



Technology/Service: Modular Xpress

Information by: Jeramy Sanford

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COMPANY INFORMATION

Company Name: GEA Houle Inc.

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Web Site: http://www.gea.com/

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City: QC, Canada

Zip Code: J2B 6W3

TECHNICAL CONTACT

Name: Jeramy Sanford

Site Name:

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Contact:

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Title:

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Phone:

City: Naperville

Email:

State: IL

Address:

Zip Code: 60563

City:

State:

Zip Code:

INITIAL TECHNOLOGY OVERVIEW

This information is to guide in the development of a more specific and detailed Technology Information Request. Please answer the following questions for each Technology or Service provided.

What is the name of the technology or service you provide?

Modular XPress fiber separator

Describe how this technology is used in a larger Nutrient Management System. Please be as detailed as possible.

The modular XPress removes fiber from dairy manure for the purpose of water cleanup, fiber bedding or composting. Removing this fiber greatly enhances the downstream equipments ability to work efficiently and protects the moving components.

How many systems do you have installed on dairy farms or other livestock operations?

	Number of Sites	Size of Installations
Dairy	>50	From 120 to 35,000 cows
Pork		
Poultry		

Do you have a preferred region or area for the location of projects?

Our equipment can function in all regions and areas worldwide.

Location of farm(s)?

Worldwide

What's the smallest and largest farm using your system?

We have systems installed on dairies ranging from 120 cows to over 35,000

Input and output of your unit/system – do you have a mass balance analysis?

If a mass balance is available, please attach or include as a separate document.

See company representative. Input and output vary by equipment type.

Input material description/characteristics:

For example: raw manure, digestate, screened digestate, suitable non-farm feedstocks, other.

Raw manure
Digestate
Screened Digestate
Suitable non-farm feedstocks
Other

Does the technology treat the full manure stream for a farm or a fraction of the stream?

This equipment treats a fraction as it is part of the bigger system.

Do you consider this a mature system or ongoing farm development?

Mature with ongoing improvements

Any weather constraints? Yes No *Please describe.*

Non Freezing building

Any bedding constraints? Yes No *Please describe.*

Will not separate sand

Output materials description and characteristics:

Please include the % of the total stream for each material, i.e. 10% fiber and 90% screened liquid by weight.

The XPress will generate fiber ranging from 24% - 34% Dry matter.

Output liquid ranges from 4% to 6% solids

Do the Outputs of the process have a resale market identified? Yes No

If so under what brand name or who is the contract with?

Is this process scalable and to what extent (top and bottom limits)? *Please describe.*

The process is scalable for any size dairy farm

Do you have a known scaling factor? *Please describe.*

Preset process limits on the equipment.

Does this technology require any air input? Yes No

What is the preferred air connection? *For example: psi, fitting size, air quality.*

If not distributed by the system please list each connected device.

Small compressor with no air consumption.

Does this technology require any water input? Yes No *If so, please describe.*

Well pressure only, no minimum GPM requirements.

What is the preferred water connection? *For example: psi, fitting size, water quality, gpm.*

If not distributed by the system please list each connected device.

Varied

Does this technology require any electrical input? Yes No *If so, please describe.*

We build panels to fit all supply types.

What is the preferred electrical connection? *For example: phase #, voltage, full load amps.*

If not distributed by the system, please list each connected device.

None preferred

Does this technology require any mechanical input? Yes No *If so, please describe.*

What is the preferred mechanical connection? *For example: horsepower, connection, rpms.*

If not distributed by the system please list each connected device.

Does this technology require any special plumbing? Yes No *Please describe what is required.*

Drain and feed fittings

Does this system require and special foundations or pads? Yes No *If so, please describe.*

Each system has it's own requirements. Contact a company representative.

Do you consider this technology part of a larger system that you provide? Yes No *If so, please describe.*

The modular XPress removes fiber from dairy manure for the purpose of water cleanup, fiber bedding or composting. Removing this fiber greatly enhances the downstream equipments ability to work efficiently and protects the moving components.

Does your system require any other components that you do not provide or are not included in your proposal?

Yes No *If so, please describe.*

Electrical, plumbing, installation by qualified dealer and some controls.

How is the system delivered to the site? *For example: skid mounted, assembled on site, constructed on site.*

Partially assembled on site.

Is this system portable or configured in such a way that it could be easily transported for use in several locations?

Yes No *Please describe.*

Trailer systems can be manufactured.

Has your technology been accepted by the NRCS and is it included into a practice standard? Yes No

Describe if necessary.

Are there any unusable or hazardous byproducts of this process? Yes No

If so, please describe the product and recommended means of disposal.

What spare parts and redundant components are included with the system?

Drive components are the same for each size of XPress.

How is the system controlled and what are the components and capabilities of the control system?

GEA supplied control panel with frequency drives.

What is the usable life of the system?

10 years+

What is the salvage value at the end of the usable life?

See company representative

What is the educational and technical level of competence for the operation of the system?

Basic mechanical skills and process understanding.

What level of maintenance is required for the system?

Please indicate if rebuilds or major components must be replaced and what the frequency is for these components.

<1 hour per day

Are consumables used in the process? Yes No

Please provide the nature and purchase relationship for these consumables. For example: proprietary, special contract, generally available.

Which of these NRCS codes would your technology be classified under? Check all that apply. Add if necessary.

CODE	NRCS DESCRIPTION	APPLIES
472	Access Control	
560	Access Road	
309	Agrichemical Handling	
371	Air Filtration and Scrubbing	
591	Amendments for the Treatment of Agricultural Waste	
366	Anaerobic Digester	
672	Building Envelope Improvement	
372	Combustion System Improvement	
317	Composting Facility	
554	Drainage Water Management	
375	Dust Control from Animal Activity on Open Lot Surfaces	
373	Dust Control on Unpaved Roads and Surfaces	
374	Farmstead Energy Improvement	
512	Forage and Biomass Planting	
561	Heavy Use Area Protection	
516	Livestock Pipeline	
590	Nutrient Management	
521A	Pond Sealing or Lining, Flexible Membrane	
533	Pumping Plant	
558	Roof Runoff Structure	
367	Roofs and Covers	
318	Short-Term Storage of Animal Waste and By-Products	
570	Stormwater Runoff Control	
606	Subsurface Drain	
635	Vegetated Treatment Area	
601	Vegetative Barrier	
360	Waste Facility Closure	
632	Waste Separation Facility	
313	Waste Storage Facility	
634	Waste Transfer	
629	Waste Treatment	
359	Waste Treatment Lagoon	

Can you provide an estimate of the capital required for the installation of this technology?

Please include all components and designate if provided by you or others.

System varies by farm size, a rough estimate would range from \$20,000 to \$150,000

Can you provide an estimate of the operational costs required for this technology?

Please include all costs and designate if provided by you or others.

System electrical consumption ranges from 1.5HP to 7.5HP

Is there financing available for this system? Yes No *If so, what are the conditions for this financing?*

Through the dealer network.

Is the system available for lease? Yes No *Please describe.*

What sort of warrantee or guarantee do you provide with this technology?

Do you provide any performance guarantees or strictly defects in parts and materials?

One year manufacturer warranty.

Explain how this system is unique or transformative and how does it improve upon or go beyond other technologies that are currently available.

The modular XPress is unique to most competitors. Low horsepower, limited maintenance and scalable.

Would you be willing to provide a location for a site visit by Newtrient? Yes No

If so, please provide location.

Indiana

Technology References. Please provide customers with whom we can discuss this technology and its performance.
Include a company name, location, contact name and contact information.

Reference 1

Company Name:	
Company Location:	
Contact Name:	
Contact Information:	

Reference 2

Company Name:	
Company Location:	
Contact Name:	
Contact Information:	

Reference 3

Company Name:	
Company Location:	
Contact Name:	
Contact Information:	

Reference 4

Company Name:	
Company Location:	
Contact Name:	
Contact Information:	

Are there any other facts about this technology that you feel should be included in this document?