

# AGRICULTURAL PRODUCT CATALOG



**DICKEY-john®**  
SINCE 1966



## A WORLD PRECISION AGRICULTURE LEADER

When you take a need, add inspired ingenuity and develop the result with unsurpassed quality, you get market-leading technology in the Agriculture Industry:

- DICKEY-john developed the ag industry's first successful planter monitor
- DICKEY-john was one of the industry's first to be ISO 9001: 2008 quality certified
- DICKEY-john was the first to offer a complete precision agriculture package with IntelliAg<sup>®</sup>
- DICKEY-john offers the award-winning handheld moisture tester mini GAC<sup>®</sup> - that uses the same technology as the U.S. federal standard

Customers on six continents depend on our precision products to perform in the most rugged environments. In-house manufacturing and an on-site engineering team help us maintain that DICKEY-john standard of quality.

When you buy DICKEY-john, you're making an investment in the future of your operation. Because DICKEY-john products solve not only today's needs but also tomorrow's challenges.

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## LAND MANAGER

Incredibly simple...amazingly accurate

Land Manager control systems are versatile, making precision chemical and fertilizer application easy for ag operations.

### LAND MANAGER CONTROL SYSTEMS PROVIDE:

- English and metric modes
- Multiple languages with no programming required
- Password protection to eliminate unwanted setup changes
- Speed, area, and distance monitoring modes
- Control of proportional, hydraulic, servo, and electric drives
- Two channels of variable-rate application control when connected to precision-farming software GPS package

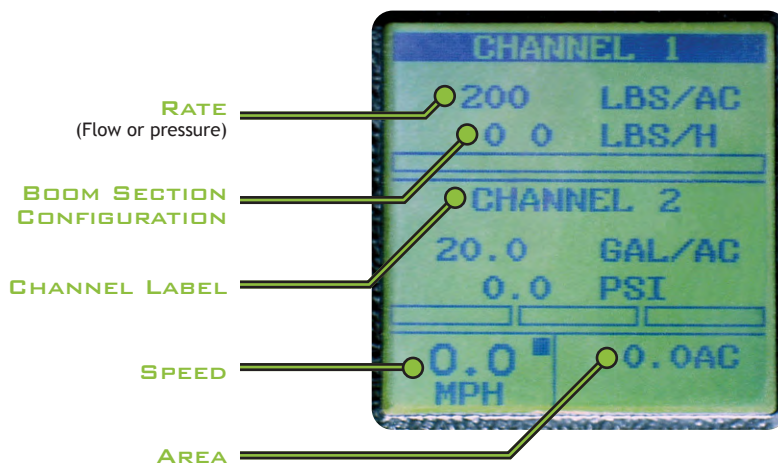
The Land Manager control systems are available for flow or pressure based systems for use with liquid, granula, or anhydrous ammonia systems.

### CUSTOMERS WHO BUY LAND MANAGER ALSO BUY THESE ACCESSORIES:

- Hopper Level Sensor- alerts when seed or granular material reaches low level in the hopper
- Hall Effect Sensor- cost-effective shaft revolution monitoring
- Application Rate Sensor- application rate sensors measure shaft rotation speed for precise granular application control
- Boom Control Module- provides manual control of up to six boom sections

### ADDITIONAL CONTROL SYSTEM PRODUCTS:

- Pressure sensor or low-meter ..... pages 20, 21, 28, & 29
- Control valves ..... pages 24, 25, 26, & 29
- NH3 kit ..... pages 22 & 23
- Ground speed sensor ..... page 52





## LAND MANAGER SE

### ECONOMICAL APPLICATION CONTROL

- Single channel
- Easy 1-button setup
- Up to 6 boom inputs
- Digital accessory input (hopper level, fan RPM or vapor detector)
- Product-level monitoring
- Non-volatile memory retains settings when disconnected from battery



## LAND MANAGER

### VERSATILE APPLICATION CONTROL

- Single channel
- Variable rate application control
- Application library stores up to 10 configuration
- Creates and logs up to 10 individual reports
- Standard RS232 interface link
- Records tank fill (with optional flow meter)
- Automatic pump shutoff
- Auto gain tunes responsiveness to application



## LAND MANAGER II

### MAXIMUM APPLICATION CONTROL

- Dual Channel
- Spray and spread with one console
- Variable rate application control for 2 channels
- Application library stores up to 10 configuration
- Creates and logs up to 10 individual reports
- Standard RS232 interface link
- Records tank fill (with optional flow meter)
- Automatic pump shutoff
- Auto gain tunes responsiveness to application



## INTELLIAG<sup>®</sup>

Accuracy @ every step with the world's most versatile controller

IntelliAg<sup>®</sup> puts the future of application control in your cab providing state-of-the-art communication between implement and tractor. The IntelliAg<sup>®</sup> precision farming system monitors and controls, with just one terminal eliminating the need for multiple controllers.

Because IntelliAg<sup>®</sup> is designed for the ISO 11783 standard, it is interchangeable with other manufacturers' compatible equipment.



### INTELLIAG<sup>®</sup> AI VIRTUAL TERMINAL

The AI Virtual Terminal (VT) is mounted inside the tractor cab and are the main user interface with the IntelliAg<sup>®</sup> system.

#### AI 120 VIRTUAL TERMINAL FEATURE:

- Graphic-defined keys for navigation
- Escape key
- Backlit graphics display for night-time use
- Backlight intensity adjustment
- English or metric measurements
- 4-channel variable-rate prescription
- Compatible with GPS receiver/NMEA
- ISO compliant
- Video display (connects to 2 optional cameras)
- SD card slot (for saving configuration files, as-applied data, and prescription application)
- Terminal generates as-covered maps
- Supports multiple languages
- 12" color screen
- AI 120 has integrated auto section control and is compatible with Topcon auto steering



AI 120

#### Benefits of IntelliAg®:

- ISO 11783 conformance allows for a common installation to interface and operate multiple implements
- Standard electrical connector at hitch for convenient plug and play installation
- Full screen alarms identify abnormal or failed operations
- Retains information when power failure occurs
- Variable rate application capability, as-applied mapping, Auto Section

#### The following components are required for the IntelliAg® control system:

- Virtual Terminal
- Master Switch
- Working Set Master (WSMT2)
- Harnesses
- CAN Terminators
- Tractor Electronic Control Unit (TECU)

#### The following components are compliments to the IntelliAg® control system:

- Working Set Member Module (WSMB)
- Boom Switch Module with Planter
- Output Module
- Remote Test Switch
- Implement Lift Switch



#### WSMTII

The Working Set Master Module (WSMTII) houses the system's primary interface device. All system parameters, constants, and memory are stored in the WSMTII and controls the application of material by interfacing with proportional hydraulic valves and feedback sensors.

WSMTII modules are available for different applications including: Sprayers, Fertilizer spreaders, Anhydrous bars, Planters/grain drills, Air Carts



#### TECU

The Tractor Electronic Control Unit (TECU) manages the power on the CAN BUS and accessory sensor inputs connected to the tractor cab harness, such as ground speed.



#### WSMB

The Working Set Member Module (WSMB) is an auxiliary to the Working Set Master Module (WSMTII) and provides inputs from seed sensors for additional row monitoring. Each WSMB can accept up to 18 rows of seed sensors and passes information direct to the WSMTII. Up to 10 WSMB's can be installed to monitor up to 196 for installation virtually anywhere on the implement.



#### MASTER SWITCH



## ANHYDROUS

The IntelliAg<sup>®</sup> anhydrous (NH<sub>3</sub>) control system provides automatic ground speed control for the application of anhydrous ammonia only.

### THE SYSTEM PROVIDES:

- Up to 2 independent channels of anhydrous ammonia control and allows large tool bars to be split in half and vary the rate of each section while traveling through a field
- Control of the pounds per acre of anhydrous ammonia applied when a DICKY-john anhydrous cooling system is paired with an anhydrous tool bar
- Flexibility to increase or decrease the rates of each material being applied on the go by setting a desired target material rate
- Manual rate changes from the cab or using automatic prescription application rates loaded into the IntelliAg<sup>®</sup> from a prescription farming VRT map
- Visual readout and display of important application information such as pounds per hour, flow rate of anhydrous, total pounds of NH<sub>3</sub> applied current NH<sub>3</sub> tank level, along with field area covered
- The capability to log as-applied data and generate an as-covered map

The IntelliAg<sup>®</sup> Anyhroudrous control system can be connected with an ISO Compliant Virtual Terminal already in your tractor:

John Deere 2600/2630, Case IH Pro 700, AGCO C1000,2000,3000

### BASE SYSTEM - ANHYDROUS

- IntelliAg<sup>®</sup> Virtual Terminal AI 120, 12" color touch screen w/SD card slot
- Tractor harness for use with AI 120 Virtual Terminal
- System power harness with ISO hitch connector
- ISO master switch to control on/off
- Hitch extension harness
- NH<sub>3</sub>- WSMT2
- WSMT2 T harness
- Control harness for connection to valves and feedback sensors



#### CONTINENTAL TTU

Continental TTU allows for faster runs at lower tank pressures.



#### IMPLEMENT LIFT SWITCH

Implement Lift Switch enables or disables implement function and attaches to 3 point hitch or lift cylinder.



#### WSMTII-NH<sub>3</sub>

WSMTII-NH<sub>3</sub> processes sensor inputs and communicates them to the control unit in the tractor cab.





## SPRAYING

The IntelliAg<sup>®</sup> sprayer control system (LIQIV) is designed with features tailored specifically for self-propelled and pulled-behind liquid sprayers.

### THE SYSTEM PROVIDES:

- 4 independent liquid control channels and inputs for auxiliary sensors such as liquid pressure, shaft RPM and 7 boom shutoff inputs
- Monitor of up to 7 boom shutoff inputs, 2 shaft RPM sensors and 4 liquid pressure sensors
- Flexibility to use either pressure sensor or flow meter feedback on liquid flow rate
- Compatibility with a wide range of liquid servo control valves or hydraulic control valves, and electric driven pumps.
- Simply set the desired target material rate and go
- Prescription variable rate flexibility to automatically increase or decrease the rates of each material being applied as you drive through the field
- Manual rate changes from the cab or by using prescription application rates loaded into the IntelliAg<sup>®</sup> from a prescription farming VRT map
- The capability to log as-applied data and generate an as-covered map

### BASE SYSTEM - SPRAYER

- IntelliAg<sup>®</sup> Virtual Terminal AI 120, 12" color touch screen w/SD card slot
- Tractor harness for use with AI 120 Virtual Terminal
- System power harness with ISO hitch connector
- ISO master switch to control on/off
- Hitch extension harness
- LIQIV - WSMT2
- WSMT2 T harness
- Control harness for connection to valves and feedback sensors



### BSM



Boom Shutoff Module is used to provide physical in-cab switching for manual on/off control of boom sections 1-6.

### AgGPS® 252



AgGPS® 252 is used for position information in VRT mode.

### WSMTII-LIQIV



WSMTII-PDC processes sensor inputs and communicates them to the control unit in the tractor cab.

### INTELLIAG® TERMINAL



The Virtual Terminal is mounted inside the tractor cab and is the main user interface with the IntelliAg® system.

### LIQUID CONTROL VALVE



Liquid Control Valves control the flow of liquid based on messages sent from the tractor cab.

### LIQUID PRESSURE SENSOR



Liquid Pressure Sensors are used to measure the pressure of liquid spray nozzles for accurate application.

### FLOW METER



Flow meters monitor the liquid flow rates (gallons per minute).

### BOOM OUTPUT MODULE



The boom output module is required for control of boom shutoff section valves.

### BOOM SHUTOFF VALVE



Boom Shutoff Valves are controlled by in-cab switches and shuts off the flow of liquid

### RADAR III



Radar III delivers accurate ground speed measurement.

### TECU



A Tractor Electronic Control Unit (TECU) is required when using an IntelliAg® 10 inch terminal. It manages the power on the CAN BUS and accessory sensor inputs connected to the tractor cab harness, such as ground speed.



## GRANULAR

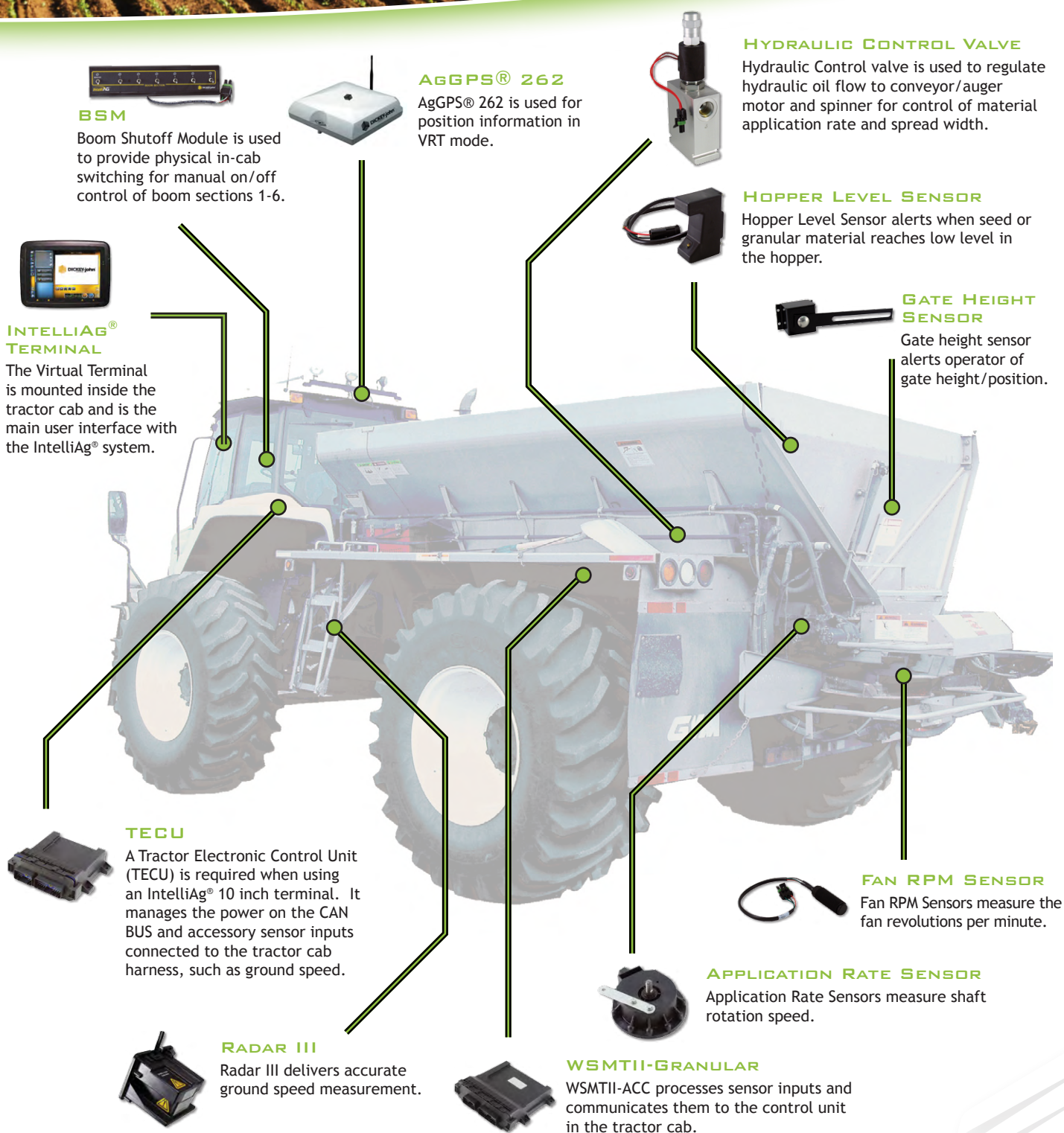
The IntelliAg<sup>®</sup> granular spreader control system (GCIV) is designed with features tailored specifically for self-propelled and pulled-behind granular spreaders.

### THE SPREADER SYSTEM PROVIDES:

- 4 channels of granular control and inputs for auxiliary sensors such as hopper level, shaft RPM, gate height, and 5 air boom shutoff inputs
- Monitoring of a 360° pulse-per-revolution feedback sensor; this mounts on the shaft of the granular material delivery system to provide accurate information relative to the granular material being applied
- Pulse-width-modulated, servo-drive hydraulic control valves, and electric motor drives are controlled by the granular controller to maintain the desired application rate.
- Simply set the desired target material rate and go
- Prescription variable rate flexibility to increase or decrease the rates of each material being applied as you drive through the field
- Manual rate changes from the cab or by using prescription application rates loaded into the IntelliAg<sup>®</sup> from a prescription farming VRT map
- A spinner or spread control feature to allow adjustment of the spread width from the cab for conventional V-Box spreaders
- The capability to log as-applied data and generate an as-covered map
- Monitoring of up to 5 boom shutoff inputs, 2 shaft RPM sensors, 2 bin level sensors, and 4 gate height sensors

### BASE SYSTEM - SPREADER

- IntelliAg<sup>®</sup> Virtual Terminal AI 120, 12" color touch screen w/SD card slot
- Tractor harness for use with AI 120 Virtual Terminal
- System power harness with ISO hitch connector
- ISO master switch to control on/off
- Hitch extension harness
- LIQIV - WSMT2
- WSMT2 T harness
- Control harness for connection to valves and feedback sensors



### BSM

Boom Shutoff Module is used to provide physical in-cab switching for manual on/off control of boom sections 1-6.

### AgGPS® 262

AgGPS® 262 is used for position information in VRT mode.

### INTELLIAG® TERMINAL

The Virtual Terminal is mounted inside the tractor cab and is the main user interface with the IntelliAg® system.

### TECU

A Tractor Electronic Control Unit (TECU) is required when using an IntelliAg® 10 inch terminal. It manages the power on the CAN BUS and accessory sensor inputs connected to the tractor cab harness, such as ground speed.

### RADAR III

Radar III delivers accurate ground speed measurement.

### WSMTII-GRANULAR

WSMTII-ACC processes sensor inputs and communicates them to the control unit in the tractor cab.

### HYDRAULIC CONTROL VALVE

Hydraulic Control valve is used to regulate hydraulic oil flow to conveyor/auger motor and spinner for control of material application rate and spread width.

### HOPPER LEVEL SENSOR

Hopper Level Sensor alerts when seed or granular material reaches low level in the hopper.

### GATE HEIGHT SENSOR

Gate height sensor alerts operator of gate height/position.

### FAN RPM SENSOR

Fan RPM Sensors measure the fan revolutions per minute.

### APPLICATION RATE SENSOR

Application Rate Sensors measure shaft rotation speed.

## MATERIAL APPLICATION

- Variable-rate application
- Logging as-applied rates
- Autosteering CFFE file

- Loads and runs up to 4 variable-rate prescriptions simultaneously
- Logs as-applied application rates
- Stores system configuration setting



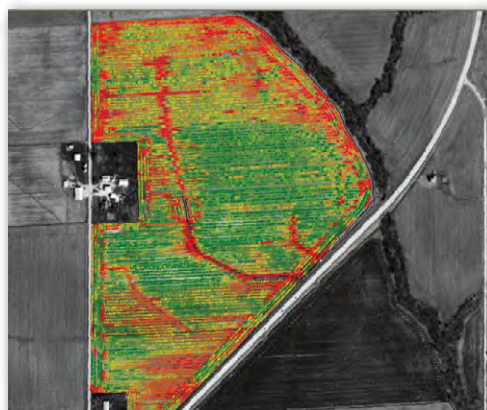
After loading selected prescriptions stored on the SD card, the variable-rate map will be displayed on the terminal. During the application of prescribed materials, an as-covered map is displayed over the prescription map



\*Examples: Farm Works versions 12, SGIS software, GTA Software Suite, Map Shots, Ag Leader SMS



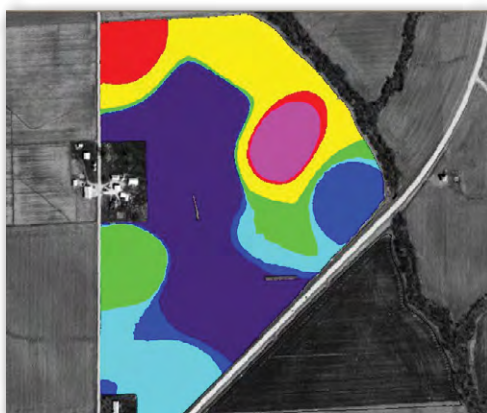
CREATED BOUNDARY MAP FROM IMPORTED  
FIELD MAP FROM USDA



YIELD MAP IMPORTED FROM YIELD MONITOR DATA



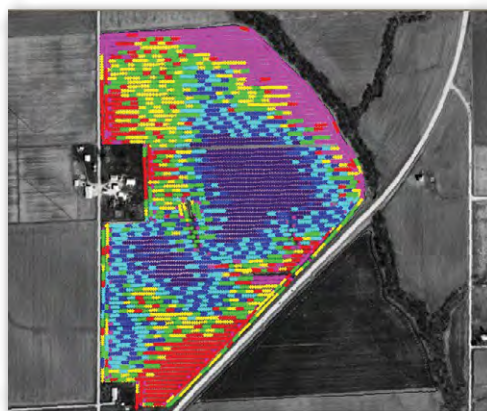
VARIABLE APPLICATION MAP OF SEED CORN



SOIL SAMPLE MAP FOR PHOSPHOROUS  
USING SOIL SAMPLES



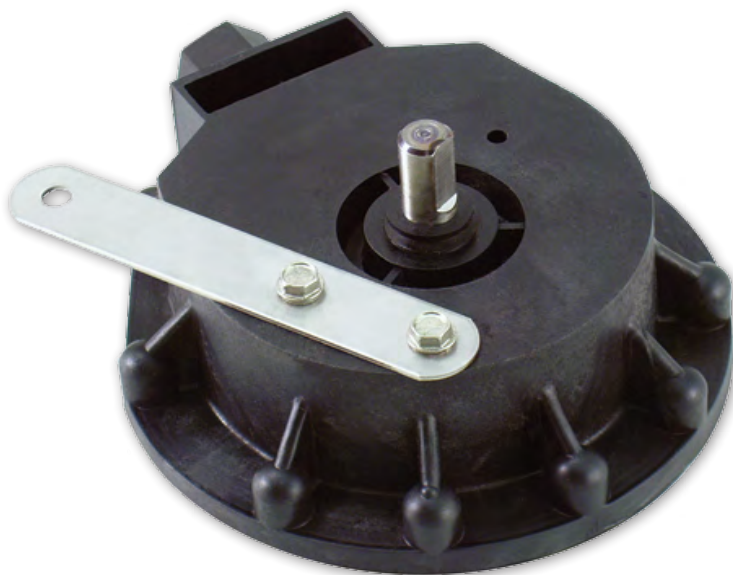
USDA NCRS SOIL TYPE MAP



AS APPLIED SEEDING MAP

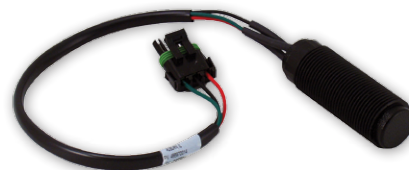


## APPLICATION SENSORS



### APPLICATION RATE SENSOR

- Measures shaft rotation speed
- Outputs at 360 pulses per revolution for increased accuracy
- RPM range 2-2,500
- Easily adapts to 1 and 1 1/4 inch diameter shafts
- 12 volt sensor with square-wave signal output



### HALL EFFECT SENSOR

- Measure rotational shaft speed and ground speed
- Available in threaded or smooth surfaces for convenient mounting
- 12 volt sensor with square-wave signal output
- Detects teeth of sprocket, magnets, lug nuts, etc.



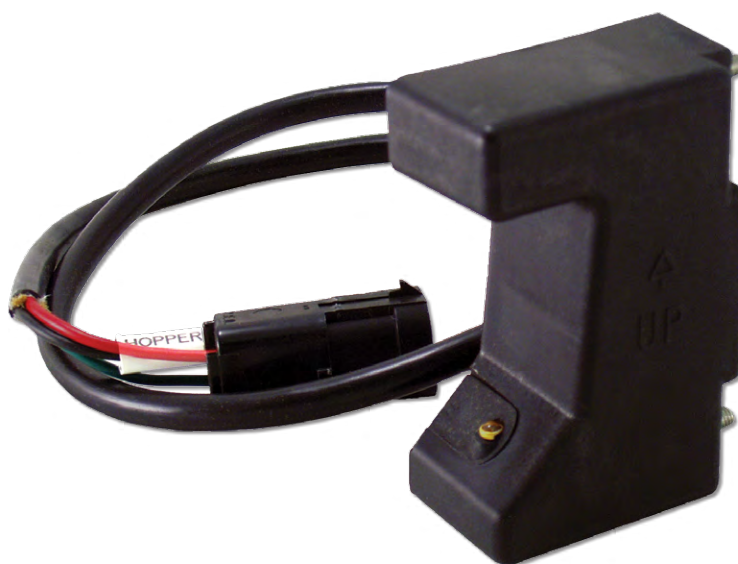
### LIQUID PRESSURE SENSOR

- Measures 0-650 psi liquid pressure
- Can be used as alternative to flow meter in Land Manager or IntelliAg<sup>®</sup> liquid sprayer control systems
- Reads liquid pressure at nozzle on spray bar
- Prevents over-application caused by single nozzle clogs



#### IMPLEMENT LIFT SWITCH

- Enable or disable implement function
- Attaches to 3-point hitch or lift cylinder
- Ties to planter monitors and control systems



#### HOPPER LEVEL SENSOR

- Mounts inside planter, drill or air cart
- Alerts when seed or granular material reaches low level



#### AIR PRESSURE SENSOR

- Measures air pressure in seed hopper and air cart tank



## LIQUID CONTROL VALVES

VALVE	DESCRIPTION	MAX GPM
3/8 inch	3/8 in. 2-way SS Valve, 3/8 in. 2-way SS	6
	3/8 in. 3-way SS Valve, 3/8 in. 3-way	3
1/2 inch	1/2 in. 2-way SS Valve, 1/2 in. 2-way SS	30
3/4 inch	3/4 in. 2-way poly Valve, 3/4 in. 2-way SS	51
	3/4 in. 2-way SS	30
1 inch	1 in. 2-way CS	68
	1 in. 2-way poly Valve, 1 in. 2-way poly	68
	1 in. 2-way SS	68
1.5 inch	1.5 in. 3-way poly Valve, 1.5 in. 3-way poly	47
	1.5 in. 3-way poly Valve, 1.5 in. 3-way SS	34
2 inch	2 in. 2-way SS Valve, 2 in. 2-way SS	376
	2 in. 3-way SS Valve, 2 in. 3-way SS	47
3 inch	3 in. 2-way SS Valve, 3 in. 2-way SS	720



3/8 IN.  
2-WAY SS



1 IN.  
2-WAY CS



1.5 IN.  
3-WAY SS



3/8 IN.  
3-WAY SS



1 IN.  
2-WAY POLY



2 IN.  
2-WAY SS



1/5 IN.  
2-WAY SS



1 IN.  
2-WAY SS



2 IN.  
3-WAY SS



3/4 IN.  
3-WAY POLY



1.5 IN.  
3-WAY POLY



3 IN.  
2-WAY SS



3/4 IN.  
SINGLE SHUTOFF



3/4 IN.  
3 BANK SHUTOFF

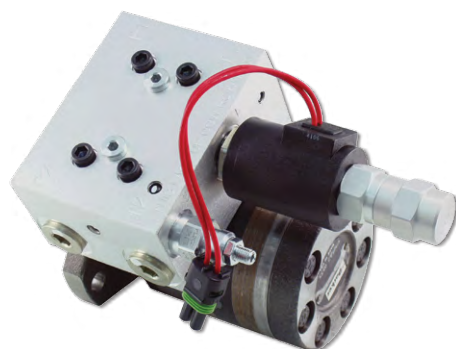


3/4 IN.  
5 BANK SHUTOFF

## HYDRAULIC CONTROL VALVES

### PROPORTIONAL HYDRAULIC FLOW CONTROL VALVE

- Available in 4 and 8 GPM sizes
- Operating pressure inlet 3,500 PSI (240 bar)
- Regulated flow rate 0-4 GPM (0-15 LMP), 0-8 GPM (0-30 LPM) and 0-24 GPM (0-90 LPM)
- Reverse free flow cracking pressure 15-20 PSI (1-1.4 BAR)
- Internal leakage 0.10 GPM (0.38 LPM) at zero current
- Coil voltage 12 VDC
- Maximum control current of 1,500 ± 100 mA



### HD 4180

#### ALL IN ONE HYDRAULIC MOTOR & VALVE ASSEMBLY

- 0-4 GPM hydraulic flow delivers 4-180 RPM at 1,400 inc pounds of torque
- Eliminates ground drivers system to rotate seeding shafts
- Install up to four units in series to control multiple planter sections or fertilizer application
- Interface with ground speed control systems for variable rate planter and fertilizer application control
- Manual override of hydraulic flow in the event of electrical failure



### SERVO HYDRAULIC FLOW CONTROL VALVE

- For precise oil flow to hydraulic-drive conveyors and liquid pumps
- Control hydraulic flow from 4 to 58 GP
- Variety of sizes available



## FLOW METERS

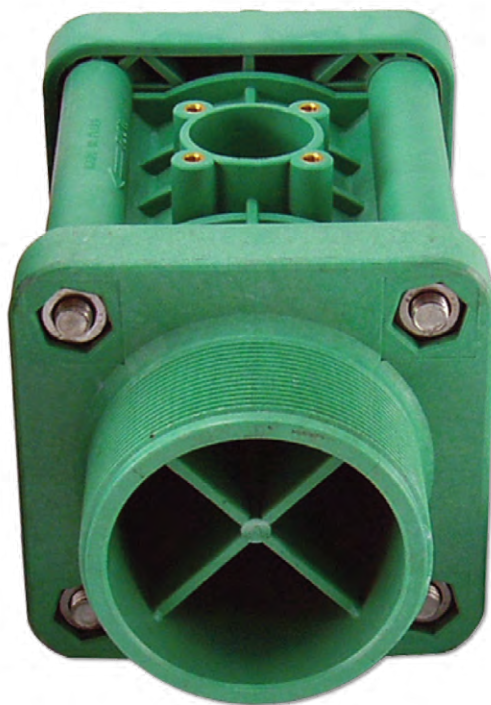
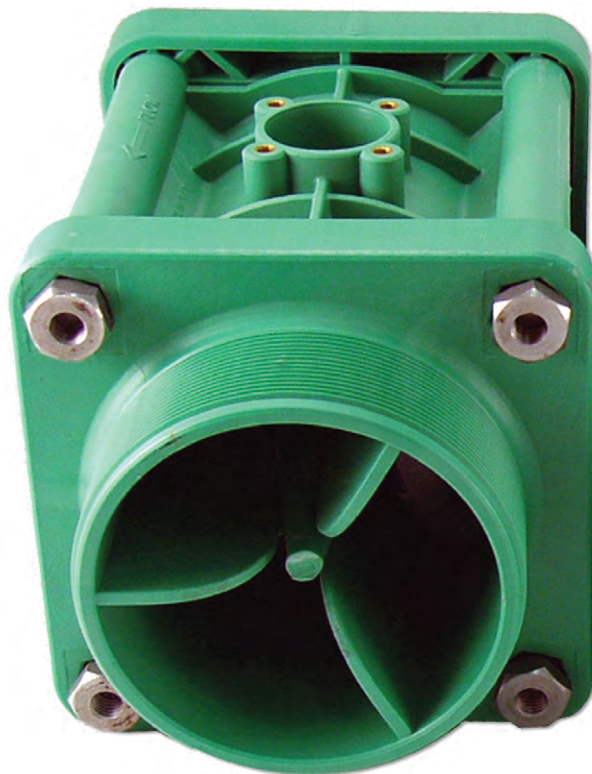
Available in poly or stainless steel to meet your spraying needs

### **3/4" - 2 INCH POLY FLOW METER ASSEMBLIES INCLUDE:**

- Flow meter body with turbine, axle and bearings
- Hall effect sensor with 3-pin weather pack connector
- Hose barbs for inlet and outlet
- Viton O-ring
- Coupling nuts

### **3/4" INCH POLY FLOW METER ASSEMBLIES INCLUDE:**

- Flow meter body with turbine, axle and bearings
- Hall effect sensor with 3-pin weather pack connector
- Flanges with Viton O-rings of inlet and outlet
- Flat flanges (no O-rings)





## ROTARY FLOW METER

### MEASURES TWO FLOW RANGES:

- 0.5 to 5 gallons per minute
- 0.2 to 2 gallons per minute (with low flow adapter)

Include hose barbs and hose clamps for connections to 1/2 inch tubing, for pre-wetting and low GPM flow rate accuracy.

USE THE FOLLOWING INFORMATION TO HELP YOU CHOOSE THE RIGHT FLOW METER FOR YOUR EQUIPMENT.

Liquid Flow Rate Formula - To calculate liquid flow rates (gpm) so you can pick the correct Flow meter for your application, use the following formula:

Width x speed x application rate (gpa) x 0.00202= gpm

Example: 60 ft. x 15 mph x 20 gpa x 0.0020= 36.36

Liquid Flow Meter Sizes

FLOW METER	FLOW RATE
3/4 inch	1.8-18.5 GPM
1 inch	0.64-26.4 GPM
1 1/2 inch	9.25-92.5 GPM
2 inch	19.00-198 GPM
3 inch	39.6-396 GPM
4 inch	79.0-790 GPM





## WORLD-CLASS PRECISION PLUS FLEXIBLE MONITORING

For incredible versatility and unsurpassed accuracy, choose the PM Series of planter monitors. With models to monitor as few as 1 row or as many as 36 rows simultaneously, this series has what you need to optimize planting and minimize skips and missed rows.

### PM300, PM400, PM500, AND PM600 SERIES PLANTER MONITORS OFFER:

- Row and ground speed monitoring
- Area and population count
- Accessory monitoring
- High and low population warning alarms
- Speed and area modes for quick field assessment
- Data saved even in power losses
- Present parameters for out-of-the-box
- Customized features for advanced operation
- Multiple seed flow display options- bar graphs, gauges, flashing b segments, test enlargement

### PM100 & PM100 E

Economical planter monitoring

- 1- to- 16-row monitoring
- Automatic sensor to detect seed flow
- LED row indicators
- Multiple seeds per second row failure setting options





### PM300

The next level in planter monitoring

- 16-row monitoring
- 1 accessory input (select shaft RPM, liquid flow meter rate, or fan RPM)
- Ground speed monitoring

### PM400

Large-scale planter monitoring

- 36-row monitoring
- 1 accessory input (select shaft RPM, liquid flow meter rate or an RPM)
- Ground speed monitoring



### PM500

Expanded planter monitoring

12-row monitoring

- 12-row tramline (four rows simultaneously)
- Right and left marker input CAN-based external row shutoff module
- 3 accessory inputs (shaft RPM, liquid flow meter rate and fan RPM)
- Ground speed monitoring

### PM600

Modular planting monitoring

- 64-row monitoring
- 1 accessory input (select shaft RPM, liquid flow meter rate or an RPM)
- Ground speed monitoring





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AI 120

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- Escape key
- Backlit graphics display for night-time use
- Backlight intensity adjustment
- English or metric measurements
- 4-channel variable-rate prescription
- Compatible with GPS receiver/NMEA
- ISO compliant
- Video display (connects to 2 optional cameras)
- SD card slot (for saving configuration files, as-applied data, and prescription application)
- Terminal generates as-covered maps
- Supports multiple languages
- 10" color screen (AI 100)
- 12" color screen (AI 120)
- AI 120 has integrated auto section control and is compatible with Topcon auto steering



AI 120

#### Benefits of IntelliAg®:

- ISO 11783 conformance allows for a common installation to interface and operate multiple implements
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#### MASTER SWITCH



## PLANTING

The IntelliAg<sup>®</sup> planter/drill system (PDC) provides planter monitoring and control of seeds being placed in soil by each row unit, including counting seeds planted per acre, inches between seeds and average population.

### THE SYSTEM PROVIDES:

- Planter monitor functionality (max. 196 rows)
- 4 independent control channels for:
  - Row crop planter seeding (seeds/acre)
  - Grain drill seeding (lbs./acre)
  - Liquid spraying (gal./acre)
  - Granular fertilizer (lbs./acre)
- Control over the number of seeds planted per acre and ease of use to set the desired target material rate and go
- Prescription variable rate flexibility to increase or decrease the population as you drive through the field
- Manual population rate changes from the cab or by using prescription application rates loaded into the IntelliAg<sup>®</sup> from your computer
- Monitoring of 16 seed sensors along with accessory implement sensors including 2 hopper level, 2 air pressure, 2 shaft RPM, 1 ground speed sensor, and 1 lift switch
- Auto row shutoff control that utilizes Tru Count Clutches (24 rows)

The IntelliAg<sup>®</sup> planter/drill system can be connected with an ISO Compliant Virtual Terminal already in your tractor: John Deere, Case IH, AGCO

### BASE SYSTEM - PLANTER

- IntelliAg<sup>®</sup> Virtual Terminal AI 120, 12" color touch screen w/SD card slot
- Tractor harness for use with AI120 Virtual Terminal
- System power harness with ISO hitch connector
- ISO master switch to control on/off
- Hitch extension harness
- PDC - WSMT2
- WSMT2 T harness



#### APPLICATION RATE SENSOR

Application Rate Sensors measure shaft rotation speed.



#### WSMB

WSMB processes up to 18 seed sensor inputs and communicates them to the control module. An accessory module is required for planters larger than 16 rows.



#### WSMTII-PDC

WSMTII-PDC processes sensor inputs and communicates them to the control unit in the tractor cab.



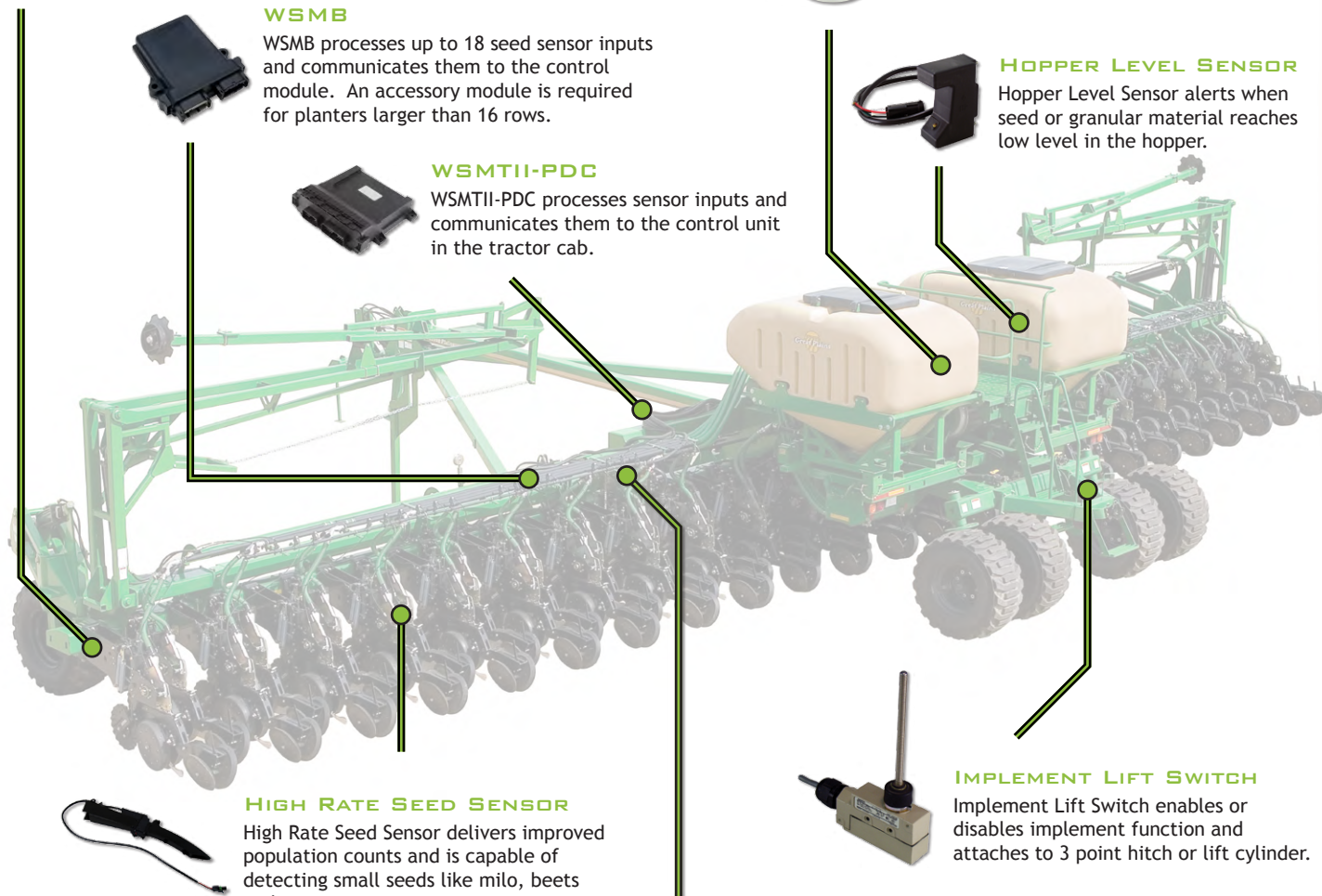
#### AIR PRESSURE SENSOR

Air Pressure Sensor measures air pressure in the seed hopper.



#### HOPPER LEVEL SENSOR

Hopper Level Sensor alerts when seed or granular material reaches low level in the hopper.



#### HIGH RATE SEED SENSOR

High Rate Seed Sensor delivers improved population counts and is capable of detecting small seeds like milo, beets and cotton.



#### BOOM SHUTOFF MODULE

Boom Shutoff Module is used to provide physical in-cab switching for manual on/off control of boom section 1-6.



#### IMPLEMENT LIFT SWITCH

Implement Lift Switch enables or disables implement function and attaches to 3 point hitch or lift cylinder.



#### HD 4180 HYDRAULIC MOTOR/CONTROL VALVE

Automatically adjusts planter and fertilizer rates while moving.



## AIR SEEDING

The IntelliAg<sup>®</sup> air cart control system allows for full utilization of a 1 to 4 bin air cart. The system monitors seed or fertilizer traveling through the air system to ensure the material is getting to the soil and is not being trapped in a hose.

### THE SYSTEM PROVIDES:

- Planter monitor functionality (max. 216 rows)
- 5 independent control channels for:
  - Air cart seeding (lbs./acre)
  - Grain drill seeding (lbs./acre)
  - Liquid spraying (gal./acre)
  - Granular fertilizer (lbs./acre)
  - Anhydrous ammonia (lbs./acre)
- Control over the pounds of seed, fertilizer or NH<sub>3</sub> that are applied per acre by each air cart bin independently to set a desired target material rate and go
- Prescription variable rate flexibility to increase or decrease the rate of each bin as you drive through the field
- Manual population rate changes from the cab or by using prescription application rates loaded into the IntelliAg<sup>®</sup> from a prescription farming VRT map
- Monitoring of accessory implement sensors including 5 hopper level, 4 air pressure, 4 shaft RPM, 1 ground speed sensor, and 1 lift switch
- Control of fertilizer in strip till applications with air carts

The IntelliAg<sup>®</sup> air cart control system can be connected with an ISO Compliant Virtual Terminal already in your tractor: John Deere, Case IH, AGCO

### BASE SYSTEM - AIR SEEDING

- IntelliAg<sup>®</sup> Virtual Terminal AI 120, 12" color touch screen w/SD card slot
- Tractor harness for use with AI 120 Virtual Terminal
- System power harness with ISO hitch connector
- ISO master switch to control on/off
- Hitch extension harness
- ACC - WSMT2
- WSMT2 T harness
- Control harness for connection to valves and feedback sensors



### VIGILENSE® SENSOR

The Vigilense® Sensor is a low-cost, yet high-tech sensor that can detect a flow or blockage situation. If a hose is blocked a visual and audible alarm indicates the sensor number along with a stop sign symbol for quick analysis. A maximum of 216 delivery hoses can be mounted for this condition simultaneously.



### CONTINENTAL TTU

Continental TTU allows for faster runs at lower tank pressures.



### AIR PRESSURE SENSOR

Air Pressure Sensor measures air pressure in the seed hopper.



### HOPPER LEVEL SENSOR

Hopper Level Sensor alerts when seed or granular material reaches a low level in the hopper.



### WSMTII-ACC

WSMTII-ACC processes sensor inputs and communicates them to the control unit in the tractor cab.



### WSMB

The Seed Sensor Member Module processes a maximum of 216 rows of seed flow monitoring (12 modules). An accessory module is required for processing 18 seed sensor inputs for communication to the control module.



### APPLICATION RATE SENSOR

Application Rate Sensors measure shaft rotation speed.



### FAN RPM SENSOR

Fan RPM Sensors measure the Fan revolutions per minute.



### IMPLEMENT LIFT SWITCH

Implement Lift Switch enables or disables implement function and attaches to 3 point hitch or lift cylinder.





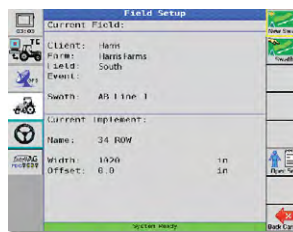
## TASK CONTROLLER

The task controller software program is integrated into the IntelliAg® terminal to manage tasks associated with:

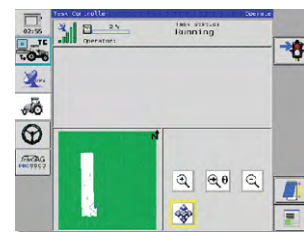
- Variable-rate application
- Logging as-applied rates
- Autosteering CFFE file

### BENEFITS AND FEATURES:

- Loads and runs up to 4 variable-rate prescriptions simultaneously
- Logs as-applied application rates
- Stores system configuration setting



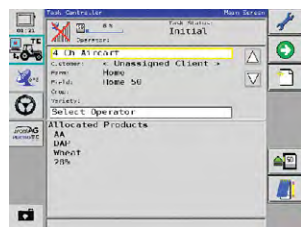
CFFE



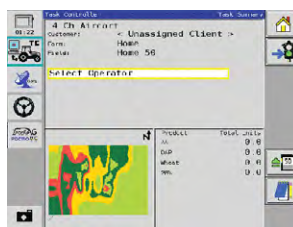
AS APPLIED

## VARIABLE-RATE APPLICATION

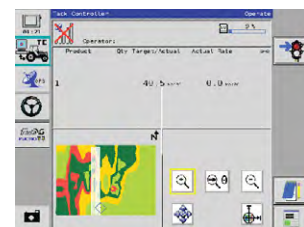
After loading selected prescriptions stored on the SD card, the variable-rate map will be displayed on the terminal. During the application of prescribed materials, an as-covered map is displayed over the prescription map



LOAD SELECTED TASK



START AND STOP TASK



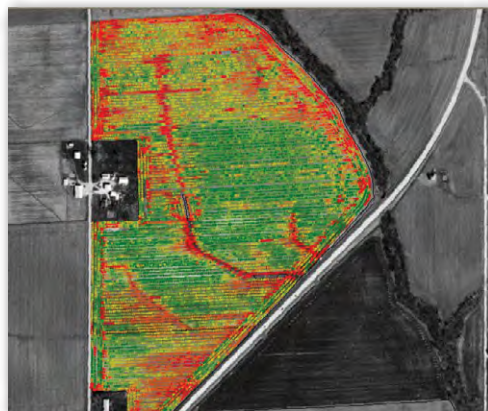
AS COVERED

Note: Farm prescription software must be compatible with FODM applications\*

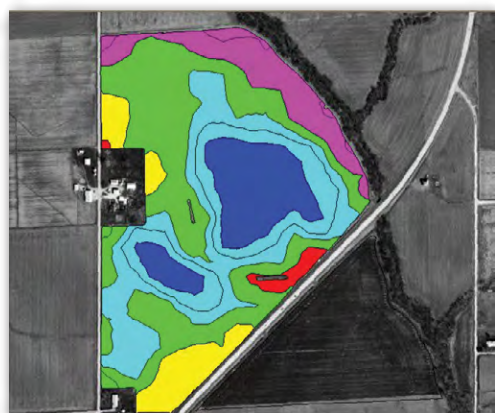
\*Examples: Farm Works versions 12, SGIS software, GTA Software Suite, Map Shots, Ag Leader SMS



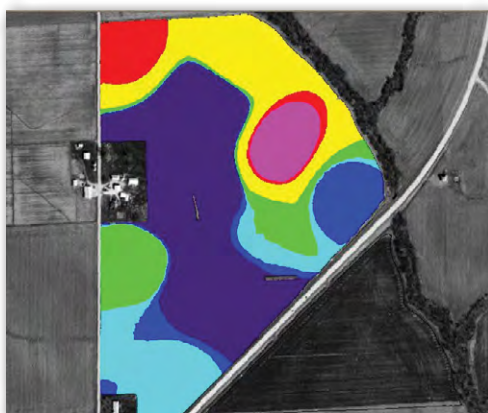
CREATED BOUNDARY MAP FROM IMPORTED  
FIELD MAP FROM USDA



YIELD MAP IMPORTED FROM YIELD MONITOR DATA



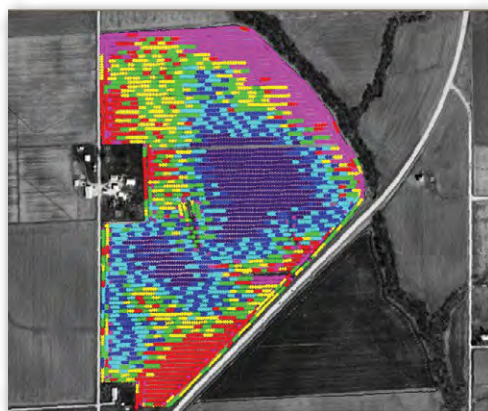
VARIABLE APPLICATION MAP OF SEED CORN



SOIL SAMPLE MAP FOR PHOSPHOROUS  
USING SOIL SAMPLES



USDA NCRS SOIL TYPE MAP



AS APPLIED SEEDING MAP



## DJASM II

### ECONOMY AND ACCURACY COMBINE FOR FIRST-RATE MONITORING

When you want top-level monitoring at low-level pricing, the DJASM II air cart monitor delivers. It precisely monitors flow on large drills and seeders to help prevent lost profit from unseeded strips.

Modular and customized, the DjASM II is easy to operate yet accurate, with 16 row indicators per module and a u-segment display. And up to 8 modules to adjust the minimum seeds per second alarm to fit your needs.

For use with DICKY-john Vigilense blockage sensors.

- Blockage monitoring for up to 128 rows or 120 rows and 8 hopper level sensors
- Customizable seeds per second alarm point for 1 to 50 seeds per 2 seconds
- Modular design can reduce harnessing and wiring costs
- Advanced RS485 communication modules receive input from 16 sensors or 15 sensors and 1 hopper level sensor
- Internal audible alarm
- Five-step LED dimming for day or night use
- Odd and even row shutoff capability

The following are additional products for the DjASM II:

- Hopper level sensor - Accurate material level reading
- **Implement lift switch** - Simple implement control
- Ground Seed Sensors
- Vigilense Blockage Sensors





### HIGH-RATE GRAIN DRILL SENSOR

The most accurate high-rate seed sensor

- Proven high rate sensor technology packaged for grain drills
- Provides improved population counts
- Detects small seeds like milo, beets and cotton
- Compatible with many grain drill brands



### VIGILENSE BLOCKAGE SENSOR

World-class accuracy in a blockage sensor

- Superior blockage detection
- Easy to install
- Detects all sizes of seeds, granular fertilizers
- Use with air seeders and grain drills



### HIGH-RATE SEED SENSOR

The most accurate high-rate seed sensor

- Delivers improved population counts
- Detects small seeds like milo, beets and cotton
- Use with many planter brands



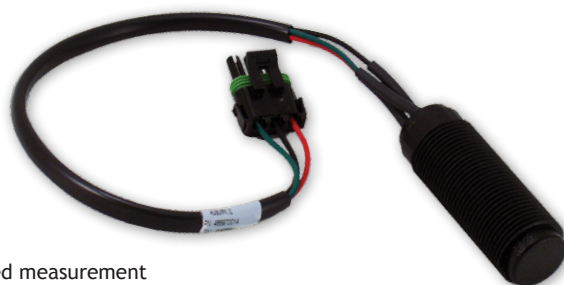
### AIR PRESSURE SENSOR

- Measures air pressure in seed hopper and air cart tank



### HOPPER LEVEL SENSOR

- Mounts inside planter, drill or air cart
- Alerts when seed or granular material reaches low level



### HALL EFFECT SENSOR

Durable, economical ground speed measurement

- Measure rotational shaft speed and ground speed
- Available in threaded or smooth surfaces for convenient mounting
- 12 volt sensor with square-wave signal output
- Detects teeth of sprocket, magnets, lug nuts, etc.



### IMPLEMENT LIFT SWITCH

- Enable or disable implement function
- Attaches to 3-point hitch or lift cylinder
- Ties to planter monitors and control systems



## FLOW METERS

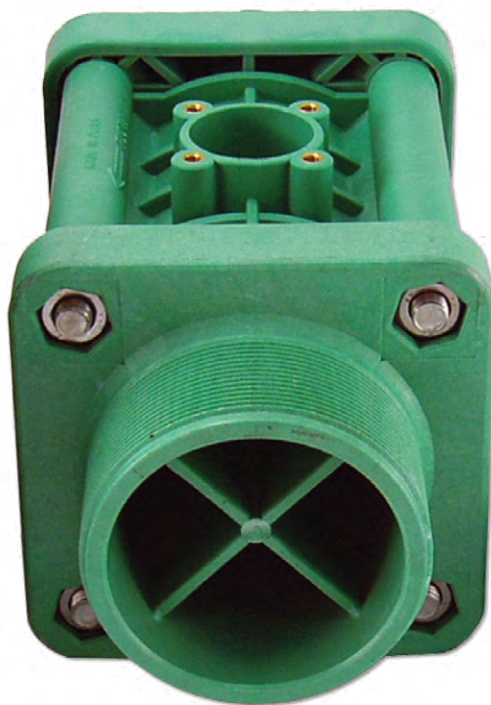
Available in poly or stainless steel to meet your spraying needs

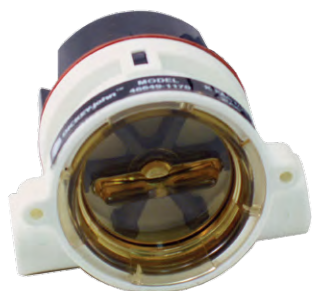
### **3/4" - 2 INCH POLY FLOW METER ASSEMBLIES INCLUDE:**

- Flow meter body with turbine, axle and bearings
- Hall effect sensor with 3-pin weather pack connector
- Hose barbs for inlet and outlet
- Viton O-ring
- Coupling nuts

### **3/4" INCH POLY FLOW METER ASSEMBLIES INCLUDE:**

- Flow meter body with turbine, axle and bearings
- Hall effect sensor with 3-pin weather pack connector
- Flanges with Viton O-rings of inlet and outlet
- Flat flanges (no O-rings)





## ROTARY FLOW METER

### MEASURES TWO FLOW RANGES:

- 0.5 to 5 gallons per minute
- 0.2 to 2 gallons per minute (with low flow adapter)

Include hose barbs and hose clamps for connections to 1/2 inch tubing, for pre-wetting and low GPM flow rate accuracy.

USE THE FOLLOWING INFORMATION TO HELP YOU CHOOSE THE RIGHT FLOW METER FOR YOUR EQUIPMENT.

Liquid Flow Rate Formula - To calculate liquid flow rates (gpm) so you can pick the correct Flow meter for your application, use the following formula:

Width x speed x application rate (gpa) x 0.00202= gpm

Example: 60 ft. x 15 mph x 20 gpa x 0.0020= 36.36

Liquid Flow Meter Sizes

FLOW METER	FLOW RATE
3/4 inch	1.8-18.5 GPM
1 inch	0.64-26.4 GPM
1 1/2 inch	9.25-92.5 GPM
2 inch	19.00-198 GPM
3 inch	39.6-396 GPM
4 inch	79.0-790 GPM





## GROUND SPEED SENSORS

Measuring ground speed has never been easier than with DICKEY-john's high-performance ground sensors.

### RADAR III

World-class accuracy in a ground speed sensor

The high-performance, top-of-the-line unit is a streamlined, more compact version of our best-selling Radar II model.

- Weighs only 1 lb.
- Compact- 4 x 3.4 x 3.1"
- High-tech planar array for truest possible velocity measurement
- Views ground surface for accurate ground speed detection
- Velocity errors of less than or equal to 1-3% after in-field calibration
- Easy to install
- Can be mounted to view forward or backward from vehicle



### RADAR II

The most accurate ground speed sensor

This radar ground speed sensor delivers the truest velocity measurement at mounting heights over 6 feet.

- Views actual surface for accurate speed measurement
- Can be mounted to look forward or backward from vehicle
- Velocity rang 0.33-60 m.p.h (0.53-96.6 km/h)
- Mounts of 35+- 5o angle and at least 24 in. (610mm) height from target surface (mounts anywhere from 2 to 8ft. high)
- Variety of factory output frequency settings available
- Sleek design - 4 x 4 x 12.25 in. (10 x 10 x 31.1mm)
- Achieves velocity errors of +- 1-3% through in-field calibratio



## HALL EFFECT SENSOR

Durable, economical ground speed measurement

For cost-effective ground speed detection, choose the Hall Effect Sensor backed by DICKEY-john's legendary reliability.

- Low-cost ground speed measurement
- Detects based on gear tooth, sprocket and lug nut movement
- Fast, Simple installation



## 4 IN 1 ADAPTER

Convenient multi-console operation

- Radar signal adapter
- Run 4 electronic consoles off of 1 RVS I or II





## THE MOST ADVANCED TECHNOLOGY IN GRAIN ANALYSIS

### GAC<sup>®</sup>2500

NTEP certified results (the industry standard)

Experience the next generation of moisture testers from the worldwide leader in grain moisture analysis.

#### BENEFITS AND FEATURES:

- Color touch screen offers best in class usability
- Utilizes the newest analysis technology (149 MHz) to provide NTEP certified results
- Testing for a moisture range of at least 5 to 45% (depending on grain calibration)
- Moisture repeatability of  $\pm 0.1\%$  (depending on application)
- Improved mechanics provide shorter analysis time allowing more samples to be run
- Accommodates special calibrations specifically developed for specialty crops such as walnuts, almonds, and coffee
- Porting of GAC 2100 calibrations into the new instrument accepts calibrations that were developed from non-NTEP applications
- Optional Pass-Thru drawer minimizes real life run-time in grain operations
- Standard RS232 or USB output
- Power supply of 85-264 VAC  $\leq$  48-62 Hz at 20VA consumption





A hand is shown pouring yellow beads into the hopper of a black and silver HPX3000 particle sizer. The device features a digital screen on its front panel that displays the text "Please fill hopper". The HP logo and "HIDEX" brand name are visible on the front. The machine has a robust, industrial design with a hopper on top and a collection area at the bottom.

## FILL HOPPER

## SELECT GRAIN

## FAST ANALYSIS TIME

## RESULTS IN SECONDS



## USE DRAWER OR PASS-THRU DRAWER



## STILL AMERICA'S CHOICE FOR CONSISTENT TESTING

Put the power of fast, fully automated business with GAC Series grain analysis computers.

The GAC Series delivers accurate, reliable moisture, temperature and test weight results quickly and consistently for applications including cereals, oilseeds, grass seeds, vegetable seeds, and beans. Advanced technology in GAC units choose your grain; testing easy—simply choose your grain; load the hopper, and press a button for precise analysis.

Each unit comes with an available calibration library of more than 450 different products, and all calibrations are transferable between units. Units are easily reprogrammed—users can change product display labels and calibrations at any time.

### THE GAC SERIES ALSO FEATURES:

- Measurement through capacitance, conductance and weighing device
- Testing for a moisture range of at least 5 to 45% (depending on grain calibration)
- Automatic temperature compensation
- Moisture repeatability of  $\pm 0.1\%$  (depending on application)
- Large LCD display (240 x 64 pixels)
- Standard RS232 output
- Power supply of 85-264 VAC < 48-62 Hz at 20 VA consumption

### EASY TO USE GAC<sup>®</sup> 2100 SERIES



TURN ON AND SELECT GRAIN



FILL HOPPER WITH GRAIN



LOAD THE SAMPLE



MEASURE GRAIN AND  
GET MOISTURE READOUT



### GAC 2100B

The U.S. federal standard in commercial grain elevators

- NTEO certified
- Grain testing results in 16 seconds
- Stores 64 grain calibrations
- Self-Loading
- Automatic weighing
- Automatic temperature compensation
- Automatic bulk density compensation
- Self-Unloading
- Multiple languages



### GAC 2100 AGRI

Economical and accurate

- Grain testing results in 32 seconds
- Stores 8 grain calibrations
- Self-Loading
- Automatic weighing
- Automatic temperature compensation
- Automatic bulk density compensation
- Self-Unloading
- Multiple languages



### GAC 2100G

Professional-level precision testing

- Grain testing results in 16 seconds
- Stores 16 grain calibrations
- Self-Loading
- Automatic weighing
- Automatic temperature compensation
- Automatic bulk density compensation
- Self-Unloading
- Multiple languages



### GAC 500XT

Elevator-quality testing on the farm

- Grain testing results in 25 seconds
- Stores 16 grain calibrations
- Semi-portable
- Printer compatibility
- Automatic temperature correction
- Automatic bulk density compensation
- Multiple languages



## THE LEADER IN PRECISION GRAIN ANALYSIS

DICKEY-john introduces the next generation of NIR analyzers, the Instalab 700<sup>®</sup>

The Instalab 700<sup>®</sup> analyzer offers the same great reliability and accuracy in fixed filter testing as the Instalab 600 series.

Quality in design and construction ensures the most reliable NIR results available. The patented rotating sample cup virtually eliminates problems associated with sample non-homogeneity. The cup rotation is computer controlled, with 120 readings taken at 3° intervals and averaged for each wavelength. Studies indicate that this method is up to 3 times more accurate than integrating sphere and other types of data collection technology.

Completely customizable it allows you to change filters to adjust the bandwidth for any probe, including protein, cellulose, sugar, ash, starch, oil and fat, alcohol, cotton, and polyester.

The Instalab 700<sup>®</sup> is dependable in design and built for trouble-free operation in any environment - from lab to production line. In addition to grain, this analyzer delivers high-performance analysis in applications including:

- Grain processing
- Flour milling
- Ethanol production
- Feed processing
- Meat processing
- Textile manufacturing

### THE INSTALAB 700<sup>®</sup> FEATURES AND BENEFITS INCLUDE:

- Easy to use
- Intuitive color touch screen
- Testing results delivered in 10 seconds
- Customizable-replaceable filters for nearly any substance and constituent
- Optigain<sup>®</sup> - Dickey-john's exclusive feature, enables the user to adjust the gain for low-reflectance samples.
- Additional optical filters available to provide flexibility over a wide range of constituent

## THE INSTALAB 700®



MOISTURE TESTING



## THE WORLD'S MOST ACCURATE HANDHELD MOISTURE TESTER

Put the industry's choice for precision moisture testing in your hand. The miniGAC plus is the only handheld that test both moisture and test weight of grain..

Both units are based on federal standard moisture testing technology, it delivers "grain trade" accuracy. The miniGAC and miniGAC plus are fast and easy to use- no cumbersome screw caps.

### FEATURES INCLUDE:

- Moisture range 5-45%
- (depending on grain type)
- 02% moisture repeatability
- (depending on grain type)
- Internal scale- no preweighing
- More than 450 calibrations loading
- Test grain hot or cold (32-122 F)
- Menu-driven operating system
- Automatic temperature compensation

### MINIGAC<sup>®</sup>

Accurate, portable moisture testing

- Easy to use
- Moisture results in just seconds
- Stores up to 20 grain calibrations

### MINIGAC<sup>®</sup> PLUS

Accurate moisture testing with test weight

- Easy to use
- Moisture results in just seconds
- Stores up to 20 grain calibrations
- With test weight





LOAD



FILL



STRIKE



PRESS

## FOR THE FASTEST GRAIN MOISTURE TESTING

The M3g put high-speed, repeatable moisture testing in your hands. This lightweight unit lets you take grain moisture readings with a simple scoop from bin and hoppers.

Advanced DICKEY-john technology lets you easily bias to match readings to local elevator tests and change grain type with the push of a button. Store and average up to 10 individual samples.

### FEATURES INCLUDE:

- +/- 0.5 repeatability with normal stored grain
- No cups or screw-on caps
- Density compensation without weighing or compressing samples
- Easy-to-read LCD display with grain labels clearly listed
- USB port for language changes and grain calibration uploads
- Compact and lightweight - only 1.6 lbs.





## THE SIMPLEST WAY TO MEASURE SOIL COMPACTION

Maximize your yields and work to decrease your costs with the economical, easy-to-use DICKEY-john Soil Compaction Tester.

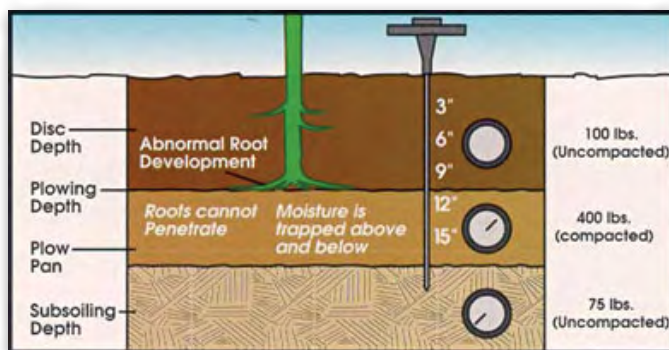
This easy-to-use tool quantifies soil compaction so you can develop a targeted plan for optimum yields and cost-effective production. (Heavily compacted soil can inhibit root growth and reduce yields.)

To measure compaction in your fields, simply push the tester into the ground at various locations to determine problem areas and pressure increases and decreases.

### SOIL COMPACTION TESTER

The soil Compaction Tester gauge gives you readings of pressure required to penetrate your soil in pounds per square inch.

- Easy- to- read, color-coded, stainless-steel dial
- Liquid-filled gauge that reduces shock
- Depth marks at 3, 6, 9, 12, 15, and 18 inches
- Rugged, molded housing and handle



COMPACTION AND ROOT DEVELOPMENT

0-200 LBS. ....	GOOD
200-300 LBS. ....	FAIR
300-500 LBS. ....	POOR



### SEED SIMULATOR

Test your planter monitors

- Simulates seed sensor and radar ground speed signals on planters up to 36 rows
- Replications 1- or all-row failure
- Reproduces 2 seeding rates for both corn and soybeans
- Cables available for PM300, PM400 PM3000, PM1000, Seed Manager SE< and DjASM II

### APPLICATION RATE SENSOR TESTER

Assess sensor function

- Easy to operate
- Plug sensor into tester and rotate shaft
- Battery powered
- Sounds intermittent alarm to indicate operation



### SENSOR TESTER 90

Check your planter sensors

- Accurately verifies sensor operation
- Ensures cabling and console are accepting input
- Simple to operate



### Backed by the power of DICKEY-john

When you buy a DICKEY-john product, you get dependability and reliability. DICKEY-john's advanced technology and superior electronics are backed by a team of expert in-house mechanical, electrical, software, and test engineers. DICKEY-john manufactures products to ensure total quality control. DICKEY-john is an ISO 9001:2008 certified facility.



**DICKEY-john®**  
SINCE 1966

11071-0415-201112

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[www.dickey-john.com](http://www.dickey-john.com)