



Pre-stressed Concrete Beams

400mm x 600mm | High-Tensile Strength & Structural Integrity for Modern Infrastructure

Key Features

Optimal Dimensions: 610mm (width) x 2440mm (length) - Ideal for rapid, modular installations.

Adjustable Thickness: Wall panels from 75mm to 250mm, tailored to insulation and structural needs.

Premium Facing: Dual-sided Fiber Cement Boards (5mm to 18mm thickness options) for unmatched strength and weather resistance.

EPS Core: Expanded Polystyrene ensures lightweight construction, thermal efficiency, and moisture resistance.

Fire-Resistant: Meets stringent safety

Technical Specifications

Parameter	Details
Common Profiles	I-Beam, T-Beam, L-Beam, and Rectangular sections
Total Wall Thickness	75mm - 250mm (customizable)
Span Length	Up to 18 meters (customizable based on project requirements)
Concrete Grade	\$C40/50\$ to \$C60/75\$ (High-strength)
Steel Tendons	High-tensile low-relaxation steel strands
Fire Rating	1 to 4 hours (depending on concrete cover)
Load Capacity	Engineered to specific Eurocode or British Standards
Finish	Smooth off-form finish, ready for painting or cladding

Benefits

Structural Efficiency: Allows for larger open floor plans by reducing the number of necessary columns.

Cost-Effective: Reduced material usage and faster on-site assembly lower overall project costs.

Durability: Highly resistant to corrosion, moisture, and chemical attacks for long-term service life.

Speed of Construction: Prefabricated design allows for immediate loading after installation, cutting schedules by up to 50%.

Eco-Friendly: Optimized material use reduces the carbon footprint compared to traditional cast-in-situ beams.

Quick Installation: Prefabricated design cuts construction time by 50%.

Applications

Multi-Storey Buildings: Primary framing for commercial and residential complexes.

Industrial Facilities: Heavy-duty support for warehouses and factories.

Bridge Engineering: Girders for short to medium-span road and pedestrian bridges.

Parking Structures: Long-span beams for unobstructed vehicle movement.

Why Choose WEB Housing Pre-stressed Beams?

Certified Quality: ISO-compliant manufacturing processes ensure every beam meets safety codes.

Custom Engineering: Our team tailors the prestressing force and beam geometry to your specific structural load.

Expert Support: End-to-end guidance from structural design to on-site hoisting.