# Cable Scrapers and Cross Gutter Cleaner

Reliable and durable systems to clean free stall barns

GEA engineering for a better world

gea.com

## EFFICIENT AND GENTLE CLEANING

GEA's cable alley scraper systems are quiet and operate without disturbing the normal behavior of the herd.

# Clean alleys. Productive cows.

Quality milk production begins long before the cows enter the milking parlor.

## Animal well-being

Undoubtedly, well-treated, comfortable cows will produce a greater volume of high-quality milk. GEA is committed to providing its clients with installations that offer maximum cow comfort through its diversified line of equipment including: ergonomic and spacious stalls, comfortable mats and manure fiber bedding separators promoting rest time, cow brushes, waterers and drinking troughs, lighting devices providing improved brightness, high-performance ventilation equipment, and manure management systems enabling efficient cleaning of manure alleys.

## The importance of clean alleys

Efficient cleaning carried out regularly every day helps :

- Maintain traction
- Improve hoof health
- Increase overall animal cleanliness
- Reduce emissions of ammonia and improve air quality, both for the animals and the farm operators

## A strong and robust scraping system designed for efficient, frequent cleaning of any length of alleys

Several models of cable alley scrapers are available to cover almost any barn configuration. GEA scrapers, drive units and corner wheels are designed to last and to excel even under the most difficult conditions. GEA's cable alley scraper and cross gutter cleaner systems perform well with limited regular maintenance to keep your barn clean and comfortable for you and your cows.

## Our diverse product line allows you to manage manure in your own way

Chain and hydraulic alley scrapers and cross gutter cleaner systems are offered, as well as a flush cleaning system to clean the alleys and holding area.

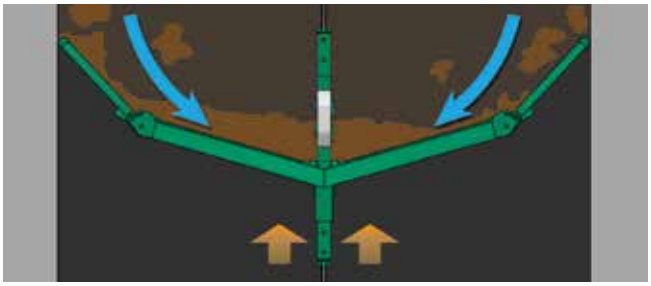
Please don't hesitate to contact your GEA representative they will know how to advise you in organizing the overall layout of your installations and choosing the most suitable cleaning system for you.

# 16° and straight scraper

GEA scrapers are robust and high-performing, equipped with adjustable steel or urethane wear blades suitable for all types of flooring. They can also be adapted to operate with or without a guiding groove.

## 16° Scraper

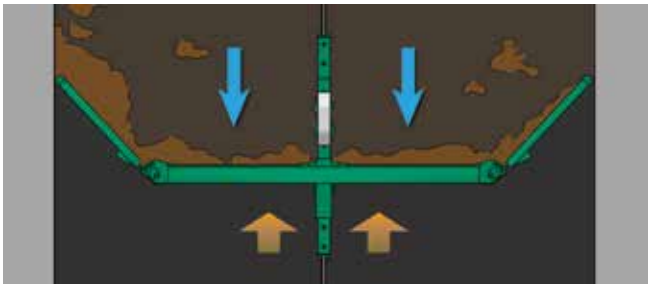
The 16° scraper is angled to direct manure towards the center where the draw bar pull is applied. This stabilizes the scraper stroke and prevents system components from being subjected to excessive stress.



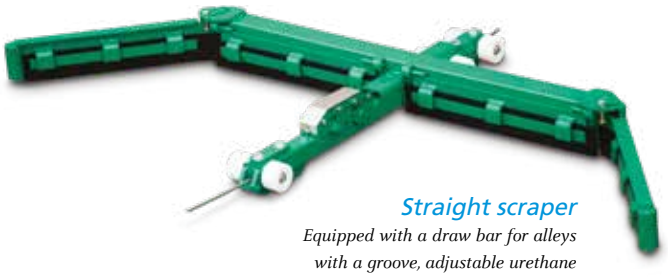
On the return stroke of the scraper, toggling blades pivot upwards to avoid bringing the manure back to the starting point. The ends fold towards the inside of the alley to leave sufficient space alongside the rest area and to avoid disturbing the cows.

## Straight Scraper

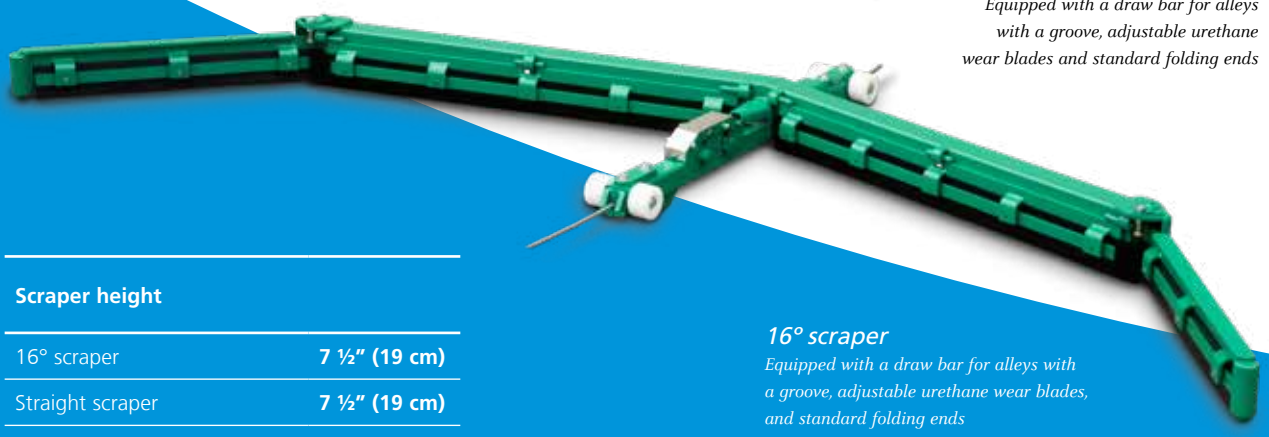
The straight scraper requires less corner wheel set-back than the 16° scraper, making it the best option for installations with limited space at the drop point. It is designed for alleys with a guiding groove.



The draw bar rides in the groove for stable scraper operation even in the event the manure load is not distributed equally on each side of the scraper.



*Straight scraper*
*Equipped with a draw bar for alleys with a groove, adjustable urethane wear blades and standard folding ends*



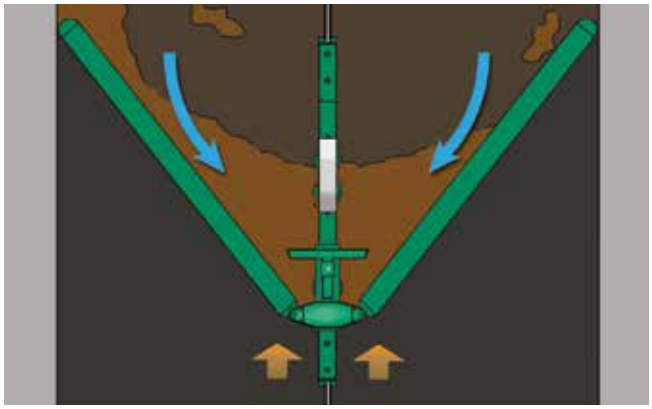
*16° scraper*
*Equipped with a draw bar for alleys with a groove, adjustable urethane wear blades, and standard folding ends*

| **Scraper height** | |
|---|---|
| 16° scraper | **7 ½" (19 cm)** |
| Straight scraper | **7 ½" (19 cm)** |

# V-shape scraper

## V-Shape Scraper

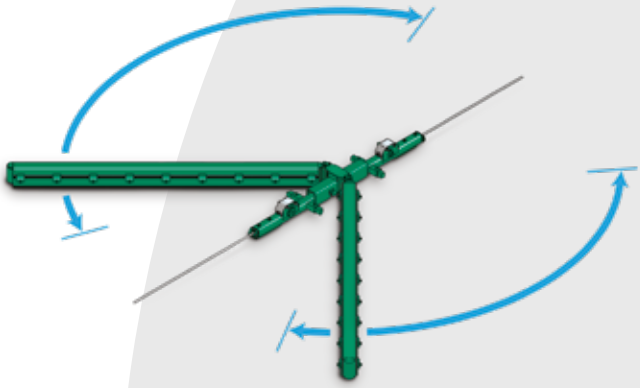
The V-shape scraper has a heavy-duty blade to provide additional down force and more effectively scrape alleys where the manure dries quickly. Also, the design allows it to fit variable-width and offset alleys.

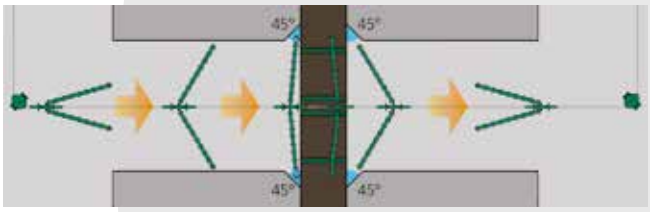


| Available heights | | |
|---|---|---|
| V-shape and Bidirectional V-shape scrapers | **6" (15.2 cm)** | **8" (20.3 cm)** |

## Bidirectional V-Shape Scraper

The bidirectional V-shape scraper is designed for use as a single scraper per alley in barns with a center drop. To allow full extension of the scraper, the alley must be grooved and must have corners cut at 45° at the intersection of the alley and the drop point.






*During the forward stroke, the scraper opens to clean the first half of the alley. With corners cut at 45°, the scraper extends fully and carries out its return stroke in the second half of the alley. The scraper proceeds the same way when carrying out its reverse stroke.*

*V-shape scraper*

*Equipped with a draw bar for use in alleys with a groove and adjustable urethane wear blades*

# Keep your alleys drier for the well-being of the herd

A slight slope towards the center of the manure alley allows excess liquid and material to naturally drain inside of a deeper groove or a channel underneath the manure alley. Material is pushed towards the cross gutter as the scraper is cleaning the alley.

## Deep Groove Scraper

The deep groove scraper consists of a draw bar equipped with an integrated toggling steel blade to direct excess liquid and push solids contained in the groove towards the cross gutter. This draw bar is specially designed for grooves with a depth of 4" to 10" (10.2 to 25.4 cm) and is available on the 16°, straight and V-shape scraper models.

- **A cleaner and healthier herd** — this system eliminates liquid accumulation in the alleys faster and keeps the cow hooves drier.
- **Affordable** — this scraper partially offers the same advantages as the under floor channel scraper, without having to install a channel underneath the cleaning alley.

## Under Floor Channel Scraper

The raised design of the draw bar allows liquid manure to drain into a channel installed underneath the manure alley and keep the cow hooves drier. During the cleaning stroke of the scraper, material contained in the channel is pushed towards the cross gutter by the integrated stainless steel paddle at the same time as the scraper is collecting manure in the alley. This draw bar is available on the 16°, straight and V-shape scraper models.

- **Adaptable** — the channel can be made of circular or rectangular concrete or PVC pipe. The paddle can be configured according to the shape and dimensions of the channel and be installed in front or at the back of the draw bar.

## Tube Scraper System

This system is designed to direct as much manure as possible into a prefabricated concrete form installed underneath the free stall alley. With each cleaning stroke, the paddle directs manure from the previous stroke towards the cross gutter.

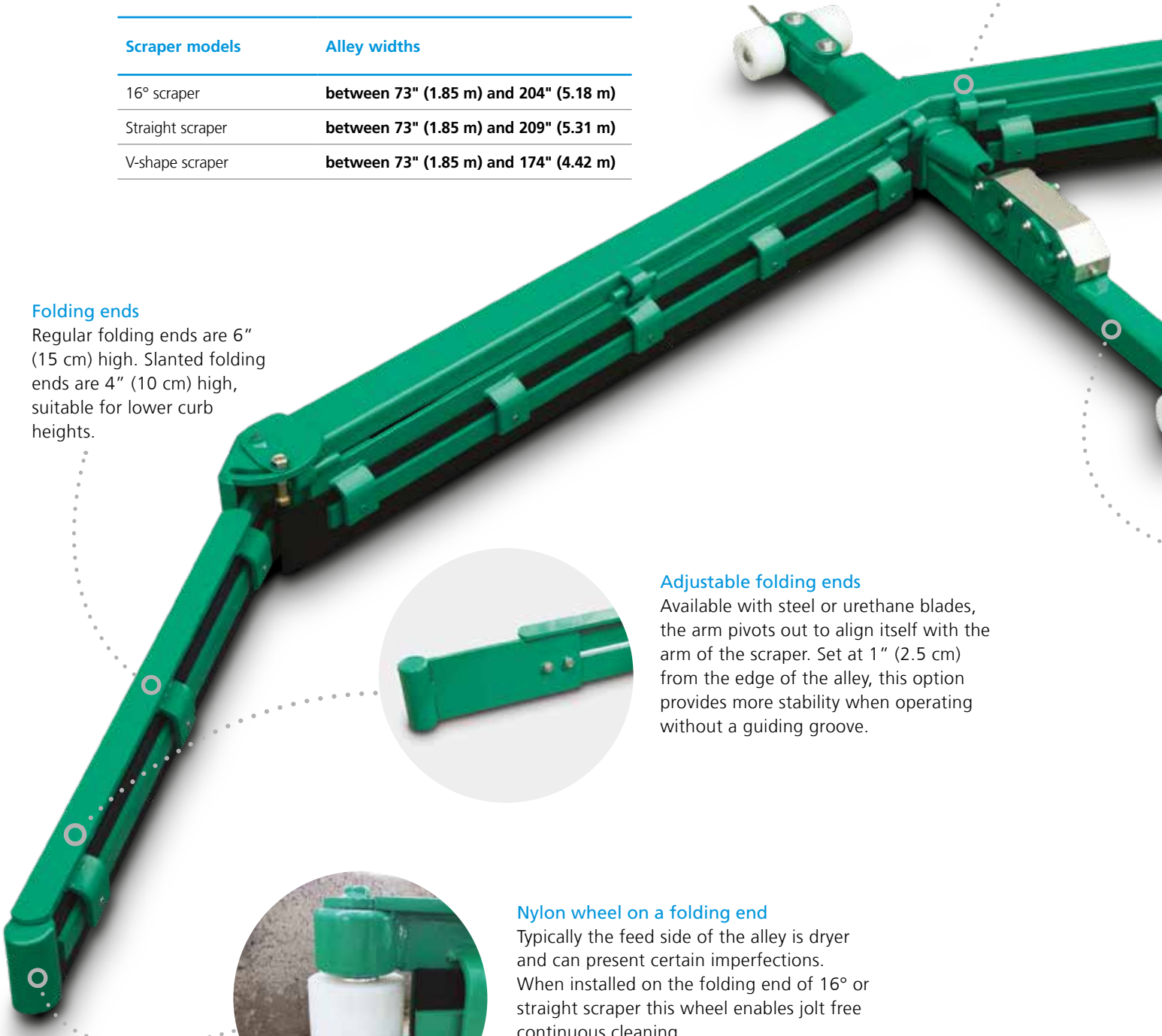
- **A cleaner and healthier herd** — this system removes a maximum amount of manure and liquid in order to keep the cow hooves drier.
- **Efficient design** — the V-shape scraper allows manure to be directed towards the center of the alley. A serrated wheel at the rear of the scraper pushes the material inside the tube, keeping the groove free from any obstruction.
- **Heavy-duty scraper** — available with two arm lengths, suitable for alley widths between 96" and 132" (244 and 335 cm), or between 133" and 168" (338 and 427 cm).
- **Quick installation** — thanks to the use of prefabricated concrete forms.
- **Installed with steel cable only.**

*Serrated wheel at the rear of the scraper*

# Accessories and options

16°, straight and V-shape scrapers can be equipped with a variety of accessories and options to provide maximum efficiency, covering all types of barn layouts and bedding.

| Scraper models | Alley widths |
|---|---|
| 16° scraper | **between 73" (1.85 m) and 204" (5.18 m)** |
| Straight scraper | **between 73" (1.85 m) and 209" (5.31 m)** |
| V-shape scraper | **between 73" (1.85 m) and 174" (4.42 m)** |



### Folding ends

Regular folding ends are 6" (15 cm) high. Slanted folding ends are 4" (10 cm) high, suitable for lower curb heights.



### Adjustable folding ends

Available with steel or urethane blades, the arm pivots out to align itself with the arm of the scraper. Set at 1" (2.5 cm) from the edge of the alley, this option provides more stability when operating without a guiding groove.

### Nylon wheel on a folding end

Typically the feed side of the alley is dryer and can present certain imperfections. When installed on the folding end of 16° or straight scraper this wheel enables jolt free continuous cleaning.

**Not available for the slanted folding-end option.*

### Hinges

Hinges allow the 16° and Straight scraper arms to fold toward the center of the alley. This enables farm vehicles to travel over the scraper.

## REPLACEABLE WEAR BLADES

Steel or urethane replaceable wear blades are available for the 16°, straight and V-shape scrapers. Urethane blades are required for alleys with rubber mats.

### Cables and ropes

Galvanized or stainless steel cable, 3/8" (9.5 mm) or 1/2" (13 mm) in diameter. Strong and durable, it is perfectly suited to very long manure alleys.

The Combi-rope has a diameter of 0.55" (14 mm) and offers all the advantages of both steel cable and polypropylene rope. It is required only for the portion of the circuit that runs through the Fit R-300 drive unit.

HTS-716 rope, light and flexible, 7/16" (11 mm) in diameter. It is suitable for manure alleys less than 300' (91 m) in length. The HTS-716 rope is designed only for grooved alleys, and must be kept in a frost-free and sand-free environment.

## RW ROLLER

The RW Roller is made from a heavy-duty composite material and has a chrome-plated hardened bushing to provide excellent wear resistance. Its efficient design limits friction for all scraper components

### Draw bars

Manufactured to fit with the design of your choice of configuration for any drive type, alley style and groove is available.

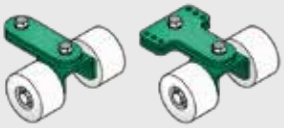
Several draw bar models are available to suit floor mount installations, with a guiding groove, a deep guiding groove or an under floor channel.

### Draw bar accessories

The draw bars on 16°, straight and V-shape scrapers require one accessory at each end.

Heavy-duty RW rollers approved for use of sand laden manure.

Nylon roller kit recommended for cleaning manure alleys with rubber flooring and no sand.



Steel half-moon recommended for concrete alleys with a guiding groove.

# The SW Series cable drive units work around the clock

MICHEL BLANCHET
BOUSQUET BLANCHET FARM
"No moving parts, no stress and no friction. Wear is reduced to a minimum, and I am not required to keep replacement parts, which represents a good savings…"

## A durable design that will make your life easier

The new SW Series cable drive units were designed to make your life easier. They give more freedom with regard to installation, provide efficient operation, and require minimal maintenance. This unique design allows lateral movement of the drive as the cable is being wrapped around the rotating drum. The coiling is done without excessive stress or friction on the cable.

- **Lateral movement of the drive unit** — is done by means of an extremely durable rolling mechanism on a track. This movement allows the cable to remain well aligned when it is being coiled, and eliminates the stress and excessive pressure caused by the cable guide found on other drive units on the market.
- **More configuration options** — the corner wheels can be installed in close proximity to the drive unit. The SW drive unit can also be mounted on a lifting base with vertical wheels, similar to the Fit R-300, for situations where existing conditions make a standard installation challenging; elevation differences, installation next to an existing curb or other obstacles.
- **Protective hood made of light plastic that is resistant and durable** — allows for easy handling when necessary.
- **Open and raised drive unit base** — facilitates cleaning of manure accumulations under the drive unit.
- **Double motor option DD** — on SW-300 and SW-450 models. Standard on the SW-650 model.


Patent pending

*Cable drive unit models for free stall alley scrapers*

### Timing chain

**1** Easy management and adjustment of the #40 timing chain from the outside of the main body of the cable drive unit.

1

### Cable tie downs

**2** Two cable tie downs on opposite sides of the drum can be accessed from outside of the rotating drum for safe and easy fastening of the cable.

2

### Strong, durable roller bearings

**3** The drum drive shaft of the SW Series cable drive unit is mounted on high quality roller bearings for smooth rotation of the drum and years of worry-free operation.

3

### Rolling mechanism

**4** The lateral movement of the SW cable drive unit is done by means of a track rolling mechanism designed with extremely durable components. The threaded rod and lateral movement guide are installed at 12" (30.5 cm) above the floor for easier access.

4

### Lifting base and vertical wheels

**5** Elevating the drive unit over the cross gutter allows you to use the space available efficiently, keeps the working area clean, and makes maintenance easier.

5

## EASE OF INSTALLATION

The lateral movement of the drive unit allows the cable to remain aligned without applying excessive stress. This makes it possible to install corner wheels in close proximity to the drive unit when necessary.

# Corners wheels for alley scraper systems

## Durability and strength for worry-free operation

GEA corner wheels are made of high-quality components; a sturdy frame and cover design, with wheels made of ductile cast iron and equipped with two greasable tapered roller bearings exclusive to GEA. All corner wheel models are equipped with a built-in wheel cleaner to dislodge material that has accumulated in the groove of the corner wheel.

1. 90° corner wheel that is 21" (53.3 cm) in diameter
2. 90° corner wheel that is 16" (40.6 cm) in diameter, equipped with an optional cable cleaner
3. 16" (40.6 cm) and 21" (53.3 cm) corner wheels can easily be converted into 180° corner wheels

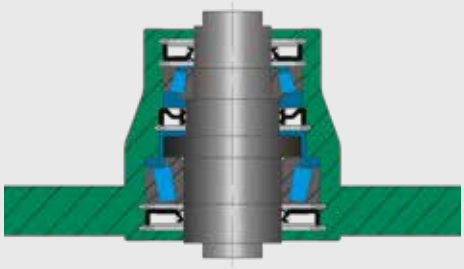
## Corner wheel shaft system with two greasable tapered roller bearings provides greater efficiency and increased durability

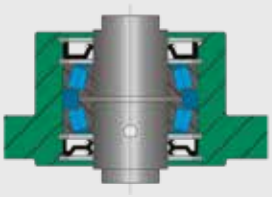
Lubricating the roller bearings helps keep contaminants out of the mechanism. As a result, the service life of the roller bearings is greatly extended, even when immersed in manure. The pressure exerted by the lubricant during injection expels the contaminated grease through the upper sealing joint.

1

2

3





*The 21" and 16" (53.3 and 40.6 cm) corner wheels are equipped with a tandem roller assembly in order to increase rigidity and load capacity. For installations where the load to be transported is significant, the 21" (53.3 cm) corner wheel is required. The roller bearing at its base is stronger and more substantial, allowing for more efficient operation without excessive stress. The 21" (53.3 cm) corner wheel is also offered as an option for any installation.*

# Cross gutter cleaner

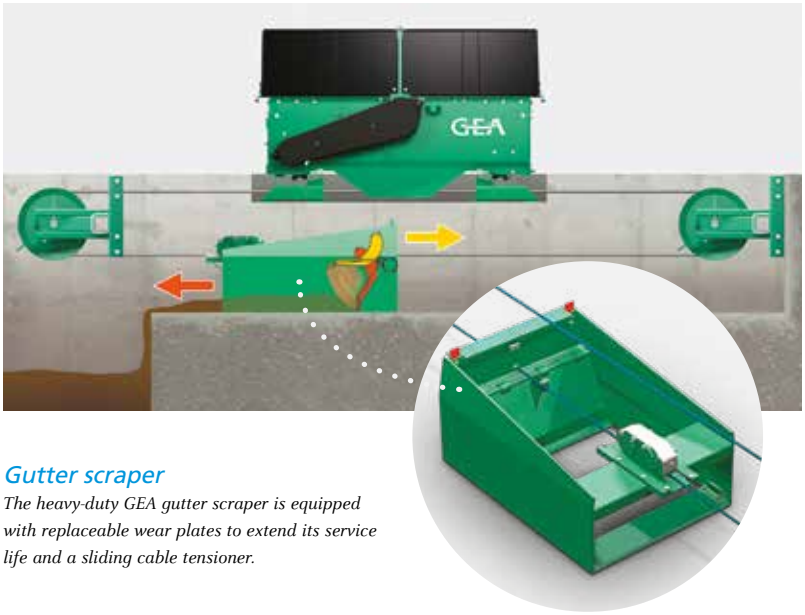
This simple and efficient cross gutter cleaning system requires minimal maintenance.

## Working principle

The system operates by directing the manure coming from the free stall alleys, into the cross gutter towards the reception pit by means of a gutter scraper. The drive unit pulls the scraper from one end to the other by means of a steel cable or a rope.

- Designed for cleaning cross gutters that are 36" (91.4 cm) deep with a maximum length of 540' (165 m).
- Double motor drive units available (SWR-300 DD and SWS-300 DD).

## SWR-300 drive unit installed in a recess




*Gutter scraper*

*The heavy-duty GEA gutter scraper is equipped with replaceable wear plates to extend its service life and a sliding cable tensioner.*

## SWS-300 drive unit installed with a single drive unit wheel and mounted on two stands

This configuration enables the scraper to start its cleaning stroke closer to the end of the gutter since the drive unit is installed above the gutter wheel.


## SWS-300 drive unit installed with two drive unit wheels and mounted on two stands

Suitable for layouts where installation in a recess is not an option.

# An automated system for worry-free operation

## Maximum safety for your herd

### IVRpro Control Panel

The IVRpro is equipped with high-quality internal components and a state-of-the-art detection sensor for accurate load fluctuation readings. It provides peace-of-mind and protection for the equipment and the cows.

### Max@ccess Option

- **Simplified navigation** – a larger, high-resolution interface screen facilitates navigation and adjustment of your settings.
- **Multilingual interface** – multiple languages are available for customized use.
- **Comprehensive and intuitive** – programming and operating parameters offer numerous options and a help menu if needed.
- **Remote start** – a remote start button can be installed away from the control panel to facilitate restarting the system.

engineering for
a better world

## We live our values.

Excellence • Passion • Integrity • Responsibility • GEA-versity

GEA is one of the largest technology suppliers for food processing and a wide range of other industries. The global group specializes in machinery, plants, as well as process technology and components. GEA provides sustainable solutions for sophisticated production processes in diverse end-user markets and offers a comprehensive service portfolio.

The company is listed on the German MDAX (G1A, WKN 660 200), the STOXX® Europe 600 Index and selected MSCI Global Sustainability Indexes.


GEA North America

GEA Farm Technologies Canada Inc.
4591 boul. St-Joseph
Drummondville, Qc, Canada J2A 0C6
Tel +1 819 477 7444
Fax +1 819 477 5565

GEA Farm Technologies, Inc.
1880 Country Farm Drive
Naperville, IL 60563 USA
Tel +1 800 563 4685
Fax +1 819 477 0486

www.gea.com