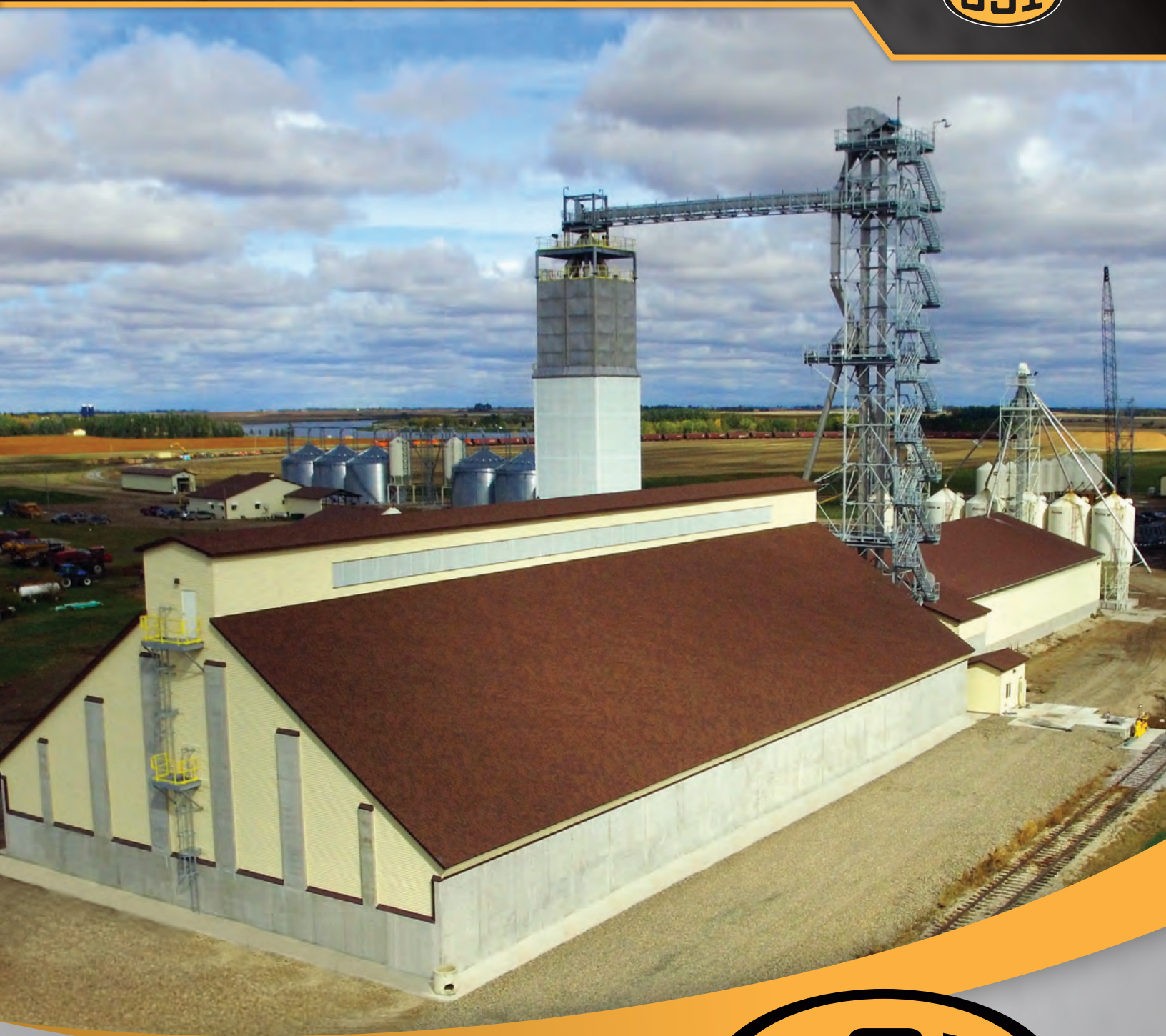


**FULL SITE SOLUTIONS**

# **DRY CROP NUTRIENT**



**PROVEN & DEPENDABLE™**

[WWW.GRAINSYSTEMS.COM](http://WWW.GRAINSYSTEMS.COM)





## **EVERY SECOND COUNTS**

In today's rapidly changing ag market, operations with the most flexibility to adapt to end-user requirements and volatile market conditions win. The current standard isn't going to cut it for forward-thinking agricultural retail and commercial co-ops. By selecting GSI's InterSystems brand of engineered-to-order heavy-duty fertilizer processing equipment, you're making the bold choice to go beyond what's expected. And, you're choosing to get your customers loaded and back in the field faster with the high-quality blends they demand.

High-speed, high-capacity InterSystems fertilizer handling equipment engineered and manufactured by GSI supports the full-site fertilizer blending process with improved capacity, efficiency and quality – the keys to increased profitability and a stronger position in a very competitive and demanding environment. Our engineered solutions - including receiving, ingredient storage, blending, load-out, and facility design and layout - are tailored to the specifications of each project. From design through manufacturing to delivery, the collaborative process ensures the highest quality products and efficient project coordination.

The industry demands forward-thinking solutions to face the challenges of rapid change, complexity, and competition. GSI's in-house team of professionals, including degreed mechanical and structural engineers, designs each project specifically for the customer's unique requirements not limited by a catalog of equipment or standard site layout. Our state-of-the-art manufacturing facility is packed with all the latest technology and automation. And, a dedicated project manager shepherds each piece through the manufacturing and delivery process and supports the millwright and construction efforts.

GSI works to provide an on-time and responsive design and delivery experience for our customers, beginning with an accurate quoting process. Throughout the design process, regular meetings with customers and contractors help ensure understanding and keep things moving. Equipment is delivered to the site, tagged and staged to simplify the installation process. To ease start-up, our project management team is on-site throughout installation and commissioning. And once a site is up and running, our team stands ready to assist with needed parts and maintenance.

QUOTE

PLAN & DESIGN

DELIVERY

INSTALLATION

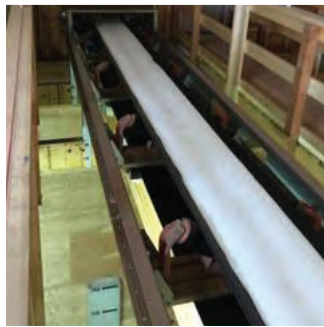
COMMISSIONING

SUPPORT





# FEATURES



## **More Product in Bins at No Extra Cost**

The fully-enclosed load-shoe of the Open Belt Conveyor allows the tail section to be positioned outside the building. The plow can be closer to the end wall for a tighter discharge point.

## **Improved Access**

The OBC's gravity take-up box can be positioned anywhere along the conveyor.



## **Cleaner Operation**

Perforated and hinged floor of Enclosed Belt Conveyor eases maintenance and cleaning.

## **Unequaled Mixing Efficiency** **8-TON DUAL SHAFT HORIZONTAL BLENDER**

Cycle times are shorter and blends remain consistent from batch to batch.

## **Strong Support**

Standard elevator support tower eliminates the use of inadequate guy wires

## **Option Rich**

Available options include: rack-and-pinion clean-out gates, magnets (receiving), shovel pockets for clean-up, and hazard-monitoring package.

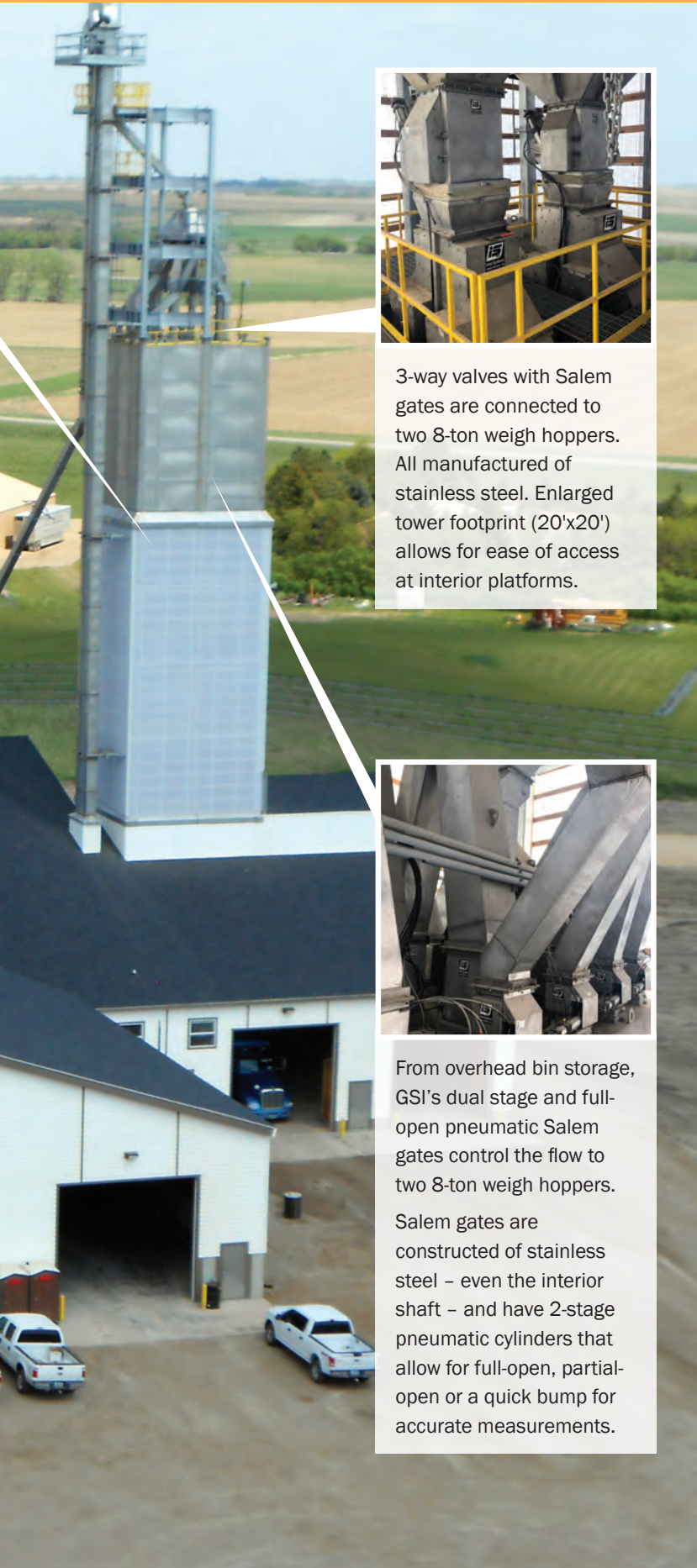
## **Customized & Quick BLEND TOWER STRUCTURE DESIGN**

GSI's patented design removes cross-bracing and promotes quick installation. The seismic and environmental variables of each site are analyzed prior to final design. Beams are hot dipped galvanized steel.





## THE DIFFERENCE IS IN THE DETAILS



3-way valves with Salem gates are connected to two 8-ton weigh hoppers. All manufactured of stainless steel. Enlarged tower footprint (20'x20') allows for ease of access at interior platforms.



From overhead bin storage, GSI's dual stage and full-open pneumatic Salem gates control the flow to two 8-ton weigh hoppers. Salem gates are constructed of stainless steel – even the interior shaft – and have 2-stage pneumatic cylinders that allow for full-open, partial-open or a quick bump for accurate measurements.



### GAME CHANGER.

#### NEW FERTILIZER PLOW WINS WITH LIGHTER, SMALLER AND MORE COST-EFFECTIVE DESIGN.

GSI's InterSystems brand has introduced a new fertilizer plow that can replace a standard tripper, is lighter, smaller and more cost-effective with no loss in capacity. And, by maintaining an even pile peak, it is 20-30 percent more efficient than a drag conveyor by eliminating the voids in the product piles between gates.

The fertilizer plow requires a smaller building head-house, offering further savings in the construction of new processing facilities.

The plow can also offer a competitive advantage by replacing fill conveyor systems in existing fertilizer plants, as was the case at the North Central Grain Cooperative in Bisbee, North Dakota.

Joe Kremer, North Central Grain's agronomy division manager, said the plow operates at 950 tons per hour, compared to 200 tons with the plant's previous drag conveyor. "It's really fast and can handle everything we throw at it," he said. "It's been a very efficient addition to our operation." Kremer noted the facility also operates a tripper conveyor housed in a new building recently added to the plant. The plow, he said, costs about one-third of the tripper, which required a much larger space and increased the cost of the expansion project by over \$300,000.

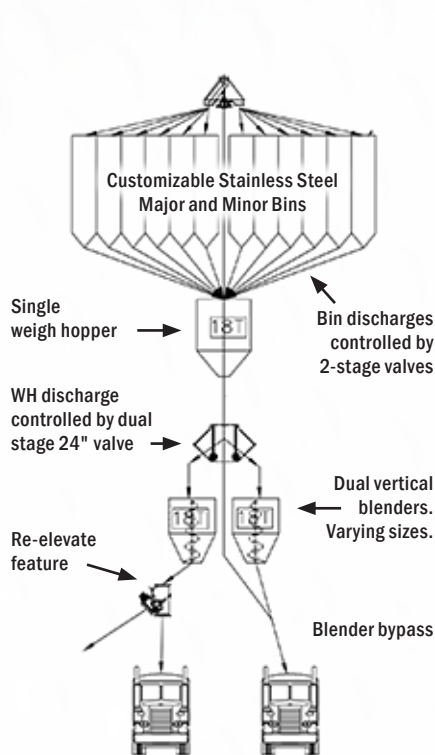
# BLENDING TOWERS

RELIABLE, FLEXIBLE, FAST, LONG-LASTING

## TRIED & TRUE

### STANDARD

#### SINGLE WEIGH HOPPER



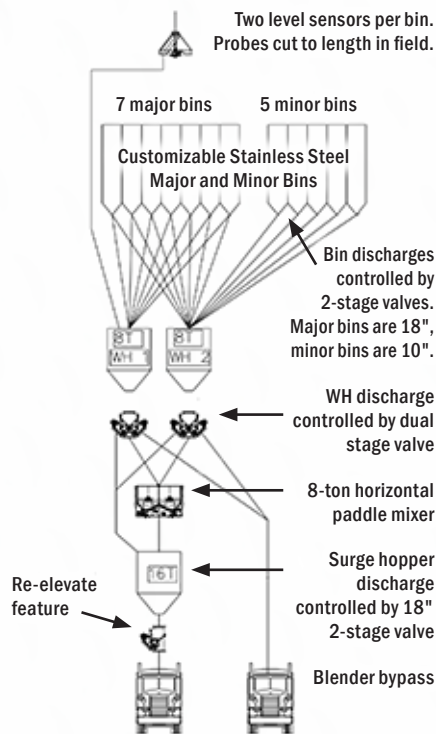
- Storage of up to 300 tons
- Up to 18-ton capacity weigh hopper
- Up to 18-ton vertical tapered auger blenders
- Largest two-stage gates in the industry
- Re-elevate
- Blender bypass
- 2nd lane wholesale spout
- Impregnation
- Galvanized support structure

## FASTER BLEND & LOAD

### RETAIL

#### DOUBLE WEIGH HOPPER

#### HORIZONTAL BLENDER

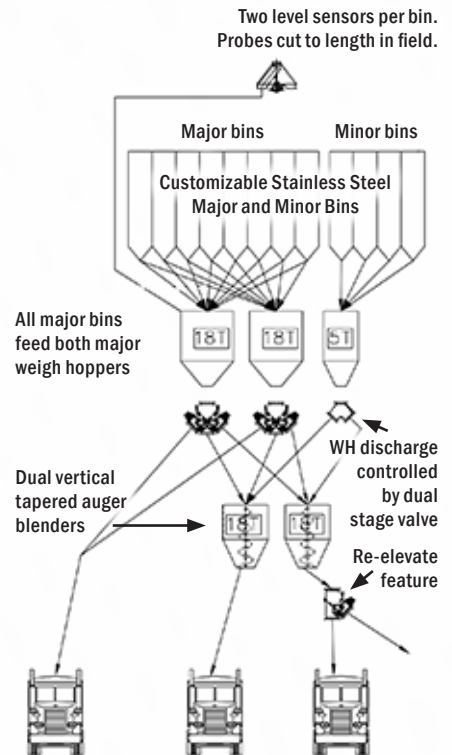


- 300 tons of storage
- Two 8-ton weigh hoppers
- 8-ton paddle and ribbon high speed, high quality, high efficiency blender
- 16-ton surge hopper
- Re-elevate
- Blender bypass
- 2nd lane wholesale
- Impregnation
- Galvanized support structure

## INDUSTRY FIRST

### HYBRID: RETAIL & WHOLESALE

#### TRIPLE WEIGH HOPPER



- 300 tons of storage
- Three weigh hopper design:
  - Two 16 or 18-ton and
  - One 5-ton for micros
- Retail and Wholesale built into one tower
- Blend and Wholesale simultaneously to two lanes without sacrificing speed
- Re-elevate
- Blender bypass
- Impregnation
- Galvanized support structure



GSI's InterSystems bulk material handling equipment offers the capacity and speed requirements needed to keep material flowing. Each piece is engineered to the exact specifications of the site's unique geographical and commodity needs.



## INTERSYSTEMS BUCKET ELEVATOR

Our proven design and manufacturing process means your bucket elevator will run smoothly and operate quietly. Our elevators have a capacity range of 10,000 to 80,000 BPH with available pulley sizes up to 60". We ship unitized trunking sections to ensure straight and plumb stacking with less construction in the field. Standard features include rack and pinion clean-out gates, magnets (receiving), shovel pockets for clean-up and can accommodate a complete hazard monitoring package.



## INTERSYSTEMS EN-MASSE CONVEYOR

The best value in the industry, the InterSystems drag conveyor popularized a bolted-box design which eases the replacement of liners. Includes features such as slack chain and choke switches, speed-to-length ratio chain calculations, and specific chain working load calculations – all developed to ensure precise applications. Roller chains (precision-built with press-fit joints) are used for higher strength and longer life. Our higher capacity 26/33 Series has a much stronger, reinforced head design with a 90° rotated bearing mount, facilitating the application of bigger drive components.



## INTERSYSTEMS ENCLOSED BELT CONVEYOR

Meet the demands for higher capacity (up to 125,000 BPH) requirements, longer lengths and more efficient horsepower. Maintenance and inspection are more convenient with InterSystems' two-piece conveyor head design and the tail pulley diameters are typically larger than the competition's. Our established formula for calculating belt tension promotes longer belt life and reduced maintenance costs, and skirting included on all loaders helps center the feed and keep material on the belt.



## ENGINEER-TO-ORDER

### GSI QUICKBOLT™ TOWER & CATWALK

#### TOWERS

- Standard footprint options  
– custom upon request
- Height to request

#### PLATFORMS

- Customizable platform
- Elevation to request

#### STAIRS

- Standard – multiple styles  
(expanded metal & bar grating)
- Height to request

#### CATWALKS

- Standard models  
– custom upon request
- Standard widths  
– custom upon request
- Length to request
- Walkarounds to request
- Standard 2' walkway,  
full width grating, bar grating
- Mitered & angled ends available
- Custom openings available

## CONVEYING, BLENDING, CONDITIONING & APPLICATION

Complete your dry crop nutrient operations with Willmar application products. GSI manufactures pull spreaders and mounted tenders known for reliability, accurate spread patterns, versatility and overall quality.



## WILLMAR SPREADERS: AGILE, DURABLE AND EASY TO OPERATE

Willmar spreaders feature corrosion-resistant phenolic flooring, a two-speed conveyor belt, a multi-leaf, spring suspension system to reduce bounce and your choice of single- or dual-spinner configurations. Stainless steel components include hopper, conveyor drive chain, and ground drive chain. All models equipped with mechanical engage/disengage with rope control from driver's seat.



## WILLMAR TENDERS: HIGH CAPACITY, EFFICIENT LOADING

The right tender makes all the difference when moving tons of material. Willmar 16- and 24-ton side-shooting tenders are truck or trailer-mounted and move up to two tons per minute. Truck-mounted rear discharge tenders are ideal for commercial fertilizer dealers, custom applicators and large farming operations.



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designs and specifications without notice.

**GS-300 JUNE 2018**