Precision Fertilizer Spreaders

AXIS®
30.2 - 40.2 - 50.2

www.KuhnNorthAmerica.com

Invest in Quality®

UNEQUALED SPREADING PRECISION!

REDUCED COSTS, INCREASED YIELDS

Controlling your application rate helps you maximize crop yield while minimizing your expenses. Kuhn's CDA distribution system is the key for adapting to different needs and optimizing your yield under all possible circumstances.

SIMPLE ADJUSTMENTS

Ensuring even spreading can be complicated. Kuhn provides electronic solutions to simplify and automate this process. Our focus is on easy adjustments to save you time and avoid errors.

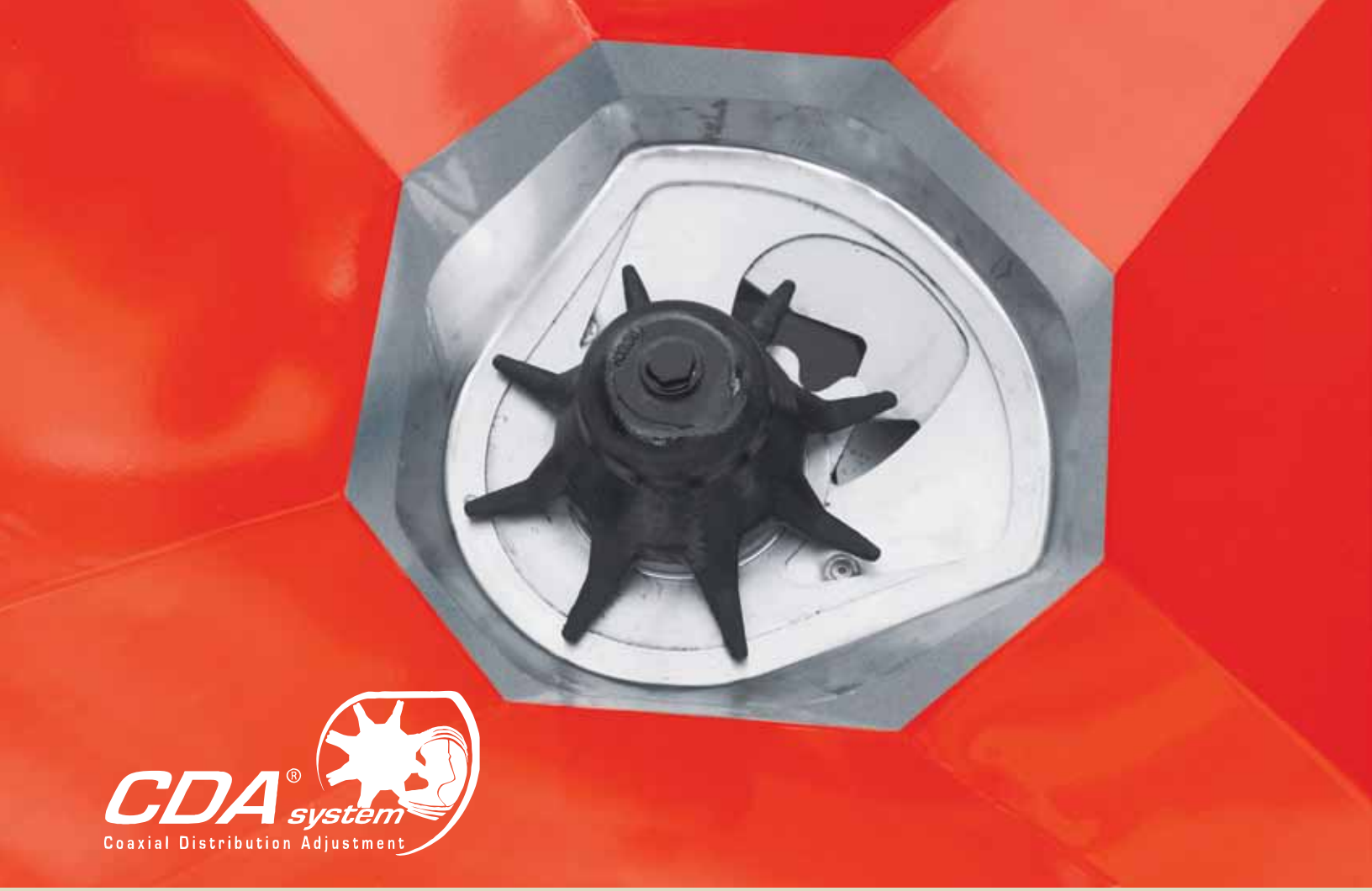
MAXIMUM EFFICIENCY

Unique Kuhn solutions provide absolute spreading precision: CDA distribution, GPS control, Kuhn's weighing system and EMC technology for automatic adaptation of the application rate during spreading are unrivaled in the industry.

PRECISION FERTILIZER SPREADERS

Axis®
in brief

Models	Working Width	Min / Max Capacity	Control Terminal
Axis 30.2 Q	39′ – 138′	49 – 112 ft.³	Quantron A
Axis 40.2 H-EMC	59′ – 138′	112 ft.³	ISOBUS
Axis 40.2 H-EMC-W	59′ – 138′	112 ft.³	ISOBUS
Axis 50.2 W	59' – 164'	148 ft.³	ISOBUS
Axis 50.2 H-EMC-W	59′ – 164′	148 ft.³	ISOBUS



SIMPLE AND PRECISE

COMPLETE FLEXIBILITY OF APPLICATION

Different fertilizers, variable application rates, multiple working widths – your fertilizer spreader must quickly adapt to different needs. The Coaxial Distribution Adjustment (CDA) system, part of every Axis spreader, helps meet these challenges while providing ultra-easy adjustments.

CONSISTENT SPREADING

It is critical to ensure even spreading across the entire working width even when changing the application rate, working width or ground speed. The CDA system provides the solution to ensure optimum distribution patterns.

COMMON FERTILIZERS AND SEEDS

UREA | KMg | AMMONIUM SULFATE | CAN | NPK | PK | FINE SEEDS

EXCLUSIVE

CDA: UNRIVALED ACCURACY

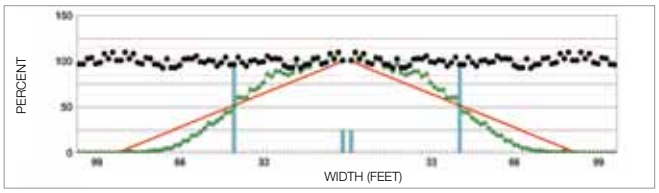
There are two important features that make the CDA system unique:

1. The pivoting hopper base enables quick adaptation to various fertilizers and working widths by adjusting the drop point of the fertilizer onto the spreading discs.
2. Specially designed metering outlets close to the center of the discs allow multiple supply points to the paddles. This helps ensure constant fertilizer flow and an even spread pattern.

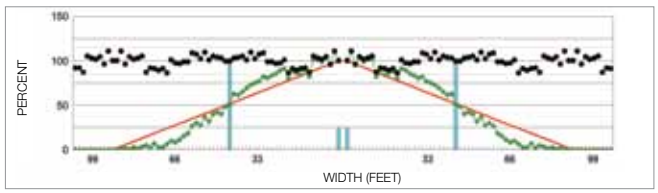
VARYING APPLICATION RATES HAVE NO INFLUENCE

With the CDA system, triangular distribution patterns are consistent and precise with large overlap areas and variation coefficients are unbearably low. This equates to precision of around 93–95% depending on material. Different application rates or travel speeds have no negative effect on fertilizer distribution.

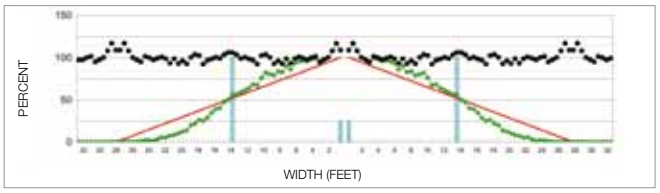
CV: A measure of frequency distribution or relative precision



Application Rate: 135 lbs/acre
Coefficient of Variation (CV): 6.76%



Application Rate: 310 lbs/acre
Coefficient of Variation (CV): 4.46%



Application Rate: 1025 lbs/acre
Coefficient of Variation (CV): 5.39%

EXTRA-SLOW AGITATOR

The agitator regulates the supply and promotes fertilizer flow. Rotating at only 17 RPM, it handles the granules gently to significantly reduce damage and prevent powder formation.

MORE ACCURACY WITH DROP GUIDE

To ensure an accurate drop point of the fertilizer on the disc, a brush drop guide follows the fertilizer flow until it is caught by the paddles.

PATENTED

REDUCED TURBULENCE

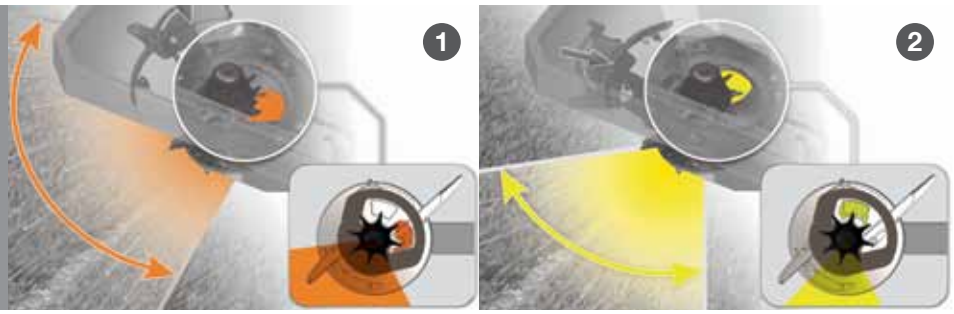
Airfin deflectors reduce turbulence generated by the rotating discs to ensure even fertilizer flow.

SET THE WORKING WIDTH WITH JUST ONE CLICK!

You can modify the working width in a few seconds by simply changing the drop point of the fertilizer onto the disc. This is done without any tools by pivoting the base – manually on Axis 30.2, and from the cab on Axis 40.2 H-EMC models and all 50.2 models. No paddles have to be adjusted and no manual contact with the fertilizer is required.

ROTATION OF HOPPER BASE AROUND CENTER OF DISCS

1. Position for wider working width
2. Position for narrower working width

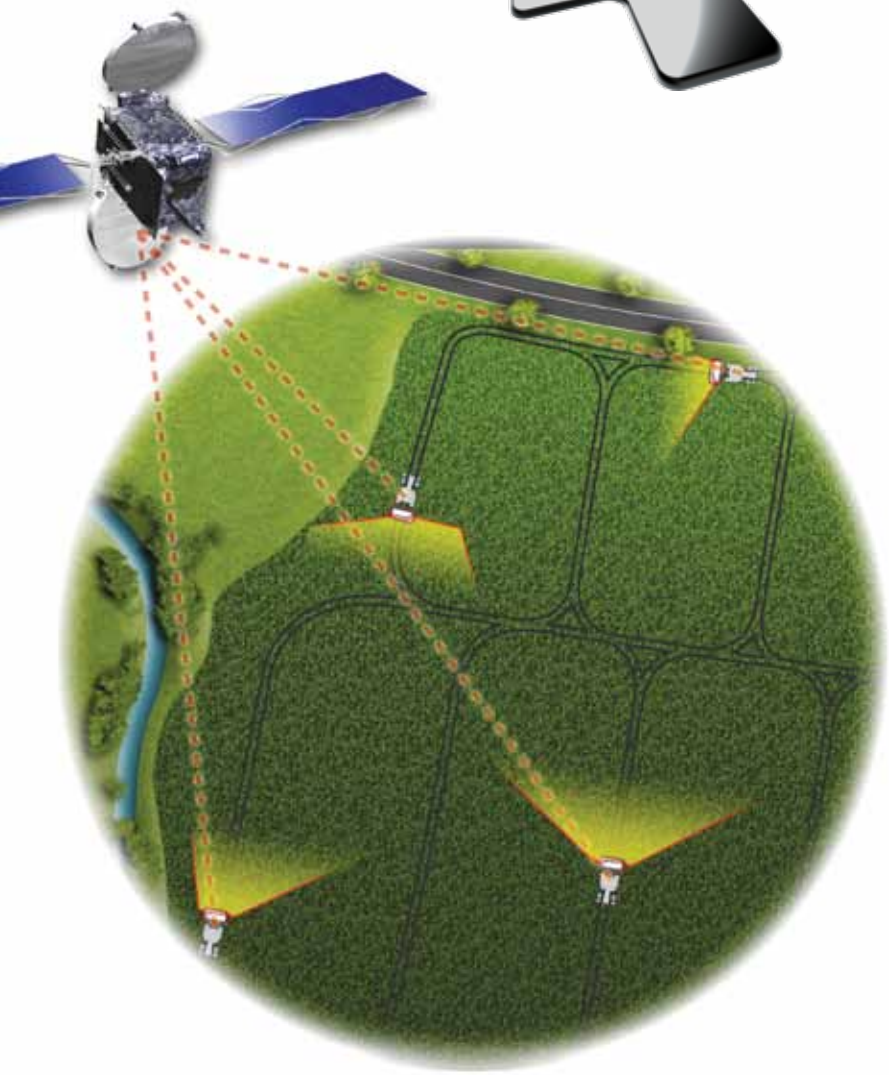


SPREAD UP TO 1,100 POUNDS PER MINUTE!

Axis spreaders have been designed for very precise work at high speeds. Small application rates from 2.7 pounds per acre up to an impressive 446 pounds per acre with high precision are possible. With the input from a speed sensor, Axis machines will automatically compensate for varying speeds so the application rate remains consistent. This clears the way for considerable cost reduction and increased daily outputs.

KUHN Electronics

INNOVATIVE FARMING



THE INTELLIGENT FERTILIZER SPREADER

Kuhn electronic solutions for Axis® fertilizer spreaders, both ISOBUS and non-ISOBUS, make use of proven technology to increase spreading accuracy as well as driver comfort. Don't wait to discover the future of farming.

QUANTRON A

YOUR SPREADING ASSISTANTS

Quantron virtual terminals electronically adjust the metering outlets to maintain a consistent flow rate relative to your ground speed. During spreading, you are able to:

- Modify the application rate
- Switch individual sections for either side
- Simultaneously close either side with a simple button

The terminals also feature a work counter for 200 fields and integrated spreading charts.

Quantron A

ISOBUS

REDUCE THE NUMBER OF TERMINALS NEEDED

ISOBUS, the universal language, allows different equipment (tractor, machine, home computer) to communicate with each other. You can monitor and transmit information about different machines with one single terminal, the Kuhn CCI 100 or any other ISOBUS compatible terminal. This allows compatibility with all ISOBUS tractors to simplify operation.

Axis H-EMC on CCI 100

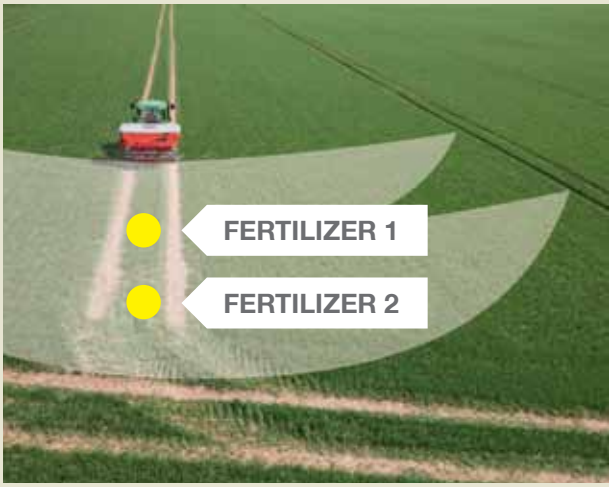
KUHN Electronics

INNOVATIVE FARMING

GPS CONTROL

Utilize your existing GPS virtual terminal in conjunction with the Kuhn-supplied Quantron or as a standalone on ISOBUS machines.* You may also purchase the CCI virtual terminal from Kuhn for ultimate plug-and-go simplicity on ISOBUS machines.

**Please contact your dealer to verify outside ISOBUS virtual terminal capabilities. Software by provider may be required for premium features.*



Opti-Point – Ideal engagement points for different fertilizer types

PRECISE WORKING WIDTH WITH GPS

Vari-Spread (Section Control) maintains the proper working width by changing:

- Drop point (50.2 W) and H-EMC models)
- Spreading disc speed (H-EMC models)

Metering outlets are opened and closed with GPS control. Even in field points Vari-Spread can shut off sections on the left and right sides at the ideal moment. The result is maximum comfort and the highest precision possible. 8 sections (except 30.2 Q models) with four on the left and four on the right can all be adjusted to minimize overspreading and save money!

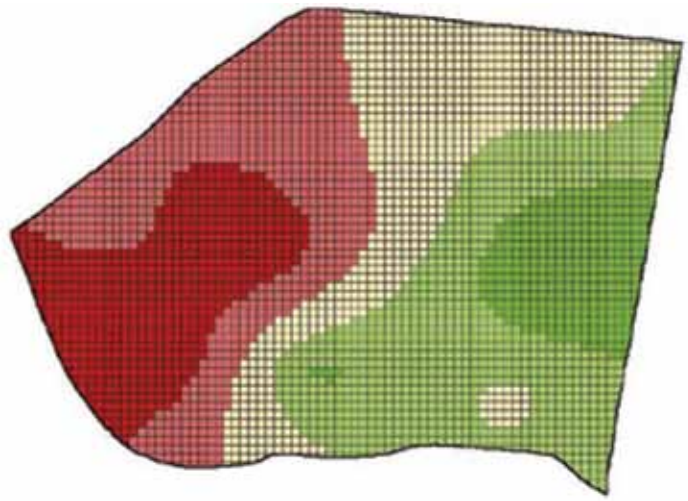
FINDING THE IDEAL POINT TO OPEN OUTLETS

On headlands most farmers typically start spreading at the same point even though each fertilizer is different. Opti-Point now automatically determines the ideal point to open and close the metering outlets according to settings made with the GPS system.

Opti-Point and Vari-Spread require ASD protocol or TUVR software on GPS virtual terminal when connecting to a Quantron machine.

ENGINEERED WITH PRECISION FARMING IN MIND

Precision farming helps optimize inputs and returns while preserving resources. The concept takes into account differences in crop development or nutrient supply within one field and relies on technologies, such as geospatial tools or N-sensors. Our goal is to maximize your benefit from these innovative tools, while maintaining a simple, user-friendly design.



COMPATIBLE FOR N-SENSORS AND GPS VARIABLE RATE ADJUSTMENT

The Quantron and ISOBUS machines are compatible with N-SENSORS to modulate the input of nitrogen. This allows you to tailor your application to your soil's potential while saving significant amounts of fertilizer. The virtual terminals are pre-equipped for information transfer to and from your home computer.
Integrate your maps into your GPS: John Deere, Trimble, Ag Leader, Raven, Topcon and more. Thanks to the RS 232 connection cable, your Axis fertilizer spreader will adjust the spread rate according to the maps controlled via GPS.

GPS terminal must use LH 5000 protocol or, VRA or TUVR software.

WEIGHING SYSTEM:
SIMPLE APPLICATION REGULATION

Two weigh cells in cooperation with the electronic terminal allow you to adapt the application rate automatically while spreading. Every second the terminal checks if the flow corresponds to the programmed rate and adjusts it for precision and control.

FLOW RATE ADJUSTMENT
EVERY SECOND!

PRINCIPLES OF USE

1. Program your work criteria – width, application rate
2. Load the fertilizer and start spreading
3. Onboard ECU automatically compares the target quantity with the actual amount of fertilizer applied 100 times per second!
4. In case of irregularities, it automatically adjusts the metering outlets every second
5. The application rate can be modified anytime with one click

OPTIMUM INTEGRATION

The unique patented design of the weighing system consists of a strong hitch frame fitted with two weigh cells that have a capacity of 10 tons each and in the upper part, a link rod connected to the machine frame.

BENEFITS OF THE COUPLING SYSTEM

1. Two weigh cells for accuracy even on steep slopes
2. No increase in the loading height
3. Two lower link coupling heights available for normal and late top spreading

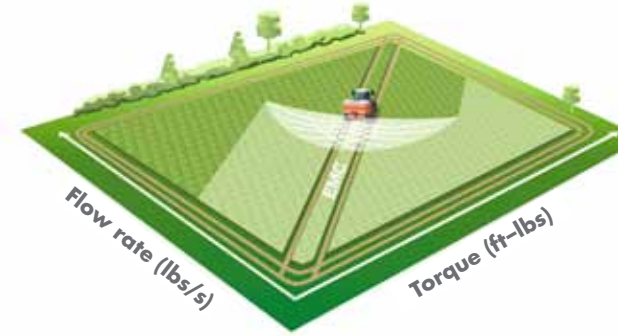
EMC: INDEPENDENT DISC BY DISC

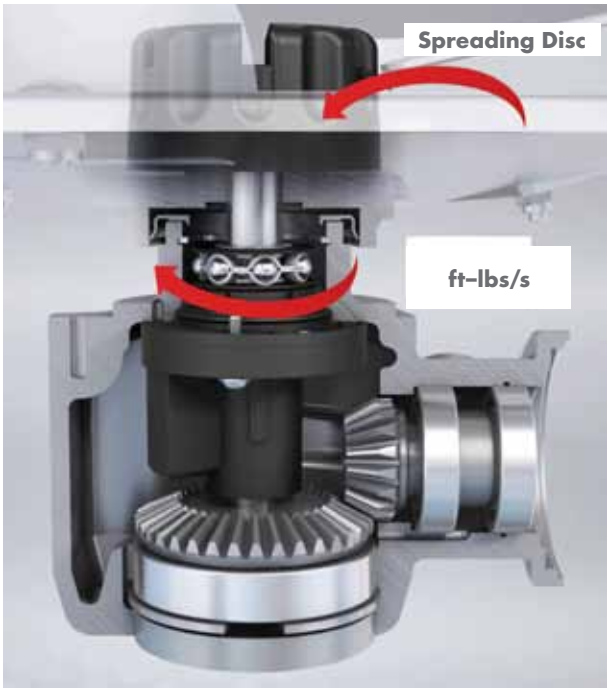
Electronic Mass Flow Control (EMC) is a unique technology, well-established and proven after years of experience. It measures and continuously adjusts the application rate on each disc separately for all hydraulically driven Axis models for those seeking complete flexibility and ultimate precision. The .2 series incorporates a new simpler torque measurement system that provides instant calibration.

NO METERING COMPROMISES

Pressure differences at the hydraulic disc motors are proportional to the fertilizer flow rate at its metering outlets. This is independent of the type or size of fertilizer. The EMC system uses this information and carries out the following steps:

1. Current flow rate (application rate) is read via the torsional sensor.
2. Pressure is adjusted when deviating from desired flow rate separately for each disc
3. Metering outlets are corrected automatically according to new data





The new electro magnetic torque sensor system on hydraulic drive models eliminates the need for a calibartion process and allows operators complete peace of mind.

MORE ADVANTAGES

1. Individual adjustment of left and right disc every second for more fuel efficiency as a result of reduced engine speed
2. Neither machine height nor weight increased, insensitive to slopes or changes in forward speed
3. No flow tests required, 100% compatible with an external supply hopper

PRECISION FERTILIZER SPREADERS AXIS 30.2 Q

SIMPLE AND EFFICIENT

The smaller Axis® model provides unequaled application rate control, quality of fertilizer distribution and easy adjustment.

GENTLE AGITATOR

The simple, mechanical drive allows for a consistent agitator speed of 17 RPM. Slow, stepped agitation prevents fertilizer granule damage.

QUICK FLOW TEST AND RATE SETTING

With the Direct Flow Control (DFC) system, your initial machine setup is easy using the spreading chart settings. You then remove the disc and fit the chute (stored above disc guard) for a flow test. After collecting the fertilizer, modify the position of the DFC selector according to your needs.

CHECK IT FROM THE CAB

The Quantron A is the standard terminal on the 30.2 model. In addition to automatic ground speed compensation, with the standard speed sensor you can also benefit from the user-friendly design and comfortable control from the cab: the metering outlets, travel speed, area spread, quantity spread and amount of fertilizer remaining are all displayed.


AXIS
AXIS 50.2
KUHN
KUHN

ADVANCED WEIGHING SYSTEM & BORDER CONTROL

INTEGRATED WEIGHING SYSTEM

Axis® 50.2 W models come standard with the integrated weighing system. Additionally, these mechanically driven machines come standard with the Telimat border spreading system.

MORE PRECISION, HIGHER RETURN ON INVESTMENT

Linked to the weigh cells, the ISOBUS terminal records the application rate continually during spreading. It recognizes uneven flow rates, which occur due to speed variations, fertilizer differences or changing climatic conditions and corrects them automatically more than one time per second. No calibration test is needed and you achieve higher fertilizer savings per acre!

TELIMAT BORDER SPREADING

The Telimat border spreading feature controls overspreading at field borders or waterways. It can be adjusted to match your specific needs and can also be raised out of the way when not in use. Electrical actuation is standard on ISOBUS machines.

SPREADING POWER UP TO 164 FEET

With a capacity of 148 cubic feet and a working width of up to 164 feet, the Axis 50.2 W ensures maximum efficiency and high outputs.

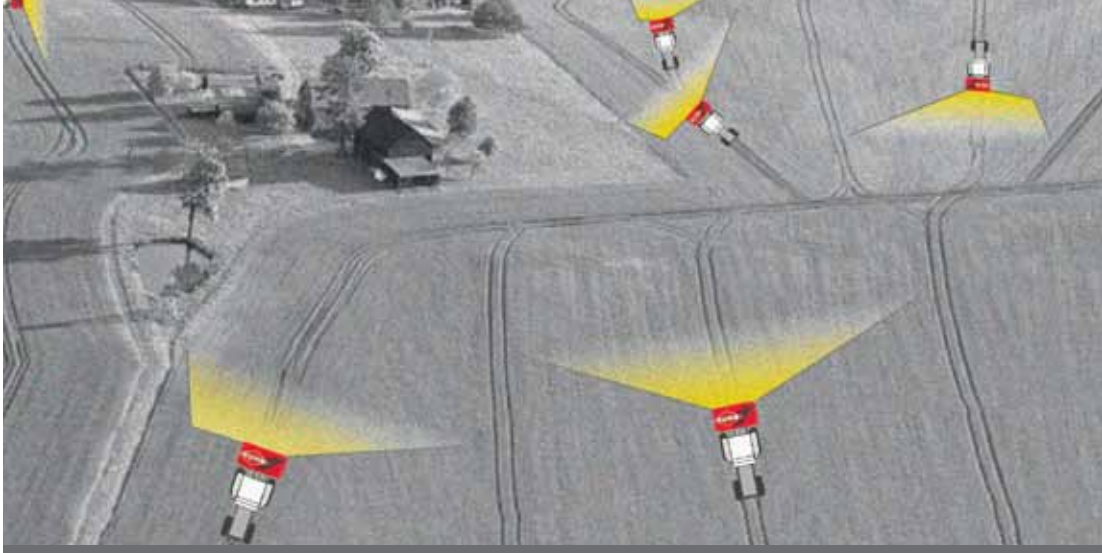
FLEXIBILTY WITH ISOBUS

Axis 50.2 W is standard as a ISOBUS version as are all Axis H-EMC models. Benefit from the advantages of one universal electronic language and the ability to run several IOSBUS machines with one terminal. As always, this is compatible with GPS control.

INDIVIDUAL FERTILIZER CONTROL FOR EACH SIDE

The Axis® H-EMC range offers a unique combination of innovative technologies to meet the expectations of today's farmers. Premium features include CDA distribution, ISOBUS options, the hydraulic disc drive and the integration of EMC technology for adjusting the application rate separately and continuously for each disc. Additionally, border spreading can be accomplished on either side by changing disc speed and drop point. The 40.2 size is available with or without weigh scales to better tailor to individual customer needs.

These machines are designed for precise spreading without the need for manual adjustments – you can simply concentrate on driving the tractor.



ADAPT YOUR SPREADING TO THE FIELD SHAPE WITH GPS CONTROL

With Vari-Spread, working widths on the left and right can be adjusted by changing the disc speed and modifying the drop point. Additionally, up to eight sections can be shut off individually, four on each side. The system is fully controllable from the tractor cab with GPS.

INDEPENDENT DISC SPEED

The discs, driven by the tractor's hydraulic system, are independent of the engine as well as PTO speed. As a result, their spread pattern remains constant and can be adjusted when driving to field points. Spreading with reduced engine speed is possible, which decreases overall fuel consumption.

COMPATIBLE WITH ISOBUS

All Axis H-EMC machines come standard with ISOBUS technology.
You can directly integrate your spreading maps into the ISOBUS terminal and also use ISOBUS systems from John Deere, Trimble, Topcon and others.

WEIGHING FRAME FOR MORE INFORMATION

Two high-capacity weigh cells continuously inform the driver about the fertilizer quantity remaining in the hopper (40.2 H-EMC excluded).

ELECTRICALLY DRIVEN AGITATOR

The electric drive of the agitator helps keep the fertilizer intact. This is because it stops immediately when the metering outlets are closed, protecting the granules from unnecessary agitation.

TESTING FOR THE FUTURE

Over 50,000 spreading tests have been carried out in our internal test center to date. These tests have allowed us to create spreading charts, increase setting precision and find new technological solutions that benefit you!

AEF REQUIREMENTS

Kuhn is a member of Agriculture Electronics Foundation (AEF) which is a worldwide association that defines and develops the ISOBUS standards in collaboration with equipment manufacturers. To activate all of the premium features on the H-EMC machines, a compatible ISOBUS terminal must have the following Task Control functions enabled.

Please note that some functions may require a paid activation from the ISOBUS terminal provider depending on make.

UT

UNIVERSAL TERMINAL
Machine display and monitoring via ISOBUS terminal

TC-BAS

TC-BASIC
Documentation and recording of work being carried out (mapping)

TC-GEO

TC-GEO-REFERENCE
Automatic adjustment of application rate by GPS (variable rate)

TC-SC

TC-SECTION CONTROL
Automatic management of sections and variable width via GPS (Vari-Spread)

KUHN ADVANTAGES FOR TERMINALS AND SOFTWARE

Please note that with the optional Kuhn CCI 100 with activated CCI Command (Section Control) and CCI Control the functions required for all premium features are met. The GPS receiver is required to be purchased separately.

TECU UT

CCI 100
- 8.4" color display touch screen
- Includes TECU function for automatic retrieval of tractor speed signal by seven-pin signal socket on tractor

TC-GEO TC-BAS

CCI CONTROL
Activates variable rate functions and mapping/map processing applications

TC-SC

CCI COMMAND – SECTION CONTROL
Vari-Spread feature for automatic section control is enabled

CCI COMMAND – PARALLEL TRACKING
GPS guidance assistance via on-screen light bar to reduce unneeded overlap or skips. Areas worked and unworked are shown. A-B line or curve mode is possible.

OPTIONAL EQUIPMENT

EASY HOPPER ACCESS

Axis® 50.2 models are equipped with ladders as standard for easier access to the hopper. For other models, ladders can be ordered as an option.

EASILY CHECK THE FERTILIZER LEVEL

Two openings bring light inside the hopper so the fertilizer level is easily visible through the hopper windows. Fertilizer level sensors can be incorporated in the hoppers (option on Axis Q and W, standard on H-EMC).

REDUCED MAINTENANCE

Reduce your maintenance costs with increased service life.

- Hopper base, application rate and spreading components: 100% stainless steel
- Reinforced VXR+ paddles coated with tungsten carbide for long service life (standard on all discs)
- Fast-attach spreading discs to rapidly change for varying fertilizers and spreading widths
- First gearbox oil change only necessary after 10 years
- Agitator control requires no maintenance
- All painted surfaces are shot-blasted, Nanotech surface treatment is applied, then powder coated
- Easy to clean and wash

PRACTICAL PARKING WHEEL

To be more flexible during attaching and detaching of your spreader, an optional parking wheel set is available. When mounted to the tractor, the wheels can be stored out of the way.

SPEED SENSOR

On 30.2 Q model, a wheel speed sensor and cable for ISO 11786 plug are standard so you can maintain a consistent application rate regardless of speed. All machines, including ISOBUS machines, can also use ground radar or GPS speed signals.

RS 232 CABLE

The optional RS 232 cable connects the Quantron control terminal and speed sensor to a GPS control terminal.

QUICK HITCH

For 50.2 models, Quick Hitch brackets are available to allow the spreader to be attached to CAT 3/4N Quick Hitches that meet current ASABE specifications. Mounting to a QH will move the spreader rearward approximately 12" and additional front weight is advised for ballasting.

YOUR INFORMATION ADVANTAGE

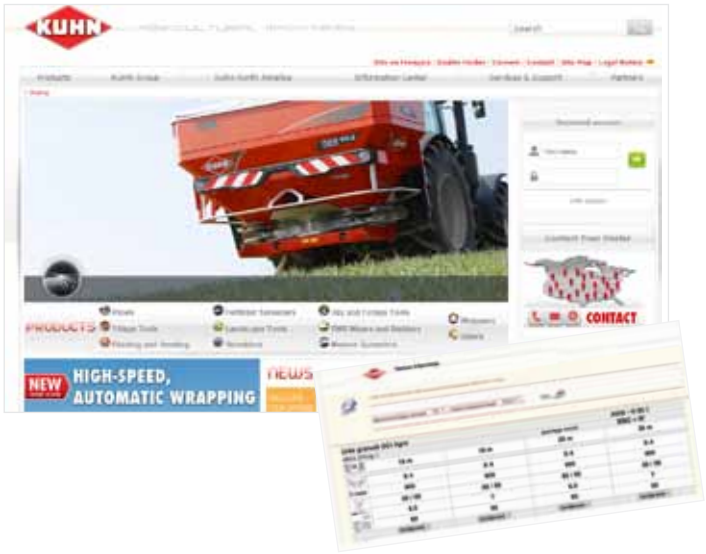
AXIS® CART - AC 100

The "hook-and-go" drawbar attachment saves time and increases operator comfort. You can also utlize smaller tractors on any of the machines. The cart allows for quick attach or detach of the spreader with simple latching along with the heavy duty design. This also allows for single or tandem axle choices providing adapabiltiy for differing practices. Quickly, via turnbuckle, adjust the spreading angle to match up to calibration charts to ensure an even consistent spread width. The cart has a set single-axle track width to 80" or 90" to match up to different planting practices.

THE KUHN ADVANTAGE

IDENTIFY YOUR FERTILIZER FOR PROPER SPREADING

For fertilizer of unknown origin, the identification guide classifies the different varieties of fertilizer by category, helping you recognize the product and determine the optimal setting.



COMPLETE SPREADING CHARTS

Charts are supplied with the machine. They can also be found on the Kuhn North America website (www.KuhnNorthAmerica.com) under ***Services & Support***. This section is continuously updated with new fertilizers.

Model Specifications

	30.2 Q	40.2 H -EMC	40.2 H-EMC-W	50.2 W	50.2 H-EMC-W
Hitch Type	Category 2			Category 3 (QH Brackets Optional)	
PTO Speed (RPM)	540	Hydraulic drive		750 (1,000)	Hydraulic Drive
Capacity: Base – Max (With Extensions)	49 - 112 ft.³ (1,400–3,100 l)	112 ft.³ (3,200 l)		148 ft.³ (4,200 l)	
Working Width	39' – 138' (12 – 42 m)			59' – 164' (18 – 50 m)	
Spreading Discs as Standard	S4 VXR+	S6 VXR+			
Section Control Capability	–	8 total sections (4 on each side)			
Disc Protector	Standard	Standard			
Application Rate Adjustment	2.7 lbs/acre – 446 lbs/acre with high precision/3 kg per ha – 500 kg per ha				
Metering Outlet Control	By Electric Cylinders				
Min Filling Height (Without Extensions)	41" (105 cm)	62" (157 cm)		67" (170 cm)	
Min Hydraulic Capacity Required	–	12 GPM at 2610 PSI		–	17.50 GPM at 2610 PSI
Required Hydraulic Connections	1 – SA or DA	1 DA with Free Return or Direct Connection to Load Sense		1 – SA or DA	1 DA with Free Return or Direct Connection to Load Sense
Border Spreading	Optional Telimat (Right Side Only)	Hydraulically controlled on each disc		Standard Telimat (Right Side Only)	Hydraulically controlled on each disc
Weighing System	–	–	Standard		
Hopper Cover	Optional	Standard			
Hopper Level Sensors	Optional	Standard		Optional	Standard
Virtual Terminal	Quantron A	ISOBUS (Optional Terminal Available)			
Speed Signal Sensor + ISO 11786 Cable	1 as Standard	Optional			
Modification of Working Width	Manual Adjustment via the Machine	Using Virtual Terminal in the Cab on-the-go			
Road Lighting and Signals	Optional	Standard			
Fertilizer ID Cards and Spread Charts	Standard in Imperial and Metric				
Unloaded Weight (Approximately)	725 lbs (330 kg)	1,175 lbs (534 kg)	1,200 lbs (545 kg)	1,600 lbs (727 kg)	1,875 lbs (852 kg)
Maximum Loaded Weight (Hopper Contents)	7,050 lbs (3,205 kg)			9,260 lbs (4,209 kg)	

Extension Type (30.2 Q Only)

XL 1800

Extension Width	9' 2" (2.8 m)
Extension Extra Capacity	63 ft.³ (1,800 l)
Total Capacity if Fitted on Basic Machine	112 ft.³ (3,200 l)
Total Filling Height When Installed	162" (411 cm)
Extension Weight	165 lbs (75 kg)

Spreading Disc

	SPREADING WIDTH	AXIS 30.2	AXIS 40.2	AXIS 50.2
S2 VXR+	39′–59′ (12–18 m)	X	X	
S4 VXR+	59′–91′ (18–28 m)	X	X	X
S6 VXR+	79′–118′ (24–36 m)	X	X	X
S8 VXR+	98′–138′ (36–42 m)	X	X	X
S10 VXR+	118′–157′ (36–48 m)			X
S12 VXR	137′–164′ (42–50 m)			X

Values shown are approximate. Exact distance depends on material spread. Consult charts to determine disc needed for a specific material.
Always use high-quality fertilizer for wide working widths.

AXIS 30.2 / 40.2 / 50.2

COMPLEMENTARY PRODUCTS

MORE PRODUCTS TO MEET YOUR NEEDS

With over 700 models of equipment, we have the most complete implement line in the industry. Whether you have a small or large operation, we have a broad range of models and options to help fit your diverse needs.

Kuhn Krause Gladiator®

Kuhn Krause Excelerator®

Kuhn Multi-Master Rollover Plow

Kuhn Krause Dominator®

For more information about your nearest Kuhn dealer and other Kuhn products, visit our website at

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