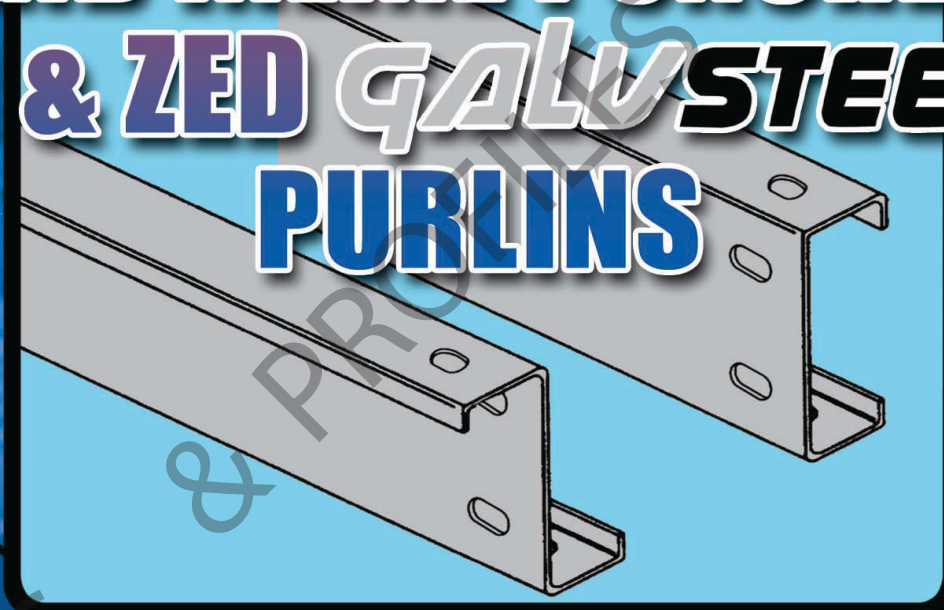




STEEL PURLINS
THE ONLY ROLL FORMED
AND INLINE PUNCHED
C & ZED GALVSTEEL™
PURLINS



Simply the Best

ROOFING & PROFILES (FIJI) LTD.

BUILD WITH CONFIDENCE

ROOFING & SHEETMETAL MANUFACTURERS

P.O. BOX 9, BA, FIJI ISLANDS

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FAX: (679) 667 0184 (OFF), (679) 667 3674 (FAC)

Email: info@rcmanubhai.com.fj www.rcmanubhai.com.fj

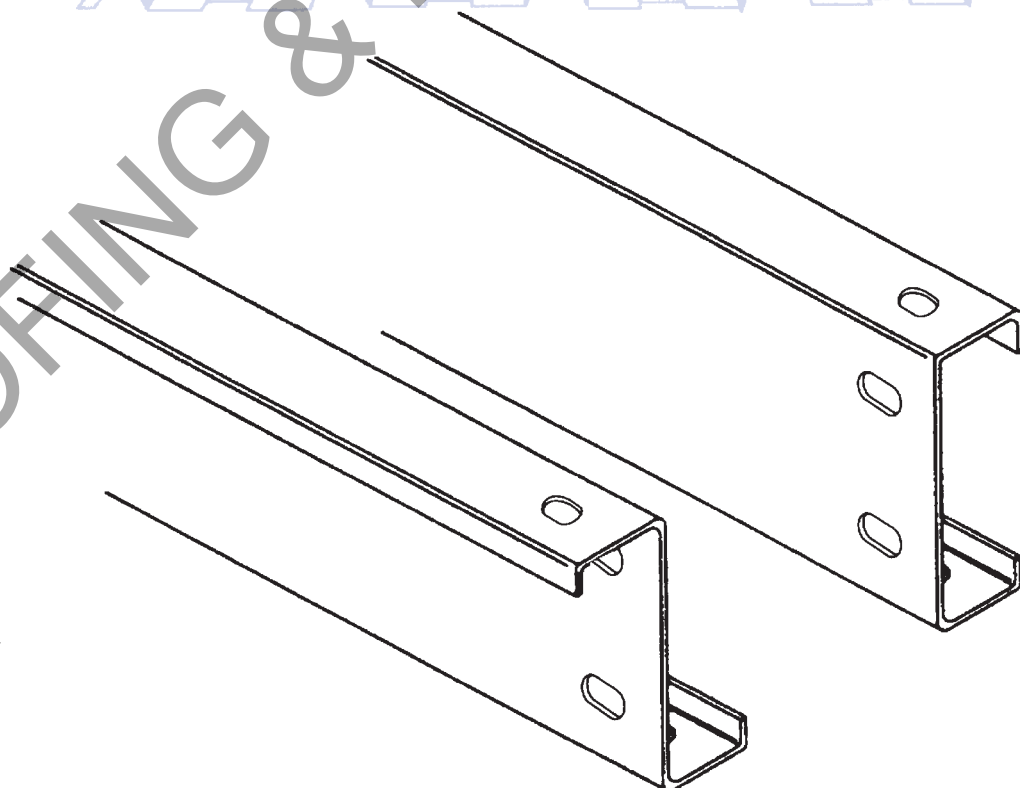
Build With Confidence





The Complete Purlin and Girt System

The Roofing & Profiles Products Zed and C sections are accurately roll-formed from high strength Zinc coated steel - G450 Z450 and combine to provide an efficient, lightweight, economical roofing and cladding support system for framed structures. The system, which includes a comprehensive range of accessories, is supplied ready for erection and, once erected, requires minimal maintenance throughout the life of the building.



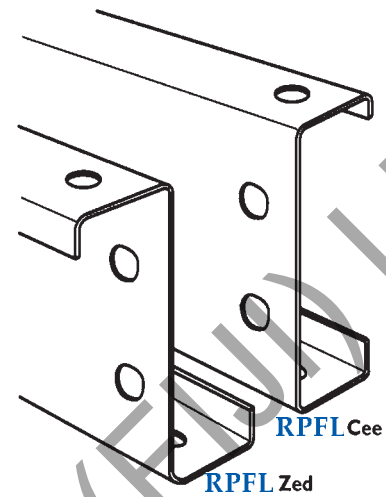
General data for Zed & Cee Sections

RPFL Zed and Cee sections are accurately roll-formed from high-strength zinc-coated steel to provide an efficient, lightweight, economical roofing and cladding support system for framed structures.

Applications

RPFL Zed sections may be used over single spans, unlapped continuous, and lapped continuous spans in multi-bay buildings. Lapped continuous spans result in a considerable capacity increase in the system.

RPFL Cee sections may be used in single spans and unlapped continuous spans in multi-bay buildings. Cee sections are ideal as eave purlins or where compact sections are required for detailing. Cee sections cannot be lapped.



Range of products & services

Our wide range includes:

- A full range of **RPFL** Zeds and Cees;
- A full range of **RPFL** Zeds and Cees with downturned-lip;
- Section sizes from 100 mm to 250 mm;
- Technical information for cleatless connections (see Design notes for capacity tables);
- bridging systems;
- Bolting systems to suit project needs;
- Advice on improving the life expectancy of purlin systems in corrosive environments;

Performance

In accordance with the provisions of AS/ANZ 4600:1996 *Cold-formed steel structures*, load capacities have been calculated for **RPFL** sections using approved **RPFL** bridging systems, bolting and other accessories. Sections chosen using the data provided in the tables will perform as specified when the design, fabrication and erection are carried out in accordance with **RPFL** recommendations and accepted building practice.

Non-standard sections

We can supply a wide range of non-standard sizes (up to 250 mm) and shapes, including Cees and Zeds with downturned lip—the Zeds can also be made to lap.

Corrosion protection & material compatibility

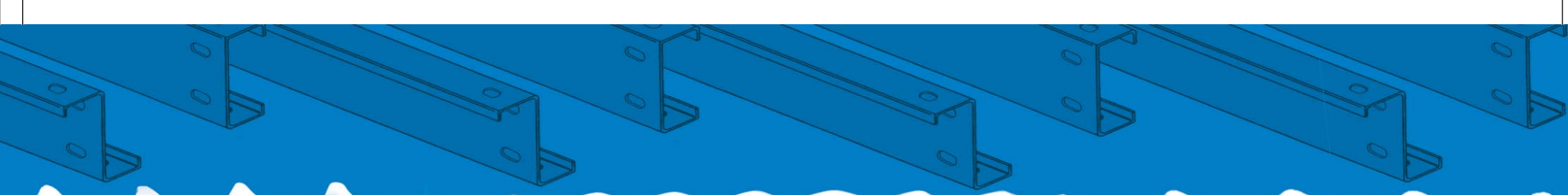
Some building materials and environmental conditions can be detrimental to coated steel products. These include contact with or exposure to runoff from:

- industrial, agricultural, marine or other aggressive atmospheric conditions;
- incompatible metals, like lead or copper;
- building materials subject to cycles of dryness and wetness, or which have excessive moisture content such as improperly seasoned timber.
- materials which have been treated with preservatives, like CCA or tanalith-treated timber.

A zinc coating of G450 Z450 (450 g/m² minimum coating mass) is the standard coating class provided with **RPFL** Zed and Cee sections. This will provide a long and trouble-free life for enclosed buildings and open-sided rural buildings, in a non-aggressive environment.

Standard range of **RPFL** Zeds and Cees

Nominal section size (mm)	BMT (mm)
100	1.9
150	1.5, 1.9, 2.4
200	1.5, 1.9, 2.4
250	1.9, 2.4



A non-aggressive environment is 1000 m from rough surf, 750 m from industrial emission and fossil fuel combustion, and 300 m from calm salt waters. Consideration must be given to the nature of activities performed within the building.

For severe corrosive environments Z450 (450 g/m² minimum coating mass) is required. This heavier coating mass is available.

All our Purlin raw materials are imported in Z450 coating.

Direct contact of incompatible materials with the coating must be avoided. In such applications, and in very corrosive environments, suitable paint systems can be obtained from paint manufacturers.

In applications where particular attention is required for corrosion, or the buildup of substances like dust or grain, then consideration should be given to the shape of the sections (either Zed, or Cee, or Zed with downturned lip); orientation of the sections; and coating class.

Available lengths

RPFL purlins are available custom-cut in any transportable length, however there are some limitations.

Minimum length 1.2m and maximum length unlimited. (refer note below transportation)

For normal deliveries nominal lengths should not exceed **10.900** m. Lengths greater than **10.900** m require special transportation and on-site handling

Length tolerance for all sections is ± 5 mm.

Packing

RPFL Zed and Cee sections are delivered in strapped bundles. The actual quantity in each bundle will vary with section size, order and length.

Storage on-site

If not required for immediate use, sections should be neatly stacked off the ground and on a slight slope so that water can drain away. Sections and accessories should not be left exposed in the open for extended periods.

Material specifications

RPFL Zed and Cee sections are roll-formed from **GALVSTEEL** steel complying with AS1397—2001. In the grades shown, the number prefixed with G indicates minimum yield stress in MPa; and the number prefixed with Z indicates minimum coating mass in g/m².

- 1.5, 1.9, and 2.4 mm BMT: G450, Z450

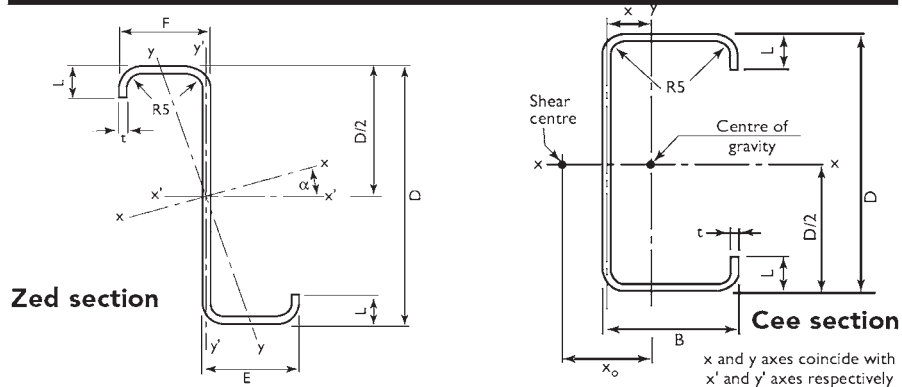
Bolt specification

RPFL purlin bolts and nuts have integral washers.

Tighten all bolts to 55 Nm torque.

Nominal section size (mm)	Bolt specification
100, 150, 200, 250	M12 RPFL purlin bolt: standard (grade 4.6) or high strength (grade 8.8)

Zed & Cee Sections Dimensions and properties



RPFL Zed sections

RPFL Zed sections feature one broad and one narrow flange, sized so that two sections of the same size fit together snugly, making them suitable for lapping.

Continuous lengths of purlin result in better economy, but lapping provides two thicknesses of metal over interior supports. Lapping increases the strength of the sections where bending moments and shear are at a maximum, thus improving the load capacity and rigidity of the system.

RPFL Zed sections of the same depth and different thicknesses can be lapped in any combination.

RPFL Zed sections may also be used over simple spans. For shorter spans they may be used continuously over two or more spans without laps—thus producing reduced deflection compared with simple spans—but it does not give the strength of a fully lapped system.

RPFL Zed sections with one lip turned outward (called *downturned lip purlins*) may be used in simple or continuous spans with the ends butted.

Typical assemblies are shown later in this manual.

RPFL Cee sections

RPFL Cee sections have equal flanges and are suitable for simply supported spans. For shorter spans they may be used continuously over two or more spans with the ends butted, thus producing reduced deflection compared with simple spans. They cannot be lapped.

Typical assemblies are shown later in this manual.

Dimensions of Zeds & Cees

Catalogue number	t mm	D mm	Mass per unit length kg/m	Zeds			Cees	
				E mm	F mm	L mm	B mm	L mm
Z/C10019	1.9	102	3.29	53	49	14.5	51	14.5
Z/C15015	1.5	152	3.59	65	61	16.5	64	15.5
Z/C15019	1.9	152	4.51	65	61	17.5	64	16.5
Z/C15024	2.4	152	5.70	66	60	19.5	64	18.5
Z/C20015	1.5	203	4.49	79	74	15.0	76	15.5
Z/C20019	1.9	203	5.74	79	74	18.5	76	19.0
Z/C20024	2.4	203	7.24	79	73	21.5	76	21.0
Z/C25019	1.9	254	6.50	79	74	18.0	76	18.5
Z/C25024	2.4	254	8.16	79	73	21.0	76	20.5

Section Properties

Section properties of RPFL Zeds

Product Code	Full section properties													Column properties		Effective section properties at yield stress	
	Area A mm ²	Second moment of area		Zy 10 ³ mm ³	Radius of gyration		Axes perpendicular & parallel to web			Torsion constant J mm ⁴	Warping constant Iw 10 ⁶ mm ⁴	Section modulus in bending Zxe 10 ³ mm ³	Area in compression Ae mm ²				
		Ix 10 ⁴ mm ⁴	Iy 10 ⁴ mm ⁴		ry mm	α (°)	Ix' 10 ⁴ mm ⁴	Iy' 10 ⁴ mm ⁴	Ix'y' 10 ⁶ mm ⁴					Zx' 10 ³ mm ³	Zy' 10 ³ mm ³	rx' mm	ry' mm
Z10019	409	0.840	0.0829	2.94	14.2	28.1	0.673	0.250	0.314	13.0	4.92	40.6	24.7	492	409	12.4	329
Z15015	443	1.84	0.145	3.96	18.1	22.0	1.60	0.383	0.588	20.8	6.06	60.1	29.4	332	1460	17.2	248
Z15019	561	2.32	0.184	5.02	18.1	22.1	2.01	0.487	0.744	26.1	7.73	59.9	29.5	675	1860	22.4	347
Z15024	712	2.92	0.238	6.38	18.3	22.5	2.53	0.632	0.950	32.6	10.0	59.6	29.8	1370	2410	31.4	535
Z20015	555	3.89	0.255	5.53	21.4	18.5	3.53	0.621	1.09	34.3	8.05	79.7	33.4	416	4260	23.8	248
Z20019	713	5.02	0.342	7.45	21.9	19.1	4.52	0.843	1.45	43.9	11.0	79.6	34.4	858	5830	36.4	378
Z20024	907	6.36	0.443	9.64	22.1	19.4	5.70	1.10	1.86	55.3	14.4	79.3	34.8	1740	7630	48.4	546
Z25019	808	8.08	0.381	7.82	21.7	14.0	7.62	0.833	1.81	59.3	10.8	97.1	32.1	972	9480	45.7	379
Z25024	1030	10.2	0.493	10.2	21.9	14.3	9.64	1.08	2.33	74.9	14.2	96.9	32.5	1970	12400	66.0	547

Properties have been computed on the basis of mean flange width. The introduced error is negligible. The shear centre and monosymmetry constant deviations can be disregarded, that is, taken as zero.

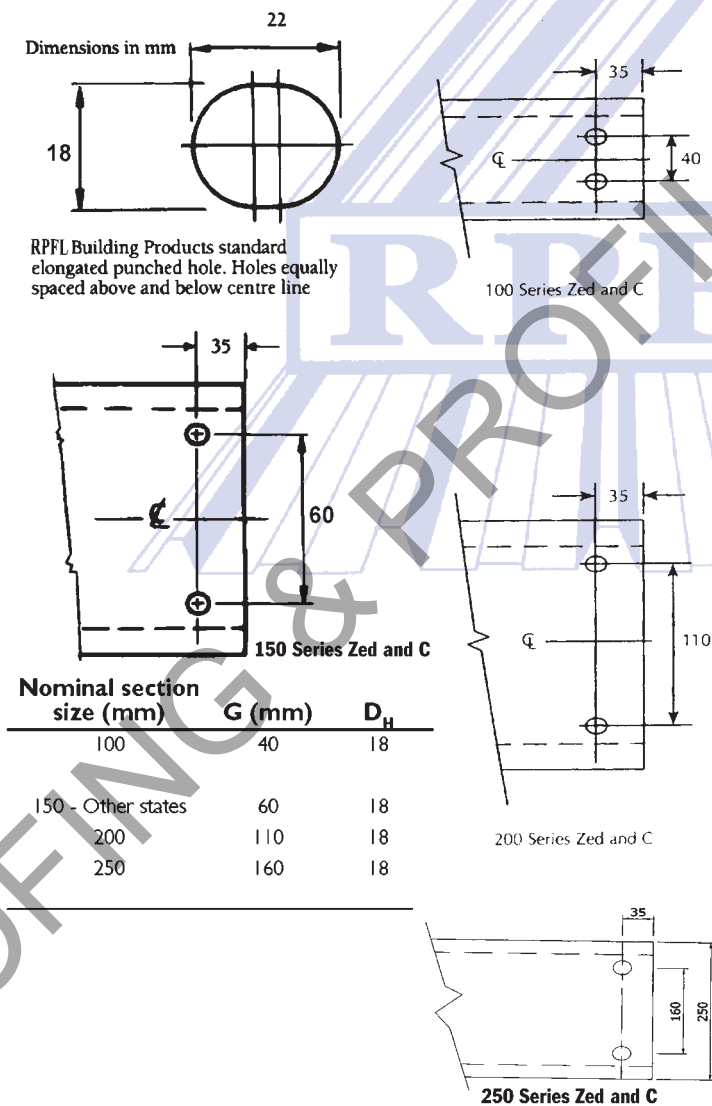
Section properties of RPFL Cees

Product Code	Full section properties								Column properties				Effective section properties at yield stress	
	Area A mm ²	Second moment of area		Section modulus		Radius of gyration		Centroid x̄ mm	Shear centre x mm	Torsion constant J mm ⁴	Warping constant Iw 10 ⁶ mm ⁴	Mono-symmetry section constant β mm	Section modulus in bending Zxe 10 ³ mm ³	Area in compression Ae mm ²
		Ix 10 ⁴ mm ⁴	Iy 10 ⁴ mm ⁴	Zx 10 ³ mm ³	Zy 10 ³ mm ³	rx mm	ry mm							
C10019	409	0.673	0.142	13.2	4.21	40.6	18.7	16.2	40.4	492	311	122	12.3	329
C15015	443	1.61	0.237	21.1	5.29	60.2	23.1	18.4	46.9	332	1070	171	17.1	244
C15019	561	2.02	0.300	26.6	6.74	60.0	23.1	18.5	47.1	675	1370	170	21.8	340
C15024	712	2.54	0.386	33.5	8.79	59.8	23.3	18.9	48.0	1370	1810	169	30.9	527
C20015	555	3.53	0.396	34.7	7.17	79.7	26.7	19.9	51.6	416	3060	223	24.1	251
C20019	713	4.51	0.531	44.4	9.77	79.6	27.3	20.8	53.6	858	4240	221	36.6	381
C20024	904	5.69	0.681	56.0	12.7	79.3	27.4	21.1	54.4	1740	5540	219	47.5	541
C25019	808	7.62	0.561	60.0	9.86	97.1	26.4	18.1	48.5	972	6860	276	46.2	381
C25024	1020	9.62	0.721	75.7	12.8	96.9	26.5	18.4	49.3	1970	8920	274	64.9	543

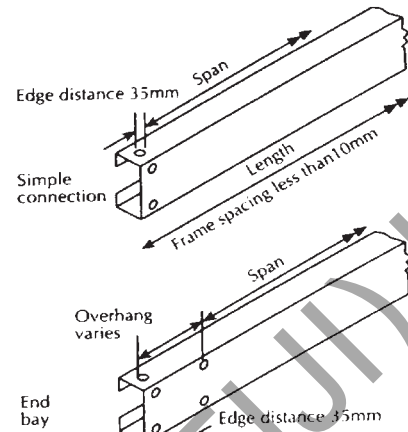
Holes & Cleats

RPFL Zed and C sections are normally supplied with 18 x 22mm elongated holes punched to the Australian Institute of Steel Construction gauge lines. They are intended for use with standard M 12 purlin bolts as lapped Zed sections are not readily assembled on site with larger bolts. Where reactions are greater than the allowable load on two standard M 12 **RPFL** purlin bolts or greater strength bolts are desired. High strength M 12 purlin bolts are recommended. Sections are also available unpunched if required.

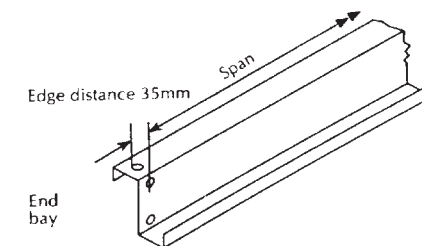
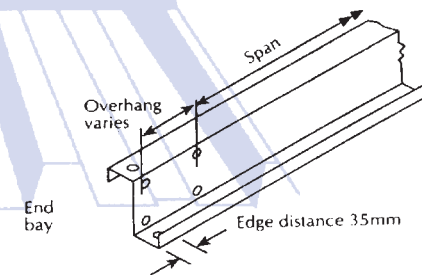
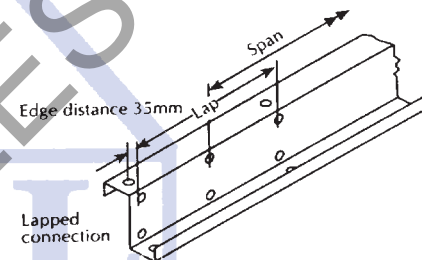
Hole details & gauge lines - Zed & C sections



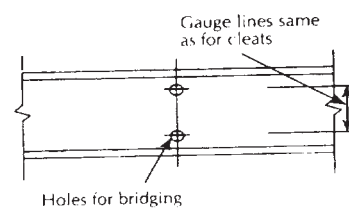
Standard holing



End holes - Zed section



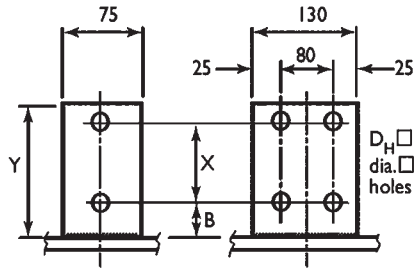
Bridging holes Zed & C sections



The holes are required at cleat supports at ends of laps and at bridging points.

For the webs of 100, 150, 200 and 250 deep sections the holes are elongated with dimensions of 18 mm x 22 mm suitable for M12 bolts.

Hole details of cleats

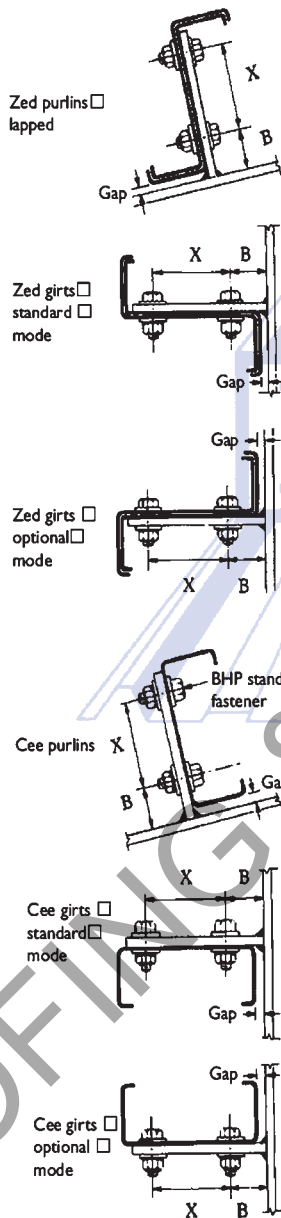


Cleat nominal dimensions (mm)

Nom.section size (mm)	X	B	Y	t (thickness)	Gap	D _H
100	40	40	105	8	10	18
150	60	55	145	8	10	18
200	110	55	195	8	10	18
250	160	55	245	8	10	18

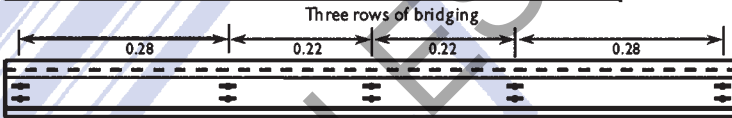
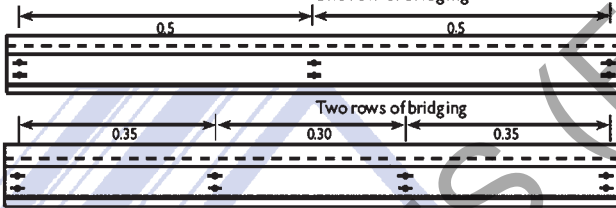
When using Zed sections with downturned lips, longer cleats are required to give clearance from the main supports.

Fastening to cleats

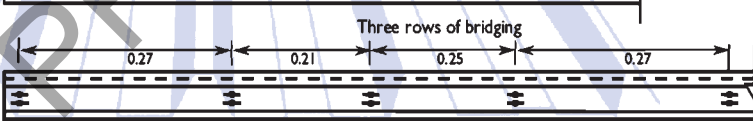
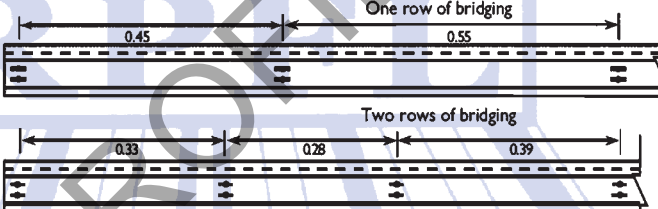


Location of bridging holes

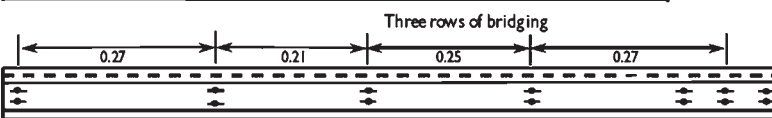
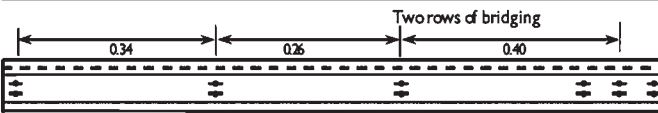
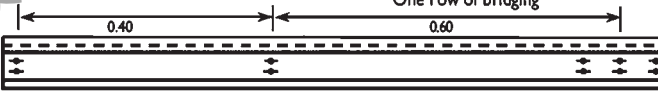
Simple Spans



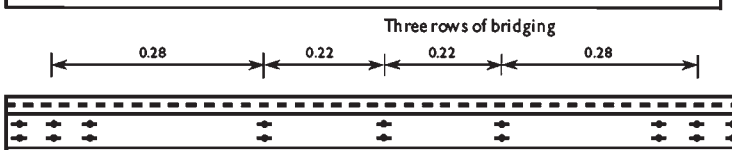
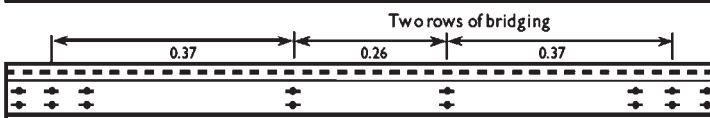
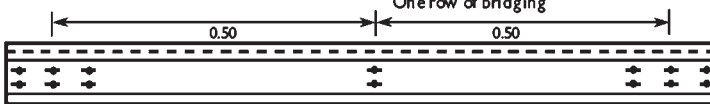
End Spans (continuous)



End Spans (lapped)



Interior Spans (lapped and unlapped)



NOTE

To minimise the tendency of Zeds and Cees to rotate when used as purlins, it is necessary to have the top flange pointing up the slope. Purlin orientation may be a consideration in certain projects.

Design notes for capacity tables

When determining a design, consideration should be given to load combinations for both strength and for serviceability.

Deflection

There are no specific rules governing acceptable deflections, though structural codes give guidance. You need to consider the specific requirements of any structure. It may be necessary to design for deflection under more than one load combination. See also *Assumptions used in tables*.

Axial loads

Where a section is not loaded to its full capacity in bending, it has a reserve of strength to carry some axial load. This reserve in purlins and girts can be used to transmit forces due to wind loading on end walls, or to resist forces due to bracing of wall and roof structures.

Where required, the combined bending and axial load capacity should be calculated using AS/NZS 4600:1996 *Cold-formed steel structures*.

Point loads

The values in this publication assume uniformly distributed loading. However, in many applications (like the mounting of services and maintenance equipment) the loads applied to a structure are point loads. Thus, to use these tables for point loadings, the loads must be converted to equivalent distributed loads.

The table on the following page gives conversion formulae for loads on simple spans and lapped spans. They have been derived from commonly published moment and shear data, and give conservative conversions.

For simple spans the formulae are straight forward. For non-continuous lapped spans the formulae depend on the number of spans, the position of the span and the lapping ratio; thus the worst-case configuration has been used, and the values may be safely used for end spans, interior spans and any lapping ratio greater than 10%.

Formulae for loads on continuous unlapped configurations, and for deflections in all configurations, are not given but may be derived similarly.

Symbols used in table for conversion of point loads

P = single point load (kN)

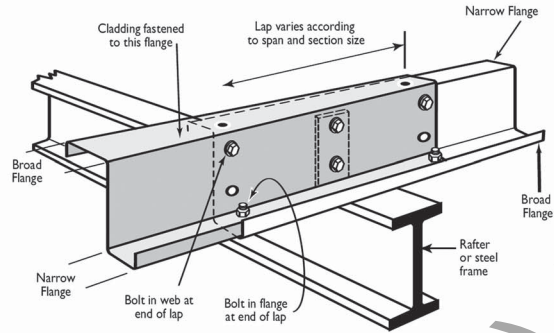
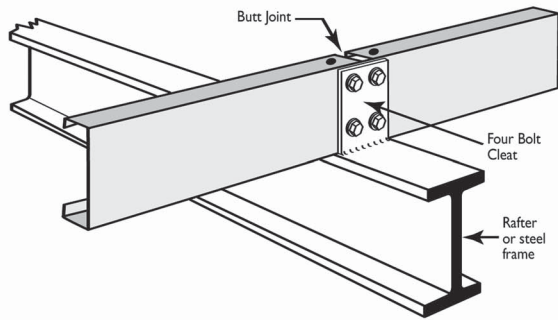
L = span (m)

a = larger distance from support (m)

b = smaller distance from support (m)

w = equivalent uniform load (kN/m)





Design optimisation

- Cantilevers at one

Design optimisation

The capacity tables provide economical design solutions for most projects. Designs can be optimised by varying:

- Material specifications
- Bolt specifications and number
- Non-standard purlin profile
- Reduced or enlarged end spans
- Span range

- Cantilevers at one or both ends
- Lap length
- Bridging quantity
- Load distribution

Bridging

The capacity tables give solutions for an equal number of rows of bridging in each span. Provision is made for 0, 1, 2 or 3 rows of bridging.

In practice it may be necessary to use at least one row of bridging in each span. We suggest that unbridged lengths be limited to 20 times the section depth.

Cleat connections

The capacity tables are based on the sections being fastened through the web to cleats (cleat connection) so that the load path is via the web of the sections.

The connections may be single section thickness such as in end connections, or the internal support connection of continuous configurations.

Connections with double section thickness occur at the internal support of lapped configurations.

Each connection uses two bolts.

Cleatless connections

Fixing of purlins through the bottom flange of the purlin (cleatless connection) is used in some forms of construction. The purlin capacity tables should not be used for these types of connections. For these types of connections there are other design issues (both strength and servability) and construction issues that need to be considered.

The number of bolts used are halved compared with the number used in conventional cleated connections.

Lapping

The structural lap at the interior supports of lapped configurations must be detailed to provide adequate structural continuity.

Each end of the lap must have one bolt through the flange furthest from the cladding, and one bolt through the webs near the flanges connected to the cladding.

The nominal lap length is the distance between the bolt centres at the end of the laps. Laps vary in length with both section size and span as shown in the table below. In no situation must the lap be less than 10% of the span.

Conversion of point loads into equivalent uniform loads

Symmetrical equidistant point loads

Loading condition		Conversion formula	
SINGLE LOAD	Simple		$w = 2P/L$
	Lapped		$w = 2.22P/L$
2 LOADS	Simple		$w = 2.67P/L$
	Lapped		$w = 3.16P/L$
3 LOADS	Simple		$w = 4P/L$
	Lapped		$w = 3.78P/L$
4 LOADS	Simple		$w = 4.80P/L$
	Lapped		$w = 5.12P/L$
5 LOADS	Simple		$w = 6P/L$
	Lapped		$w = 6.65P/L$
6 OR MORE LOADS	Simple		$w = 1.14NP/L$
	Lapped		$w = 1.22NP/L$

Single eccentric and two symmetrical point loads

Loading condition		Conversion formula	
SINGLE ECCENTRIC POINT LOAD	Simple		$w = 8abP/L^3$
	Lapped		$w = 17.76ab^2P/L^4$
2 SYMMETRICAL POINT LOADS	Simple		$w = 8bP/L^2$
	Lapped		$w = 9.45b(2L-3b)P/L^3$

Intermediate values

Within a given bridging configuration, capacities for intermediate spans may be interpolated linearly.

Notes to capacity tables

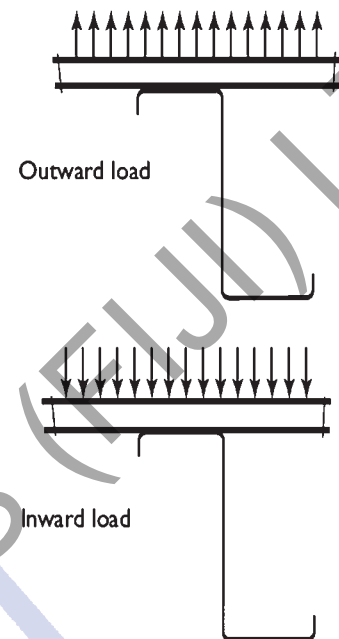
1. Loads are assumed to be uniformly distributed (see also *Point loads*).
2. The capacities assume the use of approved **RPFL** sections, bridging system and bolts.
3. The column, Load for deflection span/150, is the load that will produce this deflection. It is not a design capacity.
4. All connections use **RPFL** purlin bolts grade 4.6, except for boldened capacities which require grade 8.8.
5. Forces acting to hold cladding against a structure are defined as *inward*. Forces acting to remove cladding from a structure are defined as *outward*.

Lap lengths

Nominal section size (mm)	Span (mm)	Lap length (mm)
100	≤ 6000	600
	> 6000	900
150, 200, 250	≤ 9000	900
	> 9000 ≤ 12000	1200
	> 12000*	1800

* Load capacities for these spans are beyond the scope of this publication

Loading conditions



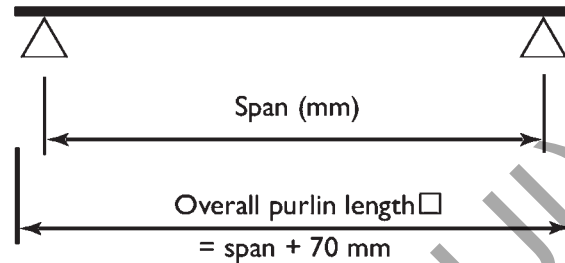
ROOFING & PURLINS



Limit state capacity tables

Single spans

Single spans



Single span: Z/C10015 (kN/m)

Bridging > Span (mm)	IN			OUT				Load for deflection span/150
	0	1,2,3		0	1	2	3	
2100	6.20	6.30		5.35	6.30	6.30	6.30	5.71
2400	4.67	4.83		3.62	4.83	4.83	4.83	3.89
2700	3.65	3.81		2.47	3.81	3.81	3.81	2.74
3000	2.92	3.09		1.73	2.99	3.09	3.09	2.01
3300	2.39	2.55		1.26	2.35	2.55	2.55	1.52
3600	2.00	2.15		0.93	1.87	2.15	2.15	1.18
3900	1.69	1.83		0.71	1.51	1.83	1.83	0.93
4200	1.45	1.58		0.55	1.20	1.56	1.58	0.74
4500	1.25	1.37		0.43	0.97	1.31	1.37	0.60
4800	1.10	1.21			0.78	1.12	1.21	0.50
5100	0.97	1.07			0.63	0.96	1.07	0.42
5400	0.86	0.95			0.52	0.82	0.95	0.35
5700	0.77	0.86			0.43	0.71	0.84	0.30
6000	0.69	0.77				0.61	0.74	0.26
6300	0.62	0.70				0.52	0.65	0.22
6600	0.57	0.64				0.45	0.58	0.19
6900	0.52	0.58					0.52	0.17
7200	0.47	0.54					0.46	0.15
7500	0.44	0.49					0.42	0.13

Single span: Z/C10019 (kN/m)

Bridging > Span (mm)	IN			OUT				Load for deflection span/150
	0	1,2,3		0	1	2	3	
2100	8.44	8.79		7.37	8.79	8.79	8.79	7.34
2400	6.30	6.73		4.90	6.73	6.73	6.73	4.99
2700	4.88	5.32		3.35	5.32	5.32	5.32	3.50
3000	3.89	4.31		2.34	4.24	4.31	4.31	2.55
3300	3.17	3.56		1.70	3.32	3.56	3.56	1.92
3600	2.63	2.99		1.27	2.61	2.99	2.99	1.48
3900	2.22	2.55		0.97	2.08	2.55	2.55	1.16
4200	1.89	2.20		0.76	1.65	2.20	2.20	0.93
4500	1.64	1.91		0.61	1.32	1.87	1.91	0.76
4800	1.43	1.68		0.50	1.06	1.58	1.68	0.62
5100	1.26	1.49		0.41	0.86	1.34	1.49	0.52
5400	1.11	1.33			0.71	1.14	1.33	0.44
5700	0.99	1.19			0.58	0.98	1.19	0.37
6000	0.89	1.08			0.49	0.84	1.05	0.32
6300	0.81	0.98			0.41	0.71	0.93	0.28
6600	0.73	0.89				0.61	0.82	0.24
6900	0.67	0.81				0.53	0.72	0.21
7200	0.61	0.75				0.46	0.64	0.19
7500	0.56	0.56					0.57	0.16

Bold capacities require grade 8.8 purlin bolts.

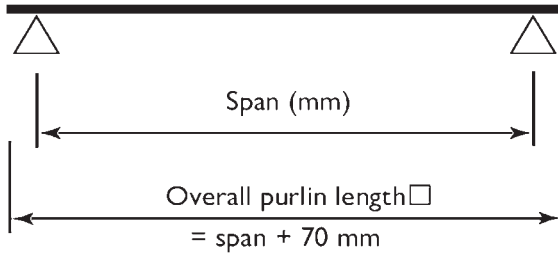
Values above horizontal line in body of table are governed by the strength of the grade 8.8 bolt.

IN = Inward load capacity. OUT = Outward load capacity. See also: Design notes for capacity tables.

Limit state capacity tables

Single spans

Single spans



Single span: Z/C15015 (kN/m)

Bridging > Span (mm)	IN			OUT				Load for deflection span/150
	0	1, 2, 3	0	1	2	3		
3000	11.12	11.12	11.12	11.12	11.12	11.12	11.12	15.62
3300	8.51	8.51	8.17	8.51	8.51	8.51	8.51	10.50
3600	6.73	6.73	5.79	6.73	6.73	6.73	6.73	7.48
3900	5.41	5.45	4.02	5.45	5.45	5.45	5.45	5.52
4200	4.39	4.50	3.00	4.50	4.50	4.50	4.50	4.19
4500	3.64	3.78	2.29	3.78	3.78	3.78	3.78	3.27
4800	3.06	3.22	1.75	3.22	3.22	3.22	3.22	2.61
5100	2.61	2.78	1.36	2.73	2.78	2.78	2.78	2.12
5400	2.25	2.42	1.06	2.25	2.42	2.42	2.42	1.74
5700	1.96	2.13	0.84	1.85	2.13	2.13	2.13	1.45
6000	1.72	1.89	0.67	1.52	1.89	1.89	1.89	1.21
6300	1.52	1.68	0.55	1.23	1.68	1.68	1.68	1.03
6600	1.36	1.51	0.45	1.04	1.51	1.51	1.51	0.88
6900	1.21	1.36		0.89	1.36	1.36	1.36	0.76
7200	1.09	1.24		0.76	1.19	1.24	1.24	0.66
7500	0.98	1.13		0.65	1.05	1.13	1.13	0.57
7800	0.89	1.03		0.56	0.92	1.03	1.03	0.50
8100	0.82	0.95		0.48	0.80	0.95	0.95	0.44
8100	0.75	0.87		0.42	0.70	0.87	0.87	0.39

Single span: Z/C15019 (kN/m)

Bridging > Span (mm)	IN			OUT				Load for deflect'n span/150
	0	1	2, 3	0	1	2	3	
3000	6.79	7.68	7.68	5.67	7.68	7.68	7.68	7.33
3300	5.51	6.35	6.35	4.12	6.35	6.35	6.35	5.59
3600	4.56	5.33	5.33	3.09	5.33	5.33	5.33	4.32
3900	3.82	4.55	4.55	2.32	4.37	4.55	4.55	3.42
4200	3.24	3.92	3.92	1.78	3.62	3.92	3.92	2.76
4500	2.78	3.41	3.41	1.39	3.02	3.41	3.41	2.26
4800	2.41	3.00	3.00	1.11	2.53	3.00	3.00	1.86
5100	2.11	2.66	2.66	0.90	2.10	2.66	2.66	1.55
5400	1.87	2.37	2.37	0.73	1.75	2.35	2.37	1.31
5700	1.66	2.13	2.13	0.61	1.45	2.05	2.13	1.11
6000	1.48	1.92	1.92	0.51	1.22	1.80	1.92	0.95
6300	1.33	1.74	1.74	0.43	1.04	1.59	1.74	0.82
6600	1.20	1.59	1.59		0.88	1.41	1.59	0.72
6900	1.09	1.45	1.45		0.75	1.25	1.45	0.63
7200	0.99	1.33	1.33		0.64	1.10	1.32	0.55
7500	0.91	1.22	1.23		0.55	0.97	1.20	0.49
7800	0.83	1.12	1.14		0.48	0.86	1.08	0.43
8100	0.77	1.04	1.05		0.42	0.75	0.98	0.39

Single span: Z/C15024 (kN/m)

Bridging > Span (mm)	IN			OUT				Load for deflect'n span/150
	0	1	2, 3	0	1	2	3	
3000	8.82	10.82	10.82	7.71	10.82	10.82	10.82	9.58
3300	7.04	8.94	8.94	5.54	8.94	8.94	8.94	7.22
3600	5.70	7.52	7.52	4.09	7.52	7.52	7.52	5.56
3900	4.71	6.40	6.40	3.09	6.20	6.40	6.40	4.37
4200	3.95	5.52	5.52	2.39	5.09	5.52	5.52	3.50
4500	3.36	4.81	4.81	1.88	4.22	4.81	4.81	2.85
4800	2.89	4.23	4.23	1.51	3.52	4.23	4.23	2.35
5100	2.52	3.74	3.74	1.23	2.93	3.74	3.74	1.96
5400	2.21	3.34	3.34	1.01	2.40	3.34	3.34	1.65
5700	1.95	2.98	3.00	0.84	1.98	2.91	3.00	1.40
6000	1.74	2.66	2.71	0.71	1.65	2.54	2.71	1.20
6300	1.56	2.39	2.45	0.61	1.39	2.23	2.45	1.04
6600	1.41	2.16	2.24	0.52	1.18	1.97	2.24	0.90
6900	1.27	1.96	2.05	0.45	1.01	1.74	2.05	0.79
7200	1.16	1.79	1.88		0.86	1.54	1.88	0.70
7500	1.06	1.64	1.73		0.75	1.35	1.70	0.62
7800	0.97	1.50	1.60		0.65	1.18	1.53	0.55
8100	0.89	1.38	1.48		0.57	1.03	1.39	0.49

Bold capacities require grade 8.8 purlin bolts.

Values above horizontal line in body of table are governed by the strength of the grade 8.8 bolt.

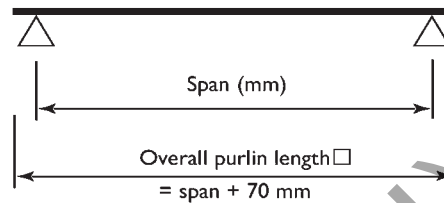
IN = Inward load capacity. OUT = Outward load capacity. See also: Design notes for capacity tables.



Limit state capacity tables

Single spans

Single spans



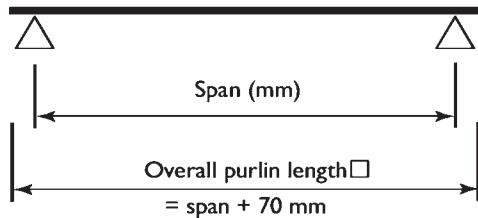
Span (mm)	Single span: Z/C20015 (kN/m)							Single span: Z/C20019 (kN/m)							Single span: Z/C20024 (kN/m)								
	IN			OUT				Load for deflect'n span/150	IN			OUT				Load for deflect'n span/150	IN			OUT			
Bridging >	0	1,2,3	0	1	2	3	0		1,2,3	0	1	2	3	0	1		2	3	0	1	2	3	
3000	7.38	7.38	7.28	7.38	7.38	7.38	10.60	10.52	11.25	10.56	11.25	11.25	11.25	15.10	13.70	16.35	16.35	16.35	14.57	16.35	16.35	16.35	19.93
3300	6.10	6.10	5.47	6.10	6.10	6.10	7.96	8.38	9.30	7.83	9.30	9.30	9.30	11.42	10.79	13.52	13.52	13.52	11.11	13.52	13.52	13.52	15.19
3600	5.13	5.13	4.10	5.13	5.13	5.13	6.28	6.78	7.81	5.77	7.81	7.81	7.81	8.89	8.65	11.36	11.36	11.36	8.32	11.36	11.36	11.36	11.89
3900	4.33	4.37	3.13	4.37	4.37	4.37	5.07	5.59	6.66	4.50	6.66	6.66	6.66	7.06	7.08	9.68	9.68	9.68	6.38	9.68	9.68	9.68	9.49
4200	3.69	3.77	2.44	3.77	3.77	3.77	4.15	4.54	5.74	3.57	5.74	5.74	5.74	5.70	5.91	8.34	8.34	8.34	4.95	8.34	8.34	8.34	7.67
4500	3.17	3.28	1.86	3.28	3.28	3.28	3.45	3.88	5.00	2.84	5.00	5.00	5.00	4.67	5.00	7.27	7.27	7.27	3.86	7.23	7.27	7.27	6.27
4800	2.75	2.88	1.51	2.88	2.88	2.88	2.88	3.35	4.39	2.27	4.39	4.39	4.39	3.88	4.29	6.39	6.39	6.39	3.06	6.14	6.39	6.39	5.19
5100	2.41	2.56	1.25	2.56	2.56	2.56	2.42	2.92	3.89	1.84	3.84	3.89	3.89	3.27	3.72	5.66	5.66	5.66	2.46	5.26	5.66	5.66	4.35
5400	2.13	2.28	1.04	2.24	2.28	2.28	2.05	2.57	3.47	1.51	3.27	3.47	3.47	2.78	3.26	5.05	5.05	5.05	2.00	4.53	5.05	5.05	3.69
5700	1.89	2.05	0.87	1.92	2.05	2.05	1.75	2.27	3.12	1.24	2.77	3.12	3.12	2.39	2.88	4.53	4.53	4.53	1.65	3.91	4.53	4.53	3.15
6000	1.68	1.85	0.72	1.62	1.85	1.85	1.51	2.03	2.81	1.03	2.26	2.81	2.81	2.07	2.55	4.05	4.09	4.09	1.38	3.35	4.09	4.09	2.70
6300	1.51	1.67	0.61	1.38	1.67	1.67	1.31	1.82	2.55	0.86	1.94	2.55	2.55	1.80	2.28	3.64	3.71	3.71	1.16	2.84	3.71	3.71	2.34
6600	1.36	1.53	0.52	1.18	1.53	1.53	1.15	1.64	2.32	0.72	1.68	2.32	2.32	1.57	2.04	3.28	3.38	3.38	0.98	2.43	3.36	3.38	2.03
6900	1.23	1.40	0.44	1.01	1.40	1.40	1.01	1.49	2.13	0.62	1.46	2.13	2.13	1.38	1.84	2.98	3.09	3.09	0.84	2.09	3.01	3.09	1.78
7200	1.12	1.28		0.87	1.28	1.28	0.89	1.36	1.95	0.53	1.28	1.95	1.95	1.22	1.67	2.71	2.84	2.84	0.72	1.82	2.70	2.84	1.57
7500	1.03	1.18		0.76	1.18	1.18	0.79	1.24	1.80	0.46	1.12	1.78	1.80	1.08	1.52	2.48	2.62	2.62	0.63	1.57	2.43	2.62	1.38
7800	0.94	1.09		0.64	1.09	1.09	0.71	1.14	1.66	0.40	0.99	1.59	1.66	0.96	1.39	2.27	2.42	2.42	0.55	1.36	2.20	2.42	1.23
8100	0.87	1.01		0.56	0.98	1.01	0.64	1.05	1.54		0.86	1.43	1.54	0.86	1.28	2.09	2.24	2.24	0.48	1.19	1.99	2.24	1.10
8400	0.80	0.94		0.50	0.88	0.94	0.58	0.97	1.44		0.76	1.27	1.44	0.77	1.18	1.93	2.09	2.09	0.42	1.04	1.80	2.09	0.99
8700	0.74	0.88		0.45	0.79	0.88	0.52	0.90	1.34		0.67	1.13	1.34	0.70	1.09	1.79	1.95	1.95		0.91	1.62	1.95	0.89
9000	0.69	0.82		0.40	0.70	0.82	0.47	0.84	1.25		0.60	0.98	1.25	0.63	1.01	1.66	1.82	1.82		0.81	1.45	1.79	0.80
9300	0.64	0.77			0.63	0.77	0.43	0.78	1.17		0.53	0.89	1.17	0.58	0.93	1.55	1.70	1.70		0.72	1.30	1.65	0.73
9600	0.60	0.72			0.56	0.72	0.39	0.73	1.10		0.47	0.80	1.10	0.52	0.87	1.44	1.60	1.60		0.64	1.17	1.52	0.66
9900	0.56	0.68			0.51	0.68	0.36	0.68	1.03		0.42	0.73	1.03	0.48	0.81	1.35	1.49	1.50		0.57	1.05	1.41	0.60
10200	0.53	0.64			0.46	0.64	0.33	0.64	0.97			0.66	0.95	0.44	0.76	1.27	1.40	1.42		0.51	0.95	1.30	0.55
10500	0.49	0.60			0.42	0.60	0.31	0.60	0.92			0.61	0.87	0.40	0.71	1.19	1.31	1.34		0.46	0.86	1.21	0.50
10800	0.46	0.57				0.55	0.28	0.56	0.87			0.55	0.80	0.37	0.67	1.12	1.23	1.26		0.41	0.78	1.12	0.46
11100	0.44	0.54				0.51	0.26	0.53	0.82			0.51	0.74	0.34	0.63	1.06	1.16	1.20			0.71	1.04	0.43
11400	0.41	0.51				0.47	0.24	0.50	0.78			0.47	0.68	0.31	0.59	1.00	1.09	1.13			0.64	0.96	0.39
11700	0.39	0.49				0.43	0.22	0.48	0.74			0.43	0.62	0.29	0.56	0.94	1.03	1.08			0.59	0.89	0.37
12000	0.37	0.46				0.40	0.21	0.45	0.70				0.55	0.27	0.53	0.89	0.98	1.02			0.53	0.82	0.34

Bold capacities require grade 8.8 purlin bolts. Values above horizontal line in body of table are governed by the strength of the grade 8.8 bolt.
 IN = Inward load capacity. OUT = Outward load capacity. See also: Design notes for capacity tables.

Limit state capacity tables

Single spans

Single spans



Bridging > (mm)	Single span: Z/C25019 (kN/m)							Single span: Z/C25024 (kN/m)								
	IN			OUT				Load for deflect'n span/150	IN			OUT				Load for deflect'n span/150
	0	1, 2, 3	0	1	2	3	0		1	2, 3	0	1	2	3		
Span 3000	13.83	14.28	14.17	14.28	14.28	14.28	24.52	17.71	20.96	20.96	19.42	20.96	20.96	20.96	33.82	
3300	10.90	11.80	10.06	11.80	11.80	11.80	18.42	13.78	17.32	17.32	14.58	17.32	17.32	17.32	25.41	
3600	8.51	9.92	7.64	9.92	9.92	9.92	14.19	11.02	14.56	14.56	10.84	14.56	14.56	14.56	19.57	
3900	7.04	8.45	5.92	8.45	8.45	8.45	11.16	9.01	12.40	12.40	8.29	12.40	12.40	12.40	15.46	
4200	5.91	7.28	4.67	7.28	7.28	7.28	9.07	7.50	10.69	10.69	6.39	10.69	10.69	10.69	12.53	
4500	5.04	6.35	3.69	6.35	6.35	6.35	7.54	6.34	9.32	9.32	4.97	9.32	9.32	9.32	10.30	
4800	4.34	5.58	2.93	5.58	5.58	5.58	6.35	5.43	8.19	8.19	3.93	8.19	8.19	8.19	8.58	
5100	3.78	4.94	2.37	4.94	4.94	4.94	5.38	4.71	7.25	7.25	3.15	7.03	7.25	7.25	7.22	
5400	3.32	4.41	1.94	4.39	4.41	4.41	4.56	4.11	6.47	6.47	2.55	6.03	6.47	6.47	6.11	
5700	2.94	3.96	1.58	3.68	3.96	3.96	3.90	3.61	5.81	5.81	2.10	5.16	5.81	5.81	5.21	
6000	2.62	3.57	1.31	3.01	3.57	3.57	3.37	3.19	5.24	5.24	1.74	4.38	5.24	5.24	4.48	
6300	2.35	3.24	1.09	2.58	3.24	3.24	2.93	2.85	4.75	4.75	1.46	3.70	4.75	4.75	3.89	
6600	2.12	2.95	0.92	2.22	2.95	2.95	2.57	2.55	4.33	4.33	1.23	3.16	4.33	4.33	3.40	
6900	1.92	2.70	0.78	1.92	2.70	2.70	2.26	2.30	3.96	3.96	1.05	2.72	3.96	3.96	2.99	
7200	1.75	2.48	0.67	1.68	2.48	2.48	2.00	2.08	3.60	3.64	0.90	2.35	3.62	3.64	2.64	
7500	1.60	2.28	0.57	1.47	2.28	2.28	1.78	1.90	3.29	3.35	0.78	2.03	3.25	3.35	2.34	
7800	1.46	2.11	0.50	1.29	2.11	2.11	1.60	1.73	3.01	3.10	0.68	1.75	2.93	3.10	2.08	
8100	1.35	1.96	0.43	1.12	1.91	1.96	1.43	1.59	2.77	2.88	0.59	1.53	2.64	2.88	1.86	
8400	1.24	1.82	0.38	0.98	1.69	1.82	1.29	1.46	2.56	2.67	0.52	1.33	2.37	2.67	1.67	
8700	1.15	1.70	0.33	0.87	1.46	1.70	1.16	1.35	2.36	2.49	0.46	1.17	2.12	2.49	1.50	
9000	1.07	1.59	0.29	0.77	1.31	1.59	1.05	1.25	2.19	2.33	0.41	1.03	1.89	2.33	1.36	
9300	1.00	1.49	0.25	0.69	1.18	1.49	0.95	1.16	2.04	2.18	0.36	0.91	1.69	2.18	1.23	
9600	0.93	1.39	0.22	0.61	1.06	1.39	0.87	1.08	1.90	2.05	0.32	0.81	1.52	2.04	1.12	
9900	0.87	1.31	0.19	0.54	0.96	1.31	0.79	1.01	1.78	1.93	0.28	0.72	1.36	1.88	1.02	
10200	0.82	1.24	0.17	0.49	0.87	1.24	0.73	0.94	1.67	1.81	0.25	0.65	1.23	1.74	0.93	
10500	0.77	1.17	0.15	0.44	0.80	1.17	0.67	0.88	1.56	1.71	0.22	0.58	1.12	1.61	0.85	
10800	0.72	1.10	0.14	0.40	0.73	1.07	0.61	0.83	1.47	1.62	0.20	0.52	1.01	1.49	0.78	
11100	0.68	1.04	0.13	0.37	0.66	0.98	0.57	0.78	1.38	1.53	0.18	0.47	0.92	1.37	0.72	
11400	0.64	0.99	0.12	0.34	0.61	0.90	0.53	0.74	1.30	1.45	0.17	0.43	0.83	1.26	0.67	
11700	0.61	0.94	0.11	0.32	0.55	0.80	0.49	0.69	1.23	1.38	0.16	0.40	0.75	1.16	0.62	
12000	0.58	0.89	0.10	0.30	0.50	0.74	0.45	0.66	1.16	1.30	0.15	0.38	0.69	1.07	0.57	

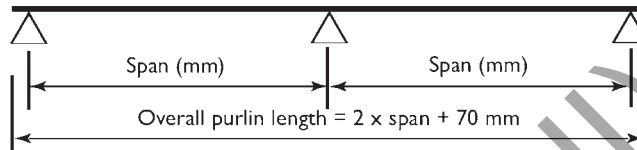
Bold capacities require grade 8.8 purlin bolts. Values above horizontal line in body of table are governed by the strength of the grade 8.8 bolt.
IN = Inward load capacity. OUT = Outward load capacity. See also: Design notes for capacity tables.



Limit state capacity tables

Double continuous spans

Double spans



Double span: Z/C10015 (kN/m)

Double span: Z/C10019 (kN/m)

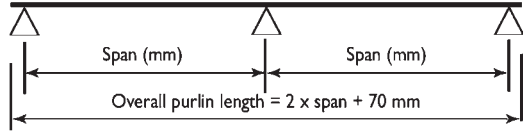
Bridging >	IN		OUT				Load for deflection span/150	IN		OUT				Load for deflection span/150
	0	1, 2, 3	0	1	2	3		0	1, 2, 3	0	1	2	3	
Span 2100	6.30	6.30	6.30	6.30	6.30	6.30	13.04	8.68	8.79	8.79	8.79	8.79	8.79	17.31
(mm) 2400	4.74	4.83	4.83	4.83	4.83	4.83	8.74	6.50	6.73	6.73	6.73	6.73	6.73	11.59
2700	3.68	3.81	3.81	3.81	3.81	3.81	6.14	5.02	5.32	5.32	5.32	5.32	5.32	8.14
3000	2.94	3.09	3.09	3.09	3.09	3.09	4.47	3.97	4.31	4.31	4.31	4.31	4.31	5.94
3300	2.39	2.55	2.46	2.55	2.55	2.55	3.36	3.22	3.56	3.49	3.56	3.56	3.56	4.46
3600	1.98	2.15	1.99	2.15	2.15	2.15	2.59	2.66	2.99	2.81	2.99	2.99	2.99	3.44
3900	1.67	1.83	1.63	1.83	1.83	1.83	2.05	2.22	2.55	2.28	2.55	2.55	2.55	2.72
4200	1.42	1.58	1.35	1.58	1.58	1.58	1.66	1.89	2.20	1.87	2.20	2.20	2.20	2.18
4500	1.22	1.37	1.12	1.37	1.37	1.37	1.37	1.62	1.91	1.55	1.91	1.91	1.91	1.78
4800	1.06	1.21	0.93	1.18	1.21	1.21	1.14	1.40	1.68	1.28	1.67	1.68	1.68	1.47
5100	0.92	1.07	0.78	1.01	1.07	1.07	0.96	1.22	1.49	1.07	1.45	1.49	1.49	1.23
5400	0.81	0.95	0.65	0.88	0.95	0.95	0.82	1.07	1.33	0.90	1.25	1.33	1.33	1.05
5700	0.72	0.86	0.55	0.77	0.86	0.86	0.70	0.94	1.19	0.76	1.08	1.19	1.19	0.89
6000	0.64	0.77	0.47	0.67	0.77	0.77	0.60	0.83	1.08	0.65	0.94	1.08	1.08	0.77
SECTIONS BELOW EXCEED THE NORMAL DELIVERY LENGTH OF 12000 mm														
6300	0.57	0.70	0.40	0.59	0.70	0.70	0.52	0.74	0.98	0.56	0.82	0.98	0.98	0.66
6600	0.51	0.64		0.52	0.62	0.64	0.45	0.66	0.89	0.48	0.72	0.89	0.89	0.58
6900	0.46	0.58		0.45	0.56	0.58	0.40	0.59	0.81	0.42	0.63	0.80	0.81	0.50
7200	0.41	0.54		0.40	0.50	0.54	0.35	0.54	0.75		0.55	0.72	0.75	0.44
7500		0.49			0.45	0.49	0.31	0.48	0.69		0.49	0.64	0.69	0.39

Bold capacities require grade 8.8 purlin bolts. Values above horizontal line in body of table are governed by the strength of the grade 8.8 bolt.
 IN = Inward load capacity. OUT = Outward load capacity. See also: Design notes for capacity tables.

Limit state capacity tables

Double continuous spans

Double spans



		Double span: Z/C15015 (kN/m)						
Bridging >	Load for deflection span/150	IN			OUT			Load for deflection span/150
		0	1, 2, 3	0	1	2, 3		
Span 3000	27.65	10.29	10.29	10.29	10.29	10.29	37.56	
(mm) 3300	18.52	8.28	8.28	8.28	8.28	8.28	25.16	
3600	13.01	6.73	6.73	6.73	6.73	6.73	17.67	
3900	9.48	5.45	5.45	5.45	5.45	5.45	12.88	
4200	7.12	4.48	4.50	4.50	4.50	4.50	9.68	
4500	5.49	3.69	3.78	3.78	3.78	3.78	7.46	
4800	4.32	3.09	3.22	3.22	3.22	3.22	5.86	
5100	3.46	2.62	2.78	2.78	2.78	2.78	4.70	
5400	2.81	2.24	2.42	2.40	2.42	2.42	3.82	
5700	2.32	1.94	2.13	2.02	2.13	2.13	3.15	
6000	1.93	1.69	1.89	1.71	1.89	1.89	2.62	
	1.63	1.48	1.68	1.44	1.68	1.68	2.21	
6300	1.41	1.30	1.51	1.21	1.51	1.51	1.88	
6600	1.23	1.15	1.36	1.01	1.36	1.36	1.62	
6900		SECTIONS BELOW EXCEED THE NORMAL DELIVERY LENGTH OF 12000 mm						
7200	1.07	1.02	1.24	0.87	1.24	1.24	1.41	
7500	0.95	0.91	1.13	0.76	1.13	1.13	1.23	
7800	0.84	0.80	1.03	0.67	1.00	1.03	1.09	
8100	0.75	0.72	0.95	0.59	0.89	0.95	0.96	
8400	0.66	0.65	0.87	0.52	0.80	0.87	0.85	
8700	0.59	0.59	0.81	0.45	0.71	0.81	0.76	
9000	0.53	0.54	0.75	0.40	0.63	0.75	0.68	

		Double span: Z/C15019 (kN/m)							Double span: Z/C15024 (kN/m)								
Bridging >	Load for deflection span/150	IN			OUT				Load for deflection span/150	IN			OUT				Load for deflection span/150
		0	1	2, 3	0	1	2	3		0	1	2, 3	0	1	2	3	
Span 3000	7.01	7.68	7.68	7.68	7.68	7.68	7.68	16.81	9.34	10.82	10.82	10.82	10.82	10.82	10.82	10.82	22.42
(mm) 3300	5.67	6.35	6.35	6.35	6.35	6.35	6.35	12.63	7.50	8.94	8.94	8.94	8.94	8.94	8.94	8.94	16.84
3600	4.68	5.33	5.33	5.33	5.33	5.33	5.33	9.73	6.13	7.52	7.52	7.52	7.52	7.52	7.52	7.52	12.97
3900	3.92	4.55	4.55	4.51	4.55	4.55	4.55	7.65	5.07	6.40	6.40	6.40	6.40	6.40	6.40	6.40	10.20
4200	3.32	3.92	3.92	3.76	3.92	3.92	3.92	6.13	4.23	5.52	5.52	5.30	5.52	5.52	5.52	5.52	8.17
4500	2.83	3.41	3.41	3.17	3.41	3.41	3.41	4.98	3.57	4.81	4.81	4.43	4.81	4.81	4.81	4.81	6.64
4800	2.44	3.00	3.00	2.69	3.00	3.00	3.00	4.10	3.05	4.23	4.23	3.74	4.23	4.23	4.23	4.23	5.47
5100	2.12	2.66	2.66	2.30	2.66	2.66	2.66	3.42	2.64	3.74	3.74	3.18	3.74	3.74	3.74	3.74	4.56
5400	1.86	2.37	2.37	1.96	2.37	2.37	2.37	2.88	2.30	3.34	3.34	2.72	3.34	3.34	3.34	3.34	3.85
5700	1.64	2.13	2.13	1.68	2.13	2.13	2.13	2.47	2.01	3.00	3.00	2.31	3.00	3.00	3.00	3.00	3.28
6000	1.45	1.92	1.92	1.43	1.90	1.92	1.92	2.13	1.78	2.71	2.71	1.95	2.71	2.71	2.71	2.71	2.82
		SECTIONS BELOW EXCEED THE NORMAL DELIVERY LENGTH OF 12000 mm															
6300	1.29	1.74	1.74	1.22	1.68	1.74	1.74	1.86	1.58	2.45	2.45	1.67	2.39	2.45	2.45	2.45	2.45
6600	1.16	1.59	1.59	1.05	1.50	1.59	1.59	1.63	1.41	2.24	2.24	1.43	2.11	2.24	2.24	2.24	2.14
6900	1.04	1.45	1.45	0.91	1.34	1.45	1.45	1.44	1.27	2.05	2.05	1.24	1.88	2.05	2.05	2.05	1.88
7200	0.93	1.33	1.33	0.80	1.20	1.33	1.33	1.27	1.15	1.88	1.88	1.08	1.68	1.88	1.88	1.88	1.67
7500	0.85	1.23	1.23	0.70	1.07	1.23	1.23	1.14	1.04	1.73	1.73	0.94	1.50	1.73	1.73	1.73	1.48
7800	0.77	1.14	1.14	0.62	0.97	1.14	1.14	1.02	0.94	1.60	1.60	0.83	1.35	1.60	1.60	1.60	1.31
8100	0.70	1.05	1.05	0.54	0.87	1.05	1.05	0.91	0.86	1.48	1.48	0.74	1.22	1.48	1.48	1.48	1.17
8400	0.64	0.98	0.98	0.48	0.78	0.96	0.98	0.82	0.79	1.36	1.38	0.66	1.09	1.37	1.38	1.38	1.05
8700	0.59	0.90	0.91	0.43	0.70	0.88	0.91	0.74	0.72	1.25	1.29	0.59	0.97	1.25	1.29	1.29	0.95
9000	0.54	0.84	0.85		0.62	0.81	0.85	0.67	0.66	1.16	1.20	0.53	0.87	1.15	1.20	1.20	0.86

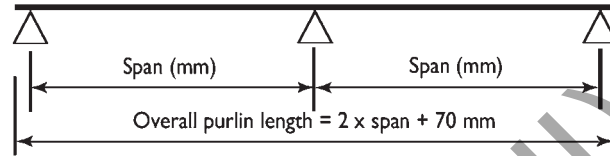
Bold capacities require grade 8.8 purlin bolts. Values above horizontal line in body of table are governed by the strength of the grade 8.8 bolt.
 IN = Inward load capacity. OUT = Outward load capacity. See also: Design notes for capacity tables.



Limit state capacity tables

Double continuous spans

Double spans



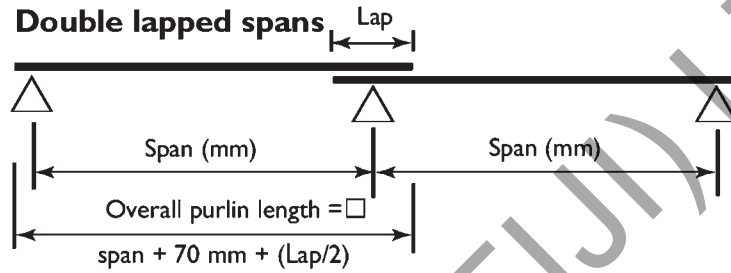
Double span: Z/C20015 (kN/m)							Double span: Z/C20019 (kN/m)						Double span: Z/C20024 (kN/m)					
Bridging >	IN		OUT			Load for deflection span/150	IN		OUT			Load for deflection span/150	IN		OUT			Load for deflection span/150
	0	1, 2, 3	0	1	2, 3		0	1, 2, 3	0	1	2, 3		0	1, 2, 3	0	1	2, 3	
Span 3000	6.10	6.10	6.10	6.10	6.10	25.47	10.69	10.69	10.69	10.69	10.69	36.30	13.82	13.82	13.82	13.82	13.82	47.93
(mm) 3300	5.30	5.30	5.30	5.30	5.30	19.14	8.88	9.16	9.16	9.16	9.16	27.27	11.73	12.57	12.57	12.57	12.57	36.01
3600	4.64	4.64	4.64	4.64	4.64	14.74	7.24	7.81	7.81	7.81	7.81	21.00	9.48	11.36	11.36	11.36	11.36	27.73
3900	4.10	4.10	4.10	4.10	4.10	11.59	5.96	6.66	6.66	6.66	6.66	16.52	7.76	9.68	9.68	9.68	9.68	21.81
4200	3.64	3.64	3.64	3.64	3.64	9.28	4.96	5.74	5.74	5.74	5.74	13.23	6.42	8.34	8.34	8.34	8.34	17.47
4500	3.23	3.25	3.25	3.25	3.25	7.55	4.19	5.00	5.00	5.00	5.00	10.75	5.39	7.27	7.27	7.27	7.27	14.20
4800	2.79	2.88	2.88	2.88	2.88	6.22	3.47	4.39	4.39	4.39	4.39	8.86	4.59	6.39	6.30	6.39	6.39	11.70
5100	2.43	2.56	2.56	2.56	2.56	5.19	3.01	3.89	3.89	3.89	3.89	7.39	3.96	5.66	5.42	5.66	5.66	9.76
5400	2.14	2.28	2.28	2.28	2.28	4.37	2.63	3.47	3.46	3.47	3.47	6.22	3.44	5.05	4.70	5.05	5.05	8.22
5700	1.88	2.05	2.05	2.05	2.05	3.71	2.32	3.12	2.99	3.12	3.12	5.29	3.02	4.53	4.09	4.53	4.53	6.99
6000	1.66	1.85	1.80	1.85	1.85	3.18	2.06	2.81	2.59	2.81	2.81	4.54	2.67	4.09	3.58	4.09	4.09	5.99
SECTIONS BELOW EXCEED THE NORMAL DELIVERY LENGTH OF 12000 mm																		
6300	1.48	1.67	1.57	1.67	1.67	2.75	1.84	2.55	2.23	2.55	2.55	3.92	2.38	3.71	3.12	3.71	3.71	5.18
6600	1.32	1.53	1.35	1.53	1.53	2.39	1.65	2.32	1.86	2.32	2.32	3.41	2.13	3.38	2.72	3.38	3.38	4.50
6900	1.19	1.40	1.17	1.40	1.40	2.09	1.49	2.13	1.63	2.13	2.13	2.98	1.91	3.09	2.35	3.09	3.09	3.94
7200	1.07	1.28	1.02	1.28	1.28	1.84	1.35	1.95	1.43	1.95	1.95	2.63	1.72	2.84	2.05	2.83	2.84	3.47
7500	0.97	1.18	0.89	1.18	1.18	1.63	1.23	1.80	1.26	1.80	1.80	2.32	1.55	2.62	1.80	2.56	2.62	3.08
7800	0.89	1.09	0.79	1.09	1.09	1.45	1.12	1.66	1.12	1.66	1.66	2.08	1.41	2.42	1.59	2.32	2.42	2.76
8100	0.81	1.01	0.69	1.01	1.01	1.30	1.02	1.54	1.00	1.54	1.54	1.86	1.29	2.24	1.42	2.11	2.24	2.48
8400	0.74	0.94	0.62	0.94	0.94	1.18	0.94	1.44	0.90	1.40	1.44	1.68	1.18	2.09	1.25	1.92	2.09	2.24
8700	0.68	0.88	0.55	0.87	0.88	1.07	0.87	1.34	0.81	1.27	1.34	1.52	1.08	1.95	1.11	1.75	1.95	2.03
9000	0.62	0.82	0.47	0.79	0.82	0.98	0.80	1.25	0.72	1.15	1.25	1.37	0.99	1.80	0.99	1.60	1.82	1.84

Double span: Z/C25019 (kN/m)							Double span: Z/C25024 (kN/m)					
Bridging >	IN		OUT			Load for deflection span/150	IN		OUT			Load for deflection span/150
	0	1, 2, 3	0	1	2, 3		0	1, 2, 3	0	1	2, 3	
Span 4500	5.27	5.83	5.83	5.83	5.83	17.47	6.82	9.22	9.22	9.22	9.22	24.09
(mm) 4800	4.51	5.26	5.26	5.26	5.26	14.39	5.80	8.91	8.19	8.19	8.19	19.85
5100	3.90	4.77	4.77	4.77	4.77	12.00	4.99	7.25	7.25	7.25	7.25	16.55
5400	3.41	4.35	4.35	4.35	4.35	10.11	4.34	6.47	6.27	6.47	6.47	13.94
5700	3.00	3.96	3.96	3.96	3.96	8.59	3.81	5.81	5.45	5.81	5.81	11.85
6000	2.66	3.57	3.44	3.57	3.57	7.37	3.36	5.24	4.74	5.24	5.24	10.16
SECTIONS BELOW EXCEED THE NORMAL DELIVERY LENGTH OF 12000 mm												
6300	2.37	3.24	2.94	3.24	3.24	6.37	2.97	4.75	4.10	4.75	4.75	8.78
6600	2.12	2.95	2.46	2.95	2.95	5.54	2.65	4.33	3.53	4.33	4.33	7.64
6900	1.91	2.70	2.15	2.70	2.70	4.85	2.37	3.96	3.05	3.96	3.96	6.68
7200	1.73	2.48	1.88	2.48	2.48	4.26	2.13	3.64	2.65	3.64	3.64	5.88
7500	1.57	2.28	1.66	2.28	2.28	3.77	1.93	3.35	2.32	3.35	3.35	5.20
7800	1.43	2.11	1.47	2.11	2.11	3.35	1.75	3.10	2.05	3.10	3.10	4.63
8100	1.31	1.96	1.31	1.96	1.96	3.00	1.59	2.88	1.81	2.82	2.88	4.13
8400	1.20	1.82	1.17	1.82	1.82	2.69	1.46	2.67	1.59	2.56	2.67	3.70
8700	1.11	1.70	1.04	1.69	1.70	2.42	1.34	2.49	1.41	2.33	2.49	3.33
9000	1.02	1.59	0.93	1.53	1.59	2.18	1.23	2.33	1.25	2.13	2.33	3.01

Bold capacities require grade 8.8 purlin bolts. Values above horizontal line in body of table are governed by the strength of the grade 8.8 bolt.
IN = Inward load capacity. OUT = Outward load capacity. See also: Design notes for capacity tables.

Limit state capacity tables

Double lapped spans



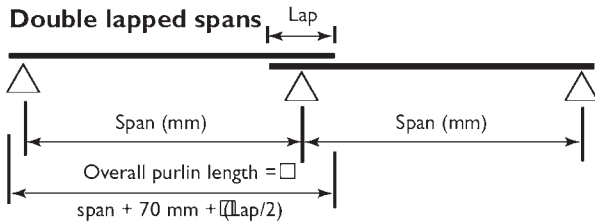
Bridging >	Double lapped span: Z10015 (kN/m)								Double lapped span: Z10019 (kN/m)								
	IN			OUT				Load for deflect'n span/150	IN			OUT				Load for deflect'n span/150	
	0	1	2, 3	0	1	2	3		0	1	2, 3	0	1	2	3		
Span 2100	10.82	10.82	10.82	10.82	10.82	10.82	10.82	15.97	15.08	15.08	15.08	15.08	15.08	15.08	15.08	15.08	21.19
(mm) 2400	8.39	8.39	8.39	8.39	8.39	8.39	8.39	10.53	11.70	11.70	11.70	11.70	11.70	11.70	11.70	11.70	13.97
2700	5.18	6.19	6.19	6.02	6.19	6.19	6.19	7.29	6.57	8.63	8.63	8.49	8.63	8.63	8.63	8.63	9.67
3000	3.96	4.72	4.72	4.43	4.72	4.72	4.72	5.25	5.02	6.59	6.59	6.24	6.59	6.59	6.59	6.59	6.96
3300	3.12	3.73	3.73	3.37	3.73	3.73	3.73	3.90	3.96	5.20	5.20	4.70	5.20	5.20	5.20	5.20	5.18
3600	2.52	3.02	3.02	2.62	3.02	3.02	3.02	2.98	3.19	4.21	4.21	3.63	4.21	4.21	4.21	4.21	3.95
3900	2.07	2.49	2.49	2.08	2.49	2.49	2.49	2.32	2.62	3.48	3.48	2.86	3.48	3.48	3.48	3.48	3.08
4200	1.73	2.10	2.10	1.66	2.10	2.10	2.10	1.84	2.19	2.92	2.92	2.27	2.92	2.92	2.92	2.92	2.45
4500	1.46	1.79	1.79	1.34	1.75	1.79	1.79	1.49	1.85	2.49	2.49	1.82	2.48	2.49	2.49	2.49	1.98
4800	1.25	1.54	1.54	1.09	1.47	1.54	1.54	1.23	1.58	2.15	2.15	1.48	2.09	2.15	2.15	2.15	1.63
5100	1.08	1.34	1.34	0.89	1.25	1.34	1.34	1.03	1.36	1.87	1.87	1.22	1.77	1.87	1.87	1.87	1.36
5400	0.94	1.18	1.18	0.73	1.07	1.18	1.18	0.88	1.19	1.65	1.65	1.01	1.50	1.65	1.65	1.65	1.14
5700	0.82	1.05	1.05	0.61	0.92	1.05	1.05	0.75	1.04	1.46	1.46	0.84	1.29	1.46	1.46	1.46	0.97
6000	0.72	0.94	0.94	0.52	0.80	0.93	0.94	0.65	0.92	1.30	1.30	0.71	1.11	1.30	1.30	1.30	0.83
6300	0.67	0.90	0.93	0.47	0.74	0.88	0.93	0.58	0.84	1.26	1.30	0.63	1.03	1.26	1.30	1.30	0.74
6600	0.59	0.80	0.84	0.40	0.64	0.78	0.84	0.50	0.75	1.12	1.17	0.54	0.88	1.11	1.17	1.17	0.64
6900	0.53	0.72	0.76		0.55	0.69	0.76	0.44	0.67	1.00	1.05	0.47	0.76	0.97	1.05	1.05	0.56
7200	0.47	0.65	0.69		0.48	0.61	0.68	0.39	0.60	0.90	0.96	0.41	0.66	0.86	0.96	0.96	0.50
7500	0.42	0.58	0.63		0.42	0.54	0.61	0.34	0.54	0.81	0.87		0.58	0.76	0.87	0.87	0.44
7800		0.53	0.57			0.49	0.55	0.30	0.49	0.73	0.80		0.51	0.68	0.78	0.78	0.39

Bold capacities require grade 8.8 purlin bolts. Values above horizontal line in body of table are governed by the strength of the grade 8.8 bolt.
IN = Inward load capacity. OUT = Outward load capacity. See also: Design notes for capacity tables.



Limit state capacity tables

Double lapped spans



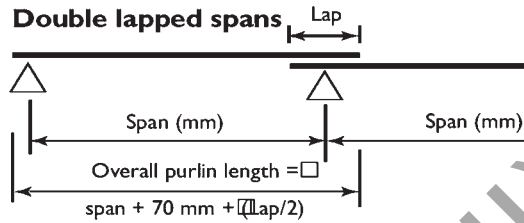
Double lapped span: Z15015 (kN/m)

Bridging >	IN			OUT				Load for deflect'n span/150
	0	1	2, 3	0	1	2	3	
Span 2400	14.23	14.23	14.23	14.23	14.23	14.23	14.23	31.72
(mm) 2700	11.37	11.37	11.37	11.37	11.37	11.37	11.37	22.02
3000	9.30	9.30	9.30	9.30	9.30	9.30	9.30	15.86
3300	7.76	7.76	7.76	7.76	7.76	7.76	7.76	11.79
3600	6.53	6.53	6.53	6.53	6.53	6.53	6.53	8.99
3900	3.79	5.36	5.36	5.17	5.36	5.36	5.36	7.00
4200	3.13	4.42	4.42	4.10	4.42	4.42	4.42	5.55
4500	2.63	3.70	3.70	3.28	3.70	3.70	3.70	4.48
4800	2.23	3.15	3.15	2.63	3.15	3.15	3.15	3.66
5100	1.92	2.72	2.72	2.08	2.72	2.72	2.72	3.03
5400	1.67	2.37	2.37	1.73	2.37	2.37	2.37	2.54
5700	1.46	2.08	2.08	1.45	2.08	2.08	2.08	2.15
6000	1.28	1.84	1.84	1.23	1.84	1.84	1.84	1.83
6300	1.14	1.64	1.64	1.05	1.63	1.64	1.64	1.57
6600	1.02	1.48	1.48	0.91	1.42	1.48	1.48	1.36
6900	0.91	1.33	1.33	0.79	1.25	1.33	1.33	1.19
7200	0.82	1.21	1.21	0.68	1.10	1.21	1.21	1.05
7500	0.74	1.10	1.10	0.59	0.96	1.10	1.10	0.93
7800	0.67	1.01	1.01	0.52	0.84	1.01	1.01	0.83
8100	0.61	0.93	0.93	0.45	0.72	0.93	0.93	0.74
8400	0.56	0.85	0.85	0.40	0.64	0.85	0.85	0.66
8700	0.51	0.79	0.79		0.57	0.78	0.79	0.60
9000	0.47	0.73	0.73		0.51	0.71	0.73	0.54
9300	0.45	0.71	0.73		0.48	0.67	0.73	0.50
9600	0.41	0.65	0.68		0.44	0.61	0.68	0.46
9900		0.60	0.63			0.55	0.63	0.42

Bold capacities require grade 8.8 purlin bolts. Values above horizontal line in body of table are governed by the strength of the grade 8.8 bolt.
 IN = Inward load capacity. OUT = Outward load capacity. See also: Design notes for capacity tables.

Limit state capacity tables

Double lapped spans



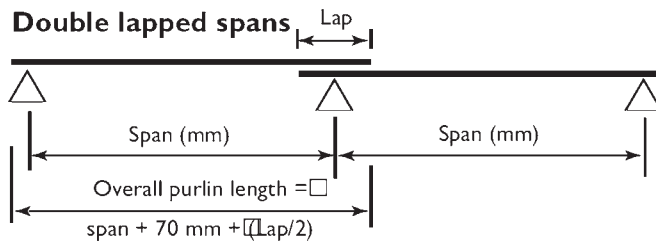
Double lapped span: Z15019 (kN/m)									Double lapped span: Z15024 (kN/m)								
Bridging >	IN			OUT				Load for deflect'n span/150	IN			OUT				Load for deflect'n span/150	
	0	1	2, 3	0	1	2	3		0	1	2, 3	0	1	2	3		
Span 2400	20.06	20.06	20.06	20.06	20.06	20.06	20.06	41.39	21.18	21.18	21.18	21.18	21.18	21.18	21.18	55.20	
(mm) 2700	15.80	16.03	16.03	16.03	16.03	16.03	16.03	28.73	18.88	18.88	18.88	18.88	18.88	18.88	18.88	38.31	
3000	12.63	13.12	13.12	13.12	13.12	13.12	13.12	20.70	17.03	17.03	17.03	17.03	17.03	17.03	17.03	27.61	
3300	10.31	10.94	10.94	10.94	10.94	10.94	10.94	15.38	13.92	15.42	15.42	15.42	15.42	15.42	15.42	20.51	
3600	8.58	9.27	9.27	9.27	9.27	9.27	9.27	11.72	11.49	13.06	13.06	13.06	13.06	13.06	13.06	15.64	
3900	4.75	7.55	7.55	6.84	7.55	7.55	7.55	9.13	5.66	10.64	10.64	9.48	10.64	10.64	10.64	12.18	
4200	3.93	6.22	6.22	5.46	6.22	6.22	6.22	7.25	4.67	8.77	8.77	7.53	8.77	8.77	8.77	9.66	
4500	3.30	5.22	5.22	4.42	5.22	5.22	5.22	5.84	3.92	7.36	7.36	6.08	7.36	7.36	7.36	7.79	
4800	2.80	4.44	4.44	3.59	4.44	4.44	4.44	4.78	3.33	6.26	6.26	4.93	6.26	6.26	6.26	6.37	
5100	2.41	3.83	3.83	2.95	3.83	3.83	3.83	3.96	2.86	5.40	5.40	3.99	5.40	5.40	5.40	5.28	
5400	2.09	3.34	3.34	2.42	3.32	3.34	3.34	3.31	2.48	4.69	4.70	3.27	4.70	4.70	4.70	4.42	
5700	1.83	2.93	2.93	2.01	2.85	2.93	2.93	2.80	2.17	4.08	4.13	2.71	4.05	4.13	4.13	3.73	
6000	1.61	2.58	2.60	1.69	2.47	2.60	2.60	2.39	1.92	3.57	3.66	2.27	3.49	3.66	3.66	3.18	
6300	1.43	2.29	2.32	1.44	2.16	2.32	2.32	2.05	1.70	3.16	3.26	1.91	3.04	3.26	3.26	2.74	
6600	1.28	2.04	2.08	1.23	1.89	2.08	2.08	1.78	1.52	2.81	2.93	1.63	2.65	2.93	2.93	2.37	
6900	1.14	1.83	1.88	1.05	1.67	1.88	1.88	1.56	1.36	2.51	2.65	1.40	2.33	2.65	2.65	2.07	
7200	1.03	1.64	1.70	0.91	1.48	1.70	1.70	1.38	1.23	2.26	2.40	1.21	2.06	2.40	2.40	1.82	
7500	0.93	1.49	1.55	0.79	1.31	1.55	1.55	1.22	1.11	2.04	2.19	1.05	1.83	2.19	2.19	1.61	
7800	0.85	1.35	1.42	0.69	1.16	1.39	1.42	1.09	1.01	1.85	2.00	0.92	1.62	1.98	2.00	1.43	
8100	0.77	1.23	1.31	0.60	1.03	1.26	1.31	0.98	0.92	1.68	1.84	0.81	1.44	1.79	1.84	1.28	
8400	0.70	1.13	1.20	0.53	0.92	1.14	1.20	0.88	0.84	1.54	1.70	0.72	1.27	1.61	1.70	1.15	
8700	0.64	1.03	1.11	0.47	0.81	1.04	1.11	0.80	0.77	1.41	1.57	0.64	1.12	1.46	1.57	1.04	
9000	0.59	0.95	1.03	0.42	0.72	0.94	1.03	0.72	0.71	1.29	1.46	0.57	1.00	1.33	1.46	0.94	
9300	0.55	0.92	1.03		0.67	0.91	1.02	0.67	0.66	1.24	1.45	0.53	0.91	1.27	1.45	0.87	
9600	0.51	0.85	0.96		0.60	0.83	0.94	0.61	0.61	1.14	1.35	0.48	0.82	1.16	1.34	0.79	
9900	0.47	0.78	0.89		0.54	0.76	0.86	0.56	0.57	1.06	1.26	0.43	0.73	1.06	1.23	0.72	
10200	0.43	0.73	0.83		0.49	0.69	0.80	0.51	0.53	0.98	1.17		0.66	0.97	1.13	0.65	
10500	0.40	0.67	0.77		0.44	0.63	0.73	0.46	0.49	0.91	1.08		0.60	0.88	1.04	0.60	

Bold capacities require grade 8.8 purlin bolts. Values above horizontal line in body of table are governed by the strength of the grade 8.8 bolt.
 IN = Inward load capacity. OUT = Outward load capacity. See also: Design notes for capacity tables.



Limit state capacity tables

Double lapped spans



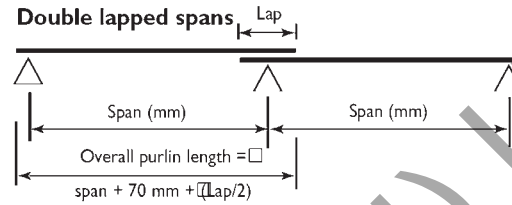
Double lapped span: Z20015 (kN/m)

Bridging > (mm)	IN		OUT				Load for deflection span/150
	0	1, 2, 3	0	1	2	3	
Span 3000	9.07	9.07	9.07	9.07	9.07	9.07	31.37
3300	7.71	7.71	7.71	7.71	7.71	7.71	23.30
3600	6.63	6.63	6.63	6.63	6.63	6.63	17.76
3900	5.54	5.75	5.75	5.75	5.75	5.75	13.84
4200	4.56	5.02	5.02	5.02	5.02	5.02	10.98
4500	3.81	4.42	4.42	4.42	4.42	4.42	8.86
4800	3.23	3.92	3.92	3.92	3.92	3.92	7.24
5100	2.78	3.49	3.49	3.49	3.49	3.49	6.00
5400	2.41	3.13	3.10	3.13	3.13	3.13	5.02
5700	2.10	2.82	2.62	2.82	2.82	2.82	4.24
6000	1.85	2.50	2.20	2.50	2.50	2.50	3.62
6300	1.64	2.23	1.86	2.23	2.23	2.23	3.11
6600	1.46	2.00	1.59	2.00	2.00	2.00	2.69
6900	1.31	1.81	1.37	1.81	1.81	1.81	2.35
7200	1.18	1.64	1.18	1.64	1.64	1.64	2.06
7500	1.07	1.49	1.03	1.49	1.49	1.49	1.81
7800	0.97	1.37	0.90	1.37	1.37	1.37	1.61
8100	0.88	1.26	0.79	1.26	1.26	1.26	1.43
8400	0.81	1.16	0.67	1.15	1.16	1.16	1.28
8700	0.74	1.07	0.60	1.04	1.07	1.07	1.15
9000	0.68	0.99	0.54	0.94	0.99	0.99	1.03
9300	0.64	0.99	0.50	0.87	0.99	0.99	0.96
9600	0.59	0.92	0.45	0.78	0.92	0.92	0.87
9900	0.54	0.86	0.41	0.70	0.86	0.86	0.80
10200	0.50	0.80		0.63	0.80	0.80	0.73
10500	0.47	0.75		0.57	0.75	0.75	0.68
10800	0.43	0.71		0.52	0.71	0.71	0.63
11100		0.66		0.47	0.66	0.66	0.58
11400		0.63		0.43	0.61	0.63	0.54
SECTIONS BELOW EXCEED THE NORMAL DELIVERY LENGTH OF 12000 mm							
11700		0.59			0.56	0.59	0.50
12000		0.56			0.52	0.56	0.47

Bold capacities require grade 8.8 purlin bolts. Values above horizontal line in body of table are governed by the strength of the grade 8.8 bolt.
 IN = Inward load capacity. OUT = Outward load capacity. See also: Design notes for capacity tables.

Limit state capacity tables

Double lapped spans



Double lapped span: Z20019 (kN/m)

Double lapped span: Z20024 (kN/m)

Bridging > (mm)	IN			OUT				Load for deflect'n span/150	IN			OUT				Load for deflect'n span/150
	0	1	2,3	0	1	2	3		0	1	2,3	0	1	2	3	
Span 3000	17.00	17.00	17.00	17.00	17.00	17.00	17.00	44.69	17.03	17.03	17.03	17.03	17.03	17.03	17.03	59.02
3300	14.16	14.16	14.16	14.16	14.16	14.16	14.16	33.21	15.51	15.51	15.51	15.51	15.51	15.51	15.51	43.85
3600	11.94	11.94	11.94	11.94	11.94	11.94	11.94	25.31	14.25	14.25	14.25	14.25	14.25	14.25	14.25	33.42
3900	7.09	10.18	10.18	10.18	10.18	10.18	10.18	19.72	8.88	13.18	13.18	13.18	13.18	13.18	13.18	26.04
4200	5.82	8.77	8.77	8.77	8.77	8.77	8.77	15.65	7.24	12.25	12.25	12.25	12.25	12.25	12.25	20.66
4500	4.86	7.61	7.61	7.61	7.61	7.61	7.61	12.62	6.01	11.12	11.12	10.51	11.12	11.12	11.12	16.66
4800	4.12	6.51	6.51	6.39	6.51	6.51	6.51	10.32	5.06	9.46	9.46	8.70	9.46	9.46	9.46	13.63
5100	3.53	5.61	5.61	5.31	5.61	5.61	5.61	8.54	4.32	8.15	8.15	7.28	8.15	8.15	8.15	11.28
5400	3.06	4.88	4.88	4.45	4.88	4.88	4.88	7.15	3.73	7.10	7.10	6.16	7.10	7.10	7.10	9.44
5700	2.67	4.29	4.29	3.70	4.29	4.29	4.29	6.05	3.25	6.24	6.24	5.19	6.24	6.24	6.24	7.98
6000	2.36	3.80	3.80	3.02	3.80	3.80	3.80	5.16	2.85	5.53	5.53	4.38	5.53	5.53	5.53	6.81
6300	2.09	3.39	3.39	2.58	3.39	3.39	3.39	4.43	2.52	4.90	4.93	3.71	4.93	4.93	4.93	5.85
6600	1.87	3.05	3.05	2.22	3.05	3.05	3.05	3.84	2.25	4.36	4.43	3.17	4.43	4.43	4.43	5.06
6900	1.67	2.75	2.75	1.93	2.75	2.75	2.75	3.34	2.01	3.90	4.00	2.73	3.96	4.00	4.00	4.41
7200	1.51	2.50	2.50	1.68	2.50	2.50	2.50	2.93	1.81	3.51	3.63	2.37	3.53	3.63	3.63	3.87
7500	1.37	2.28	2.28	1.48	2.28	2.28	2.28	2.58	1.64	3.17	3.31	2.07	3.15	3.31	3.31	3.41
7800	1.24	2.08	2.08	1.30	2.07	2.08	2.08	2.29	1.49	2.88	3.03	1.80	2.83	3.03	3.03	3.02
8100	1.13	1.91	1.91	1.16	1.86	1.91	1.91	2.04	1.35	2.63	2.78	1.57	2.55	2.78	2.78	2.69
8400	1.04	1.76	1.76	1.02	1.67	1.76	1.76	1.82	1.24	2.40	2.57	1.39	2.31	2.57	2.57	2.40
8700	0.95	1.63	1.63	0.90	1.50	1.63	1.63	1.63	1.14	2.21	2.37	1.22	2.09	2.37	2.37	2.16
9000	0.87	1.51	1.51	0.80	1.35	1.51	1.51	1.48	1.05	2.03	2.20	1.09	1.90	2.20	2.20	1.96
9300	0.82	1.48	1.51	0.74	1.21	1.51	1.51	1.37	0.97	1.96	2.19	1.00	1.79	2.17	2.19	1.82
9600	0.75	1.37	1.40	0.67	1.09	1.40	1.40	1.25	0.90	1.81	2.04	0.89	1.60	1.99	2.04	1.66
9900	0.70	1.26	1.31	0.60	0.99	1.31	1.31	1.14	0.83	1.68	1.90	0.80	1.44	1.83	1.90	1.52
10200	0.65	1.17	1.22	0.54	0.90	1.22	1.22	1.04	0.78	1.56	1.78	0.72	1.30	1.68	1.78	1.39
10500	0.60	1.09	1.15	0.49	0.82	1.13	1.15	0.96	0.72	1.45	1.67	0.65	1.18	1.56	1.67	1.28
10800	0.56	1.01	1.08	0.44	0.75	1.04	1.08	0.88	0.67	1.35	1.57	0.59	1.07	1.44	1.57	1.18
11100	0.52	0.94	1.01	0.40	0.68	0.96	1.01	0.81	0.63	1.26	1.47	0.54	0.98	1.33	1.47	1.09
11400	0.49	0.88	0.95		0.63	0.89	0.95	0.75	0.59	1.17	1.39	0.49	0.89	1.24	1.39	1.01
SECTIONS BELOW EXCEED THE NORMAL DELIVERY LENGTH OF 12000 mm																
11700	0.46	0.82	0.90		0.58	0.82	0.90	0.69	0.55	1.09	1.31	0.45	0.82	1.15	1.30	0.94
12000	0.43	0.77	0.85		0.53	0.75	0.85	0.64	0.52	1.02	1.23	0.41	0.75	1.07	1.21	0.87

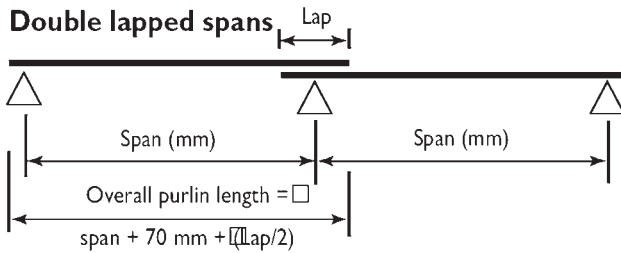
Bold capacities require grade 8.8 purlin bolts. Values above horizontal line in body of table are governed by the strength of the grade 8.8 bolt.
 IN = Inward load capacity. OUT = Outward load capacity. See also: Design notes for capacity tables.

ROOFING



Limit state capacity tables

Double lapped spans



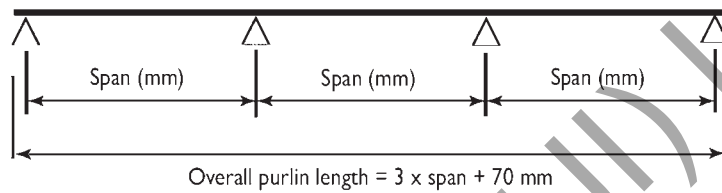
Double lapped span: Z25019 (kN/m)									Double lapped span: Z25024 (kN/m)								
Bridging >	IN			OUT				Load for deflect'n span/150	IN			OUT				Load for deflect'n span/150	
	0	1	2, 3	0	1	2	3		0	1	2, 3	0	1	2	3		
Span 3000 (mm)	15.13	15.13	15.13	15.13	15.13	15.13	15.13	72.59	17.03	17.03	17.03	17.03	17.03	17.03	17.03	100.20	
3300	13.00	13.00	13.00	13.00	13.00	13.00	13.00	53.93	15.51	15.51	15.51	15.51	15.51	15.51	15.51	74.38	
3600	11.28	11.28	11.28	11.28	11.28	11.28	11.28	41.11	14.25	14.25	14.25	14.25	14.25	14.25	14.25	56.70	
3900	9.11	9.88	9.88	9.88	9.88	9.88	9.88	32.02	11.10	13.18	13.18	13.18	13.18	13.18	13.18	44.17	
4200	7.47	8.72	8.72	8.72	8.72	8.72	8.72	25.41	9.04	12.25	12.25	12.25	12.25	12.25	12.25	35.05	
4500	6.23	7.74	7.74	7.74	7.74	7.74	7.74	20.49	7.49	11.45	11.45	11.45	11.45	11.45	11.45	28.26	
4800	5.27	6.91	6.91	6.91	6.91	6.91	6.91	16.76	6.30	10.75	10.75	10.75	10.75	10.75	10.75	23.11	
5100	4.51	6.20	6.20	6.20	6.20	6.20	6.20	13.88	5.37	10.13	10.13	9.70	10.13	10.13	10.13	19.14	
5400	3.91	5.59	5.59	5.59	5.59	5.59	5.59	11.61	4.63	9.06	9.06	8.12	9.06	9.06	9.06	16.02	
5700	3.41	5.07	5.07	4.90	5.07	5.07	5.07	9.82	4.03	8.00	8.00	6.82	8.00	8.00	8.00	13.54	
6000	3.00	4.61	4.61	4.00	4.61	4.61	4.61	8.37	3.53	7.09	7.09	5.71	7.09	7.09	7.09	11.55	
6300	2.66	4.20	4.20	3.41	4.20	4.20	4.20	7.20	3.12	6.32	6.32	4.82	6.32	6.32	6.32	9.93	
6600	2.37	3.85	3.85	2.93	3.85	3.85	3.85	6.23	2.78	5.68	5.68	4.11	5.68	5.68	5.68	8.59	
6900	2.12	3.49	3.49	2.53	3.49	3.49	3.49	5.43	2.49	5.13	5.13	3.53	5.13	5.13	5.13	7.49	
7200	1.91	3.17	3.17	2.20	3.17	3.17	3.17	4.76	2.24	4.65	4.65	3.06	4.65	4.65	4.65	6.56	
7500	1.72	2.89	2.89	1.93	2.89	2.89	2.89	4.19	2.02	4.22	4.24	2.65	4.22	4.24	4.24	5.78	
7800	1.56	2.64	2.64	1.70	2.64	2.64	2.64	3.72	1.83	3.82	3.88	2.30	3.78	3.88	3.88	5.12	
8100	1.42	2.43	2.43	1.50	2.43	2.43	2.43	3.31	1.67	3.48	3.57	2.01	3.40	3.57	3.57	4.56	
8400	1.30	2.24	2.24	1.31	2.23	2.24	2.24	2.96	1.53	3.18	3.29	1.76	3.07	3.29	3.29	4.08	
8700	1.19	2.07	2.07	1.16	2.00	2.07	2.07	2.65	1.40	2.92	3.04	1.56	2.77	3.04	3.04	3.66	
9000	1.10	1.92	1.92	1.03	1.78	1.92	1.92	2.39	1.29	2.68	2.82	1.38	2.49	2.82	2.82	3.30	
9300	1.02	1.92	1.92	0.95	1.60	1.92	1.92	2.22	1.20	2.58	2.81	1.26	2.33	2.81	2.81	3.05	
9600	0.95	1.78	1.78	0.85	1.44	1.78	1.78	2.01	1.11	2.38	2.62	1.12	2.08	2.62	2.62	2.77	
9900	0.88	1.66	1.66	0.76	1.30	1.66	1.66	1.83	1.02	2.19	2.44	1.01	1.87	2.44	2.44	2.52	
10200	0.81	1.55	1.55	0.69	1.18	1.55	1.55	1.66	0.95	2.03	2.28	0.90	1.68	2.25	2.28	2.30	
10500	0.76	1.44	1.46	0.62	1.07	1.46	1.46	1.52	0.88	1.88	2.14	0.81	1.52	2.08	2.14	2.10	
10800	0.70	1.34	1.37	0.56	0.98	1.37	1.37	1.40	0.82	1.74	2.01	0.74	1.38	1.92	2.01	1.92	
11100	0.66	1.24	1.29	0.50	0.89	1.29	1.29	1.28	0.77	1.62	1.89	0.67	1.26	1.77	1.89	1.78	
11400	0.61	1.15	1.21	0.46	0.82	1.19	1.21	1.18	0.72	1.51	1.78	0.61	1.15	1.64	1.78	1.64	
SECTIONS BELOW EXCEED THE NORMAL DELIVERY LENGTH OF 12000 mm																	
11700	0.57	1.07	1.14	0.41	0.75	1.09	1.14	1.10	0.67	1.41	1.68	0.55	1.05	1.52	1.68	1.52	
12000	0.54	1.00	1.08	0.39	0.69	1.00	1.08	1.03	0.63	1.31	1.59	0.51	0.95	1.40	1.59	1.42	

Bold capacities require grade 8.8 purlin bolts. Values above horizontal line in body of table are governed by the strength of the grade 8.8 bolt.
 IN = Inward load capacity. OUT = Outward load capacity. See also: Design notes for capacity tables.

Limit state capacity tables

Three continuous spans

Three spans



Bridging > (mm)	Three span: Z/C10015 (kN/m)							Three span: Z/C10019 (kN/m)						
	IN		OUT				Load for deflection span/150	IN		OUT				Load for deflection span/150
0	1, 2, 3	0	1	2	3	0		1, 2, 3	0	1	2	3		
Span 2100	7.48	7.88	7.88	7.88	7.88	7.88	10.26	10.14	10.99	10.99	10.99	10.99	10.99	13.61
2400	5.60	6.03	6.03	6.03	6.03	6.03	6.91	7.50	8.41	8.41	8.41	8.41	8.41	9.18
2700	4.33	4.77	4.55	4.77	4.77	4.77	4.94	5.75	6.65	6.45	6.65	6.65	6.65	6.47
3000	3.44	3.86	3.50	3.86	3.86	3.86	3.67	4.54	5.38	4.90	5.38	5.38	5.38	4.75
3300	2.80	3.19	2.74	3.19	3.19	3.19	2.80	3.66	4.45	3.78	4.45	4.45	4.45	3.59
3600	2.31	2.68	2.15	2.68	2.68	2.68	2.18	3.01	3.74	2.96	3.74	3.74	3.74	2.79
3900	1.93	2.28	1.70	2.24	2.28	2.28	1.72	2.50	3.19	2.30	3.17	3.19	3.19	2.20
SECTIONS BELOW EXCEED THE NORMAL DELIVERY LENGTH OF 12000 mm														
4200	1.64	1.97	1.34	1.86	1.97	1.97	1.38	2.09	2.75	1.83	2.65	2.75	2.75	1.76
4500	1.39	1.72	1.07	1.56	1.72	1.72	1.13	1.78	2.39	1.46	2.20	2.39	2.39	1.43
4800	1.19	1.51	0.87	1.32	1.51	1.51	0.93	1.52	2.10	1.18	1.85	2.10	2.10	1.18
5100	1.03	1.34	0.71	1.13	1.34	1.34	0.78	1.32	1.86	0.96	1.56	1.86	1.86	0.98
5400	0.90	1.19	0.59	0.96	1.17	1.19	0.66	1.15	1.66	0.80	1.32	1.66	1.66	0.83
5700	0.78	1.07	0.49	0.81	1.02	1.07	0.56	1.01	1.49	0.67	1.11	1.45	1.49	0.70
6000	0.69	0.97	0.41	0.69	0.90	0.97	0.48	0.88	1.35	0.57	0.95	1.27	1.35	0.60

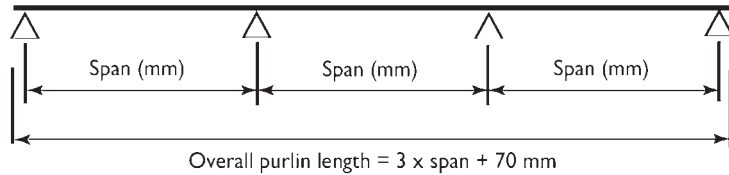
Bold capacities require grade 8.8 purlin bolts. Values above horizontal line in body of table are governed by the strength of the grade 8.8 bolt.
IN = Inward load capacity. OUT = Outward load capacity. See also: Design notes for capacity tables.



Limit state capacity tables

Three continuous spans

Three spans



Three span: Z/C15015 (kN/m)

Bridging > (mm)	IN			OUT			Load for deflection span/150
	0	1, 2, 3		0	1	2, 3	
2100	11.84	11.84		11.84	11.84	11.84	29.55
2400	9.65	9.65		9.65	9.65	9.65	19.80
2700	7.99	7.99		7.99	7.99	7.99	13.90
3000	6.38	6.72		6.72	6.72	6.72	10.14
3300	5.13	5.63		5.63	5.63	5.63	7.62
3600	4.20	4.73		4.73	4.73	4.73	5.88
3900	3.47	4.03		3.80	4.03	4.03	4.67
SECTIONS BELOW EXCEED THE NORMAL DELIVERY LENGTH OF 12000 mm							
4200	2.90	3.47		3.08	3.47	3.47	3.77
4500	2.46	3.03		2.47	3.03	3.03	3.09
4800	2.05	2.66		1.96	2.66	2.66	2.57
5100	1.78	2.36		1.63	2.36	2.36	2.15
5400	1.56	2.10		1.37	2.10	2.10	1.83
5700	1.37	1.89		1.16	1.83	1.89	1.57
6000	1.21	1.70		0.99	1.58	1.70	1.36
6300	1.08	1.54		0.84	1.38	1.54	1.18

Three span: Z/C15019 (kN/m)

Bridging >	IN			OUT			Load for deflection span/150
	0	1, 2, 3		0	1	2, 3	
2100	17.77	17.77		17.77	17.77	17.77	38.56
2400	13.50	14.45		14.45	14.45	14.45	25.83
2700	10.32	11.70		11.70	11.70	11.70	18.14
3000	8.09	9.60		9.60	9.60	9.60	13.23
3300	6.46	7.93		7.74	7.93	7.93	9.94
3600	5.26	6.67		6.22	6.67	6.67	7.70
3900	4.36	5.68		5.06	5.68	5.68	6.14
SECTIONS BELOW EXCEED THE NORMAL DELIVERY LENGTH OF 12000 mm							
4200	3.64	4.90		4.16	4.90	4.90	4.98
4500	3.08	4.27		3.39	4.27	4.27	4.10
4800	2.64	3.75		2.76	3.75	3.75	3.42
5100	2.28	3.32		2.26	3.32	3.32	2.87
5400	1.99	2.96		1.87	2.79	2.96	2.42
5700	1.74	2.66		1.58	2.43	2.66	2.07
6000	1.54	2.40		1.32	2.13	2.40	1.78
6300	1.37	2.18		1.11	1.87	2.18	1.54

Three span: Z/C15024 (kN/m)

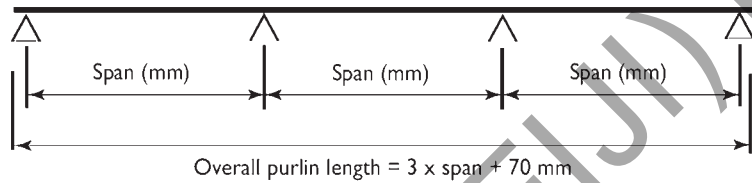
Bridging >	IN			OUT			Load for deflection span/150
	0	1, 2, 3		0	1	2, 3	
2100	22.44	22.44		22.44	22.44	22.44	51.42
2400	18.03	19.64		19.64	19.64	19.64	34.45
2700	13.58	16.70		16.70	16.70	16.70	24.19
3000	10.38	13.53		13.53	13.53	13.53	17.64
3300	8.11	11.18		10.94	11.18	11.18	13.25
3600	6.50	9.39		8.71	9.39	9.39	10.25
3900	5.31	8.00		7.03	8.00	8.00	8.11
SECTIONS BELOW EXCEED THE NORMAL DELIVERY LENGTH OF 12000 mm							
4200	4.42	6.90		5.75	6.90	6.90	6.54
4500	3.72	6.01		4.67	6.01	6.01	5.36
4800	3.18	5.28		3.75	5.28	5.28	4.44
5100	2.74	4.68		3.05	4.58	4.68	3.70
5400	2.39	4.18		2.51	3.94	4.18	3.12
5700	2.09	3.75		2.09	3.41	3.75	2.65
6000	1.85	3.38		1.76	2.97	3.38	2.27
6300	1.64	3.07		1.49	2.60	3.07	1.96

Bold capacities require grade 8.8 purlin bolts. Values above horizontal line in body of table are governed by the strength of the grade 8.8 bolt.
IN = Inward load capacity. OUT = Outward load capacity. See also: Design notes for capacity tables.

Limit state capacity tables

Three continuous spans

Three spans



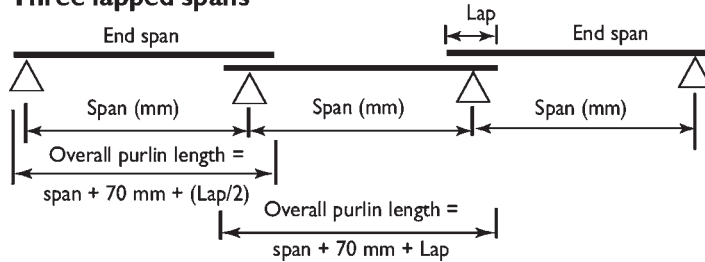
Span (mm)	Three span: Z/C20015 (kN/m)					Three span: Z/C20019 (kN/m)					Three span: Z/C20024 (kN/m)					
	IN		OUT		Load for deflect'n span/150	IN		OUT		Load for deflect'n span/150	IN		OUT		Load for deflect'n span/150	
	0	1, 2, 3	0	1, 2, 3		0	1, 2, 3	0	1, 2, 3		0	1, 2, 3	0	1, 2, 3		
2100	10.83	10.83	10.83	10.83	58.42	17.77	17.77	17.77	17.77	83.25	22.44	22.44	22.44	22.44	22.44	109.93
2400	9.18	9.18	9.18	9.18	39.14	15.55	15.55	15.55	15.55	55.77	19.64	19.64	19.64	19.64	19.64	73.64
2700	7.88	7.88	7.88	7.88	27.49	13.82	13.82	13.82	13.82	39.17	17.46	17.46	17.46	17.46	17.46	51.72
3000	6.84	6.84	6.84	6.84	20.04	12.31	12.31	12.31	12.31	28.55	15.71	15.71	15.71	15.71	15.71	37.70
3300	6.00	6.00	6.00	6.00	15.06	9.80	10.64	10.64	10.64	21.45	12.81	14.28	14.28	14.28	14.28	28.33
3600	5.29	5.29	5.29	5.29	11.60	7.62	9.28	9.28	9.28	16.52	10.17	13.09	13.09	13.09	13.09	21.82
3900	4.71	4.71	4.71	4.71	9.12	6.27	8.15	8.15	8.15	13.00	8.27	12.07	11.98	12.07	12.07	17.16
SECTIONS BELOW EXCEED THE NORMAL DELIVERY LENGTH OF 12000 mm																
4200	4.21	4.21	4.21	4.21	7.30	5.24	7.17	7.17	7.17	10.41	6.85	10.43	9.96	10.43	10.43	13.74
4500	3.56	3.78	3.78	3.78	5.94	4.45	6.25	6.11	6.25	8.46	5.77	9.09	8.35	9.09	9.09	11.17
4800	3.05	3.41	3.41	3.41	4.89	3.81	5.49	5.11	5.49	6.99	4.89	7.99	7.05	7.99	7.99	9.27
5100	2.64	3.10	2.97	3.10	4.10	3.31	4.87	4.23	4.87	5.87	4.18	7.07	5.95	7.07	7.07	7.81
5400	2.30	2.82	2.47	2.82	3.51	2.89	4.34	3.41	4.34	4.98	3.62	6.31	4.97	6.31	6.31	6.65
5700	2.02	2.56	2.06	2.56	3.04	2.55	3.90	2.89	3.90	4.26	3.16	5.66	4.16	5.66	5.66	5.71
6000	1.78	2.31	1.74	2.31	2.65	2.26	3.52	2.47	3.52	3.67	2.78	5.11	3.52	5.07	5.11	4.95
6300	1.58	2.09	1.48	2.09	2.32	2.01	3.19	2.13	3.19	3.19	2.46	4.64	3.00	4.49	4.64	4.30

Bold capacities require grade 8.8 purlin bolts. Values above horizontal line in body of table are governed by the strength of the grade 8.8 bolt.
 IN = Inward load capacity. OUT = Outward load capacity. See also: Design notes for capacity tables.

Limit state capacity tables

Three lapped spans

Three lapped spans



Three lapped span: Z10015 (kN/m)

Three lapped span: Z10019 (kN/m)

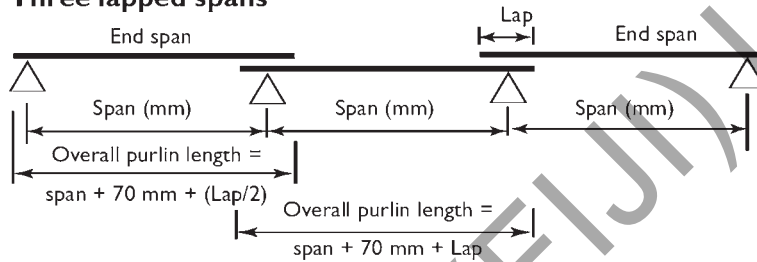
Span (mm)	Bridging > 0	IN		OUT				Load for defl. span/150	IN		OUT				Load for defl. span/150	
		0	1, 2, 3	0	1	2	3		0	1, 2, 3	0	1	2	3		
2100	9.23	10.51	10.51	10.51	10.51	10.51	10.51	11.28	12.16	14.65	14.65	14.65	14.65	14.65	14.65	14.96
2400	6.84	8.00	8.00	7.79	8.00	8.00	8.00	7.51	8.87	11.16	11.16	11.01	11.16	11.16	11.16	9.96
2700	5.25	6.29	6.29	5.77	6.29	6.29	6.29	5.24	6.66	8.77	8.77	8.08	8.77	8.77	8.77	6.95
3000	4.13	5.07	5.07	4.37	5.07	5.07	5.07	3.85	5.18	7.07	7.07	6.02	7.07	7.07	7.07	5.08
3300	3.32	4.18	4.18	3.33	4.18	4.18	4.18	2.93	4.14	5.83	5.83	4.54	5.83	5.83	5.83	3.82
3600	2.71	3.50	3.50	2.55	3.44	3.50	3.50	2.28	3.37	4.88	4.88	3.43	4.87	4.88	4.88	2.94
3900	2.25	2.97	2.97	1.95	2.81	2.97	2.97	1.82	2.80	4.15	4.15	2.63	3.99	4.15	4.15	2.32
4200	1.90	2.56	2.56	1.51	2.32	2.56	2.56	1.46	2.35	3.57	3.57	2.04	3.26	3.57	3.57	1.87
4500	1.61	2.22	2.22	1.20	1.93	2.22	2.22	1.18	1.99	3.10	3.10	1.61	2.69	3.10	3.10	1.51
4800	1.38	1.95	1.95	0.97	1.62	1.92	1.95	0.98	1.70	2.72	2.72	1.29	2.24	2.72	2.72	1.24
5100	1.18	1.70	1.70	0.78	1.34	1.63	1.70	0.82	1.46	2.37	2.37	1.05	1.85	2.32	2.37	1.03
5400	1.01	1.49	1.49	0.64	1.12	1.40	1.49	0.69	1.27	2.08	2.08	0.86	1.52	1.99	2.08	0.87
5700	0.88	1.32	1.32	0.53	0.94	1.21	1.32	0.59	1.10	1.84	1.85	0.72	1.28	1.70	1.85	0.74
6000	0.76	1.18	1.18	0.44	0.79	1.05	1.17	0.50	0.97	1.63	1.65	0.61	1.07	1.47	1.65	0.63
6300	0.68	1.11	1.14		0.68	0.96	1.09	0.44	0.87	1.53	1.59	0.53	0.93	1.33	1.55	0.55
6600	0.60	1.00	1.03		0.58	0.84	0.97	0.38	0.77	1.38	1.44	0.45	0.79	1.17	1.37	0.48
6900	0.53	0.90	0.95		0.50	0.74	0.86	0.34	0.69	1.24	1.32		0.68	1.01	1.22	0.42
7200	0.47	0.82	0.87		0.43	0.65	0.77	0.29	0.61	1.13	1.21		0.58	0.88	1.08	0.37
7500	0.42	0.74	0.79			0.57	0.69	0.26	0.55	1.02	1.10		0.50	0.77	0.96	0.33
7800		0.67	0.72			0.49	0.62	0.23	0.49	0.92	1.01		0.44	0.67	0.85	0.29

Bold capacities require grade 8.8 purlin bolts. Values above horizontal line in body of table are governed by the strength of the grade 8.8 bolt.
 IN = Inward load capacity. OUT = Outward load capacity. See also: Design notes for capacity tables. In mixed spans, the thicker section is used in the end spans.

Limit state capacity tables

Three lapped spans

Three lapped spans



Three lapped span: Z15015 (kN/m)

Bridging >	0	IN			OUT				Load for deflect'n span/150
		1	2, 3	0	1	2	3		
Span 3000	7.08	9.10	9.10	9.10	9.10	9.10	9.10	11.17	
(mm) 3300	5.64	7.49	7.49	7.49	7.49	7.49	7.49	8.35	
3600	4.59	6.27	6.27	5.94	6.27	6.27	6.27	6.40	
3900	3.80	5.32	5.32	4.69	5.32	5.32	5.32	5.02	
4200	3.20	4.58	4.58	3.56	4.58	4.58	4.58	4.00	
4500	2.72	3.98	3.98	2.87	3.98	3.98	3.98	3.27	
4800	2.34	3.49	3.49	2.34	3.49	3.49	3.49	2.71	
5100	2.04	3.08	3.08	1.94	3.08	3.08	3.08	2.27	
5400	1.78	2.74	2.74	1.61	2.63	2.74	2.74	1.92	
5700	1.57	2.46	2.46	1.34	2.25	2.46	2.46	1.64	
6000	1.39	2.21	2.21	1.12	1.92	2.21	2.21	1.41	
6300	1.24	2.00	2.00	0.95	1.63	2.00	2.00	1.23	
6600	1.11	1.82	1.82	0.80	1.36	1.82	1.82	1.07	
6900	1.00	1.67	1.67	0.68	1.19	1.65	1.67	0.95	
7200	0.89	1.53	1.53	0.58	1.04	1.47	1.53	0.84	
7500	0.80	1.39	1.39	0.50	0.91	1.30	1.39	0.75	
7800	0.72	1.28	1.28	0.43	0.80	1.16	1.28	0.67	
8100	0.65	1.17	1.17		0.71	1.02	1.17	0.60	
8400	0.59	1.08	1.08		0.62	0.91	1.08	0.54	
8700	0.54	1.00	1.00		0.55	0.80	0.99	0.49	
9000	0.49	0.93	0.93		0.49	0.70	0.90	0.44	
9300	0.45	0.89	0.92		0.45	0.65	0.85	0.40	
9600	0.42	0.82	0.86		0.40	0.59	0.78	0.37	
9900		0.76	0.80			0.53	0.70	0.33	

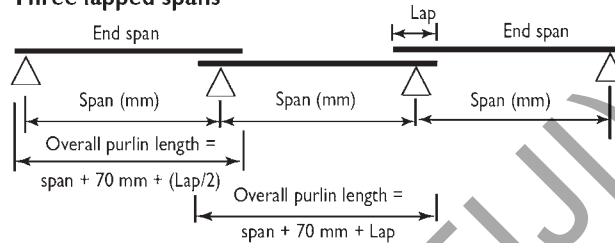
Bold capacities require grade 8.8 purlin bolts. Values above horizontal line in body of table are governed by the strength of the grade 8.8 bolt.
 IN = Inward load capacity. OUT = Outward load capacity. See also: Design notes for capacity tables. In mixed spans, the thicker section is used in the end spans.



Limit state capacity tables

Three lapped spans

Three lapped spans



Three lapped span: Z15019 (kN/m)

Three lapped span: Z15024 (kN/m)

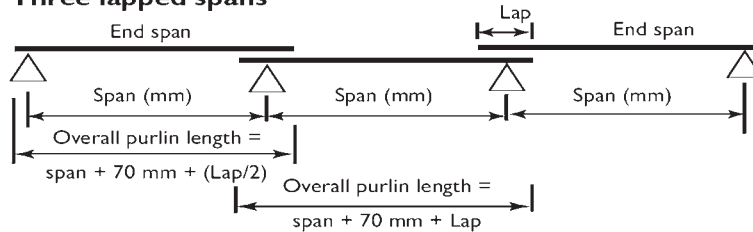
Bridging > 0	Three lapped span: Z15019 (kN/m)								Load for deflect'n span/150	Three lapped span: Z15024 (kN/m)								Load for deflect'n span/150
	IN				OUT					IN				OUT				
0	1	2	3	0	1	2	3	0	1	2	3	0	1	2	3			
Span 3000	9.20	12.83	12.83	12.83	12.69	12.83	12.83	12.83	14.57	11.31	18.08	18.08	18.08	18.00	18.08	18.08	18.08	19.43
(mm) 3300	7.22	10.56	10.56	10.56	9.94	10.56	10.56	10.56	10.90	8.78	14.88	14.88	14.88	13.94	14.88	14.88	14.88	14.53
3600	5.82	8.84	8.84	8.84	7.90	8.84	8.84	8.84	8.36	7.01	12.46	12.46	12.46	10.97	12.46	12.46	12.46	11.14
3900	4.78	7.51	7.51	7.51	6.33	7.51	7.51	7.51	6.54	5.71	10.58	10.58	10.58	8.75	10.58	10.58	10.58	8.73
4200	4.00	6.45	6.45	6.45	5.05	6.45	6.45	6.45	5.23	4.74	9.09	9.09	9.09	6.87	9.09	9.09	9.09	6.98
4500	3.39	5.61	5.61	5.61	4.00	5.60	5.61	5.61	4.29	3.99	7.90	7.90	7.90	5.39	7.90	7.90	7.90	5.68
4800	2.91	4.92	4.92	4.92	3.21	4.76	4.92	4.92	3.57	3.41	6.92	6.92	6.92	4.29	6.74	6.92	6.92	4.70
5100	2.51	4.34	4.34	4.34	2.62	4.07	4.34	4.34	3.00	2.94	6.07	6.12	6.12	3.46	5.73	6.12	6.12	3.93
5400	2.19	3.86	3.87	3.87	2.15	3.50	3.87	3.87	2.55	2.56	5.31	5.45	5.45	2.82	4.90	5.45	5.45	3.33
5700	1.92	3.42	3.46	3.46	1.76	3.03	3.46	3.46	2.19	2.24	4.68	4.88	4.88	2.33	4.21	4.88	4.88	2.82
6000	1.69	3.05	3.12	3.12	1.47	2.62	3.12	3.12	1.88	1.98	4.15	4.40	4.40	1.95	3.64	4.40	4.40	2.42
6300	1.50	2.73	2.83	2.83	1.23	2.25	2.77	2.83	1.62	1.76	3.71	3.98	3.98	1.64	3.13	3.93	3.98	2.08
6600	1.33	2.46	2.57	2.57	1.04	1.94	2.46	2.57	1.41	1.58	3.33	3.62	3.62	1.39	2.66	3.48	3.62	1.81
6900	1.19	2.23	2.35	2.35	0.89	1.66	2.19	2.35	1.24	1.41	3.00	3.31	3.31	1.19	2.27	3.08	3.31	1.58
7200	1.07	2.03	2.15	2.16	0.76	1.44	1.96	2.16	1.09	1.28	2.72	3.04	3.04	1.03	1.95	2.75	3.04	1.39
7500	0.97	1.84	1.96	1.96	0.66	1.25	1.75	1.96	0.97	1.15	2.46	2.77	2.77	0.89	1.68	2.44	2.77	1.22
7800	0.87	1.67	1.80	1.80	0.57	1.09	1.56	1.77	0.86	1.05	2.23	2.53	2.53	0.78	1.46	2.17	2.51	1.09
8100	0.79	1.52	1.65	1.65	0.50	0.96	1.40	1.60	0.77	0.96	2.04	2.33	2.33	0.69	1.28	1.95	2.26	0.97
8400	0.72	1.40	1.52	1.52	0.44	0.84	1.25	1.45	0.69	0.87	1.86	2.14	2.14	0.61	1.12	1.74	2.04	0.87
8700	0.65	1.28	1.41	1.41	0.40	0.74	1.12	1.31	0.62	0.80	1.71	1.98	1.98	0.54	0.99	1.55	1.85	0.78
9000	0.60	1.18	1.31	1.31	0.36	0.65	1.00	1.20	0.56	0.73	1.58	1.84	1.84	0.48	0.87	1.38	1.68	0.70
9300	0.55	1.14	1.29	1.29	0.32	0.59	0.91	1.14	0.51	0.69	1.51	1.82	1.82	0.44	0.79	1.25	1.60	0.64
9600	0.51	1.06	1.21	1.21	0.29	0.52	0.82	1.05	0.47	0.63	1.40	1.70	1.71	0.41	0.71	1.12	1.46	0.59
9900	0.47	0.98	1.13	1.13	0.26	0.47	0.73	0.96	0.42	0.58	1.30	1.58	1.59	0.38	0.63	1.00	1.33	0.53
10200	0.43	0.91	1.05	1.06	0.23	0.42	0.66	0.87	0.39	0.54	1.20	1.47	1.49	0.35	0.57	0.90	1.22	0.49
10500	0.40	0.85	0.97	0.99	0.20	0.40	0.60	0.79	0.35	0.50	1.12	1.36	1.39	0.32	0.51	0.81	1.11	0.45

Bold capacities require grade 8.8 purlin bolts. Values above horizontal line in body of table are governed by the strength of the grade 8.8 bolt.
 IN = Inward load capacity. OUT = Outward load capacity. See also: Design notes for capacity tables.

Limit state capacity tables

Three lapped spans

Three lapped spans



Three lapped span: Z20015 (kN/m)

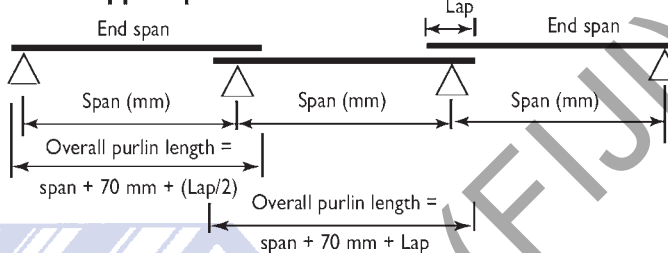
Bridging > Span (mm)	IN		OUT				Load for deflection span/150
	0	1, 2, 3	0	1	2	3	
3000	10.60	10.60	10.60	10.60	10.60	10.60	22.08
3300	8.44	9.13	9.13	9.13	9.13	9.13	16.51
3600	6.77	7.95	7.95	7.95	7.95	7.95	12.66
3900	5.55	6.97	6.97	6.97	6.97	6.97	9.92
4200	4.62	6.15	6.15	6.15	6.15	6.15	7.91
4500	3.91	5.39	5.21	5.39	5.39	5.39	6.41
4800	3.34	4.73	4.27	4.73	4.73	4.73	5.26
5100	2.89	4.18	3.48	4.18	4.18	4.18	4.37
5400	2.52	3.72	2.87	3.72	3.72	3.72	3.67
5700	2.21	3.33	2.38	3.33	3.33	3.33	3.12
6000	1.96	3.00	2.00	3.00	3.00	3.00	2.70
6300	1.74	2.72	1.69	2.72	2.72	2.72	2.36
6600	1.55	2.47	1.39	2.46	2.47	2.47	2.08
6900	1.40	2.26	1.21	2.17	2.26	2.26	1.85
7200	1.21	2.07	1.05	1.91	2.07	2.07	1.65
7500	1.09	1.89	0.92	1.66	1.89	1.89	1.48
7800	0.99	1.73	0.81	1.45	1.73	1.73	1.33
8100	0.90	1.59	0.71	1.27	1.59	1.59	1.19
8400	0.83	1.46	0.63	1.12	1.46	1.46	1.07
8700	0.76	1.35	0.56	0.99	1.35	1.35	0.97
9000	0.69	1.26	0.49	0.88	1.26	1.26	0.88
9300	0.65	1.24	0.45	0.81	1.19	1.24	0.80
9600	0.60	1.17	0.40	0.72	1.09	1.17	0.73
9900	0.56	1.09		0.62	0.98	1.09	0.67
10200	0.52	1.02		0.56	0.88	1.02	0.61
10500	0.48	0.95		0.51	0.80	0.95	0.56
10800	0.44	0.89		0.47	0.72	0.89	0.52
SECTIONS BELOW EXCEED THE NORMAL DELIVERY LENGTH OF 12000 mm							
11100	0.41	0.84		0.43	0.66	0.84	0.48
11400		0.79			0.60	0.78	0.44
11700		0.74			0.55	0.72	0.41
12000		0.70			0.50	0.67	0.38

Bold capacities require grade 8.8 purlin bolts. Values above horizontal line in body of table are governed by the strength of the grade 8.8 bolt.
IN = Inward load capacity. OUT = Outward load capacity. See also: Design notes for capacity tables.

Limit state capacity tables

Three lapped spans

Three lapped spans



Three lapped span: Z20019 (kN/m)

Three lapped span: Z20024 (kN/m)

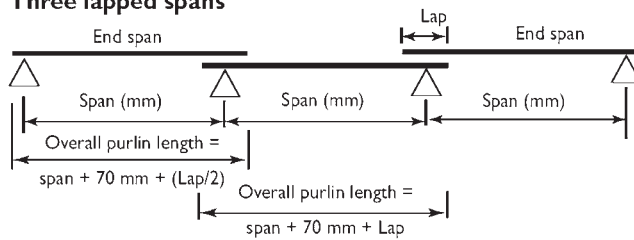
Bridging > (mm)	IN			OUT				Load for deflect'n span/150	IN			OUT				Load for deflect'n span/150
	0	1	2, 3	0	1	2	3		0	1	2, 3	0	1	2	3	
3000	13.75	18.79	18.79	18.79	18.79	18.79	18.79	31.46	18.42	19.78	19.78	19.78	19.78	19.78	19.78	41.54
3300	10.77	15.47	15.47	15.47	15.47	15.47	15.47	23.52	14.22	17.99	17.99	17.99	17.99	17.99	17.99	31.06
3600	8.66	12.95	12.95	12.95	12.95	12.95	12.95	18.04	11.13	16.50	16.50	16.50	16.50	16.50	16.50	23.82
3900	7.10	11.00	11.00	11.00	11.00	11.00	11.00	14.13	8.94	15.24	15.24	15.24	15.24	15.24	15.24	18.66
4200	5.93	9.45	9.45	9.18	9.45	9.45	9.45	11.27	7.32	13.74	13.74	12.55	13.74	13.74	13.74	14.88
4500	5.02	8.21	8.21	7.52	8.21	8.21	8.21	9.13	6.09	11.94	11.94	10.41	11.94	11.94	11.94	12.06
4800	4.29	7.20	7.20	6.07	7.20	7.20	7.20	7.50	5.15	10.47	10.47	8.58	10.47	10.47	10.47	9.90
5100	3.69	6.36	6.36	4.84	6.36	6.36	6.36	6.23	4.41	9.25	9.25	6.98	9.25	9.25	9.25	8.23
5400	3.21	5.66	5.66	4.04	5.66	5.66	5.66	5.24	3.81	8.23	8.23	5.75	8.23	8.23	8.23	6.93
5700	2.81	5.07	5.07	3.41	5.07	5.07	5.07	4.47	3.32	7.27	7.38	4.80	7.25	7.38	7.38	5.94
6000	2.48	4.57	4.57	2.90	4.57	4.57	4.57	3.85	2.92	6.46	6.64	4.02	6.35	6.64	6.64	5.13
6300	2.20	4.14	4.14	2.48	4.09	4.14	4.14	3.34	2.59	5.77	6.02	3.36	5.60	6.02	6.02	4.46
6600	1.97	3.77	3.77	2.10	3.59	3.77	3.77	2.91	2.31	5.18	5.47	2.84	4.95	5.47	5.47	3.91
6900	1.77	3.44	3.44	1.80	3.15	3.44	3.44	2.56	2.07	4.67	5.00	2.42	4.39	5.00	5.00	3.45
7200	1.59	3.16	3.16	1.55	2.74	3.16	3.16	2.26	1.86	4.24	4.59	2.07	3.88	4.59	4.59	3.04
7500	1.44	2.88	2.88	1.35	2.30	2.88	2.88	2.01	1.69	3.83	4.18	1.78	3.40	4.17	4.18	2.69
7800	1.31	2.63	2.63	1.17	2.03	2.63	2.63	1.79	1.53	3.47	3.83	1.55	2.97	3.75	3.83	2.40
8100	1.19	2.42	2.42	1.02	1.79	2.42	2.42	1.61	1.40	3.17	3.52	1.35	2.60	3.39	3.52	2.14
8400	1.09	2.22	2.23	0.89	1.59	2.23	2.23	1.45	1.28	2.90	3.24	1.18	2.30	3.07	3.24	1.93
8700	1.00	2.03	2.06	0.78	1.42	2.03	2.06	1.31	1.17	2.66	3.00	1.04	2.04	2.78	3.00	1.74
9000	0.92	1.87	1.91	0.69	1.27	1.84	1.91	1.19	1.08	2.45	2.78	0.92	1.81	2.54	2.78	1.58
9300	0.86	1.79	1.89	0.62	1.18	1.74	1.89	1.09	1.00	2.35	2.75	0.84	1.66	2.42	2.73	1.44
9600	0.79	1.66	1.78	0.56	1.07	1.56	1.78	1.00	0.93	2.17	2.58	0.75	1.47	2.21	2.52	1.32
9900	0.73	1.54	1.66	0.50	0.96	1.41	1.66	0.91	0.86	2.01	2.41	0.67	1.32	2.00	2.32	1.20
10200	0.68	1.43	1.55	0.45	0.86	1.23	1.55	0.84	0.80	1.86	2.25	0.60	1.18	1.82	2.14	1.10
10500	0.63	1.33	1.45	0.40	0.78	1.12	1.44	0.77	0.74	1.73	2.10	0.54	1.06	1.64	1.97	1.00
10800	0.58	1.24	1.36		0.70	1.02	1.33	0.71	0.69	1.61	1.96	0.49	0.95	1.49	1.82	0.92
SECTIONS BELOW EXCEED THE NORMAL DELIVERY LENGTH OF 12000 mm																
11100	0.54	1.15	1.28		0.64	0.93	1.23	0.66	0.65	1.50	1.84	0.45	0.86	1.36	1.69	0.85
11400	0.50	1.08	1.21		0.58	0.86	1.13	0.61	0.60	1.40	1.72	0.41	0.78	1.24	1.57	0.78
11700	0.47	1.00	1.14		0.53	0.79	1.05	0.56	0.56	1.31	1.62		0.71	1.13	1.46	0.72
12000	0.44	0.94	1.08		0.48	0.73	0.96	0.52	0.53	1.23	1.52		0.65	1.04	1.36	0.67

Bold capacities require grade 8.8 purlin bolts. Values above horizontal line in body of table are governed by the strength of the grade 8.8 bolt.
 IN = Inward load capacity. OUT = Outward load capacity. See also: Design notes for capacity tables.

Limit state capacity tables

Three lapped spans

Three lapped spans



Three lapped span: Z25019 (kN/m)

Bridging > (mm)	IN			OUT				Load for deflection span/150
	0	1	2, 3	0	1	2	3	
Span 3000	17.28	17.28	17.28	17.28	17.28	17.28	17.28	51.10
3300	13.93	15.00	15.00	15.00	15.00	15.00	15.00	38.21
3600	11.15	13.16	13.16	13.16	13.16	13.16	13.16	29.30
3900	9.12	11.64	11.64	11.64	11.64	11.64	11.64	22.95
4200	7.59	10.36	10.36	10.36	10.36	10.36	10.36	18.30
4500	6.38	9.28	9.28	9.28	9.28	9.28	9.28	14.83
4800	5.42	8.35	8.35	7.80	8.35	8.35	8.35	12.18
5100	4.65	7.55	7.55	6.42	7.55	7.55	7.55	10.12
5400	4.04	6.85	6.85	5.34	6.85	6.85	6.85	8.50
5700	3.53	6.24	6.24	4.49	6.24	6.24	6.24	7.21
6000	3.12	5.70	5.70	3.80	5.70	5.70	5.70	6.17
6300	2.77	5.23	5.23	3.23	5.23	5.23	5.23	5.32
6600	2.47	4.78	4.78	2.73	4.78	4.78	4.78	4.61
6900	2.22	4.37	4.37	2.33	4.19	4.37	4.37	4.04
7200	2.00	4.01	4.01	2.01	3.63	4.01	4.01	3.60
7500	1.81	3.65	3.65	1.74	3.06	3.65	3.65	3.23
7800	1.64	3.34	3.34	1.51	2.69	3.34	3.34	2.91
8100	1.49	3.07	3.07	1.31	2.37	3.07	3.07	2.63
8400	1.37	2.83	2.83	1.14	2.10	2.83	2.83	2.38
8700	1.25	2.62	2.62	1.00	1.87	2.62	2.62	2.15
9000	1.15	2.43	2.43	0.88	1.67	2.43	2.43	1.95
9300	1.07	2.37	2.40	0.80	1.55	2.31	2.40	1.78
9600	0.99	2.19	2.25	0.71	1.40	2.07	2.25	1.63
9900	0.91	2.02	2.10	0.63	1.25	1.80	2.10	1.49
10200	0.84	1.87	1.96	0.56	1.12	1.63	1.96	1.36
10500	0.78	1.73	1.84	0.51	1.00	1.48	1.84	1.26
10800	0.73	1.61	1.73	0.46	0.91	1.35	1.73	1.16
SECTIONS BELOW EXCEED THE NORMAL DELIVERY LENGTH OF 12000 mm								
11100	0.67	1.50	1.62	0.41	0.82	1.24	1.62	1.07
11400	0.63	1.40	1.53		0.75	1.13	1.52	0.99
11700	0.58	1.31	1.44		0.68	1.04	1.39	0.92
12000	0.54	1.22	1.37		0.62	0.95	1.28	0.86

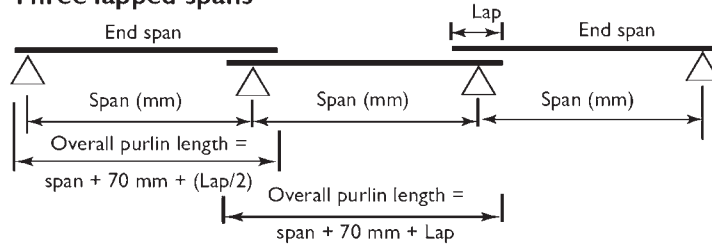
Bold capacities require grade 8.8 purlin bolts. Values above horizontal line in body of table are governed by the strength of the grade 8.8 bolt.
 IN = Inward load capacity. OUT = Outward load capacity. See also: Design notes for capacity tables.



Limit state capacity tables

Three lapped spans

Three lapped spans



Three lapped span: Z25024 (kN/m)

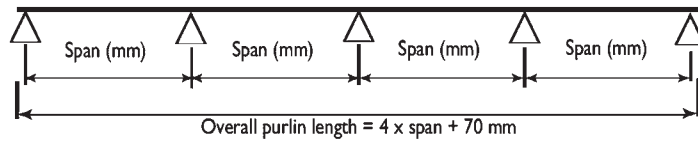
Span (mm)	Bridging > 0	IN			OUT				Load for deflect'n span/150
		0	1	2,3	0	1	2	3	
3000		19.78	19.78	19.78	19.78	19.78	19.78	19.78	70.48
3300		17.87	17.99	17.99	17.99	17.99	17.99	17.99	52.70
3600		13.95	16.50	16.50	16.50	16.50	16.50	16.50	40.41
3900		11.16	15.24	15.24	15.24	15.24	15.24	15.24	31.65
4200		9.12	14.16	14.16	14.16	14.16	14.16	14.16	25.24
4500		7.58	13.22	13.22	13.22	13.22	13.22	13.22	20.45
4800		6.40	12.40	12.40	11.27	12.40	12.40	12.40	16.80
5100		5.46	11.68	11.68	9.13	11.68	11.68	11.68	13.96
5400		4.72	10.55	10.55	7.50	10.55	10.55	10.55	11.73
5700		4.11	9.45	9.45	6.24	9.45	9.45	9.45	9.95
6000		3.61	8.52	8.52	5.20	8.52	8.52	8.52	8.51
6300		3.20	7.67	7.71	4.35	7.48	7.71	7.71	7.33
6600		2.85	6.87	7.02	3.66	6.59	7.02	7.02	6.38
6900		2.55	6.19	6.41	3.11	5.82	6.41	6.41	5.61
7200		2.29	5.60	5.88	2.65	5.10	5.88	5.88	4.97
7500		2.07	5.06	5.36	2.28	4.44	5.36	5.36	4.42
7800		1.88	4.58	4.91	1.97	3.87	4.91	4.91	3.95
8100		1.71	4.17	4.51	1.72	3.39	4.51	4.51	3.55
8400		1.57	3.81	4.15	1.50	2.98	4.10	4.15	3.20
8700		1.44	3.49	3.84	1.32	2.64	3.72	3.84	2.89
9000		1.32	3.20	3.56	1.17	2.35	3.38	3.56	2.61
9300		1.23	3.04	3.53	1.05	2.14	3.21	3.53	2.39
9600		1.13	2.81	3.31	0.94	1.90	2.91	3.31	2.18
9900		1.05	2.59	3.08	0.84	1.69	2.63	3.08	1.99
10200		0.97	2.39	2.88	0.75	1.51	2.37	2.86	1.82
10500		0.91	2.21	2.70	0.68	1.36	2.14	2.64	1.67
10800		0.84	2.05	2.53	0.61	1.22	1.94	2.44	1.54
SECTIONS BELOW EXCEED THE NORMAL DELIVERY LENGTH OF 12000 mm									
11100		0.79	1.91	2.38	0.55	1.10	1.76	2.25	1.42
11400		0.73	1.78	2.25	0.50	1.00	1.61	2.09	1.31
11700		0.69	1.66	2.12	0.46	0.90	1.47	1.94	1.21
12000		0.64	1.56	2.00	0.42	0.82	1.34	1.79	1.13

Bold capacities require grade 8.8 purlin bolts. Values above horizontal line in body of table are governed by the strength of the grade 8.8 bolt. IN = Inward load capacity. OUT = Outward load capacity. See also: Design notes for capacity tables.

Limit state capacity tables

Four continuous spans

Four spans



Four	Four span: Z/C10019 (kN/m)				Four span: Z/C15015 (kN/m)				Four span: Z/C15019 (kN/m)				Four span: Z/C15024 (kN/m)							
	IN		OUT		Load for deflection span/150	IN		OUT		Load for deflection span/150	IN		OUT		Load for deflection span/150	IN		OUT		Load for deflection span/150
Bridging >	0,1,2,3	0	1,2,3	0,1,2,3		0	1,2,3	0,1,2,3	0		1,2,3	0,1,2,3	0	1,2,3		0,1,2,3	0	1,2,3	0,1,2,3	
Span 2100	10.26	10.26	10.26	14.51	11.36	11.36	11.36	31.49	17.10	17.10	17.10	41.09	21.60	21.60	21.60	54.80				
(mm) 2400	7.85	7.85	7.85	9.72	9.22	9.22	9.22	21.10	13.66	13.66	13.66	27.53	18.90	18.90	18.90	36.71				
2700	6.20	5.34	6.20	6.87	7.62	7.62	7.62	14.82	11.04	11.04	11.04	19.33	15.59	15.59	15.59	25.78				
3000	5.03	3.57	5.03	5.02	6.36	6.36	6.36	10.80	8.96	8.96	8.96	14.09	12.62	12.62	12.62	18.80				
SECTIONS BELOW EXCEED THE NORMAL DELIVERY LENGTH OF 12000 mm																				
3300	4.15	2.49	4.15	3.79	5.25	5.02	5.25	8.12	7.41	6.97	7.41	10.59	10.43	9.47	10.43	14.12				
3600	3.49	1.80	3.49	2.94	4.41	3.76	4.41	6.25	6.22	5.10	6.22	8.16	8.77	6.80	8.77	10.88				
3900	2.97	1.33	2.97	2.33	3.76	2.82	3.76	4.92	5.30	3.74	5.30	6.42	7.47	5.00	7.47	8.56				

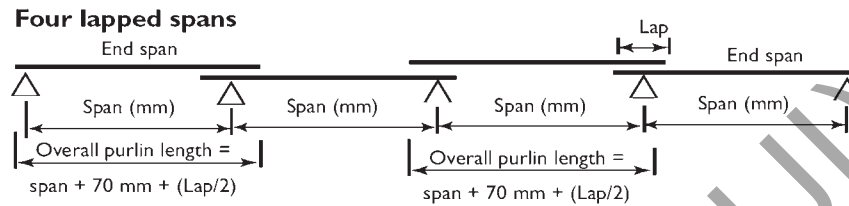
Four span: Z/C20015 (kN/m)					Four span: Z/C20019 (kN/m)					Four span: Z/C20024 (kN/m)				
IN		OUT		Load for deflection span/150	IN		OUT		Load for deflection span/150	IN		OUT		Load for deflection span/150
Bridging >	0,1,2,3	0	1,2,3		0,1,2,3	0	1,2,3	0,1,2,3		0	1,2,3			
Span 2100	10.57	10.57	10.57	62.26	17.10	17.10	17.10	88.71	21.60	21.60	21.60	117.14		
(mm) 2400	8.92	8.92	8.92	41.71	14.96	14.96	14.96	59.43	18.90	18.90	18.90	78.47		
2700	7.64	7.64	7.64	29.29	13.30	13.30	13.30	41.74	16.80	16.80	16.80	55.11		
3000	6.62	6.62	6.62	21.35	11.81	11.81	11.81	30.43	15.12	15.12	15.12	40.18		
3300	5.78	5.78	5.78	16.04	10.18	10.18	10.18	22.86	13.75	13.75	13.75	30.19		
SECTIONS BELOW EXCEED THE NORMAL DELIVERY LENGTH OF 12000 mm														
3600	5.09	5.09	5.09	12.36	8.85	8.85	8.85	17.61	12.60	12.60	12.60	23.25		
3900	4.52	4.52	4.52	9.72	7.76	7.70	7.76	13.85	11.29	11.10	11.29	18.29		

Bold capacities require grade 8.8 purlin bolts. Values above horizontal line in body of table are governed by the strength of the grade 8.8 bolt.
IN = Inward load capacity. OUT = Outward load capacity. See also: Design notes for capacity tables.



Limit state capacity tables

Four lapped spans

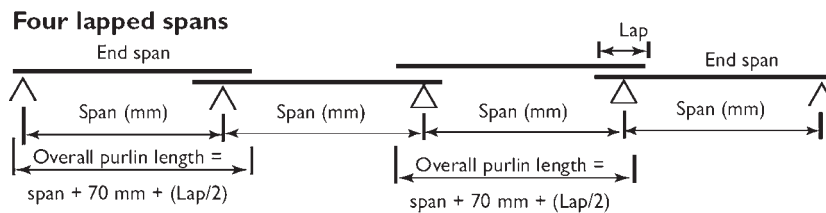


Bridging > (mm)	Four lapped span: Z10015 (kN/m)									Four lapped span: Z10019 (kN/m)								
	IN				OUT				Load for defl'n span/150	IN				OUT				Load for defl'n span/150
	0	1	2	3	0	1	2	3		0	1	2,3	0	1	2	3		
Span 2100	9.64	11.16	11.16	11.16	11.16	11.16	11.16	11.16	12.59	12.64	15.57	15.57	15.57	15.57	15.57	15.57	16.70	
2400	7.12	8.47	8.47	8.47	8.29	8.47	8.47	8.47	8.34	9.10	11.82	11.82	11.71	11.82	11.82	11.82	11.06	
2700	5.43	6.65	6.65	6.65	6.14	6.65	6.65	6.65	5.80	6.83	9.27	9.27	8.61	9.27	9.27	9.27	7.69	
3000	4.25	5.35	5.35	5.35	4.65	5.35	5.35	5.35	4.19	5.31	7.47	7.47	6.41	7.47	7.47	7.47	5.56	
3300	3.39	4.33	4.33	4.33	3.53	4.33	4.33	4.33	3.13	4.22	6.04	6.04	4.83	6.04	6.04	6.04	4.17	
3600	2.73	3.51	3.51	3.51	2.67	3.50	3.51	3.51	2.43	3.40	4.90	4.90	3.60	4.90	4.90	4.90	3.20	
3900	2.25	2.90	2.90	2.90	2.06	2.81	2.90	2.90	1.93	2.80	4.05	4.05	2.77	3.99	4.05	4.05	2.51	
4200	1.88	2.44	2.44	2.44	1.59	2.29	2.44	2.44	1.56	2.34	3.41	3.41	2.15	3.25	3.41	3.41	2.01	
4500	1.59	2.08	2.08	2.08	1.25	1.89	2.08	2.08	1.28	1.98	2.91	2.91	1.69	2.66	2.91	2.91	1.64	
4800	1.35	1.80	1.80	1.80	1.00	1.58	1.80	1.80	1.06	1.70	2.51	2.51	1.36	2.20	2.51	2.51	1.36	
5100	1.17	1.57	1.57	1.57	0.82	1.33	1.56	1.57	0.88	1.46	2.19	2.19	1.10	1.84	2.19	2.19	1.13	
5400	1.01	1.38	1.38	1.38	0.67	1.12	1.34	1.38	0.74	1.27	1.92	1.92	0.91	1.55	1.90	1.92	0.95	
5700	0.89	1.22	1.22	1.22	0.56	0.95	1.16	1.22	0.63	1.11	1.71	1.71	0.76	1.30	1.65	1.71	0.80	
6000	0.78	1.09	1.09	1.09	0.47	0.80	1.01	1.09	0.54	0.98	1.52	1.52	0.64	1.10	1.43	1.52	0.69	
6300	0.71	1.06	1.09	1.09	0.41	0.71	0.95	1.07	0.48	0.89	1.48	1.51	0.56	0.98	1.33	1.51	0.61	
6600	0.63	0.95	0.98	0.98		0.61	0.83	0.94	0.42	0.79	1.32	1.36	0.48	0.83	1.16	1.34	0.53	
6900	0.56	0.85	0.88	0.88		0.52	0.73	0.83	0.36	0.71	1.18	1.23	0.42	0.71	1.01	1.18	0.46	
7200	0.50	0.77	0.80	0.80		0.45	0.64	0.74	0.32	0.63	1.06	1.12		0.61	0.89	1.05	0.40	
7500	0.44	0.69	0.73	0.73			0.56	0.66	0.28	0.57	0.96	1.02		0.53	0.77	0.93	0.35	
7800	0.40	0.63	0.67	0.67			0.50	0.59	0.25	0.51	0.87	0.93		0.46	0.68	0.83	0.31	

Bold capacities require grade 8.8 purlin bolts. Values above horizontal line in body of table are governed by the strength of the grade 8.8 bolt.
IN = Inward load capacity. OUT = Outward load capacity. See also: Design notes for capacity tables.

Limit state capacity tables

Four lapped spans



Four lapped span: Z15015 (kN/m)

Bridging > Span (mm)	IN			OUT				Load for def'n span/150
	0	1	2,3	0	1	2	3	
3000	7.30	9.68	9.68	9.68	9.68	9.68	9.68	12.49
3300	5.81	7.95	7.95	7.95	7.95	7.95	7.95	9.31
3600	4.72	6.64	6.64	6.35	6.64	6.64	6.64	7.12
3900	3.91	5.63	5.63	5.03	5.63	5.63	5.63	5.56
4200	3.29	4.84	4.84	3.93	4.84	4.84	4.84	4.42
4500	2.80	4.20	4.20	3.07	4.20	4.20	4.20	3.58
4800	2.40	3.66	3.66	2.50	3.66	3.66	3.66	2.93
5100	2.07	3.16	3.16	2.05	3.16	3.16	3.16	2.44
5400	1.80	2.75	2.75	1.70	2.70	2.75	2.75	2.06
5700	1.57	2.42	2.42	1.41	2.30	2.42	2.42	1.76
6000	1.39	2.15	2.15	1.18	1.97	2.15	2.15	1.51
6300	1.23	1.92	1.92	0.99	1.68	1.92	1.92	1.31
6600	1.10	1.72	1.72	0.84	1.43	1.72	1.72	1.14
6900	0.98	1.55	1.55	0.72	1.20	1.55	1.55	1.00
7200	0.88	1.41	1.41	0.62	1.04	1.41	1.41	0.89
7500	0.80	1.29	1.29	0.53	0.91	1.27	1.29	0.79
7800	0.72	1.18	1.18	0.46	0.80	1.13	1.18	0.71
8100	0.66	1.08	1.08	0.40	0.71	1.01	1.08	0.63
8400	0.60	1.00	1.00		0.63	0.91	1.00	0.57
8700	0.55	0.92	0.92		0.57	0.81	0.92	0.52
9000	0.50	0.86	0.86		0.51	0.72	0.86	0.47
9300	0.47	0.84	0.85		0.46	0.65	0.83	0.43
9600	0.43	0.78	0.79		0.41	0.59	0.76	0.39
9900	0.40	0.72	0.74			0.53	0.69	0.36

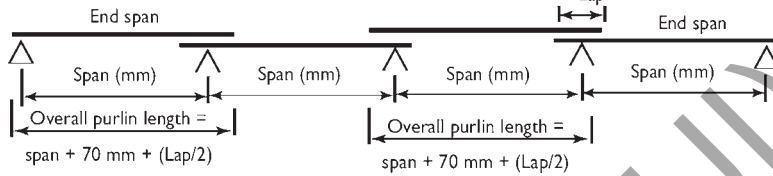
Bold capacities require grade 8.8 purlin bolts. Values above horizontal line in body of table are governed by the strength of the grade 8.8 bolt.
IN = Inward load capacity. OUT = Outward load capacity. See also: Design notes for capacity tables.



Limit state capacity tables

Four lapped spans

Four lapped spans



Four lapped span: Z15019 (kN/m)

Four lapped span: Z15024 (kN/m)

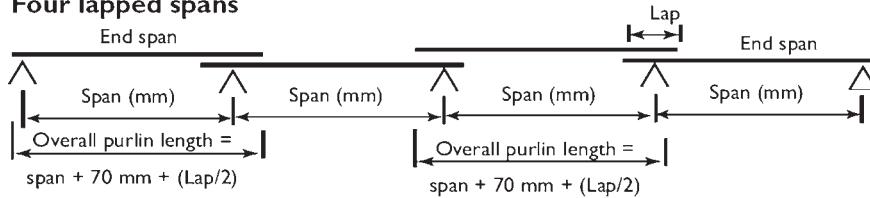
Span (mm)	IN				OUT				Load for def'n span/150	IN				OUT				Load for def'n span/150
	0	1	2	3	0	1	2	3		0	1	2	3	0	1	2	3	
3000	9.42	13.64	13.64	13.64	13.56	13.64	13.64	13.64	16.29	11.57	18.71	18.71	18.71	18.71	18.71	18.71	18.71	21.73
3300	7.39	11.21	11.21	11.21	10.61	11.21	11.21	11.21	12.14	8.97	15.79	15.79	15.79	14.89	15.79	15.79	15.79	16.20
3600	5.95	9.37	9.37	9.37	8.43	9.37	9.37	9.37	9.29	7.15	13.20	13.20	13.20	11.71	13.20	13.20	13.20	12.38
3900	4.89	7.94	7.94	7.94	6.77	7.94	7.94	7.94	7.25	5.82	11.19	11.19	11.19	9.33	11.19	11.19	11.19	9.67
4200	4.09	6.82	6.82	6.82	5.39	6.82	6.82	6.82	5.77	4.83	9.61	9.61	9.61	7.38	9.61	9.61	9.61	7.70
4500	3.47	5.92	5.92	5.92	4.29	5.92	5.92	5.92	4.67	4.06	8.34	8.34	8.34	5.78	8.34	8.34	8.34	6.22
4800	2.96	5.16	5.16	5.16	3.43	5.02	5.16	5.16	3.82	3.46	7.27	7.27	7.27	4.59	7.13	7.27	7.27	5.10
5100	2.54	4.45	4.45	4.45	2.78	4.22	4.45	4.45	3.20	2.98	6.23	6.27	6.27	3.69	5.96	6.27	6.27	4.25
5400	2.21	3.88	3.88	3.88	2.29	3.59	3.88	3.88	2.71	2.59	5.37	5.47	5.47	3.01	5.04	5.47	5.47	3.58
5700	1.93	3.40	3.41	3.41	1.88	3.07	3.41	3.41	2.32	2.26	4.68	4.81	4.81	2.48	4.29	4.81	4.81	3.05
6000	1.70	2.99	3.03	3.03	1.56	2.64	3.03	3.03	2.01	2.00	4.11	4.26	4.26	2.07	3.68	4.26	4.26	2.63
6300	1.51	2.65	2.70	2.70	1.31	2.29	2.70	2.70	1.74	1.77	3.63	3.80	3.80	1.74	3.18	3.80	3.80	2.28
6600	1.34	2.37	2.43	2.43	1.10	1.97	2.39	2.43	1.53	1.58	3.23	3.42	3.42	1.48	2.75	3.40	3.42	1.97
6900	1.20	2.12	2.19	2.19	0.94	1.71	2.11	2.19	1.34	1.42	2.89	3.09	3.09	1.26	2.37	3.00	3.09	1.72
7200	1.08	1.92	1.99	1.99	0.81	1.48	1.88	1.99	1.18	1.28	2.60	2.80	2.80	1.09	2.03	2.66	2.80	1.51
7500	0.98	1.74	1.81	1.81	0.70	1.28	1.68	1.81	1.04	1.16	2.35	2.55	2.55	0.95	1.76	2.37	2.55	1.33
7800	0.88	1.58	1.66	1.66	0.61	1.12	1.51	1.66	0.93	1.05	2.14	2.34	2.34	0.83	1.53	2.11	2.34	1.18
8100	0.80	1.44	1.52	1.52	0.53	0.98	1.36	1.52	0.83	0.96	1.95	2.15	2.15	0.73	1.33	1.90	2.15	1.05
8400	0.73	1.32	1.41	1.41	0.47	0.87	1.22	1.38	0.74	0.88	1.78	1.98	1.98	0.64	1.17	1.71	1.97	0.94
8700	0.67	1.21	1.30	1.30	0.41	0.77	1.11	1.26	0.67	0.81	1.63	1.83	1.83	0.57	1.03	1.54	1.79	0.85
9000	0.61	1.12	1.21	1.21		0.68	0.99	1.15	0.61	0.74	1.50	1.70	1.70	0.51	0.92	1.39	1.63	0.76
9300	0.57	1.08	1.18	1.20		0.62	0.93	1.11	0.56	0.70	1.45	1.64	1.69	0.47	0.83	1.29	1.56	0.70
9600	0.53	1.00	1.09	1.12		0.55	0.83	1.01	0.51	0.64	1.34	1.51	1.58	0.42	0.74	1.15	1.42	0.64
9900	0.48	0.93	1.01	1.04		0.49	0.75	0.93	0.46	0.60	1.24	1.40	1.47		0.67	1.03	1.30	0.58
10200	0.45	0.86	0.94	0.98		0.44	0.67	0.85	0.42	0.55	1.15	1.30	1.37		0.60	0.92	1.19	0.53
10500	0.41	0.80	0.87	0.91		0.40	0.61	0.78	0.39	0.51	1.07	1.20	1.29		0.54	0.83	1.09	0.48
10800		0.75	0.81	0.86			0.55	0.72	0.35	0.48	1.00	1.12	1.21		0.49	0.75	1.01	0.44
SECTIONS BELOW EXCEED THE NORMAL DELIVERY LENGTH OF 12000 mm																		
11100		0.70	0.76	0.81			0.50	0.66	0.33	0.45	0.93	1.04	1.14		0.44	0.68	0.92	0.41
11400		0.65	0.71	0.76			0.46	0.61	0.30	0.42	0.87	0.97	1.07		0.40	0.62	0.85	0.38
11700		0.61	0.66	0.72			0.42	0.56	0.28	0.41	0.81	0.91	1.01		0.57	0.78	0.35	

Bold capacities require grade 8.8 purlin bolts. Values above horizontal line in body of table are governed by the strength of the grade 8.8 bolt.
 IN = Inward load capacity. OUT = Outward load capacity. See also: Design notes for capacity tables.

Limit state capacity tables

Four lapped spans

Four lapped spans



Four lapped span: Z200 I5 (kN/m)

Bridging > (mm)	IN		OUT				Load for deflection span/150
	0	1, 2, 3	0	1	2	3	
Span 3000	10.05	10.05	10.05	10.05	10.05	10.05	24.69
3300	8.62	8.62	8.62	8.62	8.62	8.62	18.40
3600	6.93	7.47	7.47	7.47	7.47	7.47	14.07
3900	5.67	6.53	6.53	6.53	6.53	6.53	10.99
4200	4.72	5.74	5.74	5.74	5.74	5.74	8.75
4500	3.98	5.08	5.08	5.08	5.08	5.08	7.07
4800	3.40	4.53	4.53	4.53	4.53	4.53	5.79
5100	2.92	4.05	3.69	4.05	4.05	4.05	4.81
5400	2.53	3.64	3.02	3.64	3.64	3.64	4.03
5700	2.21	3.28	2.50	3.28	3.28	3.28	3.42
6000	1.95	2.91	2.09	2.91	2.91	2.91	2.92
6300	1.73	2.60	1.76	2.60	2.60	2.60	2.51
6600	1.54	2.33	1.50	2.33	2.33	2.33	2.18
6900	1.38	2.11	1.28	2.11	2.11	2.11	1.91
7200	1.24	1.91	1.07	1.89	1.91	1.91	1.70
7500	1.13	1.74	0.93	1.67	1.74	1.74	1.53
7800	1.02	1.60	0.82	1.48	1.60	1.60	1.37
8100	0.93	1.47	0.72	1.30	1.47	1.47	1.24
8400	0.85	1.35	0.64	1.14	1.35	1.35	1.12
8700	0.78	1.25	0.57	1.01	1.25	1.25	1.02
9000	0.71	1.16	0.51	0.90	1.16	1.16	0.93
9300	0.65	1.16	0.47	0.83	1.16	1.16	0.86
9600	0.60	1.08	0.42	0.74	1.06	1.08	0.78
9900	0.56	1.00		0.67	0.97	1.00	0.71
10200	0.51	0.94		0.60	0.89	0.94	0.65
10500	0.48	0.88		0.54	0.81	0.88	0.60
10800	0.45	0.82		0.47	0.73	0.82	0.55
SECTIONS BELOW EXCEED THE NORMAL DELIVERY LENGTH OF 12000 mm							
11100	0.42	0.78		0.43	0.66	0.78	0.51
11400		0.73			0.61	0.73	0.47
11700		0.69			0.55	0.69	0.44
12000		0.65			0.51	0.65	0.41

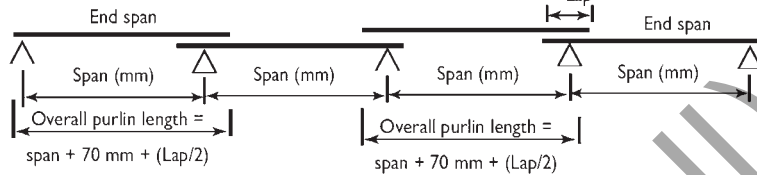
Bold capacities require grade 8.8 purlin bolts. Values above horizontal line in body of table are governed by the strength of the grade 8.8 bolt.
IN = Inward load capacity. OUT = Outward load capacity. See also: Design notes for capacity tables.



Limit state capacity tables

Four lapped spans

Four lapped spans

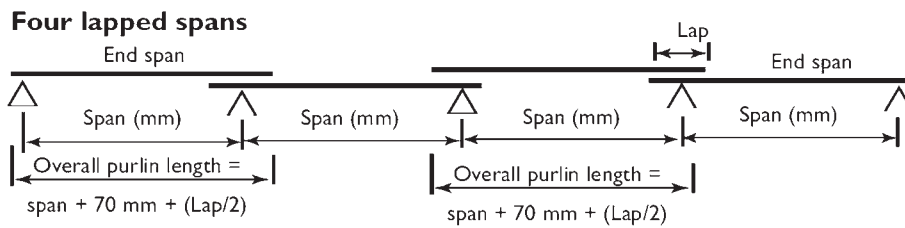


Span (mm)	Four lapped span: Z20019 (kN/m)								Load for def'n span/150	Four lapped span: Z20024 (kN/m)								Load for def'n span/150	Four lapped span: Z25019 (kN/m)								Load for def'n span/150
	IN				OUT					IN				OUT					IN				OUT				
Bridging >	0	1	2,3	0	1	2	3		0	1	2	3	0	1	2	3		0	1	2,3	0	1	2	3			
3000	14.21	18.71	18.71	18.71	18.71	18.71	18.71	35.18	18.71	18.71	18.71	18.71	18.71	18.71	18.71	18.71	46.45	16.52	16.52	16.52	16.52	16.52	16.52	16.52	57.13		
3300	11.11	16.38	16.38	16.38	16.38	16.38	16.38	26.22	14.52	17.04	17.04	17.04	17.04	17.04	17.04	17.04	34.62	14.29	14.29	14.29	14.29	14.29	14.29	14.29	42.58		
3600	8.92	13.72	13.72	13.72	13.72	13.72	13.72	20.05	11.35	15.65	15.65	15.65	15.65	15.65	15.65	15.65	26.47	11.46	12.49	12.49	12.49	12.49	12.49	12.49	32.56		
3900	7.31	11.63	11.63	11.63	11.63	11.63	11.63	15.66	9.10	14.47	14.47	14.47	14.47	14.47	14.47	14.47	20.68	9.36	11.01	11.01	11.01	11.01	11.01	11.01	25.43		
4200	6.09	9.99	9.99	9.77	9.99	9.99	9.99	12.46	7.44	13.45	13.45	13.45	13.33	13.45	13.45	13.45	16.45	7.75	9.78	9.78	9.78	9.78	9.78	9.78	20.24		
4500	5.13	8.66	8.66	8.01	8.66	8.66	8.66	10.07	6.19	12.57	12.57	12.57	11.06	12.57	12.57	12.57	13.30	6.48	8.73	8.73	8.73	8.73	8.73	8.73	16.36		
4800	4.36	7.56	7.56	6.48	7.56	7.56	7.56	8.26	5.23	10.99	10.99	10.99	9.12	10.99	10.99	10.99	10.90	5.50	7.84	7.84	7.84	7.84	7.84	7.84	13.41		
5100	3.73	6.52	6.52	5.10	6.52	6.52	6.52	6.85	4.46	9.48	9.48	9.48	7.40	9.48	9.48	9.48	9.05	4.70	7.07	7.07	7.07	7.07	7.07	7.07	11.13		
5400	3.23	5.68	5.68	4.22	5.68	5.68	5.68	5.75	3.85	8.26	8.26	8.26	6.06	8.26	8.26	8.26	7.59	4.07	6.40	6.40	6.40	6.40	6.40	6.40	9.33		
5700	2.82	5.00	5.00	3.53	5.00	5.00	5.00	4.87	3.35	7.26	7.27	7.27	5.02	7.27	7.27	7.27	6.43	3.55	5.82	5.82	4.66	5.82	5.82	5.82	7.90		
6000	2.48	4.43	4.43	2.99	4.43	4.43	4.43	4.16	2.94	6.37	6.44	6.44	4.21	6.33	6.44	6.44	5.49	3.12	5.31	5.31	3.93	5.31	5.31	5.31	6.75		
6300	2.20	3.95	3.95	2.55	3.95	3.95	3.95	3.58	2.60	5.63	5.75	5.75	3.55	5.53	5.75	5.75	4.73	2.76	4.86	4.86	3.34	4.86	4.86	4.86	5.81		
6600	1.96	3.55	3.55	2.19	3.55	3.55	3.55	3.12	2.32	5.01	5.16	5.16	3.00	4.85	5.16	5.16	4.14	2.46	4.46	4.46	2.86	4.46	4.46	4.46	5.04		
6900	1.75	3.21	3.21	1.88	3.12	3.21	3.21	2.74	2.08	4.49	4.66	4.66	2.55	4.28	4.66	4.66	3.65	2.20	4.07	4.07	2.44	4.07	4.07	4.07	4.40		
7200	1.58	2.91	2.91	1.62	2.75	2.91	2.91	2.41	1.87	4.04	4.23	4.23	2.18	3.80	4.23	4.23	3.23	1.98	3.70	3.70	2.09	3.68	3.70	3.70	3.86		
7500	1.43	2.65	2.65	1.40	2.42	2.65	2.65	2.14	1.69	3.65	3.86	3.86	1.88	3.38	3.86	3.86	2.87	1.79	3.37	3.37	1.81	3.22	3.37	3.37	3.40		
7800	1.30	2.43	2.43	1.22	2.12	2.43	2.43	1.91	1.54	3.32	3.53	3.53	1.63	3.00	3.53	3.53	2.57	1.63	3.08	3.08	1.57	2.81	3.08	3.08	3.02		
8100	1.18	2.23	2.23	1.07	1.87	2.23	2.23	1.71	1.40	3.02	3.25	3.25	1.42	2.67	3.24	3.25	2.31	1.48	2.83	2.83	1.37	2.40	2.83	2.83	2.71		
8400	1.08	2.06	2.06	0.94	1.60	2.06	2.06	1.54	1.28	2.77	2.99	2.99	1.25	2.35	2.94	2.99	2.07	1.36	2.61	2.61	1.21	2.12	2.61	2.61	2.45		
8700	0.99	1.91	1.91	0.83	1.43	1.91	1.91	1.39	1.17	2.54	2.77	2.77	1.10	2.08	2.67	2.77	1.86	1.24	2.42	2.42	1.06	1.89	2.42	2.42	2.23		
9000	0.91	1.77	1.77	0.73	1.28	1.77	1.77	1.26	1.08	2.34	2.57	2.57	0.98	1.85	2.44	2.57	1.68	1.14	2.24	2.24	0.94	1.69	2.24	2.24	2.04		
9300	0.86	1.73	1.76	0.67	1.20	1.70	1.76	1.16	1.01	2.27	2.56	2.56	0.89	1.71	2.35	2.56	1.55	1.07	2.23	2.23	0.85	1.58	2.23	2.23	1.88		
9600	0.79	1.59	1.64	0.59	1.08	1.55	1.64	1.06	0.93	2.09	2.38	2.38	0.79	1.54	2.14	2.38	1.41	0.99	2.08	2.08	0.75	1.42	2.08	2.08	1.72		
9900	0.73	1.48	1.53	0.53	0.98	1.41	1.53	0.97	0.87	1.94	2.21	2.22	0.71	1.38	1.96	2.22	1.29	0.92	1.94	1.94	0.67	1.28	1.88	1.94	1.58		
10200	0.68	1.37	1.43	0.47	0.89	1.28	1.43	0.89	0.80	1.80	2.05	2.08	0.64	1.24	1.80	2.04	1.18	0.85	1.81	1.81	0.60	1.16	1.70	1.81	1.46		
10500	0.63	1.27	1.34	0.43	0.81	1.16	1.34	0.82	0.75	1.68	1.91	1.95	0.58	1.11	1.65	1.89	1.08	0.79	1.68	1.70	0.54	1.05	1.54	1.70	1.34		
10800	0.59	1.19	1.26	0.39	0.73	1.05	1.26	0.75	0.70	1.56	1.78	1.83	0.52	1.00	1.51	1.75	1.00	0.74	1.57	1.59	0.49	0.94	1.35	1.59	1.23		
SECTIONS BELOW EXCEED THE NORMAL DELIVERY LENGTH OF 12000 mm																											
11100	0.55	1.11	1.18	0.36	0.93	1.18	0.70	0.65	1.46	1.66	1.72	0.47	0.91	1.38	1.63	0.92	0.69	1.46	1.50	0.44	0.85	1.24	1.50	1.14			
11400	0.52	1.04	1.11	0.30	0.85	1.10	0.64	0.61	1.36	1.55	1.62	0.43	0.82	1.25	1.51	0.85	0.64	1.36	1.41	0.40	0.77	1.13	1.41	1.05			
11700	0.48	0.97	1.05	0.25	0.79	1.02	0.60	0.57	1.27	1.46	1.53	0.39	0.75	1.15	1.41	0.78	0.60	1.27	1.33	0.36	0.70	1.04	1.33	0.97			
12000	0.45	0.91	0.99	0.20	0.72	0.95	0.56	0.54	1.19	1.37	1.45	0.35	0.68	1.05	1.31	0.73	0.56	1.18	1.26	0.32	0.64	0.96	1.26	0.91			

Bold capacities require grade 8.8 purlin bolts. Values above horizontal line in body of table are governed by the strength of the grade 8.8 bolt.
 IN = Inward load capacity. OUT = Outward load capacity. See also: Design notes for capacity tables. In mixed spans, the thicker section is used in the end spans.

Limit state capacity tables

Four lapped spans



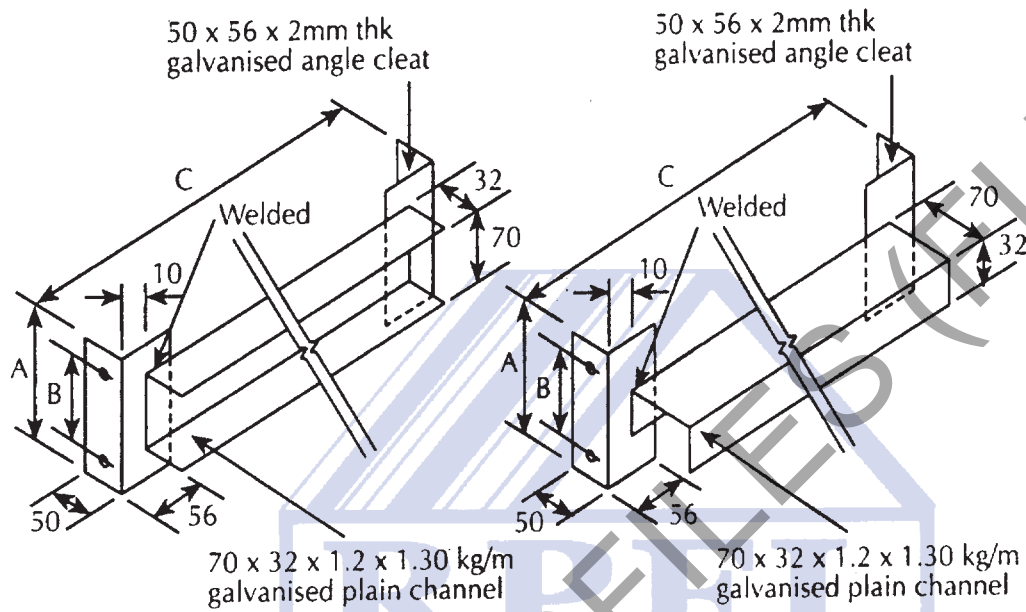
Four lapped span: Z25024 (kN/m)

0	IN			OUT				Load for deflect'n span/150
	1	2	3	0	1	2	3	
18.71	18.71	18.71	18.71	18.71	18.71	18.71	18.71	78.80
17.04	17.04	17.04	17.04	17.04	17.04	17.04	17.04	58.73
14.20	15.65	15.65	15.65	15.65	15.65	15.65	15.65	44.90
11.35	14.47	14.47	14.47	14.47	14.47	14.47	14.47	35.08
9.27	13.45	13.45	13.45	13.45	13.45	13.45	13.45	27.91
7.70	12.57	12.57	12.57	12.57	12.57	12.57	12.57	22.56
6.48	11.80	11.80	11.80	11.80	11.80	11.80	11.80	18.50
5.53	11.12	11.12	11.12	9.68	11.12	11.12	11.12	15.35
4.76	10.51	10.51	10.51	7.90	10.51	10.51	10.51	12.87
4.14	9.31	9.31	9.31	6.53	9.31	9.31	9.31	10.90
3.63	8.26	8.26	8.26	5.47	8.26	8.26	8.26	9.31
3.21	7.37	7.37	7.37	4.60	7.37	7.37	7.37	8.01
2.86	6.62	6.62	6.62	3.87	6.49	6.62	6.62	6.95
2.56	5.97	5.98	5.98	3.28	5.72	5.98	5.98	6.06
2.30	5.36	5.42	5.42	2.80	5.05	5.42	5.42	5.32
2.08	4.84	4.95	4.95	2.41	4.48	4.95	4.95	4.70
1.89	4.39	4.53	4.53	2.09	3.95	4.53	4.53	4.19
1.72	4.00	4.16	4.16	1.82	3.48	4.16	4.16	3.75
1.57	3.66	3.84	3.84	1.59	3.07	3.84	3.84	3.38
1.44	3.36	3.55	3.55	1.40	2.71	3.55	3.55	3.06
1.33	3.09	3.29	3.29	1.23	2.41	3.26	3.29	2.77
1.23	2.97	3.28	3.28	1.12	2.22	3.13	3.28	2.55
1.14	2.74	3.05	3.05	1.00	1.99	2.85	3.05	2.33
1.06	2.53	2.85	2.85	0.89	1.78	2.61	2.85	2.13
0.98	2.34	2.66	2.66	0.80	1.59	2.38	2.66	1.96
0.91	2.17	2.49	2.49	0.72	1.43	2.17	2.49	1.80
0.85	2.02	2.34	2.34	0.65	1.28	1.97	2.34	1.65
SECTIONS BELOW EXCEED THE NORMAL DELIVERY LENGTH OF 12000 mm								
0.80	1.88	2.20	2.20	0.59	1.16	1.79	2.18	1.52
0.74	1.75	2.07	2.08	0.53	1.05	1.63	2.02	1.40
0.70	1.64	1.94	1.96	0.49	0.95	1.49	1.88	1.30
0.65	1.53	1.82	1.85	0.44	0.87	1.36	1.75	1.20

Bold capacities require grade 8.8 purlin bolts. Values above horizontal line in body of table are governed by the strength of the grade 8.8 bolt. IN = Inward load capacity. OUT = Outward load capacity. See also: Design notes for capacity tables. In mixed spans, the thicker section is used in the end spans.

Bridging piece

Purlins are normally braced by alternating bridging members and tie rods. For flat roofs, up to 10° slope, alternate bridging without tie rods may be used.

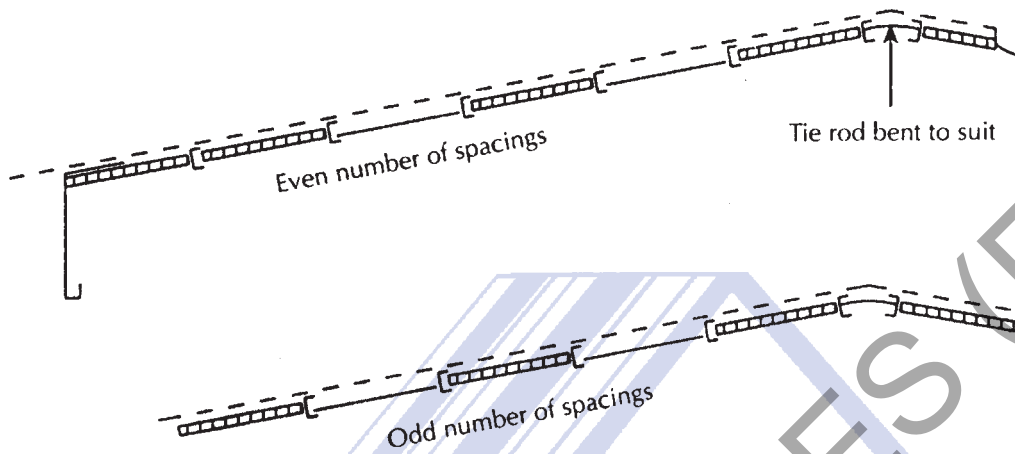


Purlin depth (mm)	A (mm)	B (mm)	C
102	65	40	Purlin spacing
152	115	60	less 2mm
203	160	110	
254	215	160	



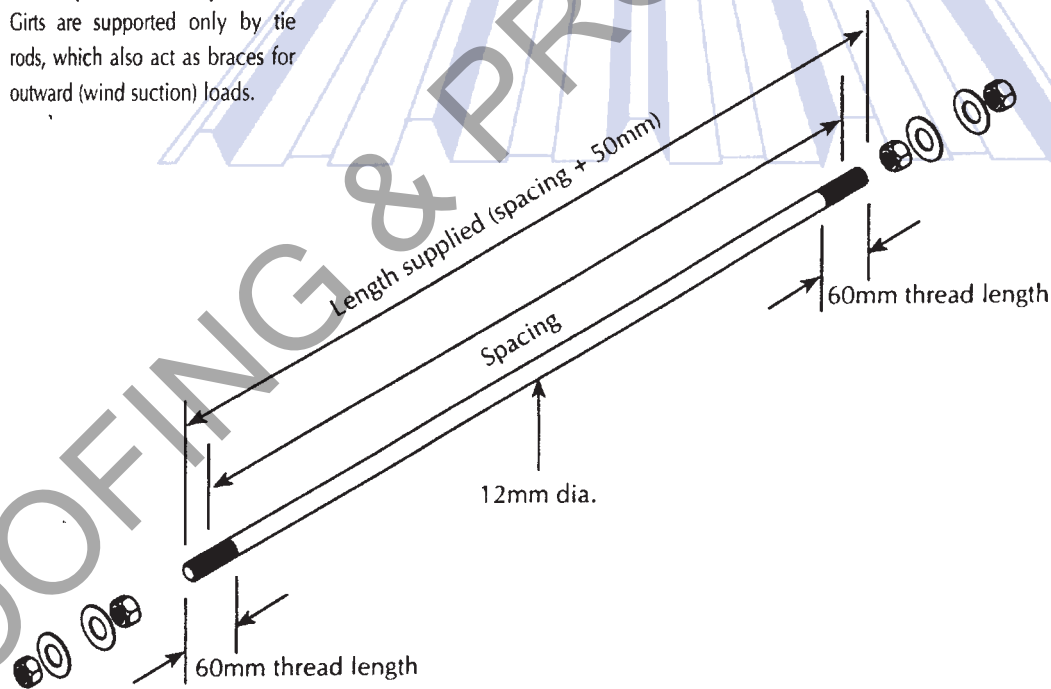
Bridging and tie rod arrangements

For flat roofs, up to 10° slope, alternate bridgings without tie rods may be used. Tie rods are located in lower bridging holes

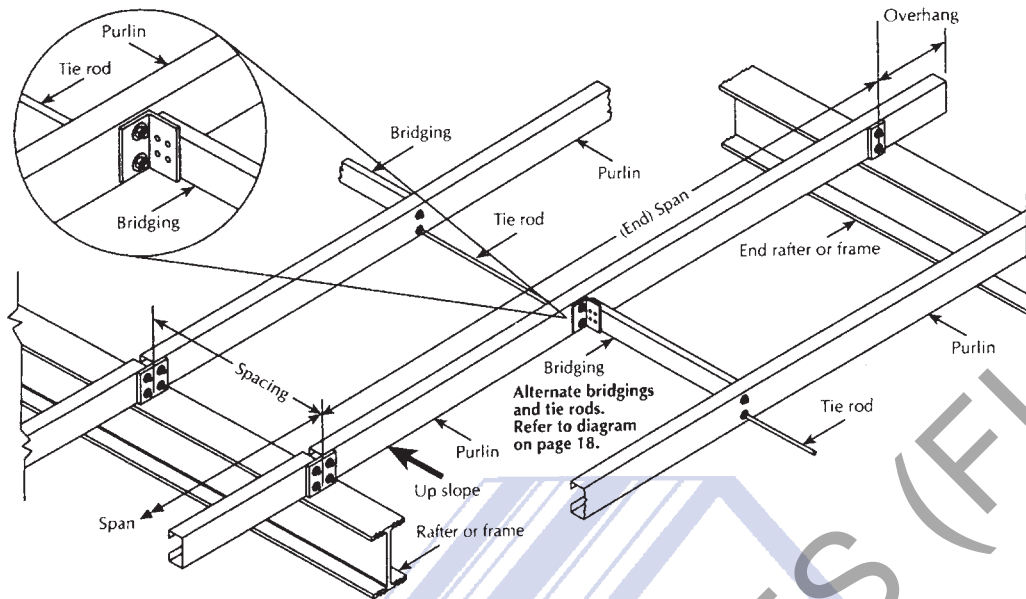


Tie rod (GALVANISED)

Girts are supported only by tie rods, which also act as braces for outward (wind suction) loads.

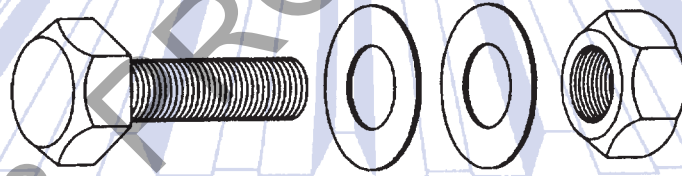


Purlin bridging system



Typical arrangement of in-line C Purlins

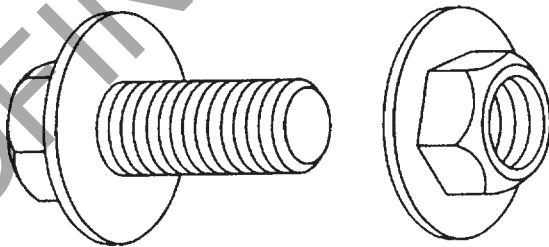
Upper lip of C purlins should face up the slope. Outside lip of girts should face upward.



PB1230 Standard purlin bolt M12 x 30mm grade 4.6 with nut and washers HD Galvanised

PB1230OHS High Strength purlin bolt

M12 x 30mm grade 8.8 with nut and washers.HD Galvanised



Purlins bolts and nuts (flanged)

PB1230 Standard **RPFL** purlin bolt

M12 x 30mm with nut

PB1230OHS High Strength **RPFL** purlin bolt

M12 x 30mm with nut Grade 8.8.

