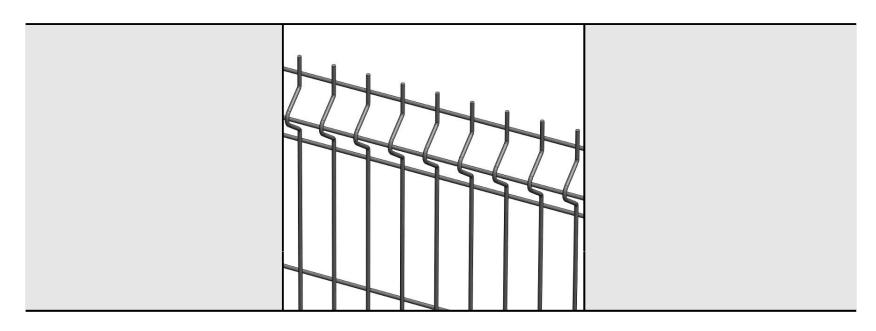
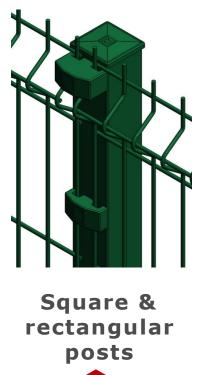
IE BETAFENCE



Nylofor / Twilfix Square & rectangular posts

Installation manual







Nylofor / Twilfix® post systems

Content

1. Components

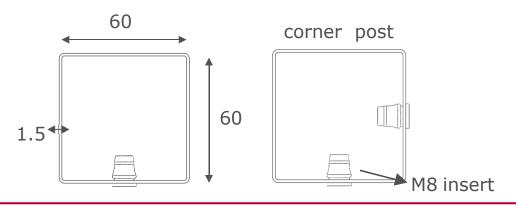
- 1. The posts
- 2. Fixators and tools
- 3. The Nylofor panels
- 4. RollTop and Paladin panels
- 5. Nylofor City system

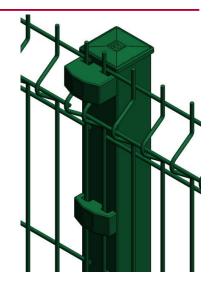
2. Installation

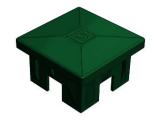
- 1. Foundations
- 2. Installation of posts & panels
- 3. Installation of Nylofor City system

1. The posts

- Posts with 60x60x1.5mm sections are available for panels from 0.6 to 2.4 m
- For <u>installations higher than 2.4m</u>, <u>rectangular posts</u> with profile 80x60x2,5mm or 120x60x3mm are used
- The posts are galvanised inside and outside and polyester coated
- This type of post can be installed with <u>all Nylofor panels</u>
- RollTop and Paladin panel also can be installed
- The posts are equipped with <u>M8 inserts</u> to attach the panels with clamps and security bolts
- Additionally inserts for panel stepping are available
- Each post is fitted with a PP post cap with Betafence logo
- Posts with inserts in 2 adjacent sides are available to make corners



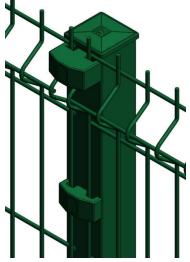




2. Fixators and tools

- PA fixators with caps, to be attached with M8x40 security bolts (ISO 7380)
- Different fittings are available, <u>depending on the</u>
 <u>type</u> of panel being installed







- 2D
- 3D INT*
- 3D Pro INT*
- 3D Pro XL INT*
- RollTop



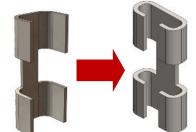
- 2D Super
- 3D Super



· F



- 3D
- 3D Pro
- 3D Pro XL



- *INT = intermediate = clamps that are not positioned in a nose
- A <u>bracket</u> (in stainless steel) is used to attach one panel on top of another or for two panels in a sharp angle (only Nylofor 3D and Nylofor Medium).





2. Fixators and tools

 Metal fixators for panel Rolltop are to be attached with M8x40 security bolts Tri-Lobe Bolt (Countersunk Head) and plastic washer



 Metal cover for Paladin panel are to be attached with M8x40 button head bolt



3. The Nylofor panels

- Range:

Туре	3D Pro	3D	2D	3D Super	F	2D Super
Height	1,03 – 2,43 m	1,03 – 2,43 m	1,03 – 2,03 m	1,63 – 2,43 m	0,63 – 2,03 m	1,03 – 2,43 m
Width	2,5 m	2,5 m	2,5 m	2,5 m	2,5 m	2,5 m
Wire dia	H: 5mm V: 5mm	H: 5mm V: 5mm	H: 2x6mm V: 5mm	H: 8mm V: 5mm	H: 15x6mm V: 5mm	H: 2x8mm V: 6mm
Mesh size	200 x 50 mm	200 x 50 mm	200 x 50 mm	200 x 50 mm	200 x 50 mm	200 x 50 mm
Nose type	1 wire	1 wire	none	1 wire	none	none
Coating	GALV+PVC	GALV+PES	GALV+PES PES	GALV+PES	GALV+PES	GALV+PES

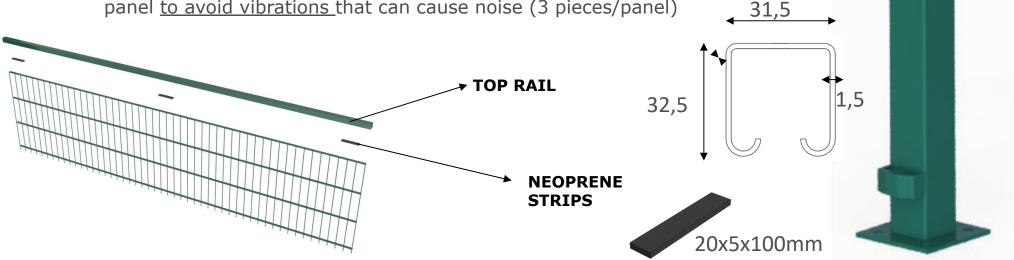
4. The RollTop & Paladin panels

- Range:

Туре	Roll Top	Paladin	
Height	900; 1200; 1500; 1800; 2400 mm	1240; 1850; 2038; 2445 mm	
Width	3 m	3 m	
Wire dia	H: 5mm V: 5mm	H: 4mm V: 3mm	
Mesh size	150 x 50mm	50,8x50,8 ; 50,8x25,4 ; 50,8x12,7 ; 25,4x12,7mm	
Nose type	4 wire	5 wire	
Coating	GALV+PES PES	GALV+PES PES	

5. Nylofor City system

- The dimensions of the post are <u>always 60x60x1,5mm</u> (Nylofor/Twilfix post)
- Post types: <u>intermediate</u> posts (same as end posts) and corner posts
- The system can be installed to concrete, or on a baseplate post
- The posts are pre-fitted with the appropriate <u>holes and inserts</u> for the fixation of the panels
- Posts are covered with plastic <u>post cap with Betafence logo</u>
- Nylofor City is always installed with <u>Nylofor F</u> panels. The panels are mounted with the <u>pins on the bottom</u>
- A <u>top rail</u> is mounted on top of the panel to have additional rigidity, standard length <u>2505mm</u>
- Neoprene strips are glued in between the top rail and the Nylofor F panel to avoid vibrations that can cause noise (3 pieces/panel)



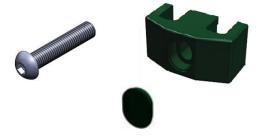


5. Nylofor City system

- Nylofor City is installed with one <u>metal clamp on top</u> to hold the rail, the other clamps are standard <u>Nylofor F clamps</u> (PA)
 - There are <u>3 types of metal clamps</u>: an intermediate clamp, a left corner clamp and a right corner clamp. <u>Corner clamps</u> are also used for <u>end posts</u>. They are fixed with <u>Hexagon Socket Button Head screws</u> (ISO 7380) **M8x60** in stainless steel.



 Nylofor clamps for Nylofor F. The plastic clamps are fixed with <u>Hexagon Socket Button Head</u> screws (ISO 7380) **M8x40**.



1. Foundations

- To obtain the best result, it is advisable to <u>level the ground</u> over the whole length of the fence
- For correct positioning, maintain the <u>centre-centre distances</u>. (with a tolerance of +/- 5 mm)
- The distance is determined the type of panel being installed

Panel type	Centre-Centre distance	
Nylofor	2530 mm	
3D PRO XL, RollTop*	3030 mm	
Paladin*	2975 mm	



- Align the <u>fence line</u>
- To determine the <u>dimensions of the foundations</u> it is advisable to consult a specialised engineer to evaluate wind load, solar conditions and any other factors requiring specialist opinion (concrete quality directive B30)
- In case of direct installation the post needs to be supported as long as necessary







^{*}Additional installation documents are available

2. Installation of posts & panels

 Installation principle: when placing square posts, first all the posts can be placed and then the panels can be attached.

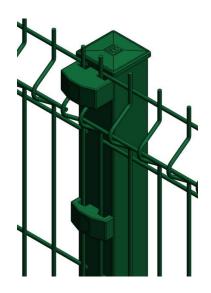
ALIGNING THE POSTS

Installation on an even surface

- Place a pin before the first post of the fence and another behind the last post. Connect those posts with two guide ropes.
- The lower guide rope should be between 20 and 40 cm above the ground. Now align all inserts with the upper guide rope.

Installation on a sloping surface

 Place a guide rope for the same heights. In case of a difference in height, place a supplementary guide rope at the height of the upper insert.





2. Installation of posts & panels

PLACEMENT OF THE POSTS (USE A TEMPLATE)

- A template makes it much easier to place the posts correctly: a mould of 2530 mm* needs to be used to see if the posts are placed at a correct distance (measured center-center, with a tolerance of +/- 5 mm)
- The template must be made by the installer and must have 2 recesses into which the posts fit perfectly
- Place the posts, correctly aligned (vertically and horizontally) and with the correct distance between them. For end posts and corner posts the distance is 3 cm smaller
- Use a spirit level to ensure the posts are placed at the correct verticle angle.







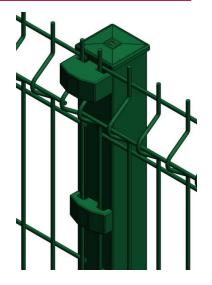
IE BETAFENCE

2. Installation of posts & panels

INSTALLATION OF THE PANELS

- Join two panels together on an intermediate post at the correct height
- Place a clamp in the <u>upper insert</u> of the post and tighten the security bolt halfway
- Now place an additional clamp in the <u>lower insert</u> and tighten the security bolt halfway
- Repeat this procedure for all intermediate posts and finish with the corner post
- Now place the bolts into the other clamps and tighten all bolts completely and firmly
- Finally, cover the clamp holes with a <u>cap</u>





FIXATORS PER POST

Panel height	Number of fixators
630mm	3
1030mm	3
1230mm	4
1430/1530mm	4
1630/1730mm	5
1830/1930mm	5
2030mm	6
2430mm	7

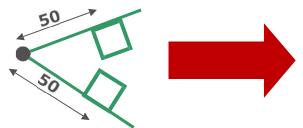
2. Installation of posts & panels

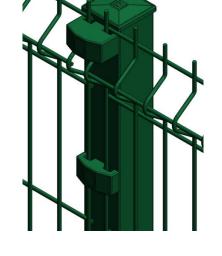
MAKING CORNERS

- RIGHT ANGLE

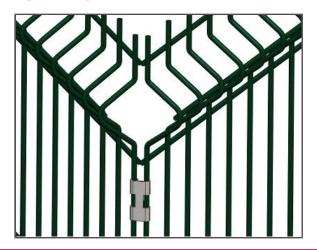


- **ACUTE/OBTUSE ANGLE**Place two intermediate posts 50 cm from the corner.





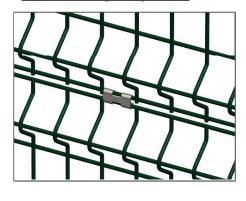
Only for Nylofor 3D / 3D Pro



2. Installation of posts & panels

PANELS ON TOP OF EACH OTHER

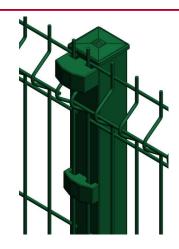
Connect the panels using <u>3</u>
 brackets per panel



SLOPES

On slopes extra <u>fixators must</u> be placed



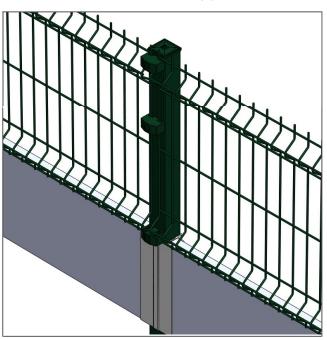


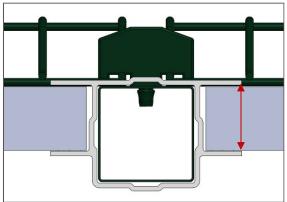
- Measure the area accurately compared to the zero level
- Do this in different places
- The zero level can be determined by means of a laser or similar instrument
- Determine all differences in height on the fence line
- For <u>slopes of more than 15%</u> posts must be placed closer together. Shorten the panels and repair the ends with zinc and polyester paint

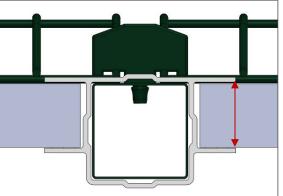
2. Installation of posts & panels

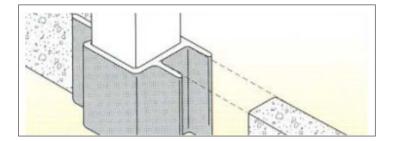
INSTALLATION WITH CONCRETE SLABS

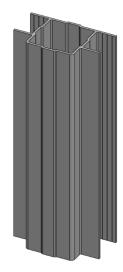
Use concrete slab supports for 60x60 posts (hard PVC)











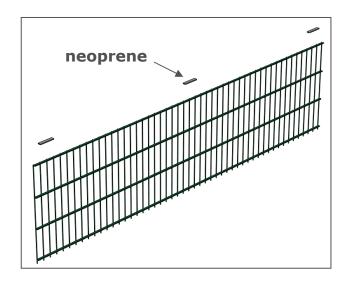
width 4cmheight 30cm

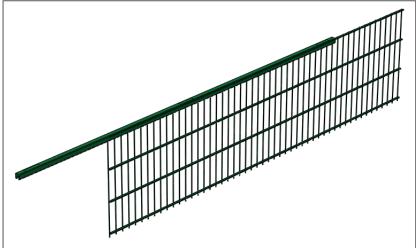


3. Installation of Nylofor City system ASSEMBLING THE PANEL

- Glue the <u>neoprene strips</u> on the top of the <u>horizontal</u> wire of the panel. Divide <u>3 strips</u> over the complete width of the panel
- Slide the panel into the top rail
- Assemble <u>a second panel</u>







3. Installation of Nylofor City system INSTALLING THE PANELS

- Fasten the top of the panels with a metal clamp
- Fasten the <u>other positions</u> of the panels with the <u>PA clamps</u>
- Repeat these steps to complete the installation
- In case of an end post, use a <u>corner clamp</u> to fix the top of the panel





3. Installation of Nylofor City system INSTALLING CORNERS / SLOPES

- In case of a corner, use a <u>corner post</u> with inserts on two adjacent sides.
 Fasten the top of the panel with <u>left and right corner clamps</u>
- Only corners of 90° are possible. In any other situation, two posts have to be installed
- In case of a <u>slope</u>, also <u>two posts</u> have to be used





BETAFENCE