

Modular Security Fence System



SECURITY FENCES FOR AIRPORTS, MILITARY, POLICE, JUDICIAL SYSTEMS, TRAFFIC,
INDUSTRY, ENERGY PROVIDERS AND BORDER MANAGEMENT

Modular Security Fence System

Vario-Inline® is a standardised and modularly customizable security fence system made in Germany. Security fences are usually system fences with a minimum height of 2 m. They can be equipped with additional features such as creep under protection, growth stops, climb over protection as well as privacy screens and fence detection. There are also higher demands on the connecting elements between fence posts and panelling. They need to be vandal- and dismantle-proof. Due to the variety of fence systems, posts, panelling and accessories on the supply side and the most different security demands, standards, regulations, local factors and dimensions on the demand side, Vario-Inline® standardises similar demands, and because of the modular structure, it is enormous adaptable and expandable. These features are a basic condition in order to adjust a security system to new security situations at any time.



Task: Security fences are object barriers with a defined resistance time. Intruding these systems always means a deliberate act. The resistance time always depends on the local factors, especially on the security regime of the object security. **Example:** Security system, uncovered zone and video monitoring allow the security personnel to detect a situation of danger. The task of the security system is to keep the intruder away from the fence until the security personnel arrives at the scene.

Overcoming the security system always means the deliberate destruction of the security fence. It must never be openable by standard tools and cannot be climbed over or crawled under without visible features. Not later than during the inspection walkway a potential attack needs to be detected.

A standardised system which covers a wide range of options in the dimensions is needed during the concept phase. Here the dig under protection and the basic height of the security

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fence are defined. Depending on the local factors, resistance time and legal requirements the panelling as roll mesh or welded wire mesh is selected. The climb over protection is mounted and adjusted at the expected attack side. In case of a changing security situation, there should be the opportunity to adjust the security system during the operating phase.

Possible options are the replacement or additional reinforcement of the panelling and/ or the replacement or modification of the climb over protection without structural changes at posts and foundation.



Description of the Post Profile

The fence post consists of a closed construction profile with two facing, continuously integrated halfen-shaped mounting flanges and allows the optional inclusion of fence accessories according to the mounting principle of a screw-clamp connection.

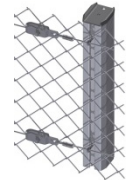
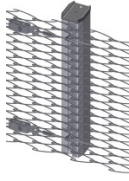
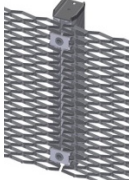




The usual treatment by drilling and thread cutting is not necessary. The screw-clamp connection can always be realised in the dimensions M6, M8 and M10.

Due to the variety of application possibilities there is a construction profile that optimises storage and provision efforts. Because of the opposite arrangement of two mounting grooves, which can always be equipped from the front (no inserting necessary), there are unlimited options for mounting. So, the fence panelling can be mounted on the outside and, additional components like strut straps, beackets, isolators, fence grounding, the double panelling or the flange-mounting of another VIP (Vario-Inline-Post) profile (for expanding the section modulus) can take place.

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| Profile Data – Post Profile | VIP 90 | 2xVIP 90 = VIP 180 |
|---|--|--|
| Material according to DIN EN 10346 and 10143 | FVZS250GD+ZM300AC | FVZS250GD+ZM300AC |
| Hot-Dip-Refined Corrosion Protection [µm] | zinc-magnesium 30-35 | zinc-magnesium 30-35 |
| Organic Coating according to RAL [µm] | polyester powder coating with wet chemical pre-treatment 80 | polyester powder coating with wet chemical pre-treatment 80 |
| Corrosive Category EN 12944 | C3 long | C3 long |
| Profile Dimensions [mm] | 90 x 70 | 180 x 70 |
| Wall Thickness [mm] | 2 | 2 |
| Profile Cross-Sectional Area [mm ²] | 581.60 | 1,163.20 |
| Section Modulus Wy [cm ³] | 18.4 | 54.6 |
| Section Modulus Wz [cm ³] | 13.3 | 26.3 |
| Second Moment of Area Iy [cm ⁴] | 82.58 | 486.26 |
| Second Moment of Area Iz [cm ⁴] | 46.45 | 89.70 |
| Weight [kg/m] | 6.197 | 12.40 |
| Torsion °/m | 1 | 1 |
| Steel grade | S250 | S250 |
| Maximum Tensile Strength [MPa] | 250 | 250 |
| Maximum Bending Moment M _{Bmax} [kNm] (weight) | 4.50 (approx. 450 kg) | 13.65 (approx. 1.38 t) |
| Number of Mounting Grooves at the front/at the back | 1/1 | 1/1 |
| Width of Groove Opening [mm] | 14 | 14 |
| Groove, Thickness of Clamping Area [mm] | 4.9 | 4.9 |
| Groove Cross-Section (clamping space) [mm] | 26 x 13.5 | 26 x 13.5 |
| Package size [Bundle, each xx pieces] | 40 (5 rows, 8 pieces each) | 16 (2 rows, 8 pieces each) |
| Bundle Cross-Section Height x Width [mm] | 560 x 600 | 470 x 600 |
| Bundle packaging [mm] | bottom and top 50x80 mm, lateral boards S=18 mm, plastics layer pads s=1.5, L=555 mm Polywell bottom and lid 60/565/60 | bottom and top 50x80 mm, lateral boards S=18 mm, plastics layer pads s=1.5, L=555 mm Polywell bottom and lid 60/565/60 |

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| Fence Panelling | Description | View | Type |
|---|--|---|----------|
| Wire Mesh | Wire mesh: ^{1,2} 50x50xØ3.1 mm crapal ^{1,2} 50x50xØ3.0/3.5mm sintered ³ 50x50xØ3.5/4.0mm sintered |  | 1 |
| Diamond Wire Mesh Securi-Wire | Diamond Wire Mesh: ^{1,2} 15x50xØ2.5mm crapal ^{1,2} 15x50xØ2.5/3.0mm sintered |  | 2 |
| Expanded Metal Mesh Securiflex | Expanded Metal Mesh ^{1,2} 76x35x3x3mm hot-dip galvanised 62x26x3x3mm hot-dip galvanised optionally powder coated |  | 3 |
| 3D-Safety Wire Mesh 3D-Securipaneel | Profiled Safety Wire Mesh ^{1,2} 12.7x76.2xØ4/6mm profiles on the upper and lower edges for im- proving the transverse rigidity |  | 4 |
| Double Bar Wire Mesh Standard Mesh with Joint Overlap | Double Bar Wire Mesh: ^{1,2} 50x200xØ8/6/8mm, edge mesh for high-strength and offset-free overlapping of the mesh: 70x200xØ8/6mm |  | 5 |
| Double Bar Wire Mesh Standard Mesh | Double Bar Wire Mesh: ^{1,2} 50x200xØ8/6/8mm |  | 6 |
| Double Bar Wire Mesh Tight Mesh | Double Bar Wire Mesh: ^{1,2} 25x200xØ8/6/8mm |  | 7 |

¹ Construction Standards for German Authority Properties

² Construction Standards ICAO Appendix 29

³ Construction Standards for US Authority Properties

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1

Fence Type 1 Wire Mesh Fence, standard mesh 50x50 mm according to the standards for authority properties

Applicable for:

airports, military barracks, depots, property borders in general

Advantages:

- high wire tensile strength due to cold forming, minimum 500 N/mm²
- endless system, the mesh is elongated endlessly by coils
- no butt joints, any acting forces transfer to the neighbouring posts
- post spaces can be varied equally sized according to the property border, minimum 2.50 up to maximum 3.0 m
- fence system can adopt to uneven ground
- mesh heights from 2.0 to 4.0 m possible
- mesh is hard to overcome (without tools) due to its instability and missing treads within the mesh structure

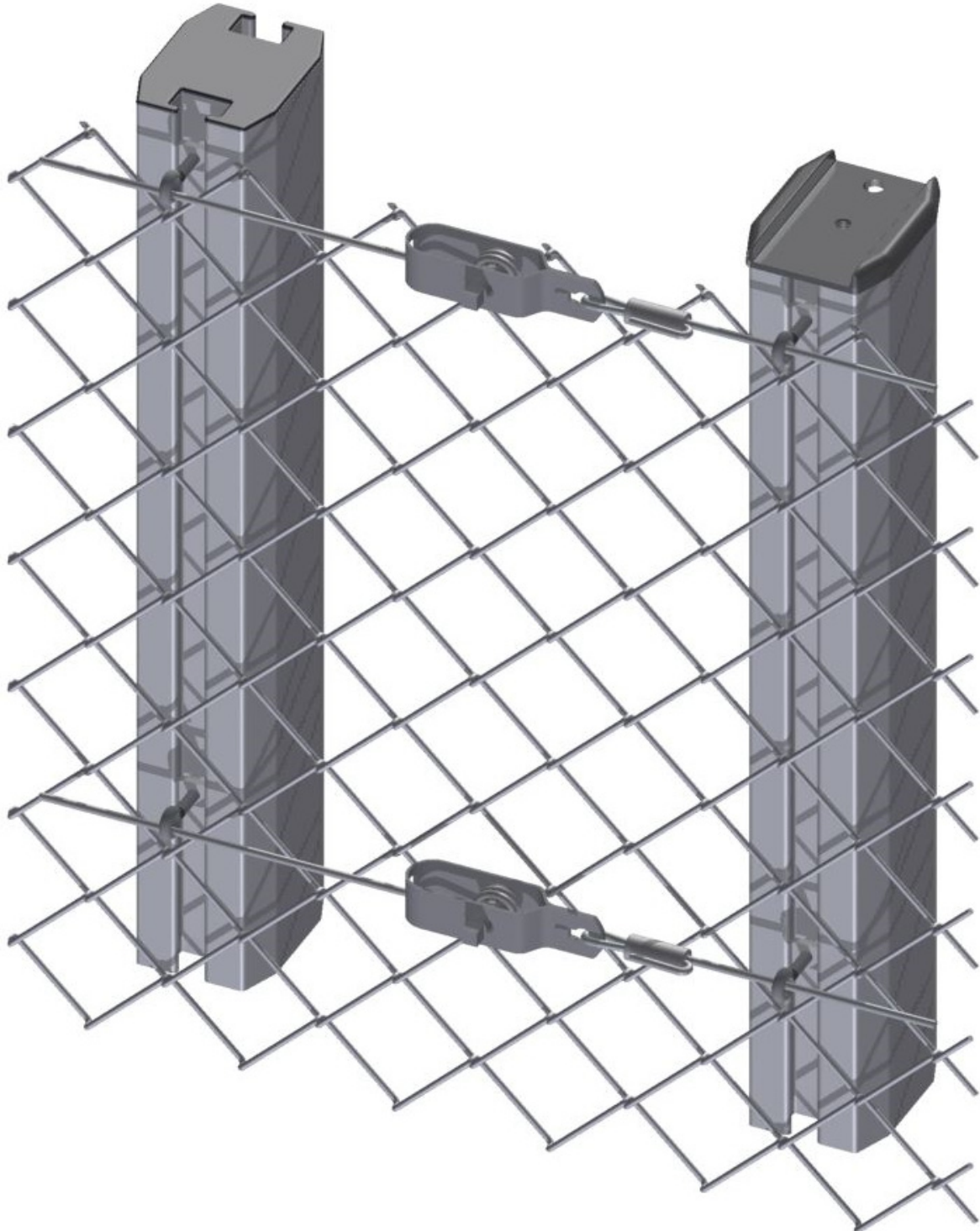
Disadvantages:

- resistance time of the fence system < 2 minutes for manhole by tool (large side cutter)

Specifications:

| Fence Height without Climb Over Protection | 2,100 mm | 2,500 mm | 3,000 mm | 3,500 mm | 4,000 mm |
|--|------------------|------------------|------------------|------------------|------------------|
| Post Profile | VIP90/70 | VIP90/70 | VIP90/70 | VIP90/70 | VIP90/70S |
| Post Spacing | max. 3.0m | max. 3.0m | max. 2.50m | max 2.50 m | max 2.50 m |
| Tension Wire Bracket | VIP90-H2 | VIP90-H2 | VIP90-H2 | VIP90-H2 | VIP90-H2 |
| Number per Post | 5 | 6 | 7 | 8 | 9 |
| Number Tension Wires | 5 | 6 | 7 | 8 | 9 |
| Start / Struts | VIP90-T18/1 | VIP90-T18/1 | VIP90-T18/1 | VIP90-T18/3 | VIP90-T18/3 |
| Inner Corners | VIP90-T18/2 | VIP90-T18/2 | VIP90-T18/2 | VIP90-T18/6 | VIP90-T18/6 |
| Corners | 2 | 2 | 2 | 6 | 6 |
| Middle Anchoring | 2 | 2 | 2 | 4 | 4 |
| Back Anchoring | 2 | 2 | 2 | 6 | 6 |
| Foundation Size | Ø35/90cm | Ø40/90cm | Ø50/90cm | Ø50/110cm | Ø60/100cm |
| Clamping Length | 0.75x90cm | 0.75x90cm | 0.75x90 cm | 0.75x100 cm | 0.75x100cm |
| Concrete Quality minimum | C20/25 XC2 | C20/25 XC2 | C20/25 XC2 | C20/25 XC2 | C20/25 XC2 |
| Grain Size | 0-16 | 0-16 | 0-16 | 0-16 | 0-16 |
| Consistence | F1, stiff | F1, stiff | F1, stiff | F1, stiff | F1, stiff |
| Climb Over Protection | a, b, c, e, f, g | a, b, c, e, f, g | a, b, c, e, f, g | a, b, c, e, f, g | a, b, c, e, f, g |

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2

Fence Type 2 Diamond Wire Mesh Fence, security mesh 15x50 mm according to the standards for authority properties

Applicable for:

airports, military barracks, depots, property borders in general

Advantages:

- high wire tensile strength due to cold forming, minimum 500 N/mm²
- endless system, the mesh is elongated endlessly by coils
- no butt joints, any acting forces transfer to the neighbouring posts
- post spaces can be varied equally sized according to the property border, minimum 2.25 up to maximum 2.5 m
- fence system can adopt to uneven ground
- higher penetration resistance, 70 cuts necessary for one manhole
- mesh is hard to overcome (without tools) due to its instability and missing treads within the mesh structure and the reduced mesh height of 15 mm
- very tight mesh structure prevents the passing-through of objects

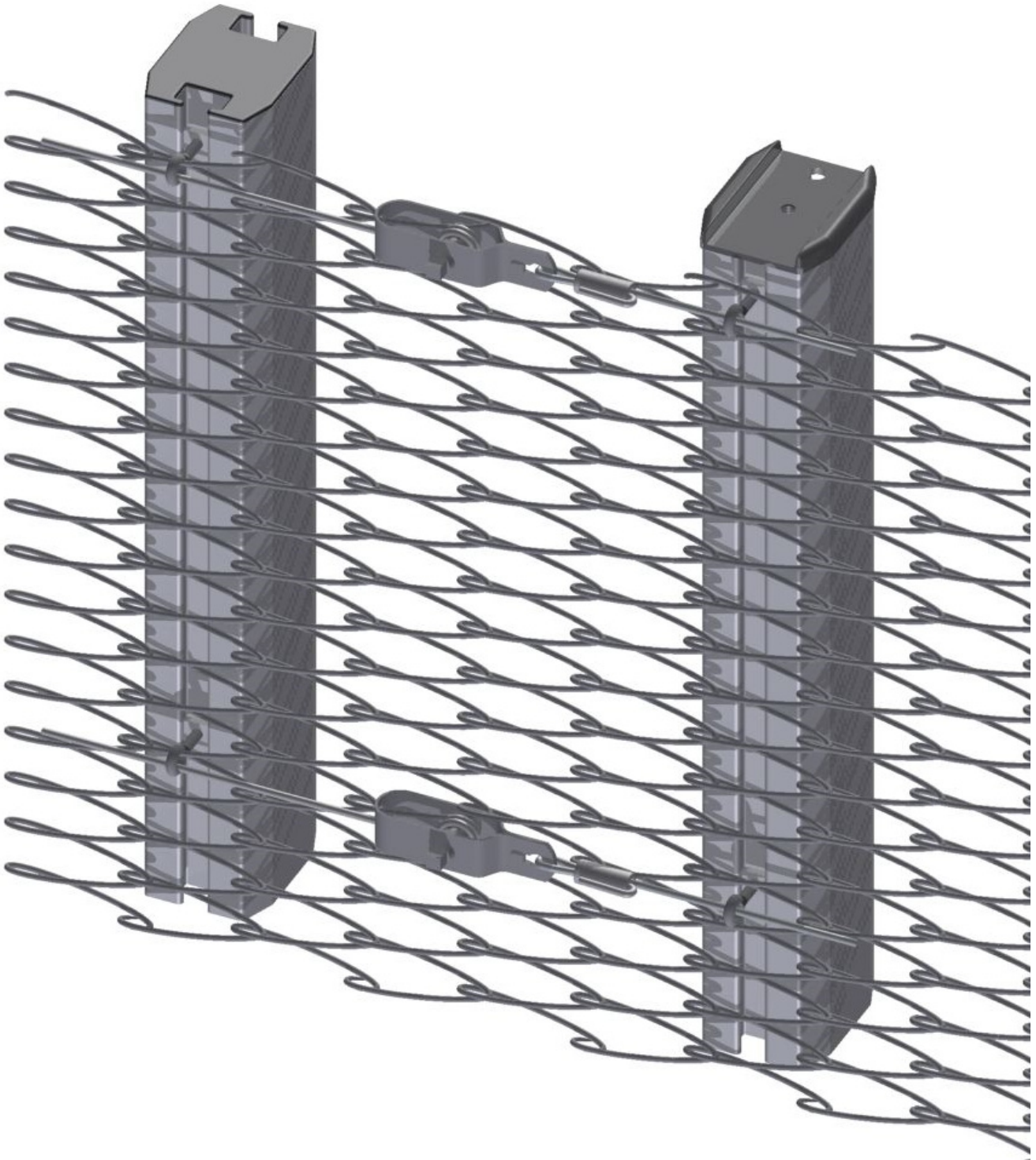
Disadvantages:

- mesh heights limited to a maximum of 2.50m

Specifications:

| | | |
|--|----------------|----------------|
| Fence Height without Climb Over Protection | 2,100 mm | 2,500 mm |
| Post Profile | VIP90/70 | VIP90/70 |
| Post Spacing | maximum 2.50 m | maximum 2.50 m |
| Tension Wire Bracket | VIP90-H2 | VIP90-H2 |
| Number per Post | 5 | 6 |
| Number Tension Wires | 5 | 6 |
| Start / Struts | VIP90-T18/1 | VIP90-T18/1 |
| Inner Corners | VIP90-T18/2 | VIP90-T18/2 |
| Corners | 2 | 2 |
| Middle Anchoring | 2 | 2 |
| Back Anchoring | 2 | 2 |
| Foundation Size | Ø40/90cm | Ø50/90cm |
| Clamping Length | 0.75x90cm | 0.75x90cm |
| Concrete Quality minimum | C20/25 XC2 | C20/25 XC2 |
| Grain Size | 0-16 | 0-16 |
| Consistence | F1, stiff | F1, stiff |
| | | |

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3

Fence Type 3 Expanded Metal Mesh, standard mesh 76x35x3x3 mm according to the standards for authority properties

Applicable for:

airports, depots, justice, aerospace industry, property borders in general

Advantages:

- the screwed overlapping of the meshes causes the forces to be transferred to the neighbouring posts
- post spaces can be varied equally sized according to the property border, minimum 2.00 up to maximum 2.25 m
- fence system can adopt to uneven ground, stepping not necessary
- panelling heights possible from 2.00 up to 5.50 m one-piece
- expanded metal mesh is hard to overcome due to its sharp-edged diamond geometrics and missing treads within the mesh structure (without tools)
- forming of flexible fence crowns by self-supporting or angled protrusion of expanded metal mesh

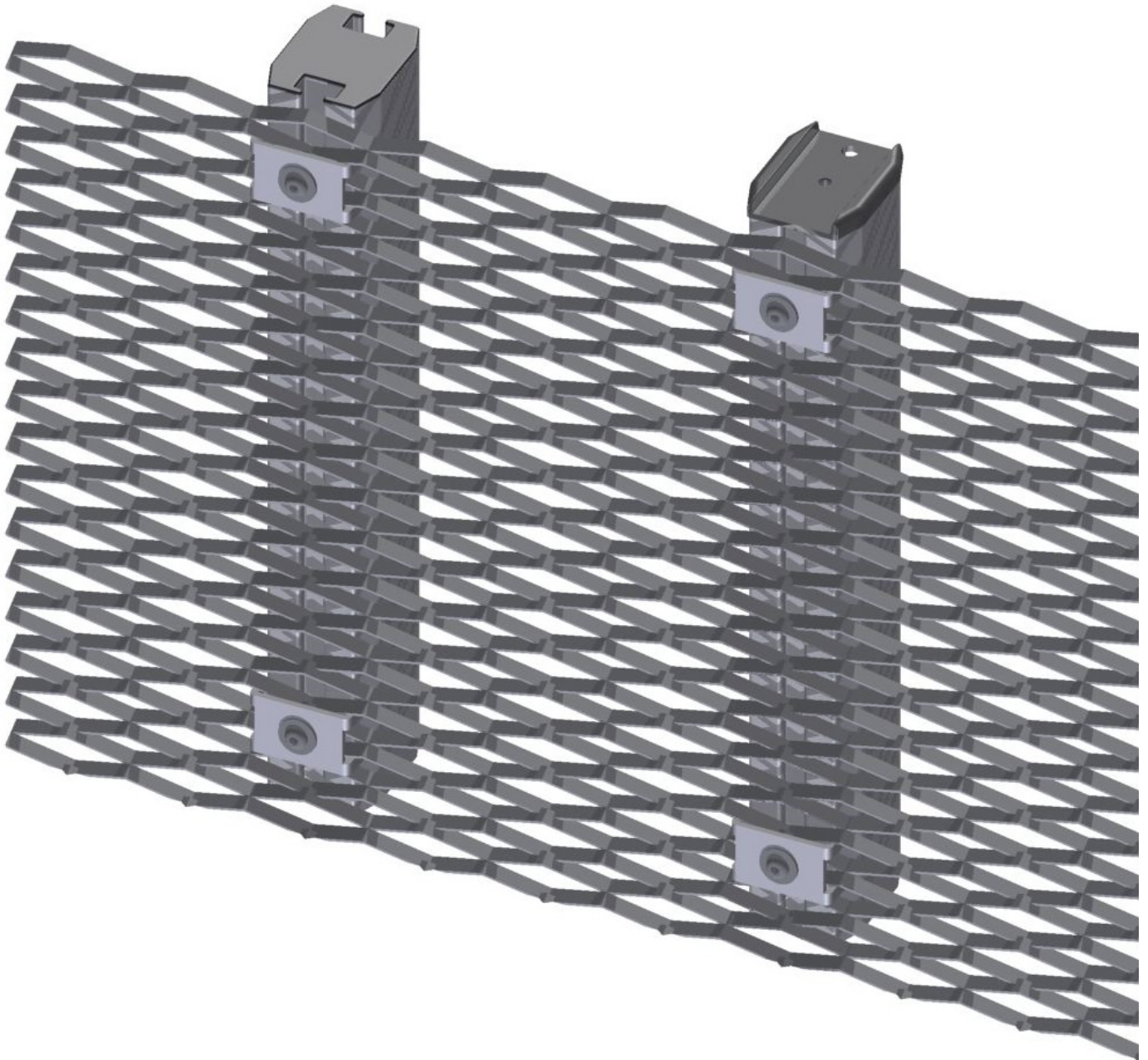
Disadvantages:

- resistance time of the fence system < 5 minutes for manhole by tool (large side cutter)

Specifications:

| Fence Height without Climb Over Protection | 2,000 mm | 2,500 mm | 3,000 mm | 4,500 mm | 5,500 mm |
|--|------------------------------|------------------------------|------------------------------|------------------------------|------------------------------|
| Post Profile | VIP90/70 | VIP90/70 | VIP90/70 | VIP180/70 | VIP180/70 |
| Clamping Device | VIP90-H6 | VIP90-H6 | VIP90-H6 | VIP90-H6 | VIP90-H6 |
| Number per Post | 6 | 7 | 8 | 12 | 14 |
| Post Spacing | 2,250mm | 2,250mm | 2,250mm | 2,250mm | 2,250mm |
| Foundation Size | Ø40/90cm | Ø40/100cm | Ø50/100cm | Ø80/110cm 140x70x80cm | Ø60/100cm 160x80x80 |
| Clamping Length | 0.75x90cm | 0.75x100cm | 0.75x100 cm | 0.75x100 cm | 0.75x100cm |
| Concrete Quality minimum | C20/25 XC2 | C20/25 XC2 | C20/25 XC2 | C25/30 XC4 | C25/30 XC4 |
| Grain Size | 0-16 | 0-16 | 0-16 | 0-32 | 0-32 |
| Consistence | F1, stiff | F1, stiff | F1, stiff | F3 | F3 |
| Optional Climb Over Protection | a, b, c, e, f, g, j, k, l | a, b, c, e, f, g, j, k, l | a, b, c, e, f, g, j, k, l | a, b, c, e, f, g, j, k, l | a, b, c, e, f, g, j, k, l |

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4

Fence Type 4 3D–Securipaneel, security mesh 12.7x76.2x4x6 mm according to the standards for authority properties

Applicable for:

airport, depots, justice, traffic, energy providers, property borders in general

Advantages:

- high wire tensile strength due to cold forming, minimum 500 N/mm²
- panelling heights possible from 2.00 up to 3.00 m one–piece
- no treads in panelling
- tight mesh structure, finger intrusion not possible
- not conquerable without tools
- >70 cuts necessary for manhole
- spider- clamping device RC3
- tight mesh structure prevents the passing–through of objects

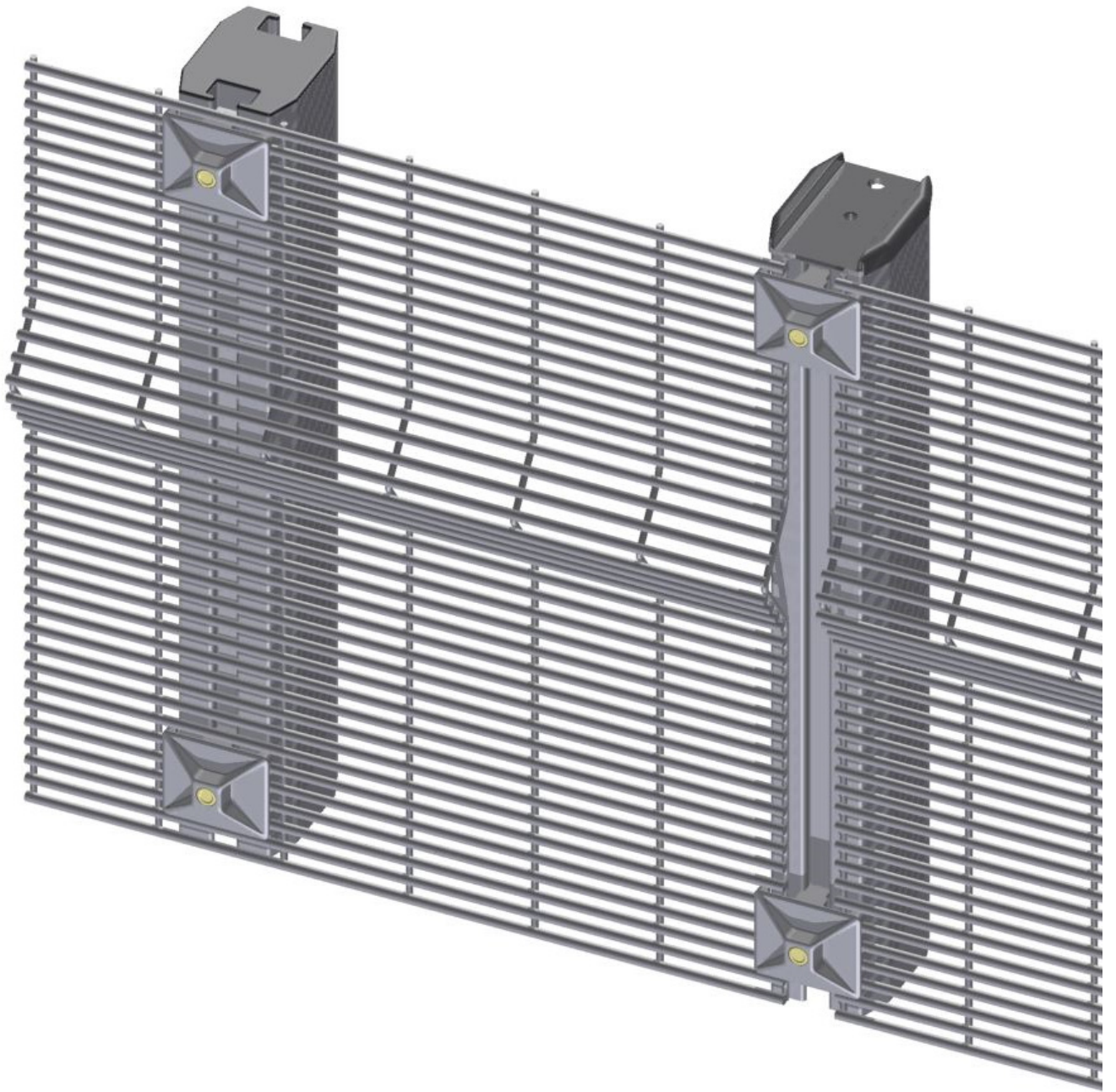
Disadvantages:

- butt joint on the post
- terrain compensation only possible by stepping

Specifications:

| Fence Height without Climb Over Protection | 2,100 mm | 2,400 mm | 3,000 mm |
|--|---------------------------|---------------------------|---------------------------|
| Post Profile | VIP90/70 | VIP90/70 | VIP90/70 S |
| Clamping Device | VIP90–H9 | VIP90–H9 | VIP90–H9 |
| Number per Post | 6 | 7 | 8 |
| Post Spacing | 2,550mm | 2,550mm | 2,550mm |
| Starting Post | 2,300mm | 2,300mm | 2,300mm |
| Foundation Size | Ø40/90cm | Ø50/100cm | Ø60/100cm |
| Clamping Length | 0.75x90cm | 0.75x100cm | 0.75x100 cm |
| Concrete Quality minimum | C20/25 XC2 | C20/25 XC2 | C20/25 XC2 |
| Grain Size | 0–16 | 0–16 | 0–16 |
| Consistence | F1, stiff | F1, stiff | F1, stiff |
| Optional Climb Over Protection | a, b, c, e, f, g, j, k, l | a, b, c, e, f, g, j, k, l | a, b, c, e, f, g, j, k, l |

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5

Fence Type 5 Double Bar Wire Mesh with Joint Overlaps, standard mesh 50x200 mm according to the standards for authority properties

Applicable for:

airport, military barracks, depots, justice, traffic, energy providers, property borders in general

Advantages:

- high wire tensile strength due to cold forming, minimum 500 N/mm²
- the screwed overlapping of the meshes causes the forces to be transferred to the neighbouring posts, high-strength joint
- fence system can adopt to uneven ground up to a slope of 2.0 %, stepping not necessary
- destruction only possible by means of bolt cutter and/ or cut-off saw
- resistance time > 5 minutes
- clamping device RC3

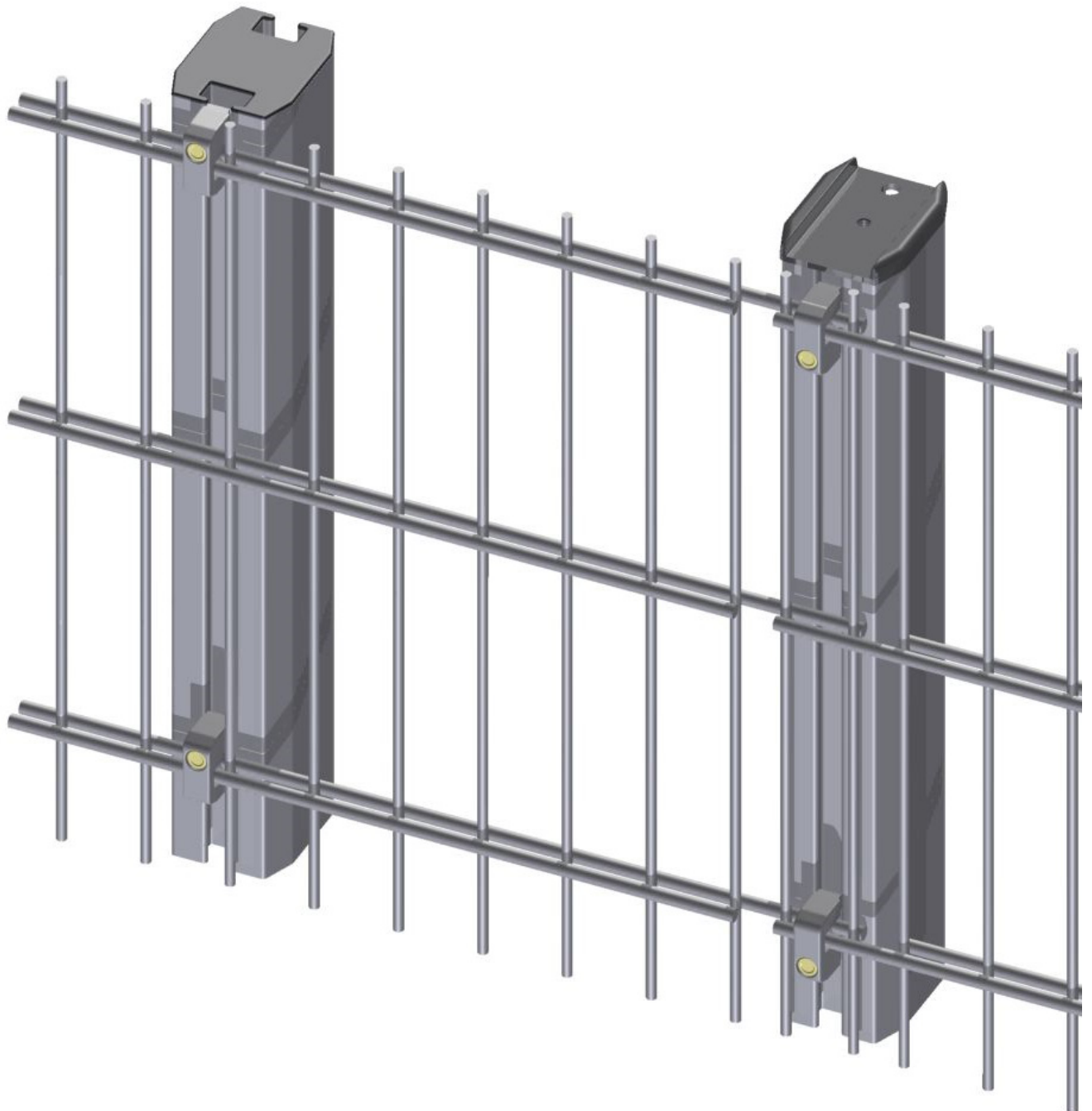
Disadvantages:

- mesh intrusion by finger → pulling up is possible
- mesh intrusion by foot → climbing up is possible

Specifications:

| Fence Height without Climb Over Protection | 2,030 mm | 2,230 mm | 2,430 mm |
|--|------------------------------|------------------------------|------------------------------|
| Post Profile | VIP90/70 | VIP90/70 | VIP90/70 |
| Clamping Device | VIP90-H7 | VIP90-H7 | VIP90-H7 |
| Number per Post | 5 | 6 | 7 |
| Post Spacing | 2,500mm | 2,500mm | 2,500mm |
| Starting Post | 2,300mm | 2,300mm | 2,300mm |
| Foundation Size | Ø35/90cm | Ø40/90cm | Ø40/100cm |
| Clamping Length | 0.75x90cm | 0.75x90cm | 0.75x100 cm |
| Concrete Quality mini-mum | C20/25 XC2 | C20/25 XC2 | C20/25 XC2 |
| Grain Size | 0-16 | 0-16 | 0-16 |
| Consistence | F1, stiff | F1, stiff | F1, stiff |
| Optional Climb Over Protection | a, b, c, d, e, f, g, j, k, l | a, b, c, d, e, f, g, j, k, l | a, b, c, d, e, f, g, j, k, l |

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6

Fence Type 6 Double Bar Wire Mesh, standard mesh 50x200 mm according to the standards for authority properties

Applicable for:

traffic, energy providers, property borders in general

Advantages:

- high wire tensile strength due to cold forming, minimum 500 N/mm²
- destruction only possible by means of bolt cutter and/ or cut-off saw
- resistance time > 5 minutes
- clamping device RC3

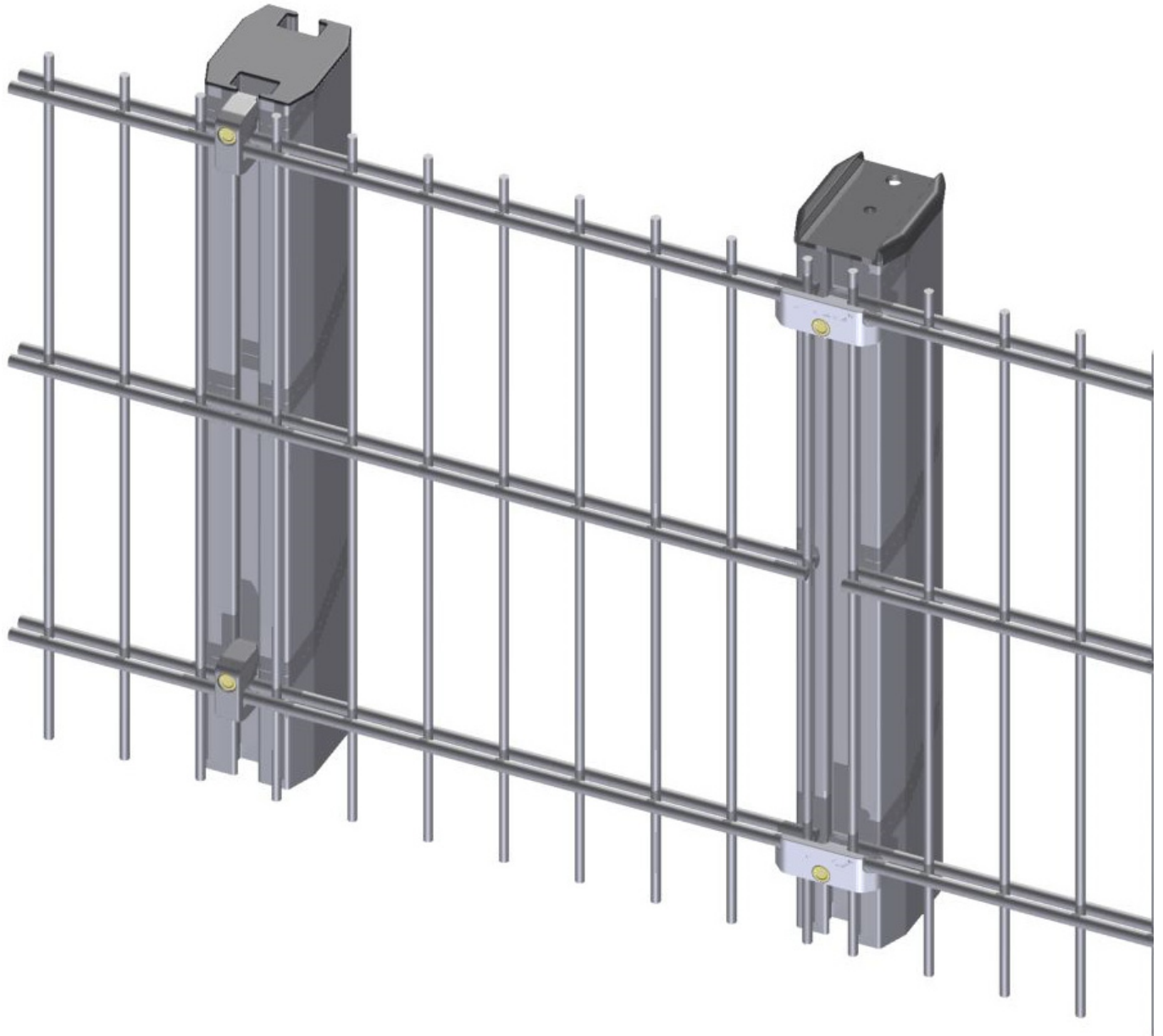
Disadvantages:

- mesh intrusion by finger → pulling up is possible
- mesh intrusion by foot → climbing up is possible
- terrain compensation only possible by stepping
- due to the butt joints on the post forces only act on the outer vertical wire ends

Specifications:

| Fence Height without Climb Over Protection | 2,030 mm one-piece | 2,230 mm one-piece | 2,430 mm one-piece | 3,030 mm one-piece | 4,080 mm two-piece |
|--|------------------------------|------------------------------|------------------------------|------------------------------|------------------------------|
| Post Profile | VIP90/70 | VIP90/70 | VIP90/70 | VIP90/70 | VIP90/70 S |
| Clamping Device | VIP90-H8 | VIP90-H8 | VIP90-H8 | VIP90-H8 | VIP90-H7 |
| Clamping Device Mounting Areas | VIP90-H7 | VIP90-H7 | VIP90-H7 | VIP90-H7 | VIP90-H7 |
| Number per Post | 5 | 6 | 7 | 8 | 10 |
| Post Spacing | 2,530mm | 2,530mm | 2,530mm | 2,530mm | 2,530mm |
| Starting Post | 2,300mm | 2,300mm | 2,300mm | 2,300mm | 2,300mm |
| Foundation Size | Ø35/90cm | Ø40/90cm | Ø40/100cm | Ø50/100cm | Ø60/100cm |
| Clamping Length | 0.75x90cm | 0.75x90cm | 0.75x100 cm | 0.75x100cm | 0.75x100 cm |
| Concrete Quality minimum | C20/25 XC2 | C20/25 XC2 | C20/25 XC2 | C20/25 XC2 | C20/25 XC2 |
| Grain Size | 0-16 | 0-16 | 0-16 | 0-16 | 0-16 |
| Consistence | F1, stiff | F1, stiff | F1, stiff | F1, stiff | F1, stiff |
| Optional Climb Over Protection | a, b, c, d, e, f, g, j, k, l | a, b, c, d, e, f, g, j, k, l | a, b, c, d, e, f, g, j, k, l | a, b, c, d, e, f, g, j, k, l | a, b, c, d, e, f, g, j, k, l |

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7

Fence Type 7 Double Bar Wire Mesh, tight mesh 25x200 mm according to the standards for authority properties

Applicable for:

traffic, energy providers, depots, property borders in general

Advantages:

- high wire tensile strength due to cold forming, minimum 500 N/mm²
- destruction only possible by means of bolt cutter and/ or cut-off saw
- tight mesh structure prevents the passing-through of objects
- resistance time > 5 minutes
- clamping device RC3

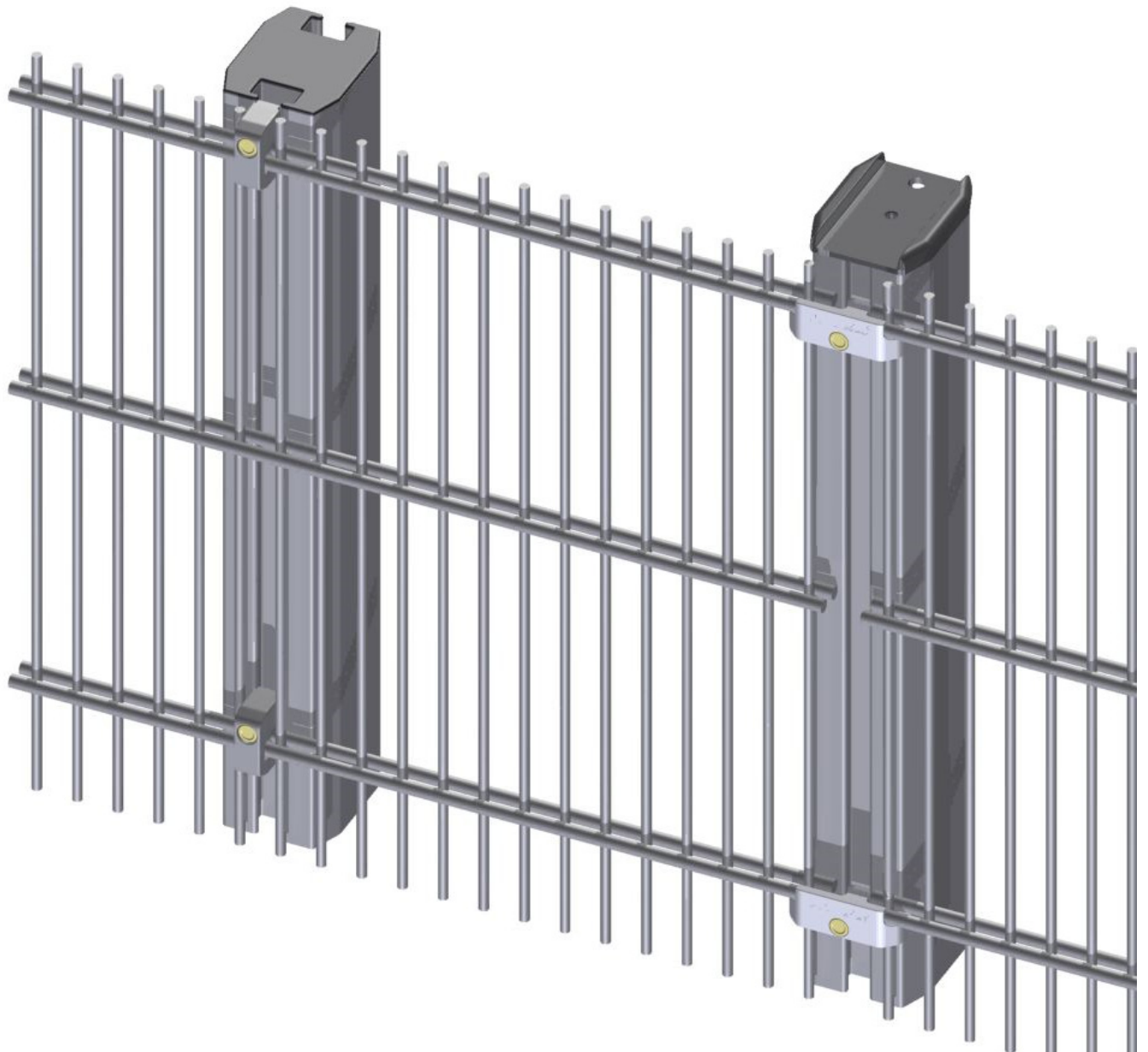
Disadvantages:

- mesh intrusion by finger → pulling up is possible
- terrain compensation only possible by stepping
- due to the butt joints on the post forces only act on the outer vertical wire ends


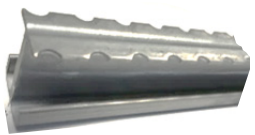


Specifications:

| Fence Height without Climb Over Protection | 2,030 mm one-piece | 2,230 mm one-piece | 2,430 mm one-piece | 3,030 mm one-piece | 4,080 mm two-piece |
|--|------------------------------|------------------------------|------------------------------|------------------------------|------------------------------|
| Post Profile | VIP90/70 | VIP90/70 | VIP90/70 | VIP90/70 | VIP90/70 S |
| Clamping Device | VIP90-H8 | VIP90-H8 | VIP90-H8 | VIP90-H8 | VIP90-H7 |
| Clamping Device Mounting Areas | VIP90-H7 | VIP90-H7 | VIP90-H7 | VIP90-H7 | VIP90-H7 |
| Number per Post | 5 | 6 | 7 | 8 | 10 |
| Post Spacing | 2,530mm | 2,530mm | 2,530mm | 2,530mm | 2,530mm |
| Starting Post | 2,300mm | 2,300mm | 2,300mm | 2,300mm | 2,300mm |
| Foundation Size | Ø35/90cm | Ø40/90cm | Ø40/100cm | Ø50/100cm | Ø60/100cm |
| Clamping Length | 0.75x90cm | 0.75x90cm | 0.75x100 cm | 0.75x100cm | 0.75x100 cm |
| Concrete Quality minimum | C20/25 XC2 | C20/25 XC2 | C20/25 XC2 | C20/25 XC2 | C20/25 XC2 |
| Grain Size | 0-16 | 0-16 | 0-16 | 0-16 | 0-16 |
| Consistence | F1, stiff | F1, stiff | F1, stiff | F1, stiff | F1, stiff |
| Optional Climb Over Protection | a, b, c, d, e, f, g, j, k, l | a, b, c, d, e, f, g, j, k, l | a, b, c, d, e, f, g, j, k, l | a, b, c, d, e, f, g, j, k, l | a, b, c, d, e, f, g, j, k, l |









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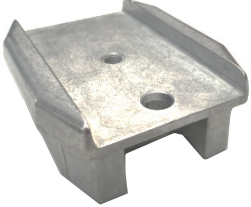


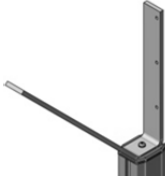




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| Important accessories | Description | View |
|--|--|---|
| VIP90-Ku | plastic lamellae plugs, suitable cover for open profile ends |  |
| VIP90-T18 | ribbed T-flange as slot for the post groove for fastening roll mesh |  |
| VIP90-H1 | dismantle-proof cranked tension wire bracket M6 V2/V4A |  |
| VIP90-H2 | dismantle-proof tension wire or barbed wire bracket M6 V2/V4A |  |
| VIP90-H4, H5 | coupling for fence struts Ø 42.4 respectively 48.3 mm made of aluminium die casting / stainless steel M8 |  |
| VIP90-H6 | clamping device for expanded metal, hot-dip galvanised / stainless steel, dismantle and vandalism - proof due to shear bolt M8 |  |
| VIP90-H7 RC3 according to DIN EN 1627 | clamping device for double and U-bar wire mesh made of zinc die casting, enclosure of the horizontal bars, recessed screwing, press-in safety cover |  |
| VIP90-H8 RC3 according to DIN EN 1627 | clamping device for double bar wire mesh made of zinc die casting, enclosure of the vertical and horizontal bars, recessed screwing, press-in safety cover |  |
| VIP90-H9 RC3 according to DIN EN 1627 | spider-clamping device for 3D-security wire mesh made of zinc die casting, enclosure of the vertical and horizontal bars, recessed screwing, press-in safety cover |  |

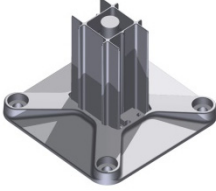

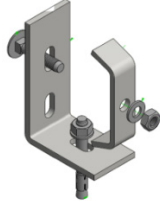



Modular Security Fence System

| Important accessories | Description | View |
|-----------------------|--|---|
| VIP90-H10 | C-clamp V2A Ø3.5mm |  |
| VIP90-H11 | clamping device for corner connections V2A/V4A, for bar wire mesh, including carriage bolt M8x25 and shear nut |  |
| VIP90-M6 | slide nut V4A for mesh-, tension- and barbed wire brackets |  |
| VIP90-M8 | slide nut V4A, for mesh brackets, cheese-head screws and strut coupling |  |
| VIP90-M10 | slide nut V4A, for grounding components or rope attachment |  |
| VIP90-S6 | round-head screw hexagon socket V2A M6x20/20, ISO 7380-1, for clamping device H7, H8, H9 |  |
| VIP90-S8-oneway | round-head screw Oneway-drive V2A M8x25/25, for clamping device H6 and VIP90-ZN |  |
| VIP90-Blitz | hot-dip galvanised ground connection for round wire 8-10mm, screw connection V2A/V4A 2xM10 |  |

Modular Security Fence System

| Climb Over Protection | Description | View | Type |
|--|--|---|----------|
| VIP90-ZN | zinc die casting adapter for the climb over protection including twist protection and connection thread, dismantle-proof screw Oneway V2A M8 |  | |
| VIP90-FL50/8 mm, 80+500 mm | climb over protection: one-sided outrigger 45°x500 mm, 3 drills for barbed wire, 1 drill adapter |  | a |
| VIP90-Y-FL50/8 mm, 500+80+500 mm | climb over protection: equal-sided Y-outrigger 2x 45°x500 mm, 6 drills for barbed wire, 1 drill adapter |  | b |
| VIP90-V-FL50/8 mm, 300+40+300 mm | climb over protection: two-sided outrigger 2x 45°x500 mm, 6 drills for barbed wire, 1 drill adapter |  | c |
| VIP90-V-FL50/8 mm, 80+500 mm | climb over protection: V-outrigger 2x45°x300 mm, 2 drills for clip bolt, 1 drill adapter, for assembly of 90° angled grilles |  | d |
| VIP90-Sickle S1-FL50/8 mm, radius 490x750 mm | climb over protection: sickle outrigger S1, r490 mm, 4 drills for barbed wire, 1 drill adapter |  | e |
| VIP90-Sickle S2-FL50/8 mm, radius 400x750 mm | climb over protection: sickle outrigger S2, r400 mm, 4 drills for barbed wire, 1 drill adapter |  | f |
| VIP90-Sickle S3-FL50/8 mm, radius 345x750 mm | climb over protection: sickle outrigger S3, r345 mm, 4 drills for barbed wire, 1 drill adapter |  | g |

Modular Security Fence System

| Other accessories | Description | View |
|---|--|---|
| Zinc die casting adapter for the baseplate Varioinline post | zinc die casting adapter for the baseplate 200x200 mm; pin length 250 mm, 4 holes for stainless steel bracket, carriage bolt M12 |  |
| Levering protection for un-surfaced grounds for all roll meshes | ground anchors L40/40/5x500mm, hot-dip galvanised, side uprights each 3x notched, sharpened at the bottom, with drill for clamping device on top |  |
| Levering protection, surfaced grounds for all types of mesh | L 95/75/4mm with 3 slotted holes Ø 9.5x25 mm stainless steel bracket, carriage bolt and shear nut V2A/V4A M8 optionally powder coated |  |
| Barbed Wire on Reels | barbed wire, two-wire, spikes 4 pointy, tightly placed 75 mm, hot-dip alloy: zinc-aluminium [] Ø 1.7 mm [] Ø 2.5 mm |  |
| Tension wire in Bundles | tension wire BfR Ø 3.8mm, crapal BfR Ø 3.5/4.0mm, sintered US Ø 4.0/4.5mm, sintered |  |
| Tension Wire, Type Barrier in Bundles Concertina | tension wire, 56 windings, ring pairs 5x clamped, barrel core 1,400 N/mm ² , sheet thickness 0.5mm, sizes: 1=980, 2=800, 3=690 mm blade types: S, SZ, Z, ZL quality blade strips: galvanised, galvanised and tarred, stainless steel |  |
| Turnbuckle for wires | turnbuckle size 2, 100mm long roll made of cast steel, hot-dip galvanised, optionally powder coated |  |

Modular Security Fence System

Climb Over Protection for Barbed Wires

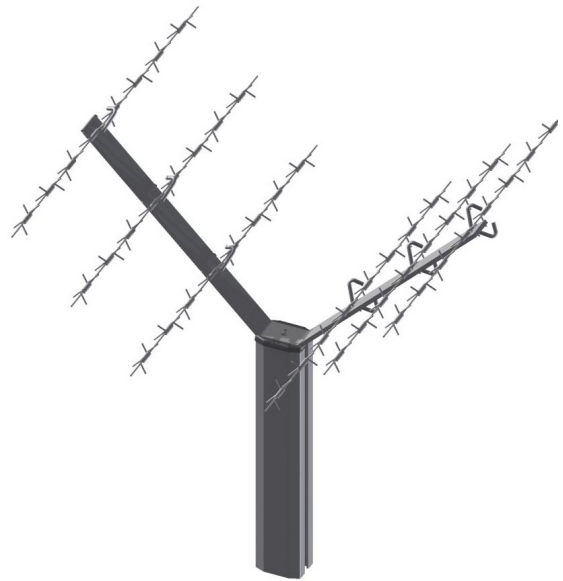
Version a)

One-sided outrigger, made of flat steel



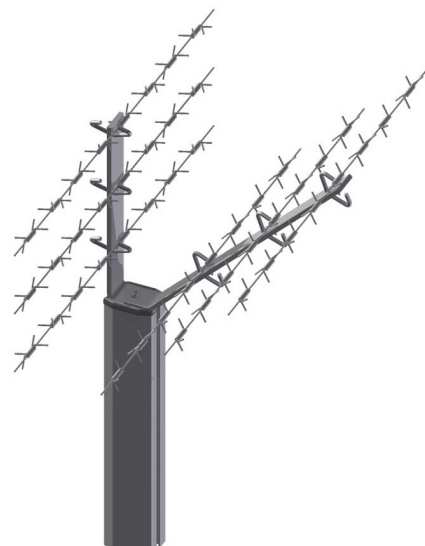
Version b)

Y- outrigger, made of flat steel



Version c)

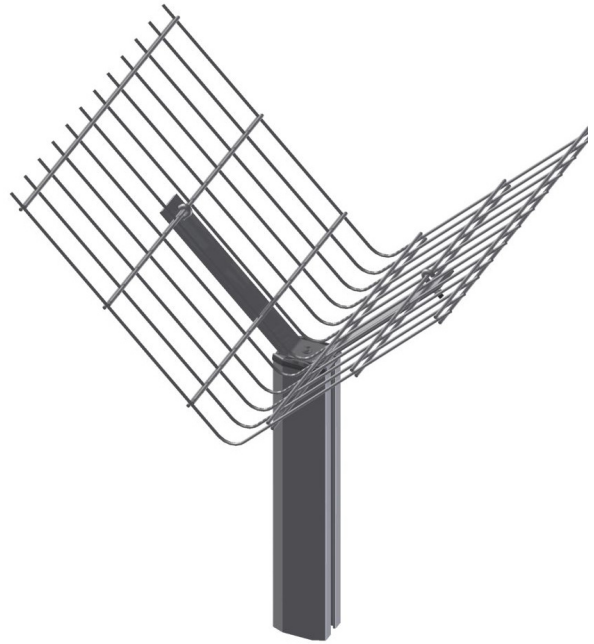
V- outrigger, made of flat steel



Modular Security Fence System

Climb Over Protection – Grille

Version d)
V-shaped grille
(one-sided versions possible, too)



Climb Over Protection – Nato Wire

Version e, f, g)
Sickle outrigger S1 (980 mm), S2 (800 mm), S3 (690 mm)

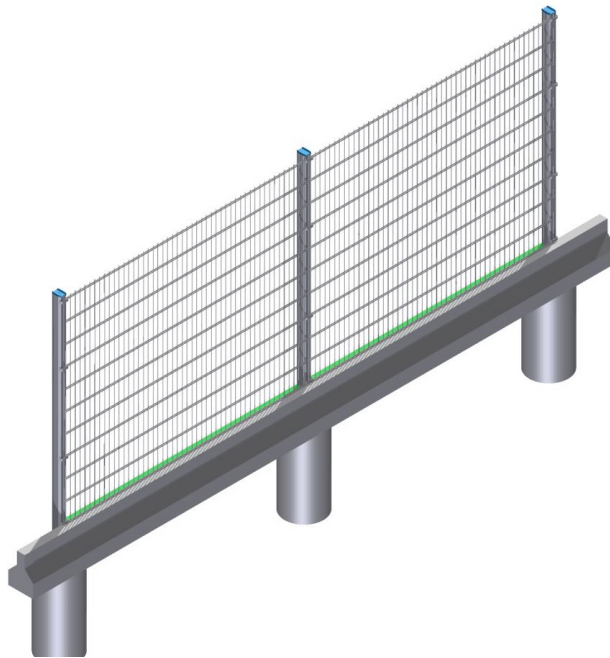


Modular Security Fence System

Dig Under Protection

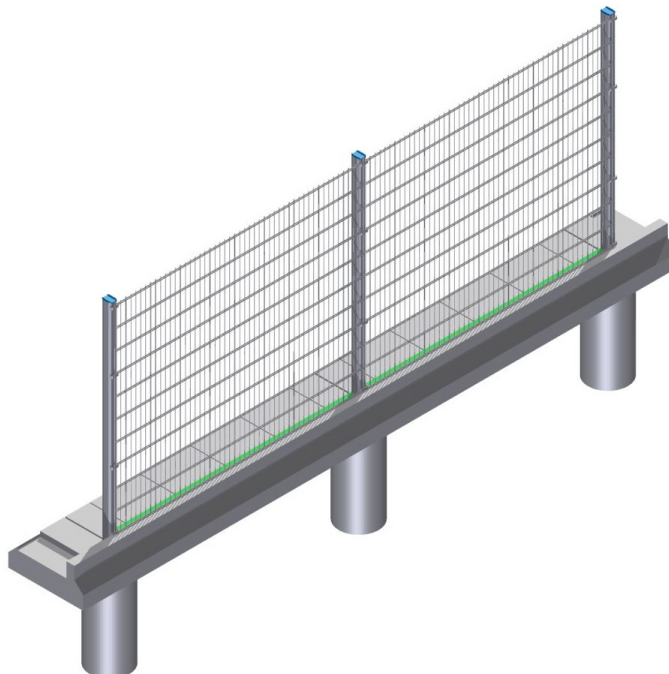
Version h)

Deep boards 8/25/100, made of concrete with concrete and back support or
Deep boards 10/30/100, made of concrete with concrete and back support



Version i)

- Deep boards and one-sided plate
- Deep boards 8/25/100 and walkway pad 40/40/5, made of concrete with concrete and back support

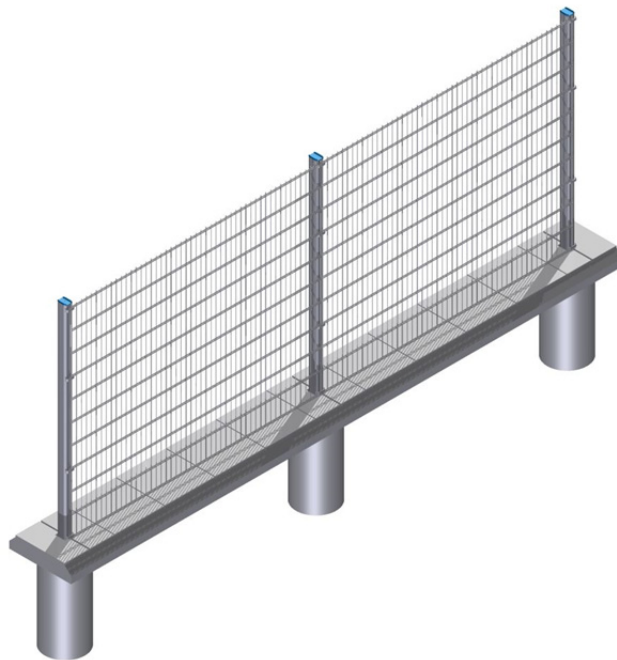


Modular Security Fence System

Dig Under Protection

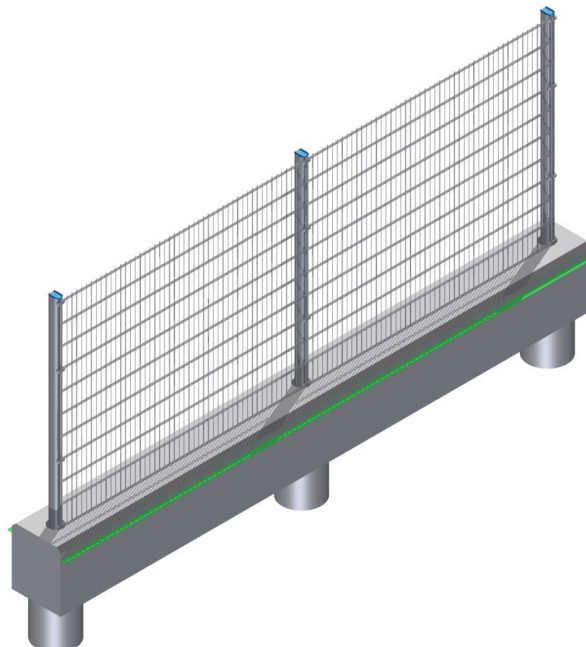
Version k)

Walkway pad 50/50/5, made of concrete with concrete and back support



Version l)

Unreinforced formed concrete beam 45x45, made of concrete on frost protection, with expansion joints



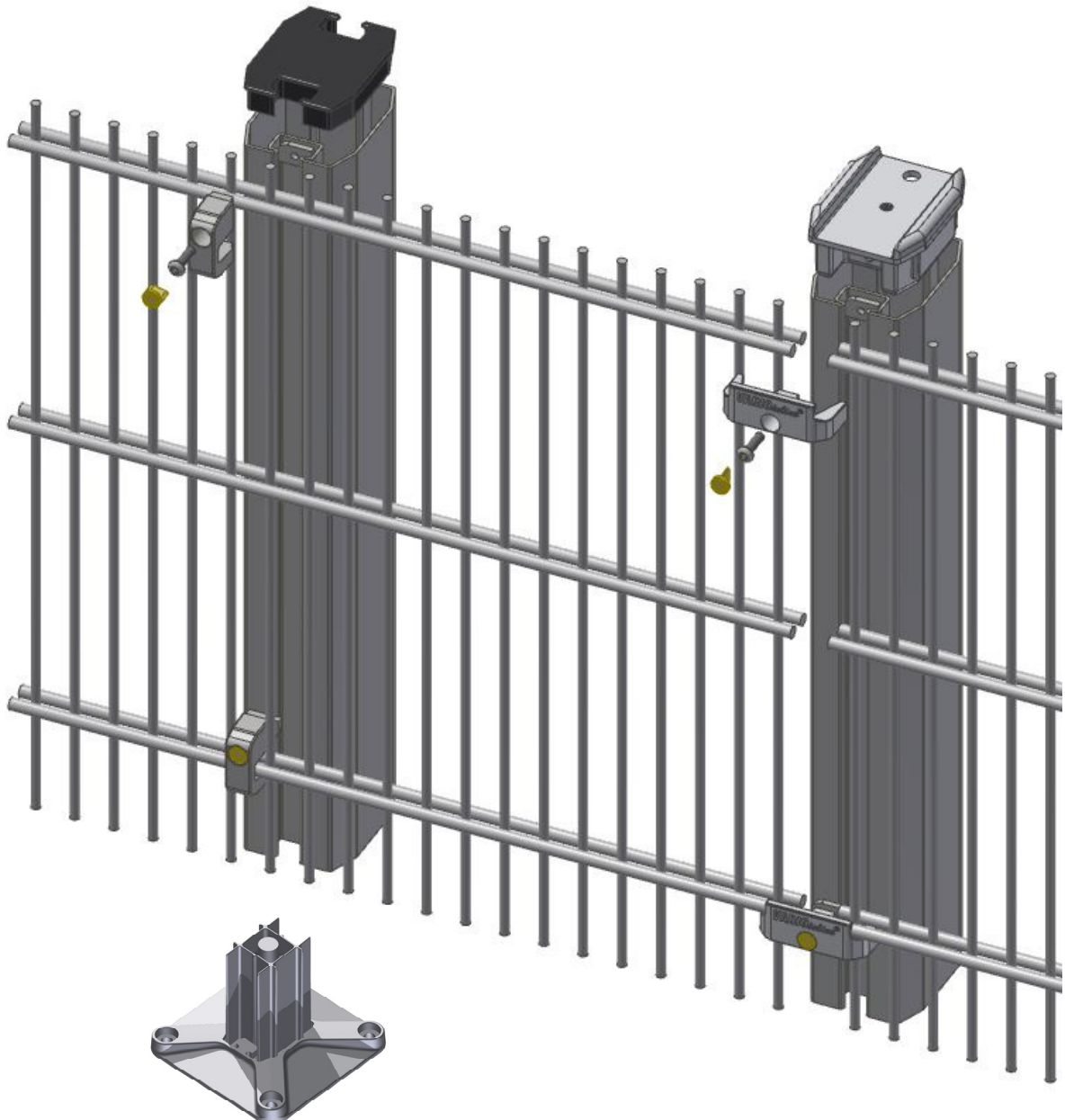
Modular Security Fence System

“Plug & Play”

Peripheral components can be randomly connected to the Vario-Inline-fence post. The continuing halfen-shaped grooves allow a wide range in the number of mountings as well as in the vertical shifting of the attachment points.

Plug & Play also means that all brackets are pre-mounted (holder, screw and slide nut). Just put on the holder and tighten it by a cordless screwdriver and the high-strength join is complete.

The protection against dismantling and vandalism is accomplished by the press-in of a frost-proof safety plug (by means of a soft face hammer).



Modular Security Fence System

Legal Notices and Provisions

Limitations of Liability

All data and notes in these instructions were prepared with consideration to the statutory standards and regulations, the present state of technology, as well as our many years of experience.

Subject to Technical Modification.

The manufacturer will not be liable for damages owing to:

- non-observance of the instruction manual
- the case of non-intended use
- employment of unskilled personnel
- unauthorised modifications
- technical alterations
- use of unauthorised replacement and wear parts

The actual scope of delivery can, by special designs, deviate from the explanations and illustrations given here, because of the utilisation of additional order options, or because of the most recent technical changes.

Warranty

The responsibilities agreed on in the delivery contract, the general terms and conditions as well as the delivery conditions of the manufacturer and the statutory regulations valid at the time of the conclusion of the contract are effective.

The manufacturer guarantees the functioning of the delivered product and the promised performance parameters. The period of warranty starts upon delivery.

Copyright Protection

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Any improper use shall be liable to prosecution.

Modular Security Fence System

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