



***SurePoint***  
Application Systems  
**SALES GUIDE**



866-626-3670

[www.SurePointAg.com](http://www.SurePointAg.com)

#SurePointAg





# Application Systems

## Industry Experts in Application & Control

SurePoint Ag is the industry expert in designing an application system that meets the needs of your farm. SurePoint has over 15 years of experience in liquid application. Let us put that expertise to work for your farm! Getting to the field with a system that works seamlessly requires understanding all the variables:

- Implement model and size
- Fertilizer products being used
- Application rates and speeds
- How to integrate with your in-cab technology

SurePoint starts by understanding your variables. We have a range of solutions from simple and basic, to the most advanced systems providing individual rate control of each row.



■ **Planting**

■ **Seeding**

■ **Transplanting**

■ **Side Dressing**

# APPLICATION SOLUTIONS for All Types of Farm Implements

Row crops, small grains, potatoes, and all types of specialty crops. SurePoint Ag has solutions for all types of farming.



## ROW CROP PLANTERS



## AIR SEEDERS & DRILLS



## POTATO PLANTERS & MARKERS



## STRIP TILL



## NH3 & SIDE DRESS APPLICATORS



## SPECIALTY CROP EQUIPMENT



# SYSTEM TYPES & CATEGORIES

## Determining What's Best for Your Farm.

We can help you determine which type of system is best for your farm, taking into consideration all the appropriate factors. Each of our systems incorporates elements from these three categories.

1

### FLOW RATE REQUIRED

Applying 3 GPA in-furrow requires a different approach than applying 25 GPA. SurePoint Ag has solutions for the application needs of your farm.

#### CATEGORIES:

##### Micro Volume Application

Less than 2 GPM

##### Standard Volume Application

2 GPM - 40 GPM

##### High Volume Application

Greater than 40 GPM

### WE ALSO DO DUAL-PRODUCT APPLICATION

Need more than one product? Many times reaching new yield thresholds requires using multiple products, applied at different rates, in different locations, or at different depths. SurePoint can make that happen!

2

### INTEGRATING WITH IN-CAB TECHNOLOGY

Seamless integration with the technology in your cab. SurePoint systems are compatible with most rate control platforms. We provide harnesses specifically designed to plug into your platform and simple "QuickStart Instructions" to get your system running with ease.

### COMPATIBILITY YOU CAN TRUST



See [www.surepointag.com](http://www.surepointag.com) for complete compatibility list.

3

### DISTRIBUTION SYSTEM

SurePoint Application Systems are equipped with one of these three manifold and distribution systems, based on your needs:

#### Dual Metering Tube

Simple, reliable and lowest cost. Each application row is equipped with a dual check valve body connected to two Metering Tubes. Use on/off valve to utilize the small tube, the large tube, or both tubes together.

#### LIQUISHIFT<sup>®</sup> GEN3

SurePoint's most popular system, LiquiShift utilizes two Metering Tubes and provides the technology to automatically shift between tubes to maintain an optimal system pressure. Compatible with most rate control platforms, the Gen3 LiquiShift utilizes Zip Valve on each row, providing positive shut-off and eliminating check valves.

#### SENTINEL

##### Row Control

SurePoint's newest advancement in application systems. Control the application rate of each row using Sentinel Row Control. Using the Sentinel E-Mag flow meter module, accurately and reliably measure and control flow to each row.



# COMPONENTS of Liquid Application Systems

Application Systems consist of components from six categories.



## 1. PUMPS

Whether your operation calls for a low-volume Tower™ or a PumpRight™, the pumping system will arrive completely assembled, including the flow meter, ready to be mounted on your implement. Model-specific brackets are available to make mounting fast and easy.



## 2. E-MAG FLOW METER TECHNOLOGY

SurePoint Ag pioneered the use of electromagnetic flow meters in liquid application systems nearly twenty years ago. The SurePoint E-Mag meter has no moving parts, which eliminates common failures of most mechanical flow meters. Less downtime means more productivity!



## 3. DISTRIBUTION SYSTEM

Between the pump and the placement device is the distribution system. Three distribution systems options are Dual Metering Tube, LiquiShift™ (Gen3) or Sentinel™ Row Control. Distribution system includes either Sentinel™ Row Monitor or floating ball flow indicators.



## 4. PLACEMENT

Differences in soil conditions with geography and farming practices result in many considerations when selecting the best placement method on your implement. A SurePoint system can be configured to include placement method or to connect to your desired placement device.



## 5. HARNESSING

Systems include harnessing to connect all components to the rate control platform you are using. SurePoint Electronics, a division of SurePoint Ag, manufactures all our wiring harnesses for maximum reliability. All harnesses are computer tested to ensure correct operation.

## 6. TANKS

Planter mounted tank kits are available for many makes and models of planters, seeders, and applicators. We will work with you to select the right size and style of tank to keep you moving forward with as much productivity as possible!



# UNDERSTANDING LIQUIDS & Components That Work to Apply Them

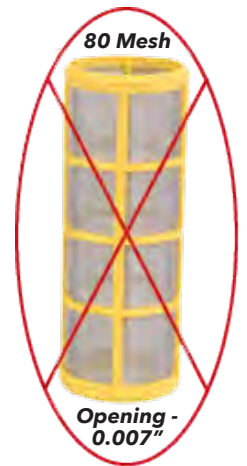
Not all fertilizers are created equal. And not all systems can keep up with all the different types of fertilizers out there. SurePoint has dedicated nearly two decades creating unmatched knowledge and expertise on the components that successfully apply them.



Application technologies from competitors require 80 or 100 mesh strainers to ensure small passages and moving parts of the system function correctly.

## 20 Mesh. *That's All You Need.*

LiquiShift, Metering Tube, and Sentinel only require 20 Mesh Strainer. 20 Mesh screen has 385% larger passageway size & 48% more open area than an 80 Mesh screen.



## OUR PROMISE TO PRODUCERS

As our team develops new and industry leading technology now and in the future, the ability to successfully work with all types of fertilizer is a requirement. We promise our customers that SurePoint application systems are the most reliable and accurate systems on the market today!





# Dual Metering Tube

## Accurate and Hassle Free

Never change or clean an orifice again! Simple, reliable, and lowest cost. Each application row is equipped with a dual check valve body connected to two metering tubes. Use the on/off valve to utilize the small tube, the large tube, or both tubes together.



## Eliminate Plugged Orifices & Maximize Application Range

Metering Tube is used in place of a traditional orifice to provide even distribution to each row. In a typical in-furrow application scenario, a 0.030" orifice is replaced with an 8' length of metering tube having a passageway of 0.096". Metering Tube eliminates the problem of plugged orifices and the need to run small strainers to keep small mechanical components and orifices from plugging.



## Row-to-Row Accuracy, Second-to-None

During planting in 2018, SurePoint Ag studied the row-to-row accuracy of LiquiShift™ combined with Metering Tube, planting 3,000 acres of corn with a 24-row, 30" planter. The farmer prescription applied from 10-40 GPA. Analyzing over 50,000 data points logged by the Sentinel™ Liquid Row Monitor shows that the Row-to-Row CV (coefficient of variance) is less than 4.6%, 95% of the time. The average CV is just 3.9%.



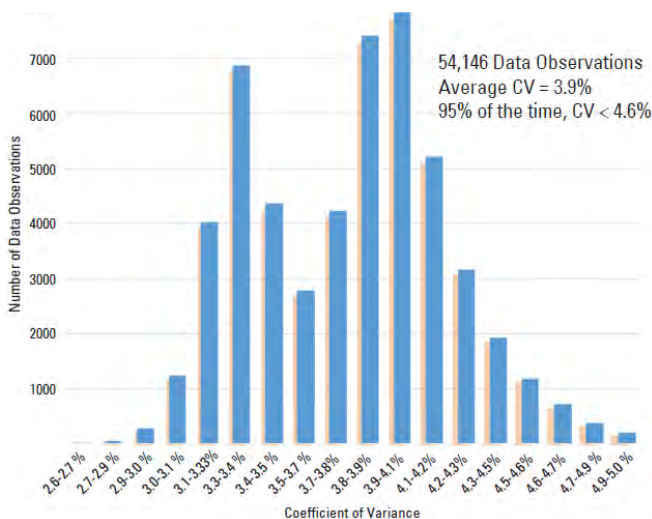
This large-scale on-farm test confirms the reason metering tube is the most accurate system available on the market.

## Split Band Application

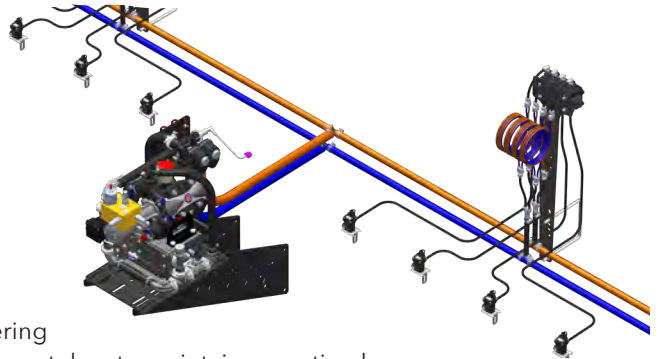
When utilizing split band placement, use metering tube to create equal split to each side of the row.



### Coefficient of Variance for Row-to-Row Accuracy



## DISTRIBUTION SYSTEM

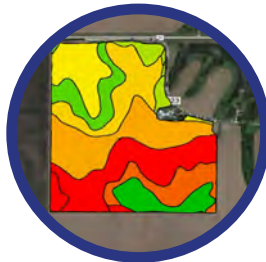


SurePoint's most popular system. LiquiShift™ utilizes two Metering Tubes and provides the technology to automatically shift between tubes to maintain an optimal system pressure. Compatible with most rate control platforms. The third generation of LiquiShift™ (released 2021) utilizes "Zip" valve on each row, providing positive shut-off and eliminating check valves.



### High Speed Planters

Faster application and/or planting speeds require larger flow ranges. LiquiShift™ is ideal for high speed planters, liquid applicators and sidedress machines where you need to work at speeds of 8-10 MPH or greater, with greater flow rates.



### Prescription Application

Achieve your objectives without limitations. With 6-8 times flow capacity, your agronomist is in the driver's seat. Whether the analysis calls for 8 GPA or 45 GPA, LiquiShift™ makes that possible. No longer will you be forced to over-apply!



### Field-to-Field Rate Changes

Never change another orifice. Simply set the rate in your controller, and LiquiShift™ utilizes Dual Metering Tube to automatically switch between tubes, allowing you to achieve uniform row-to-row accuracy with dramatic rate changes from field to field.

### Key Features of LiquiShift™ Gen3:

- Simplified Plumbing
- ZIP Valve at Each Row
- Eliminate Spring Diaphragm Check Valves
- Positive Shut-off of Each Row
- Even Greater Row-to-Row Accuracy

Check Out Our Video to Learn More!





DISTRIBUTION SYSTEM

# SENTINEL

## Row Control

Utilizing the Sentinel E-mag Flow Meter Module, Sentinel Row Control accurately and reliably measures flow to each row and uses the Row Control valve to achieve the desired application rate on an individual row resolution.



## The MOST ADVANCED version of our distribution systems.

Row Control delivers the greatest amount of application flexibility (rate, speed and product) and with simplified plumbing on the implement.



## Achieve Different Ranges of Application Rates

Row Control distribution system provides ability to achieve wide range of application rate, speed, row spacing and fertilizer products.



Row Control valve adjusts the flow to each individual row.







# SENTINEL

SurePoint's Sentinel™ family of products offer the most advanced features for precision application of crop inputs.

## Liquid Application with UNMATCHED RELIABILITY

Sentinel™ is built on a single ECU platform that provides multiple features depending on the harnessing and components connected. Sentinel™ Row Monitor has been adopted by farmers and applicators starting in 2016. Sentinel™ Rate Control was released in 2020 and Sentinel™ Row Control in 2021.



### SENTINEL™ ROW MONITOR

Instant in-cab notifications of flow variances and row blockages. Sentinel™ utilizes electromagnetic flow meter technology to measure the flow going to each row.



### SENTINEL™ RATE CONTROL

Sentinel Rate Control is compatible with most ISOBUS displays. It uses the same ECU as Sentinel™ Row Monitor, allowing you to get two features out of the same hardware.



Hear What Our Customers Have to Say!



### AS APPLIED MAPPING OF EACH ROW

Map the as-applied rate of each row or section from the Sentinel™ Row Monitor with John Deere's Gen 4 and Gen 5 Displays or Climate FieldView.





## PUMP & FLOW METER

**Pump Option #1: PumpRight™** is a variable speed hydraulic drive diaphragm pump ideally suited for planter fertilizer applications. Positive displacement pump provides suction from any tank location. Run dry protection eliminates worries of pump and seal damage. Use for flow requirements from 2-80 GPM.

**Pump Option #2: Tower™** is a 12-volt electric pump system. This smaller system is ideal for 30' and narrower planters with flow requirements of less than 5 GPM.

**E-Mag Flow Meter:** SurePoint's E-mag flow meters have no moving parts, which eliminates the common failures of most mechanical flow meters.

**PUMPRIGHT**  
HYDRAULIC DRIVE DIAPHRAGM PUMPS

**THE TOWER**  
12V ELECTRIC PUMP SYSTEM

## TANK OPTIONS

- Utilize Factory Options
- SurePoint Install Options
- Connections to Tractor or Pull-Cart Tank(s)



## FLOW MONITORING

**SENTINEL**

### Liquid Row Monitor.

Sentinel™ offers instant in-cab notification of blockages or flow variations. Measure every row with SurePoint's E-Mag flow meter technology.

### Flow Indicators.

Traditional floating ball flow indicators provide visual indications of blockages and flow variations.

## PLACEMENT OPTIONS

### In Furrow

- Keeton
- Rebounder
- Stainless Steel Tube
- Dealer Installed Options

### Beside the Row

- Fertilizer Opener
- Stainless Tube Behind Closing Wheels
- Dealer Installed Options

## DISTRIBUTION SYSTEM

**Dual Metering Tube**

**LIQUISHIFT**

Variable Rate Technology

**SENTINEL**  
ROW CONTROL

## FAMOUS for Innovation. Customized for Your Unique Needs.

- Planter Model & Size
- Fertilizer Products
- Application Rate & Speed
- Integrated with Your In-Cab Technology

### Our Customers Say:

"The liquid systems work well with no issues. Accuracy is very good, both in total gallons applied per acre and row-to-row consistency. We have planted a little over 4,000 acres without plugging a single row, which far exceeded my expectations."

- Kriss S.



# Pumps

Pump and flow meter system, factory assembled for easy installation. Select the right pump for your operation's unique needs.

## **PUMPRIGHT** HYDRAULIC DRIVE DIAPHRAGM PUMPS

- Diaphragm pump with variable speed hydraulic drive that adjusts pump speed to achieve correct flow rate.
- Ideal pumping system for applications from 2 GPM to 80 GPM

### Key Features:

- Self Priming - Pull liquid from tractor or cart mounted tanks.
- Positive Displacement - Consistent output per pump revolution.
- No Moving Parts - Equipped with E-Mag flow meter with no mechanical / moving parts.
- BLUEFLEX Diaphragm System - The BLUEFLEX material, curved shape, and diaphragm thickness have been designed and tested to achieve optimal performance, durability, and working life.

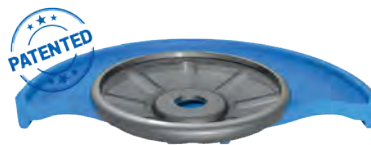


MODEL	MAX GPM
PR17	17
PR30	30
PR40	40
D250	55
PR80	80



## **THE TOWER** 12V ELECTRIC PUMP SYSTEM

Economical pumping system for applications that require 5 GPM or less.



### Key Features:

- 12-Volt Electric Diaphragm pump(s)
- Electric Pump Driver (EPD) module adjusts pump's speed to achieve correct flow rate.
- Equipped with SurePoint E-Mag flow meter with no mechanical / moving parts.
- Factory assembled; Simply connect harness, inlet and outlet plumbing.





# SENTINEL NH<sub>3</sub>

ANHYDROUS ROW MONITOR



## SENTINEL™ RATE CONTROL

SurePoint's ISOBUS Rate Control module is compatible with most ISOBUS displays. This technology is the result of 15 years of rate control experience, brings a unique, intuitive user experience.

Use our *new* setup wizard to preload Surepoint Torepdo in your system settings!



**Row Monitor & Rate Control with a Single ISOBUS ECU!**

## SENTINEL™ ROW MONITOR

Instant in-cab notifications of flow variances and row blockages. Sentinel™ utilizes temperature sensors to ensure that NH<sub>3</sub> is going to each row.

- Row Blockage Mapping
- In-line Sensors Monitor Every Manifold Outlet
- Ensure Accurate Row-to-Row Application
- Detects Full or Partial Plugs
- Works with Most Rate Control Systems
- Add to Most Anhydrous Systems
- Sentinel™ Row Monitor Can Be Connected to the Sentinel Rate Control ECU.





# TORPEDO™

Precision NH3 Application



## High Capacity Torpedo™ Application Systems

The **Torpedo™ Cooler** is the central piece of the SurePoint Anhydrous Ammonia application system. It is a high capacity, extremely accurate, efficient heat exchanger.

### Key Features:

- All Stainless Construction
- Precision Flow Control Valve - 120 Degrees of Control
- 1.5" Flow Meter
- Adjustable Vapor Return Orifice
- Rated at 75 GPM at 100 PSI or 55 GPM at 50 PSI (Tank Pressure)

**Complete Torpedo™ Application Systems** couple the cooler with all plumbing and distribution components to get anhydrous from the tank to the shank.

### Distribution System Components & Options

- Section Valves
- A - 360 or Vertical Dam Manifolds
- Mixing Chambers for Injection Manifolds

## Inlet Plumbing Kits

**System capacities** are determined by the cooler inlet plumbing and tank pressure.

### 100 SYSTEM

- Single 1.25" Inlet Hose and Break Away.
- Rated at 31 GPM at 100 PSI Tank Pressure.

### 250 SYSTEM

- Dual 1.25" Inlet Hose and Break Away.
- Rated at 47 GPM at 100 PSI Tank Pressure.

### 200 SYSTEM

- Single 1.5" Inlet Hose and Break Away.
- Rated at 47 GPM at 100 PSI Tank Pressure.

### 300 SYSTEM

- Dual 1.5" Inlet Hose and Break Away.
- Rated at 70 GPM at 100 PSI Tank Pressure.

*Maximum capacity ratings are temperature dependent. Listed rates are at 64°F.*





# DIRECT INJECTION Application Systems

Specialized pumping and distribution systems for micro-volume application. Spartan™ and Catalyst™ are engineered solutions for nutrient stabilizers and managers, insecticides, fungicides, and other products applied at less than 1 gallon per acre.



Spartan™ provides direct injection of liquid chemical, fertilizer, biological, or other product into carrier flow stream.

#### Uses include:

- Microbial Treatments such as PIVOT BIO PROVEN
- Variable Rate Application of Micro Nutrients
- Nutrient Stabilizers for Anhydrous Ammonia
- In-furrow Insecticide, Fungicide or Plant Growth Regulators

Injected product is introduced to carrier flow before the mixing chamber to ensure complete mixing prior to distribution to placement device of planter or applicator.



#### SPARTAN™ COMPLETE WITH TANK SKID

- Pump Only, Using Your Existing Tank
- 20 Gallon
- 55 Gallon
- 110 Gallon



The SurePoint Spartan™ is the most accurate injection pump in the market today. This accuracy helps eliminate waste and helps enhance more environment-friendly practices. Injection allows us to get away from tank mixing so we can adjust the concentration throughout the field.

#### FOUR MODELS TO FIT YOUR APPLICATION NEEDS

- 115 - 1 to 10 oz/min
- 125 - 3 to 20 oz/min
- 135 - 6 to 40 oz/min
- 145 - 10 to 80 oz/min

*Integrates with your desired control platform.*





# Planter Mounted Tanks

Planter mounted tanks for the most common makes and models of planters. Our team of engineers have developed tank mounting solutions for a wide variety of implements.



See Available Tanks On Our Website

## WIRELESS VALVE CONTROL

Makes filling and utilizing multiple tanks easy and convenient. Link one remote to 1 or 2 controllers to open and close up to 8 valves from up to 100' away.



1. Mount the Wireless Valve Control box in a central location on the implement or tractor. Connect up to four electric valves (standard 3-pin weather pack connection).
2. Use the remote to open or close the valves from anywhere in range (approximately 100') of the implement.





# Application Systems for Air Seeders & Drills

SurePoint's very first application systems were configured for Air Seeders as a result of our roots in the High Plains winter wheat region.



## Select The Distribution System That Fits Your Application Needs



The smaller the orifice the more likely to plug. The impact of Metering Tube on the narrow row spacing of seeders and drills is a game changer. Use of micro nutrients, biologicals and other products can be more likely to plug small orifices.

## Expanded Section Control Capability

Utilize Sentinel ISOBUS Rate Control and CANBUS section valves for expanded section control capability. Also allows for flexible mounting of rate controller near ISOBUS connection point.

- Dual and Multiple product systems are available.
- Use SurePoint Spartan system for direct injection applications.
- Configure to connect to existing placement method or inquire about placement options.

*Tank kits available for many makes and models.*



PumpRight provides flexibility to mount pump in desired location and pull from multiple tank locations (e.g. tractor tanks and pull behind trailer)







# **GFX** Hydraulic Row Cleaners

**Framed Mounted - ISOBUS Control**



## **Isobus Control**

**New in 2024:** GFX Row Cleaners use the Reflex ISOBUS Platform to control via the cab display.

## **Robust Hydraulic Control**

The GFX is a floating arm row cleaner that allows you to control how hard it is pushing on the ground. It has hydraulic down pressure and spring uplift. When hydraulic pressure is removed the unit lifts itself out of the ground.

## **Trailing Arm Design**

Trailing arm plus patented hydraulic accumulators greatly reduce vibration and load spikes allowing the row cleaner to stay engaged with the soil resulting in better row cleaning.

## **Frame Mounted**

Toolbar mounting isolates row cleaner movements from the row unit allowing for more consistent seed placement.

## **Depth Control**

The majority of GFX users configure the system with the depth gauging bands installed on the row cleaner wheels. However with GFX they aren't strictly necessary. The spring that counter balances the weight of the row cleaner, combined with the trailing arm design, allow the GFX to be run with just the trash wheels.

This can be very advantageous in many No-Till conditions where the thickness of the mat of residue in the field is deeper than the distance from the depth band edge to the tooth of the wheel. In these situations, even if you are pushing very hard on the ground, the depth band can prevent it from getting in deep enough to move the residue.





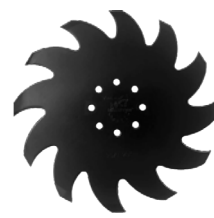


## Wheel Options

Trash wheels move residue away from the row unit allowing the planter disc wheels to run through a clean pathway of soil.



Scissor Wheel



SharkTooth® Wheel



14 Inch Trash Wheels



12.75 Inch Trash  
Wheels



SharkTooth®  
Bevel Wheel



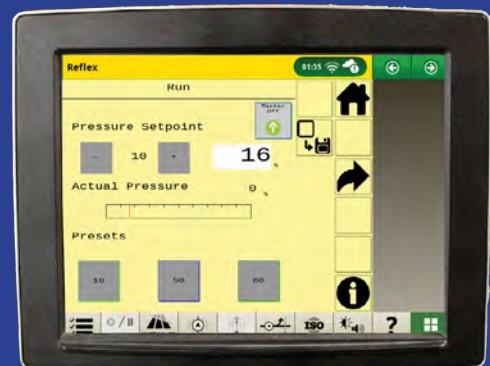
SharkTooth®  
Finger Wheel



SharkTooth® Universal  
Mount Wheel

## Reflex ISOBUS Control Platform

GFX Row Cleaners use the Reflex ISOBUS platform to control via the cab display. Position presets allow for quickly and consistently achieving desired row cleaner performance.



# Closing Wheels

Closing wheels are an important investment and serve two important purposes: closing the furrow and firming the soil around the seed, both of which help to ensure germination. Choose the wheel that maximizes performance in your planting conditions.

## M-Series Closing Wheel System

### Curvetine®

Most aggressive to break sidewall compaction. Unlike straight toothed wheels, the curved finger design eases out of the seed zone while providing consistent seed-to-soil contact for uniform emergence.



### Gaugetine

Combines the sidewall crumbling action of Curvetine® with shoulder to limit how deep the wheel penetrates the soil.



### Furrowflex

Custom designed rubber profile is flexible to deform and shed sticky soil. Achieves performance of rubber closing wheels with the heavy duty M-Series hub and bearings.



### Iron-M

Cast iron wheel for use on M-Series hub.



### M-Series Hub

M-Series Closing Wheel System allows you to quickly change closing wheels using the best wheel for the specific field conditions. The heavy duty M-Series hub is forged and uses two tapered roller bearings. Once hub is mounted and aligned to v-stle tail piece, wheels are changed in 2 minutes or less per row.

### Or a Combination...

Combine two different wheel types for desired field performance.



### Gaugetine for Air Seeders

Gaugetine wheel configured for use on airseeders. Breaks down sidewall compaction.



### Gauge Ring

Cast Iron ring insert used with existing hub, bearing and rims. Increased durability and wear-life compared with plastic options.



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