



drilling & geotechnical

# GABION INSTALLATION



## What is Gabion?

Gabions are wiring mesh baskets filled with rocks or stones, which are assembled on-site to form flexible, permeable structures.

The installation process involves positioning and securing the gabion units, filling them with locally sourced stones, and then interconnecting them for stability.

The purpose of gabion installation is to help improving slope stability, preventing land slide, and giving erosion protection in slope in an eco-friendly manner, blending naturally into the surrounding environment.

## Applications

- **Slope Protection:** Prevents soil erosion and stabilises cut or fill soil on slopes in infrastructure projects.
- **Riverbank & Shoreline Protection:** Used as revetments or retaining structures to protect banks against scouring and water current.
- **Retaining Walls:** Constructed as gravity walls to support soil and prevent slope failure or landslides.
- **Channel & Drainage Works:** Installed along drainage channels, culverts, or waterways to reduce water velocity and prevent erosion.
- **Bridge Abutment Protection:** Safeguards bridge foundations and

approaches from water-induced erosion.

- **Road & Railway Infrastructure:** Protects Road embankments and railway cuttings near rivers, slopes, or unstable soils.
- **Landscaping & Aesthetics:** Used in architectural designs for fences, benches, or landscape retaining features.

## Benefits

- **Durable & Flexible:** Withstands ground movement without losing structural integrity while also resists to settlement and deformation.
- **Cost-Effective:** Can be installed with locally source stone material and requires minimal maintenance once installed.
- **Permeability:** Allows natural drainage, prevents water buildup that can cause hydrostatic pressure that destabilises slopes.
- **Environmentally Friendly:** Blends naturally into the environment while also encourages vegetation growth within and around the gabion structure.
- **Scour & Erosion Resistance:** Protects against water flow, wave action, and soil erosion in riverine or coastal areas.
- **Ease of Construction:** Can be installed quickly without heavy equipment and adaptable to different project sizes and shapes

## Technical Specification

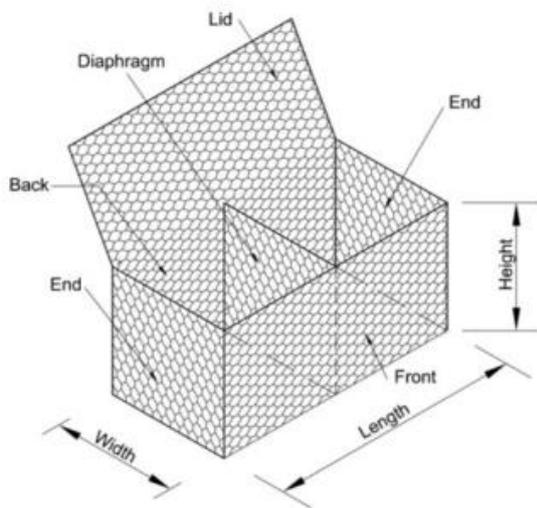
- **Material:** galvanized or PVC-coated double-twisted steel wire mesh.
- **Gabion Box Size:** Standard 2.0 × 1.0 × 1.0 m (other sizes as required).



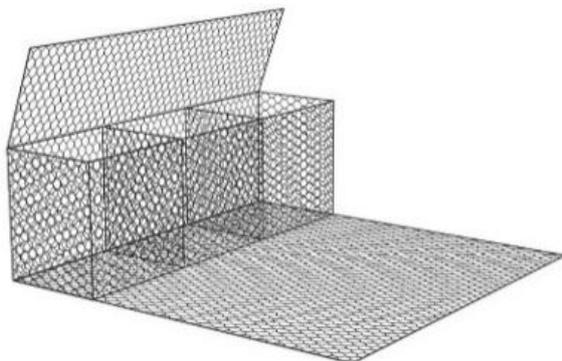
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- **Fill Material:** Durable rock/stone, size 100 – 250 mm, angular, non-weathering
- **Assembly:** Boxes unfolded, connected, and laced with binding wire.
- **Placement:** Installed in layers, joints securely tied; staggered pattern for stability.
- **Facing Alignment:** Front face kept tight and even with proper bracing.
- **Filter Layer:** Geotextile placed behind/under gabions to prevent soil washout.
- **Capping:** Top lids securely wired after filling.



Regular Gabion



Terramesh

## Why Choose Geonusa Utama?

- 15+ years of experience in geotechnical solutions
- Proven track record in infrastructure and private sector
- Committed to safety and quality
- Experienced team and in-house equipment

## Our Projects



Terramesh Installation at Kariangau, East Kalimantan, Indonesia (2019)

## Contact Us:

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