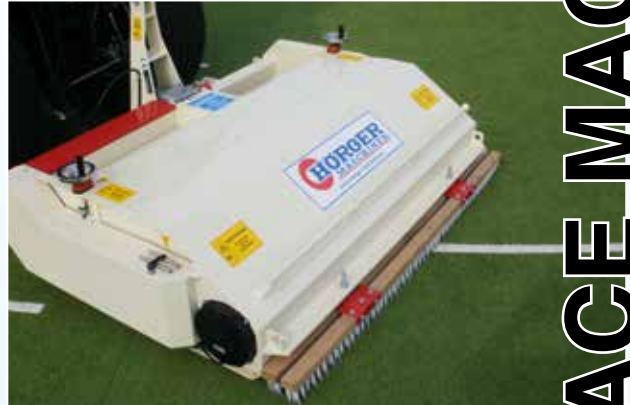


**Artificial turf cleaner SKU**  
For front or rear assembly



**Artificial Turf Cleaner SKU**  
1500 Basic



**BS 2000 Brushing System**



**Artificial turf cleaner SKR**  
With dirty water intake



**Athletic track cleaner KBR**  
Including the pick up of dirty water



# Flag

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# Artificial turf cleaner SKU

For front or rear assembly

Filled artificial turf is affected by the environment from the first day on. Dust, pollen, the residue from decaying vegetation and broken fibres are washed by rain into the fine cavities of the infill material. The result of this process is a totally hardened surface which no longer allows water to permeate through. The infill contaminated with particles of humus is also an ideal breeding ground for algae and moss. An artificial turf surface that is that dirty no longer meets its purpose. It also poses an extreme risk to players, of slipping and falling and that is not a calculable accident risk.

Only with constant maintenance and care can a filled artificial turf sports surface permanently keep its intended quality and can continue to be used

effectively for many years. For an effective care it is necessary to lift the infill material out of the pile at regular intervals, coarse contaminants must be sieved out and fine dust filtered from



the infill. The bent turf fibres must be reset upright and the infill material installed back into the turf fibres to stabilise them. The surface must appear even to the eye after treatment.

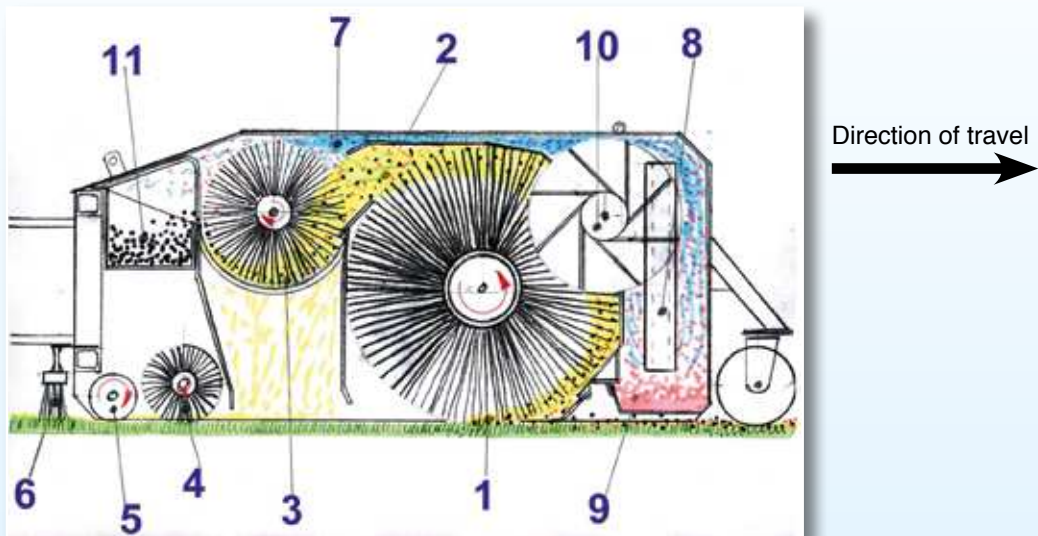


To be able to work reliably and inexpensively we have developed our artificial turf cleaner SKU as an assembling unit for compact tractors.

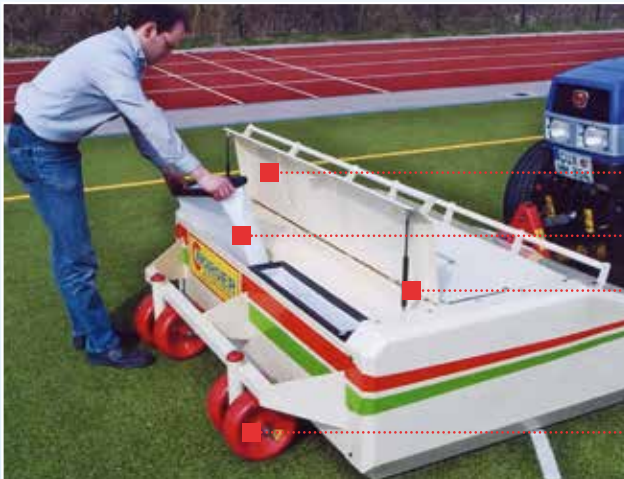
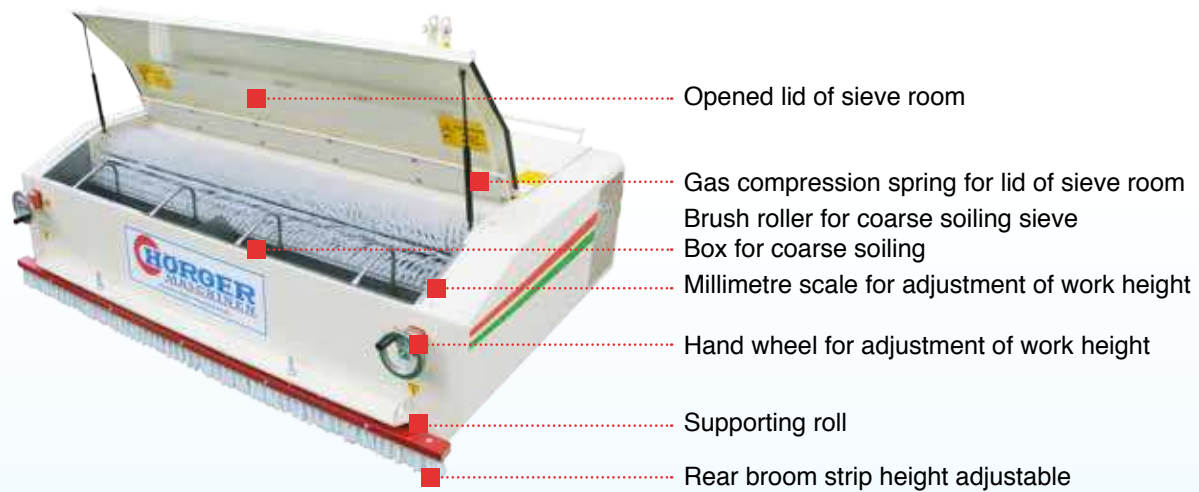
# Functioning SKU

The cleaning unit is a compact unit. All construction parts are built into one unit which can be attached within seconds to the front or rear lift arms on standard compact tractors. The drive is taken from the front or rear PTO drive

shaft. The front assembly will enable a better overview of the work. Rear assembly is preferred if the tractor does not have the necessary lifting power for front assembly. Transport can only be carried out by lifting the cleaning unit.



1. The contaminated infill, sand or rubber granules or a mixture of both is picked up from the turf by means of a rotating brush.
2. The soiled infill is carried into the cleaning area. Dust is separated from the infill. The cyclone effect prevents infill material from entering the filter bags.
3. The infill is carried over a replaceable sieve, coarse contaminants such as bottle tops, shards of glass, stones, cigarette ends, foliage etc. are sieved out, the infill falls back to the turf pile. Sieves can be obtained in different sizes.
4. The bent artificial turf fibres are set upright by a brush which is driven at ground speed.
5. The support roll drives the brush roller.
6. An adjustable broom strip smoothes out the finished surface.
7. Fine contaminants and dust particles are divided from the infill by the cyclone effect and carried to the suction channel.
8. The filter consists of two filter bags which can easily be withdrawn. The filter bags are made of a special fleece with an effective surface area of up to approx. 10 m<sup>2</sup>. The filter bags are available in different pore sizes.
9. The bottom of the filter room can easily be opened so that the space can be cleaned with little effort and if necessary it can also be rinsed out.
10. The exhaust fan creates the necessary vacuum for drawing off the dusty air and separating dirt into the filter bags.
11. The sieved dirt such as, bottle tops, shards of glass, stones, cigarette ends, foliage etc. are collected into a dirt box which can easily be emptied.



### Artificial turf cleaner SKU for sand filled or granule filled artificial turf

There are three different processes that can be done with this machine due to its large brush diameter of 500 mm.

1. **Maintenance cleaning:**  
Depending on weather every two to four weeks. Coarse soiling and accumulated dust as well as broken fibres are removed.
2. **Intensive cleaning with loosening:**  
About every 3 months. Coarse contaminants are removed, fine particles like dust, plant remains and broken fibre are filtered, infill is loosened, rebound and drainage effect is maintained.
3. **Reactivation of a surface untreated for several years:**  
The compaction is broken up, most of the infill is lifted, loosened and fed back and worked into the turf pile. Coarse con-

tamination is removed, fine particles which are responsible for compaction, are filtered out. The hardened infill is loosened, the artificial turf is loose and flexible again, accident risk decreases and drainage effect is restored.

**Working width is 1.50 m: front drive shaft speed of 1000 or 2000 rpm.**

**Required tractor power from 11 kw / 15 hp: Rear drive shaft propulsion 540 rpm. Required lifting capacity approx. 400 kg.**

(subject to changes in technology, shape and equipment)

# Artificial Turf Cleaner SKU 1500 Basic

For effective maintenance of artificial turf, it is necessary to take the infill material out of the artificial grass surface at regular intervals to remove, by the use of screens, the coarse contaminants and also to filter out the fine particulate matter (dust). The SKU 1500 Basic is a very compact unit, with all components being housed in a single purposebuilt machine which can be attached in a few seconds to the rear three point link of small compact tractors. The drive to the brushes is taken from the rear PTO drive of the tractor, the power for the dust extraction is via an electrically driven fan. With the SKU 1500 Basic different working processes can be carried out.

## 1) Maintenance cleaning:

Depending on weather conditions and the use of artificial grass usually every 2-6 weeks. Coarse dirt, dust, and surface compaction is removed.

## 2) Intensive cleaning with de compaction (deep cleaning):

About every 6 months. Coarse dirt, dust and compaction is removed, the infill material is loosened, the elasticity and drainage effect are maintained or improved.

## 3) Reactivation of an untreated area after several years:

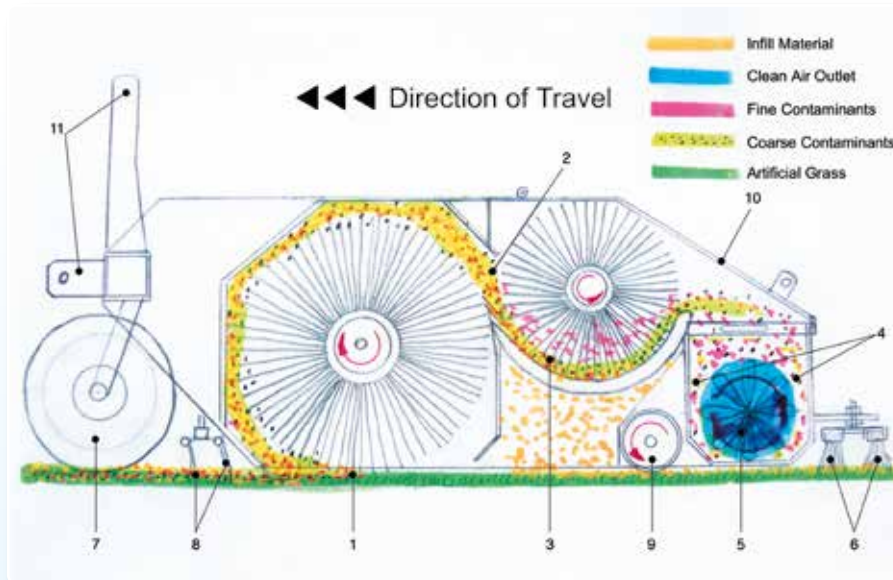
The hardened lumps are broken up, most of the infill material is taken out and recycled an-

d then re-incorporated into the surface. Coarse dirt is removed, fine particles which are responsible for the hardening will be filtered out. Once the now cleaned infill is returned, the surface becomes loose, decreasing the risk of accidents, also the drainage is restored.



**Working width 1.50 m Rear PTO operation  
540 r / min  
Minimum Tractor Power Required 15hp  
Weight 280 Kg**

# Functions of The SKU 1500 Basic



1. The contaminated infill material such as sand, rubber granules or granular sand mixture is taken from the grass surface by a rotating brush.
2. The contaminated infill is driven into the cleaning area, the dust separates from the infill and is sucked through the exhaust fan in the filter box (4).
3. The infill material is passed through a removable screen, the larger debris, like bottle tops, sticks, broken glass, stones, cigarette butts, leaved, etc. are separated out, the now clean infill material falls back to the grass surface of the coarse debris is transported by the brush into the coarse dirt box (4).
4. Combined coarse dirt and filter box
5. Fine dust extractor to filter out the fine contamination.
6. Follow-up brush strips (two), with adjustable bolts for leveling the clean infill back to the surface.
7. Support steering wheels
8. Optional spring tine rake, which are height adjustable with double spring tine bar for particularly hardened artificial turf surfaces.
9. Stainless Steel support roller
10. Sieve and filter lid
11. Three-point link for rear mounting



# BS 2000 Brushing System

To lift the fibres and level out the sand, or rubber granular infill from synthetic grass sports surfaces.

The BS2000 Brush System can be supplied with the following options:

It is built around a zinc plated and stainless steel frame, which will attach to the three point link of a tractor, or it can be towed by a drawbar for tractors without three point.

The frame can be used with other equipment added such as, depth control wheels, steel spring rake and grading blade to decompact and level out the infill to a working width of 2 Metres, or with just the brushes it can be adjusted to a working width of about 3 Metres.



1. Spring steel rake to loosen areas of compacted infill.
2. A rubber grading blade to level out the infill material.s.
3. Transport wheel set..
4. Drawbar attachment for tractors without three point linkage.





# Artificial turf cleaner SKR

with dirty water intake



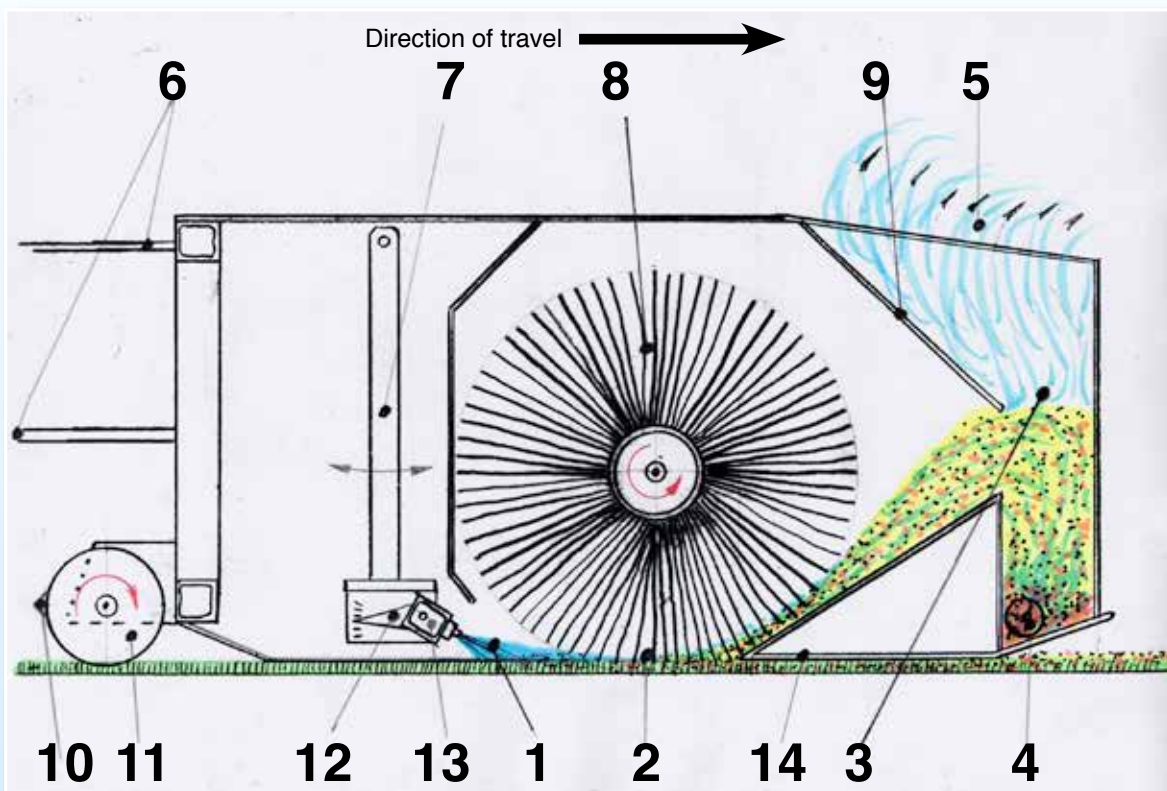
**Artificial turf cleaner SKR,** for the wet cleaning of synthetic grass surfaces, to eliminate moss and algae as well as for the renovation of filled artificial turf surfaces. Contamination on synthetic sports surfaces are removed with high pressure flush and-brushing process, they are lifted up immediately and pumped into the tank carried on the rear lift arms. In addition, the SKR artificial turf cleaner is suited for the renovation of filled artificial turf. The filling material, in this case, is extracted from the artificial turf in the same manner and can thus be removed.

# Functioning SKR Cleaning Unit

The cleaning machine is designed in a sectioned construction manner: there is a rear-mounted submersible pump unit with dual-chamber container and high-pressure pump

as well as with a pressure control valve.

The cleaning module is mounted on the front linkage of the carrier vehicle



1. From the washing bar, which is tilt-adjustable, cleaning water is jetted onto the surface to be cleaned under high pressure; in this process, the dirt is flushed out and fed into the rotating brush (8).
2. The rotating brush also helps to clean, and also transports the waste water into the reservoir (4).
3. Here, the air that has been carried along separates from the waste water.
4. From the reservoir, the contaminated water is pumped off by means of an injector pump and transported into the holding tank mounted on the rear lift arms of the tractor.
5. The air that has been carried along escapes through the front grid cover.
6. Pivot point bar attaching to the front linkage.
7. Pivoting support frame for the washing bar.
8. The 500mm diameter rotating brush, can be precisely adjusted to its working depth.
9. Splash guard.
10. Guard rail for the support roller.
11. Stainless steel support roller, with 150 mm diameter.
12. Adjustment module for angle of attack of the washing bar nozzle.
13. Washing bar with 23 VA steel nozzles.
14. Sliding surface made of stainless VA steel.

**Frontal cleaning attachment:**

Working width 1.50 m, with 500 mm diameter cylindrical brush, nozzle manifold, dirt water pump, drive shaft, pick-up attachment removable for mounting coarse dirt attachment.

**Tank pump unit for rear assembly**

Double box tank for fresh and dirty water, steering axle with pneumatic tyres, fittings, pressure hoses, cardan shaft, dirty water tap, brackets.

**Tank Version 1 600 l volume**

**Tank Version 2 1000 l volume**, requires 2000 kg tractor dead weight.

**Pump tolling**

As per capacity of the drive shaft of the tractor  
**SKR 60 pump**, 60 bar, at 28 kW/38 hp, 540 rpm.  
**SKR 80 pump**, 80 bar, at 33 kW/45 hp, 540 rpm.  
**SKR 100 pump**, 100 bar, at 40 kW/55 hp, 1000 rpm.

**Add-on equipment:**

**Coarse dirt collection tank**

for brushing off coarse dirt and renovation by millimeter-precision removal of filling material, can be adjusted by quickrelease fastener on the basic housing of the front cleaning attachment, hydraulic container discharge.



Automatic roll-up for hand lance hose.

Hand spraying lance with 10 metres high pressure hose.

Set of illumination for the rear container according to the german road traffic act.

Channel and drainage wash up equipment with 40 metres hose, swivelling hose winder (without illustration).

(Subject to changes in technology, shape and equipment)



Version  
1000 l volume

# Athletic track cleaner KBR

Including the pick up of dirty water



Many sports facilities are equipped with synthetic sports facilities. The advantages of these surfaces are anti-slip, good rebound, water permeability, reduced accident risk. But they will lose their effectiveness within a few years without care due to penetration of dirt particles and alga forming.

**We developed our athletic track cleaner for high pressure cleaning with pick up of dirty water in one stage as a combination for assembly to compact and narrow gauge tractors.**



The athletic track cleaner consists of a cleaning unit to be assembled at the front of the tractor and a tank pump unit for rear assembly. The rear tank is divided into a fresh water part and a dirty water part. The fresh water is sucked in by a high pressure pump, which is driven by a drive shaft, and carried via hoses to the front cleaning unit. Here, the water is delivered to the surface by 4 nozzles that are fitted into

two rotating arms. At the same time the front cleaning unit is under vacuum created by a powerful fan and the water with the removed dirt is taken up into the separation tank. Through an injection pump the dirty water is carried from here into the rear tank. After the fresh water is used up and needs re filling, the dirty water can be emptied through a tap.

**Extract ventilating fan**

**Separating tank**

**Edge strip nozzle**



**Filling level indicator for fresh water**

**Tap for dirty water**

**Steering axle with pneumatic tyres**



**Demands on the carrier vehicle: Front and rear lift equipment with drive shaft, max. outside width up to 1.45 metres, suitable**

**tyres, slowest driving speed about 0.4 km/h with full-open-throttle. (Vehicles with a greater outside width on demand).**

# Athletic track cleaner KBR

## Including the pick up of dirty water

### Front cleaning unit:

Work width 150 cm, 2 nozzle rotors, edge strip nozzle, dirty water pump, extract ventilating fan, separating tank, cardan shaft.

sure hoses, cardan shaft, dirty water tap, brackets

**Version each 600 l volume**

*Version each 1000 l volume, from 2000 kg tractor dead weight*

### Tank pump unit for rear assembly

Double box tank for fresh and dirty water, steering axle with pneumatic tyres, fittings, pres-

### Pump tooling

As per capacity **of the drive shaft** of the tractor

	KBR 80	KBR 100	KBR 180	KBR 180 S	KBR 200
Max. Pressure	80 bar	100 bar	180 bar	180 bar	200 bar
Capacity	60 l/min	75 l/min	65 l/min	85 l/min	102 l/min
Drift shaft speed	540 rpm	540 rpm	750 rpm	1000 rpm	1000 rpm
Drive shaft performance	22 kw/30 HP	27 kw/36 HP	38 kw/52 HP	44 kw/60 HP	55 kw/75 HP

### Additional equipment:

1. Set of washing brushes contra-rotating, for additional turn on / off, about 3 kw / 4 HP need of power, especially recommended for heavy soiling.
2. Spraying girder to wet in advance and wash down, individually adjustable.
3. Automatic roll-up for hand lance hose.
4. Hand spraying lance with 10 metres high pressure hose.
5. Set of illumination for the rear container according to the german road traffic act.
6. Channel and drainage wash up equipment with 40 metres hose, swivelling hose winder (without illustration).

(Subject to changes in technology, shape and equipment)



Version 1000 l volume

# Machines in action

## Some references

- Fa. Polytan GmbH
- Fa. Strabag Sportstättenreinigung Germany and Austria
- Fa. Heiler Sportanlagen
- Fa. Eurogreen
- Fa. Sweepfast Ltd England
- Fa. SGG Switzerland
- Fa. Hermann Kutter
- Sports City Dubai
- Aqua clean France
- Fa. Sandmaster
- Uhlenhorster Hockeyclub Hamburg
- Servest Southafrica





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