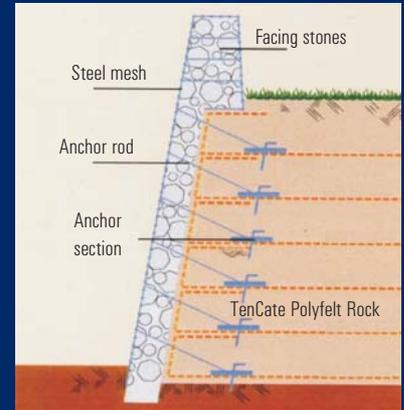


## Vector Wall

### Aesthetically pleasing walls made with steel, stone and synthetics

Vector Wall offers an interesting, optically attractive alternative to concrete walls and other retaining structures. This patented system combines the advantages of a relatively simple construction method with a variety of facing options for steep slopes and embankments. The stability of the construction is ensured by TenCate Polyfelt Rock reinforcement geosynthetics.



Vector Wall



**Vector Wall - The aesthetically pleasing alternative**

The visible facing of Vector Wall is made up of galvanized-steel mesh and of stones selected in accordance with the specific requirements of the landscape architect. The steel mesh, which gives the structure its shape, allows both straight and curved structures to be built. A particular feature of this construction method is that there are no steps or noticeable joints in contrast to, for example, gabion walls unless these are explicitly desired.

The overall stability of the structure is assured by the use of Rock PEC, a high-strength composite geosynthetic, or of Rock GX geogrids. In a manner similar to the concept of reinforced earth, the high tensile strength of the geosynthetics is used to stabilise critical slip planes. To ensure the correct design of the structures, TenCate offers comprehensive support on the basis of specialised computer-software packages.

After its construction, Vector Wall requires no care or maintenance. If wished, the finished retaining structure can be partially or completely vegetated with climbing or hanging plants. The dry-stone facing of Vector Wall provides ideal living conditions for insects and small animals.

**The advantages**

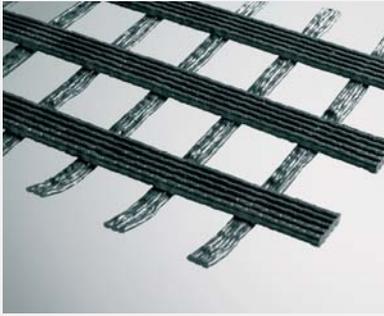
more

- + Longevity
- + Slope stability
- + Flexibility in facing appearance
- + Habitat for plants and small animals

- Maintenance
- Construction time
- Construction costs

less





## Vector Wall - System components

### Reinforcement with TenCate geosynthetics

Thanks to its open-mesh structure and the flexibility of the tensile elements (high-tenacity polyester yarns), Rock GX has excellent interface properties opposite granular soils. For cohesive fills, Rock PEC is the preferred alternative: its in-plane permeability reduces consolidation time and improves structure stability during the construction phase. With their excellent friction properties, their high tensile strength at low strain, their low propensity to creep and their longevity (120 years), both products are the ideal basis for optimum soil reinforcement. And the wrap-around installation method used lends additional stability to the embankment or slope.



### Galvanized-steel mesh

The steel mesh forms the visible outer surface of the slope or wall, and usually has an aperture size of around 100 mm. Zinc coating provides protection against corrosion. During construction, exact positioning of the matting is ensured with the aid of a simple shuttering system, and hooks anchored back into the fill soil ensure that this position is maintained. As well as imparting shape to the structure, the steel mats provide protection against mechanical damage and vandalism. They do not, however, play any part in ensuring the stability of the construction this function is fulfilled by TenCate Polyfelt Rock reinforcement geosynthetics. Therefore, should the steel mesh be damaged at any time, it can easily be repaired by replacing the damaged section, and this will not endanger the stability of the embankment.



### Stones

To alter the appearance of the Vector Wall facing a great variety of different kinds of stones can be stacked or tipped behind the steel mesh. The stones should normally be at least 120 mm in diameter, but smaller stones can be used in combination with special steel-mesh elements. An effective thickness of stone of 200-300 mm is adequate for all situations.

### Fill material

The fill material must allow good compaction and be of adequate bearing capacity. For embankments with side slopes steeper than 70°, frost-resistant fill must be used at the front of the structure to a depth at which frost penetration is no longer a problem.



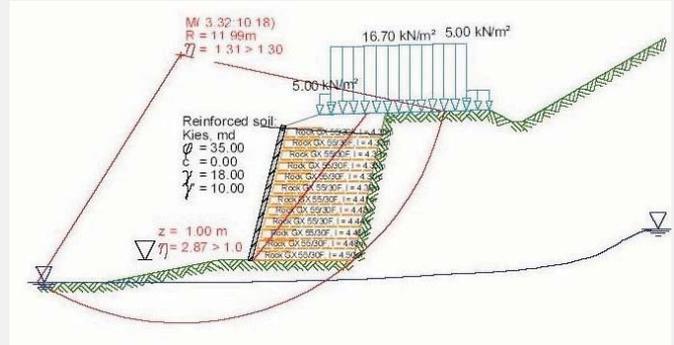
**Vector Wall - Aesthetically pleasing walls made with steel, stone and synthetics**

**Service**

TenCate offers comprehensive support from the design through to the construction phase of your Vector Wall system:

- Using a specialised software package, we investigate the stability of the planned structure with the appropriate safety factors.
- We can prefabricate customised elements (eg. for corners or connecting junctions) to avoid any construction delays.
- We supply design suggestions as a basis for detailed design.
- Our specialists offer assistance during the construction phase.

**For further information visit: [www.tencate.com](http://www.tencate.com)**



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