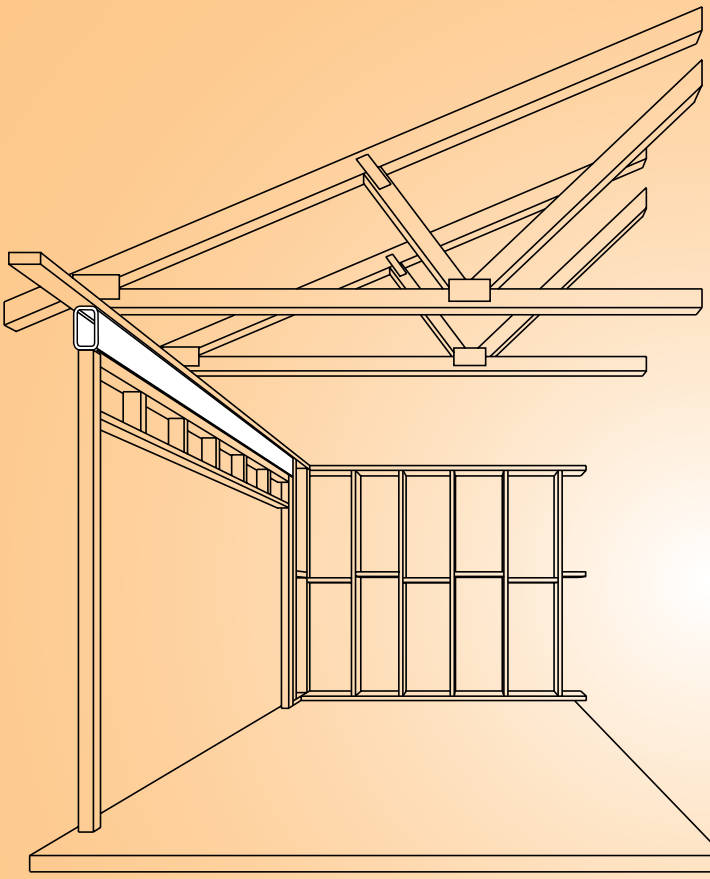

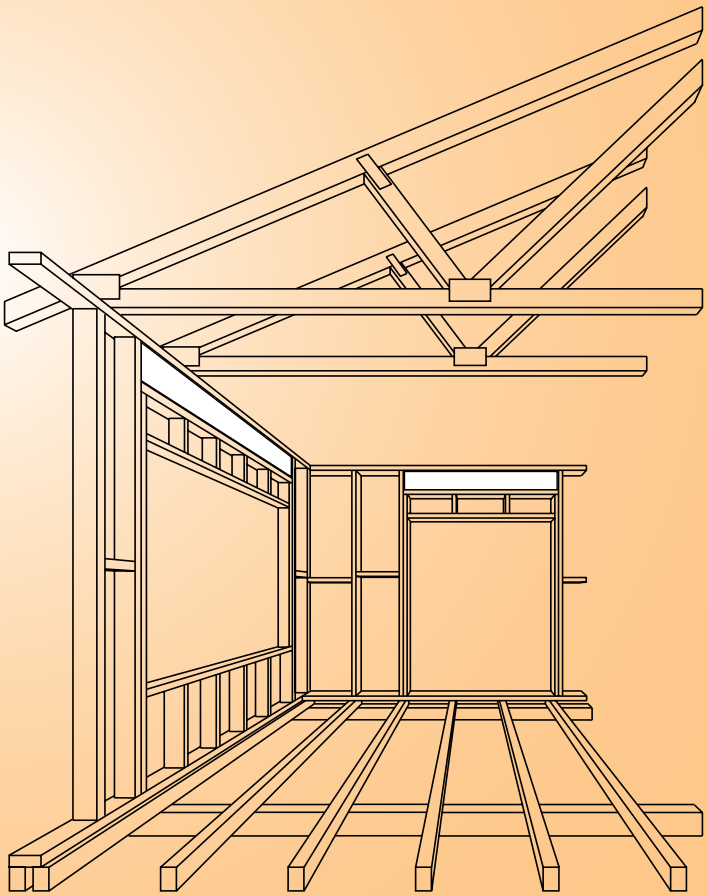

N1 to N3 DuraGalPlus® Domestic Construction Manual

Volume 2: DuraGalPlus RHS as lintels (garage beams, window heads)

DuraGal Plus®

AustubeMills
SHAPING POSSIBILITIES

DuraGalPlus® Domestic Construction Manual

Volume 1: Roof beams - N1 to C3
(N1 to C3 - Rafters)
(N1 to N3 - Roof beams, strutting beams, roof battens, ceiling joists)

Volume 2: Lintels - N1 to N3
(Garage beams, window heads)

Volume 3: Floor beams - N1 to N3
(Bearers)

Foreword

This limited edition of the DuraGalPlus® Domestic Construction Manual has been prepared by Austube Mills based on the requirements of relevant Standards Australia and Industry Specifications and in house testing.

The relevant design assumptions are listed in the front of each table.

Before selecting a member, reference should be made to the design assumptions to confirm the suitability of the tables for the intended applications.

Note: These tables do not take into account product availability from your steel retailer.

Please ensure that you check on product availability before you finalise the design.

Information on product availability can be obtained from the Austube Mills Product Availability Guide at www.austubemills.com.au.

It is strongly recommended that DuraGalPlus products be specified for construction when any of the design information in these manuals is used, as the calculations including product tolerances, mechanical properties and chemical composition have been validated by structural testing using only DuraGalPlus products. To ensure that the designers intentions are met it is strongly recommended that a note to this effect is included on any design information.

Letter of certification

STRUCterre consulting engineers

Residential | Geotechnical | Commercial & Infrastructure | Inspect & Investigate | Energy Assessment | Environmental

14 March 2017

Reference: 35739-16CS Vol3 ST01

Austube Mills
Industrial Drive
Newcastle NSW 2304

Dear Sir,

Re: Structural Engineers Certification of
N1 to N3 DuraGalPlus Domestic Construction Manual
Volume 2: DuraGalPlus RHS as lintels (garage beams, window heads)
February 2017 Edition

We hereby certify that we have checked the structural aspects of the span tables presented in the N1 to N3 DuraGalPlus Domestic Construction Manual Volume 2, dated February 2017.

We certify that the design tables conform to the requirements of the National Construction Code 2016 Building Code of Australia, and the following Australian Standards:

- AS/NZS 1170.0:2002 Structural design actions Part 0: General principles
- AS/NZS 1170.1:2002 Structural design actions Part 1: Permanent, imposed and other actions
- AS 4055:2012 Wind loads for housing
- NASH Standard: Residential and Low-rise Steel Framing Part 1: Design Criteria 2005
- AS 4100:1998 Steel Structures

These tables, when used within the parameters and limitations presented in this document, will provide structural solutions which satisfy the requirements of the National Construction Code 2016 Building Code of Australia and the referenced standards.

Yours faithfully
Structerre Consulting Engineers

Gervase Purich
BE FIEAust CPEng NPER RPEQ
CEO

WA | QLD | NSW | VIC
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Phone (+617) 3307 8300 | Fax (+617) 3307 8301 | Email brisbane@structerre.com.au | Web www.structerre.com.au
ABN 99 115 038 429 Structerre WBA Pty Ltd ACN 115 038 429 trading as Structerre Consulting Engineers (QLD)

Contents

DuraGalPlus product specifications

Surface finish and corrosion protection

DuraGalPlus products are hot dip galvanized to section 3, AS/NZS 4792 with DuraGalPlus ZB100/100 having a minimum average coating mass of 100g/m^2 on each surface and DuraGalPlus ZB135/135 having 135g/m^2.

In many corrosive environments these systems may not require any additional surface treatment. In harsh environments additional top coats may need to be applied. For advice on painting systems for a wide range of environments refer to the 'DuraGal Easy Painting and Corrosion Protection Guide'.

Welding performance

DuraGalPlus sections are made from low carbon structural steel, so they are readily weldable. The zinc coating thickness is carefully controlled to ensure that structurally sound welds can be fabricated using standard welding practices. The 'DuraGal Easy Welding Guide' provides guidelines for welding DuraGalPlus products. The Guide can be found at www.austubemills.com.au/publications-and-resources/technical/duragal_easy_welding_guide.pdf.

Grade

DuraGalPlus sections are manufactured by a cold forming process which ensures the DuraGalPlus rectangular and square hollow sections (RHS/SHS) covered in this publication comply with the requirements of AS/NZS 1163 - C450L0. AS/NZS 1163 C450L0 is supplied as C450PLUS, which meets AS/NZS 1163 requirements for both Grade 350L0 and C450L0.

Designation

Typical designations for DuraGalPlus RHS and SHS are:

> For DuraGalPlus RHS 150 x 50 x 4.0 RHS DuraGalPlus AS/NZS1163 C450L0 supplied as C450PLUS
> For DuraGalPlus SHS 100 x 100 x 4.0 RHS DuraGalPlus AS/NZS1163 C450L0 supplied as C450PLUS

Length range

DuraGalPlus ZB100/100 is stocked by distributors in the following lengths.

Section	Size	Standard length (m)
RHS	50 x 25 to 75 x 25	8.0
	75 x 50 to 150 x 50	8.0 & 12.0
SHS	25 x 25	6.5
	30 x 30 to 65 x 65	8.0
	75 x 75 to 100 x 100	8.0 & 12.0

* Non-standard lengths - minimum order quantities and/or price extras may apply.

DuraGalPlus ZB135/135 is available in the following sizes in 8.0m lengths:

90 x 90 x 2.0
100 x 50 x 1.6
100 x 50 x 2.0
150 x 50 x 2.0
150 x 50 x 3.0

More information on product availability can be found in the Product Availability Guide on Austube Mills website at www.austubemills.com.au.

Span tables design data

Scope

This volume of the DuraGal® Domestic Construction Manual covers the design of DuraGalPlus RHS lintels which conform to wind classifications of up to category N3.

The tables in this volume cover the design of DuraGalPlus RHS lintels supporting house framing (not carrying masonry walls). The tables have been broadly divided into two sections: Lintels Supporting roof loads only and lintels supporting roof and floor loads.

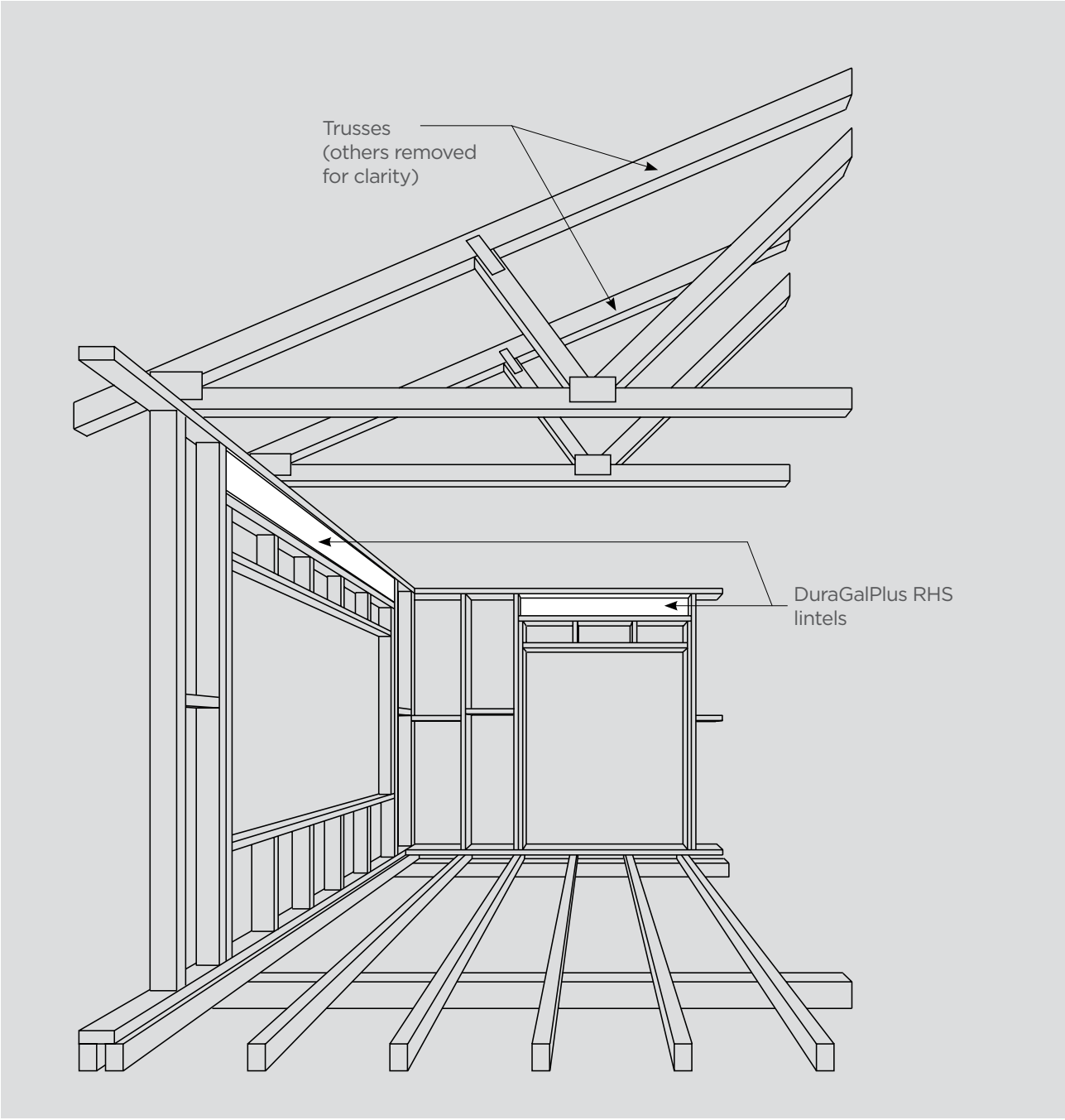
Design assumptions

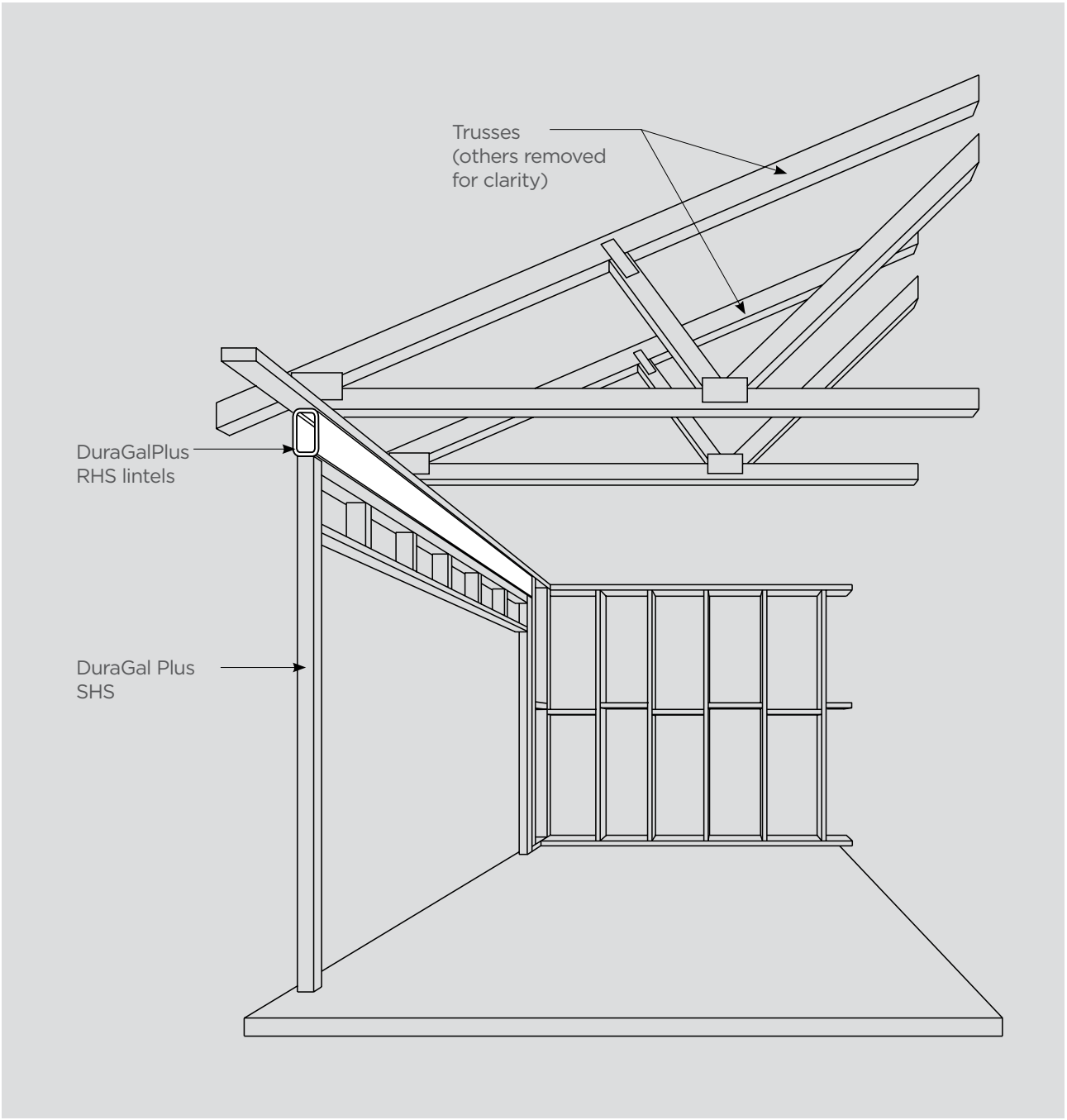
The design assumptions used to generate these tables are as follows:

- DuraGalPlus RHS lintels are designed in accordance with AS 4100.
- All lintels are assumed to be restrained against lateral movement and twist along their lengths in accordance with AS 4100.
- Lintels in single storey and upper storey walls consider the load is applied in a series of concentrated point loads spaced at maximum 1.2m. For a larger truss/rafter spacing, the girder truss tables should be considered. Loads on lower storey lintels consider a uniformly distributed load.
- The loads applied and the deflection limits for each set of tables is shown before the tables.
- All loads are static and applied vertically.
- Minimum end support bearing for lintels is assumed to be 70mm.
- All lintels are assumed to be part of an enclosed building.
- The wind pressure coefficients for enclosed buildings are taken as:
  - External pressure coefficient, $C_{p,e}$ = -0.9
  - Internal pressure coefficient, $C_{p,i}$ = +0.2 (for non-cyclonic areas)
  - k_c = 0.9

DuraGalPlus RHS as lintels

Examples of the use of DuraGalPlus members as lintels not carrying masonry are shown in this section. The diagrams show DuraGalPlus RHS used as window head and as a garage beam.




Trusses
(others removed
for clarity)
DuraGalPlus
RHS lintels
DuraGal Plus
SHS

How to use the tables

Step 1

Find out if the lintel is carrying roof loads only or roof and floor loads.

Step 2

Establish the type of roofing material (masonry tiles and ceiling or steel sheeting and ceiling).

Step 3

Check that the wind classification is equal to or below N3.

If lintel is carrying roof loads only go to Step 7

Step 4

Find the type of flooring material used (timber or concrete).

Step 5

Establish if the roof is trussed or pitched.

Step 6

Calculate the effective roof width and effective floor width. Check also the validity of the design assumptions used in the tables to work out the effective lintel spacing for trussed and pitched roof.

Step 7

Work out required effective lintel spacing as per the diagrams provided at the start of the tables.

Step 8

Work out the required span of the lintel.

Step 9

Go to the appropriate table on the basis of information from Step 1 to 8.

Step 10

Select the column under effective lintel spacing with table effective lintel spacing equal to or larger than the required effective lintel spacing (worked out in Step 7).

Step 11

Select the section that has a maximum span equal to or larger than the required span of lintel which is worked out in Step 8.

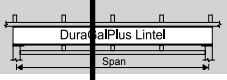
Supporting roof loads only

DuraGal Plus®

Roof - masonry tiles and ceiling

Maximum lintel span (mm)

Single span



DuraGalPlus section	Mass kg/m	Effective lintel spacing (mm)												
		1200	1800	2400	3000	3600	4200	4800	5400	6000	6600	7200	7800	8400
150x50x6.0RHS	16.7	4840	4430	4150	3920	3750	3610	3940	3400	3310	3240	3180	3120	3070
150x50x5.0RHS	14.2	4710	4310	4020	3790	3630	3500	3390	3300	3210	3150	3080	3020	2960
150x50x4.0RHS	11.6	4530	4140	3850	3640	3480	3360	3250	3170	3090	3020	2950	2880	2830
150x50x3.0RHS	8.96	4320	3910	3640	3450	3300	3190	3090	3000	2920	2840	2770	2720	2650
150x50x2.5RHS	7.53	4160	3750	3500	3320	3180	3070	2960	2870	2790	2720	2640	2560	2500
150x50x2.0RHS	6.07	3950	3570	3330	3170	3030	2920	2810	2720	2620	2530	2450	2380	2260
125x75x6.0RHS	16.7	4610	4220	3930	3720	3560	3430	3330	3240	3160	3100	3030	2970	2910
125x75x5.0RHS	14.2	4490	4090	3810	3610	3450	3330	3230	3140	3070	2990	2930	2860	2810
125x75x4.0RHS	11.6	4320	3920	3650	3460	3310	3190	3100	3020	2930	2860	2790	2730	2660
125x75x3.0RHS	8.96	4090	3700	3450	3280	3140	3030	2930	2840	2750	2680	2590	2520	2450
125x75x2.5RHS	7.53	3930	3560	3320	3160	3030	2910	2800	2720	2620	2530	2450	2380	2320
125x75x2.0RHS	6.07	3740	3390	3180	3010	2870	2750	2630	2520	2420	2310	2210	2100	1930
100x50x5.0RHS	10.3	3620	3300	3090	2920	2780	2650	2530	2430	2340	2270	2210	2150	2100
100x50x4.0RHS	8.49	3490	3180	2970	2810	2650	2510	2390	2300	2220	2160	2100	2050	2000
100x50x3.5RHS	7.53	3410	3110	2890	2730	2560	2430	2320	2230	2160	2100	2040	1990	1940
100x50x3.0RHS	6.60	3330	3040	2820	2630	2470	2340	2240	2160	2090	2030	1970	1920	1870
100x50x2.5RHS	5.56	3210	2920	2690	2490	2340	2220	2130	2060	1990	1930	1870	1820	1740
100x50x2.0RHS	4.50	3080	2770	2520	2330	2200	2100	2010	1930	1860	1800	1640	1520	1420
75x50x5.0RHS	8.35	3030	2730	2470	2290	2160	2070	1980	1910	1830	1760	1710	1630	1560
75x50x4.0RHS	6.92	2930	2600	2360	2190	2080	1980	1880	1810	1740	1650	1600	1530	1460
75x50x3.0RHS	5.42	2780	2440	2220	2070	1950	1850	1760	1650	1560	1520	1440	1400	1320
75x50x2.5RHS	4.58	2670	2320	2110	1980	1850	1750	1640	1540	1460	1410	1320	1220	1130
75x50x2.0RHS	3.72	2490	2180	2000	1850	1730	1610	1510	1420	1300	1140	1040	1000	920
75x50x1.6RHS	3.01	2330	2060	1860	1720	1510	1300	1120	1010	910	810	73		
75x25x2.5RHS	3.60	2280	2010	1820	1640	1420	1220	1040	930	830	740	71		
75x25x2.0RHS	2.93	2150	1890	1700	1410	1140	1010	840	750	710	620	55		
75x25x1.6RHS	2.38	2030	1760	1430	1130	940	820	720	630	540	520			
65x35x4.0RHS	5.35	2380	2100	1910	1760	1620	1510	1410	1230	1120	1020	92		
65x35x3.0RHS	4.25	2260	2000	1810	1640	1510	1320	1140	1030	930	830	74		
65x35x2.5RHS	3.60	2170	1910	1720	1530	1320	1130	1010	900	810	720	64		
65x35x2.0RHS	2.93	2050	1780	1550	1320	1110	930	820	720	630	600	53		
50x25x3.0RHS	3.07	1590	1330	1140	1000	820	710	610	530	500				
50x25x2.5RHS	2.62	1490	1240	1050	840	720	610	520						
50x25x2.0RHS	2.15	1380	1140	910	720	610	510							
50x25x1.6RHS	1.75	1270	1000	730	600	500								

N1 to N3 – DuraGalPlus® RHS as lintels - garage be

DDCM Volum

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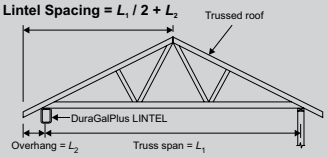
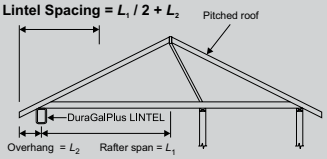
Effective Lintel Spacing = L_1 / 2 + L_2



Effective Lintel Spacing = L_1 / 2 + L_2



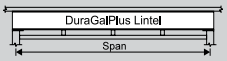
Floor - timber

Roof - masonry tiles and ceiling - trussed roof*

DuraGal Plus®

Maximum lintel span (mm)

Single span



DuraGalPlus section	Mass kg/m	Effective lintel spacing (mm)						
		1200	1800	2400	3000	3600	4200	4800
150x50x6.0RHS	16.7	3530	3200	2990	2830	2700	2570	2460
150x50x5.0RHS	14.2	3430	3100	2890	2740	2590	2460	2350
150x50x4.0RHS	11.6	3290	2970	2770	2600	2450	2320	2220
150x50x3.0RHS	8.96	3110	2820	2600	2410	2270	2160	2060
150x50x2.5RHS	7.53	2990	2710	2460	2290	2150	1920	1680
150x50x2.0RHS	6.07	2840	2270	1700	1360	1140	980	850
125x75x6.0RHS	16.7	3370	3050	2840	2690	2530	2410	2300
125x75x5.0RHS	14.2	3260	2950	2750	2570	2420	2300	2200
125x75x4.0RHS	11.6	3120	2830	2610	2430	2290	2170	2080
125x75x3.0RHS	8.96	2950	2670	2420	2250	2120	2010	1930
125x75x2.5RHS	7.53	2840	2530	2300	2130	2010	1910	1830
125x75x2.0RHS	6.07	2700	2360	2150	1800	1500	1290	1130
100x50x5.0RHS	10.3	2610	2280	2080	1930	1820	1730	1650
100x50x4.0RHS	8.49	2480	2170	1970	1830	1720	1640	1570
100x50x3.5RHS	7.53	2400	2100	1910	1770	1670	1580	1520
100x50x3.0RHS	6.60	2320	2030	1840	1710	1610	1530	1460
100x50x2.5RHS	5.56	2200	1930	1750	1630	1530	1450	1390
100x50x2.0RHS	4.50	2060	1810	1640	1520	1430	1360	1300
75x50x5.0RHS	8.35	2040	1780	1620	1510	1420	1350	1290
75x50x4.0RHS	6.92	1940	1700	1550	1440	1350	1290	1230
75x50x3.0RHS	5.42	1830	1600	1450	1350	1270	1210	1160
75x50x2.5RHS	4.58	1740	1520	1380	1290	1210	1150	1100
75x50x2.0RHS	3.72	1630	1430	1300	1210	1140	1080	1030
75x50x1.6RHS	3.01	1530	1340	1220	1130	1050	970	910
75x25x2.5RHS	3.60	1500	1310	1190	1100	1040	990	940
75x25x2.0RHS	2.93	1410	1230	1120	1040	980	930	890
75x25x1.6RHS	2.38	1330	1160	1050	980	920	870	830
65x35x4.0RHS	5.35	1570	1370	1250	1160	1090	1030	990
65x35x3.0RHS	4.25	1490	1300	1180	1100	1030	980	940
65x35x2.5RHS	3.60	1420	1240	1130	1050	990	940	900
65x35x2.0RHS	2.93	1340	1170	1060	990	930	880	850
50x25x3.0RHS	3.07	1100	960	870	810	760	720	690
50x25x2.5RHS	2.62	1050	920	840	780	730	690	660
50x25x2.0RHS	2.15	1000	870	790	730	690	660	630
50x25x1.6RHS	1.75	940	820	750	690	650	620	590

* Trussed roof - effective roof width is assumed equal to 3 times effective floor width

N1 to N3 – DuraGalPlus® RHS as lintels - garage beams, window heads

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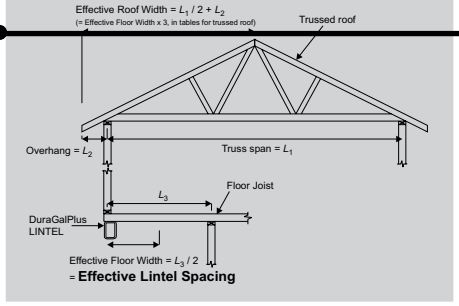
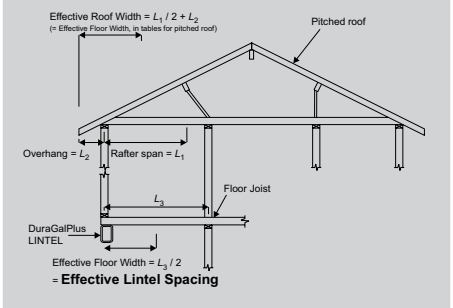
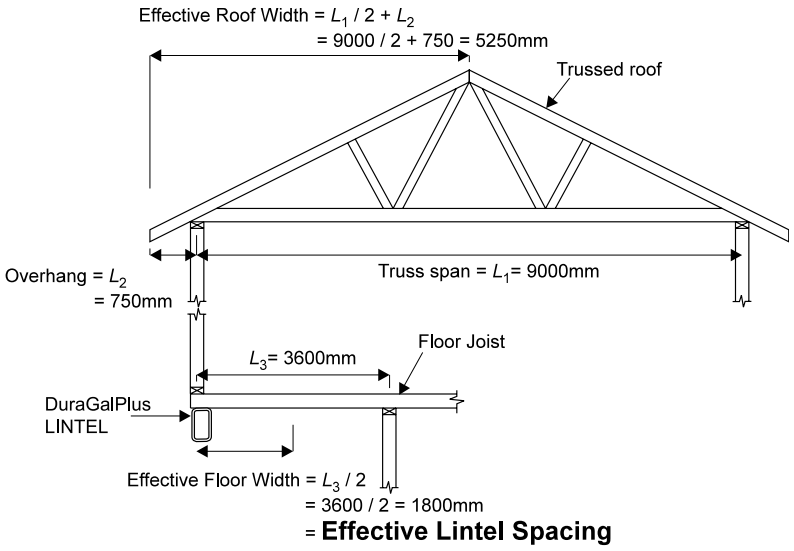
Supporting roof and floor loads





Example

Size a beam over a garage door carrying timber floor and masonry tiled trussed roof. The effective load widths are shown below. The required span of the garage lintel is 3150mm. The wind classification is given as N3.



Step 1: Lintel is carrying roof and floor loads

Step 2: Roof - masonry tiles

Step 3: Wind classification N3

Step 4: Floor - timber

Step 5: Roof - trussed

Step 6: (refer to diagram)
Effective floor width = 1800mm
Effective roof width = 5275mm
Check table assumption
3 x floor width = 3 x 1800
= 5400mm
> 5250mm

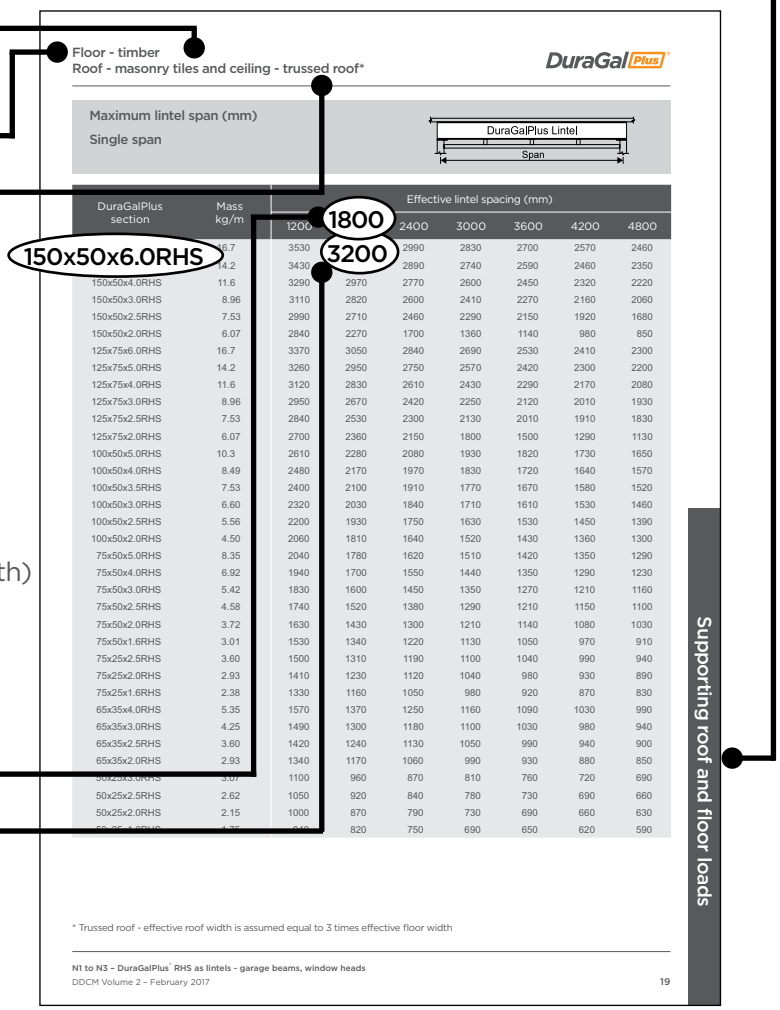
Step 7: Required lintel spacing
= 1800mm
= (Effective floor width)

Step 8: Required lintel span = 3150mm

Step 9: Select appropriate table

Step 10: Select column with
Effective lintel spacing= 1800mm

Step 11: Select 150x50x6.0RHS
Maximum span = 3200mm>3150mm



Floor - timber
Roof - masonry tiles and ceiling - trussed roof*

DuraGal Plus

Maximum lintel span (mm)
Single span

DuraGalPlus Lintel
Span

DuraGalPlus section	Mass kg/m	Effective lintel spacing (mm) 1200	1800	2400	3000	3600	4200	4800
150x50x6.0RHS	16.7	3530	3200	2990	2830	2700	2570	2460
	14.2	3430		2890	2740	2590	2460	2350
150x50x4.0RHS	11.6	3290	2970	2770	2600	2450	2320	2220
150x50x3.0RHS	8.96	3110	2820	2600	2410	2270	2160	2060
150x50x2.5RHS	7.53	2990	2710	2460	2290	2150	1920	1680
150x50x2.0RHS	6.07	2840	2270	1700	1360	1140	980	850
125x75x6.0RHS	16.7	3370	3050	2840	2690	2530	2410	2300
125x75x5.0RHS	14.2	3260	2950	2750	2570	2420	2300	2200
125x75x4.0RHS	11.6	3120	2830	2610	2430	2290	2170	2080
125x75x3.0RHS	8.96	2950	2670	2420	2250	2120	2010	1930
125x75x2.5RHS	7.53	2840	2530	2300	2130	2010	1910	1830
125x75x2.0RHS	6.07	2700	2360	2150	1800	1500	1290	1130
100x50x5.0RHS	10.3	2610	2280	2080	1930	1820	1730	1650
100x50x4.0RHS	8.49	2480	2170	1970	1830	1720	1640	1570
100x50x3.5RHS	7.53	2400	2100	1910	1770	1670	1580	1520
100x50x3.0RHS	6.60	2320	2030	1840	1710	1610	1530	1460
100x50x2.5RHS	5.56	2200	1930	1750	1630	1530	1450	1390
100x50x2.0RHS	4.50	2060	1810	1640	1520	1430	1360	1300
75x50x5.0RHS	8.35	2040	1780	1620	1510	1420	1350	1290
75x50x4.0RHS	6.92	1940	1700	1550	1440	1350	1290	1230
75x50x3.0RHS	5.42	1830	1600	1450	1350	1270	1210	1160
75x50x2.5RHS	4.58	1740	1520	1380	1290	1210	1150	1100
75x50x2.0RHS	3.72	1630	1430	1300	1210	1140	1080	1030
75x50x1.6RHS	3.01	1530	1340	1220	1130	1050	970	910
75x25x2.5RHS	3.60	1500	1310	1190	1100	1040	990	940
75x25x2.0RHS	2.93	1410	1230	1120	1040	980	930	890
75x25x1.6RHS	2.38	1330	1160	1050	980	920	870	830
65x35x4.0RHS	5.35	1570	1370	1250	1160	1090	1030	990
65x35x3.0RHS	4.25	1490	1300	1180	1100	1030	980	940
65x35x2.5RHS	3.60	1420	1240	1130	1050	990	940	900
65x35x2.0RHS	2.93	1340	1170	1060	990	930	880	850
[illegible]	3.07	1100	960	870	810	760	720	690
50x25x2.5RHS	2.62	1050	920	840	780	730	690	660
50x25x2.0RHS	2.15	1000	870	790	730	690	660	630
[illegible]	1.75	940	820	750	690	650	620	590

* Trussed roof - effective roof width is assumed equal to 3 times effective floor width

N1 to N3 – DuraGalPlus® RHS as lintels - garage beams, window heads
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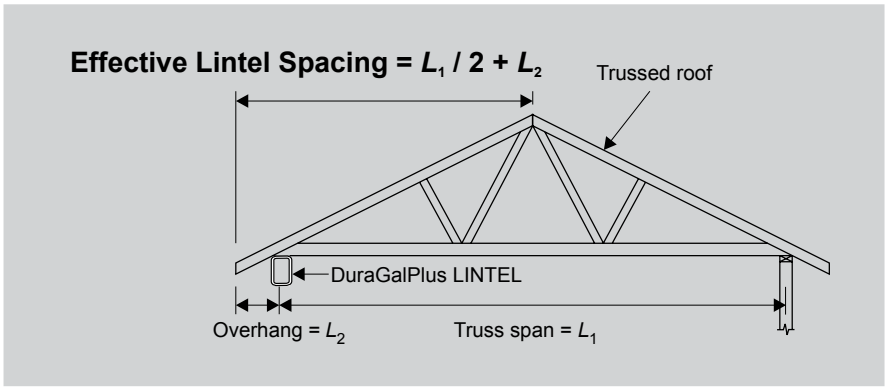
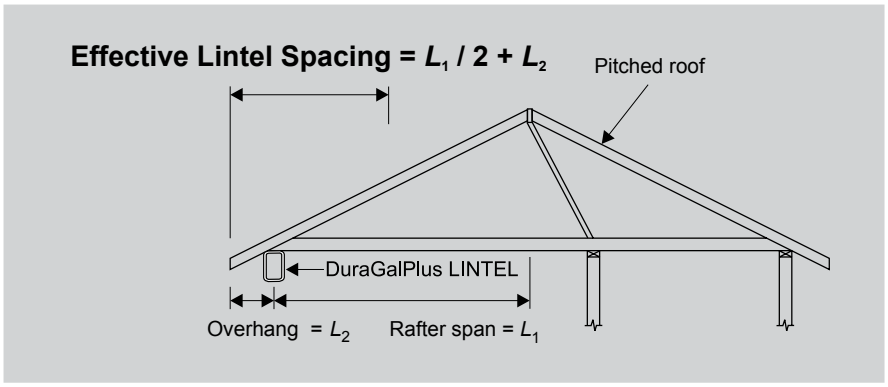
Supporting roof and floor loads

Lintel supporting roof only

Applied loads and deflection limits used to generate the tables on pages 10 to 11.

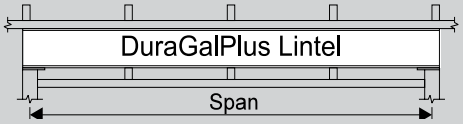
Roof	Load (kPa)		Deflection (mm)	
	Dead load (*G*)	Live load (*Q*)	Dead load (*G*)	Live load (*Q* = 1.1kN)
Masonry tiles and ceiling	0.9	Larger of 0.25 and 1.8 / area + 0.12	Span / 300 to 9mm	Span / 180 to 10mm
Steel sheeting and ceiling	0.4			





Maximum lintel span (mm)

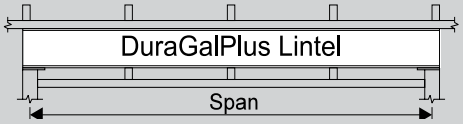
Single span



DuraGalPlus section	Mass kg/m	Effective lintel spacing (mm)												
		1200	1800	2400	3000	3600	4200	4800	5400	6000	6600	7200	7800	8400
150x50x6.0RHS	16.7	4840	4430	4150	3920	3750	3610	3940	3400	3310	3240	3180	3120	3070
150x50x5.0RHS	14.2	4710	4310	4020	3790	3630	3500	3390	3300	3210	3150	3080	3020	2960
150x50x4.0RHS	11.6	4530	4140	3850	3640	3480	3360	3250	3170	3090	3020	2950	2880	2830
150x50x3.0RHS	8.96	4320	3910	3640	3450	3300	3190	3090	3000	2920	2840	2770	2720	2650
150x50x2.5RHS	7.53	4160	3750	3500	3320	3180	3070	2960	2870	2790	2720	2640	2560	2500
150x50x2.0RHS	6.07	3950	3570	3330	3170	3030	2920	2810	2720	2620	2530	2450	2380	2260
125x75x6.0RHS	16.7	4610	4220	3930	3720	3560	3430	3330	3240	3160	3100	3030	2970	2910
125x75x5.0RHS	14.2	4490	4090	3810	3610	3450	3330	3230	3140	3070	2990	2930	2860	2810
125x75x4.0RHS	11.6	4320	3920	3650	3460	3310	3190	3100	3020	2930	2860	2790	2730	2660
125x75x3.0RHS	8.96	4090	3700	3450	3280	3140	3030	2930	2840	2750	2680	2590	2520	2450
125x75x2.5RHS	7.53	3930	3560	3320	3160	3030	2910	2800	2720	2620	2530	2450	2380	2320
125x75x2.0RHS	6.07	3740	3390	3180	3010	2870	2750	2630	2520	2420	2310	2210	2100	1930
100x50x5.0RHS	10.3	3620	3300	3090	2920	2780	2650	2530	2430	2340	2270	2210	2150	2100
100x50x4.0RHS	8.49	3490	3180	2970	2810	2650	2510	2390	2300	2220	2160	2100	2050	2000
100x50x3.5RHS	7.53	3410	3110	2890	2730	2560	2430	2320	2230	2160	2100	2040	1990	1940
100x50x3.0RHS	6.60	3330	3040	2820	2630	2470	2340	2240	2160	2090	2030	1970	1920	1870
100x50x2.5RHS	5.56	3210	2920	2690	2490	2340	2220	2130	2060	1990	1930	1870	1820	1740
100x50x2.0RHS	4.50	3080	2770	2520	2330	2200	2100	2010	1930	1860	1800	1640	1520	1420
75x50x5.0RHS	8.35	3030	2730	2470	2290	2160	2070	1980	1910	1830	1760	1710	1630	1560
75x50x4.0RHS	6.92	2930	2600	2360	2190	2080	1980	1880	1810	1740	1650	1600	1530	1460
75x50x3.0RHS	5.42	2780	2440	2220	2070	1950	1850	1760	1650	1560	1520	1440	1400	1320
75x50x2.5RHS	4.58	2670	2320	2110	1980	1850	1750	1640	1540	1460	1410	1320	1220	1130
75x50x2.0RHS	3.72	2490	2180	2000	1850	1730	1610	1510	1420	1300	1140	1040	1000	920
75x50x1.6RHS	3.01	2330	2060	1860	1720	1510	1300	1120	1010	910	810	730	700	630
75x25x2.5RHS	3.60	2280	2010	1820	1640	1420	1220	1040	930	830	740	710	630	610
75x25x2.0RHS	2.93	2150	1890	1700	1410	1140	1010	840	750	710	620	550	520	510
75x25x1.6RHS	2.38	2030	1760	1430	1130	940	820	720	630	540	520			
65x35x4.0RHS	5.35	2380	2100	1910	1760	1620	1510	1410	1230	1120	1020	920	840	810
65x35x3.0RHS	4.25	2260	2000	1810	1640	1510	1320	1140	1020	920	830	740	710	640
65x35x2.5RHS	3.60	2170	1910	1720	1530	1320	1130	1010	900	810	720	640	610	540
65x35x2.0RHS	2.93	2050	1780	1550	1320	1110	930	820	720	630	600	530	510	
50x25x3.0RHS	3.07	1590	1330	1140	1000	820	710	610	530	500				
50x25x2.5RHS	2.62	1490	1240	1050	840	720	610	520						
50x25x2.0RHS	2.15	1380	1140	910	720	610	510							
50x25x1.6RHS	1.75	1270	1000	730	600	500								

Maximum lintel span (mm)

Single span



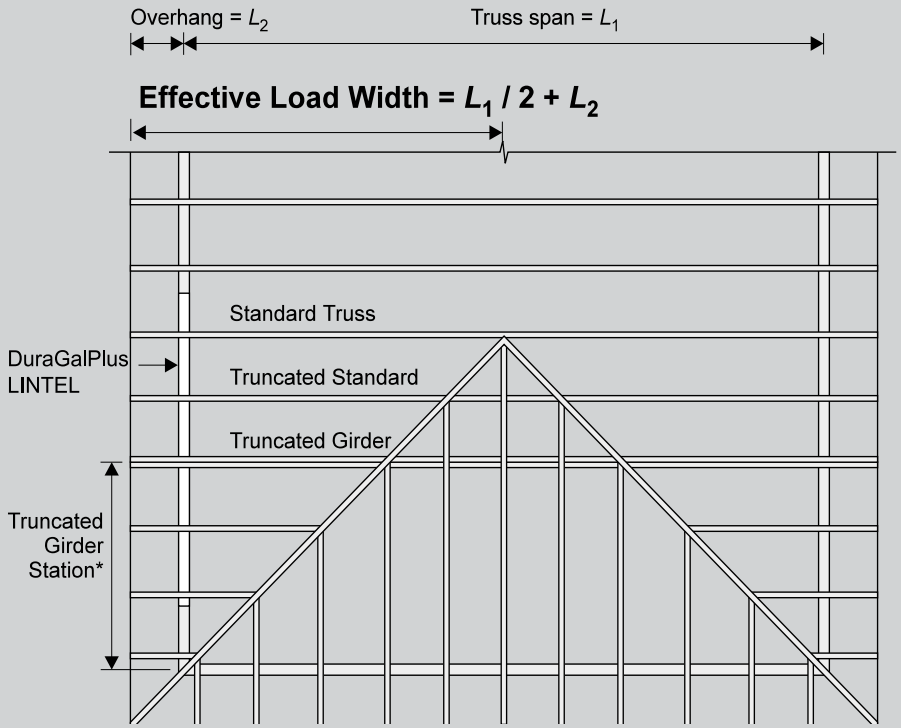
DuraGalPlus section	Mass kg/m	Effective lintel spacing (mm)												
		1200	1800	2400	3000	3600	4200	4800	5400	6000	6600	7200	7800	8400
150x50x6.0RHS	16.7	5720	5280	4970	4730	4540	4400	4270	4150	4040	3940	3860	3780	3710
150x50x5.0RHS	14.2	5600	5150	4830	4600	4420	4270	4140	4020	3910	3820	3740	3660	3600
150x50x4.0RHS	11.6	5420	4960	4650	4430	4260	4090	3960	3850	3750	3660	3580	3510	3450
150x50x3.0RHS	8.96	5170	4720	4430	4220	4030	3870	3750	3640	3550	3470	3400	3330	3270
150x50x2.5RHS	7.53	4990	4560	4280	4050	3870	3720	3600	3500	3410	3340	3270	3210	3160
150x50x2.0RHS	6.07	4770	4360	4070	3850	3680	3540	3430	3330	3250	3100	2980	2880	2760
125x75x6.0RHS	16.7	5450	5020	4730	4510	4340	4180	4050	3930	3830	3740	3670	3590	3530
125x75x5.0RHS	14.2	5320	4890	4600	4390	4210	4050	3920	3810	3710	3630	3550	3480	3420
125x75x4.0RHS	11.6	5140	4710	4430	4220	4030	3880	3760	3650	3560	3480	3410	3340	3290
125x75x3.0RHS	8.96	4900	4490	4220	3990	3810	3670	3550	3450	3370	3300	3230	3170	3120
125x75x2.5RHS	7.53	4730	4340	4050	3830	3660	3530	3420	3320	3250	3180	3110	3000	2890
125x75x2.0RHS	6.07	4530	4140	3850	3650	3490	3360	3210	3030	2890	2760	2630	2530	2430
100x50x5.0RHS	10.3	4350	3970	3720	3530	3380	3270	3170	3090	3010	2940	2870	2810	2750
100x50x4.0RHS	8.49	4220	3840	3580	3400	3270	3160	3060	2970	2890	2820	2750	2690	2620
100x50x3.5RHS	7.53	4130	3750	3500	3330	3190	3090	2980	2890	2820	2740	2670	2590	2530
100x50x3.0RHS	6.60	4030	3660	3420	3250	3120	3010	2910	2820	2740	2650	2570	2500	2440
100x50x2.5RHS	5.56	3880	3530	3300	3140	3010	2890	2780	2690	2600	2510	2440	2370	2310
100x50x2.0RHS	4.50	3680	3370	3170	3020	2880	2770	2660	2550	2460	2380	2320	2260	2200
75x50x5.0RHS	8.35	3610	3310	3110	2950	2820	2700	2570	2470	2380	2310	2250	2190	2140
75x50x4.0RHS	6.92	3510	3210	3020	2850	2710	2570	2450	2360	2280	2210	2150	2090	2050
75x50x3.0RHS	5.42	3370	3090	2870	2710	2540	2410	2300	2220	2140	2090	2030	1980	1910
75x50x2.5RHS	4.58	3270	2980	2760	2570	2420	2290	2200	2110	2050	1990	1900	1730	1620
75x50x2.0RHS	3.72	3130	2840	2600	2410	2270	2160	2070	2000	1820	1640	1520	1410	1310
75x50x1.6RHS	3.01	2990	2680	2430	2250	2130	1820	1610	1420	1250	1140	1040	950	910
75x25x2.5RHS	3.60	2930	2620	2370	2200	2020	1720	1510	1330	1210	1110	1010	920	840
75x25x2.0RHS	2.93	2800	2460	2230	2010	1640	1420	1230	1110	1010	910	820	740	710
75x25x1.6RHS	2.38	2650	2310	2030	1630	1340	1140	1020	910	820	730	640	620	550
65x35x4.0RHS	5.35	3020	2730	2470	2300	2170	2070	1990	1740	1610	1430	1320	1220	1130
65x35x3.0RHS	4.25	2910	2590	2350	2190	2070	1900	1630	1440	1320	1210	1110	1010	930
65x35x2.5RHS	3.60	2810	2470	2250	2090	1910	1620	1420	1240	1130	1020	930	840	810
65x35x2.0RHS	2.93	2670	2330	2120	1850	1540	1330	1140	1030	930	830	740	720	640
50x25x3.0RHS	3.07	2170	1910	1720	1410	1140	1010	840	750	710	620	550	520	510
50x25x2.5RHS	2.62	2090	1830	1520	1220	1020	840	740	640	610	530	510		
50x25x2.0RHS	2.15	1990	1710	1250	1020	830	720	620	540	510				
50x25x1.6RHS	1.75	1870	1410	1040	830	710	610	520						

[BLANK]

Lintel supporting roof only with girder truss*

Applied loads and deflection limits used to generate the tables on pages 14 to 15.

Roofing	Load (kPa)		Deflection (mm)	
	Dead load (*G*)	Live load (*Q*)	Dead load (*G*)	Live load (*Q* = 1.1kN)
Masonry tiles and ceiling	0.9	Larger of 0.25 and 1.8 / area + 0.12	Span / 300 to 9mm	Span / 180 to 10mm
Steel sheeting and ceiling	0.4			



Layout of a trussed roof with standard hip end and girder truss supported over DuraGal lintel (dutch hip end similar)

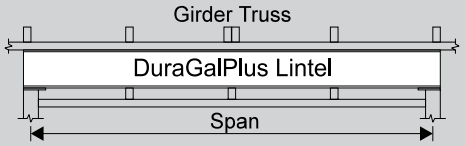
*Girder truss placed anywhere along the lintel with maximum girder station used to generate tables equals:

Effective load width (mm)	Maximum girder station (mm)
≤ 3600	= Effective load width
> 3600	3600

Supporting roof loads only

Maximum lintel span (mm)

Single span

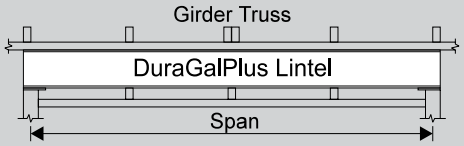


DuraGalPlus section	Mass kg/m	Effective lintel spacing (mm)												
		1200	1800	2400	3000	3600	4200	4800	5400	6000	6600	7200	7800	8400
150x50x6.0RHS	16.7	4830	4360	4000	3710	3450	3310	3190	3090	3000	2920	2850	2780	2720
150x50x5.0RHS	14.2	4700	4230	3870	3580	3330	3190	3080	2980	2890	2810	2740	2670	2590
150x50x4.0RHS	11.6	4520	4050	3710	3420	3180	3040	2930	2830	2750	2660	2570	2490	2410
150x50x3.0RHS	8.96	4290	3840	3500	3220	2980	2860	2750	2640	2530	2430	2340	2270	2200
150x50x2.5RHS	7.53	4130	3690	3350	3080	2850	2730	2590	2470	2360	1900	1450	1060	730
150x50x2.0RHS	6.07	3930	3500	3180	2910	1380								
125x75x6.0RHS	16.7	4600	4140	3800	3510	3270	3130	3020	2920	2830	2760	2680	2600	2520
125x75x5.0RHS	14.2	4470	4010	3670	3390	3150	3020	2910	2810	2730	2630	2540	2460	2380
125x75x4.0RHS	11.6	4290	3850	3510	3230	3000	2870	2760	2660	2550	2450	2360	2290	2220
125x75x3.0RHS	8.96	4070	3630	3310	3040	2810	2690	2540	2420	2320	2230	2150	2080	2010
125x75x2.5RHS	7.53	3920	3490	3170	2900	2680	2510	2380	2260	2100	1900	1730	1580	1450
125x75x2.0RHS	6.07	3730	3310	3000	2740	2240	1920	1470	910					
100x50x5.0RHS	10.3	3610	3210	2910	2640	2360	2210	2090	1990	1900	1820	1760	1700	1640
100x50x4.0RHS	8.49	3480	3090	2790	2490	2210	2070	1960	1860	1780	1710	1640	1590	1530
100x50x3.5RHS	7.53	3390	3010	2710	2390	2120	1980	1870	1780	1700	1630	1570	1520	1470
100x50x3.0RHS	6.60	3310	2930	2620	2290	2030	1900	1790	1700	1630	1560	1500	1450	1400
100x50x2.5RHS	5.56	3190	2810	2470	2150	1900	1780	1680	1590	1520	1460	1400	1350	1310
100x50x2.0RHS	4.50	3040	2660	2280	1990	1740	1630	1540	1460	1390	1250	1110	820	
75x50x5.0RHS	8.35	2990	2610	2250	1950	1720	1600	1510	1440	1370	1310	1260	1220	1180
75x50x4.0RHS	6.92	2890	2480	2130	1840	1610	1510	1420	1350	1290	1230	1190	1140	1110
75x50x3.0RHS	5.42	2760	2320	1970	1700	1490	1390	1310	1240	1180	1130	1090	1050	1010
75x50x2.5RHS	4.58	2640	2190	1860	1600	1390	1300	1220	1160	1100	1060	1020	980	920
75x50x2.0RHS	3.72	2480	2040	1720	1470	1280	1190	1120	1060	1010	940	870	790	720
75x50x1.6RHS	3.01	2310	1890	1580	1350	1080	930	800	690	610				
75x25x2.5RHS	3.60	2250	1840	1540	1310	1130	1060	990	940	890	820	760	700	660
75x25x2.0RHS	2.93	2110	1720	1430	1210	1040	970	890	810	750	690	630	570	520
75x25x1.6RHS	2.38	1980	1590	1320	1110	910	770	670						
65x35x4.0RHS	5.35	2360	1940	1630	1390	1210	1130	1060	1000	960	910	880	850	820
65x35x3.0RHS	4.25	2240	1830	1530	1300	1130	1050	990	930	890	850	820	760	710
65x35x2.5RHS	3.60	2130	1730	1440	1220	1060	980	930	880	830	770	710	660	620
65x35x2.0RHS	2.93	2000	1610	1340	1130	970	910	840	760	700	650	600		
50x25x3.0RHS	3.07	1600	1260	1030	860	730	680	640						
50x25x2.5RHS	2.62	1530	1200	970	810	690	620							
50x25x2.0RHS	2.15	1430	1120	900	750									
50x25x1.6RHS	1.75	1340	1040	840	640									

* Girder placed anywhere along the lintel with maximum girder station as shown on page 13

Maximum lintel span (mm)

Single span



DuraGalPlus section	Mass kg/m	Effective lintel spacing (mm)												
		1200	1800	2400	3000	3600	4200	4800	5400	6000	6600	7200	7800	8400
150x50x6.0RHS	16.7	5710	5230	4860	4550	4280	4120	3980	3850	3750	3650	3570	3490	3420
150x50x5.0RHS	14.2	5580	5090	4720	4410	4140	3980	3840	3720	3620	3530	3440	3370	3300
150x50x4.0RHS	11.6	5400	4910	4540	4230	3960	3800	3670	3550	3450	3360	3280	3210	3150
150x50x3.0RHS	8.96	5160	4670	4300	4000	3740	3580	3450	3340	3250	3160	3090	3020	2900
150x50x2.5RHS	7.53	4980	4500	4130	3830	3580	3430	3300	3200	3100	2640	2120	1680	1300
150x50x2.0RHS	6.07	4760	4290	3930	3630	2210	1370	750						
125x75x6.0RHS	16.7	5440	4980	4620	4320	4060	3900	3760	3650	3550	3460	3380	3300	3240
125x75x5.0RHS	14.2	5310	4840	4480	4180	3920	3770	3630	3520	3420	3330	3250	3180	3120
125x75x4.0RHS	11.6	5130	4660	4300	4000	3750	3590	3470	3360	3260	3180	3100	3030	2970
125x75x3.0RHS	8.96	4890	4430	4070	3780	3520	3380	3260	3150	3060	2940	2730	2540	2370
125x75x2.5RHS	7.53	4730	4260	3910	3620	3370	3230	2930	2630	2380	2160	1980	1820	1670
125x75x2.0RHS	6.07	4520	4060	3710	3430	2640	2250	1940	1510	990				
100x50x5.0RHS	10.3	4330	3910	3590	3320	3080	2960	2850	2750	2660	2560	2470	2390	2320
100x50x4.0RHS	8.49	4190	3770	3450	3180	2950	2830	2730	2610	2500	2400	2320	2200	2070
100x50x3.5RHS	7.53	4100	3680	3360	3100	2870	2750	2630	2510	2400	2300	2150	2010	1890
100x50x3.0RHS	6.60	4010	3590	3280	3010	2790	2660	2520	2400	2260	2100	1950	1830	1720
100x50x2.5RHS	5.56	3870	3460	3150	2890	2660	2500	2370	2160	1990	1840	1710	1600	1500
100x50x2.0RHS	4.50	3700	3300	2990	2740	2460	2220	1990	1810	1610	1450	1300	1180	1040
75x50x5.0RHS	8.35	3610	3230	2940	2700	2410	2260	2140	2040	1950	1870	1810	1730	1630
75x50x4.0RHS	6.92	3500	3120	2830	2550	2280	2140	2020	1920	1840	1740	1610	1510	1420
75x50x3.0RHS	5.42	3360	2980	2700	2370	2110	1970	1860	1720	1570	1450	1350	1260	1180
75x50x2.5RHS	4.58	3240	2870	2550	2240	1980	1850	1660	1500	1380	1270	1170	1100	1030
75x50x2.0RHS	3.72	3100	2740	2370	2070	1770	1550	1390	1250	1140	1050	970	910	840
75x50x1.6RHS	3.01	2950	2560	2200	1720	1310	1140	980	840	730	640			
75x25x2.5RHS	3.60	2890	2490	2140	1850	1550	1360	1210	1090	990	910	840	790	730
75x25x2.0RHS	2.93	2750	2340	1990	1720	1310	1150	1020	920	840	770	710	660	610
75x25x1.6RHS	2.38	2580	2180	1850	1470	1110	960	820	710	610				
65x35x4.0RHS	5.35	2980	2610	2250	1960	1720	1610	1520	1390	1270	1170	1080	1010	940
65x35x3.0RHS	4.25	2880	2480	2120	1840	1610	1460	1310	1180	1080	990	910	850	800
65x35x2.5RHS	3.60	2770	2350	2010	1740	1470	1290	1150	1030	940	860	800	740	690
65x35x2.0RHS	2.93	2610	2200	1870	1610	1250	1090	970	870	790	730	670	620	
50x25x3.0RHS	3.07	2130	1740	1450	1240	970	840	750	670	610				
50x25x2.5RHS	2.62	2040	1660	1380	1150	860	740	660						
50x25x2.0RHS	2.15	1930	1560	1290	990	730	630							
50x25x1.6RHS	1.75	1810	1450	1190	840	610								

* Girder placed anywhere along the lintel with maximum girder station as shown on page 13

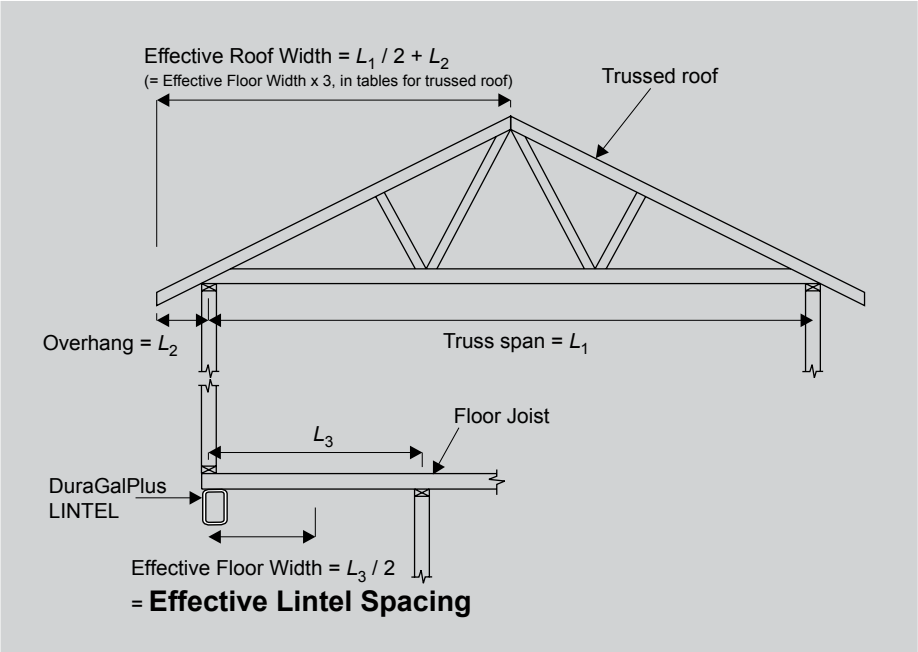
Lintel supporting roof and floor loads

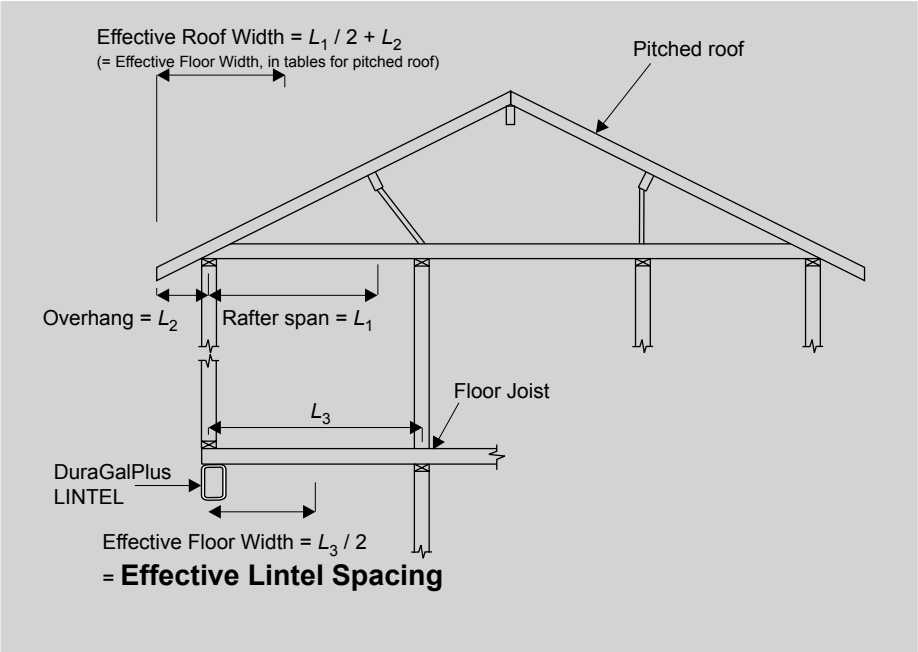
Applied loads and deflection limits used to generate the tables on pages 18 to 25.

	Load (kPa)		Deflection (mm)	
	Dead load (G)	Live load (Q)	Dead load (G)	Live load (Q)
Flooring				
Timber floor and timber walls	0.9			
Concrete floor* and timber walls	3.4	1.5	Span / 300 to 9mm	Span / 200 to 10mm
Roofing				
Masonry tiles and ceiling	0.9			
Steel sheeting and ceiling	0.4			

* Maximum concrete floor thickness assumed to be 125mm

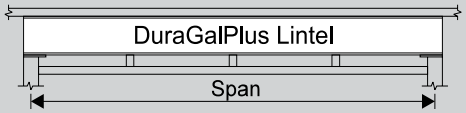
Lintel supporting roof and floor loads





Maximum lintel span (mm)

Single span

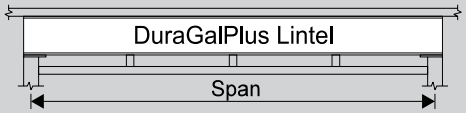


DuraGalPlus section	Mass kg/m	Effective lintel spacing (mm)						
		1200	1800	2400	3000	3600	4200	4800
150x50x6.0RHS	16.7	4170	3790	3530	3350	3200	3080	2990
150x50x5.0RHS	14.2	4040	3670	3430	3240	3100	2990	2890
150x50x4.0RHS	11.6	3880	3520	3290	3110	2970	2860	2770
150x50x3.0RHS	8.96	3680	3340	3110	2940	2820	2710	2600
150x50x2.5RHS	7.53	3540	3210	2990	2830	2710	2570	2460
150x50x2.0RHS	6.07	3370	3050	2550	2040	1700	1460	1280
125x75x6.0RHS	16.7	3970	3610	3370	3190	3050	2940	2840
125x75x5.0RHS	14.2	3850	3490	3260	3090	2950	2840	2750
125x75x4.0RHS	11.6	3690	3350	3120	2960	2830	2720	2610
125x75x3.0RHS	8.96	3500	3170	2950	2800	2670	2530	2420
125x75x2.5RHS	7.53	3360	3050	2840	2680	2530	2400	2280
125x75x2.0RHS	6.07	3200	2900	2700	2430	2220	1930	1690
100x50x5.0RHS	10.3	3110	2820	2610	2420	2280	2170	2080
100x50x4.0RHS	8.49	3000	2720	2480	2300	2170	2060	1970
100x50x3.5RHS	7.53	2920	2630	2400	2230	2100	1990	1910
100x50x3.0RHS	6.60	2850	2550	2320	2150	2030	1930	1840
100x50x2.5RHS	5.56	2750	2420	2200	2050	1930	1830	1750
100x50x2.0RHS	4.50	2590	2270	2060	1920	1810	1720	1640
75x50x5.0RHS	8.35	2550	2240	2040	1890	1780	1690	1620
75x50x4.0RHS	6.92	2440	2140	1940	1810	1700	1620	1550
75x50x3.0RHS	5.42	2290	2010	1830	1700	1600	1520	1450
75x50x2.5RHS	4.58	2190	1910	1740	1620	1520	1450	1380
75x50x2.0RHS	3.72	2050	1800	1630	1520	1430	1360	1300
75x50x1.6RHS	3.01	1930	1680	1530	1410	1280	1190	1110
75x25x2.5RHS	3.60	1880	1650	1500	1390	1310	1240	1190
75x25x2.0RHS	2.93	1770	1550	1410	1310	1230	1170	1120
75x25x1.6RHS	2.38	1670	1460	1330	1230	1160	1080	1010
65x35x4.0RHS	5.35	1970	1720	1570	1460	1370	1300	1250
65x35x3.0RHS	4.25	1870	1640	1490	1380	1300	1240	1180
65x35x2.5RHS	3.60	1790	1560	1420	1320	1240	1180	1130
65x35x2.0RHS	2.93	1680	1470	1340	1240	1170	1110	1060
50x25x3.0RHS	3.07	1380	1200	1100	1020	960	910	870
50x25x2.5RHS	2.62	1320	1160	1050	980	920	870	840
50x25x2.0RHS	2.15	1250	1100	1000	930	870	830	790
50x25x1.6RHS	1.75	1180	1030	940	870	820	780	730

* Pitched roof - effective roof width is assumed equal to effective floor width

Maximum lintel span (mm)

Single span

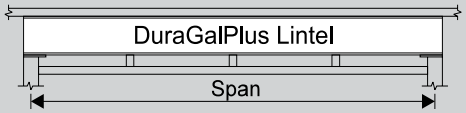


DuraGalPlus section	Mass kg/m	Effective lintel spacing (mm)						
		1200	1800	2400	3000	3600	4200	4800
150x50x6.0RHS	16.7	3530	3200	2990	2830	2700	2570	2460
150x50x5.0RHS	14.2	3430	3100	2890	2740	2590	2460	2350
150x50x4.0RHS	11.6	3290	2970	2770	2600	2450	2320	2220
150x50x3.0RHS	8.96	3110	2820	2600	2410	2270	2160	2060
150x50x2.5RHS	7.53	2990	2710	2460	2290	2150	1920	1680
150x50x2.0RHS	6.07	2840	2270	1700	1360	1140	980	850
125x75x6.0RHS	16.7	3370	3050	2840	2690	2530	2410	2300
125x75x5.0RHS	14.2	3260	2950	2750	2570	2420	2300	2200
125x75x4.0RHS	11.6	3120	2830	2610	2430	2290	2170	2080
125x75x3.0RHS	8.96	2950	2670	2420	2250	2120	2010	1930
125x75x2.5RHS	7.53	2840	2530	2300	2130	2010	1910	1830
125x75x2.0RHS	6.07	2700	2360	2150	1800	1500	1290	1130
100x50x5.0RHS	10.3	2610	2280	2080	1930	1820	1730	1650
100x50x4.0RHS	8.49	2480	2170	1970	1830	1720	1640	1570
100x50x3.5RHS	7.53	2400	2100	1910	1770	1670	1580	1520
100x50x3.0RHS	6.60	2320	2030	1840	1710	1610	1530	1460
100x50x2.5RHS	5.56	2200	1930	1750	1630	1530	1450	1390
100x50x2.0RHS	4.50	2060	1810	1640	1520	1430	1360	1300
75x50x5.0RHS	8.35	2040	1780	1620	1510	1420	1350	1290
75x50x4.0RHS	6.92	1940	1700	1550	1440	1350	1290	1230
75x50x3.0RHS	5.42	1830	1600	1450	1350	1270	1210	1160
75x50x2.5RHS	4.58	1740	1520	1380	1290	1210	1150	1100
75x50x2.0RHS	3.72	1630	1430	1300	1210	1140	1080	1030
75x50x1.6RHS	3.01	1530	1340	1220	1130	1050	970	910
75x25x2.5RHS	3.60	1500	1310	1190	1100	1040	990	940
75x25x2.0RHS	2.93	1410	1230	1120	1040	980	930	890
75x25x1.6RHS	2.38	1330	1160	1050	980	920	870	830
65x35x4.0RHS	5.35	1570	1370	1250	1160	1090	1030	990
65x35x3.0RHS	4.25	1490	1300	1180	1100	1030	980	940
65x35x2.5RHS	3.60	1420	1240	1130	1050	990	940	900
65x35x2.0RHS	2.93	1340	1170	1060	990	930	880	850
50x25x3.0RHS	3.07	1100	960	870	810	760	720	690
50x25x2.5RHS	2.62	1050	920	840	780	730	690	660
50x25x2.0RHS	2.15	1000	870	790	730	690	660	630
50x25x1.6RHS	1.75	940	820	750	690	650	620	590

* Trussed roof - effective roof width is assumed equal to 3 times effective floor width

Maximum lintel span (mm)

Single span

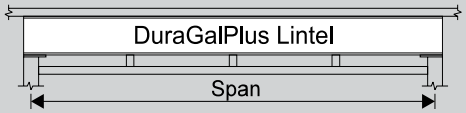


DuraGalPlus section	Mass kg/m	Effective lintel spacing (mm)						
		1200	1800	2400	3000	3600	4200	4800
150x50x6.0RHS	16.7	4490	4090	3820	3620	3460	3330	3220
150x50x5.0RHS	14.2	4360	3970	3700	3510	3350	3230	3120
150x50x4.0RHS	11.6	4190	3810	3550	3360	3210	3090	2990
150x50x3.0RHS	8.96	3980	3610	3360	3180	3040	2920	2830
150x50x2.5RHS	7.53	3830	3470	3230	3050	2920	2810	2710
150x50x2.0RHS	6.07	3650	3300	2960	2370	1980	1700	1480
125x75x6.0RHS	16.7	4270	3890	3640	3450	3300	3170	3070
125x75x5.0RHS	14.2	4150	3770	3520	3340	3190	3070	2970
125x75x4.0RHS	11.6	3980	3620	3380	3200	3050	2940	2840
125x75x3.0RHS	8.96	3780	3430	3190	3020	2880	2770	2680
125x75x2.5RHS	7.53	3640	3290	3060	2900	2770	2620	2450
125x75x2.0RHS	6.07	3460	3130	2910	2620	2390	2220	1960
100x50x5.0RHS	10.3	3360	3050	2840	2690	2540	2410	2310
100x50x4.0RHS	8.49	3240	2940	2730	2560	2410	2290	2200
100x50x3.5RHS	7.53	3160	2860	2660	2480	2330	2220	2120
100x50x3.0RHS	6.60	3080	2790	2580	2400	2260	2140	2050
100x50x2.5RHS	5.56	2970	2680	2450	2280	2140	2040	1950
100x50x2.0RHS	4.50	2830	2530	2300	2140	2010	1900	1780
75x50x5.0RHS	8.35	2800	2490	2260	2110	1980	1890	1800
75x50x4.0RHS	6.92	2700	2380	2160	2010	1890	1800	1720
75x50x3.0RHS	5.42	2550	2230	2030	1890	1780	1690	1620
75x50x2.5RHS	4.58	2430	2130	1940	1800	1700	1610	1540
75x50x2.0RHS	3.72	2280	2000	1820	1690	1590	1510	1430
75x50x1.6RHS	3.01	2140	1880	1690	1510	1380	1280	1200
75x25x2.5RHS	3.60	2090	1830	1670	1550	1460	1390	1320
75x25x2.0RHS	2.93	1970	1730	1570	1460	1370	1280	1200
75x25x1.6RHS	2.38	1850	1620	1480	1370	1260	1160	1090
65x35x4.0RHS	5.35	2180	1920	1740	1620	1530	1450	1390
65x35x3.0RHS	4.25	2080	1820	1660	1540	1450	1380	1320
65x35x2.5RHS	3.60	1990	1740	1580	1470	1380	1320	1260
65x35x2.0RHS	2.93	1870	1640	1490	1390	1300	1240	1160
50x25x3.0RHS	3.07	1530	1340	1220	1130	1070	1010	970
50x25x2.5RHS	2.62	1470	1290	1170	1090	1020	970	930
50x25x2.0RHS	2.15	1400	1220	1110	1030	970	920	860
50x25x1.6RHS	1.75	1320	1150	1050	970	900	840	780

* Pitched roof - effective roof width is assumed equal to effective floor width

Maximum lintel span (mm)

Single span

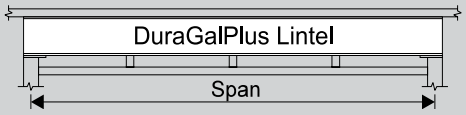


DuraGalPlus section	Mass kg/m	Effective lintel spacing (mm)						
		1200	1800	2400	3000	3600	4200	4800
150x50x6.0RHS	16.7	4020	3650	3400	3230	3080	2970	2870
150x50x5.0RHS	14.2	3900	3540	3300	3120	2990	2880	2780
150x50x4.0RHS	11.6	3740	3390	3160	3000	2860	2760	2660
150x50x3.0RHS	8.96	3550	3210	3000	2840	2710	2580	2470
150x50x2.5RHS	7.53	3410	3090	2880	2720	2570	2450	2330
150x50x2.0RHS	6.07	3250	2940	2350	1890	1570	1350	1180
125x75x6.0RHS	16.7	3830	3480	3240	3070	2940	2830	2740
125x75x5.0RHS	14.2	3710	3370	3140	2970	2840	2740	2630
125x75x4.0RHS	11.6	3560	3230	3010	2850	2720	2600	2480
125x75x3.0RHS	8.96	3370	3050	2840	2690	2530	2410	2300
125x75x2.5RHS	7.53	3240	2930	2730	2550	2400	2280	2180
125x75x2.0RHS	6.07	3080	2790	2570	2340	2080	1780	1560
100x50x5.0RHS	10.3	3000	2720	2480	2300	2170	2060	1970
100x50x4.0RHS	8.49	2890	2590	2350	2190	2060	1960	1870
100x50x3.5RHS	7.53	2820	2500	2280	2120	1990	1890	1810
100x50x3.0RHS	6.60	2750	2420	2200	2050	1930	1830	1750
100x50x2.5RHS	5.56	2630	2300	2090	1940	1830	1740	1660
100x50x2.0RHS	4.50	2460	2160	1960	1820	1720	1630	1560
75x50x5.0RHS	8.35	2430	2130	1940	1800	1690	1610	1540
75x50x4.0RHS	6.92	2320	2030	1850	1720	1620	1540	1470
75x50x3.0RHS	5.42	2180	1910	1740	1610	1520	1440	1380
75x50x2.5RHS	4.58	2080	1820	1650	1540	1450	1370	1310
75x50x2.0RHS	3.72	1950	1710	1550	1440	1360	1290	1230
75x50x1.6RHS	3.01	1830	1600	1460	1350	1230	1140	1070
75x25x2.5RHS	3.60	1790	1560	1420	1320	1240	1180	1130
75x25x2.0RHS	2.93	1690	1470	1340	1240	1170	1110	1060
75x25x1.6RHS	2.38	1580	1380	1260	1170	1100	1040	970
65x35x4.0RHS	5.35	1870	1640	1490	1380	1300	1240	1180
65x35x3.0RHS	4.25	1780	1560	1410	1310	1240	1180	1120
65x35x2.5RHS	3.60	1700	1490	1350	1250	1180	1120	1070
65x35x2.0RHS	2.93	1600	1400	1270	1180	1110	1060	1010
50x25x3.0RHS	3.07	1310	1150	1040	970	910	860	830
50x25x2.5RHS	2.62	1260	1100	1000	930	870	830	790
50x25x2.0RHS	2.15	1190	1040	950	880	830	790	750
50x25x1.6RHS	1.75	1120	980	890	830	780	740	700

* Trussed roof - effective roof width is assumed equal to 3 times effective floor width

Maximum lintel span (mm)

Single span

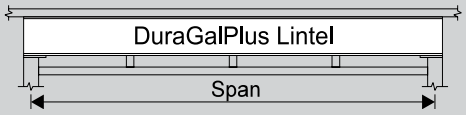


DuraGalPlus section	Mass kg/m	Effective lintel spacing (mm)						
		1200	1800	2400	3000	3600	4200	4800
150x50x6.0RHS	16.7	3390	3070	2860	2700	2550	2420	2320
150x50x5.0RHS	14.2	3280	2970	2770	2590	2440	2320	2220
150x50x4.0RHS	11.6	3150	2850	2640	2450	2310	2190	2100
150x50x3.0RHS	8.96	2980	2690	2450	2270	2140	2030	1950
150x50x2.5RHS	7.53	2860	2550	2320	2160	1980	1700	1490
150x50x2.0RHS	6.07	2720	2010	1510	1210	1010	860	760
125x75x6.0RHS	16.7	3220	2920	2720	2540	2390	2270	2170
125x75x5.0RHS	14.2	3120	2830	2610	2430	2290	2170	2080
125x75x4.0RHS	11.6	2990	2710	2470	2290	2160	2050	1960
125x75x3.0RHS	8.96	2830	2510	2290	2120	2000	1900	1820
125x75x2.5RHS	7.53	2720	2380	2170	2010	1890	1800	1720
125x75x2.0RHS	6.07	2550	2230	1990	1590	1330	1140	1000
100x50x5.0RHS	10.3	2460	2150	1960	1820	1710	1630	1560
100x50x4.0RHS	8.49	2340	2050	1860	1730	1630	1540	1480
100x50x3.5RHS	7.53	2260	1980	1800	1670	1570	1490	1430
100x50x3.0RHS	6.60	2190	1910	1740	1610	1520	1440	1380
100x50x2.5RHS	5.56	2080	1820	1650	1530	1440	1370	1310
100x50x2.0RHS	4.50	1950	1700	1550	1440	1350	1280	1230
75x50x5.0RHS	8.35	1920	1680	1530	1420	1340	1270	1220
75x50x4.0RHS	6.92	1830	1600	1460	1350	1280	1210	1160
75x50x3.0RHS	5.42	1720	1510	1370	1270	1200	1140	1090
75x50x2.5RHS	4.58	1640	1440	1300	1210	1140	1080	1040
75x50x2.0RHS	3.72	1540	1350	1220	1140	1070	1020	970
75x50x1.6RHS	3.01	1440	1260	1150	1070	990	910	850
75x25x2.5RHS	3.60	1410	1230	1120	1040	980	930	890
75x25x2.0RHS	2.93	1330	1160	1060	980	920	880	840
75x25x1.6RHS	2.38	1250	1090	990	920	870	820	780
65x35x4.0RHS	5.35	1480	1290	1170	1090	1030	980	930
65x35x3.0RHS	4.25	1400	1230	1120	1040	980	930	890
65x35x2.5RHS	3.60	1340	1170	1070	990	930	880	850
65x35x2.0RHS	2.93	1260	1100	1000	930	880	830	800
50x25x3.0RHS	3.07	1030	900	820	760	720	680	650
50x25x2.5RHS	2.62	990	870	790	730	690	650	630
50x25x2.0RHS	2.15	940	820	750	690	650	620	590
50x25x1.6RHS	1.75	890	770	700	650	610	580	560

* Pitched roof - effective roof width is assumed equal to effective floor width

Maximum lintel span (mm)

Single span

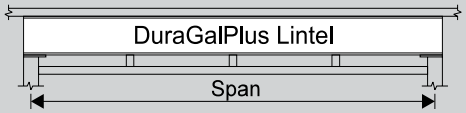


DuraGalPlus section	Mass kg/m	Effective lintel spacing (mm)						
		1200	1800	2400	3000	3600	4200	4800
150x50x6.0RHS	16.7	3110	2810	2600	2410	2270	2160	2060
150x50x5.0RHS	14.2	3010	2730	2490	2310	2180	2070	1980
150x50x4.0RHS	11.6	2890	2580	2350	2180	2050	1950	1870
150x50x3.0RHS	8.96	2730	2400	2180	2030	1910	1810	1730
150x50x2.5RHS	7.53	2600	2270	2070	1840	1530	1310	1150
150x50x2.0RHS	6.07	2320	1550	1170	930	780	670	580
125x75x6.0RHS	16.7	2960	2670	2430	2260	2130	2020	1930
125x75x5.0RHS	14.2	2870	2560	2330	2160	2040	1930	1850
125x75x4.0RHS	11.6	2750	2420	2200	2040	1920	1820	1750
125x75x3.0RHS	8.96	2560	2240	2040	1890	1780	1690	1620
125x75x2.5RHS	7.53	2430	2120	1930	1790	1690	1600	1510
125x75x2.0RHS	6.07	2270	1980	1540	1230	1030	880	770
100x50x5.0RHS	10.3	2190	1920	1740	1620	1520	1450	1390
100x50x4.0RHS	8.49	2080	1820	1660	1540	1450	1380	1320
100x50x3.5RHS	7.53	2010	1760	1600	1490	1400	1330	1270
100x50x3.0RHS	6.60	1950	1700	1550	1440	1350	1290	1230
100x50x2.5RHS	5.56	1850	1620	1470	1370	1280	1220	1170
100x50x2.0RHS	4.50	1730	1520	1380	1280	1200	1140	1090
75x50x5.0RHS	8.35	1710	1500	1360	1260	1190	1130	1080
75x50x4.0RHS	6.92	1630	1430	1300	1210	1140	1080	1030
75x50x3.0RHS	5.42	1540	1340	1220	1130	1070	1010	970
75x50x2.5RHS	4.58	1460	1280	1160	1080	1020	960	920
75x50x2.0RHS	3.72	1370	1200	1090	1010	950	910	870
75x50x1.6RHS	3.01	1290	1120	1020	950	870	800	750
75x25x2.5RHS	3.60	1260	1100	1000	930	870	830	790
75x25x2.0RHS	2.93	1180	1030	940	870	820	780	750
75x25x1.6RHS	2.38	1110	970	880	820	770	730	680
65x35x4.0RHS	5.35	1320	1150	1050	970	910	870	830
65x35x3.0RHS	4.25	1250	1090	990	920	870	820	790
65x35x2.5RHS	3.60	1190	1040	950	880	830	790	750
65x35x2.0RHS	2.93	1120	980	890	830	780	740	710
50x25x3.0RHS	3.07	920	800	730	680	640	610	580
50x25x2.5RHS	2.62	880	770	700	650	610	580	560
50x25x2.0RHS	2.15	840	730	660	620	580	550	530
50x25x1.6RHS	1.75	790	690	630	580	550	520	490

* Trussed roof - effective roof width is assumed equal to 3 times effective floor width

Maximum lintel span (mm)

Single span

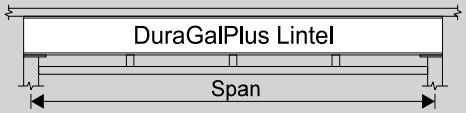


DuraGalPlus section	Mass kg/m	Effective lintel spacing (mm)						
		1200	1800	2400	3000	3600	4200	4800
150x50x6.0RHS	16.7	3490	3160	2950	2790	2650	2520	2410
150x50x5.0RHS	14.2	3380	3060	2850	2700	2540	2420	2310
150x50x4.0RHS	11.6	3240	2940	2730	2550	2400	2280	2180
150x50x3.0RHS	8.96	3070	2780	2550	2370	2230	2120	2030
150x50x2.5RHS	7.53	2950	2660	2420	2250	2110	1850	1620
150x50x2.0RHS	6.07	2810	2190	1640	1320	1100	940	820
125x75x6.0RHS	16.7	3320	3010	2810	2640	2490	2360	2260
125x75x5.0RHS	14.2	3220	2910	2720	2530	2380	2260	2160
125x75x4.0RHS	11.6	3080	2790	2570	2390	2250	2130	2040
125x75x3.0RHS	8.96	2920	2620	2380	2210	2080	1980	1890
125x75x2.5RHS	7.53	2800	2480	2260	2100	1970	1880	1790
125x75x2.0RHS	6.07	2650	2320	2110	1740	1450	1240	1090
100x50x5.0RHS	10.3	2560	2240	2040	1890	1780	1700	1620
100x50x4.0RHS	8.49	2430	2130	1940	1800	1690	1610	1540
100x50x3.5RHS	7.53	2350	2060	1870	1740	1640	1560	1490
100x50x3.0RHS	6.60	2280	1990	1810	1680	1580	1500	1440
100x50x2.5RHS	5.56	2160	1890	1720	1600	1500	1430	1370
100x50x2.0RHS	4.50	2030	1770	1610	1500	1410	1340	1280
75x50x5.0RHS	8.35	2000	1750	1590	1480	1390	1320	1270
75x50x4.0RHS	6.92	1910	1670	1520	1410	1330	1260	1210
75x50x3.0RHS	5.42	1800	1570	1430	1330	1250	1190	1130
75x50x2.5RHS	4.58	1710	1500	1360	1260	1190	1130	1080
75x50x2.0RHS	3.72	1610	1400	1280	1180	1120	1060	1010
75x50x1.6RHS	3.01	1500	1320	1200	1110	1030	950	890
75x25x2.5RHS	3.60	1470	1290	1170	1080	1020	970	930
75x25x2.0RHS	2.93	1390	1210	1100	1020	960	910	870
75x25x1.6RHS	2.38	1300	1140	1030	960	900	860	810
65x35x4.0RHS	5.35	1540	1350	1220	1140	1070	1020	970
65x35x3.0RHS	4.25	1460	1280	1160	1080	1020	970	920
65x35x2.5RHS	3.60	1400	1220	1110	1030	970	920	880
65x35x2.0RHS	2.93	1320	1150	1050	970	910	870	830
50x25x3.0RHS	3.07	1080	940	860	790	750	710	680
50x25x2.5RHS	2.62	1030	900	820	760	720	680	650
50x25x2.0RHS	2.15	980	860	780	720	680	650	620
50x25x1.6RHS	1.75	920	810	730	680	640	610	580

* Pitched roof - effective roof width is assumed equal to effective floor width

Maximum lintel span (mm)

Single span



DuraGalPlus section	Mass kg/m	Effective lintel spacing (mm)						
		1200	1800	2400	3000	3600	4200	4800
150x50x6.0RHS	16.7	3330	3020	2810	2650	2490	2370	2270
150x50x5.0RHS	14.2	3230	2920	2720	2540	2390	2270	2170
150x50x4.0RHS	11.6	3090	2800	2580	2400	2260	2140	2050
150x50x3.0RHS	8.96	2930	2630	2390	2220	2090	1990	1900
150x50x2.5RHS	7.53	2810	2500	2270	2110	1890	1620	1420
150x50x2.0RHS	6.07	2670	1920	1440	1150	960	820	720
125x75x6.0RHS	16.7	3170	2870	2670	2480	2340	2220	2120
125x75x5.0RHS	14.2	3070	2780	2550	2370	2230	2120	2030
125x75x4.0RHS	11.6	2940	2650	2410	2240	2110	2000	1920
125x75x3.0RHS	8.96	2780	2460	2240	2080	1950	1860	1780
125x75x2.5RHS	7.53	2660	2330	2120	1970	1850	1760	1680
125x75x2.0RHS	6.07	2490	2180	1900	1520	1270	1090	950
100x50x5.0RHS	10.3	2410	2110	1910	1780	1670	1590	1520
100x50x4.0RHS	8.49	2290	2000	1820	1690	1590	1510	1450
100x50x3.5RHS	7.53	2210	1930	1760	1630	1540	1460	1400
100x50x3.0RHS	6.60	2140	1870	1700	1580	1490	1410	1350
100x50x2.5RHS	5.56	2030	1780	1610	1500	1410	1340	1280
100x50x2.0RHS	4.50	1900	1660	1510	1400	1320	1260	1200
75x50x5.0RHS	8.35	1880	1640	1500	1390	1310	1240	1190
75x50x4.0RHS	6.92	1790	1570	1430	1330	1250	1180	1130
75x50x3.0RHS	5.42	1690	1470	1340	1240	1170	1110	1060
75x50x2.5RHS	4.58	1610	1400	1280	1180	1110	1060	1010
75x50x2.0RHS	3.72	1510	1320	1200	1110	1050	990	950
75x50x1.6RHS	3.01	1410	1230	1120	1040	960	890	830
75x25x2.5RHS	3.60	1380	1210	1100	1020	960	910	870
75x25x2.0RHS	2.93	1300	1140	1030	960	900	860	820
75x25x1.6RHS	2.38	1220	1070	970	900	850	810	760
65x35x4.0RHS	5.35	1440	1260	1150	1070	1000	950	910
65x35x3.0RHS	4.25	1370	1200	1090	1010	950	910	870
65x35x2.5RHS	3.60	1310	1150	1040	970	910	860	830
65x35x2.0RHS	2.93	1230	1080	980	910	860	810	780
50x25x3.0RHS	3.07	1010	880	800	750	700	670	640
50x25x2.5RHS	2.62	970	850	770	720	670	640	610
50x25x2.0RHS	2.15	920	800	730	680	640	610	580
50x25x1.6RHS	1.75	870	760	690	640	600	570	550

* Trussed roof - effective roof width is assumed equal to 3 times effective floor width

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