

**Technical Data Sheet
TDS-05-04****Bekafix® Post****1 Scope**

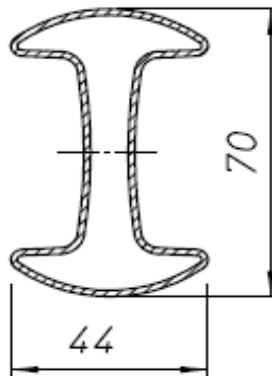
The Bekafix® posts are made out of continuously hot-dip zinc coated steel sheet (Sendzimir) and afterwards polyester coated.

The Bekafix® posts are used in combination with panels: Nylofor® 3D, Nylofor® 3D Pro, Nylofor® 3D Pro XL, Nylofor® 3D Multi, Nylofor® 3D Essential, Nylofor® 3D Super, Nylofor® 2D, Nylofor® 2D Super, Nylofor® 2D Super XL, Nylofor® F, Zenturo® Urban and CreaZen® panels.

A metal or plastic fixator can be used to mount the panels on the Bekafix® posts.

Optional a security bolt can be used.

A section of the Bekafix® post is given in figure 1.

**Figure 1**

| | | | |
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1.1 Normative references

- EN 10346: Continuously hot-dip coated steel flat products – technical delivery conditions
- EN 10025-2: Hot rolled products of structural steels – Part 2 : Technical delivery conditions for non-alloy structural steels.
- ISO 3506-1: Mechanical properties of corrosion-resistant stainless steel fasteners - Part 1: Bolts, screws and studs.
- ISO 1461: Hot dip galvanized coating on fabricated iron and steel articles – specifications and test methods.
- ISO 9227: Corrosion tests in artificial atmospheres; salt spray tests.
- ISO 16474-3: Paints and varnishes – Methods of exposure to laboratory light sources – Part 3: Fluorescent UV lamps.

2 Raw material

2.1 Steel used for Bekafix[®] post

Chemical composition: See table 1

| Table 1: Chemical composition | |
|--------------------------------------|------------|
| Element | % |
| C | ≤ 0,20 |
| Si | Max. 0,60 |
| Mn | Max. 1,70 |
| P | Max. 0,12 |
| S | Max. 0,045 |

The steel is in accordance with the European Standard EN 10346.

The designation of the steel is: S250.

The steel strip is continuously hot-dip galvanized, in accordance with EN 10346 Z275.

If DX51D or S220 quality is used in accordance to EN 10346, the yield strength shall be minimum 250 N/mm².

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2.2 **Steel used for metal fixators, base plates, bent and extensions arms**

The steel is in accordance with the European Standard EN 10025-2.

The designation of the steel is: S235.

Yield strength of the steel: Min. 235 N/mm²

2.3 **Stainless steel used for the security bolts**

The security bolts are made out of stainless steel, grade A2 in accordance with ISO 3506-1.

2.4 **Zinc ingots used for galvanisation bath**

In accordance with ISO 1461.

2.5 **Polyester**

The polyester is free of lead and cadmium

3 **Properties**

3.1 **Dimensions and tolerances**

See table 2:

| Height of the post (mm) | Sapcode RAL 6005 | Sapcode RAL 9010 | Sapcode RAL 9005 |
|-------------------------|------------------|------------------|------------------|
| 1075 | 7040652 | 7040660 | --- |
| 1475 | 7040653 | 7040663 | --- |
| 1575 | 7050120 | --- | --- |
| 1675 | 7040654 | 7040664 | --- |
| 1975 | 7040655 | 7040665 | --- |
| 2175 | 7040656 | 7040666 | --- |
| 2475 | 7040657 | 7040667 | 7040671 |
| 2575 | 7040658 | 7040668 | --- |
| 3175 | 7040659 | 7040669 | --- |
| 2775 | 7051926 | --- | --- |

The tolerance for all heights of the Bekafix® post is $\pm 2,5$ mm/m in accordance with the technical drawings, available on request.

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3.2 Plate thickness of the Bekafix[®] post

The Bekafix[®] post has a plate thickness of 1,25 mm, tolerance: +/- 0,10 mm.

3.3 Tensile strength

The strength is specified by:

- Tensile strength: Min. 330 N/mm²
- Yield strength: Min. 250 N/mm²

4 Coating

4.1 Metallic coating

4.1.1 Sendzimir (Bekafix[®] post)

Zinc coating:

Min. of 275 g/m² as an average of 3 measurements and double side determined.
 In accordance with EN 10346. (Z275)

4.1.2 Fixators, base plates, bent & extension arms

The fixators, base plates, bent & extension arms are made of bare steel and afterwards hot dip galvanized.

The galvanising is executed in accordance with ISO 1461.

| Article and its thickness | Local coating thickness (minimum) ^a | Local coating mass (minimum) ^b | Mean coating thickness (minimum) ^c | Mean coating mass (minimum) ^b |
|---------------------------|--|---|---|--|
| | µm | g/m ² | µm | g/m ² |
| Steel > 6 mm | 70 | 505 | 85 | 610 |
| Steel > 3 mm to ≤ 6 mm | 55 | 395 | 70 | 505 |
| Steel ≥ 1,5 mm to ≤ 3 mm | 45 | 325 | 55 | 395 |
| Steel < 1,5 mm | 35 | 250 | 45 | 325 |
| Castings ≥ 6 mm | 70 | 505 | 80 | 575 |
| Castings < 6 mm | 60 | 430 | 70 | 505 |

An excellent corrosion protection is obtained through the thick layer of zinc covering the entire surface, including the cutting edges and the welds of the fabrication. Inherent to this process is the possible appearance of some visual surface roughness.

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4.2 Polyester coating

Thickness:

Min. 60 µm (Average of 10 measurements done on 1 Bekafix[®] post, metal fixator, base plate, bent and extension arms)

Colours: Green RAL 6005 and white RAL 9010

Other standard colours are available and can be found in the technical data sheet TDS-99-03: Polyester coating.

Non-standard colours: On request.

Adhesion:

Make two scratches by means of a hard metal pointed graving tool, penetrating through the metal and intersecting at an angle of 30° ± 5°.

Lift a 30° peak with the point of a knife. The coating shall not be able to be lifted from the metal by more than 5 mm.

Resistance of the polyester to saltspray:

Make a diagonal cross by means of a hard metal pointed graving tool, penetrating through the metal. Test in accordance with ISO 9227.

After 1000 h there shall be no corrosion beneath the polyester or loss of adhesion in excess of 10 mm from the diagonals.

Resistance against UV: In accordance with ISO 16474-3.

After 1000 h QUV and after washing with pure water, the colour difference, expressed as ΔE^* is maximum 3.

Loss of gloss: After 1000 hours max. 50 % of the original one, measured after being washed with pure water.

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4.3 KTL & polyester coating

Some types of the fixators are KTL and polyester coated.

Thickness of the coating layer:

The total coating layer KTL & polyester shall be : > 80µm (Average of 10 measurements done on 1 fixator)

Standard colours: Green RAL 6005, white RAL 9010 and black RAL 9005

Adhesion:

Make two scratches by means of a hard metal pointed graving tool, penetrating through the metal and intersecting at an angle of $30^\circ \pm 5^\circ$.

Lift a 30° peak with the point of a knife. The coating shall not be able to be lifted from the metal by more than 5 mm.

Resistance of the polyester to saltspray:

Make a diagonal cross by means of a hard metal pointed graving tool, penetrating through the metal. Test in accordance with ISO 9227.

After 1000 h there shall be no corrosion beneath the polyester or loss of adhesion in excess of 10 mm from the diagonals.

Resistance against UV: In accordance with ISO 16474-3.

After 1000 h QUV and after washing with pure water, the colour difference, expressed as ΔE^* is maximum 3.

Loss of gloss: After 1000 hours max. 50 % of the original one, measured after being washed with pure water.

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5 Packaging

The posts until height 2475 mm are packed per 104 posts on a wooden pallet. (8 rows of 13 posts)

The posts with height 2575 mm and higher are packed per 78 posts on a wooden pallet. Between each layer of posts, there will be wooden slats.

The pallet is afterwards shrink of stretch foiled with a UV resistant foil.

An identification label with the Sapcode, product description, number of posts and colour shall be put on each side of the pallet.

Table 3: Form of delivery and packing (Bekafix® post MTS)

| Height of the post (mm) | Number of posts per pallet | Sizes of the forwarding unit L x W x H (cm) | Betafence technical drawing |
|----------------------------|----------------------------|---|-----------------------------|
| 1075 | 104 | 112 x 105 x 63,5 | NYL31P100002 |
| 1475 | 104 | 152 x 105 x 63,5 | NYL31P100004 |
| 1575 | 104 | 162 x 105 x 63,5 | NYL31P100005 |
| 1675 | 104 | 172 x 105 x 63,5 | NYL31P100006 |
| 1975 | 104 | 202 x 105 x 63,5 | NYL31P100009 |
| 2175 | 104 | 222 x 105 x 63,5 | NYL31P100011 |
| 2475 | 104 | 252 x 105 x 63,5 | NYL31P100012 |
| 2575 | 78 | 262 x 105 x 53 | NYL31P100014 |
| 3175 | 78 | 322 x 105 x 53 | NYL31P100015 |
| 2775 (*) | 78 | 280 x 105 x 53 | NYL31P100017 |

(*) In combination with panels 2m height and concrete plate

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6 Accessories

6.1 Post cap

Each post is provided with a cap made out of UV resistant plastic. (PA6)



Figure 2: Post cap

Dimensions and tolerances, see technical drawing available on request

6.2 Fixators

There are two types of fixators:

- The fixators are made out of bare steel (S235) and afterwards hot dip galvanized or KTL & polyester coated or hot dip galvanized & polyester coated.
- Made out of plastic (PA6)

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| Table 4: Fixators for Nylofor® and Zenturo® Urban panels | | | |
|---|---------|--------------------|-----------------------------|
| KTL and polyester coated | | | |
| Application | Sapcode | Colour | Betafence technical drawing |
| 3D / 3D pro / 3D pro XL / 3D Multi / 3D Essential / F/ 2D / Zenturo® Urban panels | 7029060 | RAL 6005 | NYL34P000001 |
| | 7029059 | RAL 9010 | NYL34P000001 |
| | 7029058 | RAL 9005 | NYL34P000001 |
| | 7055726 | BF 7016 M | NYL34P000001 |
| | 7058831 | RAL 7030 | NYL34P000001 |
| | 7037702 | RAL 7016 | NYL34P000001 |
| Hot dip galvanized and polyester coated | | | |
| Application | Sapcode | Colour | Betafence technical drawing |
| 3D / 3D pro / 3D pro XL / 3D Multi / 3D Essential / F/ 2D / Zenturo® Urban panels | 7030784 | RAL 6005 | NYL34P000001 |
| 2D Super / 2D Super XL / 3D Super panels | 7038651 | RAL 6005 | NYL34P000022 |
| | 7038652 | RAL 9010 | NYL34P000022 |
| | 7038653 | RAL 9005 | NYL34P000022 |
| Hot dip galvanized | | | |
| Application | Sapcode | | |
| 3D / 3D pro / 3D pro XL / 3D Multi / 3D Essential / F/ 2D / Zenturo® Urban panels | 4012544 | Hot dip galvanized | NYL34P000001 |
| 2D Super / 2D Super XL / 3D Super panels | 4016918 | Hot dip galvanized | NYL34P000022 |
| Plastic Fixator (PA6) | | | |
| 3D / 3D pro / 3D pro XL / 3D Multi / 3D Essential panels | 7009075 | RAL 6005 | NYL34P003010 |
| | 7009077 | RAL 9010 | NYL34P003010 |
| | 7009084 | RAL 9005 | NYL34P003010 |
| | 7019085 | RAL 7030 | NYL34P003010 |
| F/ 2D / Zenturo® Urban panels | 7009076 | RAL 6005 | NYL34P003011 |

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Figure 3: Fixator for 3D / 3D pro / 3D pro XL / 3D Multi / 3D Essential / F/ 2D / Zenturo® Urban panels



Figure 4: Fixator for 2D Super / 2D Super XL / 3D Super panels

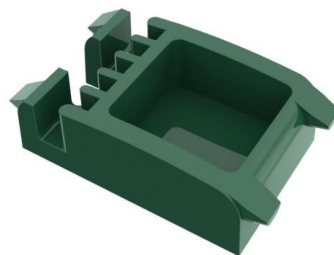


Figure 5: Fixator for 3D / 3D pro / 3D pro XL / 3D Multi / 3D Essential panels

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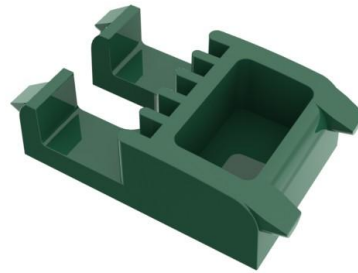


Figure 6: Plastic fixator for F/ 2D / Zenturo[®] Urban panels

Dimensions and tolerances, see technical drawing available on request.

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**Technical Data Sheet
TDS-05-04****Bekafix® Post****6.3 Base plate**

The base plate is made out of bare steel (S235), afterwards hot dip galvanized or hot dip galvanized & polyester coated.

All the holes are standard foreseen to mount the base plates on the Bekafix® posts.

Technical drawing: NYL33P000010

| Table 5 : Base plate | |
|-----------------------------|--------------------|
| Sapcode | Colour |
| 7058876 (*) | 6005 |
| 7058878 (*) | 9010 |
| 7058879 (*) | 7016 |
| 7058938 | Hot dip galvanized |

(*) 10 pieces per box



Figure 7: Base plate

Dimensions and tolerances, see technical drawing available on request.

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TDS-05-04****Bekafix® Post****6.4 Bent arm**

The bent arm is made out of bare steel (S235), afterwards hot dip galvanized and polyester coated.
All the holes are standard foreseen to mount the single and double bent arms on the Bekafix® posts.

Single bent arm :

Technical drawing: NYL34P000131

| Table 6 : Single bent arm | |
|----------------------------------|--------------------|
| Sapcode | Colour |
| 7058885 | 6005 |
| 7058887 | 9010 |
| 4025041 | Hot dip galvanized |

**Figure 8: Single bent arm**

Dimensions and tolerances, see technical drawing available on request.

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TDS-05-04****Bekafix® Post****Double bent arm :**

Technical drawing: NYL34P000132

| Table 7 : Double bent arm | |
|----------------------------------|--------------------|
| Sapcode | Colour |
| 7058892 | 6005 |
| 7058895 | 9010 |
| 4025043 | Hot dip galvanized |

**Figure 9: Double bent arm**

Dimensions and tolerances, see technical drawing available on request.

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6.5 Extension arm

The extension arm is made out of bare steel (S235), afterwards hot dip galvanized.
All the holes are standard foreseen to mount the extension arm on the Bekafix[®] posts.

Technical drawing: NYL34P000108

| Table 8 : Extension arm | |
|--------------------------------|--------------------|
| Sapcode | |
| 7060715 | Hot dip galvanized |



Figure 10: Extension arm

Dimensions and tolerances, see technical drawing available on request.

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