

Tencon
TENSILE CONCRETE

>> VERSATILE IN HOUSE CONSTRUCTION
>> COST EFFECTIVE

TENCON

• HOMOGENEOUS MATERIAL

• TENSILE STRENGTH

Fast Base

Engineered In-situ Foundations

**CEMEX**
READYMIX

Tencon Fast Base Foundation System

Fast Base is a revolutionary engineered foundation system for the construction of ground beams for piled foundations. It offers significant advantages, allowing foundations to be built more economically, more quickly and with reduced risk compared to existing foundation systems.

Tencon Fast Base utilises a “next generation concrete” called Tencon Concrete. This is an innovative material incorporating structural synthetic fibre reinforcement with proven structural tensile strength. Ground beams are cast in-situ without steel reinforcement.

Significant economical and practical benefits

Economical solution

- Fast Base offers many of the advantages from *both* pre-fabricated and traditional cast in-situ foundation systems without adding disadvantages – the best of both worlds!



All the advantages and flexibility of cast in-situ foundation solutions but without the hassles of steel reinforcement.



Shuttered trench ready for Tencon Concrete pour.

- It is an economical foundation solution that is quick to install with low installation risks.
- When combined with the Tencon Floor System, Fast Base's benefits are increased further still.

No specialist steel labour

- There is no dependence on specialist steel-fixers as with traditional cast in-situ systems.
- Installed by existing groundwork contractors experienced with cast in-situ foundation systems and formwork.

Faster, easier installations

- High speed installations: 2 days or more of steel fixing omitted versus in-situ foundations.
- Only the ground beam section need be excavated with no under slab back-filling required: reduced preparation work versus pre-fabricated foundations. Beams may also be cast on top of the ground using appropriate shuttering systems.

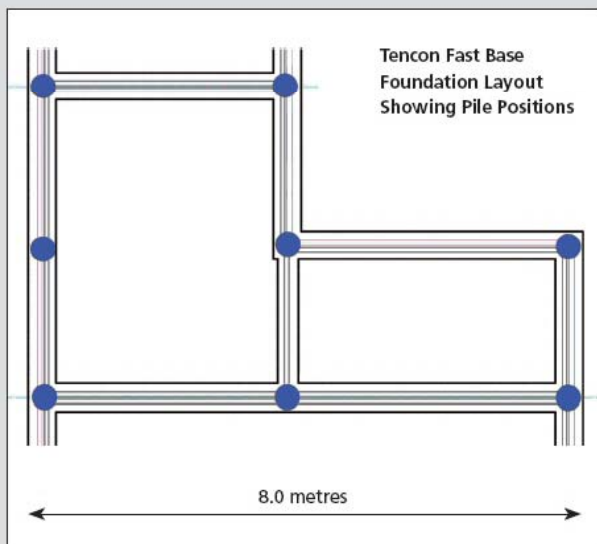
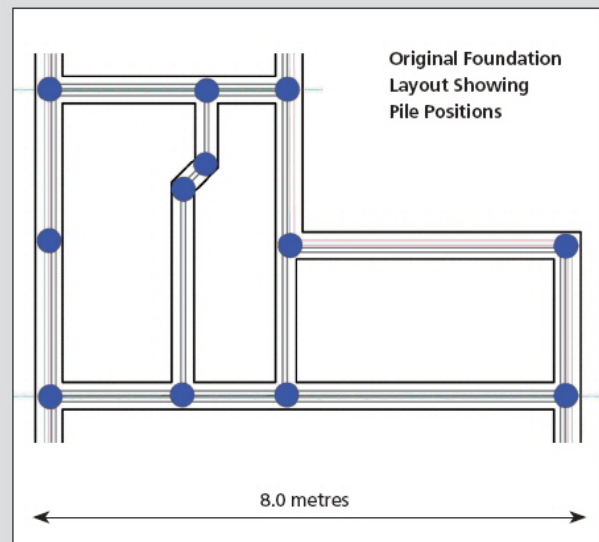
Simpler foundation layouts

- When combined with the Tencon Floor System, foundation layouts can often be simplified through reductions in sleeper wall requirements.
- Pile requirements can be reduced vs. pre-fabricated foundation systems – “corner piles” are not always necessary.

Case Study: 3 Bed Terraced Property, Piled Foundations

- ▶ The original foundation specification for this contract was a pre-fabricated ground beam solution with beam and block flooring. This incorporated **12 piles** and **37 metres** of ground beams.
- ▶ The client wished for the lowest cost foundation solution whilst still working with familiar contractors and construction methods.
- ▶ The ground beams and slab were cast separately using Tencon Concrete (the client did have the option to install a beam and block floor on the Fast Base Foundation).
- ▶ The foundation construction was completed in one day by the same contractor gang.
- ▶ Using Tencon Fast Base combined with the Tencon Floor System, the contract was reduced by **4 piles** and **4 metres** of foundation runs.
- ▶ The table below summarises the sources of savings achievable when using the Tencon Fast Base System:

- ▶ The Tencon ground beam sections used were a standard 500mm x 500mm section, shuttered using polypropylene sheets.
- ▶ The Tencon Slab thickness used was 150mm.



Finished ground beams ready for the next stage of the build process.

Process	Tencon Fast Base + Tencon Floor System	Prefabricated Beams + Beam & Block Floor	Tencon Savings
Pile Installation	8 piles	12 piles	Save 4 piles
Excavation / Backfill	33m trenches = 8m ³	36m ² plot area = 18m ³	Save 10m ³ excavation
Ground Beam Installation	8m ³ Tencon Concrete	37m prefab beams	Significant savings
Slab Installation	5½m ³ Tencon Concrete	150mm B&B floor	Similar cost / sq metre

Using Tencon saved 4 piles, 10m³ excavation and 4m of ground beam installation.

Tencon Concrete

Tencon Concrete is a proprietary, synthetic fibre-reinforced concrete. It is a homogeneous, structural material with tensile strength verified in tests by independent laboratories.

Tencon Concrete is produced by CEMEX, one of the leading manufacturers of concrete in the UK. CEMEX's reputation for technical expertise in concrete is the envy of the industry and offers guarantees of reliability and high quality products. CEMEX's manufacturing processes and products fully comply with accredited quality assurance schemes.



Approved by the BBA following full scale laboratory tests.



Tencon Concrete is produced by CEMEX.

Supported by approved installers

Providing confidence and quality assurance to clients, Tencon Fast Base Foundations are constructed by experienced contractors who are trained and approved by Keskin Tencon Ltd.

Please contact us if you are a contractor interested in installing Tencon Fast Base Foundations.

Foundation design made easy

Tencon Fast Base Foundations are designed by builders' existing structural engineers using standard section design tables found within the Tencon BBA Certificate. For applications beyond the scope of the tables, finite element modelling is used. Tencon offers structural design and technical support services – please contact us for more information.

Certification

Tencon Concrete, the Tencon Floor System and the Tencon Fast Base Engineered Foundation System are approved by the British Board of Agrément following full scale laboratory tests.

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