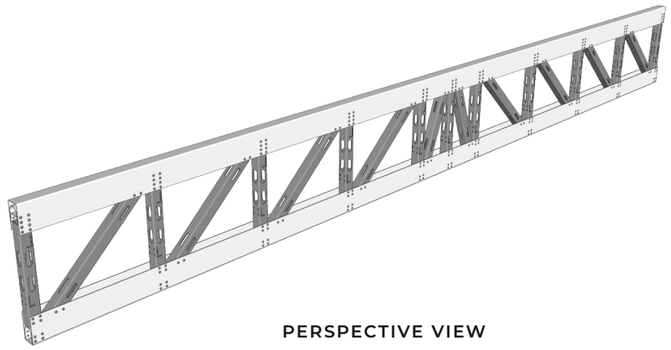
450HD TRUSS

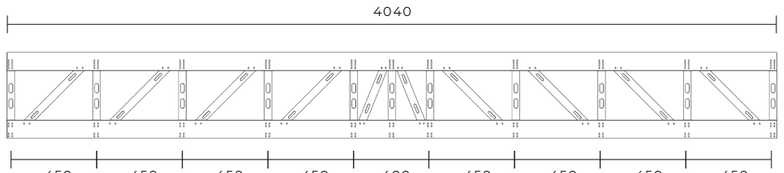
HEAVY DUTY

TECHNICAL DATA SHEET

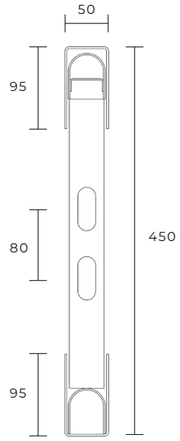
Version 1 | 20-02-2026



PERSPECTIVE VIEW



FRONT VIEW

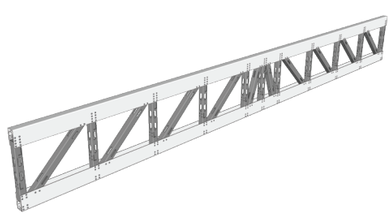
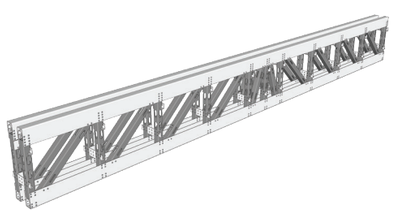


PROFILE VIEW

The drawings above show the 4-metre span model. Additional span configurations are currently under R&D and will be released upon validation.

DUAL FUNCTION STRUCTURAL MEMBER

The 450HD is engineered as a versatile structural member, capable of functioning as both a truss and a bearer depending on project requirements. This dual-purpose capability provides greater design flexibility, reduces the need for multiple member types, and streamlines procurement and installation across a range of structural applications.

MEMBER CONFIGURATION	
	
TRUSS (SINGLE)	BEARER (DOUBLE)

PRODUCT OVERVIEW

The 450HD is an engineered truss developed by Walls and Spaces. Designed for applications requiring up to a 2-tonne point load design load rating, it delivers high structural performance without the complexity of traditional welded systems. Its efficient strength-to-weight design makes it suitable for higher load demands.

PARTS LIST	
Top Chords	95 x 50 x 2.5mm C-Channel, 52 x 42 x 2mm Arch-Channel, 15 x 38 x 1.6mm C-Channel
Bottom Chords	95 x 50 x 2.5mm C-Channel, 52 x 42 x 2mm Arch-Channel
Web	40 x 40 x 2.5mm SHS
Connection	Structural Rivets

PARTS LIST NOTES

- All steel members manufactured from C350 cold-formed galvanised steel.
- Designed and engineered in accordance with relevant Australian Standards.
- Parts are laser-cut for dimensional accuracy and repeatable fitment.

SPAN AND DEFLECTION GUIDE

TRUSS (SINGLE)

Indicative span data based on calculation under a **20kN**.

SPAN (mm)	WEIGHT (kgs)	DEFLECTION (mm)	
		UDL	CPL
4000	≈ 80	1.98	3.41
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-

BEARER (DOUBLE)

Indicative span data based on calculation under a **40kN**.

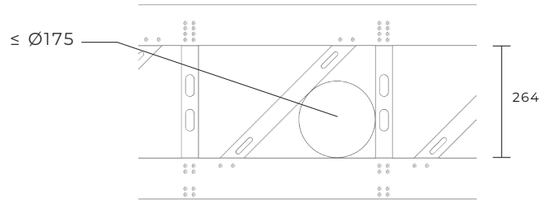
SPAN (mm)	WEIGHT (kgs)	DEFLECTION (mm)	
		UDL	CPL
4000	≈ 160	2.04	3.46
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-

LOAD AND SPAN GUIDE NOTES

- UDL = Uniformly Distributed Load | CPL = Central Point Load.
- Values shown are for guidance only. Final span, spacing, load capacity and assemblies are subject to project-specific structural engineering approval.
- Only spans shown in the tables have been analysed and validated at this stage. Additional spans are subject to ongoing analysis, testing and certification and will be issued upon request.

SERVICES

The truss web incorporates designated zones for service penetrations, with opening diameters not exceeding the maximum limits illustrated.



SURFACE FINISH

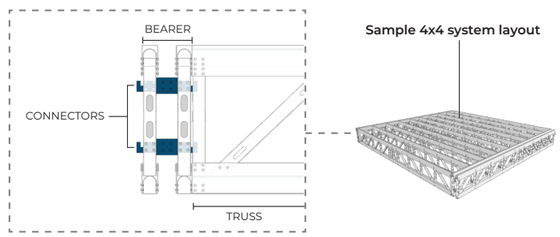
The 450HD is supplied in pre-galvanised steel for durability and corrosion protection. Optional powder-coated finishes are available, including navy blue, with custom colours on request.

Standard | Powder coated (Navy Blue) | Custom powder coating

For custom colour powder coating, minimum order quantities apply and a lead time of approximately 60 days should be allowed.

CONNECTION DETAIL

The 450HD bearer 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.



The flush, level interface maintains a continuous horizontal plane — eliminating the step-downs typically seen when trusses sit on top of supporting beams.

www.wallsandspacesglobal.com