HOUSING RESOURCES

SOW FARM

GENUGTEN AGRI PROJECTS B.V. SPECIALIZES IN THE CONSTRUCTION AND RESOURCES OF MODERN PIG FARMS.

Competitive pricing, simplicity, functionality and durability are the most important factors with respect to the construction and equipment of pig housing. Due to many years of experience with the development and production of pens and related equipment, and the application of these systems on our own pig farms, we can supply you with tested materials that are suited for years of problem-free production.

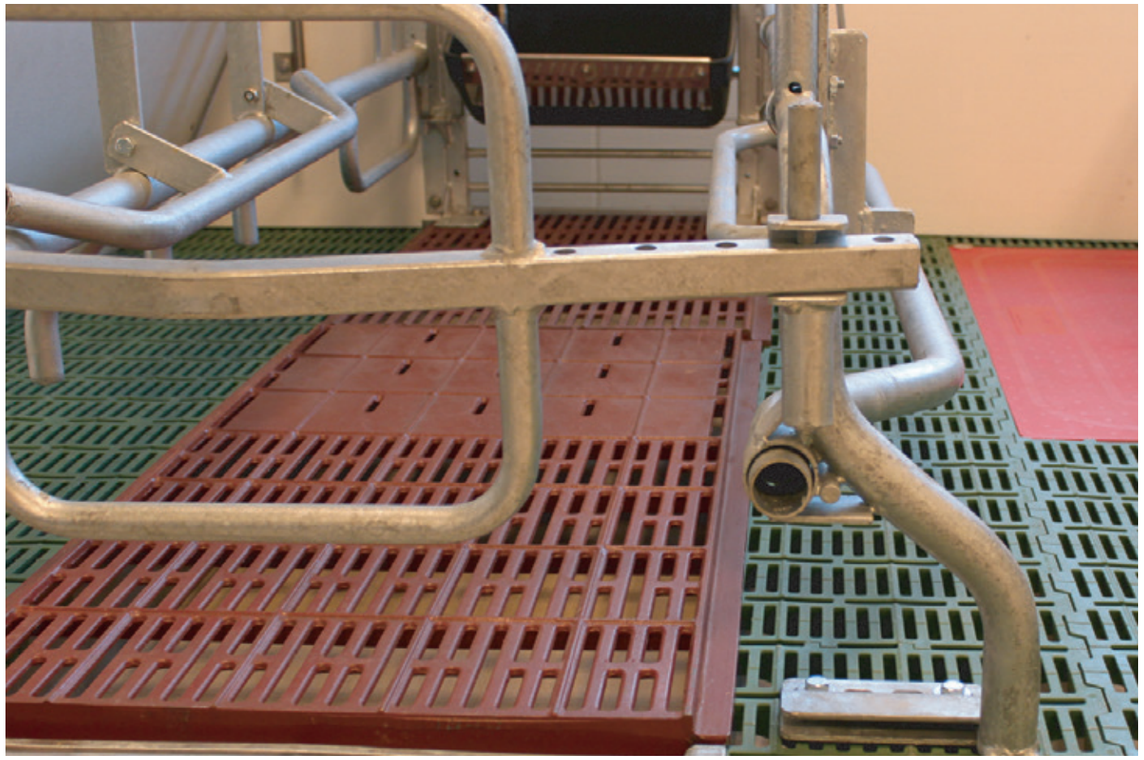
CONTENTS

Many of the materials we sell are developed in-house and manufactured by our expert OEM suppliers. We import 70 tot 80 per cent of all our plastic materials from Germany. Our cast iron slats and galvanised resources are produced according to our specifications by OEM factories in China that are specialised in farm resources. All other products are purchased directly from reputable manufacturers, which ensure that the necessary product standard is guaranteed.

1. FARROWING CRATES

1.1.1. SOLID PLASTIC FLOORING

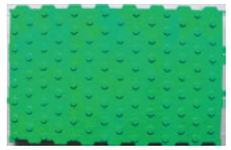
For our farrow pen floors, we have chosen to partner with the German company MIK International AG for the supply of solid plastic floors. In the 1980s this company invented plastic floors for pig farming and therefore has the most experience regarding plastic flooring. They provide a broad range of floors which makes it possible to design a farrowing facility with almost any dimension..



1.1.1. CLOSED AND HEATED NEST HEATING PLATES

Depending on the pig farmers wishes, the floors can be made with the following nest heating plates:

UNHEATED CLOSED PLASTIC SLATS



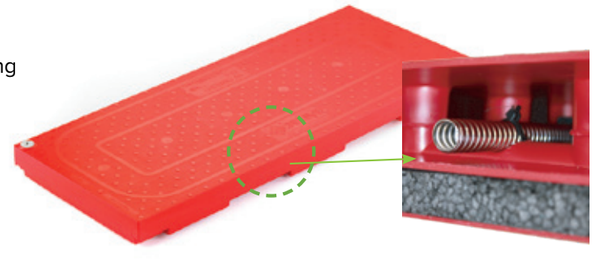
GEKU-80D
50 x 80 cm

MIK Swing - GR
40 x 60 cm

MIK Swing - G
40 x 60 cm

MIK THERMO XXL HEATING ELEMENTS

These patented elements are provided with a corrugated stainless steel heating pipe. This ensures improved heating of the elements and the following advantages:



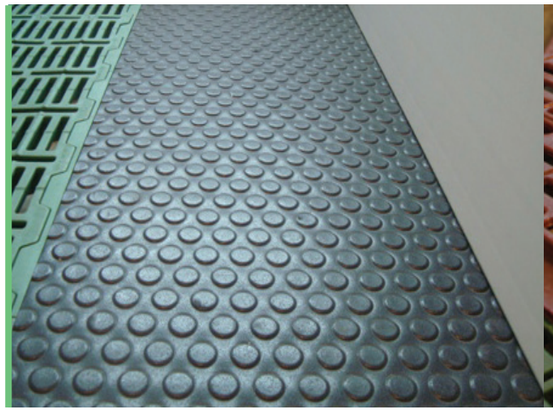
- Maximum lying comfort for the piglets;
- Anti-slip profile that is attached on the top side;
- Zero moisture due to the rounded shape;
- An air-free filling is possible, which optimises heat distribution;
- The bottom of the heating elements can be equipped with a plastic shield with insulation.

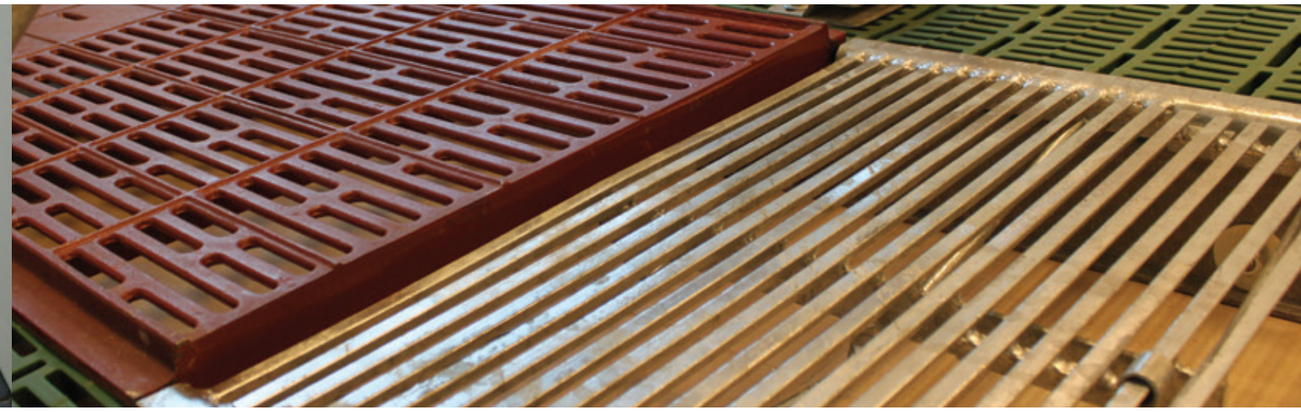
TECHNICAL SPECIFICATIONS:

	W400	W500	W600
Width:	400 mm	500 mm	600 mm
Length:	1200 mm	1200 mm	1200 mm
Heat output (20° room, 40° surface):	160 Watt	196 Watt	228 Watt
Connection:	2 x 15 mm	2 x 15 mm	2 x 15 mm

VERBA PLASTIC HEATING ELEMENTS

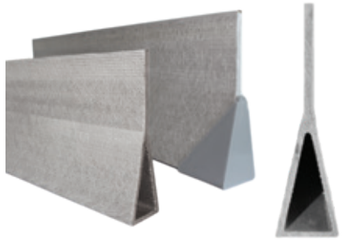
The major advantage of the VERBA plastic heating elements is that they can be manufactured to any size. The elements consist of two joint plastic plates of which the top plate is equipped with a convoluted plastic profile. This profile provides non-slip, soft bedding for the piglets. The plates have milled slots in which 12 mm PE heater hoses are fitted. As the heat is mainly released via the plastic, the plates will not warm up too fast and the heat loss to the surrounding space is limited.



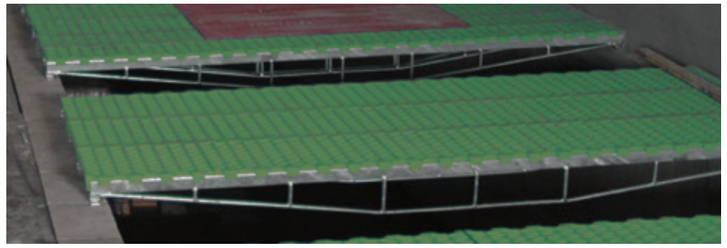


1.1.2. SUPPORT OF SOLID FARROWING SLATTED FLOORS

The following option for supporting the slatted floors is available:



135 mm Polyester delta-support



galvanised strip with 12 mm bridge

The use of galvanised strips has a major advantage. They enable the slat to be adjusted in height and can be equipped with steel supports or pins, which prevents the need for support edges when placing the slats. As a result, hygiene is greatly improved.

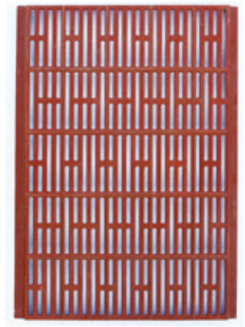
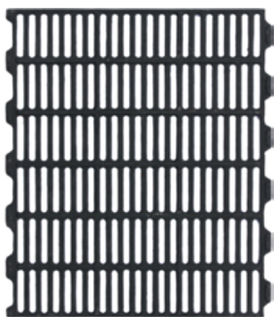
1.1.3. TRI-BAR SLATS WITH MANURE FLAP BEHIND THE SOW

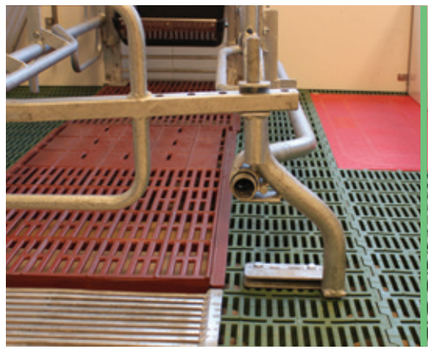
All farrowing floors can be combined with 11 mm tri-bar slats behind the sow. These slats are available in lengths of 30, 40, 50 or 60 cm.

These slats have maximum manure permeability and are easy to clean. Until the moment of farrowing, the manure flap can be left open, which results in lower labour costs.

1.1.4. CAST STEEL SLATS FOR UNDERNEATH THE SOW

All our farrowing floors are supplied with cast steel slats for underneath the sow. Cast steel has an almost unlimited service life, remains relatively cool and provides maximum grip for the sows. To provide the piglets with better accessibility to the sows udder, there are slats available with an increased height of ca. 2,5 cm. There are also cast iron slats available that can be integrated together with the plastic slats into one floor.

Type:	R-KH 90X58: flat	R-KH 120X58: flat	R-KH 60X58: flat
	R-KH 90X58H: elevated	R-KH 120X58H: elevated	R-KH 60X58H: verhoogd
	fully open	50% closed	fully open
Length:	90 cm	120 cm	60 cm
Width:	90 cm	60 cm	60 cm
			



1.1.5. PLASTIC COATED ‘SOFT-FLOOR’

Genugten Agri Projects B.V. supplies coated floors for farrowing pens. These soft plastic coated floors have the following benefits:

- Very easy to clean;
- Maximum grip for piglets: improved milk intake and no damages to their paws;
- Integrated closed piglet nest, with or without floor heating;
- Fully free bearing construction;
- Manure opening with pipe or rough grid for behind the sow;
- Suitable for standard cast iron slats for underneath the sow.

1.2. FARROWING CRATES

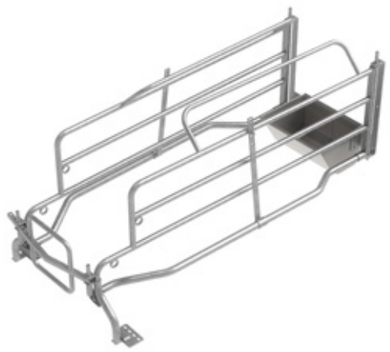
A good farrowing crate is one of the most important parts of a good sow farm. Therefore we continously develop new designs based on our own experience and the experience of our customers. This to be able to provide you with the best options that fit your wishes. Options that can be chosen include farrowing crates with adjustable rear bars, anti-crush bars and/or solid rear rump guards. Furthermore, the crates can be mounted to a wall.

Below is a list of the models of farrowing crates available:

1.2.1. EUROPE

The most often applied farrowing crate, including finger bars, anti-crush bars, adjustable width setting and rear gate.

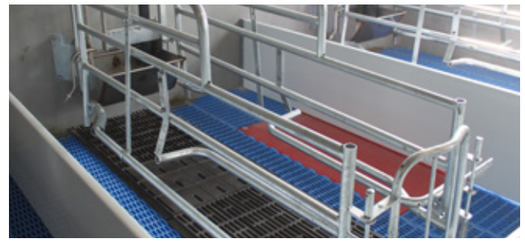
1.2.2. AMERIKA



Universal farrowing crates featuring: adjustable rear bars, width setting and rear gate. This type can be provided with anti-crush bars.

1.2.3. GENUPOR

Robust, international widely-used farrowing crate for large scale pig farming with adjustable rear bars, anti-crush bars and adjustable rear gate.



1.2.4. PELAPRO

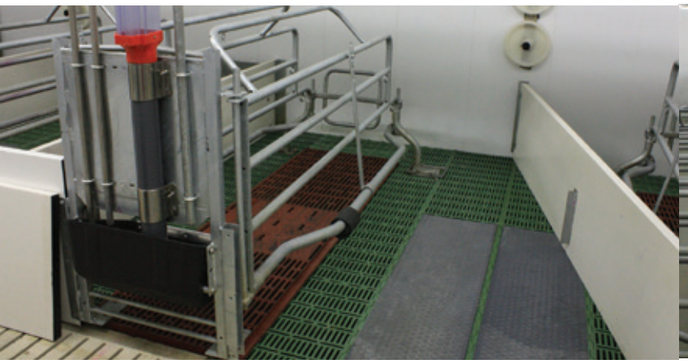
Fully free bearing farrowing crate with finger bars, crush bars and full length setting.

1.2.5. GENUMAT

An economic farrowing crate that includes fixed rear bars, long arm anti-crush bars and an adjustable rear gate.

1.2.6. GALVANISED FRAME

All farrowing crates can be supplied with a galvanised frame to which the pen walls are mounted. When applying a frame, the crates are separated from the wall. This is necessary when the sow stands with her head to the central walkway or if a free passage for the piglets is desired. The frame is provided with holes that allow easy installation of feed and water pipes.

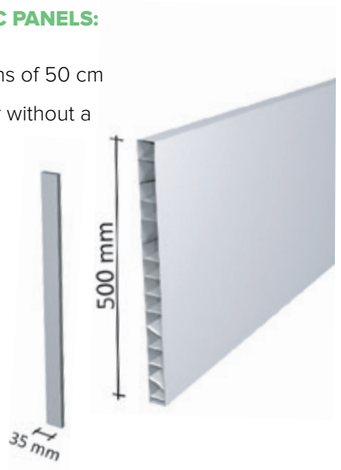


1.3. FARROWING PEN PARTITIONS

The pen partitions are never higher than 50 cm. The following options are available:

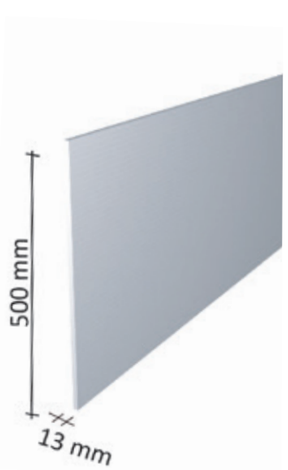
35 MM PVC PANELS:

Pen partitions of 50 cm high, with or without a plastic cap.

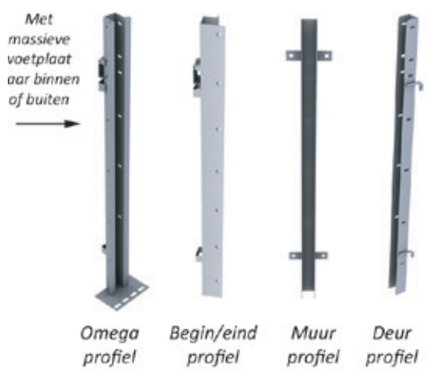


13 MM HPL LAMINATE SOLID PLASTIC PANELS WITH GALVANISED PROFILES

These panels have an indefinite service life and offer maximum hygiene. Furthermore, the pen floor area is more than % larger than when using 35 mm panels.



STAINLESS STEEL / GALVANISED PROFILES:



1.4. FARROWING-TROUGHS

Stainless Steel troughs can be supplied for wall mounting or installation to a galvanised frame. The troughs can be dedicated to wet and dry feeding systems and may be provided with a water plug for easy cleaning. We can supply the following types of troughs:

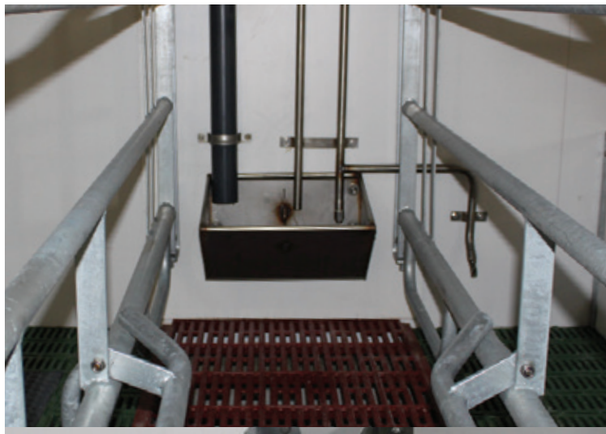
Plastic trough with stainless steel edges that is only suitable for installation in a steel front frame.

Welded stainless steel trough in one piece. Available in 16 of 24 litre capacity.

Welded stainless steel trough, with or without plug.

1.5. FARROWING WATER SYSTEMS

Farrowing crates are provided with a stainless steel pipe through which the sow can be supplied with additional water. Furthermore, a stainless steel water pipe with nipple drinker is supplied by default, which can be mounted on a front frame or in combination with a water pipe for the piglets. If this is impossible or not desirable, an extra PE water pipe can be installed instead.



1.6. FARROWING MANURE CASE

It is recommended to install tri-bar slats with a manure flap behind the sow for easy crate cleaning. During, and for a short period after the farrowing, it is wise not to use this flap. To be able to easily clean the manure during this period, stainless steel manure tubes can be used. One per every four pens is enough to work efficiently.

2. GESTATION CRATES AND GROUP HOUSING

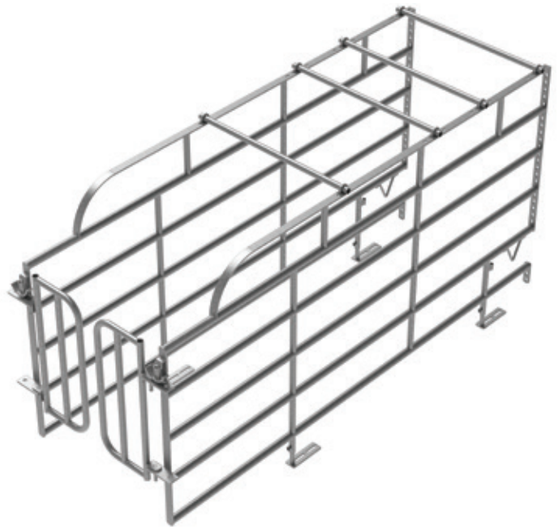
There are various kinds of gestation crates, so there is always a version available that best suits your business. All crates are made of galvanised stell, ensuring a long service life. The crates are available with horizontal or vertical bars. To ensure a long service life, the support foots that the crate is mounted onto are fabricated from 20 mm galvanised steel or stainless steel.

2.1. SALOON STALL

This stall is universal in use and can be applied both in the service- area and in the waiting areas.

FEATURES:

- Easy access to the sows during insemination and scannig;
- Gates can be locked in various modes, making them suitable for group housing;
- Standard delivery with a raised stainless steel trough.



P-D DOORS:

The saloon stall is available with special P-D stall doors that make insemination easier.

2.2. AUTOMATIC GROUP HOUSING STALL

These stalls are used in group housing in which high demand is placed on ease of use and flexibility. The automatic stalls are provided with only one revolving gate in the rear, which always closes. The gate has a function that can be set to close manually or completely automatically as follows:

Position	Setup
Sow free in and out	Standard
Sow free in and not out	During feeding
Sow free out and not in	During movements of sow
Sow fixed	When treating/scanning the sow
Gate open, fixed	During moving in
Automatically fixed sow, mannualy open gate	
Individual sow, manually closed	

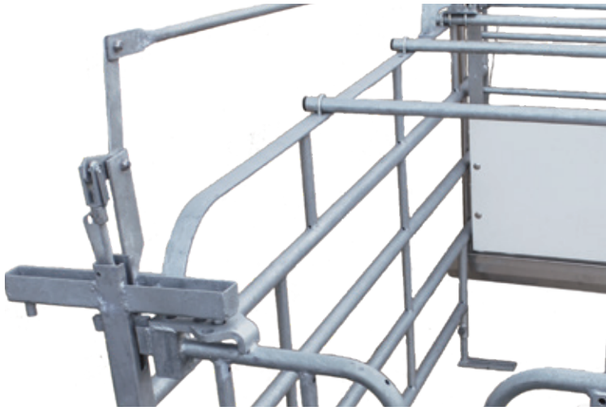
SELECTION

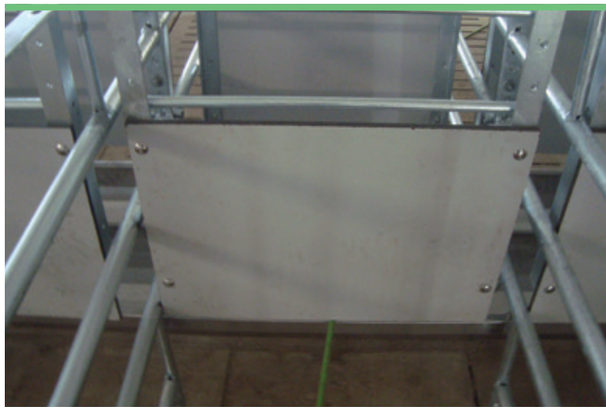
These stalls are centrally controlled (per row). So, either manually with the help of a turn/lifting mechanism or fully automated with a system. In the case of a fully automatic system, the rear gate position of the stalls is controlled with motors that are manual or can have a time operation function. The position of the rear gate is controlled by a lever and rode that are connected to a central pipe that turns across the top of all stalls. With the help of a small rod, an individual stall can be excluded from the central control. For example, in case a particular sow is ill, her stall remains closed. This can be done manually.

TROUGH VALVES

If the automatic stall system is applied with the wet feeding system, every stall can be provided with feeding valves. Through the application of valves, pigs will remain silent when a trough is being filled by the system. All troughs in the entire farm can be opened at once after which all sows can start eating. This promotes less stress and more rest amongst the sows. The valves will close automatically after feeding.

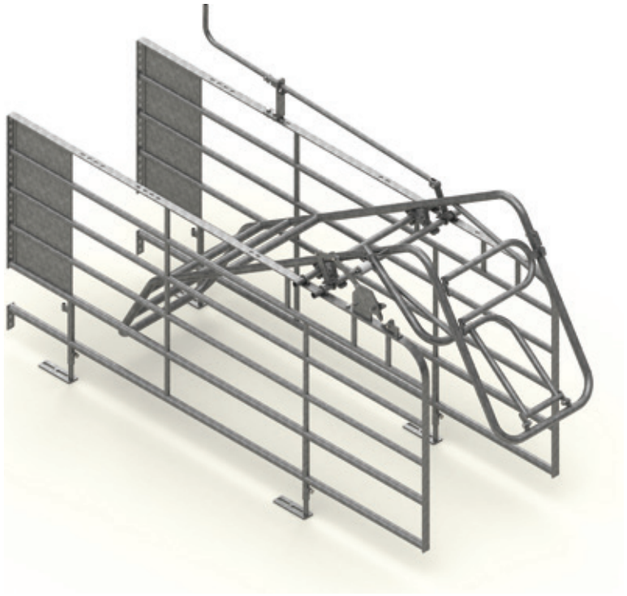
A double row of stalls is provided with a single motor that can be used to open all troughs simultaneously.

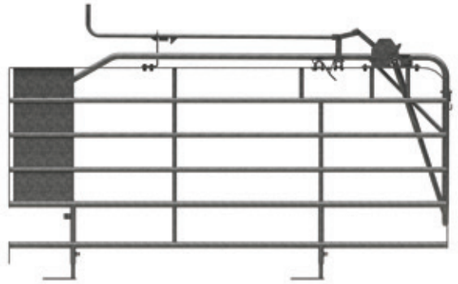


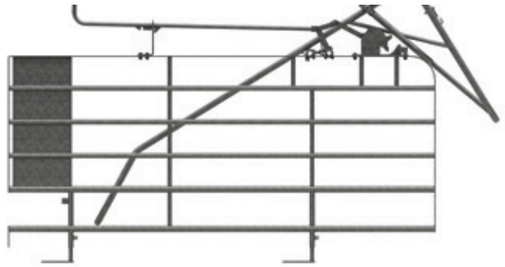


2.3. SWING STALL

Because of the demand in Germany, Genugten Agri Projects BV has designed a swing stall for group housing in which every individual stall is closed when the sow is eating. The operating principle of this stall is simple. The stall has a very robust upper swinging state in which the rear gate is integrated. By default, the swinging gate hangs at the front of the stall. When the sow commences eating, she pushes the swinging gate up in the front, which means that the gate in the rear closes and no other sow can enter the stall. Another benefit is that, if for some reason two sows were to enter one stall, the one in the rear would get the gate onto its back, forcing it to withdraw.

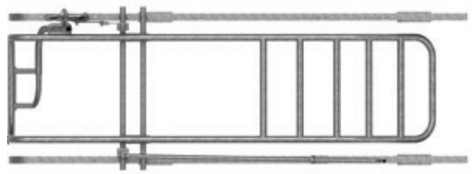


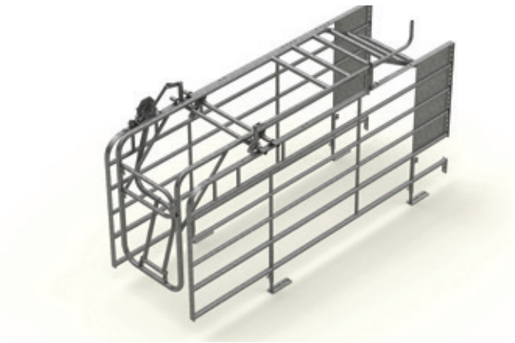




The swing stalls can be operated centrally per row with the help of a lever. In the default mode, the sows can unlock the rear gate after eating, by pushing against it. The rear gate will go up and the sow may exit. This central control has a feature to block all sows in a row from exiting, but not from entering the stalls. With this central control, you can determine a standard feeding time for the sows, something which promotes rest and rest time in the barn.

The swing stall is supplied in various lengths and is provided with horizontal pipes. The stall can so be provided with vertical bars upon demand. The standard version of the swing stall is suitable for stalls of 65 or 75 cm wide.



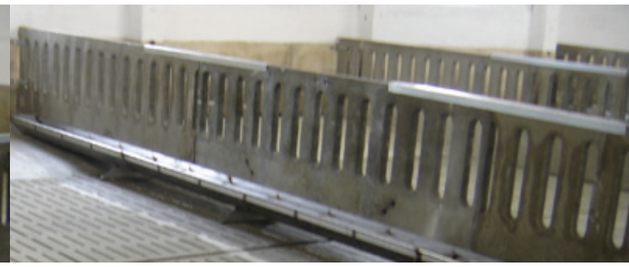


2.4. TROUGHS FOR STALLS

All stalls are standard provided with a stainless steel trough that is easily installed at a height of 20 cm. Due to the inclined shape of the trough at the back, the troughs remain cleaner in comparison with round troughs. In cases where two troughs cannot be placed opposed to each other, the single trough will have a steeper incline, which minimises feed-spilling by the sow.

2.5. GROUP HOUSING FOR SMALL GROUPS WITH CONCRETE PENNING SYSTEM

A concrete penning system can be applied for the housing of sows in small groups. Even with a height of only 1 m, this penning system will have no problems preventing the sows from jumping out. These pens are especially suitable for housing pregnant sows that are fed with wet feeding.

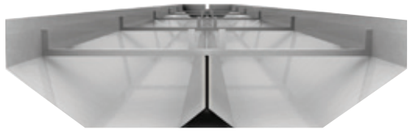


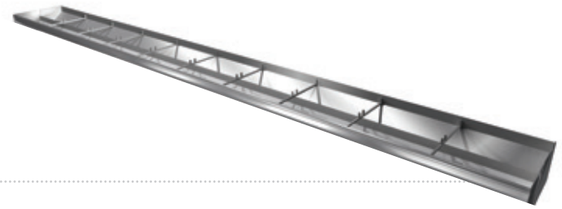
2.6. GROUP HOUSING FOR SMALL GROUPS WITH PLASTIC PENNING SYSTEM

The plastic penning system for sows in group housing can be entirely supplied according tot the customers specifications. It is possible to choose from 35 or 50 mm PVC panels, possibly combined with 1 inch or 5/4 inch galvanised tubes. The panels and tubes are mounted onto stainless steel or galvanised profiles. Standard, the pens are supplied in heights of 100, 110 and 120 cm. The penning system can be adjusted and supplied for all types of feeding systems.

2.7. TROUGHS FOR GROUP HOUSING

The wet feeding troughs in the middle of the pens are separated with a plate in order to be able to feed the sows pro pen. This is illustrated below.





2.8. GROUP HOUSING FOR LARGE GROUPS

When housing large groups, it is best to apply for a concrete penning system. The walls are tapered at the end to create more visibility in the pens. The concrete penning system has a much longer service life than a plastic panel system.

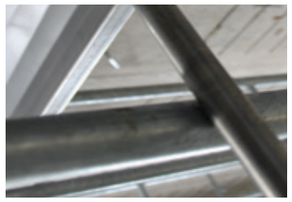
2.9. WATER SUPPLY FOR SOWS

The water supply pipes for sows are always made of stainless steel for the first 120 cm. Stalls are outfitted with stainless steel nipples at the end of the water pipes between every two stalls. In the case of group housing, stainless steel dinking bowls are used. One drinking bowl is installed per twelve pigs.

Trough nipples

Drinking nipples

Drinking bowls



3. BOAR PENS AND -GATES

3.1. BOAR PENS

Boar pens are made of galvanised pipes with easily lockable swing gates. The fence above the doors is fitted with a tube so that the strength of the fence is guaranteed. It is also possible to provide the fence with sturdy, solid HPL plastic panels. By closing off parts of the boar pen from the view of the sows, serenity amongst the animals is promoted.

Boar pens need a minimum floor area of 6 m2.

3.1. BOAR GATES

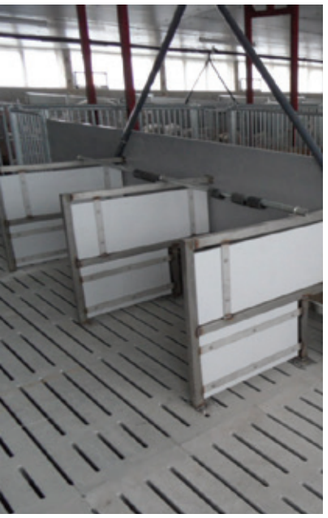
Boar gates are installed in the central walkway for the sows, so that the boar can be locked in for every 4 to 5 sows. After the insemination of the sows, the gate can be opened, after which the boar will go to the next group.

For greatest efficiency, it is best to place the two rows of sows opposite to each other as sows on both rows can be stimulated with the same boar. The assistance of a second person will speed up insemination significantly. In this case, the gates can be opened from either row side.

4. GALVANISED PENNING FENCES AND -GATES

4.1. PENNINGS FOR SOWS

Genugten Agri Projects BV produces various kinds of galvanised pennings for the separation of groups of sows/pigs. These are produced entirely according to the customers specification. The best system is chosen in consultation with the client and the final drawings and performance specifications of the design are submitted to the client for approval before production starts. This minimises the risk of errors.



4.2. GATES

To separate groups of sows, galvanised gates are supplied. This allows easy access from one group of pigs to the other. The gates have a standard height of 100 cm and a variable length with a maximum of 250 cm. The gates are mounted on robust 70x70 mm galvanised posts, which in turn are attached to the floor with an 8 mm thick base plate.

5. PIGLET REARING PENS

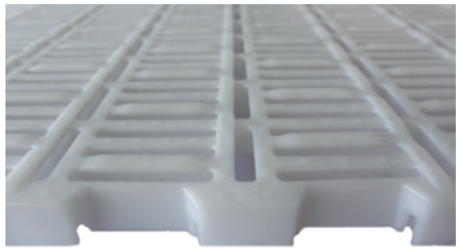
5.1. SLATS FOR PIGLETS

Genugten Agri Projects B.V. supplies various plastic flooring systems for the housing of piglets. It is possible to choose from the following options:

5.1.1. GENUKA SLATS

These slats are made of 100% PE plastic and can be supplied in the following versions:

- 100 x 50 cm, for piglets;
- 100 x 50 cm, partially closed;
- 80 x 50 cm, for piglets and sows;
- 80 x 50 cm, for walk ways.



5.1.2. PREMIUM FLOOR SLATS

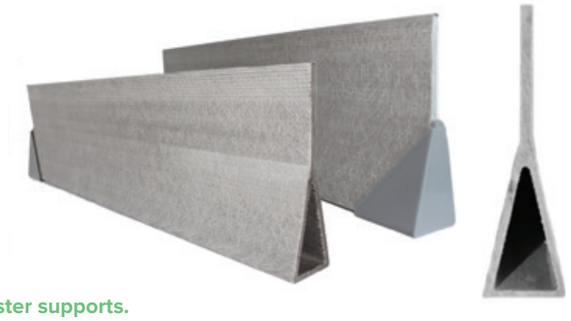
These slats are made of 100% PE plastic and can be supplied in the following versions:

- 80 x 60 cm slats;
- 80 x 60 cm closed slats;

5.1.3. SUPPORT FOR PLASTIC SLATS

Polyester beams:

Available in heights of 100 / 120 cm. The delta version is available in heights of 120 / 135 cm.



Weight in kg per m2 of slat that can be carried by polyester supports.

Length support	Length till 200 cm			Length till 250 cm			Length till 300 cm		
Slat width	**40 cm**	**50 cm**	**60 cm**	**40 cm**	**50 cm**	**60 cm**	**40 cm**	**50 cm**	**60 cm**
90 mm	230	190	150	100				230	230
100 mm	300	250	200	140	70			300	300
110 mm	380	320	260	180	140	100	120	380	380
120 mm	450	375	300	220	180	140	190	450	450
130 mm	600	510	420	400	325	250	240	600	600

norms of calculation: piglet slats 150 kg/m2, farrowing slats 250 kg/m2.

Galvanised strips with bridge:

The use of galvanised strips has a major advantage. They enable the slat to be adjusted in height and can be equipped with steel supports or pins, which prevents the need for support edges when placing the slats. As a result, hygiene is greatly improved.

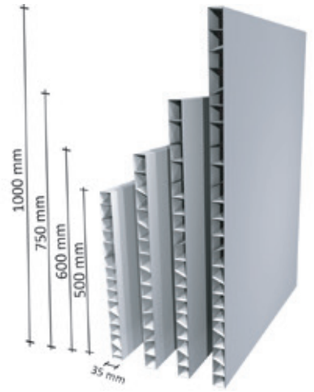
5.1.4. PLASTIC SUPPORT COLUMN SETS

If you want to build fewer manure pit walls, you can choose to support the polyester beams or galvanised strips with plastic support columns. The support columns consist of a plastic base and a plastic holder for the galvanised strip or polyester support. The height of the support column is determined by adjusting the length of the PVC pipe. A maximum height of 75 cm is maintained depending on the slat type and the required weight load.

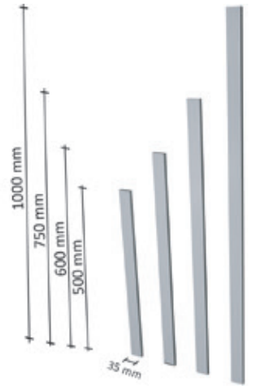
5.2. PVC PENNING WITH STAINLESS STEEL SUPPORTS

The penning can be supplied in various versions. The PVC version is favourably priced and you can easily install it yourself. Furthermore, the PVC boarding is smooth as a result of which it can be cleaned faster and better. The PVC boards are fixed to solid stainless steel profiles. All fixings are made of stainless steel, which guarantees an extended lifespan.

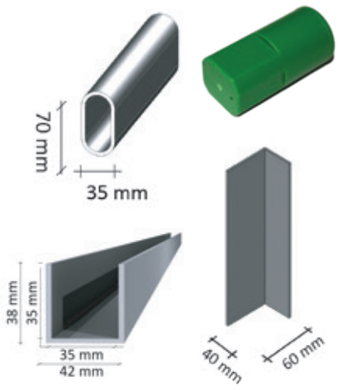
PVC boards



Side covers



Other PVC profiles



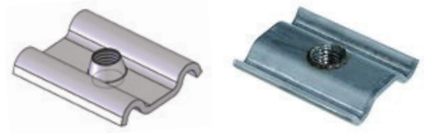
Stainless steel profiles available in thicknesses of 1.5 mm and in different heights

SS steel anchor | Omega profile | Start/end profile | Wall profile | Angular omega profile | Start/end profile | Door profile | Central profiles

RVS putankers

ALWAYS USE LOCTITE

PLASTIC FLOOR ANCHOR



Below | Above

T ANCHOR

PEN PARTITIONS

PEN PARTITIONS AND DOORS

PVC PARTITIONS FOR STAINLESS STEEL WET FEEDING TROUGHS

TYPE SBK75-75

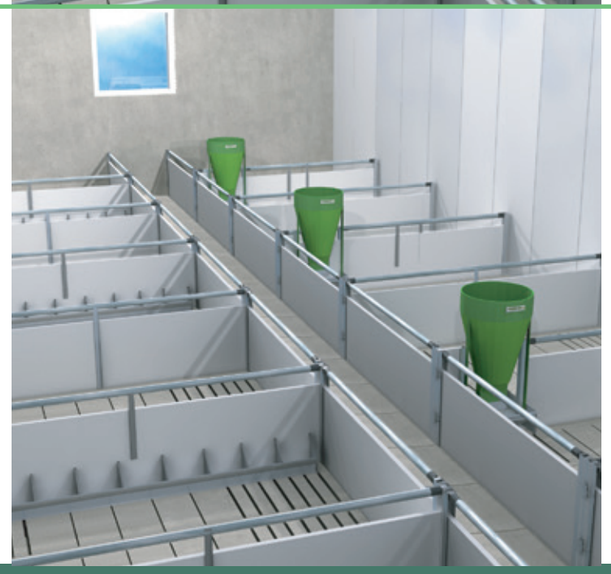
PVC penning: wall height 75 cm

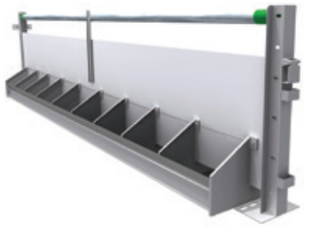
PVC Boards

Material:	Impact resistant PVC, 35 mm	
Board/wall height:	Pen partition:	75 cm
	Trough walls:	60 cm
1" galvanised tubes:		
	Pen partitions:	none
	Trough walls:	none
SS profiles:	steel thickness:	1,5 mm

TYPE SBK60-75

PVC penning:	**Wall height 75 cm**	
PVC boards		
Material:	Impact resistant PVC, 35 mm	
Board/wall height:	Pen partitions:	60 cm
	Trough walls:	50 cm
1" galvanised tubes:		
	Pen partitions:	1 buis
	Trough walls:	1 buis
SS profiles:	steel thickness:	1,5 mm



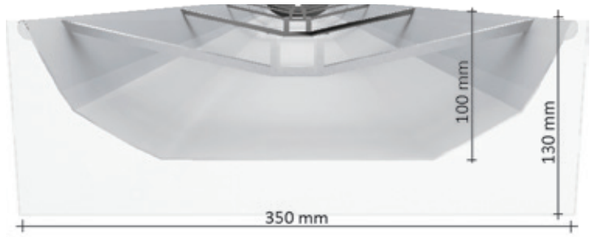


5.3 WET FEEDING TROUGHS FOR PIGLETS

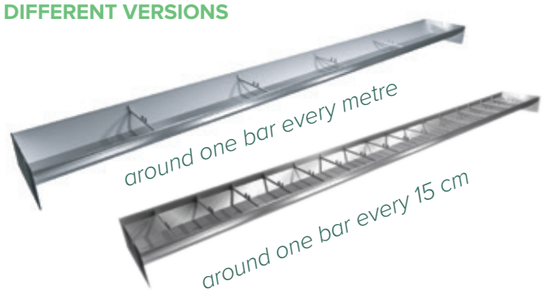
Our liquid feeding troughs are made from durable stainless steel. The troughs can be supplied in different versions for finishers and gilts. For example, a round bent trough or a trough with a flat bottom is available. Troughs with bars or stainless steel partitions are also available. The use of stainless steel troughs with partitions sharply reduces the spillage of feed. Research at our own pig farms shows that this can save up to 5% in feed costs and at the same time sharply reduce trough contamination. We recommend that there always is at least a 15 cm clearance between long troughs and the front and back wall in order to reduce contamination. If you opt for a short trough with sensor feeding. We always recommend that you maintain at least one feeding spot for every 4 pigs. A trough with partitions is preferred in that case as well.

TRA-2-40-1,5, 24 LITER/M

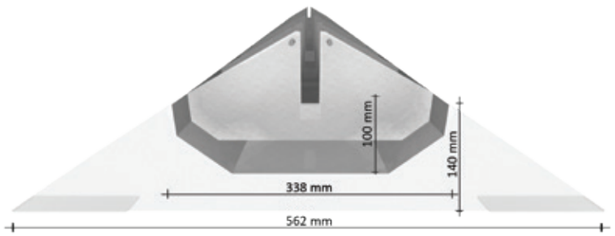
Round bent trough for piglets

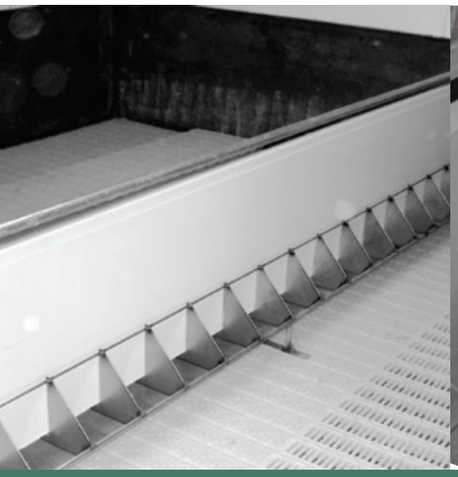


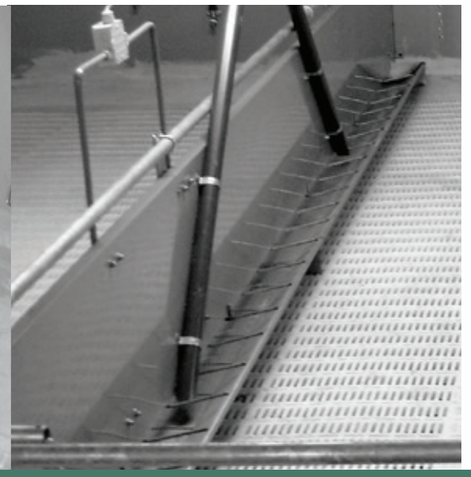
DIFFERENT VERSIONS



TRA2-40-1,5-FS, 24 LITER/M *Feedsave trough*







5.4 WATER SUPPLY FOR PIGLETS

If the piglets are not fed using a liquid feeding trough or a comparable system, then sufficient nipples must be mounted in the pens. The nipples are always fastened to the wall using stainless steel pipes. In the event of liquid troughs, the nipples are preferably attached above the troughs because this reduces the amount of spilled water. Furthermore, the preference is to mount the nipples at the back of the pens on the partitions so that two pens can be served by a single supply line. In the event of larger pens, it is possible to equip the nipple line for each pen with two nipples.

If the option is chosen to install multiple nipples or drinking bowls against the back wall, it is best to position these at different heights so that they are within reach for piglets in different sizes and also that larger piglets spill less water. Due to the lower spillage of water, stainless steel drinking bows are preferred.

DOUBLE NIPPLE SUPPORT FOR TWO PENS

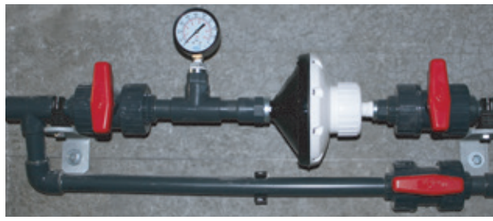
DOUBLE NIPPLE SUPPORT FOR TWO PENS WITH TWO NIPPLES PER PEN

VARIOUS NIPPLE SUPPORTS AT DIFFERENT HEIGHTS

DIFFERENT VERSIONS OF STAINLESS STEEL DRINKING BOWLS

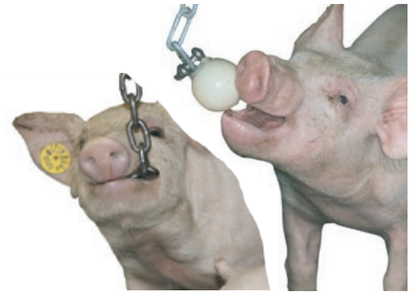
DRINKING SYSTEM WITH WATER CIRCULATION AND WATER-SAVING NIPPLES

PRESURE REGULATORS, BALL VALVES, PVC PIPES AND ALL FASTENERS



5.5 TOYS

In accordance with European regulations, all pigs must always have access to ductile toys. We supply various versions for finishers that are easy to attach to the pens partitions and that meet the legal requirements. It is best to install the toys at the back of the pen in the corner near the trough. Because pigs are more often occupied there, the manure near the trough is sharply reduced.

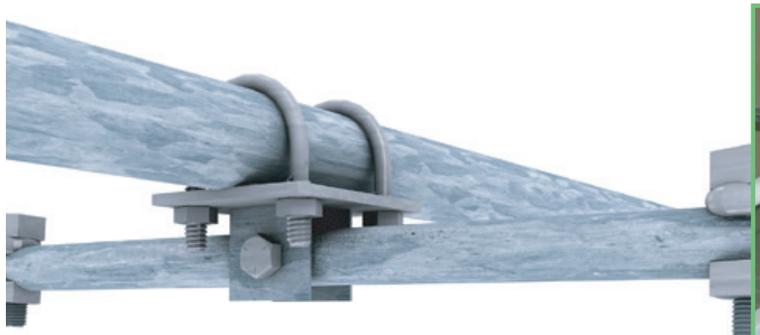


CHAIN WITH PLASTIC BALL

This plastic ball attached to a chain can be permanently attached to the wall or for two pens to the partition. The ball is also available with a stainless steel shackle.

CHAIN WITH PE HOSE

The chains with a PE hose can be permanently attached to the wall or for two pens to the partition.



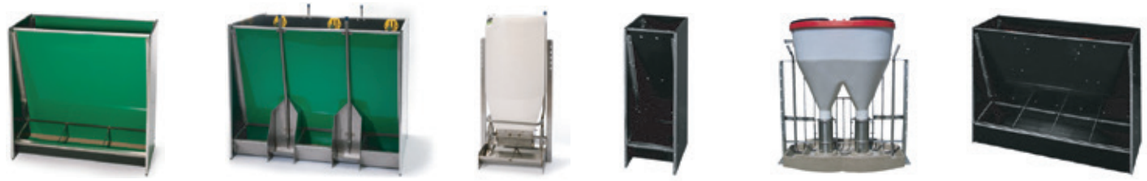
SEESAW CONSTRUCTION

This version facilitates interactive contact between the pigs.

6. FEEDING SYSTEMS

6.1. DRY AND WET FEEDERS

Genugten Agri Projects B.V. supplies a comprehensive package of dry and wet feeders. The following is an overview of the most popular feeders.



6.2. MATERIALS FOR WET FEEDING SYSTEMS

Genugten Agri Projects B.V. offers you an comprehensive package of components that are suitable for almost all liquid feeding systems and which can be used to expand your liquid feeding system or to replace a part of your existing system. In addition, we supply pipes and valves for the storage of by-products.

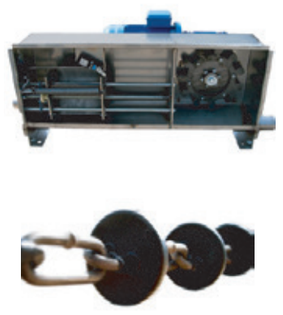
PVC piping and accessories

Ball valves and butterfly valves

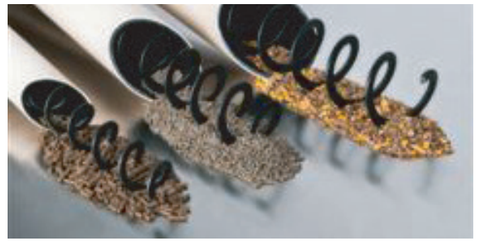
Pneumatic valves

6.3. MATERIALS FOR DRY FEED SYSTEMS AND SILOS

We also supply different systems for expanding or replacing dry feed systems.



Complete dry feed systems with a chain in a 60 mm pipe



Conveyor spirals and augers

Feed silos

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