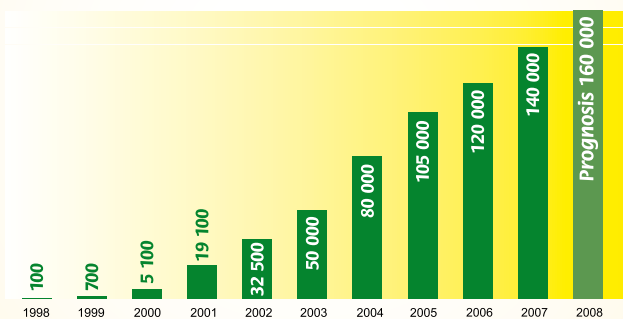


VM REAL DIRECT SEEDING®

VM REAL DIRECT SEEDING IS GAINING POPULARITY



THE AREA WHICH HAS BEEN SOWN USING THE VM REAL DIRECT SEEDING METHOD ha/year



VM 250SK

VM 300SK

VM 400SK

Front harrow and front packer optional equipments

TECHNICAL DATA

VM 250 SK VM 300SK VM 400SK

Working width, mm	2500	3000	4000
Total width, mm	2800	3300	4300
Weight, kg	2850	3600	4600
Hopper volume, l	1900	3300	4300
Coulter pressure with empty hoppers, kg	50-175	50-175	50-175
Tyre size, low-pressure tyres 0,5-1 kp/cm ²	31x15,50-15"	31x15,50-15"	15.0 / 55-17"
Number of coulters	16	20	28
Row spacing, mm	156	150	143
Working speed, km/h	8-12	8-12	8-12
Power requirement, hp	70	90	120
Digital area meter	standard	standard	standard

Reserves the right to change

VM VIESKAN METALLI

FIN-85200 ALAVIESKA

Tel: +358 8 430 9300

Fax: +358 8 430 509

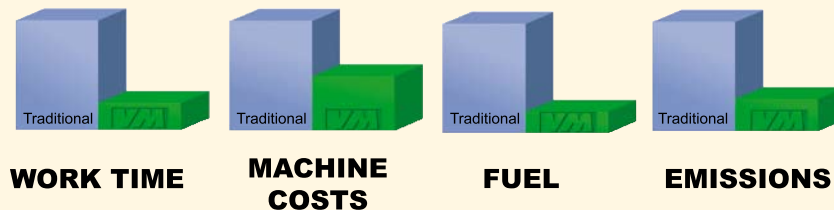
www.vieskanmetalli.com

NEW SOWING METHOD

VM REAL DIRECT SEEDING®



SAVES:



THE LEADER WITH SUPERIOR SEEDING PROPERTIES

The best performance in all soil types and seeding conditions



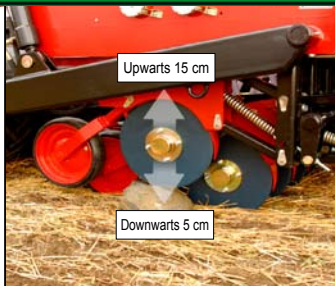
Large tyre size - Reliable and durable coulters technology - Easy-to-operate - Unique front harrow - Solidly built



- Large low-pressure tyres
- Low ground pressure on the soil surface
- The tyres press the stones and stubs in to the soils and level the field
- Low tractive force requirement



- The coulters support wheel adjusts the sowing depth and closes the furrow.
- The coulters and the harrows minimum tills the soil surface, thus covering the sludge and crop residues



- Ample reserves for coulters movements
- Stones do not break the coulters
- Hydraulic adjustment of the coulters pressure
- Coulters structure which does not get clogged



- Low filling height
- Explicit and easy-to-operate adjustment controls
- Good operating instructions and operator training ensure the success of crops



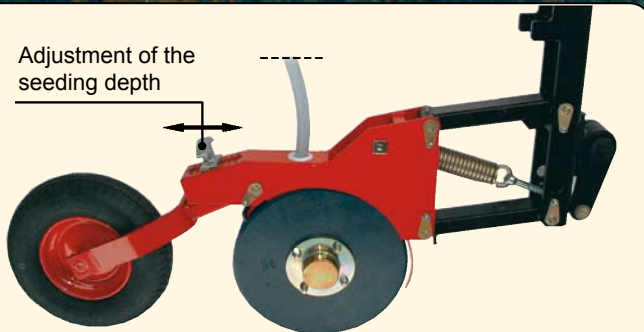
- The patented front harrow levels off the straw heaps
- It removes the straws from the seeding row
- Reduce the risk of plant diseases
- The front harrow is an option



- The front packer prepares an even seed-bed between the tractor wheels
- It increases the stability of the machine
- Large-size tyres

SOLIDLY BUILT WITH EASY-TO-OPERATE TECHNOLOGY

Adjustment of the seeding depth



SPRING-LOADED DOUBLE DISC COULTER

The coulters pressure ranges between 50-175 kg (with empty hoppers). Thanks to the parallel support arms, the coulters can easily overcome any obstruction.



The hydraulic coulters pressure adjustment.



SPACIOUS HOPPERS

Can be filled before leaving the farmhouse. Transferable intermediate walls. Available with 1-4 hoppers according to requirements.



Hopper for small seeds/start fertilizer.



THE CALIBRATION TEST IS EASY TO DO INTO THE TROUGHES



The feed rates are varied by turning the adjustment wheel.

OPTIONAL EQUIPMENT



FRONT PACKER



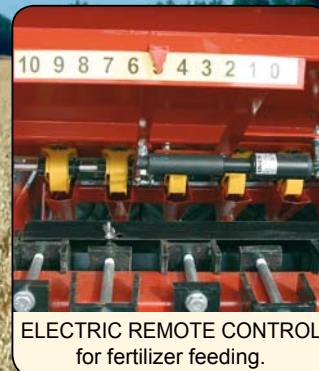
LH AGRO 1600 AUTOMATIC ACCESSORY



DRESSING DEVICE mounted in the seed hopper.



FRONT HARROW



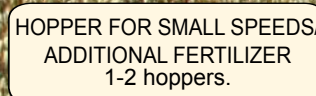
ELECTRIC REMOTE CONTROL for fertilizer feeding.



MARKER



REAR FOLLOWING HARROW



HOPPER FOR SMALL SPEEDS/ ADDITIONAL FERTILIZER 1-2 hoppers.

FOR THE COULTER SUPPORT WHEEL YOU CAN CHOOSE:

	<p>SOLID TYRES Suitable for all soil types except heavy clay.</p>	<p>PNEUMATIC TYRES Best suited to heavy clay soil.</p>	
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YOU CAN ALWAYS SOW WHEREVER YOU PLEASE:



DIRECTLY IN STUBBLE



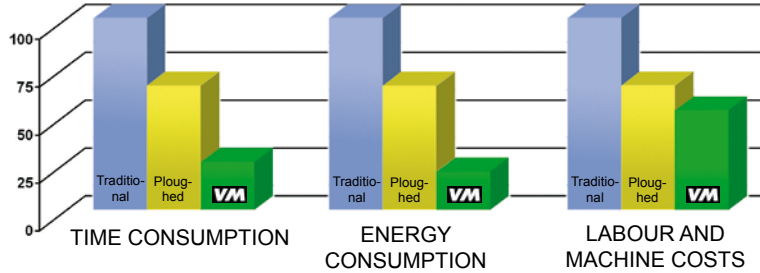
IN GRASSLAND



IN PLOUGHED SOIL

OFFERS THE BIGGEST SAVINGS

COMPARISON BETWEEN DIFFERENT TILLING METHODS



*) Source: Teija Hyytiäinen, Sari Hiltunen, Kirjayhtymä: Kasvituotanto 1, year 1992.

COMPARISON BETWEEN TRADITIONAL SEEDING AND VM REAL DIRECT SEEDING

	TRADITIONAL	VM REAL DIRECT SEEDING
Work time		
Machine costs		
Fuel		
Emissions		<p>*) REAL DIRECT SEEDING REDUCES EMISSIONS TO THE NATURAL ENVIRONMENT:</p> <ul style="list-style-type: none"> - runoff -69 % - herbicides -70 % - nitrates > -85 % - soluble phosphates >-65 % - leaching of sediment -93 % - reduces carbon dioxide emissions

*) Source: Institut für Landtechnik der Justus-Liebig-Universität, Giessen, Doctor Tebrugge

VM-REAL DIRECT SEEDING IMPROVES THE SOIL PROFILE

COMPARISON BETWEEN DIFFERENT SOIL PROFILES (Spring 2002)
 - Ostrobothnian clay, plots located side by side
 - The same cultivation history, only the seeding method was changed for one of the plots in 1998.

PLOUGHING + HARROWING + SEEDING + ROLLING



OBSERVATIONS

- the soil is dense and hard
- the straw remains undecayed in the plough layer
- the amount of organic matter is small
- the amount of humic compounds is small
- the soil breaks down into clods
- the grain structure is powdery
- no earth worms, no corridors present
- the soil is dryer.

VM REAL DIRECT SEEDING over a period of 5 years



OBSERVATIONS:

- the soil is porous and soft
- the straw remains on the soil surface
- plenty of organic matter present
- plenty of humic compounds present
- the soil breaks down into crumbs
- the grain structure is granular
- plenty of earth worms and corridors present
- the soil is moist

COMPARISON BETWEEN TRADITIONAL METHOD/VM REAL DIRECT SEEDING

Traditional	VM real direct seeding
Compaction of soil	
Weeds	
Plant diseases	
The water balance in the soil	
The ecosystem	
Yield	

On average the yields are the same.