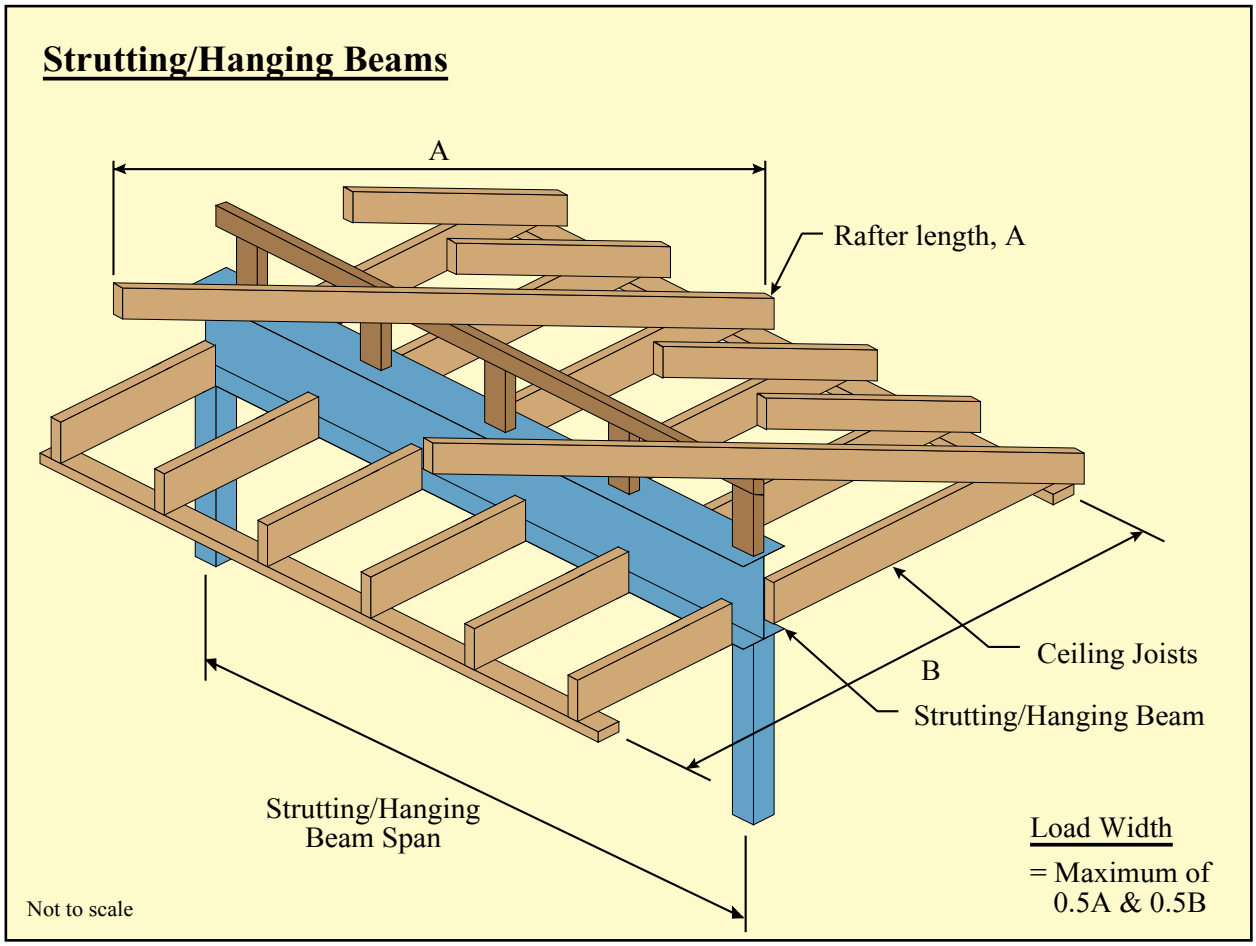
STRUTTING/HANGING BEAMS

	Load (kg/m²)		Deflection Limit (mm)	
	Dead Load	Live Load	Dead & Live Load	Live Load
Strutting/Hanging Beam supporting a steel sheet roof & ceiling	40	25 (or ≥ 180/Area + 12)	span/180 to 20	span/240 to 15
Strutting/Hanging Beam supporting a tiled roof & ceiling	90	25 (or ≥ 180/Area + 12)	span/180 to 20	span/240 to 15



Notes:

1. The roof load is assumed to be evenly distributed along the Strutting/Hanging Beam.
2. The bottom flange of the Strutting/Hanging Beam is assumed to be continuously laterally supported by ceiling joists at 600mm maximum centres.

STRUTTING/HANGING BEAM SUPPORTING A STEEL SHEET ROOF AND CEILING - NORMAL WIND N3

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	3.1	2.8	2.6	2.4	2.2*	2.1*	2.0*
125TFB	5.0	4.4*	4.0*	3.7*	3.5*	3.3*	3.2*
150UB14.0	5.0	4.5*	4.1*	3.8*	3.6*	3.4*	3.2*
• 150UB18.0	6.0	5.3*	4.8*	4.5*	4.2*	4.0*	3.8*
180UB16.1	5.6	5.0*	4.6*	4.2*	4.0*	3.8*	3.7*
180UB18.1		5.4*	4.9*	4.6*	4.3*	4.1*	3.9*
• 180UB22.2		6.1*	5.6*	5.2*	4.9*	4.7*	4.5*
200UB18.2		5.4*	5.0*	4.6*	4.4*	4.2*	4.0*
200UB22.3		6.4*	5.9*	5.5*	5.2*	5.0*	4.8*
200UB25.4		6.9*	6.3*	5.9*	5.6*	5.3*	5.1*
• 200UB29.8		7.7*	7.0*	6.6*	6.2*	5.9*	5.7*
250UB25.7		6.8*	6.2*	5.8*	5.5*	5.3*	5.0*
250UB31.4			7.1*	6.7*	6.3*	6.0*	5.8*
• 250UB37.3			8.0*	7.5*	7.4*	6.8*	6.5+
310UB32.0			7.1*	6.7*	6.4*	6.1*	5.8*
310UB40.4				8.0*	7.5*	7.2+	6.9+
310UB46.2					8.2*	7.8+	7.5+
75PFC	3.1	2.8	2.5	2.3	2.2*	2.1*	2.0*
100PFC	4.0	3.5	3.2*	2.9*	2.8*	2.6*	2.5*
125PFC	5.1	4.5*	4.1*	3.8*	3.6*	3.4*	3.2*
150PFC		5.7*	5.2*	4.9*	4.6*	4.4*	4.2*
180PFC		6.3*	5.7*	5.3*	5.0*	4.8*	4.6*
200PFC		6.6*	6.1*	5.6*	5.3*	5.1*	4.8*
230PFC		6.8*	6.2*	5.8*	5.5*	5.2*	5.0*
250PFC				7.4*	7.0*	6.6*	6.3+
300PFC				7.7*	7.3*	7.0*	6.7+

Example:
Refer to Fig. page 10
Required beam span=4.0m
A=7.8m, B=6.0m
Load width= Maximum of
=0.5A & 0.5B
=0.5x7.8
= 3.9m
Use a load width of 4.2
in the adjacent table
a 150UB18.0 will span 4.0m
and requires a M10 anchor rod.

STRUTTING/HANGING BEAM SUPPORTING A TILED ROOF AND CEILING - NORMAL WIND N3

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	2.4	2.2	2.1	1.9	1.8	1.7
125TFB	4.4	3.8	3.5	3.2	3.0*	2.9*	2.7*
150UB14.0	4.5	3.9	3.6	3.3	3.1*	3.0*	2.8*
• 150UB18.0	5.3	4.6	4.2	3.9*	3.7*	3.5*	3.3*
180UB16.1	5.0	4.4	4.0	3.7*	3.5*	3.3*	3.2*
180UB18.1	5.4	4.7	4.3	4.0*	3.8*	3.6*	3.4*
• 180UB22.2	6.1	5.4	4.9*	4.6*	4.3*	4.1*	3.9*
200UB18.2	5.4	4.8	4.4	4.1*	3.8*	3.7*	3.5*
200UB22.3	6.4	5.7	5.2*	4.9*	4.6*	4.4*	4.2*
200UB25.4	6.9	6.1	5.6*	5.2*	4.9*	4.7*	4.5*
• 200UB29.8	7.7	6.8	6.2*	5.8*	5.5*	5.2*	5.0*
250UB25.7	6.8	6.0	5.5*	5.1*	4.9*	4.6*	4.4*
250UB31.4		6.9	6.3*	5.9*	5.6*	5.3*	5.1*
• 250UB37.3		7.7*	7.1*	6.6*	6.3*	6.0*	5.7*
310UB32.0		6.9	6.4*	5.9*	5.6*	5.4*	5.2*
310UB40.4			7.5*	7.1*	6.7*	6.4*	6.1*
310UB46.2			8.2*	7.6*	7.2*	6.9*	6.6*
75PFC	2.7	2.4	2.2	2.0	1.9	1.8	1.7
100PFC	3.5	3.0	2.8	2.5	2.4	2.3	2.2
125PFC	4.5	3.9	3.6	3.3	3.1*	2.9*	2.8*
150PFC	5.7	5.0	4.6	4.3*	4.0*	3.8*	3.6*
180PFC	6.3	5.5	5.0*	4.7*	4.4*	4.2*	4.0*
200PFC	6.6	5.8	5.3*	4.9*	4.6*	4.4*	4.2*
230PFC	6.8	6.0	5.5*	5.1*	4.8*	4.6*	4.4*
250PFC		7.6*	7.0*	6.5*	6.1*	5.8*	5.6*
300PFC			7.3*	6.8*	6.5*	6.1*	5.9*

Example:
Refer to Fig. page 10
Required beam span=4.5m
A=7.6m
B=7.4m
Load width=0.5A
=0.5x7.6
=3.8m
Use a load width of 4.2
in the adjacent table
a 200UB25.4 will span 4.7m
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 sections marked '•' the next largest size may be more economical.
3. 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 & 27 kN).
4. For a steel sheet roof in high wind load areas refer to the table on page 20.

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STRUCTURAL STEEL IN HOUSING - THIRD EDITION

Structural steel is playing an increasingly important role in traditional and medium density housing with its versatility, strength and competitive price.

OneSteel produces a unique range of steel beams, columns, channels and angles which are suitable for use in domestic housing as floor bearers, joists, roof strutting beams, lintels, piling and other applications.

This booklet has been compiled to assist builders, draftspersons and designers to specify and use OneSteel's range of structural steel. It contains span tables, surface treatment specifications and installation details on the use of OneSteel's structural steel products in various residential building applications.

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