



LIQUID FEEDING

Always fresh feed



- Higher feed intake and growth
- Lactic acid bacteria improve the gastrointestinal health
- Lower feed expenses
- Automatic feed allocation control
- Reduced risk of salmonella, and lower incidence of coli bacteria
- Improved feed conversion ratio - up to 20 kg of feed per finisher
- Feed consumption up to 10% lower
- An increase in daily growth of up to 6%
- Achieve slaughter weight in less time



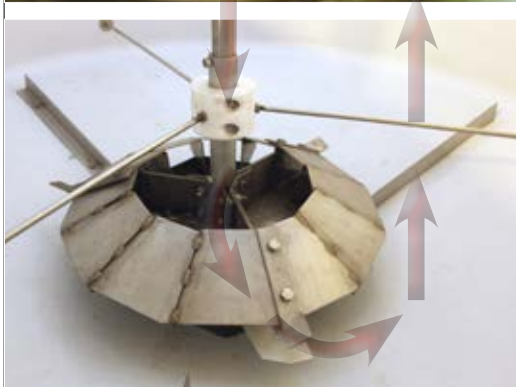
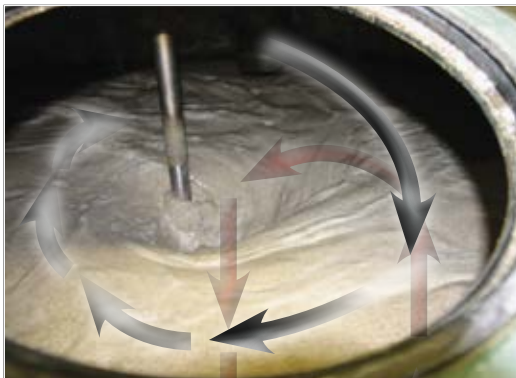
BENEFITS AND RESULTS OF LIQUID FEEDING

- Higher feed intake and growth
- Lactic acid bacteria improve the gastrointestinal health
- Lower feed expenses
- Automatic feed allocation control
- Reduced risk of salmonella, and lower incidence of coli bacteria
- Improved feed conversion ratio - savings equivalent to 20 kg of feed per finisher
- Feed consumption up to 10% lower
- An increase in daily growth of up to 6%
- Achieve slaughter weight in less time

LIQUID FEEDING

10% lower feed consumption with FUNKI LIQMIX mixing tank

ACO FUNKI offers residual-free liquid feeding system of a high quality. Advanced technology ensures an efficient investment. The main benefits of liquid feeding are fresh feed and good overview. Similarly, it is possible to use by-products from the food industry, as well as to manage feed allocation at the end of the pigs growth period. The liquid feeding is especially cost effective for finishers, because feed costs increase significantly. The liquid feed is easy for pigs to consume - especially for piglets. Good feed intake is a prerequisite for growth accelerating, so that the pigs reach slaughter weight in less time.

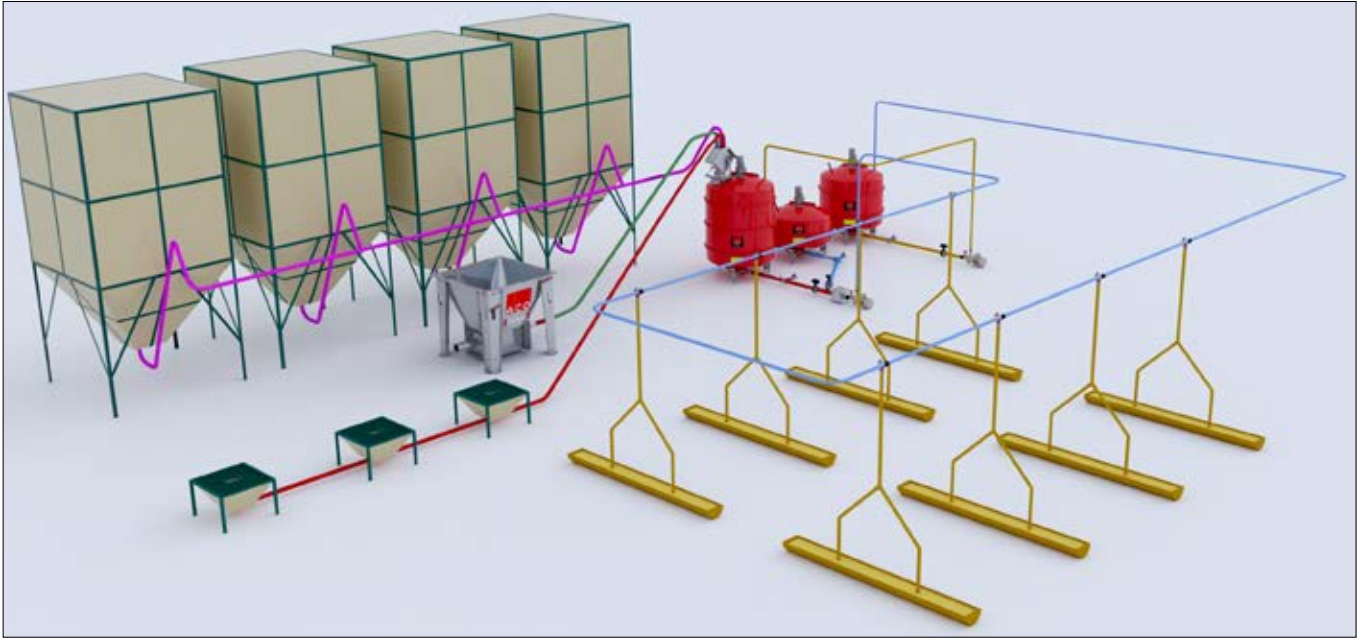


▲ FUNKI LIQMIX

The mixing tanks for liquid feeding are available with capacity from 2 to 10 tons.

COMPLETE LIQUID FEEDING SYSTEM

Liquid feeding with high level of hygiene // FUNKINET control



Choose your system

Dry feeding vs. Liquid feeding*

Description	Dry feeding ad-lib	Liquid feeding	Difference per pig	
			Per day	30-110 kg
Daily growth, g	949	959	+ 10 g	1 kg
Feed conversion ratio, kg feed/kg gain	2,75	2,58	0,17 kg	13,6 kg
Meat percentage	60,6	60,9		+0,3%
Saved feed cost per pig				Up to 5,5 EUR/pig

◀ THE CHOICE IS YOURS

Feeding strategy and feeding method

Source: Note no. 1073, Danish Pig Research Center.

*Home mixed flour feed

FROM WASTE TO PROFITS ►

Applying residual-free liquid feeding ensures no leftovers in the feed pipes after feeding. This ensures fresh feed for each feeding, and not a mixture of new and old feed. It means less bacteria and infections in a stable, and, as a result, reduction of medicine consumption by 50%.

It is practically proved that the use of liquid feeding protects against salmonella.

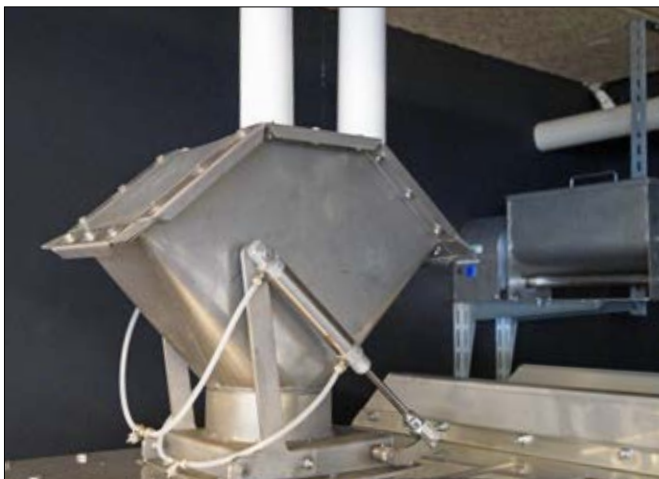
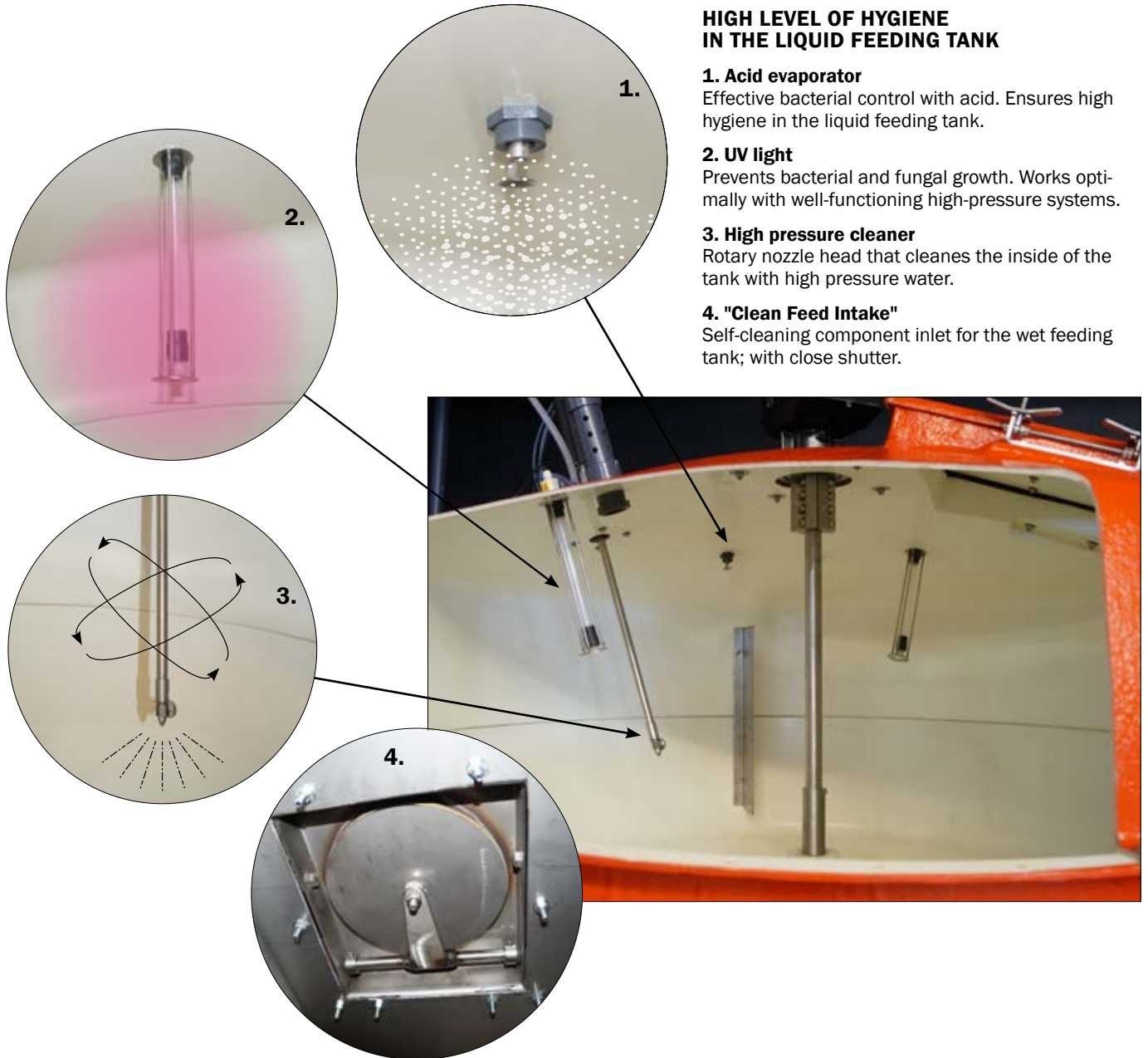
	Liquid feeding	Dry feeding
Salmonella positive*	23,5%	76,5%

*Based on screening of 256 pig farms.

Source: Note no. 9469, table 2, Danish Pig Research Center.

LIQUID FEEDING

Liquid feeding with high hygiene levels



◀ COMPONENT INLET

The component inlet damper ensures that no moisture is penetrating the feed downpipe from the mixing tank. In addition, the component inlet is designed so the feed flow cannot be blocked.

LIQUID FEEDING

Residual-free

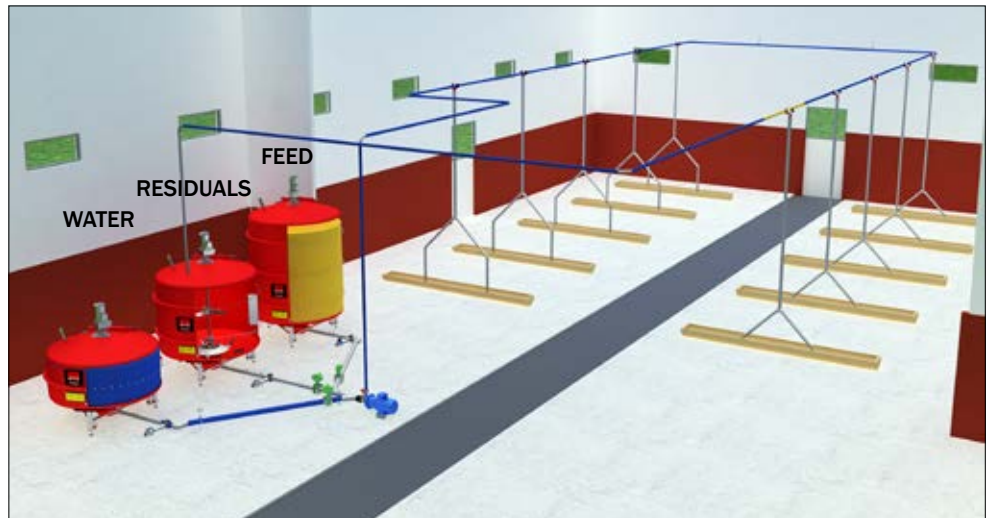
RESIDUAL-FREE LIQUID FEEDING

Residual-free liquid feeding is a feeding method that ensures no leftovers in the feed pipes after feeding. This ensures fresh feed for each feeding, and not a mixture of new and old feed.

- Increased number of weaned piglets with approx. 3 per sow per year
- Increase in piglet weight by weaning up to 1.2 kg
- Medicine consumption reduced by 50%
- No loss of amino acids
- Return on investment: 1-1.5 years

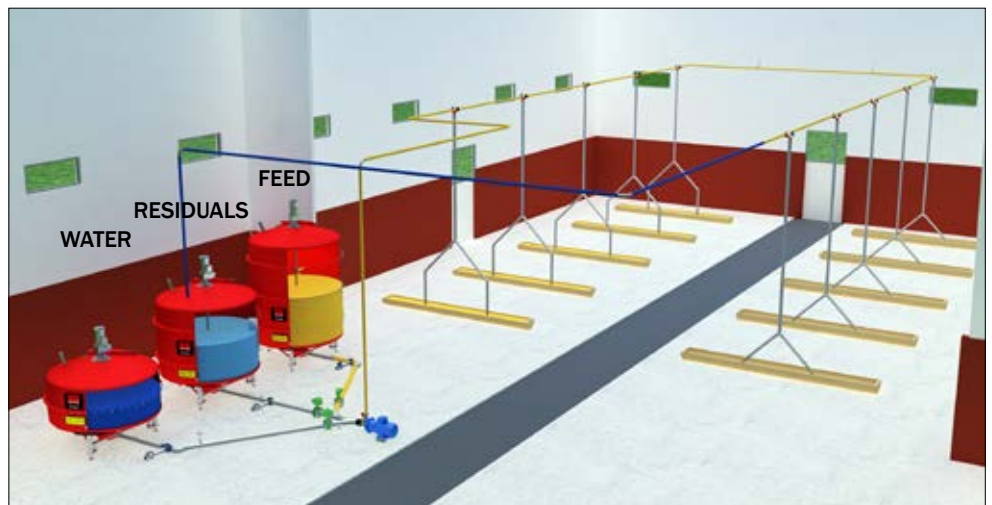
BEFORE FEEDING ►

The mixing tank has the mixture ready. The tank for residual water is empty. The tank for clean water is full and there is clean water in the pipe line.



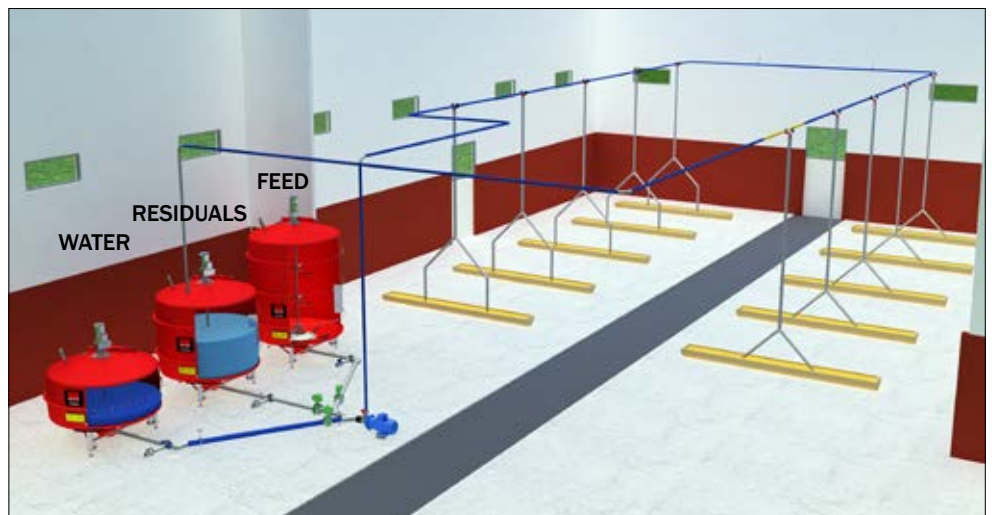
DURING FEEDING ►

The mixing tank is emptied. The tank for residual water is filled. When there is no longer feed in the mixing tank, the water is pumped from the clean water tank. In this way, the clean water tank is used to distribute the feed left in the feed pipes, and when the last valve has been fed, the feed pipes are filled with water.



AFTER FEEDING ►

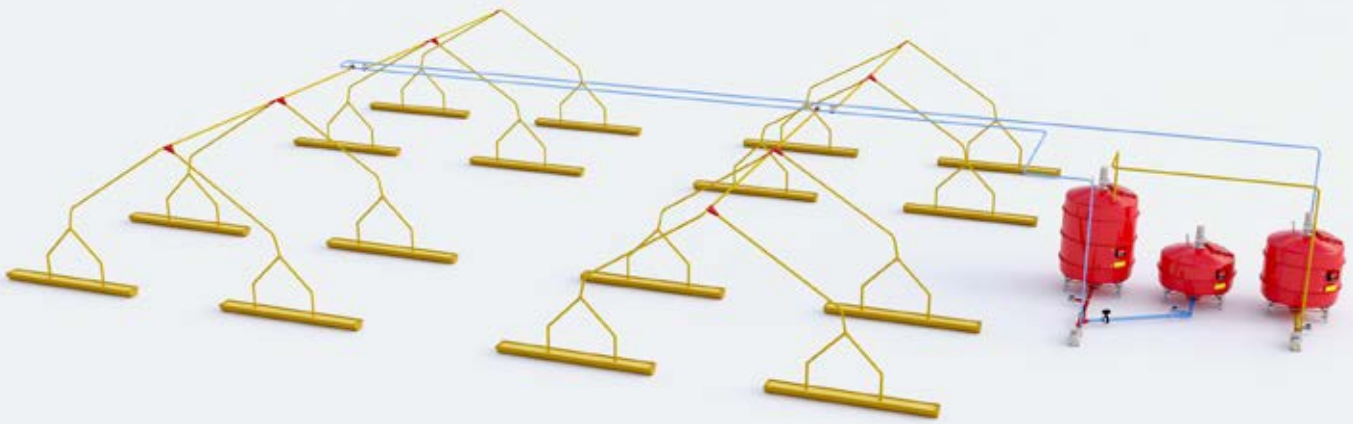
The mixing tank is empty. The residual water tank is filled up.



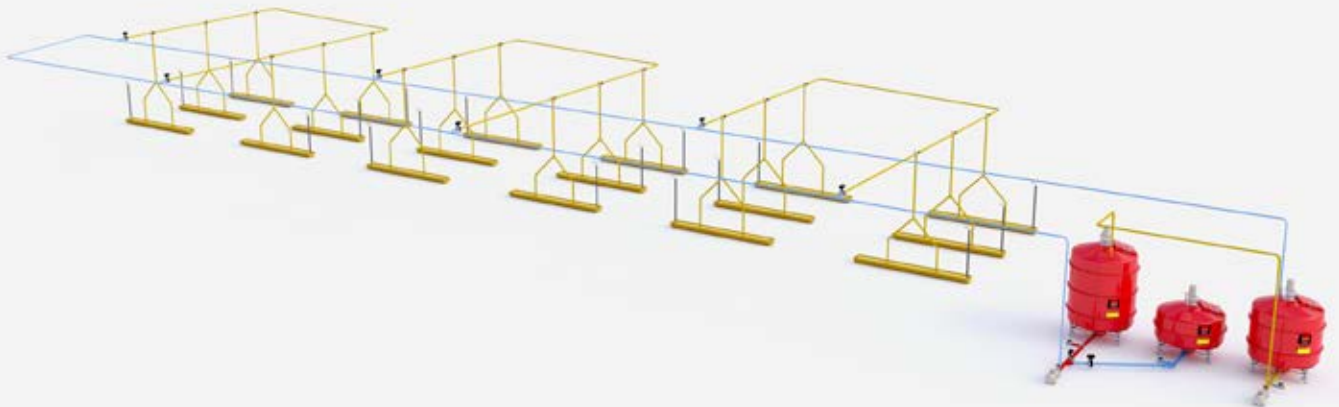
LIQUID FEEDING SYSTEMS

Individual and flexible solutions that always suit your project

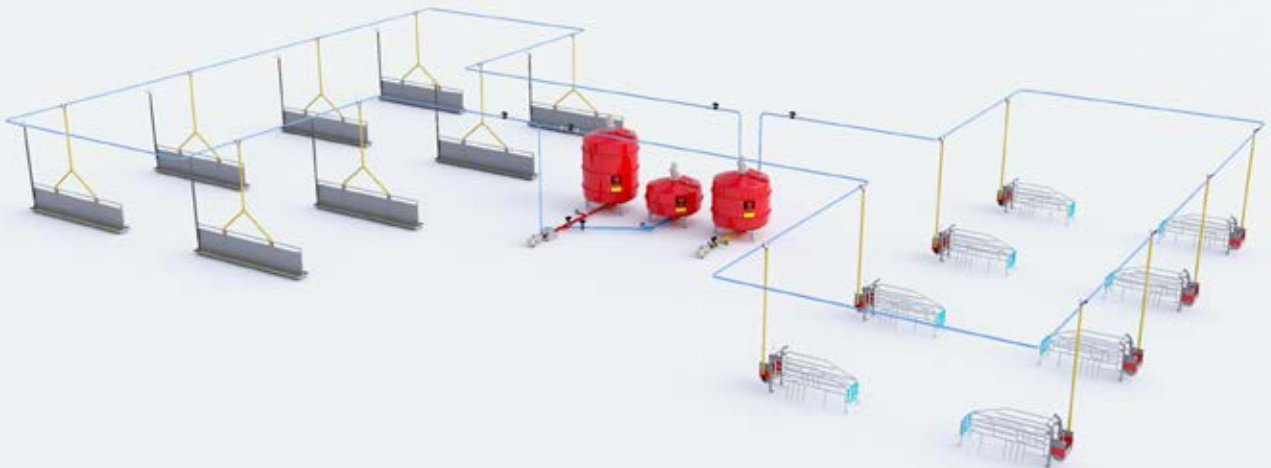
CENTRAL PIPING WITH SECTION PIPES WITHOUT RETURN



CENTRAL PIPING WITH SECTION PIPES WITH RETURN



AD-LIBITUM FEEDING FOR BOTH SOWS AND WEANERS





COMPONENTS FOR LIQUID FEEDING

High performance equipment from silo to trough

If the farm staff spend more time on direct animal care, animal welfare and comfort will be reflected in financial performance at farm operation. Full automation of feed mix and feed distribution with ACO FUNKI's liquid feeding system releases more time for staff to pay attention to the animals.



◀ COMPONENT INLET AND CCM

CCM corn is a good feed ingredient for liquid feeding. From the CCM tank the corn "snails" directly into the liquid feeding tank. The mixing tank is available in different sizes, depending on the farm capacity. The design of the tank is critical for the feed quality. One of the most important criteria for feed quality is a uniform consistency and sufficient fluidity. These properties are obtained by appropriate mixing of the components in the feed mix.

Our mixing tanks are made of robust fiber glass. The tanks have completely smooth inner walls as well as a streamlined shape that prevents unwanted deposition of feed and ensures quick and easy cleaning.



Testimonials:

“ We have 8.000 sows and produce 240.000 finishers annually. All our sows and finishers are fed by means of residual liquid feeding system from ACO FUNKI. We use CCM corn for all the animals. We now have 3 CCM plants with a volume of 20 - 60 m³ each. The system runs smoothly daily.

Mogens Hansen, DanSlovakia

COMPONENTS FOR LIQUID FEEDING

Microdosing system and feed valve



◀ MICRODOSING SYSTEM

The system dosates small amounts of vitamins, minerals and other additives with gram accuracy. The system is equipped with special stirring and has a capacity of 10 liters. The entire system is made of stainless steel.



FEED VALVE ▶

- Optimal hygiene and no feed residuals
- Easy to mount
- Strong rubber membrane with long durability
- Stainless valve cover ensures that the valve stays tight
- Flexible - can be rotated in all directions



Ø50 mm = 1,56 kg feed/m



Ø63 mm = 2,46 kg feed/m



◀ TWIN-SPIN PIPE

- Made of strong PVC
- Good mixing effect
- Low pressure loss
- Good hygiene in the tube
- Ø50 / 63 mm



◀ STONE TRAP

When the feed flows from the mixing tank, it passes the stone trap. Here, small stones and other foreign objects are being sorted out. This provides additional protection for the pump. At the same time, the pigs get cleaner feed mix.

COMPONENTS FOR LIQUID FEEDING

Pumps and acid pump



◀ PUMPS

ACO FUNKI's liquid feeding system uses electrical pumps for feed transport. This type of equipment is subject to great wearing-down due to the fact that it works almost without interruption. Unlike other pumps on the market, our pump has an advantage because it is made of stainless steel with a thickness significantly greater than other manufacturers'. This ensures a longer lifetime of the pump and a durable operation of the entire system.

- Centrifugal pump 4kw or 5.5kw
- Distribution speed 1-7 l / sec.

TYPE OVERVIEW - PUMPS

Article	Description	Max Output Tons/hour	Feed output		Max pressure, Bar	
			Liter /min	Tons/hour	50Hz	60Hz
0138-689	Centrifugal pump for water 1,1 kW , motor 380V, intake 2', outlet 1¼'	12	200	12	-	-
0139-120	Liquid centrifugal pump 4,0 kW , 220/380V, intake 3', outlet 1½'	20	240	15	4,6	6,5
0139-138	Liquid centrifugal pump 5,5 kW , 220/380V, intake 3', outlet 1½'	25	360	21	4,8	7,2
0300-125	Worm pump arr. nemo 4 kW 2-step 2kW, intake PVC Ø90 mm, outlet PVC Ø63 mm	15	150/270	9/16	-	-



▲ ELECTRONIC ACID PUMP WITH WATER INTAKE

Automatic dosing of acid and medicine in water intake for, e.g., the water tank.



▲ HELICAL ROTOR PUMP



◀ ▲ ACID- AND SOAP PUMP

- Intake capacity - approx. 1 kg./min
- Can intake at time intervals
- The pump is durable and designed to resist for example acid

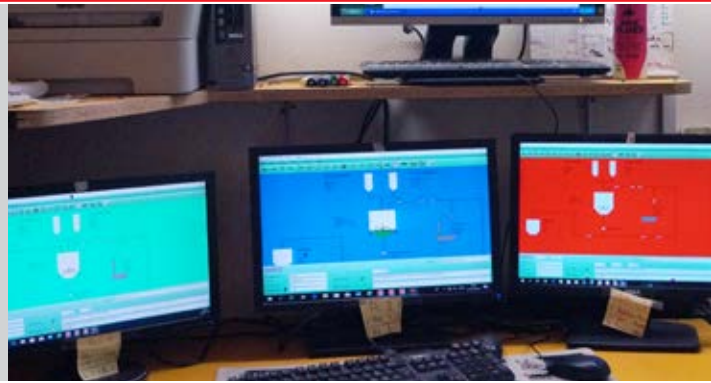
FUNKINET

Automatic control of liquid feeding process

Full automation of feed mixes and feed distribution with ACO FUNKI's liquid feeding system releases more time for staff to focus on the animals.

You can specify a feed program for the entire growth period (up to 99 programs). The system mixes and transports feed according to the selected recipes, and can be adjusted at sectional and valve level. As the animals grow, the feed recipe changes automatically.

FunkiNet monitors the mixing process, distributes feed, and provides analysis of the processes and results.



▼ CURVES FOR MULTI-PHASE FEEDING

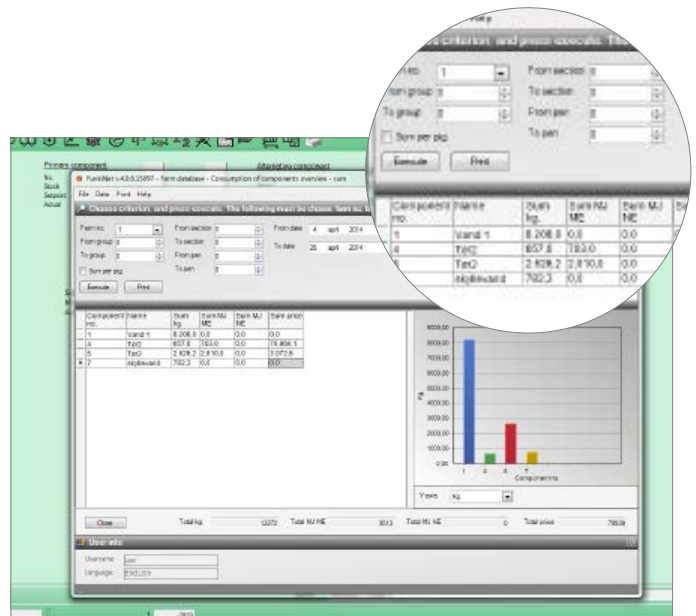


FUNKINET TO-GO APP

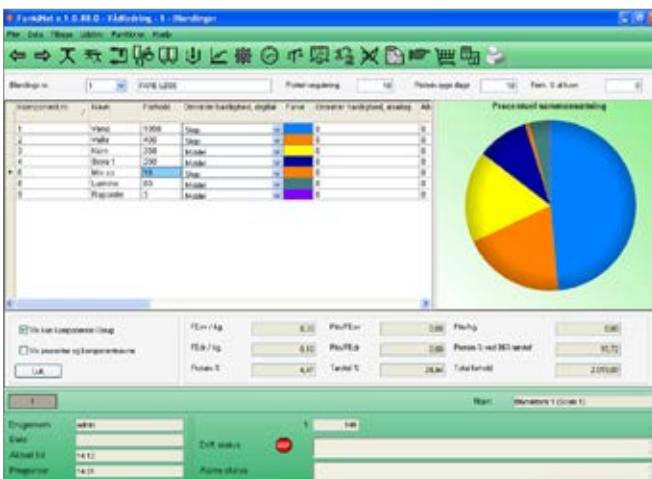
Management in pocket size

- Possibility to remote control the process
- Control data for each pen
- For Android OS
- For tablet or smartphone
- Ability to receive SMS for system failures (connection up to 10 devices)

▼ FUNKINET AUTOFEED - PROGRAM TIMES



▼ MIXES WITH PROTEIN ADJUSTMENT



FUNKINET FARM DATABASE

Collects data in a shared database

- Full traceability
- Overview of components, mixtures and nutrients
- Data extracts on farm, batch, section and pen level
- Optional periodically read-outs
- Database with data from every day back in time
- Batch reports with all relevant data
- Optimal overview
- Easy to operate
- Possible to track feed batch from delivery to trough

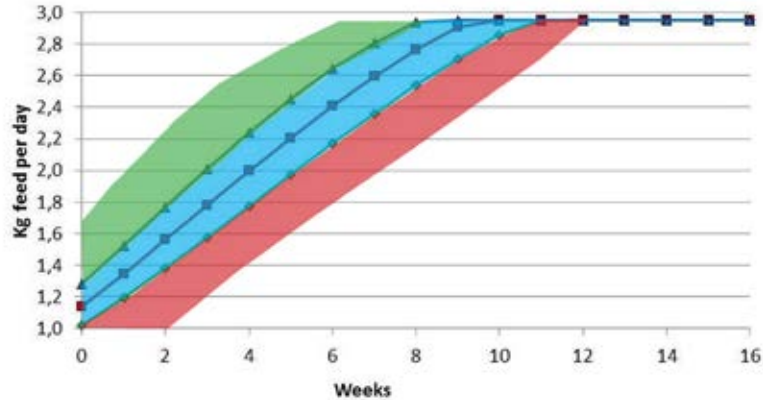
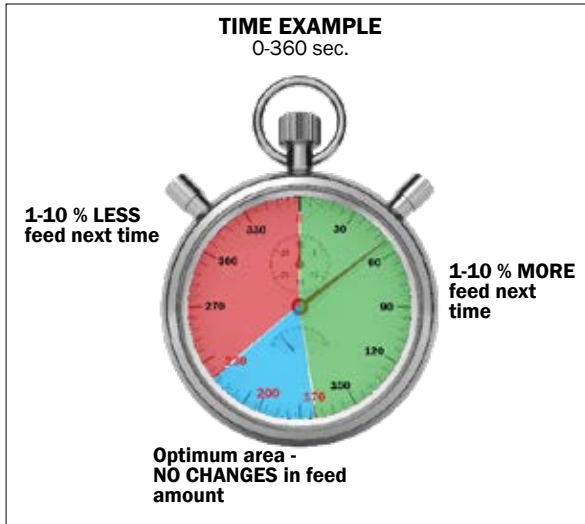
LIQUID FEEDING

Sensor feeding with FEED MANAGER

FEED MANAGER - ensures the animals get the correct amount of feed.

With ACO FUNKI's FEED MANAGER, you have an intelligent system that automatically adjust the amount of feed, depending on time pigs spend on eating. The special sensor is placed in the trough to register how fast the pigs eat. The principle is simple: there are settings for the optimum eating time. If the pigs eat slower, they get less feed next time. If the pigs eat faster, they get more feed next time, though up to a maximum amount.

Fully automatically system that ensures more rational use of feed.



▲ SENSOR

The FEED MANAGER's sensor detects how long it takes before the feed is eaten up.



Testimonials:



It is very reassuring to know that the system can detect how quickly the pigs eat, and then adjust the amount of feed according to the feed curve. We have experimented with the parameters in the feed curve and have now found an optimal solution. The system is very flexible and has many options for optimization. Based on our experience, we have now decided that Feed Manager will be used in all our stable sections in the future.

Jørgen Krøjgaard, Herning, Denmark

Production results:

- 2,62 FU/kg growth
- 1007 gram daily growth
- 1,3% mortality
- Meat percent: 60,5

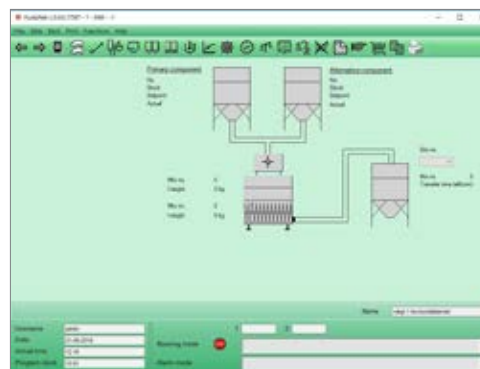


FUNKINET MILLING

Different options

With FunkiNet milling, you get the optimum overview; at the same time, consumption and mixes are shown in the same screenshot as your feed plant. And with up to 50 feed recipes and silos, you are secured far into the future, regardless of the capacity of the mill. With your own mill, you will have the opportunity to quickly adjust the feed mixes and get better welfare for your animals.

ACO FUNKI offers milling solutions of all sizes and functionality, according to your wishes and requirements.



Subject to changes in materials and design is reserved.

B-3044-GB



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