

B BETAFENCE



Securifor[®]



Betafence Quality

Betafence strives relentlessly for optimum quality, without losing sight of users' own particular requirements. Quality is of prime importance: it begins at the draft design phase for fences and remains the common theme of the entire production process. The ISO 9001 certification is a guarantee of this approach.

Betafence Technology

Betafence is the European market leader, setting technical trends in the development and application of anticorrosion technology.

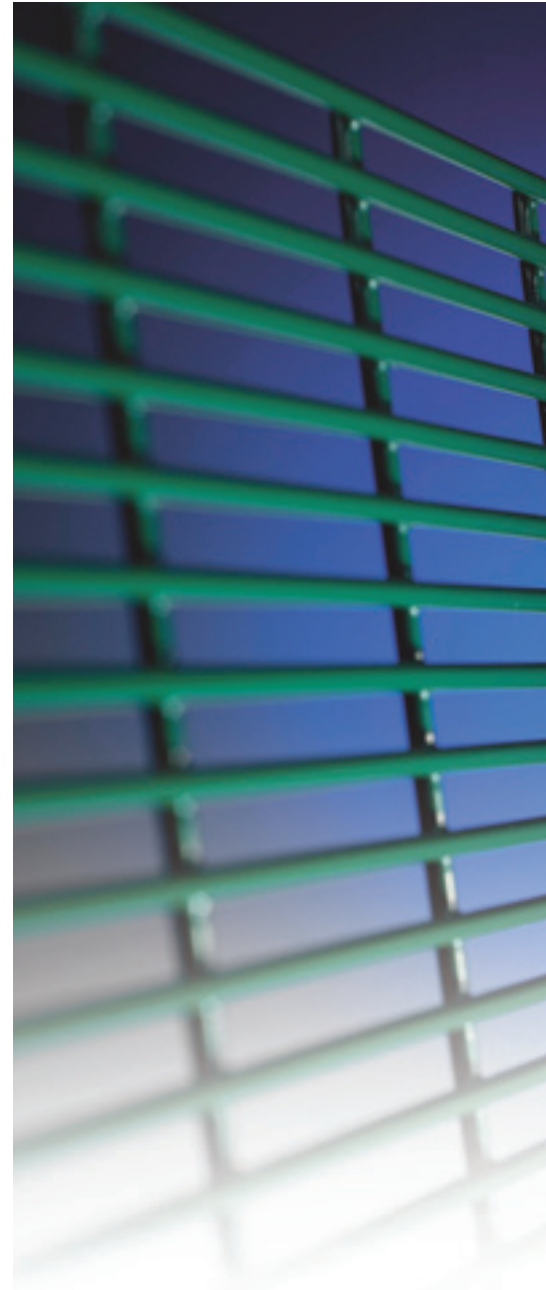
Betafence Safety

Betafence ensures that all products are developed and manufactured in accordance with the latest European safety standards. The company guarantees the safety of its products for the user at all times.

Securifor security fence

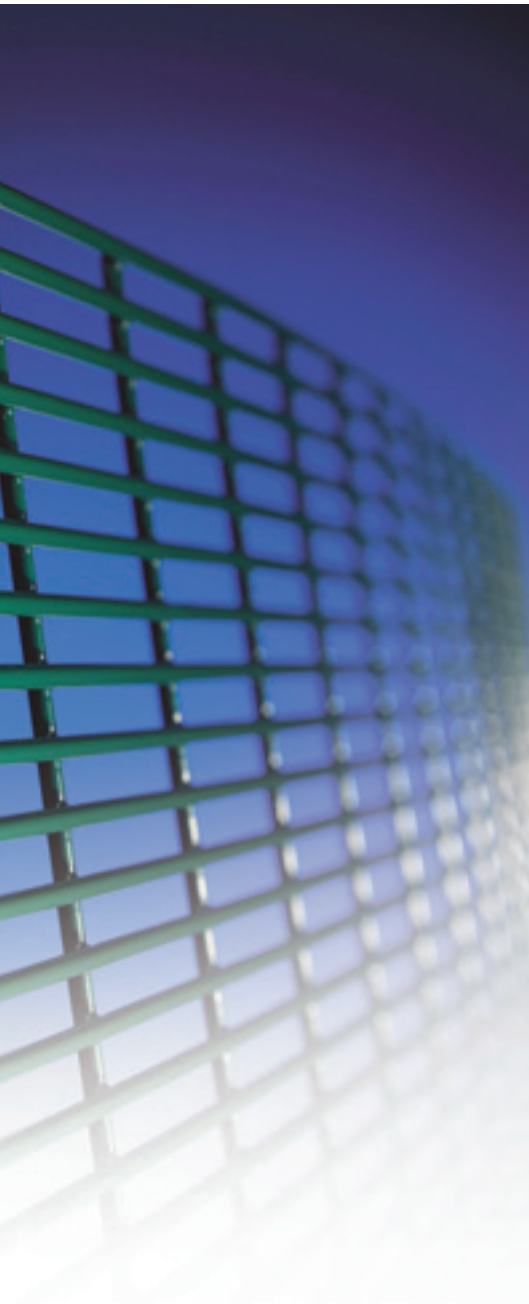
Within Betafence's wide range, the Securifor products are intended for clients who place particular importance on high security. The small mesh apertures and heavy wire diameters make the fence practically unclimbable and especially difficult to penetrate, yet still surprisingly transparent. Whether you need to keep people inside or outside the fence – you can always count on your Securifor system.

That is why Securifor is the fence of choice for utilities (water, gas, electricity), military areas, pharmaceutical and petrochemical companies, ports, railways and airports, warehousing and distribution centres, as well as schools, youth institutions, psychiatric centres, courthouses and prisons.



Securifor®

When complete security is essential



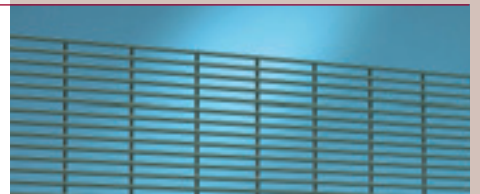
1 Security fences

The 4 functions of a security fence	4
The Securifor range: a product for each specific application	5



2 The Securifor security panels

Securifor	6
Securifor 2D	8
Securifor 2D Varimesh	10
Securifor 3D	12



3 The Securifor posts

Rectangular Securifor posts	14
Bekasecure posts	15



4 Access control

Securifor gates and access control	16
------------------------------------	----



5 Installation of Securifor

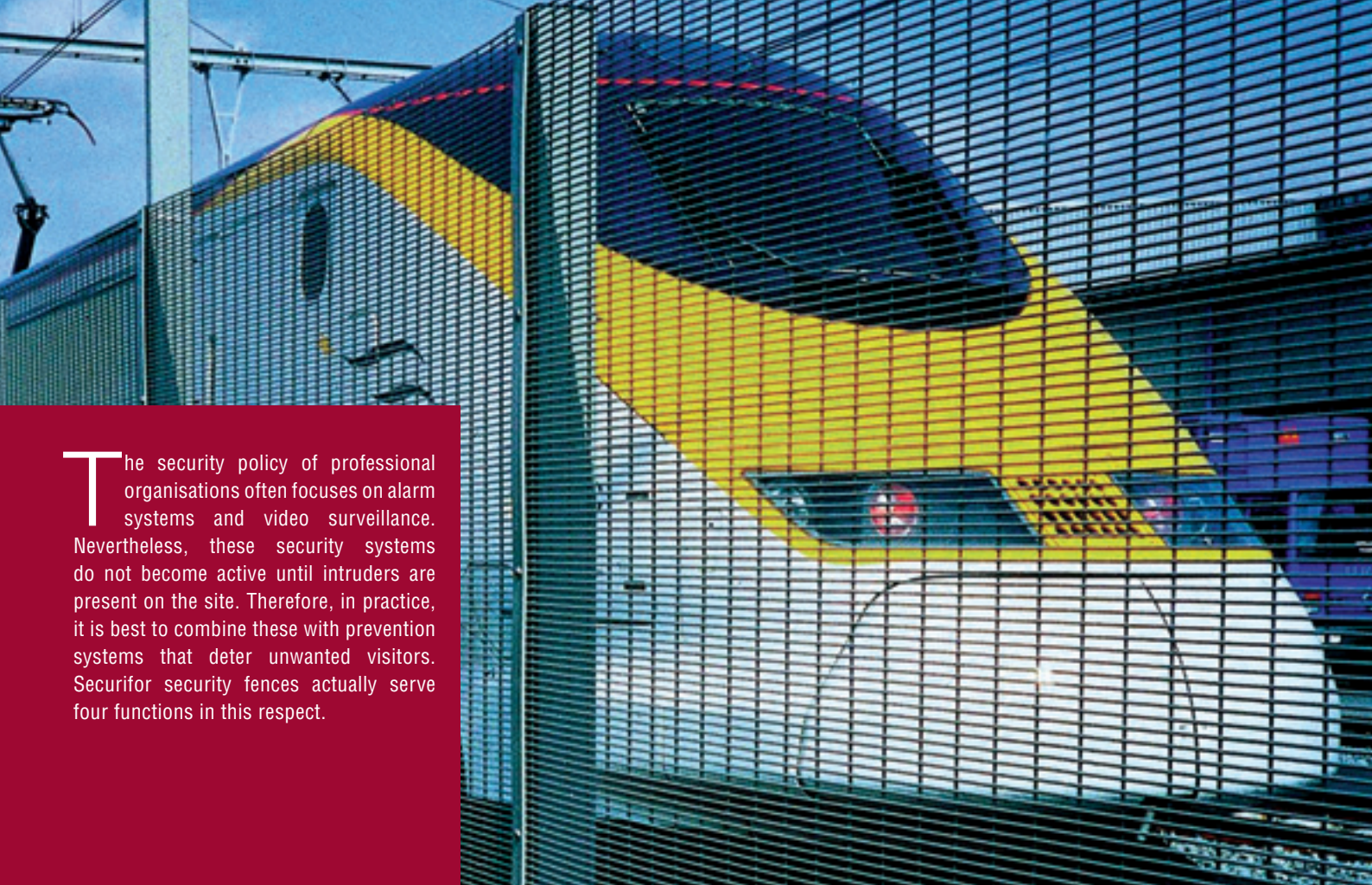
Installation with Bekasecure posts	17
------------------------------------	----



6 The Betafence project approach

A total solution for every project	18
------------------------------------	----





The security policy of professional organisations often focuses on alarm systems and video surveillance. Nevertheless, these security systems do not become active until intruders are present on the site. Therefore, in practice, it is best to combine these with prevention systems that deter unwanted visitors. Securifor security fences actually serve four functions in this respect.

1 | Security fences

The 4 functions of a security fence

Demarcation

The fence defines a border and makes it clear to visitors that the line of demarcation is not accessible to the public.

Dissuasion

The fence prevents people from casually or accidentally entering the area; it is a patently obvious barrier. It also makes a robust impression that will dissuade more wilful intruders.

Delay

A security fence delays potential intruders or prisonbreakers for longer than traditional fence. Tests from specialised police departments have demonstrated that the delay factor for high security fence is over forty times that of other fencing systems.

For example, please compare the following penetration times:

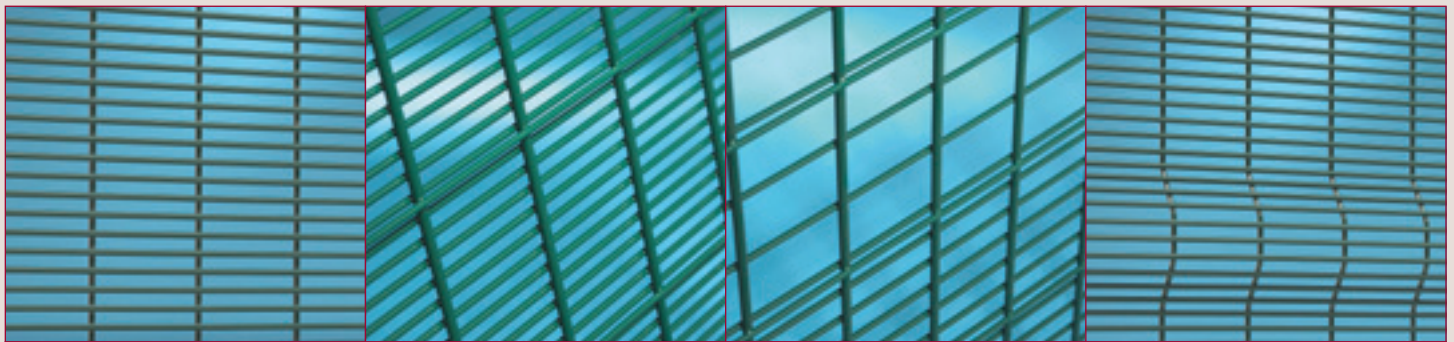
- chainlink 15 seconds
- welded mesh 3 minutes
- Securifor 11 minutes
- Securifor 2D 18 minutes

Detection

A good security fence works in harmony with surveillance systems. Thanks to a sophisticated combination of vertical and horizontal wires, the Securifor fence retains very good transparency with its fine mesh.

This is of vital importance if the fence is being used in conjunction with video surveillance and nighttime illumination.

The Securifor range: a product for each specific application

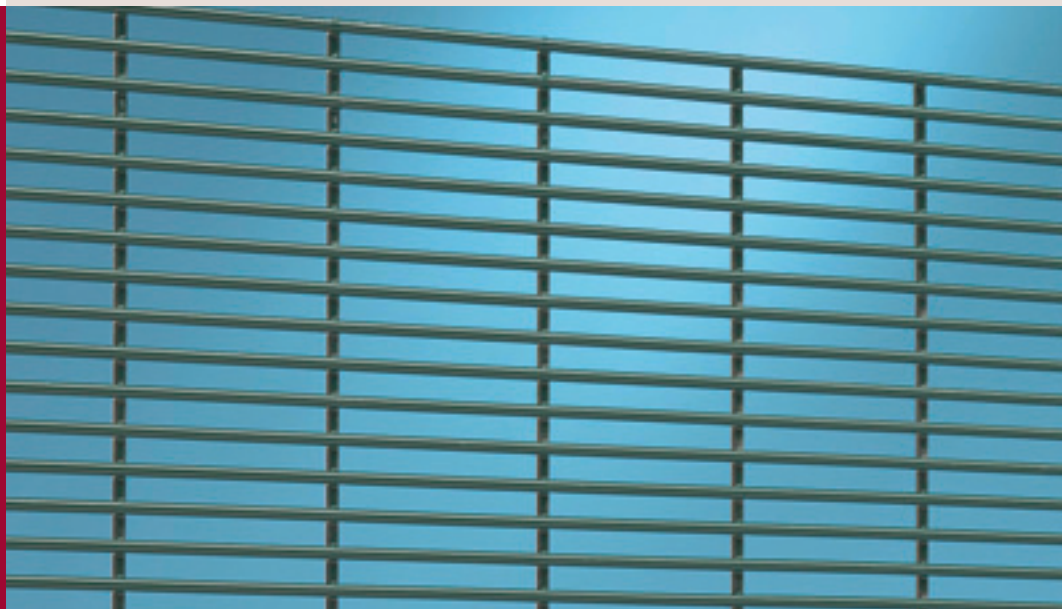


General characteristics of the Securifor range:	Specific characteristics:		
Securifor	Securifor 2D	Securifor 2D Varimesh	Securifor 3D
High security via small mesh and heavy wire diameters.	Extra high security via heavier vertical wires and supplemental horizontal wires every 15 cm.	Comparable to Securifor 2D, but progressive and with greater distance between the horizontal wires.	
High delay factor	Delay factor is greatly increased thanks to the diameter of vertical and supplemental horizontal wires: vandal-resistant	Very high delay factor for the lower part.	
Long life thanks to its very high quality coating.			
Maximum transparency			
Discreet and aesthetic	More rigid thanks to the double horizontal wires	More rigid thanks to the double horizontal wires	Security is combined with an aesthetic dimension via the three-dimensional beams.
All applications for which security is essential.	Especially for sectors with maximum demands on security (hazardous industries, prisons, data warehouses,...)	Storage facilities, distribution centres, bridge security, schools, sport facilities,...	Applicable wherever discreet security and aesthetic design are required (schools, youth institutions, psychiatric centres, recreational areas,...)



2 | The Securifor security panels: Securifor®

Securifor panels are the basis of an all-round fencing system in all situations where security is an issue. Their combination of security, transparency and flexibility make them ideally suited for a wide array of applications.



Technical description of Securifor panels

Mesh dimensions: 12.7 x 76.2 mm

Wire diameter: Ø 4 mm

Coating: Zincalu Super or galvanised and polyester-coated
standard- green RAL 6005
other colours and Zincalu Super finish on request

Securifor product table

Fence height (mm)	Panel dimensions Width x Height (mm)	Post profile L x H x W (mm)	Length of post (mm)
with rectangular posts and fixing brackets			
2000	2518.6 x 2010.6	80 x 60 x 2.50	2600
2400	2518.6 x 2417.0	80 x 60 x 2.50	3100
3000	2518.6 x 3001.2	80 x 60 x 2.50	3700
4000	2518.6 x 4004.5	120 x 60 x 3	4800
with Bekasecure posts and cover plate – to put in concrete			
3650	2518.6 x 3674.3	140 x 115 x 3.00	4450
4000	2518.6 x 4004.5	140 x 115 x 3.00	4800
with Bekasecure posts and cover plate – with welded base plate			
4000	2518.6 x 4004.5	140 x 115 x 3.00	4065
4700	2518.6 x 4690.3	140 x 150 x 5.00	4730
5300	2518.6 x 5325.3	140 x 150 x 5.00	5390
6000	2518.6 x 6011.1	140 x 150 x 5.00	6050

Note: see note on wind zones, p. 14



Security up to 6 metres high

- Securifor panels are manufactured from hard steel wire with a heavy diameter (4 mm), welded in very fine mesh (12.7 x 76.2 mm) and available in heights of up to 6 metres.
- They are extremely difficult to climb and practically nothing can be pushed through the mesh.
- It is very difficult to cut through or destroy. Tests from specialised police forces have demonstrated that a Securifor panel delays intruders/prison-breakers forty times longer than chainlink and four times longer than welded mesh.

Maximum transparency

- Thanks to the sophisticated design of the mesh, a Securifor fence retains surprisingly good transparency: up to 12 times better than railings and 5 times better than Nylofor 2D Super.
- This makes potential intruders/prisonbreakers easier to spot and identify.
- This means that this system is also particularly well-suited for combinations with video surveillance and other electronic alarm and detection systems.

Total fencing system

- Securifor is a system. According to the customer's choice, the panels can be combined with two types of posts and come delivered with specific security fixings.
- Gates can also be delivered, fitted with the same security panels as the fence.
- The desired level of security determines the actual composition of the fence: section of the posts, width and height of the panels, single or double gates, security systems...

Design

- Securifor fences are discreet and integrate well into the environment.
- Despite their high security impact, they do not give an aggressive impression.

Long life

- Thanks to a superior coating, Securifor panels remain resistant to the elements year after year.

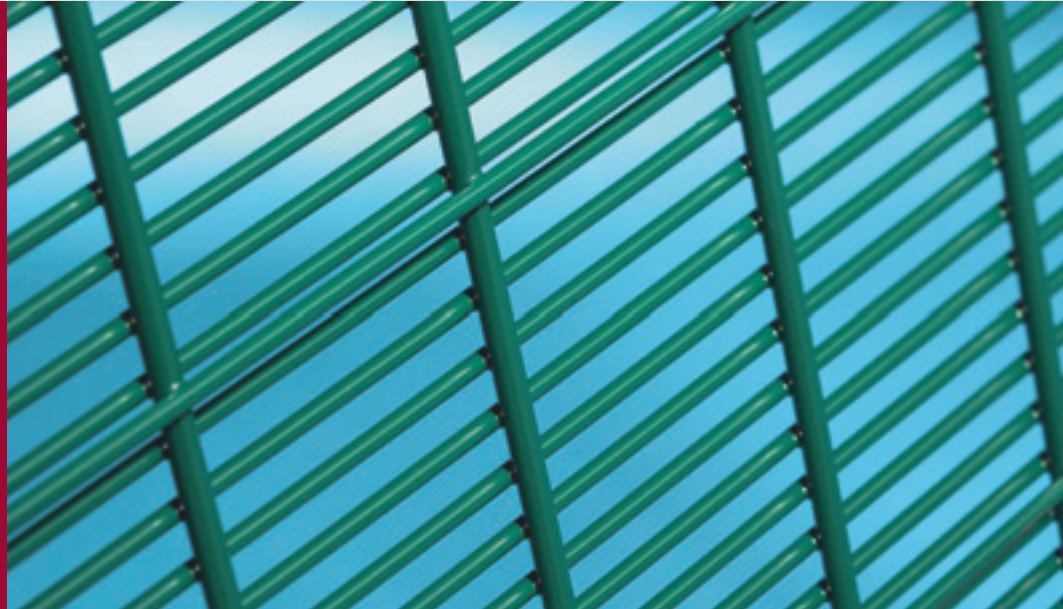
Applications

Fences made from Securifor panels are suitable for applications for which security is high on the list of priorities:

- ports, airports and railways
- utility companies: water, gas, electric
- chemical, pharmaceutical and industrial firms
- sites for the storage of fragile or hazardous substances
- sports stadiums and recreational areas
- car parks
- ...

2 | The Securifor security panels: Securifor® 2D

Securifor 2D is the absolute best of security fences. Supplemental horizontal wires and thicker vertical wires make these panels even more resistant to destruction than the already exceptionally robust standard Securifor panels.



Technical description of Securifor 2D panels

Mesh dimensions: 12.7 x 76.2 mm

Horizontal wires: \varnothing 4 mm and a supplemental wire every 152.4 mm

Vertical wires: \varnothing 6 mm

Coating: Galvanised and polyester-coated
standard- green RAL 6005
other colours on request

Securifor 2D product table

Panels		Rectangular posts	
Fence height (mm)	Panel dimensions Width x Height (mm)	Post profile L x H x W (mm)	Length of post (mm)
2000	2520.6 x 1985.2	80 x 60 x 2.50	2600
2400	2520.6 x 2442.4	80 x 60 x 2.50	3100
3000*	2520.6 x 3052.0	80 x 60 x 2.50	3700

* can also be combined with Bekasecure posts

Note: see note on wind zones, p. 14



Extreme security

- In the Securifor 2D, the hard steel wire with heavy diameter (4 mm) and the very fine mesh (12.7 x 76.2 mm) of the panels are further reinforced by a supplemental horizontal wire every 152.4 mm.
- The vertical wires are 6 mm thick.
- This makes Securifor 2D even more resistant to vandalism and attempted break-ins/outs. The delay factor for standard Securifor (already 40 times that of a chainlink fence!) is doubled in the Securifor 2D.
- The extremely fine mesh openings make Securifor 2D practically unclimbable; and almost nothing can be pushed through it.

Excellent transparency

- Even with the supplemental wires and the heavier diameters, the Securifor 2D retains the surprising transparency of the Securifor panels.
- Unquestionably suited for use with video surveillance and other electronic detection systems.

Easy installation

- The supplemental wire makes the Securifor 2D panels not only more secure, but also even more rigid than the standard Securifor. The extraordinary flatness of these panels increases their aesthetic character and considerably facilitates installation as well.

Long life

- Thanks to a superior coating, Securifor panels remain resistant to the elements year after year.

For extremely demanding applications

The Securifor 2D panels were designed for situations in which attempted break-ins/outs are a very real danger and in which security does not allow for any compromises:

- hazardous industries
- prisons
- data warehouses
- utility companies: water, gas, electric
- ...

2 | The Securifor security panels: Securifor® 2D Varimesh

With Securifor 2D Varimesh, rigidity and impenetrability are balanced in relation to the height. Security where you need it.



Technical description of Securifor 2D Varimesh panels

Progressive mesh dimensions for base panel:

- 12.7 x 76.2 mm from 0 to 1221.2 mm
- 25.4 x 76.2 mm from 1221.2 to 2135.6 mm
- 50.8 x 76.2 mm from 2135.6 to 2999.2 mm
- 12.7 x 76.2 mm from 2999.9 to 3052 mm (top)

Mesh dimensions for top panel:

50.8 x 76.2 mm with 4 12.7 x 76.2-mm mesh on both the bottom and top

Horizontal wires: \varnothing 4 mm and a supplemental wire every 152.4 mm

Vertical wires: \varnothing 6 mm

Coating: Galvanised and polyester-coated
standard- green RAL 6005
other colours on request

Securifor 2D Varimesh product table

Fence height (mm)	Dimensions of base panels Width x Height (mm)	Dimensions of top panels Width x Height (mm)	Post profile L x H x W (mm)	Length of post (mm)
with rectangular posts and fixing brackets				
3000	2520.6 x 3052.0		80 x 60 x 2.5	3700
4000	2520.6 x 3052.0	2520.6 x 918.4	120 x 60 x 3.0	4800
6000	2520.6 x 3052.0	2520.6 x 2747.2	120 x 60 x 3.0	7000
with Bekasecure posts and cover plate – to be put in concrete				
3000	2520.6 x 3052.0		140 x 115 x 3.0	3800
4000	2520.6 x 3052.0	2520.6 x 918.4	140 x 115 x 3.0	4800
with Bekasecure posts and cover plate – with welded base plate				
4000	2520.6 x 3052.0	2520.6 x 918.4	140 x 115 x 3.0	4065
6000	2520.6 x 3052.0	2520.6 x 2747.2	140 x 150 x 5.0	6050*

* base plate to be put in concrete

Note: see note on wind zones, p. 14



Balanced security

- In the Securifor 2D Varimesh panels, the mesh spacings increase the higher you go: at the bottom, they have the extremely fine and reinforced mesh of the Securifor 2D; higher up, the frequency of the horizontal wiring decreases.
- The panels with variable meshes can either be used separately or combined with top panels with larger meshes at the top.
- These panels are extremely resistant to vandalism in the bottom zone. Even in the higher zones, the 4 and 6-mm wiring and the mesh sizes, which are still quite small, guarantee a high level of security.
- At the same time, they balance high security in a way that is cost-effective toward your budget – for ball courts this panel is highly desirable for keeping balls in and keeping prospective climbers out.

Total transparency

- Even in the densest zones, the Securifor 2D Varimesh panels, like all Securifor panels, are extremely transparent.
- Above 1.2m height, there is a large mesh that greatly increases transparency at short distances (e.g. for sports applications).

Flexible system

- The Securifor 2D Varimesh panels can be combined with 'top panels' up to a total height of 5.8 metres.
- The consumer has a choice between two types of posts for erection of the Securifor 2D Varimesh: the Securifor rectangular tube posts or the extra-secure Bekasecure posts.

Design

- The variation in mesh-size gives Securifor 2D Varimesh fences a light appearance that nicely conceals its tough security.

Long life

- Thanks to a superior coating, Securifor panels remain resistant to the elements year after year.

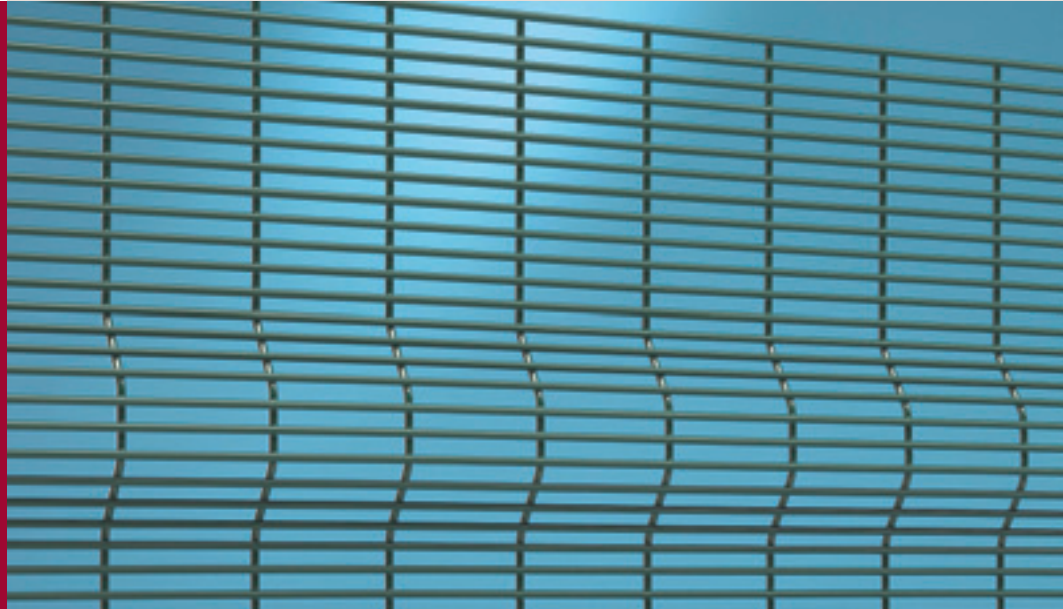
Numerous possible applications

Securifor 2D Varimesh is an ideal solution if security as well as height are important, without your risks also exacting a large investment from you. This fence is successfully used for:

- distribution centres
- schools (around playgrounds!)
- bridge security
- storage facilities
- sports fields
- sports enclosures
- ...

2 | The Securifor security panels: Securifor® 3D

Thanks to the horizontal beams, the Securifor 3D panels do not have such a severe appearance, but are in fact just as secure.



Technical description of Securifor 3D panels

Mesh dimensions: 12.7 x 76.2 mm

Wire diameter: 4 mm

Horizontal reinforcement via 2 or 3 beams per panel

Coating: galvanised and polyester-coated
standard- green RAL 6005
other colours on request

Securifor 3D product table

Fence height (mm)	Panels		Rectangular posts	
	Dimensions of panels W x H (mm)	Number of beams per panel	Post profile L x H x W (mm)	Length of post (mm)
2000	2518.6 x 2010.6	2	80 x 60 x 2.5	2600
2400	2518.6 x 2417.0	3	80 x 60 x 2.5	3100
3000	2518.6 x 3001.2	3	80 x 60 x 2.5	3700

Note: see note on wind zones, p. 14



Discreet and aesthetic

- Unlike other Securifor variants, the Securifor 3D panel displays some beams which give the fence some appearance of movement. This makes it look much less severe.
- Furthermore, the beam in the panel reinforces the dynamic stability, which makes the Securifor 3D appear very well-kept.

High security

- The aesthetic touch does not take away from security in any way: Securifor 3D panels also consist of heavy welded mesh with extremely fine rectangular mesh (12.7 x 76.2 mm) and a rigid wire diameter of 4 mm.
- These panels are practically unclimbable and very difficult to damage. The delay factor is 40 times that of normal chainlink fencing.

Surprising transparency

- Thanks to the well thought-out design of the mesh, Securifor 3D panels retain a surprising degree of transparency.
- This facilitates visual surveillance of the site and makes the fencing suitable for use with video surveillance, for instance.

Practical

- Its exceptional rigidity (result of the beam in the Securifor 3D panel) is very beneficial when it comes to installation.

Long life

- Thanks to a superior coating, Securifor panels remain resistant to the elements year after year.

Applications

Securifor 3D fences are intended for applications where security is critical but which should also be discreet and aesthetic.

- schools
- youth institutions
- psychiatric centres
- recreational parks
- storage facilities
- industrial sites
- ...

3 | Posts: Securifor® rectangular posts

The installation of Securifor panels requires specific posts. The rectangular posts can be used with all Securifor panels, including the 3D variant. If superior protection is required (security, rigidity, ease of installation), you can opt for the unique design of the Bekasecure posts.



Technical description of Securifor rectangular posts

Post Section:

80 x 60 mm or 120 x 60 mm (depending on the post length)

Plate thickness:

2.5 mm or 3.0 mm (depending on the post length)

I/V:

15.1 cm³ or 31.98 cm³ (depending on the post length)

Coating:

Internally and externally galvanised (minimum 275 g/m² both sides combined). An adhesive layer is then applied for a perfect adhesion with the polyester finish (60 microns minimum).

Colour green (RAL 6005) but other colours possible on request.

Finishing touch:

Black plastic cap on top.

Fixing of the posts

The posts have been fitted with inserts for their fixing. Intermediate posts have been fitted with 1 row of inserts for the front fixing of two panels in a straight line; corner posts have 1 row of inserts on two adjacent sides for installation of two panels in a corner.

Specially-designed fixing brackets fasten the Securifor panels to the posts very securely, while the installer still has the necessary flexibility.

The fixing brackets are secured with M8 x 40-mm safety bolts with oval heads and PVC M8 pinions.

Extra security

The fencing can be fitted with a bent arm and 3 rows of barbed wire for increased security.

Note on wind zones:

Securifor panels are very dense and are often used for high fences. This means that wind resistance is a critical factor in determining the dimensions of the posts. All systems in this table have been calculated for wind zone 1 (maximum windspeeds of up to 136 km/h). For situations with higher windspeeds or with the risk of accumulation of snow or leaves, please contact our technical service.

Securifor rectangular post product table

Fence height (mm)	Post profile L x H x W (mm)	Length of post (mm)
Rectangular posts and fixing brackets		
2000	80 x 60 x 2.50	2600
2400	80 x 60 x 2.50	3100
3000	80 x 60 x 2.50	3700
4000	120 x 60 x 3.00	4800

3 | Posts: Bekasecure®

Bekasecure design

The unique 'omega' profile of the Bekasecure posts meet three different quality requirements:

- Superior security
- Exceptional rigidity
- Maximum ease of installation

Bekasecure was specifically designed for applications with maximum security requirements: prisons, telecom, utilities, sports stadiums...

Superior security

- **Practically unclimbable:** there is not a single point of support between the flat smoothness of the cover plate used to attach the panels to the posts and the profile of the post.
- **Non-removable:** the fixing of panels and cover plates is secured by rustproof safety bolts with pinions and break-away nuts.
- **Perfect in combination with video surveillance:** wiring for video surveillance and other electronic systems can be safely enclosed within the steel profile of the Bekasecure post.
- Bekasecure is available for **fence heights of up to 6 metres.**

Exceptional rigidity

- The combination of high-grade steel and the unique profile ensures extraordinary rigidity which more than meets the requirements of part 14 of the BS 1722 standard.
- For fences of 4.7m and higher, a heavier profile is used.



Maximum ease of installation

- The 140-mm flat front side of the posts and the slotted holes in cover plates and posts ensure high tolerance during installation. With Bekasecure posts, the installer has 37 to 45 mm of play (instead of 4 to 8 mm with rectangular posts).
- Short carriage bolts and break-away nuts simplify installation.
- The posts can be delivered with the base plate welded on and can be levelled quickly and easily on a concrete foundation.

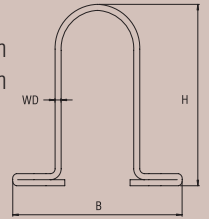
Technical description of Bekasecure posts

Profile and plate thickness:

(L x H x W):

Profile 1: 140 x 115 x 3 mm

Profile 2: 140 x 150 x 5 mm



I/V:

Profile 1: 28.5 cm³

Profile 2: 70.8 cm³

Coating:

internally and externally galvanised (minimum 275 g/m²) and polyester-coated (60 microns min.). Colour green (RAL 6005) but other colours possible on request.

Finishing touch: metal cap on top.

Fixing of the posts

The posts come fitted with 2 rows of **10 x 20-mm double slotted holes** for fixation of the panels and cover plates.

Cover plate for intermediate post and end post



Cover plate (135°) for corner post



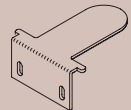
Carriage bolts made from stainless steel with pinion and break-away nut:

- M8 x 30 mm (fixation of panels and cover plates)
- M8 x 35 mm (fixation of cap or cover plate that goes over another one)
- M8 x 40 mm (double overlapping in corner situations)



Metal cap

4 types: type depends on type of panel and post section



Accessories

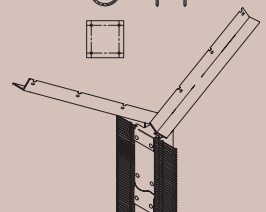
Foundation anchoring set

2 types: type depends on base plate



Bent arm

50 x 50 x 5 x 540 mm



Bekasecure post product table

Fence height (mm)	Post profile L x H x W (mm)	Length of post (mm)	Dimensions of base plate (mm)
Bekasecure posts and cover plate – to put in concrete			
3000	140 x 115 x 3.00	3800	-
3650	140 x 115 x 3.00	4450	-
4000	140 x 115 x 3.00	4800	-
Bekasecure posts and cover plate – with welded base plate			
4000	140 x 115 x 3.00	4065	230 x 230 x 15
4700	140 x 150 x 5.00	4730	300 x 300 x 20
5300	140 x 150 x 5.00	5390	300 x 300 x 20
6000	140 x 150 x 5.00	6050	300 x 300 x 20

Note: see note on wind zones, p. 14

4 | Access control

The combination of a Securifor fence with access control from the Betafence range guarantees a secure and aesthetic solution.



Extensive range

- The Securifor fence can also be seamlessly combined with the other gates and turnstiles from the Betafence range which were designed with security in mind.
- For instance, security is a priority in the Robusta industrial sliding gates; whether or not automated by Bekamatic®. Turnstiles can also be integrated into the fence to create a secure unit.

Integrated gate

- The sliding gates from the Betafence Robusta range can be fully attuned to Securifor fences by being fitted with the same Securifor in-fill instead of railings in-fill.
- They will of course retain the advantages of a Robusta sliding gate: rigidity, operational safety, superior coating, with accompanying doorway and guiding posts.
- The Robusta sliding gates come in both rail and cantilever variety, the last can be equipped with the high-quality Bekamatic® motorisation.



5 | Installation

Securifor with Bekasecure posts

The Securifor security concept remains the common theme throughout the fencing installation.



Non-removable

- For the installation of the Bekasecure security posts on the foundation, the customer has a choice between a premanufactured ground anchor set that is put in concrete in advance, a chemical (epoxy) anchoring, or a mechanical anchoring.
- The result is an absolutely secure anchoring.
- The panels are secured between the Bekasecure post and the cover plate with rustproof carriage bolts and break-away nuts.
- The use of break-away nuts makes unscrewing impossible and is also user-friendly for the installer.

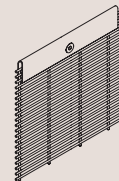
Easy to install

- Both the Bekasecure posts and the Securifor panels are installed using a crane. This enables positioning the posts and panels correctly.
- The crane lifts the panels up to the correct height in order to secure them.
- Then, the cover plate is held in the correct position and the whole unit can be fixed by using the carriage bolts and break-away nuts. An elevated work platform can be very useful.
- Due to the slotted holes in the cover plates and in the Bekasecure posts, there is a maximum tolerance (in height) for fixing the panels. This tolerance is of great importance during the installation.

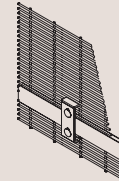
Service for the installer

- Betafence provides a detailed assembly manual and a video for the installation.
- If desired, our specialists can come on site to give advice at the beginning of the installation.

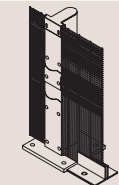
Specific accessories



- U-profile: extra reinforcement for the top of the Securifor panel.



- H-profile (for the connection of 2 panels placed one on top of the other)



- L-profile (to close the opening between the concrete foundations and the panel)

6 | Project approach

Betafence: a total solution for every project

With Betafence, you do not have to figure out for yourself which solution is best for your project, or how to arrange the installation. Our know-how is at your disposal to come together to the ideal solution.



Define the project

Betafence would like to help you at an early stage of your project. A careful analysis of the special needs of the client makes it possible to assess all risks correctly and to anticipate potential problems. Consultation with the client is the best guarantee for the best results.

Custom design

In consultation with the end user and/or the architect, we arrange the project according to your requirement. Detailed drawings give you a step-by-step view of how the system is developed and built. We develop a custom-tailored solution for your specific applications. Access control and detection systems can also be integrated.

Professional installation

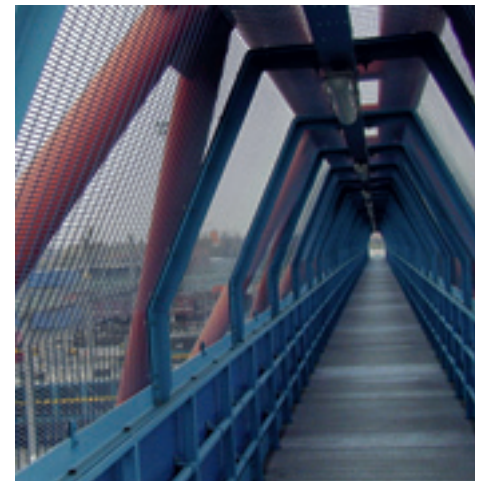
Just like you, we think it is important that our systems are installed perfectly. A professional installation means that you can choose from a network of specialised professional installers who have a detailed installation manual and the necessary experience at their disposal.

Aftersales service

Vandalism, accidents, improper use... Speedy intervention from our specialists or our dedicated partners guarantees you restoration of the damage as quickly as possible.

Guarantee

Projects installed by the Betafence partners come with a ten-year guarantee on request.





Securifor and Design

Securifor is synonymous with security, but has much more to offer. With its rectilinear, tight, and modern design, Securifor is the ideal solution for applications which must also be of high architectural quality.



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