



PATENTS – US8544383, CA2727011, EP2477806

# GEA XPress™

Reliable and efficient fiber separation system  
to get the most out of manure.



# GEA PRO MANURE

Long-fiber bedding from the GEA XPress™ gives your cows the highest level of comfort available.

# FIBER BEDDING: A SUSTAINABLE SOURCE OF COMFORT FOR YOUR COWS

## High-quality long-fiber bedding

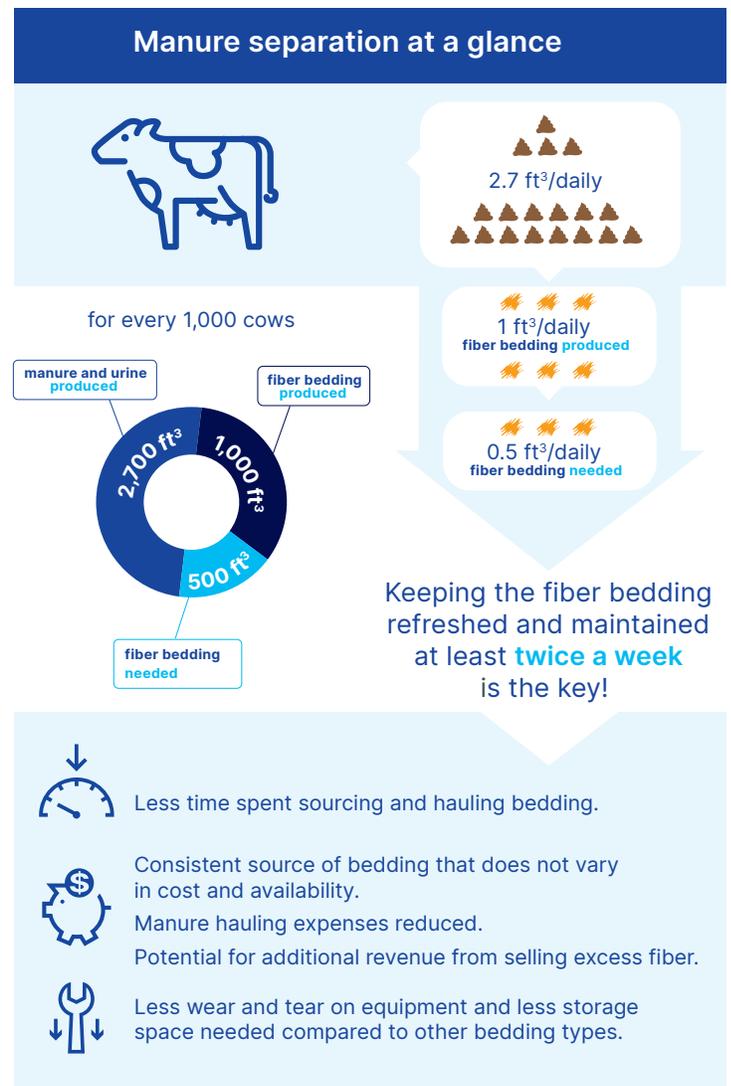
Extracting the longest possible fiber from manure is an important consideration in providing maximum comfort to your cows. GEA XPress™ systems preserve fiber length more effectively because fiber is squeezed, not ground, during the separation process.

## Less surface area for bacteria to grow

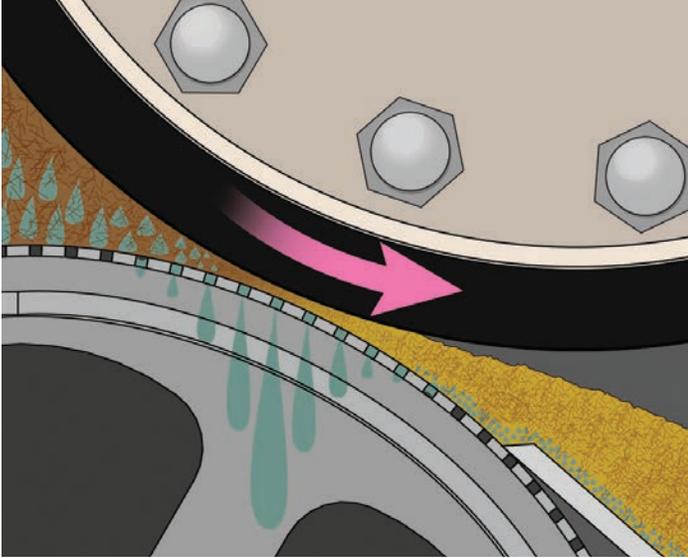
When fibers are cut or broken during the mechanical separation process, the surface area per volume of bedding increases. This increased surface area means more available space for a growing bacterial population. Long-fiber bedding has less surface area and therefore reduced opportunities for bacteria to grow and spread.

## Greater moisture absorption

Long-fiber bedding is more effective at absorbing moisture in the stalls. Short fibers become compacted in the stall and can't effectively absorb and hold moisture. As moisture seeps in from the outside, fibers are so tightly packed there is no way for moisture to travel into the small fibers in the middle of the bedding. By contrast, long fibers have less compaction, allowing moisture to travel throughout the bedding and resulting in cleaner and drier stalls.



# FIBER SEPARATION SYSTEM



The XPress™ runs with minimal energy and simple upkeep, delivering years of trouble-free performance.

The XPress™ rotation pulls in a steady stream of material from the integrated regulator tank or dewatered material from a sloped screen or vertical dewaterer. The fiber material is squeezed between an upper rubber roller and a lower stainless steel screen to remove moisture. The extracted liquid is diverted from the fiber material via openings in the screen roller. The process is repeated two or three times depending on the capacity or dry matter rate targeted.

## XPress™ main features

- The GEA XPress™ is constructed with grade 304 stainless steel – the frame, roller shield, motor table, roller arms and accessories.
- The rubber roller is made of small individual sections bolted together to provide easy rotation and replacement of the roller sections, when needed.
- Pressure is applied to the fiber with an air bag system built to handle the conditions in separation rooms. This system provides uniform material compression across the roll.
- Each steel roller and transition chute has an integrated rinsing system.
- Control panel with optional Variable Speed Drive (VSD).
- Each set of rollers uses only 1.5 HP (1.1 Kw).

## Laser level sensor

This sensor provides accurate readings of the level of solids in the hopper. Unlike mechanical level measurement devices, the laser level sensor is installed away from the slurry to avoid manure accumulation.

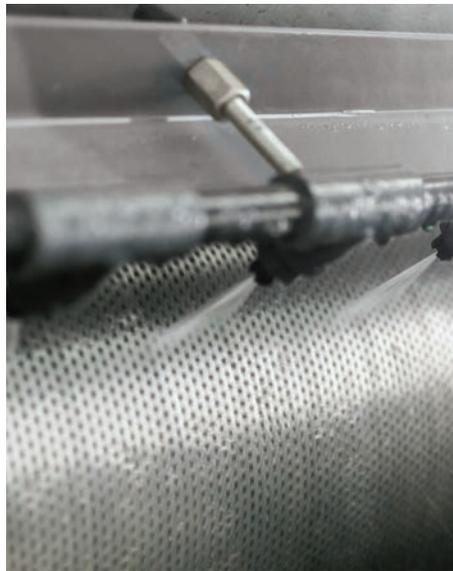
Laser level measurement is independent of pressure or temperature variations. Consequently, the speed of light passing through any gaseous medium does not vary. As a result, laser level transmitters offer accurate results with no calibration issues.

Simple to install, it provides quick and accurate responses compared to other alternatives. In addition, the laser allows the rollers to run at a lower RPM during normal operation. When the level of solids is high, the speed of the roller will increase for a short time and, then return to the lower speed. In case of extreme solids build up, the laser will stop the feed pump, reducing the risk of overflow.



#### **Laser level sensor**

This sensor accurately measures the solids level in the chute between each roller press system.



#### **Integrated rinsing system**

This rinsing system uses pressurized water to remove fiber buildup on each roller press and inside the hoppers between rollers.



#### **Air bag pressure system**

This system applies pressure on the rubber roller against the stainless steel screen roller to extract as much liquid as possible.

# XPRESS™



## 90/hr

**XPress™ 6FT - 4FT - 2FT**

Treat between 40-100 US gpm

(33-83 Imp gpm and 150-380 lpm)

Solid output between 30-34% dry matter rate\*

## XPress™ with integrated regulator tank

The XPress™ is a modular system with a step down concept which allows increased pressure at each step for optimal moisture removal. The configuration with an integrated regulator tank is well suited to process manure that does not require dewatering prior the roller press separation treatment.

**Manure consistency for optimal performance is from 1/2" to 1-1/2" (13 to 38 mm).**

The integrated regulator tank, with its three level sonar, regulates the amount of manure that is transferred into the XPress™, to ensure proper separation.

- Stainless steel chute with spray bar transitions the fiber to the next roller press
- Equipment stands, side and three-side decks, as well as steps, are offered with all XPress™ configurations to access crucial sections of the equipment.

\* Performances may vary depending on manure consistency and fluidity, configuration and application. This data does not constitute warranties of any kind.



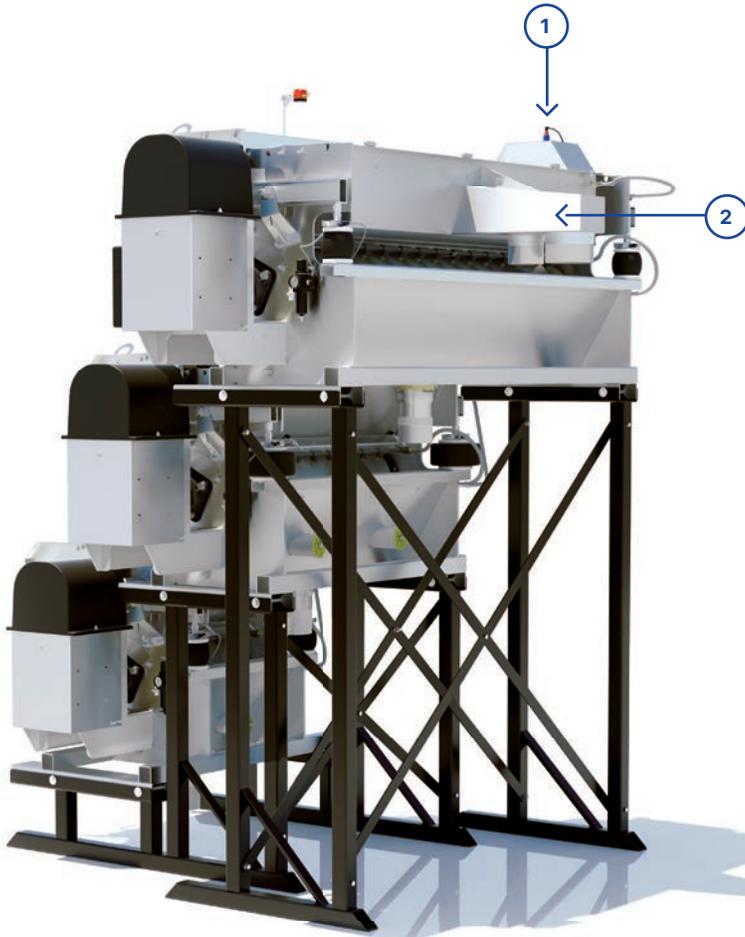
### **XPress™ 6FT - 4FT - 2FT with integrated regulator tank**

Shown with high stand for XPress™ 6FT  
and two-level stand for XPress™ 4FT and 2FT



### **XPress™ 6FT - 4FT with integrated regulator tank**

Treat between 30-75 US gpm (25-62 Imp gpm and  
110-285 lpm) – 60 cows/hour  
Solid output between 30-34% dry matter rate\*



**XPress™ integrated regulator tank  
intake and overflow**

- ① 3-level sonar to regulate the flow of material coming into the roller press.
- ② 6" (152 mm) intake and 8" (203 mm) overflow. Appropriate feed and discharge hardware and plumbing offered.



**XPress™ 2FT with integrated regulator tank**  
Treat between 10-35 US gpm (8-29 Imp gpm  
and 40-130 lpm) – 30 cows/hour  
Solid output between 24-28% dry matter rate\*



**XPress™ 4FT - 2FT with integrated regulator tank**  
Treat between 20-50 US gpm (16-41 Imp gpm and  
75-190 lpm) – 45 cows/hour  
Solid output between 30-34% dry matter rate\*

**XPress™ 6FT with integrated regulator tank**  
Treat between 30-75 US gpm (25-62 Imp gpm  
and 110-285 lpm) – 60 cows/hour  
Solid output between 24-28% dry matter rate\*

**XPress™ 4FT with integrated regulator tank**  
Treat between 20-50 US gpm (16-41 Imp gpm  
and 75-190 lpm) – 45 cows/hour  
Solid output between 24-28% dry matter rate\*

# XPRESS™



## 180-300/hr

XPress™ 6FT - 4FT - 2FT

Treat between 100-175 US gpm

(83-145 Imp gpm and 380-660 lpm)

Solid output between 30-34% dry matter rate\*

### XPress™ with Vertical Extract and regulator tank

The XPress™ is a modular system with a step down concept which allows increased pressure at each step for optimal moisture removal. This configuration is required with thin manure.

#### Manure consistency for optimal performance is less than 1/2" (13 mm).

- The liquid level regulator tank is required with the Vertical Extract. It provides a steady flow while preventing overflow.
- The Vertical Extract removes excess liquid before the roller press treatment.
- Stainless steel chute with spray bar transitions the fiber to the next roller press.
- Equipment stands, side and three-side decks, as well as steps, are offered with all XPress™ configurations to access crucial sections of the equipment.

\* Performances may vary depending on manure consistency and fluidity, configuration and application. This data does not constitute warranties of any kind.



#### XPress™ 6FT - 4FT with Vertical Extract and regulator tank

Treat between 100-175 US gpm (83-145 Imp gpm and 380-660 lpm) – 180-300 cows/hour

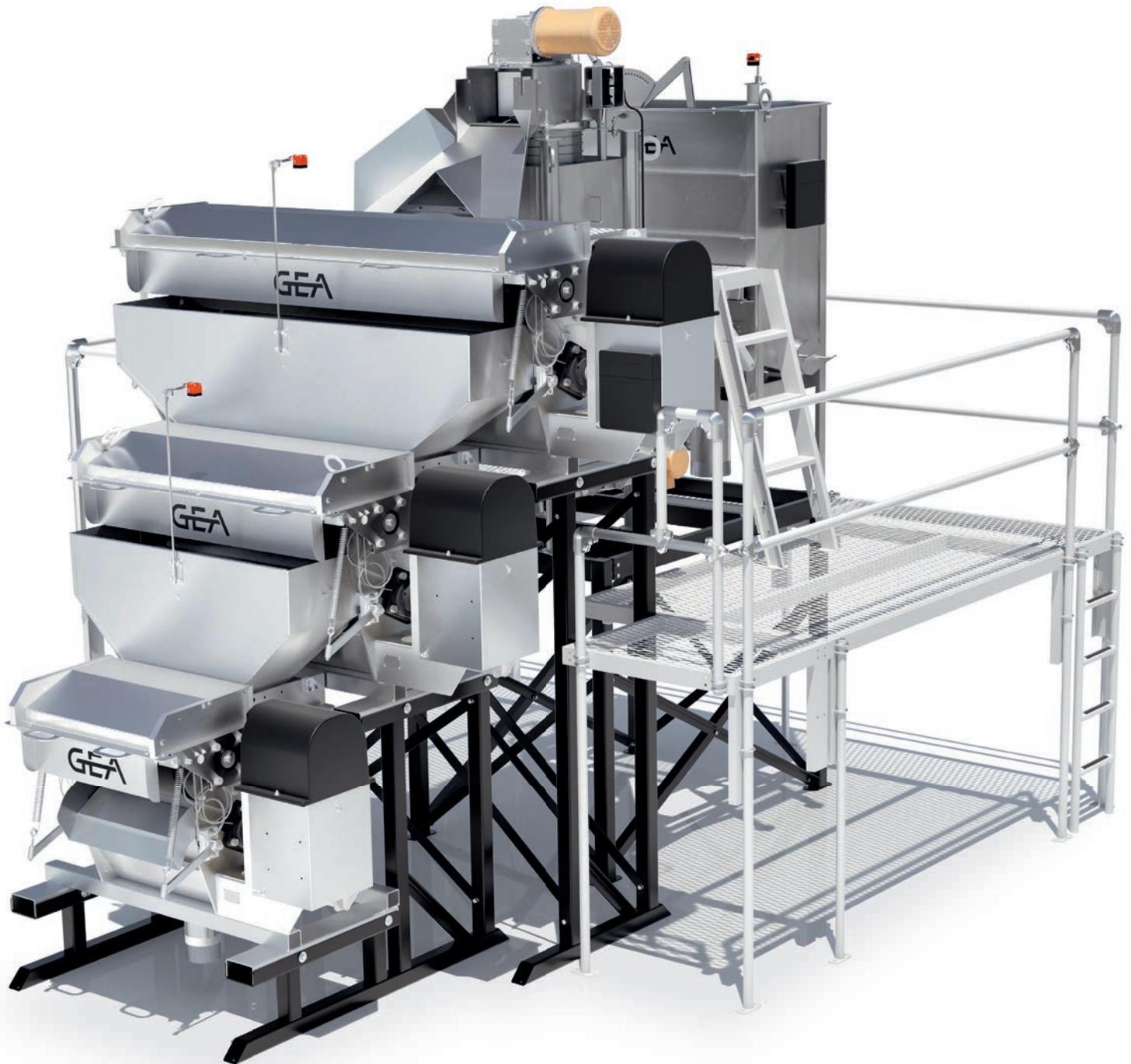
Solid output between 30-32% dry matter rate\*



#### XPress™ 6FT with Vertical Extract and regulator tank

Treat between 100-175 US gpm (83-145 Imp gpm and 380-660 lpm) – 180-300 cows/hour

Solid output between 24-28% dry matter rate\*



**XPress™ 6FT - 4FT - 2FT with Vertical Extract and regulator tank**

Shown with high stand for Vertical Extract and liquid level regulator tank, high stand for XPress™ 6FT, two-level stand for XPress™ 4FT and 2FT, and side deck with safety rails and ladder.

# RELIABLE DEWATERING PROCESS



## Vertical Extract

The Vertical Extract is used as an up-stream dewatering treatment prior to the roller press. It can also be used as a stand-alone piece of equipment to thicken material for digestion or further treatment.

Liquid removal is done without pressure on the screen. A large heavy-duty auger moves the solid material to the top exit of the device while the liquid flows by gravity through the screen openings without pressure. There is no contact wear between the auger and the screen and the auger is reversible which doubles its lifetime.

The solid output ranges between 8-12%\*.

- Constructed with 304-grade stainless steel for enhanced durability and corrosion protection.
- Low energy consumption.
- Integrated pulsator and vibrator to facilitate liquid running through the screen.
- Components requiring maintenance are positioned at ergonomic height for easier access.
- An automatic greasing system combined with grease-free bushings help significantly reduce maintenance time.
- Flexible top discharge: choose between single or dual outlets to feed one or two XPress systems.

## The liquid level regulator tank is required to feed a Vertical Extract.

### Liquid level regulator tank

The liquid regulator tank is also built of 304 stainless steel. It regulates the flow coming into the Vertical Extract to ensure a smooth and effective dewatering treatment.

- Laser sensor ensures precise liquid level detection, with an easily adjustable overflow outlet via lever control.
- Slanted bottom of the tank with access doors on each side for easy cleaning.
- Removable inner screen designed to capture foreign objects and protect the separation system from potential damage.

\* Performances may vary depending on manure consistency and fluidity, configuration and application. This data does not constitute warranties of any kind.



## Stand-alone XPress™ 8FT or 6FT

To go with a GEA SlopeScreen™ or a  
GEA SlopeScreen™ XP for additional  
water capture and drier solid output.



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