

**SALES MANUAL** 



#### 70 YEARS OF KNOW-HOW...



Sowing is an investment, an essential step that brings the crop to its full potential. All around the world, many farmers have chosen to rely on Monosem technology. Our 70 years of shared history bear witness to this. This trust, based on notions of reliability, sustainability, and agronomic performance, is now strengthened by technological innovations. Whether on seed planters or hoeing machines, intelligence is at the heart of Monosem equipment. Our relationship is based on 4 fundamental pillars: ultimate versatility, uncompromising quality of emergence, intelligence in favour of eco-responsibility and a service worthy of the challenge.

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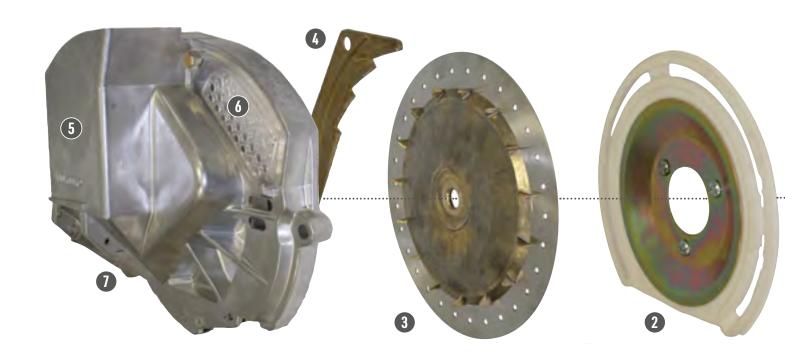
# The pneumatic planters





## The metering system

High quality planting demands a good metering system. This is why Monosem offers all their know how in order to give you an accurate, simple and extremely reliable metering system. This high quality manufacturing has made the Monosem metering system a world wide name. Today for your planting, you too can demand the Monosem reference.



#### **MAIN SEED DISCS**

	Standard discs			Distances	on the row	Other possibilities,
Type of seed	delivered	Number of holes	Diameter of holes	Standard seed spacing gearbox	EasyGear seed spacing gearbox	number and Ø of holes
Maize	DC 3050	30	5 mm	7,2 to 21,3 cm	10,2 to 19,6 cm	18 - 24 - 36 and ø 4,5 - 6 mm
Sunflower	DC 2425 DC 1825	24 18	2,5 mm	9,1 to 26,6 cm 12,1 to 35,5 cm	12,7 to 24,5 cm 16,9 to 32,7 cm	
Sugarbeet	DC 3020	30	2 mm	7,2 to 21,3 cm	10,2 to 19,6 cm	24
Beans	DC 6045 DC 6035	60	4,5 mm 3,5 mm	3,6 to 10,7 cm	5,1 to 9,8 cm	ø 2,5 mm
Soya - Peas	DC 6045	60	4,5 mm	3,6 to 10,7 cm	5,1 to 9,8 cm	
Rapeseed	DC 7212	72	1,2 mm	3 to 8,9 cm	4,2 to 8,2 cm	36 - 60 - 120
Cabbage	DC 3612	36	1,2 mm	6 to 17,8 cm	8,5 to 16,4 cm	72 - 120
Sorghum	DC 7222	72	2,2 mm	3 to 8,9 cm	4,2 to 8,2 cm	36
Kidney beans	DC 3060	30	6 mm	7,2 to 21,3 cm	10,2 to 19,6 cm	Ø 5 - 6,5 mm
Peanut	DC 3065	30	6,5 mm	7,2 to 21,3 cm	10,2 to 19,6 cm	36 and Ø 5,5 - 6 mm







#### Scraper

The brass scraper avoids doubles. A spring on the metering box cover maintains the selector perfectly in place against the disc for optimal selection, even with small seeds.





#### Covor

The cover in alloy is specially designed for planting with a minimum of seeds.





#### Cast aluminium metering box

The metering box is made from cast aluminium. Year after year the metering will always be just as accurate and this no matter the variations in temperature.





#### **Control window**

The distribution system is easily accessible, for both adjustments and control. A large transparent window allows for control of the selection after the selector.





#### Wear gasket

The wear gasket in Teflon is in permanent contact with the disc. It ensures the sealing of the disc and it is interchangeable.





#### Total emptying

The emptying trapdoor offers easier operating. Open the trapdoor and it stays open enabling, with the emptying auger supplied as standard equipment, an even easier and more efficient emptying.





#### Discs

The stainless steel discs 1,5 mm thick are very rigid. The agitator, fixed on to the disc stiffens the unit. The changing of the discs is easily made without tools. A complete range of discs for all precision seeds is available.



Metering Box cover with adjustable trapdoor (on option)

### The planting system

Launched in the 70's in the United States, the notion of planting resting on the ground directly in line with the seed drop exists in Monosem since 1989.

Low maintenance, versatility; the "American planting system" has proven its efficiency. Associated with high quality distribution, ours pneumatic planters with double discs enable an optimal use of the planter on large surfaces, thus reducing the operating costs of the planter.





The clod removers or the trash wheels clean the way for the future planting line pushing out clods, stones or trash.





The double discs open the furrow at a depth defined by the gauge wheels.





The tip finishes the bottom of the furrow for an optimal seed placement.





The curved seed chute tube has been specially designed to accompany the seeds gently into the ground and with a perfect accuracy.





The rear press wheel unit\*, made up of 2 V-wheels, closes the furrow around the seed for optimal seed germination.



# A DESIGN which makes all the difference

- Rests on the ground directly in line with the seed drop
- Follows the ground contours
- Exceptional performances in all conditions

### MULTI-PURPOSE USE IN DIFFERENT SOIL CONDITIONS AND SOIL PREPARATIONS

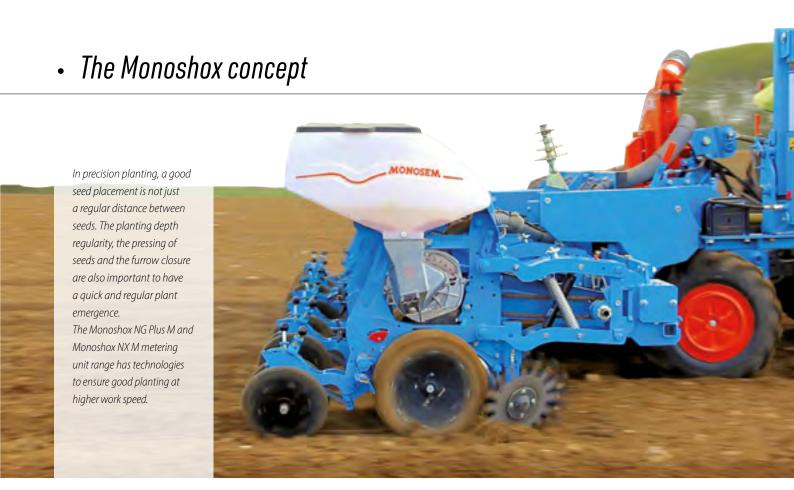






The planting design leaves a wide versatility in the use no matter what the type of soil or the preparation. Planting with double discs can be suited to your soil preparation, either traditional or low till.

<sup>\*</sup> Equipment according to the country



#### A HIGHER WORKING SPEED WITH THE MONOSEM PLANTING QUALITY



Planting at high speed without Monoshox Irregular plant emergence because of irregular distance between seeds and planting depth

Planting at high speed with Monoshox Regular plant emergence because of regular distance between seeds and planting depth



### The NG Plus 4 metering unit

The metering unit is the major component of the Monosem planter. Monosem has conserved on the NG Plus 4 the best of the NG Plus units and has added the operating comfort. Adjustments are made easier for a planter that is always perfectly adjusted enabling planting in optimal conditions.





#### **Parallelogram**

The heavy-duty parallel linkage with a large travel is mounted on interchangeable bushings. Two springs stabilize the metering unit.





#### Safety clutch

Each metering unit is equipped with an audible safety clutch system with automatic clutching for optimal protection of the metering system.





#### **Clod remover bracket**

The adjustment of the clod removers is precise (12 positions) and rapid due to the adjustment system with locking pins. In order to suit different planting conditions, the clod removers are rapidly interchangeable with the trash wheels and this with no tool.





#### **Double discs**

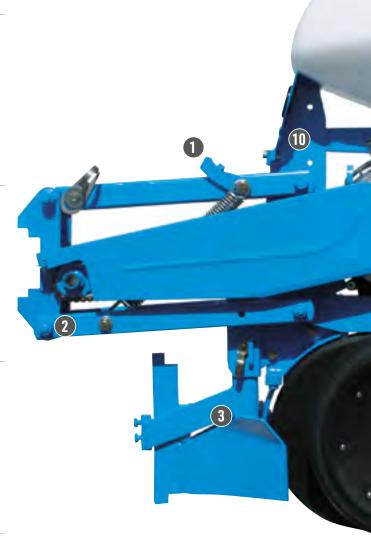
The planting system is made up of two large diameter discs (380 mm) mounted on sealed ball bearings. Together with the inner shoe, this system ensures a constant depth control and planting quality no matter what the planting conditions.





#### Gauge wheels

Large depth gauge wheels (110 mm) ensure an efficient and uniform depth control. Resting on the ground directly in line with the seed drop ensures the unmatched depth consistency that makes the reputation of the NG Plus.









The front facing of the metering unit integrates the passage of the vacuum hose and the seed monitor and signal kit cables.





### **Hopper**

The hopper in high resistance, transparent plastic has a capacity of 52 litres. The cover locks so will not close during filling, even in windy conditions.

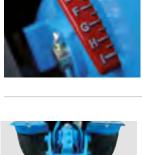


### (8)Depth adjustment

The depth adjustment is easily made using a hand wheel. This type of adjustment ensures a great control precision of the planting depth even for small seeds at a shallow depth.



The depth adjustment index is visible straight away from the rear. It is weather-proof.



#### Open rear press wheel unit

The open rear press wheel unit gives better clearance in sticky conditions.



4



### Gauge wheel arms

The bracket arms of the gauge wheels are assembled on interchangeable bushes. They are helically fluted for a good grease distribution. Scrapers are standard assembly on the gauge wheels.



#### Adjustable open wheel unit

Available on option, the rear, adjustable open wheel unit enables a quick adjustment of the press wheel pressure and the orientation of the press wheels. This press unit offers 20 % more pressure than the standard press wheel unit.

### • The Monoshox NG Plus M metering unit

In order to meet with farmers new expectations, the metering unit has Monoshox NX M exclusive technologies enabling it to be:

- Faster due to its Monoshox.EU suspension with shock absorber,
- More accurate, no matter what the type of seed with the easily removed tip,
- Easier to adjust with its parallelogram that can be rapidly adjusted in pressure and its new rear unit with adjusting levers.





#### Hopper

The hopper in high resistance, transparent plastic has a capacity of 70 litres. The cover locks so will not close during filling, even in windy conditions.





#### Safety clutch

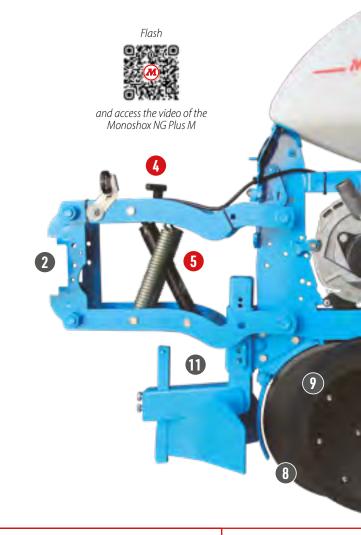
Each metering unit is equipped with an audible safety clutch system with automatic clutching for optimal protection of the metering system.





#### Depth adjustment

The depth adjustment is easily made using a hand wheel. This type of adjustment ensures a greater control precision of the planting depth even for small seeds at a shallow depth. The depth adjustment index is visible straight away from the rear. It is weather-proof.



### Monoshox NG Plus M Exclusive features





## Wide parallelogram with quick adjusting of the pressure

The parallelogram for the Monoshox NG Plus M metering units is equipped with two adjustable pressure springs to rapidly suit the planting conditions. These two springs offer more pressure, retaining the planting unit on the ground and thus guaranteeing a greater stability of the unit.

The pressure exerted by the springs can easily be adjusted and this without using tools.

This new, reinforced parallelogram has pins mounted on bushings and is also wider which improves the unit stability.





### Monoshox.EU Suspension with shock absorber

The Monoshox.EU. like all good suspensions combines pressure springs with a shock absorber specially designed for using on a plantina unit.

Thus, when working the two pressure springs retain the planting unit on the ground and the suspension with shock absorber absorbs the shocks. The precision and the regularity of the planting depth remain optimal.







#### Clod remover bracket

The adjustment of the clod removers is precise (12 positions) and rapid due to the adjustment system with locking pins. In order to suit different planting conditions, the clod removers are rapidly interchangeable with the trash wheels and this with no tool.





#### Gauge wheel arms

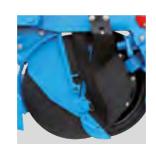
The bracket arms of the gauge wheels are assembled on interchangeable bushes. They are helically fluted for a good grease distribution. Scrapers are standard assembly on the gauge wheels.





#### Gauge wheels

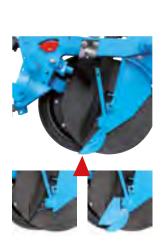
Large depth gauge wheels (110 mm) ensure an efficient and uniform depth control. Resting on the ground directly in line with the seed drop ensures the unmatched depth consistency. The independent gauge wheels are mounted on an equalizing rocker bar which ensures uniform depth control even when one wheel encounters an obstacle (eg: stones).





#### **Double discs**

The planting system is made up of two large diameter discs (380 mm) mounted on sealed ball bearings.





#### Easily removed tip

The patented quick-change system of the tip means you keep a tip forming a true V-shaped furrow for accurate seed placement at a regular depth, no matter what the planting depth or the type of seed (Maize, Sugarbeet, Rapeseed, Sunflower, Beans, Peanuts...).

With this tip, no tools are needed thanks to a lever placed between the discs. It is put back in place just as easily and in a sure manner by re-engaging it into its fixing bracket.

Two models of tips are available: the long tip for «normal» conditions or the long tip, short wings for planting at shallow depths and/or in dry conditions (this tip keeps the furrow open until the seed drops and positions itself at the bottom of the furrow).







### Adjustable open wheel unit\*

The Monoshox NX M unit is equipped with a rear press wheel unit that can be adjusted using levers\*.

The right hand lever (a) enables a rapid and accurate adjustment of the rear press wheel pressure.

The left hand lever (b) enables the adjustment of the angle of the wheels to rapidly suit the planting conditions (see pictures opposite).

\* Equipment according to the country

### The cereals planter

Many trials conducted by seed companies show the importance of placing seeds, even for cereals. The development of hoeing tends to increase inter-rows. We put our experience and the versatility of our distribution at the service of your cereals planting.

- Inter-row from 25 cm
- Monoshox NG Plus M or NG Plus 4 metering unit
- Narrow hopper, gauge wheels and rear press wheelsNo calibration of the seeds



**Benefits of planting** cereals with precision planter

#### **True Precision distribution** Regular seed distance

Planting by double discs **and gauge wheels** Regular sowing depth

#### **PRO Wheel**

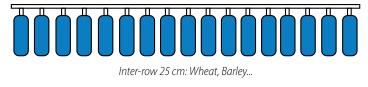
Optimal pressing Emergence dynamics

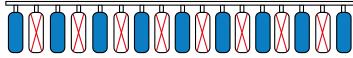


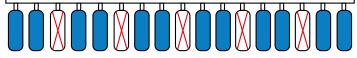


**Plant stage regularity**• Optimization of crop treatments

#### Only one planter for all your crops







Twin-Row 75 cm: Maize

#### **Example of seeding**

- Planting date: October 26th
- Crop: Hybrid wheat
- Inter-row spacing: 25 cm
- Density: 80 seeds/m<sup>2</sup>







March 22th



### Yield and/or net margin increase



#### **Seed density reduction**

- Saving seeds
- Reduction of parasite pressure and lodging



- **Better rooting** Less sensitive to mechanical weeding (harrow)
- · Wide inter-row more suitable for hoeing







- Inter-row from 18 cm
- Narrow front wheel (380x65 mm) with quick adjustment of the working depth
- · Compact element for a high precision hoeing and a perfect following of the ground contours
- Bushed parallelogram arms for intensive use on large
- From 1 to 3 tools (shoes, shovels, Planet blades, Lelièvre blades, ...)
- Rear support for additional equipment (rotary finger weeder, rear comb, disc ridgers, ...)
- Hydraulic hitching of components compatible with optional automatic GPS luffing
- Hydraulic unit lifting on option (automatically if it is linked to an ISOBUS terminal and a GPS antenna)



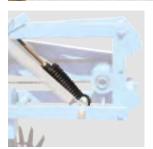
June 13th



### The main equipment

Monosem has available a number of accessories to suit all your planting conditions. Our experience enables us to advise you in the choice of equipment.





#### Additional adjustable spring

An adjustable, extra pressure spring can be added for planting in hard or trashy soils (assembly according to frame).

Only available on the NG Plus 4



#### Narrow hopper

Specially designed for planting small seeds at reduced inter row spacings (sugarbeet, rapeseed, beans...).



#### Trash wheels

Trash wheels can be assembled in replacement of clod removers for planting in trashy soils.



#### Narrow trash wheel

For planting with reduced inter row spacings, retractable narrow trash wheels are available.



Flexible clod remover

The clod removers on flexible bracket are recommended for planting in stony soils.



#### Circular coulter

Smooth or rippled, the circular coulter improves the furrow opening and produces fine soil for low till planting and/or in trashy soils.



Narrow gauge wheels

For planting with reduced inter row spacings, narrow 5cm gauge wheels are available.



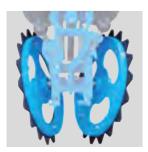
#### Shoe «Long tip, short wings»

The special shoe «Long tip, short wings» is specially designed for planting in dry soils and for small seeds.



**Narrow press wheels** The 1" wheels (instead of 2") are available on option for improved pressing on hard ground and / or low till conditions.

Compatible with NG Plus 2, NG Plus 3 and NG Plus 4



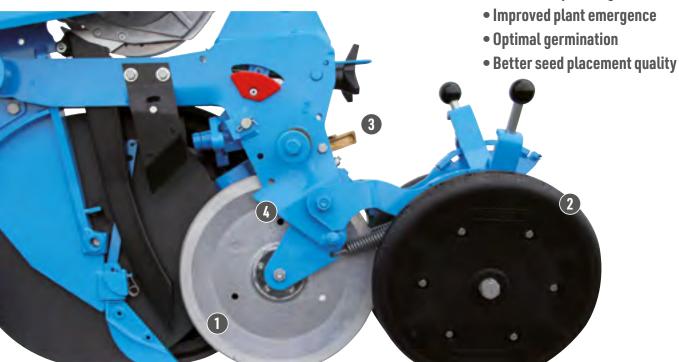
**The metallic press wheels** The metallic press wheels with notched discs can be recommended for soils that are particularly crusty or hard after rain or to improve furrow closing in no or low-till conditions.

### • The PRO Wheel

#### « The professional touch »

The press wheel has been used for years on the vegetable and sugarbeet planters. Monosem has adapted this concept to the multipurpose planters with a large diameter press wheel, the PRO wheel.









#### Large diameter press wheel

The PRO wheel in aluminium has a stainless steel coating and a plastic scraper. Wide diameter (295mm), it keeps its shape and offers a quality pressing and a better seed placement.

By improving the seed-to-soil contact, the emergence is more rapid and regular.





#### Combined adjustment

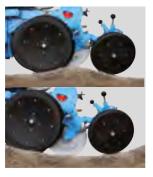
The packing down pressure of the PRO wheel is adjustable. It is combined with the pressure adjustment of the rear packing unit (a).





#### Integrated hooking up system

When the conditions are not suitable for the use of the PRO wheel, it can be very quickly retracted. Just lift the PRO wheel up by hand and lower the lock with the other. And the wheel is no longer in contact with the ground.





#### Independent wheel

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

## • The planter components NG Plus



#### Wheel units

On the Monosem planters, all the wheels drive the seed discs. This system ensures a smooth drive and thus a better planting precision. All the wheel units are equipped with a slip clutch for less stress on the seed discs on bends. Frames that may be equipped with a "High capacity" fertilizer have reinforced wheel units. So that even in the case of adding fertilizer product, the wheel units will easily support this extra equipment.

For planting with reduced inter row spacings (up to 37,5 cm) or when planting in stony grounds, front wheel units are proposed.

The wheel units are available with 3 different models of wheels:

- Narrow (500x15) for reduced inter row spacings (sugarbeet)
- Standard (6,5x80x15)
- Wide (26x12) for minimum inter row spacings of 70 cm with rear wheel units

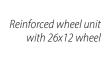




Planter with front wheel units for planting with reduced inter row spacings (up to 37,5 cm) or in stony soil conditions



Standard wheel unit with 6,5x80x15 wheel







In order to help you adjust your seed populations, download free of charge the Monosem application "Planter Adjustment" available under Google play or App Store.





#### **Turbofan**

To suit all planter configurations (number of units, type of seeds, pneumatic transport of fertilizer,...) and guarantee an optimal vacuum, Monosem has a wide choice of turbofans available.

The Monosem turbofans are reliable, efficient and ensure a regular vacuum for optimal operation of the metering. Our turbofans have 12 outlets in the standard version, an anti-rain flap (work monitor) and a drive by PTO shaft of 540 rpm. On option, the drives with PTO shafts at 450 rpm and 1000 rpm are available and also a drive by hydraulic motor. A universal joint is also proposed on option.



Standard turbofan



Double function turbofan



High output turbofan



Extra high output turbofan



According to current law, Monosem can propose anti drift of dust kits (KAP). These kits are approved by the BBA Germany and quarantee the correct operating of Monosem planters.



#### Seed spacing gearboxes

#### «Standard» gearboxes



The standard seed spacing gearbox with 18 ratios gives a rapid and precise adjustment of the seed population A single lever releases the chain. Then just place the required sprockets facing each other and release the lever to re-tighten the chain. Standard or on option according to models.

## EasyGear gearbox with levers



The EasyGear seed spacing gearbox allows an easy adjustment of the seed population. Thanks to its 3 levers, it offers 18 ratios perfectly levelled and is maitenance free.

Standard or on option according to models (except Extend, Monobloc2 et TFC rigide).

### The rigid frames



**The rigid Monobar frame**The rigid Monobar frame can have 3 to 4,5m bar. This simple and economical frame can be equipped with a hitch with pins or a semi-automatic one. Its reduced overhang and its weight enable it to be hitched on to light weight tractors. This frame is suitable for 4 to 6 rows maize and to 6 rows sugarbeet.



#### The rigid Monoblock frame

The rigid Monoblock frame is a welded unit made up of two bars, one supporting the hitch and the turbofan and the other the metering units and the wheel units. Its design is particularly suited to planting with an uneven number of rows. It may be equipped with a 3 to 4,5m bar.



Frames	Monobar				
Width	3m		3,5m	4,5m	
Number of metering units	4	6	6	6	8
Inter-row spacings (cm)	70/75/80	45	45/50	70/75/80	50/55
Number of «drive» wheel units	·		2	2	
Transport width	3	m	3,5m	4,5	im



#### The rigid Double bar frame

The design of the rigid double bar frame makes it heavy duty and multi-purpose. The double bar authorizes a bar of up to 6,1m long even with fertilizer. It is suited to an uneven number of rows. The integrated lengthwise transport carriage, available on option, enables a safe transport on the road.



Hydraulic row markers are standard assembly on all the planters.



A transport carriage (lengthwise) is available for wide configuration planters. This transport carriage may be with manual or hydraulic lift.



Monoblock					Do	ouble ba	r					
3m 4,5m				4,5m	6,1	m						
4	5	6	6	7	9	11	6	8	12			
70/75/80	60	50	70/75/80	60/65	45/50	37,5	70/75/80	70/75/80	45/50			
	2		2 4			2 4		2 4		4	4	
3m 4,5m			4,5m	6,1	m							



The Monoblock frame long off-set with front wheel unit enables reduced inter row spacings of 37,5 cm.



The Monoblock 260 frame with long off-set enables «High Capacity» fertilizer equipment.



4-row rigid Monobar planter (75 cm inter row spacing)



8-row rigid Double bar planter (70 cm inter row spacing)



11-row rigid Monoblock planter (37,5 cm inter row spacings or 6 rows at 75 cm inter row spacing).



12-row rigid Double bar planter (45 cm inter row spacing) with lengthwise transport carriage.

### The telescopic frames



Semoir 6 rangs Monobloc 260 simple télescopique avec fertiliseur 980 L et Microsem (75 cm d'inter-rangs)



#### The Monoblock single telescopic frame

The Monoblock single telescopic frame 260 has a 4,2m bar when working. When transported, the 1st and 6th rows retract for a transport width of 3,5m. This frame is also suitable for an uneven number of rows. The Monoblock 260 can be equipped with "High Capacity" fertilizer attachments.



#### The Monoblock double telescopic frame

The Monoblock 260 double telescopic frame has a 4,2m bar when working. When transported, the 1st and  $2^{nd}$  together with the  $5^{th}$  and  $6^{th}$  rows retract for a transport width of 3m. The Monoblock 260 frame can be equipped with "High Capacity" fertilizer attachments.

The row markers are fixed on to the main bar of the frame to limit the stress on the telescopic extensions.



#### **Frames**

Width

Number of metering units

Inter-row spacings (cm)

Number of «drive» wheel units

Transport width



The roller bearings mounted on bushes enable a perfect operation of the double telescopic frame year after year.



Si	ngle telesco	Double telescopic	
Monoblock 125 or 260			Monoblock 260
4,2m			4,2m
6	6 7 8		6
75/80	55/60	45/49	75/80
2			2
	3 5m		3m



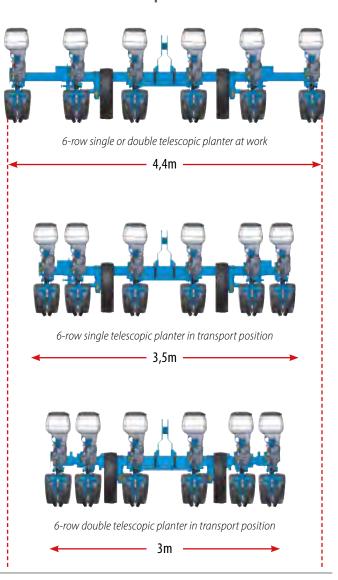


The stop parts on the telescoping system enable an adjustment perfectly suited to the required inter row spacing and folding that is suited to the equipment of the planter.



6-row Monoblock 260 single telescopic planter (75 cm inter row spacing)

### The interest of a telescopic frame



### • The telescopic Monoblock2 Comfort frames



#### The telescopic Monoblock2 Comfort frames

The Monoblock2 Comfort frame can be equipped with 6, 7 or 8 metering units. Its telescopic frame is available in single telescopic version (folding for a width of 3,5m) or double telescopic version (folding for a width of 3m depending on the inter-row). It is equipped in the standard version with wide front wheels for a constant drive of the metering units. The Monoblock2 Comfort frame can also be equipped with « High Capacity fertilizers.



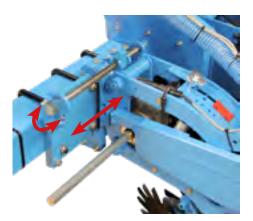
The mixed 6/7 row Monoblock2 version offers spacings of 75 or 80 cm in 6 rows and of 56,2 and 60 cm in 7 rows. Fertilizing is available for 6 and 7-row configurations.



6-row Monoblock2 Comfort planter with fertilizer 1030L and Microsem handset (75cm inter-row spacings)

Frames	Monoblok2 Single telescopic			
Width	4,2m			
Number of metering units	6 7 8			
Inter-row spacings (cm)	70/75/80	50/55/60	49	
Wheel units	2			
Transport width	3,5m			

<sup>\*</sup> Depending on the equipment



#### EasySlide plates

The Monoblock 26/7-row Mixed frame is equipped with 2 EasySlide plates. It allows the sliding sideways of some of the metering units, just with a spanner. Thus, it is possible to change a 6-row planter into a 7-row planter easily and quickly.





Monoblok2 Mixed Single telescopic	Monoblok2 Double telescopic			
4,2m	4,4m			
6/7	6	7		
75/56,2 ou 80/60	70/75/80	55/60/65/70		
2		2		
3,5m	3m	3m*		



### The « PLUS » on the Monoblock2 Comfort planter with fertilizer and Microsem



#### Fertilizer 680 L or 1030L

The Monoblock2 Comfort planters can be equipped with a 680 L fertilizer or a 1030 L fertilizer. The fertilizers are equipped with 6 to 8 metering systems in stainless steel with individual trapdoors. A Double function turbofan (Df) ensures an efficient vacuum suction of the seeds and also to pulse the fertilizer on the 4 outer rows



#### Access platform

On the Monoblock2 Comfort planters with fertilizers, a platform, delivered as standard equipment, enables an easy access to the fertilizer hopper. The platform and the step thus enable a safe access to the hopper during filling operations.



#### Adjustment by FertiDrive<sup>™</sup>

Easily accessible on the side of the planter, the FertiDrive™ variable speed transmission allows very quick and easy adjusting of the quantity of fertilizer per hectare required. This transmission is also equipped with a disengaging mechanism, used to stop the fertiliser intake where it is not necessary.



#### Adjustment by MicroDrive<sup>™</sup>

The Microsem has a MicroDrive<sup>VM</sup> variable speed drive easily accessible on the side of the planter for a quick and easy adjusting of the required dose. This transmission is also equipped with a disengaging mechanism, used to stop the Microsem intake where it is not necessary.



The drive of the metering unit is ensured by a reinforced transmission. The seed spacing gearbox is situated on the extreme left side of the planter for easy access and a rapid changing of the sprockets. The 20 settings with interchangeable sprockets offer a wide choice of seed populations.



#### **Drive wheels**

The wide wheels with large diameter ensure a regular and constant drive of the seed discs. The rapid adjustment of the width of the drive wheels means a rapid adjustment to the different tractor treads.



## Folding row markers

The folding row markers allow marking at the wheel or in the center but take up little space when in transport. They are also equipped with a safety system and a mechanical locking system for the transport.

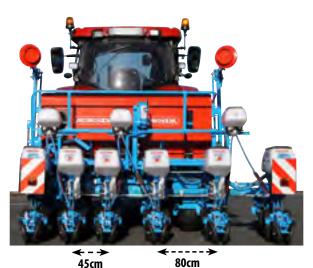
### • The Extend frame

#### The Extend frame

The Extend frame enables the rapid changing of inter row spacings by hydraulic control from the tractor cab. This frame is made up of two hydraulic telescopic bars that ensure the lateral movement of the metering units in order to change the inter row spacings. It is equipped in the standard version with wide wheels for a constant drive of the metering units. The rapid adjustment in width of the wheel units enables to easily suit the tractor treads.







The 6-row Extend planter enables spacings of 45, 50, 55, 60, 65, 70, 75 and 80 cm.

#### **Frames**

Width

Number of metering units

Inter-row spacings (cm)

Wheel units

Transport width



The mixed 6/7 row Extend version offers spacings of 75 and 80 cm in 6 rows and of 55 and 60 cm in 7 rows. It is thus possible to change very quickly with no disassembly, from 6 rows maize to 7 rows sunflower/rapeseed.



#### Telescopic bars

The hydraulic telescopic bars ensure the lateral movement of the metering units in order to change inter row spacings. In order to limit friction and ensure a longer life, the bars are equipped with guiding bearings mounted on bushings.



Extend 6 rows	Extend mixed 6/7 rows
4,15m	4,15m
6	7
From 45 to 80 cm by steps of 5cm	55 and 60 cm (7 rows) 75 and 80 cm (6 rows)
2	2
3m	3,1m



### The « PLUS » on the EXTEND planter with fertilizer\* and Microsem



#### Access platform

On the Extend planters with fertilizers, a platform, delivered as standard equipment, enables an easy access to the fertilizer hopper. The platform and the step thus enable a safe access to the hopper during filling



#### Pneumatic transport to outer rows

On the Extend planter, a turbofan ensures an efficient vacuum suction of the seeds and also to pulse the fertilizer on the outer rows to efficiently distribute at 45 or at 80 cm inter row spacings.



#### Discs fertilizer applicators

The Extend planter is equipped as standard with doublediscs fertilizer applicators. These discs fertilizer applicators are height adjustable with pins and are equipped with a spring-loaded guard.



#### Adjustment by FertiDrive<sup>™</sup>

Easily accessible on the side of the planter, the FertiDrive<sup>VM</sup> variable speed transmission allows very quick and easy adjusting of the quantity of fertilizer per hectare required. This transmission is also equipped with a disengaging mechanism, used to stop the fertiliser intake where it is not necessary.



#### Adjustment by MicroDrive™

The Microsem has a MicroDrive<sup>VM</sup> variable speed drive easily accessible on the side of the planter for a quick and easy adjusting of the required dose. This transmission is also equipped with a disengaging mechanism, used to stop the Microsem intake where it is not necessary.





#### Inter row spacing adjustment

The adjustment of the inter row of the Extend planter is very simple. You just have to position the stop parts on the adjustment bar on the required spacings and then lengthen or shorten the hydraulic cylinders on the telescopic bars in order to obtain the desired spacing.



#### Lateral seed spacing gearbox

The drive of the metering unit is ensured by a reinforced transmission. The seed spacing gearbox is situated on the extreme left side of the planter for easy access and a rapid changing of the sprockets.

The 20 settings with interchangeable sprockets offer a wide choice of seed populations.



#### **Drive wheels**

The wide wheels with large diameter ensure a regular and constant drive of the seed discs.

The rapid adjustment of the width of the drive wheels means a rapid adjustment to the different tractor treads.

### • The multiSlide frame with multiple inter-row spacing

To meet farmers demands for multi-purpose planters, Monosem developed a new frame range named MultiSlide. Based on a sliding system of the metering units, it allows multiple possibilities to suit the different inter-row spacings.



#### Folding of the wings

- 3-meter transport width (also available in 2,55m version on certain models).
- Folding wings for working width of 4m, 4,5m or 6m depending on the model
- Wings automatic locking in transport position.
- Can be used with a low powered tractor due to its limited weight.



#### Integrated sliding rail

- Hydraulic sliding of the metering units.
- System with short off-set: reduced overhang.
- Claw system for a reliable and optimal slidina.
- Integrated safety system (sliding of the metering units impossible with folded wings).



## Front wheel units with wide wheels

- 2 Front wheel units.
- 26x12 Wheels (23x10,5 wheels on 2,55m version and version with fertilizer).
- Rapid adjustment of the tread to suit the inter-row spacing.



#### **AVAILABLE MODELS**

Frames	MultiSlide 6/7-row				
Width of the frame	4	m	4,5m		
Transport width	2,5	5m	3m		
Metering units	Monoshox NG Plus M <sub>E</sub> or				
Number of rows	6	7	6	7	
Inter-row spacings (cm)	75	50/60	75/80	50/60	
Tyres	2 x (23 x 10,5) 2 x (26		26 x 12)		
Fertilizer	On option - Front-mounted hopper			opper	
Microsem	On option - MicroDrive <sup>VE</sup> (electric drive)				
Crops (example)	Maize, sur	nflower, rapes	seed, sorghu	ım, soya,	





## Exclusive inter-row spacing adjustment system

- All the configurations are available permanently on the planter.
- Locking system without pin.
- Inter-row spacing adjustment by steps of 2,5 cm (from 45 to 80 cm depending on the model).

### Transport position: 3-metre width on the road

(2,55m on certain models)



Unfolding of the wings



Metering units sliding sideways

MultiSlide 6/9	9-row	MultiSlide 8/9-row				
4,5m		6m				
3m		3m				
NG Plus 4 <sub>E</sub> (electric drive)	)					
6	9	8	9			
75/80	45/50	75/80	55/60			
2 x (26 x 12	)	2 x (26 x 12)				
On option - Front-mounted hopper						
On option - MicroDrive <sup>VE</sup> (electric drive)						
Maize, sugarbeet, rap	eseed, beans,	Maize, rapeseed, sunflow	er, sorghum,			





See the demo in video!

A multi-purpose frame to meet all your requirements!



Example of configuration: 9 rows at 50 cm

Example of configuration: 6 rows at 75 cm

### The folding frames



12-row Double bar folding planter (45 cm inter row spacing)

#### The floating Double bar folding frame

The floating Double bar frame can be equipped with 8 rows in «maize» version and up to 12 rows in «sugarbeet» version. Its folding system at 3m authorizes safe road transport. Its design is compatible with an uneven number of rows (9 or 11 rows). The floating extremities ensure a perfect following of the ground contours.

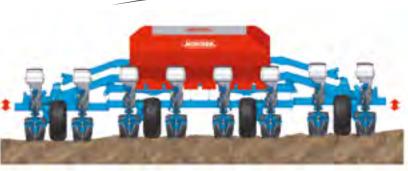


#### The TFC folding frame

The TFC folding frame can be equipped with 8 metering units in «maize» version. It is equipped with a 1500 L fertilizer. Its folding frame enables a folding for a width of 3m. The TFC folding frame is available in floating version with 4 wheel units (wide tyres 26x12) for a perfect following of ground contours or in rigid version with 2 front wheel units (wide tyres 26x12).



## A per fect following of ground contours!



The floating Double bar folding and the floating TFC frames have independent wings with wheel units. This characteristic allows for a perfect following of the ground.





8-row Double bar folding planter (80 cm inter row spacing)



11-row Double bar folding planter (60 cm inter row spacing)

TFC Floating	Rigid TFC
6m	6m
8	8
75/80	75/80
4	2 (Front wheel unit)
3m	3m



The electric Eco function selector (2 DA / 4 functions) is available on option on the folding double bar, TFC and TFC2 Comfort frames to control 4 planter functions using 2 double actions.



8-row TFC floating frame (75 cm inter row spacing) with fertilizer and Microsem





The row markers on double bar folding frame and TFC folding frame enable a compact folding for a minimum transport dimension.



### The « PLUS » on TFC planter with fertilizer



#### Fertilizer 1500 L

The TFC planters are equipped with a 1500 L fertilizer. The fertilizers are equipped with 8 metering systems with individual stainless steel trapdoors. A Double function turbofan (Df) ensures an efficient vacuum suction of the seeds and also to pulse the fertilizer on the 4 outer rows.



#### Adjustment by FertiDrive<sup>™</sup>

Easily accessible on the side of the planter, the FertiDrive<sup>NM</sup> variable speed transmission allows very quick and easy adjusting of the quantity of fertilizer per hectare required. This transmission is also equipped with a disengaging mechanism, used to stop the fertiliser intake where it is not necessary.

### The TFC2 folding frames



#### The TFC2 Comfort folding frame

The TFC2 Comfort frame can be equipped with 8, 9, 11, 12 or 16 metering units. Its folding frame enables a folding for a width of 3m. Its design, with front wheel units, offers a wide versatility and a wide clearance between the metering units (ideal in stony soil conditions). The floating extremities and the 4 mobile front wheel units with wide 26x12 tyres ensure a perfect following of the ground contours.

#### The Mixed TFC2 Comfort folding frame

The Mixed TFC2 Comfort frame is equipped with EasySlide plates. It allows the sliding sideways of some of the metering units, just with a spanner. Thus, it is possible to change a 12-row planter into an 8-row planter or an 11-row planter into an 8-row planter easily and quickly.



#### 8/12-row TFC2 Mixed Comfort floating frame



#### **Frames**

Width

Number of metering units

Inter-row spacings (cm)

Wheel units

**Transport width** 

Change a 12-row sugarbeet planter into an 8-row maize planter in less than 30 minutes, changing of the discs

included!



See the demo in video!

<sup>\*</sup> depending on the equipment





16-row TFC2 Comfort folding planter (37,5 cm inter row spacing) with equipment for DUO front-mounted fertilizer



12-row TFC2 Mixed Comfort folding planter (50cm) with Microsem

TFC2 Comfort			TF: Mixed C			
6m			6r	n		
8	9	11	12	16	8 / 12	8 / 11
75/80	55/60	55	45/50	37,5	75/45 or 50 80/45 or 50	75/55 80/55
4 (Front wheel unit)			4 (Front w	heel unit)		
3m*			3m*	3m*		



The electric Eco function selector (2 DA / 4 functions) is available on option on the folding TFC2 frames to control 4 planter functions using 2 double actions.



#### **EasySlide plates**

EasySlide plates allow to slide side plates the metering units in the field, just with a spanner. This system creates just a short off-set (only 75 mm). An automatic locking system allows the metering units to keep their working position



#### Wheel units

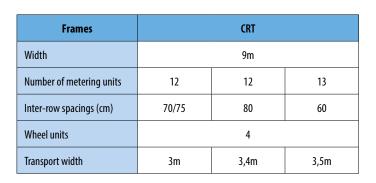
The wide wheels with large diameter ensure a regular and constant drive of the seed discs. The rapid adjustment of the width of the drive wheels means a rapid adjustment to the different planting conditions.

## The wide configuration frames

12-row CRT folding planter (80 cm inter row spacing)



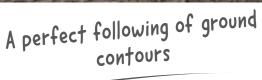
**The CRT Folding frame**The CRT folding frame can be equipped with 12 metering units in « maize » version. Its folding and telescopic frame enables a folding for a width at 3 m (depending on the inter-row and equipment). The floating extremities ensure a perfect following of the ground contours.



The central part of the frame is made up of a double telescopic frame, the wings are telescopic and folding for a transport width of 3m (depending on the equipment).

18-row coupled planter (45 cm inter row spacing)





**The coupled frame**The coupled frame is the coupling of 2 standard monobar frames. The 2 frames are supported by a double 180x180 mm bar – 9 to 12m long. This type of frame is suited to 16-row maize or 24-row sugarbeet planters.





12-row coupled planter (75 cm inter row spacing)

Frames	Coupled		
Width	8,7n	12,5m	
Number of metering units	12	16	
Inter-row spacings (cm)	70/75/80	45/50	70/75/80
Number of «drive» wheel units	8		8
Transport width (with carriage)	3m		3m

## • The NG Plus 4 technical features

											Single telescopic							
Frame				Rigid									Monobar-Monobloc			Monobloc2 Comfort		
W	idth		3m		4,5m				6,1m		4,5m			4,5m				
Tr.	ansporting wid	3m			4,5m				6,1m <i>(3m)</i>		3,5m			3,5m				
Nu	ımber of eleme	4	5	6	6	8	9	11	8	12	6	7	8	6	7	8		
Ro	ow spacing (in c	70 75 80	60	45/50	70 75 80	50/55	45/50	37,5	70 75 80	45/50	75/80	55/60	45/49	70 75 80	50 55 60	49		
Tu	rbine	Power take-off drive - standard 540 rpm, optional 450 or 1,000 rpm optional hydraulic drive, optional universal joint freewheel																
Ту	res	2 x	(6.5x80x	15)	2 x (6.5x80x15)				4 x (6.5x80x15)		2 x (6.5x80x15)			2 x (26x12)				
Drive		Distance gearbox	Standard	•1			•1				•1		•1			-		
	Mechanical		(18 speeds)	-			-				-		-			•1		
			(20 speeds)	01			O1				01		01			-		
	Electric (18 speeds)			0			0				0		О			О		
Hydraulic markers				•			•				•		•		•			
Fertilizer	Standard			○ 2 x 175L.			O 2 x 270L.			○4 x 175L.		O 2 x 270L.		-				
	"High-capacity"			O 740 or - 980L.			980 or - 2 x 700L.			O 2 x 1000L.		○ 980L		680 or 1030L.				
	Front Standard			О			0				0		0		0			
	Front DUO			-			-				0		-			-		
sem	Insecticide				0		О				0		0			0		
Micro	Helicide			0			0				0		0			0		
Не	Hectare counter				0			•				0		0		0		
So	Sowing controller				0			•				0		0		0		
Row breaks				0			0				0		0		0			
Lighting kit				0			0				0		0		0			
Weight of seed planter alone				800kg	900kg	1000kg	1100kg	1300kg	1400kg	1600kg	1650kg	2050kg	1300kg	1400kg	1500kg	1450kg	1550kg	1650kg

<sup>● :</sup> Standard ○: Optional -: Impossible \*: According to models

Doub	ole teles	copic	Ext	end					Fold	ling						
Monobloc		bloc2 fort	6	6/7		Doub	le bar		TFC floating	TFC rigid		TFC2 C	omfort		Cou	pled
4,5m	4,	5m	3m/ 4,5m	3,1m/ 4,5m	6	m	7m	6m	6m	6m		6	m		8,	7m
3m	3	m	3m	3,1m	3	m	3,5m	3m	3m	3m		31	n*		(3	m)
6	6	7	6	7	8	9	11	12	8	8	8	9	11	12	12	18
75/80	70/75 80	55/60 65/70	45/50 55/60 65/70 75/80	75/80 (6 rows) 55/60 (7 rows)	75/80	55/60	55/60	45/50	75/80	75/80	75/80	55 60 65	55	45/50	70 75 80	45/50
					Pov	wer take-off optional h	drive - star ydraulic dri	ndard 540 rp ve, optional	om, optional universal jo	450 or 1,00	0 rpm el					
2 x (6.5x80 x15)	2 x (2	6x12)	2 x (26x12)	2 x (26x12)		4 x (6,5	x80x15)		4 x (26x12)	2 x (26x12)		4 x (6.5	x80x15)		8 x (6,5x80x15)	8 x (6,5x80x15)
•1		-	-	-		•	3		• 3	-	•3		• 2	<b>●</b> 2		
-	•	1	• 1	•1		,	-		-	• 1	-				-	
Ο1		-	-	-		С	3		O3	-	O3			02	<b>O</b> 2	
0		)	0	0			)		0	0	0			0	-	
•	•	•	•	•			•		•	•			•		•	•
O 2 x 270L.		-	-	-			-		-	-			-		O 4 x 270L.	O 5 x 175L. + 1 x 270L.
O 980L.	680 or	) 1030L.	O 1020L.	-		,	-	-	O 1500L.	O 1500L.	-		-	-		
0	(	)	0	0		(	)		-	-		(	)		-	-
-	,	-	-	-		(	)		-	-		(	)		-	-
0	(	)	0	0		(	)		0	0		(	)		0	0
О	(	)	0	0		(	)		0	0		(	)		0	0
0	(	)	0	0		(	)		0	0		(	)		0	0
0	(	)	0	0		(	)		0	0		(	)		0	0
0	(	)	0	0		(	)		0	0		(	)		0	0
0	(	)	0	0		(	)		0	0		(	)		0	0
1300kg	1450kg	1550kg	1650kg	1800kg	2200kg	2300kg	2600kg	2600kg	2800kg (with fertilizer)	2750kg (with fertilizer)	2600kg	2700kg	2900kg	3000kg	3250kg	4250kg

## • The Monoshox NG Plus M technical features

							Single	telescopic			Dou	ble telesco	pic	Futond
		Frame			Monobloc		Mone	obloc2 Comf	ort	Monobloc2 Comfort Mixed	Monobloc	Monobloc	2 Comfort	Extend 6
W	'idth				4,5m			4,5m		4,5m	4,5m	4,5m	4,5m	3m/ 4,5m
Tı	ansporting w	ridth			3,5m			3,5m		3,5m	3m	3m	3m*	3m
N	umber of eler	nents		6	7	8	6	7	8	7	6	6	7	6
R	Row spacing (in cm)			75/80	55/60	45/49	75/80 50/55/60 49		75 or 80 (6 rows) 56,2 or 60 (7 rows)	75/80	75/80	55/60/ 65/70	45/50 55/60 65/70 75/80	
T	urbine					F	Power take-o Optiona	off drive - sta I hydraulic d	indard 54 rive, optio	0 rpm, optional 450 or 1 onal universal joint freev	,000 rpm /heel			
Ty	/res			2 x	(6.5x80x1	5)	:	2 x (26x12)		2 x (26 x 12)	(6.5x80x15)	2 x (2	6x12)	2 x (26x12)
			Standard		01			-		-	01		-	-
Drive	Mechanical	Distance gearbox	Laterale	-		•1		•1	-	•1		•1		
٥	٥		EasyGear		•1			-		-	•1		-	-
	Electric			0	•		0	10	ı	0	0	0	-	0
Н	ydraulic mark	ers			•			•		•	•	•	•	•
		Standard		○ 2 x 270L		-		-	○ 2 x 270L.		-	-		
	Fertilizer	"High-cap	acity"	⊃980L.	-		○ 1 x 680L. or 1 x 1030L.		1 x 680L. or 1 x 1030L.	⊃980L.	1 x 680L. o	O r 1 x 1030L.	O 1020L.	
	Fert	Front Stan	ndard	0	-			О		0	0	(	)	0
		Front DUO			-			-		-	-		-	-
	Microsem	Insecticide	e		0			0		0	0		)	0
	Micr	Helicide			0			0		0	0 0		)	0
Н	ectare counte	r			0			О		0	0	(	)	0
S	owing control	lers			0			О		0	0	(	)	0
R	ow breaks				0		0		0	0		)	0	
Li	Lighting kit				0		0		0	0	0		0	
W	Weight of seed planter alone			1300kg	1425kg	1550kg		1625kg	1750kg	1625kg	1350kg	1550kg	1675kg	1700kg

<sup>● :</sup> Standard ○: Optional -: Impossible \*: According to models : Consult us

Extend	٨	Aultislid	e							F	olding							
6/7	7	8	9		Doub	le bar		TFC Floating	TFC Rigid		TF	C2 Comfo	ort		TF Comfor		CF	RT
3,1m/ 4,5m	2,55r	m/3m	3m	6	m	7m	6m	6m	6m			6m			61	m	9m	
3,1m	2,55r	m/3m	3m	3	m	3,5m	3m	3m	3m			3m*			3n	n*	3m*	3,5m*
7	7	8	9	8	9	11	12	8	8	8	9	11	12	16	11	12	12	13
75/80 (6 rows) 55/60 (7 rows)		•		75/80	60	60	45/50	75/80	75/80	75/80	55/60/65	55	45/50	37,5	75 or 80 (8 rows) 55 (11 rows)	75 or 80 (8 rows) 45 or 50 (12 rows)	70/75/80	60
Power take-off drive - standard 540 rpm, optional 450 or 1,000 rpm Optional hydraulic drive, optional universal joint freewheel																		
2 x (26x12)	2 2	x (23 x 10 x (26 x 12	4 x (6.5x80x15) 4 x (26x12) 2 x (26x12) 4 x (26x12)						4 x (26x12)		4 x (6.5)	x80x15)						
-		-			С	3		O3	-			O3			0	3	-	-
•1		-				=		-	•1	-			-		-		-	-
-	•3				•	3		•3	-			• 3			•	3	•	3
0	•					)			-			0			-	0	C	)
•		•				•		•	•			•				•		•
-		100				_		-	-			-			-		-	
-		-				_		○ 1500L.	○ 1500L.	O 1350L			-		-		-	
0		100			(	)		-	-			0				)	0	-
-		-				)		-	-			0				)	0	-
0		0				)		0	0			0				)	C	)
0		0				)		0	0			0				)	<u> </u>	)
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0		0				)		0	0			0				)		)
0		0				)		0	О			0			0		0	
1850kg	1981kg	2081kg	2337kg	2250kg	2350kg	2600kg	2550kg	2900kg (with fertilizer)	2850kg (with fertilizer)	2700kg	2800kg	3000kg	3100kg	3500kg	3050kg	3150kg	3500kg	3500kg

## • The Monoshox NX M metering unit

In order to meet with farmers new expectations, the metering unit has Monoshox NX M exclusive technologies enabling it to be:

- Faster due to its Monoshox.EU suspension with shock absorber,
- More accurate, no matter what the type of seed with the easily removed tip,
- Easier to adjust with its parallelogram that can be rapidly adjusted in pressure and its new rear unit with adjusting levers.





## Safety clutch

Each metering unit is equipped with an audible safety clutch system with automatic clutching for optimal protection of the metering system.





## Hopper

The hopper in high resistance, transparent plastic has a capacity of 70 litres. The cover locks so will not close during filling, even in windy conditions.





## **Depth adjustment**

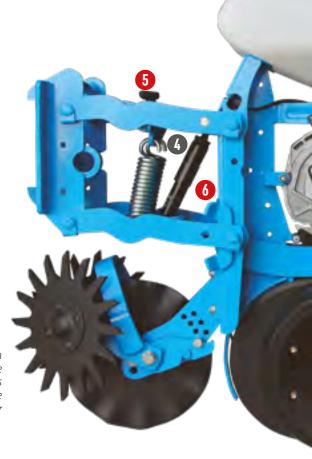
The depth adjustment is easily made using a hand wheel. This type of adjustment ensures a greater control precision of the planting depth even for small seeds at a shallow depth. The depth adjustment index is visible straight away from the rear. It is weather-proof.





## Wide and short parallelogram

The wide and short parallelogram ensures an excellent stability both vertically and laterally of the metering unit which follows perfectly the ground contours. The wide unit head for fixing on to the 7" TOP frame is also specific to the NX. It enables an extremely rigid metering unit-frame assembly. The shafts are assembled on self-lubricating bushes for a longer



## **Exclusive Monoshox NX M features**





# Double pressure springs, rapidly adjusted

The large diameter double springs ensure a high depth control pressure, guaranteeing unit stability and regular depth in all conditions. They enable the transfer of the frame weight on to the metering units. These pressure springs are adjustable so as to suit all planting conditions.





# Monoshox.EU Suspension with shock absorber

The Monoshox.EU. like all good suspensions combines pressure springs with a shock absorber specially designed for using on a planting unit

Thus, when working the two pressure springs retain the planting unit on the ground and the suspension with shock absorber absorbs the shocks. The precision and the regularity of the planting depth remain optimal.









## Wide clearance for a wide choice of accessories

The front part of the metering unit offers a wide clearance so enabling the use of a wide range of accessories for low-till planting. The trash wheels and circular coulter combination is delivered as standard equipment on NX\* units. Optional equipment is available.

\*: according to the country





## Gauge wheel arms

The bracket arms of the gauge wheels are assembled on interchangeable bushes. They are helically fluted for a good grease distribution. Scrapers are standard assembly on the gauge wheels.





## Gauge wheels

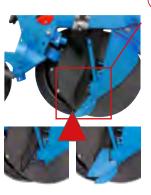
Large depth gauge wheels (110 mm) ensure an efficient and uniform depth control. Resting on the ground directly in line with the seed drop ensures the unmatched depth consistency. The independent gauge wheels are mounted on an equalizing rocker bar which ensures uniform depth control even when one wheel encounters an obstacle (eg. stones...).





## **Double discs**

The planting system is made up of two large diameter discs (380 mm) mounted on sealed ball bearings.





## Easily removed tip

The patented quick-change system of the tip means you keep a tip forming a true V-shaped furrow. The tip adapts to planting conditions and seed types without being removed.

Two models of tips are available:

- The long tip for «normal» conditions.
- The long tip, short wings for planting at shallow depths and/or in dry conditions. This tip keeps the furrow open until the seed drops and positions itself at the bottom of the furrow.







## Adjustable open wheel unit\*

The Monoshox NX M unit is equipped with a rear press wheel unit that can be adjusted using levers\*.

The right hand lever (a) enables a rapid and accurate adjustment of the rear press wheel pressure.

The left hand lever (b) enables the adjustment of the angle of the wheels to rapidly suit the planting conditions (see pictures opposite).

\* Equipment according to the country

## The main equipment







# Trash wheel and circular coulter combination

The trash wheels and circular coulter combination is delivered as standard equipment on Monoshox NX M\* units.
\*: according to the country



#### Trash wheels

Trash wheels can be assembled in replacement of clod removers for planting in trashy soils.



#### Trash wheel

The floating trash wheels enable a close following of the ground contours and to remove trash without working the soil.



## Circular coulter

Smooth or rippled, the circular coulter improves the furrow opening and produces fine soil for low till planting and / or in trashy soils or planting into another crop.



## **Clod removers**

On well prepared soils with no trash, the clod removers push aside clods and stones on the future planting line.



## Shoe « Long tip, short wings »

The special shoe « Long tip, short wings » is specially designed for planting in dry soils and for small seeds.



## **Notched press wheels**

The rear metallic wheels with notched discs can be used when the soils are particularly crusty or hard after rain or to improve furrow closing.



## Heavy notched press wheels

The heavy notched press wheels in cast iron are used for soils that are extremely difficult to close.

## The PRO wheels

## « The professional touch »

The press wheel has been used for years on the vegetable and sugarbeet planters. Monosem has adapted this concept to the multipurpose planters with a large diameter press wheel, the PRO wheel.



- Consistent pressing
- Improved plant emergence
- Optimal germination
- Better seed placement quality

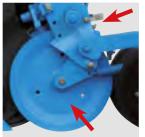






## Large diameter press wheel

The PRO wheel in cast iron has a stainless steel coating and a plastic scraper. Wide diameter (295mm), it keeps its shape and offers a quality pressing and a better seed placement. By improving the seed-to-soil contact, the emergence is more rapid and regular.



## Integrated hooking up system

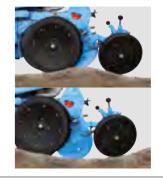
When the conditions are not suitable for the use of the PRO wheel, it can be very quickly retracted. Just lift the PRO wheel up by hand and lower the lock with the other. And the wheel is no longer in contact with the ground.





## **Combined adjustment**

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





### Independent wheel

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

## The Top 7" frames components

The Monoshox NX M planters are equipped with heavy duty TOP 7" frames in mounted or pull-type versions. These frames are characterized by a top of the market design and equipment enabling work in difficult and intensive conditions.





### 7" x 7" bar

The main part of this 7" TOP frame is a steel 7" x 7" bar. It is on this heavy duty bar that the NX metering units are assembled. The method of fixing the units with clamps excludes any risk of lateral movement of the unit when working and resists the most difficult working conditions.

The considerable weight of this frame ensures a superior force of penetration of the planter. On the rigid frames, extra ballast can, if necessary, be supplied to complement the standard ballast (see opposite).

## 2 Reinforced wheel units

The 7" TOP frames are equipped with specific reinforced wheel units, capable of supporting the heavy weight of the planter. They have, as standard equipment, large diameter land wheels ensuring a regular drive of the seed discs in both the pull-type and mounted versions. These wheel units are equipped with a height adjustment system enabling the unit parallelograms to always work in an optimal position. They also have, as standard equipment, wheel scrapers.



On the Monoshox NX M planters, the whole transmission is protected by housings for work in trash and vegetation.



The wheel units are equipped with a height adjustment system enabling the units to work well.





In order to help you adjust your seed populations, download free of charge the Monosem application "Planter Adjustment" available under Google play or App Store.



The drive system is equipped with reinforced chains and a safety slip clutch.



Wheel unit on mounted frame with 6.5 x16 wheel.



Wheel unit on pull-type frame with 7,5 x 20 wheel (265/70R19,5 wheel on 6 and 8-row WingFold)



## 3

## Seed spacing gearbox

The drive of the seed discs is ensured by a reinforced transmission. The seed spacing gearbox, situated on the side of the planter, has easy access for a rapid changing of the seed population. In the standard version, the seed spacing gearbox with interchangeable sprockets has 20 ratios covering the most commonly used seed populations. For customers wanting special seed populations, other sprockets are available on option.





The seed spacing gearbox with interchangeable sprockets enables a rapid and precise adjustment of the population.



#### Turbofan

Because the necessary vacuum on a planter depends on several parameters, (Number of metering units, type of seeds,...), Monosem has 3 models of turbofans: standard, high output or extra high output.

The Monosem turbofans are « silent », reliable, efficient and ensure a regular vacuum for optimal operation of the metering. Our turbofans have 12 outlets in the standard version, an anti-rain flap, work monitor and a drive by PTO shaft of 540 rpm. On option, the drives with PTO shafts at 450 rpm and 1000 rpm are available and also a drive by hydraulic motor. A universal joint is also proposed on option.







Standard Turbofan

High output Turbofan

Extra high output Turbofan



According to current law, MONOSEM can propose anti-drift of dust kits (KAP). These kits are approved by the BBA Germany and guarantee the correct operating of Monosem planters.



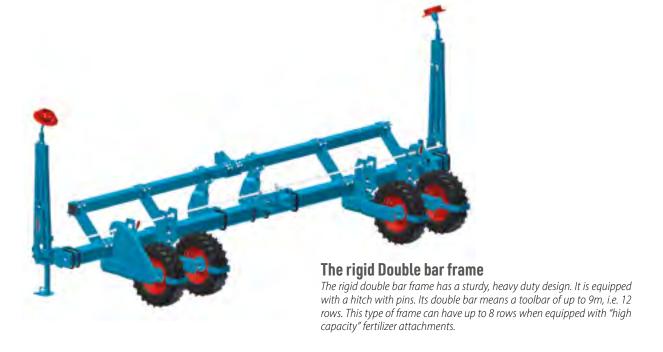
#### Row markers

The row markers on the TOP 7" frames are equipped with notched discs assembled on hub with double bearings. This type of disc ensures a regular marking no matter what the conditions. A crown to be bolted on to the row marker disc is also available as standard equipment or on option according to the models. This crown limits the working depth of the row marker in supple soils and brings extra weight to the row markers on hard soil thus improving the



marking. According to the planter model, the row markers are single, double or triple folding.

# The rigid, mounted frames





Hitch on rigid double bar frame



Row marker for 6 and 8-row planters





4-row planter with fertilizer (75cm inter row spacings)



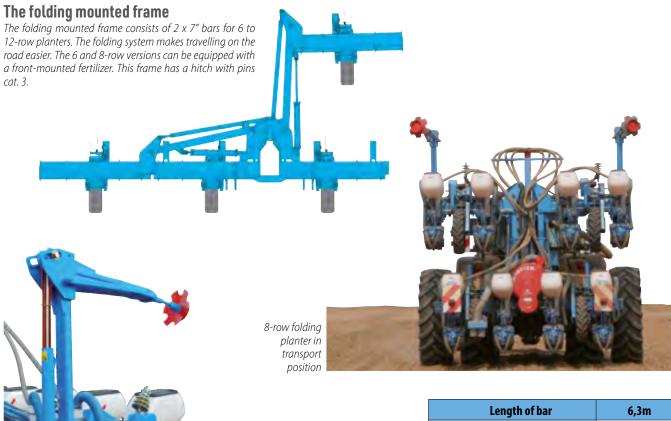
8-row rigid planter with fertilizer (inter row spacings of 75cm)

Lawath of hou	3,2m	4,7m	6,3m	9m					
Length of bar	Double bar								
Number of metering units	4	6	8	12					
Inter-row spacings (cm)	70 - 75 - 76,2 - 80	70 - 75 - 76,2 - 80	70 - 75 - 76,2 - 80	70 - 75 - 76,2 - 80					
Number of wheel units	2	2 (4 on option)	2 (4 if fertilizer)	4					
Number of « drive » wheel units	2	2 (4 on option)	2 (4 if fertilizer)	4					

# • The folding mounted frame



8-row folding planter with front fertilizer (inter row spacings of 75cm)



The pivoting row markers that equip the 8-row folding planters offer a compact folding for minimum transport dimensions.

Length of bar	6,3m
Number of metering units	8
Inter-row spacings (cm)	75 - 76,2 - 80
Number of wheel units	4
Number of « drive » wheel units	4
Number of seed spacing gearboxes	3
Transport width	3,5m

## • The rigid, pull-type frames



8-row pull-type planter with fertilizer (inter row spacings of 70cm)

## The rigid, pull-type frames

The rigid, pull-type frame is a double bar frame equipped with a 3-point hitch on which is fixed a hitch tongue. This type of frame can be assembled with 4 to 8 metering units. The land and drive hydraulic wheel units enable the planter to be used with a lightweight tractor; the planter being simply pulled by the tractor.



Length of bar	3,2m	5,1m	6,7m
Number of metering units	4	6	8
Inter-row spacings (cm)	70 - 75 - 76,2 - 80	70 - 75 - 76,2 - 80	70 - 75 - 76,2 - 80
Number of wheel units	2	4	4
Number of drive wheels	1	2	2





### Hydraulic wheel units

The rigid pull-type frames are equipped with hydraulic lift wheel units. These wheel units are equipped with large diameter wheels (7.50x20) ensuring a good soil bearing capacity and a regular drive of the seed discs. When working the planter is lowered. When in transport position and at the end of fields, the wheel units are lifted. For total safety during transport, these wheel units are equipped with a mechanical locking system. This lift system with hydraulic wheel units ensures an excellent ground clearance of the



### **Drive wheel**

On the rigid, pull-type frames, the planter drive (metering system, fertilizer and Microsem) is ensured by one or several land wheels (the 6 and 8-row models are equipped with 2 land wheels). This reliable system ensures a regular and smooth drive.

## The folding, pull-type frames





## 8-row Pull-tupe WingFold folding frame

It can be equipped with 8 maize metering units. It is equipped with 4 hydraulic wheel units. The wings are hydraulically folded to the front for easier road transport. This frame can also be equipped with the 1350-litre "High Capacity" fertilizer.



The WingFold Flex folding pull-type frame

Available in a 12-row version, they are equipped with hydraulic wheel units in the standard version. The wings are folded to the front. These frames have a central articulation point in order to follow the ground contours. This articulation allows a clearance of 13° upwards and 12° downwards. These frames can also be equipped with standard fertilizer attachments.

Longueur poutre	4,5m	6m	6,8m	9,2m
Nombre d'éléments	6	8	8	12
Inter-rangs (cm)	70 - 75 / 80 <sup>(1)</sup>	70 - 75	80	70 - 75 - 76,2
Nombre de blocs roues	2	4	4	6
Nombre de blocs roues d'entraînement	2	2	2	2
Largeur au transport	3m/3,4m	3m	3,4m	5m

(1):



## The « PLUS » on the 6 and 8-row Wingfold planter with fertilizer



#### «High capacity» Fertilizer

The WingFold planters are equipped with a 1030L (6-row), 1350L (in electric version) and 1500L (8-row) fertilizer. The fertilizers are equipped with stainless steel metering systems with individual trapdoors. A Double function (Df) turbofan ensures an efficient seed suction and also enables the driving of the fertilizer out to the outer rows. A step gives safe access to the hopper.



## Adjustment by FertiDrive<sup>™</sup>

The transmission by FertiDrive<sup>vM</sup> enables a very easy and rapid adjustment of the quantity of fertilizer required per hectare. This transmission is also equipped with a declutching system which stops the fertilizer spreading when necessary.



## Adjustment by MicroDrive<sup>™</sup> \*

The transmission by MicroDrive $^{VM}$  (only available on planters equipped with a fertilizer attachment) enables a very easy and rapid adjustment of the quantity of product required per hectare. This transmission is also equipped with a declutching system which stops the microgranulator when necessary.

## • The Monoshox NX M technical features

		_				7" TOP Mount	ted frames		
		Frame	!		Rig	gid		Folding	
Width				3,2m	4,7m	6,3m	9,2m	6,3m	
Transp	orting width			3,2m	4,7m	6,3m	9,2m	3,5m	
Numb	er of elements			4 6 8 12 8					
Row sp	pacing (in cm)			70 -75 - 76,2 - 80 75 - 76,2 - 8					
Turbin	ie			Power take-off drive - standard 540 rpm, optional 450 or 1,000 rpm Optional hydraulic drive, optional universal joint freewheel					
Tyres				2 x (6.5x15)	2 (ou 4) x (6.5x16)	2 (ou 4) x (6.5x16)	4 x (6.5x16)	4 x (6.5x16)	
		Distance	Standard (20 speeds)	1	1	1	1	3	
Drive	Mechanical	gearbox	Lever-operated (18 speeds)	-	-	-	-	-	
	Electric			0	0	О	0	O	
Hydrau	ulic markers			•	•	•	•	•	
	Standard			-	-	-	-	-	
Fertilizer	"High-capac	ity"		O 2 x 400L.	O 2 x 700L.	O 2 x 1000L.	-	-	
Ē	Front standa	nrd		0	0	0	-	0	
	Front DUO			0	0	О	О	О	
Microsem	Insecticide			0	0	0	О	0	
Mic	Helicide			О	0	0	О	0	
Hectar	re counter			О	0	О	О	О	
Sowing	g controller			О	0	0	0	О	
Lightir	ng kit								
Weigh (with	t of seed plant fertilizer)	er alone		1260kg (1580kg)	1680kg (2140kg)	2150kg (2910kg)	3350kg (-)	3000kg (-)	

<sup>● :</sup> Standard ○: Optional -: Impossible \*: According to models (1): Inter row spacing 80cm:

			7" TOP Pul	ll-type frames							
	Rigid				Folding						
3,2m	5,1m	6,7m	4,5m	4,5m	6m	6,8m	9,2m				
3,2m	5,1m	6,7m	3m	3,4m	3m	3,4m	5m				
4	6	8	6	6	8	8	12				
	70 -75 - 76,2 - 80		70-75	80 <sup>(1)</sup>	70-75	80	70				
Power take-off drive - standard 540 rpm, optional 450 or 1,000 rpm Wide angle universal joint, optional hydraulic drive, optional universal joint freewheel											
2 x (7.5x20)	4 x (7.5x20)	4 x (7.5x20)	2 x (265)	/70R19,5)	2 x (265/70R19,5)	2 x (265/70R19,5)	6 x (7,5x20)				
1	1	1	-	-	-	-	1				
-	-	-	1	1	1	1	-				
0	0	0	0	0	0	О	0				
•	•	•	•	•	•	•	•				
-	-	-	-	-	-	-	○ 4 x 270L.				
O 2 x 400L.	O 2 x 700L.	O 2 x 1000L.	O1 x 1030L.	O1 x 1030L.	O 1 x 1500L. (or 1350L.)*	O 1 x 1500L. (or 1350L.)*	-				
-	-	-	-	-	-	-	-				
-	-	-	-	-	-	-	-				
0	0	0	0	0	0	0	0				
О	0	0	0	0	0	0	0				
О	О	0	0	0	0	0	0				
0	О	0	0	0	0	О	0				
0	0	0	•	•	•	•	0				

1660kg (1960kg) 2430kg (2820kg) 3030kg (3660kg) 2500kg (2900kg) 2550kg (2950kg) 3100kg (3650kg) 4250kg (5050kg)

3150kg (3700kg)

# The NC Classic metering unit

The NC Classic is designed for farmers who want a simple and sturdy planter for maize and sunflower planting in well-prepared soils.





**Parallelogram** The heavy-duty parallel linkage with its long travel is mounted on replaceable metallic





**Safety clutch**Each metering unit is equipped with an audible safety clutch system with automatic clutching for optimal protection of the metering system.



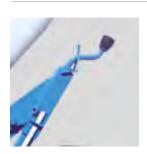


**Down pressure spring** Two depth control springs enable the stabilizing of the unit.





Planting with shoe (maize shoe) with interchangeable tip.

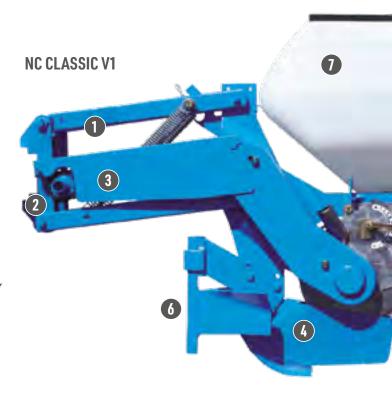




## **Depth control**

The working depth adjustment with crank adjuster and reference index is very simple and precise.









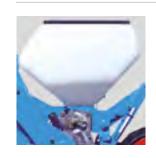






## Clod remover

The clod remover, adjustable in height is delivered as standard equipment on the NC Classic metering units.





## **Hopper**

Heavy-duty plastic hopper with a 40-litre capacity as standard. (Hopper 20 litres optional).







## **Scrapers**

The NC Classic V2 and V3 are fitted with scrapers between the shoe and the rear wheels as standard equipment for closing the furrow. On the NC Classic V1, these scrapers are fitted behind the press wheels.





## Rear press wheels

The NC Classic offers the choice of three types of rear press wheels mounted on sealed ball bearings.

### **COMPLEMENTARY EQUIPMENT**



Double-discs openers

A double disc can be fitted on to the NC unit in order to improve furrow opening (planting in less well prepared soils or in trashy soils).



# Additional adjustable spring

An adjustable, extra pressure spring can be added for planting in hard or trashy soils (assembly according to frame).

## • The NC Technic metering unit

The NC Technic is a versatile planter. The adjustable design of this planter offers the choice of depth control and furrow opening. With these features, it can be used for planting maize, sunflower, beans, sugarbeet, soya bean, peas, rapeseed,.... in traditional soil preparation or less prepared soils.





Parallelogram

The heavy-duty parallel linkage with its long travel is mounted on replaceable metallic bushes.





## Safety clutch

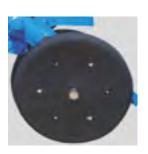
Each metering unit is equipped with an audible safety clutch system with automatic clutching for optimal protection of the metering system.





## Down pressure spring

Two depth control springs enable the stabilizing of the unit.





## Rear V-press wheels

The furrow closure is made by two V self-cleaning press wheels.



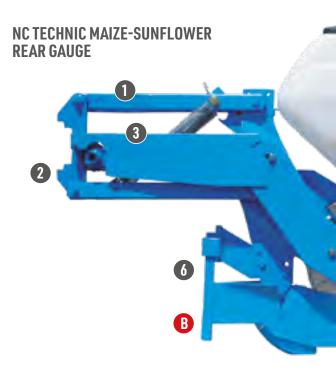
These V-wheels can be adjusted and offer four rearward positional settings and scrapers (except the narrow maize NC Technic version).



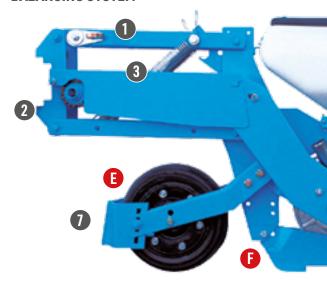


## **Depth control**

The working depth adjustment is made with a reference index lever, guaranteeing a very simple quick and precise setting.



## NC TECHNIC SUGARBEET BALANCING SYSTEM



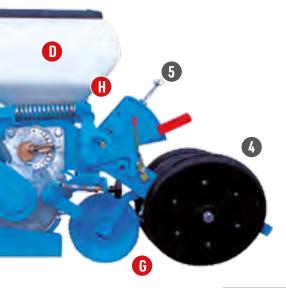


On the «rear gauge» metering units, the depth control is ensured by the rear press wheel unit.



On the «balancing» metering units, the depth control is ensured by the front wheel and the rear press wheel unit. An adjustment spring enables the distribution of the front/rear loads even to a «Front gauge» depth control.





- **A 40L** transparent plastic **hopper**
- **B** The clod remover adjustable in height (is delivered as standard equipment on the NC Technic Maize-Sunflower metering units)
- (C) Maize shoe with replaceable tip
- **D 20L** transparent plastic **hopper**
- **E** 300 x 100 front wheel with self-cleaning tyre mounted on sealed ball bearings.
- F Specially shaped **sugarbeet low shoe** with replaceable tip
- **G**Retractable press wheel with adjustable pressure.
  Intermediate stainless steel press wheel mounted on ball bearings with plastic scraper.
  Intermediate press wheel with self-cleaning tyre on option.
- **H**) **Spring** to adjust the front/rear weight distribution of the unit on the tandem system.

## **COMPLEMENTARY EQUIPMENT**



**Double-discs open-furrow**A double disc can be fitted on to the NC unit in order to improve furrow opening (planting in less prepared soils or in trashy soils).



«Double disc only for NC Technic maize model (6). Double disc with 285x65 wheels for Balancing NC Technic model (7).»



Additional adjustable spring
An adjustable, extra pressure spring can be added for planting in hard or trashy soils (assembly according to frame).

## OTHER NC TECHNIC METERING UNITS



A kit for modifying the NC Technic metering unit with « rear gauge system » into « balancing system »



NC Technic Sugarbeet metering unit Balancing system Double-discs & 285x65 wheels

NC Technic Beans metering unit Balancing system 300 x 100 front wheel

NC Technic Maize metering unit Rear gauge Double-discs

# The planter components NC



### Wheel units

On the Monosem planters, all the wheels drive the seed discs. This system ensures a smooth drive and thus a better planting precision. All the wheel units are equipped with a slip clutch for less stress on the seed discs on bends.

Frames that may be equipped with a "High capacity" fertilizer have reinforced wheel units. So that even in the case of adding fertilizer product, the wheel units will easily support this extra equipment.

For planting with reduced inter row spacings (up to 37,5 cm) or when planting in stony grounds, front wheel units are proposed.

The standard wheel unit (rear) remains the best suggestion because it ensures better drive and a good following of the ground contours.

The wheel units are proposed with 3 different models of wheels:

- Narrow (500x15) for reduced inter row spacings (sugarbeet),
- Standard (6,5x80x15),
- Wide (26x12) for minimum inter row spacings of 70 cm with rear wheel units.



Reinforced wheel unit with 6,5x80x15 wheel

Planter with front wheel units for planting with reduced inter row spacings (up to 37,5 cm) or in stony soil conditions.



## Turbofan

To suit all planter configurations (number of units, type of seeds, pneumatic transport of fertilizer, ...) and guarantee an optimal vacuum, Monosem has a wide choice of turbofans available.

The Monosem turbofans are reliable, efficient and ensure a regular vacuum for optimal operation of the metering. Our turbofans have 12 outlets in the standard version, an anti-rain flap (work monitor) and a drive by PTO shaft of 540 rpm. On option, the drives with PTO shafts at 450 rpm and 1000 rpm are available and also

a drive by hydraulic motor. A universal joint is also proposed on option.







Double function Turbofan



High output Turbofan



Extra high output Turbofan



According to current law, Monosem can propose anti drift of dust kits (KAP). These kits are approved by the BBA Germany and guarantee the correct operating of Monosem planters.





## Seed spacing gearboxes

### Standard

The standard seed spacing gearbox with 18 ratios gives a rapid and precise adjustment of the seed population. Changing the seed population is rapid. A single lever releases the chain. Then just place the required sprockets facing each other and release the lever to re-tighten the chain.

Standard or optional according to models.

## • The frames



## The rigid Monobar frame

The rigid Monobar frame can have 3 to 6,1m bar. This simple and economical frame can be equipped up to 8-row maize or 12-row sugarbeet with or without fertilizer attachment. Its reduced overhang and its weight enable it to be hitched on to light weight tractors.



## The coupled frame

The coupled frame is the coupling of 2 standard monobar frames. The 2 frames are supported by a double 180x180 mm bar – 9 to 12m long. This type of frame is suited to 16-row maize or 24-row sugarbeet planters.



NC Technic Maize planter 8-row Monobar rigid frame (70 cm) - Fertilizer 4x175 L with knives



NC Technic Maize planter 12-row Monobar rigid frame (45 cm) - Fertilizer  $4x175\,L$  with knives



Type of frame			Rigid monobar		
Width	3	Bm	4,5m	6,1	m
Number of metering units	4	6	6	8	12
Inter-row spacings (cm)	70-80	45/50	70/75/80	70/75/80	45/50
Number of « Drive » wheel units		2	2	4	
Number of seed spacing gearboxes		1	1	1	
Transport width (with transport carriage)		-	-	3r	n

<sup>- :</sup> Impossible \*: According to models



# The Monobar single telescopic frame

The Monobar single telescopic frame has a 4,5m bar when working. When transported, the 1st and 6th row retract for a transport width of 3 at 3,5m according to the type of metering unit. Its reduced over hang and its weight enable it to be hitched on to light weight tractors.



# The Monoblock 260 single telescopic frame

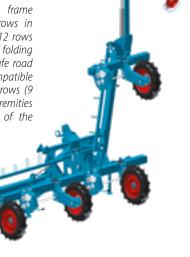
The Monoblock single telescopic frame 260 has a 4,5m bar when working. When transported, the 1st and 6th rows retract for a transport width of 3 at 3,5m according to the type of metering unit. This frame is also suitable for an uneven number of rows. The Monoblock 260 can be equipped with "High Capacity" fertilizer attachments.



NC Classic V3 planter 6-row single telescopic Monoblock frame (75 cm) Fertilizer 980 L with knives

# The floating Double bar folding frame

The floating Double bar frame can be equipped with 8 rows in «maize» version and up to 12 rows in «sugarbeet» version. Its folding system at 3 m authorizes safe road transport. Its design is compatible with an uneven number of rows (9 or 11 rows). The floating extremities ensure a perfect following of the ground contours.





Coupl	ed	Telescopio	: Monobar	Telescopic Mo	onobloc 260	Double bar Folding		
9m		4,5m		4,51	m	6m		
12 18		6		6		8	12	
70/75	45/50	75	80	75	80	75/80	45/50	
8		2	2	2	2	4		
2		1	1	1	1	3		
3m		3,4m*	3,5m	3,4m*	3,5m	3n	1	

# • The NC technical features

	_			Rig	id		
	Frame			Monobar			Monobloc
Width		3	m	4,5m	6,	lm	3m
Transporting v	width	3	m	4,5m	6,	1m	3m
Number of ele	ments	4	6	6	8	12	6
Row spacing (	in cm)	70-80	45/50	70-80	70-80	45/50	50
Turbine		Po		ve - standard 540 ptional universa			ı
Tyres			x 0x15)	2 x (6,5x80x15)		x (x15)	2 x (6,5x80x15)
Distance gear	box (18 speeds)	•	1	• 1	•	• 1	
Hydraulic mar	kers	o •		•	0		
ā	Standard		O 175L	O 2 x 270L	O 4 x 175L		○ 2 x 270L
Fertilizer	Front standard	0	0	0	0	0	0
	Front DUO	-	-	-	-	-	-
Microsem	Insecticide	0	0	0	0	0	0
Micro	Helicide	0	0	0	0	0	0
Hectare count	er	0	0	0	0	0	0
Sowing contro	oller	0	0	0	0	0	0
Row breaks		0	0	0	0	0	0
Lighting kit		0	0	0	0	0	0
Weight of see	d planter alone	600kg	800kg	800kg	1200kg	1700kg	850kg

<sup>● :</sup> Standard ○: Optional -: Impossible

					Single telescopi	c		Folding	
Coupled			Monobar	Monobloc 125		Doub	le bar	CRT	
9m 12m		4,5m	4,5m	4,5m	6m		9m		
3m 3m		3m	3,5m	3,5m	3m	3m	3m		
12	18	16	24	6	8	6	8	12	12
70/75	45/50	70	45	75/80	35/45/49	75/80	75/80	45/50	70/75/76,2/80
Power take-off drive – standard 540 rpm, optional 450 or 1,000 rpm  Optional universal joint freewheel									
8 x (6,5x80x15)	8 x (500x15)	8 x (6,5x80x15)	8 x (500x15)		2 x (6,5x80x15)		4 x (6,5x80x15)	4 x (500x15)	4 x (6,5x80x15)
• 2		2	<b>●</b> 1			• 3		● 3 (wheel block gearbok)	
•		•	•			•		•	
O 4 x 270L	○ 5 x 175L + 1 x 270L	-	-	○ 2 x 270L	O 2 x 270L	⊃ 2 x 270L or 1 x 980L	-		-
О	-	-	-	0	0	0	О	0	О
О	О	О	О	-	-	-	-	-	О
О	О	О	О	0	0	0	О	0	О
О	0	0	0	0	0	0	О	0	О
О	0	0	•	0	0	0	О	0	О
О	0	0	О	0	0	О	О	0	О
О	0	0	О	0	0	О	О	0	О
О	0	О	О	0	0	О	О	0	О
2800kg	3600kg	3500kg	4200kg	900kg	1200kg	1000kg	1800kg	2200kg	3000kg

# The vegetable planters

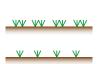




# Planting methods

	Singl	e line	Doubl	Strip	
Type of planting			<b>4→</b> 50 or 70 mm	80 to 11 mm	67 or 100 mm
Inter-row spacings	14 to 20 cm	20 cm and +	20 cm and +	26 cm and +	20 cm and +
Metering unit	MS B or B2 1 line per metering box	MS A - MS B or B2 1 line per metering box	MS C 2 lines per metering box	MS D or D2 1 line per metering box	MS A - MS C 1 strip per metering box

# Example of sowing on flat ground



In the field



Planting in the field

## In beds





Planting on 1 bed per passage



Planting on 3 beds per passage

# Example of sowing on ridges

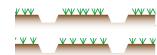






Planting in the field

# In beds



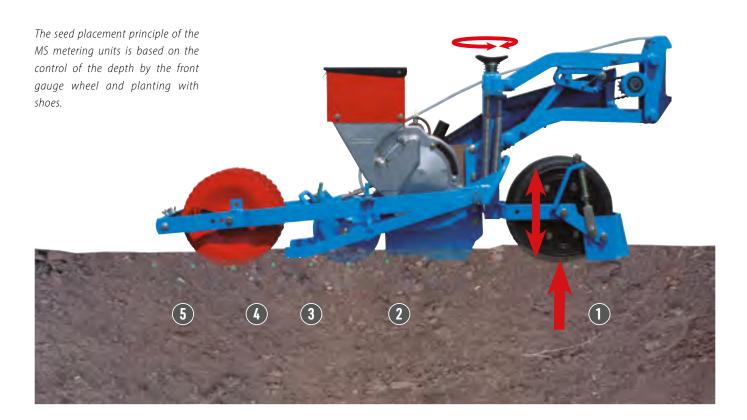


Planting on 1 bed per passage



Planting on 3 beds per passage

# • The MS seed placement







The clod remover clears the future planting line of clods or stones whilst the gauge wheel presses the soil and controls the depth.





The scrapers\* (retractable if necessary) scrape fine soil over the seeds.

\*except MS version B





The shoe opens the furrow (or the furrows) at a depth defined by the front gauge wheel.





The rear wheel closes the furrow around the seed for optimal seed germination.





The intermediate press wheel\*, adjustable in pressure, presses down the seeds into the bottom of the furrow for regular and rapid plant emergence.

\*except MS versions B and D

# The MS metering system

Quality planting depends first of all on a good metering system. This is why Monosem uses all their know-how so as to propose a precise, simple and very reliable metering system. This quality of manufacture will enable you to plant the smallest seeds with great precision.





## Metering box

The metering box made from bronze ensures a perfect seal with the disc without risk of the phenomenon of static electricity.





## **Discs**

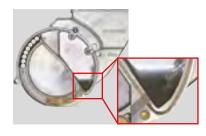
The stainless steel discs 1 mm thick are very rigid. The agitator, fixed on to the disc stiffens the unit. The changing of the discs is easily made without tools. A complete range of discs for all precision seeds is available.





## Scraper

The brass scraper avoids doubles. A spring on the metering box cover maintains the selector perfectly in place against the disc for optimal selection, even with small seeds.



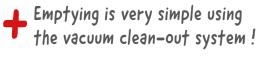


#### Cover

The cover in alloy is specially designed for planting with a minimum of seeds. A fiber gasket provides a seal between the disc and cover.











#### Control window

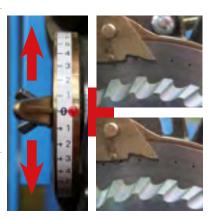
The distribution system is easily accessible, for both adjustments and control. A large transparent window allows for control of the selection after the selector.





## Air jet cleaning

After the seeds have dropped, a jet of air removes any dust and residue of seeds that could get stuck in the holes of the discs.



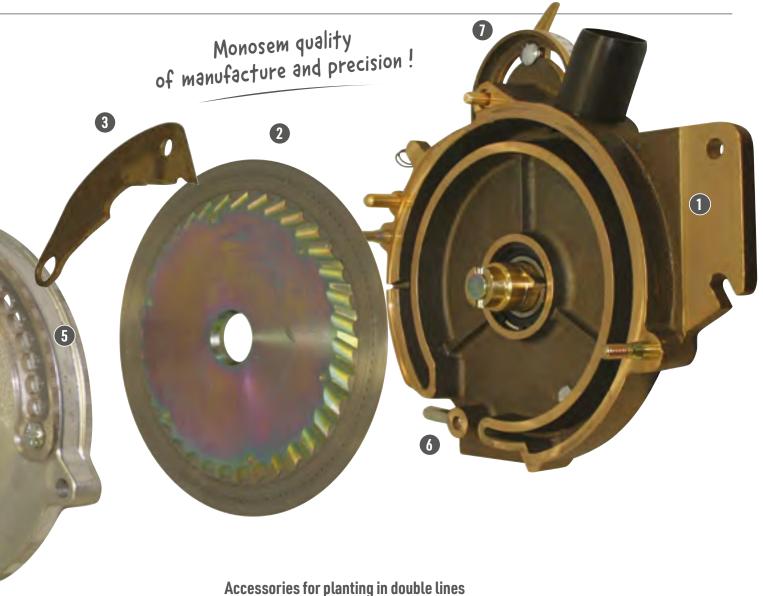


## Selection adjustment

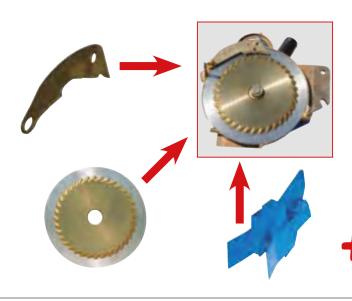
The selection adjustment is made using a single lever which is easily accessible on the top of the metering boxes. The quality and the precision of the MS metering boxes enables an identical adjustment on all of the units.



🔔 The same adjustment on all the rows due to the quality of Monosem manufacture!



**Accessories for planting in double lines**The MS metering boxes can plant in single line as well as double lines. For this, the single line shoe is simply replaced by a double lines shoe, the disc with one line of holes is replaced by a disc with 2 lines of holes and a 2<sup>nd</sup> selector is added.





One single adjustment of the 2 selectors Single row and double row on the same unit!

# • The MS metering system



Single row disc



Double row disc

## MAIN MS SEED DISCS

Numbe	er of holes	Distance on the row (seed spacing	Diameter of holes (mm)	
Single row disc	Double row disc	gearbox and standard sprockets)		
18	2 x 18	12,3 to 32,7cm		
30	2 x 30	7,4 to 19,6cm	0,5 - 0,6 - 0,65 - 0,7 - 0,8	
36	2 x 36	6,2 to 16,4cm	0,9 - 1,- 1,2 - 1,5 - 1,8 2 - 2,5	
60	2 x 60	3,7 to 9,8cm		
72	2 x 72	3,1 to 8,2cm		
120	2 x 120	1,8 to 4,9cm	0,5 - 0,6 - 0,65 - 0,7 - 0,8	
180	2 x 180	1,2 to 3,3cm	0,9 - 1 - 1,2 - 1,5 - 1,8	

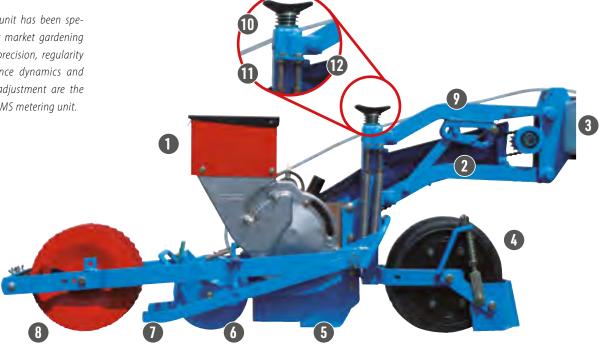
Please consult us for all special seed populations or hole diameters (double lines, hill dropping...)



Diameter of holes (mm)	Types of seeds (just given as a guide)			
2,5	wheat, pelleted sugarbeet, safflower, barley, ice			
2,2	chard, pelleted lettuce			
2	asparagus, sugar beet, beetroot, pelleted fennel, pelleted onion, pelleted parsnip			
1,8	cucumber, spinach, lentil, melon, radish, black radish			
1,7	gherkin			
1,5	paprika			
1,2	pelleted carrot, cabage, coriander unpelleted onion, radish, tomato			
1	brocoli, unpelleted fennel, mustard pepper, swede, sesame			
0,9	shallot, turnip			
0,8	lambs lettuce, poppy			
0,7	basil, unpelleted carrot, chives, parsley, rocket, thlaspi			
0,65	chicory, endive			
0,6	Djulis, anise			
0,5	Celery, unpelleted Lettuce			

## The MS metering unit

The MS metering unit has been specially designed for market gardening crops. Seed drop precision, regularity of depth, emergence dynamics and the simplicity of adjustment are the main assets of the MS metering unit.





Extension 1,5L



3L Hopper

1

## Hopper

The MS metering units are delivered, in standard version, with a 1,5-litre extension. If required, the units can be supplied without extension or with a 3-litre hopper.





#### **Parallelogram**

The heavy-duty parallel linkage is mounted on interchangeable bushings. For soft ground, a relief spring is on option.





## Metering unit head

The MS metering unit head is equipped as standard with a manual row cut-off.





### Front gauge wheel

On MS metering units, the depth control is made with the front wheel. The wheels mounted on ball bearings, are available in different models according to your requirements and according to the version of metering unit. The depth adjustment is made using a hand wheel (10). A scale enables to check the precision of depth adjustment when planting.





The MS unit shoes can be removed and have an interchangeable tip. Different models of shoes are available according to the type of planting (single line, double lines or strip) and according to the type of soil (rounded tip, short wings, long wings,...).



# 6 Intermediate press wheel with adjustable pressure

Les éléments MS sont équipés de roulettes intermédiaires pour rappuyer les graines au fond du sillon et ainsi améliorer le contact graine-sol (sauf éléments MS B et D). La pression au sol de cette roulette plombeuse est réglable (11).



## 7 Scrapers

The MS units are equipped with scrapers in the standard version for closing the furrow (except on MS B units). These scrapers can be individually adjusted in height and are retractable.



# Rear press wheel unit with adjustable pressure

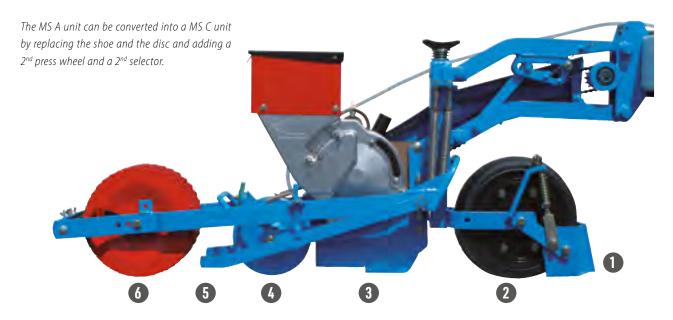
Different "models of "wheels are proposed for closing and firming the furrow. The pressure on the ground of these wheels is adjustable (12).

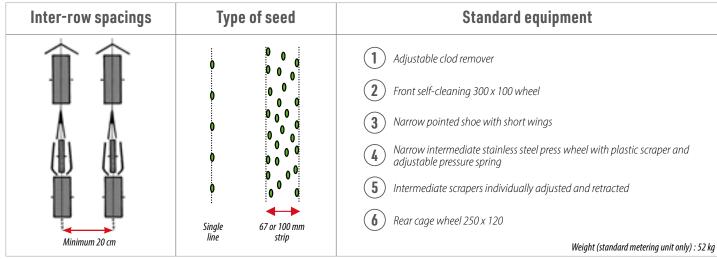


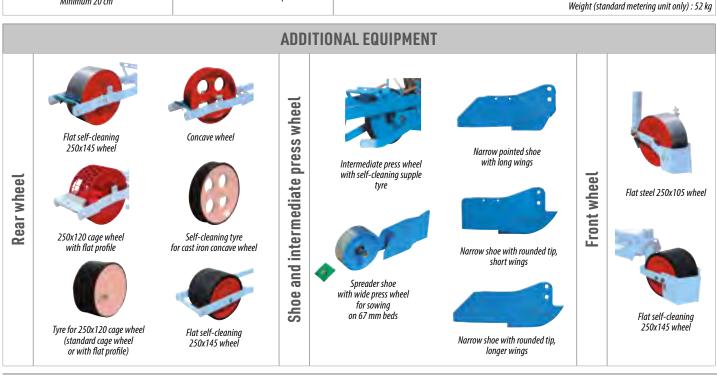
## 9 Relief spring (option)

For light, supple soils, a double adjustable relief spring helps to relieve the metering unit.

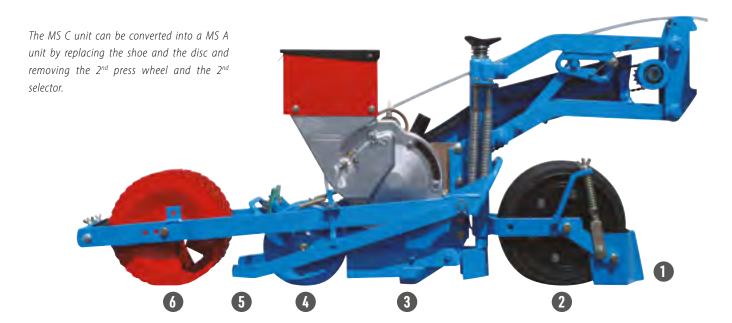
## The MS A metering unit

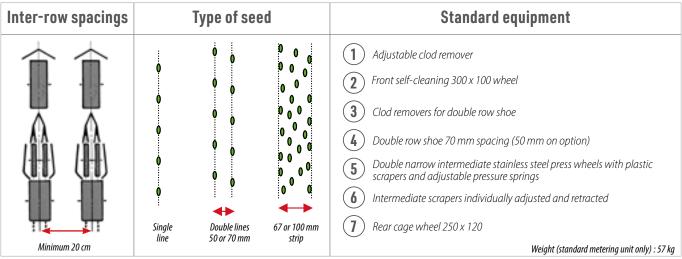


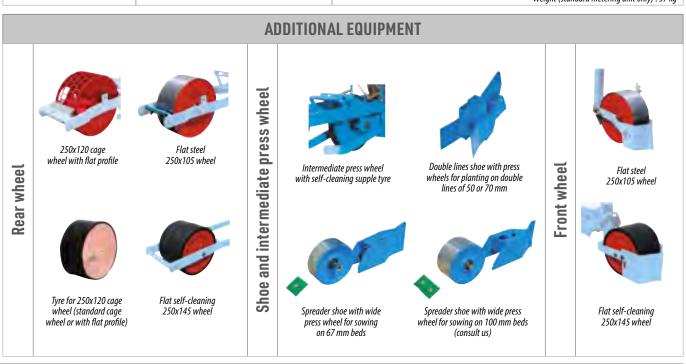




## • The MS C metering unit



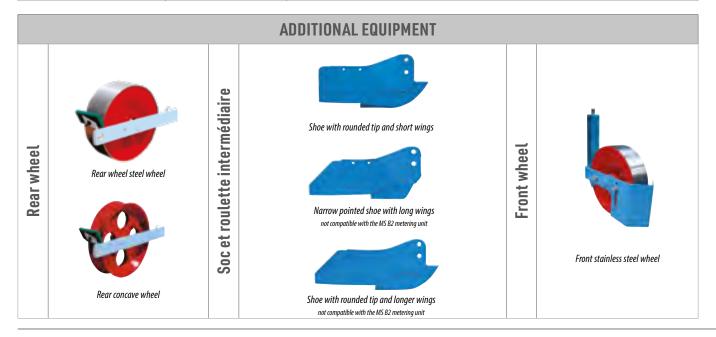




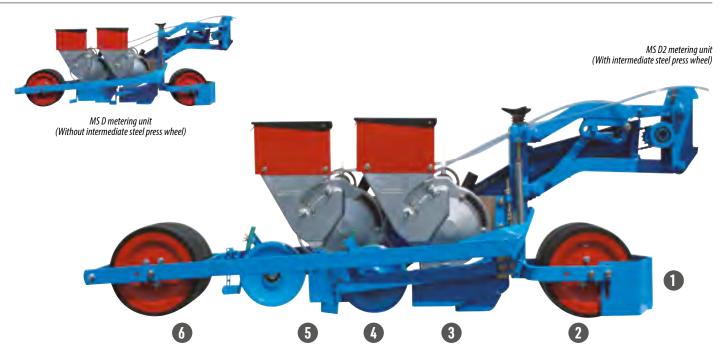
# • The MS B and B2 metering unit

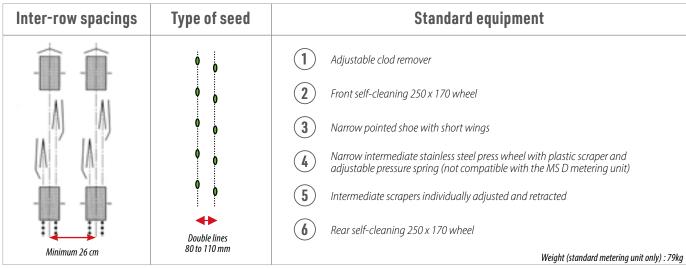


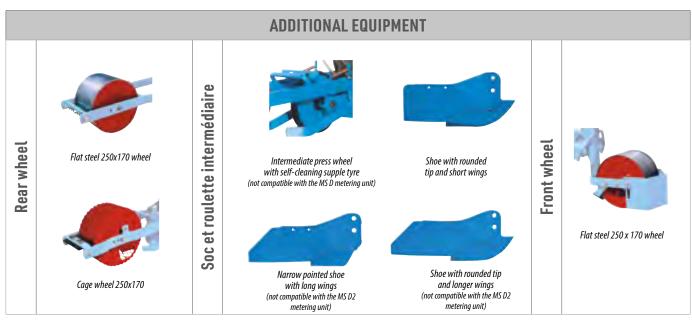
Inter-row spacings	Type of seed	Standard equipment
m m		1 Clod remover
₩ ₩		2 Front self-cleaning 285 x 65 wheel
ΛΛ	•	3 Narrow pointed shoe with short wings
м м	•	Narrow intermediate stainless steel press wheel with plastic scraper and adjustable pressure spring (not compatible with the MS B metering unit)
	•	5 Intermediate scraper (not compatible with the MS B metering unit)
Minimum 14 cm	Single line	6 Rear cast iron concave wheel with self-cleaning tyre
Minimum 14 cm		Weight (standard metering unit only) : 46kg



## • The MS D and D2 metering unit







## The MS frame components

The MS planters are equipped with TIP 5» frames. This type of frame, together with the unit fixing system and the planter components, offer a vast choice of assembly

configurations, row spacings and equipment.





#### Wheel units with adjustable height

On the Monosem planters, all the wheels drive the seed discs. This system ensures a smooth drive and so a better planting regularity.

Three types of wheel units are offered. All are equipped with a slip clutch for a smooth drive of the seed discs in irregular ground conditions. The wheel units have a system of height adjustment and are offered with narrow (500 x 15) wheels (except adjustable wheel unit with screw).



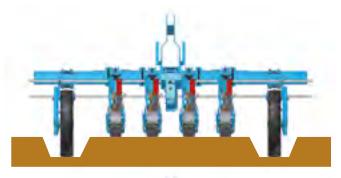
Adjustable wheel unit with 500 x 15 wheel Minimum inter-row spacings (1): 36 cm Wheel clearance: 25 cm

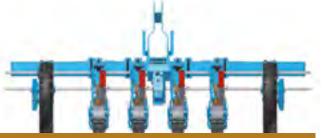


Adjustable wheel unit with 500 x 15 wheel and integrated seed spacing gearbox Minimum inter-row spacings (1): 43 cm Wheel clearance: 25 cm



Adjustable wheel unit with 6,5 x 80 x 15 wheel Minimum inter-row spacings (1): 45 cm Wheel clearance: 19 cm





The wheel units that can be adjusted in height enable planting on flat ground or on ridges.

(1) Minimum inter row spacing for a configuration with wheel unit placed between 2 metering units (according to equipment)





### Seed spacing gearbox

According to the required inter row spacing, the MS planters are equipped with a central or rear seed spacing gearbox or a gearbox integrated into the wheel unit. These gearboxes have 16 ratios for precise adjustment of the seed population.



Central seed spacing gearbox Minimum inter-row spacings (1): 33 cm



Rear seed spacing gearbox Minimum inter-row spacings (1): 20 cm



Seed spacing gearbox integrated into the wheel unit Minimum inter-row spacings (1): 43 cm

### (1) Minimum inter row spacing for a configuration with wheel unit placed between 2 metering units (according to equipment)



### Assembly of the units with clamps

The assembly of the units with clamps ensures a reliable and solid fixing of the units. If necessary, the units can be moved in order to modify the inter row spacing by loosening the clamps. This method of fixing excludes the risk of the metering unit sliding sideways when working.

### **Row markers (option)**

The MS planters can be equipped on option with row markers. Different models are available according to the types of folding and width of the planter.



Hydraulic row marker with disc (version with shoe also available)



### (3) Turbofan

The MONOSEM turbofans are silent, reliable, high performing and ensure a regular vacuum for optimal operating of the seed discs. Our standard turbofans have 19 outlets and are driven by PTO at 540 rpm. On option, they can be driven by PTO at 450 rpm and 1000 rpm and also by hydraulic motor. An universal joint is also proposed on option.



### 4 Vacuum cleaner

The MS planters are delivered with a vacuum clean-out sytem which easily and rapidly retrieves all the seeds left in the bottom of the metering boxes. All the seeds are retrieved in a transparent container.



Emptying is very simple, not a seed lost using the vacuum clean—out system delivered as standard equipment!

## The rigid frames



**The rigid Monobar frame**The rigid Monobar frame can be equipped with a bar of 2 up to 3,8m.
This simple and economic frame can receive up to 12 metering units. The reduced overhang and weight enable it to be hitched up behind relatively light tractors.



### The rigid Monoblock frame

The rigid Monoblock frame can be equipped with a bar of 3 up to 4,5m. This frame is particularly suitable for a fertilizer attachment.



Frames				gid obar
Length of bar	2m	2,2m	2,6m	3m
Maximum number of metering units	5	5	6	9
Minimum inter-row spacings				
Number of « drive » wheel units	2	2	2	2
Number of seed spacing gearboxes	1	1	1	1
Transport width (with transport carriage)	-	-	-	-



#### The rigid Double bar frame

The rigid Double bar frame has a robust and versatile design. The double bar enables a length of bar up to 8,4m, i.e. 24 metering units. This frame can also be equipped with fertilizer attachments and also an integrated transport carriage for lengthways transport.



A lengthways transport carriage is available for wide-configuration planters. This transport carriage has a manual or hydraulic wheel lift.



		Rigid Monoblock 125			Rigid Double bar	
3,5m	3,8m	3m	4,5m	6,1m	6,6m	8,4m
9	12	9	12	12	18	24
Depending on the metering unit						
2	2	2	2	2	4	4
1	1	1	1	1	1	2
-	-	-	-	2,5m	2,5m	2,5m

Just given as a guide. For other models :



MS A chicory Planter - Rigid double bar frame - 18 rows with Microsem and transport carriage



MS C Planter - Monobar rigid frame - 2 rows



 ${\it MSA Planter-Monoblock rigid frame-4 rows with fertilizer and Microsem}$ 



MS A Planter - Monobar rigid frame - 5 rows with Microsem



MSA planter - Rigid monobar frame - 3x3 rows

### The folding frames

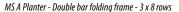


**The Monobar Compact floating folding frame**The floating folding Compact Monobar frame can be equipped with up to 18 metering units. It's folding system makes travelling on the road easier. It's floating wings ensure a perfect following of the ground contours. It's reduced overhang and it's weight mean that it can be hitched up on relatively light tractors.



#### The Double bar floating folding frame

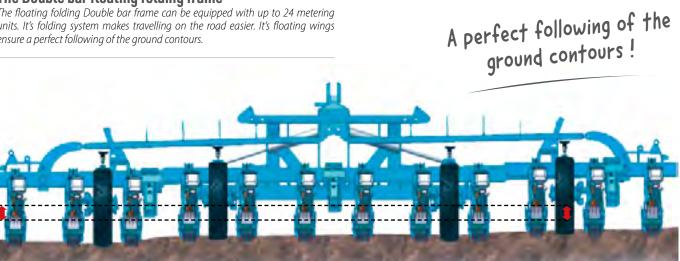
The floating folding Double bar frame can be equipped with up to 24 metering units. It's folding system makes travelling on the road easier. It's floating wings ensure a perfect following of the ground contours.





Frames	Compact folding
Length of bar	5,8m
Maximum number of metering units	18
Minimum inter-row spacings	
Number of « drive » wheel units	4
Number of seed spacing gearboxes	3
Transport width (with transport carriage)	3,5m (1)

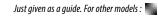
(1) Depending on inter-row spacings and equipments



The Compact or Double bar folding frames have independant wings with wheel units. This feature enables a perfect following of the ground contours. In headlands or to finish off a parcel, it is also possible to lift one or other of the wings (or the 2), automatically stopping the seed metering.



Monobar frame	Double bar folding frame				
6,3m	6m	7m			
18	18	24			
Depending on the metering unit					
4	4	4			
3	3	3			
3,5m (1)	3,5m (1)	3,7m (1)			





MS A chicory Planter - Double bar folding frame - 18 rows



MS A Planter - Double bar folding frame - 3 x 8 rows



MS D2 Planter - Double bar folding frame -  $3 \times 4$  double rows with Microsem



MS C Planter - Double bar folding frame - 3 x 4 rows with Microsem



 ${\it MSCP lanter-Compact folding frame-3x4double rows}$ 

# • The MS technical features

							Rigid		
Fran	nes			Mono	bar				
Width		2m	2,2m	2,6m	3m	3,5m	3,8m		
Transporting width (with long transport trolley)		2m	2,2m	2,6m	3m	3,5m	3,8m		
	Element MS A	6	7	8	9	9	12		
Number	Element MS B or B2	8	10	12	12	16	16		
of rows maximum <sup>(1)</sup>	Element MS C	6	7	8	9	9	12		
	Element MS D or D2	4	5	6	6	8	8		
Turbine	Turbine		Power take-off drive - standard 540 rpm, optional 450 or 1,000 rpm. Hydraulic drive optional. Universal joint freewheel optional						
Tyres		2 x (500 x 15)							
Distance gearbox (16 speeds	s)	1	1	1	1	1	1 (ou 2)		
Hydraulic markers		0	0	0	0	0	O		
Fertilizer		-	-	-	-	-	-		
Microsem	Microsem		0	0	0	0	O		
Hectare counter		0	0	0	0	0	O		
Sowing controller		0	0	0	0	0	O		
Lighting kit		0	0	0	•	0	O		
Chassis weight (without elem	nents)	290kg	295kg	320kg	325kg	365kg	410kg		

<sup>●:</sup> Standard

**O**: Optional

<sup>- :</sup> Impossible

<sup>\*:</sup> According to models

<sup>(1) :</sup> Just given as a guide

<sup>:</sup> Consult us

						Fo	olding	
Monob	obloc 125 Double bar		Com	pact	Dou	ıble bar		
3m	4,5m	5,7m	6,6m	8,4m	6m	6,3m	6m	7m
3m	4,5m	5,7m (2,5m)	6,6m (2,5m)	8,4m (2,5m)	3,5m	4,1m	3,5m	3,7m
9	12	18	18	24	18	18	18	24
16		24	30				24	
9	12	18	18	24	18	18	18	24
6		12	12	,	-	-	12	

Power take-off drive - standard 540 rpm, optional 450 or 1,000 rpm. Hydraulic drive optional. Universal joint freewheel optional

2 x (50	0 x 15)	4 x (500 x 15)		4 x (50	0 x 15)	4 x (5	500 x 15)	
1	1	1	1 (ou 2)	2	3	3	3	3
O	0	0	0	0	•	•	•	•
O	0	-	-	-	-	-	-	
O	0	0	0	0	0	0	O	0
O	0	0	0	0	0	0	O	O
O	0	0	O	O	0	0	O	O
O	0	0	0	0	0	0	O	0
550kg	580kg	700kg	750kg	1305kg	1150kg	1300kg	1220kg	1260kg

# The mechanical planter





### The metering system

High quality planting demands a good distribution system. This is why Monosem offers all their know how in order to give you an accurate, simple and extremely reliable distribution system. This high quality manufacturing has made the MECA V4 metering system an acknowledged metering system. Today for your planting, you too can demand the Monosem reference.



Cast aluminium metering box
The metering box made from cast aluminium is very simple and requires no adjustment.



Replaceable insert

A stainless steel insert is fixed on the whole inner periphery of the metering box. This highly resistant and interchangeable insert ensures long life for the metering box.





**(2**)

#### Brush

Once the seeds are ejected from the disc, the brush cleans the holes for an always optimal selection of the following seeds.





#### Fiecto

To avoid clogging of the holes, an ejector removes the seeds that may remain trapped in the holes of the disc



**(7**)



#### Nier

The distribution by vertical rotor has an internal power supply of seeds. The large diameter disc (250mm) provides exceptional placement accuracy, even at high speeds.

For all sizes of standard pelleted sugarbeet and chicory seeds.





#### **Selection plate**

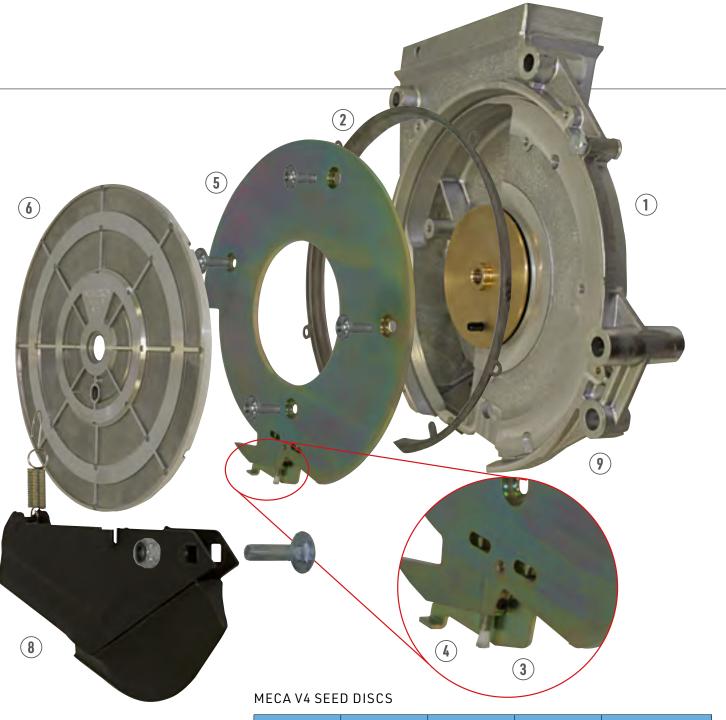
The selection plate is specific to the type of seeds. Several selection plates are available for different types of seeds.





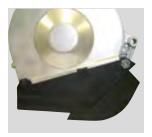
#### **Protection cover**

Stainless steel protection cover of the disc. It ensures the protection of the disc against clods, stones and trash.



Type of seed	Standard discs delivered	Number of cells	Cell width	Distances on the row (standard seed spacing gearbox)
Sugarbeet	5,5E5 and 5,7E5	5	5,5 and 5,7 mm	12 to 25 cm
Chicory	4E10	10	4 mm	6 to 12,5 cm
Rapeseed (1)	2,8C14	14	2,8 mm	4,5 to 9 cm







### Shoe

Planting of the seed is ensured by a shoe with interchangeable tip. Its tilting allows quick access to metering box.





**Emptying**The design of the metering box needs a minimum of seeds. A hatch allows emptying of the metering box.

# The MECA V4 planting system

The MECA V4 metering unit is equipped with a planting system with shoes. It's design offers two types of depth control: «Front gauge wheel» or «balancing system»



**« Front depth control » metering unit** On the MECA V4 « Front depth control » metering unit the depth control is done by the front wheel.

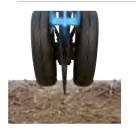


MECA V4 metering unit Front wheel 260x100 – Front depth control



MECA V4 metering unit Front wheels 285x65 + double discs – Front depth control

















The clod remover clears the future planting line, removing clods or stones whilst the gauge wheel presses down the soil land controls the depth.



The double discs open the furrow for an easier passage of the shoe in low till conditions. The 2 wheels ensure the depth control.



The shoe opens the furrow at a depth defined by the front gauge wheel (together with the rear press unit on the balancing system).



The intermediate press wheel, adjustable in pressure, presses the seed down into the bottom of the furrow for rapid and regular plant emergence.



The rear press wheel unit, made up of 2 V-wheels, closes the furrow around the seed for optimal seed germination.

# Kit for « Balancing

**system » planting** The « Front gauge wheel » units can be transformed into « Balancing system » units using a kit which is available on option.

## **« Balancing system » metering unit** On the MECA V4 « Balancing system » metering unit the

depth control is done by the front wheel and the rear wheels.



MECA V4 metering unit Front wheel 260x100 - Balancing System



MECA V4 metering unit Front wheels 285x65 + double discs - Balancing System

### The MECA V4 metering unit

The MECA V4 metering unit has been specially designed for sowing pelleted sugarbeet, rapeseed or pelleted chicory. Constant depth control, excellent seed placement and plant emergence are the main advantages of a planter unanimously recognized by the sugarbeet growers.





#### **Parallelogram**

The heavy-duty parallel linkage with a large clearance is mounted on interchangeable bushings. For better stability of the metering unit, an additional spring with adjustable pressure is available.





**Metering unit head** The MECA V4 metering unit head is equipped as standard with a manual row cut-off. The manual row cut-off can be optionally replaced by an electric clutch. Coupled to the seed monitor, it can automatically manage the row cut-off for the sprayer





#### Front wheels

The MECA V4 metering units are mounted on ball bearings. Two types of self-cleaning front wheels can be equipped the MECA V4 metering units:

- 1 wheel 260 x 100 with adjustable clod for planting in conventional soil preparation
- 2 wheels 285 x 65 with double discs openers for planting in trashy or superficially prepared soils.







#### Shoe

The seed placement is ensured by a rounded shoe. The shoe tip is interchangeable. If necessary, carbide tip shoes are available on option.

#### **COMPLEMENTARY EQUIPMENT**



Rear cast iron concave unit



Rear cast iron concave unit with self-cleaning tyre











### **Depth adjustment**

The depth adjustment is rapid thanks to a lever on the "Front depth control" metering unit or a knob on the "Balancing system" metering unit. The adjustment by lever offers a precise 5mm adjustment. On the "Balancing" metering units the precision of adjustment is in millimetres.





### **Hopper**

The hopper in high resistance, transparent plastic has a capacity of 8





**Rear V-press wheels**The furrow closure is provided by two V selfcleaning press wheels. Ground pressure of the wheels is adjustable. These wheels are mounted on reinforced bearings and with rounded scrapers.





#### **Stand**

A stand on each metering unit prevents the shoe from being clogged up.





#### Intermediate press wheel

Once in the ground, the seed is pressed with an independent stainless steel intermediate press wheel equipped with plastic scraper. This wheel has also a pressure adjustment and can be retracted.

Intermediate press wheel with self-cleaning tyre



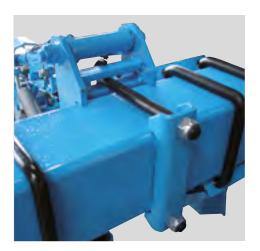
Side scrapers



Extra pressure spring

### The planter components

The MECA V4 planters are equipped with the TIP 5" frame. This type of frame, together with the metering and component fixing system, offer a wide choice of assembly and equipment.



### Fixing of the metering units by clamps

The metering unit fixing system by clamps enables sure and solid fixing of the metering units. If necessary the metering units can be moved so as to modify the inter row spacings by loosening the clamps.

This system of fixing excludes all risks of lateral movement of the metering units during work and resists in the most difficult operating conditions.



#### Wheel units

On the Monosem planters, all the wheels drive the seed discs. This system ensures a smooth drive and thus a better planting precision. All the wheel units are equipped with a slip clutch for less stress on the seed discs on bends. The frames for 18-row (and over) planters are equipped with reinforced wheel units. The wheel units are proposed with narrow wheels (500x15).



Slip clutch



Standard wheel unit with wheel 500x15



Reinforced wheel unit with wheel 500x15



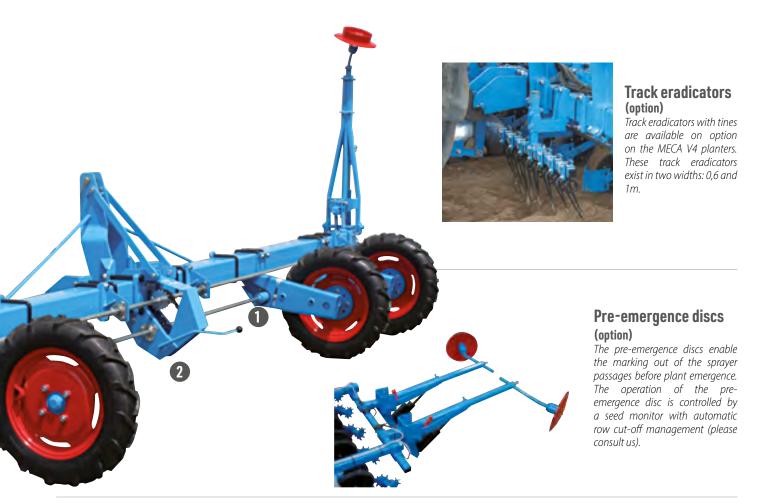


The standard seed spacing gearbox with 18 ratios gives a rapid and precise adjustment of the seed population.



### Seed spacing gearbox

The seed spacing gearbox has 18 ratios for a precise adjustment of the population. Changing the seed population is rapid. A single lever releases the chain. Then just place the required sprockets facing each other and release the lever to retighten the chain.



### (3) Row markers

The row markers on the MECA V4 planters are equipped with discs assembled on hub with double bearings (on option on 6-row planter). This type of disc ensures a regular marking no matter what the conditions. A crown to be bolted on to the row marker disc is also available as standard equipment or on option according to the models. This crown limits the working depth of the row marker in supple soils and brings extra weight to the row markers on hard soil thus improving the marking. According to the planter model, the row markers are single, double or triple folding.

In the standard version, the 6-row planters are equipped with manual row markers with shoes. Hydraulic row markers with discs are available on option.



The hydraulic row markers for rigid and coupled frames are single, double or triple folding according to the width of the planter (see above, row marker for 18-row rigid frame).



The hydraulic row markers for folding frames are equipped with a compact folding system (see above, row marker on 3-level folding frame.

### The rigid and coupled frames



#### The rigid Monobar frame

The rigid Monobar frame can have 3 to 6,1m bar. This simple and economical frame can be equipped with 6 or 12 metering units, with or without fertilizer attachment. Its reduced overhang and its weight enable it to be hitched on to light weight tractors.



#### The rigid Double bar frame

The design of the rigid double bar frame makes it heavy duty and multi-purpose. The double bar authorizes a bar of up to 6,1m long, i.e. 12 rows. This frame can also be equipped with standard fertilizer attachments.



Frame	Rigid monobar		
Length of bar	3m	6,1m	
Number of metering	6	12	
Inter-row spacings	45 or 50	45 or 50	
Wheel units	2	4	
Transport width (with carriage)	-	2,5m	

- : Impossible

(1):



#### The rigid triple bar frame

The design of the rigid triple bar frame makes it heavy duty and multi-purpose. The triple bar means that it can be equipped with 18 metering units, i.e. a bar of up to 9,2m long.



#### The coupled frame

The coupled frame is the coupling of 2 standard monobar frames. The 2 frames are supported by a double 180x180 mm bar - 9 to 12m long. This type of frame is suited to 18 or 24-row sugarbeet planters.



Rigid double bar	Rigid triple bar		Cou	pled
6,1m	8,4m	9,2m	9m	12m
12	18	18	18	24
45 or 50	45	50	45 (or 50 <sup>(1)</sup> )	45 (or 50 <sup>(1)</sup> )
6	6	6	8	8
2,5m	2,5m	2,5m	3m	3m



The transport carriages

A lengthwise transport carriage is available on option. This transport carriage may be with manual (TIP 5" frame) or hydraulic lift (TIP5" and TOP 7" frames). On the TOP 7" frames, this transport carriage is equipped on option with a hydraulic or air brake system.



6-row rigid monobar MECA V4 planter with Microsem



12-row rigid monobar MECA V4 planter



18-row rigid triple bar MECA V4 planter with Microsem and transport carriage



24-row coupled MECA V4 planter with Microsem

### The folding frames



#### The floating monobar compact folding frame

The floating monobar compact frame can be equipped with 12 rows. Its folding system at 3 m authorizes safe road transport. The floating extremities ensure a perfect following of the ground contours. Its reduced overhang and its weight enable it to be hitched on to light weight tractors.



#### The floating double bar folding frame

The floating double bar frame can be equipped with 12 rows. Its folding system at 3 m authorizes safe road transport. The floating extremities ensure a perfect following of the ground contours. This frame can be equipped with standard fertilizer attachments or equipment for a front-mounted fertilizer.



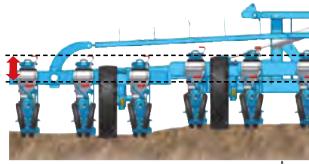
#### The three-level folding frame

The three-level folding frame can be equipped with 18 metering units. Its folding system at 3m means that it can travel safely on the road. The floating wings ensure a perfect following of the ground contours.



12-row double bar folding MECA V4 planter

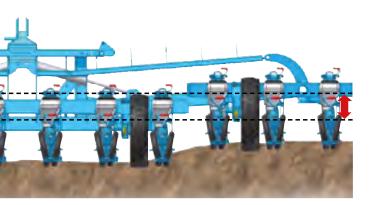
Frame	Compact folding frame
Length of bar	6m
Number of metering	12
Inter-row spacings	45 or 50
Wheel units	4
Transport width	3m



A perfect following of ground contours!



Double bar folding frame	Three level folding frame
6m	9m
12	18
45 or 50	45 or 50
4	8
3m	3m



Les châssis repliables compacts, repliables double-barres ou repliables trois niveaux disposent d'extrémités indépendantes avec blocs roues. Cette caractéristique permet un parfait suivi du terrain. Dans les pointes ou pour finir une parcelle, il est aussi possible de relever l'une ou l'autre des extrémités (ou les 2), stoppant ainsi automatiquement la distribution.



12-row compact folding MECA V4 planter with Microsem



 $12 \hbox{-row double bar folding MECA V4 planter with Microsem}$ 



18-row three-level folding MECA V4 planter



Three level folding MECA V4 18-row planter being transported

## • The MECA V4 technical features

	Frame		Rigid							
	rrame	Mon	obar	Double bar	Triple bar					
Widt	h	3m	6,1m	6,1m	8,4m					
	sporting width olongitudinal transport trolley)	3m -	6,1m (2,5m)	6,1m (2,5m)	8,4m (2,5m)					
Num	ber of rows	6	12	12	18					
Inter	-row	45 or 50	45 or 50	45 or 50	45					
Tyres	5	2 x (500 x 15)	4 x (500 x 15)	6 x (500 x 15)	6 x (500 x 15)					
Mechanical	Drive (16-speed gearbox)	1	1	1	2					
Mech	Electric	0	70	90	90					
Hydr	aulic markers	•	•	•	•					
Stan	dard fertiliser	O 2 x 175L.	O 4 x 175L.	O 4 x 175L.	-					
Front	t fertiliser	0	0	0	-					
Micro	osem Insecticide	0	0	0	0					
Hect	are counter	0	O	0	o					
Sowi	ng controllers	0	0	0	o					
Light	ting kit	0	0	0	0					
Integ	grated longitudinal transport trolley	-	O TIP 5"	O TIP 5"	O TIP 5"					
Weig	ht of seed planter alone	800kg	1600kg	1750kg	2700kg					

<sup>• :</sup> Standard • : Impossible \* : Selon modèles : Consult us

		Folding					
Triple bar	Compact	Double bar	Three levels	Coupled			
9,2m	6m	бт	9m	9m	12m		
9,2m <i>(2,5m)</i>	3m -	3m -	3m -	9m (3 <i>m</i> )	12m (3 <i>m</i> )		
18	12	12	18	18	24		
50	45 or 50	45 or 50	45 or 50	45 (or 50)	45 (or 50)		
6 x (500 x 15)	4 x (500 x 15)	4 x (500 x 15)	8 x (500 x 15)	8 x (500 x 15)	8 x (500 x 15)		
2	3	3	3	2	2		
No.	0	0	0	No.	70		
•	•	•	•	•	•		
-	-	-	-	O 6 x 175L.	-		
-	-	0	-	-	-		
o	0	0	0	0	O		
0	0	0	0	0	0		
O	0	0	0	0	O		
0	0	0	O	0	o		
O TIP 5"	-	-	-	O TOP 7"	O TOP 7"		
2800kg	2000kg	2200kg	3500kg	3400kg	4300kg		

# **The fertilizers** • The on-board hoppers

Standard fertilizers, «High Capacity» hoppers or front-mounted hoppers, with Monosem you can choose the fertilizing system the best suited to your conditions.



#### Standard hopper

Standard plastic hoppers are available in three sizes:

- 85L hopper, 1 outlet.
- 175L hopper, 2 or 3 outlets
- 270L hopper, 3 outlets

They are assembled on rigid, telescopic, folding and coupled frames.



### «High Capacity» hopper for folding frames

The high capacity hoppers in sheet metal are available with the planters with rigid double bar frames. The capacities of 700 L and 1000 L enable an easy loading of 500kg bags.

#### «High Capacity» hoppers on telescopic and folding frames

The high capacity hoppers in sheet metal are available with Monoblock, Monoblock2, Extend and TFC Frames. Even with these fertilizers, the width on the road is under 3m with the double telescopic, Extend and TFC frames. The outer rows are fed by pulsed air. The hopper is equipped with transparent windows for visual checking of the fertilizer level from the tractor cab. The capacity of the fertilizer allows for easy loading of 500 kg bags.



### Wide opening The « High Capacity » fertilizer

hoppers allows a wide opening for a "clean" and easy filling of the fertilizer.



### Easy and rapid emptying

The « High Capacity » fertilizer hoppers are equipped with a trapdoor on each side with a hose enabling a rapid and easy emptying of the hoppers.



#### Monoblock

The « High capacity » hoppers in sheet metal on Monoblock, single or double telescopic frames have a capacity of 980 L.



#### Monoblock2 / Extend / TFC

The « High Capacity » hoppers in sheet metal on the single and double telescopic Monoblock2 Comfort frames have a capacity of 680 L or 1030 L. On the Extend frames, the capacity is 1020 L. This capacity is 1500 L on the TFC folding frames.



#### Adjustment by FertiDrive<sup>∨M</sup>

The fertilizers on the Monoblock2 Comfort, Extend and TFC frames are equipped with a variable speed transmission for simple and precise adjustment of the quantity of fertilizer to be distributed.

### The equipement for on-board hoppers

The Monosem fertilizers have the same manufactured quality as our planters enabling you to spread solid fertilizer in a very precise manner with an equipment perfectly suited to your requirements suited to your requirements.

#### Adjustment of the fertilizer

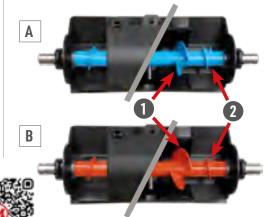
The adjustment of the quantity of fertilizer metered when planting is made using a gearbox with 12 ratios. The chart delivered with the fertilizers enable a rapid adjustment of the quantity metered.



To help you adjust your fertilizers, download the free Monosem "Seed Planter Setting" application available on Google Play or App Store.

#### Distribution by auger

The metering by auger (1), associated with agitators (2), ensure a regular dosing of the fertilizer. These augers in stainless steel are proposed with different pitches to meter exactly the required quantity.



The standard augers (A) in blue are for fertilizer metering from 80 to 350kg/ha for an inter row spacing at 75cm and from 120 to 525kg/ha for an inter row spacing of 50cm.

The «High output» augers (B) in red have a larger pitch and are for fertilizer metering from 160 to 700 kg/ha for an inter row spacing of 75 cm and from 240 to 1050 kg/ha for an inter row spacing of 50 cm.

#### Fertilizing unit with tines or with discs

Three types of units are offered for fertilizing:

- with tines
- with double discs
- with reinforced double discs

The fertilizing unit with tines has an interchangeable tip. The fertilizing unit with discs is more versatile and better suited to low till conditions with trashy soils. The types of units have a safety system with spring and depth control adjustment. For sugarbeet planting, specific fertilizing units are available.



				High ca <sub>l</sub>	pacity hoppe	r		Front-mount	Front-mounted hopper		
Basic features	Standard hopper	Monoblock	Monoblock2 Comfort	Extend	TFC	TFC2/ Wing Fold	Rigid frame	Standard	DUO		
Capacity (number of rows in maize)	2 x 175 l. (4 rows) 2 x 270 l. (6 rows) 4 x 175 l. (8 rows) 4 x 270 l. (12 rows)	980L.	680L. 1050L.	1020L.	1500L.	1350L.	1000L. (4 rows) 2 x 700L. (6 rows) 2 x 1000L. (8 rows)	1000L. 1600L.	1500L. 2100L.		
Number of rows (maize)	4 to 12	6	6 to 8	6	8	8	4 to 8	6 to 12	8 to 16		
Mini/maxi output at 50 (with high output auger)	120 to 525 kg/ha (240 to 1050 kg/ha)		120	to 525 kg/ha (-)		120 to 525 kg/ha (240 to 1050 kg/ha)	Output according to the				
Mini/maxi output at 75 (with high output auger)	80 to 350 kg/ha (-)					80 to 350 kg/ha (160 to 700 kg/ha)	quality of the fertilizer				
Type of frame	Rigid - Telescopic Folding (Double bar) Coupled	Telescopic (Monoblock)	Telescopic (Monoblock2 Comfort)	Extend	Folding (TFC)	Folding (TFC2 Wing Fold)	Rigid (double-bar)	Rigid Telescopic Folding (Double bar, TFC2)	Folding (Double bar, TFC2)		
Big-Bag loading	no	yes									

- : Impossible

### The front mounted hoppers



The front mounted Monosem hoppers have been specially designed for fertilizer applications. The sturdy frame with integrated cradle, the 100% stainless steel distribution unit and driven by a land wheel with integrated gearbox indicate the care that is applied to manufacture. The turbofan can be driven by PTO or hydraulic motor.



#### **Cyclones**

The cyclones are assembled between each unit enabling the fertilizer to drop (gravity) and thus limit dust forming.



# Stainless steel metering system

The 100% stainless steel metering system of the front-mounted fertilizer has two closing trapdoors and can be rapidly disassembled.



## Electrid drive of the distribution

On the electric Standard and DUO front-mounted hoppers, the quantity of fertilizer is managed from the tractor cab via the ECU F800E and the ISOBUS touch terminal (TOUCH or TOUCH Mini). The front fertilizers with electric drive have an easily-removed and without tools dosing wheel and metering anticipation function.



#### Standard front hopper

The standard front hopper is available in 1,000L or 1,600L capacity. The assembly can be mounted on hoeing machines with up to 12 rows. This fertiliser spreader has a stainless-steel distribution and a mechanical or electric drive, for quick adjustment of the amount of fertiliser to be applied.



#### **DUO front-mounted hopper**

The DUO front hopper is available in capacities of 1,500L or 2,100L. The assembly can be mounted on hoeing machines with up to 18 rows. This fertiliser spreader has a double stainless-steel distribution and an electric drive, for quick adjustment of the amount of fertiliser to be applied. As an option, the hopper can also be divided into two compartments, making it possible to dispense two different products simultaneously.

### • The fertilizer cart



The CT 3500 is a pull-type fertilizer cart combined to a planter or a cultivator up to 12 maize rows. Its 3500L capacity offers an important fertilizing autonomy.

#### **Distribution**

- Double stainless steel distribution unit
- · Easily-removed dosing wheel
- Electric drive with electronic dosing regulation with radar
- Managed via ECU F800E UT, TC-BAS and TC-SC certified
- Control from the cab via ISOBUS terminal
- Metering anticipation function
- Pneumatic conveyance of the fertilizer to the units with discs through 2 distribution columns placed on the planter



#### Hopper

- 3500L capacity
- Retractable lateral access platform
- Agitators and hopper sensors

#### Models available with the CT 3500

### Hitches / Ballast

#### Front hitch:

- Standard hitch or K80 ball hitch (on option)
- Hydraulic stand

#### Rear hitch:

- 4T rear lift
- 3-points hitch cat. 3/3N
- PTO shaft, hydraulic and lighting sockets

Two 500kg removable weight to balance the CT 3500 and to fit to the weight of the rear machine.

#### **Tyres**

- Low pressure 710/50R22,5 tyres as standard
- 270/95R32 Twin-wheels on option to avoid riding on the future seeding line or for cultivating use
- Available with hydraulic (standard) or pneumatic (option) braking system
- Homologated to ride on the road with loaded hopper in France (For other country, homologation has to be made by importer).



Planter model		Double b	ar Folding	g frame	TFC2 Folding frame					CRT Folding frame			
Planter width			6m		6m					9m			
Number of rows		8	3	12	8 9		11	12	16	12		13	
Inter-row sp	Inter-row spacing (cm)		80	45/50	75	80	55/60	55	45/50	37,5	75	80	60
Transport	710/50R22,5 wide tyres		3m		3m		3,2m 3m		m	3m		3,5m	
width	270/95R32 twin-wheels	3m	3,5	m	3m	3,5m		3m	3,	5m			

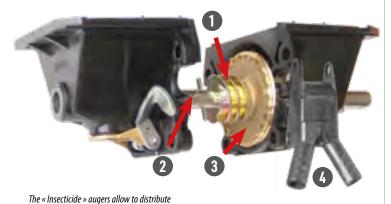
# The Microsem

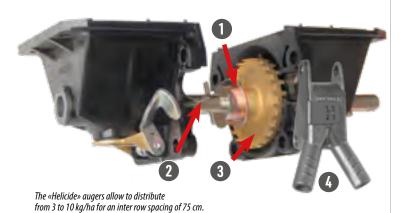
Whether for insecticide or helicide, the Microsem system with auger enures a regular metering of microgranules. Its simple design enables an easy and reliable use. Multi-purpose, the Microsem is compatible with the majority of microgranulate products on the market (insecticides, helicides,...).

#### Distribution by auger

from 3 to 25 kg/ha for an inter row spacing at 75 cm.

The principle of the Microsem distribution is based on a system of auger. The microgranules 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 uniformly the product in the chutes (4).



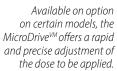






#### **Adjustment of the Microsem**

Adjustment of the microgranulators is made using a gearbox with 18 ratios. If needed, other sprockets are available and also a rapid declutching system. The adjustment chart delivered with the Microsem enables a rapid adjustment of the quantity of product.

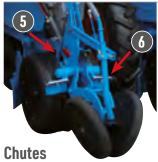








In order to help you to adjust your Microsem attachments, download free of charge the Monosem application "Planter Adjustment" available under Google play or App Store.

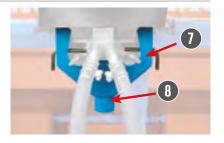


The Insecticide Microsem chute (5) is placed between the 2 discs for product supply in the planting line. The Helicide Microsem chute (6) is adjustable for a product supply on the planting line before or after the passage of the press wheels.



#### **Combined Microsem**

The Insecticide and Helicide Microsems can by associated for a simultaneous supply of the 2 products.



#### **Emptying of the hoppers**

The capacity of the Microsem hoppers is 20L. 40-litre hoppers are also available on option (Assembly according to frame). The trapdoors (7) and the chute (8) allow for a simple and quick emptying of remaining product.

# The seed monitors

Specialists in precision planters, Monosem offers a wide range of seed monitors from the simple checking of the seed drop to the counting with indication of the distance between seeds. Monosem has also ISOBUS solutions for seed population control or automatic row cut-off by GPS.







**CS10** 

CS30 Classic

**CS30 Comfort** 



**CS30 Premium** 

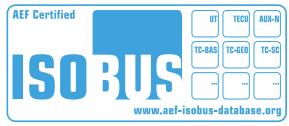
Functions		CS 10	CS 30 Classic	CS 30 Comfort	CS 30 Premium	
Seed drop	control row by row	•	•	•	•	
Alarm is n	o seed	• •		•	•	
Stop alarm	1	•	•	•	•	
Alarm prog	grammable threshold	-	•	•	•	
cing	by sensor	-	•	•	•	
Working	by radar	-	0	0	0	
Surface co	unting	-	•	•	•	
Average po	ppulation	-	0	•	•	
Distance b	etween seeds	-	0	•	•	
<b>#</b>	Manual	-	-	-	0	
Row cut-off	Programmable	-	-	-	0	
Rov	Automatic by GPS	-	-	-	-	
Maximum	number of rows	16	18	18	18	

● : Standard ○: On option -: Not possible

# The ISOBUS solutions

Monosem provides ISOBUS solutions which offer the user functionalities ranging from seed quantity per ha management to variable rate control or section control. Monosem received the Agricultural industry Electronics Foundation (AEF) certification for the seed monitors of its electric planter (S8000E) and its electric front-

mounted fertilizer (F800E). This certification guarantees a maximum compatibility between the tractor ISOBUSand Monosem tools. So, our planters are certified UT (Universal Terminal), TC-BAS (Task Controller basic), TC-SC (Task Controller Section Control) and TC-GEO (Task Controller geo-based).







### Universal Terminal

The terminal is the interface allowing the user to control the planter. It is connected to the ECU with a normalized Isobus 9-pin connector. The customer can use one of the ISOBUS terminals supplied by Monosem (TOUCH Mini, TOUCH and TOUCH Pro) or the ISOBUS terminal of the tractor if this one is compatible.





### Task Controller Section Control TC-SC

The task controller - Section Control is the system allowing the automatic management of the row cut-off (or electric drive) according to the GPS positioning and the chosen overlapping step. This system enables a saving of seeds and avoids useless overlapping (Needs a GPS antenna and activating of licenses).

List of compatible terminals:

- TOUCH
- TOUCH Mini
- TOUCH Pro
- Other ISOBUS terminals with TC-SC function (please consult us)

The row cut-off systems by GPS are also compatible with planters in operation.



### Task Controller basic TC-BAS

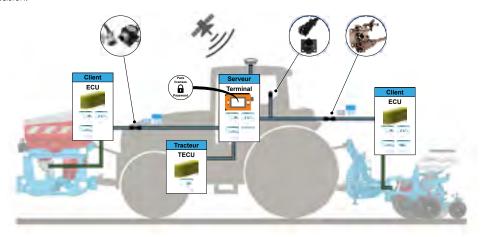
The TC-BAS feature enables the automatic and continuous saving of all data concerning the work done.



### Task Controller geo-based TC-GEO

Due to the TC-GEO feature integrated to electric planters (with ECU S8000E), the seed population can be managed automatically according to the planter position in the field. It allows the automatic adjustment of the seed population according to a recommendation map and to the field potential.

To bring always more comfort t work, Monosem makes new technologies available for everyone . With ISOBUS Terminal, users can have the row cut-off by GPS to enable a better work precision.



#### **TOUCH Terminal**



- 12,1" Colour touch screen
- ISOBUS Terminal (ISO 11783)
- USB Port
- Simultaneous displays of different working screens
- Camera (option)
- For \$7000C-12, \$7000H-12, \$8000E-24 and F800E
- Dimensions (LxHxD) : 345 x 254 x 87 mm

#### **TOUCH Mini Terminal**



- 8" Colour touch screen
- ISOBUS Terminal (ISO 11783)
- USB Port
- Screen switching with one single soft key between the different working displays
- Camera (option)
- For S7000C-12, S7000H-12, S8000E-24 and F800E
- Dimensions (LxHxD) : 244 x 186 x 67 mm

#### **TOUCH Pro Terminal**





- 10" Colour touch screen
- ISOBUS Terminal (ISO 11783)
- Variable rate control
- USB Ports
- Wifi
- Display of different working screens
- Camera (option)
- For \$8000E-24 and F800E
- Dimensions (LxHxD) : 268 x 212 x 55 mm
- Easy and intuitive navigation between the different working displays
- The TOUCH Pro terminal is only compatible with John Deere SF 3000 and SF 6000 antennas



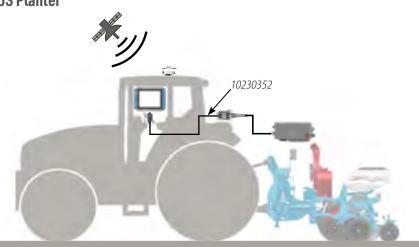
### The connection systems

Case N° 1:

NON ISOBUS TRACTOR + ISOBUS Console + ISOBUS Planter

For the ISOBUS console to communicate with the ISOBUS planter, the ISOBUS reference beam must be installed at the rear of the tractor: 10230352.

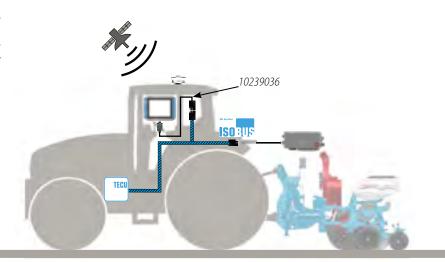
A GPS antenna can be connected to the ISOBUS console to use the TC-SC (GPS section-control) and TC-GEO (Dose modulation by prescription card) functions.



# Case N° 2: ISOBUS equipped tractor + ISOBUS console + ISOBUS Planter

For the ISOBUS console to communicate with the ISOBUS planter, the Incab reference beam must be installed at the rear of the tractor: 10239036

A GPS antenna can be connected to the ISOBUS console to use the TC-SC (GPS section-control) and TC-GEO (Dose modulation by prescription card) functions.

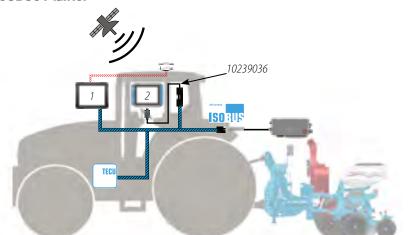


# Case N° 3: ISOBUS equipped tractor + ISOBUS 2 consoles + ISOBUS Planter

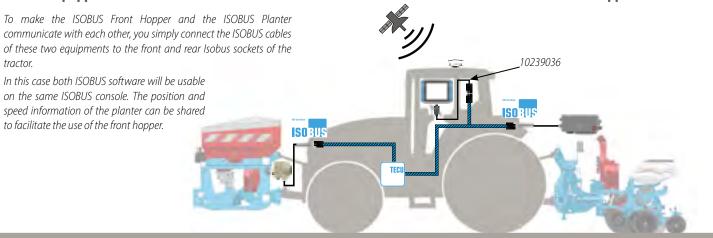
For the ISOBUS N° 2 console to communicate with the ISOBUS planter, the Incab reference beam must be installed at the rear of the tractor: 10239036. The Isobus Console N° 1 corresponds to the fixed ISOBUS console of the ISOBUS tractor.

In this example, the ISOBUS console  $N^{\circ}$  1 will control the section-control by GPS and the ISOBUS console  $N^{\circ}$ 2 will only display the ISOBUS software of the planter.

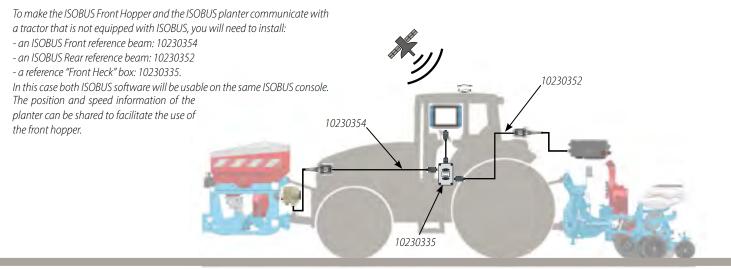
A GPS antenna can also be connected to the ISOBUS console to use the TC-SC (GPS section-control) and TC-GEO (Dose modulation by prescription card) functions.



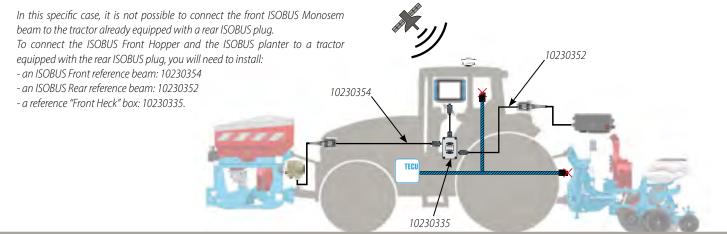
# Case N° 4: Tractor equipped with ISOBUS Front and Rear + ISOBUS Console + ISOBUS Planter + ISOBUS Front Hopper



# Case N° 5: Tractor not equipped with ISOBUS Front and Rear + ISOBUS Console + ISOBUS Planter + ISOBUS Front Hopper



### Case N° 6: Tractor equipped with ISOBUS Rear + ISOBUS Console + ISOBUS Planter + ISOBUS Front Hopper



# The electric planters

Monosem also offers an electric drive on its planters. This distribution system brings precision and comfort thanks to a more fluid communication between the planter and the tractor.



- In-cab settings
- Easy to maintain
- Easy to set up
- Easy to drive in the corners



- Continuous regulation
- Zero skidding
- AEF-certified ISOBUS compatibility
- Seed saving (section control by gps)
- Planting optimization thanks to GPSbased dose modulation
- Fine tuning



### Metering units with electric drive

**Electric motor** 

One motor per metering unit

Timing belt drive

Maintenance free

Limited space requirement (allows all inter-row spacing possibilities) Electric motor protected and distant from grounding devices

Photoelectric cell

Controls seed dropping and distance between seeds

### The electric drive is available on our planters:



NG Plus 4E



Monoshox NG Plus ME



Monoshox NX ME



Meca V4E



### Microsem with electric drive

- Precise input of the desired dose
- Quick and easy product calibration
  Wide range of supported products (anti-slug, insecticide, microgranular fertilizers)
- Automatic section control availableManual or GPS dosing management



Microsem with electric drive



### Electrically driven fertilizer

- Precise input of the desired dose
- Quick and easy product calibrationAutomatic section control available
- Manual or GPS dosing management



Fertilizer motor and calibration button

# The Monosem services



#### Reliable and close to you

Providing advice tailored to the needs of your operation is one of the outstanding qualities of our extensive distribution network. At your disposal to respond effectively to technical and operational requirements, we place our expertise at your service.

Because for more than 70 years you have placed your trust in us, we have created the Value & Tech Centre. This free service, from a team of technical experts, offers proactive listening and support, for serene sowing

#### Spare parts: action, reaction!

Checking the wear and tear of your equipment is one of the most important steps in preparing for sowing. To maintain optimum performance from your Monosem seed planter, we offer a wide range of spare parts. From distribution discs to belts and various rivets, we have the part you need!

Because you pay attention to the wear and tear of your parts, we put all our reactivity to good use to ensure their availability within the dealer network and from our large factory stock.

To consult our catalogue, go online to:

service.monosem.com

#### Our planters stand the test of time

We make a point of using quality materials in the design of our machines. A habit that has proven its effectiveness through time, and which guarantees the solidity and reliability of our machines. A lasting investment that gives you the peace of mind you need to sow in the best conditions.





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#### www.monosem.com

All the data concerning the equipment, the general appearance, the weight and dimensions are current at the date of printing and vary according to countries. They may be modified without previous notice.

This brochure cannot be considered as a binding document. Your Monosem partner will not hesitate in informing you of any possible changes. In order to illustrate this brochure, certain safety housings and mechanisms may have been removed. Apart from this particular case and complying with the recommendations in the manual, these must remain fitted.

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