



AERATION

One of the challenges faced by the turf care professional is the battle against compaction. We hear so much these days about compaction and its associated problems that it is important for our users to understand precisely what is meant by compaction, how it affects our turf and what can be done to alleviate it. First of all let us identify the problem. Plants have certain basic requirements if they are to thrive; food, water, warmth and light are all obvious and readily spring to mind. In addition to this they require the right growing medium. This is usually described as rootzone; the root zone should be open and contain a high proportion of air as healthy plants require oxygen within the root zone. These air gaps and pockets provide the pathways through which both water and air can easily move around and be stored. In addition this assists both drainage and irrigation. It is also through these cavities that the plant develops and extends its root system.

Compaction exists within the soil when it has been forced together; causing the air gaps and pockets to close. When compaction develops, the micro-environment within the soil begins to go into decline causing anaerobic conditions to develop within the soil.



Carrier

SKU	151.137.000
Weight	618kg (1362.5lbs)
Working speed	2.4mph
Three-point hitch	3-point CAT 1
Engine (petrol)	B&S 31 hp
Max. lifting capacity	475kgs (1047lbs)
Gearbox	Hydrostatic



Optional smooth tyres.



Carrier & Rink 1010.

Carrier & Speed-Seed 1100.



Carrier & Verti-Cut 1300.





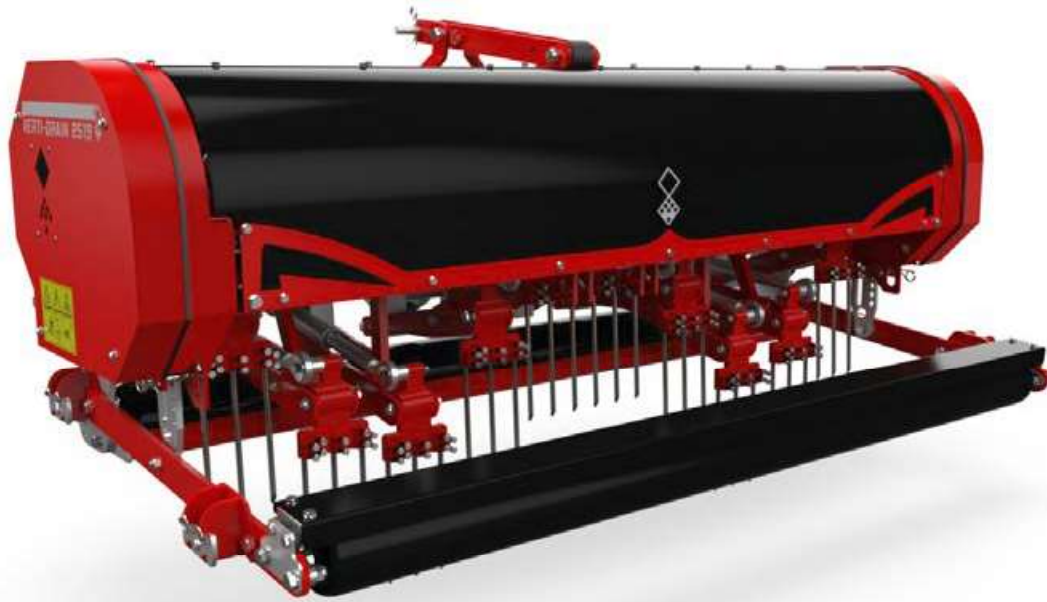
Verti-Drain®	1513	1517
SKU	111.215.013	111.215.017
Weight	448kg (985lbs)	562kg (1236lbs)
Working width	1.32m (52")	1.76m (69")
Working depth max	150mm (6")	150mm (6")
Capacity at 65mm (2 1/2") forward hole pattern	2822m ² /h (30374sq.ft/h)	3706m ² /h (39895sq.ft/h)
Capacity at 125mm (5") forward hole pattern	5427m ² /h (58415sq.ft/h)	7128m ² /h (76725sq.ft/h)
Minimum Tractor hp required	25hp, lift cap 650kg (1450lbs)	28hp, lift cap 750kg (1653lbs)
Max diameter solid tine	12mm x 150mm (1/2" x 6")	12mm x 150mm (1/2" x 6")
Three-point hitch	3-point CAT 1	3-point CAT 1



Standard items for 1513 & 1517 Solid Tines Ø12x150mm (1/2"x6"). Storage stand / quick heave adjustment lever / toolbox with tools / operators manual.

Optional items Solid Tines from Ø5x125mm (3/16"x5") to Ø12x150mm (1/2"x6"). Hollow Tines from Ø10x125mm (3/8"x5") to Ø18x150mm (3/4"x6"). Turf Hold Down Fingers / Windrow kit / Rear Roller.





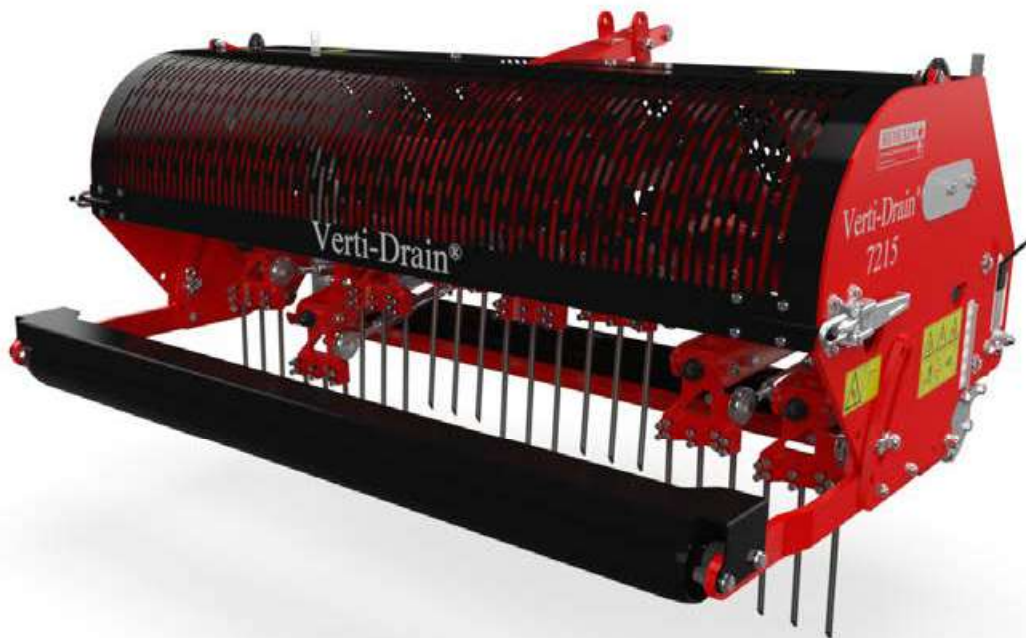
Verti-Drain®	2519
SKU	111.251.904
Weight	900kg (1984lbs)
Working width	1.95m (76.7")
Working depth max	250mm (10")
Capacity at 65mm (2 1/2") forward hole pattern	3443m ² /h (37055sq.ft/h)
Capacity at 165mm (6 1/2") forward hole pattern	8739m ² /h (94036sq.ft/h)
Minimum Tractor hp required	60hp, lift cap 920kg (2028.25lbs)



Simple depth and heave adjustment.

The new 2519 model incorporates the very latest of Redexim's® precision design and engineering to bring a high-speed machine into the range. Together with a new draw-rod system, it features an easy to adjust heave lever. With practicality and finesse at the heart of the machine, the 2519 also features new livery and styling. As standard, the Verti-Drain® 2519 comes with 12mm solid tines but it can accept a range of solid tine options up to 19mm, and hollow tines for coring. This versatility, combined with a variable working depth of up to 250mm, makes it suitable for an array of end-users, across the full spectrum of the maintenance calendar.





Verti-Drain®	7212	7215
SKU	7212	7215
Weight	470kg (1030lbs)	550kg (1210lbs)
Working width	1.2m (48")	1.56m (61")
Working depth max	250mm (10")	250mm (10")
Capacity at 65mm (2 1/2") forward hole pattern	1200m ² /h (11000sq.ft/h)	1560m ² /h (20196sq.ft/h)
Capacity at 125mm (5") forward hole pattern	3000m ² /h (32400sq.ft/h)	4680m ² /h (50544sq.ft/h)
Minimum Tractor hp required	18hp, lift cap 570kg (1250lbs)	25hp, lift cap 700kg (1540lbs)



The 72 Series Verti-Drain's® are well suited to lower hp tractors where access is restricted or a lighter footprint is required. These highly productive machines are easily adjusted and work to a maximum depth of 25cm (10") and use 12mm or 19mm (1/2" or 3/4") tines or mini-tines which are often used for summer aeration.

Standard items for 7212 & 7215 Solid Tines
 Ø12x250mm (1/2x10") / Front & Rear Rollers with scrapers / PTO with slip clutch / storage stand / central quick adjustment lever / tool box with tools.

Optional items Multi Tine heads / Solid Tines: from Ø5 to Ø18mm / Hollow Tines: from Ø10 x 125mm (3/8x5") to Ø24 x 250mm (1x10") / Cross Tines / Core Collector / Turf Hold Down Fingers / Rotating Brush.



Verti-Drain®	7316	7416
SKU	7316	7416
Weight	697kg (1533lbs)	900kg (1980lbs)
Working width	1.6m (63")	1.6m (63")
Working depth max	300mm (12")	350mm (14")
Capacity at 65mm (2 1/2") forward hole pattern	1360m²/h (12300sq.ft/h)	1360m²/h (12300sq.ft/h)
Capacity at 125mm (5") forward hole pattern	2800m²/h (25500sq.ft/h)	2800m²/h (25500sq.ft/h)
Minimum Tractor hp required	28hp, lift cap 825kg (1815lbs)	35hp, lift cap 1050kg (2310lbs)

The Verti-Drain® 7316 is a highly effective machine for use on sportsfields and all areas of the golf course. With penetration depths of up to 300mm(12") it will aerate up to 2,800m²/h (25,500 sq ft/hr) on fairways.

Standard items for 7316 Solid Tines Ø12x250mm (1/2x10") / front & Rear Rollers with scrapers / PTO with slip clutch / storage stand / central quick adjustment lever / tool box with tools.

Optional items Multi Tine Heads / Solid Tines: from Ø5 to Ø18mm / Hollow Tines: from Ø10 x 125mm (3/8x5") to Ø24 x 250mm (1x10") / Cross Tines / Core collector / Turf Hold Down Fingers / Rotating brush.

Standard items for 7416 Solid Tines Ø18x300mm (3/4"x12") for 7416 and 7521 / Solid Tines Ø24x400mm (1"x16"). Front & Rear Roller / Toolbox with tools / PTO with slip clutch / Storage stand integrated in machine.

Optional items Solid Tines from Ø5x125mm (3/16"x5") to Ø24x225mm (1"x9"). Hollow Tines from Ø10x125mm (3/8"x5") to Ø32x225mm (1 1/4"x 9"). Turf Hold Down Fingers / Windrow kit / Rear Roller / Adapters for different tine diameters.

Needle Tines in the Summertime

In the hot summer months, when many golf courses see the highest number of rounds, aerators equipped with needle tines can open thousands of holes in a soil profile to help reduce or relieve long-term compaction problems. Needle tines, also known as pencil tines, can be one of the least disruptive cultural practices used on greens. These treatments help provide passageways so water can move to the root zone, which improves

drainage and irrigation time and costs. Another benefit is that increased root growth means that turf plants can draw on water and nutrients located deeper within the soil and have a higher chance of survival in extreme conditions.





Verti-Drain®

2216

SKU	111.122.016
Weight	840kg (1851lbs)
Working width	1.6m (63")
Working depth max	225mm (9")
Capacity at 65mm (2 1/2") forward hole pattern	2796m ² /h (30096sq.ft/h)
Capacity at 125mm (5") forward hole pattern	5592m ² /h (60394sq.ft/h)
Minimum Tractor hp required	45hp, lift cap 1050kg (2314lbs)

Standard items for 2216 Solid Tines Ø18x225mm. Adapters for tines with Ø24mm to Ø18mm. Front rollers with scrapers / PTO with slipclutch / Storage stand / toolbox with tools.

Optional items Solid Tines from Ø5x125mm (3/16" x5") to Ø24x225mm (1"x9"). Hollow Tines from Ø10x125mm (3/8"x5") to Ø32x225mm (1 1/4"x 9") Turf hold down fingers / Windrow kit / Rear Roller / Adapters for different tine diameters.

The robust Verti-Drain® 2216 is a high-speed unit, capable of handling a 24mm / 1" diameter tine and working to depths of 22cm / 9". Thanks to its heavy-duty construction, the 2216 is ideal for a range of creation applications where durability and speed is key.





Verti-Drain®	7521	7626
SKU	7521	7626
Weight	1375kg (3025lbs)	1930kg (4254lbs)
Working width	2.1m (83")	2.6m (102")
Working depth max	400mm (16")	400mm (16")
Capacity at 65mm (2 1/2") forward hole pattern	1470m ² /h (13400sq.ft/h)	1950m ² /h (20989sq.ft/h)
Capacity at 195mm (7 2/3") forward hole pattern	4410m ² /h (47628sq.ft/h)	6010m ² /h (64908sq.ft/h)
Minimum Tractor hp required	55hp, lift cap 1650kg (3600lbs)	65hp, lift cap 2300kg (5070lbs)

Standard items for 7521 Solid Tines Ø18x300mm (3/4"x12") for 7416, 7516 and 7521 / Solid Tines Ø24x400mm (1"x16") for 7526. Front & Rear Roller / Toolbox with tools / PTO with slip clutch / Storage stand integrated in machine.

Optional items Solid Tines from Ø5x125mm (3/16"x5") to Ø24x225mm (1"x9"). Hollow Tines from Ø10x125mm (3/8"x5") to Ø32x225mm (1 1/4"x 9"). Turf Hold Down Fingers / Windrow kit / Rear Roller / Adapters for different tine diameters / Bogey wheel kit.

Standard items for 7626 Solid Tines Ø24x400mm (1"x16") / Front & Rear Roller / 3-speed Shuttle Gearbox / Toolbox with tools / PTO with slip clutch / Storage stand integrated in machine.

Optional items Multi Tine Heads: 10 (7626) units / Solid Tines: from Ø8 to Ø24mm (1/4"-1") Hollow Tines: from Ø10x125mm to Ø32x300mm / Bogey wheel kit.

AERATION VERTI-DRAIN® ACCESSORIES



Wheel Kit

A retro-fit bogey wheel system is available for easy transport. This also means that a tractor with less lift capacity is required.



Windrow Kit

The Windrow kit aligns the cores for easy collection.



Core Collector

The Core Collector uses a special two stage collecting system. A flexible rubber flap gathers the cores. Behind is a row of ground following aluminium fingers to ensure that all material is collected without the risk of damage to the turf.



Rotating Brush

A rotating brush on the rear of the Verti-Drain® incorporates sand into the holes, levels the ground or breaks up the cores. The brushes are segmented, so that it is ideally suited to process the material.



Turf Hold Down Fingers

The Turf Hold Down Fingers ensure that, when Verti-Draining or coring, there is no danger of damage to the turf even with a shallow root system.



Rocket Tines

Rocket tines for the 76 series are used if a large amount of sand needs to be introduced into the topsoil. After topdressing has been spread, these thick tines "push" the sand into the soil. Then the soil is decompacted by using long, $\varnothing$ 24mm Solid Tines, with "kick" applied to the tines.



Multi Tine Head

These $\varnothing$ 5mm tines are well suited for over-seeding or light summer aeration, making the most of irrigation.



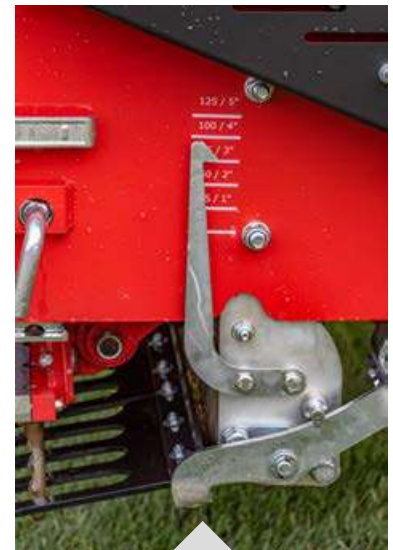
Needle Tine Head

$\varnothing$ 8mm needle tines, also known as pencil tines, can be one of the least-disruptive cultural practices used on greens.



Verti-Core® III	1600	2100
SKU	114.160.000	114.210.002
Weight	846kg (1865lbs)	1022kg (2253lbs)
Working width	1.6m (63")	2.1m (83")
Working depth max	100mm (4")	100mm (4")
Hole spacing distance driving direction	25 - 110mm (1 - 4.3")	25 - 110mm (1 - 4.3")
Minimum Tractor hp required	45hp, lift cap 1000kg (2205lbs)	55hp, lift cap 1250kg (2755lbs)

The punch-action Verti-Core III quickly cores turf surfaces while hold-down plates ensures no damage is caused to the surface in the process; Its belt drive systems ensure a high work-rate & neat hole pattern. The working depth can be easily adjusted as required by ground conditions and operators.



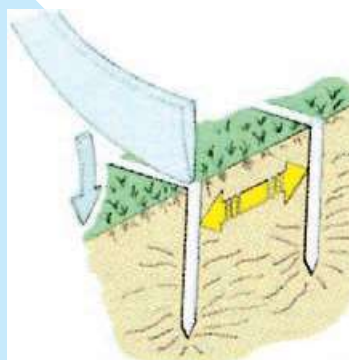
Manual Depth Control gives simple depth adjustment.

AERATION VERTI-QUAKE



Verti-Quake	2516	2521
SKU	115.251.600	115.252.100
Weight	615kg (1355lbs)	690kg (1521lbs)
Working width	1.6m (63")	2.1m (82.7")
Working depth max.	250mm (9.8")	250mm (9.8")
Minimum Tractor hp required, lift cap.	30-45hp, 750kg (1653lbs) lift cap.	35-55hp, 850kg (1873lbs) lift cap.
3-point connection	cat 1 and 2	cat 1 and 2
Capacity (max)	2400m ² /h (25833sq.ft/h)	3150m ² /h (33906sq.ft/h)
Number of blades	18	24
Blade thickness	12mm (0.47")	12mm (0.47")

Optional items for 2516 & 2521 Coulter knives for keeping the slits open.



How does it work?

Decompaction of the soil takes place via offset blades. Their rotary motion, combined with the forward speed, sets up a wave action. Thus the soil is shattered laterally, and decompacted consistently from the surface to full working depth without surface damage.

The Verti-Quake vastly improves drainage, root development, plus the uptake of moisture and nutrients. 3 Verti-Quake models are available, with a working depth up to 380mm. The Verti-Quake decompacts the soil via rotating off-set blades, shattering it laterally.



Level Spike	1700
SKU	113.170.000
Weight	405kg (890lbs)
Working width	1.8m (72")
Working depth	up to 250mm (10")
Road width	1.86m (73")
Minimum Tractor hp required	Min. 35hp
Number of mounting discs	12
Standard supplied with	48 deep slit knives
Knives/coring tines number	Standard/Maximum
- Truckster knives	48/72
- Deep Slit knives	48/72
- Fine Slit knives	264/264
- Twisted Deep Slit knives	48/72
- Hollow Coring tine	72/144



Four knife sizes + Hollow Tine	Max. working depth	Thickness
Deep Slit Knife	250mm	5mm
Truckster Knife	200mm	3mm
Fine Slit Knife	100mm	3mm
Twisted Deep Slit Knife	250mm	5mm
Hollow Tine	125mm	26mm Ø

Twisted Deep Slit knives are designed in a twisted form so that a more aggressive slicing job can be done.

Optional items for 1700 wheel kit & weight transfer system, Rear Roller.



Easy-Core	104
SKU	117.010.401
Weight	118kg (260lbs)
Working width	0.36m (14.2")
Working depth	70mm (2.75")
Engine	Briggs and Stratton 5 ¹ / ₂ hp
Engine drive	non-driven
Standard Hollow Tines	Ø22x16x70mm
Tine amount per set	4
Capacity (max)	2043m ² /h (21990sq.ft/h)

Optional items for 104 Hollow Tines: Ø16x9 1/2x70mm or Ø22x16x70mm or Ø45x38x70mm.
Solid Tines: Ø9 1/2x70mm or Ø22x70mm.



The provision of favourable germination and establishment conditions are essential to the success of any overseeding operation if high mortality rates are to be avoided. With soil temperatures of 12°C and above, a moist, well-aerated seedbed, close seed/soil contact and reduced shade from existing grasses are primary requirements for rapid development.

Intermittent germination or entire failure is often a consequence of poor seed/soil contact, inadequate surface drainage and/or insufficient seedbed preparation. Whilst the presence of thatch can severely inhibit seed germination, compaction and restricted soil aeration can also dramatically suppress seedling establishment. Soil aeration and thatch control must form part of a routine maintenance programme so that optimum conditions are provided. If you neglect these priorities until just prior to overseeding you can easily jeopardise the end result.

If you are trying to adjust the species compositions, applications of any form of nitrogen should be withheld for at least a month prior to overseeding and the application of a growth regulator prior to overseeding can help with the establishment of new seedlings.



OVERSEEDERS



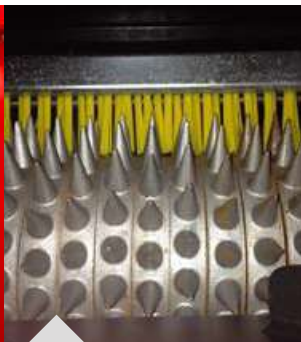
The Speed-Seed models are ideal to overseed large areas quickly. When both the front and Rear Roller are equipped with the individual cast rings, a total of 1840 holes per m² can be achieved.



Speed-Seed	1100	1500	2000	Walk Behind
SKU	124.120.004	124.160.006	124.210.006	124.060.000
Weight	380kg (836lbs)	468kg (1030lbs)	591kg (1300lbs)	210kg (463lbs)
Working width	1.1m (43.3")	1.5m (59")	2.0m (78.7")	0.6m (23.6")
Recommended tractor	20 HP with minimum lift capacity 610mm behind the lift eyes of 450kg (990lbs)	30 HP with minimal lift capacity 610mm behind the lift eyes of 550kg (1212lbs)	40 HP with minimal lift capacity 610mm behind the lift eyes of 595kg (1310lbs)	Supplied with Briggs and Stratton 6.5 Hp
Working depth	5 - 20mm (0.19" - 0.78")	5 - 20mm (0.19" - 0.78")	5 - 20mm (0.19" - 0.78")	5 - 20mm (0.19" - 0.78")
Seeding speed	Max. 12 kph (7.5 mph)	Max. 12 kph (7.5 mph)	Max. 12 kph (7.5 mph)	Max. 5 kph (3.1mph)
Seeding hole spacing	Square 30mm (1.18")	Square 30mm (1.18")	Square 30mm (1.18")	Square 30mm (1.18")
Number holes / sq meter with single spiked roller	990	990	990	990
3-point connection	Cat. 1-2	Cat. 1-2	Cat. 1-2	NA
Hopper capacity	169 ltr.(5.9 cu.ft.)	224 ltr.(7.84 cu.ft.)	297 ltr.(10.4 cu.ft.)	75 ltr.(2.6 cu.ft.)
Options	-Rear Roller with spikes -Brush scraper -Digital counter -Crush roller -Weight set	-Rear Roller with spikes -Brush scraper -Digital counter -Crush roller -Weight set -Hydraulic bogey kit	-Rear Roller with spikes -Brush scraper -Digital counter -Crush roller -Weight set	NA



The accurate seed calibration system gives good distribution and less waste.



An optional brush scraper is available for the Speed-Seed to keep the spikes clean from soil build up.



Resulting surface



Adjustable gearbox for variable seed rates



Walk Behind Speed-Seed

OVERSEEDERS OVERSEEDER 3D



Overseeder	3D 1275	3D 1575	3D 1575 LV (light version)
SKU	122.127.502	122.157.502	122.157.503
Weight	698kg (1539lbs)	1184kg (2610lbs)	832kg (1834lbs)
Working width	1.2m (47.2")	1.58m (62.2")	1.58m (62.2")
Max working depth	20mm (0.78")	20mm (0.78")	20mm (0.78")
Disc spacing	75mm (2.9")	75mm (2.9")	75mm (2.9")
Hopper capacity	212ltr (7.5cu.ft.)	276ltr (9.7cu.ft.)	276ltr (9.7cu.ft.)
Seed density	fully adjustable for any type of seed		
Minimum Tractor hp required	30hp, 698kg (1539lbs) lift cap.	40hp, 1300kg (2866lbs) lift cap.	35hp, 832kg (1834lbs) lift cap.
Max. Working speed	up to 12km/h (7.5mph)	up to 12km/h (7.5mph)	up to 12km/h (7.5mph)
Max. Capacity	up to 15300m ² /h (164688sq.ft./h)	up to 18900m ² /h (203438sq.ft./h)	up to 18900m ² /h (203438sq.ft./h)

Optional items for 3D 1275, 3D 1575 & 3D 1575 LV Fine dosing kit for seeding up to 2grm/m² (0.4lbs/1000sq.ft.).

Overseeder 3D



The Overseeder buries the seed up to 20mm(³/₄") deep in the ground, safe from the beaks of hungry birds and out of the way of the wind. The amount of seed is controlled to a highly accurate degree and the Overseeder takes undulating ground firmly in its stride. This is thanks to individually mounted coulters that allow the seeder to work in difficult conditions.

Minimal ground disturbance following overseeding.

