

MONOSEM

No. 1 Precision Planter



Built by
Carrotech



Most accurate and durable seed meter.

- **Accepts irregular seed shapes and sizes without planting skips or doubles**
- **Aluminium construction keeps it's precision during the entire lifespan of the planter**



Most accurate and durable dry fertiliser meter

- **Corkscrew auger handles poor quality fertiliser without fertiliser build-up**
- **Highly accurate design for even and consistent fertiliser output row by row**





Available with Monoshox[®] shock absorber

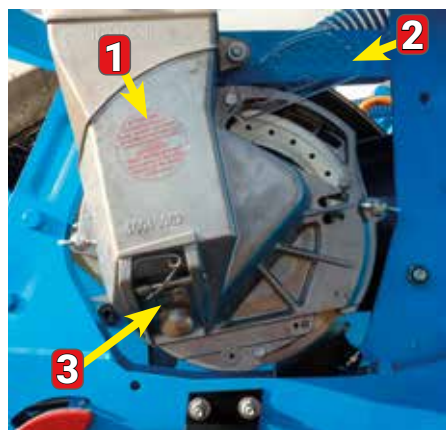
- Reduces row-unit bounce and maintains planting depths at higher speeds
- Extra strong parallel linkage with 22mm shaft through row-unit



No-nonsense design

- Easy to set up, easy to operate and low on maintenance
- Straight forward design, lowest possible amount of bearings, shafts and chains



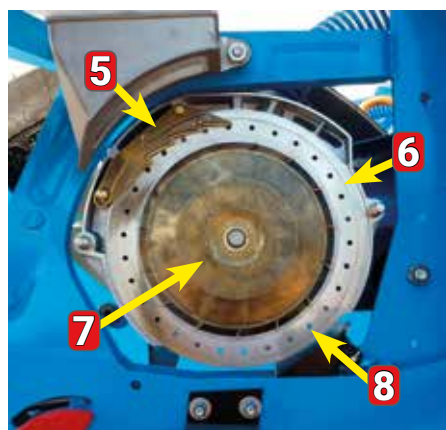


- (1) **Cover (outside)**
Cast aluminium
- (2) **Control Window**
Operator can easily see the result of his adjustments
- (3) **Clean Out Trap Door**

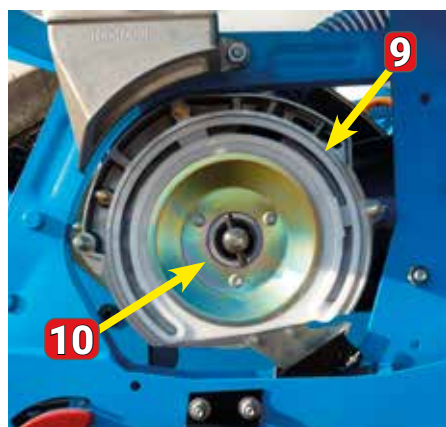


Cover (inside)

- (4) **Brass Seed Wiper**
Directs seed release to guarantee precise seed spacing
- (5) **Adjustable Brass Singulator**
Singulator
Eliminates doubles without creating skips



- (6) **Seed Disc**
1.5mm stainless steel
- (7) **Brass Agitator**
- (8) **Seed Drop Point**
Right above seed tube
- (9) **Wear Gasket**
Teflon gasket behind seed disc will last for many years



- (10) **Hold Down Plate**
- (11) **Meter Main Body**

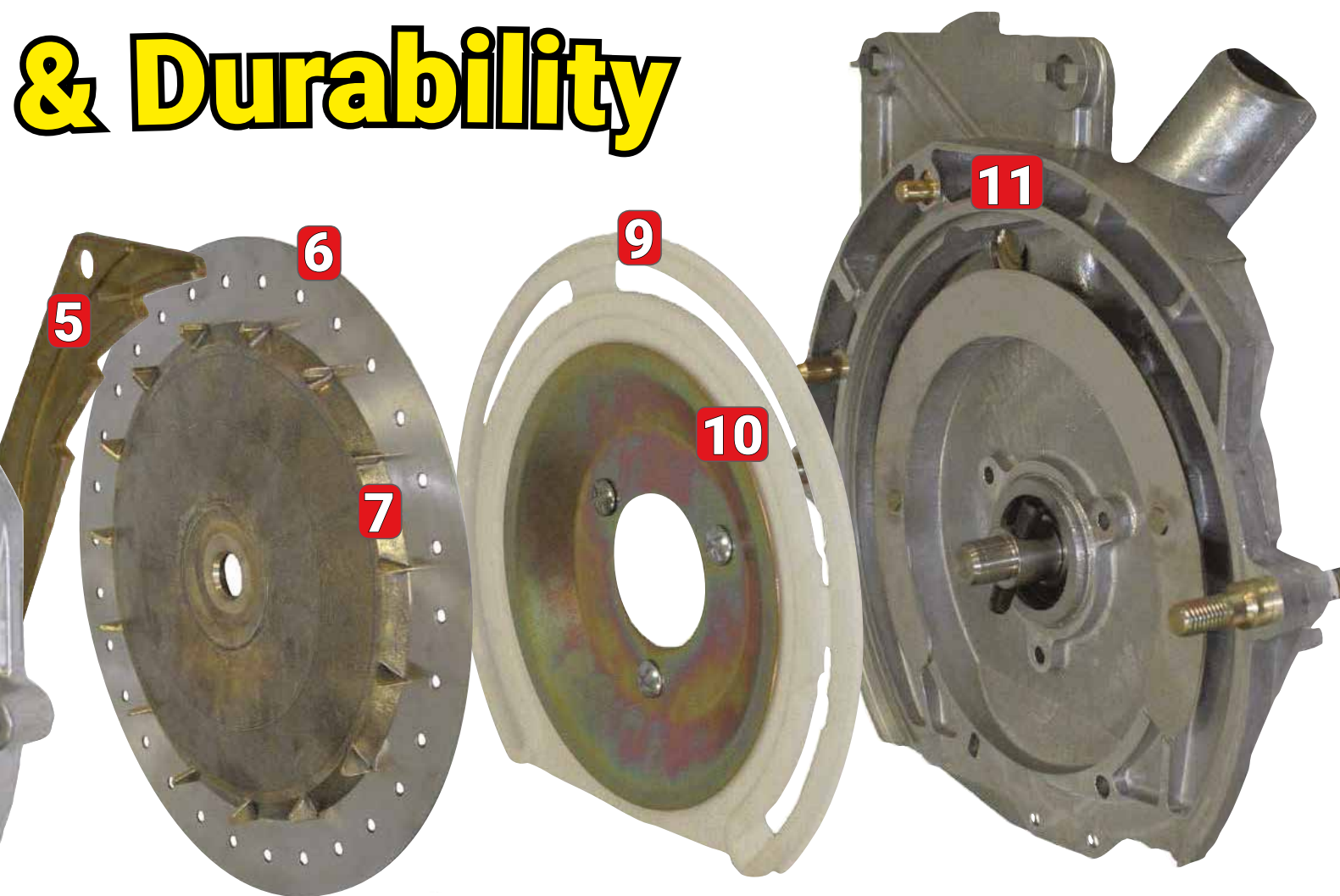
Precision



The lever on the left side



& Durability

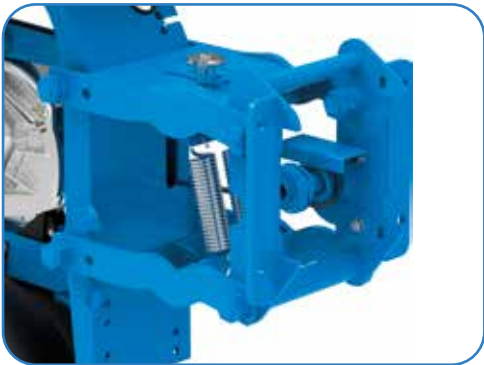
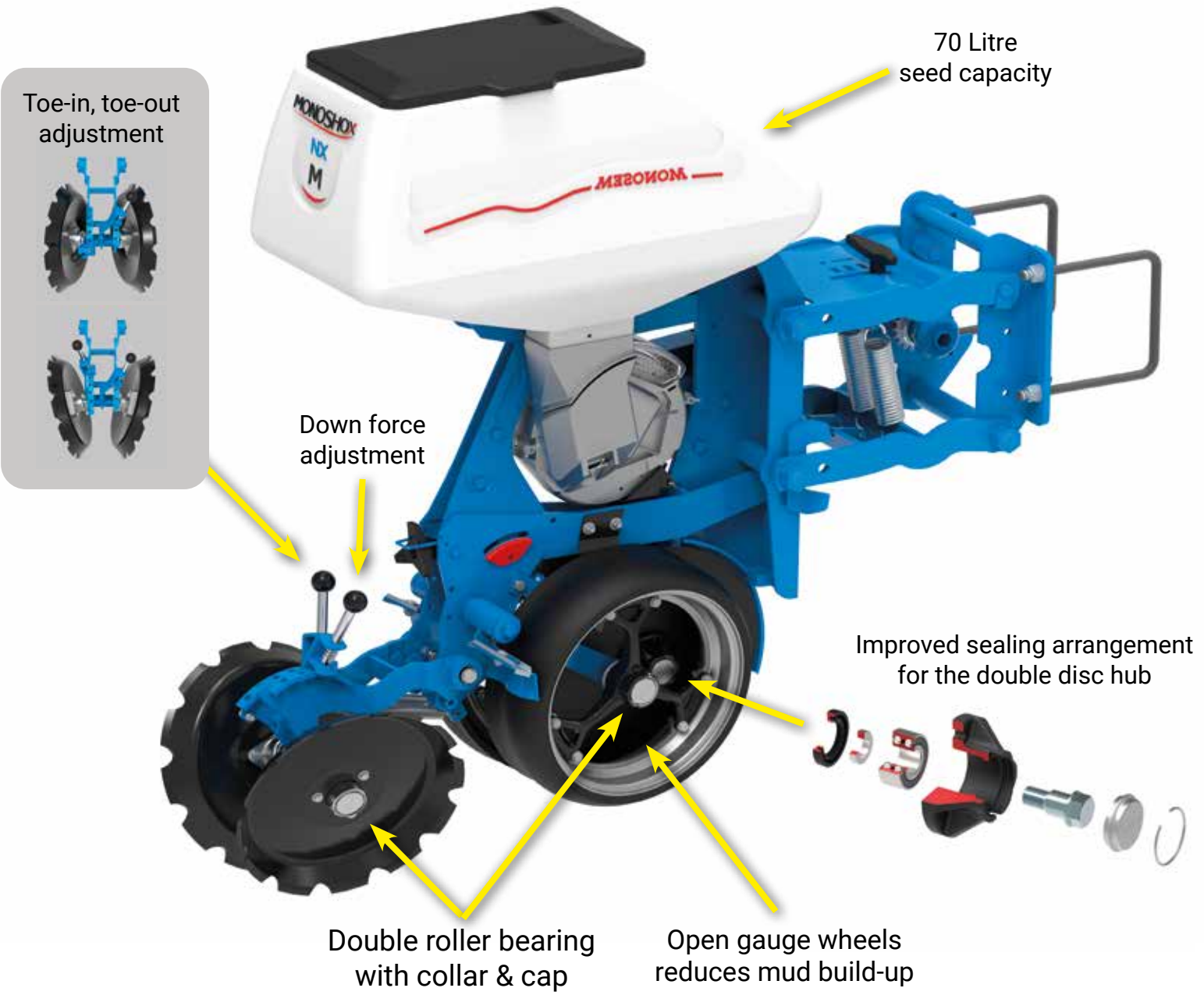


Adjusting the Seed Singulation :
of the meter's main body adjusts the Singulator on the inside.

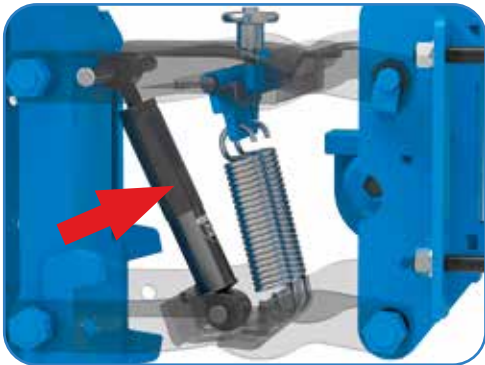
**The more the lever is set towards PLUS
the less aggressive the Singulator.**

**The more the lever is set towards MINUS
the more aggressive the Singulator.**





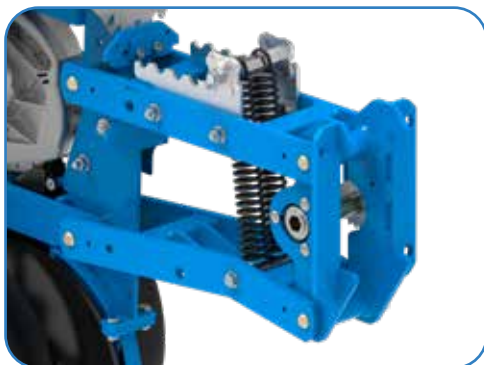
Heavy duty parallel linkage 350mm long, 250mm wide with 22mm pins and bushings



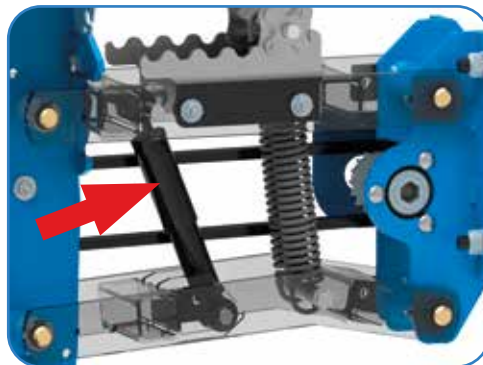
Optional SHOCK ABSORBER reduces row unit bounce to maintain consistent planting depth



200mm wide face plate to mount a large variety of residue managers



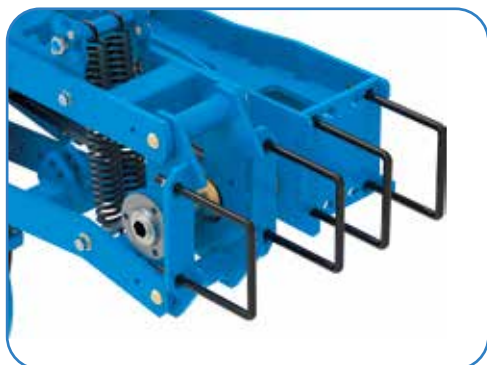
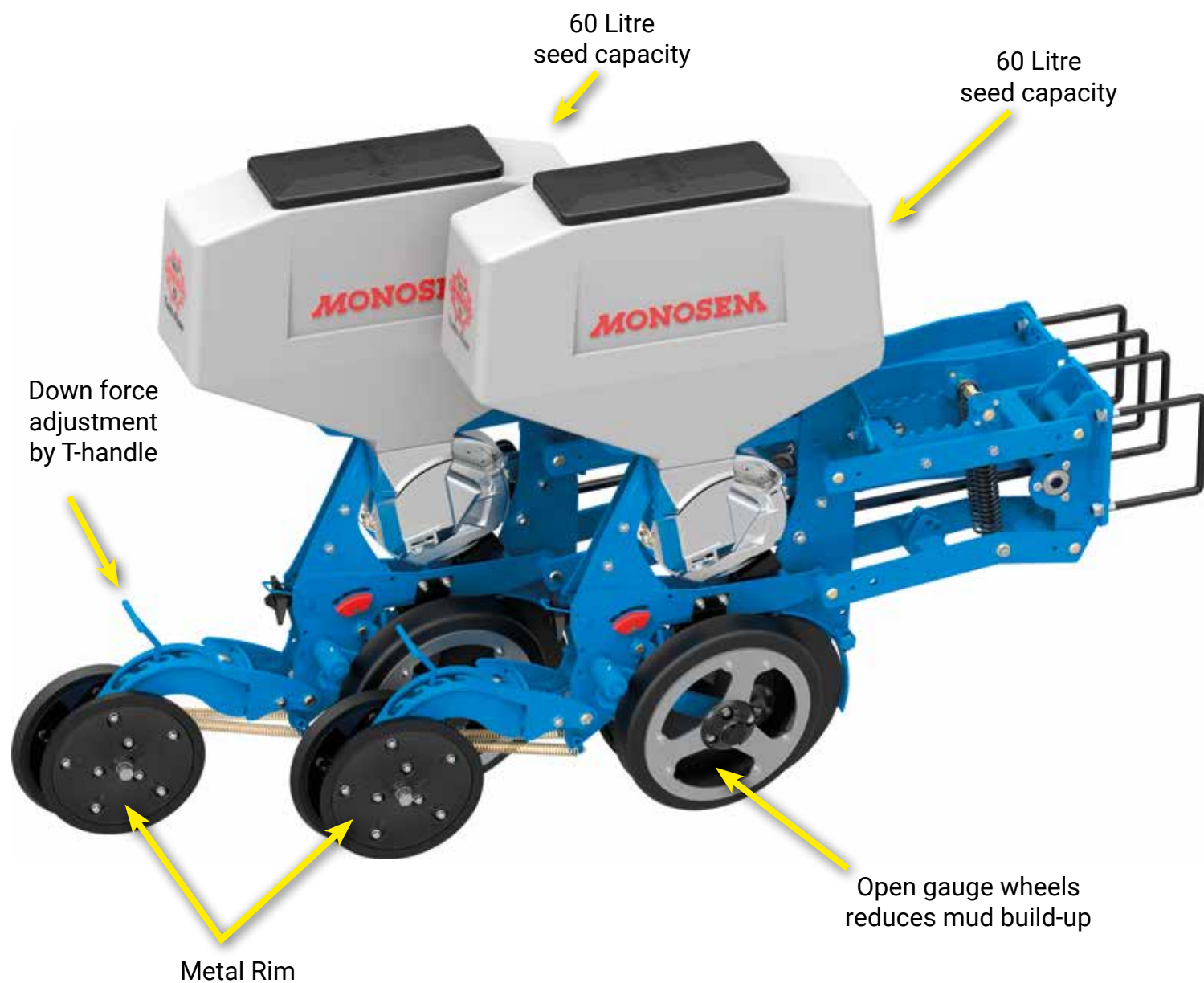
Heavy duty narrow parallel linkage
470mm long, 150mm wide with
22mm pins and bushings



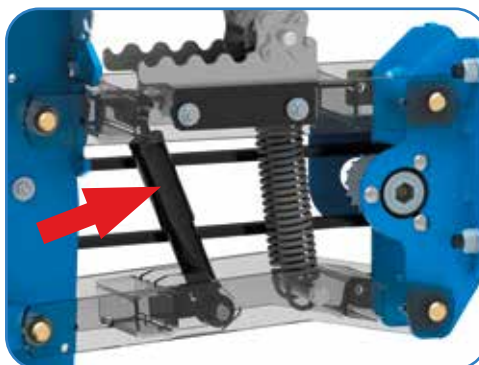
Optional SHOCK ABSORBER
reduces row unit bounce to
maintain consistent planting depth



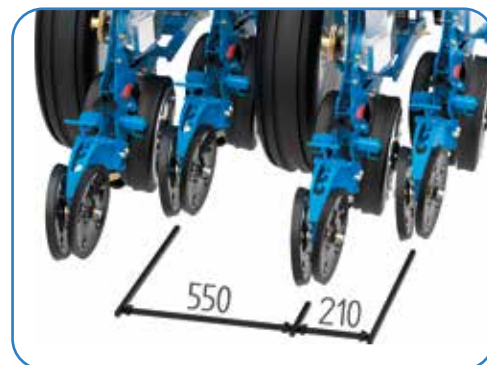
Optional : Mounting bracket for clod
deflector or fixed row cleaner



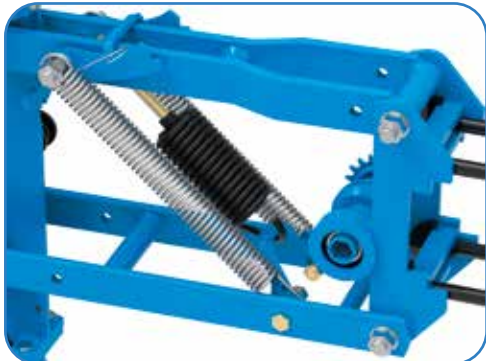
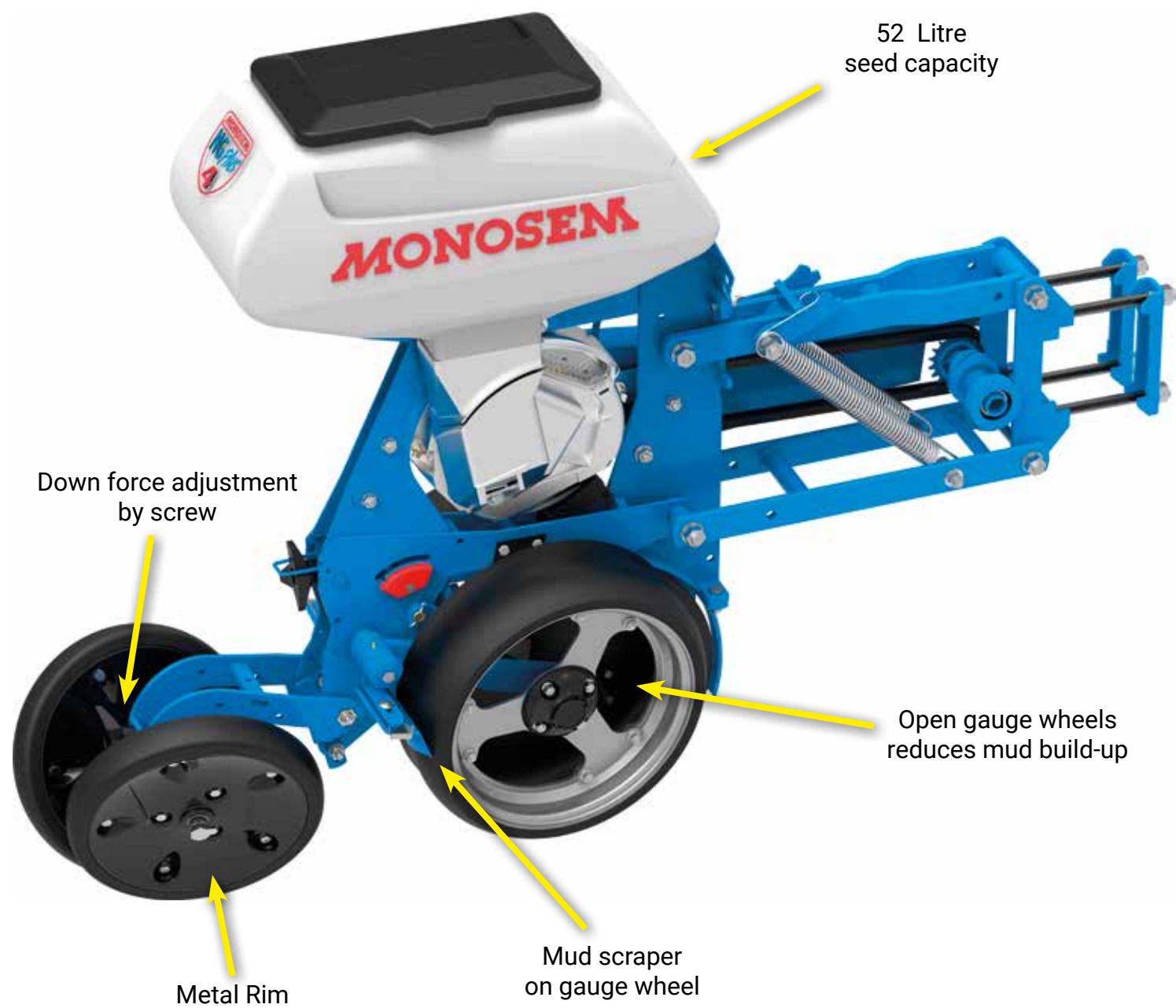
Optional : Twin Row units can be equipped with clamps for 3-point mounted frames.



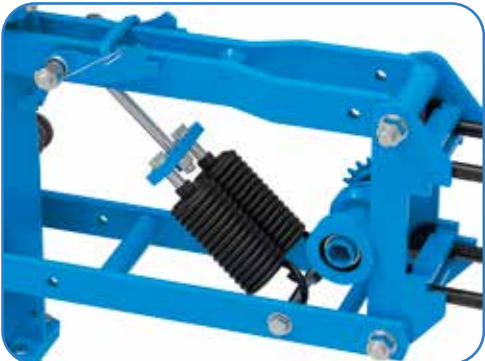
Optional : Twin Row units can be equipped with Monoshox linkage and shock absorber.



Minimum row unit distances :
210mm from row to row and
550mm from row to row with planter
wheel in between



Optional : Heavy Duty adjustable down force spring in addition to standard springs



Optional : Super Duty adjustable down force double spring in replacement to standard springs



Optional : Mounting bracket for clod deflector or fixed row cleaner

Fertiliser tools include



510mm Single Disc

or



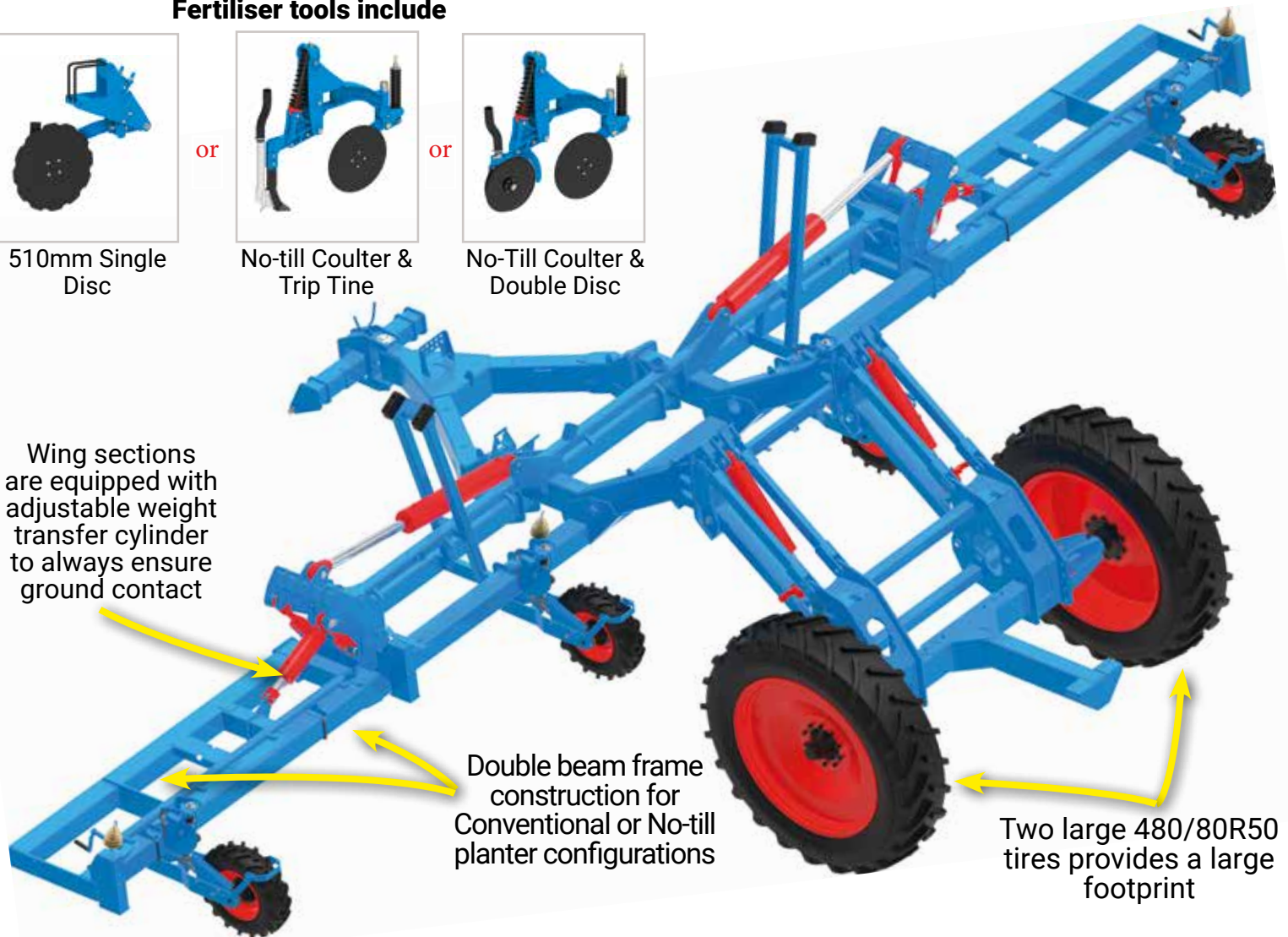
No-till Coulter & Trip Tine

or



No-Till Coulter & Double Disc

Wing sections are equipped with adjustable weight transfer cylinder to always ensure ground contact



Double beam frame construction for Conventional or No-till planter configurations

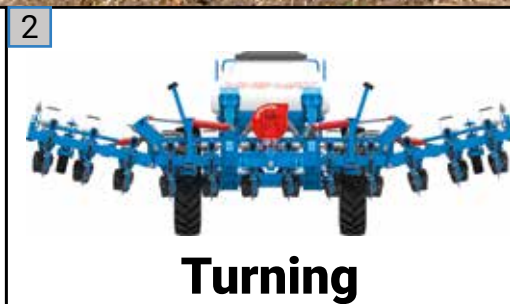
Two large 480/80R50 tires provides a large footprint



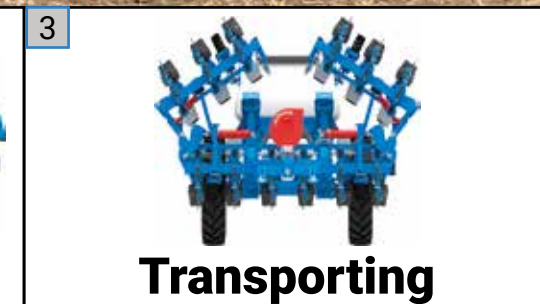
8 to 16-Row Planters



Planting



Turning



Transporting



WING-MAX planters are offered with:

- Vertical folding frame with hydraulic weight transfer
- 5500L central fertiliser hopper for dry or liquid fertiliser

A) Mechanical option

- Fully ground driven seed and fertiliser

B) Electric option

- Variable electric seed and hydraulic fertiliser drive
- Electronic control through an ISOBUS terminal

C) Hydraulic option

- Hydraulic seed and fertiliser drive
- Electromagnetic clutches

QUAD-MAX planter

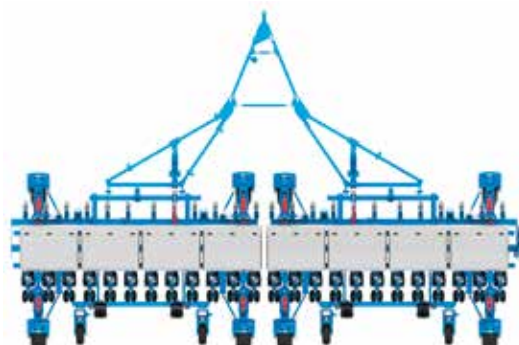
Can be built as a thoroughbred No-Till planter or as a Conventional planter.
Possible row spacings are from 45 to 60cm



Wide configurations are built by hooking 2 sections of 10, 12, 14 or 16 rows permanently side by side.



Single section Quad-Max type A



Double section Quad-Max type A

Planter configurations of up to 32 rows are possible without any heavy framework folding forward or upward for transport.



2 section QUAD-MAX type A in transport position



2 section QUAD-MAX type A in planting position

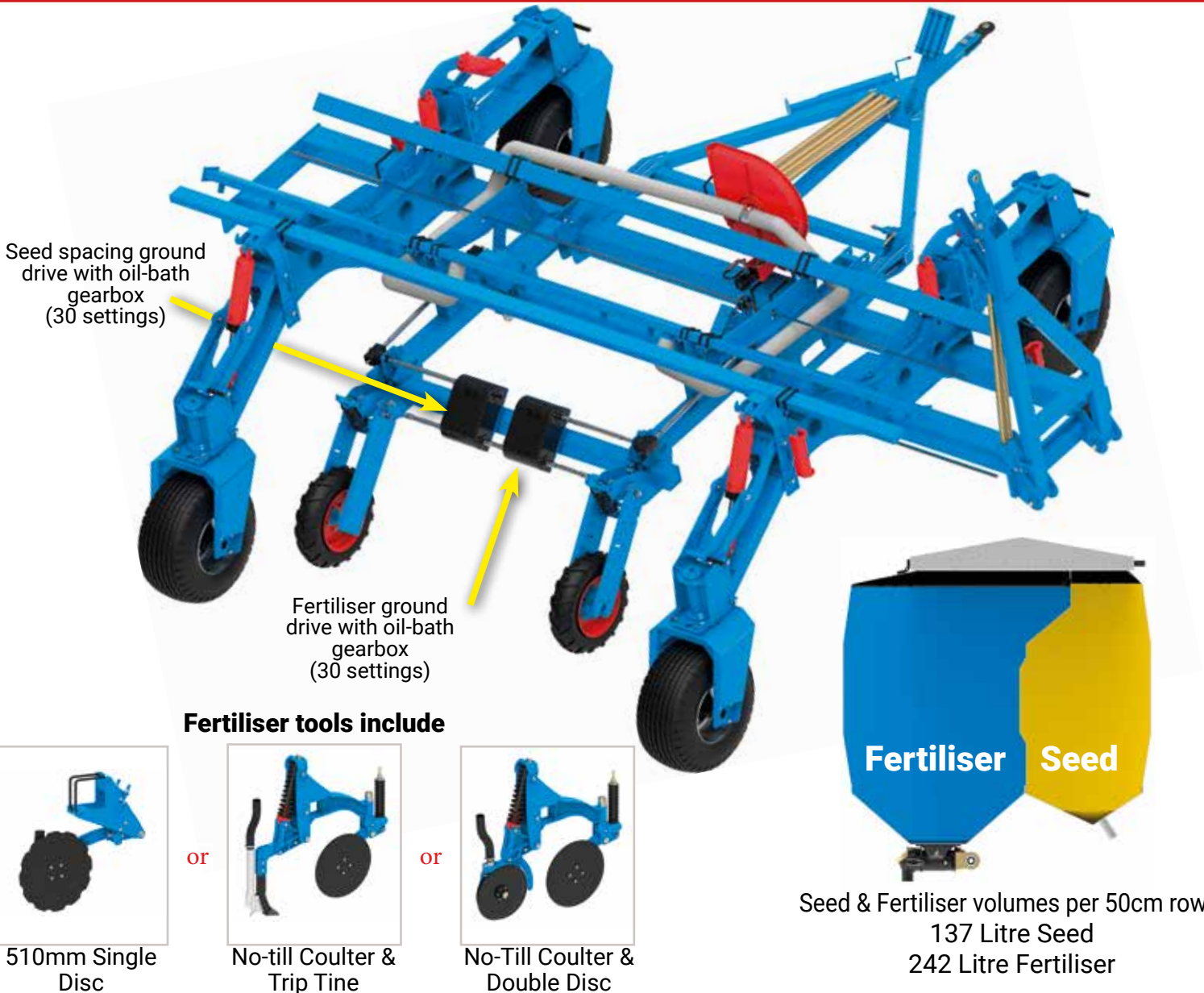
10 to 32-Row Planters

Huge fertiliser and seed capacity on top of each row.

No air assisted delivery of seed or fertiliser needed.

No horizontal pipes.

No additional hydraulic fan.

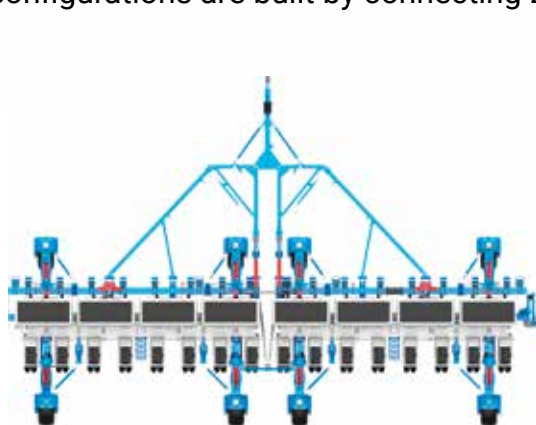


QUAD-MAX planter

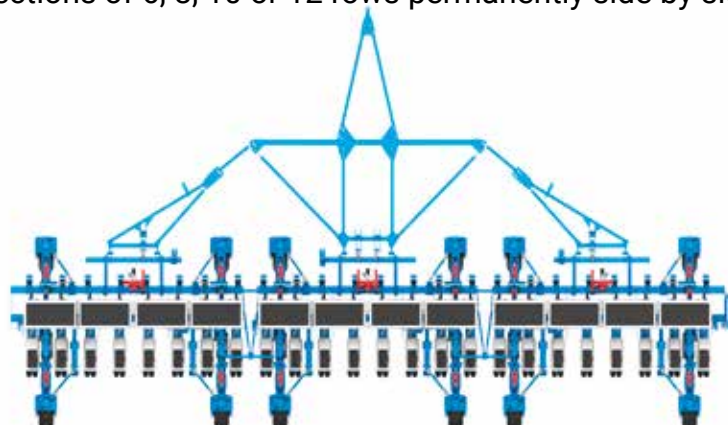
Can be built as a thoroughbred No-Till planter or as a Conventional planter.
Possible row spacings are from 60cm to 152cm



Wide configurations are built by connecting 2 or 3 sections of 6, 8, 10 or 12 rows permanently side by side.



Double section QUAD-MAX type B

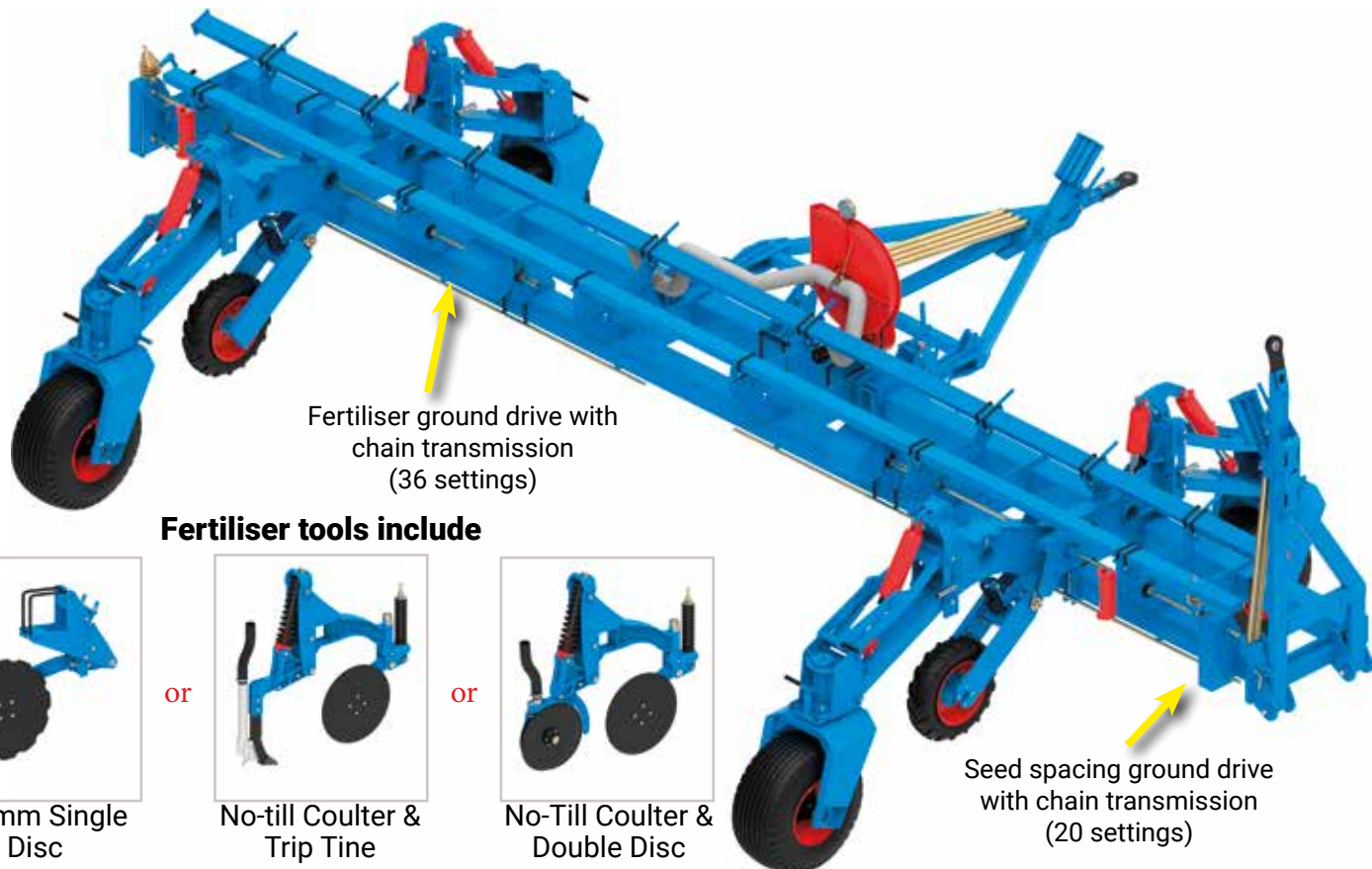


Triple section QUAD-MAX type B



8 to 36-Row Planters

600 Litre fertiliser bins (300 Litre per row) on frame. 70 Litre seed hoppers on row units.
No air assisted delivery of seed or fertiliser needed. No horizontal pipes. No additional hydraulic fan.



Fertiliser ground drive with
chain transmission
(36 settings)

Fertiliser tools include



510mm Single
Disc

or



No-till Coulter &
Trip Tine

or



No-Till Coulter &
Double Disc

Seed spacing ground drive
with chain transmission
(20 settings)

Our PULL TYPE FRAMES are heavy and robust. The straight forward design of the drive and lift system make them easy to set and a pleasure to operate.

WELDED CONSTRUCTION with one 178mm and one 127mm square beam

The CONTACT DRIVE is reliable and maintenance free. It is designed with short chains and a minimal number of shafts and bearings.

LARGE DIAMETER TYRES carry the planter with a big footprint.

The SIDE SEED SPACING GEARBOX is easily accessible and allows for quick adjustment without any tools.

Fertiliser tools include



510mm Single Disc

or



No-till Coulter & Trip Tine

or



No-Till Coulter & Double Disc



3 to 12-Row Planters



Wheels with a 7.5x20 tyre are fitted for row spacings of 76cm and narrower.

TWO OPTIONAL WHEEL SIZES



Wheels with a 12x18 tyre are fitted for row spacings of 91cm and wider.



Planter frame height is easily adjusted using clip-on spacers



Triple-lip sealed SKF flange bearings on wheel hubs



OPTIONAL CATWALK & RAILING

**INCREASE YOUR YIELD!
PLANT MORE SEEDS WITHOUT
PLANTING TOO CLOSE**



Better plant spacing

- Less competition for nutrients and moisture
- Better root development
- More space for photosynthesis
- Better growth

Quicker canopy

- Controls weed pressure
- Conserves moisture



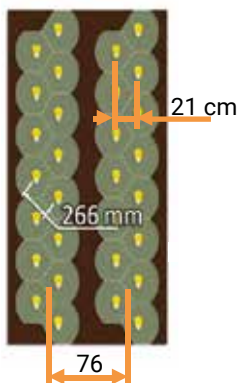
80,000 seed planted per Ha
with:

Single Row



Theoretical
Root Area per
plant: 637cm²

Twin-Row



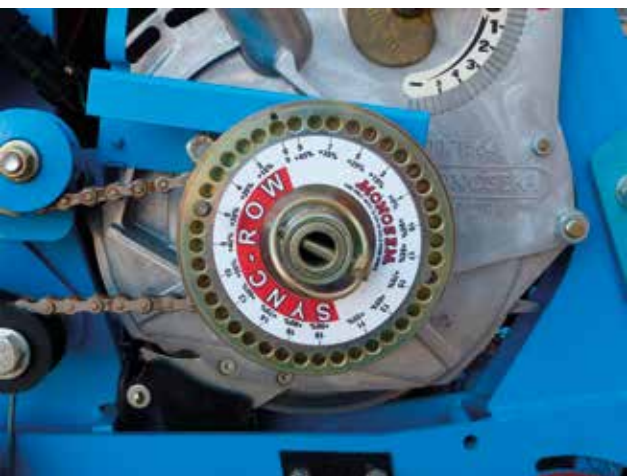
Theoretical
Root Area per
plant: 917cm²



The Original



ADVANTAGES OF THE TWIN-ROW SYNC-ROW®



Planting in a diamond seed drop maximises space between each plant and reduces competition for nutrients. On Monosem planter's independent row units driven by a shared hex shaft ensures the Sync-Row® diamond pattern remains consistent pass after pass.

Sync-Row® Timing system designed to maintain the staggered seed and create the diamond pattern :

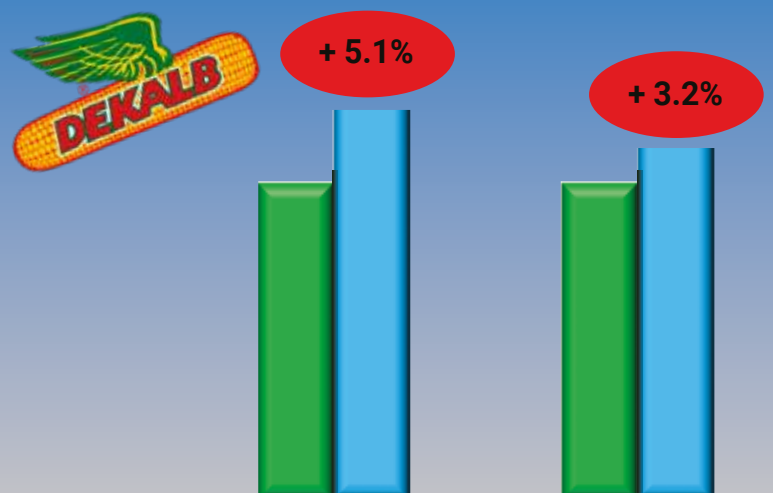
- Easily adjusted with a simple turn of the dial, less than one minute per twin-row pair
- Adjusts the position of the seed disc to synchronise the seed drop

The average gain with Twin-Row Sync-Row® in 2011 was + 5.1% with a -3.5% to + 9.3% variance according to varieties.

The average gain with Twin-Row Sync-Row® in 2012 was + 3.2% with a +1.5% to + 4.4% variance according to varieties.

Source: Trials carried out in partnership with Dekalb in France in 2011 and 2012. Comparison Single line planting (commercial seed population) and Twin Row Sync-Row® planting (seed population + 20%)

Basis of 7 variances tested in 2011 and 2012 in different regions of France.



MONOSEM
3-point
mounted
planter with
MONOSHOX
row units,
four 250 litre
fertiliser
bins, higher
wheel units
and side seed
spacing



**3-POINT MOUNTED
FRAMES** have ample
space for the fertiliser
tools in front and row
units on the rear.



The **SIDE SEED SPACING
GEARBOX** is easily accessible
and allows more than 18
standard settings

HIGHER WHEEL UNITS use
6.5/80x15 tyres and drive a
shaft on top of
the rear beam



Mount row units as close as 38cm apart with
OPTIONAL FORWARD FACING WHEEL UNITS

2 to 16-Row Planters

3-POINT MOUNTED FRAMES are strong, versatile and allow for a vast variety of row configurations

WELDED CONSTRUCTION made with two 127mm beams

CENTRAL SEED SPACING GEARBOX provides 18 possible settings

OPTIONAL PLATFORMS give easy access to the fertiliser bins

STANDARD WHEEL UNITS have 6.5/80x15 tyres and drive a shaft underneath the rear beam.

MONOSEM 3-point mounted planter set at 76cm with NGplus4 row units, two 350 litre dry fertiliser bins and MICROSEM granular applicator.



Efficient & Reliable !

Three sizes ensure a regular vacuum for optimal operation of the seed meter to suit all planter configurations.



Standard Turbofan



High Output Turbofan



Extra High Output Turbofan



**Standard drawbar with long
wide-angle PTO shaft**

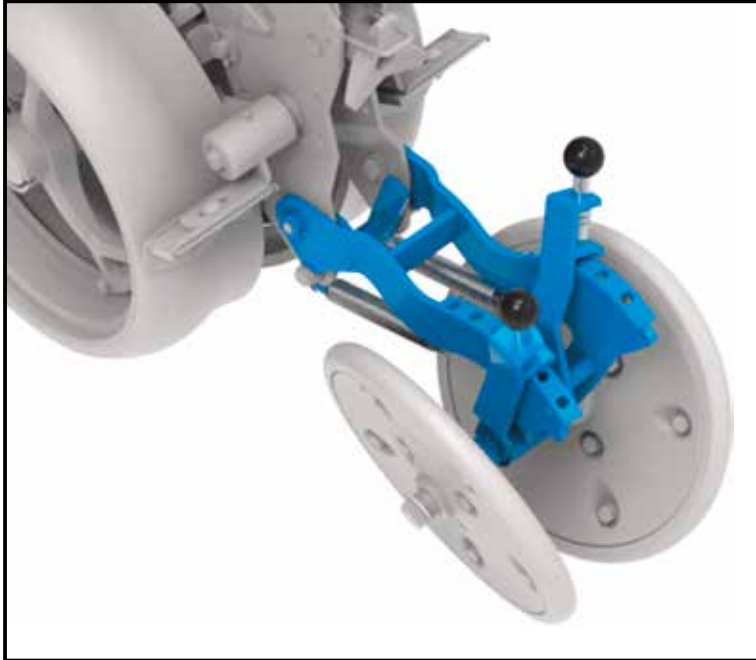


**Optional hydraulic drive
with vacuum gauge**



**Drawbar for mounting to lift
arms & short PTO shaft**

Adjustable Rear Wheel Bracket Options



Two Lever Bracket

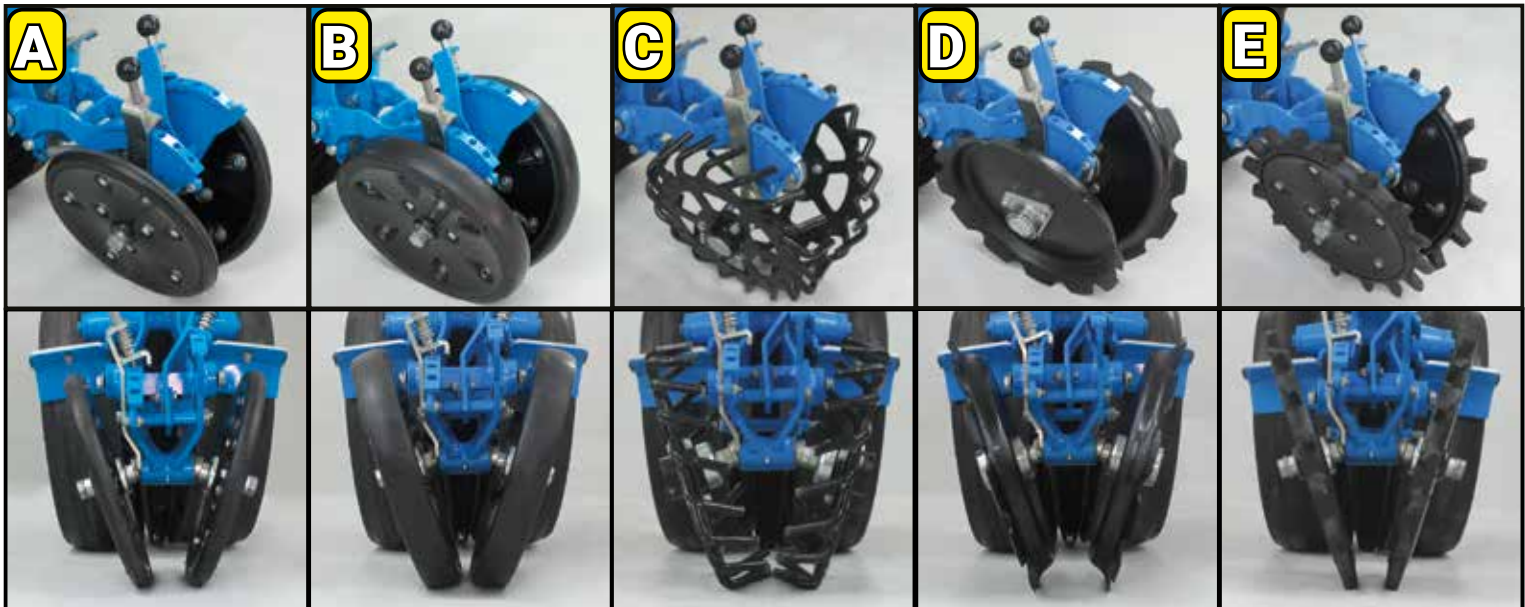
(adjustable toe-in, toe-out and down force)



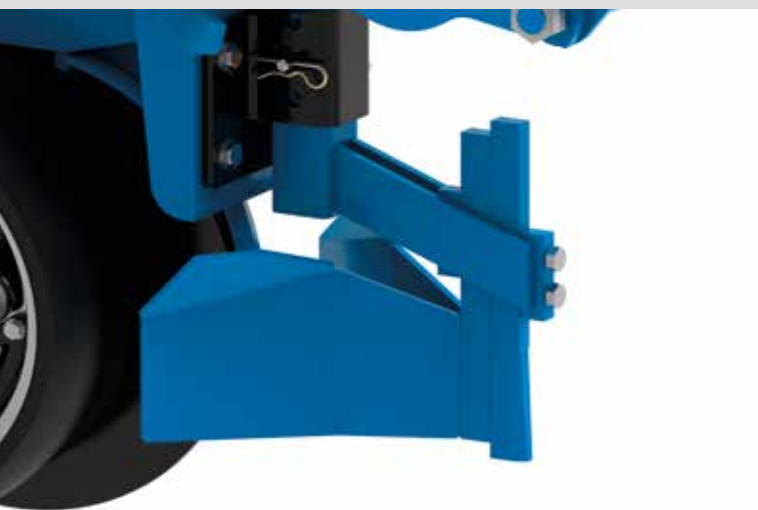
Screw Bracket

(adjustable down force only)

Wheel Options



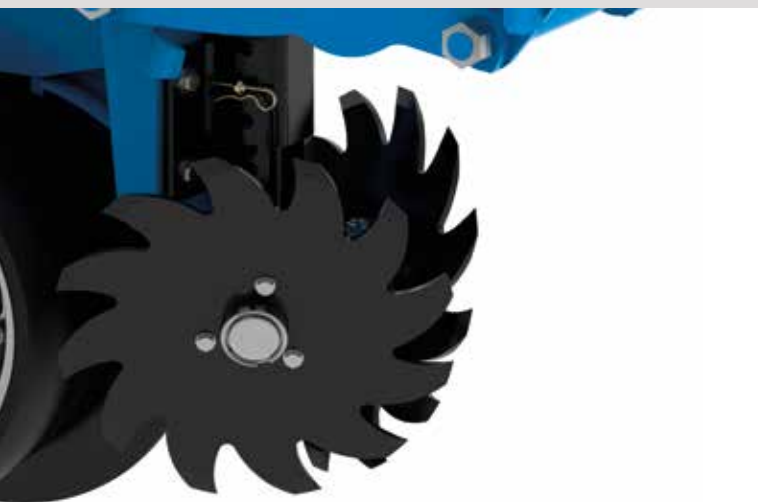
- A** 25mm Narrow Rubber Wheels
 B 50mm Wide Rubber Wheels
 C Steel Finger Wheels
 D Boron Steel Notched Wheels
 E Poly Cracker Wheels



Clod Deflector



Wavy No-Till Coulter



Fixed 13 Inch Row Cleaner



Fixed 14.5 Inch Row Cleaner



Floating Row Cleaner



Fixed Row Cleaner for Twin-Row

« The professional touch »

The press wheel has been used for years on the vegetable and sugar-beet planters. MONOSEM has adapted this concept to the multi-purpose planters with a large diameter press wheel, the PRO wheel.



- Constant seed to soil contact
- Prevents seed rolling or bouncing in seed trench
- Enhanced constant seed depth
- Improves constant emergences
- Optimal germination



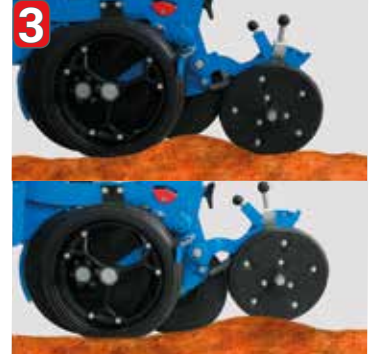
Large diameter press wheel

The PRO-wheel is a flexible rubber with a large 300mm diameter. The firm outer surface allows for good seed to soil contact and the hollow core provides a gentle touch to minimize cracking of seed and prevents excessive mud build up.



Combined adjustment

The packing down pressure of the PRO wheel is adjustable. It is combined with the pressure adjustment of the rear packing unit (a).



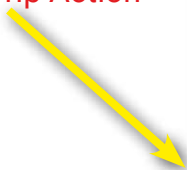
Independent wheel

Independent from the planting system and the rear press unit, the PRO wheel follows the ground contours for a consistent pressing.

Fertiliser Opener Options for No-Till:

NO-TILL COULTER & TINE COMBO
for hard soils

Auto Reset
Trip Action



NO-TILL COULTER & DOUBLE DISC COMBO
for semi hard soils

Double Disc
exchangeable
with Trip-Tine



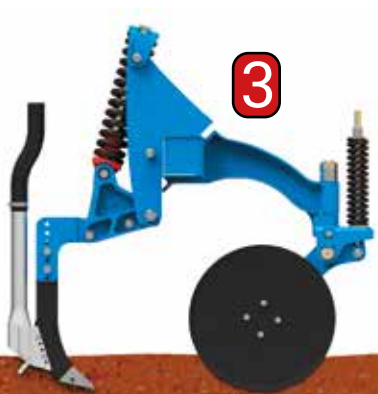
Auto Reset Trip Action



1



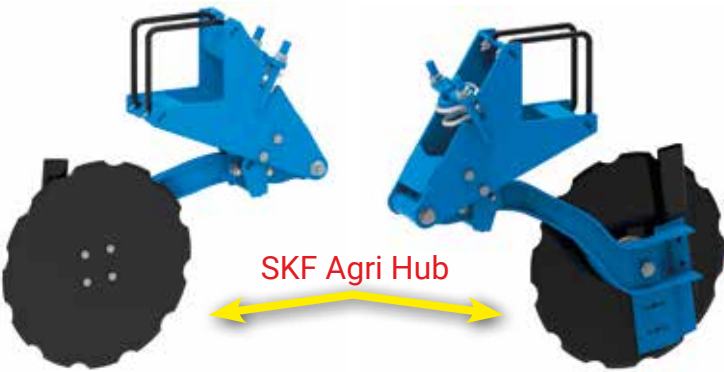
2



3

Fertiliser Opener Options for Minimum or Conventional Tillage

510mm SINGLE DISC FERTILISER OPENER



SKF Agri Hub

Left View

Right View

460mm SINGLE DISC FERTILISER OPENER



SKF Agri Hub

Left View

Right View

No-Till Coulter and Tine



510mm Single Disc Opener



Dry Fertiliser Bin Capacities Available



250 Litres

350 Litres

600 Litres

Liquid Option Bin Capacities



600L Tank Drawbar Mounted
Additional sprayer/ in-furrow system



1000L Tank in Cradle
Liquid Fertiliser planter

**HIGHLY ACCURATE & LOW IN MAINTENANCE
EVEN WITH**

- **HIGH FERTILISER RATES AND**
- **POOR FERTILISER QUALITY**



- Replaceable Polyacetal moulded lining
- Great durability
- Low friction with fertiliser

- Overflow for when fertiliser opener is blocked
- Rain cap can be taken off to monitor flow



- Angle drive gear system
- Low friction and torque

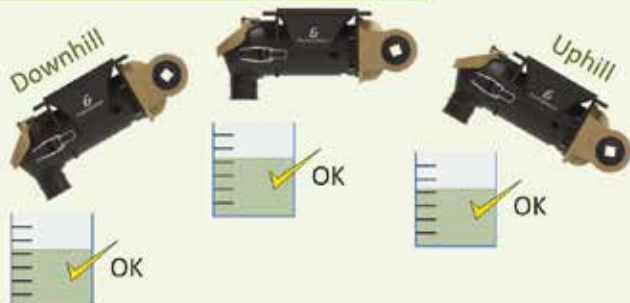
- Double sealed ball bearings
- Special grease ensures low torque and high durability

- Five fold protection between bearing and fertiliser
- Self cleaning discharge hole

- Self-cleaning auger
- Easy to exchange
- High and low output available.

Reliable Flow rate:

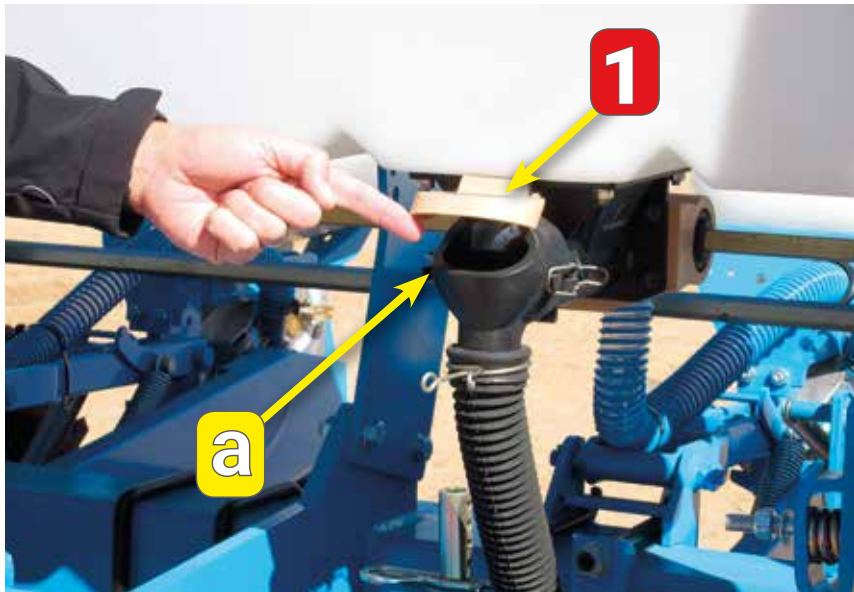
Even Up / Downhill Distribution



Even Linear Distribution



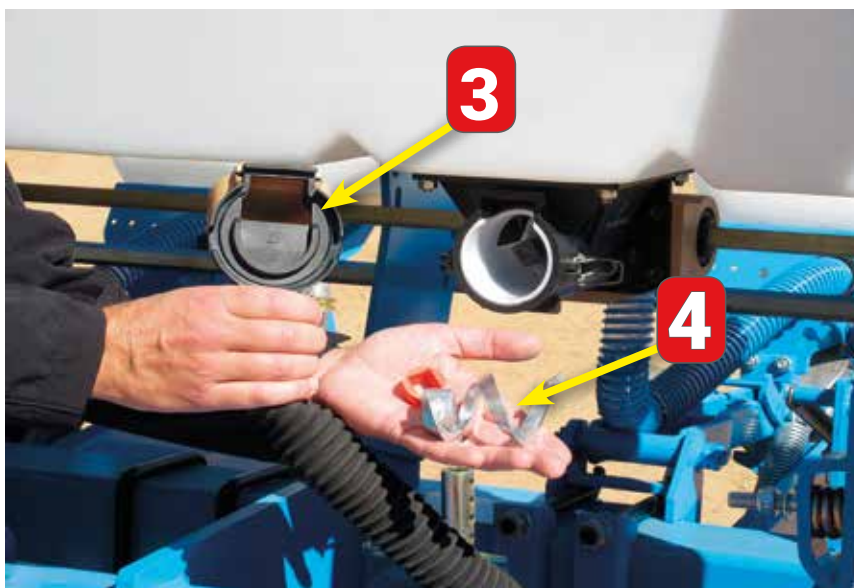
Fertiliser augers visible from tractor



The rain cap **1** can be taken off to enable the tractor driver to see the fertiliser flow. Should there occur a blockage in the opener, the fertiliser will overflow through opening **a** even if the rain cap is in place.



Emptying, cleaning and checking of the FertiSystem auger is made easy. Just clip off two latches and the front spout **2** can be taken off. Thereafter the auger screw **4** can be pulled out by hand.



The overflow plate **3** inside the outlet spout ensures uniform fertiliser distribution even if the planter runs uphill, downhill or leans sideways on slopes. The corkscrew design of the FertiSystem auger screw make it self cleaning and fertiliser is unable to clog around this screw even if damp or powdery.

Variety of integrated systems available from



Possible options include :

- Hydraulic drives for seed or fertiliser
- Electric drive for seed or fertiliser
- Variable seeding rate
- Variable fertiliser rate
- Individual row shut-off
- Section shut-off
- Fertiliser blockage monitoring
- Seed monitoring

9-pin ISOBUS connector



One type inductive sensor for :

- ground speed
- shaft speeds
- up / down positions



Electric Seed Drive



Electric Fertiliser Drive



Hydraulic Fertiliser Drive



Hydraulic Seed Drive

- Electric drive
- Less bearings
- No chains
- No idlers
- No tensioners
- No clutches
- No hex. shaft





One MICROSEM hopper per two row units

Adjustment of the Microsem

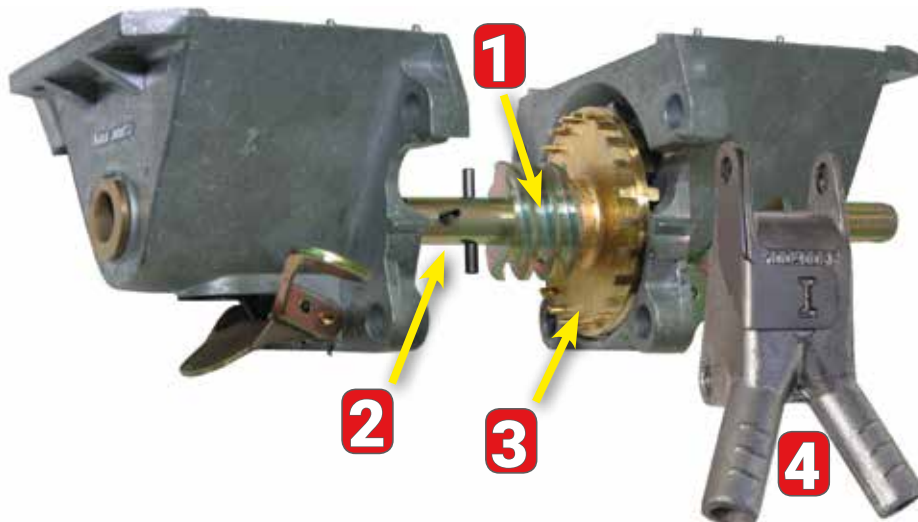


Adjustment of the microgranulators is made using a gearbox with 18 ratios. If needed, other sprockets are available and also a quick declutching system.

20 & 40 litre hoppers are available



Distribution by auger



The principle of the Microsem distribution is based on a system of augers. The micro-granules contained in the hopper are picked up by 2 augers **1**. The agitators **2** allow for a regular feed of these augers. A finger wheel **3** then distributes the product uniformly in the chutes **4**.



Fertiliser Applicators also available

Carrotech
MANUFACTURES

MONOSEM

PLANTERS FOR
SOUTH AFRICA



Carrotech Main Building



Idle Winds Estate
Waarburgh Road
N1 Exit 39 to Klipheuwel
7570
Cape Town



021 865 2048



083 233 4266



sales@carrotech.co.za



www.carrotech.co.za