STEEL SHEET ROOFS IN HIGH WIND AREAS

STRUTTING BEAM SUPPORTING A STEEL SHEET ROOF AND CEILING - HIGH WIND N5/C2

Section Designation	Load Area (m^2) 7	10	13	16	19	22	25
	MAXIMUM SPAN OF BEAM (m)						
100TFB	1.7*	1.1*					
125TFB	4.0*	2.8*	2.1+	1.7+	1.4^	1.2^	1.1^
150UB14.0	4.4*	3.6*	2.7+	2.2+	1.8^	1.6^	1.4^
• 150UB18.0	5.6*	4.6*	3.6+	2.9+	2.5^	2.1^	1.9^
180UB16.1	5.5*	4.5*	3.7+	3.0+	2.5^	2.2^	1.9^
180UB18.1	6.1*	5.0*	4.2+	3.4+	2.9^	2.5^	2.2^
• 180UB22.2	7.3*	6.0*	5.1+	4.3+	3.6^	3.1^	2.7^
200UB18.2	6.4*	5.3*	4.6+	3.9+	3.3^	2.8^	2.5^
200UB22.3		7.1*	6.1+	5.0+	4.2^	3.6^	3.2^
200UB25.4		7.7*	6.6+	5.7+	4.8^	4.1^	3.7^
• 200UB29.8		8.9*	7.7+	6.9^	5.9^	5.0^	4.5^
250UB25.7		7.9*	6.9+	6.2+	5.6^	5.1^	4.5^
250UB31.4			8.5+	7.6+	6.9^	6.3^	5.6^
• 250UB37.3			9.9+	8.9+	8.1^	7.4^	6.9^
310UB32.0			8.9+	8.0+	7.4^	6.8^	6.5^
310UB40.4					9.4^	8.7^	8.2^
310UB46.2						9.5^	8.9^
75PFC	1.0						
100PFC	2.0*	1.4*	1.0+				
125PFC	3.6*	2.5*	1.9+	1.6+	1.3^	1.1^	1.0^
150PFC	6.2*	4.5*	3.5+	2.8+	2.3^	2.0^	1.8^
180PFC	7.4*	6.0*	4.6+	3.7+	3.1^	2.7^	2.4^
200PFC		6.6*	5.6+	4.5+	3.8^	3.3^	2.9^
230PFC		7.2*	6.2+	5.4+	4.7^	4.0^	3.6^
250PFC			9.0+	7.9+	7.1^	6.8^	5.6^
300PFC				9.0+	8.2^	7.5^	7.0^

Refer to page 8 for the layout diagram

Example:
Refer to Fig. page 8
Span S=6.1m
A=7.0m
Load area=0.25xAxS
=0.25x7.0x6.1
=10.7m^2
Use a load area of 13 sq metres in the adjacent table
a 200UB22.3 will span 6.1m and requires a M12 anchor rod.

STRUTTING/HANGING BEAM SUPPORTING A STEEL SHEET ROOF AND CEILING - HIGH WIND N5/C2

Section Designation	Load Width (m) 1.2	1.8	2.4	3.0	3.6	4.2	4.8
	MAXIMUM SPAN OF BEAM (m)						
100TFB	2.7*	2.3*	2.1*	2.0*	1.8*	1.7*	1.7*
125TFB	4.2*	3.7*	3.3*	3.1*	2.9*	2.7+	2.6+
150UB14.0	4.3*	3.7*	3.4*	3.2*	3.0*	2.8+	2.7+
• 150UB18.0	5.0*	4.4*	4.0*	3.7*	3.5+	3.3+	3.2+
180UB16.1	4.8*	4.2*	3.8*	3.6*	3.4+	3.2+	3.1+
180UB18.1	5.1*	4.5*	4.1*	3.8*	3.6+	3.4+	3.3+
• 180UB22.2	5.8*	5.1*	4.7*	4.4+	4.1+	3.9+	3.7^
200UB18.2	5.2*	4.6*	4.2*	3.9+	3.7+	3.5+	3.3+
200UB22.3	6.2*	5.5*	5.0+	4.7+	4.4+	4.2^	4.0^
200UB25.4	6.6*	5.8*	5.3+	5.0+	4.7^	4.5^	4.3^
• 200UB29.8	7.4*	6.5*	6.0+	5.5+	5.2^	5.0^	4.8^
250UB25.7	6.5*	5.8*	5.3+	4.9+	4.7^	4.4^	4.3^
250UB31.4		6.6*	6.1+	5.7^	5.3^	5.1^	4.9^
• 250UB37.3		7.4+	6.8+	6.4^	6.0^	5.7^	5.5^
310UB32.0		6.6*	6.1+	5.7^	5.4^	5.2^	5.0^
310UB40.4		7.9+	7.3^	6.8^	6.4^	6.1^	5.9^
310UB46.2			7.8^	7.3^	6.9^	6.6^	6.3^
75PFC	2.7*	2.3*	2.1*	1.9*	1.8*	1.7*	1.6*
100PFC	3.3*	2.9*	2.6*	2.4*	2.3*	2.1*	2.0*
125PFC	4.3*	3.7*	3.4*	3.1*	2.9*	2.8+	2.7+
150PFC	5.5*	4.8*	4.4*	4.1+	3.8+	3.6+	3.4^
180PFC	6.0*	5.3*	4.8*	4.5+	4.2+	4.0^	3.8^
200PFC	6.3*	5.6*	5.1+	4.7+	4.4+	4.2^	4.0^
230PFC	6.5*	5.7*	5.2+	4.9+	4.6+	4.3^	4.2^
250PFC		7.3+	6.7+	6.2^	5.8^	5.6^	5.3^
300PFC		7.7+	7.0+	6.6^	6.2^	5.9^	5.6^

Refer to page 10 for the layout diagram

Example:
Refer to Fig. page 10
Span=4.6m
A=3.0m
B=2.9m
Load width=0.5A
=0.5x3.0
=1.5
Use a load width of 1.8 in the adjacent table
a 200UB18.2 will span 4.6m and requires a M10 anchor rod.

LINTEL SUPPORTING A STEEL SHEET ROOF AND CEILING - HIGH WIND N5/C2

Section Designation	Load Width (m) 1.2	1.8	2.4	3.0	3.6	4.8	6.0
	MAXIMUM SPAN OF LINTEL (m)						
100TFB	2.7*	2.3*	2.1*	1.9*	1.8*	1.6*	1.5*
125TFB	4.3*	3.7*	3.3*	3.0*	2.8*	2.5+	2.3+
150UB14.0	4.4*	3.8*	3.4*	3.2*	3.0*	2.7+	2.5+
• 150UB18.0	5.2*	4.5*	4.1*	3.7*	3.5+	3.1+	2.9^
180UB16.1	5.0*	4.3*	3.9*	3.6*	3.4+	3.1+	2.9^
180UB18.1	5.4*	4.7*	4.2*	3.9+	3.6+	3.3+	3.0^
• 180UB22.2	6.1*	5.3*	4.8*	4.4+	4.1+	3.7^	3.4^
200UB18.2	5.5*	4.8*	4.3*	4.0+	3.8+	3.4^	3.2^
200UB22.3	6.6*	5.7*	5.2+	4.8+	4.5+	4.1^	3.8^
200UB25.4	7.0*	6.1*	5.5+	5.1+	4.8^	4.3^	4.0^
• 200UB29.8	7.9*	6.8+	6.1+	5.7^	5.3^	4.8^	4.4^
250UB25.7	7.0*	6.1*	5.5+	5.1+	4.8^	4.4^	4.1^
250UB31.4		7.0+	6.4+	5.9^	5.6^	5.1^	4.7^
• 250UB37.3		7.9+	7.1^	6.6^	6.2^	5.6^	5.2^
75PFC	2.6*	2.2*	2.0*	1.8*	1.7*	1.5*	1.4*
100PFC	3.3*	2.9*	2.6*	2.3*	2.2*	2.0*	1.8*
125PFC	4.3*	3.7*	3.3*	3.1*	2.9*	2.6+	2.4+
150PFC	5.6*	4.9*	4.4*	4.0+	3.7+	3.4+	3.1^
180PFC	6.2*	5.4*	4.8*	4.5+	4.2+	3.7^	3.4^
200PFC	6.6*	5.7*	5.1+	4.7+	4.4+	4.0^	3.7^
230PFC	6.8*	5.9*	5.3+	4.9+	4.6^	4.2^	3.8^
250PFC		7.6+	6.8+	6.3^	5.9^	5.3^	4.9^

Refer to page 12 for the layout diagram

Example:
Refer to Fig. page 12
Lintel Span=4.6m, trussed roof
A=3.8m
Load width=A
=3.8m
Use a load width of 4.8
in the adjacent table
a 250UB29.8 will span 4.8m
and requires a M16 anchor rod.

BEAM SUPPORTING A STEEL SHEET VERANDAH OR CARPORT ROOF - HIGH WIND N5/C2

Section Designation	Load Width (m) 1.2	1.8	2.4	3.0	3.6	4.2	4.8
	MAXIMUM SPAN OF BEAM (m)						
100TFB	2.7*	2.3*	2.1*	1.9*	1.8*	1.7*	1.6*
125TFB	4.3*	3.7*	3.3*	3.0*	2.8*	2.7*	2.5+
150UB14.0	4.4*	3.8*	3.4*	3.2*	3.0*	2.8+	2.7+
• 150UB18.0	5.2*	4.5*	4.1*	3.7*	3.5+	3.3+	3.1+
180UB16.1	5.0*	4.3*	3.9*	3.6*	3.4+	3.2+	3.1+
180UB18.1	5.4*	4.7*	4.2*	3.9+	3.6+	3.5+	3.3+
• 180UB22.2	6.1*	5.3*	4.8*	4.4+	4.1+	3.9+	3.7^
200UB18.2	5.5*	4.8*	4.3*	4.0+	3.8+	3.6+	3.4^
200UB22.3	6.6*	5.7*	5.2+	4.8+	4.5+	4.3^	4.1^
200UB25.4	7.0*	6.1*	5.5+	5.1+	4.8^	4.5^	4.3^
• 200UB29.8	7.9*	6.8+	6.1+	5.7^	5.3^	5.0^	4.8^
250UB25.7	7.0*	6.1*	5.5+	5.1+	4.8^	4.6^	4.4^
250UB31.4		7.0+	6.4+	5.9^	5.6^	5.3^	5.1^
• 250UB37.3		7.9+	7.1^	6.6^	6.2^	5.9^	5.6^
310UB32.0		7.1+	6.5+	6.0^	5.7^	5.4^	5.2^
310UB40.4		8.5+	7.7^	7.2^	6.7^	6.4^	6.1^
310UB46.2			8.3^	7.7^	7.2^	6.9^	
75PFC	2.6*	2.2*	2.0*	1.8*	1.7*	1.6*	1.5*
100PFC	3.3*	2.9*	2.6*	2.3*	2.2*	2.1*	2.0*
125PFC	4.3*	3.7*	3.3*	3.1*	2.9*	2.7*	2.6+
150PFC	5.6*	4.9*	4.4*	4.0+	3.7+	3.5+	3.4+
180PFC	6.2*	5.4*	4.8*	4.5+	4.2+	3.9^	3.7^
200PFC	6.6*	5.7*	5.1+	4.7+	4.4+	4.2^	4.0^
230PFC	6.8*	5.9*	5.3+	4.9+	4.6^	4.4^	4.2^
250PFC		7.6+	6.8+	6.3^	5.9^	5.6^	5.3^
300PFC		8.1+	7.3^	6.8^	6.3^	6.0^	5.7^

Refer to page 18 for the layout diagram

Example:
Refer to Fig. page 18
Span=4.6m
A=3.8m
B=3.0m
Load width $=A^2/2B$
$=3.8^2/(2x3.0)$
=2.4m
Use a load width of 2.4
in the adjacent table
a 180UB22.2 will span 4.8m
and requires a M10 anchor rod.

Notes on Tables:

1. The tables apply for 300PLUS® steel only. For details of your nearest 300PLUS® structural steel supplier, call OneSteel Direct toll free on 1800 1 STEEL (1800 1 78335), or visit our website at www.onesteel.com
2. For angle lintels, the first dimension corresponds to the vertical lintel leg. eg for 100x75x6UA, 100mm leg is vertical.
3. For sections marked '•' the next largest size may be more economical.
4. No symbol next to the span indicates that only nominal holding down is required (uplift is less than 5 kN).
   A "*" indicates a M10 holding down rod is required (uplift is between 5 and 19 kN).
   A "+" indicates a M12 holding down bolt is required (uplift is between 19 and 27 kN).
   A "^" indicates a M16 holding down bolt is required (uplift is between 27 and 50 kN).

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