

Kersten

SITE MAINTENANCE EQUIPMENT

Artificial Sports Turf Pitch Care

All sports surfaces need care and attention, not just real turf pitches.

New artificial surfaces are a considerable investment designed to provide extended periods of use in all weathers. Natural surfaces just cannot compete with this performance. Whether we are talking about 2G sand filled surfaces, 3G sand and granular rubber filled or 4G long pile unfilled synthetic grass surfaces, the planned maintenance will dictate the players comfort, the speed of game, the cleanliness of the surface and the expected life span of the playing surface before renewal.



Brushing – the regular regime

Why brush the surface?

The most frequent maintenance operation is brushing the surface. There are a number of issues that may be addressed by brushing regularly.

1. Heavy foot fall on the pitch may cause depressions in the in-filling creating an uncomfortable playing surface and a significant reduction in ball speed.
2. On the whole the blades of “grass” are designed to be laying vertically to the ground supported by the infilling. In this state each strand provides the maximum amount of support to the foot and ball and is subject to the least amount of wear.
3. The pitch must drain freely to allow the surface to dry out rapidly after rainfall. Surfaces remaining damp for longer periods of time are more likely to become infected with moss and algae spores, unplayable in freezing conditions, and expedite the decomposition process of any organic material lodged in the surface fibres. Compaction of the in-filling causes rapid deterioration of the surface by restricting free drainage.
4. Filling material can migrate over the surface especially in heavy play areas such goal

mouths, edges, corners and tennis base lines leaving these locations devoid of material. If this situation is left unaddressed it may seriously damage the surface, affect play performance and cause a hazard for players.

Brushing – How Often do I need to brush?

A 3G five-a-side pitch being played by energetic adults 8 hours per day could require attention every 2 days. A sand filled 2G tennis court played for an hour every couple of weeks would benefit from a brush up to half a dozen times per year.

The pitch manager is the best person to gauge the required regularity after considering the 4 points above.

It is important the brush is supported (rather than just relying on gravity) enabling the height and pressure applied to the surface to be adjusted to effectively carry out the above operations.

The brush must have the facility to be lifted and lowered to enable filling to be redistributed across the surface where it has migrated in to corners and around goals etc. A drag brush towed behind a tractor/mower is unable to access the corners effectively or relocate filling accurately.



The Kersten KRB250 Folding Brush fits the bill perfectly.

It may be mounted on any of the Kersten K-Series Two Wheel Tractors From the 5.5hp K820 to the 9hp K2100 or, using the Kersten FKDR front linkage kit, it may be fitted to certain models of Ride-on Mower.

The working width of the Kersten KRB250 is 2.5 metres. The outer brushes may be easily folded up in seconds to a transport width of less than 1.1 metre.

Additional surface penetration may be achieved when required by adding weight to the weight tray and adjusting the height wheels.

Powered sweeping the pile to prevent compaction

Both sand and rubber crumb will compact with intensive use, and the ability of the surface to drain adequately will be reduced. This can be compounded when organic matter contaminates the infill material. This not only restricts the drainage capacity but also retains moisture in the filling material. This prolonged moisture retention and organic material

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Tennis court infested with moss and algae

provides an ideal conditions for moss and algae to flourish.

This can result in dangerous slippery conditions and produce an unpleasant odour.

In extreme cases the algae can cause puddles leaving a thick black sticky residue that can solidify when the surface does eventually dry out. This solidified algae binds the surface and the infilling rendering the shock reduction characteristics the surface should provide as ineffective.

Debris collection – as required

Therefore it is essential to remove any organic debris before it contaminates the surface. At the same time remove any litter and potentially injury causing debris before play on a regular basis.

Sources of debris include that can contaminate the surface include

1. Wind blown material such as leaves and litter,
2. Animal excrement from birds and other animals gaining access to unsecured sites,
3. Debris carried on to the surface by users of the facility.
4. Loose fibres from the surface often found following a new installation.
5. Debris carried on to the surface on maintenance machinery used in other applications.
6. Debris that can wash on to the surface in heavy rain or flood conditions from higher ground

Secure barriers can help to prevent some debris entering the area but can also prevent any captured from escaping. Light loose debris may be quickly blown off the surface. The material that is heavy, damp or sticky tends to remain on or in the grass pile. A Kersten sweeper is a very effective means of picking this material up. All the Kersten sweepers may be fitted with a full debris collector which collects all swept material or a filter collector.

The Kersten pedestrian sweepers all feature a collector box made from robust polyurethane.(PE) The box is attached to and removed from the sweeper easily. It can then be emptied in to a bin. Larger tractor mounted sweepers can feature hydraulic emptying.



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Sorting the debris from the filling

The filter collector accessory allows smaller particles through a filter including the sand or rubber filling and return to the surface while the larger debris such as leaves, sticks fabric, hair etc. remain in the collector for disposal off the surface.

Debris collection frequency will be governed by the local environmental conditions in and around the surface and the hygiene regime applied to the users of the surface by the pitch manager. There may also be a seasonal effect regarding volumes of debris found on the surface. It is always surprising the amount of debris which is collected but cannot be easily seen when laying on the surface prior to the operation.

Looking after the edges

It is common to find a build up of debris around the perimeter fence of the sports surface. Modern surfaces may feature a kick board to prevent damage to the lower part of the perimeter fence. It is essential this board has a clear gap between it and the surface. The gap is designed to allow surface water to drain off the surface very quickly in the event of extreme rainfall. Failure to maintain the edges often results in weed growth encroaching on to the surface.



All Kersten sweepers may be fitted with the side gully brush accessory which carry out this function quickly and easily. The accessory can fold up in and out of work and works effectively with the solid or filter box collector. Can one hour.



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Kersten Machines Inside and out

Keeping the access paths, roads and edges clean in and around the playing surface is also essential to prevent ingress of debris on to the surface.

Debris may easily be transported on to the service by Shoes and tyres of maintenance equipment.

All of the sweepers in the Kersten range can carry out the same sweeping tasks on most types of surface collecting debris.

After the event

The result of not maintaining your artificial sports surface can be seen below. It can take several years of neglect to produce results as established as this. The causes however are fundamental and have been outlined in this document. The Kersten sweepers are ideal machines for preventative maintenance but their benefits don't stop there. If you find yourself responsible for trying to revive a surface that has already suffered from neglect then the Kersten sweeper is robust enough to remove to refresh some of the worst infestations of moss and algae. Weather conditions can affect the moss and algae very drastically which can some times make it easier or harder to remove from the surface so you should not expect to get a perfect result in one operation. The results can be quite amazing.



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Above: The Kersten sweeper cuts through the mass of accumulated debris.



Several passes are required to undo months of neglect and reveal the surface.



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Tarmac and painted surfaces.

It is not only artificial sports surfaces that suffer degradation from organic material remaining on the surface. Any surface can be affected. The same sweeping regime should be adopted and the Kersten pedestrian or tractor mounted sweeper is ideal for the preventative maintenance and rehabilitation. It is important to note that tarmac surfaces can be damaged by lack of maintenance.

Organic material left on a surface decomposes into fine particles. This material washes deep into the porous surface and retains moisture similar to a sponge. The surface takes an ever longer time to dry out after wet weather. During winter conditions this moisture freezes and expands. The result is to dislodge the stones from the tarmac eventually turning the smooth playing surface into an uneven hazard with many loose stones on the surface. The sweeper will collect these loose stones but the craters left by the loose stones are not easily repairable and the damaged surface is more likely to create puddles which quickly lead to further damage.



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