

# MAINTENANCE MANUAL

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## 1. INTRODUCTION

You have chosen JUBOpadel courts, a JUBOPADEL INTERNATIONAL, S.L. registered brand. Congratulations and thank you for putting your faith in us. You have chosen technological innovation, durability and the experience of over 25 years working as manufacturers, installers and padel players. These criteria behind great sporting achievements are a vocation for JUBOpadel. Being devotees of this sport, JUBOPADEL INTERNATIONAL, S.L. company makes and installs padel courts with all the sports players, maintenance people and owners in mind.

Hence, JUBOPADEL INTERNATIONAL, S.L., has become the Official Distributor for the leading brands in the market and worldwide leader in the construction of padel courts.

Each product sold under the JUBOpadel brand has been designed to respond to the most demanding of circumstances. The materials used to manufacture these products ensure outstanding durability. Special attention has been paid to the finishing. Prior to reaching the market, each new product undergoes numerous quality tests.

All the component parts of our padel courts are designed and manufactured for continuous regular use. That is the reason why the use and maintenance instructions in this manual must be followed to reap the benefits of the investment in the installation. This manual includes instructions of use and recommendations for proper maintenance.

- **Extend the useful life**

Maximise the time your installation can be used, making your investment more profitable

- **Prevention**

It has been shown that ineffective or poor maintenance hastens the deterioration of the padel court. When maintenance is performed, all the parts of the installation are inspected. This will enable the identification of indications of pathologies which require treatment to prevent replacement or repairs. Repairs are always costlier than applying a preventive measure to correct the problem.

Optimum playing conditions

The maintenance of the padel court is essential to achieve optimal properties for sports practice. Its regular maintenance is essential for reasons such as safety, quality of the game, durability, and aesthetic appearance.

- **Minimise injuries**

The lack of preventive maintenance with the glasses could cause a breakage after a hit by a player during a padel match. In the same way, a very compacted turf or with irregularities in the dosage of silica sand is a source of injuries for players. With simple regular maintenance, you will minimize accidents, falls and muscle injuries to players.

- **Good image**

The good image of the courts is the first impression client gets of your facility. Always keep in mind the image of order, cleanliness and good condition of your installations.



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### 2. ARTIFICIAL TURF

Over time and through the intense use to which the artificial turf of the padel court is exposed, the qualities of the turf will change. To return the playing surface to the technical conditions envisaged, a series of maintenance tasks must be carried out.

Two types of actions are recommended to properly perform the maintenance tasks and ensure they are effective:

**2.1 REGULAR MAINTENANCE:** easily carried out by the owner or manager of the installation with their own resources and personnel.

**2.2 SPECIALIZED MAINTENANCE:** carried out by a maintenance company specialized in the maintenance of artificial grass for padel courts (and/or tennis), with personnel with a specific technical qualification and with appropriate technical means.

#### 2.1. REGULAR MAINTENANCE (easy maintenance)

##### - **Cleanliness**

The most obvious cleaning requirement is the removal of the rubbish left by players and spectators who use the installation daily. Good preventive practices will greatly reduce these problems.

The surface and access areas near the padel court need to be kept clean of bits of paper, leaves, butts, food waste and organic waste in general. The installation of bins for general waste collection is thus recommended.

It is essential to remove leaves, seeds, flowers or other types of waste that may decompose and cause fungi to appear on the surface. It should be carried out manually, by means of a sweeper brush or by means of a professional blowing machine as long as it does not affect the distribution of the sand on the surface.

Heavy rain is the best way to clean the fibre. It refreshes and gently cleans the fibres of dust, grime and atmospheric contaminants which are otherwise difficult to clean. Furthermore, it keeps the surface drainage systems clean and in ideal conditions.

With covered padel courts, it is a good idea to regularly water the turf using a sprinkler to clean it of any possible impurities. Aside from cleaning the surface, this watering enables some compacting of the silica sand, stabilising the surface. This action is advisable to carry out monthly.

Turfsoft machine, or similar, can be used quarterly to perform these jobs, but it is not recommended to use it more often because its rotating brushes can wear the fibre of the turf.

A certain percentage of humidity is useful. Keeping the courts clean may prevent the build-up of silica sand dust around the grass drainage holes, preventing sand slipping through the holes while enhancing drainage. Additionally, this also prevents possible slippage of the turf across the concrete slabs. Is not necessary in covered or indoor padel courts with texturized or curly MONDO turf because this model has NO drain holes.

##### - **Sand redistribution**

The player-surface and ball-surface sports interaction is achieved through the synergy of several of the parts which comprise the artificial turf system. One key factor is the sand filling, and that is why the choice of sand type (shape, size, dust-free and quantity) is essential.

The movement of players around the court during a match causes the displacement of the sand on the surface. This displacement is more noticeable in the areas where it is stepped on most frequently. It is advisable to regularly brush the surface to redistribute uniformly the silica sand. The artificial grass surface is a system that is in motion and the sand is displaced while match is ongoing.

The more intense the usage, the more the sand is displaced. Therefore, the regular spreading and refilling shall be based on the needs of each individual court.

Remember that the displacement of the silica sand may vary depending on the type of artificial grass. Hence, it is more complicated to displace the silica sand on artificial grass systems which use higher density monofilament fibres, features which are commonly known as the "fibre weight per m<sup>2</sup>" and the "number of stitches per m<sup>2</sup>", and even more difficult if the fibre is also texturized (curly) like the MONDO SUPERCOURT model.



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This brushing and redistributing of the sand should be done using a standard JUBOpadel brush (or sweeping brush with medium-strength nylon fibres), brushing gently in the opposite direction to the fibre. The accumulated sand in the corners or near the walls and padel net will be redistributed regularly and uniformly towards the emptiest areas of the court. This action helps to eliminate the uncertainty factor in aspects such as the bounce of the ball or the rotational and longitudinal traction of the players.

The artificial grass in indoor or covered courts is not affected by rainwater. This means the silica sand does not compact and any possible powder does not disappear. This factor may cause the silica sand to slide into the drainage holes in the grass and down to the concrete base. This may lead to the turf sliding across the slab, causing wrinkles in the surface. It is advisable to water the turf regularly to enable a slight compacting of the silica sand, and use a Turfsoft machine, or similar, in order to clean and remove the dust of the turf, but it is not recommended to use it more than once every four months because its rotating brushes can wear the fibre of the turf.

### - **Sand refilling**

If there are significant losses of silica sand fill, then the artificial turf should be refilled in with more sand and redistributed evenly over the surface as described above.

The sporting performance of the turf may be altered by poor choice in silica sand, incorrect amount of sand used, or sand badly/not properly spread across the surface.

Very important, in outdoor or uncovered padel courts it will be necessary to refill silica sand more frequently due to sand loss caused by heavy rains or wind gusts.

### - **Weed removal**

Seeds from weeds that are dispersed by wind, birds, etc. may germinate in the silica sand. These weeds must be removed as soon as possible. If the specific conditions of the facility (shady and humid area) aggravate this problem, a foliar absorption herbicide should be used on time, in addition to an anti-germination product in the affected area.

### - **Prevention: Do not dirty to avoid cleaning**

Provision of bins, restricted access, limiting the consumption of certain shelled foods, etc. as ways to keep the surface free of organic waste, nutshells, bits of paper, etc.

## 2.2 SPECIALIZED MAINTENANCE (professional)

### - **Inspection of the seams**

The seams must be inspected, since they are the most sensitive points on the surface, proceeding to repair those that are in bad condition as soon as possible.

### - **Scarifying the surface**

In the classic artificial turf systems made with straight monofilament, the silica sand filling must be scarified and aerated by means of specialist maintenance equipment like Turfsoft machine, or similar, which has a rotating brush that penetrates between the filaments of the artificial grass system. This type of machine is also useful to clean and remove the dust of all kinds of artificial grass for padel, but it is not recommended to use it more than once every four months because its rotating brushes can wear the fibre of the turf.

Once the surface has been scarified, it needs to be swept using a soft brush. This allows the playing surface to recover the sporting performance qualities for which it was designed.



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### 3. METALLIC STRUCTURE

Our padel courts are designed and built with the highest quality materials by experts with 25 years of experience as manufacturers, installers and padel players, all to meet the highest standards in the industry.

At JUBOpadel we manufacture the metal structures of our padel courts in compliance with the UNE 147201:2024 standard that establishes the quality and safety standards for the manufacture of padel courts, complying with numerous standards and regulations such as:

- the structural resistance defined by the Eurocodes of the UNE-EN 1993 standard,
- the quality of the steel according to UNE-EN 10025-1 and UNE-EN 10204 for at least type 2. 1,
- the welding process in our factory according to UNE-EN ISO 15614, with welders coalified and certified according to UNE-EN ISO 9606 and with weld inspection acceptance criteria with level C of UNE-EN ISO 5817,
- the traceability of the processes according to UNE-EN 1090-2, and
- the corrosion protection according to UNE-EN ISO 12944-2:2018, for an average durability of 5 to 15 years.

- **Protecting the metallic structure**

The coating lacquer or paint is the protection element of the metal structure. Small bumps, scratches and chips that occur from daily use of the courts should be checked. A scratch can cause an oxidation process to begin at that point, so all elements of the structure should be checked monthly.

If the element detected has not yet begun to rust, it will be sufficient to cover with the same RAL paint as the structure, always using a brush, avoiding the use of aerosol due to its lower solar resistance and less covering layer (less thickly).

If the element detected is already rusted, it must be sanded to remove the damaged surface, apply a passivator (specific for metal) to stop the oxidation process and finally paint with paint with the same RAL as the metal structure, always using a brush, avoiding use aerosol for its less solar resistance and less covering layer.

By protecting these areas whenever is necessary, we ensure that all parts have the useful life for which they are designed.

Clean the metallic structure with a damp cloth (no chemical products) every month to remove any organic or fatty waste or general dirt; take particular care with bird excreta as this must be cleaned as soon as it is found.

In any case, except agreement with JUBOpadel, avoid:

- A) Using any type of chemical product close by or which dampens the metallic structure, as it may damage the metal or the heat-lacquer polyester paint.
- B) The presence of water sprinklers or diffusers, particularly if the water has a high mineral content, gray or regenerated water
- C) Welding on the metallic structure.
- D) Gardens, plants or trees of any sort which involve irrigation or moisture at 1 metre or less from the court.
- E) Any modification to the metallic structure, particularly any cutting, welding or drilling.
- F) Any use other than the one for which it is designed.

- **Inspection of the anchorage**

Padel court structure is anchored to the concrete base using anchor bolts. After weather events with extremely high gusts of wind, must be inspected:

A) **The anchors bolts**, checking that they have not come loose (it is quite unlikely). If they are loosened, they should be tightened as soon as possible, previously checking that the metallic structure in the affected area is still in good condition and remains aligned.

If the metallic structure is misaligned, it must be corrected by shimming the anchor plate with a strong element (such as stainless-steel nuts or washers) and retightening the anchors as soon as possible. These little misalignments can cause the glass to break or, even, the whole structure to collapse.

B) **The concrete base**; checking that it has not shattered due to the excess pressure from the anchor bolts. If the concrete base has shattered (it is very unlikely), proceed as follows:

1. Restrict access to the court using safety barriers; allow access to professional workers only.



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2. Uninstall the glass and metallic structure of the affected area.
3. Rebuild the damaged concrete foundation to ensure structural stability.
4. Wait until the repaired foundation has dried and hardened.
5. Reinstall the glass and metallic structure of the padel court.

### - **Inspection of the screws**

Given its size, the padel structure is split into metallic panels (normally 2 metres wide), which are assembled using stainless steel screws. The torque of all the screws should be checked every six months, not having to retighten unless the screws are loose.

### - **Checking the net and its tensioning mechanism**

Padel net and its tensioning mechanism need to be checked monthly. Verify the net is at 88 cm high at the centre and 92 cm high at the net posts (tolerance of 5 mm). Furthermore, the tensioning mechanism should always be kept properly greased or lubricated.

### - **Checking the protection nets** (optional accessory)

Protection nets (or ball stop nets) are placed around the perimeter of the padel court to prevent balls being lost during a match. Cable ties used to tie the net to the structure should be checked and the necessary ones replaced. After weather events with extremely high gusts of wind, check that the metal pillars and steel cables remain in perfect conditions.

### - **Checking doors & locks** (optional accessory)

Doors should be checked monthly to ensure they work properly. If necessary, recalibrate the doors and lubricate hinges (hinged doors), trolleys (sliding doors) and locks.

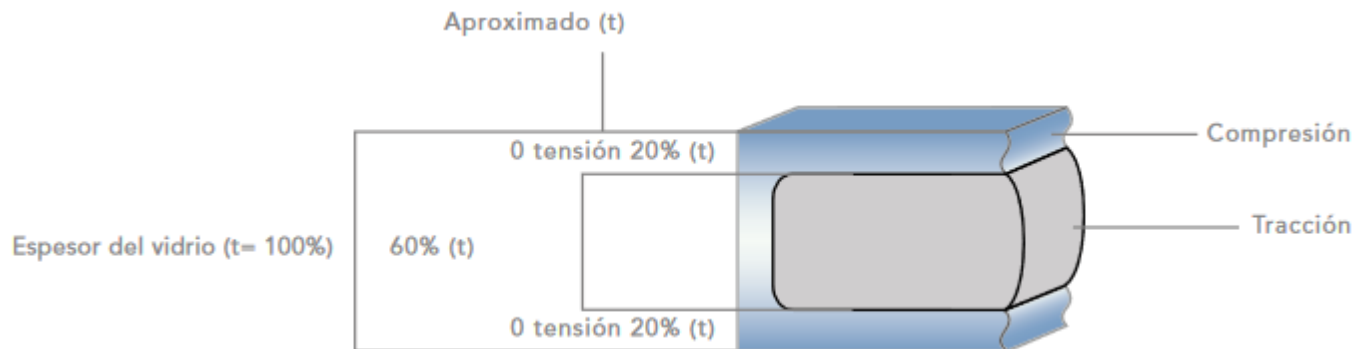


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### 4. TEMPERED GLASS

Heat-tempered glass is about four times more resistant than annealed glass of the same thickness and configuration. Our tempered glass is certified and meets the most demanding requirements of the European EN 12150-2:2004 standards and also the American ANSI Z97.1-2015(R2020) standards. If it breaks, it does so into relatively small pieces which will not cause serious injuries.

The process by which heat-tempered glass is made requires heating the glass to over 600°C before rapidly cooling it, which seals the glass surfaces in a state of compression and the middle in a state of traction (see diagram).



Tempered glass is typically called 'safety glass' because it fulfils the requirements of the various European laws and construction regulations that establish the standards for safety glass. This type of glass is generally used for glazing and other uses that require greater resistance and safety.

Tempered glass cannot be transformed, i.e. it cannot be cut, drilled or bevelled once it has been tempered, nor can it be, for example, polished by sand blasting or acid etched as this could weaken it and cause damage to the glass.

#### - **Handling and storage**

Generally speaking, this is a durable material which, if correctly handled, can last virtually forever. However, even though it is a tough material, the glass can be scratched. One of the most dangerous materials for this glass is, in fact, glass itself.

When stored, the sheets of glass need to be separated using air spacers, suitable dividers or paper.

When handled, avoid bumping the edge of the glass against any toughened material, as it may break easily. Prevent each glass sliding against another, as this contact could scratch or mark the glass. It is advisable to hire professional workers for this type of work.

#### - **Cleaning the glass**

Glasses should be properly cleaned once a month using suitable cleaning products and tools. Glass cleaning should not only be done for aesthetic reasons, but also to reduce the adherence of dust particles and organic matter that increase water condensation on the glass.

Equally, cleaning prevents stains from appearing. The sodium in the glass leaves marks when it reacts with moisture in the air. Sodium combined with very small quantities of water may create sodium hydroxide (caustic soda), which is highly corrosive to the glass. If sodium hydroxide is left on the surface for too long, the glass may suffer irreversible damage. Sodium hydroxide can be easily cleaned with water and a normal glass-cleaning product, e.g. water with alcohol or ammonia. Glass installed in outdoor courts is less likely to suffer damage through sodium hydroxide given the natural cleaning of the surface by rainwater.

#### *Recommended cleaning solution:*

1. Use a clean cloth soaked in water.
2. Use appropriate glass cleaners and follow the manufacturer's instructions. Immediately remove the cleaning product applied, with a dry, soft and clean cloth.
3. For encrusted marks or stains, use a mixture of 50% alcohol and water, or ammonia and water, and then rinse with lukewarm water. Use a soft, dry cloth to dry the glass or a chamois and a cellulose sponge.
4. Clean in an orderly way, moving from one glass to the next, checking that the surface and the space between glasses are corrects



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5. For the best results, clean the glass while it is in the shade. Avoid cleaning in direct sunlight or while the glass is hot.

### Precautions:

1. Avoid using abrasive or highly alkaline cleaning products.
2. Do not use oil derivatives, i.e. gasoline or combustible liquids.
3. Do not use hydrofluoric or phosphoric acids: they will corrode the surface of the glass.
4. Protect the glass surface from possible splashes of acids and cleaning products used to clean metal, brick or masonry, as well as splashes from the welding process.
5. Do not use abrasive brushes, knives or other objects which may scratch the glass surface.
6. Immediately remove any cement-type construction materials.

### - Checking the screws

Due to the constant vibrations in the padel glasses produced by the amount of blows received during matches or training, it can cause the fastening screws of the glasses to the structure to loosen (it is quite unlikely). The torque of all the screws should be checked monthly, and the screws should not be retightened if they are not loose.

### - Checking the rubber seal strips

These rubber seals prevent the glass from touching the metal and ensure that the blows on the glass are properly distributed. Over time, the rubber seals may move laterally due to the natural expansion and contraction of the materials of the padel court, which are also affected by the constant vibrations produced by the number of blows that the glasses receive, therefore that a monthly check is recommended to make sure they are in good condition.

If the rubber seal has moved towards the outside of the glass, the protruding part can be cut with a cutter, in order to maintain a clean and orderly aesthetic.

If the rubber gasket has been displaced excessively and the glass is in contact with metal (a sharp, clear sound of two hard materials hitting each other is heard), the glass must be uninstalled and the defective rubber seal replaced (by skilled workers).

It is not advisable to uninstall / move the glasses if the glass does not touch the metal, because the glass is likely to break during the uninstallation and installation work.

### - Inspecting the separation between glasses

Tempered glass is a material with a high linear expansion coefficient. Using the example of a 3 x 2 metre glass from a padel court and a temperature increase of +30°C (from night-time to midday), each glass will expand by 0.81 x 0.54 mm (from night-time to midday).

Bearing this in mind, the minimum separation between two glasses should always be at least 3 mm, thus preventing them knocking into each other and breaking unexpectedly. On the contrary, the separation should never be more than 8 mm since it will affect the bounce of the ball on the glass wall. Lastly, the separation must be uniform throughout the length between the glasses.

### - Silicone seams between glass

JUBOpadel always uses structural silicone for curtain wall type Silirub WS Transparent, in order to ensure the effective sealing of structural glass, and also with high resistance to weathering without losing its properties. However, and although it is extremely atypical, with the passage of time, exposure to adverse climatic agents, aggressive cleaning products and even the constant succession of blows during normal padel matches, the silicone joints could become detached.

It is recommended to check weekly the correct adhesion of the silicone and in the case of detecting detachments or open joints between glass, you should immediately proceed to replace the joint to its initial state by proceeding as follows:

1. Limit access to the court with safety fences, facilitating access only to workers.
2. Remove the remains of silicone with mechanical means
3. Use a dry, soft and clean cloth to remove the remains of dust or dirt, to ensure a clean surface on which to apply the new silicone (it is recommended structural type for curtain wall).
4. If the glasses have unevenness between them, you can easily level the glasses using tile leveling wedges.leveling wedge
5. Apply the silicone evenly on the joint with a battery frame gun, pneumatic or manual, avoiding air inclusions, then smooth the joint with a spatula. Important, never apply silicone exposed to direct sunlight or with hot glass, and always follow the installation recommendations of the silicone manufacturer.



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6. Wait for the complete curing to use the paddle court normally after 24 hours.

- **Inspecting the separation between glass and concrete base**

Check that there is separation between the glass and the concrete base, especially to avoid glass breakage by hitting its edge against the concrete base. If you detect or believe that the glass may be touching the concrete base, immediately contact JUBOpadel or a professional glass handling expert to correct this situation, as it could cause the glass to break and cause injury to players.



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### 5. LIGHTING

Nowadays the lighting system used in padel courts is always LED, normally installed on the lighting pillars of the padel court, and occasionally in covered courts installed directly on the ceiling or on hanging rails.

- **Lighting anchorage and orientation**

Although it is not usual, it is possible that a screw has become loose due to the vibration caused by shocks during the use of the padel court. The anchors of the floodlights must be checked if they are not properly oriented, in that case, it will be necessary to correct their orientation and re-tighten the screws.

- **Checking the LED floodlights**

JUBOpadel floodlights are maintenance-free because they are manufactured with cutting edge technology and only components from leading lighting brands worldwide. Designed specifically for padel, with a very significant saving in electricity consumption, in addition to having a very long useful life.

- **Protection & earthing systems**

Generally, one individual lighting circuit must be made for each padel court. The power switch and line protection mechanisms are located inside a General Protection Cabinet. It is compulsory to install a surge protector to protect the LED floodlights (and any other electrical device) from voltage spikes.

All lighting installations must have an earthing device, with the corresponding records to perform measurements and checks. The earthing mechanism prevents electrical discharges towards players through electrical shunts.

The lighting installation has to be checked to ensure correct earthing and the state of the protection mechanisms (circuit breakers and differentials); if these do not work properly, they must be replaced.



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### 6. DRAINAGE

- **Scarifying the turf's silica sand**

Excessive compacting of the silica sand of the turf increases the accumulation of dust and organic matter over the surface. This greatly reduces the permeability of the artificial grass, allowing puddles to form and slowing down the dispersal of water from the playing surface. The turf should be checked and scarified on a regular basis according to the previously noted instructions.

- **Cleaning the gutters and grates**

When a padel court is installed on an impermeable base and the rainwater dispersal system uses a sideways slope towards a drainage gutter, it periodically needs regular cleaning and the grate clip or anchor needs checking. A large amount of dirt tends to accumulate in the gutters, including silica sand washed away from the turf. They need regular cleaning to improve the drainage and prevent the accumulation of moisture on the surface.

- **Cleaning the catch basins and drains**

These are connection points in the dispersal network that, typically, come with a sandy base where the aggregate, leaves and other materials are deposited, preventing these materials entering the horizontal dispersal network. Regular cleaning is essential to prevent blockages in the dispersal system.

- **Cleaning the porous base (concrete or asphalt)**

Vertical drainage system throughout the playing surface. The system comprises porous concrete or asphalt bases built on site, which are typically 6 to 8 cm thick, over an 8 to 10 cm layer of clean gravel (normally). The porous base has a large number of holes enabling water to pass through.

Over time, the drainage pores become covered or saturated with dust particles and dirt moved by the rainwater, which reduces the drainage capacity of the system. This leads to puddles forming on the playing surface as water only drains slowly. When this occurs, the artificial grass needs to be uninstalled and the porous base cleaned using a very powerful vacuum cleaner or pressurized water. In the event that drainage does not improve or is insufficient, to regain the drainage capacity of the system, holes may be drilled in the surface of up to 6mm in diameter and up to a maximum of 20cm separation between holes, in order to cross the plugged or clogged surface.

- **Cleaning the connection to the rainwater drainage network**

Connection point for the dispersal network with the general network, normally through a primary catch basin. Check the network connection is correct and in good conditions.



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### 7. ANNEX: MAINTENANCE SCHEDULE

	MAINTENANCE ACTIONS	FREQUENCY	VERIFIED													
			J	F	M	A	M	J	J	A	S	O	N	D		
TURF	Cleaning & organisation	Daily														
	Sand redistribution	Weekly														
	Sand refilling	Quarterly														
	Weed removal	Quarterly (if necessary)														
	Inspection of the seams	Quarterly														
	Scarifying the surface	Quarterly														
METALLIC STRUCTURE	Protecting the metallic structure	Weekly														
	Inspection of the anchorage	After high wind														
	Inspection of the screws	Monthly														
	Checking the net and its tensioning mechanism	Monthly														
	Checking the protection nets	Monthly														
	Checking doors & locks	Monthly														
GLASS	Handling and Storage	-														
	Cleaning the glass	Monthly														
	Checking the screws	Monthly														
	Checking the rubber gaskets	Monthly														
	Inspecting the separation between glasses	Monthly														
	Silicone seams between glass	Weekly														
LIGHTING	Inspecting the separation between glass and turf	Monthly														
	Lighting anchorage and orientation	(If necessary)														
	Checking the LED floodlights	-														
DRAINAGE	Protection & earthing systems	Annually														
	Scarifying the turf's silica sand	Quarterly														
	Cleaning the gutters and grates	Quarterly														
	Cleaning the catch basins and drains	Annually														
	Cleaning the porous base	When replacing turf														
	Cleaning the connection to the rainwater drainage network	Annually														