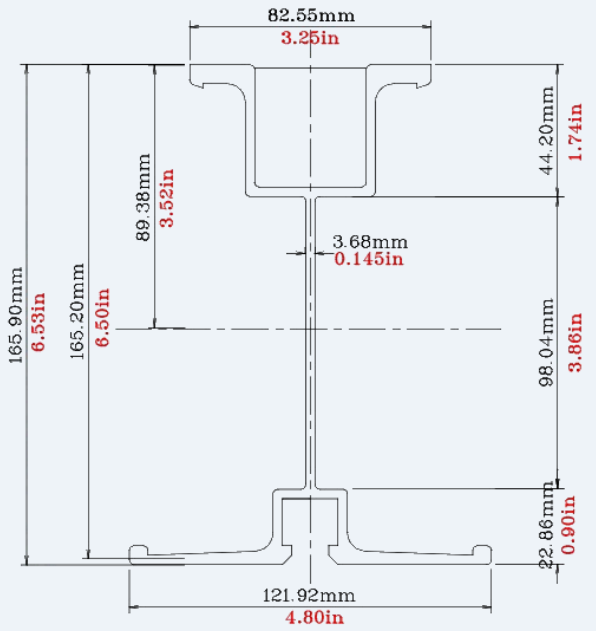


STANDARD LENGTHS

MM	FT
2,743	9.0
3,200	10.5
3,658	12.0
4,267	14.0
4,877	16.0
5,486	18.0
6,401	21.0

SECTION PROPERTIES

PROPERTY		METRIC	IMPERIAL
Overall Height		165 mm	6.50 in
Base Width		122 mm	4.80 in
Top Width		83 mm	3.25 in
Cross Sectional Area	*excl. nailer*	1,781 mm²	2.76 in²
Nominal Weight	*excl. nailer*	4.84 kg/m	3.25 lb/ft
Nominal Weight	*incl. nailer*	6 kg/m	4 lb/ft
Distance of Neutral Axis from Top		89 mm	3.52 in
Moment of Inertia	I_{x-x}	7.43E6 mm⁴	17.84 in⁴
Moment of Inertia	I_{y-y}	1.13E6 mm⁴	2.71 in⁴
Section Modulus	S_{xt}	83.08E3 mm³	5.07 in³
Section Modulus	S_{xb}	97.01E3 mm³	5.92 in³
Section Modulus	S_y	18.52E3 mm³	1.13 in³
Radius of Gyration	r_x	65 mm	2.54 in
Radius of Gyration	r_y	25 mm	0.99 in
Modulus of Elasticity	E	7.03E4 kN/mm²	10.2E6 psi

NOTES

1. Allowable design values are based on a 2.20 factor of safety.
2. Allowable reaction and shear values are based on Alcan's *Strength of Aluminum*, 4th edition.
3. Interior reaction length of bearing: 127 mm (5 in). Exterior reaction length of bearing: 64 mm (2.5 in).

165 mm	4.84 kg/m	11.30 kN·m	43.73 kN
OVERALL HEIGHT (6.50 IN)	WEIGHT EXCL. NAILER (3.25 LB/FT)	ALLOWABLE BENDING (BOTTOM FLANGE)	ALLOWABLE SHEAR (9.83 KIPS)

ALLOY PROPERTIES

Ultimate Tensile Stress	F_u	290E3 kN/m²	42 ksi
Yield Stress	F_y	255E3 kN/m²	37 ksi
Shear Yield Stress	F_{sy}	155E3 kN/m²	22 ksi
Ultimate Bearing Stress	F_b	580E3 kN/m²	84 ksi

ALLOWABLE REACTIONS & SHEARS

Interior Reaction (Full Bearing)	69.97 kN	15.73 kips
Exterior Reaction (Partial Bearing)	34.96 kN	7.86 kips
Concentrated Load	69.97 kN	15.73 kips
Shear	43.73 kN	9.83 kips

LOCAL BUCKLING OF BOTTOM FLANGE

Ultimate Bending Moment	24.74 kN·m	18.25 k·ft
Allowable Bending Moment	11.30 kN·m	8.30 k·ft

LOCAL BUCKLING OF TOP FLANGE

Ultimate Bending Moment	21.20 kN·m	15.63 k·ft
Allowable Bending Moment	9.64 kN·m	7.11 k·ft

DESIGN

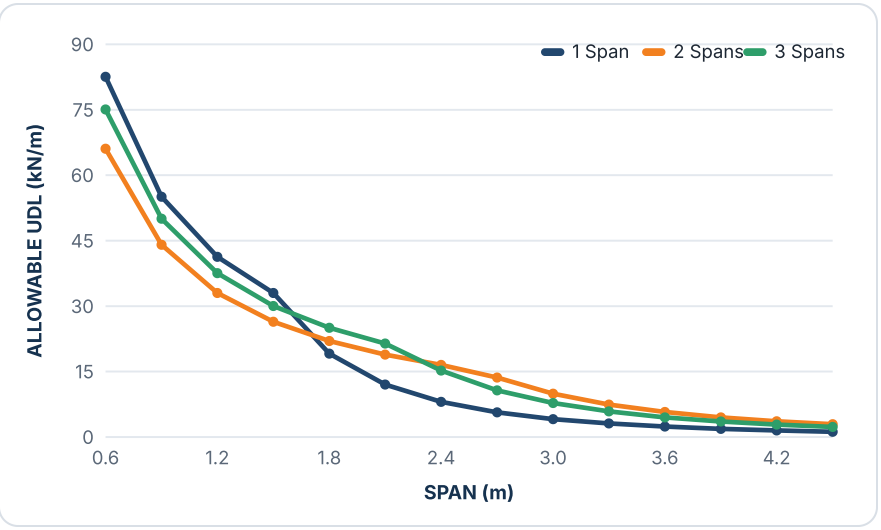
Allowable values include a 2.20 factor of safety. Consult TTF Engineering for any application outside these values.

CALCULATED VALUES

To be confirmed by tests.

NOTES

1. Deflection limited to L/360.
2. Factor of safety 2.2:1 included.
3. Design load = dead load + live load.
4. Cantilevers are not to exceed 30% of the adjacent span and not more than 915 mm (3 ft).
5. Consult TTF Engineering for other stringer configurations.



ALLOWABLE UDL (KN/M)

SPAN M	1 SPAN	2 SPANS	3 SPANS
0.6	82.58	66.07	75.08
0.9	55.06	44.05	50.05
1.2	41.29	33.03	37.54
1.5	33.00	26.43	30.03
1.8	19.10	22.02	25.03
2.1	12.03	18.88	21.45
2.4	8.06	16.52	15.24
2.7	5.66	13.63	10.70
3.0	4.12	9.94	7.80
3.3	3.10	7.46	5.86
3.6	2.39	5.75	4.51
3.9	1.88	4.52	3.55
4.2	1.50	3.62	2.84
4.5	1.22	2.94	2.31

ALLOWABLE UDL (PLF)

SPAN FT	1 SPAN	2 SPANS	3 SPANS
2	5,570	4,456	5,064
3	3,713	2,971	3,376
4	2,785	2,228	2,532
5	2,157	1,782	2,025
6	1,248	1,485	1,688
7	786	1,273	1,447
8	527	1,114	996
9	370	891	699
10	270	649	510
11	203	488	383
12	156	376	295
13	123	296	232
14	98	237	186
15	80	192	151