

Machines for Synthetic Turf

Redexim












Verti ART
Breaking barriers to better turf.
Artificial

Verti-Art® Range of Synthetic Turf Maintenance Machines

A common misconception is that synthetic turf requires little maintenance, but regular attention is vital to ensure optimum playing performance and durability. This can be achieved with the Verti-Art range of synthetic turf care equipment, manufactured by Redexim-Charterhouse.



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From: Turf Business

Bladerunner, a clean-sweep for the Hammers

We look at one of the latest sets of synthetic surface maintenance equipment in use at Premiership club West Ham. For Dougie, the Verti-Top proved to be the just item of kit he was looking for. "Yes, this was the piece of kit I had been waiting for", he says. "The Verti-Top is specifically designed to remove debris, leaves, bottle tops; even human hair – and it does just that, really cleaning the whole surface. It is amazing what the machine picks up and the quantities too. The hopper gets filled with surprising amounts of hair and even stones from the indoor pitches. It will also tackle chewing gum, one of the most unpleasant things we have to deal with, very well."

A Verti-Groom is the vital extra component of the package deployed by Dougie and his team. He has found using this tool ahead of the Verti-Top helps to de-compact, level and soften the surface, bringing debris to the top of the infill in the process. A previous pass with Verti-Top is not

always necessary, but working the two together can really help bring a heavily played and contaminated surface back into shape.

"The two bits of kit complement each other and both are straightforward and simple bits of kit. There is nothing over complicated and that means there is very little that can go wrong. That is what we want – simple kit that does a really good job."

Even when the Verti-Groom is used first and followed with the Verti-Top, Dougie reckons he can finish a pitch in around an hour and a half.

"After the pitches have been cleaned, they really look great. Of arguably far greater importance, the coach and players tell me the surfaces play better and that they are softer under foot. Because we are covering these pitches in less time, we are now better able to stick to a regular leaning regime. I reckon this should help extend the life of the artificial pitches and I'd recommend this equipment to anyone charged with maintaining an artificial pitch."

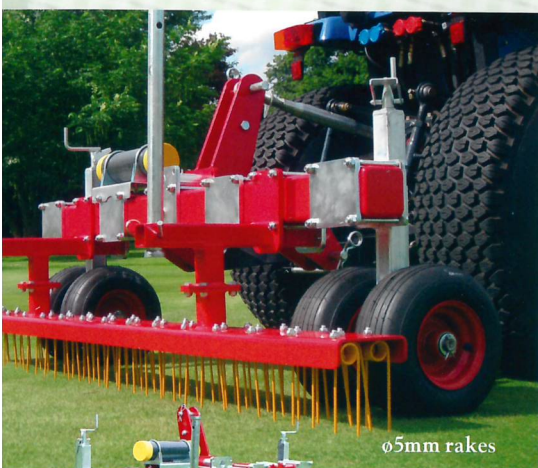


West Ham groundsman Dougie Robertson uses the Verti-Top on the club's indoor and outside synthetic playing surfaces. He is pleased with the machine's ability to pick up debris, finding it effective, fast and easy to operate.

Decompaction - Brushing

Compaction will inevitably occur on filled synthetic surfaces, this will make the surface harder to play on, give unrealistic playing characteristics, become dangerous and will have an impact on the carpets lifespan. It is imperative to use spring tines (rakes and pins) to loosen the infill mix. This process keeps the fibres upright allowing them wear correctly and the player to gain traction on the surface.

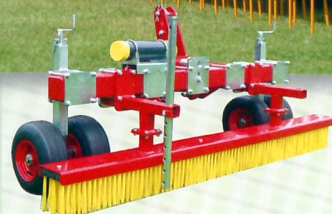
Model	Verti-Groom	Air-Rake	Verti-Rake Pro 200	Verti-Rake Pro 300	Verti-Rake Pro 450H	Verti-Rake Pro 600H
Working width	2.0m(79")	2.0m(79")	2.0m(79")	3.0m(118")	4.5m(177")	6.0m(236")
Weight	150kg (330lbs)	100kg (220lbs)	220kg (485lbs)	317kg (699lbs)	550kg (1213lbs)	610kg (1345lbs)
Tractor required	14hp+200kg lift cap.	10hp+140kg lift cap.	10hp+225kg lift cap.	20hp+280kg lift cap.	25hp+430kg lift cap.	40hp+600kg lift cap.
Dimensions	50x200x90cm	100x215x80cm	175x200x90cm	175x295x90cm	175x295x165cm	175x295x246cm
Number of rakes/pins	45xØ5/66xØ3mm	45	168	240	360	480
Optional items	For Verti-Groom and Verti-Rake Pro 200: Brushkit + towed version (mechanically) incl. drawbar					



Ø5mm rakes



Optional Ø3mm pins



Optional-photo left: the mounting beam with rakes or pins can be exchanged for a beam containing a brush. Also a frame containing 3 brushes can be attached at the rear (photo right).

Verti-Groom

The Verti-Groom is equipped with fine and flexible steel rakes (3 rows of Ø 5mm) or optional steel pins (2 rows of Ø 3mm) which gently lift and break up compacted areas. They straighten and lift the turf fibres, leaving them plush and upright for a soft and level playing surface.



Air-Rake

Like the Verti-Groom, the Air-Rake is equipped with spring steel rakes of Ø 5mm. However the rows with rakes are displaced from each other and the Air-Rake is pulled on two sliding carriages.



Verti-Rake

If more intensive decompaction is required than the Verti - Groom can offer, then the Verti - Rake should be used. The Verti - Rake decompacts the surface using Ø 6mm diameter spring loaded flexible tines.



Decompaction - Brushing

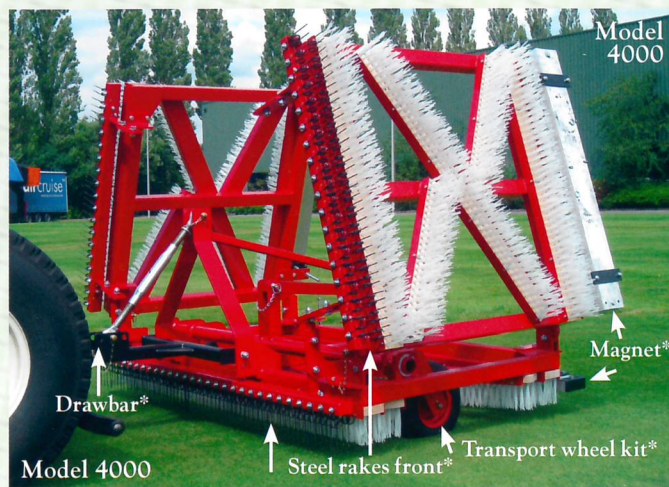
Infill is a "mobile" material, so it will inevitably move around whilst the surface is used. The movement of the player and the characteristics of many of the sports played on these surfaces means the infill will be moved to the outside of playing area. Brushing with brooms is required to evenly redistribute the infill back into the playing surface.

Model	Verti-Comb 1800	Verti-Comb 4000	Base-Rake	Court-Top 1200	Court-Top 1500	Verti-Brush 185	Verti-Broom 240	Verti-Broom Walk behind
Working width	1.8m(71")	4.0m(157")	1.45m(57")	1.2m(47")	1.5m(59")	1.5m(59")	1.85m(73")	1.0m(39")
Weight	104kg(229lbs)	220kg(484lbs)	76kg(167lbs)	85kg(187lbs)	105kg(231lbs)	170kg(374lbs)	50kg(110lbs)	36kg(79lbs)
Tractor required	18hp+200kg lift cap.	25hp+450kg lift cap.	16hp+450kg lift cap.	5hp	5hp	13hp with double acting valve + 10ltr min. at 70bar	10hp	10hp

Optional items **Verti-Comb:** Magnetic kit / Steel pins section front + rear / Drawbar + transport wheel kit (lift: mechanical or hydraulic or electrical) / Hydraulic lift kit
Verti-Broom: two transport wheels **Base-Rake:** Drawbar + transport wheelkit

Verti-Comb

The Verti-Comb is designed for brushing and decompacting large areas of turf quickly and efficiently. Foldable side wings can be added to the standard Verti-Comb 1800 model converting it into the model 4000 (4.0m working width).



Several options can be added, these include steel front or rear pins for decompaction, a magnetic strip for picking up steel debris, and a transport wheel kit with drawbar, which makes it possible to pull the Verti-Comb with any vehicle.

The Verti-Comb 4000 is foldable resulting in a total width of 2.22m in transport position.

*=optional items

Base-Rake

The Base-Rake utilises flexible steel tines, mounted between 2 brushes and these decompact the infill. Weights can be added to improve penetration.



The Base-Rake with the optional Drawbar + transport wheelkit.

Court-Top



The Court-Top consists of firm brushes at the front, for decompacting the Infill. A plate levels the infill brought to the surface, followed by a soft brush at the back which stands the fibres upright. The Court-Top is available in 1.2m or a 1.5m working widths.



Verti-Brush



The 5 counter rotating brushes turn at high speed.



The Verti-Brush quickly and effectively levels and distributes topdressing material with powerful hydraulic brushes. The 5 counter rotating brushes can easily reach to the base of the turf to loosen and evenly redistribute fill or can be applied to mix and level a new application. The durable poly brushes can be accurately set to a specific depth to achieve a light surface brush-in or aggressively mix and loosen the deepest fill.



Verti-Broom 185

Optional transport wheels can be added



Model 240 has a large working width of 2.4m



Verti-Broom

For brushing and striping of turf, nothing beats the proven Verti-Broom. The highly effective triangular arrangement of the brushes will straighten and groom each grass blade. The soft, long wearing brushes quickly and efficiently brush surface infill to an even and level finish.

Verti-Broom WB



The hand pulled Verti-Broom WB weighs 36kg and has a working width of 100cm.

Brushing/Leveling

Speed-Brush

The Speed-Brush is a towable land driven brushing machine, utilising two round brushes rotating in the opposite direction of travel. This intensive brushing action stands synthetic turf fibres up while de-compacting and settling infill into the surface.

Technical specifications

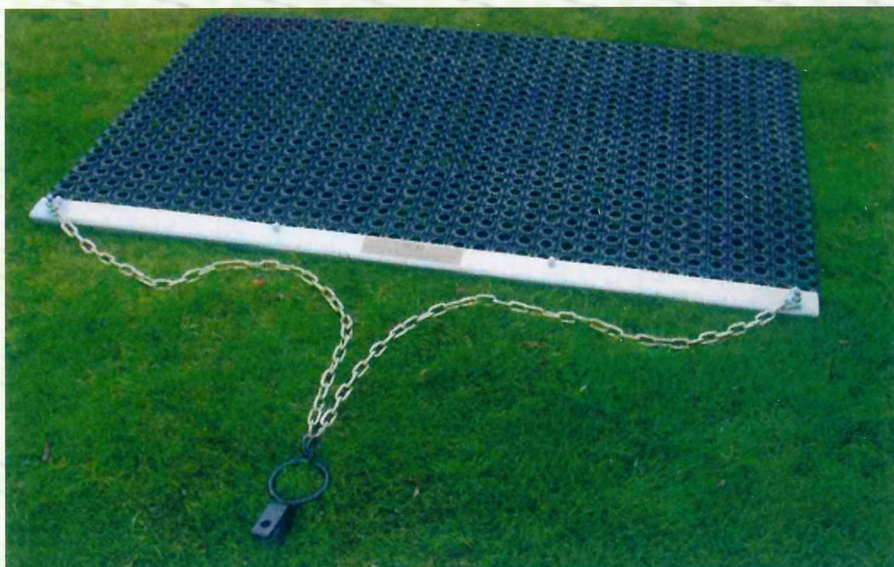
- Working width: 140cm (55.1")
- Total length with hitch: 269cm (106.9")
- Weight: 181kg(398lbs)
- Vehicle requirements: 10HP with 12Volt + electric connection



Rubber Dragmat

- Dimensions: 1.5x1.0m
Weight: 18kg
Thickness: 15mm

The Rubber Dragmat is ideal to work sand and rubber infill into synthetic turf. It can be hand-pulled, or towed behind a vehicle.



Cleaning

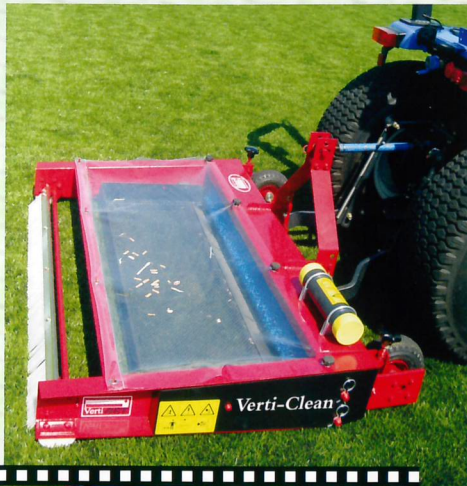
The Infill material used in synthetic turf must be kept level for a consistent playing field and the upper carpet fibres have to remain free of litter and organic material to avoid the accumulation of dirt and bacteria, as well as harmful materials such as glass or stray studs.

Model	Verti-Clean Pulled	Verti-Clean PTO driven	Verti-Top Vac1200*	Verti-Top Vac1800*	Verti-Top Vac Tow behind*	Verti-Top WB	X-treme Clean 1200	X-treme Clean 1800
Working width	1.5m (59")	1.5m (59")	1.2m (47")	1.8m (71")	1.45m (57")	84cm (33")	Width: 1.2m (47")	Width: 1.8m (71")
Weight	109kg (240lbs)	115kg (250lbs)	358kg (789lbs)	433kg (951lbs)	300kg (660lbs)	150kg (330lbs)	Weight: 225kg	Weight: 300kg
Capacity hopper	70ltr	70ltr	64ltr	96ltr	70ltr	30ltr	Number of brush: 6	Number of brush: 9
Tractor required	12hp + 150kg lift cap.	12hp + 150kg lift cap.	20hp + 360kg lift cap.	25hp + 500kg lift cap.	no; is pulled unit with 6½ hp engine		Tract. Req. 18hp	Tract. Req. 25hp
Dimensions	171x108x70cm	171x108x70cm	158x140x90cm	158x201x90cm	140x170x100cm		Number of rotors 2	Number of rotors 3

Optional items for E-Cleaner: steel pin section / for E-Cleaner + Verti-Top: Sieve mesh size:3,2x3,2mm, 4x4mm,5,5x5,5mm,6x6mm for Verti-Top 1500: vacuum unit. *models include vacuum unit.

Verti-Clean

The Verti-Clean picks up surface debris with a rotating brush, which throws it on a vibrating sieve. The sieve filters infill material back on to the playing surface, while retaining the debris. Both the rotating brush and the vibrating sieve are powered by the movement of the machine.



The PTO driven version of the Verti-Clean makes it easier to remove larger amounts of dirt, litter and debris as the rotary speed of the brush can be varied.



The lightweight hopper with debris can easily be removed for emptying

Verti-Top + Vacuum Unit

The Verti-Top Vac is a version of the Verti-Top 1500, in which a vacuum cleaning mechanism has been constructed. While the vibrating mechanism is collecting the larger debris particles, the vacuum system removes all of the fine material, such as dust, hair and the like into a washable filter bag.



The Verti-Top Vac 1800



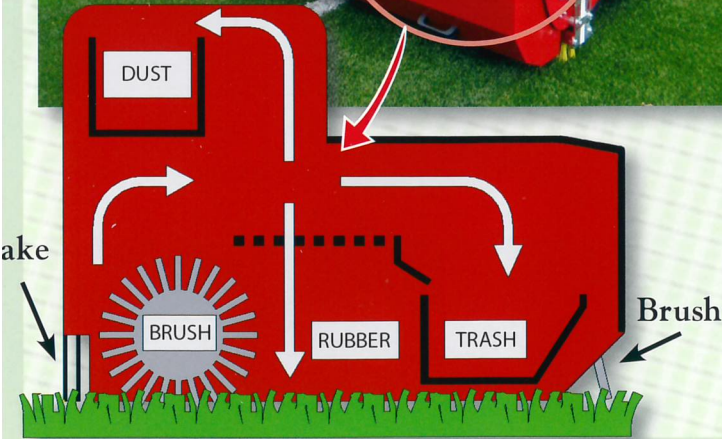
After only a few hundred meters, the dustbag already contains a few dense clumps of dirt, hair, trash and dust.



Verti-Top Vac 1200



There are optional sifting screens (sieves) available for various infill sizes.

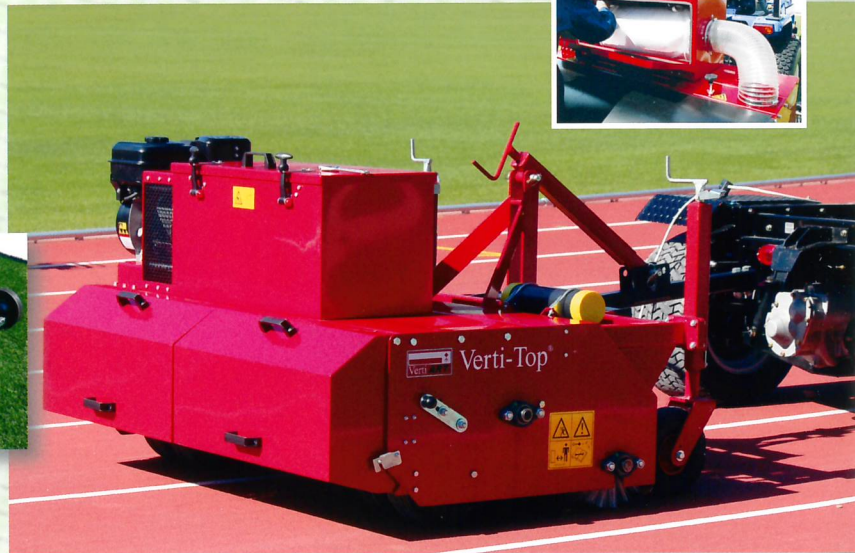


Verti-Top Vac Tow Behind

The Tow Behind Verti-Top Vac utilises the same innovative cleaning technology as the tractor mount version by quickly and effectively removing debris from the surface while gently brushing and grooming the turf fibers. All material that is brought up is sifted out on a vibrating shaker screen with the clean infill being returned to the turf and the debris sifted into two easy-to-empty bins. The Tow-Behind Verti-Top Vac is equipped with a quiet and powerful 6½ hp engine. This machine can be used with any power unit – from a golf cart to a riding lawn mower.



The optional towed magnet picks up metallic debris.



Verti-Top WB

The Walk-behind Verti-top is self-driven and powered by a 6½ hp engine. It is ideal to clean small areas.

The width of the Verti-Top WB can be narrowed to 87cm enabling it to pass through small passways.



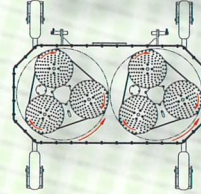


X-treme-Clean

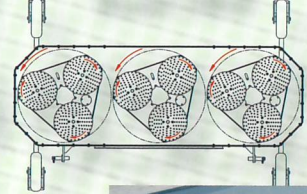
The X-Treme-Clean decompacts the toughest of sand based surfaces. The machine uses firm brushes designed to penetrate the compacted surface, these are mounted on separate heads which intern rotate in opposite directions. The carpet is decompacted bringing the infill to the surface to be removed, cleaned or worked back into the fibres. The X-Treme-Clean is ideal to regenerate tennis courts, sand-filled football fields and hockey fields.



Model 1200



Model 1800



After the sand is brought to the surface, it can be easily processed, like cleaning it with the Verti-TopVac.

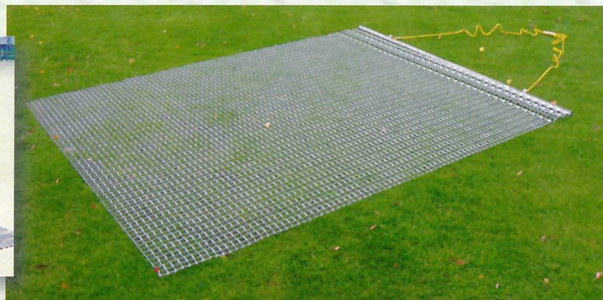


Eliminating static electricity

The regular use of brushes on an artificial turf field results in the build up of static electricity in the fibres. As a result, infill moves upwards, and it is hard to work it back down in the carpet.

Dragmat

Size	Weight
120x180cm	12kg((26lbs)
180x240cm	35kg(77lbs)
240x240cm	47kg(103lbs)



Stainless steel scraper wire mats are being used to evenly distribute infill material, and to eliminate the static electricity in the fibres.

Spraying

Algae growth and moss can cause accidents and can be removed by using liquid (organic) weed killer.

Verti-Spray

The trailed Verti-Spray is an excellent tool for any turf spray application. Easily coupled to most tow vehicles, the 12 volt sprayer quickly disperses up to 300 liter disinfectants and other liquids such as static reducing mixes, or plain water to cool the playing surface.

Technical specifications

Tank size:	300 liter
Hitch Type:	adjustable chevis
Weight empty:	75kg
Required tow vehicle:	400kg tow capacity
Standard items:	boom sprayer swath 6m + trigger spraygun 5m hose.



Infilling/Refilling

The Redexim infill machines are ideal to fill artificial turf fields, with sand and infill during initial construction, but also for refilling existing pitches. A typical synthetic field loses 5-10% of its infill over a year.

Model Rink	SP950 Walk-in-front	TB950 Tow behind	1010	1210	1520
Spreading width	0.95m (37")	0.95m (37")	1.5m (59")	1.8m (71")	1.4m (55")
Spreading thickness	0.3 to 10mm	0.3 to 10mm	0.3 to 10mm	0.3 to 10mm	0.3 to 40mm
Weight	280kg (616lbs)	190kg (418lbs)	270kg (594lbs)	370kg (814lbs)	950kg (2090lbs)
Hopper capacity level	0.33m ³	0.33m ³	0.75m ³	1.0m ³	2.0m ³
Tractor size	selfpropelled 6.5hp engine	Any pull vehicle	20hp +:	20hp+:	25hp+:
			double acting hydraulic valve and min. oil supply of:		
			12ltr/m@120bar	20ltr/m@ 140bar	25ltr/m@ 140bar
Optional items	Dry sandplate (Rink 1005, 1010, 1210) / Auxiliary tank and pump unit (Rink 1010,1210, 1520) / 13hp engine+hopper extension kit+special infill kit (Rink 1010, 1210) / 4 pivoting wheels (Rink 1520)				

Rink SP950 Walk-in-front

The Rink SP950 is powered by a 6½ hp engine, and the weight of the machine is evenly distributed over 7 wheels in order to minimize ground pressure.



Rink TB950 Tow behind

The Rink TB950 is a wheel drive topdresser and can be pulled by virtually any vehicle.

The brush and conveyor belt are driven by the wheels (either 2 or 4 wheel driven), ensuring a constant application rate.



Rink 1010

The floatation tyres minimize ground pressure and the lightweight hopper is made of aluminium to avoid rusting.



Options:

- a Hopper Extension kit (photo r-top) increases the hopper capacity to 1.27m³.
- a Special Infill kit (photo r-bottom) consists of a custom seal kit and a rake, which pulls the fibres into a vertical position immediately behind the wheels of the spreader, so that the Infill material can drop down to the base of the mat.
- if a 13hp engine is added the Rink 1010 can be pulled by virtually any vehicle (photo l-below).



Rink 1210

The Rink 1210 is low to the ground, for easy refilling and ensuring the operator a good rear view.



The Dry-sand plate ensures extra accurate spreading.



Options on the Rink 1210 are the Hopper Extension kit (increasing the hopper size to 2.0m³), a Special Infill kit (to pull the fibres vertically) and a 13hp engine (a tractor is then not required) as shown in the photo below.



Rink 1520

The Rink 1520 can spread extremely accurate.



The Rink 1520 with the Special infill Kit.

Optional: the Rink 1520 can be equipped with 4 small pivoting tyres.



Infilling/Refilling

Specialised infillers	Utility vehicle version		Rink Handspreader
	Rink 1204	Rink 1205	
Working width	1.8m (71")	1.8m (71")	0.60m (24")
Spreading thickness	0.3 to 10mm	0.3 to 10mm	0.3 to 10mm
Tractor required	-	-	Walk behind spreader
Weight	300kg (660lbs)	300kg (660lbs)	50kg (110lbs)
Hopper capacity level	1.0m ³ (35cu. ft)	1.0m ³ (35cu. ft)	100 liters
Dimensions	1.12x1.81x0.56m	2.06x1.88x0.70m	
Optional items Drysand plate/Hopper Extension kit to 2.0m ³			

Rink Spreaders for Utility vehicles

The hoppers of the spreaders are made of aluminium to reduce the total weight, so that they can be placed on top of utility vehicles.

Model 1205 for on the Toro Workman or John Deere Porgator and model 1204 for on top of the Cushman Turf Truckster.



Rink 1205



A Hopper Extension Kit can be mounted on top of the Rink 1204, increasing its total capacity to 2.0m³ for infill (photo left).

Rink Handspreader

The Rink Handspreader is especially handy to distribute infill material on small pitches or tight areas.



Snow-Removing

Snow-Blade 272

The Snow-Blade 272 is the ideal snow remover for natural and synthetic turf sports fields. Capable of fitting relatively small tractors, the large blade is entirely galvanized, so that it will not corrode. The working height is accurately adjusted with the two spindles.



Technical specifications

- Working width: 2720mm (107")
- Weight: 135kg(297lbs)
- Tractor required: 25hp min. with front 3-point linkage
- Standard item: A-frame Cat.1 included

Testing Test devices allow for monitoring the vital artificial turf field characteristics over time.

Ball Roll Tester + Ball Rebound Tester

This device measures how far the ball rolls, and how high it bounces and gives an indication on what kind of maintenance is needed.



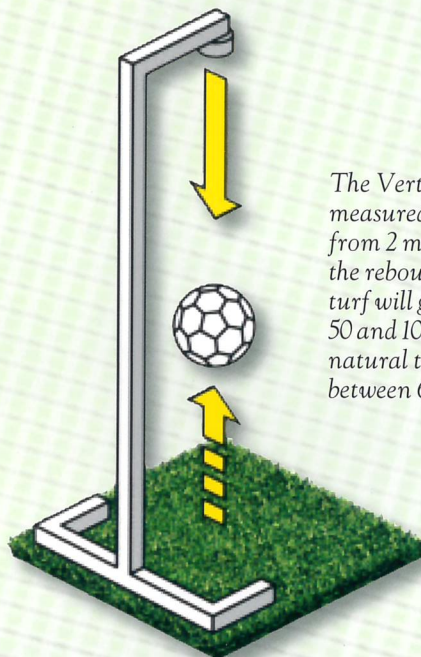
Ball Roll Tester



The Ball Roll values for natural turf would vary between 4- and 10m, natural turf in ideal conditions will give values from 4- to 8m. The lower the value, the slower the pitch.*



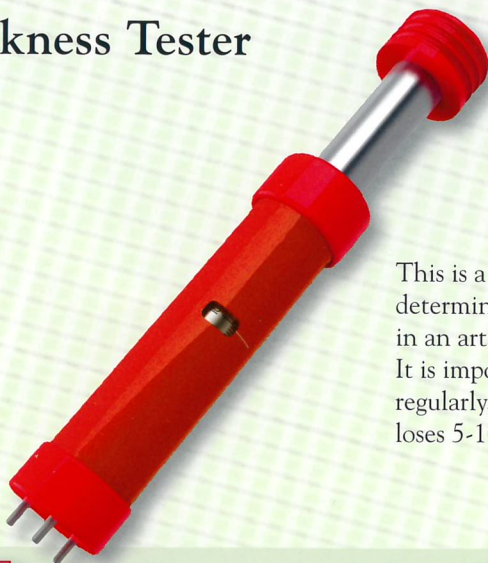
Ball Rebound Testing Bar



The Vertical Ball Rebound is measured by dropping a ball from 2 meters and measuring the rebound height. Natural turf will give values of between 50 and 100 cm, but an "ideal" natural turf will give values of between 60 and 85 cm.*

*from FIFA Quality Concept for Football Turf.

Infill Thickness Tester



This is a measuring tool for determining the amount of infill in an artificial grass surface. It is important to measure this regularly, as a typical synthetic field loses 5-10% of its infill over a year.

From: Fieldmanager June 2013

In 2011-2012 in Turkey there was an increase in heartattacks on sportsfields. They were on the artificial grass fields on private areas, which were run by commercial companies. It appeared that there was no or hardly any rubber infill in the artificial grass. The ballroll was therefore too high, and players had to run extremely fast and thus had to give too much efforts resulting in extra heartattacks. Ballroll on many of those fields appeared to be 16-18 meters, while according to the Fifa rules it should be maximum 12 meters.

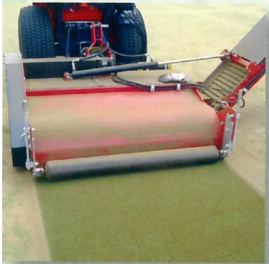
Eliminator

The Eliminator removes the infill-material from the turf by using an intensive rotating brush. A conveyor belt transports the material to a dumptruck or in a large bag which is carried alongside the Eliminator.

Model Eliminator

Working width	1.5m (59")
Weight	600kg (1320lbs)
Working depth (cm)	up to 5cm.
hp required	35hp with lift cap. of 900kg + 2x double acting valve
Dimensions:	160x210x238cm

The Eliminator is ideal to remove sand from short piled tennis or hockey fields.



Carpet-Lifter



Technical specifications

- Working width: 2.0m (79")
- Weight: 1800kg(3960lbs)
- Tractor required: 35hp



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