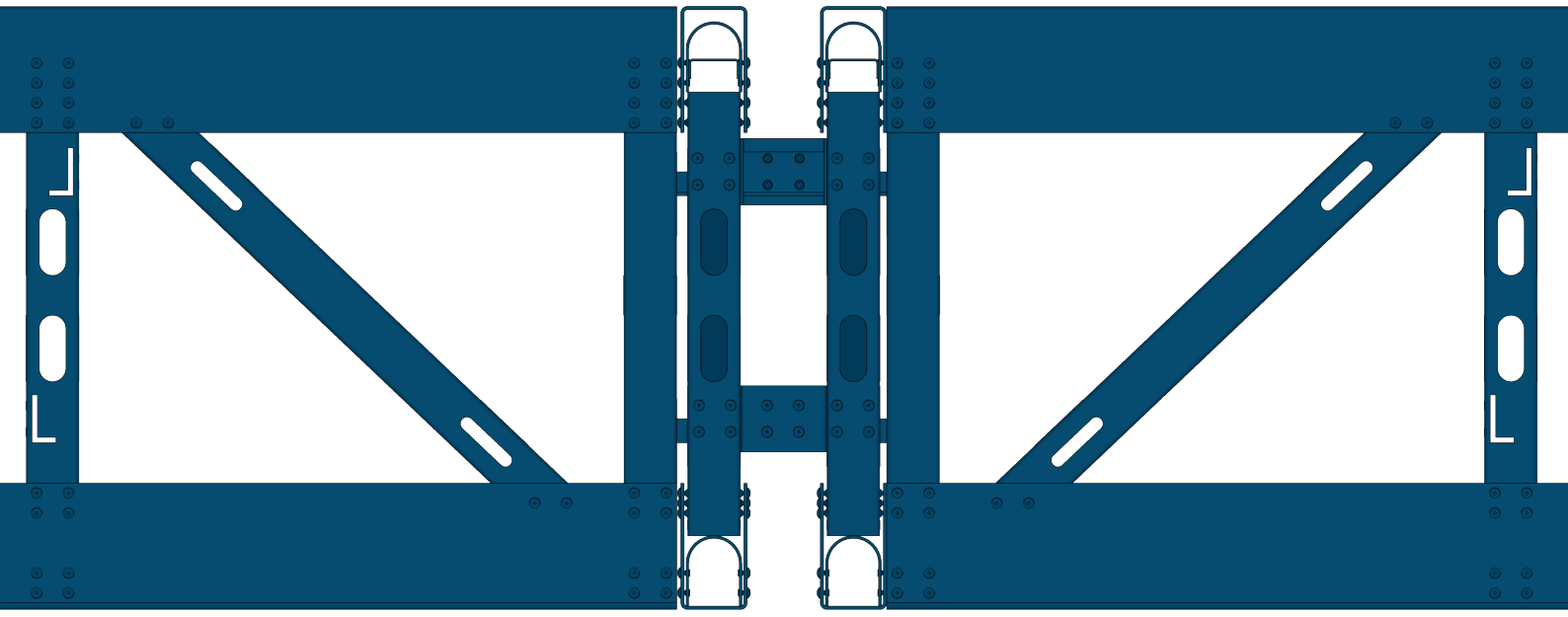
WALLS AND SPACES

THE ULTIMATE

TRUSS - BEARER SYSTEM



450 HEAVY DUTY | TRUSS-BEARER SYSTEM

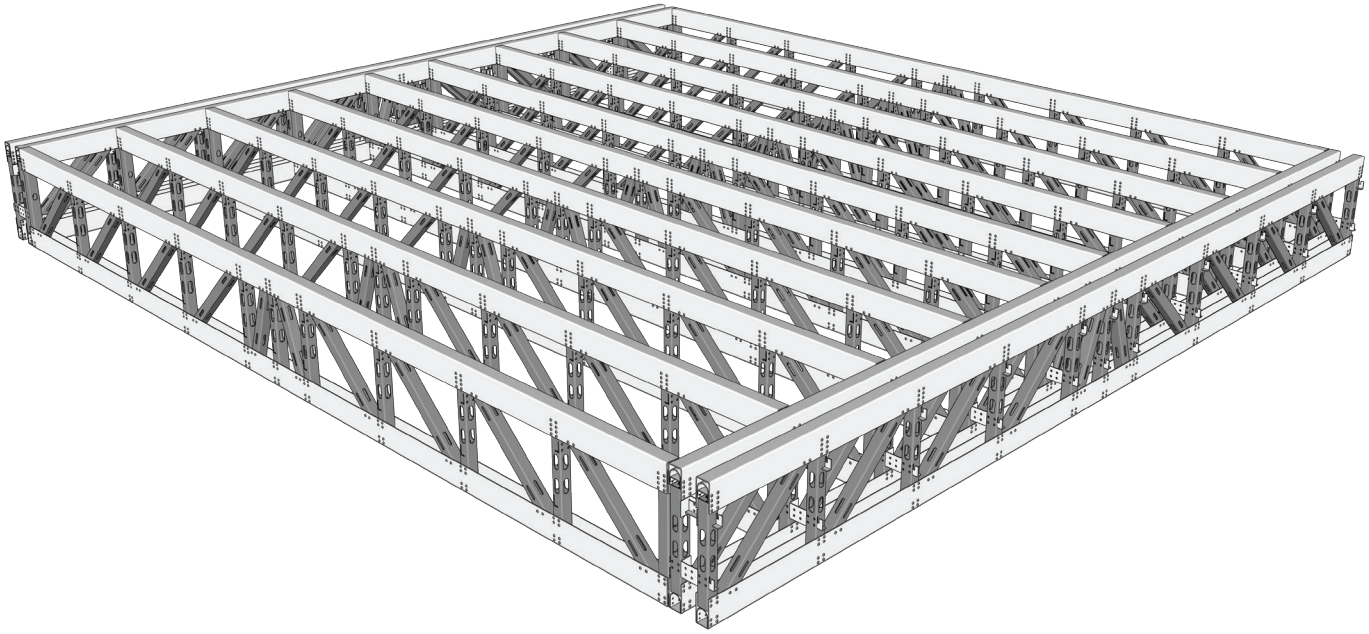
Walls and Spaces introduces a 450mm depth structural system built around one core principle — a single engineered element that functions as both truss and bearer. This unified approach reduces component variation, simplifies detailing, and improves site efficiency.

Made from C350 grade pre-galvanised steel and assembled using structural rivet connections, the system removes the need for welding while ensuring consistent engineered structural integrity and quality.

Engineered for strength, rapid installation, and structural clarity, the 450 series supports efficient load transfer while maintaining a lightweight, modular framework suitable for scalable construction.

DESIGNED FOR

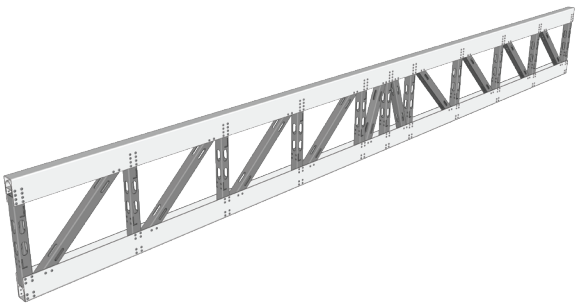
- Residential, commercial & multi storey
- Mezzanine & decking systems
- Warehouses & industrial
- Modular buildings
- Temporary / event structures



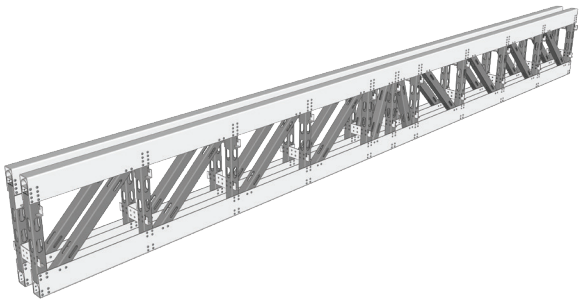
This brochure covers the 450 Heavy Duty Truss, featuring a standard profile of **450mm depth** × **50mm thickness**.

HEAVY DUTY

MODEL	HEAVY DUTY
PART ID	450HD
APPLICATIONS	Multistorey Residential, Mezzanine, Decking, Events
AVAILABLE SPANS (mm)	4000



TRUSS



BEARER

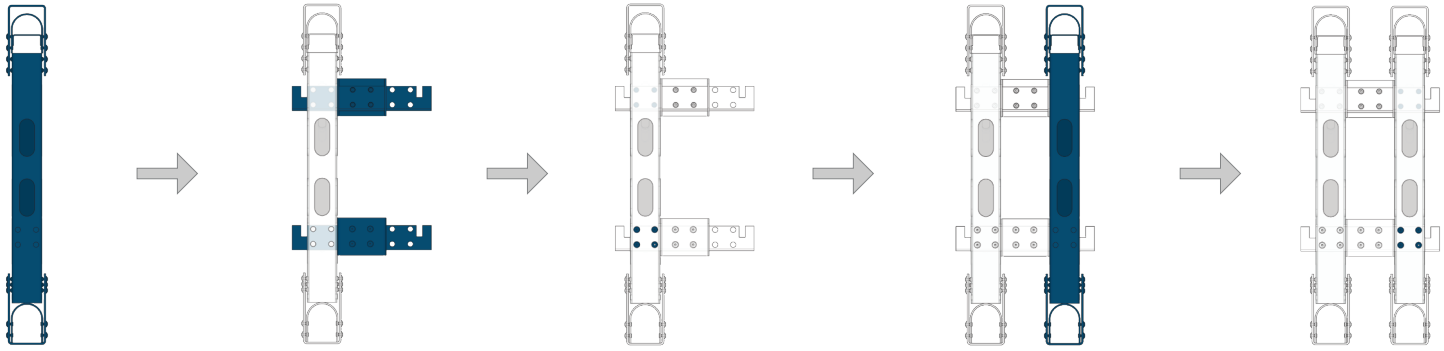
Scan the QR code to access the Technical Data Sheet (TDS).

SLIDE-DROP CONNECTION

The 450HD features a mechanical slide-drop connection system for efficient, no-weld assembly. Using connectors and structural rivets, trusses slide, drop, and lock into position to form bearers and complete structural systems.

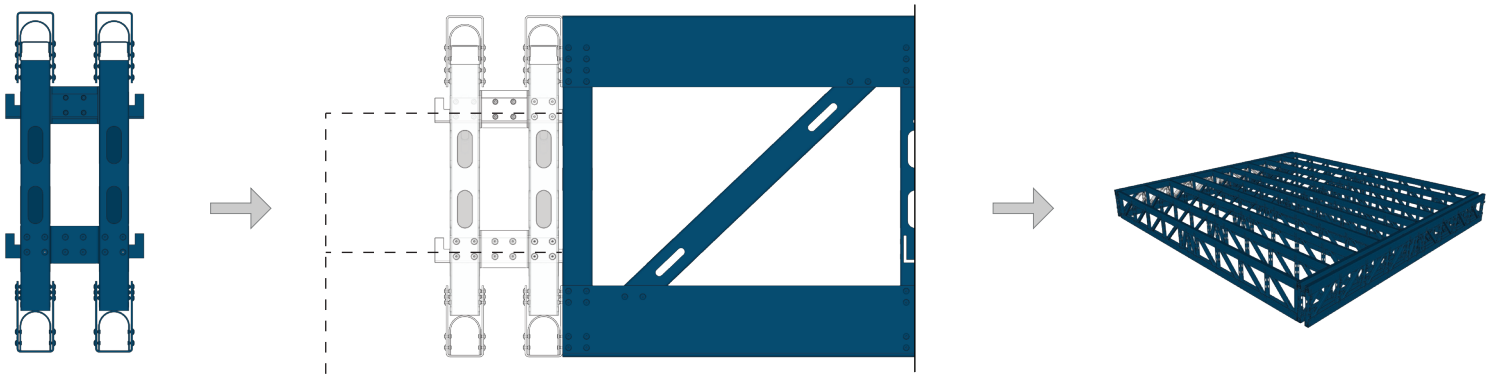
BEARER ASSEMBLY

1. FIRST TRUSS
2. CONNECTOR
3. RIVETS
4. SECOND TRUSS
5. RIVETS



SYSTEM ASSEMBLY

1. BEARER
2. TRUSS
3. SYSTEM



As part of internal engineering and product development initiatives, a structured comparison was conducted to assess performance characteristics of the 450HD truss relative to a conventional universal beam.

The results below summarise the observed differences under matched span assumptions.

PARAMETER	310UB - 304x165	BEARER (2x 450HD)
Span	4000mm	4000mm
Weight	≈ 163 kg	≈ 160kg (2 x ≈ 80kg)
Depth	304mm	450mm
Width	165mm	155mm
Coating	Mill Finish (Uncoated) / Hot Dipped Galvanised	Galvanised Steel / Powder Coating
Connection Type	Welded fabrication	Structural Rivets
Structural Behaviour	Primarily bending member	Triangulated (axial forces)
Service Penetrations	Limited / requires drilling	Open-web allows service integration
Transport Handling	Heavier single section	Lighter components
Lead times	4–6 weeks (fabricated supply)	Off-the-shelf (standard configuration)
Cost (Supply)	Higher material cost	Lower material cost
Cost (Installation)	Heavier lift requirements + welding	Reduced handling + rivet assembly

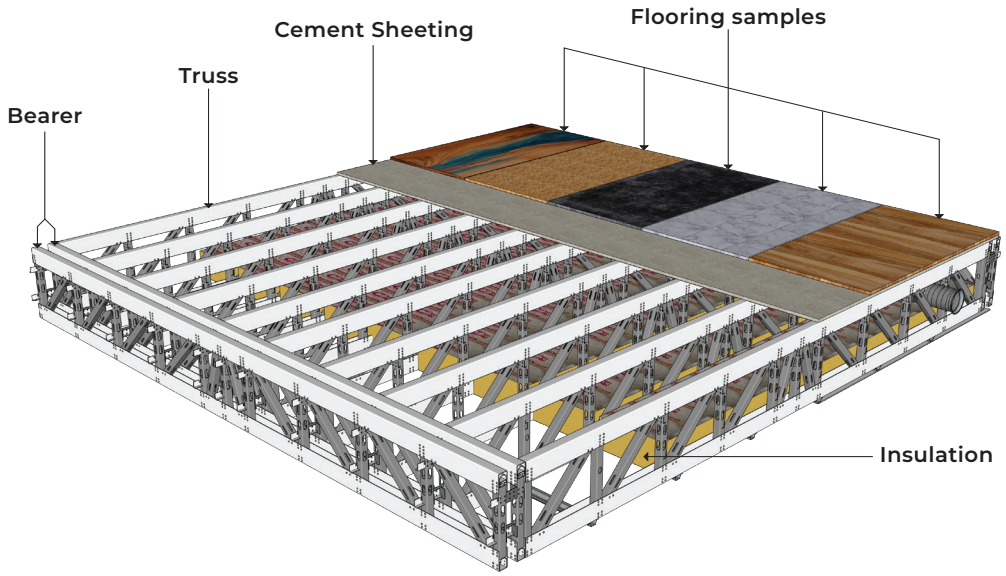
Comparison based on a 4000mm span under standardised assumptions. Values shown are indicative and for general reference only. Final selection must be verified for project-specific structural and commercial requirements.

Scan to view our internal performance validation report.

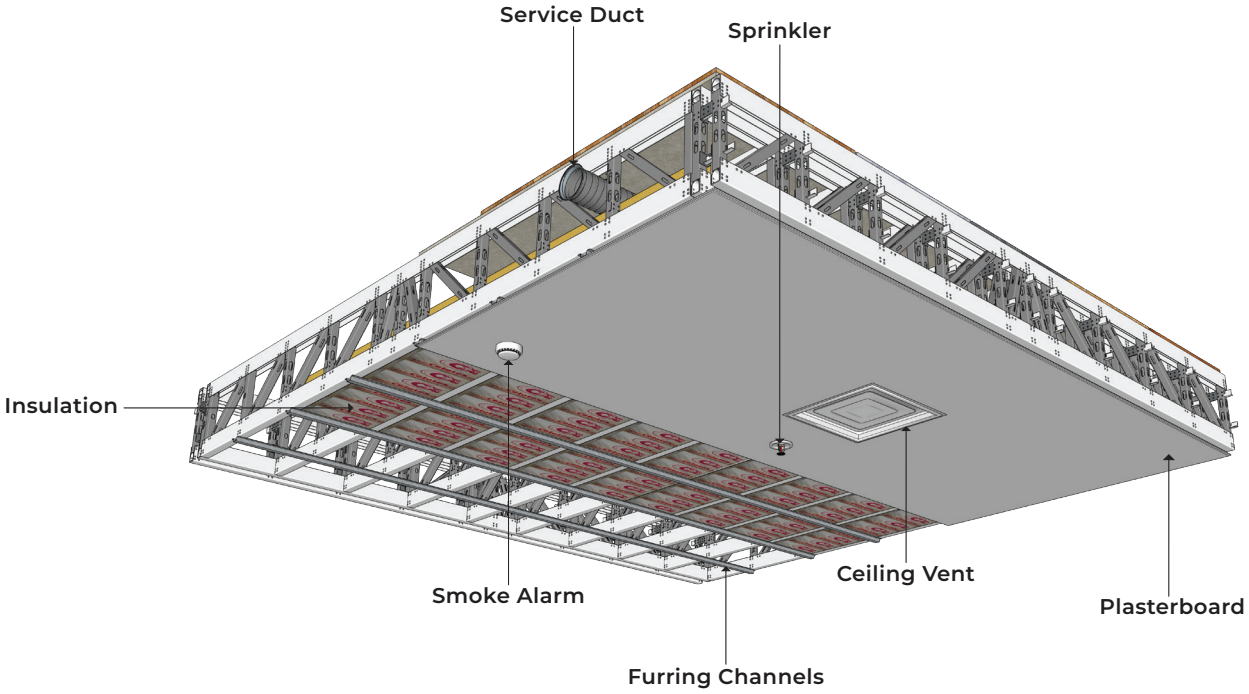
4 METRE SYSTEM SAMPLE

The diagrams below illustrate a typical assembly layout of the 450HD (4 metres) truss system, as shown in this brochure, highlighting how the components integrate in standard floor and ceiling configurations.

FLOORING VIEW

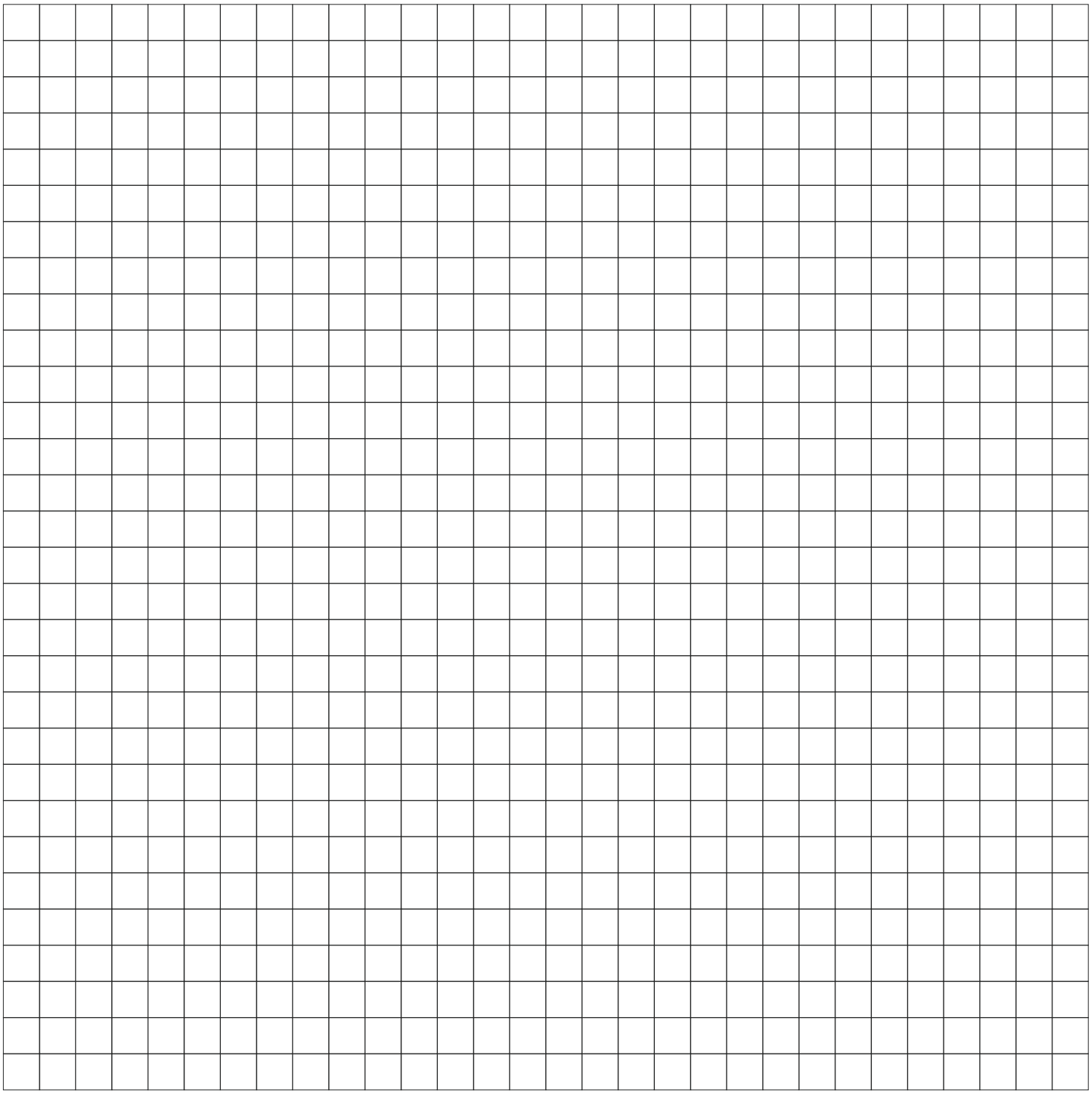


CEILING VIEW



Note: This is for illustration only. 450HD is suitable for various applications, subject to structural engineering approval.

SKETCH



NOTES

Walls and Spaces delivers scalable, high-quality building solutions — from precision-engineered framing systems to multi-storey structural platforms — engineered for strength and designed for future expansion.

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