



## HD-GABION Evert Koorenhof

ul. Graniczna 27, 34-120 Targanice, Polska · NIP PL 5512668057

+48 500 845 353 · info@hd-gabion.pl · hd-gabion.pl · Zakład produkcyjny: ul. Krakowska 83D, 34-120 Andrychów

# Technical data sheet — HDGDEF Defence modular baskets

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## Product description

HDGDEF HD-GABION™ is a multicellular defensive structure built from **welded steel wire mesh panels** lined with geotextile. Panels are welded in our plant from **Hard Bezinal®** wire (ZnAl 95/5 coating, min. 350 g/m<sup>2</sup>, wire manufacturer: Bekaert Bohumín s.r.o.). On request we make the baskets from bare wire, hot-dip galvanised after welding. Cells are joined with spiral connectors into a rigid modular unit; modules are joined lengthwise and widthwise with connecting pins.



HDGDEF barrier in three tiers



Filled HDGDEF units with geotextile lining

## Mesh, wire and coating

|                         |                                                                 |
|-------------------------|-----------------------------------------------------------------|
| Mesh size               | 100 × 100 mm (other sizes on request: 100 × 50 mm, 50 × 100 mm) |
| Wire                    | Ø 4,0 mm; Ø 4,5 or 5,0 mm on request                            |
| Wire diameter tolerance | ± 0,07 mm — EN 10218-2 (class T1), DIN EN 10017                 |

|                                         |                                                                                                                            |
|-----------------------------------------|----------------------------------------------------------------------------------------------------------------------------|
| <b>Tensile strength (specification)</b> | 540–770 MPa (N/mm <sup>2</sup> )                                                                                           |
| <b>Elongation</b>                       | 7% ± 2% (250 mm sample)                                                                                                    |
| <b>Coating (standard)</b>               | <b>Hard Bezinal®</b> — zinc-aluminium alloy ZnAl 95/5 on the wire, applied before welding, min. <b>350 g/m<sup>2</sup></b> |
| <b>Coating mass</b>                     | confirmed by the wire manufacturer's certificate (Bekaert) for every wire delivery                                         |
| <b>On request</b>                       | bare wire, hot-dip galvanised after welding to EN ISO 1461; coating thickness measured per batch by the galvanising plant  |
| <b>Welds</b>                            | weld shear tested to EAD 200020-00-0102 and EN 10223-8                                                                     |
| <b>Connectors</b>                       | spiral connectors and connecting pins Ø 4,0 mm, of Hard Bezinal® wire                                                      |
| <b>Geotextile</b>                       | nonwoven, UV-stabilised, 150–300 g/m <sup>2</sup> ; standard colour grey, other colours on request                         |

### Independent testing

The welded mesh (Ø 4,0 mm wire) was tested by the **Building Research Institute (ITB)**, Warsaw, in a laboratory accredited by the Polish Centre for Accreditation (No. AB 023) — report **LZK00-01903/26/Z00NZK**, 17-08-2026: static tensile test to PN-EN ISO 6892-1:2020-05 and weld shear strength to EAD 200020-00-0102 / EN 10223-8.

| Property                                           | Mesh 100 × 100 mm | Mesh 100 × 50 mm |
|----------------------------------------------------|-------------------|------------------|
| Tensile strength R <sub>m</sub> (mean)             | 663 MPa           | 655 MPa          |
| Proof strength R <sub>p0,2</sub> (mean)            | 606 MPa           | 590 MPa          |
| Maximum tensile force F <sub>m</sub> (mean)        | 8,36 kN           | 8,25 kN          |
| Weld shear strength F <sub>m,s</sub> (mean / min.) | 5,41 / 5,02 kN    | 5,58 / 5,20 kN   |

Values relate to the samples tested (mesh from August 2026, made before the changeover to Hard Bezinal® wire). The full report is published in its entirety at [hd-gabion.pl/jakosc-i-dokumenty](https://hd-gabion.pl/jakosc-i-dokumenty). The laboratory marked the weld shear test as outside the scope of accreditation. A further independent test series is under way following adjustment of our spot-welding machine.

### Sizes

| Model     | Height (m) | Width (m) | Length (m) | Cells | Fill (m³) | Units per pallet |
|-----------|------------|-----------|------------|-------|-----------|------------------|
| HDGDEF 10 | 1,00       | 1,00      | 10,00      | 10    | 12,00     | 8                |
| HDGDEF 20 | 1,00       | 1,00      | 20,00      | 20    | 23,00     | 4                |

Height, width, length and fill volume are nominal values; fill includes an allowance for compaction. Other sizes are made to order.



## Deployment

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- Take the unit off the pallet near its final position.
- Unfold and extend the unit to its full length and place it to the project layout.
- Join cells with spiral connectors; join modules lengthwise and widthwise with connecting pins before filling.
- Fold the lower part of the geotextile liner inward in each cell to retain the fill.
- Fill uniformly with locally available soil, sand, gravel or crushed stone and compact at intervals.
- When stacking units, interconnect them around the perimeter of the shared walls.

Structural design, ground conditions and drainage remain the responsibility of the client's engineer. HD-GABION supplies the baskets and the bill of materials for the stated geometry.