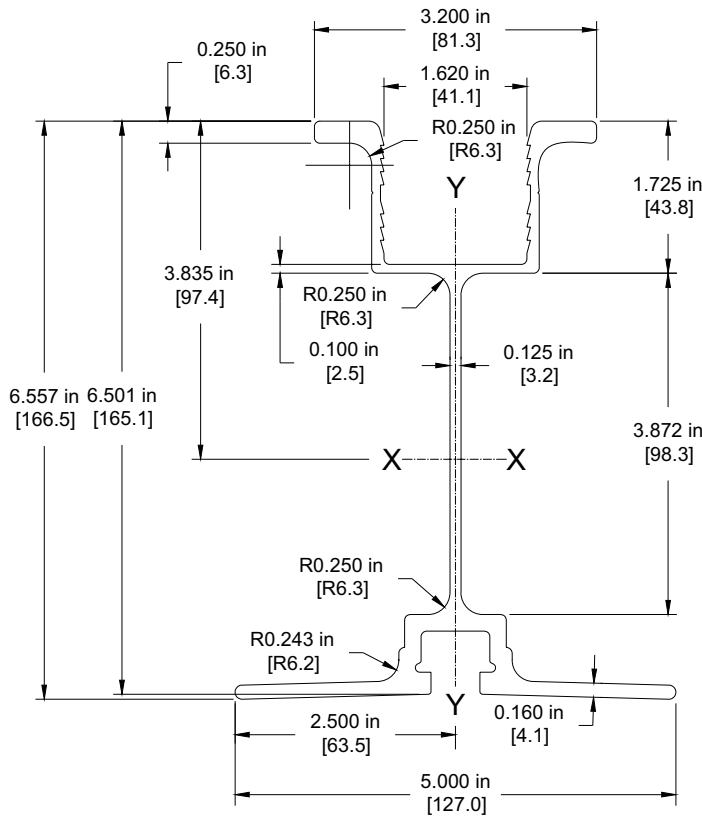


Aluma Beam Design and Maintenance Guidelines

Product ID	Product Detail	Design Data	Application	Appendix
Aluma Beam Section Properties				



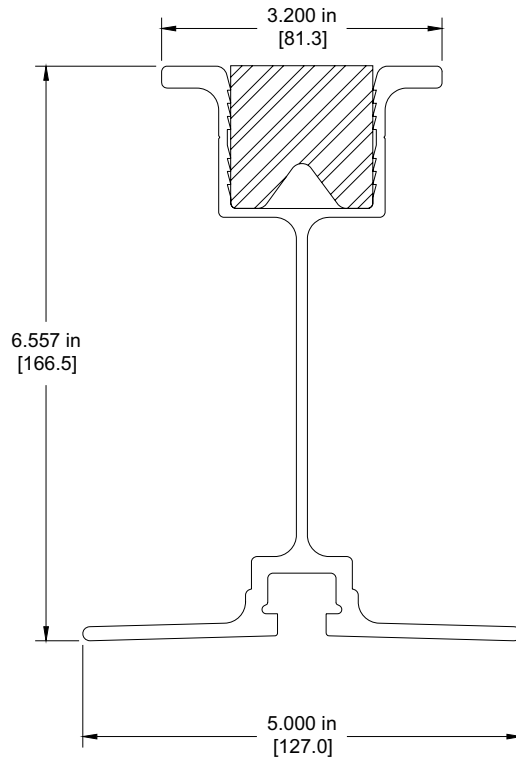
Section Properties		Imperial	Metric
Cross-Section Area	A (without nailer)	2.66 in ²	1716 mm ²
Moment of Inertia	I _{xx}	16.96 in ⁴	7.06E6 mm ⁴
	I _{yy}	2.65 in ⁴	1.10E6 mm ⁴
Section Modulus	S _{xx(min)}	4.42 in ³	72.50E3 mm ³
	S _{yy(min)}	1.06 in ³	17.35E3 mm ³
Radius of Gyration	r _x	2.52 in	64.11 mm
	r _y	1.00 in	25.32 mm
Torsion Constant	J	0.05 in ⁴	19.11E3 mm ⁴
Warping Constant	H	7.57 in ⁶	2.03E9 mm ⁶
Weight/ft	(without nailer)	3.18 lb/ft	4.73 kg/m
	(with nailer)	4.00 lb/ft	5.95 kg/m
Material Properties	AA ALUMINUM ALLOY 6061-T6		
Ultimate Tensile Strength	F _u	38 ksi	260 MPa
Yield Strength	F _y	35 ksi	240 MPa
Modulus of Elasticity	E	10150 ksi	70000 MPa
Density	ρ	0.0975 lb/in ³	2700 kg/m ³
% Elongation			8%

This information is subject to change; it is intended to be used by technically skilled designers, knowledgeable in the field, and is to be used with other data.

Note: Bolt slot accepts 1/2" SAE Gr. 5 or ASTM A307 Hex bolts, Aluma bolts or standard square head bolts.

Aluma Beam Design and Maintenance Guidelines

Product ID	Product Detail	Design Data	Application	Appendix
Aluma Beam Section Properties				



	Imperial	Metric
Allowable Bending Moment	76.34 kip-in	8.58 kN-m
Allowable Interior Reaction	12.35 kips	54.94 kN
Allowable Shear	7.31 kips	32.52 kN
Allowable End Reaction	6.17 kips	27.47 kN
Safety Factor 2.2:1 (on ultimate)		

(Interior reaction based on an effective bearing length of 5" (127mm))

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