PARAFENCE

The Ultimate Windbreak Fencing System

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As the world's most effective lightweight windbreak fencing system, Parafence is the perfect choice for applications where high winds could cause severe damage or injury to buildings, people, crops or livestock.

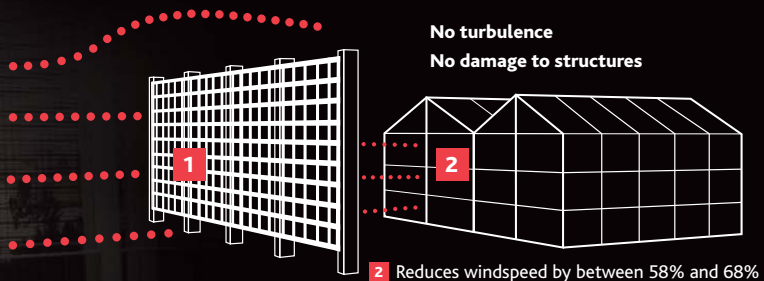
The system, which is manufactured from high tenacity polyester fibres encased in a durable polyethylene sheath, has been proven across the world in a wide variety of applications ranging from the protection of industrial plant and equipment, through mining and quarrying to agriculture and horticulture.

Additionally it has been widely used to provide effective windbreaks on open highways and other transport routes and its special properties have made it ideal for use as sand/snow control barriers.

The scientific key to the success of Parafence is 'controlled porosity'.

When solid structures are used as windbreaks they can have the effect of actually increasing wind damage. They cause the wind flow to rise over the structure, creating an area of low pressure and a partial vacuum to the leeward side. The vacuum tends to pull the free stream downwards, negating the windbreak effect very quickly. This situation is worsened because friction between the free stream and the vacuum can generate high speed turbulence capable of causing more damage than the original wind.

Parafence is engineered to avoid this problem. It is manufactured from a series of horizontal and vertical webs, carefully designed to enable 'controlled porosity' – i.e. the design allows a diffused flow of wind to pass through to the leeward side. Although travelling at a much slower speed, this flow is closer to equilibrium with the higher energy free stream flow and the downward suction effect on the free stream is much less. As a result the problem of high speed turbulence is avoided and the wind shelter effect persists for much greater distances than those achieved with a solid structure.



1 Controlled Porosity

2 Reduces windspeed by between 58% and 68%

PARAFENCE ADVANTAGES

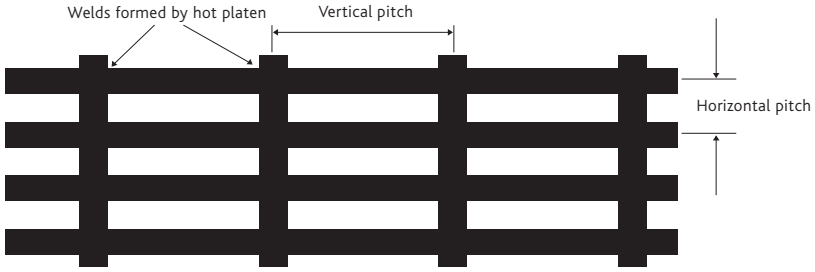
- Designed to provide maximum protection.
- Provides instant protection after short installation period.
- Light weight, easy to handle. Easy to relocate.
- Tough and durable. High impact and tensile strength.
- Retains tension once installed.
- Virtually maintenance free.
- Rot proof. Unaffected by sunlight, rain or salt water. Does not harbour insects or pests.
- Does not interfere with drainage or irrigation systems. Does not compete with crops for moisture or nutrients.

PARAFENCE STRUCTURE

Parafence is composed of horizontal and vertical webs, manufactured from high strength polyester filaments encased in a polyethylene polymer sheath. Assembly of the fence structure is carried out on a purpose-designed machine that welds the horizontal and vertical members together. Horizontal webbings are, typically, 50mm wide and 50mm apart although a wide variety of variations is possible.

Typical nominal breaking loads (NBL) for the horizontal webs are 165kg, 400kg and 1000kg with widths of around 50mm.

Parafence is supplied in rolls of 10m or 30m in five standard heights – 2.2m, 2.0m, 1.8m, 1.4m and 1.0m. Parafence is most usually supplied in black to provide the highest UV resistance but is also available in orange, light green and dark green.

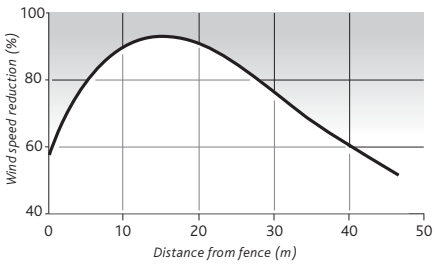


Type	5	5L	5LV	4	4L	4LV	50	50L	50LV	40	40L	40LV
Vertical pitch mm	500	500	500	500	500	500	1000	1000	1000	1000	1000	1000
Vertical loop	n/a	1	2	n/a	1	2	n/a	1	2	n/a	1	2
Horizontal loop	n/a	n/a	n/a	2	2	2	n/a	n/a	n/a	2	2	2

WINDSPEED REDUCTION

Depending on the type of Parafence selected, the system has the ability to reduce windspeed by between 58 and 68%.

The graph opposite illustrates the results of wind tunnel trials carried out at Nottingham University, using a 1.8m high Parafence windbreak.



PARAFENCE IN ACTION

HORTICULTURE & AGRICULTURE GREENHOUSES | SHADE HALLS | ANIMAL ENCLOSURES

Parafence has a proven track record in horticulture and agriculture, where it is used to protect plants and crops from both wind and excessive sunlight. It is also the ideal choice for protecting vulnerable structures, especially glasshouses, from potential wind damage. Additionally, it is widely used to create animal compounds.

The slatted construction makes it the ideal choice for shade halls, protecting young plants from too much sun whilst allowing them to benefit from intermittent light as the sun passes overhead. At the same time there is little or no interference with rainfall, air movement or access by pollinating insects.

TRANSPORT RAILWAYS | HIGHWAYS | BRIDGES

High winds can bring havoc to transport infrastructure and Parafence windbreaks are used increasingly to reduce potential danger and damage – and to provide relatively unobtrusive screening on roads, railways etc.

It has, for example, been used at both the English and French ends of the Channel Tunnel to ensure wind reduction and provide screening and in other parts of the world – especially Japan – it has been used to provide wind reduction on open stretches of highway and rail track. It has also been used to provide wind protection on bridges.

SPORT STADIUMS | TENNIS COURTS

Wind can interfere with many sports and, for this reason, Parafence windbreak has been installed at sports arenas to ensure that wind speeds are held at an acceptable level.

The athletics stadium at Narbonne in France is an example of a purpose-designed structural windbreak system utilising Parafence. In this instance the aim was to protect the 'open end' of the stadium to ensure that wind speeds would not affect athletic performance.

The system can, however, be used in a simpler form to provide wind reduction and protection on much smaller sports projects.

The advent of modular and portable indoor tennis courts has also created a new application for Parafence. These lightweight structures can be very vulnerable to wind damage and permanent or temporary Parafence windbreaks provide the additional level of protection required.

ENVIRONMENT SAND CONTROL | SNOW PROTECTION

As Parafence effectively destroys or reduces wind velocities, it can also be used to control the drifting of snow and sand.

Its light weight, ease of installation, durability and the fact that it is rot proof and unaffected by rain or salt water, makes it the ideal choice for this type of application.

INDUSTRY FUEL STORAGE | MINING | QUARRYING

Parafence is widely used across a wide variety of industrial sites to provide wind protection to potentially vulnerable structures and to effectively reduce 'particle movement'.

Many major industrial facilities, such as fuel and chemical plants, are located in areas – particularly by rivers or the sea – where high winds are a feature of the local climate and large structures, pipelines and machinery can be damaged by wind or wind-borne debris. The implementation of a Parafence windbreak system effectively reduces the speed of the wind and the occurrence of damage.

Parafence is also increasingly used in industries where wind-blown particles can create either neighbourhood or environmental problems – particularly mining and quarrying.

In these cases the installation of a Parafence system offers dual advantages – it provides an effective defence against wind entering the facility whilst, at the same time, preventing small particles from being blown out of the facility.

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PARAFENCE SERVICE

PARAFENCE is manufactured by Linear Composites, an acknowledged world leader in this field.

The company has unparalleled experience in developing and refining applications for PARAFENCE in association with customers and distributors.

Linear Composites specialists work closely with customers and designers to ensure that the ideal PARAFENCE solution is provided for each application.

Linear COMPOSITES

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