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Seed drills

SuperDrill • MasterDrill

VOGEL NOOT
SOIL SOLUTIONS

Seed drills for plough sowing and conservational cultivation processes

Seedbed preparation, reconsolidation and sowing in a single process

Sowing technology success factor

Even a homogenous seedbed is an important basic requirement for the uniform germination and early development of the whole crop. Of course, natural factors such as light, water and the type of soil also play an important role. However, these factors are not influenced by sowing technology. It is therefore all the more important to use a perfect cultivation process to give the young plants the optimum possibilities for growth, irrespective of whether conventional or conservational sowing procedures are used.

The following criteria are crucial for a uniform emergence and healthy development of the young plants:

- Constant seed depositing depth
- Even covering with fine soil
- Good soil consolidation, no plant remains in the sowing drills
- Even pressure
- No deep tramlines or compressed zones in the soil
- Even distribution of plant remains (influences light conditions and nutrient reservoir)

VN seed drill application areas

Vogel&Noot seed drills are made to do a professional job and cover a broad range from conventional sowing after ploughing to powerful mulch sowing. A wide selection of different device designs with various sowing options offers the best possible solutions and creates the basis for a successful crop.

Conventional soil cultivation

Conventional soil cultivation is characterised by the annual use of the plough. Under good conditions, ploughing works all plant remains deep into the ground. Any existing weeds are destroyed because working the plants deep into the ground means that they are deprived of both air (for respiration) and light (for photosynthesis). The cultivation depth is usually in a range of 15 – 30 cm.

After ploughing the ground is very loose (high volume increase) and displays large hollows within the ploughing depressions. Both corresponding reconsolidation and sufficiently fine clod-breaking are required to ensure that optimum germination conditions are produced for the crop that is cultivated next. These tasks can both be achieved via secondary soil cultivation. As the plough leaves behind a „clean table", conventional seed drills with shoe coulters can be used without them getting clogged with plant remains.

Mulch sowing/conservational cultivation technology

In the case of mulch sowing, the ground is not rotated before sowing (= without plough), the plant remains are mixed with soil measuring 2 - 15 cm on the ground surface. Cultivation can be carried out in a separate process or at the same time as sowing. The ground covering (area proportion of the plant remains/straw remains in the whole area) varies between 20 – 80% depending on the cultivation implement and working depth.

Significant cultivation targets in the case of mulch sowing:
- Create a sufficiently high fine earth proportion
- Even soil loosening (working depth according to requirements)
- Incorporation and shredding of the plant remains
- Removal of existing old weed growth

Today there are a variety of different types of device for these tasks, such as cultivators, disc harrows and rotary cultivators. The quality of the work has a significant effect on the success mulch sowing.

The range

Mechanical seed drills

SuperDrill AL / A

Attachments (rotary harrow, etc.) 2.50 / 3.00 / 4.00 m

SuperDrill D

3-point attachments
3.00 / 4.00 m

Pneumatic seed drills

MasterDrill A

Attachments (rotary harrows, etc.) 2.50 / 3.00 / 4.00/ 4.50 m

MasterDrill*pro* A

Attachments (rotary harrows, etc.) 3.00 / 4.00/ 4.50 m

MasterDrill D / DF-M

3-point attachments, 2.50 / 3.00 / 4.00 / 4.50 / 6.00 / 8.00 m – rigid/mechanically folding

MasterDrill DF-H / HD

3-point attachments
4.00 / 4.50 / 5.00 / 6.00 m – hydraulically folding

MasterDrill FT1

Front-mounted tank combinations
3.00 / 4.00 m – rigid

MasterDrill FT2

Front-mounted tank combinations
5.00 / 6.00 m – folding

SuperDrill AL/A

SuperDrill A 300 with sickle coulters

Mechanical attachment seed drills for soil cultivation machines

Advantages at a glance:

- Simple and robust construction.
- Continuous frame, seed tank has no load-bearing function.
- Low lifting force requirement thanks to low unladen weight (SuperDrill A 300 approx. 500 kg).
- Low loading of the rotary harrow pan because it is assembled on the packer roller of the rotary harrow.
- Low dwell and loading times thanks to large seed hopper volumes (230 litres per metre).
- Dust-tight roller cover, easy to use (SuperDrill A).

The SuperDrill AL and A mechanical seed drills never fail to impress thanks to their simple and robust construction. The fact that they are mounted on the packer roller of the rotary harrow means that the large seed hopper volumes permit rapid cultivation in three working widths (2.5 /3 / 4 m).

Hydraulic coulter lifting

The depth control bar is used as standard for hydraulic coulter lifting. In the case of rotary harrow - seeder combinations, this increases the ground clearance during lifting. Tail wheel and tine with steps are lifted at the same time.

Large tail wheel

The large diameter of the tail wheel guarantees very even driving of the sowing shaft and therefore exactly conorms with the sowing rate.

Depth control bars

In the case of all SuperDrill seed drills, the stable steel sowing pipes are positioned on the depth control bar and are therefore guided exactly into the depression, the precise deposit depth is especially important for quick and even growth of the seed.

SuperDrill D

SuperDrill D 300 with double disc coulters

Mechanical seed drill for 3-point mounting

Advantages at a glance:

- Simple and robust construction.
- Continuous frame, seed tank has no load-bearing function
- 3-point mounting for direct tractor attachment or combined use with cultivation implements with lifting linkage (e.g. hydraulic hitch).
- Low lifting force requirement thanks to low unladen weight (SuperDrill D 300 approx. 580 kg).
- Exact deposit depth thanks to standard depth control bars (especially important for quick and even growth of the seed).
- Low dwell and loading times thanks to large seed hopper volumes (230 litres per metre).
- Dust-tight roller cover, easy to use.

The SuperDrill D mechanical seed drill is used as an attachment with the 3-point coupling. It is robust, easy to use and permits precise seed depositing in combination with exact seed metering. The large seed hopper facilitates high outputs in combination with 3/4 m working width.

Running wheels

The generous dimensions of the running wheels (200/60-14.5) reduce the soil pressure and guarantee incredibly even driving of the sowing shaft.

Track indicator

Operated hydraulically as standard, vertical folding. Also available as a disc model on request.

SuperDrill – the technology

The perfect drill coulter for every application

Sickle coulters

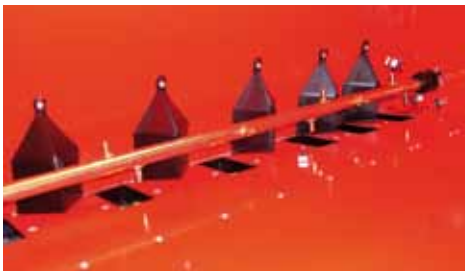
The SuperDrill sickle coulters are not sensitive to harvest remains thanks to their special shape (circular arc). As these are not contracted, blockages are avoided. The wearing part is also reversible and can be used on both sides. This means that the service life of the SuperDrill coulters is twice as long as it is for conventional shoe coulters.

Double disc coulter

The double disc coulters with 300 mm diameter are equipped with a robust bearing. Double-sided scrapers and a covering on the upper side help to prevent the formation of blockages. This means that double disc coulters work optimally, even under conditions where there is a large amount of harvest remains.

Efficient down to the finest detail

Central and individual coulter pressure adjustment (optional hydraulic operation)



Agitator shaft in the tank, separating wedges for fine seeds as standard

Sack carriers in the tank facilitate filling

Optional equipment

Tine and gangway/steps

The exact tine guarantees exact seed coverage and its angle is adjustable. The gangway combined with the tine reaches over the entire width of the device and is therefore particularly secure and convenient.

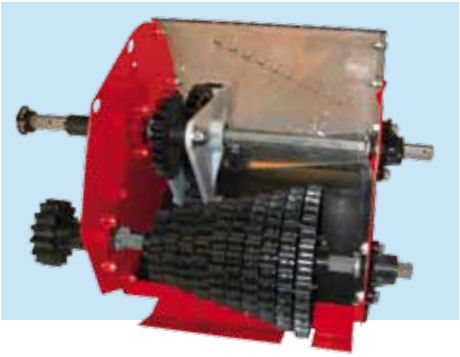
Electronic tramline control TRAM GRX

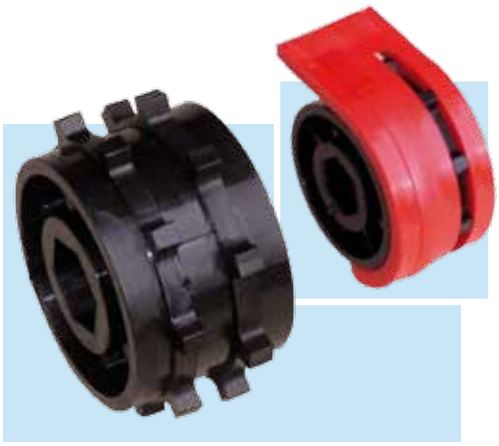
The electronic system switches all common tramlines by stopping the seed metering wheels of the corresponding sowing drives (magnetic coupling).

Lighting

The lighting equipment provides safety during transportation on the road.

Precise and reliable





Sowing shaft drive

The sowing shaft is driven via the drive cassettes and the standard gear mechanism. The gear mechanism offers a number of setting opportunities for the required sowing shaft speed.

The optional gears are a particularly convenient solution. The special construction of these gears guarantees very even driving of the seed metering wheels, resulting in incredibly exact sowing. The continuous gears can also be equipped with an electrical remote seed quantity adjustment if required.

Cam seed metering wheel system

The tried-and-tested cam seed metering wheel system guarantees precise sowing in all conditions and with all types of seed. In the case of normal sowing with cereals, peas, soy etc. amounts of up to approx. 400 kg/ha are possible. In the case of greatly reduced sowing, e.g. rape or alfalfa, the fine sowing lugs (picture) are attached to the seed metering wheel.

SuperDrill technical specifications

		SuperDrill					
Key data		**AL250**	**A300**	**A400**		**D300**	**D400**
Working width	cm	250	300	400		300	400
Row number		21	25	33		25	33
Row spacing	cm	12	12	12		12	12
Seed hopper volume	l	500 *)	645	870		645	870
Tyres		–	–	–		200 x 14,5	200 x 14,5
Weights							
with sickle coulters	kg	410	530	684		490	610
with disc coulter	kg	470	600	780		560	705
Equipment							
Seed hopper roller cover		–	S	S		S	S
Seed hopper hinged cover		S	–	–		–	–
Norton gear mechanism		S	S	S		S	S
Infinitely variable gearbox		O	O	O		O	O
Central depth control of the drill coulters		S	S	S		S	S
Hydraulic coulter lifting		S	S	S		O	O
Central coulter pressure adjustment	Mechanical	S	S	S		S	S
	Hydraulic	O	O	O		O	O
Track indicator, hydraulic	With tines	O	O	O		S	S
	With discs	O	O	O		O	O
Discharge taper in the tank		S	S	S		S	S
Fine sowing lugs		S	S	S		S	S
Lighting equipment		O	O	O		O	O

*) With seed hopper attachment S = standard equipment O = optional additional equipment - = not available
The illustrations and data given here are not binding and may be subject to change without notice.

MasterDrill A

MasterDrill A 300 with double disc coulters and pressure rollers

Pneumatic attachment seed drills for soil cultivation machines

Advantages at a glance:

Simple construction and dismantling onto/ from the soil cultivation implement with semi-mounted three-point linkage and corresponding parking supports.

The fan drive for PTO shaft speed 1000 rpm is equipped with a centrifugal clutch as standard, which protects against overloading and guarantees a gentle start-up.

The standard hopper volume of 840 litres can be increased to 1250 litres using a hopper extension.

The drive of the metering organ via the tail wheel is equipped with a PTO shaft. Damage to the metering unit caused by accidentally being turned backwards (for example on the headland with insufficiently raised machine) is therefore prevented.

The tail wheel runs inside the device range on worked ground and therefore powers the metering unit exactly and evenly.

The MasterDrill A is optionally available with hydraulic coulter bar lifting. This considerably increases the ground clearance under the drill coulters and therefore protects against damage.

The MasterDrill A is suitable for attachment onto active seedbed preparation devices of all types. The MasterDrill A is a particularly robust cultivation combination especially when used with the VN rotary harrows or rotary cultivators, meaning that seedbed preparation and sowing can be carried out in one process, even in the most difficult conditions. Working widths 3.0 / 4.0 / 4.5 m.

Universal application

Not just for use on VN rotary harrows. The seed rail is fastened onto a parallelogram, the height and length which can be adjusted many times, and can therefore be adapted to the most wide-ranging conditions - including to other brands.

Solo chassis

On request can also be equipped with a solo chassis for use in direct three-point attachment.

MasterDrill pro A

MasterDrill pro A 300 with double disc coulters and pressure rollers

Comfortable, flexible and comprehensive

The MasterDrill pro pneumatic seed drill meets all professional requirements as a combination implement for rotary harrows and rotary cultivators. Already perfectly equipped as standard, working widths of 3.0/4.0 and 4.5 m are available.

Large-volume tank

The new tank has a large volume of 1400 litres. Thanks to the tank being around two metres wide, filling via a front loader is optimally possible. The tank cap is designed to be dust-proof and water-proof. The design of the frame is stable and features an aperture angle geared towards filling with BigBags.

Other features:

- Compact construction minimises lifting force requirements
- New tank shape moves the centre of gravity forwards
- Precise seed deposition and high stability thanks to new coulter holder and coulter pressure adjustment
- Unique standard equipment

Comprehensive standard equipment

The MasterDrill pro series is fully equipped for use by professionals as standard, with features including a hydraulic fan drive (if required, also LoadSensing compatible), machine track electronics and comprehensive Müller-Drillmat implement monitoring, plus optimised steps with a hand rail, a robust S-harrow tine with multiple adjustment options, and much more.
A hydraulic coulter bar lift is also supplied as standard, which greatly increases the ground clearance under the drill coulters, as well as simplifying any temporary use of the cultivating implement minus the sowing function.

MasterDrill D / DF

MasterDrill D 600 with double disc coulters

Pneumatic seed drills for 3-point mounting

With its 3-point mounting, the MasterDrill D is suitable for use direct on the tractor, but also in combination with various drawn cultivation implements. The MasterDrill D seed drills are ideal for powerful sowing in deposited work procedures with low power consumption (6.00 m from approx. 100 PS).

The following models are available:

MasterDrill D 250 – 450

Rigid design with working widths of 2.50 to 4.50 m.

MasterDrill DF-Ha 400 – 450

Hydraulic parallelogram folding of the seed rail with transport widths of under 3 m.

Other features:

High-volume tyres reduces the soil pressure and avoid tramlines (see tech. specification p 18).

Favourable centre of gravity reduces the lifting force requirement. Therefore sowing can be carried out with large working widths, even when smaller tractors are used.

MasterDrill D 600 – 800

Machines with 6.00 and 8.00 m are equipped with a long distance travel system for road transport as standard (picture). This is used to transport the seed drills on roads in a longitudinal direction after adjusting the running wheels and putting on the quick-release three-point linkage.

MasterDrill DF-M 400 – 450

The devices of the MasterDrill DF-M series with 4.00/4.50 m working width are equipped with a mechanically folding coulter bar. Springs are used to support the folding in of the device via a parallelogram to the transport width of less than 3.00 m.

MasterDrill HD

MasterDrill HD 600 trailed version

Pneumatic seed drills for 3-point mounting, fully hydraulic folding

With its 3-point mounting, the MasterDrill HD is suitable for use direct on the tractor, but specially built to be used in combination with large, drawn cultivation implements (e.g. cultivators, compact-disc harrows) with appropriate mounting devices, and can therefore be used either on its own or in combination with other devices without the need for further remodelling. The MasterDrill HD seed drills are ideal for combined sowing with corresponding preliminary soil preparation. Available in working widths 5.00 m and 6.00 m.

Optional: Trailed version with hydraulic chassis and drawbar

These turn the machine into a trailed seed drill and can then be used with smaller tractors (from approx. 80 hp).

Other features:

Metering unit drive is non-slip and even over the large running wheels, meaning that there is an even spread.

Favourable centre of gravity reduces the lifting force requirements, meaning that sowing can be carried out in large working areas even with smaller tractors.

The quick-release three-point linkage facilitates attachment e.g. onto cultivation implements.

High-volume tyres

(31 x 15.5-15) reduces the soil pressure and avoids tramlines.

Fully hydraulic folding

on 3.00 m transport widths including track indicator, tine or further additional equipment.

MasterDrill FT

MasterDrill FT2-M in connection with folding rotary harrow

Pneumatic seed drill with front tank

Other features:

Small construction of the front tank, so that there is good visibility to the front.

Optimised weight distribution, the front tank also serves as ballast with the result that even axle loads are achieved on both the front and back and therefore there is lower soil pressure and reduced tramlines.

Perfect overview of the rear-side cultivation implement - due to the lack of a seed hopper the tractor driver has a full overview of all elements and cultivation functions.

MasterDrill FT devices are made up of a front tank for the seeds and a rear part for seed dispersion and sowing which can be combined with the most wide-ranging cultivation implements. The MasterDrill FT combinations are ideal for use with heavy rear cultivation implements. They optimise the weight distribution on the tractor. This means that large folding sowing combinations can be used as attachments, which has a particularly positive effect on the manoeuvrability.

The following models are available:

MasterDrill FT1

Front tank with 1,100 litre volume, a metering unit and rear part in rigid design. Working widths 3.00 and 4.00 m.

MasterDrill FT2

Front tank with 2 metering units and large filling volumes (1,800 litres). Rear part in 2 designs:

- **FT2-M** also with 5.00 and 6.00 m working width: Frame does not have folding equipment and is intended for fixed attachment onto folding cultivation implements (e.g. rotary harrows).

References

Georg Wallner

Wallner farm
Treffelstein, Germany
Farm size: 85 ha

Mr Wallner operates an 85 ha dairy farm. He mainly grows cereals and fodder crops, and cultivates his soils using a plough and mulch. This dedicated farmer has been using a Vogel & Noot ArterraGrip 300 rotary harrow in combination with a pneumatic seed drill since 2007.

"Our soil is very stony. We therefore needed a really robust and stable soil cultivation machine. The ArterraGrip rotary harrow is exactly that and was therefore the best choice for us. It is also very compact and very easy to maintain."

Mr Vandler Hubert et Aimé

GAEC du Pratelle
Langatte, France

Mr and Mrs Vandler run an arable (particularly maize cultivation) and dairy farm. The farm's soil is loamy and limy.

Mr Vandler: "In 2009 we decided to buy a rotary harrow. In the end we opted for the Vogel & Noot ArterraGrip 400. The most impressive feature of the Vogel & Noot rotary harrow is the excellent mixing of crop remains. The ArterraGrip also works extremely well on uncultivated soils and the work is very neat. This machine has proven to be the best choice for us when it comes to preparing the seedbed for sowing."

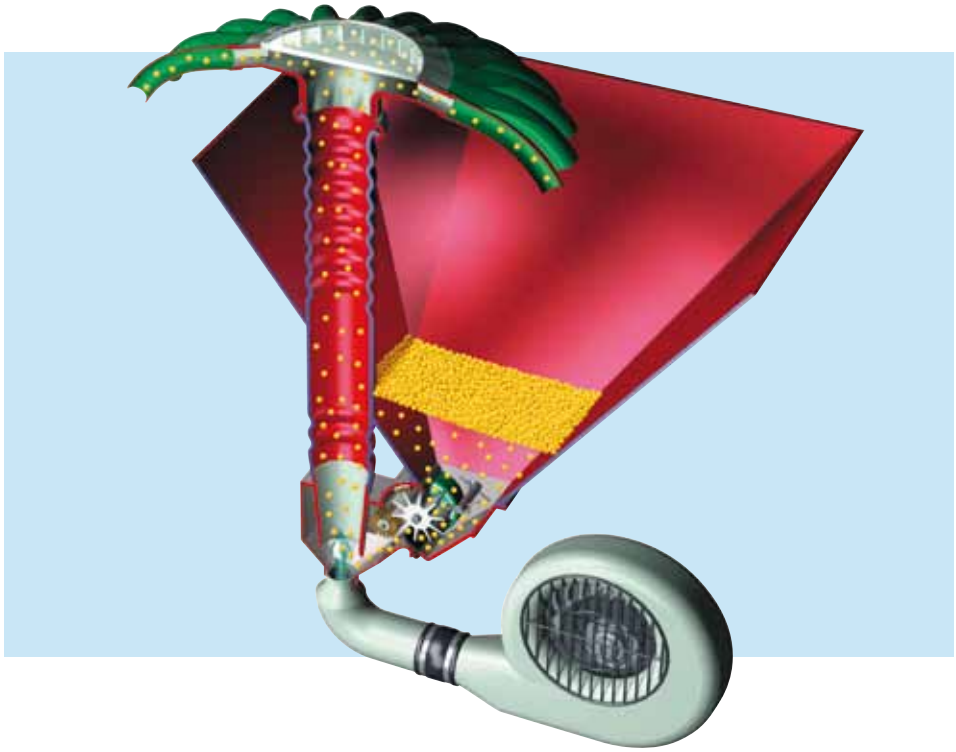
Cernel Slavko

Cernel farm
Sv. Jurij ob S'cavnici, Slovenia
Farm size: 40 ha

Mr Cernel owns 40 ha of arable land and has been cultivating the soil with a Vogel & Noot Arterra MS 300 since August 2009. He uses the rotary harrow in combination with the Vogel & Noot MasterDrill A 300 seed drill. Mr Cernel also owns a Vogel & Noot Grubber TerraFlex with a mechanical seed drill.

"The biggest advantage for me is that by combining the rotary harrow and seed drill, I only have to cover the field once in order to cultivate the soil and sow the seeds. The design of the Vogel & Noot machines is also impressively robust and high quality, which makes it easy to work with heavy soils."

The MasterDrill metering system:
Precise and cost-effective

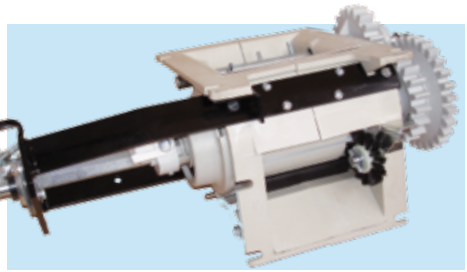


Tried-and-tested technology

The system of the central bucket wheel metering has been in use for many years and as a result, has proved itself over and over again. The MasterDrill metering system stands for precise metering and, in combination with seed depositing, is the basis for cost-effective sowing because deviations from the required sowing rate mean a direct increase in costs, or reduced yield.

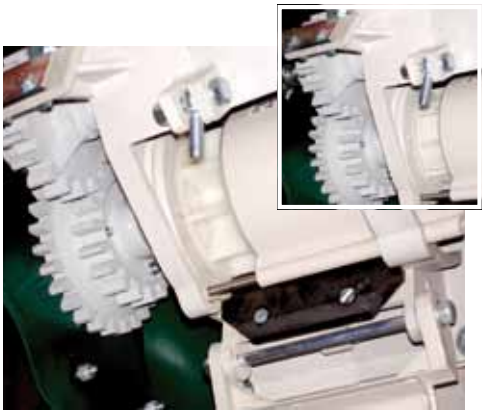
Tramline control with seed return into the tank

The seed pipes are blocked after the distributor using electrical valves for the laying down of tramlines. The seeds in the blocked pipes will be returned to the tank via a buffer chamber („seed return"), which results in effective seed saving. The switch-off valves are controlled by the electronic monitoring system.



Rape brush

The rape brush, which is included as standard, must be attached for the sowing of fine seeds such as rape. This brush gives additional cleaning to the metering chambers, which are on very small settings for this purpose, meaning that there is very precise metering even in the case of small sowing rates.



Fine metering

The metering unit can be reset to fine sowing very simply and without the need for tools when there are especially small sowing rates, e.g. rape or grass.

Fan

The fan produces the airflow needed for the seed distribution, high air volumes with low air speeds guarantee gentle transportation of the seeds.
The fan is powered mechanically directly via the PTO shaft of the tractor (D and HD types) or via the PTO shaft through drive of the cultivation implement (A types), or on request it can also be powered hydraulically with an oil motor (optionally also capable of load sensing).

MasterDrill drill coulter for all requirements

Shoe coulter

Conventional sowing with the tried-and-tested show coulters. The standard shutter flap prevents blockages in the case of backwards movement. The large swing area means that the drill coulters avoid obstacles, and therefore damage is prevented.

Double disc coulter

The double-sided ball bearing has a very compact housing. The large pass that is therefore possible between the new double disc coulters provides blockage-free working conditions, even in complicated mulch sowing conditions. The discs, made from rust-free V2A steel, are particularly robust in sticky soils.

Compaction roller (optional)

The compaction rollers (250 mm diameter, 42 mm wide) are equipped with a finely adjustable height alteration system (perforated screen). They guide each individual drill coulter to the precise depth and therefore ensure incredibly accurate seed depositing. Pressure rolling increases the soil consolidation and therefore helps quick emergence.

Coulter pressure adjustment

All MasterDrill seed drills are equipped with continuous central coulter pressure adjustment (spindle) (can also be hydraulically operated on request), and individual coulters can also have their pressure adjusted.

Track indicator + depth control

The hydraulically operated disc track indicators (double-acting control unit) are equipped with a depth limiter. The track indicators can optionally be set to the tractor wheel track or also to the centre of the tractor. Overload protection system via shear-off bolt.

Rapid discharge from seed hopper

Any remains in the hopper can easily be removed via the residue emptying supports in the hopper and the emptying flap on the metering unit.

New tank cover

Can be folded up in one piece, allowing you to carry out filling more easily. The improved sealing prevents the penetration of water and dust.

MasterDrill equipment options

Electronic tramline control/monitoring

The current version of the electronic control and monitoring unit, the Drillmat III, switches the tramlines via electromotive valves in all common rhythms. As part of this process, the seeds are returned to the tank via a buffer chamber („seed return"). This means effective seed saving. In addition to the switching of the tramlines, the monitoring system provides comprehensive information about the device functions such as working speed, hectare performance, fan speed, metering function and tank contents (with height-adjustable sensor).

Hydraul. pre-emergence marker

This marks the switched tramlines for maintenance or fertiliser procedures before the emergence of the seeds. The discs leave an easily visible marking on the ground. The pre-emergence marker can optionally either be controlled directly via a hydraulic control unit or automatically through connection to the monitoring system.

Sowing tine

The sowing tine provides optimum seed coverage, even when there are harvest remains. The angle of inclination of the tines has 3-fold adjustment; the tine height can be continuously adjusted (important in the case of light soils). In the case of heavy soils, the tine pressure can also be increased via a spring in addition to the unladen weight. The tines can also be supplied in a strong 10 mm model for use in heavy soils.

Steps and platform

All VN seed drills can be equipped with convenient access routes to ensure that the seed hopper can be reached safely. Non-slip step tread and additional railings ensure safety is maintained.

Individual coverer for the shoe coulters

These are directly assembled onto the shoe coulter, therefore they adjust exactly to the soil meaning that they cover the seeds particularly evenly. Can be used in light soil conditions with no harvest remains.

Track loosener (only for D and HD types)

Track looseners are available both for loosening the tractor tracks IN FRONT OF the seed drill and for the wheel of the drill. Continuous height and side adjustment

Lighting

All MasterDrills, are approved for road transport due to the fact that their transport width is less than 3.00 m, have a lighting system with warning boards, lights and rear reflectors as standard.

Seed drills – technical specifications

		MasterDrill*pro*		
Key data		**A300**	**A400**	**A450**
Working width	cm	300	400	450
Row number		24	32	36
Row spacing	cm	12,5	12,5	12,5
Seed hopper - volume	l	1400	1400	1400
Tyres	Standard	–	–	–
	Optional[1)]	23x8,5-12 or 26x12-12	23x8,5-12 or 26x12-12	23x8,5-12 or 26x12-12
Weights				
with shoe coulter	kg	810	880	920
with double disc coulter	kg	930	1040	1100
Equipment				
Method of attachment	Quick-release three-point linkage[2)]	O	O	O
	3-point[1)]	O	O	O
Coulter bar folding		–	–	–
Seed hopper rapid discharge		S	S	S
Fan drive	Mechanical	O	O	O
	Hydraulic	S	S	S
Metering unit		Tail wheel	Tail wheel	Tail wheel
Freewheel in metering drive		S	S	S
Coulter pressure adjustment	Mechanical	S	S	S
	Hydraulic	O	O	O
Coulter lifting	Hydraulic	S	S	S
Disc track indicator	Hydraulic	S	S	S
Lighting equipment		S	O	O
Solo operation equipment		O	O	O
Long distance transport equipment		–	–	–

S = standard equipment O = optional additional equipment - = not available
1) In the case of solo operation equipment
2) Quick-release three-point linkage NOT contained in standard scope of supply, but frame is prepared for it as standard
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Seed drills – technical specifications

Key data		**A300**	**A400**	**A450**	**D300**	**D400**	**D450**	**D600**	**D800**
Working width	cm	300	400	450	300	400	450	600	800
Row number		24	32	36	24	32	36	48	64
Row spacing	cm	12,5	12,5	12,5	12,5	12,5	12,5	12,5	12,5
Seed hopper - volume	l	840	840	840	840	840	840	1500	1500
Hopper extensions - volume	l	400	400	400	400	400	400	1000	1000
Tyres	Standard	–	–	–	23x8,5-12	23x8,5-12	23x8,5-12	7,5x16	7,5x16
	Optional	23x8,5-12 or 26x12-12	23x8,5-12 or 26x12-12	23x8,5-12 or 26x12-12	26x12-12	26x12-12	26x12-12	–	–
Weights									
with shoe coulter	kg	730	800	840	980	1040	1070	1260	1380
with double disc coulter	kg	850	960	1020	1100	1200	1250	1500	1700
with single disc coulter	kg	780	860	910	1030	1105	1140	1350	1510
Equipment									
Method of attachment	Quick-release three-point linkage	O 6)	O 6)	O 6)	O 6)	O 6)	O 6)	O 6)	O 6)
	3-point	O 1)	O 1)	O 1)	S	S	S	–	–
Coulter bar folding		–	–	–	–	–	–	–	–
Seed hopper rapid discharge		S	S	S	S	S	S	S	S
Fan drive	Mechanical	S	S	S	S	S	S	S	S
	Hydraulic	O	O	O	O	O	O	O	O
Metering unit		Tail wheel	Tail wheel	Tail wheel	Running wheel	Running wheel	Running wheel	Running wheel	Running wheel
Freewheel in metering drive		S	S	S	S	S	S	S	S
Coulter pressure adjustment	Mechanical	S	S	S	S	S	S	S	S
	Hydraulic	O	O	O	O	O	O	O	O
Coulter lifting	Hydraulic	O	O	O	–	–	–	–	–
Disc track indicator	Hydraulic	S	S	S	S	S	S	S	S
Lighting equipment		S	O	O	S	O	O	S	S
Solo operation equipment		O	O	O	–	–	–	–	–
Long distance transport equipment		–	–	–	–	–	–	S	S

1) In the case of solo operation equipment
2) Information for front tank/rear part
3) In the case of rear part for assembly onto cultivation implement
4) In the case of front tank
5) Is folded together with the cultivation implement (does not have its own folding frame)
6) Quick-release three-point linkage NOT contained in standard scope of supply, but frame is prepared for it as standard

S = standard equipment O = optional additional equipment - = not available

The illustrations and data given here are not binding and may be subject to change without notice.

MasterDrill

DF–M400	DF–M450	DF–Ha400	DF–Ha450	HD500	HD600	FT1-300	FT1-400	FT2-H500	FT2-H600	FT2-M500	FT2-M600
400	450	400	450	500	600	300	400	500	600	500	600
32	36	32	36	40	48	24	32	40	48	40	48
12,5	12,5	12,5	12,5	12,5	12,5	12,5	12,5	12,5	12,5	12,5	12,5
840	840	840	840	1500	1500	1100	1100	1800	1800	1800	1800
400	400	400	400	500	500	400	400	–	–	–	–
23x8,5-12	23x8,5-12	23x8,5-12	23x8,5-12	31x15,5-15	31x15,5-15	–	–	–	–	–	–
26x12-12	26x12-12	26x12-12	26x12-12	–	–	–	–	–	–	–	–
1040	1070	1125	1190	1490	1560	560/530 2)	560/610 2)	650/670 2)	650/680 2)	650/515 2)	650/570 2)
1200	1250	1300	1370	1690	1800	560/650 2)	560/770 2)	650/870 2)	650/920 2)	650/715 2)	650/810 2)
1105	1140	1200	1260	1570	1650	560/580 2)	560/670 2)	650/750 2)	650/780 2)	650/595 2)	650/670 2)
O 6)	O 6)	O 6)	O 6)	O 6)	O 6)	O 3) 6)	O 3) 6)	O 3) 6)	O 3) 6)	–	–
S	S	S	S	–	–	S 4)	S 4)	S 4)	S 4)	S 4)	S 4)
Mech.	Mech.	Hydraul.	Hydraul.	Hydraul.	Hydraul.	–	–	Hydraul.	Hydraul.	Mech. 5)	Mech. 5)
S	S	S	S	S	S	S	S	S	S	S	S
S	S	S	S	S	S	S	S	S	S	S	S
O	O	O	O	O	O	O	O	O	O	O	O
Running wheel	Running wheel	Running wheel	Running wheel	Running wheel	Running wheel	Tail wheel	Tail wheel	Tail wheel	Tail wheel	Tail wheel	Tail wheel
S	S	S	S	S	S	S	S	S	S	S	S
S	S	S	S	S	S	S	S	S	S	S	S
O	O	O	O	O	O	O	O	O	O	O	O
–	–	–	–	–	–	O	O	–	–	O	O
S	S	S	S	S	S	S	S	S	S	S	S
S	S	S	S	S	S	S	O	S	S	S	S
–	–	–	–	–	–	–	–	–	–	–	–
–	–	–	–	–	–	–	–	–	–	–	–

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