



BISON PRECAST

a Forterra brand

PREFABRICATED MASONRY

Walling System

Pre-assembled masonry panels manufactured with a high performance mortar



Delivering Solutions

Variations of the system can be adopted to provide either a structural element or a cladding finish for:

- Flood Defence Systems
- Free Standing Walls
- Retaining Walls
- Transportation Infrastructure i.e. bridges or rail platforms

Delivering Benefits

Architectural Flexibility

- Finish Specification – Clay brick, aggregate or aerated blockwork and natural stone
- Aesthetics – Variety of different bonds & detail incorporation i.e. dentil coursing. Panels can be manufactured plain or curved and can incorporate piers.

Structural

- High flexural strength
- Single leaf or cavity wall construction
- Robust in transportation

Site

- Minimal material wastage
- Rapid construction
- Consistent quality
- No wet trades on site

Environmental

- Product longevity
- Reduction in the environment risks associated in working adjacent to a watercourse using wet trades.
- Reduced transport to site
- Reduced disruption on the local area caused by the construction process
- Environmentally stable product

OUR PEOPLE. OUR PASSION. OUR PRODUCTS

The components you need for a more successful project.

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Technical Information

Masonry types

- Prefabricated wall panels can be constructed in clay brick, aggregate concrete block, aircrete block and natural stone.
- For each masonry type, there is a specific high performance adhesive ensuring compatibility for strength, durability and flexibility in handling of prefabricated units.



Testing of wall ties for prefabricated cavity wall manufacture



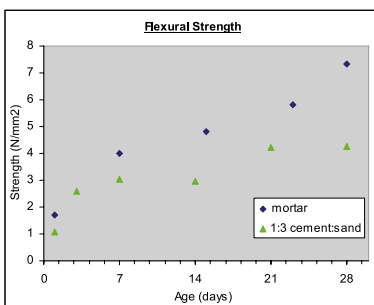
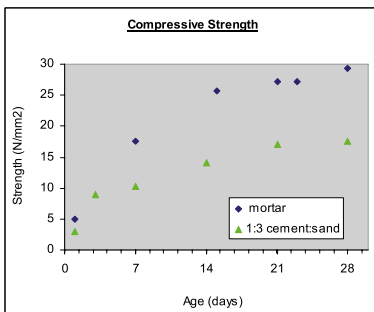
Masonry flexural strength testing in laboratory

Material properties

- All materials are tested to ensure suitability for given situations which include resistance to rain penetration, durability and liability to efflorescence.
- Each masonry / mortar combination is tested in accordance with the appropriate BS EN standard in order to establish design data such as compressive, flexural and shear strength



Walette sample panels for flexural strength testing.



Comparison of compressive and tensile strengths for traditional mortar and high performance mortars

Structural performance

For each type of masonry there is a specific adhesive ensuring the best optimum performance from the panels and the following comparisons can be made with traditional cement : sand mortars

- Compressive strength is typically increased by 30%
- Flexural strength is increased up to a factor of 2
- Flexural strength both parallel to and perpendicular to the bed joint of a stretcher bond panel is increased
- The flexural strength of stack bonded masonry is increased for joints both parallel and vertical to the bed joint
- panels display an early high strength gain allowing maximum production output in factory conditions.



Dimensions and weights for typical brick panels :

- Single skin brickwork, standard stock type brick and 10mm joints.....= **130 kg/m²**
- Single skin brickwork with engineering brick and 10mm joints.....= **180kg/m²**
- Typical length..... = 9.0m
- Typical height = from 0,6m – 3.0m
- Wall format – 102mm and 215mm single skin, double skin cavity wall with or without insulation
- Wall may be plain or with openings
- Wall may be rectangular or non rectangular format including curves and corners

