





Intelligent machines for global challenges.

WINTERSTEIGER has established itself at the top of a niche market which will continue to gain significance in future. Agronomists and plant breeders today face the challenge of introducing new developments to make a decisive contribution towards sustainable food and energy supplies for the world.

WINTERSTEIGER supplies the technology needed to do this. Precision spaced planters were developed specially for precision spaced planting in trial plots.

This ensures a perfect framework for the research, breeding, testing and propagation of field crops - including specialty crops - at the highest standards.

Read the following pages to discover in detail what the global market leader offers you.



Contents:

Dynamic Disc	4
Tractor mounted precision spaced planters featuring exceptionally high performance	
Monoseed B/K/DT/Vario	12
Tractor mounted precision spaced planters for all types of seeds	
Monoseed TC	20
Self propelled precision spaced planters for all types of seeds	
Satellite navigation for planters (GPS technology)	26
Kubota	27
Small tractor for planters	
After Sales Service	28
WINTERSTEIGER SEEDMECH	29
WINTERSTEIGER Worldwide	31



Dynamic Disc

Tractor mounted precision spaced planters featuring exceptionally high performance.

Accurate precision spaced planting for the highest performance.

The Dynamic Disc was specially designed to meet very high performance requirements for precision spaced planting of field trials. The specifically for seed research developed and patented seed metering unit provides exact seed placement and a very high planting capacity.



Your benefits summed up:

■ Highly accurate planting

- Mix-free planting
- Precise seed spacing
- Precise seed singulation, avoiding skipped seeds and doubles
- Independent of seed size and seed weight

■ Fast planting speed

- The patented seed metering unit with slotted disks achieves optimum planting speeds
- The turning seed chamber enables precise separation of seeds between plots

■ Tracking and recording of the planting operation

- Machine parameters are stored
- Current results including errors are displayed during planting
- All data is recorded on a memory card

■ Wear-free electric drive of seed metering units based on highly advanced drive technology

■ Modular system supporting a variety of applications



A large variety of basic frames.

A variety of basic frames for 2 - 8 rows are available for the Dynamic Disc (other row number options possible depending on customer requirements):



Dynamic Disc on 2-row telescope frame for easy hydraulic row spacing adjustment



Dynamic Disc on 4-row pull type frame



Dynamic Disc on 4-row 3-point frame



WINTERSTEIGER Dynamic Disc on 8-row tractor mounted frame (3-point or pull type design available)

Reliable drive technology.

The machine features a heavy-duty electric seed unit drive as standard equipment, designed for high planting capacity with the utmost in accuracy. A mechanical drive is also available on request.

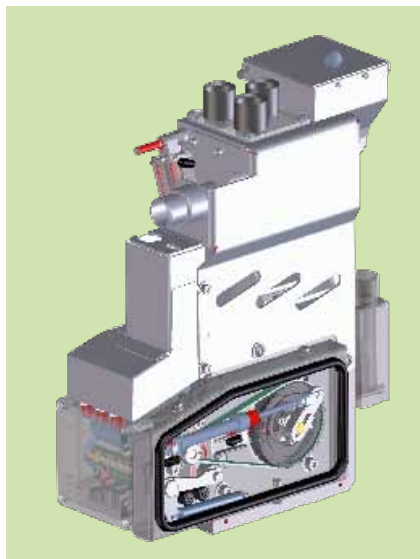
The electric drive features a brushless servo motor, ensuring completely maintenance-free performance. A high degree of efficiency is achieved through the planetary gearbox with steel gears. The engineering design of the servo motor drive solution is known for tried and trusted performance, demonstrated through years of use in DC and EC drives, gear units and brakes.

Following are the benefits of the electric seed unit drive:

- Long service life
- Zero error tolerance
- High insulating material class
- Highly controllable
- High protection class
- Integrated electronic systems and CAN bus interfaces

This drive technology has proven itself in use, demonstrating superior quality and reliability in a wide variety of sectors, including the automotive, aircraft manufacturing and shipbuilding industries.

The complete drive unit, including controller and motor, is built into a compact case protecting it from dust, dirt and moisture. A CAN bus supports communication with the WINTERSTEIGER Global Seed Control (GSC) planter control unit.



Dynamic Disc seed unit drive



Compact processing of the electric drive on the seed unit

Movie and further information about the Dynamic Disc can be found at:

www.wintersteiger.com/Seedmech

(Products/Precision spaced planters/Dynamic Disc)



Global Seed Control (GSC) control unit.

The GSC guarantees the best distribution accuracy and precision. The control unit is characterized by the following features:

Terminal:

- Easy controls via function keys
- Clear, high-contrast display

Setting options:

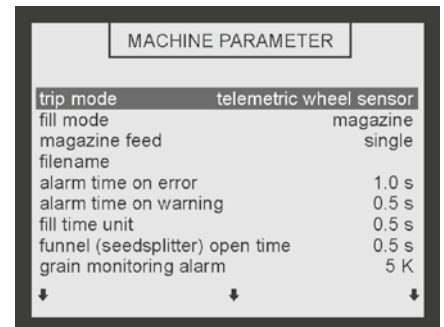
- User menu language setting
- Easy setting of different plot parameters, e.g. slot count of seed disk, seed count per row, plot, alley and cycle length
- Starting distance, run mode and plots per field
- Selection of distribution system

Display:

- Displays the selected plot parameters
- Monitoring of all critical functions and displays error messages
- Motor monitoring with all electric drives
- Warning message for empty magazines



Control unit Global Seed Control (GSC)



Setting the plot parameters

Triggering of the planting cycle.

The planting cycle is triggered by the measuring wheel, whereas the signal can be corrected by means of a cable trip system or GPS signal.



Measuring wheel

Travel measuring system via measuring wheel (option).

The measuring wheel greatly facilitates sowing, since there is no need for field markers; at the same time, it improves efficiency and precision.

The GSC controls the following functions in combination with the measuring wheel:

- Beginning and end of plot and alley
- A warning signal occurs when the maximum speed is exceeded



Cable trip system with cable winder

Cable trip system (option).

To improve the accuracy of the measuring wheel, especially for longer field lengths, the measuring wheel is continually corrected by means of cams on the cable. The cable can be unrolled manually or via the cable winder. The cable winder has the advantage that the cable always has the same tension; it simply needs to be relocated at the end of the field.

GPS signal (option).

Additionally, the measuring wheel can be corrected by a GPS signal instead of the cable trip system (see page 26).

Seed monitor (option).

Electronic seed monitoring registers each seed that drops from the row unit into the opener. Each time a seed drops, the LED on the GSC control unit flashes. At the end of each plot, the control unit shows the number

of seeds per row on the display, and issues a warning if the preset number of skipped seeds is exceeded. The plot documentation option records the data on a memory card for immediate for ongoing processing.

	speed [km/h]					
	max	current				
	1.5	1.4				
Stop next			sowing end			
mag fill						
mag back	R1	R2	R3	R4	R5	R6
	73	73	73	73	73	73
abspos.	range		plot	plotpos.		
4.20 m	2		1	310 cm		

Seed monitor

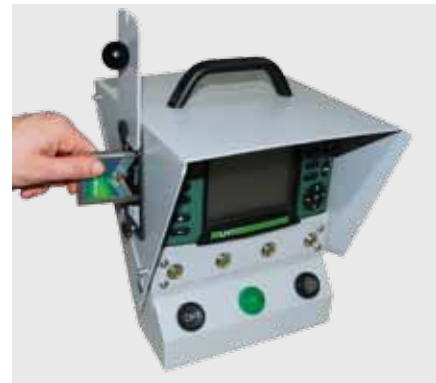
Plot data documentation (option).

Plot data documentation is highly recommended, especially in combination with seed monitoring, since it documents the seed count per plot as actually measured.

Additionally, the following parameters are stored: date, time, field name,

travel mode, plots per run, slot count, seed spacing, preset speed, alley length, and cycle length.

You can read the PCMCIA card using a laptop and process the data in MS Excel.



Plot data documentation via PCMCIA card

Feeding variants.

The following variants are available for feeding the row unit:

- Single funnel (one filling funnel per row)
- Central seed distributor (seed is distributed over multiple rows)
- Magazine system (seed is filled into 4- or 6-row magazines and sowed automatically)
- Continuous sowing unit (for continuous sowing with a capacity of 6 liters per row; this lets you sow border rows or larger areas)



Predistributor and single funnel

Seed metering unit with slotted disk system.

A reliable high-speed seed metering unit, equipped with specially designed radial and spiral slotted disks, ensures the utmost in precision even at high planting speeds. The seed metering unit guarantees a very high degree of accuracy at high planting speeds, independent of seed size, shape and weight.

Function:

- At the center of the radial slotted disk, specially designed for high planting speeds, seeds are picked up by vacuum force and held in place
- As the radial slotted disk turns, the seeds slide along the slots of the disk to the outside, where the seeds are held by suction and then dropped at the optimum
- The seeds drop from here through the opener and into the ground
- At the end of the plot, the remaining seeds are evacuated into a central seed container
- A turning seed chamber separates seed from two successive plots, thus preventing any carryover even at very high speeds



The radial slotted disk and, behind it, the spiral slotted disk



The transparent cover of the seed metering unit allows an optimum view



The turning seed chamber in the seed metering unit of the Dynamic Disc

Opener system for seed placement.

The WINTESTEIGER opener system is equipped with a parallelogram-guided double disk opener including side mounted depth gauge wheels. The opener can be adjusted to varying terrain conditions.



The opener of the Dynamic Disc

Fertilizer spreader for side dressing (option).

Spring loaded double disk opener spreads fertilizer to the side or underneath the seed.

- 2 x 70 liter container with 2 or 3 outlets and a draining flap
- Spread volume individually configurable per row
- The electric drive of the fertilizer spreader is regulated depending on the planting speed
- The calibration test, guided by a display menu, can be performed with the machine at a standstill

Micro-granulate spreader (option).

- Residue-free spreading thanks to use of composites
- Maximum spreading and dosing accuracy thanks to electronic control unit
- The electric drive of the micro-granulate spreader is regulated depending on the planting speed
- The calibration test, guided by a display menu, can be performed with the machine at a standstill



Micro-granulate spreader

Dynamic Disc Figures. Data. Facts.

Technical data

Basic machine	
Seed type	Corn, soybeans, sunflowers, peas, beans, sorghum
Attachment options	3-point hydraulics on tractor (category II) or pull type frame
Track width	Depends on the basic machine option
Row numbers	2 to 8 rows (other row number options possible depending on customer requirements)
Row spacing	Depends on the basic machine option according to customer requirements
Seed spacing	Continuously variable – electric drive allows free selection
Feeding of the seed distribution system	
Single funnel	One filling funnel per row
Central seed distributor	Seed is distributed over 2 or 4 rows
Magazine system	Seed is filled into a 4 or 6-row magazine and fed automatically
Double disk opener	
Sowing depth	1 to 8.5 cm (0.5 - 3.5") or depending on opener type
Depth gauge wheels	Width 6 or 11 cm (2.5 or 4.5")
Pressure rollers	Rubberized pressure rollers for optimum germination conditions
Dimensions (depend on row number and basic machine type) Example: Dynamic Disc on 4-row basic frame	
Length	3-point: approx. 1930 mm (76") Pull type: approx. 3500 mm (138")
Width	2500 – 2980 mm (98 - 118")
Height	Approx. 2200 mm (87")
Weight	As of 1900 - 2500 kg (4180 - 5500 lbs), depending on features
Options	
	Coulters, track markers, micro-granulate spreader, fertilizer spreader, wind and rain protection cabin

We reserve the right to make technical alterations.



Monoseed B/K/DT/Vario

Precision spaced planter, tractor mounted.

Variety of precision spaced planting options.

The Monoseed was specially designed for precision spaced planting in field trials.

Thanks to its variety of distribution systems and a modular design with many variants, the machine fulfills a variety of requirements for precision spaced planting in field trials.



Monoseed DT

Your benefits summed up:

- Simple controls and excellent visibility for the driver and operator
- Wide range of applications thanks to selection of variants:
 - Monoseed B (for grain, rapeseed, maize, beans, etc.)
 - Monoseed K (for beet)
 - Monoseed DT (for maize, soybeans, sunflowers, etc.)
 - Monoseed Vario: Basic frame for multiple variants (B, K, DT)
- Different feeding variants
- Precise seed placement



Monoseed B

Feeding variants.

The following variants are available for feeding the row unit:

- Single funnel (one filling funnel per row)
- Central seed distributor (seed is distributed over multiple rows)
- Magazine system (seed is filled into 4- or 6-row magazines and sowed automatically)
- Continuous sowing unit (for continuous sowing with a capacity of 6 liters per row; this lets you sow border rows or larger areas)



Magazine system and single funnel

Global Seed Control (GSC) control unit.

The GSC guarantees the best distribution accuracy and precision. The control unit is characterized by the following features:



Control unit Global Seed Control (GSC)

Terminal:

- Easy controls via function keys
- Clear, high-contrast display

Setting options:

- User menu language setting
- Easy setting of different plot parameters, e.g. selection of seed disk, seed spacing, alley length, cycle length, preset speed, start length, run mode and plots per run
- Selection of distribution system and filling time settings

Display:

- Displays the drive train settings required for the selected plot parameters
- Monitoring of all critical functions and malfunction cause display
- Voltage monitoring of magazine feed motors
- Warning message for empty magazines

	QUICK MONO	bulk seed
start	seed space 4.2 cm	quick set
	fill mode magazine 25	set
calibration	max. speed 2.3 km/h	plot prog.
	driving sequential	machine param
select menu	trip mode telemetr.	100 cm
	checkhead off disabled	
	start length	
13.04.45		22.02.08

MACHINE PARAMETER	
trip mode	telemetric wheel sensor
fill mode	magazine
magazine feed	single
filename	
alarm time on error	1.0 s
alarm time on warning	0.5 s
fill time unit	0.5 s
funnel (seedsplitter) open time	0.5 s
grain monitoring alarm	5 K

Setting the plot parameters

Triggering of the sowing cycle.

The following variants are available for triggering the sowing cycle. Additionally, the sowing cycle can be triggered by a GPS signal (see page 26).

Measuring wheel.

The measuring wheel greatly facilitates sowing, since there is no need for field markers; at the same time, it improves efficiency and precision.

The GSC controls the following functions in combination with the measuring wheel:

- The sowing cycle is triggered by a signal from the measuring wheel
- A warning signal occurs in case of excessive speed



Measuring wheel

Cable trip system.

The cycle start is automatically triggered by cams on the cable. The cable can be unrolled manually or via the cable winder. The cable winder has the advantage that the cable always has the same tension; it simply needs to be relocated at the end of the field.



Cable trip system with cable winder

Seed monitor (option).

Electronic seed monitoring registers each seed that drops from the row unit into the opener. Each time a seed drops, the LED on the GSC control unit flashes. At the end of each plot, the control unit shows the number

of seeds per row on the display, and issues a warning if the preset number of skipped seeds is exceeded. The plot documentation option records the data on a memory card for immediate for ongoing processing.

	speed [km/h]		
Stop next	max 1.5	current 1.4	sowing end
mag fill			
mag back	R1	R2	R3
	R4	R5	R6
	73	73	73
	73	73	73
abspos.	range	plot	plotpos.
4.20 m	2	1	310 cm

Seed monitor

Plot data documentation (option).

Plot data documentation is highly recommended, especially in combination with seed monitoring, since it documents the seed count per plot as actually measured.

Additionally, the following parameters are stored: date, time, field name, travel mode, plots per run, slot count, seed spacing, preset speed, alley length, and cycle length. You can read the PCMCIA card using a laptop and process the data in MS Excel.



Plot data documentation via PCMCIA card



Row units.

The Monoseed B/K/DT uses a perforated disk row unit as standard. As an option for the Monoseed DT, you can select a row unit with a slotted disk.

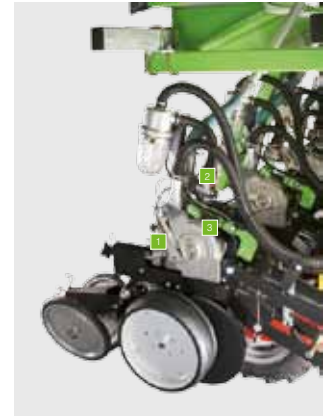
Row unit with perforated disk.

Function:

- Seeds are picked by vacuum force and held against the holes on the seed disk
- The disk continues to turn while this is happening. The vacuum holding the seed is interrupted at the drop point and the seeds drop off the seed disk
- If seed is still held by the powerful vacuum at the drop position, they are scraped off by the scraper and fall through the opener into the soil
- At the end of the plot, the remain seeds are evacuated and collected into a plexiglas container
- In case of doubles, the excess seed is separated off by a scraper and can be picked up in again by the vacuum. An air nozzle in the seed unit through which compressed air is blown in prevents carry over with small seeds and also seed damage with larger seeds



Row unit Monoseed



- 1 Evacuation
- 2 Feeding
- 3 Row unit

This row unit is best suited for homogeneous seed sizes (TKG) and weights, since the seed disk is chosen to reflect the seed size.



Monoseed B

Precision spaced planter for sowing small grain, rapeseed, or similar.

Seed bedding is effected by a pressure roller with a clod clearer in front of the shoe opener and by a trailing depth-controlled pressure roller.

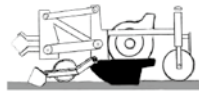


Opener Monoseed B

Technical data

Basic machine	
Seed type	From rapeseed, through grain to large field beans
Attachment options	3-point hydraulics on tractor (category II), Kubota plot tractor
Track width	Depending on row spacing
Row numbers	2 - 6 rows
Row spacing	Infinitely adjustable from 18 cm
Seed spacing	Approx. 20 - 400 mm

Feeding of the seed distribution system	
Single funnel	One filling funnel per row
Central seed distributor	Seed is distributed over multiple rows
Magazine system	Seed is filled into a 4 or 6-row magazine and sowed fully automatically

Opener systems	
Shoe opener for flat sowing	For grains or similar 
Shoe opener for deep sowing	For maize or similar

Dimensions	
Length	Approx. 2300 mm (90")
Width	Approx. 800 mm (31") wider than sowing width
Height	Approx. 2300 mm (90")
Weight	600 - 1300 kg (1350 - 2900 lbs), depending on features and number of rows

Options	
	Track marking, cable trip system, wind and rain protection cabin, micro-granulate spreader, side dressing, disk pre-cutter

We reserve the right to make technical alterations.

Monoseed K

Precision spaced planter for sowing rapeseed, beet, or similar.

For conventional sowing, seed bedding is effected by a shoe opener with a depth-controlled pressure roller in front of the opener and by a press wheel. For mulch and direct seeding, the depth-controlled pressure roller in front of the opener is replaced by two cutting disks.





Opener Monoseed K

Technical data

Basic machine	
Seed type	For sowing beet or rapeseed
Attachment options	3-point hydraulics on tractor (category II), Kubota plot tractor
Track width	Depending on row spacing
Row numbers	2 - 6 rows
Row spacing	Infinitely adjustable from 28 cm
Seed spacing	Approx. 14 - 247 mm

Feeding of the seed distribution system	
Single funnel	One filling funnel per row
Central seed distributor	Seed is distributed over multiple rows
Magazine system	Seed is filled into a 4 or 6-row magazine and sowed fully automatically

Opener systems	
Shoe opener for conventional sowing	
Shoe opener for mulch and direct seeding	With disk pre-cutter 

Dimensions	
Length	Approx. 2300 mm (90")
Width	Approx. 700 mm (28") wider than sowing width
Height	Approx. 2300 mm (90")
Weight	600 - 1500 kg (1350 - 3300 lbs), depending on features and number of rows

Options	
	Track marking, cable trip system, wind and rain protection cabin, micro-granulate spreader, side dressing, disk pre-cutter

We reserve the right to make technical alterations.

Monoseed DT

Precision spaced planter for sowing corn, soybeans, sunflowers, or similar.

For conventional sowing, seed bedding is effected by a double disk opener with side mounted depth gauge wheels and packer wheels. For no-till a rolling coultter is added in front of the opener.



Opener Monoseed DT

Monoseed Vario

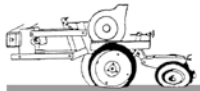

Basic machine for attaching various opener systems.

The Vario system supports quick changing of the basic machine to a variety of opener systems. This supports the configuration of combinations of the Monoseed B, K and DT machines for a variety of applications.

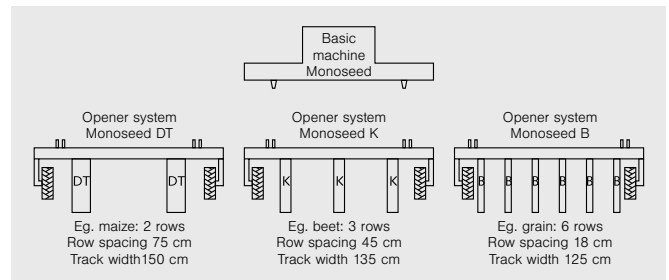


Monoseed Vario attachment frame

Technical data

Basic machine	
Seed type	For sowing maize, soy or sunflowers
Attachment options	3-point hydraulics on tractor (category II), Kubota plot tractor
Track width	Depending on row spacing
Row numbers	2 - 4 rows
Row spacing	Infinitely adjustable from 40 cm
Seed spacing	Approx. 12 - 400 mm
Feeding of the seed distribution system	
Single funnel	One filling funnel per row
Central seed distributor	Seed is distributed over multiple rows
Magazine system	Seed is filled into a 4-row magazine and sowed fully automatically
Opener systems	
Double disk opener conventional sowing	
Double disk opener mulch and direct seeding	With disk pre-cutter 
Dimensions	
Length	Approx. 2300 mm (90")
Width	Approx. 400 mm (16") wider than sowing width
Height	Approx. 3000 mm (118")
Weight	800 - 1800 kg (1750 - 4000 lbs), depending on features and number of rows
Options	
Track marking, cable trip system, cable trip system with automatic cable winder, wind and rain protection cabin, micro-granulate spreader, side dressing, clod clearer, disk pre-cutter	

We reserve the right to make technical alterations.



Monoseed Vario



Monoseed TC

Precision spaced planter, self propelled.

Universal and accurate precision spaced planting.

The Monoseed TC was specially designed for precision spaced planting in trial plots. Different distribution systems and a modular system with many variants allow the machine to be configured for for a wide range of applications.



Your benefits summed up:

- Simple controls and excellent visibility for the driver and operator
- Best maneuverability thanks to compact body and hydraulic steering brakes
- Easy track width and row spacing adjustment
- Wide application scope thanks to a variety of feeding variants
- Variety of opener systems for sowing in different soil conditions
- Can be used as a plot seeder by fitting a Plotseed TC quick-change frame



Basic machine for peak performance.

The Monoseed TC has a hydrostatic drive train. The specially constructed steering and hydraulic steering brakes allow you to turn on the spot.

Feeding variants.

The following variants are available for feeding the row unit:

- Single funnel (one filling funnel per row)
- Central seed distributor (seed is distributed over multiple rows)
- Magazine system (seed is filled into 4- or 6-row magazines and sowed automatically)



Single funnel and central seed distributor



Magazine system

Global Seed Control (GSC) control unit.

The GSC guarantees the best distribution accuracy and precision. The control unit is characterized by the following features:



Control unit Global Seed Control (GSC)

Terminal:

- Easy controls via function keys
- Clear, high-contrast display

Setting options:

- User menu language setting
- Easy setting of different plot parameters, e.g. selection of seed disk, seed spacing, alley length, cycle length, preset speed, start length, run mode and plots per run
- Selection of distribution system and filling time settings

Display:

- Displays the drive train settings required for the selected plot parameters
- Monitoring of all critical functions and malfunction cause display
- Voltage monitoring of magazine feed motors
- Warning message for empty magazines

	QUICK MONO	bulk seed
start	seed space 4.2 cm	quick set
	fill mode magazine 25	set
calibration	ranges deep 2.3 km/h	plot prog.
	driving sequential	machine param
select menu	trip mode telemetr. 100 cm	
	checkhead off disabled	
	start length	
13.04.45		22.02.08

MACHINE PARAMETER	
trip mode	telemetric wheel sensor
fill mode	magazine
magazine feed	single
filename	
alarm time on error	1.0 s
alarm time on warning	0.5 s
fill time unit	0.5 s
funnel (seedsplitter) open time	0.5 s
grain monitoring alarm	5 K

Setting the plot parameters

Travel measuring system via measuring wheel (option).

The measuring wheel greatly facilitates sowing, since there is no need for field markers; at the same time, it improves efficiency and precision. The GSC controls the following functions in combination with the measuring wheel:

- The sowing cycle is triggered by a signal from the measuring wheel
- A warning signal occurs in case of excessive speed



Measuring wheel

Seed monitor (option).

Electronic seed monitoring registers each seed that drops from the row unit into the opener. Each time a seed drops, the LED on the GSC control unit flashes.

At the end of each plot, the control unit shows the number of seeds per row on the display, and issues a warning if the preset number of skipped seeds is

exceeded. The plot documentation option records the data on a memory card for immediate for ongoing processing.

	speed [km/h]						
Stop next	max	current					sowing end
mag fill	1.5	1.4					
mag back	R1	R2	R3	R4	R5	R6	
	73	73	73	73	73	73	
abspos.	range	plot	plotpos.				
4.20 m	2	1	310 cm				

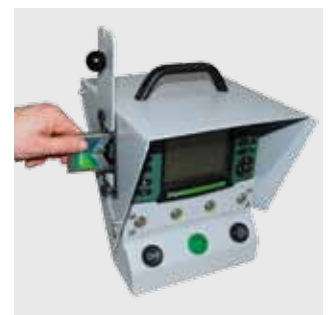
Seed monitor

Plot data documentation (option).

Plot data documentation is highly recommended, especially in combination with seed monitoring, since it documents the seed count per plot as actually measured.

Additionally, the following parameters are stored: date, time, field name, travel mode, plots per run, slot count, seed spacing, preset speed, alley length, and cycle length.

You can read the PCMCIA card using a laptop and process the data in MS Excel.



Plot data documentation via PCMCIA card

Seed change.

The following versions are available for seed change at the next plot:

- NON STOP: Seed change between plots is fully automated and absolutely mix-free in combination with the GSC control unit. There is no need to stop the machine
- STOP&GO: You must stop at the end of each plot to execute the seed change. This version does not require the use of the GSC control unit

In both cases the remaining seeds are evacuated into a central seed hopper.

Row unit with slotted disk principle.

Function:

- Seeds are picked up by vacuum and held against the slots on the radial slotted disk
- The rotation of the radial slotted disk against the spiral slot continually changes the shape of the air intake aperture
- While the radial slotted disk turns, the seeds slide along the slots of the spiral slotted disk to the outside, where the suction holding the seeds in place drops. The seeds fall into a cell in the cell ring
- From the cell ring they are transported on to the drop aperture
- They drop from here through the opener and into the ground



1 Cell housing

- The residual seed can be extracted before the end of the plot because each seed that is in the cell ring will definitely be sown. The residual seed container captures all the suctioned-off grains



2 Cell ring, 3 Radial slotted disk, 4 Spiral slotted disk

- If a radial slotted disk has twice as many slots as there are cells in the cell ring, precise double deposition is accomplished during sowing

The row unit guarantees highest precision, independently of the seed size and weight.

Opener systems for precision spaced planting.

Shoe opener for shallow seed placement.

The shoe opener with FARMFLEX pressure wheel and spring tine coverer is suitable for planting of small grain, rapeseed, peas, lupins with shallow planting depth (max. 5 cm, 2"). Planting depth is controlled by the height adjustable press wheel. If the ground is poorly prepared, the use of a clod clearer is recommended. Minimum row spacing: 22 cm.

Shoe opener for deep seed placement.

The shoe opener with side mounted depth gauge wheels and rubber V pressure wheels with pneumatic down pressure system is suitable for planting corn, sunflower, beans, peas up to a planting depth of 8 cm. The use of a clod clearer is recommended for poorly prepared soil. Minimum row spacing: 45 cm.



Shoe opener for shallow and deep seed placement

Replaceable frames.

The basic Monoseed TC machine supports the use of replaceable frames for the following applications:

- Plotseed TC plot seeder
- Plot sprayer
- Plot fertilizer spreader

Accessories.

- Working lights
- Wind and rain protection cabin
- Waste bag holder
- Pneumatically actuated track marker
- Micro-granulate spreader
- External sowing drive



Plotseed TC

Monoseed TC Figures. Data. Facts.

Technical data

Basic machine		
Motor	Kubota diesel motor: 3 cylinders, 1000 ccm, water cooled, 27 HP (20 kW)	
Track width	Adjustable to 1250 – 1850 mm or 1600 – 2200 mm	
Row numbers	2 - 6 rows	
Row spacing	From 22 cm depending on opener type	
Tire variants	Front	Rear
Dimensions	7.00 – 85 / 10	6.00 - 16
Tire width	180 mm	185 mm
Dimensions	18 x 9.50 - 8	29 x 12.0 - 15
Tire width	300 mm	240 mm
Feeding of the seed distribution system		
Single funnel	One filling funnel per row	
Central seed distributor	Seed is distributed over multiple rows	
Magazine system	Seed is filled into a 4 or 6-row magazine and sowed fully automatically	
Opener systems		
Shoe opener for shallow seed placement	Shoe opener with FARMFLEX pressure wheel and spring tine coverer for flat sowing (max. 5 cm depositing depth) for sowing of grain, rapeseed, peas, lupins, etc. Minimum row gap 22 cm	
Shoe opener for deep seed placement	The shoe opener with depth control rollers and rubberized V pressure rollers with pneumatic contact pressure, is suitable for deep sowing (max. 8 cm depositing depth) for sowing of maize, sunflowers, beans, soy beans, etc. Minimum row gap 45 cm	
Dimensions		
Length	Approx. 4000 mm (157")	
Width	Approx. 2200 mm (87")	
Height	Approx. 2250 mm (89")	
Weight	From 1150 kg (2500 lbs), depending on features	
Options		
	Track marking, cable trip system, wind and rain protection cabin, road lights, micro-granulate spreader	

We reserve the right to make technical alterations.

GPS Technology

Use of satellite navigation for field trials.

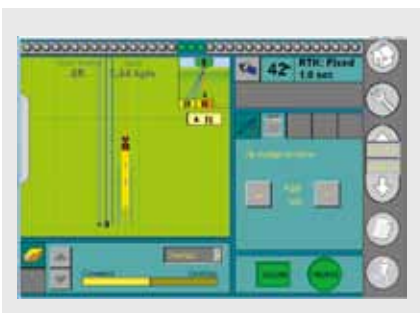
WINTERSTEIGER gives you the option of fitting state-of-art GPS technology to any planter. WINTERSTEIGER cooperates with experienced partners in this field. Together, we have developed a system that supports your field work easily and reliably.

Your benefits summed up:

- Simple use of GPS technology
- Maximum sowing precision for highly reliable results
- Complicated field marks are no longer needed
- If needed, the funnel on the row unit can be lifted automatically
- Faster sowing speeds than with common technology
- Automatic steering system available for maximum tractor accuracy
- Comprehensive documentation available after sowing
- Available for all planters



Safe and simple sowing with GPS technology



Perfect visibility during and after the task at hand



Fitting the control display to the tractor



RTK station for maximum precision sowing

Kubota

Plot tractor.

Powerful, versatile tractor.

The Kubota plot tractor is a small tractor that has been specially adapted for the Plotseed S, Rowseed S, and Monoseed B/DT/K machines. It has its own attachment frame, sowing drive, and hydraulic sowing PTO to suit it perfectly to your choice of planter. An automatic steering system is available as an option.

Your benefits summed up:

- Variety of front- and rear-mounted applications
- Easy to transport thanks to low deadweight
- Highly maneuverable thanks to compact design



Technical data

Model	L4240 DT	L5240 HST
Motor performance (SAE)	Quiet diesel 44 HP	Quiet diesel 54 HP
Capacity	2197 ccm	2434 ccm
Cooling	Water-cooled	Water-cooled
Drive	16 forwards + reverse gears	Hydrostatic infinite
Driving speed	0 - 30 km/h	0 - 30 km/h
PTO	Rear PTO 540/750 rpm	Rear PTO 540 rpm
Hydraulics	Rear: Category II, 1750 kg lifting force Front: Optional	Rear: Category II, 1750 kg lifting force Front: Optional
Cockpit	Comfortable seat with roll-over bar or comfortable cabin	Comfortable seat with comfortable cabin
Track width, front	1145 mm	1135 mm
Track width, rear	1140 – 1410 mm	1125 – 1325 mm
Ground clearance	390 mm	405 mm
Wheel base	1895 mm	1915 mm
Dimensions		
Length	3170 mm	3245 mm
Width	1485 mm	1470 mm
Height incl. roll-over bar	2450 mm	2550 mm
Height incl. comfortable cabin	2265 mm	2375 mm
Weight incl. roll-over bar	Approx. 1560 kg	-
Weight incl. comfortable cabin	Approx. 1700 kg	Approx. 1920 kg

We reserve the right to make technical alterations.

WINTERSTEIGER After Sales Service. The delivery is just the start of our service.

The best time to evaluate the quality of an investment is several years after delivery. That is why WINTERSTEIGER has set up a worldwide After Sales Service.

Commissioning and training

WINTERSTEIGER ensures both with its experts worldwide and of course on site.

Proactive maintenance

Maintenance and preventive exchange of pre-defined parts subject to wear and tear at pre-set times eliminate problems before they arise. For example, during our customers' annual holiday to keep maintenance costs as low as possible.

On-Call-Help-Desk

This service underlines our high claims for service for our partners worldwide. It ensures first class support even outside our own hours of business.

Strong customer service team

A large team of extremely well trained service staff provides comprehensive care for:

- Installation and commissioning
- Training
- Preventive maintenance
- Conversions
- Modifications
- Clearing faults
- Repairs
- Support
- Rapid supply of replacement parts

Advice services

- Advice from experts on technical equipment for research facilities
- Participation at international seed breeding symposia
- Arranging contacts with experts
- Advice from agricultural consultants in the definition and implementation of projects and technology transfer



Intensive guidance and training courses

WINTERSTEIGER regularly holds guidance and training courses for servicing staff, either directly on site, in our original building in Austria or one of our agencies around the world. They are the basis for perfect mastery of the machines and an uninterrupted harvest. This helps avoid down time and saves costs. Both WINTERSTEIGER service engineers and the service engineers from our agencies receive ongoing training and product information about new developments.

Those who sow also harvest with WINTERSTEIGER.

WINTERSTEIGER has positioned itself at the peak of a niche, which will become more critical in the future. Today, agricultural field research is challenged with providing significant contributions for a lasting food and energy supply to the world through new developments. WINTERSTEIGER provides the necessary technology.

Uniquely designed products offer a range, which covers the entire cycle of field research from the sowing to the harvesting:

■ Sowing

Precision spaced planters, plot drills, single row planters and plot tractors for the front and rear planting with seed machines

■ Fertilization and plant protection

Fertilizer distributors, field sprayer and hand-pushed plot sprayer

■ Data collection

Field PC's for mobile data acquisition

■ Harvesting

Plot combines, stationary combines and forage harvester

■ Laboratory analysis

Laboratory thresher, laboratory corn sheller, seed dresser, sample chopper and sample divider



Plot combine Split



Plot drill Plotseed S



Plot combine Delta



Laboratory thresher LD 350

As complete provider in agricultural testing, WINTERSTEIGER proves itself as strong partner for customers in various fields:

- Agricultural Universities and research centres
- Agricultural ministries and their departments for plant breeding
- National and international institutes for development projects

- National and international companies that research in the field of plant breeding
- Service companies that test for research companies

Precious seed deserves a careful harvest.



WINTERSTEIGER. A Global Player. Worldwide.

WINTERSTEIGER is the world market leader in its three divisions SPORTS, SEEDMECH and WOODTECH. Our success is based on customer proximity which we enjoy due to a globally-structured, tightly-knit sales and service network and sophisticated and future-oriented planning. In this we are guided by the following principles:

■ According to the „**Progress Principle**“ we are consistently extending our lead with targeted investments in research and development.

■ By the „**Quality and Productivity Principle**“ we mean both computer-assisted planning and design, which result directly in fully automated production processes, as well as strict quality assurance management, which ensures continuous control from design to after-sales service.

■ We meet the „**Qualification Principle**“ with optimally trained employees. Continuous professional development is an essential part of our strategy.

■ On one hand we see the „**Sustainability Principle**“ as our permanent contribution to long-term success, while on the other it represents a clear commitment to conserving natural resources.

The result:

- 15 subsidiaries
- 60 representatives worldwide
- Sales distribution in 130 countries
- 85 % export share
- World market leader in all three divisions

Division SPORTS

Total solutions for rental and servicing of skis and snowboards.



Division SEEDMECH

Worldwide No. 1 in field research equipment.



Division WOODTECH

Process solutions for quality thin-cutting.



Headquarters located in Ried im Innkreis, Upper Austria

Success begins with the right decisions.
At the right time. We look forward to you!



Worldwide No.1
WINTERSTEIGER
in field research equipment.

Headquarters:

Austria: WINTERSTEIGER AG, 4910 Ried, Austria,
Dimmelstrasse 9, Tel.: +43 7752 919-0, Fax: +43 7752 919-57,
seedmech@wintersteiger.at

International Companies:

Brazil: WINTERSTEIGER SOUTH AMERICA COMERCIO DE
MAQUINAS LTDA, Av. Sete de Setembro 4884, conj. 203 e 204,
Batel, CEP: 80240-000, Curitiba - PR, Brasil,
Tel. / Fax: +55 41 3343 6853, office@wintersteiger.com.br

Canada: WINTERSTEIGER Inc., 2933 Miners Avenue,
Saskatoon, SK S7K 4Z6, Tel.: +1 306 343 8408,
Fax: +1 306 343 8278, mailbox@wintersteiger.com

China: WINTERSTEIGER China Co. Ltd., 9/F New Poly Plaza,
No.1 Chaoyangmen North Ave, Dongcheng District, 100010 Beijing,
China, Tel.: +86 10 8419 3334, Fax: +86 10 8419 3399,
office@wintersteiger.com.cn

France: SKID WINTERSTEIGER, 93 Avenue de la Paix,
F-41700 Contres, Tel.: +33 254 790 633, Fax: +33 254 790 744,
palphonse.wintersteiger@wanadoo.fr

Germany: WINTERSTEIGER AG, Subsidiary Germany,
D-94535 Eging am See, Kollmering 10, Tel.: +49 8544 974-634,
Fax: +49 8544 974-640, seedmech@wintersteiger.at

Italy: WINTERSTEIGER Italia s.r.l., Strada Ninz 82,
I-39030 La Villa in Badia (BZ), Tel.: +39 0471 844 186,
Fax: +39 0471 844 179, info@wintersteiger.it

Russia: OOO WINTERSTEIGER, Business Center „ACADEMY“,
Office 304, Krzhizhanovsky Str. 14, Build 3, 117218 Moscow,
Tel.: +7 495 645 84 91, Fax: +7 495 645 84 92,
office@wintersteiger.ru

USA: WINTERSTEIGER Inc., 4705 Amelia Earhart Drive,
Salt Lake City, UT 84116-2876, Tel.: +1 801 355 6550,
Fax: +1 801 355 6541, mailbox@wintersteiger.com

Representations:

Argentina: Rosario, **Australia / New Zealand:** Adelaide, **Bulgaria:** Haskovo, **Chile:** Santiago, **Colombia:** Bogotá, **Czech Republic:** Litomysl, **Ecuador:** Quito, **Egypt:** Cairo,
Great Britain / Ireland: Essex, **Greece:** Athens, **Hungary:** Jászboldogháza, **India:** New Delhi, **Iran:** Teheran, **Japan:** Tokyo, **Kazakhstan:** Astana, **Korea:** Seoul, **Mexico /**
Venezuela: Mexico City, **Morocco:** Casablanca, **Netherlands:** Etten-Leur, **Paraguay:** Asuncion, **Poland:** Poznan, **Portugal:** Lisbon, **Slovakia:** Bratislava, **Spain:** Zaragoza,
Syria: Damascus, **Tunisia:** Tunis, **Turkey:** Ankara, **Ukraine:** Kiev, **Uruguay:** Montevideo