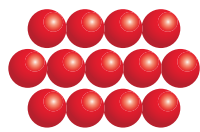


TechWall™

Precast Counterfort Retaining Walls



REINFORCED eARTH
SUSTAINABLE TECHNOLOGY



Uchumayo, Peru



Cubricion Metro de Arganda, Spain



Uchumayo, Peru

TechWall™

Precast Counterfort Retaining Walls

TechWall™ is a precast retaining wall system which combines the design advantages of counterforts with the quality and effectiveness of precast concrete.

The ability of counterforts to act as cantilever beams resisting lateral earth pressure makes it a key to the overall success of the TechWall™ system.

Because the counterforts are heavily reinforced, the moments in the facing panel are minimized and a relatively thin concrete panel may be used.

This type of precast wall is frequently used in civil works not only for wingwalls and abutments, but also as an independent retaining structure.

Common applications include:

- + Overpass and underpass abutments
- + Structures retaining a slope
- + Hydraulic works, like river channelings

Terre Armée Group has designed 1300 projects and close to 1,000,000 square meters of TechWall™ around the world.

Where does TechWall™ fit the best?

TechWall™ counterfort precast retaining walls are a good fit for sites presenting a soil bearing capacity that allows for a shallow foundation. A piling solution can also be integrated in the design, when required.

This system can reach up to 15 m in height. The wall unit width can vary between 1.20 m and 2.40 m, and other widths can be manufactured when necessary.

Every wall unit is composed of a full height facing panel to the back of which two counterforts are perpendicularly attached.

Footings are cast in place after setting and bracing the panels on the leveling pad. When a toe footing is needed for soil bearing capacity reasons, a hole in the facing panel ensures the continuity of the horizontal rebar.

Footings can be precast directly with counterforts and facing panel if shipping conditions allow this.

The panel facings can be customized with various architectural finishes.



Uchumayo, Peru



Uchumayo, Peru



Le Puisoz, France

TechWall™ presents multiple benefits

Cost effectiveness: The overall cost is equal to or lower than conventional methods and maintenance requirements are minimal.

Faster construction: The standardized TechWall™ method reduces construction time by 50% to 60%.

Construction advantages: TechWall™ reduces excavation in cut-and-fill situations and ensures cleaner sites and less disruption to the vicinity. It allows for a wider range of backfills compared to other solutions.

Aesthetics: The standardized precast process ensures a better finish, with the possibility of customization.

Safety: Using precast elements allows for higher safety standardization and clearer procedures.

Sustainability: Using thin panels reduces the carbon emission and consumption of concrete, making TechWall™ environmentally sustainable.

Experience: Terre Armée Group and its subsidiaries have extensive global experience and local expertise with TechWall™ structures.

A short construction sequence

- 1 Set of precast panels on top of a leveling pad or a shear key
- 2 Installation of lateral bracing
- 3 Erection of footing forms
- 4 Placing and tying of reinforcing steel
- 5 Pouring of footing concrete
- 6 Removal of bracing
- 7 Backfilling of structure



Spur 380 Kansas City Southern Rail Interchange, USA



Uchumayo, Peru



Uchumayo, Peru



Amtrak Rail, USA



Puymorens, France

Precasting brings many benefits to your project

For more than 15 years, Terre Armée Group has significantly contributed to the development and consolidation of the large precast element sector for public works.

Prefabrication presents many benefits compared to traditional in-situ construction procedures:

Better product quality

- Industrial manufacturing and quality control (CE marking)
- Steam curing process
- Higher facing quality

Optimization of construction costs

- Optimum design, calculation and construction
- Combined high performance concrete and passive steel optimization allow for an optimal solution and minimize material waste
- Short and reliable lead time
- Elimination of in-situ worksite process interferences
- Possibility of working on several structures simultaneously
- Independence of climatic conditions

Higher safety conditions for workers during construction

- No scaffolding needed

Environmental concerns

- Reduction of energy, material consumption and pollutants
- Higher structural durability
- Minimal environmental impact on surroundings

Uchumayo, Peru

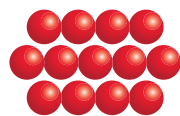




Spur 380 Kansas City Southern Rail Interchange, USA

Our goal is to create, design and supply innovative techniques to the civil engineering industry with a strong commitment to excellence in design, service and public welfare.

Sustainable Technology



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