



PRECISION PLANTER

**PPX**



**HORIZON**

## [ OUR VISION ]

Our vision begins with the soil and our commitment to design and manufacture innovative products that promote soil regeneration, whilst also helping our customers to improve productivity, yield and profitability.



## [ OUR PROMISE ]

Our soils are degrading at an alarming rate. We recognise that to sustain our soils, farmers require quality, reliable machinery and components that address agronomic issues and at the same time increase efficiency and productivity.

Our promise is to imagine, develop and manufacture innovative machines and components that challenge perceptions, improve efficiency, productivity and make a real difference to the environment.

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## [ OUR STORY ]

George Sly's passion for agronomy and his ongoing campaign to promote better soil health through regenerative farming principals, has led him on a journey of discovery and was ultimately the driving force behind him starting his own business in 2006.

Sly Agri was built on historical family ties with agricultural equipment and engineering practices. The 300 hectare Sly family farm (in Lincolnshire), is at the heart of the company's activities, providing the opportunity to conduct vital in-field research, the results of which inform and contribute to the product development process.

In 2019 Sly Agri was rebranded as Horizon Agricultural Machinery Ltd, the focus of which, has been the production of innovative agricultural machinery that facilitates regenerative and conservation-friendly farming.



*GEORGE SLY - MANAGING DIRECTOR*





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## [ THE HORIZON PPX ]

Owned by AGCO; Precision Planting are a pioneering company that develop components and technologies to improve planting operations. Precision Planting are well-known for their unique approach to addressing agronomic issues by creating new technologies which enable planters to perform at the highest standards across a variety of applications and conditions.

## [ THE PPX PLANTER ]

The innovative Horizon PPX Planter is a designed to incorporate Precision Planting technologies and accurately place seed in the perfect growing environment no matter what the field challenges are presented to the planter..

## [ PRECISION PLANTING COMPONENTS ]

Horizon offer all the Precision Planting components outlined in this brochure as retro-fit upgrades to other manufacturers planters. DeltaForce, FurrowForce and SmartFirmers are very popular upgrades that farmers around the world are adding to their existing planter.

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## [ WHY CHOOSE THE HORIZON PPX? ]

Row Crop establishment is changing with farmers now looking to reduce soil disturbance ahead of the planter operation. Therefore a new generation of planter is required operate across a variety of field scenarios such as fully cultivated, min-till, strip-till and no-till soils.

When the planter places seed in the furrow, the yield potential for that plant is already being determined. At this stage, several factors such as emergence, compaction, singulation, spacing, and population will play a major factor in how that plant germinates, emerges and develops.

The PPX Planter has been designed to perfectly place seed into the optimal growing environment even in the most challenging environments. High volumes of crop residue, hard no-till stubbles or uneven and lumpy strip till seedbeds are just some of the challenges that the PPX can comfortably handle. The PPX won't only perform in these challenging scenarios, it will also capture live data and make automated adjustments to ensure the optimal growing environment is achieved for every seed.



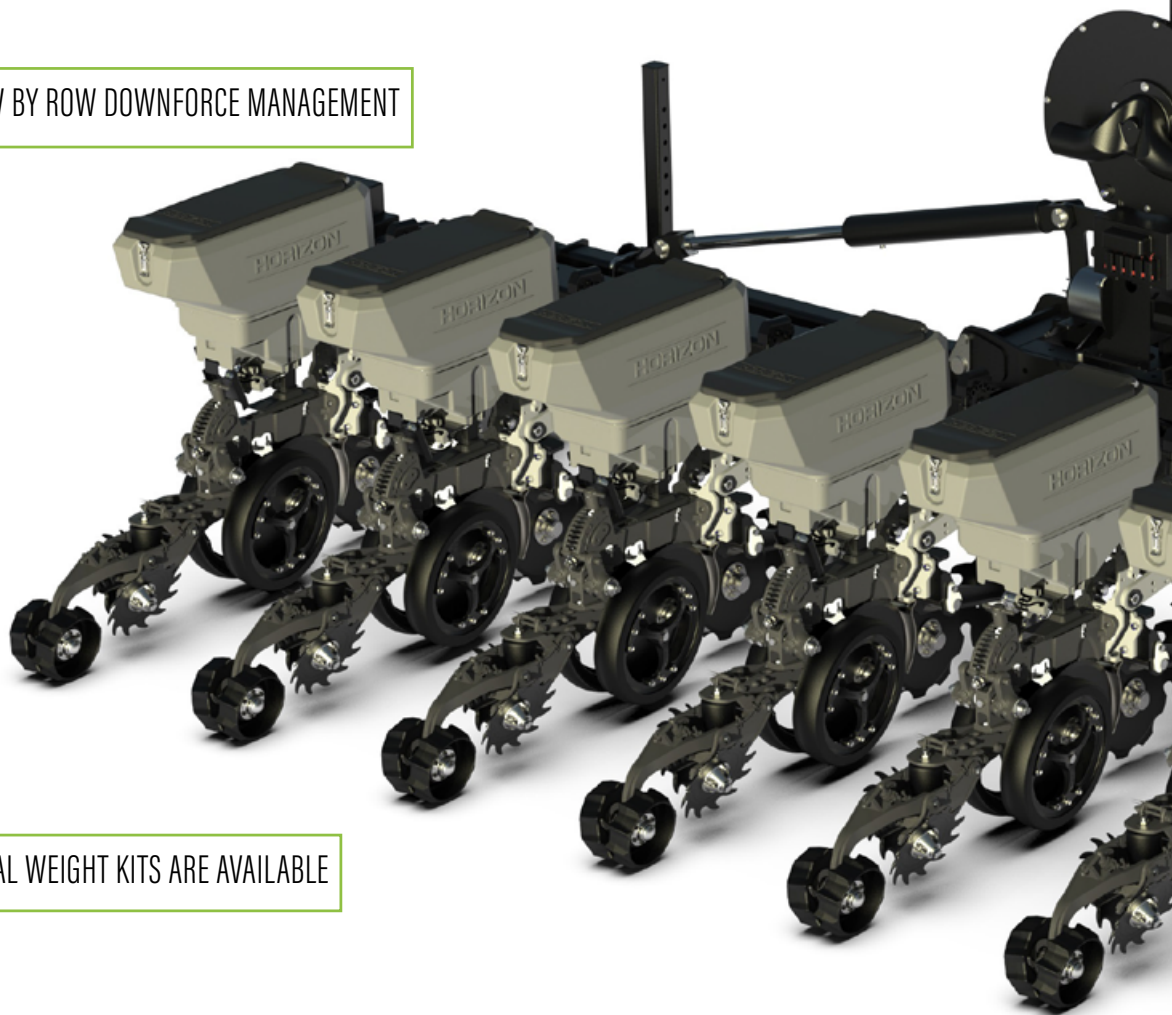


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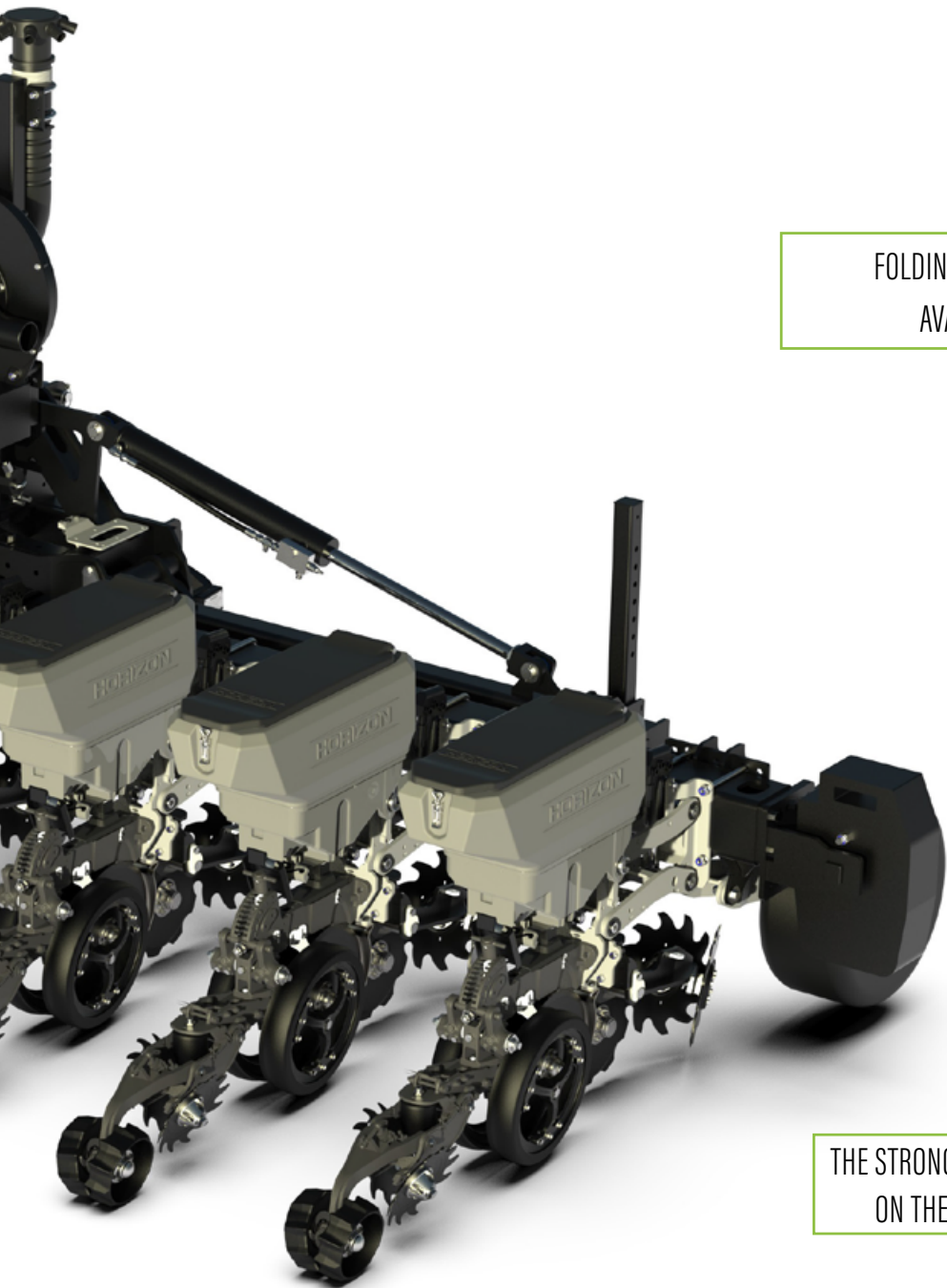
FULLY INTEGRATED LIQUID OR GRANULAR FERTILISER KITS ARE AVAILABLE

PP DELTAFORCE OFFERS ROW BY ROW DOWNFORCE MANAGEMENT



OPTIONAL WEIGHT KITS ARE AVAILABLE

ROW SPACINGS AVAILABLE FROM 25CM+



FOLDING OR RIGID MOUNTED FRAMES  
AVAILABLE UP TO 6.4M WIDE

OPTIONAL STABILIZER WHEELS

THE STRONGEST AND MOST STABLE PARALLELOGRAM  
ON THE MARKET WHICH IS ONLY 13CM WIDE

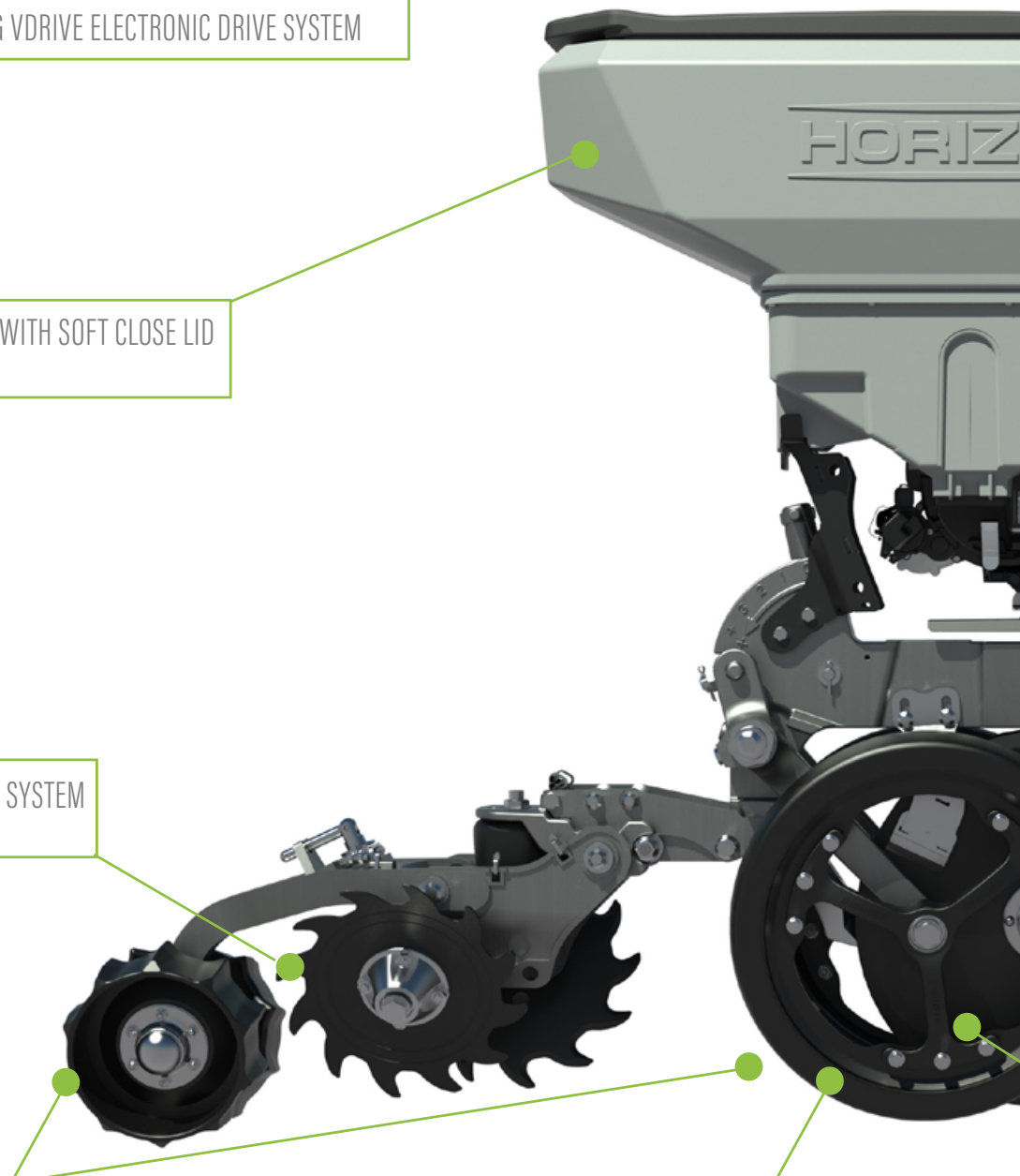
PRECISION PLANTING VSET SEED METERING IS POWERED BY THE  
PRECISION PLANTING VDRIVE ELECTRONIC DRIVE SYSTEM

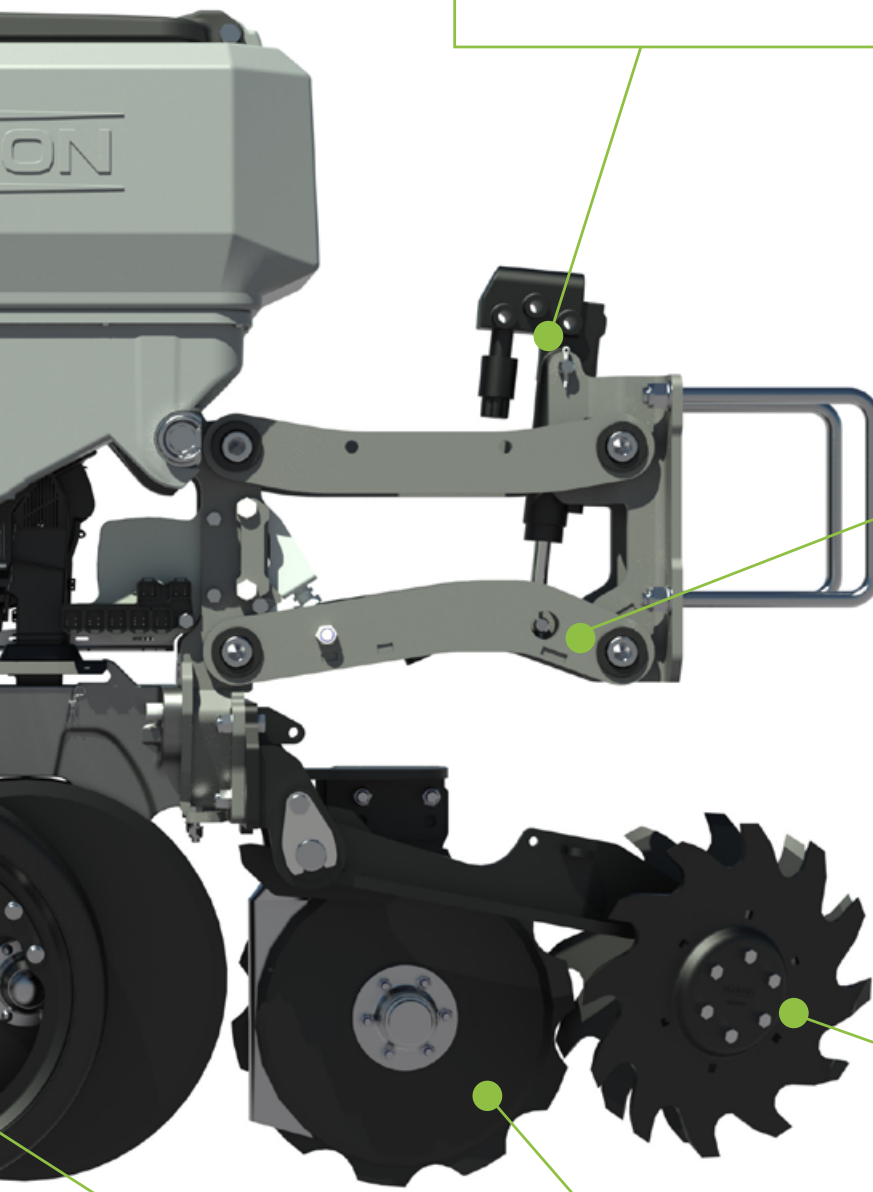
**\*NEW\*** SEED HOPPER WITH SOFT CLOSE LID

FURROWFORCE CLOSING SYSTEM

LIQUID FERTILISER PLACEMENT

SMARTFIRMER DATA SENSOR





DELTA FORCE HYDRAULIC DOWNFORCE

**\*NEW\*** NARROW BODY EXTRA STRONG PARALLELOGRAM

PNEUMATIC ROW CLEANER

OPEN SPOKE GAUGE WHEELS

GRANULAR FERTILISER PLACEMENT

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## [ SMARTFIRMER ]

The Precision Planting SmartFirmmer provides live data to the operator so that informed adjustments can be made to the settings to ensure the seed is planted into the optimal growing environment

**Soil Moisture Sensing** SmartFirmmer measures moisture content in the furrow so that depth adjustments are made to ensure seed is planted into the optimal moisture content for uniform germination

**Soil Temperature Sensing** SmartFirmmer measures soil temperature in furrow so the operator can make the right decision about when to plant temperature sensitive seeds

**Furrow Uniformity Sensing** SmartFirmmer identifies any irregularities along the furrow, such as soil clods and air space, to give the operator the insight to row unit performance

**Residue Sensing** SmartFirmmer measures the quantity of residue in the furrow and informs the operator if the row cleaners need adjustments to ensure residue won't cause germination problems

**Organic Matter Sensing** SmartFirmmer measures organic matter in the soil to give the operator a clear picture of nutrient availability to ensure the correct nutrition is applied



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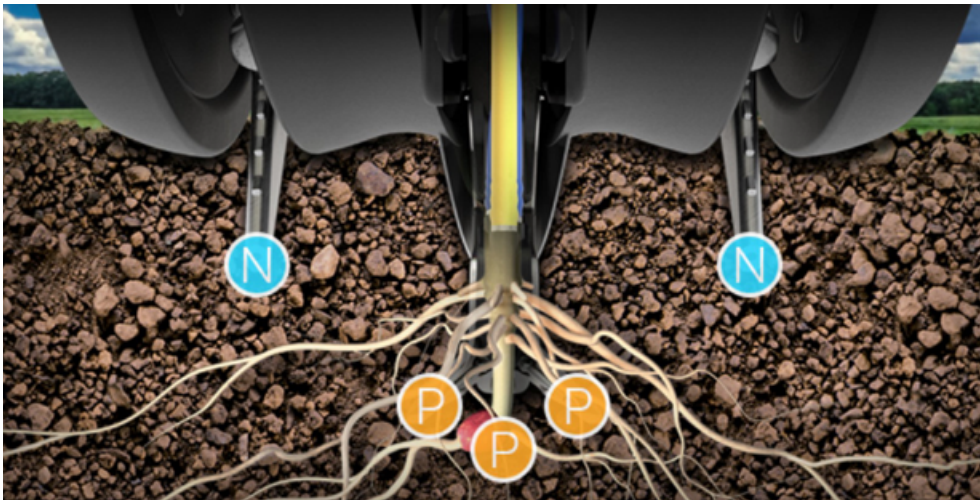
**PPX**

## [ NUTRIENT OPTIONS ]

Accurately placing nutrients in the soil with the seed can reduce fertiliser requirements by up to 30% while maintaining the same yield.

Nitrogen needs to be readily available to the crown roots of the plant in order to maximize the yield. In the case of nitrogen for corn/maize, the most important time for nitrogen uptake is from V4-V8 when the plant is determining the maximum size of the ear it can produce.

Phosphorus does not move in the soil, which means that it needs to be placed where a plant will be able to access it. Broadcasting an immobile nutrient across the entire field will result in large proportions of the phosphorus not being available to the plant.





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## [ FURROWJET ]

The FurrowJet attachment firms the seed in the trench whilst placing bands of liquid fertilizer on and near the seed, which is perfect place to apply phosphate. The FurrowJet attachment can place starter fertilizer in the furrow and also 2 cm to each side of the seed avoiding the risk of seed burn.



## [ CONCEAL ]

The Conceal attachment is cleanly tucked into the row unit and places liquid fertiliser in the soil 7.5cm away from the seed which is ideal for nitrogen applications. Conceal is a combination of a gauge wheel that has a groove in it, and a knife running in the groove. The knife is guided by the gauge wheel so that placement is always exactly same distance from the seed no matter how uneven the seedbed is.



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## [ CLEANSWEEP ]

High volumes of in-furrow crop residue can cause problems with late emergence, seed placement, disease and nutrient lock up. Therefore; setting row cleaners correctly is essential but historically this has been a frustrating and time consuming process. The Precision Planting SmartFirmer will display the in-furrow residue levels on the 20/20 Monitor so the operator is constantly informed and can then use the CleanSweep controls to make row cleaner adjustments from the cab on the go.



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## [ DELTAFORCE ]

The Running a single downforce setting across an entire field causes yield loss because the setting is rarely correct. Too much downforce and the planter will be causing compaction, not enough downforce and the planter will not consistently penetrate the soil. Precision Planting DeltaForce is an automated row by row downforce control system that measures and adjusts every time it changes so your seed will be consistently planted in the optimal growing environment.



DeltaForce replaces previously used springs or airbags with hydraulic cylinders and load cells that measure how much weight is being carried on the row unit gauge wheels and keep it consistent. The operator sets a weight that should be carried on the gauge wheels, and DeltaForce does the rest, maintaining the same weight on the gauge wheels of every row.

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**PPX****[ 20:20 CONTROLS ]**

The new 20|20 Monitors provides the most advanced agronomic picture you've ever seen as it controls you planter from the live data it collects. The new 20|20 monitor manages all Precision Planting components to control population, downforce, liquid, multi-hybrid planting and high speed planting, all while sensing the furrow.



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## [ FURROWFORCE ]

FurrowForce is a two-stage closing system that adapts to your planting conditions to remove air pockets, cover the seed and firm soil to the correct density.

+

**The first stage, notched wheels work to close the seed furrow from the bottom up, eliminating air pockets.**

+

**The second stage, stitch wheels carry weight on them to firm the soil over the seed to retain moisture.**

FurrowForce also offers the option to add load cells to measure and set the weight on the closing system from the 20|20 monitor. When a load cell measures more or less weight than has been set on the 20|20, the FurrowForce system will automatically adjust row-by-row the force applied to the unit.







OPTIONAL EQUIPMENT

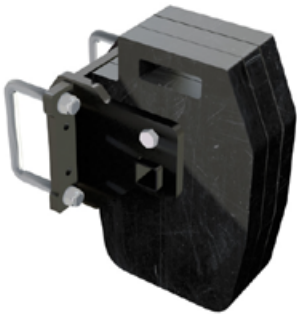
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[ FT2200 ]



[ LIQUID FERTILISER TANK ]



[ WEIGHT KIT ]



[ GAUGE WHEELS ]



[ DELTAFORCE ]



[ V APPLY ]



[ CONCEAL ]

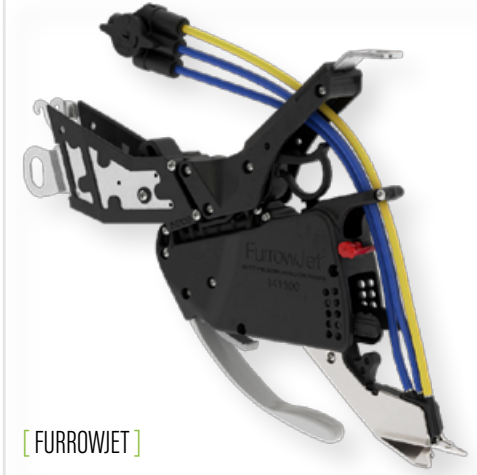


[ KEETON LOW STICK ]

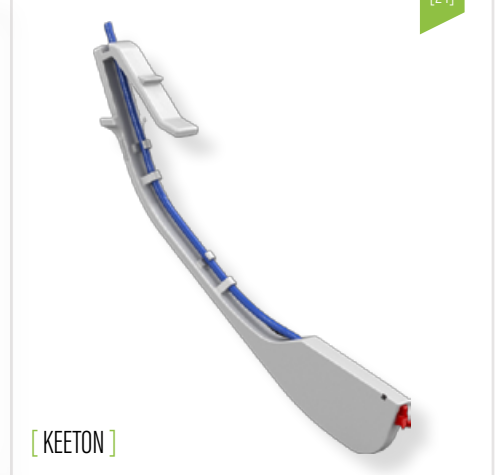




[ SMARTFIRMER ]



[ FURROWJET ]



[ KEETON ]



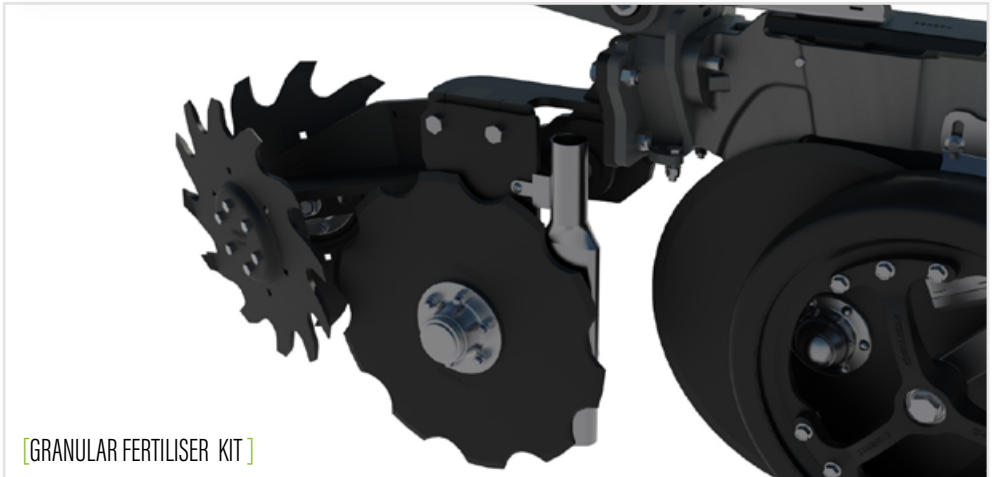
[ SEEDER FORCE LOAD CELL ]



[ CLEANSWEEP ]



[ FURROWFORCE ]



[ GRANULAR FERTILISER KIT ]





**HORIZON**

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