agitator 		U		+ 123	0	10
			or:Direct switch on		< <u>+ nn</u>]	+ 123	0	11
							0	11
			or on signal		-> .r.	+ 123		
		Fogger1	- 741		< <u>+</u>			x1/1) Digital_module_BDDIO32 [1]
		- InputFlag			<u>+лг</u>	+ nn		1
			atureSensor	0		+ nn		2
		- Acknowl			<u>+ лл</u>	+ nn		3
		SmallCircuit			<u>← лл</u>	+ nn		4
		EmptyingTa			← лл. ▼	+ nn		5
		A. FeedPumn(6
		Collapse all	Expand all	Default map	ping v	Apply	Reset	Testmode
		Valve link	Restart	application		Remov	e links	🗹 Display Device Path

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

- Digital output
- Digital input + m
- Analog output +
- Analog input Analog
- Counter input + 123
- Serial interface 4 10101

Connected devices and channels are indicated by dark gray icons and a green arrow. Example:

Devices and channels that are not connected are grayed out. Example:



3.5.1 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.

Channel		
= 💮 Cor	ntrol / Control box / IO card settings / BDDIO32 [[1] (ID: 0x1
O Dig	Bus node settings	32 [1]
	PC interface card settings.	vExact
	Searching for bus nodes	yLXactr
L	3÷ JUL +2Δ 2 2 2 2 2 2 2 2 2	_

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

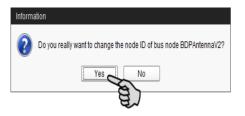
BDDIO32CardSettingsForm: BDDIO32 [0x1]		
Common Node guarding Firmware	BDDIO32 parameter	
Node ID	0x1 (1)	Change.
State	INITIALISING	Change
Enabled		Change
EDS File	BD_DIO32_HL32.eds	
Device Type		
Manufacturer Device Name		
✓ Verify if configured bus node matches the CANopen settings of bus node.		
		× Close



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

Important: Change Node ID on corresponding CANopen bus r		figured value is	not equal to P	nardware se	tting of the
New bus node identifier:	20 1A 1B 1C 1D 1E 1F			ОК	× Cancel

5. Confirm the prompt for confirmation.



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

3.5.2 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).



Channel			
Control / Control box / IO	card settings / BDDIO32 [1] (ID: 0x1	/1)	
Digital Input/Output (32/32)	available) / (0x1/1) BDDIO32 [1]		
- >	Channel Info		
-> nr.	Switch to output	•	LowSide
-→ nr.	Polarity	\rightarrow	HighSide
-> лл	□ 4	S	
-> .rr	5		

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

Channel	
Control / Control box /) card settings / BDDIO32 [1] (ID: 0x1/1)
Digital Input/Output (32/	2 available) / (0x1/1) BDDIO32 [1]
< <u>- лл</u> +24	
+ .n.	Channel Info
	Set Test Value
+> nn	Switch to input
-> лл	Switch to output
-+ лл.	Polarity Inverted
- > лл.	6

2. In the "Device" part of the window, click on the linking icon of the system component and hold the mouse button.

9		Channel			
FillValve	_ +.m. ^	< <u>+</u> лл.	+24	8	
MixTank 1		- > лл		9	
- Scale	0 + ^	+ лл	+24	10	
🜩 Agitator		4 — лл.	+24	11	
Agitator:Direct switch on	- m	. пл	+24	12	
Agitator on signal		4 — лл.	+24	13	
Fogger1	_ + лī	. пл	+24	14	
InputFlap [1]	_ + лл	4 — лл.	+24	15	
- TemperatureSensor	0 + ^	. пл	+24	16	
AcknowledgeActor	_ + л .	+ лл	+24	17	
SmallCircuitValve	□ ← nn	-+> .nn		18	

3. Drag the mouse to the linking icon of the desired channel in the "Channel" part of the window on the right.

FillValve	_ ← лл	← лл	+24	8	
o MixTank 1		-+ nn		9	
- Scale	0 -> -	- m_	+24	10	
🖕 Agitator		€ лл	B)	11	
- Agitator:Direct switch on	- +- JUL	+ лл	+24	12	
Agitator on signal	> .rr.		+24	13	
Fogger1	_ ← лл		+24	14	
InputFlap [1]	_ ← лл	к лл.	+24	15	
TemperatureSensor	0 -> ~	4 - лл	+24	16	
AcknowledgeActor	_ ← лл	+ лл	+24	17	
- SmallCircuitValve	_ ← л ,	-+ nn		18	



4. Release the mouse button.

The system component and the channel are now linked.

Device		Channel			
FillValve	□ ← _	+ лл +	24	8	
MixTank 1		-+ лл.		9	
Scale	0 -> ^.	+ лл +	24	10 C	ulinaMixPro / MixUnit [1] / MixTank 1 / Agita
 Agitator 		+ лл. +	24	11	
- Agitator:Direct switch on	— <mark>- л</mark>	+ лл +	24	12	
Agitator on signal		+ лл +	24	13	
···· Fogger1	_ ← лл	+ лл. +	24	14	
InputFlap [1]	_ ← лл	+ лл. +	24	15	
TemperatureSensor	0 ->	+ лл. +	24	16	
AcknowledgeActor	_ ← лл .	++	24	17	

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



Checking links:

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

- 6. Click on "Save" in the bottom command bar after having established all links.
- 7. Click on "Restart application" in the bottom command bar to start the control.

3.5.3 Displaying the device path

Valve link			Restart a	oplication	1			Remove I	inks	Display Device Path
Collapse all	Expa	nd a		Defau	ult mapping 🗸 🗸 🗸		Apply		Reset	Testmode
Temnera	tureSensor	0	-> ^	×	4- лл	+74		15		
- Pressure	Sensor	0	\rightarrow \land		н. пл.	+24		14		
- EmptySe	nsor		- > лл		+ лл	+24		13		
ByPa	ssValve		← лл		€ лл	+24		12		
Fi	neDosingActor		≪ лл		<u>+ лл</u>	+24		11		
Pi	Imp:Direct switc		← лл		+ .m	+24		10	CulinaMixPro / Mi	ixUnit [1] / MixTank 1 / Agitator / Agita
🗢 Pump	MixTank 1				- > лл			9		
FeedPur					+ nn	+24		8		

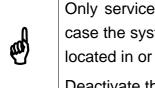
Check this box to see the device path of all devices.

3.5.4 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:





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. Check the "Test mode" box in the bottom command bar.

Valve link	Restart a	application				Remove li	inks	Display Device Path
Collapse all	Expand all	Default m	apping v		Apply		Reset	Testmode
FineD	osinaActor 🗆 🐗 💷	×	4 - лл	+94		15		
Pump	Direct switc		. м. м.	+24		14		
🔶 Pump Mix	Tank 1		← лл	+24		13		
FeedPump			← лл	+24		12		
• FeedPumpGrou	p [1]		< <u>+</u> лл	+24		11		
- EmptyingTankVa	alve fin		(лл	+24		10	CulinaMixPro / N	lixUnit [1] / MixTank 1 / Agitator
- SmallCircuitValv	e fir		- > лл			9		
L. Acknowledge	Actor		<u>+ лл</u>	+24		8		

2. In the "Device" part of the window, double-click on the linking icon of the device you want to turn on. + m + m

This marks the linked channel in the "Channel" part of the window on the right.

3. 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.

Device		Cha	annel				
FillValve	□ ←		. н. н.	+24		8	
MixTank 1			-) лл			9	
Scale	0 + ~		+- лл	+24	.	10	CulinaMixPro / MixUnit [1] / MixTank 1 /
Agitator			. ти	+24	Ę	3 11	
Agitator:Direct sv	vitch on		. ч– лл	+24		12	
Agitator on signa			. н. н.	+24		13	
···· Fogger1			. н. н.	+24		14	
InputFlap [1]	_ ← лл		. лл. →	+24		15	

- 4. Turn off the device by deactivating the check box.
- 5. Exit the test mode by deactivating the check box "Test mode" in the bottom command bar.

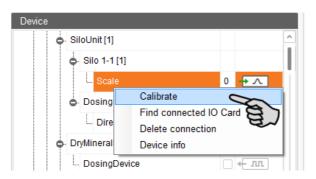


3.5.5 Calibrating the scale

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.

- 1. In the "Device" area, right-click on "Weighing bar".
- 2. 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:

eight	-382.262 kg	Raw-Value	0	
ng Calibration				
art-Weight	0.000 kg	Raw-Value	722.718	Set Start-Raw-Value
nd-Weight	25.000 kg	Raw-Value	770.321	Set End-Raw-Value
nimum scale va	llue change		0.000 kg	
			Reset	Calibrate

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

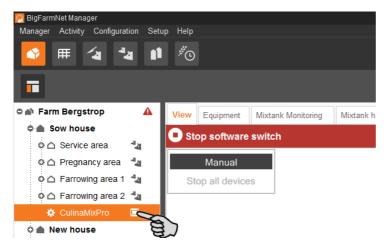


3.6 Manually controlling the system components

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

The system usually runs automatically, based on the configured settings. From the "View" tab, 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.

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



2. Click on the "View" tab.

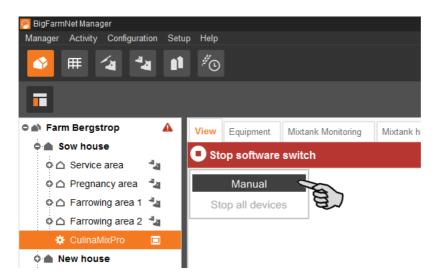


Check whether the application is running. If necessary, stop the application in BigFarmNet Manager by clicking on the "Stop" button.



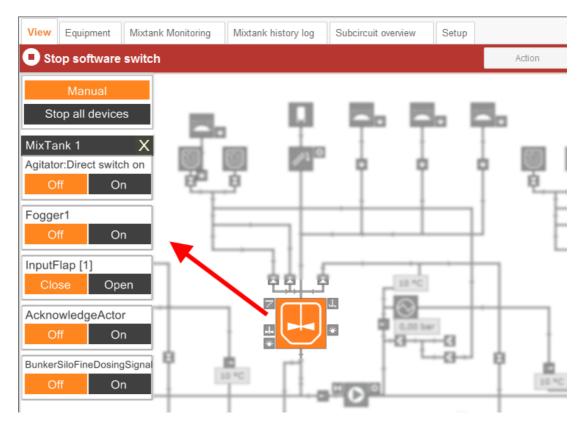
- 3. If necessary, adjust the view or retrieve one of your saved views using the camera icons, see chapter 3.3.4 "Adjusting and saving views".
- 4. Click on "Manual" in the upper left corner.

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.

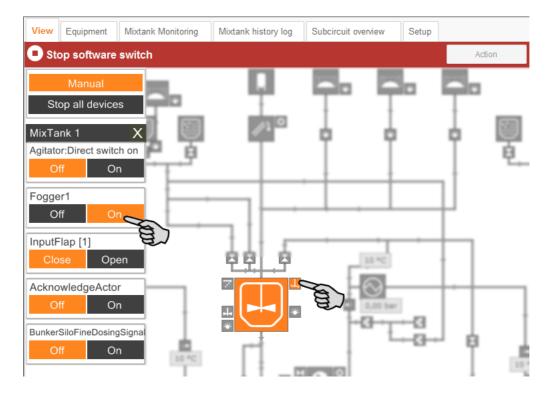
The colour of the system component changes to orange. The elements belonging to this component are displayed in the window to the left.





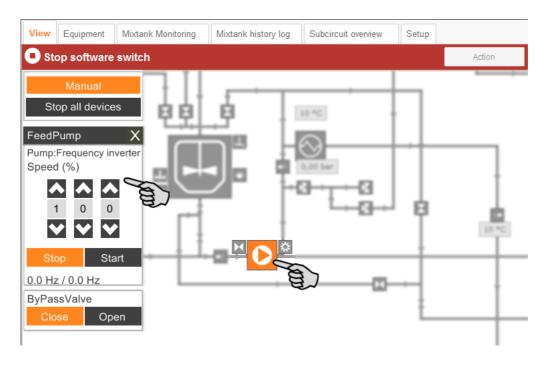
b) Activate or deactivate the required element in the window to the left or by clicking directly on the element icon in the view.

Active elements are orange. Inactive elements are gray.



6. Change the frequency of a system component that is controlled by a frequency inverter, e.g. an agitator or a pump, if necessary.

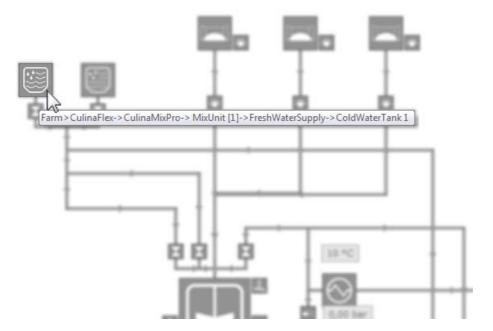
Click on the respective system component and change the frequency using the arrows pointing upwards and downwards.





7. 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.



8. Stop manual control by clicking on "Manual" again.



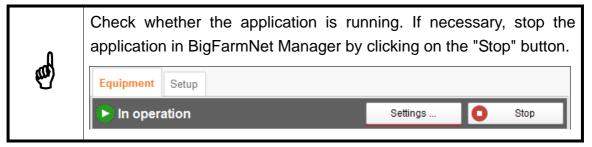
3.7 Manual actions for the feed moves

As soon as you have created your system in the FeedMove Editor (see chapter 3.3), the tab "View" is added to the application window.

The system usually runs automatically, based on the configured settings. However, you may access individual feed moves and carry out manual actions, e.g. pump the contents of a mixing tank to the slurry tank or move a cleaning agent into a mixing tank. Manual actions can also be defined for multiple feed moves. These actions are then carried out one after another in the desired order.

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





2. Click on the "Action" button in the "Equipment" or "View" tab.

This opens the dialog window "Manual action".

🤗 BigFarmNet Manager														-	. – ×	1
Manager Activity Configuration	n Setup	Help														
🔷 🎟 👍 🏜		[#]											16 aları	ms ┥	Î	
ī													Stop equipmer	ıt 📑	· 🔁	
🗢 🗥 Farm Bergstrop	▲	View E	quipment	Mixtank Monitoring	Mixtank	history log	Subcircuit (overview	Setup							
🗢 🌰 Sow house	▲	O Stop	software	ewitch							Action		Settings	0	Start v	1
o 🛆 Service area	44	Juop	Soltware	switch									ocungo		Start	ł,
o 🛆 Pregnancy area	44	Ν	Manual													
o 🛆 Farrowing area 1	4	Stop	all devices	5 🗖				Ņ.			F					
o 🛆 Farrowing area 2	4				T	Ţ		Î dit e	į.	1	ļ 🛛		11 °	1		
CulinaMixPro				÷.	ę.	¢.		T	ĭ	ĭ	Ĭ		<u> </u>	ĭ		
				1				1	1	1	1	*	1	1		1



3. In the upper area, enter the "Source" and the "Target" of the respective feed move and select the feed move from the list.

Filter								
Source	MixTank 2	~	Target	SlurryTank	~	Passed circuit	Don't care	~
Feed move								
MixTank 2 - SlurryTa	ank (over Feed pump	(Pump))						
						Sol		
						A)		
End condition								
 Weight 		○ Volume		Sensor is	s activated	O Dura	ation	
Weight		0.0	kg <=	Until minimum weight				
Pump								
Speed		0	% Auto					
Agitator speed								
Source bin				On ¥				
Target bin				¥				
Add								
Remove								
Remove all								
Active feed move:								
Start							×	Close

4. Configure the temporary setting under "End condition", " Pump" and "Agitator speed".

Depending on the feed move and the installed system components, the corresponding parameters for the action become active.

If you click on the button "<= Until minimum weight", the system turns off as soon as the minimum weight has been reached in the mixing tank. The weight is defined in the settings under "Min. amount", see chapter 6.4 "Feed preparation (mixing tank, agitator)".

5. Click on "Start" in the lower command bar to start the action for the selected feed move immediately.

OR:

Click on "Add" in the lower area if you want to add actions for other feed moves.

Feed moves with defined actions are listed in the field on the right. Use the arrows pointing upwards and downwards to sort the actions in the correct order for execution.

Add	MixTank 2 - SlurryTank (over Feed pump (Pump)) WarmWaterTank 1 - MixTank 1 (over FiilValve)	
Remove all	×	
ctive feed move:		

- 6. Click on "Start" in the lower command bar to start the action(s).
- 7. Click on "Close" in the lower command bar to close the dialog window.

3.8 Stopping the system and canceling an action

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

					Stop	o equipm	ent 🔄	5
View	Equipment	Mixtank Monitoring	Mixtank history log	Subcircuit over	view	Setup		
🕒 In	operation				Settir	ngs	0	Stop
							(Ê	\$

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

- 1. Click on the arrow pointing downwards next to the "Start" button" and select the correct option from the context menu.
 - Start with canceling current action: The system starts, cancels the current action and continues with the next action that was defined in the Task Manager.
 - Start with canceling the feeding time: The system starts and cancels the current task, e.g. feeding or cleaning.



 Restore control process: In case of control errors of the BigFarmNet Manager, use this option to restart the entire system including all processes.

					Stop equipment 🛛 🕞 - 🕞
View	Equipment	Mixtank Monitoring	Mixtank history log	Subcircuit overview	Setup
🗖 Ste	op software	switch		Action	Settings 💽 Start
St	Manual op all device	95			Start with canceling current action Start with canceling the feeding time Restore control process

3.9 Stopping the mixing tank and canceling an action

The mixing tanks are displayed in the "Equipment" tab based on the configured system. The CulinaMix*pro* mixing tanks are sub-applications. The graphical depiction provides the following information, for example:

- Current actions of the mixing tank
- Current temperatures for mixing in the mixing tank (T), for the heat exchanger (E) and for distribution (D)
- Current pressure in the pipelines
- "Content" shows the components in the mixing tank, including their amount. For water, no difference is made between warm and cold.
- "Preparation" shows the current preparation, including information on the currently available amount and the missing amount of the components.

You can stop each mixing tanks individually during operation by clicking on the corresponding stop button. If you click on "Start" again, the mixing tank continues to operate with the current action.

View Equipment Mixtank Monitoring	g Mixtank his	tory log Subcircuit overview	Setup		
[Simulation] In tion				Settings	Stop
A Feeding kitchen					
MixTank 1: Error	0 ~	MixTank 2: Operation	Q_	MixTank 3: Operation	0
Clean with water 10.0 kg: 10.0 kg		Tank cleaning: Waiting for r by other processes	eleasing devices used	nk cleaning: Waiting for re other processes	leasing devices used
					4
150 kg		150 kg 11.3 kg	-	150 kg 11.8 kg	-
DM: 21 g/kg	-	DM: 18 g/kg		DM: 20 g/kg	all and the
10.0 °C T 2 kg	1	10.0 °C T 2 kg	A 1	10.0 °C T 2 kg	
10.0 °C D		10.0 °C D		10.0 °C D	1
0.0 bar		0.0 bar	1994	0.0 bar	199
Content Preparation		Content Preparation		Content Preparation	
Component	Amount 🚽	Component	Amount 👻	Component	Amount
Water	11.29 kg	Water	11.06 kg	Water	11.54
Bi-Lacatal Plasma	0.28 kg	Bi-Lactin Ultimus	0.13 kg	Super-frueh	0.27
		Super-frueh	0.10 kg		

CulinaMixpro Edition: 01/18 M 3621 GB



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

- 1. Click on the arrow pointing downwards next to the start button of and select the correct option from the context menu.
 - Start with canceling current action: The mixing tank starts, cancels the current action and continues with the next action defined in the Task Manager.
 - Start with reset total feeding time: The mixing tank starts and cancels the current task, e.g. feeding or cleaning.
 - Start with new mixture: The mixing tank starts and mixes a new recipe. A dialog to indicate the amount opens.

3.10 Mixing tank monitoring

The tab "Mixing tank monitoring" indicates the contents of each tank for the past 24 hours. The diagram shows at which times of the day weight changes occurred.

Click into the diagram to change the 24-hour view with the scroll wheel of your mouse (see longer or shorter periods). The timeline changes accordingly.

View Equipment MixTank 1	Mixtank Monitoring	Mixtank history log	Subcircuit	overview Setup				
Mixtank info	Feeding info		100%					
11.6 kg	Feedcurve:	Schaumann Futterkurv	80% -					
DM:21g/kg	Curveday:	<= 16	60% -					
27.3 °C T	Feeding start:		40% -					
10.0 °C E	Last mixing:		20% -					
10.0 °C D	Planned end:		0%				,	
0.0 bar	Last dosing:			3:00 PM	8:00 PM	1:00 AM	6:00 AM	11:00 AM
MixTank 2 Mixtank info	Feeding info							
			100%					
11.3 kg	Feedcurve:	Schaumann Futterkurv	80%					
DM:18 g/kg	Curveday:	17 - 21	60%					
28.4 °C T	Feeding start:		40% -					
10.0 °C E	Last mixing:		20%					
10.0 °C D	Planned end:							
0.0 bar	Last dosing:		0% -	3:00 PM	8:00 PM	1:00 AM	6:00 AM	11:00 AM
MixTank 3								
Mixtank info	Feeding info		100%					
11.8 kg	Feedcurve:	Schaumann Futterkurv	80%					
DM: 20 g/kg	Curveday:	> 21	60% -					
27.5 °C T	Feeding start:		40% -					
10.0 °C E	Last mixing:		20%					
10.0 °C D	Planned end:							
0.0 bar	Last dosing:		0% -	3:00 PM	8:00 PM	1:00 AM	6:00 AM	11:00 AN



3.11 Mixing tank history log

The "Mixing tank history log" shows a log for each individual action of each mixing tank. This makes it easy to identify unusual actions.

View Equipment Mixtank Monitoring Mixtan	k history log Sub	circuit overview	Setup
MixTank 1			
Preparation history	Event log		
Preparation	Date	Time	Event
from 19/01/2018 v to 08/02/2018 v	18/12/2017	09:20	Started "Cleaning tank" action "Reinigung Mixtank 1" schedul
	18/12/2017	09:20	Finished "PigletFeeding" action "Füttern Tank 1 ohne entleere
	06/10/2017	13:44	Preparation in MixTank 1 finished
0.0 kg	06/10/2017	13:39	Filled in 4.4 kg Water from WarmWaterTank 1
_	06/10/2017	13:39	Filled in 3.8 kg Bi-Lacatal Plasma from BunkerSilo 1-1 [1]
No amount to compare in the previous period	06/10/2017	13:36	Filled in 12.7 kg Water from WarmWaterTank 1
	06/10/2017	13:29	Preparation in MixTank 1 started
	06/10/2017	08:13	Preparation in MixTank 1 finished
Prepared for 08/02/2018 v	06/10/2017	08:01	Filled in 13.8 kg Water from WarmWaterTank 1
	06/10/2017	08:00	Filled in 13.5 kg Bi-Lacatal Plasma from BunkerSilo 1-1 [1]
0.0 kg	06/10/2017	07:55	Filled in 45.1 kg Water from WarmWaterTank 1
0.0 kg	06/10/2017	07:52	Preparation in MixTank 1 started
	06/10/2017	07:52	Started "PigletFeeding" action "Füttern Tank 1 ohne entleeren
No prepared amount for 07/02/2018	06/10/2017	07:52	Finished "CleaningCircuitByRecipe" action "Reinigen Tank un
	00/40/0047	07.40	n a shekarar i
MixTank 2			
Preparation history	Event log		
Preparation	Date	Time	Event
from 19/01/2018 v to 08/02/2018 v	18/12/2017	09:21	
		00.21	Started "Cleaning tank" action "Reinigung Mixtank 2" schedul
	18/12/2017	09:21	Finished "PigletFeeding" action "Füttern Tank 2 ohne entleere
	18/12/2017 06/10/2017		
0.0 kg		09:21	Finished "PigletFeeding" action "Füttern Tank 2 ohne entleere
0.0 kg	06/10/2017	09:21 07:33	Finished "PigletFeeding" action "Füttern Tank 2 ohne entleere Preparation in MixTank 2 finished
0	06/10/2017 06/10/2017	09:21 07:33 07:21	Finished "PigletFeeding" action "Füttern Tank 2 ohne entleere Preparation in MixTank 2 finished Filled in 18.2 kg Water from WarmWaterTank 2
0	06/10/2017 06/10/2017 06/10/2017	09:21 07:33 07:21 07:20	Finished "PigletFeeding" action "Füttern Tank 2 ohne entleere Preparation in MixTank 2 finished Filled in 18.2 kg Water from WarmWaterTank 2 Filled in 5.8 kg Bi-Lactin Ultimus from BunkerSilo 2-1 [1]
No amount to compare in the previous period	06/10/2017 06/10/2017 06/10/2017 06/10/2017	09:21 07:33 07:21 07:20 07:13	Finished "PigletFeeding" action "Füttern Tank 2 ohne entleere Preparation in MixTank 2 finished Filled in 18.2 kg Water from WarmWaterTank 2 Filled in 5.8 kg Bi-Lactin Ultimus from BunkerSilo 2-1 [1] Filled in 4.6 kg Super-frueh from Silo 2-1 [1]
0	06/10/2017 06/10/2017 06/10/2017 06/10/2017 06/10/2017	09:21 07:33 07:21 07:20 07:13 07:10	Finished "PigletFeeding" action "Füttern Tank 2 ohne entleere Preparation in MixTank 2 finished Filled in 18.2 kg Water from WarmWaterTank 2 Filled in 5.8 kg Bi-Lactin Ultimus from BunkerSilo 2-1 [1] Filled in 4.6 kg Super-frueh from Silo 2-1 [1] Filled in 29.5 kg Water from WarmWaterTank 2
No amount to compare in the previous period	06/10/2017 06/10/2017 06/10/2017 06/10/2017 06/10/2017 06/10/2017	09:21 07:33 07:21 07:20 07:13 07:10 07:02	Finished "PigletFeeding" action "Füttern Tank 2 ohne entleere Preparation in MixTank 2 finished Filled in 18.2 kg Water from WarmWaterTank 2 Filled in 5.8 kg Bi-Lactin Ultimus from BunkerSilo 2-1 [1] Filled in 4.6 kg Super-frueh from Silo 2-1 [1] Filled in 29.5 kg Water from WarmWaterTank 2 Preparation in MixTank 2 started
No amount to compare in the previous period Prepared for 08/02/2018	06/10/2017 06/10/2017 06/10/2017 06/10/2017 06/10/2017 06/10/2017 06/10/2017	09:21 07:33 07:21 07:20 07:13 07:10 07:02 07:02	Finished "PigletFeeding" action "Füttern Tank 2 ohne entleere Preparation in MixTank 2 finished Filled in 18.2 kg Water from WarmWaterTank 2 Filled in 5.8 kg Bi-Lactin Ultimus from BunkerSilo 2-1 [1] Filled in 4.6 kg Super-frueh from Silo 2-1 [1] Filled in 29.5 kg Water from WarmWaterTank 2 Preparation in MixTank 2 started Started "PigletFeeding" action "Füttern Tank 2 ohne entleeren
No amount to compare in the previous period	06/10/2017 06/10/2017 06/10/2017 06/10/2017 06/10/2017 06/10/2017 06/10/2017 06/10/2017	09:21 07:33 07:21 07:20 07:13 07:10 07:02 07:02 07:02 03:40	Finished "PigletFeeding" action "Füttern Tank 2 ohne entleere Preparation in MixTank 2 finished Filled in 18.2 kg Water from WarmWaterTank 2 Filled in 5.8 kg Bi-Lactin Ultimus from BunkerSilo 2-1 [1] Filled in 4.6 kg Super-frueh from Silo 2-1 [1] Filled in 29.5 kg Water from WarmWaterTank 2 Preparation in MixTank 2 started Started "PigletFeeding" action "Füttern Tank 2 ohne entleeren Finished "Cleaning tank" action "Reinigung Mixtank 2" with st
No amount to compare in the previous period Prepared for 08/02/2018	06/10/2017 06/10/2017 06/10/2017 06/10/2017 06/10/2017 06/10/2017 06/10/2017 06/10/2017 06/10/2017	09:21 07:33 07:21 07:20 07:13 07:10 07:02 07:02 07:02 03:40 03:07	Finished "PigletFeeding" action "Füttern Tank 2 ohne entleere Preparation in MixTank 2 finished Filled in 18.2 kg Water from WarmWaterTank 2 Filled in 18.8 kg Bi-Lactin Ultimus from BunkerSilo 2-1 [1] Filled in 4.6 kg Super-frueh from Silo 2-1 [1] Filled in 29.5 kg Water from WarmWaterTank 2 Preparation in MixTank 2 started Started "PigletFeeding" action "Füttern Tank 2 ohne entleeren Finished "Cleaning tank" action "Reinigung Mixtank 2" with st Started "Cleaning tank" action "Reinigung Mixtank 2" schedul
No amount to compare in the previous period Prepared for 08/02/2018 0.0 kg	06/10/2017 06/10/2017 06/10/2017 06/10/2017 06/10/2017 06/10/2017 06/10/2017 06/10/2017 06/10/2017 06/10/2017	09:21 07:33 07:21 07:20 07:13 07:10 07:02 07:02 07:02 03:40 03:07 03:07	Finished "PigletFeeding" action "Füttern Tank 2 ohne entleere Preparation in MixTank 2 finished Filled in 18.2 kg Water from WarmWaterTank 2 Filled in 5.8 kg Bi-Lactin Ultimus from BunkerSilo 2-1 [1] Filled in 4.6 kg Super-frueh from Silo 2-1 [1] Filled in 29.5 kg Water from WarmWaterTank 2 Preparation in MixTank 2 started Started "PigletFeeding" action "Füttern Tank 2 ohne entleeren Finished "Cleaning tank" action "Reinigung Mixtank 2" with st Started "Cleaning tank" action "Reinigung Mixtank 2" schedul Finished "PigletFeeding" action "Füttern Tank 2 ohne entleere
No amount to compare in the previous period Prepared for 08/02/2018 • 0.0 kg No prepared amount for 07/02/2018	06/10/2017 06/10/2017 06/10/2017 06/10/2017 06/10/2017 06/10/2017 06/10/2017 06/10/2017 06/10/2017 06/10/2017 05/10/2017	09:21 07:33 07:21 07:20 07:13 07:10 07:02 07:02 07:02 03:40 03:07 03:07 08:12	Finished "PigletFeeding" action "Füttern Tank 2 ohne entleere Preparation in MixTank 2 finished Filled in 18.2 kg Water from WarmWaterTank 2 Filled in 5.8 kg Bi-Lactin Ultimus from BunkerSilo 2-1 [1] Filled in 4.6 kg Super-frueh from Silo 2-1 [1] Filled in 29.5 kg Water from WarmWaterTank 2 Preparation in MixTank 2 started Started "PigletFeeding" action "Füttern Tank 2 ohne entleeren Finished "Cleaning tank" action "Reinigung Mixtank 2" with st Started "Leaning tank" action "Reinigung Mixtank 2" schedul Finished "PigletFeeding" action "Füttern Tank 2 ohne entleere
No amount to compare in the previous period Prepared for 08/02/2018 O.0 kg	06/10/2017 06/10/2017 06/10/2017 06/10/2017 06/10/2017 06/10/2017 06/10/2017 06/10/2017 06/10/2017 06/10/2017 05/10/2017	09:21 07:33 07:21 07:20 07:13 07:10 07:02 07:02 07:02 03:40 03:07 03:07 08:12	Finished "PigletFeeding" action "Füttern Tank 2 ohne entleere Preparation in MixTank 2 finished Filled in 18.2 kg Water from WarmWaterTank 2 Filled in 5.8 kg Bi-Lactin Ultimus from BunkerSilo 2-1 [1] Filled in 4.6 kg Super-frueh from Silo 2-1 [1] Filled in 29.5 kg Water from WarmWaterTank 2 Preparation in MixTank 2 started Started "PigletFeeding" action "Füttern Tank 2 ohne entleeren Finished "Cleaning tank" action "Reinigung Mixtank 2" with st Started "Leaning tank" action "Reinigung Mixtank 2" schedul Finished "PigletFeeding" action "Füttern Tank 2 ohne entleere
No amount to compare in the previous period Prepared for 08/02/2018 • 0.0 kg No prepared amount for 07/02/2018	06/10/2017 06/10/2017 06/10/2017 06/10/2017 06/10/2017 06/10/2017 06/10/2017 06/10/2017 06/10/2017 06/10/2017 05/10/2017	09:21 07:33 07:21 07:20 07:13 07:10 07:02 07:02 07:02 03:40 03:07 03:07 08:12	Finished "PigletFeeding" action "Füttern Tank 2 ohne entleere Preparation in MixTank 2 finished Filled in 18.2 kg Water from WarmWaterTank 2 Filled in 5.8 kg Bi-Lactin Ultimus from BunkerSilo 2-1 [1] Filled in 4.6 kg Super-frueh from Silo 2-1 [1] Filled in 29.5 kg Water from WarmWaterTank 2 Preparation in MixTank 2 started Started "PigletFeeding" action "Füttern Tank 2 ohne entleeren Finished "Cleaning tank" action "Reinigung Mixtank 2" with st Started "Leaning tank" action "Reinigung Mixtank 2" schedul Finished "PigletFeeding" action "Füttern Tank 2 ohne entleere

3.12 Subcircuit overview

You can lock circuits and valves under the tab "Subcircuit overview". Parameters with the pen icon \swarrow can be edited:

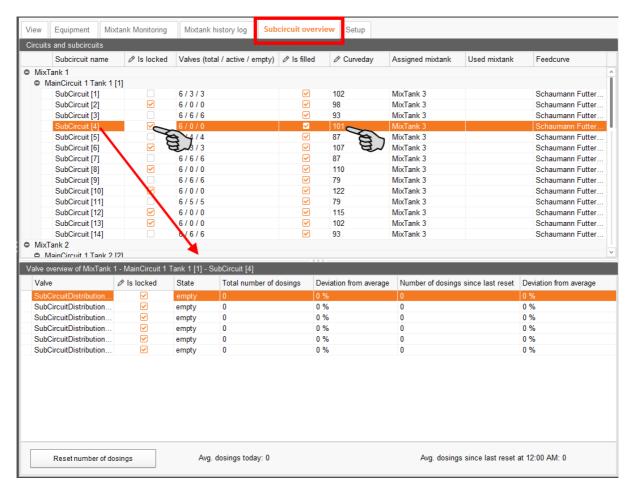
• In the upper part, you can lock an entire circuit directly if you do not want it to supply feed or if the corresponding section is empty.

Marked a circuit by clicking to view all corresponding valves in the lower part of the window. Lock individual valves of a circuit, for example if some pens are not occupied.

• Define the correct feed curve and the animals' age based on the curve day.

The "Valves" parameter shows

- the total number of connected valves at the first position ("total");
- the number of active valves at the second position ("active);
- the number of active valves with the status "Empty" at the third position ("empty").





4 Feed curve

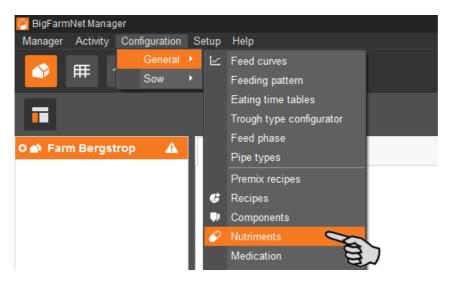
To meet the feed demand of the animals, use a feed curve to define which feed components are dispensed at which ratio and during which time periods. Daily rations are adapted automatically as required by the individual growth states.

Before you define a feed curve, you need to determine (feed) components as well as nutrients ("nutriments") as required.

4.1 Creating nutrients

Nutrients include carbohydrates, fats and proteins, but also vitamins and minerals. The nutrients you create determine the nutritional value of the components. When you create a new component, all nutrients you created before will be listed. You can then enter the corresponding values per component, see chapter 4.2 "Creating components".

1. In the menu "Configuration" > "General", click on "Nutrients".



- 2. In the dialog window "Nutrients", click on "Add".
- 3. Enter a name for the nutrient and determine the unit.

Calcium	
milligrams v	8
micro grams	
	milligrams 🗸



4. As an option, you can also determine a priority for each nutrient. The nutrients can then be listed in ascending or descending order according to priority later on.

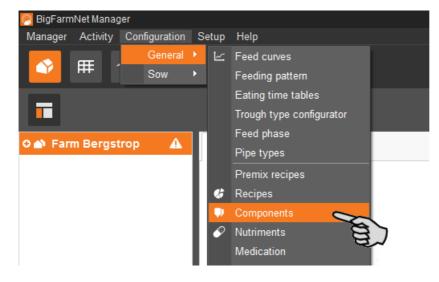
lutriment		
Name	Calcium	
Unit	milligrams	v
Priority	📀 Normal	[*]
	High Normal	A A
	Low	OK Cancel
	•	

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

4.2 Creating components

Use the "Component" dialog to create different components and to add any corresponding information. Components are classified into the categories "Feed" and "Additive". Components in the category "Feed" can be the individual ingredient of a feed mix or a complete compound feed.

1. In the menu "Configuration" > "General", click on "Components".



- 2. In the dialog window "Components", click on "Add".
- 3. Enter a name for the component and select a category.

omponent		
Name	Component 1	
Category	Feed	× 🗢
	Additive	a
Nutrition	Technical Feed	Hydrewnix



4. Under the first tab "Nutrition", enter the dry matter fraction of the component.

Name	Compon	ent 1					
Category	Feed	•					
Nutrition	Technical settings	Replacement components	Liquid feeding settings	Culina	settings	Color	
Dry matter	r fraction					0.	0 g/kg
				FM	DM 88%	DM 1	
	Name		FM				
•	Energy			0.0	MJ/kg		
\sim	Calcium			0.0	g/kg		

- 5. Only after entering the dry matter fraction can you choose one of the following quantities:
 - FM = per fresh matter
 - DM 88 % = in relation to 88 % dry matter
 - DM 100 % = in relation to 100 % dry matter

If required, enter the energy content and the individual nutrient fractions in the table below (see 4.1 "Creating nutrients").

Name	Compor	nent 1			
Category	Feed	~			
Nutrition	Technical settings	Replacement components	Liquid feeding settings	Culina settings	Color
Dry matte	er fraction				880.0 g/kg
				FM DM 88%	5 DM 100%
	 Name 		FM B		
Ð	Energy		18	12.6 MJ/kg	
\sim	Calcium			15.0 g/kg	
<	Vitamin A			5.0 ppm 🥿	~
-	0 1 1			0.0 g/kg	X the
\sim	Crude protein			0.0 9/kg	8

6. Define parameters for feed preparation in the mixing tank and dosing under the tab "Technical settings".

Name	Compo	nent 1
Category	Feed	~
Nutrition	Technical settings	Replacement components Liquid feeding settings Culina settings Color
		Mixing
Total mixin	g time	00:00:00 🗘 hh:mm:ss
Interval	mixing	
Interval	mixing time	00:00:00 🗘 hh:mm:ss
Interval	pause time	00:00:00 🗘 hh:mm:ss
Low mi	xing speed	
		Dosing
Time dosin	g threshold	0.0 kg O Auto
Dosing typ	e	by weight v Manual
		Specific weight
Specific we	eight	1.000 kg/l
	-	
		✓ ОК Х С

- Under Total mixing time, determine a time frame for mixing the component. If several components are mixed together, the mixing time will correspond that of the component with the longest mixing time.
- If a component needs to macerate first, click on Interval mixing and enter the required value.
- Under the section **Dosing**, select either **Auto** or **Manual**.

The automatic mode works based on the determined weight. Below this threshold weight, a time-dosing method is used automatically, and a weight-based method above this weight.

In the manual mode, select either "by weight" or "by time".

If the component is dissolved in water, change the presetting under Specific weight, if necessary.



7. Select one or more replacement components from the tab "Replacement components" in case the component you entered is used up before a new order arrives. If you select more than one replacement, you may sort them in descending order according to priority.

Name	Compon	ient 1			
Category	Feed	*			
Nutrition	Technical settings	Replacement components	Liquid feeding settings	Culina settings	Color
Select re	eplacement component	Replacement	For Component 1		
Pig feed 13,0 MJ EM			Pig feed 13,6 MJ CORC	DNA	^
Pig feed	ed 13,6 MJ	<			~

- 8. Configure the necessary settings under the tab "Liquid feeding settings".
 - The bottom part, Parameters for dosing into mixing tank, applies to the CulinaMixpro application:

The temperature values that must be defined are target values. The parameter **Additional mixing time after dosing** ensures that the component can dissolve at the stated temperature.

Name Component 1		ent 1				
Category	Feed	٣				
Nutrition	Technical settings	Replacement components	Liquid feeding	settings Culi	ina settings	Color
		Liquid feeding tec	hnical settings			
Wait after n	nixing tank agitator o	n/off		3.0 s		
Dosing with	n agitator of mixing ta	nk				
Dose comp	onent through circuit					
Preferred fe	ed pump type			None		*
		Parameters for us	age as additive			
Position for	dosing into mixing ta	ank for activities		After adjustme	ent componer	its v
Start Medil	nject for stub or valve	s before dosing into mixing tar	ık			
How to han	dle missing ingredier	t for activities		Alarm		~
		Parameters for dosing	g into mixing ta	ink		
Preparation	temperature during	dosing into mixing tank		0.0 °C		
Allowed ten	nperature tolerance (±)		3.0 °C		
Additional r	mixing time after dosi	ng		00:00:00 🔇	hh:mm:ss	1

- 9. Define the values for the agitator during distribution under the tab "Culina settings":
 - If the box Interval mixing during distribution is not checked, the agitator will mix permanently.

The system uses the longest mixing time and the shortest pause time when mixing multiple components.

Name		Compon	ent 1				
Category		Feed	~				
Nutrition	Technical	settings	Replacement components	Liquid feeding s	ettings	Culina settings	Color
			Mixing of tank conten	t during distributio	on		
🗹 Interval	mixing durin	g distribu	tion				
Interva	I mixing time	•			00:00:0	0 🗘 hh:mm:s	6
Interva	l pause time				00:00:0	0 🗘 hh:mm:s	5
Low m	ixing speed						
				~	ОК	×	Cancel
					UN		Cancer

10. Select a color for the component under the tab "Color". This makes recognizing components in the feed curve easier and lets you distinguish specific components from others during evaluation.

Category	Feed				Component 1									
		*												
Nutrition Te	chnical settings	Replacement components	Liquid feeding settings	Culina settings	Color									
Select a prec	defined color	Compone Choose your own color												

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



4.3 Defining a feed curve

1. In the menu "Configuration" > "General", click on "Feed curves".

🧖 BigFarm	Net Manag	ler			
Manager	Activity	Configuration	S	etup	Help
	—	General	١.	⊵	Feed curves
	ſ₩ (Sow	Þ		Feeding pattern
					Eating time tables
					Trough type configurator

2. In the dialog window "Feed curve list", click on "Add".

You can edit, copy or remove created feed curves later on, if necessary.

3. In the next window, select the feed curve type "Piglet – CulinaMixPro liquid feeding" and enter a name for the feed curve.

Feed curve main view	
Add a new feed curve	
Feed curve type:	Finisher - Dry feeding 🗸
Unit type:	Finisher - Dry feeding Sow - Callmatic & Dry feeding Finisher - Liquid feeding Sow - HydroMixPro liquid feeding
Feed curve name:	Piglet - CulinaMixPro liquid feeding
	> Next X Cancel

The unit type is set to "Fresh matter" automatically.

- 4. Click on "Next".
- 5. From the component list in the upper left-hand part of the window, select the dry components for your feed curve by either double clicking on the component in the list or by clicking on the arrow button.

d curve - /	Add						Type: Piglet - C	CulinaMixPro liquid	lfeeding Un	it type: Fresh mass	N
Compone	ent selection	Envelope curve									
elect co	mponents					To Piglet					
Туре	Name		DM [g/kg]	Energy [MJ/kg]	>_	Туре	Name		DM [g/kg]	Energy [MJ/kg]	
Feed	Bi-Lacatal F	lasma	880.0	16.0	L'A						
	Bi-Lactin Ul		880.0	16.0	· · · · ·	e l					
	Super-frueh		880.0	16.0	<						
					<>		You need to add	components to th	ie component	: list	[

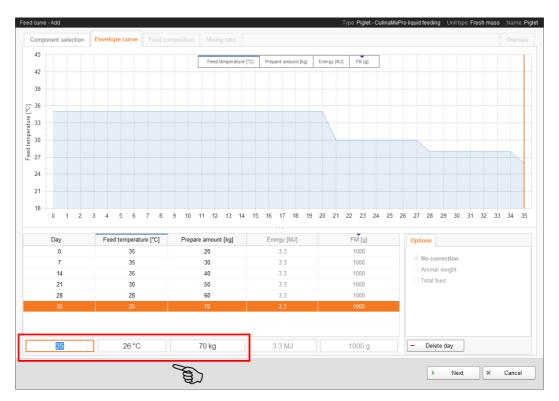


6. If necessary, define an order for the components.

By default, the function "Automatic mixing order of the components" is active (button highlighted in gray). This means that the component with the largest fraction always enters the mixing tank first. Click on the button to deactivate the function and to define a different order using the arrows.

To Piglet Type	Name	DM [g/kg]	Energy [MJ/kg]	
Feed	Bi-Lacatal Plasma	880.0	16.0	
	Bi-Lactin Ultimus	880.0	16.0	
			Ē	
	Automatic mixing order of the		st fraction is mixed f	<i>,</i>

- 7. Click on "Next".
- 8. Define the feed curve under the tab "Envelope curve".
 - a) Enter values for the following parameters in the input fields below the table:
 (Curve) Day, Feed temperature (distribution temperature), Preparation amount for each mixture plus pipe content (amount that is actually supplied to the animals)..





- b) Press Enter after you have determined a time period for the curve.
- c) Continue by entering further curve days.

The curve in the diagram will take shape the more curve days you enter.

- 9. Click on "Next" after you have completed all inputs.
- 10. Define the percentage share of the different components for one curve period under "Feed composition". The fractions always add up to 100 %.

F	eed curve - Ad	bt							
	Componen	nt sel	ection	E	nvelop	e curve	e	Feed composition	Mixing ratio
	1100								Bi-Lacatal Plasma Bi-Lactin
	1000								

a) Click on the desired curve day in the list.

You can also edit multiple curve days at the same time: Press and hold down the Ctrl key, then click on all curve days you want to assign the same percentage.

b) In the pane "Fixed ingredient fraction", enter the value into the field next to the colored line for the component.

Or:

Define the value by extending or shortening the colored line: Click on the dot and hold the mouse button. Move the mouse into the desired direction.

c) If there are more than two components, click on the padlock icon to fix component fractions. Such locked values will not be changed when defining further component fractions.

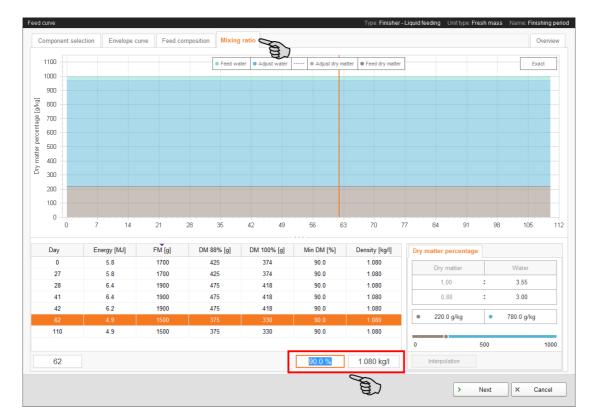
DM 88% [g]	DM 100% [g]	Fixed ingredient fraction			
205	180	Day 0			
205	180		100.0%		
205	180	Super-frueh	FM	DM	6
205	180	•	35.0 %	35.0 %	6
205	180	•	50.0 %	50.0 %	8
205	180		15.0_%	15.0 %	8
		> Next	×	Cano	el



- 11. Under the tab "Mixing ratio", define the dry matter (feed) and water percentages for the corresponding curve time period.
 - a) Click on the desired curve day in the table.

You can also edit multiple curve days at the same time: Press and hold down the Ctrl key, then click on all curve days you want to assign the same percentage.

b) Enter the minimum dry matter percentage (Min DM) into the input field below the respective column.



c) Enter the density into the input field below the respective column, if necessary.

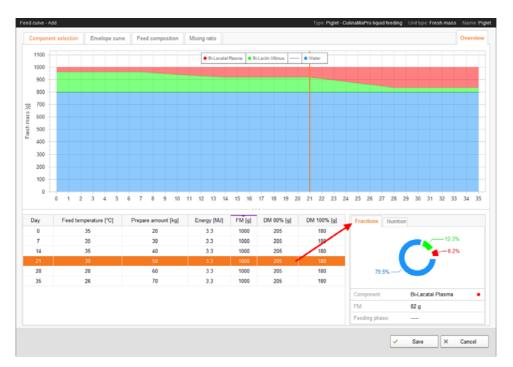


d) In the pane "Dry matter percentage", enter either the value for dry matter or for water.

The other value and the ratio are calculated automatically.

Density [kg/l]	Dry matter per	centage		
1.080	Dry mat	tor	Water	
1.080				
1.080	1,00	:	3.55	
1.080	0,88	:	3.00	
1.080				
1.080	• <u>220.0</u> g	/kg •	780.0 g/kg	
1.080		8		
	0	500		1000
1.080 kg/l	Interpolatio	on		
	[> Next	× 0	ancel

12. Click on "Next" to move to the "Overview" tab.



This tab shows a summary of the feed curve you created. Use the overview to verify your settings. It is, however, not possible to make any changes here.

Click on the individual curve days to see the corresponding information in the "Fractions" window, and the nutritional values under the "Nutrition" tab.

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



5 Cleaning components

5.1 Creating an acid / a lye

Acids and lyes are treated separately in BigFarmNet Manager. However, menu navigation for adding acids and lyes is identical. The following instructions explain how to create an acid as an example.

1. In the menu "Configuration" > "Cleaning", click on "Acids".



- 2. In the next dialog window, click on "Add".
- 3. Enter a name for the acid and activate the option that the acid may be used in feed curves by checking the box, if necessary. This option does not exist for lyes and is therefore not displayed in the corresponding dialog!

Name	Acid 1]
Acid can b	e used in feed curves	S
		ヨン

4. Define parameters for feed preparation in the mixing tank and dosing under the tab "Technical settings".

Name	Acid 1		
Acid can b	e used in feed curves		
Nutrition	Technical settings	Culina settings	Color
			Mixing
Total mixin	g time		00:01:00 🗘 hh:mm:ss
			Dosing
Dosing type	e		by weight v



- Under **Total mixing time**, define a duration for mixing of the acid.
- Select the **Dosing type**, either "by weight" or "by time".
- 5. Define the values for the agitator during distribution under the tab "Culina settings":
 - If the box Interval mixing during distribution is not checked, the agitator will mix permanently.

Name	Acid 1					
Acid can b	e used in feed curve	5				
Nutrition	Technical settings	Culina settings	Color			
		Mixing of	tank content durir	ng distributi	on	
Interval	mixing during distrib	ution				
Interva	I mixing time				00:00:00 🗘	hh:mm:ss
Interva	l pause time			[00:00:00 🗘	hh:mm:ss
Low m	ixing speed					

6. Select a color for the acid under the tab "Color".

С	leaning acid	- Add								
	Name		Acid 1							
	Acid can be used in feed curves									
	Nutrition	Technical	settings	Culina settings	Color					
					Componer	nt color —				
	Select a	predefined		Choose your		•				
							~	ОК	×	Cancel

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



5.2 Creating a cleaning recipe

Use the acids and lyes you have set up to create a recipe for cleaning. Observe the instructions on the packaging of the cleaning component, e.g. regarding temperature. Recipes for cleaning are used in the task "Circuit cleaning according to a recipe", for example, see chapter 7.1.5.

1. In the menu "Configuration" > "Cleaning", click on "Recipes".



- 2. In the dialog window "Cleaning recipe", click on "Add".
- 3. Enter a name for the recipe.
- 4. Add the correct cleaning component under the first tab "Detergents".

Cleaning recipe - Ac	ld	
Name Cleaning	recipe	
Detergents	Nater Total mixture	
Ingredients:	+ Add - Remove	🕏 Replace
Cleaning r	Acid	💽 Stretch
	Lye Water)



- 5. Define the mixing ratio between the cleaning component and water:
 - a) Click on the tab "Total mixture", and in the lower part of the window on the tab "Water ratio".
 - b) Enter the amount of the cleaning component.

The ratio is calculated automatically and the percentages are indicated in the upper part of the window, also automatically.

me Cleaning recipe							
Detergents Water Total mixture							
Ingredient	Fraction FM						Water
Water	75.00 %	100%					Lye
Lye	2.50 %	- 80%					
	· · · · · · · · · · · · · · · · · · ·	8 00%					
	\						
		L Lac					_
	N 1	140%					
		80% 80% 60% 10% 20%					
	77.50 %	0%					_
	11.50 %	ц ¹					
Nutrition Water ratio							
Nutrition Water ratio Liquid feeding settings	ŝ						
Nutrition Water ratio Liquid feeding settings	ò		ater ratio				
Nutrition Water ratio Liquid feeding settings		w	ater ratio	Wata	-		
Nutrition Water ratio Liquid feeding settings	Detergent			Wate			
Nutrition Water ratio Liquid feeding settings			:	3.0	0		
Nutrition Water ratio Liquid feeding settings	Detergent 1.00 0.33		:	3.0	0		
Nutrition Water ratio Liquid feeding settings	Detergent 1.00 0.33 250.0 g/kg		:	3.00 1.00	D D		
Nutrition Water ratio Liquid feeding settings	Detergent 1.00 0.33		:	3.0	D D		
Nutrition Water ratio Liquid feeding settings	Detergent 1.00 0.33 250.0 g/kg		:	3.00 1.00	D D		
Nutrition Water ratio Liquid feeding settings	Detergent 1.00 0.33 250.0 g/kg		:	3.00 1.00	D D		
Nutrition Water ratio	Detergent 1.00 0.33 250.0 g/kg		:	3.00 1.00	D D		
Nutrition Water ratio	Detergent 1.00 0.33 250.0 g/kg		:	3.00 1.00	D D		
Nutrition Water ratio	Detergent 1.00 0.33 250.0 g/kg		:	3.00 1.00	D D	OK	Cancel

6. In the lower part of the window, define the temperature of the mixture under "Liquid feeding settings".

Iutrition Water ratio	Parameter for final temperature
Final temperature during dosing into mix tank	0.0 °C

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

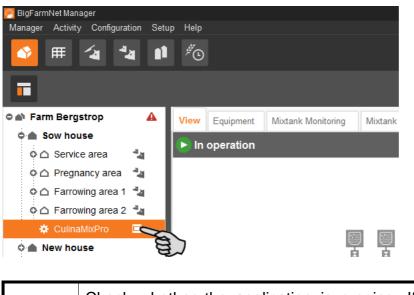


6 Configuration of the application

Settings for the application are configured under the "Equipment" tab. Parameter values can be changed as necessary at any time to meet individual requirements.

Open the setting parameters as follows:

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





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

View	Equipment	Mixtank Monitoring	Mixtank history log	Subcircuit ove	erview	Setup				
🗖 Ste	op softwar	ch			Actio	n	Settings	0	Start	~
							00	כ		

The settings dialog opens with multiple tabs. The first open tab is called "General". All parameters for the functions of the system components you created beforehand in the Composer become active in the different tabs. These parameters are described in the following chapters. Define the corresponding values for the parameters. Change pre-set values, if required.



General	Compone	nt Supply	Feed preparation	Feed pump	Distribution
Feed pre	paration	Piglet setti	ngs Application set	tings Use	r acknowledge
Filter	and setting	5			
Applic	ations at o	below this I	location:	F	arm Bergstrop
	ations at or		location: gitator slow before off		arm Bergstrop nount at end of
	ry matter			Clean an	nount at end of
Max. d	ry matter naMia	A . dry matter e dry matter ir		Clean an prep.	

Tooltips available! Move the mouse pointer over input fields or parameters in tables to see detailed descriptions for this parameter.

6.1 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.

ettings: Cu	urrent applic	cation: Culin	aMixPro									
ieneral	Feed pre	paration	Feed pump	Distribution	Scales	Expert setti	igs					
eed prep	paration	Piglet sett	ings App	ication settings	User ack	nowledge	Water settings	Distribution	Miscellanea	Sub ap	plication settings	
Filter a	and setting	S										
Applic	ations at o	r below this	location:		Farm	Bergstrop				۲ ۵	Сору	Settings
Max. dr	y matter	/	Agitator slow		Clean amount prep.	at end of	Min. clean amo of prep		llowed temperatu fference	re	Adjustment water at sta	Int Water via cleaning valve
Culin			gstrop - Sow									
O Culin		300.0 g/kg Farm Bergst	trop - Sow ho	15.0 kg		0.0 %		0.0 kg		2.0 °C	80.	0 %
e cuin		300.0 g/kg	liop - oow ne	15.0 kg		0.0 %		0.0 kg		2.0 °C	80.	0 %
								0.0 Ng		2.0 0		





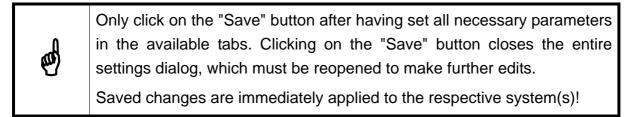
3. In the next dialog window, select the system whose settings you want to copy.

Choose source CulinaMixPro		
Choose an item where settings should be copied f	from.	
CulinaMixPro +		
CulinaMixPro 2: Farm Bergstrop - Sow house L. CulinaMixPro 2 CulinaMixPro 2 CulinaMixPro: Farm Bergstrop - Sow house	Farm Bergstrop - Sow house	
CulinaMixPro	Farm Bergstrop - Sow house	
見て		
	> Next	× Cancel

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

Name	 Location
🗢 🗹 CulinaMixPro 2: Farm Bergstrop -	Sow house
CulinaMixPro 2	Farm Bergstrop - Sow house
E.	

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



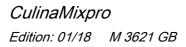


6.2 General

6.2.1 Feed preparation (general)

Settings: C	urrent applic	ation: Culinal	lixPro												
General	Compone	nt Supply	Feed preparation	Feed pump	Distribution	Scales	Expert se	ettings							
Feed pre	paration	Piglet settin	gs Application sett	ngs User a	cknowledge	Water set	ttings D	istribution	Miscellanea	Su	b appl	ication settings			
Filter	and setting	_		_	_	_	_	_	_	_		_	_	_	_
Filter	and setting:	5													
Applic	ations at o	below this lo	cation:	Far	m Bergstrop					*	¢,	(Copy Set	tings	
Max. d	y matter	Ag	itator slow before off	Clean amou prep.	unt at end of	Min. clea of prep	an amount :		llowed temperatui		A	Adjustment water a	at start	Water via cl	eaning valve
O Culir	aMixPro: F	arm Bergstro	p - Sow house		_		_						_		
		00.0 g/kg	15.0	kg	0.0 %	6		0.0 kg		2.0)°C		80.0 %		
												×	Save	×	Cancel

- **Maximum dry matter:** If this value is exceeded during filling of the mixing tank, an alarm is generated.
- Agitator slow before off: When a component is conveyed into a mixing tank or a
 pre-mixer while the agitator is running (a setting for the component), the agitator
 mixes quickly at first. As soon as the remaining amount that still needs to be
 dispensed corresponds to the value given here, the agitator switches to a slower
 mode. If the value given here is greater than the total amount, the agitator mixes
 slowly from the beginning.
- Cleaning amount at end of preparation: If water is used as replacement component, the amount of water given here is dispensed by the cleaning valve after preparation. This requires that the amount is greater than the given minimum amount, see "Minimum cleaning amount at end of preparation".
- **Minimum cleaning amount at end of preparation:** If the calculated percentage "Cleaning amount at end of preparation" is below this value, no water is dispensed by the cleaning value after preparation.
- Allowed temperature difference in the mixing tank during mixing.
- Adjustment water at start is used to regulate the temperature. The remaining amount is also used to reach the correct temperature, e.g. if feed is added manually.
- Water via cleaning valve: Instead of the normal water valve, the cleaning valve dispenses the water into the mixing tank.





6.2.2 Piglet settings

neral	Compone	nt Supply	Feed preparation	Feed pu	Imp Distrib	oution Scales	s Exper	t settings						
ed prepa	aration	Piglet setting	s Application	settings l	Jser acknowle	edge Water	settings	Distribution	Miscel	lanea S	ub applicatio	n settings		
Filter a	and settings	3												
Applic	ations at or	below this loca	ation:		Farm Berg	strop				۷	₿.	C	Copy Setting	JS
			Ger	eral							Assig	nment		
Max. op	pen valves	Max. all	owed pressure	Min. time for Main- and St		^o ercentage to wa pipe content		1ix tank used fo oung piglets		Curve day t young pigle	hreshold for ts	Mix tank us middle aged		Curve day threshold for middle aged piglets
Culin	naMixPro: F	arm Bergstrop												
		1	8.0 bar		50 %		20 % 🛛	1ixTank 1 (MixT	ank)		16	MixTank 2 (MixTank)	
_														

General

- Maximum open valves: Number of valves that are open at the same time.
- Maximum allowed pressure: This parameter is a safety function. The system measures the conveying pressure in the pipes, which must not exceed the set value.
- Minimum time for emptying main and subcircuits, based on the filling time.
- Percentage to water pipe content to dilute the pipe contents in steps. The percentage refers to the pipe volume, which can be found in the expert settings. This parameter is only applicable where pipes are cleaned with water only.

• Assignment

Use the curve days to define the order of the mixing tanks emptied to feed piglets of different ages under "Assignment".

- Mixing tank used for young piglets
- Curve day threshold for young piglets: Feed is taken from the "mixing tank used for young piglets" until the curve day entered here. This means that piglets that are younger or of the same age as the indicated curve day receive feed from the "mixing tank for young piglets".
- Mixing tank used for middle-aged piglets
- Curve day threshold for middle-aged piglets: Feed is taken from the "mixing tank used for middle-aged piglets" until the curve day entered here. This means that piglets that are younger or of the same age as the indicated curve day receive feed from the "mixing tank for middle-aged piglets".



6.2.3 Application settings

neral	Compor	nent Supply	Feed preparation	Feed pump	Distribution	Scales	Expert settings			
ed prepa	aration	Piglet settin	gs Application se	ettings User	acknowledge	Water set	ings Distribution	Miscellanea	Sub application settings	
Filter a	and setting	gs								
Applic	ations at o	or below this lo	ocation:	F	arm Bergstrop				• Co	ppy Settings
			Application not o	perational			Warr	nings	Simulation	Reset
Action a	after max.	pause time	Max. pause time		Repeat action		Generate warnin not linked	gs if device is	Activate simulation	Reset application
Culin	naMixPro:	Farm Bergstro	op - Sow house							
Aları	m		·	0 min		2				Hard reset

- Application not operational
 - 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.
- Warnings
 - Generate warnings if device is not linked
- Simulation
 - 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".
- Reset
 - Reset application



6.2.4 User acknowledgement

ieneral	Compor	ent Supply	Feed preparation	Feed pump	Distribution	Scales	Expert settings			
eed prep	aration	Piglet settin	gs Application set	tings User a	acknowledge	Water set	tings Distribut	ion Miscellanea	Sub application settings	
Filter	and settin	gs								
Applic	ations at	or below this lo	ocation:	Fa	rm Bergstrop				`	Copy Settings
	_	e alarm level		T	īmeout				Repeat alarm	
Alar	m	Farm Bergstro	p - Sow house	~				60 min		
Alar No										
vva	ming									
_										

- User acknowledgement alarm level
- **Timeout:** You need to manually confirm the action, e.g. the manual filling of components, within the time set here. Otherwise, the status "User acknowledgement alarm level" will be issued.
- **Repeat alarm** after the period under "Timeout" has been exceeded.

6.2.5 Water settings

Settings:	Current appl	ication: Culinal	lixPro											
General	Compon	ent Supply	Feed preparation	Feed pump	Distribution	Scales	Exper	t settings						
Feed pre	eparation	Piglet settin	gs Application sett	ings User a	cknowledge	Water se	ettings	Distributio	n Mis	scellanea	Sub application set	ttings		
Filte	er and setting	js												
Appl	lications at o	or below this lo	cation:	Fa	m Bergstrop					~	Ċ.	Copy Setti	ngs	
		tor of mixing ta					W	/ait after mix	xing tank	agitator on/o	off			
© Cu	IlinaMixPro:	Farm Bergstro	p - Sow house											3.0 s
											~	' Save	×	Cancel

- **Dosing with agitator of mixing tank:** Use this setting to define whether the system uses water for mixing, e.g. if cold and warm water are used to regulate the temperature in a specific way.
- Wait after mixing tank agitator on/off: When the agitator is switched from "on" to "off" (and vice versa), the agitator waits for the time indicated here before water is filled into the mixing tank.



6.2.6 Distribution (heat exchanger)

Settings: C	urrent application: Culin	aMixPro											
General	Component Supply	Feed preparation	Feed pump	Distribution	Scales	Expert setting	gs						
Feed prep	aration Piglet sett	ngs Application set	tings User ad	cknowledge	Water set	tings Distri	bution	Miscellanea	Sub app	lication settings			
Filter	and settings												
Applic	ations at or below this	location:	Farr	n Bergstrop					ŕ		Copy Settings	s	
Heat ex	kchanger temperature t	olerance				Block val	ves alwa	ays empty					
Culi	naMixPro: Farm Bergst	rop - Sow house			5.	0°C							
										~	Save	×	Cancel

• Heat exchanger temperature tolerance is a switching threshold for the heat exchanger. If the feed temperature drops below this tolerance value, the heat exchanger is activated.

6.2.7 Miscellaneous (tank cleaning)

ettings: Cu	urrent appl	lication: Culinal	MixPro										
Seneral	Compon	ent Supply	Feed preparation	Feed pump	Distribution	Scales	Expert s	ettings					
eed prepa	aration	Piglet settin	Application set	tings User a	cknowledge	Water se	ettings C	Distribution	Miscellanea	Sub appli	cation settings		
	and settin	-											
Applic	cations at (or below this l	ocation:	Fa	m Bergstrop					<u>_</u>		Copy Settings	
						T	ank cleanir	ng					
Delay fo	ogging and	d emptying											
Culin	naMixPro:	Farm Bergstre	op - Sow house										60
											~	Save	× Cancel

• **Delay fogging and emptying:** Waiting time between two cleaning processes to allow the compressor to build up pressure.



6.2.8 Sub-application settings

py Settings Repeat action
Repeat action
in 🗹
in V

The CulinaMix*pro* mixing tanks are individual sub-applications. Mixing tanks can be locked for a specified time period, e.g. in case of damage.

- Activate sub-application: The mixing tanks are active by default. Click into the box to remove the checkmark if you want to lock the mixing tank.
- 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.

6.3 Component supply

6.3.1 Silos

Mineral dosing units iller and settings Applications at or below this location:	eneral											
riter and settings Applications at or below this location:		Component Supply	Feed preparation	Feed pump	Distribution	Scales Expert s	ettings					
Applications at or below this location: Farm Bergstrop Copy Settings Copy Settings Agitator speed Agitator speed Activation Error/Pause Deviation Min. Speed Max. Speed Delay from Delay for to slow CulinaMixPro. Farm Bergstrop - Sow house BunkerSito 1-1 [1] Anno American Activation Ac	los Mi	ineral dosing units										
Applications at or below this location: Farm Bergstrop Copy Settings Copy Settings Agitator speed Agitator speed Activation Error/Pause Deviation Min. Speed Max. Speed Delay from Delay for to slow CulinaMixPro. Farm Bergstrop - Sow house BunkerSito 1-1 [1] Anno American Activation Ac												
General Agitator ame Location Mix up speed Agitator speed Recirculation Error/Pause Deviation Min. Speed Max. Speed Delay form CdinaMixPro: Farm Bergstrop - Sow house BunkerSilo 1-1 [1] Image: State Image: State Image: State Image: State Image: State Stid 1-1 [1] Farm Ber. Image: State Image: State Image: State Image: State Image: State Image: State	Filter a	and settings										
Amme Location Mix up time before dosing Mix up speed Agitator speed when filling time time back state Deviation Min. Speed Max. Speed Delay from slow to fast to slow to fast	Applic	ations at or below this	location:	Far	m Bergstrop			*	Ch	Copy Settin	gs	
Amme Location Mix up time before dosing Mix up speed Agitator speed time time to state Deviation Min. Speed Max. Speed Delay from slow to fast to slow to fast	_				2			_				
Inter Interview Defend dosing With top speed when filling time state Demandon With top speed Max Speed slow to fast to slow CulinaMixPro: Farm Bergstrop - Sow house			Mix up time		Agitator spe	ed Recirculation	Error/Pause	D · · ·			Delay from	Delay
BunkerSilo 1-1 [1] months Silo 1-1 [1] Farm Ber	Name		before dosing	Mix up speed	when filling			Deviation	Min. Speed	Max. Speed	slow to fast	to slov
	Bunk	kerSilo 1-1 [1]				-						
	Silo	1-1 [1] Farr	n Ber			-						
✓ Save X Cancel												
✓ Save X Cancel												
✓ Save X Cancel												
Save X Cancel	<											1
Save X Cancel	<											
Save X Cancel	<											[]
	<											
	<]									Save		
	<									Save		
	c									Save	× Ca	

- **General** (applicable for the mixing tank)
 - Mix-up time before dosing: This setting only applies to silos with agitator. The parameter defines the duration for which the silo contents are mixed before the component is dispensed into the mixing tank or pre-mixer.
 - Mix-up speed: This setting only applies to silos with agitator. The parameter defines the speed at which the agitator mixes before dosing. For an agitator with direct start, only the option "On" is available. For double-stage agitators with tapped winding or for agitators with frequency inverter, select either the option "Slow" or "Fast".
 - Agitator speed when filling: This setting only applies to silos with agitator.
 The parameter defines the agitator speed during dosing into the mixing tank.
 The options "on/off" or "fast/slow/off" are available.
 - Recirculation time: This is the duration for which the components are recirculated in the liquid silo before the component is dispensed into the mixing tank. If mixing is also planned for the liquid silo, the contents are recirculated after mixing. This setting only applies for a liquid silo if recirculation is possible in the silo.

• Agitator

Error/Pause state

- Deviation: This setting only applies to agitators in weighed silos and is necessary if a curve has been created for the agitator. The deviation is the tolerance value ensuring that the agitator is not switched regularly because the weight deviates from the value of the curve point.
- Minimum speed: This setting only applies to agitators with frequency inverter.
 Set the maximum frequency here. If the tank is not weighed, the maximum frequency is used for fast mixing.
- Maximum speed: This setting only applies to agitators with frequency inverter.
 Set the minimum frequency here. If the tank is not weighed, the minimum frequency is used for slow mixing.
- Delay from slow to fast / Delay from fast to slow: These delay times ensure that there is no direct switching from minimum to maximum speed and vice versa.

6.3.2 Mineral dosing units

Setting	s: Current application: Culina	MixPro												<u>.</u>
Gener	al Component Supply	Feed prep	aration	Feed pump	Distribution	Scales	Expert setting	s						
Silos	Mineral dosing units													
F	ilter and settings													
4	pplications at or below this	location:		Fa	rm Bergstrop				۲	2		Copy Settings		
								General						
Na	ime 🔺 l	Location	Ingredient	Current a	amount Warn	amount	Outlet locked	Mix up time before dosing	Mix up sp	ed v	Agitator speed vhen filling	Fill in parallel by time	Priority	Res
0	CulinaMixPro: Farm Bergst	rop - Sow ho	use											
	DryMineralDosingUnit				0 g	0 g		0.0 s		~	-	✓		50
<														>
											Image: A start of the start	Save	× c	ancel
											Ľ	Jave	<u> </u>	

- General
 - Name: Name of the system component
 - **Ingredient:** Indicates the content of the mineral dosing unit.
 - Current amount: Indicates the current fill level in the mineral dosing unit. The control adjusts this amount when ingredients are removed.



- Warning amount: A warning is issued when the content drops below this warning amount.
- Outlet locked: No ingredients are removed from the mineral dosing unit as long as this box is checked.
- Mix-up time before dosing: This setting only applies to mineral dosing units with agitator. The parameter defines the duration for which the contents are mixed before the component is dispensed into the mixing tank or pre-mixer.
- Mix-up speed: This setting only applies to silos with agitator. The parameter defines the speed at which the agitator mixes before dosing. For an agitator with direct start, only the option "On" is available. For double-stage agitators with tapped winding or for agitators with frequency inverter, select either the option "Slow" or "Fast".
- Agitator speed when filling: This setting only applies to silos with agitator.
 The parameter defines the agitator speed during dosing into the mixing tank.
 The options "on/off" or "fast/slow/off" are available.
- Fill-in parallel by time
- Priority: Priority is a whole number between 0 and 100, with 100 meaning the highest priority. If a component can be removed from multiple tanks during preparation, the tank with the highest number is selected. If the priority is identical, the component is removed from the tank from which it was removed during the last preparation.
- The **Calibration** process is carried out as follows:
 - a) 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) Click on "Start" under **Start calibration** and the mineral dosing unit starts dispensing for the set time.
 - **d)** Weigh the amount dispensed into the container after the mineral dosing unit has completed dosing.
 - e) Enter the weight under Result amount.

The **Speed** is only an information calculated from the values **Result amount** and **Time calibration**.

- Agitator
 - Error/Pause state



- Deviation: This setting only applies to agitators in weighed silos and is necessary if a curve has been created for the agitator. The deviation is the tolerance value ensuring that the agitator is not switched regularly because the weight deviates from the value of the curve point.
- Minimum speed: This setting only applies to agitators with frequency inverter.
 Set the maximum frequency here. If the tank is not weighed, the maximum frequency is used for fast mixing.
- Maximum speed: This setting only applies to agitators with frequency inverter.
 Set the minimum frequency here. If the tank is not weighed, the minimum frequency is used for slow mixing.
- Delay from slow to fast / Delay from fast to slow: These delay times ensure that there is no direct switching from minimum to maximum speed and vice versa.

Settings:	Current application: Culin	aMixPro											
General	Component Supply	Feed preparation	Feed pump	Distribution	Scales	Expert settings							
Mix tan	k												
Filte	er and settings												
	-	l	-										
Арр	lications at or below this	location:	Fa	arm Bergstrop				~	ţ٦		Copy Settings		
						Gener							
Nam		Location Capacity	Max. an	nount Min.a	mount			Min. clea amount	an	Tank content	Feed curve	Error/Pause state	Dev
	IlinaMixPro: Farm Bergs												
	ixTank 2 ixTank 3		0.0 kg 0.0 kg		0.00 kg 0.00 kg			Off Off					
	ixTank 1		0.0 kg	2	0.00 kg	Water:		Off					
													·····
<							-						>
Fas	t curve												
Fill A	Amount					▲ Speed							
													_
		-											
Ľ	+ Add -	Remove											
										×	Save	× Canc	el

6.4 Feed preparation (mixing tank, agitator)

- General
 - **Capacity** of the mixing tank
 - Maximum amount defines the maximum amount that can be filled into the mixing tank. The maximum amount should be slightly lower than the capacity due to the residual flow volume.



- **Minimum amount** defines the minimum amount that always remains in the mixing tank.
- Agitator off amount: The agitator is switched off if the amount in the tank reaches or is below this value during distribution. This is to prevent air from being drawn in, for example.
- Minimum mix amount: The minimum amount required for mixing. Mixing is not possible below this amount for technical reasons.
- Minimum clean amount: The minimum amount of water required for tank cleaning.
- **Tank content:** Use this parameter to adjust the mixing tank content manually.
- Feed curve: Use this parameter to assign a feed curve to the mixing tanks.
- Agitator
 - Error/Pause state: Use this parameter to define how an agitator behaves if the application or the sub-application is in error or pause mode. However, this setting only applies if pause or error occur during feeding.
 - Deviation: This setting only applies to agitators in weighed silos and is necessary if a curve has been created for the agitator. The deviation is the tolerance value ensuring that the agitator is not switched regularly because the weight deviates from the value of the curve point.
 - Minimum speed: This setting only applies to agitators with frequency inverter.
 Set the maximum frequency here. If the tank is not weighed, the maximum frequency is used for fast mixing.
 - Maximum speed: This setting only applies to agitators with frequency inverter.
 Set the minimum frequency here. If the tank is not weighed, the minimum frequency is used for slow mixing.
 - Delay from slow to fast / Delay from fast to slow: These delay times ensure that there is no direct switching from minimum to maximum speed and vice versa.
- Pause distribution settings
 - All full time span: If all valves linked to this mixing tank indicate that they are full for the period defined here, the system goes into pause mode for the time defined under "Pause time span".
 - Pause time span, see "All full time span"



• Fast/slow curve

Depending on the switching of the used agitator, you can create a fast and/or a slow curve in the lower part of the dialog window.

- a) Click on "Add".
- **b)** Enter the fill amount and select the corresponding speed.
- c) To make another input, click on "Add" again.

Cancel

6.5 Feed pump

Settings: C	urrent application: Culinal	MixPro										
General	Component Supply	Feed preparation	Feed pump	Distribution	Scales	Expert settings						
Feed pun	np											
Filter	and settings	_	_							_	_	
Applic	ations at or below this lo	ocation:	Fai	m Bergstrop				*	4		Copy Settings	
Name		Location	Max. Speed	lin. Speed	Measure in	terval Reacti	on time	Max. deviation	/	Allowed pressure deviaton	Max. adj. per step	Shared frequency inverter
	naMixPro: Farm Bergstro	op - Sow house										
	Centrifugal pump											
	Pump MixTank 1	Farm Ber	50.0 Hz	15.0 Hz		2.0 s	0.0 s	15.00 kg	/min	0.30 bar	15.0 Hz	
	Pump MixTank 2	Farm Ber										
F	Pump MixTank 3	Farm Ber										
<												
										~	Save	Cancel

- **Maximum speed:** Setting of the maximum frequency of the pump's frequency inverter.
- **Minimum speed:** Setting of the minimum frequency of the pump's frequency inverter.
- **Measure interval** to control the speed.
- **Reaction time** or waiting time is the duration for which the system waits after adjusting the speed before the next speed measurement starts with the set measuring interval.
- **Maximum deviation** from the target speed. If the measured speed deviates from the target speed by more than this value, a new frequency is set so the measured speed meets the target speed more closely.



- Allowed pressure deviation: Tolerance value for deviation from the allowed pressure in the pipe. This parameter ensures that feed is conveyed constantly, which is important for time-controlled feed metering.
- **Maximum adjustment per step:** This parameter is used to keep the control from changing the frequency too much at each adjustment. This may specifically make sense for centrifugal pumps.
- Shared frequency inverter: Setting of the frequency inverter that controls the pump. This parameter only applies if the pump is controlled by a shared frequency inverter. "Shared" means that two system components use (share) the same frequency inverter, provided that these components never run at the same time, such as the feed pump and the component supply. For example, a shared frequency inverter cannot be used for agitator and feed pump.

6.6 Distribution (main circuits)

	Component Supply		eparation Feed pu	Imp Distribution	Scales Expert sett						
ain circu	uits										
Filter a	and settings	-				-		-			
Applica	ations at or below thi	is location:		Farm Bergstrop			~	4	Copy Setti	ngs	
Name		Location	Time span filling	Time span emptying	Min. Emptying Pressure	Is filled	Content volume	Pipe type	Pipe length	Dosing time water	Usag
Culina	aMixPro: Farm Berg	strop - Sow h	ouse								
	Circuit 1 Tank 1 [1]		200.0 s	120.0 s	0.00 b	ar 🗹	27,0	20 x 2	134.3 m	3.0 s	
	Circuit 1 Tank 2 [2]		200.0 s	120.0 s				20 x 2	134.3 m		
Main	Circuit 1 Tank 3 [3]	Farm Ber	200.0 s	120.0 s	; 0.00 b	ar 🗹	27.0	20 x 2	134.3 m	3.0 s	
<											
Enter	r Volume:	1									
		B	1								
		8	/								

- **Time span filling:** The time period required to fill the main circuit completely at the start of feeding.
- **Time span emptying:** The time period required to empty the main circuit completely after the end of feeding.
- Minimum emptying pressure
- Is filled indicates whether the main circuit is filled or not. This setting can be adjusted manually.



- **Content volume** (pipe content) is calculated automatically from "Pipe type" and "Pipe length". The volume can also be entered directly if the box "Enter volume" is checked. The parameter "Pipe length" is deactivated in this case.
- Pipe type
- **Pipe length:** If the box "Enter volume" is checked, it is not possible to make inputs for the pipe length.
- **Dosing time water** is the water valve's opening time. This parameter play a role for cleaning. The pipes are cleaned by water within this time. Afterwards, air is pushed through the pipes, see the next parameter, "Usage time air".
- **Usage time air:** Air is pushed through the pipes during this time after they have been flushed with water.
- Clean amount mix: In case of cleaning with recipe, this amount is mixed additionally.
- **Recirculate after pause time:** After a pause, the pipe content recirculates for this time before it is distributed. This parameter refers to "Feed preparation" parameters or to the manual pause (by stopping the system).

6.7 Scales

Use this tab to tare and calibrate each mixing tank individually.

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

ttings: Ci	urrent application: Culinal	MixPro							
eneral	Component Supply	Feed preparation	Feed pump	Distribution	Scales	Expert settings			
Filter a	and settings								
Applic	ations at or below this lo	ocation:	Far	m Bergstrop			~	4	Copy Settings
Name			▲ L	ocation			Cal	ibration	
Culin	aMixPro: Farm Bergstro	op - Sow house							
0 M	lixTank 1								
S	cale		F						Calibrate 🗪
0 M	lixTank 2								
S	cale		F	arm Bergstrop -	Sow hous				Calibrate Ex
0 M	lixTank 3								
S	cale		F	arm Bergstrop -	Sow hous				Calibrate
0.5	ilo 1-1 [1]								
					Sow hous				Calibrate



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

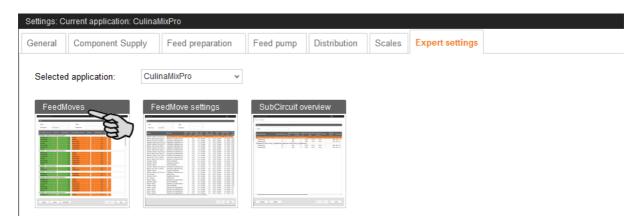
le taring and calibratio	on:			
Weight	-382.262 kg	Raw-Value	0	
Taring Calibration				
Start-Weight	0.000 kg	Raw-Value	722.718	Set Start-Raw-Value
End-Weight	25.000 kg	Raw-Value	770.321	Set End-Raw-Value
Minimum scale val	lue change		0.000 kg	
			Reset	Calibrate
				× Close

- 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.

6.8 Expert settings

6.8.1 Feed moves

Define switch times and the switch order for feed moves in the dialog window "Feed move overview".





2	11030 301		hould only	y be configured b	w a serv	vice technici	an
				y be configured t			
dMove overview (51 F	FeedMoves)						
Filter	_	_			_	_	_
				_			
Source			*	Target			~
Passed device	MixUnit [1]/EmptyingTar	nkValve 🗸				
tart FeedMove: De	vice order Start	Value St	tartWaitingTime	End FeedMove: Device order	EndValue	EndWaitingTime	EndPartialStop
) MixTank 1 - MixT	ank 2 (Count=5)						
ByPassValve			0.2 s	ByPassValve		0.2 s	~
Pump MixTank 1			0.0 s	TransferValve		0.0 s	✓
EmptyingTankVa	lve		0.0 s	EmptyingTankValve		0.0 s	
TransferValve			0.0 s	Pump MixTank 1		2.0 s	<u>~</u>
ByPassValve			0.0 s	ByPassValve		0.0 s	
MixTank 1 - MixT	ank 3 (Count=5)				_		
ByPassValve			0.2 s	ByPassValve		0.2 s	<u>~</u>
Pump MixTank 1			0.0 s	TransferValve		0.0 s	<u>~</u>
EmptyingTankVa	live		0.0 s	EmptyingTankValve		0.0 s	<u>~</u>
TransferValve			0.0 s	Pump MixTank 1		2.0 s	<u> </u>
ByPassValve	T 1 (0 1 5)		0.0 s	ByPassValve		0.0 s	
MixTank 1 - Slurr	y I ank (Count=5)		0.0	DuDee-Mehr			
ByPassValve			0.2 s	ByPassValve		0.2 s	✓
Pump MixTank 1	h a	✓	0.0 s	SlurryValve EmptyingTankValve		0.0 s	✓
EmptyingTankVa	live		0.0 s				✓
SlurryValve ByPassValve			0.0 s 0.0 s	Pump MixTank 1 ByPassValve		2.0 s	
byPassvalve			0.0 S	byPassvalve		0.0 S	

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 of the columns "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. Define partial stops for the switch from one feed move to the next:



a) Check the box in the column "End partial stop" for the corresponding devices.

A partial stop is carried out when the system switches directly from one feed move to another. First, all devices of the old feed move for which "End partial stop" has been activated are switched. In case both feed moves use the same feed pump, all devices of the new feed move are switched all the way to the feed pump in the next step. This is to prevent the pump from running dry. Next, all devices of the old feed move for which "End partial stop" has not been activated and which are not part of the new feed move are switched. All as of yet unswitched devices of the new feed move are switched as the last step.

- 4. 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".

St	art FeedMove: Device orde	r	StartValue	StartWai
۰	MixTank 1 - MixTank 2 (C	ount=	=5)	
	ByPassValve			
	Pump MixTank 1			
	EmptyingTankValve	*	Device up	
	TransferValve	*	DeviceDown	
	ByPassValve			

- 5. Define the stop time, i.e. indicate how long the stopped system should maximally wait for an end of the feed moves:
 - a) Click on the "Max. stop time" button in the bottom command bar.
 - b) In the next dialog window, change the time displayed for "Additional stop time", if necessary.

Max stop time					
Auto calcualted Additional stop Max. StopTime	time	ne		33.5 s <mark>5 s</mark> 38.5 s	
	~	Save	×	Close	



c) Click on "Save".

The maximum stop time results from the sum of all feed move waiting times plus the residual flow time for the feed move.

The stop time is currently determined automatically. The additional stop time is added to the automatically calculated stop time, resulting in the maximum stop time.

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

6.8.2 Feed move settings

In the dialog window "Feed move settings", define different parameters for the feed moves as described in the following.

Settings: C	urrent application: C	Culinal	lixPro						
General	Component Sup	ply	Feed preparation	F	eed pump	Distribution	Scales	Expert settings	
Selected	d application:	Culii	naMixPro 🗸						
FeedM	loves	-	edMove settings		SubCircuit ov	verview			
				2		2019 2019 2019 2019 2019 2029 2029 2019 2029 2029 2029 2029 2029 2029 2029 2029			
~ ~ ~ ~				1	100 100				

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

Drag the horizontal scroll bar at the bottom all the way to the right to see any hidden parameters.

- 2. If you want to define the same setting (value) for multiple feed moves, use one of the following options for multi-editing:
 - a) Select multiple feed moves:

Hold the Shift key and click on the first and last position to select all positions inbetween.

Hold the Ctrl key and click on the individual positions to select multiple positions.

- b) Right-click into the marked area.
- c) Click on "Multi edit".

This opens a dialog you can use to change the values.



- 3. Change the values either in the multi-edit dialog or directly in the respective input field when editing individual values.
- 4. Click on "Save" to save all settings.

		v	Target				*					
Passed circuit	Do not take into	*	Passed de	vice			*					
Feed move		Start devices		Backlash time	Backlash mass	Backlash adapt factor	Dosing speed	Speed adapt factor	Burst control weight	Minimum speed	Control time speed	N s
Fresh water tank - Mixing	tank [1] (Fill over Fillin	Filling valve mixing tank, Outle	et valve F				0.00 kg/min		0.0 kg	6.00 kg/min		
Silo_Wheat [2] - Mixing t	ank [1]	Input flap [1], Motor		5 s	0.0 kg	33 %	0.00 kg/min	10 %	0.0 kg	1.80 kg/min	30 s	\$
Fresh water tank - Pre-m	ixing tank [1] (Fill over V	Valve cleaning pre-mixing tank	k, Outlet	3 s	0.0 kg	33 %	0.00 kg/min	10 %	0.0 kg	1.80 kg/min	30 s	\$
Aixing tank [1] - Branch	line [6] (over Feed pump	Bypass valve, Outlet valve mix	ing tank,	3 s	0.0 kg	33 %	0.00 kg/min	10 %	20.0 kg	6.00 kg/min	30 s	\$
Silo [4] - Mixing tank [1]		Input flap [1], Motor, Motor		5 s	0.0 kg	33 %	0.00 kg/min	10 %	0.0 kg	1.80 kg/min	30 s	\$
Aixing tank [1] - Branch	line [7] (over Feed pump	Bypass valve, Outlet valve mix	ting tank,	3 s	0.0 kg	33 %	0.00 kg/min	10 %	20.0 kg	6.00 kg/min	30 s	\$
Pre-mixing tank [1] - Mix	ing tank [1]	Valve to mixing tanks [1], Valv	/e outlet	3 s	0.0 kg	33 %	0.00 kg/min	10 %	0.0 kg	1.80 kg/min	30 s	\$
Jsed water tank - Mixing	tank [1] (Fill over Feed	Bypass valve, Outlet valve UW	/T, Pump,	3 s	0.0 kg	33 %	0.00 kg/min	10 %	0.0 kg	12.00 kg/min	30 s	6
/lixing tank [1] - Pre-mix	ing tank [1] (Fill over Fe	Bypass valve, Outlet valve mix	ting tank,	3 s	0.0 kg	33 %	0.00 kg/min	10 %	0.0 kg	12.00 kg/min	30 s	5
iquid add on [1] - Liquid	add on [1]	Valve recycle, Valve outlet liqu	uid add o	5 s	0.0 kg	0 %	0.00 kg/min	0 %	20.0 kg	0.00 kg/min	0 s	6
Silo [3] - Mixing tank [1]		Input flap [1], Motor, Motor		5 s	0.0 kg	33 %	0.00 kg/min	10 %	0.0 kg	1.80 kg/min	30 s	6
iquid add on [1] - Mixing	tank [1]	Valve to mixing tanks [1], Valv	ve outlet li	5 s	0.0 kg	33 %	0.00 kg/min	10 %	0.0 kg	1.80 kg/min	30 s	;
Jsed water tank - Branch	n line [2] (over Feed pum	Bypass valve, Outlet valve UW	/T, Pump,	3 s	0.0 kg	33 %	0.00 kg/min	10 %	20.0 kg	6.00 kg/min	30 s	\$
iquid mineral dosing uni	t [2] - Mixing tank [1]	Valve to tanks, Outlet valve, P	ump	0 s	0.0 kg	0 %	0.00 kg/min	0 %	0.0 kg	0.00 kg/min	0 s	\$
Aixing tank [1] - Pre-mix	ing tank [1] (Fill over Fe	Bypass valve, Outlet valve mix	ting tank,	3 s	0.0 kg	33 %	0.00 kg/min	10 %	0.0 kg	12.00 kg/min	30 s	\$
Jsed water tank - Branch	n line [5] (over Feed pum	Bypass valve, Outlet valve UW	T, Pump,	3 s	0.0 kg	33 %	0.00 kg/min	10 %	20.0 kg	6.00 kg/min	30 s	3
Jsed water tank - Pre-mi	xing tank [1] (Fill over F	Bypass valve, Outlet valve UW	T, Pump,	3 s	0.0 kg	33 %	0.00 kg/min	10 %	0.0 kg	12.00 kg/min	30 s	\$
resh water tank - Used	water tank (Fill over Filli	Filling valve UWT, Outlet valve	FWT, Fr	3 s	0.0 kg	33 %	0.00 kg/min	10 %	0.0 kg	1.80 kg/min	30 s	3

Parameter definition

- Individual feed moves and the corresponding devices to be started and stopped are displayed under **Feed move** and **Start devices**.
- Backlash time to measure the residual flow.

This time does not apply to feed moves for feeding or watering at a valve or to push to a valve. The corresponding times in the general settings are used for this purpose.

- Backlash mass: The residual flow volume determined by the control.
- Backlash adapt factor: Weighting of the new value to calculate the residual flow.
- **Dosing speed:** The dosing speed is determined and set automatically for dosing based on weight. Calculate and enter the dosing speed if the system doses based on time.
- The **speed adapt factor** is the weighting of the new factor to calculate the dosing speed.
- Burst control weight: This setting is only important for feed moves
 - from one weighed tank to another weighed tank;
 - from one weighed tank to itself (recirculation);



- through a flow meter whose source or target tanks are weighed;

If a weight deviation larger than the value set here is determined while these feed moves are carried out, the alarm "Unexpected weight loss" is generated.

- **Minimum speed:** If this speed is not reached, an alarm is generated, e.g. empty silo, clogging.
- Control time speed are time intervals in which the minimum speed is checked.
- Normal speed: The target speed of the feed move.
- **Slow speed:** The target speed of the feed move in case of fine dosing.
- **Fine dosing amount:** If the remaining amount to be dispensed is smaller than this amount, the system switches to fine dosing.
- **Minimum mass fast dosing:** This is the minimum amount to be dispensed at normal speed. If the entire amount to be dispensed is smaller than the sum of "Fine dosing amount" and "Minimum mass fast dosing", the entire amount is dispensed with fine dosing.
- **Normal frequency** indicates the frequency inverter's frequency for normal speed. The normal speed is adjusted by the control.
- **Slow frequency:** This setting indicates the frequency inverter's frequency for fine dosing speed. The normal speed is adjusted by the control.
- Maximum jet drain speed deviation: This percentage refers to the target speed for jet emptying ("normal speed" and "slow speed"). Compressed air for the jet is switched on when the measured speed is below the target speed by this percentage. Compressed air for the jet is switched off as soon as the speed is above the target speed by this percentage.
- **Target pressure:** This pressure should be applied to the pipe during the entire feeding process. The frequency inverter controls the target pressure. Use the target pressure parameter to regulate for which feed moves feed should be pumped/supplied more quickly.

*The parameters **normal speed**, **slow speed**, **fine dosing amount** and **minimum mass fast dosing** are only relevant for the following feed moves:

- feed moves with a pump controlled by a frequency inverter which have a weighed source or target tank or which include a flow meter;
- feed moves to empty a branch line with jet into a weighed tank, see also the parameter "Maximum jet drain speed deviation".



6.8.3 Subcircuit overview

In the "Subcircuit overview", you can define specific parameters, lock valves and carry out valve tests for each subcircuit.

Settings: C	Current application: C	ulinal	lixPro					
General	Component Supp	oly	Feed preparation	Feed pump	Distribution	Scales	Expert settings	
Coloria		Culi	o MivBro					
Selecte	ed application:	Cull	naMixPro 🗸					
Feed	Moves	Fe	edMove settings	SubCircuit ov				
		No. No. 1	being bein bein bein bein bein bein bein bein		a a	\sim		
				Hadrandy B R 2 1 Hadrandy La Ting () Handrah Ka 1 Hadrand () Handrah Ka 1 Hadrand () Handrah Ka 1 Hadrand () Handrah Ka 1 Handrah () Handrah Ka 1 Handrah () Handrah () Handrah () Handrah () Handrah () Handrah () Handrah () Handrah () Handrah () Handrah ()				
		Real Real Real Property Real Real Real						

Circuits

Each mixing tank supplies only one subcircuit. All valves of the subcircuit are treated identically.

ub circuit	Curve day	Locked	Maximum time dosing	Maximum dosing per valve	Open valve time		Time span filling	Time span emptying	Emptying minimum pressure	ls filled	Content volume Pipe type	Pipe length
MainCircuit 1 Tank												
SubCircuit [1]	2		60 s	5		10.00 s	0.0 s	0.0 s	0.00 bar		0.01	0.0 m
MainCircuit 2 Tank	k 1 [1] (MainCirc							0.0	0.001		0.01	0.0
SubCircuit [1]	1		60 s	5			0.0 s		0.00 bar 0.00 bar		0.01	0.0 m 0.0 m
SubCircuit [2] SubCircuit [3]	1		60 s 60 s	5			0.0 s				0.01	0.0 m
SubCircuit [4]	1		60 s	5			0.0 s		0.00 bar		0.01	0.0 m
SubCircuit [5]	1		60 s	6			0.0 s		0.00 bar		0.01	0.0 m

- **Maximum time dosing:** The time period for which feed is dispensed in the subcircuit until the system switches to the next subcircuit. A valve reporting "empty" is irrelevant. The cup should fill up within this time.
- **Maximum dosing per valve:** Maximum number of times a valve can be used for dosing before it is locked. This value refers to one feeding cycle.
- **Open valve time:** Time during which feed is dispensed.
- Valve block time: The empty sensor is ignored and the valve is considered full during this time.



- **Time span filling:** The time period required to fill the main circuit completely at the start of feeding or cleaning.
- **Time span emptying:** The time period required to empty the main circuit completely after the end of feeding.
- **Emptying minimum pressure:** If the pressure reaches this value while pushing the (last) portion through the pipe, the pipe is empty.
- Is filled indicates whether the main circuit is filled or not. This setting can be adjusted manually.
- **Content volume** (pipe content) is calculated automatically from "Pipe type" and "Pipe length". The volume can also be entered directly if the box "Enter volume" is checked. The parameter "Pipe length" is deactivated in this case.
- Pipe type
- Pipe length
- **Dosing time water** is the water valve's opening time. The pipes are cleaned by water within this time.
- **Usage time of air**: Air is pushed through the pipes during this time after they have been flushed with water.
- Clean amount mix: In case of cleaning with recipe, this amount is mixed additionally.
- Amount valve clean: Amount for valve or drop pipe cleaning.
- **Time valve clean**: The time period for which the valves opens for cleaning. The "Amount valve clean" may pass through the valve during this time.
- **Squeeze valve dosing delay:** When switching to the subcircuit, the system waits for this time before the pinch valve is opened again.
- **Recirculation time pre dosing:** When switching e.g. from circuit 1 to circuit 2, feed recirculates in circuit 2 for this time before it is dispensed.
- **Target pressure:** This pressure should be applied to the pipe during the entire feeding process. The frequency inverter controls the target pressure. Use the target pressure parameter to regulate for which feed moves feed should be pumped/supplied more quickly.
- **Dose with closed end valve** for better application of the pressure / less pressure loss with long pipes.



- Adjustment factor: This factor is a percentage used to adjust the amount for valve cleaning. The adjustment depends on the remaining amount. The percentage is subtracted from the total cleaning amount used beforehand. Example: From a cleaning amount of 20 liters, an amount of 5 liters remained. At an adjustment factor of 50 %, a total amount of 17.5 liters will be used for the next cleaning.
- **Recirculate after pause time:** After a pause, the pipe content recirculates for this time before it is distributed. This parameter refers to "Feed preparation" parameters or to the manual pause (by stopping the system).

Valves

This tab allows locking individual valves.

CulinaMixPro sub circuits			
Circuits Valves Valve test			
Filter			
Circuit		*	
Valve	Locked		
 SubCircuit 			
FeedValve [1]			
 SubCircuit 			
FeedValve [1]			
FeedValve [2]			
FeedValve [3]			
FeedValve [4]			
FeedValve [5]			
FeedValve [6]			
FeedValve [7]			
FeedValve [8]	~		



Valve test

This tab allows testing individual valves.

- 1. In the column **Wait before**, define the waiting time for the switch between valves.
- 2. Activate the correct valves individually.

OR

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

ilter										
	~									
Sircuit	All sub circuit	S V								
rouping	OLocation		۲	Circuit						
/ait before		3.0 s	0	pening period	3.0 s	Open iter	ations		1	
Repeat test un	ntil user stop it			With digital sensor check		Maximur	n waiting time		3.0 s	
louse	Section	Pen	Location	Valve 🔺	Wait before Open iterations	Test	Valve open	Sensor check		
CulinaFlex CulinaFle		ICrate stand 2 for all valves in sub ci		SubCircuitDistribution [1].Tr SubCircuitDistribution [1].Tr	3.0 s 3.0 s	1				
CulinaFlex		Crate stand 2		SubCircuitDistribution [1].Tr	3.0 s	1				
		for all valves in sub ci	ircuit			1				
CulinaFle										
	Activate lest	for all valves	0	SubCircuitDistribution [1].Tr	3.0 s	1				
CulinaFle		for all valves st for all valves in sub	circuit	CircuitDistribution [1].Tr	3.0 s	1				
CulinaFle CulinaFle	Deactivate Tes		circuit	CircuitDistribution [1].Tr CircuitDistribution [1].Tr	3.0 s 3.0 s	1 0				
CulinaFle CulinaFle CulinaFle	Deactivate Tes Deactivate Tes	st for all valves in sub st for all valves	circuit	CircuitDistribution [1].Tr	3.0 s					
CulinaFle CulinaFle CulinaFle © SubCircui	Deactivate Ter Deactivate Ter Print all valves	st for all valves in sub st for all valves s	circuit	CircuitDistribution [1].Tr CircuitDistribution [1].Tr SubCircuitDistribution .Trou	3.0 s 3.0 s 3.0 s	1				
CulinaFle CulinaFle CulinaFle © SubCircui CulinaFle	Deactivate Ter Deactivate Ter Print all valves Print tested va	st for all valves in sub st for all valves s alves		SubCircuitDistribution [1].Tr SubCircuitDistribution [1].Tr SubCircuitDistribution .Trou	3.0 s 3.0 s 3.0 s 3.0 s	1				
CulinaFle CulinaFle CulinaFle SubCircui CulinaFle CulinaFle	Deactivate Ter Deactivate Ter Print all valves Print tested va Service area	st for all valves in sub st for all valves s alves	ni.2.1	CircuitDistribution [1].Tr CircuitDistribution [1].Tr SubCircuitDistribution .Trou SubCircuitDistribution [2].Tr SubCircuitDistribution [2].Tr	3.0 s 3.0 s 3.0 s 3.0 s 3.0 s	1 0 1 0 1 0				
CulinaFle CulinaFle CulinaFle © SubCircui CulinaFle CulinaFlex CulinaFlex	Deactivate Tes Deactivate Tes Print all valves Print tested va Service area Service area	st for all valves in sub st for all valves alves Crate stand 1 Crate stand 4	H1.2.1	CircuitDistribution [1].Tr CircuitDistribution [1].Tr SubCircuitDistribution .Trou SubCircuitDistribution [2].Tr SubCircuitDistribution [2].Tr SubCircuitDistribution [2].Tr	3.0 s 3.0 s 3.0 s 3.0 s 3.0 s 3.0 s 3.0 s	1 0 1 0 1 0 1 0				
CulinaFle CulinaFle CulinaFle SubCircui CulinaFle CulinaFlex CulinaFlex CulinaFlex	Deactivate Tes Deactivate Tes Print all valves Print tested va Service area Service area	st for all valves in sub st for all valves alves Crate stand 4 Crate stand 5	H1.2.1 H1.2.4 H1.2.5	DircutDistribution [1]. fr CircutDistribution [1]. fr SubCircutDistribution [1]. fr SubCircutDistribution [2]. fr SubCircutDistribution [2]. fr SubCircutDistribution [2]. fr	3.0 s 3.0 s 3.0 s 3.0 s 3.0 s 3.0 s 3.0 s	1 0 1 0 1 0 1 0 1 0				
CulinaFle CulinaFle CulinaFle SubCircui CulinaFle CulinaFlex CulinaFlex CulinaFlex CulinaFlex	Deactivate Tex Deactivate Tex Print all valves Print tested va Service area Service area Service area Service area	st for all valves in sub st for all valves alves Crate stant 4 Crate stand 5 Crate stand 6	H1.2.1 H1.2.4 H1.2.5 H1.2.6	DircuitDistribution [1], Tr SubCircuitDistribution [1], Tr SubCircuitDistribution [2], Tr SubCircuitDistribution [2], Tr SubCircuitDistribution [2], Tr SubCircuitDistribution [2], Tr SubCircuitDistribution [2], Tr	3.0 s 3.0 s 3.0 s 3.0 s 3.0 s 3.0 s 3.0 s 3.0 s 3.0 s	1 0 1 0 1 0 1 0				
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Valve open and Sensor check only show how 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 box **With digital sensor check** was checked.

linaMixPro sub ci	rcuits										
rcuits Valves	Valve test										
Filter											1
Circuit	All sub circuit	s v									
Onedit	All Sub circuit	5									
Grouping	Continue		۲	Circuit							
Wait before		3.0 s	0	pening period		3.0 s		Open iterat	ions		
Repeat test	until user stop it			With digital sensor chec	k			Maximum v	vaiting time		
House	Section	Pen	Location	E)		Wait before	Open iterations	Test	Valve open	Sensor check	l
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CulinaFle	ex Service area	Crate stand 4	H1.1.5	SubCircuitDistribution	[1].Tr	3.0 s	1				
CulinaFle	ex Service area	Crate stand 5	H1.1.6	SubCircuitDistribution	[1].Tr	3.0 s	1				
CulinaFle	ex Service area	Crate stand 6	H1.1.1	SubCircuitDistribution	Trou	3.0 s	1				



- 3. Click on "Start" in the lower command bar to start the test.
- 4. To stop the test, click on "Stop".
- 5. Deactivate valves you had activated for the test, if necessary.

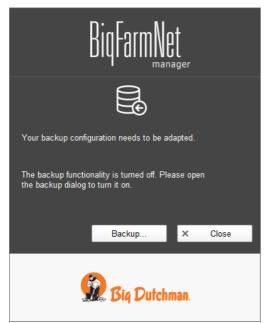
6.9 Data backup

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.



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.

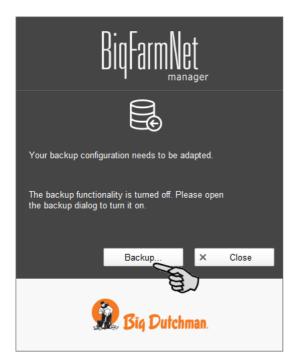


The BigFarmNet Manager provides the following options for data backups:

- 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.

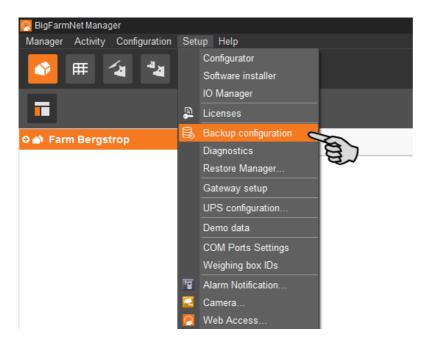
Open the settings dialog as follows:

1. Click on "Backup...".





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".

Backup configuration					×
Automatic backup	Manual backup				
Current backup	state is:		OFF		
Please don't rem	ind me to enable backup				
How often would	you like to create backups?		Daily	~	
How long would y	you like to save backups?		1 week	*	
When would you	like to make backups?		2:00 AM 💲		
Backups will be s	saved here:				*
		~	OK	× Ca	ncel

a) Click on "OFF" to turn off the deactivation.

The button then switches to "ON".

- b) Determine the backup period.
- c) Select an external storage location.
- d) Click on "OK" to accept these settings.

Or:

Manual backup

Backup configuration	×
Automatic backup Manual backup	
On this tab, you are able to start a bac	kup process manually
Select a directory where you'd like to s	ave the backup files
Backups will be saved here:	
	Do backup now! × Cancel

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



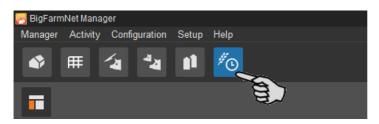
7 Task Manager

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

7.1 Defining a task

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

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



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

R BigFarmNet Manager Manager Aktivitäten Konfiguration Setu	p Hilfe												- ~ >
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Abteil 6	01:20		Reinigung Mixt							4.	CulinaMixPro 1	Ó	Bucht 3
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O 🛆 Abteil 7	07:02		Füttern Tank 2 Füttern Tank 3	0						ų,	CulinaMixPro 1 CulinaMixPro 1	8	Bucht 6
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o 🛆 Abteil 12	•												Bucht 6
o 🛆 Abteil 13	+ Hinzu	fügen											
o 🛆 Abteil 14									_				



3. Define information for the task at the top.

Fields with bold text are mandatory.

eeding task			Execute	Daily	~
Туре	Feeding		All	1	Days
Application	CulinaMixPro	~	From - Until	2/8/2018 🗸	- 12/31/2099 🗸
Strategy	PigletFeeding	~			
Feeding 0 🕂	Add 🙃 Copy 😑 Delet	e		Y	9
Time				6	H.

- Name of the task
- **Type** is pre-set to "Feeding".
- Application
- Strategy is the subject of the task: feeding, cleaning or recirculation. Refer to the following chapters for information on the strategies.
- Execute: Daily > Every ... day(s): The task should be executed every nth day.
 OR

Execute: Weekly > **Days:** Select the correct day(s) of the week.

 From – Until: Time period for this task. The task will not be started outside of this time period.

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

7.1.1 Piglet feeding

- 1. Carry out all introductory instructions in 7.1 "Defining a task".
- 2. Click on "Add" and define the start time for the feeding.

Feeding task					
Name			Execute	Daily	~
Туре	Feeding		All	1	Days
Application	CulinaMixPro	~	From - Until	2/8/2018	12/31/2099
Strategy	PigletFeeding	~			
Feeding 0	🕞 Add 💿 Copy 😑 Delet	te			
Time					



3. Configure the settings in the lower part of the window under the "Feeding details" tab:

Mixing tank	~	Aft	er feeding	
Water prepare time	0 min	Emptying pipe		
End time	12:00 AM 🗘	Emptying mixing tank	Without emptying	
Last mix before end	0 min			
Dose time after end	0 min			

- a) Select the **Mixing tank** and define when the feeding process should end (**End time**).
- b) Define when the mixing tank should prepare the last feed mixture before the "End time" (Last mix before end).

Example: Feeding ends at 9 p.m. and "Last mix before end" is set to 120 minutes. The tank will prepare the last feed mixture at 7 p.m.

OR

Define the **Water prepare time** if you want to dilute the feed step by step before the feeding process ends.

Example: The feeding process ends at 9 p.m. and "Water prepare time" is set to 120 minutes. Water will be added from 7 p.m.

- c) Define for how long feed may be dispensed after the end of the feeding process (**Dose time after end**). If the last feed mixture has been prepared shortly before the end of the feeding process, this feed can still be dispensed to empty the mixing tank as completely as possible. Use "Dose time after end" for this purpose.
- d) Define whether the pipe should be emptied by means of air (Emptying pipe) after the feeding process, i.e. after the "End time" and/or the "Dose time after end".
- e) Define whether the mixing tank should be emptied (**Emptying mixing tank**) after the feeding process, i.e. after the "End time" and/or the "Dose time after end", e.g. to clean the mixing tank. Select either another mixing tank or the slurry tank for the tank contents. When emptying a mixing tank, the remaining feed is usually supplied to older animals.
- 4. Click on "OK" after you have configured all settings.



7.1.2 Heat exchanger

- 1. Carry out all introductory instructions in 7.1 "Defining a task".
- 2. Click on "Add" and enter the start time.

ame			Execute	Daily	
уре	Feeding		All	1	Days
pplication	CulinaMixPro	*	From - Until	2/8/2018	v - <u>12/31/2099</u>
trategy	HeatExchanger	~			

3. Configure the following settings for the heat exchanger in the lower part of the window:

Heat exchanger detail	
12:00 AM Heat exchanger	
Mixing tank	~
End time	12:00 AM 🗘
Temperature deviation	0.0 °C

- a) Select the **Mixing tank**, and thus also the circuit.
- b) Define the **End time** at which the heat exchanger should stop.
- c) Define the **Temperature deviation**. The temperature in the heat exchanger is slightly higher than in the mixing tank. The heat exchanger is equipped with a temperature sensor. The "Equipment" window of the mixing tank shows the heat exchanger's temperature in the graphical depiction.
- 4. Click on "OK" after you have configured all settings.

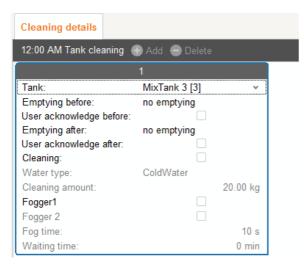


7.1.3 Tank cleaning

- 1. Carry out all introductory instructions in 7.1 "Defining a task".
- 2. Click on "Add" and enter the start time.

lame			Execute	Daily		~
уре	Feeding		All	1	Days	
pplication	CulinaMixPro	*	From - Until	2/8/2018	× - 12/31/2099	~
strategy	Cleaning tank	~				

3. Configure the following settings for tank cleaning in the lower part of the window:



- **Tank:** Selection of the tank to be cleaned.
- Emptying before: Indicate whether the tank should be emptied before it is cleaned. If yes, select a different tank or the slurry tank for the tank contents.
- User acknowledgement before: If the box "User acknowledgement before" is checked, the system waits for manual confirmation before starting the cleaning process.
- Emptying after: Selection of the tank into which the cleaning amount should be emptied.
- User acknowledgement after: If the box "User acknowledgement after" is checked, the system waits for manual confirmation before completing the cleaning process.



- Cleaning refers to the option of cleaning with water. When choosing this option, select either warm or cold water (Water type) and define the Cleaning amount of water, which should be greater than the minimum cleaning amount.
- Fogger 1: Should the first fogger be used for fogging of the tank?
- Fogger 2: Should the second fogger be used for fogging of the tank?
- Fog time: Duration of the fogging process. The foggers are started with a delay if fogging is carried out in another tank beforehand.
- Waiting time after fogging. The tank to be cleaned is always rinsed with water (minimum clean amount) after the waiting time after fogging has elapsed.
- 4. Click on "OK" after you have configured all settings.

7.1.4 Circuit cleaning by means of compressed air

- 1. Carry out all introductory instructions in 7.1 "Defining a task".
- 2. Click on "Add" and enter the start time.

eeding task						
Name			Execute	Daily		*
Туре	Feeding		All	1	Days	
Application	CulinaMixPro	~	From - Until	2/8/2018	 12/31/2099 	۷
Strategy	CleaningCircuitWithAir	Pres v				
Cleaning circu Time	it 0 + Add © Copy •	Delete				

3. Configure the following settings for circuit cleaning in the lower part of the window:

Cleaning circuit		
12:00 AM Cleaning circ	uit	
Mixing tank		۷
Emptying before	no emptying	*
User ACK before		
Emptying after	no emptying	~
User ACK after		
Water type	ColdWater	~

- **Mixing tank:** Selection of the mixing tank whose circuit should be cleaned.
- Emptying before: Indicate whether the mixing tank should be emptied before it is cleaned. If yes, select a different mixing tank or the slurry tank for the tank contents.



- User acknowledgement before: If the box "User acknowledgement before" is checked, the system waits for manual confirmation before starting the cleaning process.
- Emptying after: Selection of the tank into which the cleaning amount should be emptied.
- User acknowledgement after: If the box "User acknowledgement after" is checked, the system waits for manual confirmation before completing the cleaning process. Use this parameter to ensure that cleaning has been completed correctly.
- Water type: Select either warm or cold water.
- 4. Click on "OK" after you have configured all settings.

7.1.5 Circuit cleaning according to a recipe

- 1. Carry out all introductory instructions in 7.1 "Defining a task".
- 2. Click on "Add" and enter the start time.

lame			Execute	Daily		
уре	Feeding		AII	1	Days	
pplication	CulinaMixPro	~	From - Until	2/8/2018	× - 12/31/2099	
Strategy	CleaningCircuitByRecipe					

3. Configure the following settings for circuit cleaning in the lower part of the window:

Cleaning circuit				
12:00 AM Cleaning cire	cuit			
Mixing tank		~	Recipe	~
Emptying before	no emptying	v	Waiting time	0 s
User ACK before			Washing time	0 s
Emptying after	no emptying	*	Washing amount	0.0 kg
User ACK after			Empty pipe after	

- Mixing tank: Selection of the mixing tank whose circuit should be cleaned.



ø

- Emptying before: Indicate whether the mixing tank should be emptied before it is cleaned. If yes, select a different mixing tank or the slurry tank for the tank contents.
- User acknowledgement before: If the box "User acknowledgement before" is checked, the system waits for manual confirmation before starting the cleaning process.
- Emptying after: Selection of the tank into which the cleaning amount should be emptied.
- User acknowledgement after: If the box "User acknowledgement after" is checked, the system waits for manual confirmation before completing the cleaning process. Use this parameter to ensure that cleaning has been completed correctly.

We recommend this setting when cleaning with lyes to ensure that the tank and pipes are empty before feeding starts. Pipes and tank are usually flushed with some water after cleaning with a lye.

- **Recipe:** Selection of a cleaning recipe that was created beforehand.
- Waiting time: Time for soaking in the pipes. The cleaning agent remains inside the pipes for this time.
- Washing time: The cleaning component is pumped from the mixing tank through the pipes and back into the tank within this time.
- Washing amount: The additional amount of the cleaning agent or water used for cleaning.
- Empty pipe after: Define whether the pipe should be emptied by means of air after the cleaning process.
- 4. Click on "OK" after you have configured all settings.



7.1.6 Valve cleaning (currently cleaning valve)

- 1. Carry out all introductory instructions in 7.1 "Defining a task".
- 2. Click on "Add" and enter the start time.

Name			Execute	Daily	
Туре	Feeding		AII	1	Days
Application	CulinaMixPro	*	From - Until	2/8/2018	✓ - 12/31/2099
Strategy	CleaningValve	~			

3. Configure the following settings for valve cleaning in the lower part of the window:

Cleaning valve				
12:00 AM Cleaning valve				
Mixing tank		~	Recipe	~
Emptying before	no emptying	~		
User ACK before				
Emptying after	no emptying	~		
User ACK after				
Clean only empty valves				
Clean also blocked valves				

- Mixing tank: Select the mixing tank whose circuit, and thus the corresponding valves, should be cleaned.
- Emptying before: Indicate whether the mixing tank should be emptied before it is cleaned. If yes, select a different mixing tank or the slurry tank for the tank contents.
- User acknowledgement before: If the box "User acknowledgement before" is checked, the system waits for manual confirmation before starting the cleaning process.
- Emptying after: Selection of the tank into which the cleaning amount should be emptied.
- User acknowledgement after: If the box "User acknowledgement after" is checked, the system waits for manual confirmation before completing the cleaning process. Use this parameter to ensure that cleaning has been completed correctly.



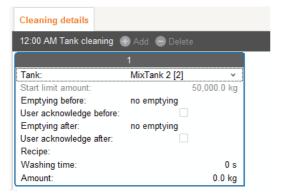
- Clean only empty valves: The system only cleans valves with the status "Empty".
- Clean also blocked valves: Additionally clean locked valves, e.g. in empty pens.
- 4. Click on "OK" after you have configured all settings.

7.1.7 Tank cleaning according to a recipe

- 1. Carry out all introductory instructions in 7.1 "Defining a task".
- 2. Click on "Add" and enter the start time.

Туре	Feeding		AII	1	Days
Application	CulinaMixPro	~	From - Until	2/8/2018	12/31/2099
Strategy	CleaningTankWithRecipe	~			

3. Configure the following settings for tank cleaning in the lower part of the window:



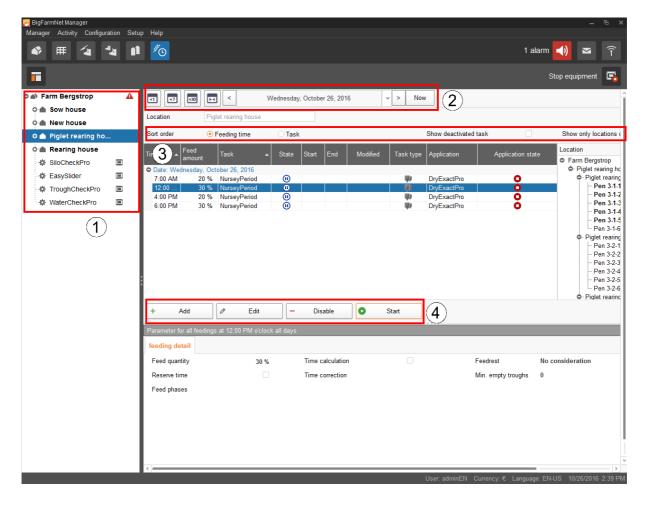
- **Tank:** Selection of the mixing tank to be cleaned.
- Start limit amount: only an information
- Emptying before: Indicate whether the mixing tank should be emptied before it is cleaned. If yes, select a different mixing tank or the slurry tank for the tank contents.
- User acknowledgement before: If the box "User acknowledgement before" is checked, the system waits for manual confirmation before starting the cleaning process.
- Emptying after: Selection of the tank into which the cleaning amount should be emptied.



- User acknowledgement after: If the box "User acknowledgement after" is checked, the system waits for manual confirmation before completing the cleaning process. Use this parameter to ensure that cleaning has been completed correctly.
- **Recipe:** Selection of a cleaning recipe that was created beforehand.
- Washing time: The cleaning component is pumped from the mixing tank through the pipes and back into the tank within this time.
- Amount: The cleaning agent amount for this cleaning process. Select an amount as large as possible for effective cleaning.
- 4. Click on "OK" after you have configured all settings.

7.2 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:





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".

Feeding patt	ern				×
Please s	elect a	feeding patte	ern		
Pattern					Jan San
	 Image: A start of the start of	Next	×	Cancel	8



 "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
O Edit complete feeding task
✓ OK X 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)					
O Delete complete feeding task (NurseyPeriod)					
○ Disable this feeding time (7:00 AM o'clock today and in the future)					
 Disable complete feeding task (NurseyPeriod) 					
✓ OK X 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



8 Silo Manager

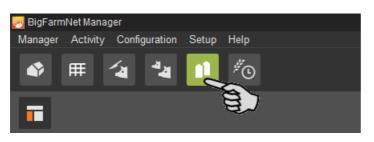
8.1 Overview

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

🧖 BigFarmNet Manager													-	ē ×
Manager Activity Configuration	Setup H	lelp												
🗳 🌐 省	11 >	[#] ©										36 alarm	is ┥)	Î
—												Stop eq	uipment	-
🗢 📣 Farm Bergstrop 🛛 🔺	Silo Ma	anager Sile	os											
🌣 🌰 Sow house 🛛 🔺							- 1 ()	Yesterday	Forecast	Current	Critical fill			
o 🛆 Service area 🐴	Locked	Location	Name	Number 🔺	Cont	ent	Today (-)	(-)	empty	weight	level	Fill level		
o 🛆 Pregnancy 🌯		Sow house	Silo 1-1	1			0.0 kg	600.8 kg	0 days	3			0%	^
o △ Farrowing 🏜		Sow house	Silo_Wheat	2	Whe		0.0 kg	604.7 kg		13,475.1 kg			67%	
		Sow house	Silo_Wheat	3	Whe		0.0 kg	592.7 kg		13,475.1 kg			67%	- II
o 🛆 Farrowing 🐴	_	Sow house	Silo_Barley	4	Barl		0.0 kg	630.6 kg	21 days	13,475.1 kg			67%	
🔅 CulinaMixPro 亘		Sow house Sow house	Silo_Barley Silo Corn	6	Barl		0.0 kg	595.9 kg	22 days	13,475.1 kg		_	67%	
🗘 🌰 New house		Sow house	Silo_Com	7	Corr		0.0 kg	595.9 kg 598.5 kg		13,475.1 kg			67%	— II
🔿 🌰 Piglet rearin		Sow house	Silo Rye	8	Rye		0.0 kg	607.5 kg	11 days	6,814.1 kg			34%	
		Sow house	Silo Soya	9	Soya	1	0.0 kg	628.3 kg	11 days	6,814.1 kg			34%	
🛈 🌰 Rearing hou	X	Sow house	Silo Triticale	10	Tritic		0.0 kg	596.7 kg	3 days	1,927.0 kg	₽		10%	
🔅 SiloCheckPro 🔳	_	Sow house	Silo_Rye	11	Rye		0.0 kg	607.2 kg	11 days	6,814.1 kg	-		34%	
🔅 EasySlider 🔳		Sow house	Silo Soya	12	Soya	3	0.0 kg	604.1 kg	11 days	6,814.1 kg			34%	
		Sow house	Silo_Barley	13	Barl	ey .	0.0 kg	615.8 kg	11 days	6,814.1 kg			34%	
💠 TroughCheck 🔳		Sow house	Silo_Wheat	14	Whe	at	0.0 kg	630.6 kg	11 days	6,814.1 kg			34%	
🔅 WaterCheckPro 🔳		Sow house	Silo_Triticale	15	Tritic	ale	0.0 kg	626.2 kg	11 days	6,814.1 kg			34%	
		Sow house	Silo_Wheat	16	Whe	at	0.0 kg	610.5 kg	11 days	6,814.1 kg			34%	
	X	Sow house	Silo_Corn	17	Corn		0.0 kg	631.4 kg	25 days	15,694.3 kg			78%	
		Sow house	Silo_Corn	18	Corn		0.0 kg	623.1 kg	25 days	15,694.3 kg			78%	
		Sow house	Silo_Barley	19	Barl	ey .	0.0 kg	632.2 kg	25 days	15,694.3 kg			78%	
		Sow house	Silo_Rye	20	Rye		0.0 kg	591.3 kg	26 days	15,694.3 kg			78%	
	Silo 1-1	[1]												
	Gener	al	Name			Silo 1-1		Capacity					1.0	kg
	Loadin	g	Location			Sow house		Current v	veight				0.0	kg
	Unload	ling	Silo type			Dry feed		Priority						50
	History	/												
	Setting	10												
	Gernif	12												
			1						Lloor, od	min Currond	v:S Langua	THE FAILUR	2/0/2010	0.02 AM

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.

8.2 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]	Silo_Wheat [1]								
General	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.

General	4/04/0040 4 00 414		Supplier	Delivery number	Price	Total cost	Amount
La sulla su	1/24/2018 1:00 AM	Wheat	East Pig Food	10120	0.57 €/kg	5,430.77€	9,531.0
Loading	1/16/2018 1:00 AM	Wheat	East Pig Food	10121	0.31 €/kg	3,113.81€	9,923.0
3	1/8/2018 1:00 AM	Wheat	East Pig Food	10122	0.30 €/kg	3,076.95€	10,357.0 k
Unloading	12/31/2017 1:00 AM	Wheat	East Pig Food	10123	0.59 €/kg	6,208.51€	10,452.0 k
	12/18/2017 1:00 AM	Wheat	East Pig Food	10124	0.29 €/kg	2,763.68€	9,425.0 k
History							
Settings	_						
	+ Add	Ø Edi	it – Rem	nove 🕞			

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)

Name Silo_Corn [1]	Capacity 20,000.0 kg
Supplier	East Pig Food X 💌
Delivery no.	
Delivery date	10/26/2016 3:46 PM ~
Amount	0.0 kg Corn 👻
Dry matter fraction	880.0 g/kg
Price	0.26 \$/kg -
Total cost	0.00 \$

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.

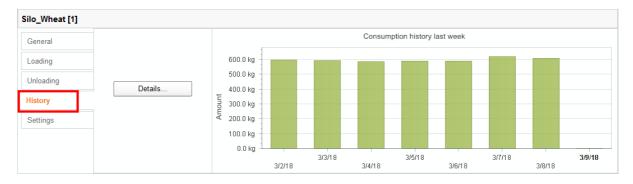
You may export the data as .csv or .xlsx file for further use if you click on the "Export" button.

General	Date	- Location	Content	Amount
	3/8/2018 8:37 PM	Piglet rearing house	Wheat	302.7 kg
Loading Unloading	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
	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
e	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



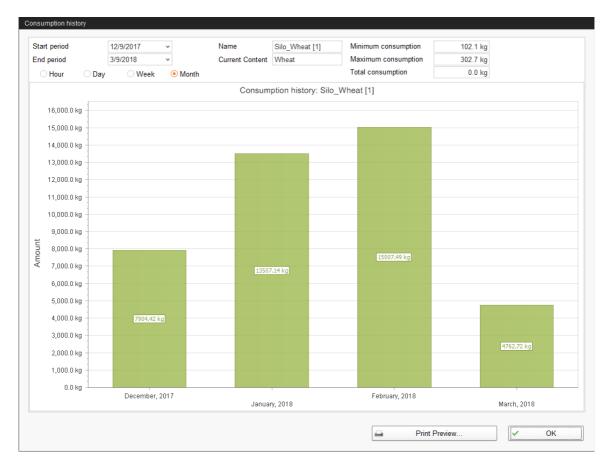
History

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.

			20,000.0 kg
Components	Wheat	▼ ▼ Warning amount (relative)	10.0 %
Recipes		 Warning amount (total) 	2,000.0 kg
Weighed		Create warning	
Lock outlet		Priority	50
Unlock outlet automatically		Tara	Tare
		Last tara date	1/1/1970

E

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.

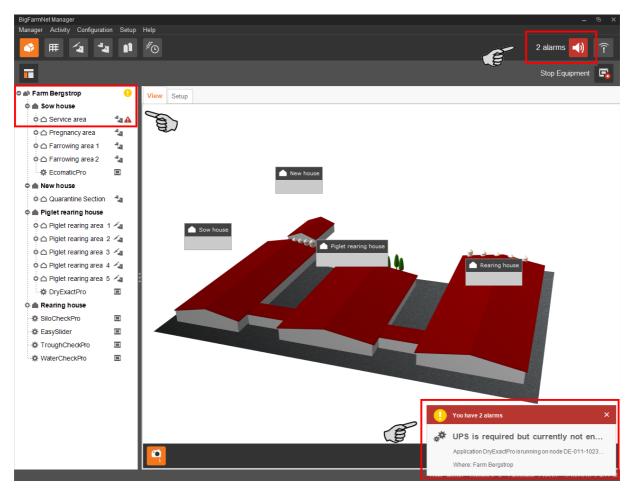


9 Alarms

An alarm is triggered when the set values are not met during operation or when there are malfunctions. Warnings are also counted as alarms. Alarms are first registered by the control computer. The control computer then sends the alarm message to the BigFarmNet Manager.

The BigFarmNet Manager indicates alarms as follows:

- Pop-up window: The window appears as soon as an alarm is registered, irrespective of the application the user is currently working in.
- Farm structure: Locations with a current problem are marked with a triangle in case of an alarm and with a circle in case of a warning.



• Tool bar: The number of alarms is shown next to the alarm icon.

Click on the pop-up window or the alarm icon in the tool bar to open the "Alarm" tab in the application window. The "Alarm" tab lists all active alarms and warnings.

If you click on a location with alarm or warning icon in the farm structure, the "Alarm" tab only shows problems active in the respective location.



Alar	m Log				Filter
Туре	Categ.		Where	When	Category
•	**	Windows Auto Update activated		3/2/2016 3:44:49 PM	<enter criteria="" filter=""> v</enter>
0	**	UPS is required but currently not enabled	Farm Bergstrop	3/2/2016 3:40:49 PM	Alarm
					Reset
A (\$	larm Deta	ils			
Ð	Iser Notes	3			2 alarms

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

- Type: Alarm type
- Category: Alarm category
- Alarm: Alarm cause
- Where: Location of the alarm
- When: Time of occurrence

lcon	Status	Description
A	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.
0	Ended warning	Acknowledged: Cause no longer exists.
6	Info	Information about an incident that has occurred.

Alarm types



Alarm categories

lcon	Category
*	Climate: temperature, humidity
***	Control, IO connection or test (system-specific)
È	BigFarmNet system or CAN bus
	Dry feeding
Q	Liquid feeding
1	SiloCheck system
۲.	WaterCheck system

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

9.1 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.

Filter		
Category		
<enter filter="" o<="" td=""><td>riteria></td><td>~</td></enter>	riteria>	~
🗹 🛷 Gener	al	E S
Clear	Ok	Cancel

- 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.

Filter	
Category	
<enter criteria="" filter=""> v</enter>	
Alarm	
<enter criteria="" filter=""></enter>	
<enter criteria="" filter=""></enter>	87
Power options may cause problems UPS is required but currently not ena Windows Auto Update activated	

6. To deselect the alarms, click on "Reset".

The table now lists all alarms.

9.2 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.

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



3. Click on "Acknowledge".

D I	Windows Au	to Update is activated	Where:	Farm Bergstrop	
		to Update is activated on DE- (10.104.3.48). This can cause	Mhen:	3/15/2017 10:40:10 AM	
		rith BigFarmNet, if the machine is controller. Please deactivate it in			
*	Category:	General	Duration:		
	Source:	Service offline	Code:	116-0008	
	The alarm h	as not been acknowledged			Acknowledge

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

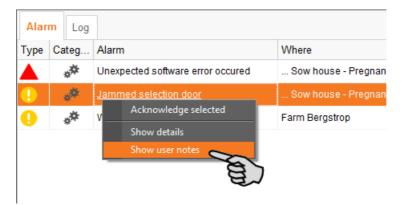


5. If necessary, leave a note on the alarm.

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.

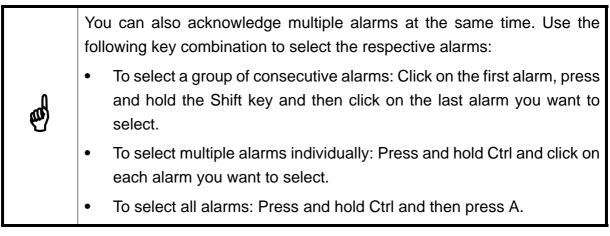


c) Enter your note into the field "Feedback" or "Corrective action".

User Notes	~
Feedback	Corrective action
	Cancel Save

d) Click on "Save".

Or:



- 1. Select one or more alarms.
- 2. Right-click to open the context menu and click on "Acknowledge selected".



Aları	m Log			
Туре	Categ	Alarm		Where
	**	Jammed :	selection door	Sow house - Pregna
0	**	Windows	Acknowledge selected Show details	m Bergstrop
			Show user notes	e.

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

9.3 Alarm log

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

Alarm	n Log	8				Search Date interval
Туре	Categ	Ala	Where	When	Duration	TI T7 T4 IX 🖽
•	**	UPS is required but currently not	Farm Bergstrop	3/18/2016 3:03:30 PM		
!	***	Windows Auto Update activated	Farm Bergstrop	3/18/2016 3:03:15 PM		Type <enter criteria="" search=""></enter>
						Category <enter criteria="" search=""></enter>
						Alarm
						Where
						<pre><create chiena="" search=""> User notes </create></pre> <enter criteria="" search=""> Reset Delete</enter>
AI 🚡	larm Deta	ils				
Đ٧	ser Notes	i				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.





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.



9.4 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

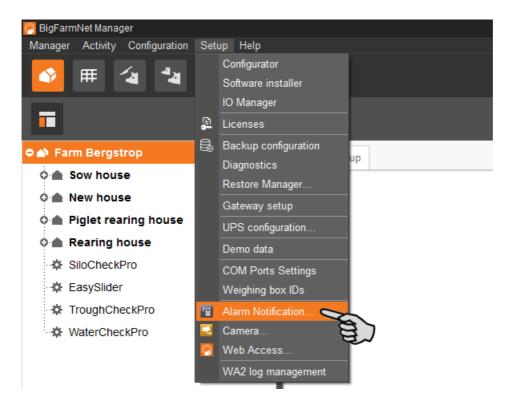


The Alarm Notification service cannot replace an autocaller! The service is merely an additional help.

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

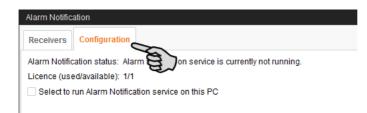
1. Click on "Alarm Notification" in the "Setup" menu.

This opens the dialog window "Alarm Notification".





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



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

Alarm Notification						
Receivers Configure	ation					
Alarm Notification statu	s: Alarm Notification service is running on this PC					
Licence (used/available	e): 1/1					
Select to run Alarm N	Notification service on this PC					
E-mail mguration						
E-mail settings						
Enable e-mail notification						
Server defaults	×					
E-mail server						

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

Alarm Notification			
Receivers Config	uration		
Alarm Notification sta	atus: Alarm Notification service is running on this F	°C	
Licence (used/availa	ble): 1/1		
🕑 Select to run Alarn	n Notification service on this PC		
E-mail Configuration	n		
E-mail settings			
	Enable e-mail notification		
Server defaults		, ,	
E-mail server	Standard SMTP Google GMAIL Yahoo mail	E .	
Server Port	Microsoft Live mail GMX		
User name	Web.de Default mail client		
Password			
Sender E-mail		Test E-mail	
Sender name		Save	
			Close

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 Config	uration		
Alarm Notification sta	atus: Alarm Notification service is running on this PC		
Licence (used/availa	ble): 1/1		
Select to run Alarn	n Notification service on this PC		
E-mail Configuration	1		
E-mail settings			
	Enable e-mail notification		
Server defaults	Web.	~	
E-mail server	smtp.web.de		
Server Port	587 Vise SSL		
User name	Test 1		
Password	****		
Sender E-mail	Test@web.de	Test E-mail	
Sender name	Farm Bergstrop	Save	
			Close

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

Alarm Notification					
Receivers Configuration					
Alarm Notification stat	us: Alarm Notification service is running on this PC				
Licence (used/availab	ile): 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 Vise SSL				
User name	Test 1				
Password	\$\$\$\$				
Sender E-mail	Test@web.de	Test E-mail			
Sender name	Farm Bergstrop	Save E			
			Close		

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



9. Click on the "Receivers" tab.



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

Alarm Notific	Aarm Notification				
Receivers	Configuration				
Active	Contact	Notification type	Where	Alarms	Test
				Add Edit Re	emove
				Add Edit Re	entove
				8)	
					Close
					Close

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

Edit Contact	_ 🗆 ×
Name	
Mobile no.	
E-mail	
Language	English (United Kingdom)
	Ok Cancel

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



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

Alarm Notification					
Receivers	Configuration				
Active	Contact	Notification type	Where	Alarms	Test
	Receiver 1	Select notification type 🛛 👻	All locations are selected 🔹 👻	All Selected 🗸 🗸	18
		Clear Ok Car	ncel		
				Add Edit R	emove
					Close

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

You may select multiple locations.

Alarm Notific	ation				
Receivers	Configuration				
Active	Contact	Notification type	Where	Alarms	Test
	Receiver 1 ···	Select notification type 🛛 🗸 🗸	All locations are selected 🛛 🗸 🗸	All Selected 🗸 🗸	10
				Add Edit R	emove
<u> </u>					Close

16. 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.

	Configuration				
Active	Contact	Notification type	Where	Alarms	Test
	Receiver 1	 Select notification type 	All locations are selected 🛛 👻	All Selected 🗸 🗸	1
				• ※ Climate • ※ Coluction • Production Equipm • Feed • Finduction Equipm • Feed • Production Equipm • Feed • Water/Feed • ParnWatch • Y Management • Y Nargement • Y Y Margement • Y Y Air Cleaning • Y Y Air Cleaning • Y Y Air Cleaning • Y Y AlarmUnit • Y Y Callmatic • Clear • Ok Cancel	
				Add Edit R	emove

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

	Configuration				
Active	Contact	Notification type	Where	Alarms	Test
×	Receiver 1	Select notification type 🛛 👻	All locations are selected 🛛 👻	Selected 4176 of 4298 🛛 🗸 🗸	1
- Ye	3				
7	E.				
				Add Edit R	emove

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:
 - a) Click on the alarm notification icon.
 - b) Confirm the dialog for test notification by clicking on "Yes".

Receivers	Configuration					
Active	Contact	Notification type	Where		Alarms	Test
~			 All locations are sel 		 Selected 4176 of 4298 	
				•	nd test notification to Receiver 1? Yes No	

21. Click on "Close" after you have configured all settings.

This closes the dialog window.



CONTRACTOR OF CO

10 Operation of the control computer

The CulinaMix*pro* application uses the 510*pro* control computer to control the CulinaFlex feeding system for suckling pigs. The CulinaFlex feeding system can also be controlled independently of BigFarmNet Manager by the 510*pro* control computer.

The control computer and BigFarmNet Manager constantly exchange data when they are connected. All control computer data is transferred to the Manager PC in the farm office and vice versa.

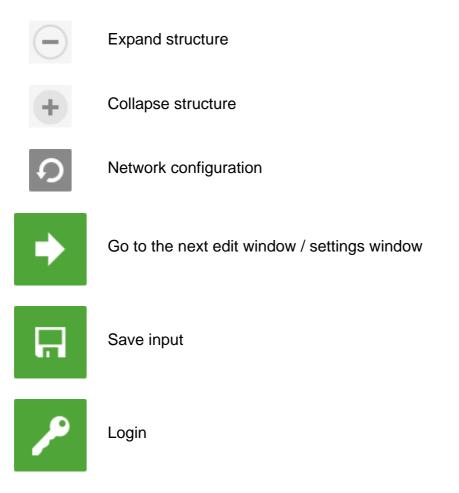
10.1 Technical data

Dimensions (H x W x D)	381 mm x 400 mm x 170 mm
Protection degree according to	IP 54
EN60529	
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 g	land M 25 x 1.5
Code no.	91-02-4041

10.2 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.
Ð	Logout
5	Stop the equipment / system
П?	Information on the settings parameter
¢	Return to previous view
>	Open additional information or settings
∧∨	Scroll up / down in selection



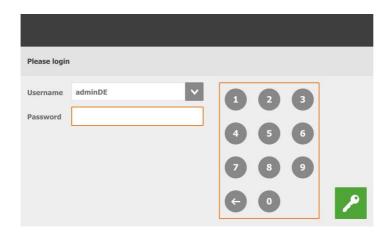


10.3 Login

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.



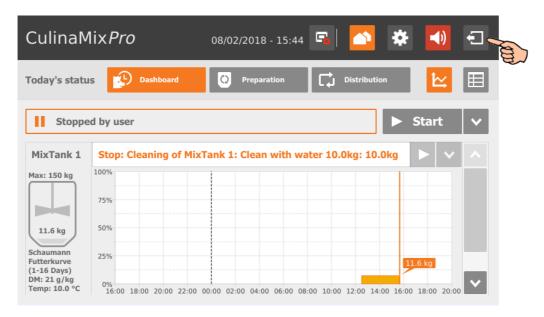




The user name and the password are the same as when logging into BigFarmNet Manager.

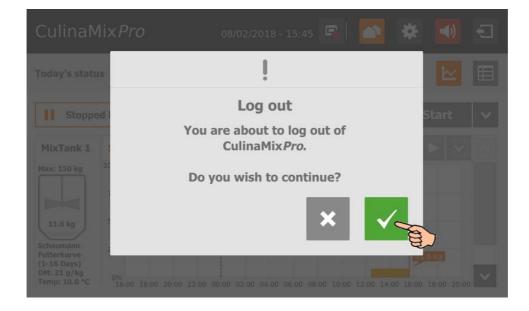
10.4 Logout

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



2. Confirm that you are logging out.

The login dialog appears on the display again.





10.5 Dashboard diagram view



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

10.5.1 Trend mixing tank contents

The contents of the first mixing tanks are indicated for the past 24 hours. The diagram shows at which times of the day weight changes occurred.

Use the vertical scroll bar to see the other mixing tanks.

Cannan	1ix <i>Pro</i>		08/0	02/2018 - 13	3:23 🖣		*		Ē
Today's statı	ıs 😥	Dashboard	0	Preparation	C	Distribut	on	₩	
Stoppe	ed by user							Start	
MixTank 1	Stop: Cl	eaning of	MixTank 1	L: Clean wit	h water 10).0kg: 10	.0kg		
	100%								
Max: 150 kg	10070								
Max: 150 kg	75%								
Max: 150 kg									
	75%						11	.6 kg	ļ

10.5.2 Stopping / starting the system

You can 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.



Culina№	1ix <i>Pro</i>	08/02/2018 - 13:26	ra 🔼 🕴	🗱 📢 🕣	
Today's statu	IS Dashboard	C) Preparation	Distribution		
► In ope	ration			II Stop	8
MixTank 1	Cleaning of MixTank	L: Clean with water 10).0kg: 10.0kg		AN
Max: 150 kg	100%				
	75%				
11.6 kg	50%				
Schaumann Futterkurve	25%			11.6 kg	
(1-16 Days) DM: 21 g/kg Temp: 10.0 °C	0% 14:00 16:00 18:00 20:00	22:00 00:00 02:00 04:00 06	:00 08:00 10:00 12:00 1	4:00 16:00 18:00	

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.

Culina№	1ix <i>Pro</i>	08/02/2018 - 13:31	🛋 🔼 🏶	•	
Today's statu	IS Dashboard	C) Preparation	Distribution		
Stoppe	ed by user			Start 🗸	A
MixTank 1	Stop: Cleaning of Mix	Tank 1: Clean with wa	Start with canceling	current action	a
Max: 150 kg	100%		Start with cancelling	feeding time	
	75%		Start with restore co	ntrol process	
11.6 kg	50%		Transfer		
Schaumann	25%		Drain		
(1-16 Days) DM: 21 g/kg Temp: 10.0 °C	0% 14:00 16:00 18:00 20:00	22:00 00:00 02:00 04:00 06	:00 08:00 10:00 12:00 14:00	16:00 18:00	

- **Start with canceling current action:** The system starts, cancels the current action and continues with the next action that was defined in the Task Manager.
- Start with canceling the feeding time: The system starts and cancels the current task, e.g. feeding or cleaning.
- Start with restoring control process In case of control errors of the BigFarmNet Manager, use this option to restart the entire system including all processes.
- Transfer
- Drain



10.5.3 Stopping / starting the mixing tank

The CulinaMix*pro* mixing tanks are sub-applications. You can stop each mixing tanks individually during operation by tapping on the corresponding stop button. If you tap on "Start" again, the mixing tank continues to operate with the current action.

Culina№	1ix <i>Pro</i>	08/02/2018 - 13:26	s 🖪 🔼 🌞	I
Today's statu	IS Dashboard	O Preparation	Distribution	
▶ In ope	ration			II Stop
MixTank 1		k 1: Clean with water 1	.0.0kg: 10.0kg	
Max: 150 kg	75%			
11.6 kg	50%			
Schaumann Futterkurve (1-16 Days)	25%			.6 kg
DM: 21 g/kg Temp: 10.0 °C	0% 14:00 16:00 18:00 20:	00 22:00 00:00 02:00 04:00 0	6:00 08:00 10:00 12:00 14:00	16:00 18:00

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.

Culina№	1ix <i>Pro</i>	08/02/2018 - 13:28	s 🔼 🔅	I
Today's statı	IS Dashboard	Q Preparation	Distribution	
▶ In ope	ration			II Stop
MixTank 1	Pause: Cleaning of M	lixTank 1: Clean with v	vater 10.0kg: 10.0kg	
Max: 150 kg	100%		Start with canceling	current action
	75%		Start with reset tota	I feeding time
11.6 kg	50%		New Mixture	
Schaumann Futterkurve	25%			.6 kg
(1-16 Days) DM: 21 g/kg Temp: 10.0 °C	0% 14:00 16:00 18:00 20:00	22:00 00:00 02:00 04:00 06		

- Start with canceling current action: The mixing tank starts, cancels the current action and continues with the next action defined in the Task Manager.
- Start with reset total feeding time: The mixing tank starts and cancels the current task, e.g. feeding or cleaning.
- **New mixture:** The mixing tank starts and mixes a new recipe. A dialog to indicate the amount opens.



10.6 Dashboard Task Manager



Tap on the table icon in the "Dashboard" view to switch to the Task Manager. The Task Manager allows you to save feeding and cleaning tasks for each mixing tank. All tasks are displayed in a table for each mixing tank, and consecutively based on the time. You may view tasks of individual days up to a week in advance, starting with the current day. For example: "Today" = Tuesday, i.e. "Today +3" = Friday.

Feed	ling sett	> < MixTank 2	> >	< Toda	ay +3 >	<u>ا</u> يد	E
sk					and		
Start	End	Туре	State	No mixture before end	Dosing out after end	Modified	2
01:10		Cleaning Tank	Ш	-	-		
06:00		Cleaning C By Recipe	Ш	÷	-		
	03:00	Feeding	Ш	0 min	0 min		

Use the arrows pointing to the left and to the right in the top bar to select the correct mixing tank.

Culina	Mix <i>Pr</i>	O 08/02/20)18 - 13	:34 强	<u>~</u>	-)	ŧ
5 Feed	ling sett	MixTank 2	>	< Toda	ay +3 >	۲	
ask		C	A A				+
Start	End	Туре	State	No mixture before end	Dosing out after end	Modified	^
01:10		Cleaning Tank	Ш	-	-		
06:00		Cleaning C By Recipe	Ш	-	-		
07:02	03:00	Feeding	Ш	0 min	0 min		
							~



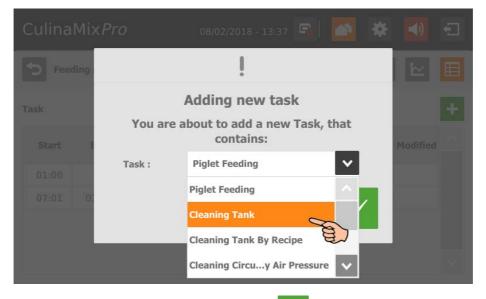
10.6.1 Defining a task

Tasks of all types (strategies) are created in the same manner. The following instructions explain how to define a new task based on the example of the cleaning task "Tank cleaning".

1. Tap on the plus icon.

Culina	Mix <i>Pro</i>) 08/02/2	018 - 13	:37 🗳	<u>*</u>	(ا	Ð	
Feed	ling sett	> < MixTank 1	>	< Toda	ay +3 ゝ	<u>ا</u> ب	⊞	
Task							+,	S.
Start	End	Туре	State	No mixture before end	Dosing out after end	Modified		a)
01:00		Cleaning Tank	Ш	-	-			
07:01	03:00	Feeding	Ш	0 min	0 min			

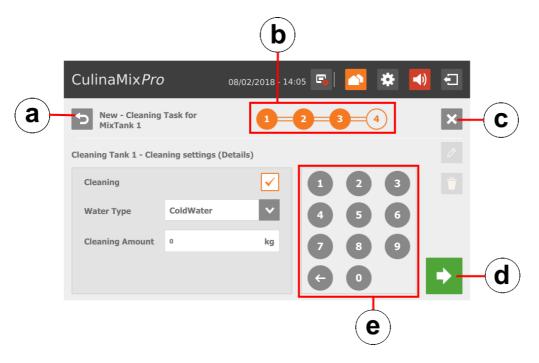
2. Tap on the input field and select the correct task.



- 3. Confirm your selection by tapping on
- 4. Tap directly into the parameters' input fields to
 - enter values using the numeric keypad;
 - open selection lists to select the correct input;
 - check boxes.

The following functions and information are also available:

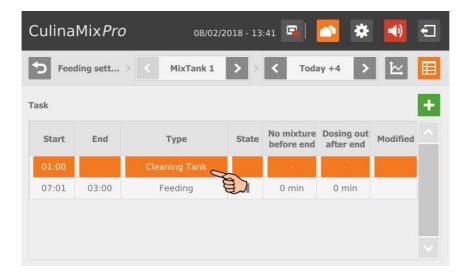




- a) Return to the previous edit window of the task.
- b) This timeline indicates how many edit windows exist for the task and which window you are currently editing.
- c) Cancel the creation of a task.
- d) Move on to the next edit window. Your inputs are not changed or deleted.
- e) Numeric keypad to input values.
- 5. When you have configured all settings and reached the final edit window, tap on to save the task.

10.6.2 Editing a task

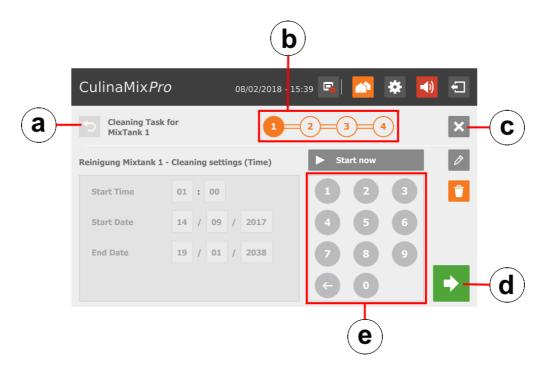
1. Tap on the task you want to edit.





- 2. You have the following options for editing the task:
 - Start now
 Use this function to start the selected task immediately (manually), even if a different time has been saved.
 - Edit": Edit the selected time for the current day (individual task) or for all upcoming days (complete task).
 - The state of "Disable": Delete or disable the complete task.

The following functions and information are also available:



- a) Return to the previous edit window of the task.
- b) This timeline indicates how many edit windows exist for the task and which window you are currently editing.
- c) Cancel editing of the task.
- d) Move on to the next edit window. Your inputs are not changed or deleted.
- e) Numeric keypad to input values.
- 3. When you have configured all settings and reached the final edit window, tap on to save the task.



10.6.3 Piglet feeding

- Define when the feeding process should start (Start time) and end (End time).
- Define the time period for this task with the **Start date** and the **End date**.
- Define when the mixing tank should prepare the last feed mixture before the "End time" (No mixture before end = Last mix before end).

Example: Feeding ends at 9 p.m. and "Last mix before end" is set to 120 minutes. The tank will prepare the last feed mixture at 7 p.m.

OR

Define the **Water prepare time** if you want to dilute the feed step by step before feeding process ends.

Example: The feeding process ends at 9 p.m. and "Water prepare time" is set to 120 minutes. Water will be added from 7 p.m.

- Define for how long feed may be dispensed after the end of the feeding process
 (Dosing out after end = Dose time after end). If the last feed mixture has been
 prepared shortly before the end of the feeding process, this feed can still be
 dispensed to empty the mixing tank as completely as possible. Use "Dose time
 after end" for this purpose.
- Define whether the pipe should be emptied by means of air (**Emptying pipe**) after the feeding process, i.e. after the "End time" and/or the "Dose time after end".
- Define whether the mixing tank should be emptied after the feeding process, i.e. after the "End time" and/or the "Dose time after end", e.g. to clean the mixing tank. Select either another mixing tank or the slurry tank for the tank contents. When emptying a mixing tank, the remaining feed is usually supplied to older animals (**Emptying mixing tank**).

10.6.4 Tank cleaning

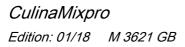
- Define when the tank cleaning should start (**Start time**).
- Define the time period for this task with the **Start date** and the **End date**.
- **Emptying before:** Indicate whether the tank should be emptied before it is cleaned. If yes, select a different tank or the slurry tank for the tank contents.
- User acknowledgement before: If the box "User acknowledgement before" is checked, the system waits for manual confirmation before starting the cleaning process.



- **Emptying after:** Selection of the tank into which the cleaning amount should be emptied.
- User acknowledgement after: If the box "User acknowledgement after" is checked, the system waits for manual confirmation before completing the cleaning process.
- **Cleaning** refers to the option of cleaning with water. When choosing this option, select either warm or cold water (**Water type**) and define the **Cleaning amount** of water, which should be greater than the minimum cleaning amount.
- **Fogger 1:** Should the first fogger be used for fogging of the tank?
- **Fogger 2:** Should the second fogger be used for fogging of the tank?
- **Fogging time:** Duration of the fogging process. The foggers are started with a delay if fogging is carried out in another tank beforehand.
- Waiting time after fogging. The tank to be cleaned is always rinsed with water (minimum clean amount) after the waiting time after fogging has elapsed.

10.6.5 Tank cleaning according to a recipe

- Define when the tank cleaning should start (**Start time**).
- Define the time period for this task with the **Start date** and the **End date**.
- **Emptying before:** Indicate whether the mixing tank should be emptied before it is cleaned. If yes, select a different mixing tank or the slurry tank for the tank contents.
- User acknowledgement before: If the box "User acknowledgement before" is checked, the system waits for manual confirmation before starting the cleaning process.
- **Emptying after:** Selection of the tank into which the cleaning amount should be emptied.
- User acknowledgement after: If the box "User acknowledgement after" is checked, the system waits for manual confirmation before completing the cleaning process. Use this parameter to ensure that cleaning has been completed correctly.
- **Recipe:** Selection of a cleaning recipe that was created beforehand.
- **Amount:** The cleaning agent amount for this cleaning process. Select an amount as large as possible for effective cleaning.
- **Washing time:** The cleaning component is pumped from the mixing tank through the pipes and back into the tank within this time.





10.6.6 Circuit cleaning by means of compressed air

- Define when circuit cleaning should start (Start time).
- Define the time period for this task with the **Start date** and the **End date**.
- **Emptying before:** Indicate whether the mixing tank should be emptied before it is cleaned. If yes, select a different mixing tank or the slurry tank for the tank contents.
- User acknowledgement before: If the box "User acknowledgement before" is checked, the system waits for manual confirmation before starting the cleaning process.
- **Emptying after:** Selection of the tank into which the cleaning amount should be emptied.
- User acknowledgement after: If the box "User acknowledgement after" is checked, the system waits for manual confirmation before completing the cleaning process. Use this parameter to ensure that cleaning has been completed correctly.
- Water type: Select either warm or cold water.

10.6.7 Circuit cleaning according to a recipe

- Define when circuit cleaning should start (Start time).
- Define the time period for this task with the **Start date** and the **End date**.
- **Emptying before:** Indicate whether the mixing tank should be emptied before it is cleaned. If yes, select a different mixing tank or the slurry tank for the tank contents.
- User acknowledgement before: If the box "User acknowledgement before" is checked, the system waits for manual confirmation before starting the cleaning process.
- **Emptying after:** Selection of the tank into which the cleaning amount should be emptied.
- User acknowledgement after: If the box "User acknowledgement after" is checked, the system waits for manual confirmation before completing the cleaning process. Use this parameter to ensure that cleaning has been completed correctly.



We recommend this setting when cleaning with lyes to ensure that the tank and pipes are empty before feeding starts. Pipes and tank are usually flushed with some water after cleaning with a lye.

• **Recipe:** Selection of a cleaning recipe that was created beforehand.



- Waiting time: Time for soaking in the pipes. The cleaning agent remains inside the pipes for this time.
- **Washing time:** The cleaning component is pumped from the mixing tank through the pipes and back into the tank within this time.
- Washing amount: The additional amount of the cleaning agent or water used for cleaning.
- **Empty pipe after:** Define whether the pipe should be emptied by means of air after the cleaning process.

10.6.8 Valve cleaning (currently cleaning valve)

- Define when valve cleaning should start (Start time).
- Define the time period for this task with the **Start date** and the **End date**.
- **Emptying before:** Indicate whether the mixing tank should be emptied before it is cleaned. If yes, select a different mixing tank or the slurry tank for the tank contents.
- User acknowledgement before: If the box "User acknowledgement before" is checked, the system waits for manual confirmation before starting the cleaning process.
- **Emptying after:** Selection of the tank into which the cleaning amount should be emptied.
- User acknowledgement after: If the box "User acknowledgement after" is checked, the system waits for manual confirmation before completing the cleaning process. Use this parameter to ensure that cleaning has been completed correctly.
- Clean only empty valves: The system only cleans valves with the status "Empty".
- Clean also blocked valves: Additionally clean locked valves, e.g. in empty pens.

10.6.9 Heat exchanger

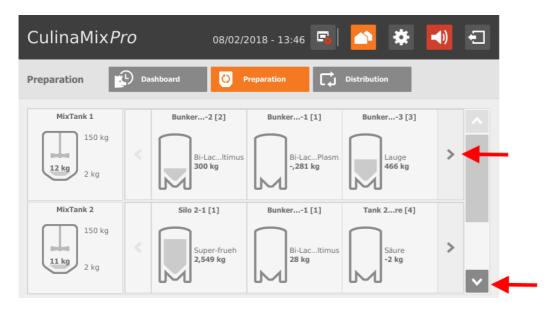
- Define when the feeding process should start (Start time) and end (End time).
- Define the time period for this task with the **Start date** and the **End date**.
- Define the **End time** at which the heat exchanger should stop.
- Define the **Temperature deviation**. The temperature in the heat exchanger is slightly higher than in the mixing tank. The heat exchanger is equipped with a temperature sensor. The "Equipment" window of the mixing tank shows the heat exchanger's temperature in the graphical depiction.





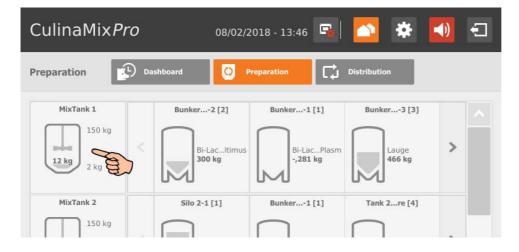
10.7 Preparation – Overview

The "Preparation" view provides an overview of the mixing tanks, including the corresponding silos and other containers. Use the different arrows to switch to other silos and containers or to view more mixing tanks.



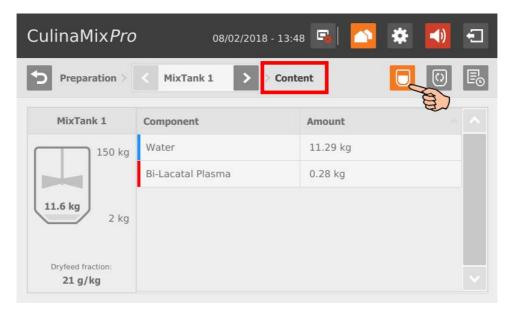
10.7.1 Mixing tank – Preparation

Tap on a mixing tank to switch to the individual view, including the following information:

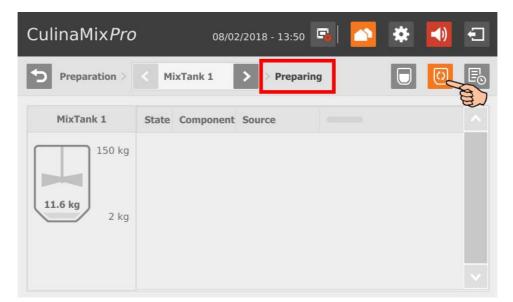




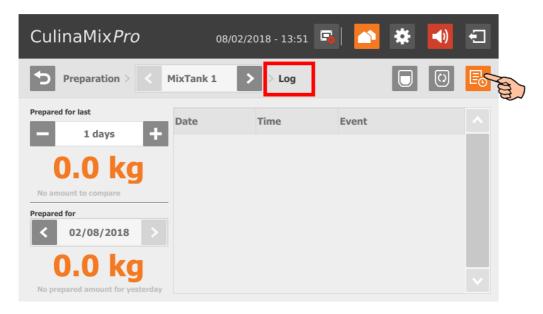
• "Content" shows the components in the mixing tank, including their amount. For water, no difference is made between warm and cold.



• "Preparing" indicates the currently active preparation, including the state and the used components.



• "Log" shows a log of the individual actions completed for this mixing tank. This makes it easy to identify unusual actions.



• You can switch to any other mixing tank from all views.

CulinaMix <i>Pro</i>	08/02/2018 - 13:5	з 🛋 🔼 🌞 🚺	Ð
Preparation >	< MixTank 2 > Cont	ent 🔲 🖸	Ē
MixTank 2	Component	Amount	
150 kg	Water	11.06 kg	
	Bi-Lactin Ultimus	0.13 kg	
11.3 kg	Super-frueh	0.10 kg	
2 kg			
Dryfeed fraction:			
18 g/kg			



10.7.2 Silo – Content and deliveries

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

CulinaMix <i>Pro</i>	08/02/	2018 - 13:54 🖪	-	()	3
Preparation	Dashboard	Preparation	Distribution		
MixTank 1 150 kg 12 kg 2 kg	Bunker2 [2] Bi-LacItimus 300 kg	Bunker1 [1] Bi-LacPlasm -,281 kg	Bunker3 [3]	>	^
MixTank 2	Silo 2-1 [1]	Bunker1 [1]	Tank 2re [4]		

• "Content" shows current silo data and information on the current contents. You can directly switch to any other silo from this view.

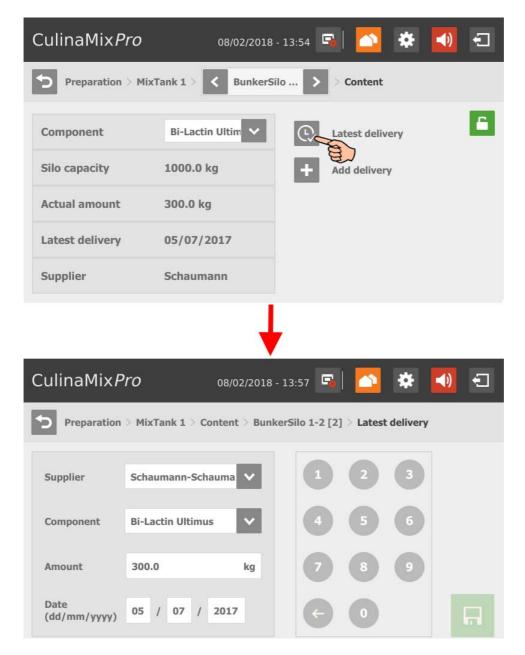
CulinaMix <i>Pro</i>	08/02/2018	- 13:54 🖪 🔼 🔅	I
Preparation > Mix	Tank 1	ilo 💙 Content	
Component	Bi-Lactin Ultim 🗸	Latest delivery	
Silo capacity	1000.0 kg	+ Add delivery	
Actual amount	300.0 kg		
Latest delivery	05/07/2017		
Supplier	Schaumann		

• Tap on the padlock icon to lock the silo.

CulinaMix <i>Pro</i>	08/02/2018	- 13:54 🖪 🔼 🏟 📢 🗧	
Preparation > Mix	Tank 1 > C BunkerS	lo > > Content	
Component	Bi-Lactin Ultim 🗸	Latest delivery	
Silo capacity	1000.0 kg	+ Add delivery	

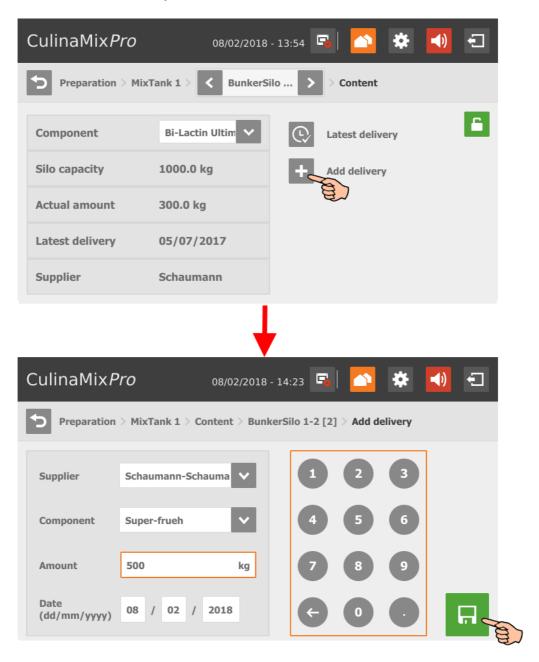


• View the latest delivery by tapping on the "Latest delivery" icon. If necessary, edit the latest delivery and save new inputs.





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





10.8 Distribution

The "Distribution" view provides an overview of a mixing tank's subcircuits. You can directly switch to any other mixing tank from this view.

CulinaMix <i>I</i>	Pro		0	8/02/2018 - 1	4:24 뒄	🗠 🌞 ᆀ	Ð
Distribution	() •	ashboard		O Preparation	• 🗘 •	istribution	
< MixTank	1	>		MainCi	rcuit 1 Tank 1	[1] >	æ
Location	Filled	Valves (T/A/E)	Days	Assigned Tank	MixTank in Use	Feeding Curve	
Unterkreis	\checkmark	6/3/3	154	MixTank 3		Schaumann Futterkurve	
Unterkreis [2]	\checkmark	6/0/0	150	MixTank 3		Schaumann Futterkurve	
Unterkreis [3]	\checkmark	6/6/6	145	MixTank 3		Schaumann Futterkurve	
Unterkreis [4]	\checkmark	6/0/0	153	MixTank 3		Schaumann Futterkurve	
Unterkreis		CIAIA	120	Mistral 2		Schaumann	\sim

The parameter "Valves (T/A/E)" provides the following information:

- T: Total number of connected valves
- A: Number of active valves
- E: Number of active valves with the status "Empty"

Tap on a subcircuit to switch to the overview of the corresponding valves. From the valve overview, you can also switch to another subcircuit.

CulinaMi	< <i>Pro</i>		0	8/02/2018 - 14	4:26 🕞	🗠 🌣 ┥	Ð	CulinaMix <i>Pro</i>	08/0	2/2018 - 14:27	5	i 🕋 🌩 🗾
Distribution	P •	ashboard		O Preparation	- 다 •	istribution		Circuit Overview > M	lainCircuit 1 Ta	nk 1 [1] > <	Un	nterkreis [1]
< MixTa	nk 1	>		MainCi	rcuit 1 Tank 1	[1] >	Ω?	Valve	Trough State	Number of dosings	<u>^</u>	Set the Age of the pigle
Location	Filled	Valves	Days	Assigned	MixTank	Feeding Curve		SubCircuitDistri	Empty	0		- 154 days
Unterkreis		(T/A/E)		Tank MixTank 3	in Use	Schaumann		SubCircuitDistri	Empty	0		Lock Subcircuit
		0/3/3	154	MIXTANK 3		Futterkurve Schaumann		SubCircuitDistri	Empty	0	i i	Change SubCircu
nterkreis		6/0/0	150	MixTank 3		Futterkurve		SubCircuitDistri	Empty	0		State to Empty
Interkreis	- 🗸	6/6/6	145	MixTank 3		Schaumann		SubcircuitDistri	empty	0		Reset number o
3] Interkreis						Futterkurve Schaumann		SubCircuitDistri	Empty	0		
4] I	• 🗹	6/0/0	153	MixTank 3		Futterkurve		Cub Circuit Distri	Franks	0		
Unterkreis	- 🔽	ciala	120	Misteria 2		Schaumann	\sim	SubCircuitDistri	Empty	0		



The valve overview offers the following functions, which you activate by tapping on them:

CulinaMix <i>Pro</i>	08/0	2/2018 - 14:27	12 🏹 🛠 🔼
Circuit Overview	MainCircuit 1 Ta	nk 1 [1] > <	Unterkreis [1]
Valve	Trough State	Number of dosings	Set the Age of the piglets:
SubCircuitDistri	Empty	0	— 154 days 🕂
SubCircuitDistri	Empty	•(b)-	Lock Subcircuit
SubCircuitDistri	Empty	0	Change SubCircuit State to Empty
SubCircuitDistri	Empty	•(C)	Reset number of dosing
SubCircuitDistri	Empty	0	
SubCircuitDistri	e	0	
	\mathbf{U}		U

- a) Change the curve day/age of the piglets.
- b) Lock or open a subcircuit, depending on the state.
- c) Mark a subcircuit with the status "Empty".
- d) Reset the number of dosings for the entire subcircuit.
- e) Lock or open individual valves, depending on the state.

10.9 Settings

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

CulinaMix <i>Pro</i>	08/02/2018 - 14:40 🕞	🔺 🙋 📢	Ð
- Settings		Ē	œ?
General		>	
Feed preparation		>	
Distribution		>	
Masterdata		>	
Mix tank settings		>	
Crocial avaat cattings		×	×.
O Network configuration		BigFarmNet v	/.3.2.2



10.9.1 Feed preparation (general)

CulinaMix <i>Pro</i> 08/02/2018 - 14:41	🛋 🕋 🐱 🚺	ŧ
Settings > General > Feed preparation	-	II ?
Maximum dry matter	300 g/kg	
Agitator slow before off	3 kg	
Clean amount at end of prep.	0 %	
Minimal clean amount at end of prep.	0 kg	ĺ.
Allowed temperature difference	20 °C	
Adjustment water at start	80 %	
Water via cleaning valve	no	~

- **Maximum dry matter:** If this value is exceeded during filling of the mixing tank, an alarm is generated.
- Agitator slow before off: When a component is conveyed into a mixing tank or a
 pre-mixer while the agitator is running (a setting for the component), the agitator
 mixes quickly at first. As soon as the remaining amount that still needs to be
 dispensed corresponds to the value given here, the agitator switches to a slower
 mode. If the value given here is greater than the total amount, the agitator mixes
 slowly from the beginning.
- Cleaning amount at end of preparation: If water is used as replacement component, the amount of water given here is dispensed by the cleaning valve after preparation. This requires that the amount is greater than the given minimum amount, see "Minimum cleaning amount at end of preparation".
- **Minimum cleaning amount at end of preparation:** If the calculated percentage "Cleaning amount at end of preparation" is below this value, no water is dispensed by the cleaning value after preparation.
- Allowed temperature difference in the mixing tank during mixing.
- Adjustment water at start is used to regulate the temperature. The remaining amount is also used to reach the correct temperature, e.g. if feed is added manually.
- Water via cleaning valve: Instead of the normal water valve, the cleaning valve dispenses the water into the mixing tank.



10.9.2 Piglet settings

CulinaMix <i>Pro</i> 08/02/2018 - 14:42 🖪 🕋 🔅 🚺	Ð
Settings > General > Piglet settings	œ?
Maximum open valves 1	
Maximum allowed pressure 8 bar	
Min. time for emptying Main and Subcircuits 50 %	
Percentage to water pipe content 20 %	

- Maximum open valves: Number of valves that are open at the same time.
- **Maximum allowed pressure:** This parameter is a safety function. The system measures the conveying pressure in the pipes, which must not exceed the set value.
- Minimum time for emptying main and subcircuits, based on the filling time.
- **Percentage to water pipe content** to dilute the pipe contents in steps. The percentage refers to the pipe volume, which can be found in the expert settings. This parameter is only applicable where pipes are cleaned with water only.



10.9.3 Application settings

CulinaMix <i>Pro</i>	08/02/2018 - 14:43	G	*	Ð
Settings > General > Applic	cation settings			œ?
Action after maximal pause time			Alarm	
Maximum pause time			0 min	
Repeat action			yes	
Generate warnings if device is no	t linked		no	
Simulation			>	
Hard reset			>	

- 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.
- Generate warnings if device is not linked
- Simulation > 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 > Reset application



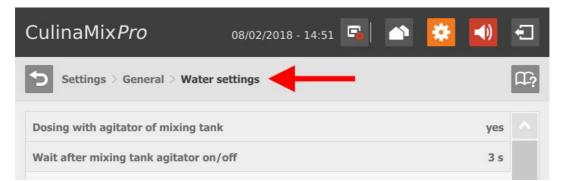
10.9.4 User acknowledgement

Follow the navigation indicated by the red arrow in the screenshot to access the corresponding settings.

CulinaMix <i>Pro</i> 08/02/2018 - 14:49 🖪 🕋 😣 📢	Ð
Settings > General > User acknowledge	œ?
User acknowledge alarm level Alarm	^
Timeout 60 min	
Repeat alarm no	

- User acknowledgement alarm level
- **Timeout:** You need to manually confirm the action, e.g. the manual filling of components, within the time set here. Otherwise, the status "User acknowledgement alarm level" will be issued.
- **Repeat alarm** after the period under "Timeout" has been exceeded.

10.9.5 Water settings



- **Dosing with agitator of mixing tank:** Use this setting to define whether the system uses water for mixing, e.g. if cold and warm water are used to regulate the temperature in a specific way.
- Wait after mixing tank agitator on/off: When the agitator is switched from "on" to "off" (and vice versa), the agitator waits for the time indicated here before water is filled into the mixing tank.

10.9.6 Distribution (heat exchanger)

Follow the navigation indicated by the red arrow in the screenshot to access the corresponding settings.

CulinaMix <i>Pro</i>	08/02/2018 - 14:51	F	-()	Ð
Settings > General > Distr	ribution	-	Ŭ D	Ω?
Heat exchanger temperature to	erance		5 °C	^
Block valves always empty			no	

• Heat exchanger temperature tolerance is a switching threshold for the heat exchanger. If the feed temperature drops below this tolerance value, the heat exchanger is activated.

10.9.7 Feed preparation (mixing tank, agitator)

Follow the navigation indicated by the red arrow in the screenshot to access the corresponding settings.

Mixing tank

CulinaMix <i>Pro</i>	/02/2018 - 14:52 强	🔊 😣 🚺 🕤
Settings > Feed preparation > M	kUnit 1 .MixTank	 다?
Name		MixTank 1
Capacity		160 kg
Maximum amount		150 kg

- Capacity of the mixing tank
- **Maximum amount** defines the maximum amount that can be filled into the mixing tank. The maximum amount should be slightly lower than the capacity due to the residual flow volume.
- **Minimum amount** defines the minimum amount that always remains in the mixing tank.



- **Agitator off amount:** The agitator is switched off if the amount in the tank reaches or is below this value during distribution. This is to prevent air from being drawn in, for example.
- **Minimum mix amount:** The minimum amount required for mixing. Mixing is not possible below this amount for technical reasons.
- Minimum clean amount: The minimum amount of water required for tank cleaning.
- **Tank content:** Use this parameter to adjust the mixing tank content manually.
- Feed curve: Use this parameter to assign a feed curve to the mixing tanks.
- Activate sub-application: The CulinaMix*pro* mixing tanks are individual subapplications. Mixing tanks can be locked for a specified time period, e.g. in case of damage.

• Sub-application not operating

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.

Pause distribution settings

All full time span: If all valves linked to this mixing tank indicate that they are full for the period defined here, the system goes into pause mode for the time defined under "Pause time span".

Pause time span, see "All full time span".

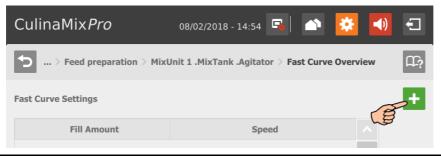
Agitator

CulinaMix <i>Pro</i> 08/02/2018 - 14:53 🖼 🏠 🚺	Ð
Settings > Feed preparation > MixUnit 1 .MixTank .Agitator	œ?
Error/Pause-State On	
Deviation 10 kg	
Fast curve >	

- **Error/Pause state:** Use this parameter to define how an agitator behaves if the application or the sub-application is in error or pause mode. However, this setting only applies if pause or error occur during feeding.
- **Deviation:** This setting only applies to agitators in weighed silos and is necessary if a curve has been created for the agitator. The deviation is the tolerance value ensuring that the agitator is not switched regularly because the weight deviates from the value of the curve point.
- **Minimum speed:** This parameter is only applicable for agitators with frequency inverter. Set the maximum frequency here. If the tank is not weighed, the maximum frequency is used for fast mixing.
- **Maximum speed:** This parameter is only applicable for agitators with frequency inverter. Set the minimum frequency here. If the tank is not weighed, the minimum frequency is used for slow mixing.
- Delay from slow to fast
- Delay from fast to slow
- Fast/slow curve

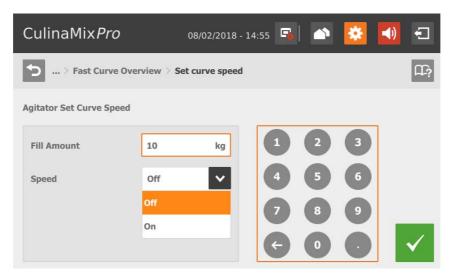
Depending on the switching of the used agitator, you can create a fast and/or a slow curve.

- a) Tap on the correct curve.
- b) Tap on the plus icon to define values.





c) Enter the fill amount using the numeric keypad and select the speed.



- d) Confirm you input by tapping on \checkmark
- e) Tap on the plus icon again to make more inputs.

CulinaMix <i>Pro</i>	08/02/2018 - 14:56 🕞 📄 👔	5 🚺 🖸
Seed preparation > Mix	Unit 1 .MixTank .Agitator $>$ Fast Curve Ov	erview
Fast Curve Settings		
Fill Amount	Speed	
10.0 kg	On	
15.0 kg	Off	
		, 🖬

f) Tap on 🔲 to save the curve.



10.9.8 Distribution (main circuits)

CulinaMix <i>Pro</i>	08/02/2018 - 14:57	G	()	Ð
Settings > Distribution	-			œ?
SubCircuitGroup .MainCircuit 1	Se la		>	
SubCircuitGroup .MainCircuit 2	E)		>	
SubCircuitGroup .MainCircuit 3			>	

- **Time span filling:** The time period required to fill the main circuit completely at the start of feeding.
- **Time span emptying:** The time period required to empty the main circuit completely after the end of feeding.
- Minimum emptying pressure
- **Is filled** indicates whether the main circuit is filled or not. This setting can be adjusted manually.
- **Content volume** (pipe content) is calculated automatically from "Pipe type" and "Pipe length". The volume can also be entered directly if the box "Enter volume" is checked. The parameter "Pipe length" is deactivated in this case.
- Pipe type
- **Pipe length:** If the box "Enter volume" is checked, it is not possible to make inputs for the pipe length.
- **Dosing time water** is the water valve's opening time. This parameter play a role for cleaning. The pipes are cleaned by water within this time. Afterwards, air is pushed through the pipes, see the next parameter, "Usage time air".
- **Usage time air:** Air is pushed through the pipes during this time after they have been flushed with water.
- Clean amount mix: In case of cleaning with recipe, this amount is mixed additionally.



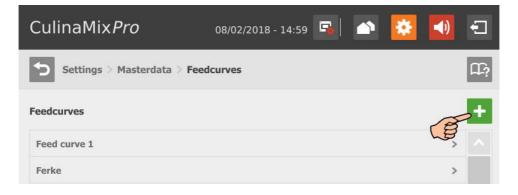
• **Recirculate after pause time:** After a pause, the pipe content recirculates for this time before it is distributed. This parameter refers to "Feed preparation" parameters or to the manual pause (by stopping the system).

10.9.9 Feed curve (creating a new feed curve)

Follow the navigation indicated by the red arrow in the screenshot to access the corresponding settings.

CulinaMix <i>Pro</i>	08/02/2018 - 14:59 🗳	🔺 😣	I	
Settings > Masterdata > Feed	curves		۲?	
Feedcurves			+	
Feed curve 1			> ^	
Ferke			>	
Schaumann Futterkurve			>	
Schaumann Tank 1			>	
Schaumann Tank 2			>	
Schaumann Tank 3			> ~	

1. Tap on the plus icon to add a new component.



2. Select the correct component by tapping on it. Use the arrow pointing to the right to add the selected component to the feed curve. Add all desired components using this procedure.

CulinaMix <i>Pro</i>	08/02/2018 - 15:01 🕞	🗠 😣 📢 🕤
		×
Available components	Feed curve component	s
Bi-Lacatal Plasma		^
Bi-Lactin Ultimus		
Component 1		~
Super-frueh		
~		 ✓

To remove a component from the feed curve, tap on the component in the feed curve and use the arrow pointing to the left to remove it.

CulinaMix <i>Pro</i>		08/02	2/2018 - 15:01 🖼 🕋 懿 젟 🐔
	(1)=(2=3=4 ×
Available components			Feed curve components
Bi-Lacatal Plasma	^		1 Bi-Lacatal Plasma
Bi-Lactin Ultimus		>	2 Bi-Lactin Ultimus
Component 1			
Super-frueh		"The	
	~		Image: A state of the state



3. If necessary, define an order for the components.

The components are conveyed to the mixing tank one after another, starting at the top.

- a) Select the correct component by tapping on it.
- b) Tap on the arrows to determine the new position.

CulinaMix <i>Pro</i>		08/02	2/2018 - 15:01 🕞 📩	🔅 🚺 🐔
		1=(2=3=4	×
Available components			Feed curve components	
Bi-Lacatal Plasma	^		1 Bi-Lacatal Plasma	
Bi-Lactin Ultimus		>	2 Bi-Lactin Ultimus	
Component 1				
Super-frueh				
	\sim		~	•
Super-frueh	·	<	~	

- 4. Go to the next edit window by tapping on
- 5. Define the envelope curve:
 - a) Tap into the input fields and use the arrows to define values for the following parameters: (Curve) Day, (Feed) Temperature (distribution temperature), Preparation amount for each mixture plus pipe content (amount that is actually supplied to the animals).

CulinaMix <i>Pro</i>	08/02/2018 -	16:10 🖼 🕋 🧕	¥ 🜒 🕤
Envelope	1=2	=3=4	×
Curve Envelope			
7 🗸	35 °C 🗸	- 31 + 🗸	†
Day	33	Prepare Amount	
0	34	20 kg	
7	35	30 kg	
14	36 🗸	40 kg	
21	30	50 kg	× 7





- b) Tap on 🗸 to save your input. The input appears in the table.
- c) Enter further curve days.
- d) To edit a curve day, select this curve day by tapping on it and edit the inputs fields. Confirm by tapping on

CulinaMix <i>Pro</i>	08/02/2018 - 1	.2:59 🖼 🏠	2 🚺 🖸
Envelope	1-2	=3=4	×
Curve Envelope			
21 🗸	30 °C 🗸	- 51 + 🗸	†
Day	Temp	Prepare Amount	^
0	35	20 kg	
7	35	30 kg	
14	35	40 kg	
21	30	50 kg	
1			

- e) To delete a curve day, select this curve day by tapping on it and delete it by tapping on
- 6. Go to the next edit window by tapping on
- 7. Define the feed composition:
 - a) Select the curve time period under Interval.

CulinaMix <i>P</i>	Pro 08/02/2018 - 1	15:05 🖼 🕋 这	∢ €
Feed Compo	osition 1	2=3=4	×
Interval:	Composition		
Day 14 - 20 💊	Bi-Lacatal Plasma	- 100 % + ^	\checkmark
Day 0 - 6	Bi-Lactin Ultimus	- 0% +	_
Day 7 - 13			
Day 14 - 20	So and a second		
Day 21 - ?	E.		
0	14	21 10	•



b) Define the percentage share of the different components for the selected interval. The fractions always add up to 100 %.

Tap on + and - to change the percentage.

c) Tap on 🗸 to save your input.

The colored line in the lower part of the window indicates the different intervals and marks them based on their edit state:

- Green: Feed composition for this interval has been defined and saved.
- Light green: This interval is currently being edited and has not been saved yet.
- White: This interval has not been edited yet.

You can only switch to the next edit window after you have defined and saved the feed composition for all intervals.

CulinaMix <i>Pro</i>	0 08/02/2018	8 - 15:05 🕞 🏠	😫 🚺 🗉
S Feed Composit	tion 1	2-3-4	
Interval:	Composition		
Day 14 - 20 🗸	Bi-Lacatal Plasma	- 100 %	+ ^ 🗸
	Bi-Lactin Ultimus	- 0 %	+
Days applied	•		
0	7 14	21	100

- 8. Go to the next edit window by tapping on
- 9. Define the ratio between dry matter and water for each interval, if necessary.
 - a) Select the correct interval by tapping on it.
 - b) Use the arrows at the colored line to define values for dry matter (brown) and water (blue).

	Culina	aMix <i>Pro</i>	08/02	/2018 - 11:07 🖪	🕋 🙋	-	
	• Mi	xing Ratio	1	2-3	-4	2	×
	Day	Dry Matter	Water	Dry Matter Ratio	Water Ratio		
A	, 0	180 g/kg	820 g/kg	1.00	4.56		
B	7	180 g/kg	820 g/kg	1.00	4.56		
	14	180 g/kg	820 g/kg	1.00	4.56	~	
	<	180 ⇔ 820				>	

- 10. When you have configured all settings and reached the final edit window, tap on to save the feed curve.
 - Tap on \times to cancel the edit process.

Tap on 🕤 the return to the previous step.

10.9.10 Feed curve (editing an existing feed curve)

CulinaMix <i>Pro</i>	08/02	/2018 - 14:59	5	*		Ð
Settings > Masterdata > Fe	edcurves	+	-			œ?
Feedcurves						+
Feed curve 1					>	
Ferke					>	
Schaumann Futterkurve					>	
Schaumann Tank 1					>	
Schaumann Tank 2					>	
Schaumann Tank 3					>	~



1. Select the correct feed curve by tapping on it.

The feed curve is now displayed as a table.

CulinaMix <i>Pro</i>	08/02/2018 - 15:11	5	* 🔹	Ð
Settings > Masterdata > Fee	edcurves			œ?
Feedcurves				+
Feed curve 1			>	
Ferke			>	
Schaumann Futterkurve				
Schaumann Tank 1)		>	
Schaumann Tank 2			>	
Schaumann Tank 3			>	~

2. Tap on any curve day to switch to the edit mode.

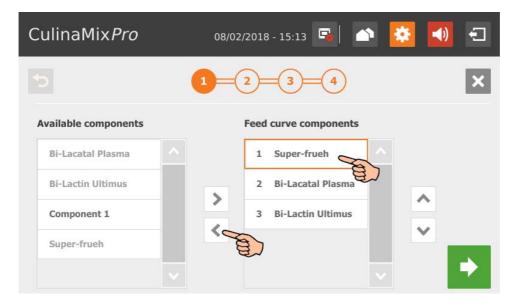
Culir	naMix <i>P</i>	Pro	08/02/2018	8 - 15:12 🖼 📥	*	Ð	
Settings > Masterdata > Feedcurves > Schaumann Futterkurve							
Feedcurve 1 (Day 0-9) <							
Day	Temp	TS	Super-frueh	Bi-Lacatal Plasma	3i-Lactin Ultimu:		
0	35	160 g/kg	0%	100%	0%		
1	35	160 g/kg	0%	100%	0%		
2	35	E_00 g/kg	0%	100%	0%		
3	35	160 g/kg	0%	100%	0%		
4	35	160 g/kg	0%	100%	0%	~	



- 3. Change the feed curve components, if necessary:
 - Add a component by tapping on the correct component to select it. Use the arrow pointing to the right to add the selected component to the feed curve.

CulinaMix <i>Pro</i>	08/02/2018 - 15:13 🖪 🕋 🔅 🚺 🗧	
		×
Available components	Feed curve components	
Bi-Lacatal Plasma	1 Super-frueh	
Bi-Lactin Ultimus	2 Bi-Lacatal Plasma	
Component 1	Bi-Lactin Ultimus	
Super-frueh		
×		

 Remove a component from a feed curve by tapping on this component. Use the arrow pointing to the left to remove the component from the feed curve.





4. If necessary, define an order for the components:

The components are conveyed to the mixing tank one after another, starting at the top.

- a) Select the correct component by tapping on it.
- b) Tap on the arrows to determine the new position.

CulinaMix <i>Pro</i>	08	/02/2018 - 15:01 写 📩	😣 🚺 🕣
5	1=	2=3=4	×
Available components		Feed curve components	
Bi-Lacatal Plasma	^	1 Bi-Lacatal Plasma	
Bi-Lactin Ultimus	>	2 Bi-Lactin Ultimus	
Component 1		E)	
Super-frueh	<		
	~	~	

- 5. Go to the next edit window by tapping on
- 6. Change the curve days of the envelope curve, if necessary:
 - a) Select a curve day by tapping on it.

CulinaMix <i>Pro</i>	08/02/2018 - 1	12:59 🖪 📄 🤅	E 🚺 🕣
Envelope	1-2	-3-4	×
Curve Envelope			
21 🗸	30 °C 🗸	- 51 + 🗸	Ť
Day	Temp	Prepare Amount	^
0	35	20 kg	
7	35	30 kg	
14	35	40 kg	
21	30	50 kg	
t		d	

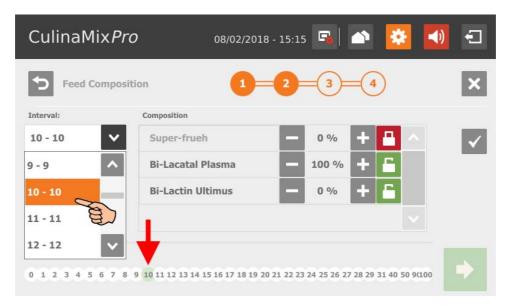


b) Tap into the input fields and use the arrows to change the values for (Curve) Day, (Feed) Temperature (distribution temperature), Preparation amount for each mixture plus pipe content (amount that is actually supplied to the animals).

CulinaMix <i>Pro</i>	08	/02/2018 - 16:2	10 强 📄	😫 🚺 🗧
Envelope	(2	3=4	×
Curve Envelope				
7 🗸	35	°c 🗸 -	- 31 +	1
Day	33	^	Prepare Amount	
0	34		20 kg	
7	35	Z	30 kg	
14	36	~	40 kg	
21	30		50 kg	× 7

- c) Tap on 🗸 to save your input.
- d) To delete a curve day, select this curve day by tapping on it and delete it by tapping on
- 7. Go to the next edit window by tapping on
- 8. Change the feed composition for a specific interval, if necessary:
 - a) Select the curve time period under Interval.

The colored line in the lower part of the window marks the selected interval with a light green color (currently being edited).



b) Define the percentage share of the different components for the selected interval. The fractions always add up to 100 %.

Tap on + and - to change the percentage.

Tap on **Tap** to fix the value so it cannot be changed.

Tap on **r** to unlock the value so it can be changed again.

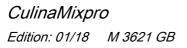
c) Tap on 🗸 to save your input.

In the colored line in the lower part of the window, the selected interval is now displayed in green (edited and saved).

CulinaMix <i>Pr</i>	O 08/02/201	8 - 12:28 뒄	s 😣 ୶	Ð
Feed Compos	ition 1	2-3	-4	×
Interval:	Composition			
10 - 10 🗸	Super-frueh	- 0 %	+ 🖴 \land	\checkmark
	Bi-Lacatal Plasma	— 90 %	+ 🔓	
	Bi-Lactin Ultimus	- 10 %	+ 🖬	
	1			
Days applied	+			
0 1 2 3 4 5 6 7	8 9 10 11 12 13 14 15 16 17 18 19	20 21 22 23 24 25 26 27 2	8 29 31 40 50 9(100	•

- 9. Go to the next edit window by tapping on
- 10. Change the ratio between between dry matter and water for each interval, if necessary.
 - a) Select the correct interval by tapping on it.
 - b) Use the arrows at the colored line to define values for dry matter (brown) and water (blue).

	Culina	aMix <i>Pro</i>	08/02	/2018 - 11:07 📮	🕋 😟	-
	Mi	xing Ratio	1	2-3	-4	×
	Day	Dry Matter	Water	Dry Matter Ratio	Water Ratio	
A	, 0	180 g/kg	820 g/kg	1.00	4.56	
B	7	180 g/kg	820 g/kg	1.00	4.56	
	14	180 g/kg	820 g/kg	1.00	4.56	v
		180 ⇔ 820				
B	<					>





11. When you have configured all settings and reached the final edit window, tap on

to save the feed curve.

Tap on \times to cancel the edit process.

Tap on 5 the return to the previous step.

10.9.11 Component (feed)

Follow the navigation indicated by the red arrow in the screenshot to access the corresponding settings.

CulinaMix <i>Pro</i>	08/02/2018 - 15:19	5	*	Ð
Settings > Masterdata > Com	ponents	_		œ?
Components				+
Bi-Lacatal Plasma			>	
Bi-Lactin Ultimus			>	
Component 1			>	
Super-frueh			>	
Used water			>	
Water			>	~

1. Tap on the plus icon to add a new component.

OR

Tap on an existing component to edit it.

CulinaMix <i>Pro</i>	08/02/2018 - 15:19	6	*	()	Ð
Settings > Masterdata > 0	Components				ſſ?
Components				B	+
Bi-Lacatal Plasma				L.	
Bi-Lactin Ultimus				>	

- 2. Tap directly into the parameters' input fields to
 - enter values using the numeric keypad;
 - open selection lists to select the correct input;



- check boxes.

The following functions and information are also available:

		b	
	CulinaMix <i>Pro</i>	08/02/2018 · 13:58 🖪 📄 🄅	()
a -	New Component	1 - 2 - 3 - 4 - 5 - 6	×-C
	Creating Component 2 (Do	sing)	
	Dosing type	Weight V 1 2 3	
	Time dosing threshold	0.0 kg 4 5 6	
	Specific weight	1.000 kg/l 7 8 9	
		€ 0 0	→d
		(e)	

- a) Return to the previous edit window of the component.
- b) This timeline indicates how many edit windows exist for the component and which window you are currently editing.
- c) Cancel the creation of a component.
- d) Move on to the next edit window. Your inputs are not changed or deleted.
- e) Numeric keypad to input values.
- When you have configured all settings and reached the final edit window, tap onto save the component.

Component parameters

- Category: Feed or additive
- Dry substance: Dry matter percentage of the component
- Energy: Energy content of the component
- **Dosing type:** Select either dosing based on "Time", "Weight" or "Auto" (automatic). The automatic mode works based on the determined weight. Below this threshold weight, a time-dosing method is used automatically, and a weight-based method above this weight.
- If the component is dissolved in water, change the presetting under **Specific** weight, if necessary.



- Under Total mixing time, determine a time period for mixing the component. If several components are mixed together, the mixing time will correspond to that of the component with the longest mixing time.
- If a component needs to macerate first, click on **Interval mixing** and enter the required values.
- Select one or more **Replacement** components in case the component you selected is used up before a new order arrives. If you select more than one replacement component, you may sort them in descending order according to priority.
- Wait after agitator on/off
- Dosing with agitator
- **Temperature:** Preparation temperature during dosing into the mixing tank (target value)
- **Temperature tolerance** (target value)
- Additional mixing time after dosing ensures that the component can dissolve at the stated temperature.
- If the box **Interval mixing during distribution** is not checked, the agitator will mix permanently.

10.9.12 Creating a cleaning recipe

Follow the navigation indicated by the red arrow in the screenshot to access the corresponding settings.

08/02/2018 - 15:4!	5 强 🛛	s 😣	()	÷
aning Recipes		-		Œ?
				+
			>	
			>	
			>	
				aning Recipes

1. Tap on the plus icon to add a new recipe.

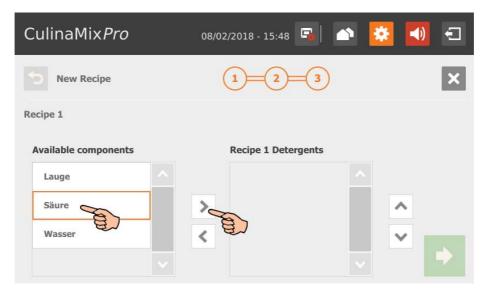
OR

Tap on an existing recipe to edit it.



CulinaMix <i>Pro</i>	08/02/2018 - 15:45	5	*	()	Ð
Settings > Masterdata > Cle	eaning Recipes				Ω?
Cleaning Recipes				B	+
Laugenspülung 1.5%					
Säurespülung 0,5%				>	
Wasserspülung				>	

2. Select the correct cleaning component by tapping on it and use the arrow pointing to the right to add it to the recipe.



To remove a cleaning component from a recipe, tap on the cleaning component in the recipe and use the arrow pointing to the left to remove it.





- 3. Go to the next edit window by tapping on
- 4. Define the percentage shares of the cleaning components, based on 100 %.
 - If you use only one cleaning component, the percentage is automatically _ 100 %.
 - To unlock the input field, tap on the padlock icon д The input field is then unlocked for inputs P. Tap on + and to change the percentage.

CulinaMix <i>Pro</i>	08/02/2018 - 15:49 🗔 🕋 🔅	•
New Recipe	1 - 2 - 3	×
Recipe 1		
Säure	- 100 % +	^

- 5. Go to the next edit window by tapping on
- Define the following parameters: 6.
 - Mixing ratio between the cleaning component and water
 - Temperature of the mixture

CulinaMix <i>Pro</i>	08/02/2018 - 15:51 🖪 📄 🔅	()
New Recipe	1-2-3	×
Recipe 1 Water Ratio		
Detergent : Water		
1 : 5 Temperature 80	°C	
	e o	Ⴙ





7. When you have configured all settings, tap on 🔲 to save the recipe.

Tap on 🗙 to cancel the edit process.

Tap on 🕤 the return to the previous step.

10.9.13 Acid

Follow the navigation indicated by the red arrow in the screenshot to access the corresponding settings.

CulinaMix <i>Pro</i>	08/02/2018 - 15:23	s 🖍	*	Ð
Settings > Masterdata > Acids	•			æ,
Cleaning Acids				+
Säure			>	<u>^</u>
				-

1. Tap on the plus icon to add a new acid.

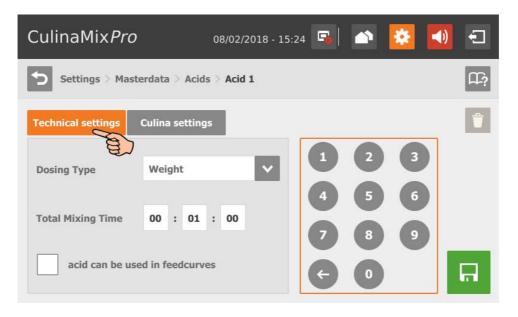
OR

Tap on an existing acid to edit it.

CulinaMix <i>Pro</i>	08/02/2018 - 15:23	I	*	()	Ð
Settings > Masterdata > Acids	5			2	Ω?
Cleaning Acids				A	+
Säure					^



2. Define parameters for feed preparation in the mixing tank and dosing under the tab "Technical settings".



- Select the **Dosing type**, either "Weight" or "Time".
- Under **Total mixing time**, define a duration for mixing of the acid.
- If necessary, activate the option that the acid may be used in feed curves by checking the corresponding box. This option is only applicable for acids.
- 3. Define the values for the agitator during distribution under the tab "Culina settings":

CulinaMix <i>Pro</i>	08/02/2018 - 15:2	25 🖪 🔺 🔯	
Settings > Masterdate	a $>$ Acids $>$ Acid 1		Ω?
Technical settings Culin	a settings		Ť
Interval mixing during dist	tribution	123	
Interval mixing time	00 : 01 : 00	4 5 6	
Interval pause time	00 : 01 : 00	789	
Low mixing speed		< 0 €	딦

- If the box Interval mixing during distribution is not checked, the agitator will mix permanently.
- 4. When you have configured all settings, tap on 📮 to save the acid.



10.9.14 Lye

Follow the navigation indicated by the red arrow in the screenshot to access the corresponding settings.

CulinaMix <i>Pro</i>	08/02/2018 - 15:26	B	*	(ا	Ð
Settings > Masterdata > Lyes		•			Ω?
Cleaning Lyes					+
Lauge				>	
					~

1. Tap on the plus icon to create a new lye.

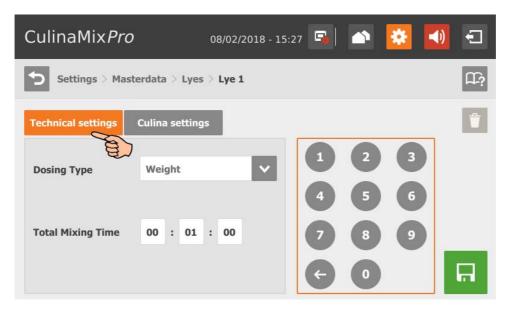
OR

Tap on an existing lye to edit it.

(C)
H-?
+



2. Define parameters for feed preparation in the mixing tank and dosing under the tab "Technical settings".



- Select the **Dosing type**, either "Weight" or "Time".
- Under **Total mixing time**, define a duration for mixing of the lye.
- 3. Define the values for the agitator during distribution under the tab "Culina settings":

CulinaMix <i>Pro</i>	08/02/2018 - 15:28 🖪 🔺 🔅	I
Settings > Masterda	nta > Lyes > Lye 1	Ω?
Technical settings Cul	ina settings	1
Interval mixing during di	stribution	
Interval mixing time	00 : 01 : 00 4 5 6	
Interval pause time	00 : 01 : 00 7 8 9	
Low mixing speed		ត

- If the box Interval mixing during distribution is not checked, the agitator will mix permanently.
- 4. When you have configured all settings, tap on 🔲 to save the lye.



10.9.15 Mixing tank settings (assigning)

Follow the navigation indicated by the red arrow in the screenshot to access the corresponding settings.

CulinaMix <i>Pro</i>	08/02/2018 - 10:34	• 🛋 🕋 🔀 🐔	
Settings > Mix tank s	ettings	ם	?
MixTank 1	MixTank 2	MixTank 3	
Schaumann Futte 🗸	Schaumann Futte 🗸	Schaumann Futte 🗸	
Day: 0 - 16	Day: 17 - 21	Day: 21 - Max	
10	5 ⇔ 17 ⇔ 22		
< 6		> ✓	

- 1. Define the order of the mixing tanks based on the piglets' age.
- 2. Assign a feed curve to each mixing tank.
- 3. Tap on the time period limit in the colored line and use the arrows to define the corresponding feed curve intervals for the respective mixing tanks.
- 4. Confirm your input by tapping on \checkmark

10.9.16 Expert settings

Follow the navigation indicated by the red arrow in the screenshot to access the corresponding settings.

CulinaMix <i>Pro</i>	08/02/2018 - 15:39	s 🗠	*	-)	Ð
Settings > Special expert	settings	-			Ω?
Feed move settings				>	^
Subcircuit overview				>	



Feed move settings

Tap on the correct feed move in the list.

OR

Filter the correct feed move, e.g. based on start and/or target.

CulinaMix <i>Pro</i>	08/02/2018 - 15:40 🕞 🖄	🔅 📢 🕣
Settings > Special expert setti	ngs > Feed move settings	 ?
	~	×
BunkerSilo 1-1 [1] - MixTank 1		
BunkerSilo 1-2 [2] - Merk 1	MixTank 1	
BunkerSilo 1-3 [3] - MixTank 1	MixTank 2	_
BunkerSilo 2-1 [1] - MixTank 2	MixTank 3	~
BunkerSilo 2-2 [2] - MixTank 2		>
Bunkarfila 2.2 [2] - MiyTank 2		

- **Start devices** indicates the devices that belong to the selected feed move and that are started and stopped.
- Backlash time to measure the residual flow.

This time does not apply to feed moves for feeding or watering at a valve or to push to a valve. The corresponding times in the general settings are used for this purpose.

- Backlash mass: The residual flow volume determined by the control.
- Backlash adapt factor: Weighting of the new value to calculate the residual flow.
- **Dosing speed:** The dosing speed is determined and set automatically for dosing based on weight. Calculate and enter the dosing speed if the system doses based on time.
- The **speed adapt factor** is the weighting of the new factor to calculate the dosing speed.
- Burst control weight: This setting is only important for feed moves
 - from one weighed tank to another weighed tank;
 - from one weighed tank to itself (recirculation);



- through a flow meter whose source or target tanks are weighed;

If a weight deviation larger than the value set here is determined while these feed moves are carried out, the alarm "Unexpected weight loss" is generated.

- **Minimum speed:** If this speed is not reached, an alarm is generated, e.g. empty silo, clogging.
- Control time speed are time intervals in which the minimum speed is checked.
- **Normal frequency** indicates the frequency inverter's frequency for normal speed. The normal speed is adjusted by the control.
- **Slow frequency:** This setting indicates the frequency inverter's frequency for fine dosing speed. The normal speed is adjusted by the control.

Subcircuit overview

Select the mixing tank and tap on the correct subcircuit.

CulinaMix <i>Pro</i>	08/02/2018 - 15:41	si 🔺 🙆		Ð
Settings > Special expert sett	ings > Subcircuit overvie	ew	_	Ω?
< MixTank 2 >	< MainCirc	cuit 1 Tank 2 [2]		
Unterkreis [1] (SubCircuit)	E)		>	
Unterkreis [2] (SubCircuit)			>	
Unterkreis [3] (SubCircuit)			>	
Unterkreis [4] (SubCircuit)			>	
Unterkreis [5] (SubCircuit)			>	
				V



You can switch between the subcircuits in the settings parameter window.

CulinaMix <i>Pro</i> 08/02/2018 - 15:42 🖼 🕋 这	()	Ð
Settings > Special expert settings > Subcircuit overview > Subcircuit		£
< Unterkreis [2] >		
Maximum time dosing	120 s	
Maximum dosing per valve	160	
Open valve time	1 s	
Valve block time	4 s	
Time span filling	120 s	
	440	

- **Maximum time dosing:** The time period for which feed is dispensed in the subcircuit until the system switches to the next subcircuit. A valve reporting "empty" is irrelevant. The cup should fill up within this time.
- **Maximum dosing per valve:** Maximum number of times a valve can be used for dosing before it is locked. This value refers to one feeding cycle.
- **Open valve time:** Time during which feed is dispensed.
- Valve block time: The empty sensor is ignored and the valve is considered full during this time.
- **Time span filling:** The time period required to fill the main circuit completely at the start of feeding or cleaning.
- **Time span emptying:** The time period required to empty the main circuit completely after the end of feeding.
- **Content volume** (pipe content) is calculated automatically from "Pipe type" and "Pipe length". The volume can also be entered directly if the box "Enter volume" is checked. The parameter "Pipe length" is deactivated in this case.
- Pipe type
- Pipe length
- **Dosing time water** is the water valve's opening time. The pipes are cleaned by water within this time.
- **Usage time of air**: Air is pushed through the pipes during this time after they have been flushed with water.

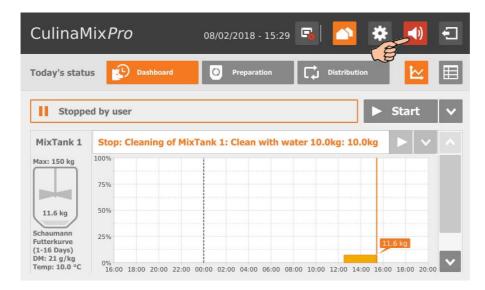


- Clean amount mix: In case of cleaning with recipe, this amount is mixed additionally.
- Amount valve clean: Amount for valve or drop pipe cleaning.
- **Time valve clean**: The time period for which the valves opens for cleaning. The "Amount valve clean" may pass through the valve during this time.
- **Squeeze valve dosing delay:** When switching to the subcircuit, the system waits for this time before the pinch valve is opened again.
- **Dose with closed end valve** for better application of the pressure / less pressure loss with long pipes.
- Adjustment factor: This factor is a percentage used to adjust the amount for valve cleaning. The adjustment depends on the remaining amount. The percentage is subtracted from the total cleaning amount used beforehand. Example: From a cleaning amount of 20 liters, an amount of 5 liters remains. At an adjustment factor of 50 %, a total amount of 17.5 liters will be used for the next cleaning.
- **Recirculate after pause time:** After a pause, the pipe content recirculates for this time before it is distributed. This parameter refers to "Feed preparation" parameters or to the manual pause (by stopping the system).

10.10 Alarms

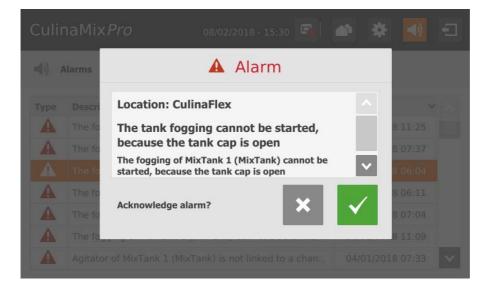
If there is an active alarm or warning, the alarm icon is colored.

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 9 "Alarms"
- 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.





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