



Product range for perfect stall planning

Your practical support with an overview of barn equipment, feeding and cleaning systems

GEA Farm Equipment | Royal De Boer | Mullerup | Houle

engineering for a better world

GEA Farm Technologies

Welcome to GEA Farm Technologies!

In this Farm Equipment catalogue, we offer you a glimpse of our current livestock farming solutions product range. Over the following pages you can find out more about barn equipment, cleaning, feeding and drinking and also the wide subject of manure management.

GEA Farm Technologies has decades of expertise in all of these areas and through its Royal De Boer, Mullerup and Houle product ranges, has achieved the highest product and quality standards, together with value for money in terms of the application life cycle of the equipment, machines and tools. Through our developments we have repeatedly established benchmarks and provided new impetus for improvements in ecology, economy and animal-friendly husbandry.

The Extent of our product range is much greater than space permits in this catalogue, so please take advantage of the experience of our sales consultants at your local GEA sales organisation. Not only will you always receive reliable advice, but we will also visit you on your farm. Plan your new projects with GEA Farm Technologies right on your premises. Together we will find effective solutions for a successful, financially attractive and demand-oriented application, based on your requirements.

GEA Farm Technologies

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Barn equipment

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Resting in the stall



1. Resting in the stall

When selecting cubicles for dairy cows, the well-being of the cows and efficient operation of the stall must be considered equally measures if a profitable milk yield is to be achieved. In addition, legal regulations which specify the minimum space requirements must be observed. GEA Farm Technologies cubicles combine maximum use of the space available, while at the same time increasing the standards of comfort for the dairy cow. For cubicle division frames, our range includes the high-quality Royal De Boer products.



In the design of our cubicles we have taken into account the natural movement patterns of the cows and ensured that hygiene measures can be carried out without restriction. Results demonstrate that yields can be increased and consolidated with the use of GEA Farm Technologies cubicles. The main features include:

- Space for forward movements: plenty of room at the front enables problem-free movements, in particular when standing up
- Freedom from barriers: an unobstructed design at the front avoids knocks
- Animal-friendly guidance: through the use of a bris-ket board and optimal placement of the neck bar
- Safety: non-slip area for a secure stance
- Protection of the joints: a soft surface to lie on, in order to prevent bruising and joint injuries



Recommended dimensions for cubicle divisions:

Age in months	Description	Recommended length wall row	Minimum length wall row	Recommended length double row	Minimum length double row
Older than 22 months	2-D High Neckrail, 2-D Optima	250-260 cm	230-240 cm	230 cm	220 cm
Older than 22 months	Other cubicle divisions	250 cm	220 cm	230 cm	220 cm
16 – 22 months		230 cm	220 cm	220 cm	210 cm
10 – 16 months		210 cm	210 cm	200 cm	200 cm
5 – 12 months		190 cm	190 cm	190 cm	190 cm
0,5 – 5 months		160 cm	160 cm	160 cm	160 cm



1.1 Cubicle division frames

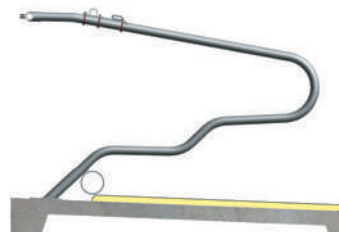
2-D Optima – 1st Class animal comfort

- More space for sideways movements
- Optima bend for controlled guiding of the animals
- Simple assembly: ideal for stall renovations
- Can be combined with any stall mat thanks to the minimum box length of 220 cm
- Optional extension: Nylon neck-strap



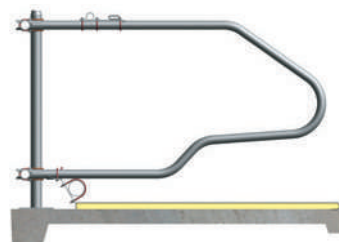
2-D Optima High Neckrail – Maximum hygiene

- Creates space for sideways movements
- Enables unrestricted standing up and laying down
- Optima bend for controlled guiding of the animals
- DLG quality seal with ++ grading for resting comfort
- Minimum cubicle length: Single version 230 cm, double version 450 cm
- Particular hygiene bonus through the simplified laying of the mats



Combi Comfort – Flexible solution

- Flexible installation: height and width adjustable
- Hygienic: self-supporting assembly
- Ideal for deep litter and sand beds



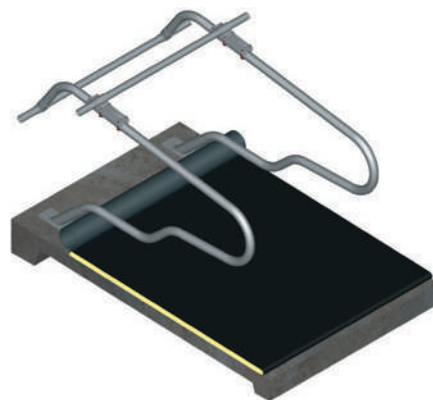
Mushroom-shaped cubicle division frames, suspended - High durability

- Particularly suitable for large-scale cattle farms
- Good guiding of cows into the intended position
- Optimum lying position



2-D Optima cubicle division frames (also available in a US version)

Plenty of freedom of movement both forwards and to the side, as well as controlled guiding of the animals, combined with the advantages of long life, due to the top-quality manufacturing standards of our Royal De Boer products - This is what the 2-D Optima cubicle division frame represents. Its simple installation makes it the preferred form of stall equipment when it comes to renovation. The unique Optima bend ensures that the cow finds its best position. Neither impeding floor bars or stanchions restrict the forward movement when the cow stands up. The 2D Optima cubicle division frame is also available in a US version which prevents the cows leaning over.

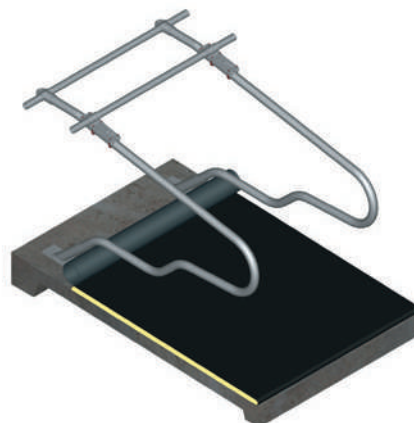


Wall row:

Part Number	Description	Dimensions
5510-3720-003	2-D Optima cubicle division frame	200 cm
5510-3720-004	2-D Optima cubicle division frame	200 cm (60.3 x 3.2 mm) US
5510-3720-005	2-D Optima High Neckrail cubicle division frame	205 cm
5510-3720-006	2-D Optima High Neckrail cubicle division frame	205 cm US

2-D Optima High Neckrail cubicle division frame

Due to the use of solid 2" steel tubing and its generous dimensions, this cubicle division frame is particularly well suited for the husbandry of large breeds, such as Holstein cattle. The division frame is DLG tested and has received a ++ grading for its resting comfort. All the advantages of durability and animal comfort contained in our Royal De Boer product range are conveyed here. In addition, the design of the 2-D High Neckrail simplifies handling, such as in the laying of rubber mats: a particular hygiene bonus.

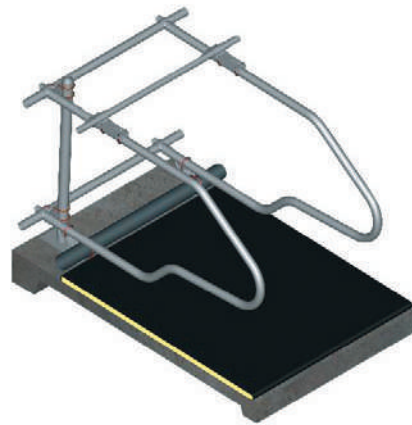


Wall row:

Part Number	Description	Dimensions
5510-3920-018	2-D High Neckrail cubicle division frame	205 cm
5510-3920-019	2-D High Neckrail cubicle division frame	205 cm US

Combi Comfort cubicle division frame

Stalls with deep litter or sand beds require the ability to adjust the cubicle division frame. The Combi Comfort is adjustable both in height and width. This makes the setting up of the cubicle highly flexible and leads to an increase in comfort for the animals. In addition, all the advantages of durability and animal comfort contained in our Royal De Boer products are brought to bear in the Combi Comfort cubicle division frame.

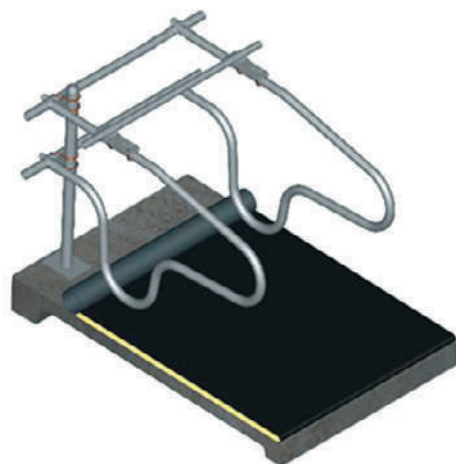


Wall row:

Part Number	Description	Dimensions
5510-3319-010	Combi Comfort cubicle division frame	190 cm H = 97 cm
5510-3320-016	Combi Comfort cubicle division frame	205 cm H = 97 cm
5510-3321-013	Combi Comfort cubicle division frame	215 cm H = 97 cm
5510-3322-005	Combi Comfort cubicle division frame	225 cm H = 97 cm
5510-3319-011	Combi Comfort HN cubicle division frame	190 cm H = 107 cm HN
5510-3320-017	Combi Comfort HN cubicle division frame	205 cm H = 107 cm HN
5510-3321-014	Combi Comfort HN cubicle division frame	215 cm H = 107 cm HN
5510-3322-006	Combi Comfort HN cubicle division frame	225 cm H = 107 cm HN

Mushroom-shaped cubicle division frame, suspended

The freely suspended mushroom-shaped guidance system integrated on both sides gives this cubicle division frame its name. Thanks to its particularly wide opening for the head the mushroom shape permits the greatest possible freedom of movement when standing up and guides the animal instinctively into a perfect lying position. The division frame from our Royal De Boer product range is made of robust and durable 2" steel tubing. Due to its perfect ease of installation it is well suited for re-equipment when renovating.



Wall row:

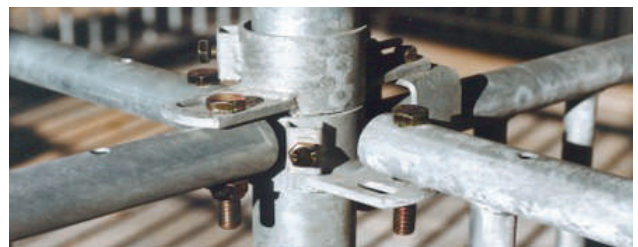
Part Number	Description	Dimensions
5510-8535-003	TYPE R suspended cubicle division frame	190 x 115 x 45 cm

Accessories for cubicle division frame

In addition to the robust, high-quality cubicle division frames from the Royal De Boer products, we also offer suitable genuine accessories including stanchions, chest brackets, nylon straps, T and cross-clamps, wall and pipe brackets, mounting brackets and many more articles.



You can find the accessories needed for your specification with the assistance of your local GEA sales organisation or your GEA sales consultant. We will put together a perfect, tailor-made solution for your requirements.

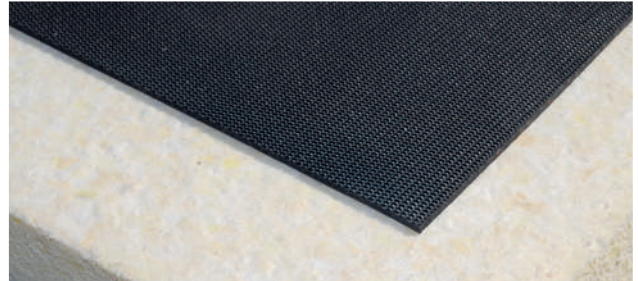




1.2 Top mats & mattresses

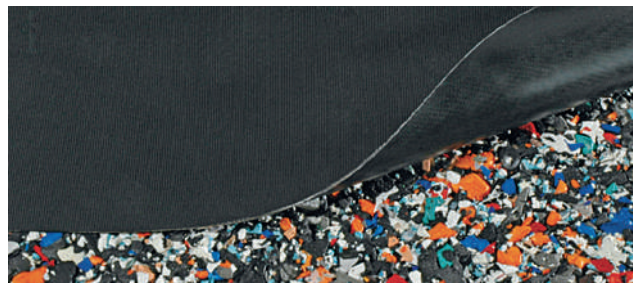
Latex mattress

- Good shape retention: special material combination of latex and special foam
- High comfort: best comfort properties due to high latex content
- Balanced: ideal combination of comfort and durability
- Variable: available in various thicknesses



Meadow mattress:

- System construction: under-mat with a freely selectable top mat (e.g. Dunlosheet)
- Moisture-resistant: water-resistant properties
- Low weight: light and easy to lay
- Environmentally friendly: thanks to recycled polyethylene flakes



Dunlosheet surface mat

- Top-quality material: top product features through virgin rubber
- Resistant: central polyester-nylon mesh reinforcement
- High durability: wear-resistant and good shape retention
- Good retention properties: Bedding material is well retained in the cubicle



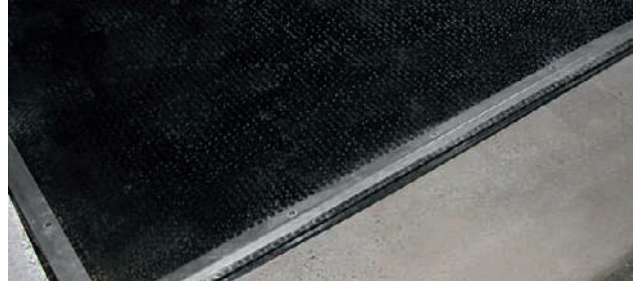
Polysoft surface mattress

- Completely sealed: Top mat is made of 100% moisture-proof polyester mesh
- Moisture barrier on bottom: plastic-coated under-mat made of 100% polyurethane
- Top properties: high strength in combination with good elasticity
- Easy to clean: Covering made of 100% PVC
- DLG award



Gummisoft surface mat

- Robust: thick, strong top mat made of moisture-proof plastic
- Hygienic and comfortable: good cleaning properties and animal comfort
- Variable: available in 8 mm and 10 mm thicknesses



Dunlop Alanta waterbed (roll form)

- Proven quality: seam-free SBR rubber with polyamide fibre-reinforcement
- Comfortable: 10 mm layer of water for excellent lying comfort and stability
- Modular: individual filling at the resting space
- Variable: available for resting space widths of 110 to 125 cm



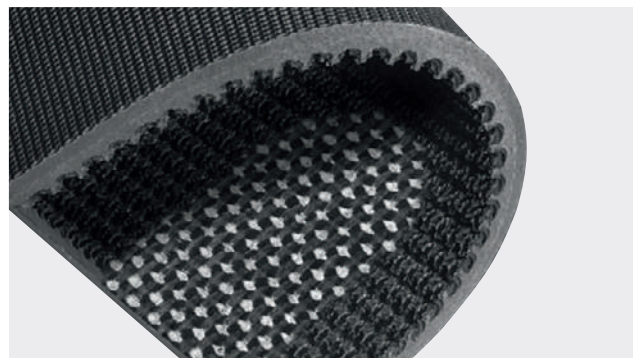
RDB Topcover - SBR

- Flexible, can be combined with a latex and / or polyethylene foam mattress
- Insensitive to liquids
- Very good surface structure and therefore good slip resistance and pleasant resting comfort
- Made of industrial-quality natural rubber and therefore extremely insensitive



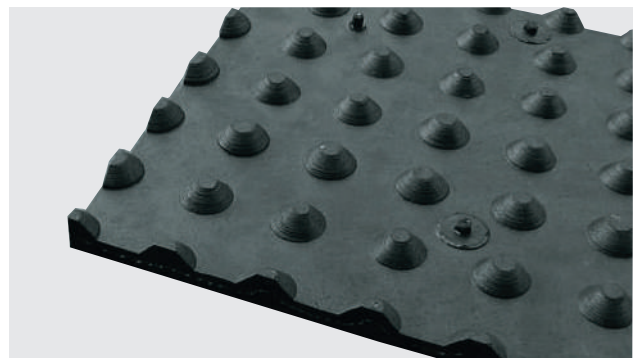
Dunlomat (roll form)

- High economy: very high lifetime and retains its shape extremely well
- Good retention properties: bedding material remains securely in the cubicle
- Good well-being: impact absorption through Rufftop profile on the underside
- Seam-free fixing: only fixed at the front and side edges



Dimpled mat (roll form)

- Variable: suitable for raised cubicles and walkways
- Crush-resistant: 10 mm dimpled profile on the underside, textured profile on the upper side
- Perfect blend of materials: rubber with stabilising nylon mesh insert
- Simple laying: on Nirosta rails or with impact dowels
- Adaptable: available in widths of 150, 165 and 180 cm



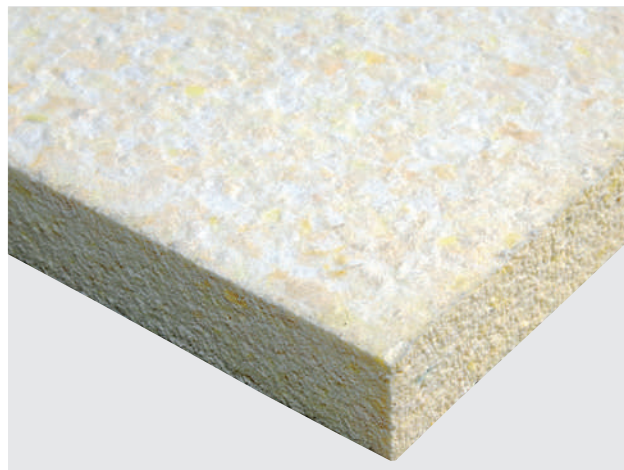
Rubber mat (roll form)

- Seamless: closed, continuous surface for lying on
- Hygienic: no empty spaces
- Resilient: good wearing properties and keeps its shape well
- Simple assembly: quick laying due to continuous surface



Latex mattress

The GEA Farm Technologies latex mattress combines excellent value for money with the best possible product characteristics. Thanks to its mixture of latex and PU foam the DLG-certified underlay (DLG test report 5819F) deforms within a time period of 10 years by less than 1%. Best conditions for pleasant resting comfort for the animals. The latex mattress is used in combination with plastic sheets.



Latex mattress:

Part Number	Description	Dimensions / Misc.
5520-0400-000	Latex mattress	150 x 100 x 2,5 cm
5520-0401-003	Latex mattress	180 x 100 x 3,5 cm

Meadow mattress:

The meadow mattress is a part of a mat system from GEA Farm Technologies with a freely selectable top mat (e.g. Dunlosheet surface mat). Made of environmentally friendly recycled polyethylene flakes, the meadow mat acts as a moisture-blocking underlay. In combination with the two layers it creates a top level of comfort for the animals. The low weight of the DLG-tested mattress (DLG test report 5829F) also makes it extremely easy to lay. Moreover, it is excellent value for money.



Meadow mattress:

Part Number	Description	Dimensions / Misc.
5520-0600-000	Meadow mattress	168 x 100 x 4,5 cm

Dunlosheet surface mat

The Dunlosheet surface mat from GEA Farm Technologies is a durable underlay which retains its shape and which has an intelligent mixture of materials. The top-quality virgin rubber ensures comfortable impact absorption and good abrasion properties. The polyester and nylon reinforcement retains its shape, even over long periods of time. In addition, bedding material is well retained in the cubicle. A mat which can be used for many stall applications.

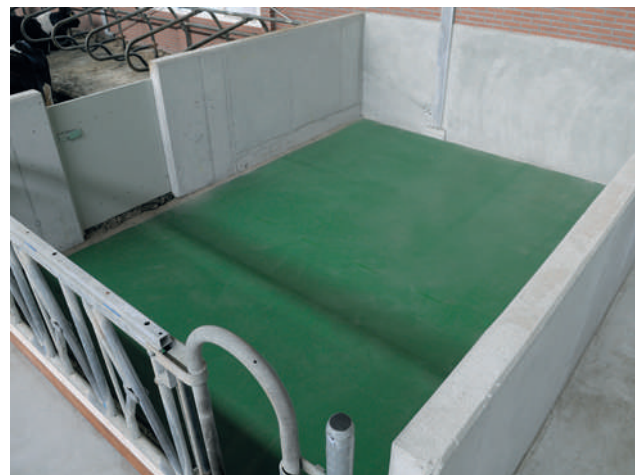


Dunlosheet surface mat

Part Number	Description	Dimensions / Misc.
5520-0501-001	Dunlosheet top mat, black	200 cm wide

Polysoft surface mat

The Polysoft mattress is a proven product from GEA Farm Equipment and was awarded DLG-Signum approval. The mattress construction stands out due to its 100% moisture-proof, thickly woven polyester mesh and a plastic-coated under-mat made of 100% polyurethane which minimises the penetration of moisture from below. This combination of materials has good comfort and lying characteristics with a high level of durability. Polysoft mattresses are available in 300 or 40 mm thicknesses as well as in versions for young cattle.

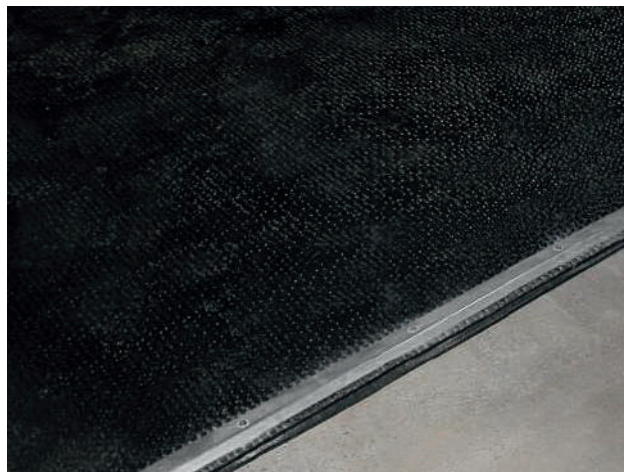


Polysoft mattress:

Part Number	Description	Dimensions / Misc.
5520-3507-002	Polysoft mattress	

Gummisoft surface mat

The Gummisoft surface mat from GEA Farm Technologies is a sound base product. A thick, fixed and moisture-proof top mat which has very good animal comfort and hygiene properties with extreme robustness. Mat thicknesses of 8 and 10 mm are available.



Gummisoft surface mat:

Part Number	Description	Dimensions / Misc.
5520-0328-000	Gummisoft mattress	

Dunlop Alanta waterbed (roll form)

The focus of the Dunlop Alanta waterbed is on a high level of resting comfort while at the same time providing a good foothold.

The 10 mm thick water-filled chambers provide individual, pleasantly soft, seamless lying areas which simultaneously give the animal a secure standing position. This is ensured by an anti-slip profile. As a result of the continuous surface the underlay does not simply provide advantages in animal comfort but also in cleaning. The Dunlop Alanta waterbed is manufactured as a roll form low-swelling SBR rubber with 2 layers of polyamide fibre-reinforcement.



Dunlop Alanta waterbed (roll form)

Part Number	Description	Dimensions / Misc.
5520-0611-000	Dunlop Alanta waterbed	110 cm wide
5520-0611-001	Dunlop Alanta waterbed	112,5 cm wide
5520-0611-002	Dunlop Alanta waterbed	115 cm wide
5520-0611-003	Dunlop Alanta waterbed	117,5 cm wide
5520-0612-000	Dunlop Alanta waterbed	120 cm wide
5520-0612-001	Dunlop Alanta waterbed	122,5 cm wide
5520-0612-002	Dunlop Alanta waterbed	125 cm wide

RDB Topcover - SBR

Topcover - SBR is extremely robust, but nevertheless flexible, due to its type of material and manufacture. Topcover is excellently suited as a top mat for the meadow mattress and / or the latex mattress. Its excellent cow comfort properties, combined with the durability of this system, make a strong contribution to cow comfort and thus to positive operating results, because high-performance cows have to also feel at ease in order to be able to provide a top level of performance.



RDB Topcover - SBR:

Part Number	Description	Dimensions / Misc.
5520-0510-001	RDB Topcover - SBR	200 cm wide

Dunlomat (roll form)

The Rufftop profile on the underside of this long-life, shape-retaining mat ensures impact resistance for every movement in the cubicle. A considerable plus for a better well-being of the animals. The Dunlomat mat from GEA Farm Technologies consists of polyamide-reinforced SBR rubber and is available as a roll. It can be seamlessly laid, thus ensuring additional comfort and good cleaning properties.



Dunlomat (roll form):

Part Number	Description	Dimensions / Misc.
5520-0705-000	Dunlomat stall mat	50 cm wide
5520-0706-000	Dunlomat stall mat	60 cm wide
5520-0710-001	Dunlomat stall mat	100 cm wide
5520-0712-000	Dunlomat stall mat	120 cm wide
5520-0715-000	Dunlomat stall mat	150 cm wide
5520-0716-000	Dunlomat stall mat	160 cm wide
5520-0717-000	Dunlomat stall mat	170 cm wide
5520-0718-000	Dunlomat stall mat	180 cm wide
5520-0720-000	Dunlomat stall mat	200 cm wide

Dimpled mat (roll form)

The dimpled mat can be used both in raised cubicles and in walkways, leading to better stability for the animals. The mat consists of a 10 mm thick rubber layer with a form-retaining nylon fibre reinforcement and textured profile on the upper side for a good foothold. There is also a 10 mm thick dimpled layer on the underside which fixes the mat firmly to the floor. The mat is available as a roll and can be easily installed with Nirosta rails or with impact dowels.



Dimpled mat for cubicles:

Part Number	Description	Dimensions / Misc.
5520-0836-000	Dimpled mat on a roll for walkways	60 cm x 21 mm
5520-0839-000	Dimpled mat on a roll for walkways	95 cm x 21 mm
5520-0840-000	Dimpled mat on a roll for walkways	100 cm x 21 mm
5520-0840-001	Dimpled mat on a roll for walkways	105 cm x 21 mm
5520-0841-000	Dimpled mat on a roll for walkways	115 cm x 21 mm
5520-0842-000	Dimpled mat on a roll for walkways	120 cm x 21 mm
5520-0843-000	Dimpled mat on a roll for walkways	130 cm x 21 mm
5520-0844-000	Dimpled mat on a roll for walkways	140 cm x 21 mm
5520-0844-002	Dimpled mat on a roll for walkways	145 cm x 21 mm
5520-0845-000	Dimpled mat on a roll for walkways	150 cm x 21 mm
5520-0845-001	Dimpled mat on a roll for walkways	155 cm x 21 mm
5520-0846-000	Dimpled mat on a roll for walkways	160 cm x 21 mm
5520-0846-001	Dimpled mat on a roll for walkways	165 cm x 21 mm
5520-0847-000	Dimpled mat on a roll for walkways	175 cm x 21 mm
5520-0848-000	Dimpled mat on a roll for walkways	180 cm x 21 mm
5520-0849-000	Dimpled mat on a roll for walkways	190 cm x 21 mm
5520-0850-000	Dimpled mat on a roll for walkways	200 cm x 21 mm

Rubber mat (roll form)

This continuous, closed lying surface of this underlay creates the best conditions for any hygiene measures due to the seamless way that it is laid. The rubber mat, supplied as a roll, is a sound basic product from GEA Farm Technologies and stands out thanks to its high shape retention, low wear, a high level of resting comfort and simple installation.



Rubber mat as a roll:

Part Number	Description	Dimensions / Misc.
5520-0315-000	Rubber mat on a roll	150 cm x 10 mm
5520-0316-000	Rubber mat on a roll	165 cm x 10 mm
5520-0318-000	Rubber mat on a roll	180 cm x 10 mm



Feeding



2. Feeding

An optimum stall concept ensures that all processes related to the animals' feeding and drinking are able to take place in a calm and orderly manner. Long resting periods in a lying position are essential pre-conditions for the production of top-quality milk and are directly related to problem-free feeding in a standing position. For this reason it is absolutely essential to bear all factors in mind which could affect drinking and feeding.

When it comes to drinking it is important that the animal has easy access to a water source which always contains fresh, high-quality drinking water to prevent any deficits in milk production through a lack of or poor water.

The focus is on calm processes in feeding. A clean and problem-free access to feed and the possibility to separate individual animals to check or treat them after milking where necessary are important aspects of feeding.



Our water and feed supply equipment can offer you the following advantages:

- A significant reduction in feed losses
- Simplification of animal management
- Optimal options for animal separation
- Improvement in the integration of heifers
- Minimisation of fights for rank in the herd
- Reduction in bruises and marks
- Optimised feed mixing for various groups of animals
- Time saving in daily work

You can prepare your stall for the future with the automated feed supply systems from the GEA Farm Technologies Mullerup product line. Sound, efficient and time-saving are just some of the aspects of this forward-looking equipment. The optimised feed mixing, weighing and distribution, and a saving in effective working time in this area, make a significant contribution to efficient and profitable milk production.





2.1 Water supply

Watermaster

- Optimal fresh water concept
- Frost-free due to polyurethane foam layer
- Optional heating element for extremely low temperatures
- Robust polyethylene outer shell



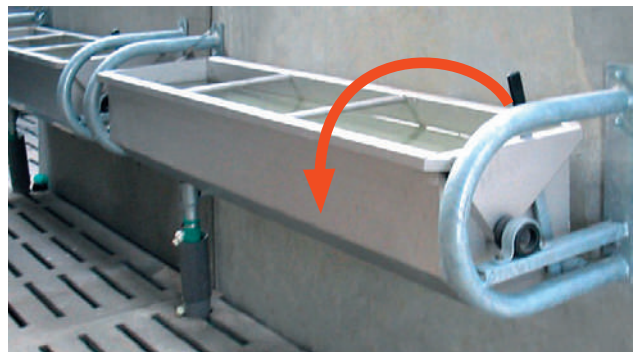
Easy Drink

- Faster flow: 2,400 litres/hr.
- Easy cleaning: V2A stainless steel
- Can be fitted to the floor or wall
- Optional frost protection



Tip Over

- Flow suited to the application: 600 litres/hr.
- Easy cleaning with a tipping lever
- Can be fitted to the floor or wall



Suevia range

- Gentle water supply
- Continuously adjustable volume of water
- Large drinking bowl
- Cast iron, completely enamelled



Watermaster

The Watermaster provides an optimal solution for large barns with its design and fresh water supply. The robust, completely enclosed polyethylene outer wall is simultaneously insensitive to impacts, animal-friendly due its lack of sharp edges and rounded shape, and also moisture-proof as a result of its protective polyurethane insulation. The latter also ensures frost-free drinking in the winter with fresh water. An optional heating element may be retrofitted for extreme frost periods. The float has a high capacity and can be maintained without the use of tools.



Watermaster:

Part Number	Description	Dimensions / Misc.
5540-2909-032	Watermaster Thermo trough	366 x 61 x 61 cm
5540-2909-063	Watermaster Thermo trough	137 x 84 x 56 cm
5540-2909-064	Watermaster Thermo trough	182 x 61 x 61 cm
5540-2909-065	Watermaster Thermo trough	229 x 84 x 56 cm

Easy Drink

Easy Drink is a robust trough with a high water throughput of 2,400 litres hourly and quick drainage through large openings. V2A stainless steel, smooth welds and doubled-off outer edges ensure injury-free drinking and top cleaning features. The water input requires piping of at least 3/4". Easy Drink is designed for mounting either on the floor or on the wall. Frost protection is optionally available.



Easy Drink:

Part Number	Description	Dimensions / Misc.
5540-3154-000	Easy Drink	L = 100 cm
5540-3154-001	Easy Drink	L = 100 cm, wall-mounted
5540-3155-000	Easy Drink	L = 190 cm
5540-3155-001	Easy Drink	L = 190 cm, wall-mounted

Tip-Over

The Tip Over drinking trough is made of V2A stainless steel with smooth seams and doubled-off outer edges. In contrast with Easy Drink the drinking trough may be tilted forward for cleaning by use of a lever so that the empty trough simply has to be sprayed off and cleaned. An input pipe of at least 1/2" is required for the Tip Over drinking trough. The floating valve permits a throughput of 600 litres hourly. Frost protection is optionally available.



Tip-Over:

Part Number	Description	Dimensions / Misc.
5540-3142-003	Tip Over stainless steel trough with float	100 cm, high-pressure, floor-mounted
5540-3142-004	Tip Over stainless steel trough with float	100 cm, high-pressure, wall-mounted
5540-3142-005	Tip Over stainless steel trough with float	100 cm, low-pressure, floor-mounted
5540-3142-006	Tip Over stainless steel trough with float	100 cm, low-pressure, floor-mounted
5540-3152-007	Tip Over stainless steel trough with float	177 cm, high-pressure, floor-mounted
5540-3152-008	Tip Over stainless steel trough with float	177 cm, high-pressure, wall-mounted
5540-3152-009	Tip Over stainless steel trough with float	177 cm, low-pressure, floor-mounted
5540-3152-010	Tip Over stainless steel trough with float	177 cm, low-pressure, wall-mounted

Additional product range for water supply

As a result of the fact that the water supply is governed by the animals themselves and that, at the same time, a top-quality and adequate water supply is essential for the production of high-quality milk, the needs for drinking solutions may be varied and individual.



Additional water-related products:

Part Number	Description	Dimensions / Misc.
5540-3681-000	Trough	Model 1200
5540-3682-000	Trough	Model 25 R
5540-3683-000	Trough	Model 19 R
5540-6105-000	Long trough	Model 500
5540-6106-000	Stainless steel long trough	Model 600
5540-6152-000	Stainless steel long trough	Model 520

As well as the troughs detailed above, you can obtain additional solutions for water supply from GEA Farm Technologies, including those from the company Suevia. This selection includes troughs for stanchion barns and other types of trough which the local GEA sales organisation will be happy to present to you.



2.2 Feed fences

Twist&Lock self-locking safety feed fence

- Animal-friendly: ergonomic unobstructed design
- Better animal separation: holding of individual animals using a rotary knob
- Long service life: bronze bearings
- Simple installation and maintenance: thanks to modular structure



Classic self-locking feed fence

- Classic version: robust, spacious, low-noise
- Comfortable operation: can be centrally controlled from up to 40 m
- Individual feeding: individual unlocking at each feeding place



Swedish self-locking feed fence

- Robust and sturdy 57 mm diameter tubing for large animals
- Installation form freedom: Fixing to stanchions or rafters
- Good access to feed: also for smaller animals



Diagonal feed fences

- Long service life: sturdy design from robust steel tubing
- Installation form freedom: Fixing to stanchions or rafters
- Variable usage: available for calves, young cattle and large cattle



Neck bar / feeding table divisions

- Freedom when eating
- Simple fitting
- Robust and inexpensive



Twist&Lock self-locking safety feed fence

The new type of Twist&Lock self-locking safety feed fence enables individual animals to be held at their place using a rotary knob. Individual animals can be separated in a comfortable and trouble-free manner from other animals without the herd scattering. In addition, Twist&Lock stands out due to its bronze bearings for a long working life and its profile in the upper part for simple operation and maintenance. Like all feed fences in the GEA Farm Technologies range, the Twist&Lock is also especially animal-friendly and prevents injuries occurring.



Feed fence Twist&Lock:

Part Number	Description	Dimensions / Misc.
5530-7001-000	Feed fence - Twist&Lock	L = 134 / 2 x 65 cm
5530-7001-001	Feed fence - Twist&Lock	L = 197 / 3 x 65 cm
5530-7001-002	Feed fence - Twist&Lock	L = 260 / 4 x 65 cm
5530-7001-003	Feed fence - Twist&Lock	L = 325 / 5 x 65 cm
5530-7001-004	Feed fence - Twist&Lock	L = 140 / 2 x 70 cm
5530-7001-005	Feed fence - Twist&Lock	L = 210 / 3 x 70 cm
5530-7001-006	Feed fence - Twist&Lock	L = 280 / 4 x 70 cm
5530-7001-007	Feed fence - Twist&Lock	L = 350 / 5 x 70 cm
5530-7001-008	Feed fence - Twist&Lock	L = 150 / 2 x 75 cm
5530-7001-009	Feed fence - Twist&Lock	L = 225 / 3 x 75 cm
5530-7001-010	Feed fence - Twist&Lock	L = 300 / 4 x 75 cm
5530-7001-011	Feed fence - Twist&Lock	L = 375 / 5 x 75 cm
5530-7001-012	Feed fence - Twist&Lock	L = 156 / 2 x 78 cm
5530-7001-013	Feed fence - Twist&Lock	L = 234 / 3 x 78 cm
5530-7001-014	Feed fence - Twist&Lock	L = 312 / 4 x 78 cm
5530-7001-015	Feed fence - Twist&Lock	L = 390 / 5 x 78 cm
5530-7001-016	Feed fence - Twist&Lock	L = 299 / 5 x 60 cm
5530-7001-017	Feed fence - Twist&Lock	L = 356 / 6 x 60 cm
5530-7001-018	Feed fence - Twist&Lock	L = 250 / 4 x 62.5 cm
5530-7001-019	Feed fence - Twist&Lock	L = 437 / 7 x 62.5 cm
5530-7001-020	Feed fence - Twist&Lock	L = 479 / 7 x 68 cm

Feed fence Twist&Lock + central locking:

Part Number	Description	Dimensions / Misc.
5530-7001-400	Feed fence - Twist&Lock	L = 134 / 2 x 65 cm
5530-7001-401	Feed fence - Twist&Lock	L = 197 / 3 x 65 cm
5530-7001-402	Feed fence - Twist&Lock	L = 260 / 4 x 65 cm
5530-7001-403	Feed fence - Twist&Lock	L = 325 / 5 x 65 cm
5530-7001-404	Feed fence - Twist&Lock	L = 140 / 2 x 70 cm
5530-7001-405	Feed fence - Twist&Lock	L = 210 / 3 x 70 cm
5530-7001-406	Feed fence - Twist&Lock	L = 280 / 4 x 70 cm
5530-7001-407	Feed fence - Twist&Lock	L = 350 / 5 x 70 cm
5530-7001-408	Feed fence - Twist&Lock	L = 150 / 2 x 75 cm
5530-7001-409	Feed fence - Twist&Lock	L = 225 / 3 x 75 cm
5530-7001-410	Feed fence - Twist&Lock	L = 300 / 4 x 75 cm
5530-7001-411	Feed fence - Twist&Lock	L = 375 / 5 x 75 cm
5530-7001-412	Feed fence - Twist&Lock	L = 156 / 2 x 78 cm
5530-7001-413	Feed fence - Twist&Lock	L = 234 / 3 x 78 cm
5530-7001-414	Feed fence - Twist&Lock	L = 312 / 4 x 78 cm
5530-7001-415	Feed fence - Twist&Lock	L = 390 / 5 x 78 cm
5530-7001-416	Feed fence - Twist&Lock	L = 299 / 5 x 60 cm
5530-7001-417	Feed fence - Twist&Lock	L = 356 / 6 x 60 cm
5530-7001-418	Feed fence - Twist&Lock	L = 250 / 4 x 62.5 cm
5530-7001-419	Feed fence - Twist&Lock	L = 437 / 7 x 62.5 cm
5530-7001-420	Feed fence - Twist&Lock	L = 479 / 7 x 68 cm

Feed fence Twist&Lock + locking arms:

Part Number	Description	Dimensions / Misc.
5530-7001-200	Feed fence - Twist&Lock	L = 134 / 2 x 65 cm
5530-7001-201	Feed fence - Twist&Lock	L = 197 / 3 x 65 cm
5530-7001-202	Feed fence - Twist&Lock	L = 260 / 4 x 65 cm
5530-7001-203	Feed fence - Twist&Lock	L = 325 / 5 x 65 cm
5530-7001-204	Feed fence - Twist&Lock	L = 140 / 2 x 70 cm
5530-7001-205	Feed fence - Twist&Lock	L = 210 / 3 x 70 cm
5530-7001-206	Feed fence - Twist&Lock	L = 280 / 4 x 70 cm
5530-7001-207	Feed fence - Twist&Lock	L = 350 / 5 x 70 cm
5530-7001-208	Feed fence - Twist&Lock	L = 150 / 2 x 75 cm
5530-7001-209	Feed fence - Twist&Lock	L = 225 / 3 x 75 cm
5530-7001-210	Feed fence - Twist&Lock	L = 300 / 4 x 75 cm
5530-7001-211	Feed fence - Twist&Lock	L = 375 / 5 x 75 cm
5530-7001-212	Feed fence - Twist&Lock	L = 156 / 2 x 78 cm
5530-7001-213	Feed fence - Twist&Lock	L = 234 / 3 x 78 cm
5530-7001-214	Feed fence - Twist&Lock	L = 312 / 4 x 78 cm
5530-7001-215	Feed fence - Twist&Lock	L = 390 / 5 x 78 cm
5530-7001-216	Feed fence - Twist&Lock	L = 299 / 5 x 60 cm
5530-7001-217	Feed fence - Twist&Lock	L = 356 / 6 x 60 cm
5530-7001-218	Feed fence - Twist&Lock	L = 250 / 4 x 62.5 cm
5530-7001-219	Feed fence - Twist&Lock	L = 437 / 7 x 62.5 cm
5530-7001-220	Feed fence - Twist&Lock	L = 479 / 7 x 68 cm

Feed fence Twist&Lock + central locking:

Part Number	Description	Dimensions / Misc.
5530-7001-300	Feed fence - Twist&Lock	L = 134 / 2 x 65 cm
5530-7001-301	Feed fence - Twist&Lock	L = 197 / 3 x 65 cm
5530-7001-302	Feed fence - Twist&Lock	L = 260 / 4 x 65 cm
5530-7001-303	Feed fence - Twist&Lock	L = 325 / 5 x 65 cm
5530-7001-304	Feed fence - Twist&Lock	L = 140 / 2 x 70 cm
5530-7001-305	Feed fence - Twist&Lock	L = 210 / 3 x 70 cm
5530-7001-306	Feed fence - Twist&Lock	L = 280 / 4 x 70 cm
5530-7001-307	Feed fence - Twist&Lock	L = 350 / 5 x 70 cm
5530-7001-308	Feed fence - Twist&Lock	L = 150 / 2 x 75 cm
5530-7001-309	Feed fence - Twist&Lock	L = 225 / 3 x 75 cm
5530-7001-310	Feed fence - Twist&Lock	L = 300 / 4 x 75 cm
5530-7001-311	Feed fence - Twist&Lock	L = 375 / 5 x 75 cm
5530-7001-312	Feed fence - Twist&Lock	L = 156 / 2 x 78 cm
5530-7001-313	Feed fence - Twist&Lock	L = 234 / 3 x 78 cm
5530-7001-314	Feed fence - Twist&Lock	L = 312 / 4 x 78 cm
5530-7001-315	Feed fence - Twist&Lock	L = 390 / 5 x 78 cm
5530-7001-316	Feed fence - Twist&Lock	L = 299 / 5 x 60 cm
5530-7001-317	Feed fence - Twist&Lock	L = 356 / 6 x 60 cm
5530-7001-318	Feed fence - Twist&Lock	L = 250 / 4 x 62.5 cm
5530-7001-319	Feed fence - Twist&Lock	L = 437 / 7 x 62.5 cm
5530-7001-320	Feed fence - Twist&Lock	L = 479 / 7 x 68 cm

Classic self-locking feed fence

The classic self-locking feed fences from GEA Farm Technologies are robust, spacious and have a 2" (60 mm) lower rail. They can be very simply operated from a central position at a distance of up to 40 metres using the upper profile.

The plastic caps on the locking rods ensure that the fences make very little noise. Animals can be released individually at the press of a button. The feed fences can be fixed either to stanchions or rafters as required using the assembly material and each one can be expanded by up to 20 cm.



Classic self-locking feed fence:

Part Number	Description	Dimensions / Misc.
5530-7400-048	Classic self-locking feed fence	130 / 2 x 65 cm
5530-7400-050	Classic self-locking feed fence	140 / 2 x 70 cm
5530-7400-052	Classic self-locking feed fence	150 / 2 x 75 cm
5530-7400-054	Classic self-locking feed fence	195 / 3 x 65 cm
5530-7400-056	Classic self-locking feed fence	210 / 3 x 70 cm
5530-7400-058	Classic self-locking feed fence	225 / 3 x 75 cm
5530-7400-060	Classic self-locking feed fence	260 / 4 x 65 cm
5530-7400-062	Classic self-locking feed fence	280 / 4 x 70 cm
5530-7400-064	Classic self-locking feed fence	300 / 4 x 75 cm
5530-7400-066	Classic self-locking feed fence	325 / 5 x 65 cm
5530-7400-068	Classic self-locking feed fence	440 / 7 x 65 cm

Swedish self-locking feed fence

The Swedish self-locking feed fence from GEA Farm Technologies was specifically developed for large cattle breeds. Depending on the model, it is also suitable for cattle breeds with horns. The frames are made of robust tubing with a diameter of 57 mm. However, due to their rounded ends, smaller animals can also find their way to the fence. Flexible animal management is possible through the use of a central control system to release animals individually. The locking lever is made of 1 1/4" tubing (Ø 42 mm) and is equipped with collar protection.



Swedish feed fence:

Part Number	Description	Dimensions / Misc.
5530-0437-000	Swedish self-locking feed fence	440 / 7 x 62,5 cm
5530-0438-000	Swedish self-locking feed fence	460 / 7 x 72 cm
5530-0435-000	Swedish self-locking feed fence	65 / 1 x 65 cm
5530-0434-000	Swedish self-locking feed fence	130 / 2 x 65 cm
5530-0432-000	Swedish self-locking feed fence	195 / 3 x 65 cm
5530-0431-000	Swedish self-locking feed fence	260 / 4 x 65 cm
5530-0430-000	Swedish self-locking feed fence	325 / 5 x 65 cm

Diagonal feed fences

The diagonal feed fence from GEA Farm Technologies forms a solid division between the animals’ movement and feeding areas and to the feeding lane. The animals are separated from each other when feeding without excessive crowding, and, at the same time, the feeding with minimal feed loss works just as well as with a feeding tube.

The diagonal feed fence is available for calves, young cattle and large cattle.



Diagonal feed fence:

Part Number	Description	Dimensions / Misc.
5530-1000-000	Diagonal feed fence	325 / 7 x 46 cm
5530-1001-000	Diagonal feed fence	250 / 5 x 50 cm
5530-1002-000	Diagonal feed fence	135 / 2 x 68 cm
5530-1007-000	Diagonal feed fence	440 / 10 x 44 cm

Neck bar / feeding table divisions

If it is possible to avoid locking in the animals, the neck bars and feeding table divisions from GEA Farm Technologies present an inexpensive alternative to more complicated feeding solutions. The animals have a large amount of freedom of movement when feeding. The use of spacers should be planned for in this open system. The neck bars and feeding table divisions from GEA Farm Technologies have a sturdy design and are simple to install.



Feeding tube / feeding table division:

Part Number	Description	Dimensions / Misc.
5510-3338-002	Intermediate piece	Lgth 15 cm for 2" tube
5500-9660-038	Wire arm with nuts	2" (60 mm) M10 x 102 mm
5540-9660-007	Wire arm with nuts	2,5" (76 mm) M12 x 112 mm
5510-6031-004	Two-piece clamp coupling	2" with bolts
5510-3335-000	Coupling plate	2,5" (76mm) x 2" (60mm)

Alberta feeding tube:

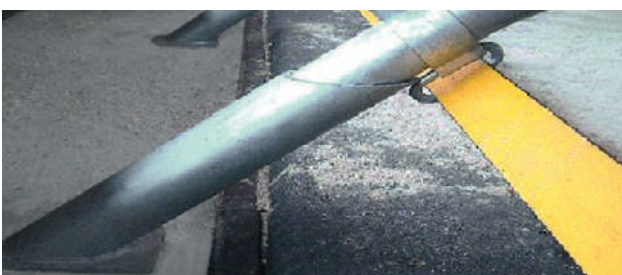
Part Number	Description	Dimensions / Misc.
5530-1130-003	Bracket with moveable lubricating nipple	Incl. T-clamp for 2"
5530-1130-004	Chains with rubber	
5510-6040-013	Tube 2"	2" (60 mm) Lgth 330 cm
5510-2566-000	Plastic cap, grey	2" (60 mm)
5510-6031-004	Two-piece clamp coupling	2" with bolts
5510-3335-000	Coupling plate	2.5" (76mm) x 2" (60mm)
5500-9660-038	Wire arm with nuts	2" (60 mm) M10 x 102 mm
5540-9660-007	Wire arm with nuts	2.5" (76 mm) M12 x 112 mm
5510-3336-000	Coupling plate	On column 84 – 114 mm
5500-9660-038	Wire arm with nuts	2" (60 mm) M10 x 102 mm
5500-9660-044	Wire arm with nuts	3" (89 mm) M12 x 124 mm

Feed fence accessories

Stanchions, chest brackets, nylon straps, T and cross-clamps, wall and pipe brackets, mounting brackets and many more genuine accessory articles complement your feeding solutions in keeping with your needs. Our consultants within your GEA sales organisation will be happy to put the suitable accessories together for you.



You can obtain the accessories needed in each case for the complete, possible specification via your appropriate GEA sales organisation / GEA sales consultant. They will be happy to assist you and to show you the most suitable solution for your demands.





2.3 Automatic feeding

Belt Feeder

- Robust and durable
- Carriage guided by steel rope
- space-saving
- several daily feed supplies possible



Free Stall Feeder

- Stationary mixer or distribution table with feed carriage
- Driven on rails and computer-controlled
- Space-saving.
- Distribution possible either single-sided or on both sides
- several daily feed supplies possible
- Large capacity



Mix Feeder

- Little effort required to fill the hopper
- Feeding for each group, based on their needs
- several daily feed supplies possible
- Optimal feed utilisation
- Robust and durable equipment
- Driven on rails and computer-controlled



Mix & Carry

- Little effort required to fill the hopper
- Large capacity
- several daily feed supplies possible
- Feeding for each group, based on their needs
- High effectiveness
- Optimal feed utilisation
- Driven on rails and computer-controlled
- Distribution possible either single-sided or on both sides



MVM Mixer

- 8 – 45 m³ volume
- Extreme flexibility
- Low maintenance



MM8 Magazin

- Can be flexibly arranged, an optimum positioning is therefore possible
- Modular construction
- Low maintenance



All Mullerup feeding systems:

- Ideal for retrofitting
- Space-saving.
- Quiet, therefore minimizing stress
- Simple operation

Belt Feeder

The Belt Feeder is the next step towards automatic feed supply, a small, flexible solution with great financial strengths: the combination of conveyor belt and sliding scraper allows small quantities of raw feed to be distributed several times a day to various groups of animals. And while the Belt Feeder is casting the load with consistent precision, the animals can relish it at leisure. Flexible in length and according to the local situation, the Belt Feeder brings efficiency by the metre into the stall. Fixed to a stand or on the ceiling, the rope-guided carriage serves both narrow and wide feeding tables. Start the automatic feed supply with the Belt Feeder: simple, safe and very economical!



Free Stall Feeder

The optimisation of animal feed, increased yield, long-term growth or expansion of the herd – whatever thoughts come into mind when thinking about the subject of TMR feeding – the Free Stall Feeder transfers your ideas directly onto the feeding table. The rail-mounted feed trolley provides your herd with a finely measured amount of feed from a feeding station - reliably and round the clock. This results in a terrific saving in time and labour for you every day. The system is space-saving, thus reducing the costs for any extension to your cowshed, and is similarly suitable for any upgrading. The Free Stall Feeder fetches the ingredients for the optimised energy feed for your herd directly from the power feed mixer. Quietly and with amazing precision it then distributes its contents onto the feeding table in a programmed cycle - thanks to its transverse conveyance system either on one or both sides. Which group receives its TMR ration, at what time, how much and how often, is determined through computer control by you alone! Give a free rein to your plans for the future, the Free Stall Feeder will support you on the path to top-quality milk!



Mix Feeder

Whether it is for top-performing cows, heifers, dry cows – depending on the computer control command, the Mix Feeder travels to the raw feed hoppers and puts together the feed mixtures using exactly weighed portions of the ingredients. After the mixture comes the distribution in pre-programmed areas of the feed table. It's so easy to get your cows to acquire the right taste! The cows are happy with the Mix Feeder. The low noise of its weighing, mixing and distribution ensures a relaxed atmosphere in the cowshed, avoiding stress and rush. You can despatch the feed trolley when and as often as you want! A frequent cycle frees you and your staff from time-consuming routine work, ensures calm during the distribution of the feed and avoids over-feeding of the cows.



Mix & Carry

The farmer is in demand on every part of his farm. So it is a good idea if he can leave the work in the free shed to experts: Mix & Carry is the reliable, automatic system that frees him from the whole chain of work, from the weighing of the individual portions of raw feed, through the mixing, right up to the distribution of the TMR rations onto the feeding table. In other words, this means pure relief for the farmer and full productivity, leading to top-quality milk! You can provide every group of cows with the menu desired using individual mixtures. The user-friendly WIC control system gives you quick access to feeding schedules, ingredients, quantities or feed station parameters. Once it has been started up Mix & Carry manages fully independently the weighing, mixing and distribution using a feed trolley. Of course not without reporting to you in detail on every step taken. Mix & Carry frees a considerable amount of time for you to utilise for intensive herd management, enabling you to closely pursue the goals in your concept and to optimise your long-term success.



MVM Mixer

Anyone who thinks this is about cooking is not far off the mark: The powerful MVM vertical mixer is at the heart of every partially and fully automated feed supply system. It mixes all the ingredients with the greatest of care into a consistent feed mixture which provides your cows with valuable nutrients and additives for healthy, high-yield milk production. Now it is only up to you whether you fill the MVM mixer manually or integrate it seamlessly into a fully automated system. In either case the MVM mixer provides a massive work-saving for you, while the herd is optimally fed. With the time you have saved you can take up a hobby. The great asset of the MVM mixer is that it can break up almost all kinds of bales, no matter if they are round or square, while still taking special care of the feed composition, whether it is hay, silage or straw. This is made possible by augers within the mixing container which gently break the content into small pieces and vigorously mix it, using their special geometric form with lots of windings, each fitted with five stable blades.



MM8 silage bunker

MM8 silage bunkers maintain stocks of the basic feed within a closed construction with waterproof, rust-proof side panels. Distribution is made using stainless steel floor panels which are guided on reinforced chains as well as on up to three beater rollers, as desired. An adjustable support construction enables positioning of the bunker at the best angle. Irrespective of whether you prefer the optional fitment with a reversing device or a convenient remote control unit, MM8 is the bunker that grows to meet your desires. Module for module, always in line with the size of your herd and farm!

MM8 bunkers from GEA Farm Technologies are the tailor-made elements in automatic feeding systems.

Above all, they provide large capacity volumes which can also be further extended. This makes for ideal conditions from which you can profit in all senses of the word: You can put together a variety of feed mixtures each day while hardly having to invest any work in the process!





Barn and animal management



3. Barn and animal management

As with feeding and drinking, stress-free and calm processes are of extreme importance when the animals are being guided in the stall and separated as necessary. In order to ensure optimal guidance through the stall or to feeding and also the guiding of sick cows directly into a separate treatment area, barn and animal management equipment is needed which can take into account the varied behaviour of the herd and which can combine this with the desired efficiency aspects.

Return stops, barriers, lift gates, turning and latching parts and special handling races from GEA Farm Technologies are set up to meet these demands.



Through our top-quality Royal De Boer product range we are able to bring about barn concepts which increase efficiency in the long term, minimise the causes of stress and, as a result, achieve a positive overall result in terms of the herd's milk yield.



Take advantage of our on-site service for operationally-based planning of your barn and animal management. Our experienced consultants from your local GEA sales organisation will put together a tailor-made solution on-site for the optimisation of your barn.



3.1 Selection and guiding

Return stops

- Targeted: very good guidance of the animals
- Robust: resistant, even against hard impacts
- Barn optimisation: good possibilities for division



Barriers

- Variable: modular system with varied elements
- Economical: optimal use of the space available
- Animal friendly: very good guidance features



Lift gates

- Operator-friendly: very good operation
- Quick processing: stress-free design of the herding path



Handling race

- Well thought-out: many examination possibilities
- Uncomplicated: simple to use
- Animal-friendly: optimal care of the herd away from the feeding area
- Modular: expandable basic module with options for extension



Return stops

Return stops regulate the general forward movement of the animals in the barn and ensure that the process runs smoothly and without stress. Equipping the barn with our Royal De Boer products offers top resistance against impacts caused when moving backwards, even under the most demanding conditions. They are available in many different versions and, like all articles from the Royal De Boer product range, are extremely robust and solidly constructed.



Selection and guiding - Return stops:

Part Number	Description	Dimensions / Misc.
5550-4410-000	Return stop complete (walkway width up to max. 110 cm)	
5550-3040-000	Adjustable return stop 90/140cm (walkway width 90 - 145 cm)	
5550-3045-000	Two-piece return stop (walkway width up to max. 110 cm)	

Barriers

The variable barriers from our Royal De Boer products enable an optimal use of the space available, well thought-out guidance and flexible variants for dividing the animals. Available in various designs with vertical and horizontal bars, for extending or adjusting, these elements always provide the right solution for guiding and selection in your barn.



Selection and guiding - Barriers:

Part Number	Description	Dimensions / Misc.
5550-4310-000	Barrier, rear side of cubicles	230-280 cm rear cubicles
5550-4310-001	Barrier, rear side of cubicles	255-310 cm rear cubicles

Safety barrier Front side:

Part Number	Description	Dimensions / Misc.
5550-4312-000	Safety barrier Front side 2D	275-299 cm safety ff/front 2D
5550-4312-001	Safety barrier Front side 2D	300-350 cm safety ff/front 2D
5550-4312-002	Safety barrier Front side 2D	351-400 cm safety ff/front 2D
5550-4312-003	Safety barrier Front side 2D	401-450 cm safety ff/front 2D
5550-4312-004	Safety barrier Front side 2D HN	296-350 cm safety ff/front 2D HN
5550-4312-005	Safety barrier Front side 2D HN	351-400 cm safety ff/front 2D HN
5550-4312-006	Safety barrier Front side 2D HN	401-450 cm safety ff/front 2D HN

Safety barrier Rear side:

Part Number	Description	Dimensions / Misc.
5550-4316-000	Safety barrier Rear side 2D	275-299 cm safety ff/rear 2D
5550-4316-001	Safety barrier Rear side 2D	300-320 cm safety ff/rear 2D
5550-4316-002	Safety barrier Rear side 2D	321-370 cm safety ff/rear 2D
5550-4316-003	Safety barrier Rear side 2D	371-440 cm safety ff/rear2D

Extendable barrier:

Part Number	Description	Dimensions / Misc.
5550-7213-021	Extendable barrier	200-300 cm H = 98 cm + fixings
5550-7213-023	Extendable barrier	250-400 cm H = 98 cm + fixings
5550-7213-025	Extendable barrier	300-500 cm H = 98 cm + fixings

Barrier with 3 horizontal bars:

Part Number	Description	Dimensions / Misc.
5550-4293-001	Barrier with 3 horizontal bars	L = 230 cm H = 53 cm
5550-4293-002	Barrier with 3 horizontal bars	L = 270 cm H = 53 cm
5550-4293-003	Barrier with 3 horizontal bars	L = 320 cm H = 53 cm
5550-4293-004	Barrier with 3 horizontal bars	L = 350 cm H = 53 cm
5550-4293-005	Barrier with 3 horizontal bars	L = 400 cm H = 53 cm
5550-4295-013	Barrier with 3 horizontal bars	L = 140 cm H = 79 cm
5550-4295-014	Barrier with 3 horizontal bars	L = 185 cm H = 79 cm
5550-4295-015	Barrier with 3 horizontal bars	L = 230 cm H = 79 cm
5550-4295-016	Barrier with 3 horizontal bars	L = 270 cm H = 79 cm
5550-4295-017	Barrier with 3 horizontal bars	L = 295 cm H = 79 cm
5550-4295-018	Barrier with 3 horizontal bars	L = 320 cm H = 79 cm
5550-4295-019	Barrier with 3 horizontal bars	L = 345 cm H = 79 cm
5550-4295-020	Barrier with 3 horizontal bars	L = 370 cm H = 79 cm
5550-4295-021	Barrier with 3 horizontal bars	L = 415 cm H = 79 cm
5550-4295-022	Barrier with 3 horizontal bars	L = 460 cm H = 79 cm
5550-4295-000	Barrier with 3 horizontal bars	L = 140 cm H = 98 cm
5550-4295-001	Barrier with 3 horizontal bars	L = 185 cm H = 98 cm
5550-4295-002	Barrier with 3 horizontal bars	L = 230 cm H = 98 cm
5550-4295-003	Barrier with 3 horizontal bars	L = 270 cm H = 98 cm
5550-4295-004	Barrier with 3 horizontal bars	L = 295 cm H = 98 cm
5550-4295-005	Barrier with 3 horizontal bars	L = 320 cm H = 98 cm
5550-4295-006	Barrier with 3 horizontal bars	L = 345 cm H = 98 cm
5550-4295-007	Barrier with 3 horizontal bars	L = 370 cm H = 98 cm
5550-4295-008	Barrier with 3 horizontal bars	L = 415 cm H = 98 cm
5550-4295-009	Barrier with 3 horizontal bars	L = 460 cm H = 98 cm

Barrier with vertical bars:

Part Number	Description	Dimensions / Misc.
5550-4294-004	Barrier with vertical bars	L = 150 cm H = 109 cm
5550-4294-005	Barrier with vertical bars	L = 250 cm H = 109 cm
5550-4294-007	Barrier with vertical bars	L = 275 cm H = 109 cm
5550-4294-009	Barrier with vertical bars	L = 325 cm H = 109 cm
5550-4294-010	Barrier with vertical bars	L = 350 cm H = 109 cm
5550-4294-012	Barrier with vertical bars	L = 400 cm H = 109 cm
5550-4294-013	Barrier with vertical bars	L = 450 cm H = 109 cm
5550-4294-006	Barrier with vertical bars and TBS	L = 250 cm H = 109 cm
5550-4294-008	Barrier with vertical bars and TBS	L = 275 cm H = 109 cm
5530-4294-000	Barrier with vertical bars and TBS	L = 325 cm H = 109 cm
5550-4294-011	Barrier with vertical bars and TBS	L = 350 cm H = 109 cm
5530-4294-001	Barrier with vertical bars and TBS	L = 400 cm H = 109 cm
5530-4294-002	Barrier with vertical bars and TBS	L = 450 cm H = 109 cm

Adjustable barriers:

Part Number	Description	Dimensions / Misc.
5550-4262-000	Adjustable barrier	rear cubicles + fixings
5550-4252-000	Adjustable barrier	feed barrier/front Polo
5550-4257-000	Adjustable barrier	feed barrier 2000/front Polo
5550-4250-000	Adjustable barrier	feed barrier/front model R
5550-4255-000	Adjustable barrier	feed barrier 2000/front model R
5550-4251-000	Adjustable barrier	feed barrier/rear of cubicles
5550-4256-000	Adjustable barrier	feed barrier 2000/front of cubicles
5550-4259-001	Adjustable barrier	feed barrier/front Polo
5550-4259-000	Adjustable barrier	feed barrier/front Polo

Lift gates

Of decisive importance when designing herding paths are control elements which enable a quick and smooth procedure. The lift gates from our Royal De Boer products are the state of the art in this area with the advantages of many years of tried and tested use in practical operation. Lift gates from GEA Farm Technologies stand out, on the one hand, due to their high level of flexibility and robustness and, on the other hand, because of their great operator friendliness.



Selection and guiding - Lift gates:

Part Number	Description	Dimensions / Misc.
5550-4297-001	Lift gate incl. stanchions on the floor	230-270 cm
5550-4297-002	Lift gate incl. stanchions on the floor	270-320 cm
5550-4297-003	Lift gate incl. stanchions on the floor	320-350 cm
5550-4297-004	Lift gate incl. stanchions on the floor	350-400 cm
5550-4297-005	Lift gate incl. stanchions on the floor	400-440 cm

Handling race

Insemination, veterinary treatment, vaccination or regular checks during gestation are just some examples for the uses of a handling race. With the aid of a specially designed fence construction, cows can be easily separated from the herd individually or in groups by just one person without any additional help. The handling race is recommended for farms with more than 150 cows and is installed away from the feeding area. Available for concrete or slatted floors, this care unit is particularly robust thanks to its solid construction and can be individually adjusted to the existing space conditions. The base element of 600 cm can be expanded as desired with modules of 300 and 600 cm.



On concrete floors:

Part Number	Description	Dimensions / Misc.
5550-5600-000	Handling race 6 m incl. fixing on concrete	L = 600 cm
5550-5600-002	Extension part 3 m incl. fixing on concrete	L = 300 cm
5550-5600-004	Extension part 6 m incl. fixing on concrete	L = 600 cm

On slatted floors

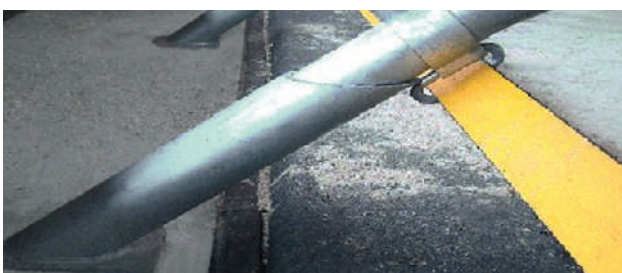
Part Number	Description	Dimensions / Misc.
5550-5600-001	Handling race 6 m incl. fixing on slats	L = 600 cm
5550-5600-003	Extension part 3 m incl. fixing on slats	L = 300 cm
5550-5600-005	Extension part 6 m incl. fixing on slats	L = 600 cm

Selection and guiding accessories

In addition to the top-quality selection and guiding products from our Royal De Boer product range, we also offer further genuine accessories such as stanchions, chest brackets, nylon straps, T and cross-clamps, wall and pipe brackets, mounting brackets and many more articles. Take advantage of our diverse range of products. Our consultants within your GEA sales organisation will show you the most suitable possibilities. They will also be happy to give you on-site guidance.



You can obtain the accessories needed in each case for the complete, possible specification via your appropriate GEA sales organisation / GEA sales consultant. They will be happy to assist you and to show you the most suitable solution for your demands.



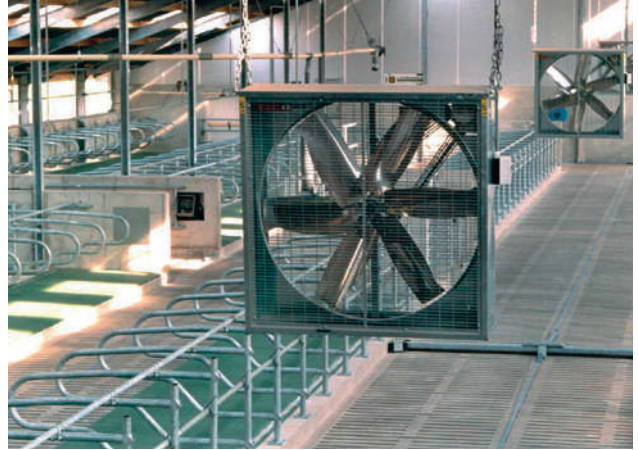


Stall climate



4. Stall climate

Changes in temperature, stress caused by light, wind and precipitation as well as room and animal-related thermal processes within the parlour are just some of the factors which affect the stall climate. An exact control and regulation of these factors is of essential importance in order to ensure optimal climate conditions. Adequate ventilation and stable temperature conditions have a direct effect on the well-being of the herd and thus on the milk yield.



The climate-related product range of our Royal De Boer product range leads to a high yield from the herd through specific stress-reduction measures and the reduction of illness-related losses. In addition, the fitting and retrofitting of climate-related equipment represents a protection of assets by, for instance, enabling the avoidance of the build-up of condensation in the winter period.



We present to you in this catalogue a small selection of the most highly demanded basic climate-related products from our range. Ask your GEA sales consultant about tailor-made climate concepts for your stalls. Once he has paid a visit to your farm Your needs will become clear and an individual solution can be quickly found.



4.1 Stall climate

Lumitherm

- Very quiet, even when it is windy outside
- Optimal diffusion of light and ventilation
- Very good insulation effect
- Protection against extreme cold



Curtains

- Good ventilation concept for a high degree of animal health
- Pleasant working atmosphere
- Reduction in pathogens



Agridoors

- Flexible height and width
- Suitable for large entrances
- Very sturdy due to aluminium profiles
- Easy handling



Lumitherm

Lumitherm combines light protection, ventilation and insulation in one outstanding, low-noise system solution. An energy-saving fan pumps air into the inflatable hoses which form a continuous, closed, insulating wall when they are blown up. A glare-free passage of light into the stall is made possible through the semi-transparent film. A thermostat, and an automatic control unit with a weather station, regulates the system and determines the extent to which the air vent is opened, enabling a reaction to temperature, precipitation and wind as needed. Lumitherm can consist of various sections, depending on the height of the side walls.



Lumitherm II basic package:

Part Number	Description	Dimensions / Misc.
5570-0809-000	Lumitherm II basic package	Typ 90
5570-0812-000	Lumitherm II basic package	Typ 120
5570-0815-000	Lumitherm II basic package	Typ 150
5570-0818-000	Lumitherm II basic package	Typ 180
5570-0821-000	Lumitherm II basic package	Typ 210
5570-0824-000	Lumitherm II basic package	Typ 240
5570-0827-000	Lumitherm II basic package	Typ 270
5570-0830-000	Lumitherm II basic package	Typ 300

Curtains

A curtain is a simple but effective basic solution for the regulation of climate in the stall. It is guided by loops on the wall and is available both for manual and fully automated operation with a weather station. The ventilation curtain is available in green and grey and also in a transparent version and can be fitted with a net to protect against wind or birds, as required.



Curtain basic package - manual operation:

Part Number	Description	Dimensions / Misc.
5570-0602-148	Cow Curtain basic package	Opening 50 cm
5570-0602-153	Cow Curtain basic package	Opening 75 cm
5570-0602-000	Cow Curtain basic package	Opening 100 cm
5570-0602-029	Cow Curtain basic package	Opening 125 cm
5570-0602-058	Cow Curtain basic package	Opening 150 cm
5570-0602-090	Cow Curtain basic package	Opening 175 cm
5570-0602-105	Cow Curtain basic package	Opening 200 cm
5570-0602-120	Cow Curtain basic package	Opening 225 cm
5570-0602-127	Cow Curtain basic package	Opening 250 cm
5570-0602-141	Cow Curtain basic package	Opening 275 cm
5570-0602-144	Cow Curtain basic package	Opening 300 cm

Curtain basic package - electric operation:

Part Number	Description	Dimensions / Misc.
5570-0601-009	Cow Curtain basic package incl. motor	Opening 50 cm
5570-0601-010	Cow Curtain basic package incl. motor	Opening 75 cm
5570-0601-000	Cow Curtain basic package incl. motor	Opening 100 cm
5570-0601-001	Cow Curtain basic package incl. motor	Opening 125 cm
5570-0601-002	Cow Curtain basic package incl. motor	Opening 150 cm
5570-0601-003	Cow Curtain basic package incl. motor	Opening 175 cm
5570-0601-004	Cow Curtain basic package incl. motor	Opening 200 cm
5570-0601-005	Cow Curtain basic package incl. motor	Opening 225 cm
5570-0601-006	Cow Curtain basic package incl. motor	Opening 250 cm
5570-0601-007	Cow Curtain basic package incl. motor	Opening 275 cm
5570-0601-008	Cow Curtain basic package incl. motor	Opening 300 cm

Agridoors

Agridoors provide a flexible climate solution for frequently used entrances with a broad span and heights of up to 6.10 m. The rolling door achieves its strength through its horizontally reinforced aluminium profiles. The door runs safely and smoothly on its side-mounted galvanised steel guide rails. An important pre-condition for climate stability in the stalls.



Manual operation:

Part Number	Description	Dimensions / Misc.
5570-6430-002	Agridoor	3,00 x 3,10 mtr
5571-6430-005	Agridoor	4,00 x 3,10 mtr
5571-6430-007	Agridoor	4,00 x 4,10 mtr
5570-6430-008	Agridoor	4,50 x 3,10 mtr
5571-6430-016	Agridoor	4,50 x 5,10 mtr
5570-6430-011	Agridoor	6,00 x 3,10 mtr
5571-6430-022	Agridoor	6,00 x 4,10 mtr
5570-6340-037	Agridoor	6,00 x 5,10 mtr

Electric operation:

Part Number	Description	Dimensions / Misc.
5570-6430-040	Agridoor	4,00 x 5,10 mtr
5571-6430-015	Agridoor	4,50 x 4,10 mtr
5570-6430-041	Agridoor	4,50 x 5,10 mtr
5570-6430-035	Agridoor	5,00 x 5,10 mtr
5570-6430-042	Agridoor	6,00 x 5,10 mtr



Animal comfort



5. Animal comfort

Hygiene and the well-being of the animals are the focus when talking about animal comfort in dairy farming. Brushes and hoof troughs in particular are of outstanding importance for the care of the animals, since they can reach sensitive parts of the animal's body and can potentially act as stress relievers. The automatically-operated brushes from GEA Farm Technologies have been designed in such a way that they are not just highly robust and durable but are also favourably accepted by the animals. This is a guarantee for a good blood circulation in the tissue layers, an increase in the release of heat via the back and, not least, stress-free care sessions.



Our hoof troughs also provide excellent conditions for cleaning and disinfection. The cows feel secure in the stall and remain relaxed.



With the selection of products presented, GEA Farm Technologies gives you an insight into the animal comfort programme of our Royal De Boer and Mullerup product range, which has an even broader range of products on offer. Find out about additional articles from our sales consultants: Contact us and receive on-site advice on your farm!



5.1 Cow brushes

E-Brush cow brush

- Compact pendulum design
- Robust gearbox in proven design
- Bristles made of wear-resistant nylon
- Double-comfort design brush with long and short bristles
- Both automatic and reversing start-up direction



M-Brush cow brush

- Angled brush with robust gearbox
- Self-regulation of the brush pressure by the cow
- Bristles made of proven nylon
- Double-comfort function due to special bristle arrangement
- Easy on materials due to alternating direction of rotation each time it starts up



E-Brush cow brush

The compact pendulum design of this water-resistant nylon brush is designed to provide an optimal cleaning and brushing effect on the cow's back and has maximum effect when additional pressure is applied to the brush. The double-comfort brush with long and short bristles and its reversing start-up direction enables it to also get to hard-to-reach parts of the body, such as the head or the tailhead. The E-Brush helps to increase the well-being in the herd and is favourably received by the animals.



E-Brush:

Part Number	Description	Dimensions / Misc.
5580-2201-002	E-Brush	

M-Brush cow brush

M-Brush is a pressure-sensitive controlled brush with a very robust gearbox, which intensifies its rotation when pressure is applied. In this way the cow can regulate the effect of the brush according to its needs by the force of its own weight. In doing so, hard-to-reach places, such as the head, back and tailhead can be reached.

Short and long bristles on the angled brush guarantee a massage which stimulates the blood circulation and, as a result, leads to an improved release of heat via the back. M-Brush changes the direction of rotation each time it starts up and is thus designed to be easy on materials.



M-Brush

Part Number	Description	Dimensions / Misc.
5580-5502-600	M-Brush - GEA cow brush	dia. 50cm, 35rpm, 0.37kW, 230V



5.2 Hoof care trough

Delta hoof care trough

- Ensures that hooves are spread thanks to its studded profile
- Light and retains its shape: simple setting up and adjusting
- Especially slip resistant



Delta hoof care trough

The special studded profile of the hoof care trough provides support for the natural spreading of the hooves so that disinfectant agents are able to have an optimal effect. The light trough which, however, retains its shape well can be used at any place, as required, and ensures that the animals have good stability.

Delta hoof care trough:

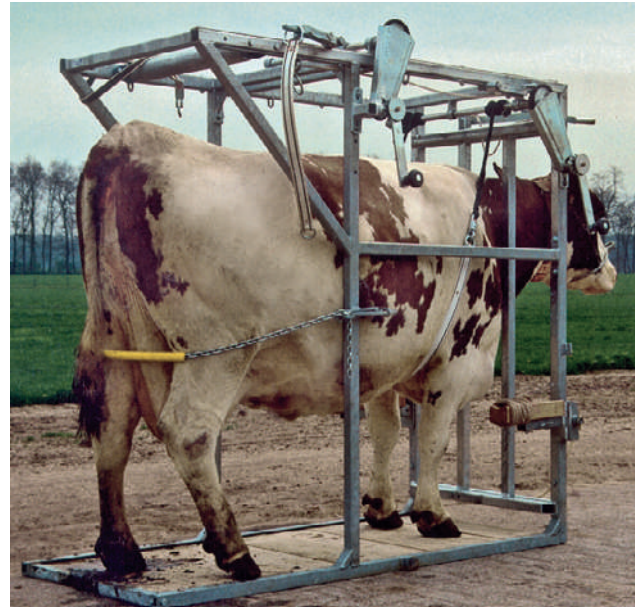
Part Number	Description	Dimensions / Misc.
5580-3000-000	Delta hoof care trough, made of polyethylene	



5.3 Hoof trimming crush

Klauenpflegestand

- Robust design
- Injury-free care of the hooves
- Effective cleaning and maintenance
- Durable



Hoof trimming crush

Taking care of the hooves demands a robust design and top-quality finish to the hoof trimming crush due to the strong effects of the loads and movements of the animal. The aim is to be able to carry out care sessions in a smooth and injury-free manner and effectively clean and maintain the equipment. The hoof trimming crush from GEA Farm Technologies has been designed to meet these demands and requires little effort in all its forms of application.



Hoof trimming crush:

Part Number	Description	Dimensions / Misc.
5580-6480-000	Hoof trimming crush with front foot rests	WB18
5580-6480-003	Hoof trimming crush with front foot rests	WB22



Young stock



6. Young stock

Successful long-term milk production means extreme care and diligence in the rearing of young cattle. The essential basics for successful rearing of an animal to the adult stage are formed by an initial investment in accommodation and care - from the newly born calf to a sexually mature heifer.

Products and solutions from GEA Farm Technologies are proven in practice and provide economical support for your farm in appropriate, sustainable rearing so that high-quality milk production can be ensured at the end of the rearing process.

Through our YoungStock Solutions programme from the Royal De Boer product range we can provide you with suitable feed fences, cubicle separations, igloo huts and other products which have been proven through practical use. We recommend the following forms of accommodation for specific age groups:

0 – 6 months	Calf box or igloo hut
7 – 12 months	Group boxes or cubicles with Polysoft mat
13 – 18 months	Cubicles with Polysoft mat
19 – 22 months	Cubicle





6.1 YoungStock Solutions

Calf igloo huts and calf boxes

- Variable: size form for specific ages
- Durability: first-class selection of materials
- Optimal animal care: simple access to the calf



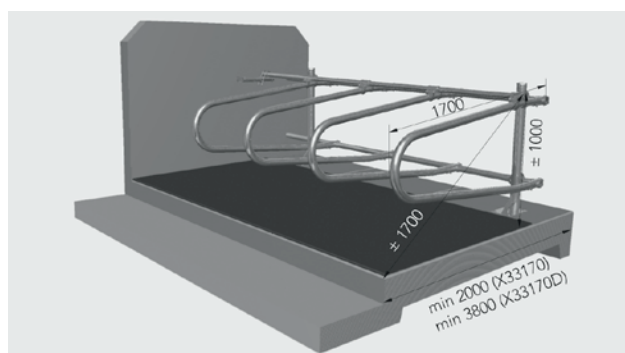
Barriers

- Flexible: many possibilities for division
- Stable: resistant against impacts
- Field-tested: proven design



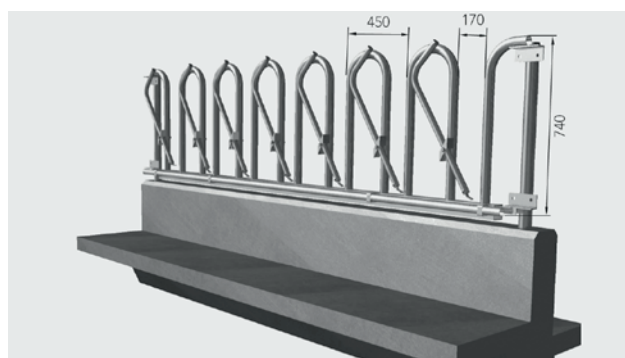
Cubicle divisions

- Effective: optimal use of the space available
- Top-quality manufacture: designed to be durable
- Flexible: designs available for specific ages



Feed fence

- Functions comparable with those for feed fences for adult animals
- Available as self-locking, diagonal, or Swedish feed fences
- Tailored to the anatomy of young animals



Calf igloo huts and calf boxes

With their small size, ergonomic design and feeding and drinking fitments GEA Farm Technologies has taken the initial development stage of the animals into consideration in its equipment. Our calf igloo huts and calf boxes are simple to handle, sturdy and have a durable design as well as standing out due to their varied accessories. Indispensable for the successful rearing of high-yield dairy cattle.



Calf igloo hut:

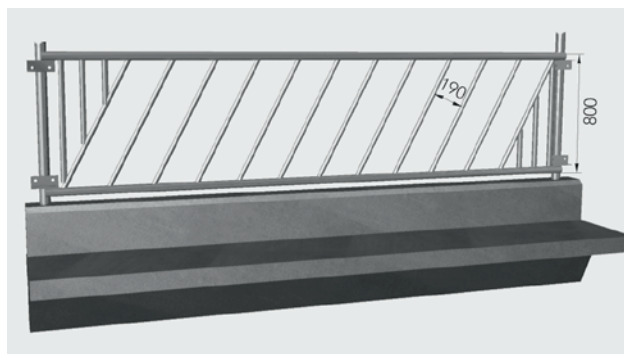
Part Number	Description name	Dimensions / Misc.
5580-3002-001	Calf-o-tel, calf igloo hut	200-300 cm H = 98 cm + fixings

Calf boxes:

Part Number	Description name	Dimensions / Misc.
5550-7685-001	Calf box, rotating front grille	
5550-7684-000	Calf box, arm	
5550-7686-005	Calf box, end wall	
5550-7686-006	Calf box, central wall	
5550-7675-018	Calf box roof	optional
5550-7682-004	Calf box wheel set	optional

Barriers

The group husbandry of calves and young cattle demands animal-friendly equipment and easy access for cleaning and care work. Our barriers from the Royal de Boer product range provide the best possibilities here for the design of the stall. They have a sturdy design, are easy to handle and extremely flexible in their use.



Barriers for dimensions of 260 - 325 cm:

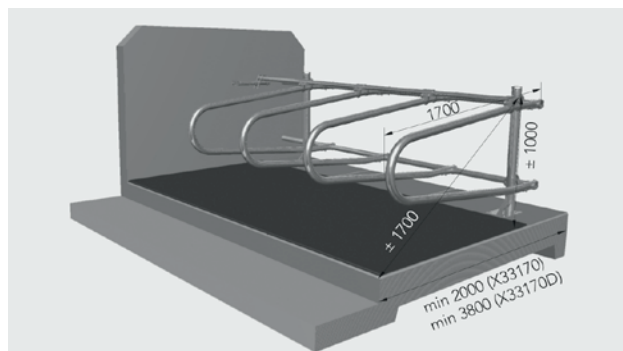
Part Number	Description name	Dimensions / Misc.
5550-7200-010	Barriers rotatable - adjustable	
5550-7200-011	Barriers rotatable - adjustable	
5550-7200-012	Barriers rotatable - adjustable	
5550-7200-013	Barriers rotatable - adjustable	
5550-7200-014	Barriers rotatable - adjustable	

Barriers for dimensions of 300 - 365 cm:

Part Number	Description name	Dimensions / Misc.
5550-7200-021	Barriers rotatable - adjustable	
5550-7200-022	Barriers rotatable - adjustable	
5550-7200-023	Barriers rotatable - adjustable	
5550-7200-024	Barriers rotatable - adjustable	
5550-7200-025	Barriers rotatable - adjustable	

Cubicle divisions

Our cubicle divisions from the Young Stock Solutions programme are available for specific stages of development and ages. There are three sizes available for the animals from 1 - 16 months, which, similar to all articles from our Royal De Boer products, have a first-class finish, are extremely robust and particularly easy to clean and user friendly.



Cubicle divisions ½ - 5 months:

Part Number	Description name	Dimensions / Misc.
5510-0313-005	Cubicle division	135 cm

Cubicle divisions 5 - 12 months:

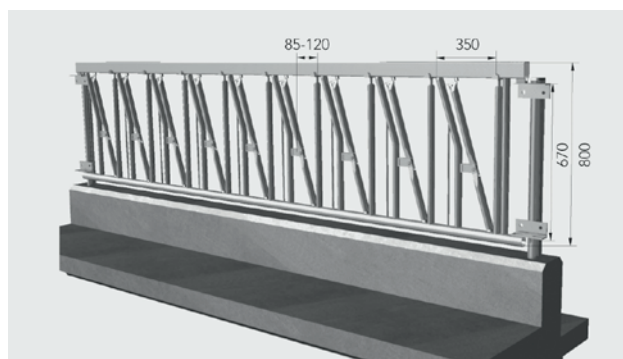
Part Number	Description name	Dimensions / Misc.
5510-0316-005	Cubicle division	160 cm

Cubicle divisions 12 - 16 months:

Part Number	Description name	Dimensions / Misc.
5510-3317-005	Cubicle division	170 cm

Feed fence

Animal comfort, stability and simple operation mark the feed fences from the Royal De Boer product range. The feed fences from the Young Stock Solutions area of GEA Farm Technologies are available as self-locking, diagonal, or Swedish feed fences. They have dimensions suitable for the various stages of development and thus make a contribution to optimal rearing.



Self-locking feed fence Young cattle 2 to 6 months:

Part Number	Description name	Dimensions / Misc.
5530-7360-005	Self-locking feed fence Calves	2-6 M. 87 / 2 x 42 cm
5530-7360-007	Self-locking feed fence Calves	2-6 M. 155 / 4 x 38 cm
5530-7360-009	Self-locking feed fence Calves	2-6 M. 189 / 5 x 38 cm
5530-7360-011	Self-locking feed fence Calves	2-6 M. 223 / 6 x 37 cm
5530-7360-013	Self-locking feed fence Calves	2-6 M. 257 / 7 x 37 cm
5530-7360-015	Self-locking feed fence Calves	2-6 M. 325 / 9 x 36 cm
5530-7360-017	Self-locking feed fence Calves	2-6 M. 440 / 12 x 37 cm

Self-locking feed fence Young cattle 6 to 15 months:

Part Number	Description name	Dimensions / Misc.
5530-7350-007	Self-locking feed fence Young cattle	6-15 M. 108 / 2 x 54 cm
5530-7350-009	Self-locking feed fence Young cattle	6-15 M. 151 / 3 x 50 cm
5530-7350-011	Self-locking feed fence Young cattle	6-15 M. 195 / 4 x 49 cm
5530-7350-013	Self-locking feed fence Young cattle	6-15 M. 238 / 5 x 48 cm
5530-7350-015	Self-locking feed fence Young cattle	6-15 M. 282 / 6 x 47 cm
5530-7350-017	Self-locking feed fence Young cattle	6-15 M. 325 / 7 x 46 cm
5530-7350-020	Self-locking feed fence Young cattle	6-15 M. 440 / 9 x 49 cm

Self-locking feed fence Young cattle 12 to 22 months:

Part Number	Description name	Dimensions / Misc.
5530-7340-006	Self-locking feed fence Young cattle	12-22 M. 119 / 2 x 60 cm
5530-7340-008	Self-locking feed fence Young cattle	12-22 M. 171 / 3 x 57 cm
5530-7340-010	Self-locking feed fence Young cattle	12-22 M. 222 / 4 x 56 cm
5530-7340-012	Self-locking feed fence Young cattle	12-22 M. 274 / 5 x 55 cm
5530-7340-014	Self-locking feed fence Young cattle	12-22 M. 325 / 6 x 54 cm
5530-7340-016	Self-locking feed fence Young cattle	12-22 M. 440 / 8 x 55 cm

Diagonal feed fence Young cattle 2 - 6 months:

Part Number	Description name	Dimensions / Misc.
5530-1040-000	Diagonal feed fence	325 / 9 x 36 cm
5530-1041-000	Diagonal feed fence	265 / 7 x 38 cm
5530-1042-000	Diagonal feed fence	205 / 5 x 41 cm
5530-1043-000	Diagonal feed fence	145 / 3 x 48 cm
5530-1047-000	Diagonal feed fence	440 / 13 x 34 cm

Diagonal feed fence Young cattle 6 – 16 months:

Part Number	Description name	Dimensions / Misc.
5530-1017-000	Diagonal feed fence	440 / 11 x 40 cm
5530-1010-000	Diagonal feed fence	325 / 8 x 41 cm
5530-1011-000	Diagonal feed fence	225 / 5 x 45 cm
5530-1012-000	Diagonal feed fence	125 / 2 x 62 cm
5530-1047-000	Diagonal feed fence	440 / 13 x 34 cm

Swedish feed fence Young cattle 6 - 12 months:

Part Number	Description name	Dimensions / Misc.
5530-0452-000	Swedish self-locking feed fence Young cattle 6 - 12 months	105 / 2 x 55 cm
5530-0451-000	Swedish self-locking feed fence Young cattle 6 - 12 months	237 / 5 x 47 cm
5530-0450-000	Swedish self-locking feed fence Young cattle 6 - 12 months	325 / 7 x 46 cm

Self-locking feed fence Twist&Lock 7 – 12 months:

Part Number	Description name	Dimensions / Misc.
5530-7030-100	Self-locking feed fence Twist&Lock	L=110/2x46 cm
5530-7030-101	Self-locking feed fence Twist&Lock	L=156/3x46 cm
5530-7030-102	Self-locking feed fence Twist&Lock	L=202/4x46 cm
5530-7030-103	Self-locking feed fence Twist&Lock	L=248/5x46 cm
5530-7030-104	Self-locking feed fence Twist&Lock	L=294/6x46 cm
5530-7030-105	Self-locking feed fence Twist&Lock	L=325/7x43,5 cm
5530-7030-106	Self-locking feed fence Twist&Lock	L=350/7x48 cm

Self-locking feed fence Twist&Lock 12 – 22 months:

Part Number	Description name	Dimensions / Misc.
5530-7020-100	Self-locking feed fence Twist&Lock	L=121/2x51 cm
5530-7020-101	Self-locking feed fence Twist&Lock	L=174/3x51 cm
5530-7020-102	Self-locking feed fence Twist&Lock	L=226/4x51 cm
5530-7020-103	Self-locking feed fence Twist&Lock	L=295/5x56 cm
5530-7020-104	Self-locking feed fence Twist&Lock	L=325/6x51 cm
5530-7020-105	Self-locking feed fence Twist&Lock	L=350/6x56 cm

Young Stock Solutions accessories

The Young Stock Solutions from our Royal De Boer product range include a broad range of accessories, such as stanchions, chest brackets, nylon straps, T and cross-clamps, wall and pipe brackets, mounting brackets and many more genuine accessory articles. You can obtain information from your GEA sales consultant about the extensive possibilities for the equipping of an animal friendly rearing stall for calves and young cattle. We will be happy to advise you on-site!



You can obtain the accessories needed in each case for the complete, possible specification via your appropriate GEA sales organisation / GEA sales consultant. They will be happy to assist you and to show you the most suitable solution for your demands.





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Manure removal



7. Manure removal

It goes without saying that exemplary barn hygiene is of extreme importance for the health of the herd and is thus the primary condition for perfect milk production. Hoof diseases and mastitis can be avoided and the overall risk of infection is lowered. However, the hygiene measures are greatly dependent on the type of animal husbandry and the equipment installed in the buildings.



As experts with decades of experience in the processing of manure GEA Farm Technologies is able to offer you top-class quality products. We are optimally placed to meet your needs through the Royal De Boer and Houle products. No matter whether you want to fit a stanchion barn or free shed, whether you have a solid or slatted floor, we will always find the right system for you. Our extensive programme ranges from chain manure removal systems to hydraulically-operated systems with a hoist up to manure removal robots; from this we can find a suitable solution for your farm which exactly meets your demands in terms of the type of drive and the scraper design.

As scrapers have to be specified dependent on the barn layout and in most cases take customer-specific demands into consideration we have concentrated in this catalogue on the representation of complete systems. This is the reason why you will find very few article numbers in the following chapter „Scraper systems“. We will be happy to draft for you a complete system for your stalls. Please speak to your GEA sales consultant about your needs.





7.1 Free shed scraper systems

SRone

- Mobile use: robot independent of chains and hoists
- Specialist all-rounder: the comprehensive problem-free solution for slatted floors
- Extreme manoeuvrability: 80 cm wide, 55 cm high, turns around completely in 2 m
- Heavy dead weight: 500 kg total weight for excellent floor adhesion
- High scraping performance: 100 kg thrust with a working width of 1.40 - 2 m
- Intelligent technology: recognition of obstacles and route
- Efficient results: 19 hours daily pushing, 5 hours charging



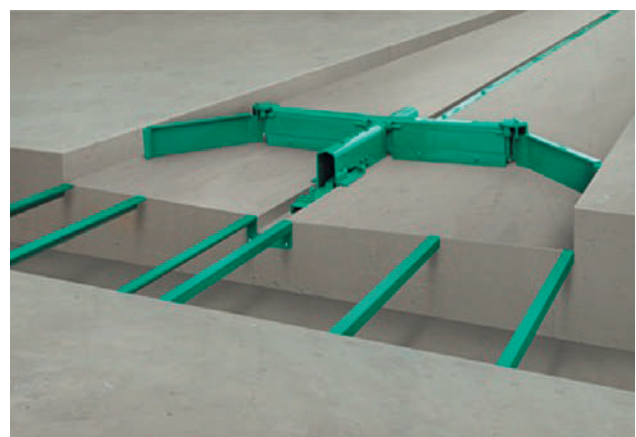
Cable winch manure removal system

- The big solution: For walkways up to 180 m
- High level of animal friendliness: recognition of obstacles, low-noise operation and top cleaning performance
- Maximum flexibility: various widths through design with folding arms and additional options for installation
- Proven technology: long service life on concrete floors
- Cost-effective use: round the clock operation and work savings due to operator-friendly control unit



Hydraulic manure removal system

- Maximum flexibility: adaptable system for channels of varying length
- Economical loading: For walkways up to 60 m
- High individuality: adjustable, flexible flaps for solid floors or walkways with rubber mats
- Special scraper for walkways with concrete or rubber mats as a base



Chain manure removal system

- Great range: For walkways up to 100 m
- Extremely cost-effective: operator-friendly programmable control unit for 24-hour continuous operation
- Low maintenance costs: maintenance-free chain tensioner and adjustable overload protection
- Top cleaning performance: strong floor adhesion through heavy dead weight



Lateral channel - cable winch

- The big solution: for lateral channels up to 183 m
- Robust design: solid quality of our Houle product range
- Low maintenance: optimal cleaning performance and solid construction



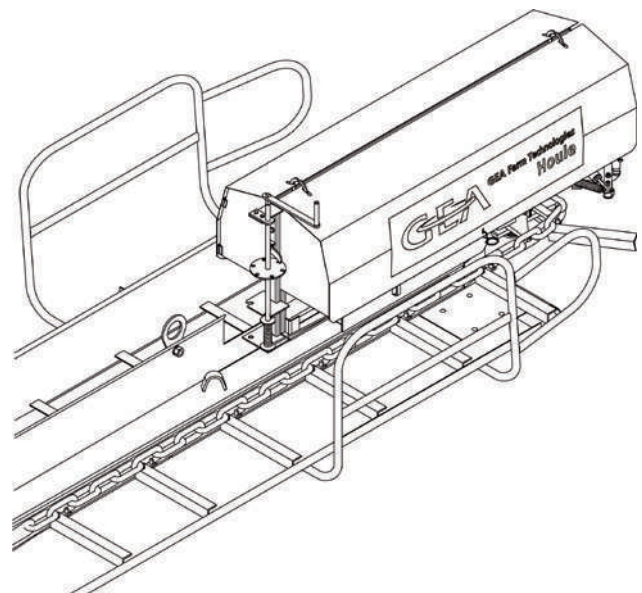
Lateral channel - hydraulic

- Economical loading: for lateral channels of up to 50 m
- Variety of setting possibilities: many accessory and enhancement options
- Top cleaning performance: through the system's heavy dead weight



Lateral channel - chain

- Great range: for lateral channels of up to 102 m
- Long service life: solid quality of our Houle product range
- Low maintenance: optimal cleaning performance and solid construction



SRone

This agile robot for slatted floors is designed for high performance. With a dead weight of 500 kg it adheres firmly to the ground and provides a pushing force of 100 kg. It can thus handle an area of up to 8,600 sqm at a maximum speed of 5 m per minute. It can operate every day for up to 19 hours. Its batteries are completely recharged within 5 hours. With this concept SRone can be used practically round the clock.

In addition, its cleaning performance is highly effective: It reaches difficult to access areas of the stall quite easily and is resistant to acids and slippery floors. The robot demonstrates its animal-friendliness on its pre-programmed routes. Via sensors integrated into the scraper, which report objects and animals to the machine, it is capable of avoiding them in time and represents no danger at all for the herd.



SRone scraper robot with sensor and 2 magnets:

Part Number	Description name	Dimensions
5560-0000-084	SRone scraper robot with magnetic sensor	140 cm GEA
5560-0000-085	SRone scraper robot with magnetic sensor	170 cm GEA
5560-0000-086	SRone scraper robot with magnetic sensor	200 cm GEA

SRone scraper robot without magnets:

Part Number	Description name	Dimensions
7100-6100-000	SRone scraper robot	140 cm GEA
7100-6100-010	SRone scraper robot	170 cm GEA
7100-6100-020	SRone scraper robot	200 cm GEA

Cable winch manure removal system

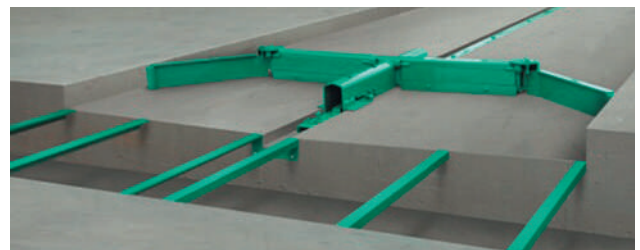
GEA Farm Technologies supplies cable winch manure removal systems for walkways of up to 180 m in different variants. The systems from our Royal De Boer and Houle products are marked by their ease of maintenance, long service life and efficiency.

You have various possibilities when selecting the scraper: Guided scrapers or those which run on the floor as well as many design variants of V-shaped or slatted floor scrapers with folding arms and various scraping blades cover every need. All variants are marked both by a top-class level of cleaning performance and very good floor adhesion due to their solid construction and heavy dead weight.



Hydraulic manure removal system

Hydraulic manure removal systems are advantageous for various length walkways with varying floor coverings. The system adapts excellently to walkway surfaces with a rubber covering or concrete floors with the aid of flexibly adjustable blades. Hydraulic manure removal systems from GEA Farm Technologies are extremely sturdily built and achieve a very good cleaning effect.



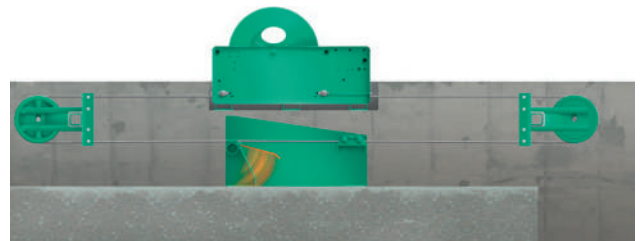
Chain manure removal system

Our chain manure removal systems from the Royal De Boer and Houle product ranges are designed for walkways of up to 100 m and stand out due to their sturdy design and top cleaning performance in 24-hour continuous operation. This is ensured by the operator-friendly drive with the unique chain wheel, the specially constructed 22 mm chain, the maintenance-free chain tensioner and the adjustable overload protection. The heavy dead weight of our chain manure removal systems leads to an optimal cleaning effect and it is extremely well accepted within the herd.



Lateral channel - cable winch

In order to complete your barn cleaning equipment we recommend a specialised system for the lateral channel. Our cable winch manure removal system for long lateral channels of up to 183 m originates from the Houle product range and smoothly takes up the manure from the manure removal system in the walkways. Despite its solid weight the motor runs on low power and delivers a perfect cleaning result in the lateral channel. In addition to this cost-effective design the system requires very little maintenance and is simple to install.



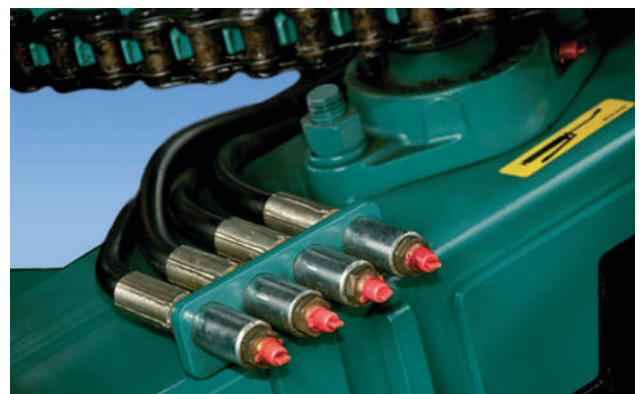
Lateral channel - hydraulic

Our hydraulic systems for lateral channels with dimensions of up to 61 cm wide and up to 50 m long are flexible and adaptable. This system is comparable with the hydraulic systems for walkways and has a number of possible versatile variations for adaption to your stall. The system stands out due to its solid construction and the subsequent cleaning performance and long service life.



Lateral channel - chain

A lateral channel may have a maximum length of 102 m and a width of up to 114 cm for this type of system. The drive unit is at the end of the channel and pulls on a strong chain with various options for additional equipment. The fitment, construction and design of this system from our Houle products are intended for heavy stress in constant operation. Top cleaning and transport performance are a sign of reliability and long service life.





7.2 Stanchion barn scraper systems

Inclined conveyors

- Sturdy design: made of 100% steel with an epoxy resin coating
- Variety of ranges: from 3 to 23 metres in steps of 1.5 metres
- Various models: fixed, pivoting and suspended
- Individually adjustable: through various drive units, chain wheels, chains, deflection rollers, etc.



Inclined conveyors

The programme of inclined conveyors for manure removal from our Royal De Boer and Houle product ranges is built to cope with widely differing local conditions. In steps of 1.5 metres you can obtain fixed inclined conveyors from 3 to 9 metres, suspended inclined conveyors from 11 to 17 metres and pivoting conveyors from 12 to 23 metres in length.

Depending on the barn layout, the type of requirements and adjoining outside area, the systems can be adjusted to meet individual local conditions through different drive units, chain wheels, chains and deflection rollers. All models are built of 100% steel with a urethane-based epoxy resin coating and have a gutter depth of more than 40 cm for accommodating loads. The sturdy, well thought-out design means that our inclined conveyors require very little maintenance and have a long service life



Houle H-2000 overhead conveyor, stationary or suspended:

Part Number	Description name	Dimensions
2002-8002-660	H-2000 stationary	3 m
2002-8002-670	H-2000 stationary	5 m
2002-8002-680	H-2000 stationary	6 m
2002-8002-690	H-2000 stationary	7.5 m
2002-8002-700	H-2000 stationary	9 m
2002-8002-710	H-2000 suspended	10.5 m
2002-8002-720	H-2000 suspended	12 m
2002-8002-730	H-2000 suspended	13.5 m
2002-8002-740	H-2000 suspended	15 m

Houle H-4000 overhead conveyor, suspended:

Part Number	Description name	Dimensions
2002-8002-750	H-4000 suspended	12 m
2002-8002-760	H-4000 suspended	13.5 m
2002-8002-770	H-4000 suspended	15 m
2002-8002-780	H-4000 suspended	16.5 m
2002-8002-790	H-4000 suspended	18 m
2002-8002-800	H-4000 suspended	19.5 m
2002-8002-810	H-4000 suspended	21 m
2002-8002-820	H-4000 suspended	22.5 m

Houle H-8000 overhead conveyor, fixed:

Part Number	Description name	Dimensions
2002-8002-900	H-8000 rigid	13.5 m
2002-8002-910	H-8000 rigid	15 m
2002-8002-920	H-8000 rigid	16.5 m
2002-8002-930	H-8000 rigid	18 m
2002-8002-940	H-8000 rigid	19.5 m
2002-8002-950	H-8000 rigid	21 m
2002-8002-960	H-8000 rigid	22.5 m

De Boer fixed overhead conveyors:

Part Number	Description name	Dimensions
5505-6200-000	Overhead conveyor, fixed	1.5 m
5505-6200-002	Overhead conveyor, fixed	6 m
5505-6200-004	Overhead conveyor, fixed	8 m
5505-6201-001	Overhead conveyor, fixed	10 m
5505-6201-003	Overhead conveyor, fixed	12 m

De Boer pivoting overhead conveyors:

Part Number	Description name	Dimensions
5505-0700-001	Overhead conveyor, pivoting	6 m
5505-0700-000	Overhead conveyor, pivoting	8 m



7.3 Flush systems

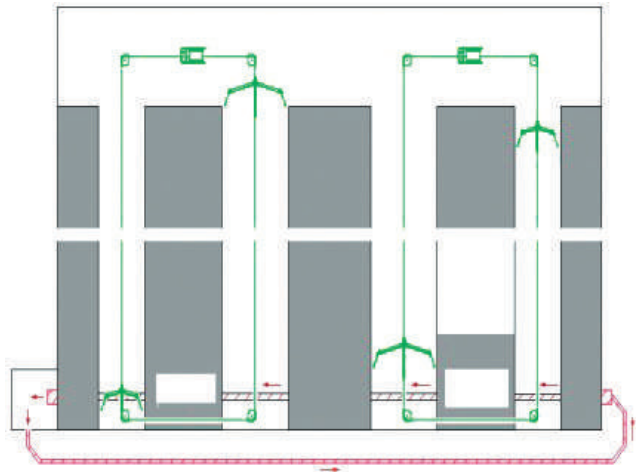
Waiting area flush

- Cleaner waiting area due to regular cleaning
- Quicker and cleaner than a dung scraper
- Capable of rinsing several areas, such as the return path areas
- Use of recycled or fresh water
- Simple operation



Flush flume / lateral channel

- Closed system in combination with a stall manure removal system
- Easy handling
- High level of cleaning performance
- Effective and requires very little maintenance



Stall flush

- High level of cleaning performance
- Effective and requires very little maintenance
- Simple operation



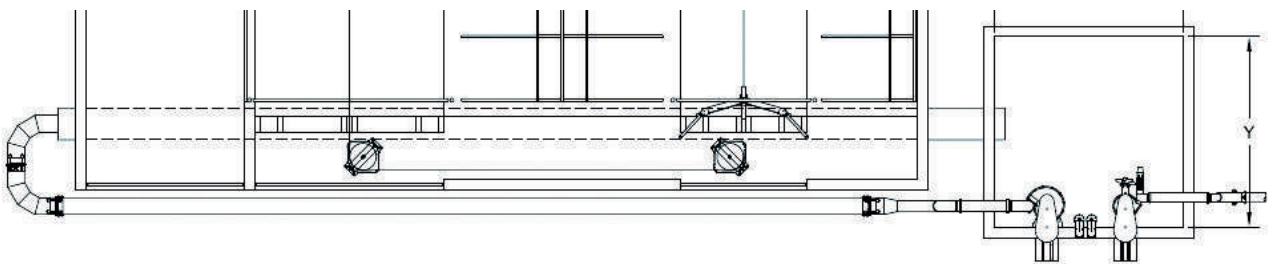
Waiting area flush

Depending on the integrated functions and layout, the waiting area plays an important part in herd hygiene and thus in the overall milk production. A flush system for this area ensures an outstanding cleaning performance through the use of rinsing so that first-class hygiene conditions, e.g. for the return path and separation can be created. The system cleans the areas in question better than a dung scraper in a quick and extremely efficient manner using fresh or recycled water. The waiting area flush system from our Houle products can be expanded on a modular basis and is capable of being tailor-made to every barn layout.



Flush flume / lateral channel

A flush system can form a closed circulation system in combination with a matching manure removal system for the lateral channel. The work load is significantly reduced and efficiency is increased to its maximum limit while providing a top cleaning and transportation performance. GEA Farm Equipment is able to offer the flush flume system for the lateral channel in the Houle product range. Its pump with an extremely high throughput generates a pumping power of 11,000 l/min and makes the system extremely powerful. In addition, Flush Flume stands out due to its simple operation, ease of maintenance and a compact construction which ensures a long service life.



Stall flush

We recommend the stall flush system from our Houle products, which performs its cleaning function via a rinsing process using fresh or recycled water. The system's pump requires very little maintenance and is fitted with a powerful belt drive. The robust, welded pump housing is a guarantee for a long service life. Like all articles from the Houle product range the stall flush stands out due to its simplicity, effectiveness and its high quality.





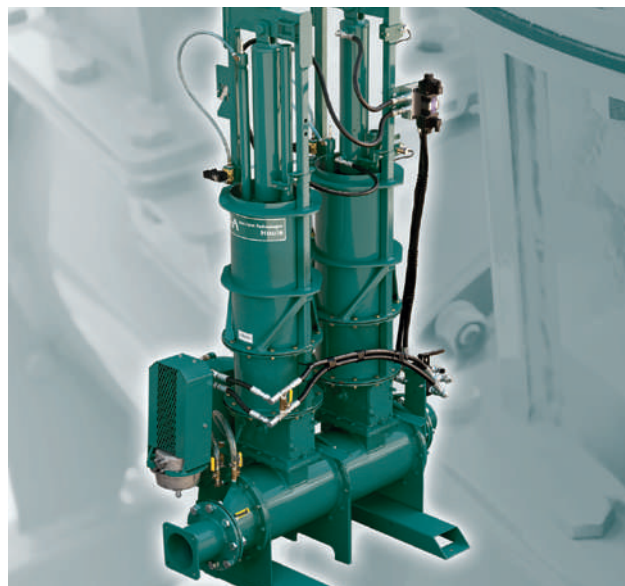
Pumps and agitators



8. Pumps and agitators

GEA Farm Technologies is the leading manufacturer in the manure processing sector and can thus offer you an unrivalled selection of products for the processing of manure in high quality and sturdy design for professional use. Our Houle product range in particular has an extensive selection.

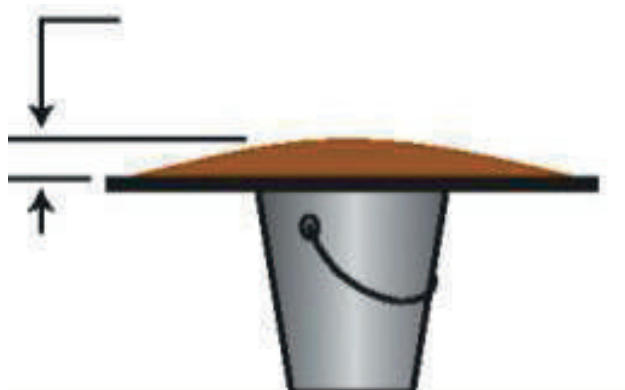
Pumps and agitators play a decisive part in the further processing of the manure which has been gathered. The use of the most suitable machines on your farm depends on the viscosity of well agitated manure, which you can establish yourself in the following quick test.



1. Ensure that the manure in the pit is well agitated and homogenised.
 2. Place a 60 cm disc onto a bucket.
 3. Shake sufficient manure onto the disc until it is fully covered.
 4. After waiting for 1 minute measure the thickness of the manure in the middle of the disc.
 5. The value obtained determines, in conjunction with the form of the bedding and the general planning conditions, the basis for the selection of your pump.
- Your GEA sales consultant will be happy to provide you with support.

The following pump systems are available in the GEA Farm Technologies programme:

- Piston pumps
- Electric pumps
- Tractor-driven (PTO) pumps
- Tractor-driven (PTO) agitators
- Electric agitators





8.1 Piston pumps

Magnum

- For manure with a viscosity of up to 127 mm and a high straw content
- Funnel construction for simple installation in many different types of buildings
- Mechanical discharge system without excessive hydraulic pressure
- Easy to maintain and operate



Futuro

- For extremely viscous manure which has a viscosity of up to 127 mm
- Particularly safe and clean due to its flap construction with sharp edges and urethane seals
- The pump housing and pistons are made of stainless steel



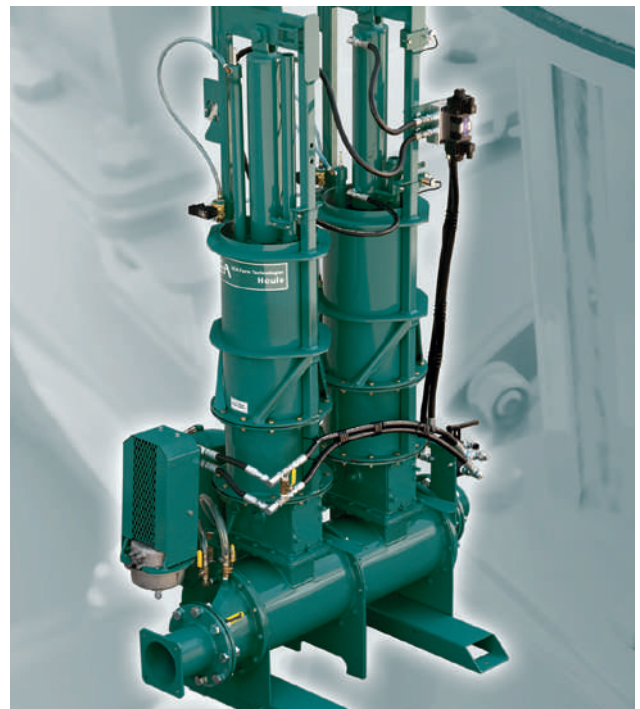
Electromix pump

- High-performance pump for viscous manure
- For pumping distances of up to 1 km
- Economical due to an efficient motor loading of 4 or 5.5 kW
- Can be used as a system together with the Elektromix agitator



Sync²

- For manure with a viscosity of up to 38 mm and bedding containing straw or wood shavings
- Proven technology for more than 25 years
- High pumping power at a constant flow
- Very economical due to optimum loading
- Sturdy, compact, long-life design



XPulse

- Constant flow rate between 75 and approx. 600 l/ min
- Variable for different types of manure
- With a viscosity of up to 13 mm, for large pumping distances
- Hydraulic flow control valve to adjust flow rate
- Particularly simple to maintain due to easily accessible piston stroke technology



Magnum

The typical area of use for the Magnum pump is for the removal of cattle manure from a stanchion barn where the viscosity may be as much as 127 mm and may contain straw or wood shavings. The mechanical discharge system permits even operation of the pump without excessive hydraulic pressure on the relevant components. With its funnel construction the Magnum piston pump minimises the work needed for installation and allows it to be used in various types of building.



Magnum piston pump:

Part Number	Description	Dimensions / Misc.
2007-8007-000	Magnum piston pump with hydraulic cutting tools	
2007-8007-200	Magnum piston pump with hydraulic cutting tools and pneumatic spring	
2007-8007-180	Magnum piston pump with hydraulic cutting tools and manual cutting tool valve	
2007-8007-390	Magnum piston pump with hydraulic cutting tools, pneumatic spring and manual cutting tool valve	
2007-8007-190	Magnum piston pump with spring-loaded flap and manual cutting tool valve	

Futuro

The piston pump with integrated urethane seals cannot be beaten in terms of safety and cleanliness due to its striking flap construction. In the suction phase a vacuum opens the inlet flap so that the manure can be sucked into the pump pipe. In the evacuation phase high pressure closes the inlet flap and opens the spring-loaded outlet flap.

The manure is pressed through the discharge pipe. The manure to be pumped may have a viscosity of up to 127 mm and the system tolerates bedding consisting of sand or wood shavings. The pump housing and pistons of the Futuro are made of stainless steel for a long service life and reliability. The pump is easy to maintain and simple to operate due to its construction.



Futuro piston pump:

Part Number	Description name	Dimensions
2007-8007-170	Futuro piston pump	

Electromix pump

This high-performance pump is a part of an overall system (Fig.) with compatible agitator (see also chapter 8.6.) from our Houle products. The Elektromix pump is designed for viscous cattle manure and long pumping distances of up to 1 km. It has a throughput of up to 40m³/hr but only requires a motor power of 3.8 or 5.5 kW, making the pumping system extremely economical. The pistons and pump housing are made of stainless steel, resulting to low wear. This creates considerable advantages in terms of maintenance, durability and robustness.



Electromix pump:

Part Number	Description name	Dimensions
2011-8011-060	Electromix pump - Wall mounting (in a pit)	
2011-8011-130	Electromix pump - Floor mounting (on the edge of a pit)	
2011-8011-150	Electromix pump - Floor mounting, suction pipe 90 cm from the wall	
2011-8011-160	Electromix pump - Floor mounting with 8" inlet flange	

Sync²

Die Sync² is the result of proven hydraulic piston technology of more than 25 years. The pump stands out due to its ability to run tirelessly: it can master long distances at a constant speed and remains extremely economical. The manure to be pumped may have a viscosity of between 2 and 38 mm and may contain bedding with straw or wood shavings. Thanks to its sturdy and compact design the Sync² works efficiently while only requiring a small amount of electric power.



Sync² piston pump with mechanical switching mechanism:

Part Number	Description name	Dimensions
2011-8011-280	Sync ² piston pump with 2 " cylinder	
2011-8011-290	Sync ² piston pump with 3 " cylinder	

Sync² piston pump with electrical switching mechanism:

Part Number	Description name	Dimensions
2011-8011-320	Sync ² piston pump with 2 " cylinder	
2011-8011-330	Sync ² piston pump with 3 " cylinder	
2011-8011-340	Sync ² piston pump with 4 " cylinder	

XPulse

The robust nature, efficiency and long service life of the XPulse are the result of more than 25 years of experience and development. This double piston pump from our Houle product range is an energy-efficient pump solution for constant throughput rates between 75 und and about 600 l/min. By the use of an easy-to-adjust, hydraulic flow control valve the throughput rate can be adjusted to the area of application. Replaceable steel and urethane flaps provide additional adjustment, for example for very liquid manure which contains no fibres. All maintenance and service work required can be carried out very simply due to the easily accessible piston technology.



XPulse piston pump with mechanical reversing system:

Part Number	Description name	Dimensions
2011-8011-220	XPulse piston pump with 2 " cylinder	
2011-8011-230	XPulse piston pump with 3 " cylinder	

XPulse piston pump with electrical reversing system:

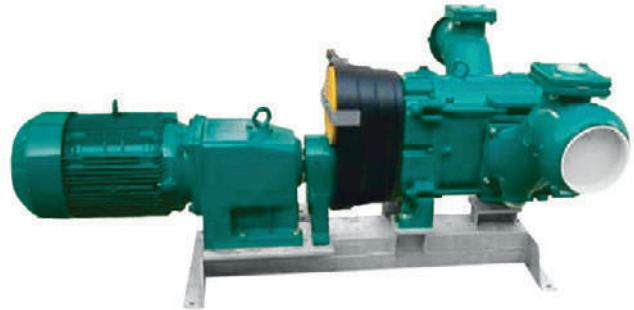
Part Number	Description name	Dimensions
2011-8011-350	XPulse piston pump with 2 " cylinder	
2011-8011-360	XPulse piston pump with 3 " cylinder	
2011-8011-370	XPulse piston pump with 4 " cylinder	



8.2 Rotary piston pumps

DK rotary piston pump

- Pumping power of 450 to 6,000 l/min
- Drive with PTO shaft or electric motor
- Pressure output 4 - 10 bar



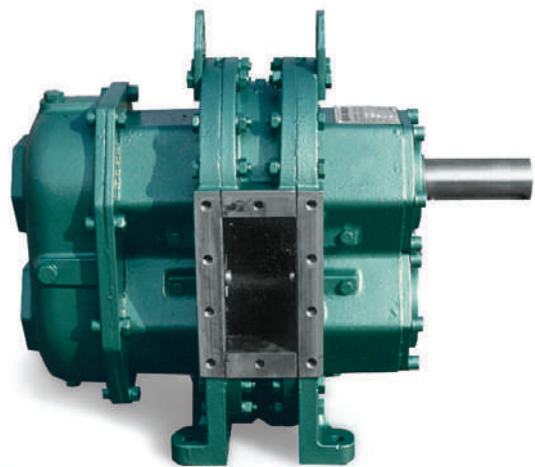
PTO pumps for tractors

- Simple installation and easy operation
- Compact dimensions and require little space
- Universal and flexible in daily work



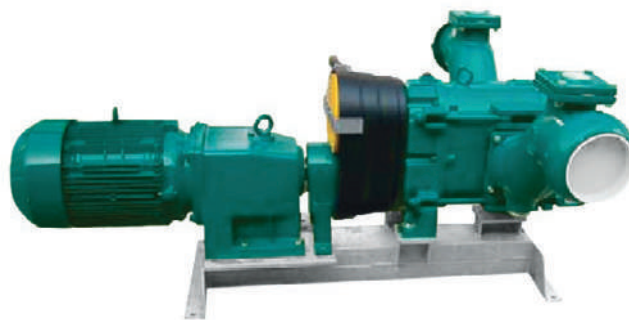
Displacement pumps for tractors

- Pressure output range of 3 - 5 bar
- Compact dimensions and require little space
- Low-maintenance, robust, long service life



DK rotary piston pump

This effective and robust pump can be driven by both a PTO shaft and by an electric motor meaning that it can be used for various applications. Its pressure output ranges from 4 - 10 bar, enabling the pumping of manure with up to 30% solids. Depending on the consistency, the throughput ranges from 450 - 6,000 l/min. In addition, the DK rotary piston pump is robustly built, very durable and is extremely simple to handle.



Rotary piston pump, frame-mounted with coupling and protective cap:

Part Number	Description name	Dimensions / Misc. (H x W)
5560-5855-019	DK12V-1040 rotary piston pump with 7.5 kW 400 V	for 600 l / min at a max. of 4 Bar
5560-5855-020	DK12V-1540 rotary piston pump with 11 kW 400 V	for 475 l / min at a max. of 7 Bar
5560-5855-021	DK12V-2040 rotary piston pump with 15 kW 400 V	for 650 l / min at a max. of 4 Bar
5560-5855-022	DK12V-2540 rotary piston pump with 18.5 kW 400V	for 600 l / min at a max. of 10 Bar
5560-5855-023	DK22V-1040 rotary piston pump with 7.5 kW 400 V	for 1,100 l / min at a max. of 2 Bar
5560-5855-024	DK22V-1540 rotary piston pump with 11 kW 400 V	for 1,075 l / min at a max. of 3.5 Bar
5560-5855-025	DK22V-2040 rotary piston pump with 15 kW 400 V	for 1,300 l / min at a max. of 4 Bar
5560-5855-026	DK22V-2540 rotary piston pump with 18.5 kW 400V	for 1,500 l / min at a max. of 5 Bar
5560-5855-027	DK31V-2540 rotary piston pump with 18.5 kW 400V	for 1,950 l / min at a max. of 2 Bar
5560-5855-028	DK31V-3040 rotary piston pump with 22 kW 400 V	for 2,350 l / min at a max. of 2.5 Bar

Rotary piston pump, frame-mounted for connection to a PTO shaft:

Part Number	Description name	Dimensions / Misc. (H x W)
5560-5855-030	DK12V rotary piston pump 5" PTO shaft connection	for 1,500 l / min at a max. of 10 Bar
5560-5855-008	DK22V rotary piston pump 6" PTO shaft connection	for 2,500 l / min at a max. of 5 Bar
5560-5855-014	DK31V rotary piston pump 6" PTO shaft connection	for 4,000 l / min at a max. of 5 Bar
5560-5855-031	DK60V rotary piston pump 8" PTO shaft connection	for 6,000 l / min at a max. of 4 Bar

Rotary piston pump, basic version:

Part Number	Description name	Dimensions / Misc. (H x W)
5560-5855-033	DK12V rotary piston pump	for 1,500 l / min at a max. of 10 Bar
5560-5855-034	DK22V rotary piston pump	for 2,500 l / min at a max. of 5 Bar
5560-5855-015	DK31V rotary piston pump	for 4,000 l / min at a max. of 5 Bar
5560-5855-035	DK60V rotary piston pump	for 6,000 l / min at a max. of 4 Bar

PTO pumps for tractors

The self-priming PTO tractor pump has proven itself in daily use for the pumping of manure over long distances. Its compact construction saves on space and makes the robust pump flexible enough to be used anywhere. It can also be used without any external power supply if necessary.

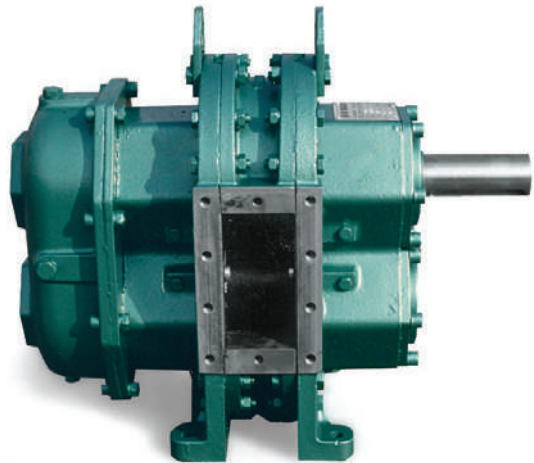


PTO pump:

Part Number	Description name	Dimensions / Misc. (H x W)
5560-1200-007	B120T pump set for a tractor	74 m ³ / hrs 3 Bar
5560-2401-000	B240T pump set for a tractor	148 m ³ / hrs 3 Bar
5560-2801-000	B280T pump set for a tractor	163 m ³ / hrs 5 Bar
5560-3502-000	B350T pump set for a tractor	204 m ³ / hrs 5 Bar

Displacement pumps for tractors

The self-priming displacement pump from GEA Farm Technologies is the optimal choice for daily use. With its small dimensions, sturdy construction and great flexibility it can be used anywhere that the application requires it. Durability, a long service life and effectiveness are the features of this pump with a pressure output range of 3 - 5 bar.



Tractor pump:

Part Number	Description name	Dimensions / Misc. (H x W)
5560-1918-000	B120T pump, tractor-driven	72 m ³ / hrs 3 Bar
5560-1918-037	B240T pump, tractor-driven	148 m ³ / hrs 3 Bar
5560-1918-009	B280T pump, tractor-driven	163 m ³ / hrs 5 Bar
5560-1918-017	B350T pump, tractor-driven	204 m ³ / hrs 5 Bar
5560-1918-020	B420T pump, tractor-driven	245 m ³ / hrs 5 Bar



8.3 Electric pumps

Electric 4" waste water pump

- Transports waste water or pig manure with a viscosity of up to 10 mm
- Optional nozzle and powerful drive
- Economical through low power consumption



Electric 4" vertical pump

- For cattle manure with a consistency of up to 13 mm
- Energy-efficient, high-powered belt drive
- High productivity through non-swirling nozzle



Electric 4" Agi-Pompe®

(also available as pontoon pump)

- For manure containing straw
- V-belt drive ensures safe operation and flexibility in its speed.
- Pumping and agitation at the same time
- Pumping power for liquid manure of up to 3,600 l/min
- Agitator mechanism with propeller and knife set chops up the remaining straw during the transport



Electrical 8" flush pump

(also available as pontoon pump)

- Especially designed for flush systems in walkways, the waiting area and lateral channels
- Pump with a high throughput for very liquid manure with up to 11,000 l/m
- Simple maintenance due to central lubrication system



**Electrical 4" high-pressure vertical pump
(also available as pontoon pump)**

- High throughput with a power of 1,890 l/min
- For the pumping of flush liquid from long distances
- High pumping pressure
- Simple maintenance due to central lubrication system



Vertical pump V

- Top throughput values of up to 12,000 l/min
- Agitation and pumping of extremely viscous manure
- Sturdy frame-mounted design



Submersible motor pump AT

- For collecting pools and manure pits
- Requires little space and is simply installed
- Used thousands of times in farming



Electric 4" waste water pump

The electric 4" waste water pump transports waste water or pig manure with a maximum viscosity of up to 10 mm. The pump has both an optional pivoting nozzle and a powerful drive and thus ensures quick, strong and clean mixing over a broad area. The electric 4" waste water pump is simple to operate and requires very little maintenance. In addition, the pump motor is particularly energy-efficient when used at maximum capacity.



4" electric waste water pump with mixing nozzle:

Part Number	Description name	Dimensions / Misc. (H x W)
2008-8008-370	4 " electric waste water pump for a pit	up to 1.80 m
2008-8008-380	4 " electric waste water pump for a pit	up to 2.40 m
2008-8008-390	4 " electric waste water pump for a pit	up to 3.05 m
2008-8008-400	4 " electric waste water pump for a pit	up to 3.65 m

4" electric waste water pump without mixing nozzle:

Part Number	Description name	Dimensions / Misc. (H x W)
2008-8008-410	4 " electric waste water pump for a pit	up to 1.80 m
2008-8008-420	4 " electric waste water pump for a pit	up to 2.40 m
2008-8008-430	4 " electric waste water pump for a pit	up to 3.05 m
2008-8008-440	4 " electric waste water pump for a pit	up to 3.65 m

Electric 4" vertical pump

The electric 4" vertical pump with an average throughput of 255 m³/hr is normally used for the transport of cattle manure with a consistency of up to 13 mm from the collection pit to the main collection tank. It stands out due to its long service life and a top motor output thanks to its belt drive. Its simple operation, low maintenance and low power uptake are further significant features. The unique construction of the agitator with a non-swirling nozzle results in effective mixing of the manure, thus leading to high productivity of the manure management system.



4" electric vertical pump:

Part Number	Description name	Dimensions / Misc. (H x W)
2008-8008-250	4 " vertical pump with 30 cm impeller for a pit	pit depth up to 1.80 m
2008-8008-260	4 " vertical pump with 30 cm impeller for a pit	pit depth up to 2.40 m
2008-8008-270	4 " vertical pump with 30 cm impeller for a pit	pit depth up to 3.05 m
2008-8008-280	4 " vertical pump with 30 cm impeller for a pit	pit depth up to 3.65 m
2008-8008-530	4 " vertical pump with 30 cm impeller for a pit	pit depth up to 4.25 m
2008-8008-540	4 " vertical pump with 30 cm impeller for a pit	pit depth up to 4.85 m
2008-8008-290	4 " vertical pump with 40 cm impeller for a pit	pit depth up to 1.80 m
2008-8008-300	4 " vertical pump with 40 cm impeller for a pit	pit depth up to 2.40 m
2008-8008-310	4 " vertical pump with 40 cm impeller for a pit	pit depth up to 3.05 m
2008-8008-320	4 " vertical pump with 40 cm impeller for a pit	pit depth up to 3.65 m
2008-8008-550	4 " vertical pump with 40 cm impeller for a pit	pit depth up to 4.25 m
2008-8008-560	4 " vertical pump with 40 cm impeller for a pit	pit depth up to 4.85 m



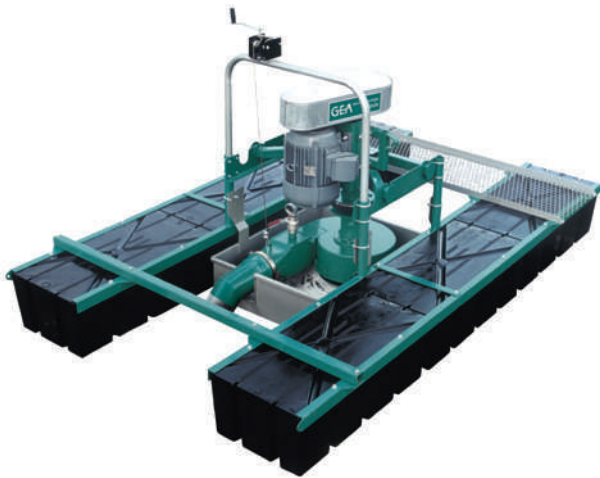
Electric 4" Agi-Pompe®

The Electric 4" Agi Pompe® from our Houle products meets all the demands placed on a professional standard pump for cattle and pig manure which contains straw: Agitating, chopping and pumping in one. The special construction of the agitator mechanism with propeller and knife set chops up the remaining straw during transport and thus increases the pumping capacity. The pumping power for liquid manure is up to 3,600 l/min, the V-belt drive ensures safe operation and flexibility in its speed. This pump is typically used for the agitation of manure and transfer from the intermediate tank to the manure pit. A particular advantage: Agitation and pumping at the same time is possible with the Agi Pompe®. The electric 4" Agi Pompe® is also available as a pontoon pump.



Electric 4" Agi Pompe®:

Part Number	Description name	Dimensions / Misc. (H x W)
2019-8019-020	4 " Agi Pompe® with 150mm outflow for pit depth	up to 1.80 m
2019-8019-820	4 " Agi Pompe® with 150mm outflow for pit depth	up to 2.40 m
2019-8019-830	4 " Agi Pompe® with 150mm outflow for pit depth	up to 3.05 m
2019-8019-840	4 " Agi Pompe® with 150mm outflow for pit depth	up to 3.65 m
2019-8019-850	4 " Agi Pompe® with 150mm outflow for pit depth	up to 4.25 m
2019-8019-860	4 " Agi Pompe® with 150mm outflow for pit depth	up to 4.85 m



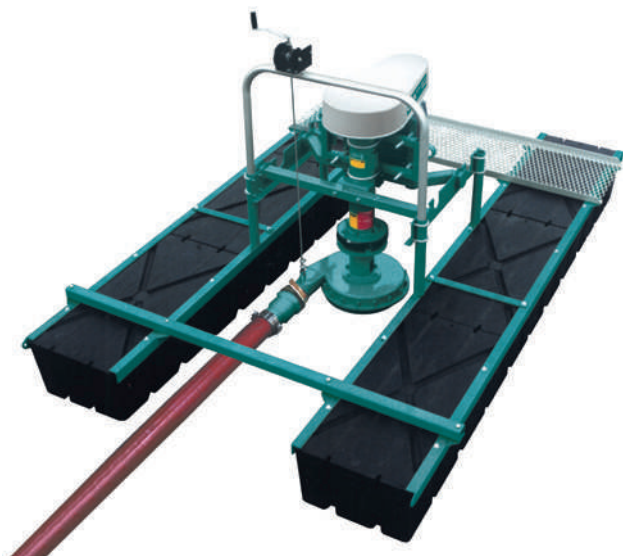
Electric 8" flush pump

The electric 8" flush pump has been specially designed for use in flush systems. Using very thin cattle manure, the high-throughput pump cleans areas such as the waiting area, walkways or lateral channel flush systems. It is easy to maintain thanks to a central lubrication system. Further features of the electric 8" flush pump are its simple operation and its robust design which leads to a long service life. Due to its low-vibration bearing, it generates very little noise when in operation despite its high pumping performance of 11,000 l/min. The electric 8" flush pump is also available as a pontoon pump.



Electric 8" flush pump:

Part Number	Description name	Dimensions / Misc. (H x W)
2019-8019-030	8" Flush pump for a pit	up to 1.80 m
2019-8019-670	8" Flush pump for a pit	up to 2.40 m
2019-8019-680	8" Flush pump for a pit	up to 3.05 m
2019-8019-690	8" Flush pump for a pit	up to 3.65 m
2019-8019-700	8" Flush pump for a pit	up to 4.25 m
2019-8019-710	8" Flush pump for a pit	up to 4.85 m



Electric 4" high-pressure vertical pump

The electric 4" high-pressure vertical pump from the Houle product range is a high-throughput pump with a power of 1,890 l/min. Typically it is used for the pumping of flush liquid from long distances and in applications where high pumping pressure is required. This pump is easy to maintain thanks to a central lubrication system. In addition, the low-vibration bearing ensures that it generates little noise when in operation. The electric 4" high-pressure vertical pump is also available as a pontoon pump.



Electric 4" high-pressure vertical pump:

Part Number	Description name	Dimensions / Misc. (H x W)
2019-8019-240	4" high-pressure pump with 150 mm outflow for pit depth	up to 1.80 m
2019-8019-770	4" high-pressure pump with 150 mm outflow for pit depth	up to 2.40 m
2019-8019-780	4" high-pressure pump with 150 mm outflow for pit depth	up to 3.05 m
2019-8019-790	4" high-pressure pump with 150 mm outflow for pit depth	up to 3.65 m
2019-8019-800	4" high-pressure pump with 150 mm outflow for pit depth	up to 4.25 m
2019-8019-810	4" high-pressure pump with 150 mm outflow for pit depth	up to 4.85 m

Vertical pump V

The V vertical pump provides a high-power capacity with a throughput value of 12,000 l/min, even when agitating and pumping extremely viscous manure. The sturdy frame-mounted construction means that the pump is also capable of coping with the strongest of demands in daily use. The V vertical pump is extremely robust, very reliable and a good choice if there is a need for a high capacity.



Vertical pump V:

Part Number	Description name	Dimensions / Misc. (H x W)
5560-5811-001	Vertical pump V1541	Length 150 cm, incl. 180 x 180 mm flange
5560-5812-002	Vertical pump V2041	Length 150 cm, incl. 180 x 180 mm flange
5560-5816-005	Vertical pump V2541	Length 150 cm, incl. 180 x 180 mm flange
5560-5817-001	Vertical pump V3041	Length 150 cm, incl. 180 x 180 mm flange

Submersible motor pump AT

The use of pumps in collecting pools and manure pits demands simple handling, a well thought-out design and a high level of efficiency in the protection class IP68. The AT submersible motor pump fulfils all these demands. With its integrated chopping unit it also completely eliminates any potentially blocking elements. The AT submersible motor pump thoroughly stands out due to the small amount space it requires and its simple installation. Good reasons for it to have been used for thousands of times over in the farming sector.



AT Submersible motor pump:

Part Number	Description name	Dimensions / Misc. (H x W)
5560-5880-012	AT54-F submersible motor pump	4 kW, 400V
5560-5880-015	AT104 submersible motor pump	7.5 kW, 400 V
5560-5880-000	AT104S submersible motor pump	7.5 kW, 400 V
5560-5880-003	AT154S submersible motor pump	11 kW, 400 V
5560-5880-016	AT204S submersible motor pump	15 kW, 400 V
5560-5880-017	AT154S submersible motor pump	18.5 kW, 400 V
5560-5880-018	AT304S submersible motor pump	22 kW, 400 V



8.4 Tractor-driven (PTO) pumps

6" Agi-Pompe®

- Agitation volume of up to 80,000 l/min
- High-performance pumping and agitation at the same time
- Central lubrication system for maintenance which can be easily carried out from above



6" Super Pump

- Effective
- Robust
- Low maintenance



3-point suspension Agi-Pompe®

- Quick homogenisation of liquid manure
- High-performance drive system for continuous operation
- Welded steel pump housing and steel impeller
- Nozzles with a non-swirling construction



3-point suspension 6"/8" Super Pump

- Suitable for viscous cattle manure with a high straw content
- Also suitable for sandy manure thanks to its wear-resistant pump housing and base plate
- Low maintenance and easy to operate



Lagoon Agi-Pompe®

- Specialised lagoon variant of our classic pump
- Homogenisation with a 120 HP tractor at 540 revs/min or a 160 HP tractor at 1,000 revs/min
- Broad nozzle with double-jointed hinge
- 8" pump pressure ports, multi-directional valves and loading pipes for quicker loading



6"/8" Lagunen Super Pump

- Specialised lagoon variant of our classic pump
- Homogenisation with a 90 HP tractor at 540 revs/min or a 180 HP tractor at 1,000 revs/min
- Running gear with pneumatic tyres
- Optional solenoid valves for 2-pump operation



Maxi Pump

- For manure with a maximum consistency of 13 mm
- Oil lubricated bearings and protected by three seals
- Easy to maintain and robust



Booster Pump

- For manure of up to 6 mm viscosity
- Can be used for the operation of an irrigation system
- Long service life while very simple to operate and maintain



Filling tubes for manure tankers

- For exact and quick filling of manure tankers
- Many possible designs for individual applications
- Quality from our Houle product range



6" Agi-Pompe®

With an agitation volume of up to 80,000 l/min and a pumping power of up to 11,000 l/min the 6" Agi Pompe® achieves extreme level of efficiency and top homogenisation results. Simultaneous pumping and agitation within a short period enables quick and effective working on the spot. In addition, the pump profits from the advantages of our Houle product range which are marked by its sturdy construction with high durability.



6" Agi-Pompe®:

Part Number	Description name	Dimensions / Misc. (H x W)
2010-8010-010	Agi-Pompe® - tilting	1.5 - 2.5 m
2010-8010-020	Agi-Pompe® - tilting	2.7 m
2010-8010-030	Agi-Pompe® - tilting	3 m
2010-8010-040	Agi-Pompe® - tilting	3.3 m
2010-8010-050	Agi-Pompe® - tilting	3.6 m
2010-8010-060	Agi-Pompe® - tilting	4 m
2010-8010-580	Stationary Agi Pompe® with hydraulic valve	up to 2.4 m
2010-8010-590	Stationary Agi Pompe® with manual scraper	up to 2.4 m

6" Super Pump

This high-performance pump from our Houle products is able to process up to 10,000 l/min and thus achieves a very high throughput value. The unique construction of the mixing nozzle enables effective homogenisation of the manure. The 6" Super Pump is simple to handle and requires very little maintenance. Its sturdy design is the basis for its long service life.



6" Super Pump:

Part Number	Description name	Dimensions / Misc. (H x W)
2010-8010-310	Super Pump - tilting	1.5 - 2.5 m
2010-8010-320	Super Pump - tilting	2.7 m
2010-8010-330	Super Pump - tilting	3 m
2010-8010-340	Super Pump - tilting	3.3 m
2010-8010-350	Super Pump - tilting	3.6 m
2010-8010-360	Super Pump - tilting	4 m
2010-8010-600	Stationary Super Pump with hydraulic valve	up to 2.4 m
2010-8010-610	Stationary Super Pump with manual valve	up to 2.4 m

3-point suspension Agi-Pompe®

This pump from our Houle products is suited for quick homogenisation of liquid manure with a 120 HP traction unit at only 540 revs/min. A high-performance drive shaft for continuous operation, a robust welded steel pump housing and welded impeller ensure a long service life of the 3-point suspension Agi Pompe®. Rotating nozzles with a non-swirling construction ensure speedy and effective mixing. In addition, the pump contains all the features of the Houle product range, such as simple operation, low maintenance and durability.



3-point suspension Agi Pompe®

Part Number	Description name	Dimensions / Misc. (H x W)
2010-8040-540	5.4 m Agi Pompe®	3.6 m pit depth
2010-8040-550	6.4 m Agi Pompe®	4.2 m pit depth
2010-8040-680	7.3 m Agi Pompe®	4.9 m pit depth

3-point suspension 6"/8" Super Pump

The 3-point suspension 6" or 8" Super Pump easily handles the transport and homogenisation of viscous cattle manure with a high straw content. The pump with a heavy-duty drive also homogenises liquid manure in a concrete pit with a 90 HP traction unit at only 540 revs/min. The wear-resistant pump housing and the base plate are also suited for the pumping of sandy manure. Like all pumps in our Houle products the 3-point suspension Super Pump is simple to operate, requires little maintenance, is powerful and is sturdily constructed.



3-point suspension 6" Super Pump:

Part Number	Description name	Dimensions / Misc. (H x W)
2010-8010-860	5.2 m Super Pump	3.6 m pit depth
2010-8010-870	5.4 m Super Pump	4.2 m pit depth
2010-8010-880	6.4 m Super Pump	4.9 m pit depth

Lagoon Agi Pompe®

The Agi Pompe® for lagoons is a specialised variant of our classic pump from the Houle products. It allows a quick homogenisation of the manure in lagoons to be carried out: With the help of a 120 HP tractor at 540 revs/min or a 160 HP tractor at 1,000 revs/min. The pump has a wide nozzle with a double-jointed hinge, running gear with pneumatic tyres and 8" pump pressure ports, multi-directional valves and loading pipes for quicker loading. Many other fitment details and options make this Agi Pompe® variant into a perfect specialist for manure management with lagoons.



Lagoon Agi Pompe®:

Part Number	Description name	Dimensions / Misc. (H x W)
2010-8010-300	9.7 m Agi-Pompe®	4.2 m pit depth
2010-8010-770	12.8 m Agi-Pompe®	5.4 m pit depth
2010-8010-930	15.8 m Agi-Pompe®	6.7 m pit depth
2010-8070-560	18.9 m Agi-Pompe®	6.7 m pit depth
2010-8070-060	21.9 m Agi-Pompe®	6.7 m pit depth

6" / 8" Lagoon Super Pump

The Super Pump as a variant for lagoons is capable of processing heavy, viscous manure. In addition, thanks to its wear-resistant pump housing and the base plate it can also cope with sandy manure. Homogenisation takes place using a broad mixing nozzle with a double-jointed hinge and results in an effective mixture. For this a 90 HP tractor at 540 revs/min or a 180 PS tractor at 1,000 revs/min can be used. Its equipment package includes running gear with pneumatic tyres, 6" or 8" pump pressure ports, multi-directional valves and loading pipes for quicker loading as well as optional solenoid valves for 2-pump operation from any traction unit with a hydraulic connection.



6" Lagoon Super pump:

Part Number	Description name	Dimensions / Misc. (H x W)
2010-8010-560	9.7 m Super Pump	4.2 m pit depth
2010-8040-660	12.8 m Super Pump	5.4 m pit depth
2010-8040-590	15.8 m Super Pump	6.7 m pit depth
2010-8070-570	18.9 m Super Pump	6.7 m pit depth
2010-8070-070	21.9 m Super Pump	6.7 m pit depth

8" Lagoon Super pump:

Part Number	Description name	Dimensions / Misc. (H x W)
2010-8040-750	9.7 m Super Pump	4.2 m pit depth
2010-8040-760	12.8 m Super Pump	5.4 m pit depth
2010-8040-770	15.8 m Super Pump	6.7 m pit depth

Maxi Pump

The tractor-driven Maxi Pump ensures quick agitation and pumping away from manure tanks with a maximum consistency of 25 mm using its powerful nozzles. The pump bearings are oil-lubricated and protected by three seals, the inlet flap valve also has a thick seal - outstanding features which are a guarantee for low maintenance and robustness.



Maxi Pump - 3-point suspension:

Part Number	Description name	Dimensions / Misc. (H x W)
2014-8014-020	20 " Maxi-Pump	40 HP min.
2014-8014-110	20 " Maxi-Pump	100 HP min.
2014-8014-100	28 " Maxi-Pump	85 HP min.

Maxi Pump – transportable:

Part Number	Description name	Dimensions / Misc. (H x W)
2014-8014-250	20 " Maxi-Pump	40 HP min.
2014-8014-260	20 " Maxi-Pump	100 HP min.
2014-8014-270	28 " Maxi-Pump	85 HP min.

Booster Pump

A typical application of the Booster Pump is the operation of an irrigation system with a manure processing range of up to 6 mm viscosity. The Booster Pump works extremely efficiently and productively at high pressure. This means that a popular use is in situations where normal pumps with an average pressure output are insufficient. As a product from our Houle products, the Booster Pump is a solidly constructed device with a long service life which is very simple to operate and maintain.



Booster Pump:

Part Number	Description name	Dimensions / Misc. (H x W)
2015-8015-010	Booster Pump, transportable, high volume	7.5 to 9.3 bar
2015-8015-200	Booster Pump, transportable, low volume, high pressure	up to 10.3 bar
2015-8015-210	Booster Pump, transportable, high volume, high pressure	up to 10.3 bar
2015-8015-020	Booster Pump, with 3-spoke impeller	7.5 to 9.3 bar
2015-8015-050	Booster Pump, with 6-spoke impeller	7.5 to 9.3 bar

Filling tubes for manure tankers

The speedy and exact filling of manure tankers is a significant factor in productive manure processing. Filling systems and tubes from GEA Farm Technologies cover all possible applications and offer innumerable options for the design of a solution to meet your needs. All components involved in the top-quality fitments of our Houle products are solidly manufactured, require little maintenance, are simple to operate and have a long service life. You can obtain more information on the various possibilities from your GEA sales consultant.



Filling tubes for manure tankers:

Part Number	Description name	Dimensions / Misc. (H x W)
2010-7618-460	Tube with 70° bend and stand	8" x 7.6 m
2010-7626-520	Tube with 90° bend and stand	8" x 7.6 m
2010-7624-240	Tube with 20° bend and stand	8" x 7.6 m
2010-7624-230	Tractor-mounted tube with 20° bend	8" x 7.6 m
2010-8010-510	Mobile tube on wheels with 8" hose adapter and manual winch	8" to 10" x 9,1 m
2010-8040-870	Mobile tube on wheels with 8" hose adapter and hydraulic cylinder	8" to 10" x 9,1 m
2010-7607-420	Tube with 70° bend and stand	6" x 7.6 m
2010-7626-420	Tube with 90° bend and stand	6" x 7.6 m
2010-7622-160	Tube with 20° bend and stand	6" x 7.6 m
2010-7613-450	Tractor-mounted tube with 20° bend	6" x 7.6 m



8.5 Tractor-driven (PTO) agitators

3-point suspension agitator

- High-powered propeller
- Agitation output of 125,000/ l/min
- Particularly large screw for quick, effective agitation
- Long service life while very simple to operate and maintain



Lagoon agitator

- Solid construction
- Durable
- Productive



Raceway agitator

- For manure processing in lateral channels and slalom systems
- Proven technology
- Long service life while very simple to operate and maintain



Worm shaft

- Free of blockages due to its construction
- Operation on a dry run
- Roller bearings on the shaft
- Drive shaft runs in an oil bath



3-point suspension agitator

125,000/ l/min is the impressive agitation output value of the 3-point suspension agitator from our Houle products. Its large screw and the high-performance propeller make its agitation output so effective. Like all products in the Houle product range, the 3-point suspension agitator is simple to operate, requires little maintenance and has an extremely long service life due to its solid, sturdy construction.



3-point suspension agitator:

Part Number	Description name	Dimensions / Misc. (H x W)
2010-8010-780	Agitator - with vertical propeller adjustment	8.2 m
2010-8040-910	Agitator - fixed propeller	8.2 m

Lagoon agitator

The lagoon agitator demonstrates all the proven features of our Houle product range: a solid, sturdy construction, a long service life and ease of maintenance and operation.



Lagoon agitator:

Part Number	Description name	Dimensions / Misc. (H x W)
2010-8010-900	Agitator - with vertical propeller adjustment	9.7 m
2010-8010-910	Agitator - with vertical propeller adjustment	12.8 m
2010-8070-230	Agitator - with vertical propeller adjustment	15.8 m
2010-8010-570	Agitator - fixed propeller	9.7 m
2010-8010-950	Agitator - fixed propeller	12.8 m
2010-8010-990	Agitator - fixed propeller	15.8 m
2010-8070-580	Agitator - fixed propeller	18.9 m
2010-8070-080	Agitator - fixed propeller	21.9 m

Raceway agitator

The main areas of application give the Raceway agitator its name, as it is mostly used for manure processing in lateral channels and slalom systems with manure tanks under the barn. As a sturdy device from our Houle product range the Raceway agitator is characterised by its long service life, ease of maintenance, solid quality and simple handling.



Raceway agitator:

Part Number	Description name	Dimensions / Misc. (H x W)
2010-8010-250	Raceway agitator - fixed propeller	

Worm shaft

Worm shafts are not subject to blockages because of their construction. That has the significant advantage that the device can run in a dry state and requires little power to increase its pumping output. The roller bearings on the shaft and the oil bath in which the shaft runs ensure continuous operation with high reliability and a long service life. In addition, there are advantages in maintenance as a result of the durable seals.



Worm shaft:

Part Number	Description name	Dimensions / Misc. (H x W)
5560-5800-018	Worm shaft 450 cm	incl. lifting frame
5560-5800-030	Worm shaft 450 cm	without lifting frame
5560-5800-019	Worm shaft 500 cm	incl. lifting frame
5560-5800-021	Worm shaft 550 cm	without lifting frame



8.6 Electric agitators

Electromix agitator

- For effective agitation of manure pits
- In a system with the Elektromix pump for the homogenisation and evacuation of viscous and liquid manure
- Separate use in barn manure pits
- Oil-filled gearbox for safety and durability



Electromix agitator

This agitator is a part of an overall system with a matching pump (see also chapter 8.1.) from our Houle products. The powerful design of the overall system enables the homogenisation of solid and liquid manure for the evacuation across long distances. The Electromix agitator is preferably used on its own to agitate barn manure pits. The oil-filled gearbox of the agitator provides a high level of safety and maximum service life. The high product standards of our Houle product range with regard to ease of operation, maintenance and long service life are combined here with a practical design.



Electromix agitator:

Part Number	Description name	Dimensions / Misc. (H x W)
2011-8011-170	Electromix agitator	For 1.8 m pit
2011-8011-070	Electromix agitator	For 2.4 m pit
2011-8011-180	Electromix agitator	For 3 m pit
2011-8011-190	Electromix agitator	For 3.6 m pit
2011-8011-200	Electromix agitator	For 4.2 m pit
2011-8011-210	Electromix agitator	For 4.9 m pit



Separation



9. Separation

Energy efficiency, integrated recycling management and environmental compatibility are current challenges which have to be faced today by farms, particularly those in the dairy industry. The separation of liquid and solid materials in manure is of particular importance in this respect.

The recycling of water is made possible by separation. A water saving which does not simply have advantages in terms of cost but also for the environment. The extracted solids can in turn be re-used as compost and, after a sufficiently long drying period, even as bedding. Thanks to separation the amount which has to be stored is also considerably reduced.



GEA Farm Technologies is attuned to the various demands of your manure management system. From the two-stage separator for manure produced from flush systems to the combination of a roller press and dewaterer for the processing of manure from other barn cleaning systems, we can offer you optimal separation solutions from our Houle product range: to suit your needs and tailor-made to your requirements. Please contact your GEA sales consultant for more details.

Your advantages with a well thought-out separation solution from GEA Farm Technologies:

- Recycling management: recycling of water, generation of compost and bedding
- Hygiene protection: prevention of bacterial infections from outside
- Logistics: lower storage capacities, lower transport costs
- Cost savings: less need for fresh water, less purchasing of bedding
- Animal-friendliness: good acceptance of the bedding, good hygiene results





9.1 Separation

Curved sieve separator

- Filters large and tiny residues
- Intelligent curved shape, made of high-quality stainless steel
- Can cope with a daily manure volume from up to 3,000 animals from flush systems



Two-stage separator

- Separates flush liquids from straw elements
- Preparation of fibrous material for use as bedding or for composting
- Complete construction in stainless steel



Equalisation tank

- Regulating tank between the manure pump and dewaterer
- Optimal regulation of the manure intake
- Robust construction
- Easy cleaning incl. removal of foreign bodies



XTract - horizontal dewaterer

- Can be used in a system with XPress
- Complete construction in stainless steel
- Energy saving: 0.55 KW power consumption for up to 150 l/min
- Simple operation



Vertical dewaterer

- System solution in conjunction with an equalisation tank
- Dewatering through the use of natural gravity
- Ecologically sound and economical through water recycling
- Separated liquid can be used for flush systems
- Pre-thickening of the manure for further processing with an XPress



XPress – modular roller system

- Can be used in a system with XTract
- Processes manure at between 75 and 662 l/min
- Low power consumption due to rubber rollers and stainless steel sieve rollers



Crusher

- For protection against damage to following equipment, such as pumps and separators
- Crushes stones, concrete parts, hard wood, ceramics and small pieces of steel
- Throughput 23 - 45m³/hr.
- As a system with a pump



Curved sieve separator

Our curved sieve separator easily copes with a daily manure volumes from up to 3,000 animals. Different sieve openings filter large and tiny residues from the mass and ensure a maximum take-up of solid materials. Thanks to its intelligent high-quality stainless steel curved shape the cleaning of the curved sieve separator can be carried out very simply and without any problems. In addition, the device offers all the advantages of our Houle product range: Profit from its durability, robustness and ease of maintenance.



Curved sieve separator:

Part Number	Description name	Dimensions / Misc. (H x W)
2019-8019-500	Curved sieve separator	

Two-stage separator

This separator divides the liquids from solid materials in a two-stage process and prepares the fibrous material thus generated for further use as bedding or for composting. The two-stage separator is constructed in a vertical curved form and is made of high-quality stainless steel, thus slowing the manure flow and increasing the separation effect. As the device reliably filters the service water the water quality is considerably improved and the cleaning performance in such as a flush system is increased despite a reduction in the input of fresh water. The two-roller press reliably takes up the separation of the solid materials without a negative effect on the processing of the water.



Two-stage separator:

Part Number	Description name	Dimensions / Misc. (H x W)
2019-8019-460	Two-stage separator	

Equalisation tank

An equalisation tank is used as a regulation tank between the manure pump and the dewaterer. It takes up the regulation function of the flow volume on both sides for optimal manure processing. As soon as the manure in the tank has reached its highest level, the equalisation tank gives the starting signal to the separator and then regulates its working speed through an adjustment to the level. If the level is too low, the dewaterer receives a signal to stop. If the level is too high, the pump is stopped. In addition, the equalisation tank regulates the input of fibrous material in order to achieve an optimal level of viscosity. Our equalisation tank is designed to fully meet the functions mentioned. Its solid construction, with a tilted base and openings on both sides, permits easy cleaning. As a device from our Houle products it has a robust design, is easy to maintain and is durable.



Equalisation tank:

Part Number	Description name	Dimensions / Misc. (H x W)
2019-8019-620	Equalisation tank	

XTract - horizontal dewaterer

The XTract has been designed to be part of a powerful system solution for separation and demonstrates its optimal potential as the preliminary stage for the XPress roller press system. With a power consumption of only 0.55 KW the XTract can process up to 150 l/min. The remaining part of the dry matter in the solid material can then be between 16 - 20% and is taken up by the XPress roller press system while the extracted water can be recycled back into the water system. The XTract stands out due to its top-quality finish and the use of stainless steel on all of its parts as well as thanks to its simple installation and high level of user-friendliness.



XTract - horizontal dewaterer:

Part Number	Description name	Dimensions / Misc. (H x W)
2019-8049-030	XTract - horizontal dewaterer	

Vertical dewaterer

The vertical dewaterer is part of a system solution as a separation component in conjunction with the equalisation tank. Through the use of a rotating auger, operated without pressure, the vertical construction enables an effective use of natural gravity both for the separation of the solid materials from the manure and for water recycling. The extracted liquid can be recycled back into the water system of a flush system, thus reducing the input of fresh water. An ecologically and economically attractive solution.



Vertical dewaterer:

Part Number	Description name	Dimensions / Misc. (H x W)
2019-8019-610	Vertical dewaterer	

XPress - modular roller system

The modular XPress roller system was specially developed for the pressing of manure previously dewatered by the XTract. Depending on the configuration, manure between 75 and 662 l/min can be processed and the possible amount of solid material can range from 26% to 34%. Rubber rollers and stainless steel sieve rollers achieve a maximum reduction in the straw element while maintaining low energy consumption. A unique air suspension system generates a constant pressure on the rollers and reduces the mechanical load, leading to a long service life for the system. An advantage of our Houle product range which also stands for simple handling and easy cleaning.

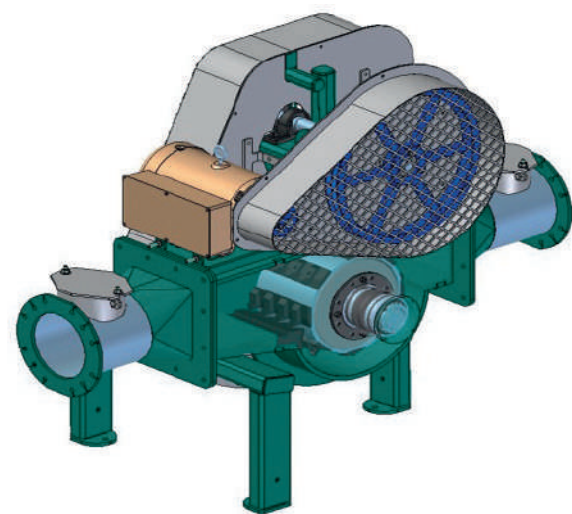


XPress - modular roller system:

Part Number	Description name	Dimensions / Misc. (H x W)
2019-8049-040	XPress (1st stage)	

Crusher

The crusher is integrated into the separation process to crush solid objects which have been sorted out in order to protect later elements in the system, such as separators, from wear and damage. Small stones, concrete parts, hard wood, ceramics and even small pieces of steel can be crushed with ease at a throughput of 23 - 45m³/hr and fed back into the process. The crusher can work as an independent unit, but it should be synchronised with the pump’s control unit to ensure smooth processing. As a result of the nature of the hard demands on it the machine is extremely solidly built and has a long service life.



Crusher:

Part Number	Description name	Dimensions / Misc. (H x W)
2019-8019-930	Crusher	



Manure spreading



10. Manure spreading

The spreading of manure onto the field is the final part of the overall process in dairy farming. GEA Farm Technologies has many years of experience in this area and, in addition to manure tankers in various sizes and designs, it offers a varied number of tools in order for you to be able to choose the correct aid, depending on the type of spreading desired.



No matter whether you are spreading manure on fields of maize which do or do not contain harvest residues, whether you are working under windy conditions, whether you wish to spread fibre-free manure within a small circle area or viscous manure with long fibrous material, you will most certainly find the tool for the use you desire at GEA Farm Technologies. We have an extensive selection from our Houle products:

- Manure distribution systems for fibre-free and viscous manure
- Various types of cultivators
- Tools with injectors to place the manure into the ground
- Toolbar with hose

As a sample, we will show you a small selection from our overall programme from the Houle product range in this catalogue. Should the application you desire not be shown, please speak to the GEA sales organisation responsible for you about a suitable solution. We are certain to be able to offer you the right product for any application you may have.





10.1 Manure spreader tanks

EL 44 - Manure spreader with steerable axles

- Sturdy and top-quality construction
- High level of driver comfort and manoeuvrability
- Hydraulic suspension and power steering
- Proven and patented technology



EL 44 - Manure spreader with steerable axles

The EL 44 stands as a representative of all GEA Farm Technologies manure tankers from our Houle product range with its high-quality finish. Since manure tankers have to be capable of being used on any kind of ground, our tankers are fitted both with a patented technology for manure spreading and with hydraulic suspension and power steering which match the turning angle of the traction unit. This leads to a high standard of driver comfort, excellent manoeuvrability and control on all kinds of surfaces. Easily accessible lubrication points and openings render any maintenance and cleaning work which needs to be done child's play. A large selection of optional accessories for almost any application is available both for the EL 44 and for other manure tankers (see chapter 10.2).

EL-44 manure tanker:

Part Number	Description name	Dimensions / Misc. (H x W)
2018-8078-740	Manure tanker EL44 - 4D - 14,350 l	(3.160) 16'
2018-8078-750	Manure tanker EL44 - 4D - 16,150 l	(3.557) 18'
2018-8078-760	Manure tanker EL44 - 4D - 19,750 l	(4.350) 22'
2018-8078-770	Manure tanker EL44 - 4D - 21,500 l	(4.735) 24'
2018-8078-780	Manure tanker EL44 - 4D - 23,300 l	(5.132) 26'
2018-8078-790	Manure tanker EL44 - 4D - 25,100 l	(5.528) 28'



10.2 Distributor systems

Splash plate

- Sturdy and top-quality construction
- Especially for viscous manure and manure containing no fibrous material
- High spreading width
- Can be fitted with wind deflectors for a spreading range of 7.6 or 8.2 m.



S-Tine cultivator

- For fields free of stones and plant residues
- For targeted spreading of nutrients at peaks in demand
- Effective against weeds



16" / 22" disc cultivator

- For fields with plant residue, e.g. maize, beans, etc.
- Maximum fertiliser value
- Less smell
- No damage to roots



24" hydraulic disc cultivator

- Suitable for any type of ground
- Disc injectors with a working depth of 15 cm
- Improved efficiency
- For fibre-free manure



Sweep cultivator

- Curved injectors with deep effect
- Separate adjustment of the injectors
- For manure containing no long fibrous material
- Maximum nutrient concentration
- Minimum smell



Toolbar with Flex Drop hose

- Direct distribution at ground level
- For spreading at widths of 15 or 20 metres
- Less smell
- No losses due to wind



Splash plate

The splash plate is perfectly suited in particular for viscous manure and for the spreading of manure containing no fibrous material. The essentially narrow spreading range enables the traction unit to move at a higher speed and at the same time it achieves a reduction in soil density which leads to less smell and a high level of efficiency. The spreader openings of the splash plate are individually adjustable.

The splash plate is a product from our Houle products which represents a high level of quality and a long service life as well as ease of maintenance and operation.



Especially for viscous manure:

Part Number	Description name	Dimensions / Misc. (H x W)
2018-8048-900	Tool bar for viscous manure	

S-Tine cultivator

We recommend the S-Tine cultivator from our Houle product range for use on fields with no stones and few plant residues for targeted aeration and spreading of nutrients at peaks in demand. The cultivator loosens the soil and manures in a targeted manner in the desired area between the rows. At the same time it keeps weeds in control. The working width is individually adjustable via the selection of a tool bar for 4, 6 or 8 cultivators.



S-Tine cultivator:

Part Number	Description name	Dimensions / Misc. (H x W)
2018-8018-600	Tool bar for S-Tine cultivator	

16" / 22" disc cultivator

Disc cultivators, which work on the soil between the rows without damaging roots, are recommended for use on fields with plant residues, such as maize fields. The smell is reduced by the use of a disc cultivator and a maximum fertilisation of the soil is achieved through a high depth of penetration. Both the 16" and 22" disc cultivators are made from robust material, extremely sturdily constructed and, as a result, very durable. A product from our Houle products.



16" / 22" cultivator:

Part Number	Description name	Dimensions / Misc. (H x W)
2018-8018-590	Tool bar for 16" cultivator	16"
2018-8018-610	Tool bar for 22" cultivator	22"

24" hydraulic disc cultivator

The 24" hydraulic disc cultivator is fitted with 6 or 8 disc injectors which inject fibre-free manure into all types of ground at a speed of at least 8 kilometres per hour and in doing this reach a depth of up to 15 cm. Every disc injector is connected to a hydraulic cylinder so that separate guiding to maintain a constant working depth is possible, even on uneven surfaces. This technology makes the 24" hydraulic disc cultivator into an extremely efficient and flexible tool for manure spreading.



24" hydraulic disc cultivator:

Part Number	Description name	Dimensions / Misc. (H x W)
2018-8048-650	Tool bar for 24" hydraulic disc cultivator	

Sweep cultivator

A maximum concentration of nutrients with, at the same time, a minimisation of smell - that is what the Sweep cultivators from our Houle product range represent. The curved injectors are individually adjustable via springs so that a targeted distribution of nutrients in a broad pattern close to the roots is possible. In addition, the tool achieves the advantages of good soil aeration through its construction. The Sweep cultivator is best suited for manure containing no long fibrous material and is available with 40.64 cm or 57.15 cm broad curved parts and with 4 or 5 injectors.



Sweep cultivator:

Part Number	Description name	Dimensions / Misc. (H x W)
2018-8018-620	Tool bar for Sweep cultivator	

Toolbar with Flex Drop hose

Losses due to wind can be avoided by using the tool bar with a Flex Drop hose. This manure spreading tool places the nutrient substrate directly into the soil and avoids spreading losses due to drifting caused by winds. A positive side-effect: Smell is also reduced. The tool bar is available with 12 or 16 hoses for spreading at widths of 15 or 20 metres. Its solid build holds out the promise of a long service life and extreme ease of maintenance.



Toolbar with hose:

Part Number	Description name	Dimensions / Misc. (H x W)
2018-8048-320	Toolbar with hose	



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GEA Group is a global engineering company with multi-billion euro sales and operations in more than 50 countries. Founded in 1881, the company is one of the largest providers of innovative equipment and process technology. GEA Group is listed in the STOXX® Europe 600 index.

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