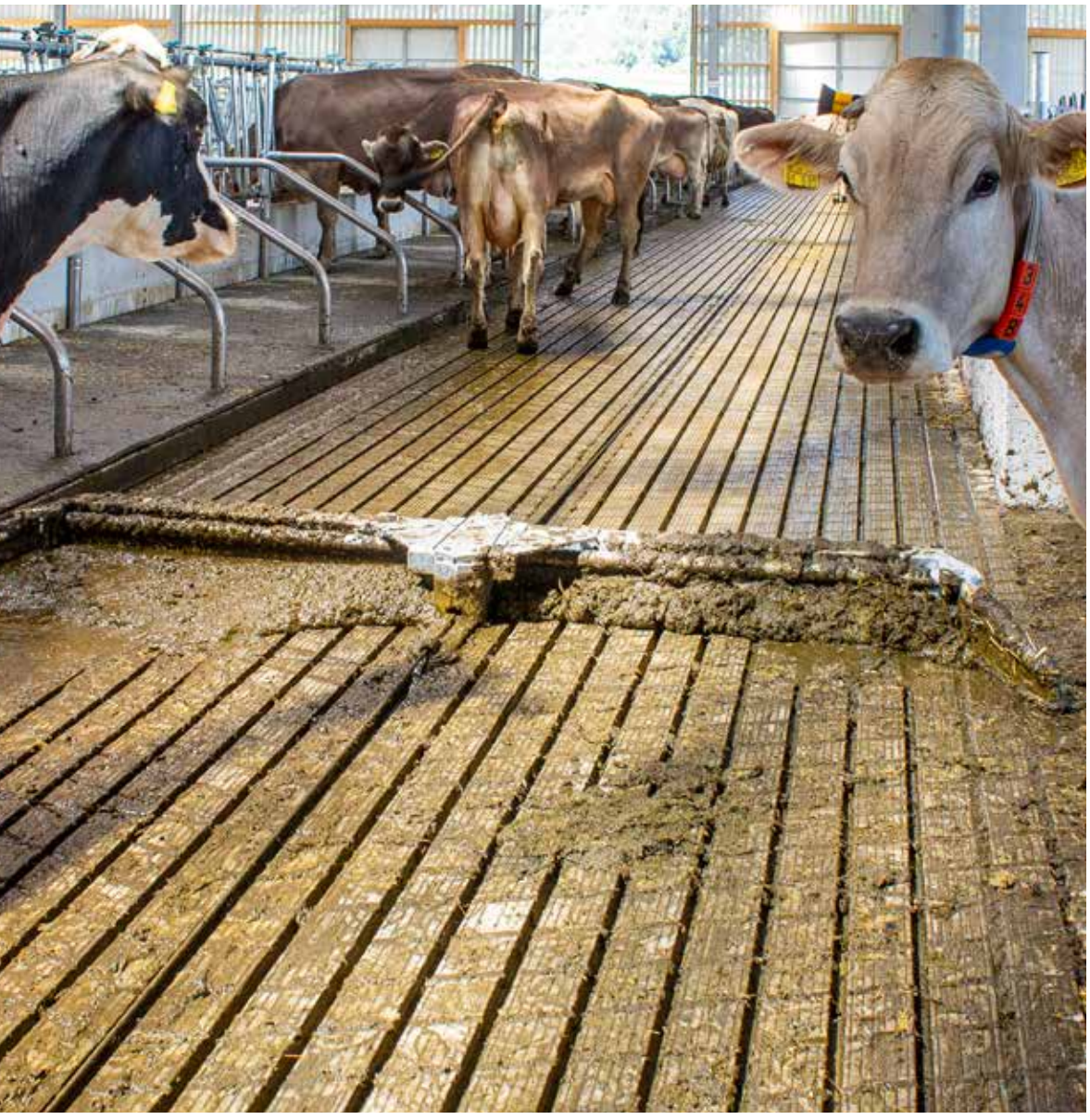
Dung Removal Systems For Your Stall

Cattle Stall



Prinzing
MASCHINENBAU

Single Drive Winches - EW

Our single drive winches (EW) are compact and have a closed design. They impress with their stable construction and simple installation. The scrapers are driven by a special stainless steel or plastic rope, with a continuous working speed of 3-4 m/min. All drive winches can be used for single or double-row systems. The necessary protective covers in galvanized design are available for all drive winches.

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◄ EW4

◄ EW56

◄ EW62

Technical data single drive winches

	EW4 *AB*	**EW4 *SE***	**EW56**	**EW62**
Frame	Steel (galvanised)	Steel (galvanised)	Steel (galvanised)	Steel (galvanised)
Rope drum-Ø	200 mm Steel (galvanised)	250 mm Steel (galvanised)	460 mm Steel (galvanised)	640 mm Steel (galvanised)
Drive	0,58 - 0,75 kW	0,75 kW	0,58 - 0,75 kW	0,75 kW
Spooling device Pull rope	option	option	option	option
Max. length pull rope Ø 8 mm Ø 10 mm	 90 m 70 m	 120 m 100 m	 110 m 90 m	 150 m 130 m
Wall mounting	possible	possible	not possible	not possible
Wall-/Floor frame	possible	possible	possible	not possible
Options	Available with stainless steel drum	Available with stainless steel drum		

▲ Assembly EW62

▲ Assembly EW4, guide pulley and PKSF

▲ EW56 on wall console

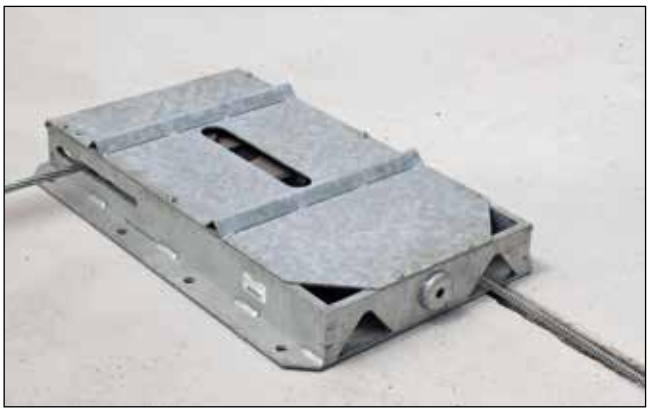
Single-/Double Drive Winch - W7

The W7 drive winch is designed for use in barns with long alleys. The frame and drum are made of galvanized steel. The drum is driven by a geared motor with a low-maintenance chain drive. A spooling device on the DW7 ensures that the pulling rope is wound and unwound evenly onto the drum.
Thanks to its powerful motor, the EW7 drive winch is recommended for long alleys..

Technical data EW7 / DW7

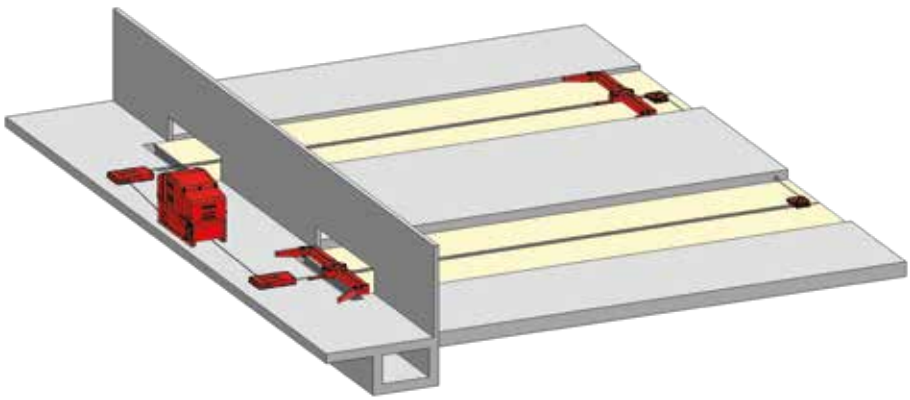
	EW7	DW7
Frame	Steel (galvanised)	
Rope drum	Ø = 1000 mm, Steel (galvanised)	
Drive	1,5 kW	0,75 kW
Max. length pull rope Ø 8 mm Ø 10 mm	 180 m 150 m	 150 m 120 m
Wall mounting	no	
Wall-/Floor frame	no	

◄ EW7



▲ Pulley Ø 300 mm with cable tensioning device for DW

▲ Double drive winch DW7 with rope guidance system.



▲ Double scraper system with DW7

◄ 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.

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*

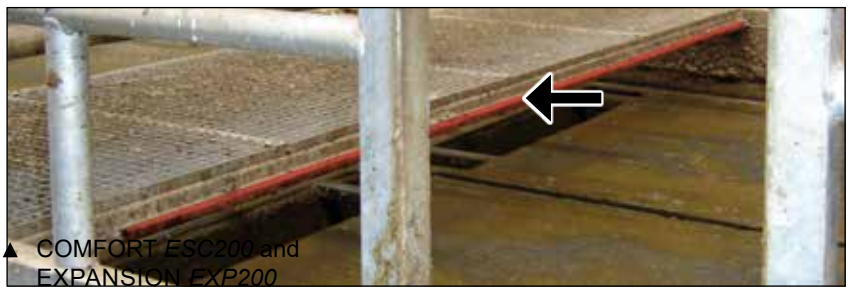
Features of the ESB210

- Learning program for automatic adjustment of the pulling force
- Manual and fully automatic operation
- Timer for automatic start with up to 20 start times per day
- Two different frost programs, controlled via temperature sensor (included)
- Automatic adjustment of switch-off current in the event of voltage fluctuations in the power grid due to PV or wind power turbines
- Set parameters are saved and protected against power failure

Equipment for Electronic Controls

Our electronic control systems can be expanded with various accessories. This enables simplified operation, increased safety and an extended range of functions. The following accessories are available:

- External push buttons for the operation of the control from any place of the barn
- Safety shutdown strip for switching off the system in emergency situations at wall- or door slots and personnel bridges
- Safety ripcord to extend the emergency stop functionality
- Signal devices (horns, lights) for visual / acoustic signaling



▲ COMFORT *ESC200* and EXPANSION *EXP200*

◄ Safety shutdown strip (marked red)

Electronic Control COMFORT - ESC400

Features Electronic control unit COMFORT ESC400

- Operation of up to 6 drive units (tracks)
- Modular design for high flexibility during expansion and servicing
- Individual operation of the individual drive units
- Setting and operation via touchscreen
- Help and operating instructions directly on the touchscreen
- Remote control of the ESC400 in the local network with smartphone, tablet or PC via web browser or PRINZING app
- Timetable for automatic start with adjustable start interval or individual time setting
- Teaching program with detection of motor current and alley length
- Manual adjustment of switch-off current from an individual position
- 6 programs for manual and automatic start:
  - 2 programs are created automatically (by learning drive)
  - 4 programs can be created individually by moving the scraper with teach-in mode
- Frost protection mode with interval operation for each drive unit
- Enhanced animal welfare through animal and obstacle detection and step switching at partitions, transitions or at the end of the alley
- Cow drive function, can be activated individually for each drive unit
- Mains voltage monitoring and automatic adjustment of motor current monitoring in the event of voltage fluctuations in the power grid
- Automatic data backup and logging of the scraper movement
- Connection option for mechanical/electronic signaling devices in the alley or at the end of the alley
- Emergency operation for each alley via buttons in the control unit
- Signal output for additional controls and information/fault messages
- Remote maintenance with integration of the ESC400 into the local WLAN, LAN or via hotspot

Flap Scraper - PKSF

The PKSF flap scraper consists of a central support, base support with clearing flaps and movable side wings. The side wings clear exactly along the upstand and can compensate for different widths in the alley. For alleys without upstands, the side wings can be fixed to the width of the alley. The animal-friendly design of the flap scraper (e.g. step protection on the side wings) prevents injuries to the animals.

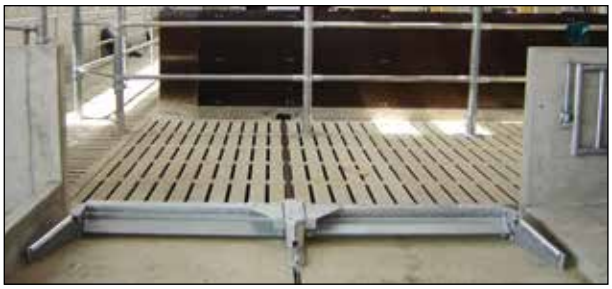
Features Flap Scraper (PKSF):

- Sturdy, heavy, galvanized design in a modular system
- Level adjustment on the central support for optimum adaptation to the slope of the alley surface
- Working width of the scraper up to 12 m
- Use of the flap scraper with and without guide rail
- The scraper plates open automatically on return
- Rubber or plastic strips (optional) on the scraper plate
- Individual adaptation of the flap scraper to prefabricated or rubber floors from various manufacturers

▲ PKSF on rubber floor

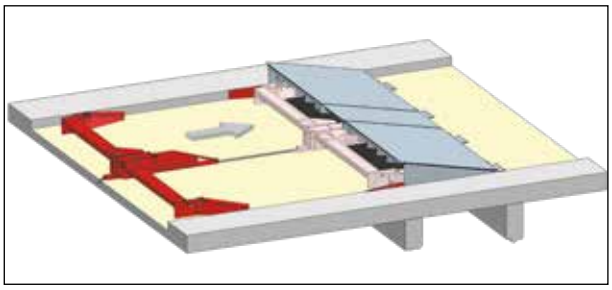
▲ PKSF - Base frame can be swivelled in

▲ PKSF for grooved bottom



▲ PKSF for clearing on partial areas with slatted floor

▲ PKSF with cross canal covering

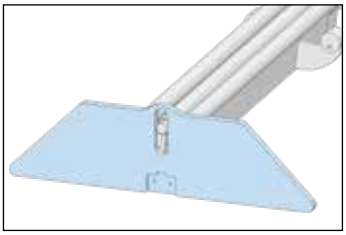


▲ PKSF with lifting device for cross canal covering

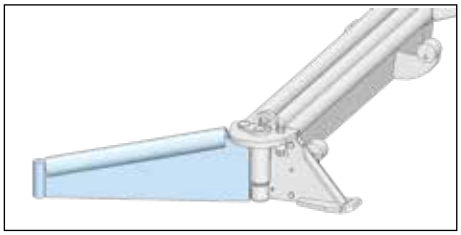
Flap turn scraper - PKWS

▲ PKWS at the dropping, central on the alley

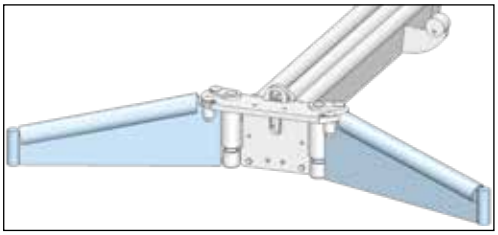
- For use with central cross channel (discharge) in the alley
- Clearing with a scraper in both directions
- Discharge into open cross channel or via grates
- Narrow and stable design, galvanized version



▲ PKWS with fixed side panel



▲ PKWS with one wing each side



▲ PKWS with two wings each side

Slatted Floor Scraper - SR

The SR slatted floor scraper is used on concrete slatted floors or slatted floors with a rubber surface. Adjustable scraper blades and rubber strips on the underside of the scraper ensure optimum and gentle cleaning of the slatted floor in both directions. Lateral rubber strips clean along the upstands. The slatted floor is cleared right up to the end of the run thanks to a sliding pull rod. The slatted floor scraper is sturdily manufactured and fully galvanized. The slatted floor scraper is driven by a plastic or stainless steel rope..

▲ Single drive winch EW4 with plastic rope

V-Scraper - FS

The V-scraper is a proven and animal-friendly scraper thanks to its simple and slim design. During the clearing process, the movable folding scraper wings (160 mm high) can be used to compensate for alleys of different widths.
The reversible V-scraper is used for cross channels (discharge) in the alley.

▲ V-scraper at the dropping

▲ V-scraper at the stop

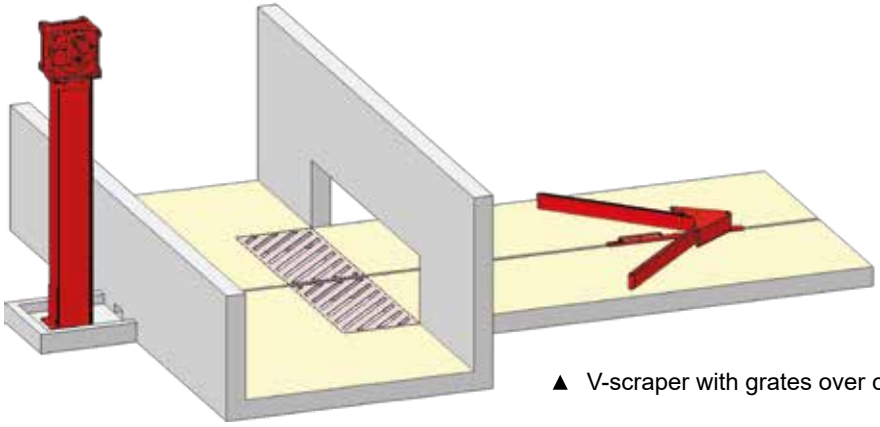
▲ V-scraper on the alley

V-scraper for bedded barns - FS

The V-scraper for the step manure barn is manufactured in a sturdy, fully galvanized design. It is available with a reinforced central support and an outward limiting stop on the wings.
The V-position of the wings (230 mm high) of the V-scraper in the step manure barn shifts the manure that accumulates on one side to the center and pushes it onto a clearing surface or a lower manure floor.

▲ V-scraper on cleaning surface

▲ V-scraper on the alley

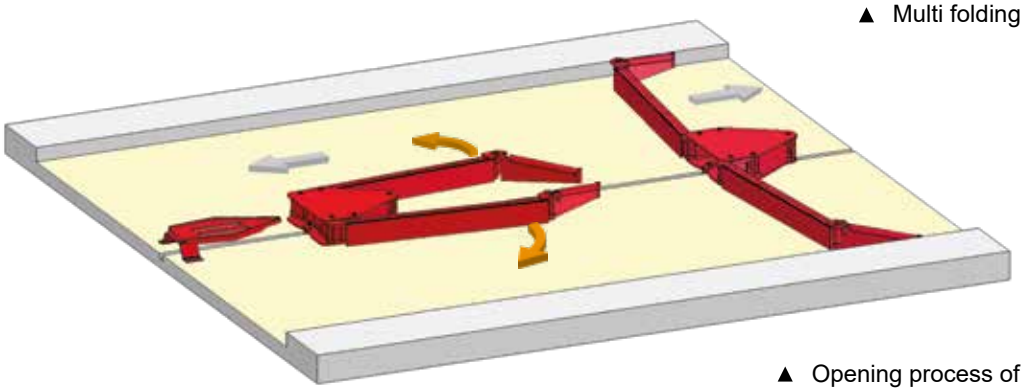


▲ V-scraper with grates over cesspool at clearing area

Multi Folding Scraper - FBS

The multi folding scraper FBS combines the advantages of the flap scraper and V-scraper. In the clearing position, the base wings are in a slight V-position, which is ideal for transverse joints of precast floors. In the return position, the FBS is automatically folded up. This allows easy access to the alley via the FBS. When the home position is reached at the stop, the clearing wings are opened automatically. This enables optimum clearing of the alley right from the start. Uncleared alley corners are minimized

▲ Multi folding scraper in reverse motion

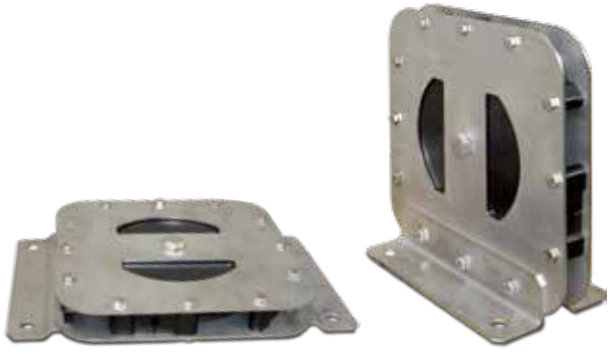


▲ Opening process of the multi folding scraper (FBS)

Pulleys

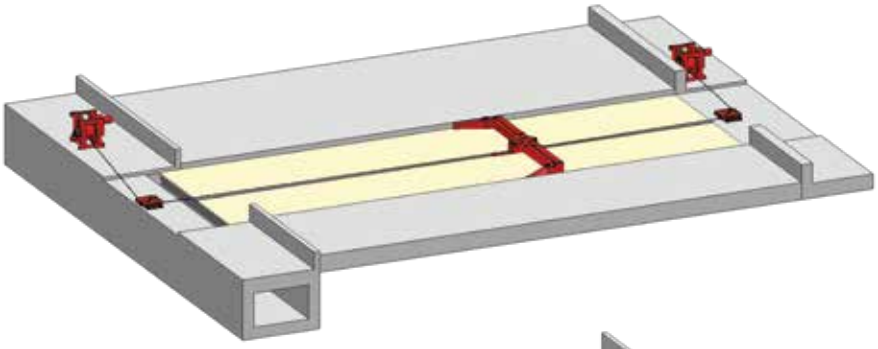
PRINZING guide pulleys consist of a robust housing and rope pulleys made of high-quality plastic. The pulley is mounted on a stainless steel bushing, making it very smooth-running and low-maintenance.
Pulleys are available in upright and horizontal versions.

▲ Design galvanized, with plastic pulleys
diameter: 250 mm

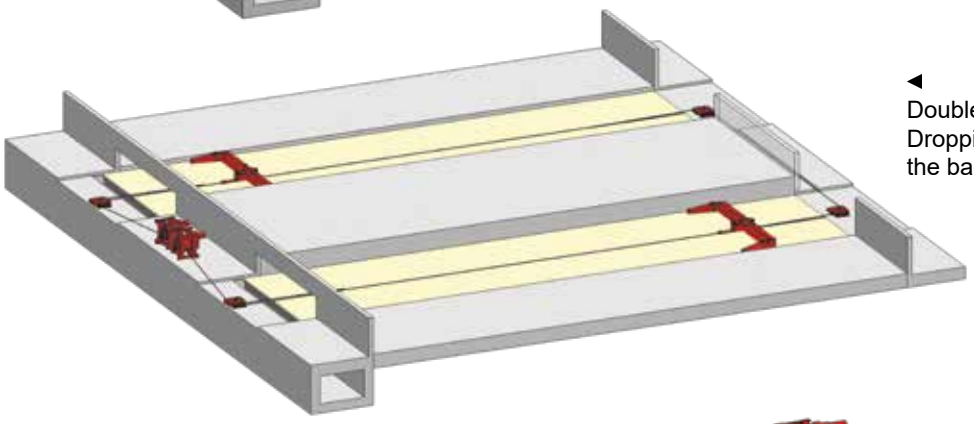


▲ Design stainless steel, with plastic pulleys
diameter: 300 mm and 400 mm

Example Systems for Scraper Dunging (scheme)



◄
Single system with flap scraper PKSF. Dropping into the cross canal at the end of the barn.



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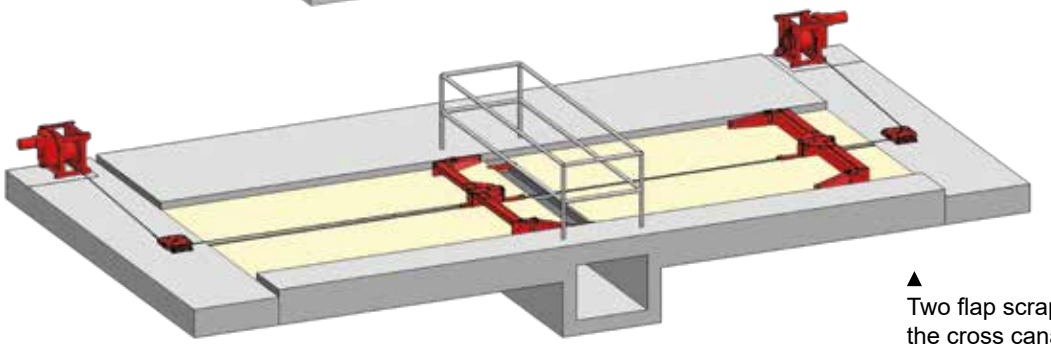
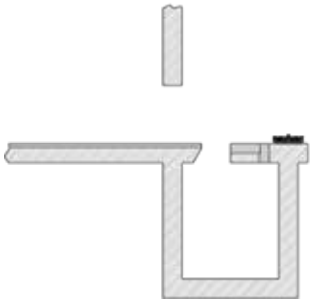
Double system with flap scraper PKSF. Dropping into the cross canal at the end of the barn.

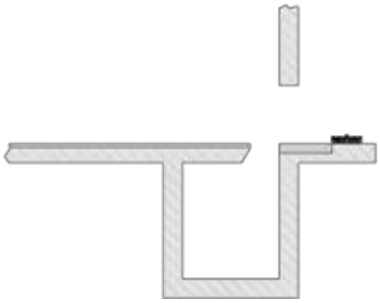


▲
Two flap scrapers PKSF with dropping into the cross canal in the middle of the barn.

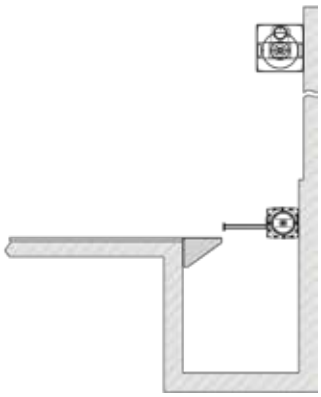
Examples of Dropping into the Cross Canal



▲ Dropping outside the barn



▲ Dropping inside the barn



▲ Dropping into open cross canal in the barn

Mounting Examples for Dung Removal Systems

▲ Wall mounting drive winch EW4

▲ Drive winches EW4 and cross canal covering

▲ Mounting the EW4 drive winch with wall bracket

▲ Mounting drive winch EW4 and guide pulley

▲ Foldable cross channel cover in front of the milking parlour

▲ Flap scraper PKSF with driving gate

▲ Dropping via extension to lower dung floor

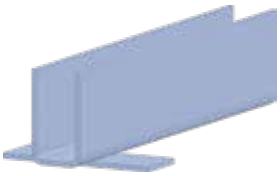
▲ PKSF with lateral wings of V-scraper

Guide Rails and Liquid Manure Channel

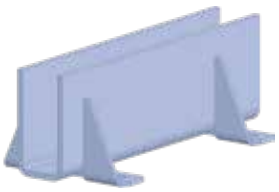
The guide rail guides the scraper during clearing and serves as a drain for the liquid manure from the alley. All guide rails are made of high-quality steel and are provided with corrosion protection. Guide rails are available in different designs and are adapted to the respective barn and scraper type. There are fixing lugs on the guide rails for secure installation.

Standard guide rails

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

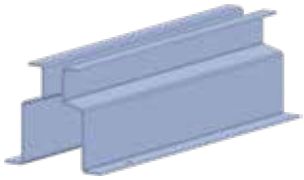


▲ U-guidance
depth 66 mm/width 32 mm



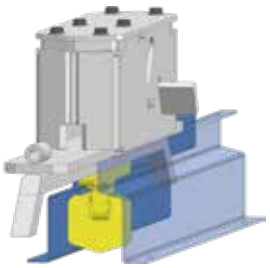
▲ U-guidance
depth 94 mm/width 40 mm

Guide rail / profile trough with clear-out flap



The stainless steel clean-out flap is mounted on the underside of the center block of the scraper.

A cross slope in the alley allows more liquid to enter the profile channel. The liquid is effectively removed with the clearing flap.
Less liquid manure in the alley results in a reduction of emissions.



Information about our further Products

Please also inform yourself about our other products in the field of manure removal technology!

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 manufacture special systems or special designs for individual areas of application, on request. Also outside of animal husbandry. Please contact us - our staff will be happy to advise you!

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