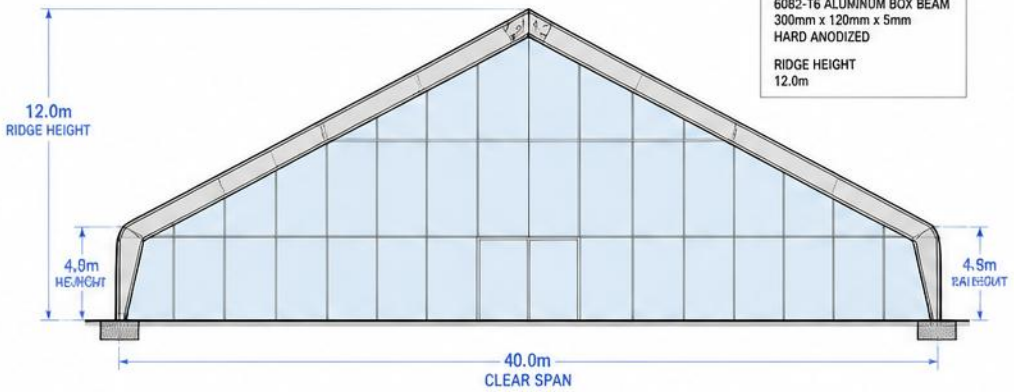
40.0m MODULAR CLEAR-SPAN ALUMINUM A-FRAME BUILDING

6082-T6 EXTRUDED ALUMINUM PORTAL FRAME SYSTEM

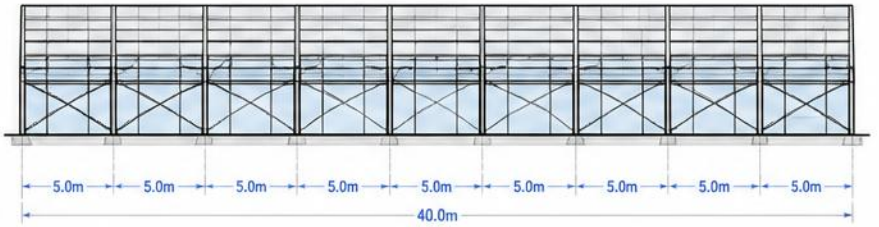
CROSS-SECTION (PORTAL FRAME ELEVATION)



PRIMARY FRAME
6082-T6 ALUMINUM BOX BEAM
300mm x 120mm x 5mm
HARD ANODIZED

RIDGE HEIGHT
12.0m

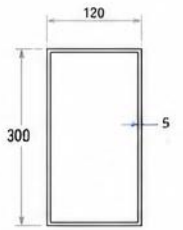
SIDE ELEVATION (MODULAR BAY GRID)



SPECIFICATIONS

- CLEAR SPAN: 40.0m
- RIDGE HEIGHT: 12.0m
- EAVE HEIGHT: 4.5m
- BAY SPACING: 5.0m (MODULAR)
- PRIMARY FRAME: 6082-T6 ALUMINUM BOX BEAM 300x120x5mm
- FINISH: HARD ANODIZED
- ROOF PITCH: 18°
- WIND LOAD: 0.75 kN/m² (ULT)
- SNOW LOAD: 0.50 kN/m² (ULT)
- CODE: EN 1999 / AS/NZS 1664

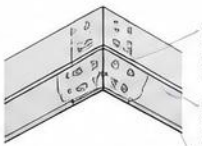
TYPICAL FRAME SECTION



6082-T6 ALUMINUM
BOX BEAM
300x120x5mm

CONNECTION DETAIL

RIDGE JOINT

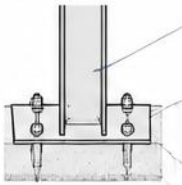


CNC MACHINED ALUMINUM RIDGE PLATE 25mm THK

M20 STAINLESS STEEL BOLTS (8.8/SUS304)

6082-T6 ALUMINUM BOX BEAM 300x120x5mm

BASE CONNECTION



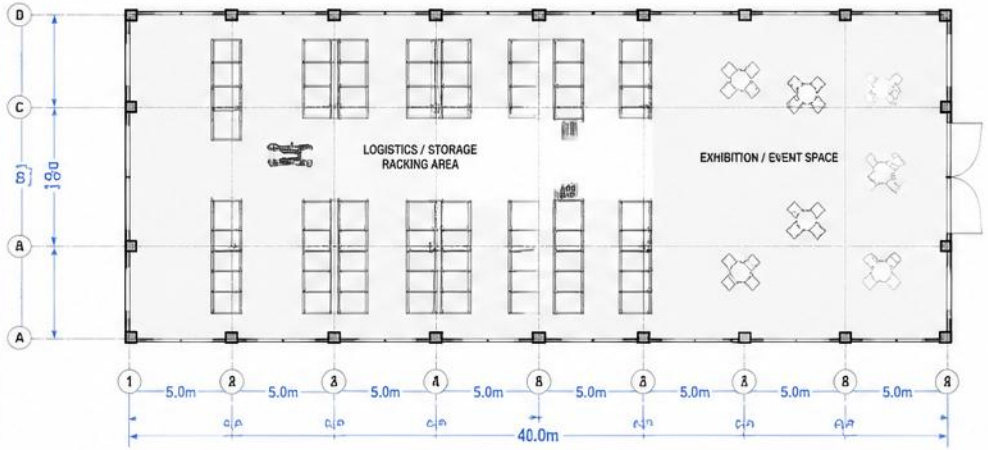
ALUMINUM BASE PLATE 25mm THK

M30 ANCHOR BOLTS (8.8/SUS304)

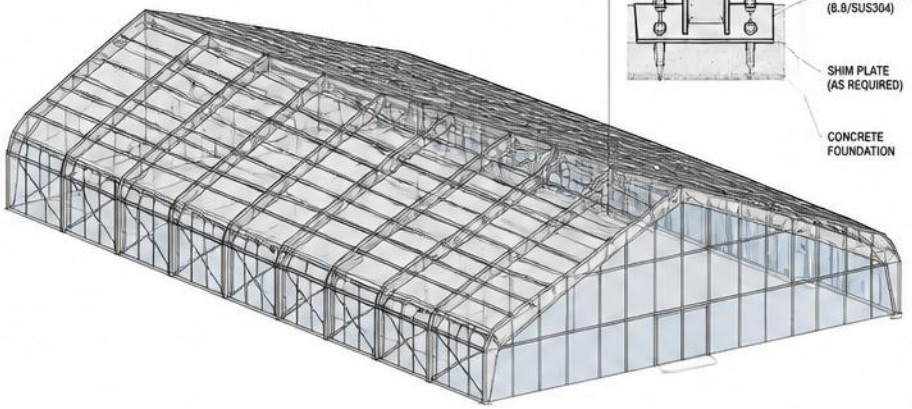
SHIM PLATE (AS REQUIRED)

CONCRETE FOUNDATION

FLOOR PLAN LAYOUT (40.0m x VARIABLE DEPTH)



3D ISOMETRIC STRUCTURAL VIEW



MATERIAL PROPERTIES (6082-T6)	
YIELD STRENGTH (f_y)	260 MPa
TENSILE STRENGTH (f_u)	310 MPa
MODULUS OF ELASTICITY (E)	69 GPa
DENSITY	2700 kg/m³

GENERAL NOTES

1. ALL ALUMINUM MEMBERS: 6082-T6, HARD ANODIZED (25μm MIN)
2. ALL WELDS TO BE PERFORMED BY QUALIFIED WELDERS
3. ALL BOLTS: STAINLESS STEEL 8.8 / SUS304
4. TOLERANCES: ±2mm UNLESS NOTED
5. ALL DIMENSIONS IN MILLIMETERS UNLESS NOTED

LEGEND

- □ = ALUMINUM COLUMN
- —— = PRIMARY FRAME (ROOF)
- - - - = SECONDARY PURLIN
- ⊠ = CROSS BRACING

CONCEPT DRAWING ONLY — NOT FOR CONSTRUCTION. FINAL PE-STAMPED DRAWINGS REQUIRE CONFIRMED LOCATION, WIND/SNOW LOADS, SOIL REPORT AND PROJECT OPTIONS.
The drawing content above remains unobstructed; title metadata is placed in reserved margins outside the drawing viewport.