

Dung Removal Systems for your Stall

Cattle Stall



Prinzing
— MASCHINENBAU —



Single Drive Winches - EW

Our single drive winches (EW) are compact, performed in a closed construction and will convince by the sturdy construction and the easy assembling. The drive of the scraper happens by a special stainless steel- or plastic rope, with a continuous working speed of 3-4 m/min. You can use all drive winches for single- or double row systems. Including to all drive winches you will get the necessary protective coverings in galvanized design.



◀ EW4



◀ EW5



◀ EW6

Technical Data Single Drive Winches

	EW4	EW5	EW6
Frame:	steel, galvanized	steel, galvanized	steel, galvanized
Drum:	Ø = 200 / 250 mm	Ø = 500 mm	Ø = 640 mm
	steel, galvanized	stainless steel, galvanized	steel, galvanized
Drive:	0,55 - 0,9 kW	0,55 - 0,75 kW	0,75 kW
Coiling device tension rope: ...	optional available	---	optional
Max. length tension rope:	120 m (Ø 8 mm) 100 m (Ø 10 mm)	80 m (Ø 8 mm) 70 m (Ø 10 mm)	150 m (Ø 8 mm) 130 m (Ø 10 mm)
Wall fastening:	possible	possible	not possible
Wall-/floor console:	possible	possible	not possible
Extras:	available with stainless steel drum	---	---



▲ Wall fastening EW4



▲ Assembling drive winch EW4, guide pulley and flap scraper PKSF



▲ Drive winch EW4 on floor console



Double Drive Winch - DW7

The double drive winch DW7 is especially produced for big stalls with long walkways. Frame and drum of the DW7 are out of galvanized steel. The drive of the drum happens with a gear motor by a low maintenance chain drive. A coiling device arranges an equal, alternately coiling and decoiling of the tension rope on the drum. The single drive winch EW7 has got a one sided coiling device for the tension rope and is designed for systems with a high tractive output.

Technical Data DW7 / EW7

Frame: steel, galvanized
 Drum: Ø = 1000 mm
 steel, galvanized
 Drive: 0,75 kW
 Max. length tension rope: ... Ø 8 mm = 150 m
 Ø 10 mm = 120 m
 Wall fastening: not possible
 Wall-/floor console: not possible



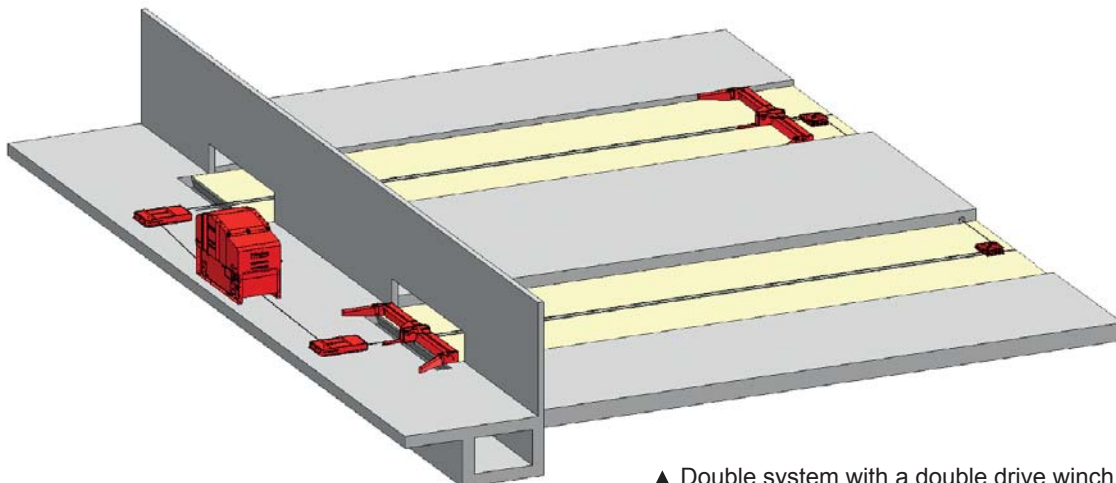
◀ DW7



▲ Guide pulley Ø 300 mm with rope tension device



▲ Double drive winch DW7 with rope guidance in a covered floor channel



▲ Double system with a double drive winch DW7



Electronic Controls

By our electronic controls you are able to control all PRINZING drive winches. By a continuous motor current monitoring you don't need any switching contacts at the ends of the walkways. The infinitely variable regulation of the tension, separated for forward- and backward move, allows an optimal scraper move as well as less abrasion on the dung removal system.

Main features of our electronic controls:

- Electronic motor current monitoring for a sensitive controlling of the dung removal system and increased safety for the animals
- Time- and temperature controlled auto mode for an optimal sequence of the cleaning intervals
- Connectivity for external operation- and control elements (e.g. push buttons, connecting blocks)
- Multi lingual and lighted graphic display

Electronic Control BASIC - ESB210



▲ BASIC ESB210

Characteristics of the ESB210

- Learning program for the automatic setting of the tension
- Manual and fully automated operation
- Timer to start the auto mode with up to 20 starting times a day
- Two different frost program types, controlled by a temperature feeler (inclusive)
- Automatic adaption of the switch off current during voltage fluctuations in the electric circuit by photovoltaics- or wind power plants
- Set parameters will be saved with mains failure protection

Electronic Control COMFORT - ESC200



▲ COMFORT ESC200 and EXPANSION EXP200

Characteristics of the ESC200

- Learning program for the automatic setting of the tension
- Expandable on up to 5 drive units (max. 10 alleys) by the Expansion Module (each EXP200 2 drive units)
- Timer to start the auto mode with up to 20 starting times a day, for each alley individual, at the same time or sequentially
- Two different frost program types, controlled by a temperature feeler (inclusive), single shiftable for each alley
- Animal- and obstacle detection, several starting trials programmable
- Different setting options in the program, e.g. central dropping, calving box, limited movement control before the end of the alley
- Cow driving function with adjustable driving time, for each alley (option)

Electronic Control COMFORT - ESC300

(Patented)



- ✓ Innovative technique
- ✓ Simple setting
- ✓ Flexible operation
- ✓ Extensive functions
- ✓ Reliable operation
- ✓ Simply extendable

Electronic Control COMFORT ESC-300

- Flexible operation of the control from all over the stall by a wireless remote
- Automatic programming of all parameters of the control by a learning program
- Function „teaching“ - individual learning of the scraper move by operation buttons on the remote
- Animal- and obstacle detection, several starting trials programmable
- Individual controlling and operation of up to 6 drive units (max. 12 alleys)
- Frost protection mode with self-controlled and temperature-dependent interval operation
- Improved over voltage- and short circuit protection
- Automatic adaption of the switch off current during voltage fluctuations in the electric circuit by photo-voltaics- or wind power plants
- Connection possibility for mechanic or electric end switches at the end of the walkway
- Signal output for info-/or error messages and external controls
- Emergency operation for each alley by manual operable control buttons in the control
- Data backup, logging of the scraper moves and update by a SD-card
- Fast, low-cost expansion of the system by a modular construction

Equipment for Electronic Controls

Our electronic controls can be extended or combined with different equipment. This offers you a simplified operation, increased safety or extended functionality of your dung removal system. You have the following equipment available:

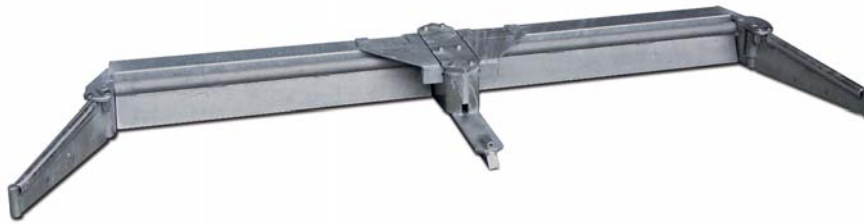
- External push buttons for the operation of the control from any place of the stall
- Safety-switch rails to switch off the system in a danger situation on wall or door passages and staff passages
- Emergency trip wire for the expansion of the emergency stop functionality
- Signalling device (horn, light) for the optical / acoustic messaging



◀ Safety-switch rail (marked red)



Flap Scraper - PKSF



The flap scraper PKSF consists out of a central block, a base frame with cleaning plates and movable lateral wings. The lateral wings are cleaning exactly along the upstand and are able to balance different walkway wide. If you have a walkway without upstand, you can fix the lateral wings on the wide of the walkway. For rubber floor walkways the scraper will be custom-built equipped according the guidelines of the manufacturer. By the animal-friendly design of the flap scraper (e.g. step protection on the lateral wings), it is possible to avoid that animals get injured.

Further features of the flap scraper(PKSF):

- Sturdy, heavy, galvanized design in modular construction system
- Automatic level control on the middle part for the optimal adaption on the down-grade of the walkway
- Working wide of the scraper up to 12 m
- Use of the flap scraper with and without guidance bar
- The cleaning plates are opening automatically during the reverse motion
- Rubber- or plastic ledges (option) on the cleaning plate are improving the result and are conserving the flooring
- Adaption of the base frame and the cleaning plates for the walkway floor out of concrete finished parts



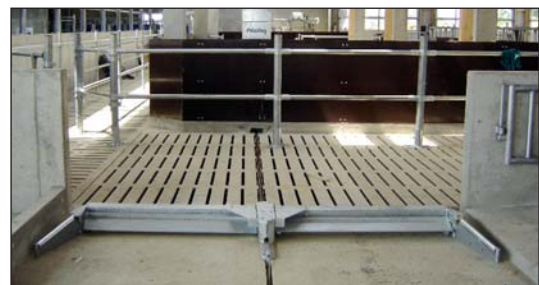
▲ Flap scraper on rubber floor



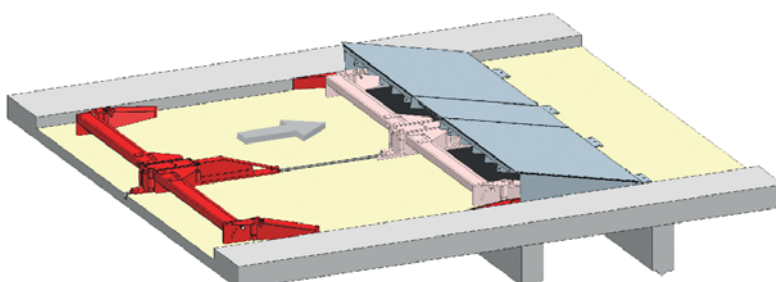
▲ Flap scraper, base frame pivotable



▲ Flap scraper with cross canal covering



▲ Flap scraper for cleaning partial areas with slatted floor



◀ Flap scraper with lifting device for folding cross canal covering

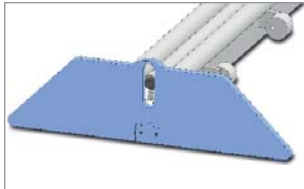


Flap Turn Scraper - PKWS

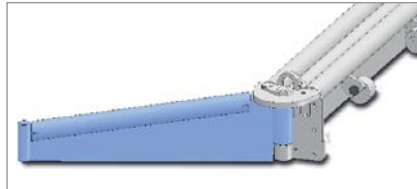


- Use for dropping on the cross canal in the middle of the stall
- Cleaning with a scraper into both directions
- Dropping into the open cross canal or over rusts
- Narrow and sturdy design, galvanized

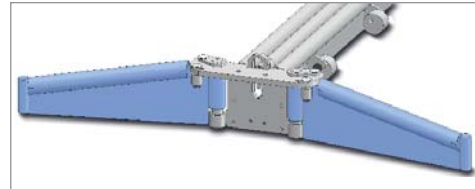
▲ PKWS at the dropping, central on the walkway



▲ PKWS with fixed lateral part



▲ PKWS with one wing each side



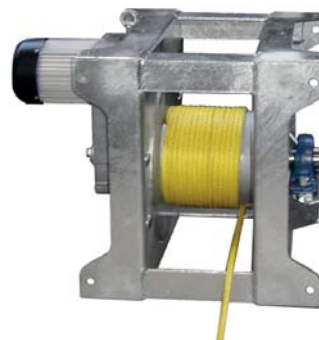
▲ PKWS with two wings each side



Slatted Floor Scraper - SR



The slatted floor scraper SR is used on concrete slatted floors or on slatted floors with rubber surface. Adjustable cleaning wings and rubber ledges on the bottom side of the scraper guarantee an optimal and gentle cleaning of the slatted floor into both directions. Lateral rubber ledges are cleaning along the upstand. By an adjustable tension rod the scraper can clean the slatted floor up to the end of the walkway. The slatted floor scraper is in a sturdy design and completely galvanized. The drive of the slatted floor scraper happens by a plastic- or stainless steel rope.



▲ Single drive winch EW4 with special-plastic rope



V-Scraper - FS

The V-scraper is a very established and animal-friendly scraper because of its simple and narrow design. During the cleaning process, different walkway width can be balanced by the movable V-scraper wings.

For the use with a central cross canal we have the V-turning scraper.



▲ V-scraper at the dropping



▲ V-scraper at the stop



▲ V-scraper on the walkway



V-scraper for bedded stalls - FS



The V-scraper for bedded stalls is manufactured in a very sturdy, completely galvanized, design. It is deliverable with a reinforced central part and a wing limitation to the outside.

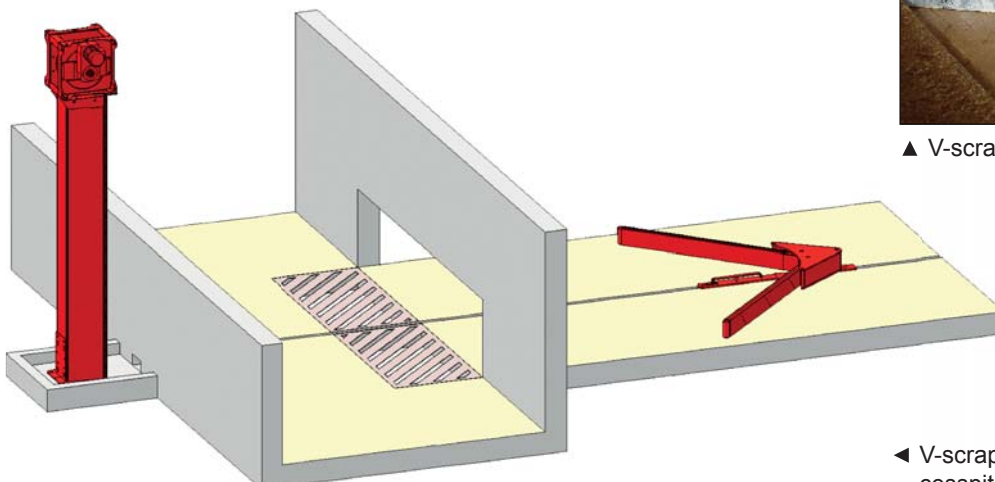
By the V-scraper in the bedded stall, the one-sided incoming dung will be displaced to the middle and moved to a cleaning surface or a deeper dung heap.



▲ V-scraper on cleaning surface



▲ V-scraper on the walkway



◀ V-scraper FS with rusts over cesspit on cleaning surface



Multi Folding Scraper - FBS

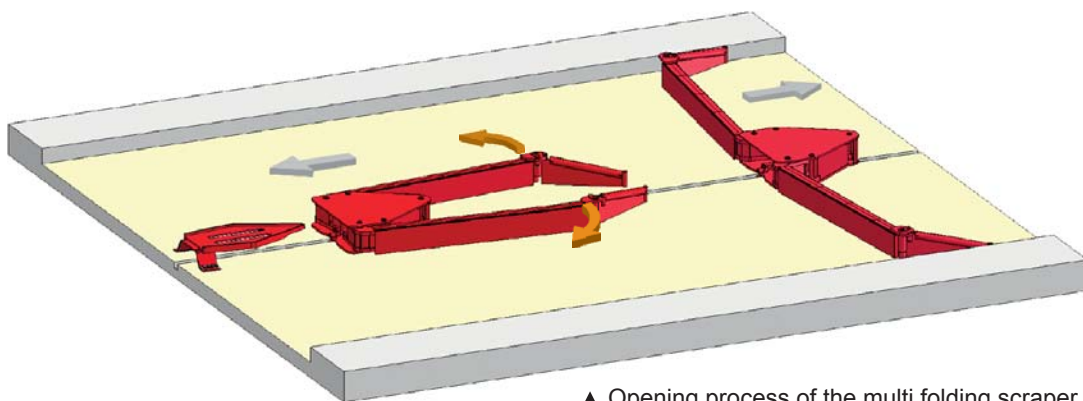
(Patented)



In the design of the multi folding scraper FBS, the advantages of the flap scraper and V-scraper are combined. In the cleaning position, the basic wings are in a V-position, this is optimal for transverse seams of finished floorings. In the reverse position, the multi folding scraper folds in automatically. Thereby you can drive over the walkway and the multi folding scraper problem free. When reaching the parking position, the cleaning wings open automatically. This allows an optimal cleaning of the walkway from the beginning. So uncleaned edges on the walkway will be minimized.



▲ Multi folding scraper in reverse motion



▲ Opening process of the multi folding scraper FBS



Guide Pulleys

PRINZING-guide pulleys are consisting out of a sturdy frame and rope rolls out of high-quality plastic. By the bearing of the rope roll with a stainless steel bushing, the guide pulley is free-moving and service reduced. The guide pulleys are available in a standing or lying design.



▲ Design galvanized, with plastic rolls diameter: 250 mm

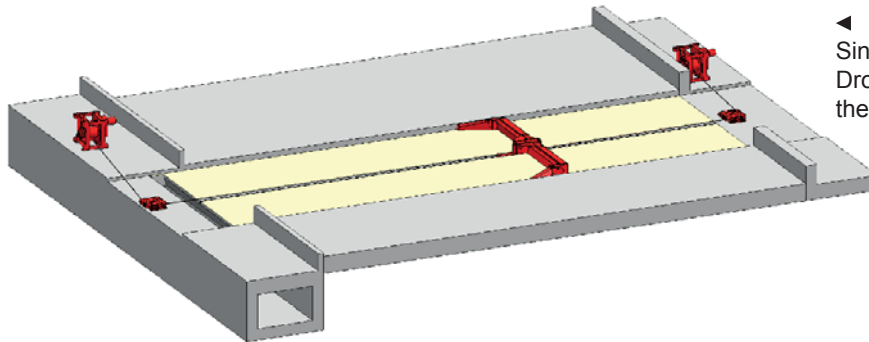


▲ Design stainless steel, with plastic rolls diameter: 300 mm and 400 mm

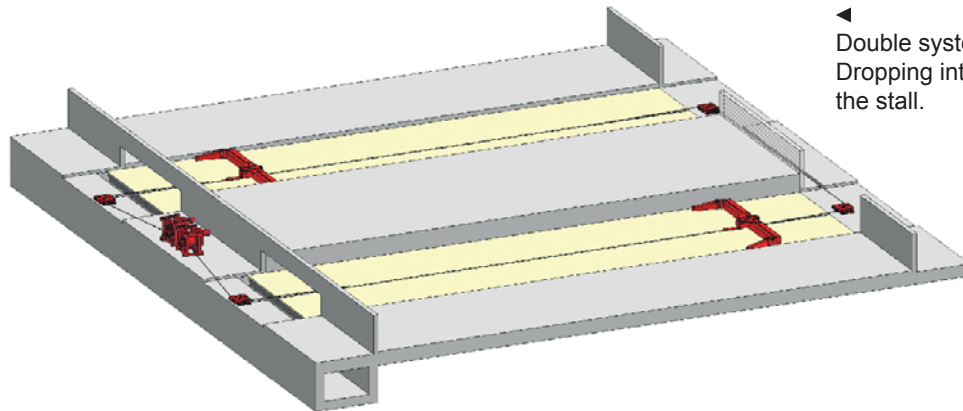




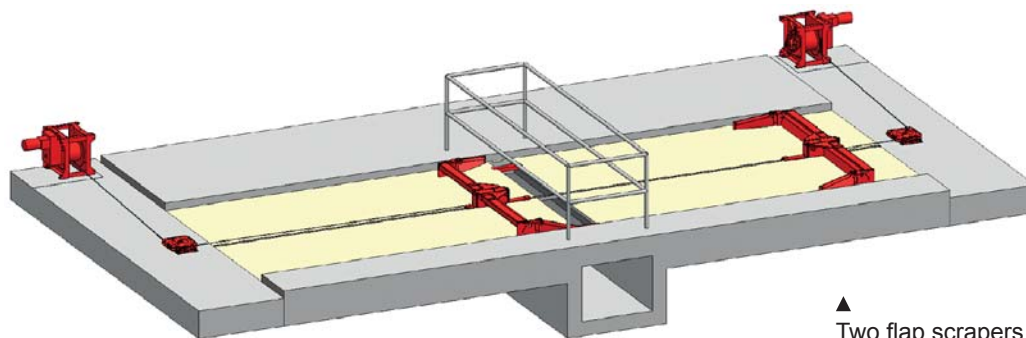
Example Systems for Scraper Dunging (scheme)



◀ Single system with flap scraper PKSF.
Dropping into the cross canal at the end of the stall.



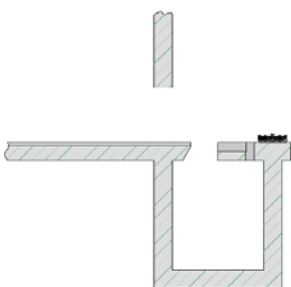
◀ Double system with flap scraper PKSF.
Dropping into the cross canal at the end of the stall.



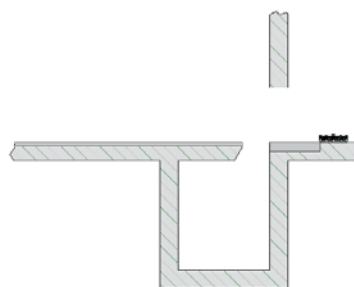
▲ Two flap scrapers PKSF with dropping
into the cross canal at the end of the stall.



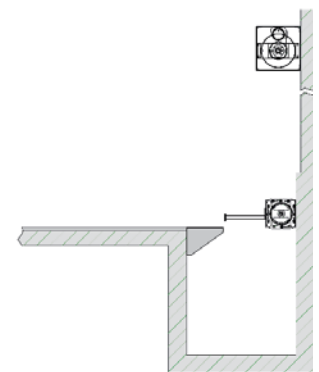
Examples of Dropping into the Cross Canal



▲ Dropping outside the stall



▲ Dropping inside the stall



▲ Dropping into open
cross canal in the stall



Mounting Examples for Dung Removal Systems



▲ Wall fastening drive winch EW4



▲ Drive winches EW4 and cross canal covering



▲ Flap scraper PKSF with driving gate



▲ Flap scraper PKSF with driving gate



▲ Folding cross canal covering before the milking parlour



▲ Mounting drive winch EW4 and guide pulley



▲ Dropping over beam on a deeper dung heap



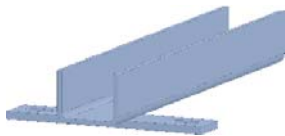
▲ PKSF with lateral wings of V-scraper



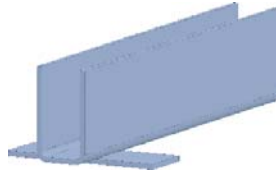
Guide Bars and Liquid Manure Channel

You need the guide bars to guide the scraper during the cleaning process and for the drainage of the liquid manure on the walkway. The guide bars are manufactured out of high-quality steel and added with an anticorrosive. Guide bars are available in different designs. They will be adjusted to the respective scraper. For easier assembling there are position adapters (sheet straps) on the guide bars.

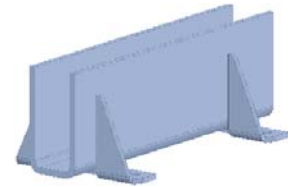
Standard guide bars



▲ U-guidance standard
depth 36 mm / width 42 mm

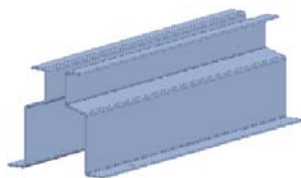


▲ U-guidance
depth 66 mm / width 32 mm



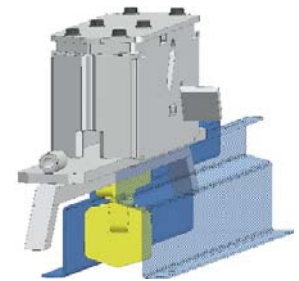
▲ U-guidance
depth 94 mm / width 40 mm

Guide bars/treat channel with clearing flap



The clearing flap is out of stainless steel and is on the bottom side of the central block of the scraper.

By the combination of the cross fall in the walkway there will be more fluid in the treat channel. Thereby you can reach a reducing of emissions.



Information about our further Products

Inform yourself also about our products out of the area of the dung removal technique!



Dung removal systems for horse stables



Dung removal systems for hen houses (sub surface)



Dung removal systems for pigsty (sub surface)



Automotive dunging robot **PRIBOT**

We can provide you also with special systems or special designs for individual building sites. Even outside the area of livestock. Contact us - Our experienced staff will be pleased to advise you!