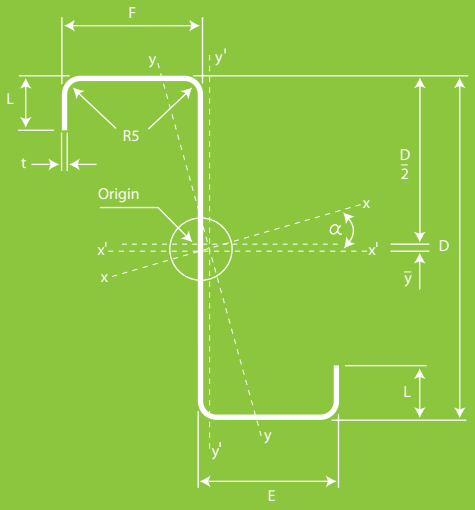
Steeline

Service over and above

Steeline Standard Purlin Range

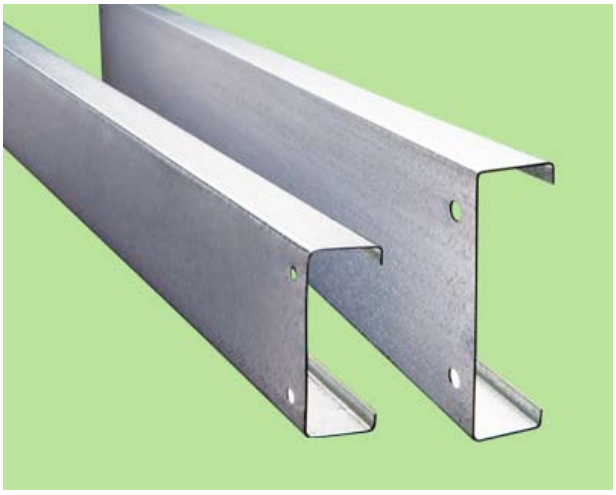
DESIGN MANUAL



steeline.com.au

CONTENTS

IMPORTANT NOTES..... 1-1
DISCLAIMER..... 1-1
INTRODUCTION.....1-2
HOW TO USE THE DESIGN CAPACITY TABLES.....1-2
HOLES IN PURLINS.....1-8
BRIDGING CONFIGURATIONS.....1-9
ORDER FORM – BRIDGING.....1-10
ORDER FORM – PURLINS.....1-11
DESIGN PRINCIPLES.....1-12
DESIGN CAPACITY TABLES - SINGLE SPANS.....2-1
DESIGN CAPACITY TABLES - DOUBLE SPANS 3-1
DESIGN CAPACITY TABLES - 2 LAPPED SPANS..... 4-1
DESIGN CAPACITY TABLES - 5 LAPPED SPANS..... 5-1



IMPORTANT NOTES

This Design Guide has been prepared for the industry standard range of purlins manufactured and distributed by Steeline.

Steeline standard purlins are manufactured from high quality Bluescope GALVASPAN® steel with strictly controlled dimensions and tolerances.

The design capacity tables in this manual have been calculated using the limit state design principles in accordance with Australian Standard AS/NZS 4600-2018 using software developed by the Centre for Advanced Structural Engineering, University of Sydney.

DISCLAIMER

This manual has been prepared for purlins manufactured by Steeline and is intended to be an aid for building professionals. It is not a substitute for professional advice. We recommend that specialist advice be sought to confirm the suitability of the products for the proposed application.

PREPARED FOR STEELINE MEMBERS PTY LTD BY:
FERNANDES AND ASSOCIATES PTY LTD
CONSULTING ENGINEERS
(www.fernandes.net.au)

Rev.10122018

INTRODUCTION

Steeline standard purlins are available in Z or C cross sections, with heights of 100, 150, 200, 250, 300, 350 and 400mm and thicknesses of 1.0, 1.2, 1.5, 1.9, 2.4 and 3.0mm (BMT). This design manual has been prepared to assist Steeline customers to develop economic design solutions for their projects.

Steeline also manufactures or stocks accessories such as bolted and boltless bridging systems, brackets, cleats, and fasteners that can be used with the Steeline standard purlins.

HOW TO USE THE DESIGN CAPACITY TABLES

The design capacity tables have been prepared using uniformly distributed loads. The tables have been prepared for inwards and outwards loads with 0, 1, 2 or 3 bridgings. Inwards loads are towards the roof and outward loads are away from the roof (uplift). To use the tables, loads have to be converted to uniformly distributed loads.

Loads which give deflections of Span/150 are also given in the capacity tables. To obtain deflections for other loads linear proportioning may be used.

PURLIN SIZES AND PROPERTIES

Table 1 lists the purlin sizes available. All sizes are available with pre-punched holes and with a full range of accessories including bridging, brackets, bolts, nuts and washers. Purlins without pre-punched holes may also be available by contacting Steeline.

TABLE 1 – Nominal Sizes of Steeline C and Z Purlins

Nominal purlin height (mm)	Available in thicknesses - BMT (mm)
100	1.0, 1.2 and 1.9
150	1.2, 1.5, 1.9 and 2.4
200	
250	1.5, 1.9 and 2.4
300	1.9, 2.4 and 3.0
350	2.4 and 3.0
400	2.4 and 3.0

C sections have equally sized top and bottom flanges and are suitable for simply supported spans and continuous spans. Continuous spans have less deflection than single spans. C sections cannot be lapped.

Z sections are manufactured with one broad flange and one narrow flange so that they can be lapped. Lapping increases the thickness of the metal over the interior supports resulting in higher load capacities in the lapped joints. Z sections of the same depth and different thicknesses can be lapped in any required configuration. Z sections can also be used for single and continuous spans without laps.

MATERIAL

Steeline standard purlins are roll-formed from high-strength zinc coated GALVASPAN® steel conforming to AS 1397/ Z350. The strength of steel varies with the base material thickness (BMT).
Table 2 indicates purlin thickness and the strength of steel.

TABLE 2 – Material Strength and Coating Mass

Purlin thickness (mm)	Min. yield stress (MPa)	Min. Ultimate tensile strength (MPa)	Z350 Min. total coating mass (g/m^2)
1.0	550	550	350
1.2	500	520	
1.5	450	480	
1.9			
2.4			
3.0			

CORROSION PROTECTION

Steeline standard purlins are manufactured from GALVASPAN® steel and are covered by BlueScope warranty. Refer to www.bluescopesteel.com for warranty details. The steel is coated with a coating mass of 350g/ m2 total on both sides. This provides a long and trouble-free service life without having to provide additional protection for normal non-aggressive environments.

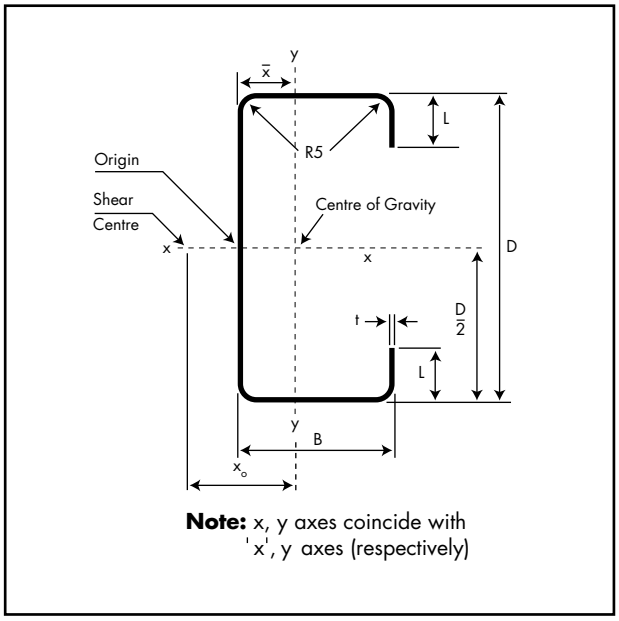
For more severe environments, heavier coating masses may be available. Please consult Steeline for further information or advice.

Rev.10122018

CROSS SECTION PROPERTIES

The cross section properties of the Steeline standard purlins are given in tables 3 to 5.

FIGURE 1 Steeline C-Section Purlins



Note: x, y axes coincide with 'x', y axes (respectively)

FIGURE 2 Steeline Z-Section Purlins

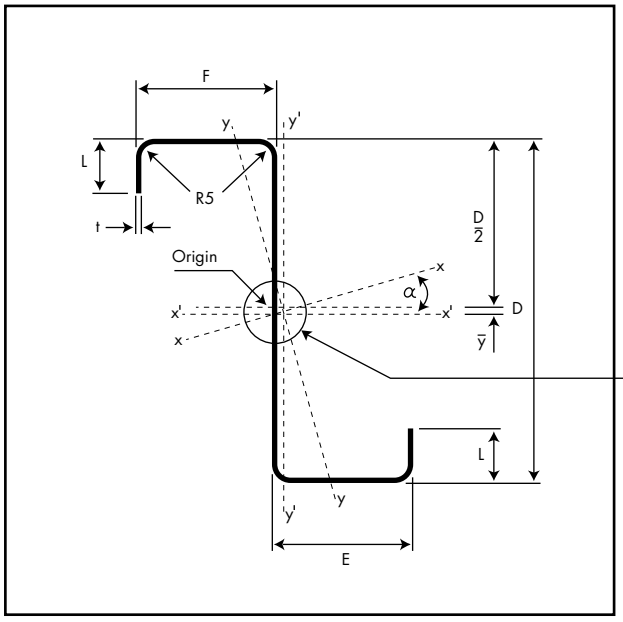
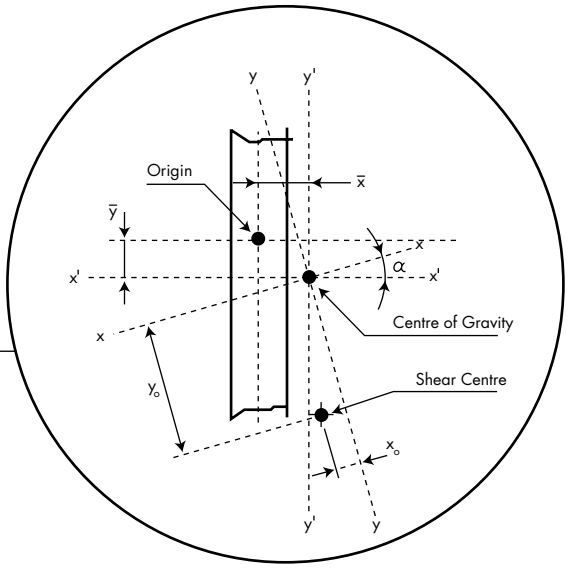


FIGURE 3 Steeline Z-Section Details



Rev.10122018

TABLE 3 Purlins Dimensions and Weight

Section size (mm)	t (mm)	D (mm)	Z Sections			C Sections		Mass (kg/m)
			E (mm)	F (mm)	L (mm)	B (mm)	L (mm)	
100-10	1.0	102	53	49	12.5	51	12.5	1.78
100-12	1.2	102	53	49	12.5	51	12.5	2.01
100-15	1.5	102	53	49	13.5	51	13.5	2.62
100-19	1.9	102	53	49	14.5	51	14.5	3.29
150-12	1.2	152	65	61	15.5	64	14.5	2.89
150-15	1.5	152	65	61	16.5	64	15.5	3.59
150-19	1.9	152	65	61	17.5	64	16.5	4.51
150-24	2.4	152	66	60	19.5	64	18.5	5.70
200-12	1.2	203	79	74	15.0	76	15.0	3.59
200-15	1.5	203	79	74	15.0	76	15.5	4.49
200-19	1.9	203	79	74	18.5	76	19.0	5.74
200-24	2.4	203	79	73	21.5	76	21.0	7.24
250-15	1.5	254	79	74	18.0	76	18.0	5.15
250-19	1.9	254	79	74	18.0	76	18.5	6.50
250-24	2.4	254	79	73	21.0	76	20.5	8.16
300-19	1.9	300	100	93	27.0	96	26.5	7.99
300-24	2.4	300	100	93	27.0	96	27.5	10.09
300-30	3.0	300	100	93	31.0	96	31.5	12.76
350-24	2.4	350	129	121	30.0	125	29.0	12.18
350-30	3.0	350	129	121	30.0	125	30.0	15.23
400-24	2.4	400	129	121	30.0	125	28.0	13.16
400-30	3.0	400	129	121	30.0	125	30.0	16.39

TABLE 4 C Sections - Full Section Properties

Section size (mm)	Area (mm^2)	Second moment of area (x 10^6 mm^4)		Second modulus (x 10^3 mm^3)		Radius of gyration (mm)		Torsion constant (mm^4)	Warping constant (x $10^6 mm^6$)	Mono-symmetry constant (mm)	Shear centre (mm)	Centre of gravity (mm)
		I_x	I_y	Z_x	Z_y	rx	ry	J	I_w	β_y	x_o	$\bar{x}$
C10010	215	0.36	0.08	7.13	2.19	41.1	18.7	71.8	160	123.3	-39.9	16.1
C10012	258	0.43	0.09	8.48	2.59	41.0	18.6	123.6	188	122.8	-39.7	16.0
C10015	323	0.54	0.11	10.54	3.29	40.8	18.7	241.9	241	122.4	-40.1	16.1
C10019	409	0.67	0.14	13.20	4.21	40.6	18.7	491.6	311	121.8	-40.4	16.2
C15012	354	1.29	0.19	16.97	4.17	60.4	23.1	169.9	842	171.2	-46.5	18.3
C15015	443	1.61	0.24	21.14	5.29	60.3	23.1	331.9	1071	170.5	-46.9	18.4
C15019	561	2.02	0.30	26.60	6.75	60.0	23.1	674.5	1370	169.7	-47.1	18.5
C15024	712	2.54	0.39	33.47	8.79	59.8	23.3	1367.0	1807	168.5	-48.0	18.9
C20012	444	2.83	0.32	28.06	5.79	79.8	26.7	213.3	2459	223.6	-51.6	19.9
C20015	555	3.53	0.40	34.73	7.35	79.7	26.7	416.0	3063	223.2	-51.6	19.9
C20019	713	4.51	0.53	44.45	9.77	79.6	27.3	858.0	4240	221.0	-53.6	20.8
C20024	906	5.69	0.68	56.03	12.67	79.3	27.4	1740.0	5540	219.0	-54.4	21.1
C25015	639	6.05	0.45	47.89	7.93	97.3	26.4	479.1	5473	276.8	-48.6	18.2
C25019	808	7.62	0.56	59.98	9.86	97.1	26.4	971.7	6860	276.4	-48.5	18.1
C25024	1020	9.62	0.72	75.74	12.79	96.9	26.5	1970.0	8920	273.9	-49.3	18.4
C30019	1001	13.50	1.20	90.57	17.36	116.1	34.6	1205.0	21230	320.8	-65.9	25.0
C30024	1260	17.00	1.51	113.10	21.68	116.0	34.6	2430.0	26800	319.8	-66.0	25.0
C30030	1600	21.25	1.96	142.20	28.50	116.0	35.0	4790.0	35700	315.8	-67.9	25.8
C35024	1530	28.80	3.07	165.71	34.30	137.2	44.7	2938.0	72300	379.4	86.3	33.2
C35030	1910	35.80	3.82	204.60	42.28	137.0	44.7	5730.0	90000	378.4	-86.3	33.2
C40024	1645	39.21	3.15	197.3	34.20	154.4	43.8	3159.0	95530	433.8	-81.0	30.5
C40030	2060	48.94	3.96	246.5	43.47	154.1	43.9	6179.0	121000	431.6	-81.7	30.8

Rev.10122018

TABLE 5 Z Sections - Full Section Properties

Section	Area (mm^2)	Second moment of area ($x\ 10^6\ mm^4$)		Second modulus ($x\ 10^3\ mm^3$)		Radius of gyration (mm)		Mono-symmetry constant (mm)		Torsion constant (mm^4)	Warping constant ($x\ 10^6 mm^6$)	Shear centre (mm)		Centre of gravity (mm)		∝ (deg.)
		I_x	I_y	Z_x	Z_y	rx	ry	B_x	β_y	J	I_w	x_o	y_o	$\bar{x}$	$\bar{y}$	
Z10010	215	0.36	0.13	7.00	2.56	41	24.6	9.9	11.8	71.9	215	-1.94	-4.73	1.11	-0.94	27.6
Z10012	258	0.43	0.16	8.32	3.02	41	24.5	9.9	11.8	123.8	252	-1.94	-4.75	1.11	-0.94	27.5
Z10015	323	0.54	0.20	10.34	3.84	41	24.7	9.9	11.8	241.9	321	-1.95	-4.75	1.11	-0.94	27.8
Z10019	409	0.67	0.25	12.96	4.92	41	24.7	9.9	11.7	491.6	409	-1.96	-4.77	1.12	-0.94	28.1
Z15012	354	1.28	0.30	16.68	4.78	60	29.3	12.4	12.7	169.9	1156	-1.88	-5.89	1.01	-1.03	21.8
Z15015	443	1.60	0.38	20.78	6.06	60	29.4	12.4	12.6	331.9	1462	-1.89	-5.90	1.01	-1.02	22.0
Z15019	561	2.01	0.49	26.13	7.73	60	29.5	12.5	12.6	674.5	1859	-1.90	-5.92	1.02	-1.02	22.1
Z15024	712	2.53	0.63	32.65	10.00	60	29.8	18.7	18.6	1367	2407	-2.88	-8.87	1.54	-1.52	22.5
Z20012	446	2.84	0.50	27.79	6.58	80	33.6	17.5	17.0	213.9	3476	-1.65	-9.90	1.18	-1.36	18.6
Z20015	555	3.53	0.62	34.30	8.05	80	33.4	17.6	17.1	416.3	4261	-2.26	-8.30	1.17	-1.36	18.5
Z20019	713	4.52	0.84	43.90	10.97	80	34.4	17.4	16.8	857.4	5830	-2.30	-8.24	1.19	-1.34	19.1
Z20024	906	5.67	1.10	55.29	14.37	80	34.8	21.0	19.8	1740	7626	-2.79	-9.94	1.45	-1.60	19.4
Z25015	640	6.07	0.67	47.51	8.77	97	32.4	22.3	19.8	480.3	7666	-1.53	-12.23	1.05	1.48	14.1
Z25019	808	7.62	0.83	59.33	10.81	97	32.1	25.9	23.5	971.7	9478	-2.69	-12.16	1.34	-1.87	14.7
Z25024	1026	9.64	1.09	74.89	14.17	97	32.5	27.0	23.5	1971	12370	-2.62	-12.79	1.27	-1.77	14.3
Z30019	1005	13.57	1.87	89.83	19.38	116	43.2	28.6	25.4	1209.0	29630	-2.29	-15.86	1.56	-1.97	16.1
Z30024	1264	16.99	2.32	111.79	23.85	116	42.8	20.9	17.2	2427	36570	-1.99	-10.19	0.94	-1.00	16.2
Z30030	1595	21.35	3.04	140.50	31.36	116	43.6	21.3	16.9	4786	48200	-2.02	-10.42	0.94	-0.94	16.6
Z35024	1535	28.89	4.83	164.2	38.74	140	56.1	29.2	27.4	2947	101200	-2.66	-16.44	1.86	-2.17	17.9
Z35030	1910	35.80	5.93	202.07	47.22	137	55.7	21.6	19.1	5731	123644	-2.38	-10.49	1.16	-1.19	18.0
Z40024	1655	39.48	4.83	196.3	38.70	155	54.0	34.0	30.3	3177	136100	-2.49	-18.72	1.73	-2.31	15.0
Z40030	2069	49.19	6.06	244.9	48.76	154	54.1	34.0	30.2	6206	170600	-2.51	-18.76	1.73	-2.30	15.0

DELIVERY LENGTHS

The maximum lengths for standard deliveries are up to 12 metres. For lengths greater than 12 metres transportation hours are restricted by state laws. Suitable transportation and on-site handling facilities are required for delivery lengths of over 12 metres.

PACKING

Steeline standard purlins are delivered in strapped bundles weighing up to 1 tonne.

Accessories are delivered in bags, packages or in strapped/wired bundles.

STORAGE

The purlins and accessories should not be left exposed to the weather for a long period of time.

Ideally the purlins and accessories should be kept under cover sheltered from the rain if they are not to be used immediately. If this is not possible, the sections and accessories should be stacked neatly above the ground. The ground should be on a slight slope which drains the water away from the purlins.

ACCESSORIES

A full range of accessories is available from Steeline. Accessories such as bridging, purlins bolts, cleats and brackets are available. Figure 4 shows some of the accessories available.

M12 and M16 purlin bolts, nuts and washers are available in grades 4.6 (standard strength) and 8.8 (high strength).

Boltless bridging is available to securely brace both Z and C purlins. Bridging controls lateral deflection and twisting in the purlins and straighten the purlins prior to fixing the cladding. Bridging is manufactured from compatible material and can be loaded in tension, compression and bending. A continuous run of bridging provides an effective stabilizer for both the wall and roof.

Please contact Steeline for a comprehensive range of accessories available.

Rev.10122018

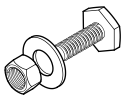
FIGURE 4 Accessories available

Purlin Bolts

M12 Size PB1230 standard purlin bolt (grade 4.6): M12x30mm with nut

Fascia Bolts

PB1230 fascia bolt (grade 4.6): M12x30mm with nut

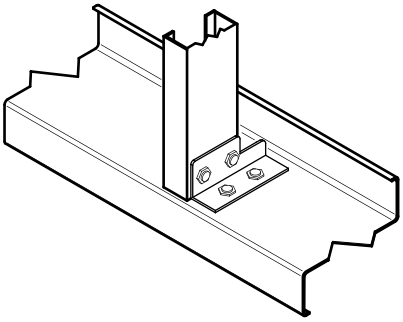


Purlin Bolts

M12 Size PB1230 standard purlin bolt (grade 4.6): M16x45mm with nut

Adaptor Bracket

(4 bolts)
200 - 150
200 - 100
150 - 100



General Purpose Bracket

6 holes: 18mm diam

Cat. NO	A	B	C	D	E	F
GPB100	14	40	14	35	50	25
GPB150	23	64	23	35	65	25
GPB200	24	110	24	35	75	25
GPB250	24	160	24	35	75	25

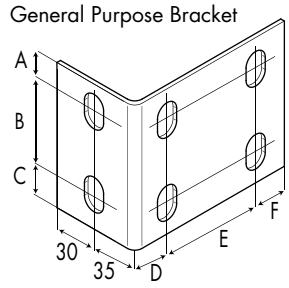
Clamp Plate

Cat. NO	A mm
AC100	90
AC150	140
AC200	190
AC250	240

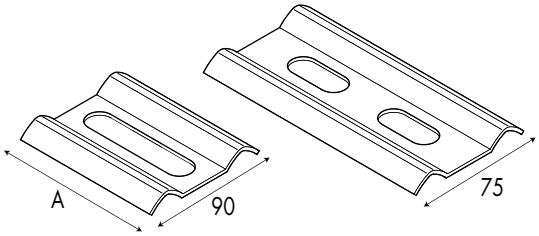
Angle Connector

Cat. NO	A mm
AC100	90
AC150	140
AC200	190
AC250	240

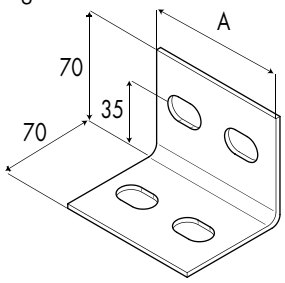
General Purpose Bracket



Clamp Plate



Angle Connector

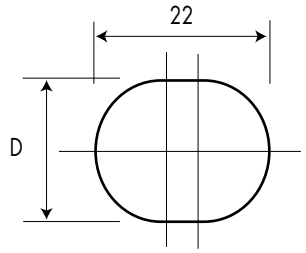


Rev.10122018

HOLES IN PURLINS

Z and C sections are normally supplied with holes punched. The holes can be used for bolting the sections to cleats, lapped connections and for attaching bridging. Table 6 indicate the hole sizes and centres for the range of C and Z sections.

Dimensions in mm



Standard elongated punched hole.
Holes equally spaced above and below centre line.

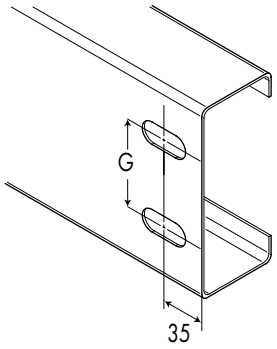


TABLE 6 Hole Sizes in Purlins

Standard Purlin - nominal size (mm)	G (mm)	D (mm)
100	40	18
150 (Vic only)	70	18
150 (Other states)	60	18
200	110	18
250	160	18
300	210	22
350	260	22
400	310	22

CLEATS

The purlins are generally attached to cleats welded to rafters or other structural members. The cleat dimensions are shown in Table 7.

The hole centres in the cleats match the holes in the purlins. The first hole from the bottom of the cleat is positioned to leave a gap of 10mm between the purlin and the rafter.

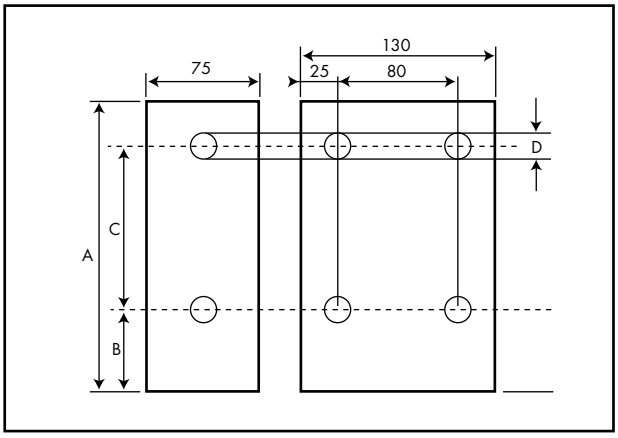


TABLE 7 2 and 4 Hole Cleats - Nominal Dimensions

Nominal purlin size	A	B	C	Hole diam, D	Cleat thickness
100	105	40	40	18	8
150 (Vic only)	145	50	70	18	8
150 (Other states)	145	55	60	18	8
200	195	55	110	18	8
250	245	55	160	18	8
300	305	65	210	22	12
350	355	65	260	22	12
400	410	65	310	22	12

ORDERING

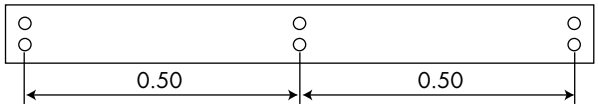
To place orders for purlins and accessories contact your nearest Steeline store. To find a Steeline store closest to you, visit www.steeline.com.au. For your convenience order forms are included on pages 1-10 and 1-11 of this manual.

Rev.10122018

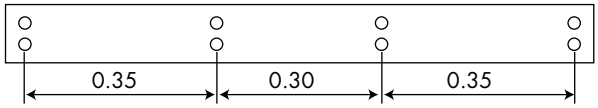
BRIDGING HOLE POSITIONS

The bridging hole positions in the webs of the purlins are shown in figures 5A to 5D.

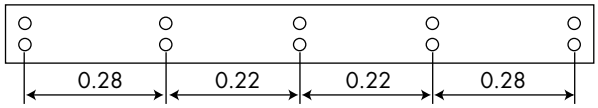
FIGURE 5A – Bridging Positions – Single Spans



Single Span - 1 row of bridging

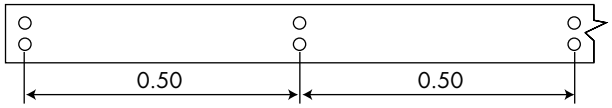


Single Span - 2 rows of bridging

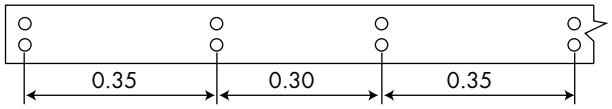


Single Span - 3 rows of bridging

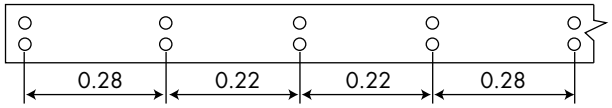
FIGURE 5B – Bridging Positions – End Spans (unlapped)



End Span - (continuous) 1 row of bridging

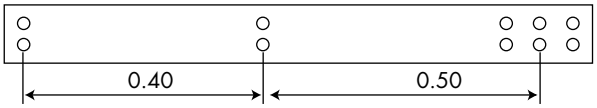


End Span - (continuous) - 2 rows of bridging

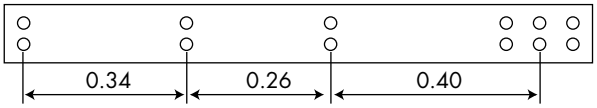


End Span - (continuous) - 3 rows of bridging

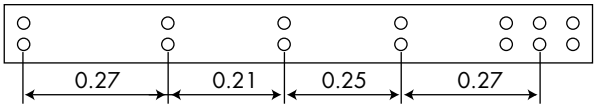
FIGURE 5C – Bridging Positions – End Spans (lapped)



End Span (lapped) - 1 row of bridging

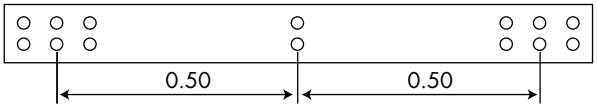


End Span (lapped) - 2 rows of bridging

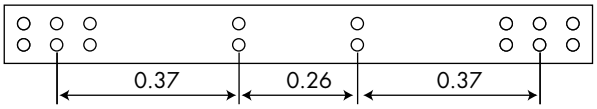


End Span (lapped) - 3 rows of bridging

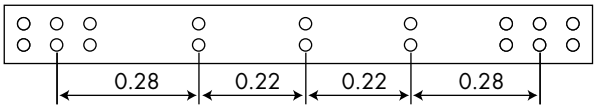
FIGURE 5D – Bridging Positions – Inside Spans



Inside Span (lapped or unlapped) - 1 row of bridging



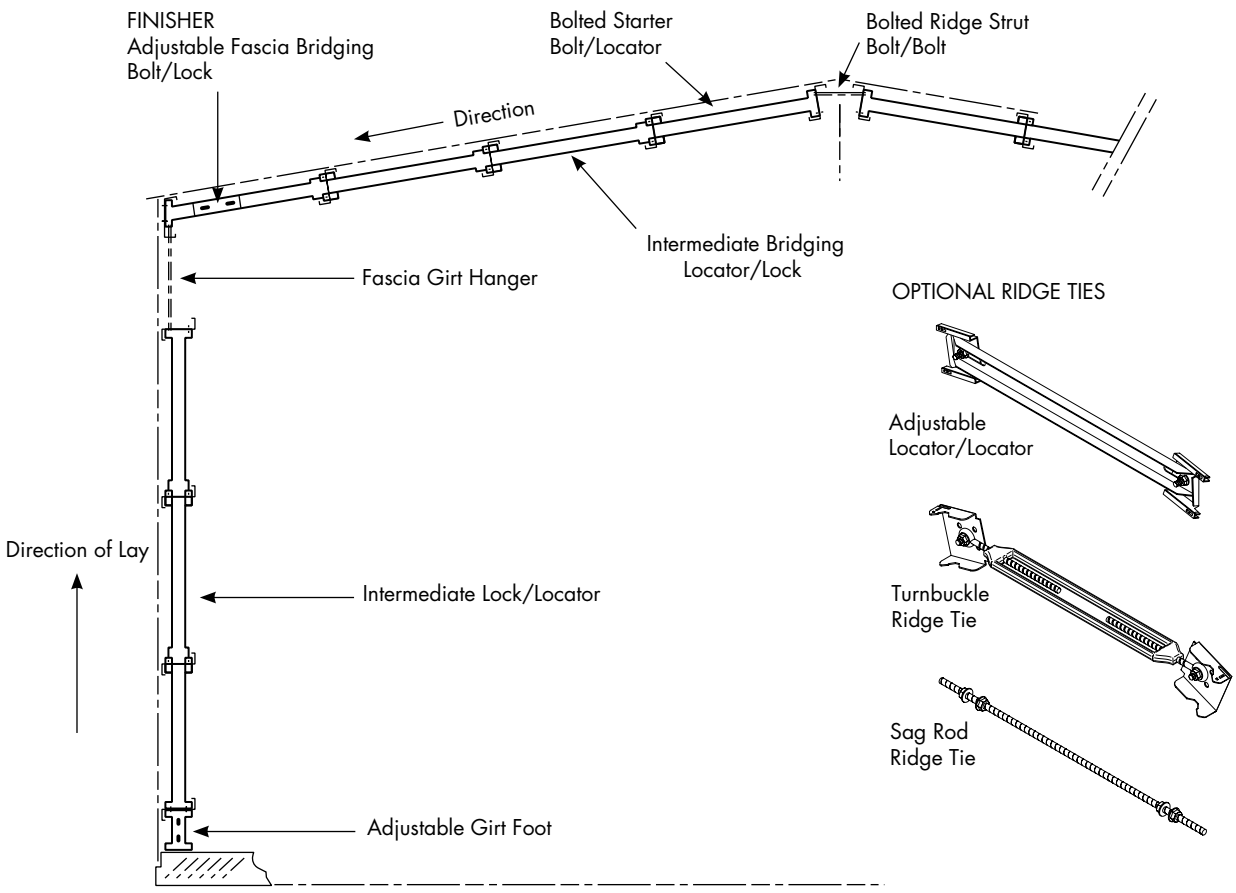
Inside Span (lapped or unlapped) - 2 rows of bridging



Inside Span (lapped or unlapped) - 3 rows of bridging

Rev.10122018

BRIDGING CONFIGURATIONS



Intermediate Bridging
Place locator end through purlin holes as per Diagram 1. Snap the next piece of bridging into place by pushing the lock into the locator.

Diagram 1.

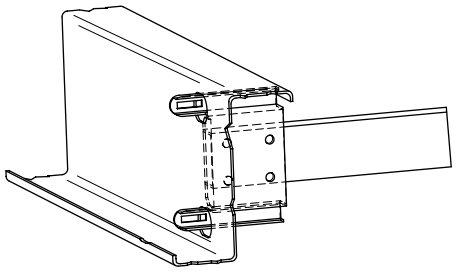
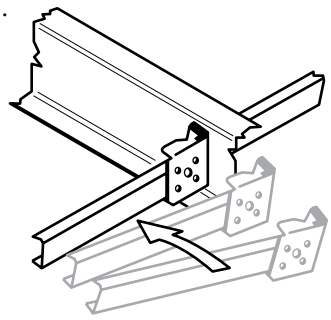


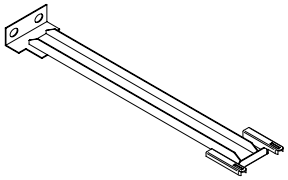
Diagram 2.



Rev.10122018

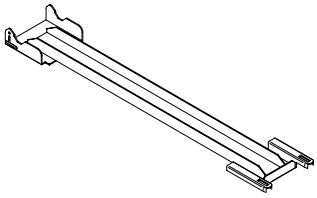
ORDER FORM BRIDGING

Client		Job No.	
Project		Sheet No.	of
DRN	CH'D	Date	
HAVE YOU DEDUCTED 2mm FROM CLEAT CENTRES?		Yes	No



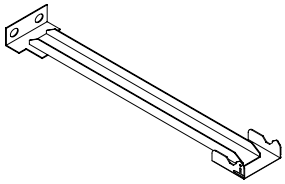
Bolted Starter
(BOLT/LOCATOR) 003

No. Req'd	O/All Length	Mark	Centre



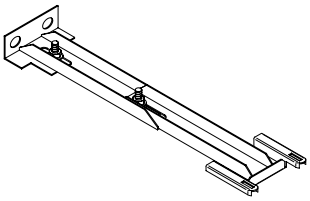
Intermediate
(LOCK/LOCATOR) 001

No. Req'd	O/All Length	Mark	Centre



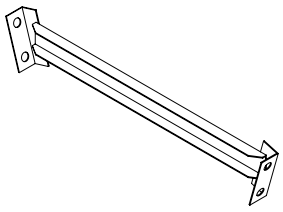
Bolted Finisher
(BOLT/LOCK) 004

No. Req'd	O/All Length	Mark	Centre



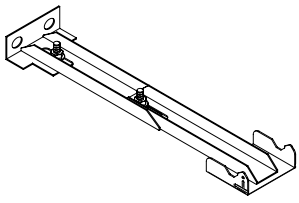
Adjustable Starter
(BOLT/LOCATOR)

No. Req'd	O/All Length	Mark	Centre	Set Angle



Apex Ridge Strut
(BOLT/BOLT)

No. Req'd	O/All Length	Mark	Centre	Set Angle



Adjustable Finisher
(BOLT/LOCK)

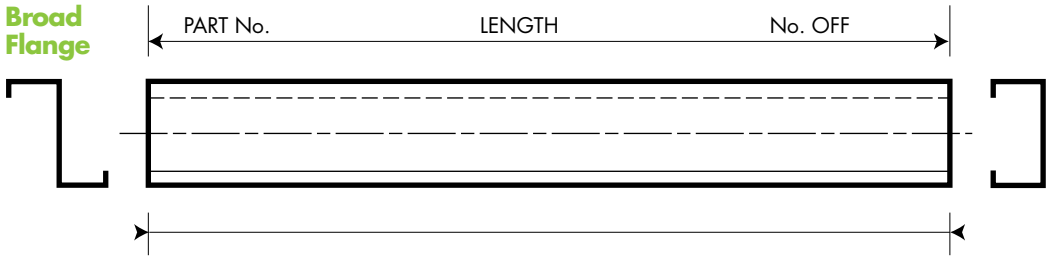
No. Req'd	O/All Length	Mark	Centre	Set Angle

Rev. 10122018

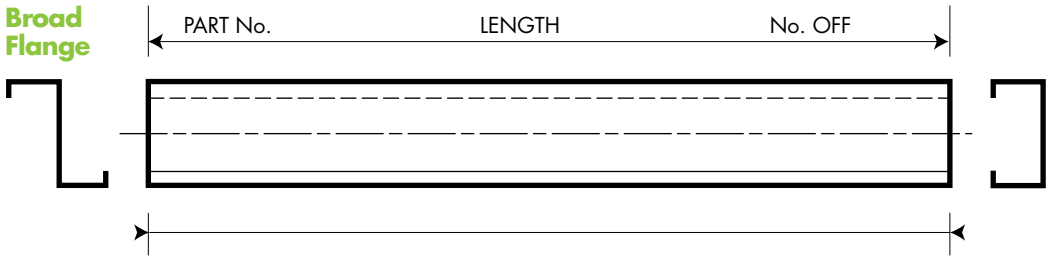
ORDER FORM STEELINE STANDARD PURLINS

Client					Date / /		Sheet No.
Project							
By	Checked	Holes	Other Options	Finish	Delivery Date	Sales Docket	Z/C

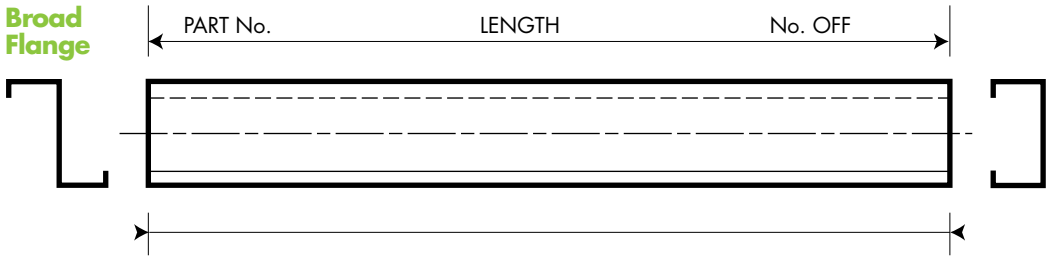
Broad Flange



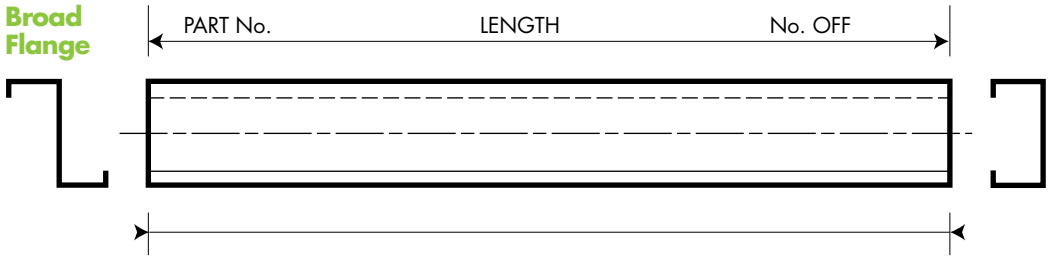
Broad Flange



Broad Flange



Broad Flange



Rev. 10122018

DESIGN PRINCIPLES

The design capacity tables in this manual have been prepared in accordance with the requirements of AS/NZS 4600:2018 using elastic flexural-torsional buckling, strength and deflection design models.

Some of the assumptions made in the models are as follows:

- Continuity at the laps
- Lateral deflection and twisting is prevented at the supports and bridging points
- The cladding prevents lateral deflection of the connecting flanges but does not provide torsional restraint
- The loads act parallel to the webs and perpendicular to the flanges of the purlins
- The Z Sections are acting as equivalent C Sections.

LOADINGS

The loads in design capacity tables are uniformly distributed loads. The design capacity tables have been calculated with cladding attached on the top flanges. The self-weight of the purlins and claddings have not been included in the calculations.

SPAN CONFIGURATIONS

Design capacity tables are provided for the following span configurations:

- Single spans
- Double spans
- Double lapped spans
- 5 lapped spans

Notes:

1. *Unlapped spans are for C purlins.*
2. *Lapped spans are for Z purlins only. The laps are over the internal supports. The tables have been prepared for lap lengths equal to 15% of the span.*

BRIDGING

The design capacity tables are provided for spans with 0, 1, 2 and 3 rows of bridging in each span.

DEFLECTION

The choice of deflection limits is left up to the design engineer. The capacity tables include the loads at which the deflection is span/150. Deflections for other loads can be obtained by using linear proportioning.

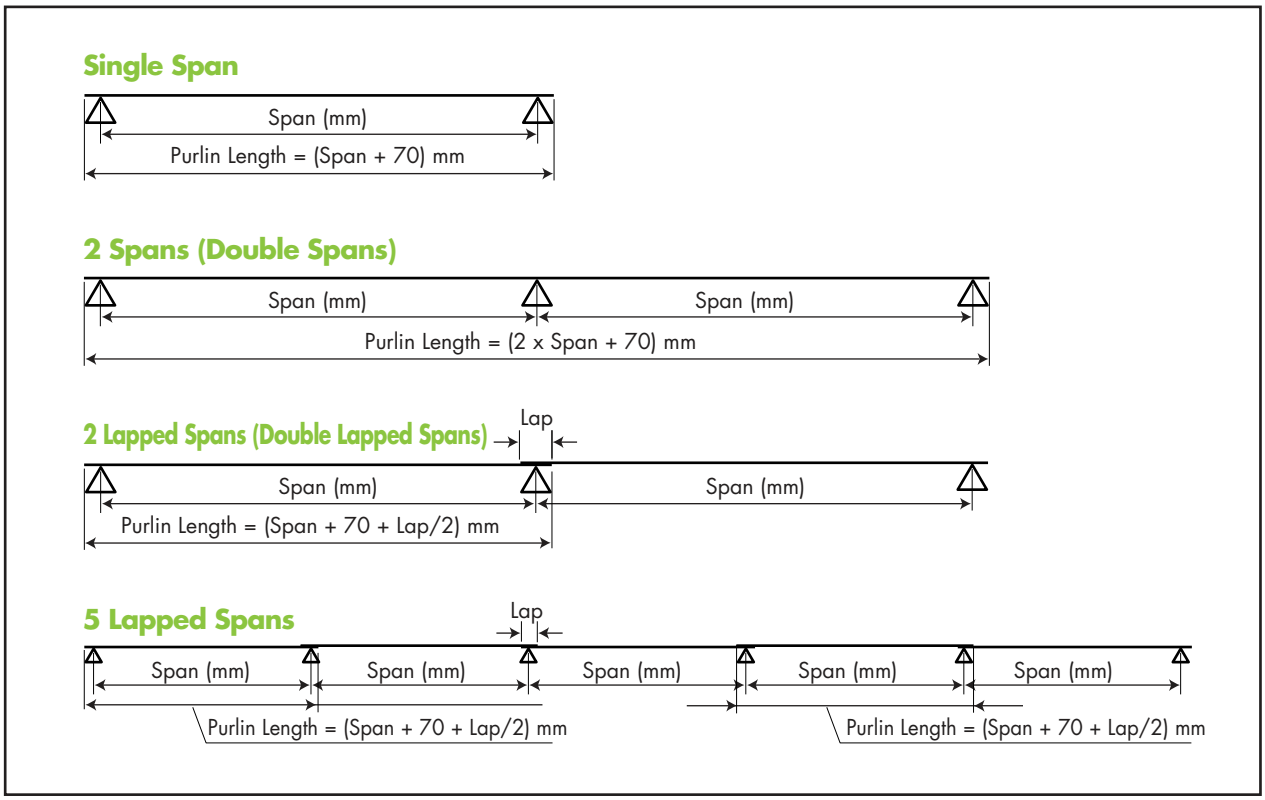
CLEAT CONNECTIONS AND BOLT SPECIFICATIONS

The capacity tables are for C or Z purlins fastened through the webs to cleats so that the load path is via the webs of the purlins. Cleats are available with 2 or 4 bolt holes. The bolts specifications depend on the purlin size. The 150, 200 and 250mm purlins generally use standard M12, Grade 4.6 purlin bolts. The 300, 350 and 400mm purlins generally use standard M16, Grade 4.6 bolts. In some cases where the bolts are heavily loaded, high strength Grade 8.8 purlin bolts are to be used. The tables indicate where Grade 8.8 bolts are to be used.

Refer to figure 6 for the span configurations for which the tables have been prepared.

For multi-span configurations, the design capacity tables are only valid for equal spans.

FIGURE 6 Span Configurations for Design Capacity Tables



BUTT CONNECTION

Two C sections can be connected to a rafter or steel frame using a four bolt cleat.

LAPPED CONNECTION

Steeline Z sections are manufactured with one narrower flange so that two Z sections can be lapped. The capacity tables for lapped spans assume that the lap length is equal to 15% of the span.

FIGURE 7 Butt Joint

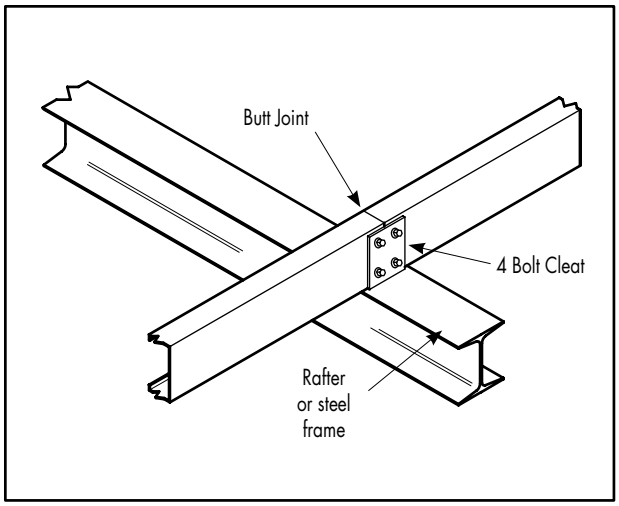
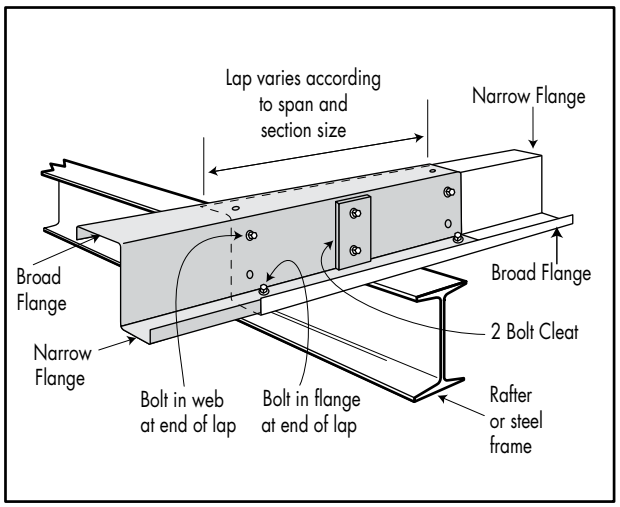
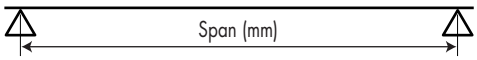


FIGURE 8 Lapped Joint



Rev.10122018

SINGLE SPANS



SINGLE SPAN DESIGN CAPACITY C10010 (kN/m)

LOAD TYPE >	INWARDS				OUTWARDS				LOAD FOR
BRIDGING >	0	1	2	3	0	1	2	3	SPAN/150
SPAN									DEFLECTION
2000	4.53	4.53	4.53	4.53	4.24	4.53	4.53	4.53	4.268
2500	2.90	2.90	2.90	2.90	2.17	2.90	2.90	2.90	2.185
3000	2.01	2.01	2.01	2.01	1.14	2.01	2.01	2.01	1.265
3500	1.48	1.48	1.48	1.48	0.68	1.40	1.48	1.48	0.796
4000	1.13	1.13	1.13	1.13	0.43	0.95	1.13	1.13	0.533
4500	0.89	0.89	0.89	0.89	0.28	0.65	0.89	0.89	0.375
5000	0.72	0.72	0.72	0.72	0.19	0.45	0.70	0.72	0.273
5500	0.60	0.60	0.60	0.60	0.14	0.32	0.54	0.60	0.205
6000	0.50	0.50	0.50	0.50	0.10	0.24	0.41	0.50	0.158

SINGLE SPAN DESIGN CAPACITY C10012 (kN/m)

LOAD TYPE >	INWARDS				OUTWARDS				LOAD FOR
BRIDGING >	0	1	2	3	0	1	2	3	SPAN/150
SPAN									DEFLECTION
2000	5.46	5.46	5.46	5.46	4.99	5.46	5.46	5.46	5.157
2500	3.50	3.50	3.50	3.50	2.65	3.50	3.50	3.50	2.640
3000	2.43	2.43	2.43	2.43	1.45	2.42	2.43	2.43	1.528
3500	1.78	1.78	1.78	1.78	0.86	1.65	1.78	1.78	0.962
4000	1.37	1.37	1.37	1.37	0.53	1.14	1.37	1.37	0.645
4500	1.08	1.08	1.08	1.08	0.35	0.80	1.07	1.08	0.453
5000	0.87	0.87	0.87	0.87	0.24	0.56	0.82	0.87	0.330
5500	0.72	0.72	0.72	0.72	0.17	0.41	0.64	0.72	0.248
6000	0.60	0.61	0.61	0.61	0.13	0.30	0.50	0.60	0.191

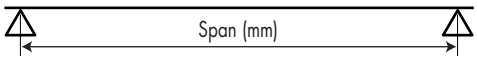
SINGLE SPAN DESIGN CAPACITY C10015 (kN/m)

LOAD TYPE >	INWARDS				OUTWARDS				LOAD FOR
BRIDGING >	0	1	2	3	0	1	2	3	SPAN/150
SPAN									DEFLECTION
2000	6.96	7.12	7.12	7.12	6.38	7.12	7.12	7.12	6.566
2500	4.39	4.56	4.56	4.56	3.57	4.56	4.56	4.56	3.362
3000	3.01	3.17	3.17	3.17	2.00	3.04	3.17	3.17	1.946
3500	2.19	2.33	2.33	2.33	1.17	2.10	2.33	2.33	1.225
4000	1.67	1.78	1.78	1.78	0.73	1.50	1.76	1.78	0.821
4500	1.31	1.41	1.41	1.41	0.48	1.09	1.34	1.41	0.576
5000	1.05	1.14	1.14	1.14	0.34	0.78	1.04	1.14	0.420
5500	0.87	0.94	0.94	0.94	0.24	0.55	0.82	0.92	0.316
6000	0.73	0.79	0.79	0.79	0.18	0.41	0.66	0.75	0.243

NOTES: 1. Interpolation is permitted for intermediate spans.
2. Design loads are for purlins supported by cleats using 2 bolts per cleat.
3. Self-weight of purlins and roof sheets are not included.
4. Loads shown in BOLD require Grade 8.8 bolts.

Rev.10122018

SINGLE SPANS

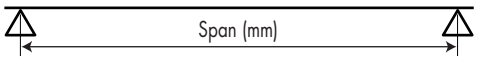


SINGLE SPAN DESIGN CAPACITY C10019 (kN/m)

LOAD TYPE >	INWARDS				OUTWARDS				LOAD FOR
BRIDGING >	0	1	2	3	0	1	2	3	SPAN/150
SPAN									DEFLECTION
2000	9.29	9.91	9.91	9.91	8.64	9.91	9.91	9.91	8.459
2500	5.80	6.34	6.34	6.34	4.78	6.33	6.34	6.34	4.331
3000	3.96	4.40	4.40	4.40	2.76	4.17	4.40	4.40	2.506
3500	2.87	3.24	3.24	3.24	1.61	2.86	3.24	3.24	1.578
4000	2.17	2.48	2.48	2.48	1.02	2.02	2.42	2.48	1.057
4500	1.70	1.96	1.96	1.96	0.69	1.46	1.84	1.96	0.743
5000	1.37	1.58	1.59	1.59	0.49	1.07	1.42	1.58	0.541
5500	1.12	1.30	1.31	1.31	0.36	0.77	1.12	1.27	0.407
6000	0.94	1.09	1.10	1.10	0.28	0.56	0.89	1.03	0.313

NOTES: 1. Interpolation is permitted for intermediate spans.
2. Design loads are for purlins supported by cleats using 2 bolts per cleat.
3. Self-weight of purlins and roof sheets are not included.
4. Loads shown in BOLD require Grade 8.8 bolts.

SINGLE SPANS



SINGLE SPAN DESIGN CAPACITY C15012 (kN/m)

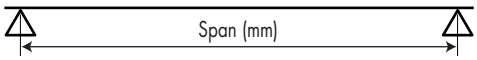
LOAD TYPE >	INWARDS				OUTWARDS				LOAD FOR
BRIDGING >	0	1	2	3	0	1	2	3	SPAN/150
SPAN									DEFLECTION
2000	9.31	9.31	9.31	9.31	9.31	9.31	9.31	9.31	14.816
2500	5.96	5.96	5.96	5.96	5.85	5.96	5.96	5.96	7.586
3000	4.14	4.14	4.14	4.14	3.55	4.14	4.14	4.14	4.39
3500	3.04	3.04	3.04	3.04	2.10	3.04	3.04	3.04	2.764
4000	2.33	2.33	2.33	2.33	1.31	2.33	2.33	2.33	1.852
4500	1.84	1.84	1.84	1.84	0.87	1.80	1.84	1.84	1.301
5000	1.49	1.49	1.49	1.49	0.61	1.36	1.49	1.49	0.948
5500	1.23	1.23	1.23	1.23	0.43	1.01	1.23	1.23	0.712
6000	1.03	1.03	1.03	1.03	0.31	0.75	1.03	1.03	0.549
6500	0.88	0.88	0.88	0.88	0.23	0.56	0.87	0.88	0.432
7000	0.76	0.76	0.76	0.76	0.18	0.43	0.72	0.76	0.346
7500	0.66	0.66	0.66	0.66	0.14	0.34	0.59	0.66	0.281
8000	0.58	0.58	0.58	0.58	0.11	0.27	0.49	0.58	0.231
8500	0.51	0.52	0.52	0.52	0.09	0.22	0.39	0.51	0.193
9000	0.45	0.46	0.46	0.46	0.07	0.18	0.32	0.45	0.163
9500	0.41	0.41	0.41	0.41	0.06	0.15	0.26	0.39	0.138
10000	0.37	0.37	0.37	0.37	0.05	0.12	0.22	0.33	0.119
10500	0.33	0.34	0.34	0.34	0.04	0.10	0.18	0.29	0.102
11000	0.30	0.31	0.31	0.31	0.04	0.08	0.16	0.25	0.089
11500	0.27	0.28	0.28	0.28	0.03	0.07	0.13	0.21	0.078
12000	0.25	0.26	0.26	0.26	0.03	0.06	0.12	0.18	0.069

SINGLE SPAN DESIGN CAPACITY C15015 (kN/m)

LOAD TYPE >	INWARDS				OUTWARDS				LOAD FOR
BRIDGING >	0	1	2	3	0	1	2	3	SPAN/150
SPAN									DEFLECTION
2000	12.23	12.23	12.23	12.23	12.23	12.23	12.23	12.23	19.251
2500	7.83	7.83	7.83	7.83	7.49	7.83	7.83	7.83	9.857
3000	5.44	5.44	5.44	5.44	4.56	5.44	5.44	5.44	5.704
3500	3.93	3.99	3.99	3.99	2.82	3.99	3.99	3.99	3.592
4000	2.97	3.06	3.06	3.06	1.81	3.06	3.06	3.06	2.406
4500	2.32	2.42	2.42	2.42	1.18	2.30	2.42	2.42	1.690
5000	1.86	1.96	1.96	1.96	0.82	1.74	1.96	1.96	1.232
5500	1.52	1.62	1.62	1.62	0.57	1.32	1.62	1.62	0.926
6000	1.27	1.36	1.36	1.36	0.42	1.00	1.36	1.36	0.713
6500	1.07	1.16	1.16	1.16	0.31	0.77	1.12	1.16	0.561
7000	0.92	1.00	1.00	1.00	0.24	0.60	0.92	1.00	0.449
7500	0.80	0.87	0.87	0.87	0.19	0.46	0.76	0.87	0.365
8000	0.70	0.77	0.77	0.77	0.15	0.37	0.63	0.76	0.301
8500	0.61	0.68	0.68	0.68	0.12	0.29	0.52	0.66	0.251
9000	0.55	0.60	0.60	0.60	0.10	0.24	0.43	0.57	0.211
9500	0.49	0.54	0.54	0.54	0.08	0.19	0.36	0.49	0.180
10000	0.44	0.49	0.49	0.49	0.07	0.16	0.30	0.43	0.154
10500	0.40	0.44	0.44	0.44	0.06	0.13	0.26	0.37	0.133
11000	0.36	0.40	0.40	0.40	0.05	0.11	0.22	0.32	0.116
11500	0.33	0.37	0.37	0.37	0.04	0.10	0.18	0.28	0.101
12000	0.30	0.34	0.34	0.34	0.04	0.08	0.16	0.24	0.089

NOTES: 1. Interpolation is permitted for intermediate spans.
2. Design loads are for purlins supported by cleats using 2 bolts per cleat.
3. Self-weight of purlins and roof sheets are not included.
4. Loads shown in BOLD require Grade 8.8 bolts.

SINGLE SPANS



SINGLE SPAN DESIGN CAPACITY C15019 (kN/m)

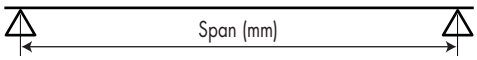
LOAD TYPE >	INWARDS				OUTWARDS				LOAD FOR
BRIDGING >	0	1	2	3	0	1	2	3	SPAN/150
SPAN									DEFLECTION
2000	16.87	17.34	17.34	17.34	17.27	17.34	17.34	17.34	24.647
2500	10.43	11.10	11.09	11.09	10.13	11.10	11.10	11.09	12.62
3000	7.05	7.71	7.71	7.70	6.28	7.71	7.71	7.71	7.303
3500	5.07	5.66	5.66	5.66	3.92	5.66	5.66	5.66	4.599
4000	3.82	4.33	4.33	4.33	2.43	4.17	4.33	4.33	3.081
4500	2.97	3.42	3.42	3.42	1.60	3.13	3.42	3.42	2.164
5000	2.38	2.77	2.77	2.77	1.09	2.38	2.77	2.77	1.577
5500	1.95	2.29	2.29	2.29	0.77	1.83	2.26	2.29	1.185
6000	1.62	1.93	1.93	1.93	0.57	1.41	1.84	1.93	0.913
6500	1.37	1.64	1.64	1.64	0.43	1.06	1.51	1.64	0.718
7000	1.17	1.42	1.42	1.42	0.33	0.81	1.25	1.42	0.575
7500	1.01	1.23	1.23	1.23	0.26	0.63	1.04	1.21	0.467
8000	0.89	1.07	1.08	1.08	0.21	0.50	0.87	1.03	0.385
8500	0.78	0.95	0.96	0.96	0.17	0.40	0.73	0.89	0.321
9000	0.69	0.84	0.86	0.86	0.15	0.32	0.61	0.77	0.27
9500	0.62	0.75	0.77	0.77	0.12	0.26	0.50	0.67	0.230
10000	0.56	0.68	0.69	0.69	0.10	0.22	0.41	0.59	0.197
10500	0.50	0.61	0.63	0.63	0.09	0.18	0.35	0.51	0.17
11000	0.45	0.56	0.57	0.57	0.08	0.15	0.29	0.45	0.148
11500	0.41	0.51	0.52	0.52	0.07	0.13	0.25	0.39	0.130
12000	0.38	0.47	0.48	0.48	0.06	0.11	0.21	0.34	0.114

SINGLE SPAN DESIGN CAPACITY C15024 (kN/m)

LOAD TYPE >	INWARDS				OUTWARDS				LOAD FOR
BRIDGING >	0	1	2	3	0	1	2	3	SPAN/150
SPAN									DEFLECTION
2000	22.64	24.67	24.67	24.67	23.92	24.67	24.67	24.67	31.921
2500	13.76	15.79	15.79	15.79	13.89	15.79	15.79	15.79	16.344
3000	9.18	10.97	10.97	10.97	8.54	10.97	10.97	10.97	9.458
3500	6.53	8.06	8.06	8.06	5.40	7.91	8.06	8.06	5.956
4000	4.87	6.17	6.17	6.17	3.34	5.76	6.17	6.17	3.990
4500	3.77	4.84	4.87	4.87	2.18	4.30	4.87	4.87	2.802
5000	3.00	3.87	3.95	3.95	1.50	3.26	3.91	3.95	2.043
5500	2.44	3.16	3.26	3.26	1.08	2.50	3.13	3.26	1.535
6000	2.02	2.63	2.74	2.74	0.80	1.94	2.54	2.74	1.182
6500	1.70	2.22	2.34	2.34	0.62	1.48	2.08	2.33	0.930
7000	1.45	1.90	2.01	2.01	0.48	1.12	1.72	1.97	0.745
7500	1.25	1.64	1.74	1.75	0.39	0.87	1.43	1.67	0.605
8000	1.09	1.43	1.52	1.54	0.32	0.68	1.19	1.43	0.499
8500	0.96	1.26	1.34	1.37	0.26	0.55	1.00	1.23	0.416
9000	0.85	1.12	1.18	1.22	0.22	0.45	0.84	1.06	0.350
9500	0.76	1.00	1.06	1.09	0.19	0.37	0.70	0.92	0.298
10000	0.68	0.90	0.95	0.98	0.16	0.31	0.58	0.80	0.255
10500	0.61	0.81	0.85	0.89	0.14	0.26	0.48	0.70	0.221
11000	0.55	0.73	0.78	0.80	0.12	0.22	0.40	0.61	0.192
11500	0.50	0.67	0.71	0.73	0.11	0.19	0.34	0.54	0.168
12000	0.46	0.61	0.65	0.67	0.10	0.16	0.29	0.47	0.148

NOTES: 1. Interpolation is permitted for intermediate spans.
2. Design loads are for purlins supported by cleats using 2 bolts per cleat.
3. Self-weight of purlins and roof sheets are not included.
4. Loads shown in BOLD require Grade 8.8 bolts.

SINGLE SPANS



SINGLE SPAN DESIGN CAPACITY C20012 (kN/m)

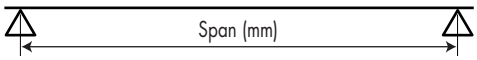
LOAD TYPE >	INWARDS				OUTWARDS				LOAD FOR
BRIDGING >	0	1	2	3	0	1	2	3	SPAN/150
SPAN									DEFLECTION
2000	7.89	7.89	7.89	7.89	7.89	7.89	7.89	7.89	30.992
2500	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	15.868
3000	5.26	5.26	5.26	5.26	5.26	5.26	5.26	5.26	9.183
3500	4.22	4.25	4.25	4.25	3.59	4.25	4.25	4.25	5.783
4000	3.19	3.25	3.25	3.25	2.40	3.25	3.25	3.25	3.874
4500	2.49	2.57	2.57	2.57	1.67	2.57	2.57	2.57	2.721
5000	2.00	2.08	2.08	2.08	1.15	2.02	2.08	2.08	1.983
5500	1.64	1.72	1.72	1.72	0.82	1.59	1.72	1.72	1.490
6000	1.37	1.45	1.45	1.45	0.60	1.26	1.45	1.45	1.148
6500	1.16	1.23	1.23	1.23	0.46	1.00	1.23	1.23	0.903
7000	0.99	1.06	1.06	1.06	0.35	0.79	1.05	1.06	0.723
7500	0.86	0.93	0.93	0.93	0.27	0.64	0.89	0.93	0.588
8000	0.75	0.81	0.81	0.81	0.22	0.52	0.75	0.81	0.484
8500	0.66	0.72	0.72	0.72	0.17	0.42	0.64	0.72	0.404
9000	0.59	0.64	0.64	0.64	0.14	0.34	0.55	0.64	0.340
9500	0.53	0.58	0.58	0.58	0.11	0.28	0.47	0.57	0.289
10000	0.47	0.52	0.52	0.52	0.09	0.23	0.40	0.50	0.248
10500	0.43	0.47	0.47	0.47	0.08	0.20	0.35	0.44	0.214
11000	0.39	0.43	0.43	0.43	0.07	0.17	0.30	0.39	0.186
11500	0.35	0.39	0.39	0.39	0.06	0.14	0.26	0.35	0.163
12000	0.32	0.36	0.36	0.36	0.05	0.12	0.22	0.31	0.143

SINGLE SPAN DESIGN CAPACITY C20015 (kN/m)

LOAD TYPE >	INWARDS				OUTWARDS				LOAD FOR
BRIDGING >	0	1	2	3	0	1	2	3	SPAN/150
SPAN									DEFLECTION
2000	15.45	15.45	15.45	15.45	15.45	15.45	15.45	15.45	40.508
2500	10.93	10.93	10.93	10.93	10.93	10.93	10.93	10.93	20.74
3000	7.59	7.59	7.59	7.59	7.59	7.59	7.59	7.59	12.002
3500	5.58	5.58	5.58	5.58	5.13	5.58	5.58	5.58	7.558
4000	4.27	4.27	4.27	4.27	3.33	4.27	4.27	4.27	5.064
4500	3.35	3.37	3.37	3.37	2.19	3.37	3.37	3.38	3.556
5000	2.69	2.73	2.73	2.73	1.52	2.73	2.73	2.73	2.592
5500	2.20	2.26	2.26	2.26	1.10	2.23	2.26	2.26	1.948
6000	1.83	1.90	1.90	1.90	0.80	1.79	1.90	1.90	1.500
6500	1.55	1.62	1.62	1.62	0.60	1.42	1.62	1.62	1.18
7000	1.33	1.40	1.40	1.40	0.46	1.11	1.39	1.39	0.945
7500	1.15	1.22	1.22	1.22	0.36	0.87	1.22	1.22	0.768
8000	1.01	1.07	1.07	1.07	0.28	0.69	1.06	1.07	0.633
8500	0.89	0.95	0.95	0.95	0.22	0.55	0.91	0.95	0.528
9000	0.79	0.84	0.84	0.84	0.18	0.46	0.79	0.84	0.445
9500	0.71	0.76	0.76	0.76	0.15	0.38	0.67	0.76	0.378
10000	0.63	0.68	0.68	0.68	0.12	0.32	0.57	0.68	0.324
10500	0.57	0.62	0.62	0.62	0.10	0.26	0.48	0.62	0.280
11000	0.52	0.57	0.57	0.57	0.09	0.22	0.41	0.55	0.243
11500	0.47	0.52	0.52	0.52	0.08	0.19	0.35	0.49	0.213
12000	0.43	0.48	0.48	0.48	0.07	0.16	0.30	0.44	0.188

NOTES: 1. Interpolation is permitted for intermediate spans.
2. Design loads are for purlins supported by cleats using 2 bolts per cleat.
3. Self-weight of purlins and roof sheets are not included.
4. Loads shown in BOLD require Grade 8.8 bolts.

SINGLE SPANS



SINGLE SPAN DESIGN CAPACITY C20019 (kN/m)

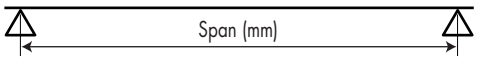
LOAD TYPE >	INWARDS				OUTWARDS				LOAD FOR
BRIDGING >	0	1	2	3	0	1	2	3	SPAN/150
SPAN									DEFLECTION
2000	26.00	26.00	26.00	26.00	26.00	26.00	26.00	26.00	54.357
2500	16.56	16.64	16.64	16.64	16.64	16.64	16.64	16.64	27.831
3000	11.03	11.56	11.56	11.56	11.04	11.56	11.56	11.56	16.106
3500	7.82	8.49	8.49	8.49	7.26	8.49	8.49	8.49	10.143
4000	5.81	6.50	6.50	6.50	4.85	6.50	6.50	6.50	6.794
4500	4.48	5.14	5.14	5.14	3.28	5.14	5.14	5.14	4.772
5000	3.55	4.16	4.16	4.16	2.24	4.15	4.16	4.16	3.479
5500	2.88	3.44	3.44	3.44	1.59	3.25	3.44	3.44	2.614
6000	2.38	2.89	2.89	2.89	1.15	2.57	2.89	2.89	2.013
6500	2.00	2.46	2.46	2.46	0.85	2.03	2.46	2.46	1.583
7000	1.70	2.12	2.12	2.12	0.65	1.62	2.12	2.12	1.268
7500	1.47	1.85	1.85	1.85	0.50	1.29	1.82	1.85	1.031
8000	1.27	1.63	1.63	1.63	0.40	1.04	1.55	1.63	0.849
8500	1.12	1.44	1.44	1.44	0.32	0.83	1.31	1.44	0.708
9000	0.99	1.28	1.28	1.28	0.26	0.67	1.12	1.28	0.596
9500	0.88	1.15	1.15	1.15	0.22	0.55	0.96	1.15	0.507
10000	0.79	1.04	1.04	1.04	0.18	0.46	0.82	1.03	0.435
10500	0.71	0.94	0.94	0.94	0.15	0.38	0.70	0.91	0.376
11000	0.64	0.86	0.86	0.86	0.13	0.32	0.60	0.80	0.327
11500	0.58	0.79	0.79	0.79	0.11	0.27	0.52	0.71	0.286
12000	0.53	0.72	0.72	0.72	0.10	0.23	0.45	0.63	0.252

SINGLE SPAN DESIGN CAPACITY C20024 (kN/m)

LOAD TYPE >	INWARDS				OUTWARDS				LOAD FOR
BRIDGING >	0	1	2	3	0	1	2	3	SPAN/150
SPAN									DEFLECTION
2000	36.25	**37.17**	**37.17**	**37.17**	**37.17**	**37.17**	**37.17**	**37.17**	69.833
2500	21.99	23.79	23.79	23.79	23.51	23.79	23.79	23.79	35.755
3000	14.56	16.52	16.52	16.52	15.16	16.52	16.52	16.52	20.691
3500	10.27	12.14	12.14	12.14	10.15	12.14	12.14	12.14	13.03
4000	7.56	9.29	9.29	9.29	6.72	9.29	9.29	9.29	8.729
4500	5.75	7.34	7.34	7.34	4.48	7.28	7.34	7.34	6.131
5000	4.51	5.95	5.95	5.95	3.03	5.67	5.95	5.95	4.469
5500	3.62	4.92	4.92	4.92	2.12	4.48	4.92	4.92	3.358
6000	2.97	4.10	4.13	4.13	1.54	3.58	4.13	4.13	2.586
6500	2.47	3.46	3.52	3.52	1.15	2.87	3.51	3.52	2.034
7000	2.09	2.95	3.03	3.03	0.88	2.27	2.95	3.03	1.629
7500	1.79	2.55	2.64	2.64	0.69	1.80	2.50	2.64	1.324
8000	1.55	2.22	2.32	2.32	0.55	1.43	2.13	2.32	1.091
8500	1.35	1.95	2.06	2.06	0.45	1.14	1.82	2.06	0.910
9000	1.19	1.73	1.84	1.84	0.37	0.92	1.57	1.81	0.766
9500	1.05	1.54	1.65	1.65	0.31	0.75	1.35	1.59	0.652
10000	0.94	1.38	1.48	1.49	0.26	0.62	1.15	1.41	0.559
10500	0.85	1.25	1.33	1.35	0.22	0.51	0.98	1.25	0.483
11000	0.76	1.13	1.21	1.23	0.19	0.43	0.84	1.11	0.420
11500	0.69	1.03	1.10	1.12	0.16	0.36	0.72	0.99	0.367
12000	0.63	0.94	1.00	1.03	0.14	0.31	0.61	0.88	0.323

NOTES: 1. Interpolation is permitted for intermediate spans.
2. Design loads are for purlins supported by cleats using 2 bolts per cleat.
3. Self-weight of purlins and roof sheets are not included.
4. Loads shown in BOLD require Grade 8.8 bolts.

SINGLE SPANS



SINGLE SPAN DESIGN CAPACITY C25015 (kN/m)

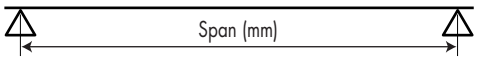
LOAD TYPE >	INWARDS				OUTWARDS				LOAD FOR
BRIDGING >	0	1	2	3	0	1	2	3	SPAN/150
SPAN									DEFLECTION
2000	12.18	12.18	12.18	12.18	12.18	12.18	12.18	12.18	68.764
2500	9.75	9.75	9.75	9.75	9.75	9.75	9.75	9.75	35.209
3000	8.12	8.12	8.12	8.12	8.12	8.12	8.12	8.12	20.375
3500	6.96	6.96	6.96	6.96	6.70	6.96	6.96	6.96	12.831
4000	5.49	5.79	5.79	5.79	4.61	5.79	5.79	5.79	8.596
4500	4.27	4.57	4.57	4.57	3.15	4.57	4.57	4.57	6.037
5000	3.42	3.70	3.70	3.70	2.17	3.68	3.70	3.70	4.401
5500	2.79	3.06	3.06	3.06	1.56	2.92	3.06	3.06	3.307
6000	2.33	2.57	2.57	2.57	1.14	2.34	2.57	2.57	2.547
6500	1.96	2.19	2.19	2.19	0.84	1.89	2.19	2.19	2.003
7000	1.68	1.89	1.89	1.89	0.63	1.53	1.89	1.89	1.604
7500	1.45	1.65	1.65	1.65	0.49	1.24	1.62	1.65	1.304
8000	1.27	1.45	1.45	1.45	0.38	0.99	1.39	1.45	1.074
8500	1.12	1.28	1.28	1.28	0.30	0.80	1.19	1.28	0.896
9000	0.99	1.14	1.14	1.14	0.24	0.65	1.03	1.14	0.755
9500	0.88	1.03	1.03	1.03	0.20	0.54	0.89	1.03	0.642
10000	0.79	0.93	0.93	0.93	0.16	0.45	0.77	0.91	0.550
10500	0.72	0.84	0.84	0.84	0.14	0.37	0.67	0.81	0.475
11000	0.65	0.77	0.77	0.77	0.12	0.31	0.58	0.72	0.413
11500	0.59	0.70	0.70	0.70	0.10	0.26	0.50	0.65	0.362
12000	0.54	0.64	0.64	0.64	0.08	0.22	0.43	0.58	0.318

SINGLE SPAN DESIGN CAPACITY C25019 (kN/m)

LOAD TYPE >	INWARDS				OUTWARDS				LOAD FOR
BRIDGING >	0	1	2	3	0	1	2	3	SPAN/150
SPAN									DEFLECTION
2000	24.84	24.84	24.84	24.84	24.84	24.84	24.84	24.84	90.184
2500	19.87	19.87	19.87	19.87	19.87	19.87	19.87	19.87	46.175
3000	14.57	14.58	14.58	14.58	14.58	14.58	14.58	14.58	26.720
3500	10.37	10.71	10.71	10.71	9.68	10.71	10.71	10.71	16.827
4000	7.67	8.20	8.20	8.20	6.38	8.20	8.20	8.20	11.273
4500	5.88	6.48	6.48	6.48	4.25	6.48	6.48	6.48	7.917
5000	4.64	5.25	5.25	5.25	2.88	5.25	5.25	5.25	5.772
5500	3.76	4.34	4.34	4.34	2.04	4.34	4.34	4.34	4.336
6000	3.10	3.65	3.65	3.65	1.46	3.44	3.65	3.65	3.34
6500	2.60	3.11	3.11	3.11	1.08	2.71	3.11	3.11	2.627
7000	2.20	2.68	2.68	2.68	0.82	2.14	2.68	2.68	2.103
7500	1.89	2.33	2.33	2.33	0.63	1.69	2.33	2.33	1.710
8000	1.64	2.05	2.05	2.05	0.50	1.35	2.05	2.05	1.409
8500	1.44	1.82	1.82	1.82	0.40	1.07	1.76	1.82	1.175
9000	1.27	1.62	1.62	1.62	0.32	0.87	1.50	1.62	0.99
9500	1.13	1.45	1.45	1.45	0.26	0.71	1.27	1.45	0.841
10000	1.01	1.31	1.31	1.31	0.22	0.59	1.09	1.31	0.721
10500	0.91	1.19	1.19	1.19	0.18	0.48	0.92	1.19	0.623
11000	0.82	1.08	1.08	1.08	0.16	0.40	0.79	1.07	0.542
11500	0.74	0.99	0.99	0.99	0.13	0.34	0.67	0.95	0.474
12000	0.68	0.91	0.91	0.91	0.12	0.29	0.58	0.84	0.418

NOTES: 1. Interpolation is permitted for intermediate spans.
2. Design loads are for purlins supported by cleats using 2 bolts per cleat.
3. Self-weight of purlins and roof sheets are not included.
4. Loads shown in BOLD require Grade 8.8 bolts.

SINGLE SPANS

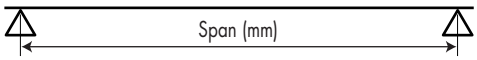


SINGLE SPAN DESIGN CAPACITY C25024 (kN/m)

LOAD TYPE >	INWARDS				OUTWARDS				LOAD FOR
BRIDGING >	0	1	2	3	0	1	2	3	SPAN/150
SPAN									DEFLECTION
2000	**47.25**	**47.25**	**47.25**	**47.25**	**47.25**	**47.25**	**47.25**	**47.25**	118.289
2500	29.23	**30.24**	**30.24**	**30.24**	**30.24**	**30.24**	**30.24**	**30.24**	60.564
3000	19.19	**21.00**	**21.00**	**21.00**	**20.31**	**21.00**	**21.00**	**21.00**	35.049
3500	13.42	15.43	15.43	15.43	13.45	15.43	15.43	15.43	22.07
4000	9.75	11.81	11.81	11.81	8.74	11.81	11.81	11.81	14.786
4500	7.36	9.33	9.33	9.33	5.76	9.33	9.33	9.33	10.385
5000	5.73	7.56	7.56	7.56	3.85	7.56	7.56	7.56	7.571
5500	4.58	6.25	6.25	6.25	2.69	5.99	6.25	6.25	5.688
6000	3.73	5.25	5.25	5.25	1.94	4.75	5.25	5.25	4.381
6500	3.10	4.47	4.47	4.47	1.44	3.77	4.47	4.47	3.446
7000	2.61	3.86	3.86	3.86	1.10	2.96	3.86	3.86	2.759
7500	2.23	3.36	3.36	3.36	0.85	2.32	3.35	3.36	2.243
8000	1.93	2.95	2.95	2.95	0.67	1.84	2.85	2.95	1.848
8500	1.68	2.60	2.62	2.62	0.54	1.45	2.43	2.62	1.541
9000	1.48	2.30	2.33	2.33	0.44	1.17	2.08	2.33	1.298
9500	1.31	2.05	2.09	2.09	0.37	0.95	1.77	2.09	1.104
10000	1.17	1.83	1.89	1.89	0.31	0.78	1.51	1.89	0.946
10500	1.05	1.65	1.71	1.71	0.26	0.65	1.28	1.67	0.817
11000	0.94	1.49	1.56	1.56	0.22	0.54	1.08	1.48	0.711
11500	0.85	1.36	1.43	1.43	0.19	0.46	0.92	1.32	0.622
12000	0.78	1.24	1.31	1.31	0.17	0.39	0.79	1.17	0.548

NOTES: 1. Interpolation is permitted for intermediate spans.
2. Design loads are for purlins supported by cleats using 2 bolts per cleat.
3. Self-weight of purlins and roof sheets are not included.
4. Loads shown in BOLD require Grade 8.8 bolts.

SINGLE SPANS

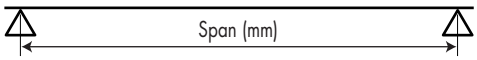


SINGLE SPAN DESIGN CAPACITY C30019 (kN/m)

LOAD TYPE >	INWARDS				OUTWARDS				LOAD FOR SPAN/150 DEFLECTION
BRIDGING >	0	1	2	3	0	1	2	3	
SPAN									
3000	13.90	13.90	13.90	13.90	13.90	13.90	13.90	13.90	46.254
3500	11.91	11.91	11.91	11.91	11.91	11.91	11.91	11.91	29.128
4000	10.42	10.42	10.42	10.42	10.42	10.42	10.42	10.42	19.512
4500	8.24	9.27	9.27	9.27	8.27	9.27	9.27	9.27	13.705
5000	6.50	7.51	7.52	7.52	6.20	7.51	7.51	7.52	9.991
5500	5.25	6.21	6.21	6.21	4.54	6.21	6.21	6.21	7.506
6000	4.32	5.22	5.22	5.22	3.33	5.22	5.22	5.22	5.782
6500	3.61	4.45	4.45	4.45	2.51	4.40	4.45	4.45	4.547
7000	3.06	3.83	3.83	3.83	1.94	3.69	3.83	3.83	3.641
7500	2.60	3.34	3.34	3.34	1.48	3.11	3.34	3.34	2.960
8000	2.24	2.94	2.94	2.94	1.16	2.64	2.94	2.94	2.439
8500	1.94	2.60	2.60	2.60	0.92	2.24	2.60	2.60	2.034
9000	1.70	2.32	2.32	2.32	0.74	1.91	2.32	2.32	1.713
9500	1.50	2.08	2.08	2.08	0.60	1.61	2.06	2.08	1.457
10000	1.34	1.86	1.88	1.88	0.49	1.34	1.83	1.88	1.249
10500	1.20	1.68	1.70	1.70	0.41	1.12	1.62	1.70	1.079
11000	1.08	1.52	1.55	1.55	0.35	0.95	1.45	1.55	0.938
11500	0.97	1.39	1.42	1.42	0.29	0.81	1.29	1.42	0.821
12000	0.88	1.27	1.31	1.31	0.25	0.71	1.16	1.31	0.723
12500	0.81	1.16	1.20	1.20	0.21	0.60	1.04	1.20	0.639
13000	0.74	1.07	1.11	1.11	0.19	0.52	0.93	1.09	0.568
13500	0.68	0.99	1.03	1.03	0.16	0.45	0.83	1.00	0.508
14000	0.63	0.92	0.96	0.96	0.14	0.39	0.74	0.91	0.455
14500	0.58	0.85	0.89	0.89	0.12	0.34	0.65	0.84	0.410
15000	0.54	0.79	0.84	0.84	0.11	0.30	0.58	0.77	0.370

NOTES: 1. Interpolation is permitted for intermediate spans.
2. Design loads are for purlins supported by cleats using 2 bolts per cleat.
3. Self-weight of purlins and roof sheets are not included.
4. Loads shown in BOLD require Grade 8.8 bolts.

SINGLE SPANS

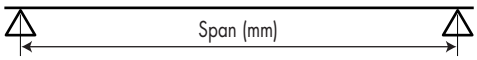


SINGLE SPAN DESIGN CAPACITY C30024 (kN/m)

LOAD TYPE >	INWARDS				OUTWARDS				LOAD FOR
BRIDGING >	0	1	2	3	0	1	2	3	SPAN/150
SPAN									DEFLECTION
3000	28.11	28.11	28.11	28.11	28.11	28.11	28.11	28.11	60.354
3500	19.70	21.58	21.58	21.58	21.58	21.58	21.58	21.58	38.006
4000	14.18	16.52	16.52	16.52	15.80	16.52	16.52	16.52	25.461
4500	10.56	13.05	13.05	13.05	11.38	13.05	13.05	13.05	17.883
5000	8.15	10.57	10.57	10.57	8.24	10.57	10.57	10.57	13.036
5500	6.45	8.74	8.74	8.74	6.06	8.74	8.74	8.74	9.794
6000	5.22	7.34	7.34	7.34	4.46	7.34	7.34	7.34	7.544
6500	4.30	6.26	6.26	6.26	3.28	6.26	6.26	6.26	5.934
7000	3.59	5.40	5.40	5.40	2.47	5.28	5.40	5.40	4.751
7500	3.04	4.70	4.70	4.70	1.90	4.38	4.70	4.70	3.863
8000	2.61	4.13	4.13	4.13	1.49	3.65	4.13	4.13	3.183
8500	2.26	3.66	3.66	3.66	1.18	3.05	3.66	3.66	2.653
9000	1.98	3.26	3.26	3.26	0.95	2.55	3.26	3.26	2.235
9500	1.74	2.90	2.93	2.93	0.78	2.14	2.93	2.93	1.901
10000	1.54	2.59	2.64	2.64	0.64	1.81	2.63	2.64	1.63
10500	1.37	2.32	2.40	2.40	0.54	1.51	2.31	2.40	1.408
11000	1.23	2.09	2.19	2.19	0.45	1.28	2.04	2.19	1.224
11500	1.11	1.90	2.00	2.00	0.39	1.07	1.80	2.00	1.071
12000	1.01	1.72	1.84	1.84	0.33	0.91	1.59	1.84	0.943
12500	0.92	1.57	1.69	1.69	0.29	0.77	1.41	1.69	0.834
13000	0.84	1.44	1.56	1.56	0.25	0.67	1.25	1.56	0.742
13500	0.77	1.33	1.45	1.45	0.22	0.58	1.11	1.43	0.662
14000	0.71	1.22	1.35	1.35	0.19	0.50	0.98	1.30	0.594
14500	0.65	1.13	1.26	1.26	0.17	0.44	0.87	1.19	0.535
15000	0.61	1.05	1.18	1.18	0.15	0.38	0.78	1.08	0.483

NOTES: 1. Interpolation is permitted for intermediate spans.
2. Design loads are for purlins supported by cleats using 2 bolts per cleat.
3. Self-weight of purlins and roof sheets are not included.
4. Loads shown in BOLD require Grade 8.8 bolts.

SINGLE SPANS

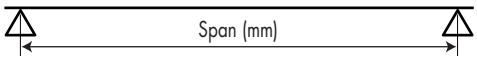


SINGLE SPAN DESIGN CAPACITY C30030 (kN/m)

LOAD TYPE >	INWARDS				OUTWARDS				LOAD FOR
BRIDGING >	0	1	2	3	0	1	2	3	SPAN/150
SPAN									DEFLECTION
3000	38.56	**41.94**	**41.94**	**41.94**	**41.94**	**41.94**	**41.94**	**41.94**	77.989
3500	26.52	30.82	30.81	30.81	30.24	30.82	30.81	30.81	49.112
4000	18.85	23.59	23.59	23.59	21.85	23.59	23.59	23.59	32.902
4500	13.69	18.64	18.64	18.64	16.00	18.64	18.64	18.64	23.108
5000	10.17	15.10	15.10	15.10	11.65	15.10	15.10	15.10	16.846
5500	7.79	12.48	12.48	12.48	8.24	12.48	12.48	12.48	12.656
6000	6.14	10.49	10.49	10.49	5.90	10.49	10.49	10.49	9.748
6500	4.96	8.93	8.93	8.94	4.35	8.71	8.93	8.94	7.668
7000	4.09	7.61	7.70	7.70	3.28	7.27	7.70	7.70	6.139
7500	3.43	6.53	6.71	6.71	2.53	6.12	6.71	6.71	4.991
8000	2.92	5.65	5.90	5.90	1.99	5.16	5.90	5.90	4.113
8500	2.51	4.94	5.23	5.23	1.59	4.33	5.22	5.23	3.429
9000	2.18	4.34	4.66	4.66	1.29	3.63	4.64	4.66	2.889
9500	1.91	3.85	4.18	4.18	1.06	3.00	4.09	4.18	2.456
10000	1.69	3.43	3.78	3.78	0.88	2.47	3.61	3.78	2.106
10500	1.51	3.07	3.42	3.42	0.74	2.04	3.20	3.42	1.819
11000	1.35	2.77	3.11	3.12	0.62	1.71	2.85	3.12	1.582
11500	1.22	2.50	2.82	2.85	0.53	1.44	2.54	2.85	1.385
12000	1.10	2.26	2.57	2.62	0.46	1.22	2.25	2.61	1.219
12500	1.00	2.06	2.34	2.42	0.40	1.04	2.00	2.37	1.078
13000	0.92	1.88	2.15	2.23	0.35	0.90	1.78	2.16	0.958
13500	0.84	1.72	1.98	2.07	0.31	0.78	1.57	1.97	0.856
14000	0.77	1.58	1.82	1.93	0.27	0.68	1.38	1.80	0.767
14500	0.71	1.46	1.69	1.80	0.24	0.59	1.20	1.65	0.691
15000	0.66	1.35	1.56	1.68	0.21	0.52	1.06	1.51	0.624

NOTES: 1. Interpolation is permitted for intermediate spans.
2. Design loads are for purlins supported by cleats using 2 bolts per cleat.
3. Self-weight of purlins and roof sheets are not included.
4. Loads shown in BOLD require Grade 8.8 bolts.

SINGLE SPANS



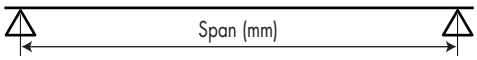
SINGLE SPAN DESIGN CAPACITY C35024 (kN/m)

LOAD TYPE >	INWARDS				OUTWARDS				LOAD FOR
BRIDGING >	0	1	2	3	0	1	2	3	SPAN/150
SPAN									DEFLECTION
3000	23.92	23.92	23.92	23.92	23.92	23.92	23.92	23.92	97.363
3500	20.50	20.50	20.50	20.50	20.50	20.50	20.50	20.50	61.314
4000	17.94	17.94	17.94	17.94	17.94	17.94	17.94	17.94	41.077
4500	14.48	15.95	15.94	15.94	15.94	15.94	15.95	15.94	28.849
5000	11.27	13.20	13.20	13.20	12.58	13.20	13.20	13.20	21.031
5500	8.95	10.91	10.91	10.91	9.93	10.91	10.91	10.91	15.801
6000	7.07	9.17	9.17	9.17	7.91	9.17	9.17	9.17	12.17
6500	5.70	7.81	7.81	7.81	6.28	7.81	7.81	7.81	9.573
7000	4.68	6.74	6.74	6.74	4.84	6.74	6.74	6.74	7.664
7500	3.91	5.87	5.87	5.87	3.79	5.87	5.87	5.87	6.231
8000	3.32	5.16	5.16	5.16	3.01	5.14	5.16	5.16	5.135
8500	2.85	4.57	4.57	4.57	2.43	4.46	4.57	4.57	4.281
9000	2.47	4.07	4.07	4.07	2.01	3.89	4.07	4.07	3.606
9500	2.16	3.62	3.66	3.66	1.66	3.41	3.66	3.66	3.066
10000	1.91	3.23	3.30	3.30	1.38	3.00	3.30	3.30	2.629
10500	1.70	2.90	2.99	2.99	1.15	2.64	2.99	2.99	2.271
11000	1.52	2.62	2.73	2.73	0.96	2.33	2.73	2.73	1.975
11500	1.37	2.38	2.50	2.50	0.81	2.06	2.50	2.50	1.729
12000	1.24	2.17	2.29	2.29	0.69	1.78	2.27	2.29	1.521
12500	1.12	1.98	2.11	2.11	0.59	1.54	2.06	2.11	1.346
13000	1.03	1.81	1.95	1.95	0.51	1.34	1.88	1.95	1.197
13500	0.94	1.67	1.81	1.81	0.44	1.17	1.72	1.81	1.068
14000	0.87	1.54	1.68	1.68	0.39	1.02	1.57	1.68	0.958
14500	0.80	1.43	1.57	1.57	0.34	0.90	1.44	1.57	0.862
15000	0.74	1.32	1.46	1.47	0.30	0.80	1.32	1.47	0.779

NOTES: 1. Interpolation is permitted for intermediate spans.
2. Design loads are for purlins supported by cleats using 2 bolts per cleat.
3. Self-weight of purlins and roof sheets are not included.
4. Loads shown in BOLD require Grade 8.8 bolts.

Rev.10122018

SINGLE SPANS

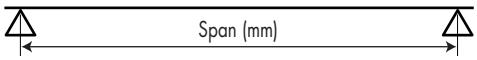


SINGLE SPAN DESIGN CAPACITY C35030 (kN/m)

LOAD TYPE >	INWARDS				OUTWARDS				LOAD FOR
BRIDGING >	0	1	2	3	0	1	2	3	SPAN/150
SPAN									DEFLECTION
3000	**46.88**	**46.88**	**46.88**	**46.88**	**46.88**	**46.88**	**46.88**	**46.88**	125.998
3500	36.06	**37.38**	**37.38**	**37.38**	**37.38**	**37.38**	**37.38**	**37.38**	79.348
4000	25.72	**28.62**	**28.62**	**28.62**	**28.62**	**28.62**	**28.62**	**28.62**	53.155
4500	18.86	22.61	22.61	22.61	22.61	22.61	22.61	22.61	37.334
5000	14.13	18.32	18.32	18.32	17.68	18.32	18.32	18.32	27.217
5500	10.79	15.14	15.14	15.14	13.64	15.14	15.14	15.14	20.447
6000	8.50	12.72	12.72	12.72	10.56	12.72	12.72	12.72	15.749
6500	6.86	10.84	10.84	10.84	8.15	10.84	10.84	10.84	12.387
7000	5.65	9.35	9.35	9.35	6.33	9.35	9.35	9.35	9.918
7500	4.71	8.14	8.14	8.14	5.02	8.14	8.14	8.14	8.064
8000	3.96	7.16	7.16	7.16	4.00	7.16	7.16	7.16	6.645
8500	3.38	6.34	6.34	6.34	3.22	6.34	6.34	6.34	5.540
9000	2.92	5.65	5.65	5.65	2.63	5.49	5.65	5.65	4.667
9500	2.55	5.06	5.07	5.07	2.14	4.75	5.07	5.07	3.968
10000	2.24	4.49	4.58	4.58	1.76	4.12	4.58	4.58	3.402
10500	1.99	4.00	4.15	4.15	1.46	3.57	4.15	4.15	2.939
11000	1.78	3.58	3.78	3.79	1.23	3.10	3.78	3.79	2.556
11500	1.60	3.22	3.46	3.46	1.04	2.69	3.46	3.46	2.237
12000	1.44	2.91	3.18	3.18	0.89	2.32	3.18	3.18	1.969
12500	1.30	2.64	2.93	2.93	0.76	2.02	2.93	2.93	1.742
13000	1.18	2.40	2.71	2.71	0.66	1.77	2.66	2.71	1.548
13500	1.08	2.19	2.51	2.51	0.58	1.56	2.41	2.51	1.383
14000	0.99	2.01	2.34	2.34	0.50	1.37	2.18	2.34	1.240
14500	0.91	1.84	2.18	2.18	0.44	1.21	1.98	2.18	1.116
15000	0.84	1.70	2.04	2.04	0.39	1.07	1.80	2.04	1.008

NOTES: 1. Interpolation is permitted for intermediate spans.
2. Design loads are for purlins supported by cleats using 2 bolts per cleat.
3. Self-weight of purlins and roof sheets are not included.
4. Loads shown in BOLD require Grade 8.8 bolts.

SINGLE SPANS

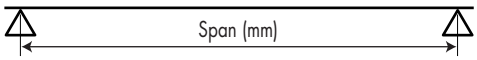


SINGLE SPAN DESIGN CAPACITY C40024 (kN/m)

LOAD TYPE >	INWARDS				OUTWARDS				LOAD FOR
BRIDGING >	0	1	2	3	0	1	2	3	SPAN/150
SPAN									DEFLECTION
3000	20.81	20.81	20.81	20.81	20.81	20.81	20.81	20.81	130.605
3500	17.84	17.84	17.84	17.84	17.84	17.84	17.84	17.84	82.249
4000	15.61	15.61	15.61	15.61	15.61	15.61	15.61	15.61	55.099
4500	13.88	13.88	13.88	13.88	13.88	13.88	13.88	13.87	38.698
5000	12.41	12.49	12.49	12.49	12.49	12.49	12.49	12.49	28.210
5500	9.81	11.35	11.35	11.35	11.05	11.35	11.35	11.35	21.194
6000	7.91	10.40	10.40	10.40	8.77	10.40	10.40	10.40	16.326
6500	6.50	8.86	8.86	8.86	6.98	8.86	8.86	8.86	12.841
7000	5.39	7.64	7.64	7.64	5.59	7.64	7.64	7.64	10.281
7500	4.50	6.66	6.66	6.66	4.41	6.66	6.66	6.66	8.359
8000	3.81	5.85	5.85	5.85	3.50	5.76	5.85	5.85	6.887
8500	3.27	5.15	5.18	5.18	2.82	4.99	5.18	5.18	5.742
9000	2.83	4.55	4.62	4.62	2.32	4.35	4.62	4.62	4.837
9500	2.48	4.04	4.15	4.15	1.92	3.80	4.15	4.15	4.113
10000	2.19	3.61	3.74	3.74	1.59	3.33	3.74	3.74	3.526
10500	1.94	3.24	3.40	3.40	1.33	2.93	3.40	3.40	3.046
11000	1.74	2.92	3.09	3.09	1.11	2.58	3.09	3.09	2.649
11500	1.56	2.65	2.83	2.83	0.94	2.27	2.81	2.83	2.319
12000	1.41	2.41	2.60	2.60	0.80	2.00	2.54	2.60	2.041
12500	1.29	2.20	2.40	2.40	0.68	1.77	2.31	2.40	1.805
13000	1.17	2.02	2.22	2.22	0.59	1.55	2.10	2.22	1.605
13500	1.08	1.85	2.05	2.05	0.51	1.36	1.91	2.05	1.433
14000	0.99	1.71	1.90	1.91	0.44	1.19	1.75	1.91	1.285
14500	0.92	1.58	1.76	1.78	0.39	1.05	1.60	1.78	1.157
15000	0.85	1.47	1.63	1.66	0.34	0.93	1.46	1.66	1.045

NOTES: 1. Interpolation is permitted for intermediate spans.
2. Design loads are for purlins supported by cleats using 2 bolts per cleat.
3. Self-weight of purlins and roof sheets are not included.
4. Loads shown in BOLD require Grade 8.8 bolts.

SINGLE SPANS



SINGLE SPAN DESIGN CAPACITY C40030 (kN/m)

LOAD TYPE >	INWARDS				OUTWARDS				LOAD FOR
BRIDGING >	0	1	2	3	0	1	2	3	SPAN/150
SPAN									DEFLECTION
3000	**40.78**	**40.78**	**40.78**	**40.78**	**40.77**	**40.78**	**40.78**	**40.78**	169.949
3500	**34.95**	**34.95**	**34.95**	**34.95**	**34.95**	**34.95**	**34.95**	**34.95**	107.025
4000	**30.58**	**30.58**	**30.58**	**30.58**	**30.58**	**30.58**	**30.58**	**30.58**	71.696
4500	22.32	**26.15**	**26.15**	**26.15**	**26.15**	**26.15**	**26.15**	**26.15**	50.355
5000	16.61	21.18	21.18	21.18	20.70	21.18	21.18	21.18	36.708
5500	12.64	17.51	17.51	17.51	16.34	17.51	17.51	17.51	27.580
6000	9.93	14.71	14.71	14.71	12.60	14.71	14.71	14.71	21.243
6500	8.00	12.53	12.53	12.53	9.69	12.53	12.53	12.53	16.709
7000	6.56	10.81	10.81	10.81	7.50	10.81	10.81	10.81	13.377
7500	5.43	9.42	9.41	9.41	5.94	9.41	9.41	9.41	10.876
8000	4.57	8.27	8.27	8.27	4.71	8.27	8.28	8.27	8.962
8500	3.90	7.33	7.33	7.33	3.78	7.33	7.33	7.33	7.472
9000	3.36	6.54	6.54	6.54	3.07	6.41	6.54	6.54	6.294
9500	2.93	5.84	5.87	5.87	2.50	5.62	5.87	5.87	5.352
10000	2.58	5.21	5.30	5.30	2.05	4.93	5.30	5.30	4.589
10500	2.28	4.67	4.80	4.80	1.70	4.27	4.80	4.80	3.964
11000	2.03	4.21	4.38	4.38	1.43	3.70	4.38	4.38	3.448
11500	1.82	3.81	4.00	4.00	1.21	3.19	4.00	4.00	3.017
12000	1.64	3.46	3.68	3.68	1.03	2.75	3.68	3.68	2.656
12500	1.48	3.14	3.39	3.39	0.88	2.39	3.39	3.39	2.349
13000	1.34	2.85	3.13	3.13	0.76	2.09	3.09	3.13	2.089
13500	1.23	2.60	2.91	2.91	0.66	1.84	2.83	2.91	1.865
14000	1.12	2.37	2.70	2.70	0.58	1.62	2.58	2.70	1.672
14500	1.03	2.18	2.52	2.52	0.51	1.42	2.37	2.52	1.505
15000	0.95	2.00	2.35	2.35	0.45	1.25	2.15	2.35	1.360

NOTES: 1. Interpolation is permitted for intermediate spans.
2. Design loads are for purlins supported by cleats using 2 bolts per cleat.
3. Self-weight of purlins and roof sheets are not included.
4. Loads shown in BOLD require Grade 8.8 bolts.

DOUBLE SPANS

DOUBLE SPAN DESIGN CAPACITY C10010 (kN/m)

LOAD TYPE >	INWARDS				OUTWARDS				LOAD FOR
BRIDGING >	0	1	2	3	0	1	2	3	SPAN/150
SPAN									DEFLECTION
2000	4.53	4.53	4.53	4.53	4.53	4.53	4.53	4.53	10.261
2500	2.90	2.90	2.90	2.90	2.90	2.90	2.90	2.90	5.254
3000	2.01	2.01	2.01	2.01	2.01	2.01	2.01	2.01	3.040
3500	1.48	1.48	1.48	1.48	1.48	1.48	1.48	1.48	1.915
4000	1.13	1.13	1.13	1.13	1.07	1.13	1.13	1.13	1.283
4500	0.89	0.89	0.89	0.89	0.77	0.89	0.89	0.89	0.901
5000	0.72	0.72	0.72	0.72	0.56	0.72	0.72	0.72	0.657
5500	0.58	0.60	0.60	0.60	0.41	0.58	0.60	0.60	0.493
6000	0.48	0.50	0.50	0.50	0.30	0.46	0.50	0.50	0.380

DOUBLE SPAN DESIGN CAPACITY C10012 (kN/m)

LOAD TYPE >	INWARDS				OUTWARDS				LOAD FOR
BRIDGING >	0	1	2	3	0	1	2	3	SPAN/150
SPAN									DEFLECTION
2000	5.46	5.46	5.46	5.46	5.46	5.46	5.46	5.46	12.399
2500	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	6.349
3000	2.43	2.43	2.43	2.43	2.43	2.43	2.43	2.43	3.674
3500	1.78	1.78	1.78	1.78	1.75	1.78	1.78	1.78	2.314
4000	1.35	1.37	1.37	1.37	1.26	1.37	1.37	1.37	1.550
4500	1.04	1.08	1.08	1.08	0.92	1.08	1.08	1.08	1.089
5000	0.83	0.87	0.87	0.87	0.68	0.87	0.87	0.87	0.794
5500	0.67	0.72	0.72	0.72	0.51	0.68	0.72	0.72	0.596
6000	0.55	0.61	0.61	0.61	0.39	0.55	0.61	0.61	0.459

DOUBLE SPAN DESIGN CAPACITY C10015 (kN/m)

LOAD TYPE >	INWARDS				OUTWARDS				LOAD FOR
BRIDGING >	0	1	2	3	0	1	2	3	SPAN/150
SPAN									DEFLECTION
2000	7.04	7.12	7.12	7.12	7.12	7.12	7.12	7.12	15.788
2500	4.42	4.56	4.56	4.56	4.56	4.56	4.56	4.56	8.084
3000	3.02	3.17	3.17	3.17	3.12	3.17	3.17	3.17	4.678
3500	2.18	2.33	2.33	2.33	2.20	2.33	2.33	2.33	2.946
4000	1.65	1.78	1.78	1.78	1.60	1.78	1.78	1.78	1.974
4500	1.28	1.41	1.41	1.41	1.20	1.38	1.41	1.41	1.386
5000	1.02	1.14	1.14	1.14	0.92	1.09	1.14	1.14	1.011
5500	0.83	0.94	0.94	0.94	0.71	0.87	0.94	0.94	0.759
6000	0.69	0.79	0.79	0.79	0.54	0.70	0.78	0.79	0.585

NOTES: 1. Interpolation is permitted for intermediate spans.
2. Design loads are for purlins supported by cleats using 2 bolts per cleat.
3. Self-weight of purlins and roof sheets are not included.
4. Loads shown in BOLD require Grade 8.8 bolts.

Rev.10122018

DOUBLE SPANS

DOUBLE SPAN DESIGN CAPACITY C10019 (kN/m)

LOAD TYPE >	INWARDS				OUTWARDS				LOAD FOR
BRIDGING >	0	1	2	3	0	1	2	3	SPAN/150
SPAN									DEFLECTION
2000	9.48	9.91	9.91	9.91	9.91	9.91	9.91	9.91	20.338
2500	5.90	6.34	6.34	6.34	6.34	6.34	6.34	6.34	10.413
3000	4.01	4.40	4.40	4.40	4.29	4.40	4.40	4.40	6.026
3500	2.89	3.24	3.24	3.24	3.00	3.24	3.24	3.24	3.795
4000	2.17	2.48	2.48	2.48	2.18	2.48	2.48	2.48	2.542
4500	1.68	1.96	1.96	1.96	1.63	1.91	1.96	1.96	1.786
5000	1.34	1.59	1.59	1.59	1.24	1.49	1.59	1.59	1.302
5500	1.09	1.31	1.31	1.31	0.96	1.19	1.31	1.31	0.978
6000	0.90	1.10	1.10	1.10	0.76	0.96	1.08	1.10	0.753

NOTES: 1. Interpolation is permitted for intermediate spans.
2. Design loads are for purlins supported by cleats using 2 bolts per cleat.
3. Self-weight of purlins and roof sheets are not included.
4. Loads shown in BOLD require Grade 8.8 bolts.

Rev.10122018

DOUBLE SPANS

DOUBLE SPAN DESIGN CAPACITY C15012 (kN/m)

LOAD TYPE >	INWARDS				OUTWARDS				LOAD FOR
BRIDGING >	0	1	2	3	0	1	2	3	SPAN/150
SPAN									DEFLECTION
2000	6.82	6.82	6.82	6.82	6.82	6.82	6.82	6.82	35.624
2500	4.96	4.96	4.96	4.96	4.96	4.96	4.96	4.96	18.239
3000	3.76	3.76	3.76	3.76	3.76	3.76	3.76	3.76	10.555
3500	2.93	2.93	2.93	2.93	2.93	2.93	2.93	2.93	6.647
4000	2.33	2.33	2.33	2.33	2.33	2.33	2.33	2.33	4.453
4500	1.84	1.84	1.84	1.84	1.84	1.84	1.84	1.84	3.127
5000	1.49	1.49	1.49	1.49	1.46	1.49	1.49	1.49	2.28
5500	1.22	1.23	1.23	1.23	1.15	1.23	1.23	1.23	1.713
6000	1.01	1.03	1.03	1.03	0.89	1.03	1.03	1.03	1.319
6500	0.85	0.88	0.88	0.88	0.69	0.88	0.88	0.88	1.038
7000	0.72	0.76	0.76	0.76	0.54	0.76	0.76	0.76	0.831
7500	0.62	0.66	0.66	0.66	0.42	0.64	0.66	0.66	0.676
8000	0.53	0.58	0.58	0.58	0.34	0.54	0.58	0.58	0.557
8500	0.46	0.52	0.52	0.52	0.28	0.46	0.52	0.52	0.464
9000	0.40	0.46	0.46	0.46	0.23	0.38	0.46	0.46	0.391
9500	0.34	0.41	0.41	0.41	0.19	0.32	0.41	0.41	0.332
10000	0.30	0.37	0.37	0.37	0.16	0.26	0.36	0.37	0.285
10500	0.26	0.34	0.34	0.34	0.14	0.22	0.32	0.34	0.246
11000	0.23	0.31	0.31	0.31	0.12	0.19	0.29	0.31	0.214
11500	0.20	0.28	0.28	0.28	0.10	0.16	0.25	0.28	0.187
12000	0.18	0.26	0.26	0.26	0.09	0.14	0.22	0.26	0.165

DOUBLE SPAN DESIGN CAPACITY C15015 (kN/m)

LOAD TYPE >	INWARDS				OUTWARDS				LOAD FOR
BRIDGING >	0	1	2	3	0	1	2	3	SPAN/150
SPAN									DEFLECTION
2000	11.04	11.04	11.04	11.04	11.04	11.04	11.04	11.04	46.290
2500	7.68	7.68	7.68	7.68	7.68	7.68	7.68	7.68	23.700
3000	5.44	5.44	5.44	5.44	5.44	5.44	5.44	5.44	13.715
3500	3.97	3.99	3.99	3.99	3.99	3.99	3.99	3.99	8.637
4000	2.98	3.06	3.06	3.06	3.06	3.06	3.06	3.06	5.786
4500	2.31	2.42	2.42	2.42	2.42	2.42	2.42	2.42	4.064
5000	1.84	1.96	1.96	1.96	1.87	1.96	1.96	1.96	2.962
5500	1.49	1.62	1.62	1.62	1.46	1.62	1.62	1.62	2.226
6000	1.23	1.36	1.36	1.36	1.15	1.36	1.36	1.36	1.714
6500	1.03	1.16	1.16	1.16	0.91	1.16	1.16	1.16	1.348
7000	0.87	1.00	1.00	1.00	0.72	0.98	1.00	1.00	1.080
7500	0.74	0.87	0.87	0.87	0.58	0.82	0.87	0.87	0.878
8000	0.64	0.77	0.77	0.77	0.47	0.69	0.77	0.77	0.723
8500	0.55	0.68	0.68	0.68	0.39	0.59	0.68	0.68	0.603
9000	0.48	0.60	0.60	0.60	0.32	0.50	0.60	0.60	0.508
9500	0.42	0.54	0.54	0.54	0.26	0.42	0.53	0.54	0.432
10000	0.37	0.49	0.49	0.49	0.22	0.36	0.47	0.49	0.370
10500	0.33	0.44	0.44	0.44	0.19	0.31	0.41	0.44	0.320
11000	0.29	0.40	0.40	0.40	0.16	0.26	0.36	0.40	0.278
11500	0.26	0.36	0.37	0.37	0.14	0.23	0.32	0.37	0.243
12000	0.23	0.33	0.34	0.34	0.12	0.20	0.29	0.33	0.214

NOTES: 1. Interpolation is permitted for intermediate spans.
2. Design loads are for purlins supported by cleats using 2 bolts per cleat.
3. Self-weight of purlins and roof sheets are not included.
4. Loads shown in BOLD require Grade 8.8 bolts.

Rev.10122018

DOUBLE SPANS

DOUBLE SPAN DESIGN CAPACITY C15019 (kN/m)

LOAD TYPE >	INWARDS				OUTWARDS				LOAD FOR
BRIDGING >	0	1	2	3	0	1	2	3	SPAN/150
SPAN									DEFLECTION
2500	**10.69**	**11.10**	**11.10**	**11.10**	**11.10**	**11.10**	**11.10**	**11.10**	30.343
3000	7.21	7.71	7.71	7.71	7.71	7.71	7.71	7.71	17.56
3500	5.17	5.66	5.66	5.66	5.66	5.66	5.66	5.66	11.058
4000	3.87	4.33	4.33	4.33	4.28	4.33	4.33	4.33	7.408
4500	3.00	3.42	3.42	3.42	3.25	3.42	3.42	3.42	5.203
5000	2.39	2.77	2.77	2.77	2.52	2.77	2.77	2.77	3.793
5500	1.94	2.29	2.29	2.29	1.99	2.29	2.29	2.29	2.850
6000	1.60	1.93	1.93	1.93	1.58	1.91	1.93	1.93	2.195
6500	1.34	1.64	1.64	1.64	1.27	1.58	1.64	1.64	1.726
7000	1.13	1.42	1.42	1.42	1.02	1.32	1.42	1.42	1.382
7500	0.97	1.23	1.23	1.23	0.81	1.12	1.23	1.23	1.124
8000	0.84	1.08	1.08	1.08	0.65	0.95	1.08	1.08	0.926
8500	0.73	0.96	0.96	0.96	0.53	0.81	0.94	0.96	0.772
9000	0.63	0.84	0.86	0.86	0.44	0.69	0.82	0.86	0.650
9500	0.55	0.75	0.77	0.77	0.37	0.59	0.72	0.77	0.553
10000	0.49	0.67	0.69	0.69	0.31	0.51	0.64	0.69	0.474
10500	0.43	0.60	0.63	0.63	0.26	0.43	0.56	0.62	0.410
11000	0.38	0.54	0.57	0.57	0.22	0.37	0.50	0.56	0.356
11500	0.34	0.49	0.52	0.52	0.19	0.31	0.45	0.50	0.312
12000	0.30	0.44	0.47	0.48	0.17	0.27	0.40	0.45	0.274

DOUBLE SPAN DESIGN CAPACITY C15024 (kN/m)

LOAD TYPE >	INWARDS				OUTWARDS				LOAD FOR
BRIDGING >	0	1	2	3	0	1	2	3	SPAN/150
SPAN									DEFLECTION
2500	**14.35**	**15.79**	**15.79**	**15.79**	**15.79**	**15.79**	**15.79**	**15.79**	39.297
3000	**9.56**	**10.97**	**10.97**	**10.97**	**10.97**	**10.97**	**10.97**	**10.97**	22.741
3500	6.79	**8.06**	**8.06**	**8.06**	**8.04**	**8.06**	**8.06**	**8.06**	14.321
4000	5.05	**6.17**	**6.17**	**6.17**	**5.92**	**6.17**	**6.17**	**6.17**	9.594
4500	3.88	4.87	4.87	4.87	4.48	4.87	4.87	4.87	6.738
5000	3.07	3.95	3.95	3.95	3.46	3.95	3.95	3.95	4.912
5500	2.49	3.26	3.26	3.26	2.71	3.24	3.26	3.26	3.690
6000	2.05	2.74	2.74	2.74	2.16	2.65	2.74	2.74	2.843
6500	1.71	2.34	2.34	2.34	1.74	2.19	2.34	2.34	2.236
7000	1.45	1.99	2.01	2.01	1.41	1.83	2.01	2.01	1.790
7500	1.24	1.72	1.75	1.75	1.14	1.54	1.75	1.75	1.455
8000	1.07	1.49	1.54	1.54	0.92	1.31	1.51	1.54	1.199
8500	0.92	1.31	1.37	1.37	0.75	1.11	1.31	1.37	1.000
9000	0.80	1.15	1.22	1.22	0.62	0.95	1.14	1.22	0.842
9500	0.70	1.02	1.09	1.09	0.52	0.82	1.00	1.08	0.716
10000	0.62	0.91	0.98	0.99	0.44	0.71	0.88	0.96	0.614
10500	0.55	0.81	0.88	0.90	0.37	0.61	0.78	0.86	0.530
11000	0.48	0.73	0.79	0.82	0.32	0.53	0.69	0.77	0.461
11500	0.43	0.66	0.71	0.75	0.28	0.45	0.61	0.69	0.404
12000	0.39	0.60	0.65	0.69	0.25	0.39	0.55	0.62	0.355

NOTES: 1. Interpolation is permitted for intermediate spans.
2. Design loads are for purlins supported by cleats using 2 bolts per cleat.
3. Self-weight of purlins and roof sheets are not included.
4. Loads shown in BOLD require Grade 8.8 bolts.

Rev.10122018

DOUBLE SPANS

DOUBLE SPAN DESIGN CAPACITY C20012 (kN/m)

LOAD TYPE >	INWARDS				OUTWARDS				LOAD FOR
BRIDGING >	0	1	2	3	0	1	2	3	SPAN/150
SPAN									DEFLECTION
2000	5.83	5.83	5.83	5.83	5.83	5.83	5.83	5.83	74.514
2500	4.48	4.48	4.48	4.48	4.48	4.48	4.48	4.48	38.152
3000	3.57	3.57	3.57	3.57	3.57	3.57	3.57	3.57	22.079
3500	2.92	2.92	2.92	2.92	2.92	2.92	2.92	2.92	13.905
4000	2.43	2.43	2.43	2.43	2.43	2.43	2.43	2.43	9.314
4500	2.05	2.05	2.05	2.05	2.05	2.05	2.05	2.05	6.542
5000	1.75	1.75	1.75	1.75	1.75	1.75	1.75	1.75	4.769
5500	1.51	1.52	1.51	1.51	1.51	1.52	1.52	1.52	3.583
6000	1.32	1.32	1.32	1.32	1.32	1.32	1.32	1.32	2.760
6500	1.13	1.16	1.16	1.16	1.10	1.16	1.16	1.16	2.171
7000	0.96	1.02	1.02	1.02	0.90	1.02	1.02	1.02	1.738
7500	0.83	0.91	0.91	0.91	0.73	0.91	0.91	0.91	1.413
8000	0.71	0.81	0.81	0.81	0.60	0.79	0.81	0.81	1.164
8500	0.62	0.72	0.72	0.72	0.50	0.68	0.72	0.72	0.971
9000	0.55	0.64	0.64	0.64	0.42	0.59	0.64	0.64	0.818
9500	0.48	0.58	0.58	0.58	0.35	0.51	0.58	0.58	0.695
10000	0.43	0.52	0.52	0.52	0.29	0.45	0.52	0.52	0.596
10500	0.38	0.47	0.47	0.47	0.25	0.39	0.47	0.47	0.515
11000	0.34	0.43	0.43	0.43	0.21	0.34	0.42	0.43	0.448
11500	0.30	0.39	0.39	0.39	0.18	0.29	0.38	0.39	0.392
12000	0.27	0.36	0.36	0.36	0.16	0.26	0.34	0.36	0.345

DOUBLE SPAN DESIGN CAPACITY C20015 (kN/m)

LOAD TYPE >	INWARDS				OUTWARDS				LOAD FOR
BRIDGING >	0	1	2	3	0	1	2	3	SPAN/150
SPAN									DEFLECTION
2000	10.60	10.60	10.60	10.60	10.60	10.60	10.60	10.60	97.393
2500	7.91	7.91	7.91	7.91	7.91	7.91	7.91	7.91	49.867
3000	6.12	6.12	6.12	6.12	6.12	6.12	6.12	6.12	28.859
3500	4.87	4.87	4.87	4.87	4.87	4.87	4.87	4.87	18.174
4000	3.96	3.96	3.96	3.96	3.96	3.96	3.95	3.96	12.175
4500	3.27	3.27	3.27	3.27	3.27	3.27	3.27	3.27	8.551
5000	2.70	2.73	2.73	2.73	2.73	2.73	2.73	2.73	6.233
5500	2.20	2.26	2.26	2.26	2.26	2.26	2.26	2.26	4.683
6000	1.82	1.90	1.90	1.90	1.89	1.90	1.90	1.90	3.607
6500	1.53	1.62	1.62	1.62	1.55	1.62	1.62	1.62	2.837
7000	1.31	1.40	1.40	1.39	1.28	1.40	1.40	1.40	2.272
7500	1.12	1.22	1.22	1.22	1.04	1.22	1.22	1.22	1.847
8000	0.97	1.07	1.07	1.07	0.84	1.07	1.07	1.07	1.522
8500	0.84	0.95	0.95	0.95	0.68	0.95	0.95	0.95	1.269
9000	0.73	0.84	0.84	0.84	0.56	0.83	0.84	0.84	1.069
9500	0.64	0.76	0.76	0.76	0.47	0.73	0.76	0.76	0.909
10000	0.56	0.68	0.68	0.68	0.39	0.64	0.68	0.68	0.779
10500	0.50	0.62	0.62	0.62	0.33	0.55	0.62	0.62	0.673
11000	0.44	0.57	0.57	0.57	0.29	0.48	0.57	0.57	0.585
11500	0.39	0.52	0.52	0.52	0.25	0.41	0.52	0.52	0.512
12000	0.35	0.48	0.48	0.48	0.21	0.36	0.47	0.48	0.451

NOTES: 1. Interpolation is permitted for intermediate spans.
2. Design loads are for purlins supported by cleats using 2 bolts per cleat.
3. Self-weight of purlins and roof sheets are not included.
4. Loads shown in BOLD require Grade 8.8 bolts.

Rev.10122018

DOUBLE SPANS

DOUBLE SPAN DESIGN CAPACITY C20019 (kN/m)

LOAD TYPE >	INWARDS				OUTWARDS				LOAD FOR
BRIDGING >	0	1	2	3	0	1	2	3	SPAN/150
SPAN									DEFLECTION
3500	**8.10**	**8.33**	**8.33**	**8.33**	**8.33**	**8.33**	**8.33**	**8.33**	24.386
4000	6.00	**6.50**	**6.50**	**6.50**	**6.50**	**6.50**	**6.50**	**6.50**	16.336
4500	4.61	5.14	5.14	5.14	5.14	5.14	5.14	5.14	11.474
5000	3.63	4.16	4.16	4.16	4.16	4.16	4.16	4.16	8.364
5500	2.93	3.44	3.44	3.44	3.40	3.44	3.44	3.44	6.284
6000	2.40	2.89	2.89	2.89	2.73	2.89	2.89	2.89	4.841
6500	2.00	2.46	2.46	2.46	2.21	2.46	2.46	2.46	3.807
7000	1.69	2.12	2.12	2.12	1.80	2.12	2.12	2.12	3.048
7500	1.44	1.85	1.85	1.85	1.48	1.85	1.85	1.85	2.478
8000	1.24	1.63	1.63	1.63	1.22	1.63	1.63	1.63	2.042
8500	1.08	1.44	1.44	1.44	1.00	1.40	1.44	1.44	1.702
9000	0.94	1.28	1.28	1.28	0.84	1.21	1.28	1.28	1.434
9500	0.83	1.15	1.15	1.15	0.70	1.05	1.15	1.15	1.219
10000	0.73	1.04	1.04	1.04	0.58	0.91	1.04	1.04	1.046
10500	0.65	0.94	0.94	0.94	0.49	0.79	0.94	0.94	0.903
11000	0.58	0.86	0.86	0.86	0.42	0.69	0.86	0.86	0.786
11500	0.52	0.79	0.79	0.79	0.36	0.60	0.77	0.79	0.687
12000	0.46	0.72	0.72	0.72	0.31	0.53	0.69	0.72	0.605

DOUBLE SPAN DESIGN CAPACITY C20024 (kN/m)

LOAD TYPE >	INWARDS				OUTWARDS				LOAD FOR
BRIDGING >	0	1	2	3	0	1	2	3	SPAN/150
SPAN									DEFLECTION
3500	**10.74**	Purlin capacity exceeds bolt capacity							31.329
4000	**7.94**	**9.29**	**9.29**	**9.29**	**9.29**	**9.29**	**9.29**	**9.29**	20.988
4500	**6.07**	**7.34**	**7.34**	**7.34**	**7.34**	**7.34**	**7.34**	**7.34**	14.741
5000	4.74	**5.95**	**5.95**	**5.95**	**5.81**	**5.95**	**5.95**	**5.95**	10.746
5500	3.79	**4.92**	**4.92**	**4.92**	**4.63**	**4.92**	**4.92**	**4.92**	8.074
6000	3.09	**4.13**	**4.13**	**4.13**	3.75	**4.13**	**4.13**	**4.13**	6.219
6500	2.56	3.52	3.52	3.52	3.06	3.52	3.52	3.52	4.891
7000	2.14	3.03	3.04	3.03	2.52	3.03	3.03	3.03	3.916
7500	1.82	2.64	2.64	2.64	2.06	2.59	2.64	2.64	3.184
8000	1.56	2.32	2.32	2.32	1.69	2.23	2.32	2.32	2.624
8500	1.34	2.06	2.06	2.06	1.39	1.93	2.06	2.06	2.187
9000	1.17	1.82	1.84	1.84	1.15	1.67	1.84	1.84	1.843
9500	1.03	1.62	1.65	1.65	0.96	1.46	1.65	1.65	1.567
10000	0.91	1.45	1.49	1.49	0.80	1.28	1.48	1.49	1.343
10500	0.80	1.30	1.35	1.35	0.68	1.12	1.32	1.35	1.160
11000	0.72	1.18	1.23	1.23	0.57	0.98	1.18	1.23	1.009
11500	0.64	1.06	1.12	1.12	0.49	0.85	1.06	1.12	0.883
12000	0.57	0.97	1.03	1.03	0.43	0.74	0.96	1.03	0.777

NOTES: 1. Interpolation is permitted for intermediate spans.
2. Design loads are for purlins supported by cleats using 2 bolts per cleat.
3. Self-weight of purlins and roof sheets are not included.
4. Loads shown in BOLD require Grade 8.8 bolts.

Rev.10122018

DOUBLE SPANS

DOUBLE SPAN DESIGN CAPACITY C25015 (kN/m)

LOAD TYPE >	INWARDS				OUTWARDS				LOAD FOR
BRIDGING >	0	1	2	3	0	1	2	3	SPAN/150
SPAN									DEFLECTION
2000	9.16	9.16	9.16	9.16	9.16	9.16	9.16	9.16	165.34
2500	7.10	7.10	7.10	7.10	7.10	7.10	7.10	7.10	84.654
3000	5.71	5.71	5.71	5.71	5.71	5.71	5.71	5.71	48.989
3500	4.70	4.70	4.70	4.70	4.70	4.70	4.70	4.70	30.852
4000	3.95	3.95	3.95	3.94	3.95	3.95	3.95	3.95	20.667
4500	3.36	3.36	3.36	3.36	3.36	3.36	3.36	3.36	14.516
5000	2.89	2.89	2.89	2.89	2.89	2.89	2.89	2.89	10.582
5500	2.51	2.51	2.51	2.51	2.51	2.51	2.51	2.51	7.950
6000	2.20	2.20	2.20	2.20	2.20	2.20	2.20	2.20	6.124
6500	1.94	1.94	1.94	1.94	1.94	1.94	1.94	1.94	4.816
7000	1.65	1.72	1.72	1.72	1.66	1.72	1.72	1.72	3.856
7500	1.42	1.54	1.54	1.54	1.38	1.54	1.54	1.54	3.135
8000	1.23	1.38	1.38	1.38	1.15	1.38	1.38	1.38	2.583
8500	1.07	1.25	1.25	1.25	0.96	1.25	1.25	1.25	2.154
9000	0.94	1.13	1.13	1.13	0.79	1.09	1.13	1.13	1.814
9500	0.83	1.03	1.03	1.03	0.66	0.95	1.03	1.03	1.543
10000	0.73	0.93	0.93	0.93	0.55	0.83	0.93	0.93	1.323
10500	0.65	0.84	0.84	0.84	0.47	0.73	0.84	0.84	1.143
11000	0.59	0.77	0.77	0.77	0.40	0.64	0.76	0.77	0.994
11500	0.53	0.70	0.70	0.70	0.34	0.56	0.69	0.70	0.870
12000	0.47	0.64	0.64	0.64	0.30	0.50	0.62	0.64	0.765

DOUBLE SPAN DESIGN CAPACITY C25019 (kN/m)

LOAD TYPE >	INWARDS				OUTWARDS				LOAD FOR
BRIDGING >	0	1	2	3	0	1	2	3	SPAN/150
SPAN									DEFLECTION
3500	**8.52**	**8.52**	**8.52**	**8.52**	**8.52**	**8.52**	**8.52**	**8.52**	40.458
4000	**7.00**	**7.00**	**7.00**	**7.00**	**7.00**	**7.00**	**7.00**	**7.00**	27.105
4500	**5.85**	**5.85**	**5.85**	**5.85**	**5.85**	**5.85**	**5.85**	**5.85**	19.036
5000	4.77	**4.95**	**4.95**	**4.95**	**4.95**	**4.95**	**4.95**	**4.95**	13.877
5500	3.83	4.23	4.23	4.23	4.23	4.23	4.23	4.23	10.426
6000	3.13	3.65	3.65	3.65	3.64	3.65	3.65	3.65	8.031
6500	2.60	3.11	3.11	3.11	2.95	3.11	3.11	3.11	6.317
7000	2.19	2.68	2.68	2.68	2.39	2.68	2.68	2.68	5.058
7500	1.86	2.33	2.33	2.33	1.95	2.33	2.33	2.33	4.112
8000	1.59	2.05	2.05	2.05	1.59	2.05	2.05	2.05	3.388
8500	1.38	1.82	1.82	1.82	1.30	1.82	1.82	1.82	2.825
9000	1.20	1.62	1.62	1.62	1.08	1.61	1.62	1.62	2.379
9500	1.05	1.45	1.45	1.45	0.89	1.40	1.45	1.45	2.023
10000	0.92	1.31	1.31	1.31	0.74	1.21	1.31	1.31	1.735
10500	0.82	1.19	1.19	1.19	0.62	1.05	1.19	1.19	1.499
11000	0.73	1.08	1.08	1.08	0.53	0.91	1.08	1.08	1.303
11500	0.65	0.99	0.99	0.99	0.45	0.79	0.99	0.99	1.141
12000	0.58	0.91	0.91	0.91	0.39	0.68	0.91	0.91	1.004

NOTES: 1. Interpolation is permitted for intermediate spans.
2. Design loads are for purlins supported by cleats using 2 bolts per cleat.
3. Self-weight of purlins and roof sheets are not included.
4. Loads shown in BOLD require Grade 8.8 bolts.

Rev.10122018

DOUBLE SPANS

DOUBLE SPAN DESIGN CAPACITY C25024 (kN/m)

LOAD TYPE >	INWARDS				OUTWARDS				LOAD FOR
BRIDGING >	0	1	2	3	0	1	2	3	SPAN/150
SPAN									DEFLECTION
4500	**7.82**	Purlin capacity exceeds bolt capacity							24.969
5000	**6.06**	**7.56**	**7.56**	**7.56**	**7.56**	**7.56**	**7.56**	**7.56**	18.203
5500	**4.81**	**6.25**	**6.25**	**6.25**	**6.21**	**6.25**	**6.25**	**6.25**	13.676
6000	3.90	**5.25**	**5.25**	**5.25**	**5.00**	**5.25**	**5.25**	**5.25**	10.534
6500	3.20	**4.47**	**4.47**	**4.47**	**4.06**	**4.47**	**4.47**	**4.47**	8.285
7000	2.67	**3.86**	**3.86**	**3.86**	3.31	**3.86**	**3.86**	**3.86**	6.634
7500	**2.26**	**3.36**	**3.36**	**3.36**	2.68	**3.36**	**3.36**	**3.36**	5.394
8000	1.93	2.95	2.95	2.95	2.18	2.95	2.95	2.95	4.444
8500	1.66	2.62	2.62	2.62	1.77	2.58	2.62	2.62	3.705
9000	1.45	2.33	2.33	2.33	1.46	2.23	2.33	2.33	3.121
9500	1.27	2.09	2.09	2.09	1.20	1.94	2.09	2.09	2.654
10000	1.11	1.89	1.89	1.89	1.00	1.69	1.89	1.89	2.275
10500	0.98	1.71	1.71	1.71	0.84	1.47	1.71	1.71	1.965
11000	0.87	1.56	1.56	1.56	0.71	1.27	1.56	1.56	1.710
11500	0.78	1.42	1.43	1.43	0.61	1.10	1.42	1.43	1.496
12000	0.70	1.29	1.31	1.31	0.52	0.95	1.28	1.31	1.317

NOTES: 1. Interpolation is permitted for intermediate spans.
2. Design loads are for purlins supported by cleats using 2 bolts per cleat.
3. Self-weight of purlins and roof sheets are not included.
4. Loads shown in BOLD require Grade 8.8 bolts.

DOUBLE SPANS

DOUBLE SPAN DESIGN CAPACITY C30019 (kN/m)

LOAD TYPE >	INWARDS				OUTWARDS				LOAD FOR
BRIDGING >	0	1	2	3	0	1	2	3	SPAN/150
SPAN									DEFLECTION
3000	10.09	10.08	10.09	10.09	10.09	10.09	10.09	10.09	111.215
3500	8.38	8.38	8.38	8.38	8.38	8.38	8.38	8.38	70.035
4000	7.09	7.09	7.09	7.09	7.09	7.09	7.09	7.09	46.918
4500	6.08	6.08	6.08	6.08	6.08	6.08	6.08	6.08	32.952
5000	5.28	5.28	5.28	5.28	5.28	5.28	5.28	5.28	24.021
5500	4.62	4.62	4.62	4.62	4.62	4.62	4.62	4.62	18.048
6000	4.07	4.07	4.07	4.07	4.07	4.07	4.07	4.07	13.902
6500	3.62	3.62	3.62	3.62	3.62	3.62	3.62	3.62	10.934
7000	3.15	3.23	3.23	3.23	3.23	3.23	3.23	3.23	8.754
7500	2.69	2.90	2.90	2.90	2.90	2.90	2.90	2.90	7.118
8000	2.30	2.62	2.62	2.62	2.62	2.62	2.62	2.62	5.865
8500	1.98	2.38	2.38	2.38	2.36	2.38	2.38	2.38	4.889
9000	1.72	2.16	2.16	2.16	2.04	2.16	2.16	2.16	4.119
9500	1.51	1.97	1.98	1.98	1.76	1.97	1.98	1.98	3.502
10000	1.33	1.81	1.81	1.81	1.53	1.81	1.81	1.81	3.003
10500	1.18	1.67	1.66	1.66	1.31	1.67	1.67	1.66	2.594
11000	1.05	1.54	1.54	1.54	1.12	1.51	1.54	1.54	2.256
11500	0.94	1.42	1.42	1.42	0.96	1.36	1.42	1.42	1.974
12000	0.85	1.31	1.31	1.31	0.83	1.22	1.31	1.31	1.738
12500	0.77	1.20	1.20	1.20	0.72	1.10	1.20	1.20	1.537
13000	0.70	1.11	1.11	1.11	0.63	1.00	1.11	1.11	1.367
13500	0.63	1.03	1.03	1.03	0.56	0.90	1.03	1.03	1.220
14000	0.58	0.95	0.96	0.96	0.49	0.82	0.96	0.96	1.094
14500	0.53	0.88	0.89	0.89	0.43	0.74	0.88	0.89	0.985
15000	0.49	0.81	0.84	0.84	0.38	0.67	0.82	0.84	0.890

NOTES: 1. Interpolation is permitted for intermediate spans.
2. Design loads are for purlins supported by cleats using 2 bolts per cleat.
3. Self-weight of purlins and roof sheets are not included.
4. Loads shown in BOLD require Grade 8.8 bolts.

DOUBLE SPANS

DOUBLE SPAN DESIGN CAPACITY C30024 (kN/m)

LOAD TYPE >	INWARDS				OUTWARDS				LOAD FOR
BRIDGING >	0	1	2	3	0	1	2	3	SPAN/150
SPAN									DEFLECTION
4000	**12.76**	**12.76**	**12.76**	**12.76**	**12.76**	**12.76**	**12.76**	**12.76**	61.221
4500	**10.75**	**10.75**	**10.75**	**10.75**	**10.75**	**10.75**	**10.75**	**10.75**	42.996
5000	8.80	**9.16**	**9.16**	**9.16**	**9.16**	**9.16**	**9.16**	**9.16**	31.345
5500	6.94	7.90	7.89	7.90	7.90	7.90	7.90	7.90	23.551
6000	5.60	6.86	6.87	6.86	6.87	6.87	6.87	6.86	18.139
6500	4.59	6.02	6.02	6.02	6.02	6.02	6.02	6.02	14.267
7000	3.83	5.31	5.31	5.31	5.31	5.31	5.31	5.31	11.423
7500	3.23	4.70	4.70	4.70	4.57	4.70	4.70	4.70	9.287
8000	2.75	4.13	4.13	4.13	3.85	4.13	4.13	4.13	7.653
8500	2.37	3.66	3.66	3.66	3.26	3.66	3.66	3.66	6.380
9000	2.05	3.26	3.26	3.26	2.77	3.26	3.26	3.26	5.374
9500	1.80	2.93	2.93	2.93	2.36	2.93	2.93	2.93	4.570
10000	1.59	2.64	2.64	2.64	2.02	2.64	2.64	2.64	3.918
10500	1.40	2.40	2.40	2.40	1.73	2.40	2.40	2.40	3.385
11000	1.25	2.19	2.19	2.19	1.49	2.17	2.19	2.19	2.944
11500	1.11	2.00	2.00	2.00	1.28	1.93	2.00	2.00	2.576
12000	1.00	1.84	1.84	1.84	1.11	1.73	1.84	1.84	2.267
12500	0.90	1.69	1.69	1.69	0.96	1.54	1.69	1.69	2.006
13000	0.82	1.56	1.56	1.56	0.83	1.38	1.56	1.56	1.783
13500	0.74	1.45	1.45	1.45	0.72	1.24	1.45	1.45	1.592
14000	0.68	1.34	1.35	1.35	0.63	1.11	1.35	1.35	1.428
14500	0.62	1.23	1.26	1.26	0.56	0.99	1.26	1.26	1.285
15000	0.57	1.14	1.18	1.18	0.49	0.90	1.17	1.18	1.161

NOTES: 1. Interpolation is permitted for intermediate spans.
2. Design loads are for purlins supported by cleats using 2 bolts per cleat.
3. Self-weight of purlins and roof sheets are not included.
4. Loads shown in BOLD require Grade 8.8 bolts.

DOUBLE SPANS

DOUBLE SPAN DESIGN CAPACITY C30030 (kN/m)

LOAD TYPE >	INWARDS				OUTWARDS				LOAD FOR
BRIDGING >	0	1	2	3	0	1	2	3	SPAN/150
SPAN									DEFLECTION
3500	**25.79**	**25.79**	**25.79**	**25.79**	**25.79**	**25.79**	**25.79**	**25.79**	118.089
4000	**20.68**	**20.92**	**20.92**	**20.92**	**20.92**	**20.92**	**20.92**	**20.92**	79.107
4500	**15.36**	**17.27**	**17.27**	**17.27**	**17.27**	**17.27**	**17.27**	**17.27**	55.562
5000	**11.69**	**14.47**	**14.47**	**14.47**	**14.47**	**14.47**	**14.47**	**14.47**	40.504
5500	**8.98**	**12.28**	**12.28**	**12.28**	**12.28**	**12.28**	**12.28**	**12.28**	30.430
6000	7.04	**10.49**	**10.49**	**10.49**	**10.49**	**10.49**	**10.49**	**10.49**	23.440
6500	5.63	**8.93**	**8.93**	**8.93**	**8.93**	**8.93**	**8.93**	**8.93**	18.435
7000	4.59	**7.70**	**7.70**	**7.70**	**7.42**	**7.70**	**7.70**	**7.70**	14.761
7500	3.82	**6.71**	**6.71**	**6.71**	**6.28**	**6.71**	**6.71**	**6.71**	12.001
8000	3.22	**5.90**	**5.90**	**5.90**	5.35	**5.90**	**5.90**	**5.90**	9.889
8500	2.75	5.22	5.23	5.23	4.57	5.23	5.23	5.23	8.244
9000	2.37	4.66	4.66	4.66	3.89	4.66	4.66	4.66	6.945
9500	2.06	4.18	4.18	4.18	3.33	4.18	4.18	4.18	5.905
10000	1.81	3.77	3.78	3.78	2.82	3.74	3.78	3.78	5.063
10500	1.60	3.39	3.42	3.42	2.38	3.33	3.42	3.42	4.374
11000	1.42	3.06	3.12	3.12	2.01	2.98	3.12	3.12	3.804
11500	1.27	2.77	2.85	2.86	1.71	2.67	2.85	2.85	3.329
12000	1.15	2.52	2.62	2.62	1.47	2.40	2.62	2.62	2.930
12500	1.03	2.30	2.42	2.42	1.26	2.17	2.42	2.42	2.592
13000	0.94	2.11	2.23	2.23	1.10	1.95	2.23	2.23	2.304
13500	0.85	1.94	2.07	2.07	0.96	1.76	2.07	2.07	2.058
14000	0.78	1.79	1.93	1.93	0.84	1.58	1.90	1.93	1.845
14500	0.72	1.65	1.80	1.80	0.74	1.42	1.75	1.80	1.661
15000	0.66	1.53	1.68	1.68	0.66	1.27	1.61	1.68	1.500

NOTES: 1. Interpolation is permitted for intermediate spans.
2. Design loads are for purlins supported by cleats using 2 bolts per cleat.
3. Self-weight of purlins and roof sheets are not included.
4. Loads shown in BOLD require Grade 8.8 bolts.

DOUBLE SPANS

DOUBLE SPAN DESIGN CAPACITY C35024 (kN/m)

LOAD TYPE >	INWARDS				OUTWARDS				LOAD FOR
BRIDGING >	0	1	2	3	0	1	2	3	SPAN/150
SPAN									DEFLECTION
3000	**17.41**	**17.41**	**17.41**	**17.41**	**17.41**	**17.41**	**17.41**	**17.41**	234.105
3500	**14.48**	**14.48**	**14.48**	**14.48**	**14.48**	**14.48**	**14.48**	**14.48**	147.428
4000	**12.26**	**12.26**	**12.26**	**12.26**	**12.26**	**12.26**	**12.26**	**12.26**	98.759
4500	**10.53**	**10.53**	**10.53**	**10.53**	**10.53**	**10.53**	**10.53**	**10.53**	69.366
5000	9.14	9.14	9.14	9.14	9.14	9.14	9.14	9.14	50.567
5500	8.01	8.01	8.00	8.01	8.01	8.01	8.00	8.00	37.992
6000	7.07	7.07	7.07	7.07	7.07	7.07	7.07	7.07	29.265
6500	6.28	6.28	6.28	6.28	6.28	6.28	6.28	6.28	23.016
7000	5.21	5.61	5.61	5.61	5.61	5.61	5.61	5.61	18.428
7500	4.32	5.05	5.05	5.05	5.05	5.05	5.05	5.05	14.982
8000	3.64	4.56	4.56	4.56	4.56	4.56	4.56	4.56	12.346
8500	3.10	4.13	4.13	4.13	4.13	4.13	4.13	4.13	10.292
9000	2.67	3.76	3.76	3.76	3.76	3.76	3.76	3.76	8.671
9500	2.33	3.44	3.44	3.44	3.44	3.44	3.44	3.44	7.373
10000	2.04	3.15	3.15	3.15	3.08	3.15	3.15	3.15	6.321
10500	1.80	2.90	2.90	2.90	2.73	2.90	2.90	2.90	5.460
11000	1.60	2.68	2.68	2.68	2.43	2.68	2.68	2.68	4.749
11500	1.44	2.48	2.48	2.48	2.17	2.48	2.48	2.48	4.156
12000	1.29	2.29	2.29	2.29	1.93	2.29	2.29	2.29	3.658
12500	1.17	2.11	2.11	2.11	1.72	2.11	2.11	2.11	3.236
13000	1.06	1.95	1.95	1.95	1.51	1.94	1.95	1.95	2.877
13500	0.97	1.81	1.81	1.81	1.33	1.78	1.81	1.81	2.569
14000	0.88	1.67	1.68	1.68	1.17	1.63	1.68	1.68	2.304
14500	0.81	1.55	1.57	1.57	1.04	1.50	1.57	1.57	2.073
15000	0.75	1.44	1.47	1.47	0.93	1.38	1.47	1.47	1.873

NOTES: 1. Interpolation is permitted for intermediate spans.
2. Design loads are for purlins supported by cleats using 2 bolts per cleat.
3. Self-weight of purlins and roof sheets are not included.
4. Loads shown in BOLD require Grade 8.8 bolts.

DOUBLE SPANS

DOUBLE SPAN DESIGN CAPACITY C35030 (kN/m)

LOAD TYPE >	INWARDS				OUTWARDS				LOAD FOR
BRIDGING >	0	1	2	3	0	1	2	3	SPAN/150
SPAN									DEFLECTION
3500	**26.07**	**26.07**	**26.07**	**26.07**	**26.07**	**26.07**	**26.07**	**26.07**	190.784
4000	**21.70**	**21.70**	**21.70**	**21.70**	**21.70**	**21.70**	**21.70**	**21.70**	127.807
4500	**18.33**	**18.33**	**18.33**	**18.33**	**18.33**	**18.33**	**18.33**	**18.33**	89.766
5000	**15.67**	**15.67**	**15.67**	**15.67**	**15.67**	**15.67**	**15.67**	**15.67**	65.439
5500	**12.30**	**13.53**	**13.53**	**13.53**	**13.53**	**13.53**	**13.53**	**13.53**	49.164
6000	**9.69**	**11.79**	**11.79**	**11.79**	**11.79**	**11.79**	**11.79**	**11.79**	37.870
6500	**7.73**	**10.36**	**10.36**	**10.36**	**10.36**	**10.36**	**10.36**	**10.36**	29.785
7000	6.31	**9.16**	**9.16**	**9.16**	**9.16**	**9.16**	**9.16**	**9.16**	23.848
7500	5.25	**8.14**	**8.14**	**8.14**	**8.14**	**8.14**	**8.14**	**8.14**	19.388
8000	4.43	**7.16**	**7.16**	**7.16**	**7.16**	**7.16**	**7.16**	**7.16**	15.976
8500	3.79	**6.34**	**6.34**	**6.34**	**6.34**	**6.34**	**6.34**	**6.34**	13.319
9000	3.25	**5.65**	**5.65**	**5.65**	**5.63**	**5.65**	**5.65**	**5.65**	11.221
9500	2.81	**5.07**	**5.07**	**5.07**	**4.91**	**5.07**	**5.07**	**5.07**	9.540
10000	2.46	**4.58**	**4.58**	**4.58**	4.29	**4.58**	**4.58**	**4.58**	8.180
10500	2.17	4.15	4.15	4.15	3.75	4.15	4.15	4.15	7.066
11000	1.92	3.79	3.78	3.79	3.29	3.78	3.78	3.78	6.146
11500	1.72	3.46	3.46	3.46	2.89	3.46	3.46	3.46	5.378
12000	1.55	3.18	3.18	3.18	2.54	3.18	3.18	3.18	4.734
12500	1.40	2.93	2.93	2.93	2.23	2.93	2.93	2.93	4.188
13000	1.27	2.71	2.71	2.71	1.96	2.71	2.71	2.71	3.723
13500	1.15	2.51	2.51	2.51	1.73	2.51	2.51	2.51	3.325
14000	1.05	2.34	2.34	2.34	1.54	2.31	2.34	2.34	2.981
14500	0.96	2.16	2.18	2.18	1.37	2.11	2.18	2.18	2.683
15000	0.88	2.00	2.04	2.04	1.23	1.93	2.04	2.04	2.424

NOTES: 1. Interpolation is permitted for intermediate spans.
2. Design loads are for purlins supported by cleats using 2 bolts per cleat.
3. Self-weight of purlins and roof sheets are not included.
4. Loads shown in BOLD require Grade 8.8 bolts.

DOUBLE SPANS

DOUBLE SPAN DESIGN CAPACITY C40024 (kN/m)

LOAD TYPE >	INWARDS				OUTWARDS				LOAD FOR
BRIDGING >	0	1	2	3	0	1	2	3	SPAN/150
SPAN									DEFLECTION
3000	**15.70**	**15.70**	**15.70**	**15.70**	**15.70**	**15.70**	**15.70**	**15.70**	314.025
3500	**13.20**	**13.20**	**13.20**	**13.20**	**13.20**	**13.20**	**13.20**	**13.20**	197.755
4000	11.30	11.30	11.30	11.30	11.30	11.30	11.30	11.30	132.484
4500	9.81	9.81	9.81	9.81	9.81	9.81	9.81	9.81	93.048
5000	8.61	8.61	8.61	8.61	8.61	8.61	8.61	8.61	67.832
5500	7.63	7.63	7.63	7.62	7.63	7.63	7.63	7.63	50.962
6000	6.80	6.80	6.80	6.80	6.80	6.80	6.80	6.80	39.253
6500	6.11	6.11	6.11	6.11	6.11	6.11	6.11	6.11	30.874
7000	5.51	5.51	5.51	5.51	5.51	5.51	5.51	5.51	24.720
7500	4.91	5.00	5.00	5.00	5.00	5.00	5.00	5.00	20.098
8000	4.18	4.55	4.55	4.55	4.55	4.55	4.55	4.55	16.560
8500	3.56	4.16	4.16	4.16	4.16	4.16	4.16	4.16	13.807
9000	3.06	3.81	3.81	3.81	3.81	3.81	3.81	3.81	11.631
9500	2.66	3.51	3.51	3.51	3.51	3.51	3.51	3.51	9.889
10000	2.33	3.24	3.24	3.24	3.24	3.24	3.24	3.24	8.479
10500	2.06	2.99	2.99	2.99	2.99	2.99	2.99	2.99	7.325
11000	1.83	2.78	2.78	2.78	2.70	2.78	2.78	2.78	6.370
11500	1.64	2.58	2.58	2.58	2.40	2.58	2.58	2.58	5.575
12000	1.47	2.41	2.41	2.41	2.14	2.41	2.41	2.41	4.907
12500	1.33	2.25	2.25	2.25	1.90	2.25	2.25	2.25	4.341
13000	1.21	2.10	2.10	2.10	1.70	2.10	2.10	2.10	3.859
13500	1.10	1.97	1.97	1.97	1.52	1.97	1.97	1.97	3.446
14000	1.01	1.85	1.85	1.85	1.36	1.82	1.85	1.85	3.090
14500	0.93	1.73	1.74	1.74	1.21	1.67	1.74	1.74	2.781
15000	0.86	1.60	1.64	1.64	1.07	1.54	1.64	1.64	2.512

NOTES: 1. Interpolation is permitted for intermediate spans.
2. Design loads are for purlins supported by cleats using 2 bolts per cleat.
3. Self-weight of purlins and roof sheets are not included.
4. Loads shown in BOLD require Grade 8.8 bolts.

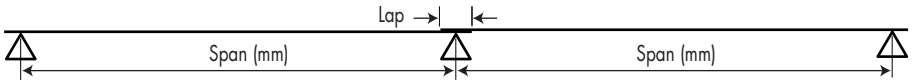
DOUBLE SPANS

DOUBLE SPAN DESIGN CAPACITY C40030 (kN/m)

LOAD TYPE >	INWARDS				OUTWARDS				LOAD FOR
BRIDGING >	0	1	2	3	0	1	2	3	SPAN/150
SPAN									DEFLECTION
3000	**29.48**	**29.48**	**29.48**	**29.48**	**29.48**	**29.48**	**29.48**	**29.48**	408.612
3500	**24.47**	**24.47**	**24.47**	**24.47**	**24.47**	**24.47**	**24.47**	**24.47**	257.318
4000	**20.68**	**20.68**	**20.68**	**20.68**	**20.68**	**20.68**	**20.68**	**20.68**	172.382
4500	**17.73**	**17.73**	**17.73**	**17.73**	**17.73**	**17.73**	**17.73**	**17.73**	121.072
5000	**15.36**	**15.36**	**15.36**	**15.36**	**15.36**	**15.36**	**15.36**	**15.36**	88.261
5500	**13.43**	**13.43**	**13.43**	**13.44**	**13.43**	**13.43**	**13.43**	**13.43**	66.312
6000	**11.32**	**11.84**	**11.84**	**11.84**	**11.84**	**11.84**	**11.84**	**11.84**	51.077
6500	**9.02**	**10.51**	**10.51**	**10.51**	**10.51**	**10.51**	**10.51**	**10.51**	40.174
7000	**7.36**	**9.38**	**9.38**	**9.38**	**9.38**	**9.38**	**9.38**	**9.38**	32.166
7500	**6.10**	**8.42**	**8.42**	**8.42**	**8.42**	**8.42**	**8.42**	**8.42**	26.152
8000	5.14	**7.59**	**7.59**	**7.59**	**7.59**	**7.59**	**7.59**	**7.59**	21.549
8500	4.36	**6.88**	**6.88**	**6.88**	**6.88**	**6.88**	**6.88**	**6.88**	17.965
9000	3.73	**6.26**	**6.26**	**6.26**	**6.26**	**6.26**	**6.26**	**6.26**	15.134
9500	3.23	**5.71**	**5.71**	**5.71**	**5.71**	**5.71**	**5.71**	**5.71**	12.868
10000	2.82	**5.24**	**5.24**	**5.24**	**5.07**	**5.24**	**5.24**	**5.24**	11.033
10500	2.49	**4.80**	**4.80**	**4.80**	**4.49**	**4.80**	**4.80**	**4.80**	9.531
11000	2.21	**4.38**	**4.38**	**4.38**	3.93	**4.38**	**4.38**	**4.38**	8.289
11500	1.97	**4.00**	**4.00**	**4.00**	3.44	**4.00**	**4.00**	**4.00**	7.254
12000	1.77	3.68	3.68	3.68	3.02	3.68	3.68	3.68	6.384
12500	1.59	3.39	3.39	3.39	2.64	3.39	3.39	3.39	5.649
13000	1.44	3.13	3.13	3.13	2.31	3.13	3.13	3.13	5.022
13500	1.31	2.91	2.91	2.91	2.04	2.91	2.91	2.91	4.484
14000	1.19	2.70	2.70	2.70	1.81	2.68	2.70	2.70	4.021
14500	1.09	2.50	2.52	2.52	1.62	2.47	2.52	2.52	3.619
15000	1.00	2.32	2.35	2.35	1.45	2.27	2.35	2.35	3.269

NOTES: 1. Interpolation is permitted for intermediate spans.
2. Design loads are for purlins supported by cleats using 2 bolts per cleat.
3. Self-weight of purlins and roof sheets are not included.
4. Loads shown in BOLD require Grade 8.8 bolts.

2-LAPPED SPANS



2-LAPPED SPANS DESIGN CAPACITY Z10010 (kN/m)

LOAD TYPE >	INWARDS				OUTWARDS				LOAD FOR
BRIDGING >	0	1	2	3	0	1	2	3	SPAN/150
SPAN									DEFLECTION
2000	5.68	5.68	5.68	5.68	5.68	5.68	5.68	5.68	11.663
2500	3.92	3.92	3.92	3.92	3.92	3.92	3.92	3.92	5.971
3000	2.72	2.72	2.72	2.72	2.72	2.72	2.72	2.72	3.456
3500	1.99	2.00	2.00	2.00	1.92	2.00	2.00	2.00	2.176
4000	1.49	1.53	1.53	1.53	1.34	1.53	1.53	1.53	1.458
4500	1.15	1.21	1.21	1.21	0.94	1.21	1.21	1.21	1.024
5000	0.90	0.98	0.98	0.98	0.66	0.97	0.98	0.98	0.746
5500	0.72	0.81	0.81	0.81	0.48	0.75	0.81	0.81	0.561
6000	0.59	0.68	0.68	0.68	0.35	0.59	0.68	0.68	0.432
6500	0.48	0.58	0.58	0.58	0.27	0.46	0.58	0.58	0.340
7000	0.40	0.50	0.50	0.50	0.21	0.36	0.47	0.50	0.272
7500	0.33	0.44	0.44	0.44	0.17	0.28	0.39	0.44	0.221
8000	0.28	0.38	0.38	0.38	0.14	0.23	0.32	0.38	0.182

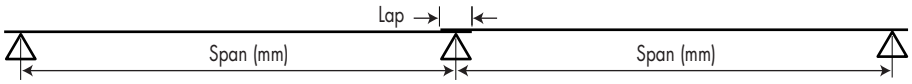
2-LAPPED SPANS DESIGN CAPACITY Z10012 (kN/m)

LOAD TYPE >	INWARDS				OUTWARDS				LOAD FOR
BRIDGING >	0	1	2	3	0	1	2	3	SPAN/150
SPAN									DEFLECTION
2000	7.39	7.39	7.38	7.39	7.38	7.39	7.39	7.39	14.093
2500	4.65	4.73	4.73	4.73	4.73	4.73	4.73	4.73	7.215
3000	3.16	3.28	3.28	3.28	3.28	3.28	3.28	3.28	4.176
3500	2.27	2.41	2.41	2.41	2.26	2.41	2.41	2.41	2.630
4000	1.70	1.85	1.85	1.85	1.59	1.85	1.85	1.85	1.762
4500	1.31	1.46	1.46	1.46	1.14	1.46	1.46	1.46	1.237
5000	1.03	1.18	1.18	1.18	0.82	1.14	1.18	1.18	0.902
5500	0.83	0.98	0.98	0.98	0.60	0.89	0.98	0.98	0.678
6000	0.68	0.82	0.82	0.82	0.46	0.70	0.82	0.82	0.522
6500	0.56	0.70	0.70	0.70	0.35	0.56	0.67	0.70	0.411
7000	0.46	0.60	0.60	0.60	0.27	0.45	0.56	0.60	0.329
7500	0.39	0.51	0.53	0.53	0.21	0.36	0.47	0.52	0.267
8000	0.33	0.44	0.46	0.46	0.17	0.29	0.39	0.45	0.220

NOTES: 1. Interpolation is permitted for intermediate spans.
2. Design loads are for purlins supported by cleats using 2 bolts per cleat.
3. Self-weight of purlins and roof sheets are not included.
4. Loads shown in BOLD require Grade 8.8 bolts.

Rev.10122018

2-LAPPED SPANS



2-LAPPED SPANS DESIGN CAPACITY Z10015 (kN/m)

LOAD TYPE >	INWARDS				OUTWARDS				LOAD FOR
BRIDGING >	0	1	2	3	0	1	2	3	SPAN/150
SPAN									DEFLECTION
2000	9.10	9.63	9.63	9.63	9.63	9.63	9.63	9.63	17.944
2500	5.67	6.16	6.16	6.16	6.16	6.16	6.16	6.16	9.188
3000	3.85	4.28	4.28	4.28	4.10	4.28	4.28	4.28	5.317
3500	2.77	3.14	3.15	3.15	2.86	3.15	3.15	3.15	3.348
4000	2.08	2.41	2.41	2.41	2.06	2.39	2.41	2.41	2.243
4500	1.62	1.90	1.90	1.90	1.52	1.83	1.90	1.90	1.575
5000	1.28	1.54	1.54	1.54	1.14	1.43	1.54	1.54	1.148
5500	1.04	1.25	1.27	1.27	0.84	1.14	1.25	1.27	0.863
6000	0.85	1.04	1.07	1.07	0.63	0.92	1.03	1.07	0.665
6500	0.71	0.87	0.91	0.91	0.48	0.74	0.85	0.91	0.523
7000	0.60	0.74	0.78	0.79	0.38	0.61	0.71	0.77	0.419
7500	0.51	0.63	0.67	0.69	0.30	0.50	0.60	0.66	0.340
8000	0.43	0.55	0.58	0.60	0.24	0.40	0.51	0.56	0.280

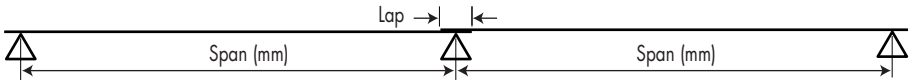
2-LAPPED SPANS DESIGN CAPACITY Z10019 (kN/m)

LOAD TYPE >	INWARDS				OUTWARDS				LOAD FOR
BRIDGING >	0	1	2	3	0	1	2	3	SPAN/150
SPAN									DEFLECTION
2000	**12.07**	**13.40**	**13.40**	**13.40**	**13.40**	**13.40**	**13.40**	**13.40**	23.115
2500	7.44	8.58	8.58	8.58	8.50	8.58	8.58	8.58	11.835
3000	5.01	5.96	5.96	5.96	5.61	5.96	5.96	5.96	6.849
3500	3.59	4.38	4.38	4.38	3.88	4.38	4.38	4.38	4.313
4000	2.68	3.35	3.35	3.35	2.78	3.30	3.35	3.35	2.889
4500	2.07	2.62	2.65	2.65	2.04	2.52	2.65	2.65	2.029
5000	1.64	2.09	2.14	2.14	1.53	1.96	2.14	2.14	1.479
5500	1.33	1.70	1.77	1.77	1.17	1.55	1.73	1.77	1.111
6000	1.09	1.41	1.49	1.49	0.88	1.24	1.41	1.49	0.856
6500	0.91	1.18	1.27	1.27	0.68	1.01	1.17	1.25	0.673
7000	0.76	1.00	1.08	1.09	0.53	0.82	0.97	1.06	0.539
7500	0.65	0.85	0.93	0.95	0.42	0.68	0.82	0.90	0.438
8000	0.56	0.74	0.80	0.84	0.35	0.56	0.69	0.77	0.361

NOTES: 1. Interpolation is permitted for intermediate spans.
2. Design loads are for purlins supported by cleats using 2 bolts per cleat.
3. Self-weight of purlins and roof sheets are not included.
4. Loads shown in BOLD require Grade 8.8 bolts.

Rev.10122018

2-LAPPED SPANS



2-LAPPED SPANS DESIGN CAPACITY Z15012 (kN/m)

LOAD TYPE >	INWARDS				OUTWARDS				LOAD FOR
BRIDGING >	0	1	2	3	0	1	2	3	SPAN/150
SPAN									DEFLECTION
2000	8.13	8.13	8.13	8.13	8.13	8.13	8.13	8.13	40.617
2500	6.05	6.05	6.05	6.05	6.05	6.05	6.05	6.05	20.796
3000	4.67	4.67	4.67	4.67	4.67	4.67	4.67	4.67	12.034
3500	3.70	3.70	3.70	3.70	3.70	3.70	3.70	3.70	7.579
4000	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	5.077
4500	2.41	2.48	2.48	2.48	2.48	2.48	2.48	2.48	3.566
5000	1.91	2.07	2.07	2.07	1.91	2.07	2.07	2.07	2.600
5500	1.54	1.71	1.71	1.71	1.44	1.71	1.71	1.71	1.953
6000	1.26	1.44	1.44	1.44	1.09	1.44	1.44	1.44	1.504
6500	1.04	1.22	1.22	1.22	0.82	1.22	1.22	1.22	1.183
7000	0.87	1.06	1.06	1.06	0.64	1.02	1.05	1.06	0.947
7500	0.74	0.92	0.92	0.92	0.50	0.85	0.92	0.92	0.770
8000	0.63	0.81	0.81	0.81	0.41	0.70	0.81	0.81	0.635
8500	0.53	0.72	0.72	0.72	0.33	0.58	0.71	0.72	0.529
9000	0.46	0.64	0.64	0.64	0.27	0.48	0.62	0.64	0.446
9500	0.40	0.57	0.57	0.57	0.23	0.39	0.54	0.57	0.379
10000	0.34	0.51	0.52	0.52	0.19	0.33	0.47	0.52	0.325
10500	0.30	0.45	0.47	0.47	0.16	0.28	0.40	0.47	0.281
11000	0.26	0.41	0.43	0.43	0.13	0.23	0.35	0.42	0.244
11500	0.23	0.36	0.39	0.39	0.11	0.20	0.30	0.37	0.214
12000	0.21	0.32	0.36	0.36	0.10	0.17	0.26	0.33	0.188

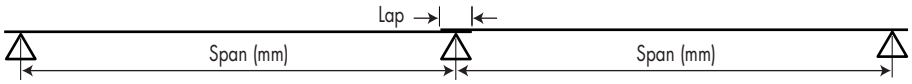
2-LAPPED SPANS DESIGN CAPACITY Z15015 (kN/m)

LOAD TYPE >	INWARDS				OUTWARDS				LOAD FOR
BRIDGING >	0	1	2	3	0	1	2	3	SPAN/150
SPAN									DEFLECTION
2000	**13.67**	**13.67**	**13.67**	**13.67**	**13.67**	**13.67**	**13.67**	**13.67**	52.644
2500	**9.72**	**9.72**	**9.72**	**9.72**	**9.72**	**9.72**	**9.72**	**9.72**	26.953
3000	7.00	7.23	7.23	7.23	7.23	7.23	7.23	7.23	15.599
3500	4.99	5.54	5.54	5.54	5.54	5.54	5.54	5.54	9.823
4000	3.72	4.24	4.24	4.24	4.21	4.24	4.24	4.24	6.580
4500	2.86	3.35	3.35	3.35	3.15	3.35	3.35	3.35	4.622
5000	2.26	2.72	2.72	2.72	2.40	2.72	2.72	2.72	3.369
5500	1.82	2.25	2.25	2.25	1.84	2.25	2.25	2.25	2.531
6000	1.49	1.89	1.89	1.89	1.43	1.89	1.89	1.89	1.950
6500	1.24	1.61	1.61	1.61	1.11	1.55	1.61	1.61	1.534
7000	1.05	1.39	1.39	1.39	0.87	1.29	1.39	1.39	1.228
7500	0.89	1.21	1.21	1.21	0.69	1.07	1.21	1.21	0.998
8000	0.76	1.06	1.06	1.06	0.55	0.90	1.06	1.06	0.823
8500	0.65	0.92	0.94	0.94	0.45	0.75	0.91	0.94	0.686
9000	0.57	0.81	0.84	0.84	0.37	0.63	0.79	0.84	0.578
9500	0.49	0.71	0.75	0.75	0.30	0.53	0.68	0.75	0.491
10000	0.43	0.63	0.68	0.68	0.25	0.45	0.60	0.67	0.421
10500	0.38	0.56	0.62	0.62	0.21	0.38	0.52	0.60	0.364
11000	0.34	0.50	0.56	0.56	0.18	0.32	0.45	0.53	0.316
11500	0.30	0.45	0.50	0.51	0.15	0.28	0.40	0.47	0.277
12000	0.27	0.40	0.45	0.47	0.13	0.24	0.35	0.42	0.244

NOTES: 1. Interpolation is permitted for intermediate spans.
2. Design loads are for purlins supported by cleats using 2 bolts per cleat.
3. Self-weight of purlins and roof sheets are not included.
4. Loads shown in BOLD require Grade 8.8 bolts.

Rev.10122018

2-LAPPED SPANS



2-LAPPED SPANS DESIGN CAPACITY Z15019 (kN/m)

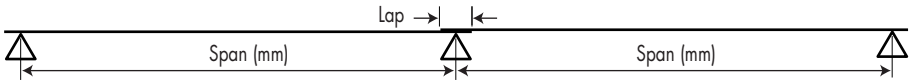
LOAD TYPE >	INWARDS				OUTWARDS				LOAD FOR
BRIDGING >	0	1	2	3	0	1	2	3	SPAN/150
SPAN									DEFLECTION
2000	**21.82**	**21.82**	**21.82**	**21.82**	**21.82**	**21.82**	**21.82**	**21.82**	67.375
2500	**13.70**	**14.85**	**14.85**	**14.85**	**14.85**	**14.85**	**14.85**	**14.85**	34.496
3000	**9.14**	**10.61**	**10.61**	**10.61**	**10.61**	**10.61**	**10.61**	**10.61**	19.963
3500	6.49	**7.80**	**7.80**	**7.80**	**7.71**	**7.80**	**7.80**	**7.80**	12.572
4000	4.82	**5.97**	**5.97**	**5.97**	5.66	**5.97**	**5.97**	**5.97**	8.422
4500	3.71	4.72	4.72	4.72	4.26	4.72	4.72	4.72	5.915
5000	2.91	3.82	3.82	3.82	3.27	3.82	3.82	3.82	4.312
5500	2.33	3.16	3.16	3.16	2.55	3.11	3.16	3.16	3.240
6000	1.90	2.62	2.65	2.65	1.97	2.54	2.65	2.65	2.495
6500	1.57	2.21	2.26	2.26	1.52	2.10	2.26	2.26	1.963
7000	1.31	1.88	1.95	1.95	1.19	1.75	1.95	1.95	1.571
7500	1.11	1.62	1.70	1.70	0.94	1.47	1.66	1.70	1.278
8000	0.95	1.40	1.49	1.49	0.75	1.24	1.43	1.49	1.053
8500	0.81	1.22	1.32	1.32	0.60	1.05	1.23	1.32	0.878
9000	0.71	1.08	1.18	1.18	0.49	0.88	1.07	1.16	0.739
9500	0.62	0.95	1.04	1.06	0.41	0.74	0.94	1.03	0.629
10000	0.54	0.84	0.93	0.96	0.34	0.62	0.82	0.91	0.539
10500	0.48	0.75	0.83	0.87	0.29	0.52	0.72	0.81	0.466
11000	0.42	0.67	0.75	0.79	0.25	0.44	0.63	0.72	0.405
11500	0.37	0.61	0.67	0.72	0.22	0.38	0.56	0.65	0.354
12000	0.33	0.55	0.61	0.65	0.19	0.32	0.49	0.58	0.312

2-LAPPED SPANS DESIGN CAPACITY Z15024 (kN/m)

LOAD TYPE >	INWARDS				OUTWARDS				LOAD FOR
BRIDGING >	0	1	2	3	0	1	2	3	SPAN/150
SPAN									DEFLECTION
3000	**11.85**	**15.01**	**15.01**	**15.01**	**15.01**	**15.01**	**15.01**	**15.01**	25.842
3500	**8.29**	**11.02**	**11.02**	**11.02**	**10.58**	**11.03**	**11.03**	**11.03**	16.273
4000	**6.05**	**8.44**	**8.44**	**8.44**	**7.73**	**8.44**	**8.44**	**8.44**	10.902
4500	4.58	**6.61**	**6.67**	**6.67**	**5.80**	**6.67**	**6.67**	**6.67**	7.657
5000	3.57	**5.27**	**5.40**	**5.40**	4.44	**5.33**	**5.40**	**5.40**	5.582
5500	2.84	4.29	**4.47**	**4.47**	3.45	4.28	**4.47**	**4.47**	4.194
6000	2.31	3.55	3.75	3.75	2.67	3.49	3.75	3.75	3.23
6500	1.90	2.98	3.20	3.20	2.08	2.88	3.18	3.20	2.541
7000	1.59	2.53	2.76	2.76	1.62	2.39	2.68	2.76	2.034
7500	1.34	2.17	2.40	2.40	1.27	2.01	2.29	2.40	1.654
8000	1.14	1.88	2.10	2.11	1.02	1.69	1.96	2.10	1.363
8500	0.99	1.64	1.84	1.87	0.83	1.44	1.69	1.83	1.136
9000	0.86	1.44	1.62	1.67	0.69	1.21	1.47	1.61	0.957
9500	0.75	1.27	1.43	1.50	0.58	1.02	1.28	1.41	0.814
10000	0.66	1.13	1.27	1.35	0.49	0.86	1.12	1.25	0.698
10500	0.58	1.00	1.14	1.22	0.42	0.73	0.99	1.11	0.603
11000	0.52	0.90	1.02	1.10	0.36	0.61	0.87	0.99	0.524
11500	0.46	0.81	0.92	0.99	0.31	0.52	0.77	0.89	0.459
12000	0.41	0.73	0.83	0.90	0.27	0.45	0.67	0.79	0.404

NOTES: 1. Interpolation is permitted for intermediate spans.
2. Design loads are for purlins supported by cleats using 2 bolts per cleat.
3. Self-weight of purlins and roof sheets are not included.
4. Loads shown in BOLD require Grade 8.8 bolts.

2-LAPPED SPANS



2-LAPPED SPANS DESIGN CAPACITY Z20012 (kN/m)

LOAD TYPE >	INWARDS				OUTWARDS				LOAD FOR
BRIDGING >	0	1	2	3	0	1	2	3	SPAN/150
SPAN									DEFLECTION
2000	6.64	6.64	6.64	6.64	6.64	6.64	6.64	6.64	84.954
2500	5.16	5.16	5.16	5.16	5.16	5.16	5.16	5.16	43.499
3000	4.16	4.16	4.16	4.16	4.16	4.16	4.16	4.16	25.172
3500	3.44	3.44	3.44	3.44	3.44	3.44	3.44	3.44	15.852
4000	2.90	2.90	2.90	2.90	2.90	2.90	2.90	2.90	10.619
4500	2.48	2.48	2.48	2.48	2.48	2.48	2.48	2.48	7.459
5000	2.14	2.14	2.14	2.14	2.14	2.14	2.14	2.14	5.437
5500	1.86	1.86	1.86	1.86	1.86	1.86	1.86	1.86	4.085
6000	1.64	1.64	1.64	1.64	1.64	1.64	1.64	1.64	3.147
6500	1.38	1.45	1.45	1.45	1.39	1.45	1.45	1.45	2.475
7000	1.17	1.29	1.29	1.29	1.12	1.29	1.29	1.29	1.981
7500	1.00	1.15	1.15	1.15	0.91	1.15	1.15	1.15	1.611
8000	0.86	1.04	1.04	1.04	0.75	1.04	1.04	1.04	1.327
8500	0.74	0.94	0.94	0.94	0.61	0.89	0.94	0.94	1.107
9000	0.65	0.85	0.85	0.85	0.50	0.77	0.85	0.85	0.932
9500	0.57	0.78	0.78	0.78	0.42	0.66	0.77	0.78	0.793
10000	0.50	0.69	0.70	0.70	0.35	0.57	0.68	0.70	0.680
10500	0.45	0.62	0.64	0.64	0.29	0.49	0.61	0.64	0.587
11000	0.40	0.56	0.58	0.58	0.25	0.43	0.54	0.58	0.511
11500	0.36	0.50	0.53	0.53	0.21	0.37	0.48	0.53	0.447
12000	0.32	0.46	0.49	0.49	0.19	0.33	0.43	0.48	0.393

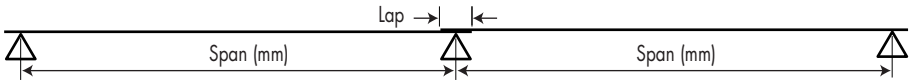
2-LAPPED SPANS DESIGN CAPACITY Z20015 (kN/m)

LOAD TYPE >	INWARDS				OUTWARDS				LOAD FOR
BRIDGING >	0	1	2	3	0	1	2	3	SPAN/150
SPAN									DEFLECTION
2000	**12.29**	**12.29**	**12.29**	**12.29**	**12.29**	**12.29**	**12.29**	**12.29**	110.445
2500	9.33	9.33	9.32	9.32	9.33	9.33	9.32	9.32	56.551
3000	7.33	7.33	7.33	7.33	7.33	7.33	7.33	7.33	32.725
3500	5.91	5.91	5.91	5.91	5.91	5.91	5.91	5.91	20.608
4000	4.86	4.86	4.86	4.86	4.86	4.86	4.86	4.86	13.806
4500	4.06	4.06	4.06	4.06	4.06	4.06	4.06	4.06	9.697
5000	3.29	3.44	3.44	3.44	3.44	3.44	3.44	3.44	7.069
5500	2.64	2.94	2.94	2.94	2.94	2.94	2.94	2.94	5.311
6000	2.16	2.53	2.53	2.53	2.41	2.53	2.53	2.53	4.091
6500	1.79	2.16	2.16	2.16	1.95	2.16	2.16	2.16	3.218
7000	1.50	1.86	1.86	1.86	1.54	1.86	1.86	1.86	2.576
7500	1.27	1.62	1.62	1.62	1.22	1.62	1.62	1.62	2.094
8000	1.08	1.42	1.42	1.42	0.98	1.42	1.42	1.42	1.726
8500	0.93	1.26	1.26	1.26	0.79	1.24	1.26	1.26	1.439
9000	0.81	1.12	1.12	1.12	0.65	1.08	1.12	1.12	1.212
9500	0.70	1.01	1.01	1.01	0.54	0.94	1.01	1.01	1.031
10000	0.62	0.91	0.91	0.91	0.46	0.80	0.91	0.91	0.884
10500	0.55	0.83	0.83	0.83	0.39	0.69	0.83	0.83	0.763
11000	0.49	0.75	0.75	0.75	0.34	0.58	0.75	0.75	0.664
11500	0.43	0.68	0.69	0.69	0.29	0.50	0.67	0.69	0.581
12000	0.39	0.62	0.63	0.63	0.24	0.43	0.60	0.63	0.511

NOTES: 1. Interpolation is permitted for intermediate spans.
2. Design loads are for purlins supported by cleats using 2 bolts per cleat.
3. Self-weight of purlins and roof sheets are not included.
4. Loads shown in BOLD require Grade 8.8 bolts.

Rev.10122018

2-LAPPED SPANS



2-LAPPED SPANS DESIGN CAPACITY Z20019 (kN/m)

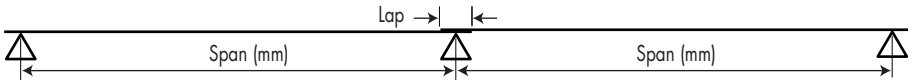
LOAD TYPE >	INWARDS				OUTWARDS				LOAD FOR
BRIDGING >	0	1	2	3	0	1	2	3	SPAN/150
SPAN									DEFLECTION
2000	**23.33**	**23.33**	**23.33**	**23.33**	**23.33**	**23.33**	**23.33**	**23.33**	148.484
2500	**17.24**	**17.24**	**17.24**	**17.24**	**17.24**	**17.24**	**17.24**	**17.24**	76.023
3000	**13.22**	**13.22**	**13.22**	**13.22**	**13.22**	**13.22**	**13.22**	**13.22**	43.994
3500	**9.75**	**10.43**	**10.43**	**10.43**	**10.43**	**10.43**	**10.43**	**10.43**	27.704
4000	**7.10**	**8.41**	**8.41**	**8.41**	**8.41**	**8.41**	**8.41**	**8.41**	18.560
4500	**5.39**	**6.87**	**6.87**	**6.87**	**6.87**	**6.87**	**6.87**	**6.87**	13.036
5000	4.20	**5.57**	**5.57**	**5.57**	**5.52**	**5.57**	**5.57**	**5.57**	9.503
5500	3.35	**4.60**	**4.60**	**4.60**	**4.34**	**4.60**	**4.60**	**4.60**	7.140
6000	2.73	3.87	3.87	3.87	3.44	3.87	3.87	3.87	5.499
6500	2.26	3.29	3.29	3.29	2.75	3.29	3.29	3.29	4.325
7000	1.89	2.84	2.84	2.84	2.21	2.84	2.84	2.84	3.463
7500	1.61	2.47	2.47	2.47	1.78	2.47	2.47	2.47	2.816
8000	1.38	2.18	2.18	2.18	1.44	2.12	2.17	2.18	2.320
8500	1.19	1.93	1.93	1.93	1.18	1.81	1.93	1.93	1.934
9000	1.04	1.70	1.72	1.72	0.97	1.55	1.72	1.72	1.629
9500	0.91	1.50	1.54	1.54	0.80	1.33	1.54	1.54	1.385
10000	0.80	1.34	1.39	1.39	0.67	1.15	1.39	1.39	1.188
10500	0.71	1.19	1.26	1.26	0.57	0.99	1.24	1.26	1.026
11000	0.63	1.07	1.15	1.15	0.48	0.86	1.10	1.15	0.892
11500	0.56	0.96	1.05	1.05	0.41	0.74	0.97	1.05	0.781
12000	0.50	0.87	0.97	0.97	0.35	0.64	0.87	0.97	0.687

2-LAPPED SPANS DESIGN CAPACITY Z20024 (kN/m)

LOAD TYPE >	INWARDS				OUTWARDS				LOAD FOR
BRIDGING >	0	1	2	3	0	1	2	3	SPAN/150
SPAN									DEFLECTION
3500	**12.95**	Purlin capacity exceeds bolt capacity							35.735
4000	**9.28**								23.94
4500	**6.91**	**10.01**	**10.01**	**10.01**	**9.77**	**10.01**	**10.01**	**10.01**	16.814
5000	**5.31**	**8.11**	**8.11**	**8.11**	**7.62**	**8.11**	**8.11**	**8.11**	12.257
5500	4.20	**6.70**	**6.70**	**6.70**	**6.03**	**6.70**	**6.70**	**6.70**	9.209
6000	3.37	**5.62**	**5.63**	**5.63**	**4.83**	**5.63**	**5.63**	**5.63**	7.093
6500	2.76	**4.72**	**4.80**	**4.80**	**3.88**	**4.80**	**4.80**	**4.80**	5.579
7000	2.30	**4.01**	**4.14**	**4.14**	3.11	**4.05**	**4.14**	**4.14**	4.467
7500	1.94	**3.45**	**3.61**	**3.61**	2.49	**3.44**	**3.61**	**3.61**	3.632
8000	1.65	**2.99**	**3.17**	**3.17**	2.01	2.94	**3.17**	**3.17**	2.992
8500	1.43	2.61	**2.81**	**2.81**	1.63	2.53	**2.81**	**2.81**	2.495
9000	1.24	2.30	2.50	2.50	1.32	2.19	2.48	2.50	2.102
9500	1.08	2.04	2.25	2.25	1.09	1.90	2.19	2.25	1.787
10000	0.96	1.81	2.03	2.03	0.91	1.64	1.93	2.03	1.532
10500	0.85	1.62	1.84	1.84	0.77	1.41	1.72	1.84	1.324
11000	0.75	1.46	1.66	1.68	0.65	1.22	1.53	1.67	1.151
11500	0.68	1.31	1.51	1.53	0.56	1.05	1.37	1.50	1.007
12000	0.61	1.19	1.37	1.41	0.48	0.91	1.23	1.36	0.887

NOTES: 1. Interpolation is permitted for intermediate spans.
2. Design loads are for purlins supported by cleats using 2 bolts per cleat.
3. Self-weight of purlins and roof sheets are not included.
4. Loads shown in BOLD require Grade 8.8 bolts.

2-LAPPED SPANS

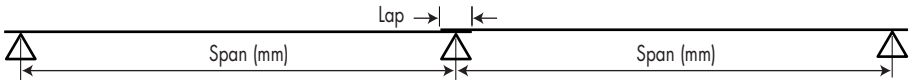


2-LAPPED SPANS DESIGN CAPACITY Z25015 (kN/m)

LOAD TYPE >	INWARDS				OUTWARDS				LOAD FOR
BRIDGING >	0	1	2	3	0	1	2	3	SPAN/150
SPAN									DEFLECTION
2000	10.38	10.38	10.38	10.38	10.38	10.38	10.38	10.38	188.489
2500	8.12	8.12	8.12	8.12	8.12	8.12	8.12	8.12	96.511
3000	6.59	6.59	6.59	6.59	6.59	6.59	6.59	6.59	55.849
3500	5.49	5.49	5.49	5.49	5.49	5.49	5.49	5.49	35.169
4000	4.65	4.65	4.65	4.65	4.65	4.65	4.65	4.65	23.561
4500	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	16.547
5000	3.48	3.48	3.48	3.48	3.48	3.48	3.48	3.48	12.063
5500	3.05	3.05	3.05	3.05	3.05	3.05	3.05	3.05	9.063
6000	2.69	2.69	2.69	2.69	2.69	2.69	2.69	2.69	6.981
6500	2.34	2.40	2.40	2.40	2.40	2.40	2.40	2.40	5.491
7000	1.97	2.14	2.14	2.14	2.11	2.14	2.14	2.14	4.396
7500	1.69	1.93	1.93	1.93	1.73	1.93	1.93	1.93	3.574
8000	1.45	1.74	1.74	1.74	1.42	1.74	1.74	1.74	2.945
8500	1.26	1.58	1.58	1.58	1.15	1.58	1.58	1.58	2.455
9000	1.09	1.44	1.44	1.44	0.94	1.42	1.44	1.44	2.068
9500	0.95	1.32	1.32	1.32	0.78	1.24	1.32	1.32	1.759
10000	0.84	1.21	1.21	1.21	0.66	1.08	1.21	1.21	1.508
10500	0.74	1.10	1.11	1.11	0.56	0.94	1.11	1.11	1.303
11000	0.66	0.99	1.03	1.03	0.47	0.82	0.99	1.03	1.133
11500	0.59	0.89	0.95	0.95	0.40	0.72	0.89	0.95	0.991
12000	0.53	0.81	0.87	0.87	0.34	0.63	0.80	0.87	0.873
12500	0.47	0.74	0.80	0.80	0.30	0.54	0.71	0.79	0.772
13000	0.43	0.67	0.74	0.74	0.26	0.47	0.64	0.72	0.686
13500	0.39	0.61	0.68	0.69	0.22	0.41	0.58	0.66	0.613
14000	0.35	0.56	0.63	0.64	0.19	0.36	0.52	0.60	0.549
14500	0.32	0.51	0.58	0.60	0.17	0.32	0.47	0.55	0.495
15000	0.29	0.47	0.53	0.56	0.15	0.29	0.42	0.51	0.447

NOTES: 1. Interpolation is permitted for intermediate spans.
2. Design loads are for purlins supported by cleats using 2 bolts per cleat.
3. Self-weight of purlins and roof sheets are not included.
4. Loads shown in BOLD require Grade 8.8 bolts.

2-LAPPED SPANS

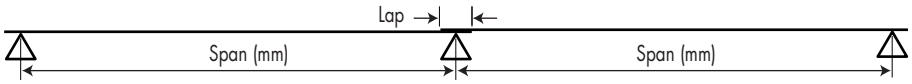


2-LAPPED SPANS DESIGN CAPACITY Z25019 (kN/m)

LOAD TYPE >	INWARDS				OUTWARDS				LOAD FOR
BRIDGING >	0	1	2	3	0	1	2	3	SPAN/150
SPAN									DEFLECTION
2000	**20.38**	**20.38**	**20.39**	**20.39**	**20.39**	**20.39**	**20.39**	**20.39**	246.186
2500	**15.67**	**15.67**	**15.67**	**15.67**	**15.67**	**15.67**	**15.67**	**15.67**	126.051
3000	**12.49**	**12.49**	**12.49**	**12.49**	**12.49**	**12.49**	**12.49**	**12.49**	72.942
3500	**10.20**	**10.20**	**10.20**	**10.20**	**10.20**	**10.20**	**10.20**	**10.20**	45.933
4000	**8.49**	**8.49**	**8.49**	**8.49**	**8.49**	**8.49**	**8.49**	**8.49**	30.773
4500	**6.96**	**7.17**	**7.17**	**7.17**	**7.17**	**7.17**	**7.17**	**7.17**	21.614
5000	**5.39**	**6.12**	**6.12**	**6.12**	**6.12**	**6.12**	**6.12**	**6.12**	15.756
5500	4.27	**5.29**	**5.29**	**5.29**	**5.29**	**5.29**	**5.29**	**5.29**	11.837
6000	3.46	**4.60**	**4.60**	**4.60**	**4.60**	**4.60**	**4.60**	**4.60**	9.118
6500	2.86	**4.04**	**4.04**	**4.04**	3.65	**4.04**	**4.04**	**4.04**	7.171
7000	2.39	**3.57**	**3.57**	**3.57**	2.91	**3.57**	**3.57**	**3.57**	5.742
7500	2.03	3.12	3.12	3.12	2.32	3.12	3.12	3.12	4.668
8000	1.73	2.74	2.74	2.74	1.87	2.74	2.74	2.74	3.847
8500	1.49	2.43	2.43	2.43	1.52	2.42	2.43	2.43	3.207
9000	1.29	2.17	2.17	2.17	1.24	2.08	2.17	2.17	2.702
9500	1.13	1.95	1.95	1.95	1.02	1.78	1.95	1.95	2.297
10000	0.99	1.76	1.76	1.76	0.85	1.52	1.76	1.76	1.969
10500	0.88	1.58	1.59	1.59	0.72	1.31	1.59	1.59	1.701
11000	0.78	1.42	1.45	1.45	0.61	1.12	1.45	1.45	1.480
11500	0.70	1.28	1.33	1.33	0.51	0.96	1.31	1.33	1.295
12000	0.63	1.15	1.22	1.22	0.44	0.83	1.16	1.22	1.140
12500	0.56	1.04	1.12	1.12	0.38	0.72	1.03	1.12	1.008
13000	0.51	0.94	1.04	1.04	0.33	0.63	0.91	1.04	0.896
13500	0.46	0.85	0.96	0.96	0.29	0.54	0.81	0.96	0.800
14000	0.42	0.77	0.90	0.90	0.25	0.48	0.72	0.89	0.718
14500	0.38	0.70	0.84	0.84	0.22	0.42	0.64	0.81	0.646
15000	0.35	0.64	0.78	0.78	0.20	0.37	0.57	0.74	0.584

NOTES: 1. Interpolation is permitted for intermediate spans.
2. Design loads are for purlins supported by cleats using 2 bolts per cleat.
3. Self-weight of purlins and roof sheets are not included.
4. Loads shown in BOLD require Grade 8.8 bolts.

2-LAPPED SPANS

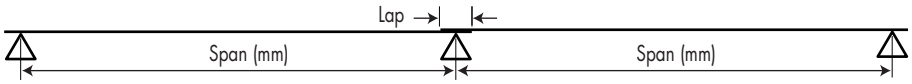


2-LAPPED SPANS DESIGN CAPACITY Z25024 (kN/m)

LOAD TYPE >	INWARDS				OUTWARDS				LOAD FOR
BRIDGING >	0	1	2	3	0	1	2	3	SPAN/150
SPAN									DEFLECTION
4500	**8.63**	Purlin capacity exceeds bolt capacity							28.48
5000	**6.61**								20.762
5500	**5.17**	**8.53**	**8.53**	**8.53**	**8.05**	**8.53**	**8.53**	**8.53**	15.598
6000	**4.14**	**7.16**	**7.16**	**7.16**	**6.41**	**7.16**	**7.16**	**7.16**	12.015
6500	3.38	**6.10**	**6.10**	**6.10**	**5.09**	**6.10**	**6.10**	**6.10**	9.450
7000	2.81	**5.26**	**5.26**	**5.26**	**4.03**	**5.26**	**5.26**	**5.26**	7.566
7500	2.37	**4.58**	**4.58**	**4.58**	**3.20**	**4.58**	**4.58**	**4.58**	6.152
8000	2.02	**3.98**	**4.03**	**4.03**	2.57	**3.94**	**4.03**	**4.03**	5.069
8500	1.74	**3.47**	**3.57**	**3.57**	2.06	**3.37**	**3.57**	**3.57**	4.226
9000	1.51	**3.04**	**3.18**	**3.18**	1.67	**2.90**	**3.18**	**3.18**	3.560
9500	1.32	**2.69**	**2.86**	**2.86**	1.37	**2.51**	**2.86**	**2.86**	3.027
10000	1.16	**2.39**	**2.58**	**2.58**	1.14	2.15	**2.58**	**2.58**	2.595
10500	1.03	2.13	**2.34**	**2.34**	0.95	1.84	**2.30**	**2.34**	2.242
11000	0.92	1.91	2.13	2.13	0.81	1.57	2.04	2.13	1.950
11500	0.82	1.72	1.95	1.95	0.69	1.35	1.82	1.95	1.706
12000	0.74	1.54	1.79	1.79	0.59	1.16	1.63	1.79	1.502
12500	0.66	1.39	1.65	1.65	0.51	1.00	1.45	1.65	1.329
13000	0.60	1.25	1.52	1.53	0.45	0.86	1.29	1.50	1.181
13500	0.54	1.13	1.39	1.42	0.39	0.75	1.15	1.36	1.055
14000	0.50	1.03	1.27	1.32	0.35	0.65	1.02	1.24	0.946
14500	0.45	0.93	1.17	1.23	0.31	0.57	0.91	1.13	0.851
15000	0.41	0.85	1.07	1.15	0.27	0.50	0.80	1.03	0.769

NOTES: 1. Interpolation is permitted for intermediate spans.
2. Design loads are for purlins supported by cleats using 2 bolts per cleat.
3. Self-weight of purlins and roof sheets are not included.
4. Loads shown in BOLD require Grade 8.8 bolts.

2-LAPPED SPANS

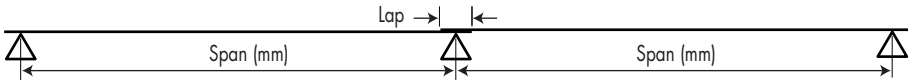


2-LAPPED SPANS DESIGN CAPACITY Z30019 (kN/m)

LOAD TYPE >	INWARDS				OUTWARDS				LOAD FOR
BRIDGING >	0	1	2	3	0	1	2	3	SPAN/150
SPAN									DEFLECTION
2000	17.97	17.97	17.97	17.97	17.97	17.97	17.97	17.97	429.333
2500	14.14	14.14	14.14	14.13	14.14	14.14	14.14	14.14	219.815
3000	11.56	11.56	11.56	11.56	11.56	11.56	11.56	11.55	127.21
3500	9.69	9.69	9.69	9.69	9.69	9.69	9.69	9.69	80.110
4000	8.28	8.28	8.28	8.27	8.28	8.28	8.28	8.27	53.667
4500	7.17	7.17	7.17	7.17	7.17	7.17	7.17	7.17	37.691
5000	6.27	6.27	6.27	6.27	6.27	6.27	6.27	6.27	27.476
5500	5.54	5.54	5.54	5.54	5.54	5.54	5.54	5.54	20.643
6000	4.93	4.93	4.93	4.93	4.93	4.93	4.93	4.93	15.900
6500	4.18	4.41	4.41	4.41	4.41	4.41	4.41	4.41	12.507
7000	3.47	3.97	3.97	3.97	3.97	3.97	3.97	3.97	10.014
7500	2.92	3.59	3.59	3.59	3.59	3.59	3.59	3.59	8.141
8000	2.49	3.26	3.26	3.26	3.26	3.26	3.26	3.26	6.708
8500	2.14	2.98	2.98	2.98	2.98	2.98	2.98	2.98	5.593
9000	1.86	2.72	2.72	2.72	2.61	2.72	2.72	2.72	4.711
9500	1.63	2.50	2.50	2.50	2.21	2.50	2.50	2.50	4.006
10000	1.45	2.30	2.30	2.30	1.85	2.30	2.30	2.30	3.435
10500	1.29	2.13	2.13	2.13	1.57	2.13	2.13	2.13	2.967
11000	1.16	1.97	1.97	1.97	1.33	1.97	1.97	1.97	2.580
11500	1.04	1.83	1.83	1.83	1.14	1.80	1.83	1.83	2.258
12000	0.93	1.68	1.70	1.70	0.99	1.61	1.70	1.70	1.988
12500	0.84	1.54	1.59	1.59	0.87	1.45	1.59	1.59	1.759
13000	0.76	1.41	1.49	1.49	0.75	1.31	1.49	1.49	1.563
13500	0.69	1.29	1.39	1.39	0.65	1.18	1.38	1.39	1.396
14000	0.63	1.19	1.31	1.31	0.57	1.06	1.26	1.31	1.252
14500	0.58	1.10	1.22	1.22	0.50	0.95	1.16	1.22	1.127
15000	0.53	1.01	1.14	1.14	0.44	0.84	1.07	1.14	1.018

NOTES: 1. Interpolation is permitted for intermediate spans.
2. Design loads are for purlins supported by cleats using 2 bolts per cleat.
3. Self-weight of purlins and roof sheets are not included.
4. Loads shown in BOLD require Grade 8.8 bolts.

2-LAPPED SPANS

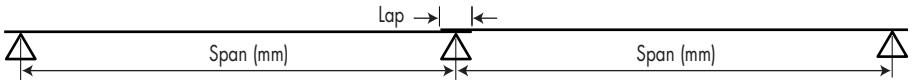


2-LAPPED SPANS DESIGN CAPACITY Z30024 (kN/m)

LOAD TYPE >	INWARDS				OUTWARDS				LOAD FOR
BRIDGING >	0	1	2	3	0	1	2	3	SPAN/150
SPAN									DEFLECTION
2000	**35.29**	**35.29**	**35.30**	**35.30**	**35.29**	**35.29**	**35.30**	**35.30**	556.023
2500	**27.38**	**27.38**	**27.38**	**27.38**	**27.37**	**27.37**	**27.37**	**27.37**	284.689
3000	**22.02**	**22.02**	**22.02**	**22.02**	**22.02**	**22.02**	**22.02**	**22.02**	164.750
3500	**18.16**	**18.16**	**18.16**	**18.16**	**18.16**	**18.16**	**18.16**	**18.16**	103.746
4000	**15.25**	**15.25**	**15.25**	**15.25**	**15.25**	**15.25**	**15.25**	**15.25**	69.503
4500	**12.98**	**12.98**	**12.98**	**12.98**	**12.98**	**12.98**	**12.98**	**12.98**	48.814
5000	**9.85**	**11.18**	**11.18**	**11.18**	**11.18**	**11.18**	**11.18**	**11.18**	35.585
5500	7.65	**9.72**	**9.72**	**9.72**	**9.72**	**9.72**	**9.72**	**9.72**	26.734
6000	6.07	**8.52**	**8.52**	**8.52**	**8.52**	**8.52**	**8.52**	**8.52**	20.592
6500	4.93	**7.52**	**7.52**	**7.52**	**7.52**	**7.52**	**7.52**	**7.52**	16.197
7000	4.05	**6.69**	**6.69**	**6.69**	**6.69**	**6.69**	**6.69**	**6.69**	12.969
7500	3.38	5.98	5.98	5.98	5.76	5.98	5.98	5.98	10.544
8000	2.86	5.37	5.37	5.37	4.80	5.37	5.37	5.37	8.688
8500	2.45	4.85	4.85	4.85	4.01	4.85	4.85	4.85	7.243
9000	2.12	4.39	4.39	4.39	3.36	4.39	4.39	4.39	6.102
9500	1.85	3.92	3.94	3.94	2.84	3.94	3.94	3.94	5.188
10000	1.63	3.48	3.55	3.55	2.41	3.55	3.55	3.55	4.448
10500	1.44	3.11	3.22	3.22	2.03	3.16	3.22	3.22	3.843
11000	1.28	2.79	2.94	2.94	1.73	2.79	2.94	2.94	3.342
11500	1.15	2.51	2.69	2.69	1.48	2.47	2.69	2.69	2.925
12000	1.03	2.26	2.47	2.47	1.26	2.20	2.47	2.47	2.574
12500	0.93	2.05	2.27	2.27	1.09	1.95	2.27	2.27	2.277
13000	0.85	1.86	2.10	2.10	0.94	1.73	2.10	2.10	2.025
13500	0.77	1.70	1.95	1.95	0.82	1.54	1.95	1.95	1.808
14000	0.70	1.55	1.81	1.81	0.72	1.38	1.78	1.81	1.621
14500	0.64	1.42	1.69	1.69	0.63	1.23	1.62	1.69	1.459
15000	0.59	1.30	1.58	1.58	0.56	1.10	1.48	1.58	1.318

NOTES: 1. Interpolation is permitted for intermediate spans.
2. Design loads are for purlins supported by cleats using 2 bolts per cleat.
3. Self-weight of purlins and roof sheets are not included.
4. Loads shown in BOLD require Grade 8.8 bolts.

2-LAPPED SPANS

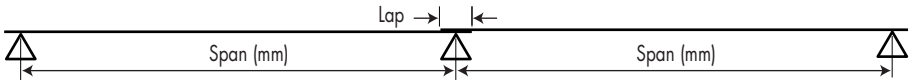


2-LAPPED SPANS DESIGN CAPACITY Z30030 (kN/m)

LOAD TYPE >	INWARDS				OUTWARDS				LOAD FOR
BRIDGING >	0	1	2	3	0	1	2	3	SPAN/150
SPAN									DEFLECTION
4500	**16.71**	Purlin capacity exceeds bolt capacity							63.104
5000	**12.15**	**18.24**	**18.24**	**18.25**	**18.24**	**18.24**	**18.24**	**18.25**	46.003
5500	**9.19**	**15.61**	**15.61**	**15.61**	**15.61**	**15.61**	**15.61**	**15.61**	34.565
6000	7.17	**13.49**	**13.49**	**13.49**	**13.49**	**13.49**	**13.49**	**13.49**	26.621
6500	5.74	**11.76**	**11.76**	**11.76**	**11.44**	**11.76**	**11.76**	**11.76**	20.938
7000	4.69	**10.33**	**10.33**	**10.33**	**9.53**	**10.33**	**10.33**	**10.33**	16.765
7500	3.90	**8.96**	**9.04**	**9.04**	**8.00**	**9.04**	**9.04**	**9.04**	13.631
8000	3.29	**7.75**	**7.94**	**7.94**	**6.71**	**7.94**	**7.94**	**7.94**	11.231
8500	2.81	**6.76**	**7.04**	**7.04**	**5.63**	**7.04**	**7.04**	**7.04**	9.364
9000	2.43	**5.94**	**6.28**	**6.28**	4.72	**6.27**	**6.28**	**6.28**	7.888
9500	2.12	**5.25**	**5.63**	**5.63**	3.90	**5.52**	**5.63**	**5.63**	6.707
10000	1.86	**4.67**	**5.08**	**5.08**	3.23	**4.88**	**5.08**	**5.08**	5.750
10500	1.65	4.17	**4.61**	**4.61**	2.70	**4.34**	**4.61**	**4.61**	4.968
11000	1.47	3.74	**4.20**	**4.20**	2.28	3.86	**4.20**	**4.20**	4.320
11500	1.32	3.38	3.84	3.84	1.94	3.45	3.84	3.84	3.781
12000	1.18	3.05	3.53	3.53	1.66	3.09	3.53	3.53	3.328
12500	1.07	2.76	3.25	3.25	1.43	2.75	3.21	3.25	2.944
13000	0.97	2.50	3.01	3.01	1.24	2.46	2.93	3.01	2.617
13500	0.89	2.28	2.79	2.79	1.08	2.19	2.67	2.79	2.337
14000	0.81	2.08	2.58	2.59	0.95	1.96	2.45	2.59	2.096
14500	0.75	1.90	2.39	2.42	0.84	1.73	2.24	2.42	1.886
15000	0.69	1.74	2.21	2.26	0.75	1.53	2.06	2.26	1.704

NOTES: 1. Interpolation is permitted for intermediate spans.
2. Design loads are for purlins supported by cleats using 2 bolts per cleat.
3. Self-weight of purlins and roof sheets are not included.
4. Loads shown in BOLD require Grade 8.8 bolts.

2-LAPPED SPANS

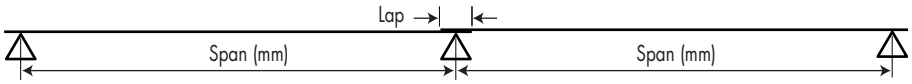


2-LAPPED SPANS DESIGN CAPACITY Z35024 (kN/m)

LOAD TYPE >	INWARDS				OUTWARDS				LOAD FOR
BRIDGING >	0	1	2	3	0	1	2	3	SPAN/150
SPAN									DEFLECTION
2000	**30.96**	**30.96**	**30.96**	**30.96**	**30.96**	**30.96**	**30.96**	**30.96**	903.955
2500	**24.38**	**24.38**	**24.38**	**24.38**	**24.38**	**24.38**	**24.38**	**24.38**	462.851
3000	**19.94**	**19.94**	**19.94**	**19.94**	**19.94**	**19.94**	**19.94**	**19.94**	267.854
3500	**16.73**	**16.73**	**16.73**	**16.74**	**16.73**	**16.73**	**16.73**	**16.73**	168.682
4000	**14.30**	**14.30**	**14.30**	**14.30**	**14.30**	**14.30**	**14.30**	**14.30**	113.002
4500	**12.40**	**12.40**	**12.40**	**12.40**	**12.40**	**12.40**	**12.40**	**12.40**	79.364
5000	**10.86**	**10.86**	**10.86**	**10.86**	**10.86**	**10.86**	**10.86**	**10.86**	57.857
5500	**9.60**	**9.60**	**9.60**	**9.60**	**9.60**	**9.60**	**9.60**	**9.60**	43.467
6000	**8.55**	**8.55**	**8.55**	**8.55**	**8.55**	**8.55**	**8.55**	**8.55**	33.482
6500	**6.93**	**7.66**	**7.66**	**7.66**	**7.66**	**7.66**	**7.66**	**7.66**	26.334
7000	5.65	**6.90**	**6.90**	**6.90**	**6.90**	**6.90**	**6.90**	**6.90**	21.085
7500	4.68	**6.25**	**6.25**	**6.25**	**6.25**	**6.25**	**6.25**	**6.25**	17.142
8000	3.94	**5.68**	**5.68**	**5.68**	**5.68**	**5.68**	**5.68**	**5.68**	14.125
8500	3.36	5.18	5.18	5.18	5.18	5.18	5.18	5.18	11.776
9000	2.89	4.75	4.75	4.75	4.75	4.75	4.75	4.75	9.920
9500	2.53	4.36	4.36	4.36	4.36	4.36	4.36	4.36	8.435
10000	2.23	4.02	4.02	4.02	4.02	4.02	4.02	4.02	7.232
10500	1.98	3.71	3.72	3.71	3.55	3.71	3.71	3.71	6.247
11000	1.76	3.44	3.44	3.44	3.14	3.44	3.44	3.44	5.434
11500	1.58	3.20	3.20	3.19	2.74	3.20	3.20	3.19	4.755
12000	1.42	2.98	2.98	2.98	2.37	2.98	2.98	2.98	4.185
12500	1.28	2.74	2.78	2.78	2.06	2.78	2.78	2.78	3.703
13000	1.17	2.50	2.60	2.60	1.80	2.60	2.60	2.60	3.292
13500	1.06	2.30	2.43	2.43	1.58	2.37	2.43	2.43	2.939
14000	0.97	2.12	2.29	2.29	1.40	2.17	2.28	2.29	2.636
14500	0.89	1.95	2.15	2.15	1.24	1.99	2.15	2.15	2.372
15000	0.81	1.81	2.01	2.01	1.10	1.83	2.01	2.01	2.143

NOTES: 1. Interpolation is permitted for intermediate spans.
2. Design loads are for purlins supported by cleats using 2 bolts per cleat.
3. Self-weight of purlins and roof sheets are not included.
4. Loads shown in BOLD require Grade 8.8 bolts.

2-LAPPED SPANS

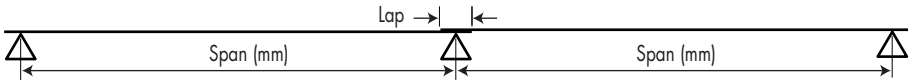


2-LAPPED SPANS DESIGN CAPACITY Z35030 (kN/m)

LOAD TYPE >	INWARDS				OUTWARDS				LOAD FOR
BRIDGING >	0	1	2	3	0	1	2	3	SPAN/150
SPAN									DEFLECTION
5000	**17.87**	Purlin capacity exceeds bolt capacity							74.375
5500	**13.55**	**16.64**	**16.64**	**16.64**	**16.64**	**16.64**	**16.64**	**16.64**	55.879
6000	**10.60**	**14.62**	**14.62**	**14.62**	**14.62**	**14.62**	**14.62**	**14.62**	43.040
6500	**8.44**	**12.93**	**12.94**	**12.94**	**12.93**	**12.93**	**12.94**	**12.94**	33.852
7000	**6.82**	**11.52**	**11.52**	**11.52**	**11.52**	**11.52**	**11.52**	**11.52**	27.105
7500	5.62	**10.31**	**10.31**	**10.31**	**10.31**	**10.31**	**10.31**	**10.31**	22.036
8000	4.71	**9.28**	**9.28**	**9.28**	**9.28**	**9.28**	**9.28**	**9.28**	18.157
8500	4.00	**8.39**	**8.39**	**8.39**	**8.34**	**8.39**	**8.39**	**8.39**	15.138
9000	3.42	**7.62**	**7.62**	**7.62**	**7.18**	**7.62**	**7.62**	**7.62**	12.753
9500	2.95	**6.86**	**6.86**	**6.86**	**6.19**	**6.86**	**6.86**	**6.86**	10.843
10000	2.57	**6.19**	**6.19**	**6.19**	**5.36**	**6.19**	**6.19**	**6.19**	9.297
10500	2.26	**5.58**	**5.62**	**5.62**	**4.64**	**5.62**	**5.62**	**5.62**	8.031
11000	2.00	**5.00**	**5.12**	**5.12**	4.02	**5.12**	**5.12**	**5.12**	6.985
11500	1.78	**4.49**	**4.68**	**4.68**	3.47	**4.68**	**4.68**	**4.68**	6.112
12000	1.59	**4.05**	**4.30**	**4.30**	3.01	**4.30**	**4.30**	**4.30**	5.380
12500	1.44	**3.67**	**3.96**	**3.96**	2.63	**3.96**	**3.96**	**3.96**	4.760
13000	1.30	3.33	**3.66**	**3.66**	2.32	**3.62**	**3.66**	**3.66**	4.232
13500	1.18	3.03	**3.40**	**3.40**	2.05	3.29	**3.40**	**3.40**	3.779
14000	1.08	2.77	3.16	3.16	1.81	2.98	3.16	3.16	3.388
14500	0.99	2.53	2.95	2.95	1.60	2.71	2.95	2.95	3.050
15000	0.91	2.33	2.75	2.75	1.42	2.47	2.75	2.75	2.755

NOTES: 1. Interpolation is permitted for intermediate spans.
2. Design loads are for purlins supported by cleats using 2 bolts per cleat.
3. Self-weight of purlins and roof sheets are not included.
4. Loads shown in BOLD require Grade 8.8 bolts.

2-LAPPED SPANS

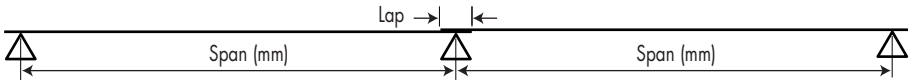


2-LAPPED SPANS DESIGN CAPACITY Z40024 (kN/m)

LOAD TYPE >	INWARDS				OUTWARDS				LOAD FOR
BRIDGING >	0	1	2	3	0	1	2	3	SPAN/150
SPAN									DEFLECTION
2500	**21.61**	**21.61**	**21.61**	**21.61**	**21.61**	**21.61**	**21.61**	**21.61**	624.917
3000	**17.81**	**17.81**	**17.81**	**17.81**	**17.81**	**17.81**	**17.81**	**17.81**	361.657
3500	**15.06**	**15.06**	**15.06**	**15.06**	**15.06**	**15.06**	**15.06**	**15.06**	227.749
4000	**12.99**	**12.99**	**12.99**	**12.99**	**12.99**	**12.99**	**12.99**	**12.99**	152.582
4500	**11.36**	**11.36**	**11.36**	**11.36**	**11.36**	**11.36**	**11.36**	**11.36**	107.156
5000	**10.05**	**10.05**	**10.05**	**10.05**	**10.05**	**10.05**	**10.05**	**10.05**	78.119
5500	**8.97**	**8.97**	**8.97**	**8.97**	**8.97**	**8.97**	**8.97**	**8.97**	58.691
6000	**8.06**	**8.06**	**8.06**	**8.06**	**8.06**	**8.06**	**8.06**	**8.06**	45.206
6500	**7.29**	**7.29**	**7.29**	**7.29**	**7.29**	**7.29**	**7.29**	**7.29**	35.556
7000	**6.57**	**6.63**	**6.63**	**6.63**	**6.63**	**6.63**	**6.63**	**6.63**	28.468
7500	5.43	**6.05**	**6.05**	**6.05**	**6.05**	**6.05**	**6.05**	**6.05**	23.146
8000	4.56	5.55	5.55	5.55	5.55	5.55	5.55	5.55	19.072
8500	3.89	5.10	5.10	5.10	5.10	5.10	5.10	5.10	15.900
9000	3.36	4.71	4.71	4.71	4.71	4.71	4.71	4.71	13.395
9500	2.94	4.36	4.36	4.36	4.36	4.36	4.36	4.36	11.389
10000	2.59	4.05	4.05	4.04	4.05	4.05	4.05	4.04	9.765
10500	2.28	3.76	3.76	3.76	3.76	3.76	3.76	3.76	8.435
11000	2.03	3.51	3.51	3.51	3.51	3.51	3.51	3.51	7.336
11500	1.81	3.28	3.28	3.27	3.11	3.28	3.28	3.27	6.420
12000	1.63	3.07	3.07	3.07	2.75	3.07	3.07	3.07	5.651
12500	1.47	2.88	2.88	2.88	2.44	2.88	2.88	2.88	4.999
13000	1.33	2.71	2.71	2.70	2.13	2.71	2.71	2.70	4.445
13500	1.21	2.54	2.54	2.54	1.87	2.54	2.54	2.54	3.969
14000	1.10	2.38	2.40	2.40	1.65	2.40	2.40	2.40	3.559
14500	1.01	2.19	2.26	2.26	1.46	2.26	2.26	2.26	3.203
15000	0.93	2.03	2.14	2.14	1.30	2.07	2.14	2.14	2.893

NOTES: 1. Interpolation is permitted for intermediate spans.
2. Design loads are for purlins supported by cleats using 2 bolts per cleat.
3. Self-weight of purlins and roof sheets are not included.
4. Loads shown in BOLD require Grade 8.8 bolts.

2-LAPPED SPANS

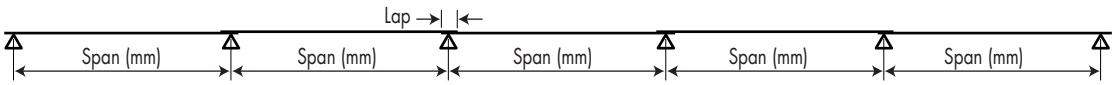


2-LAPPED SPANS DESIGN CAPACITY Z40030 (kN/m)

LOAD TYPE >	INWARDS				OUTWARDS				LOAD FOR
BRIDGING >	0	1	2	3	0	1	2	3	SPAN/150
SPAN									DEFLECTION
5000	**18.33**	**18.33**	**18.33**	**18.33**	**18.33**	**18.33**	**18.33**	**18.33**	101.149
5500	**16.17**	**16.17**	**16.17**	**16.17**	**16.17**	**16.17**	**16.17**	**16.17**	75.997
6000	**12.64**	**14.38**	**14.38**	**14.38**	**14.38**	**14.38**	**14.38**	**14.38**	58.536
6500	**9.96**	**12.87**	**12.87**	**12.87**	**12.87**	**12.87**	**12.87**	**12.87**	46.040
7000	**8.04**	**11.58**	**11.58**	**11.58**	**11.58**	**11.58**	**11.58**	**11.58**	36.863
7500	**6.63**	**10.47**	**10.47**	**10.47**	**10.47**	**10.47**	**10.47**	**10.47**	29.971
8000	5.49	**9.51**	**9.51**	**9.51**	**9.51**	**9.51**	**9.51**	**9.51**	24.695
8500	4.62	**8.67**	**8.67**	**8.67**	**8.67**	**8.67**	**8.67**	**8.67**	20.589
9000	3.94	**7.93**	**7.93**	**7.93**	**7.93**	**7.93**	**7.93**	**7.93**	17.344
9500	3.39	**7.28**	**7.28**	**7.28**	**7.28**	**7.28**	**7.28**	**7.28**	14.748
10000	2.95	**6.70**	**6.70**	**6.70**	**6.52**	**6.70**	**6.70**	**6.70**	12.644
10500	2.59	**6.19**	**6.19**	**6.19**	**5.64**	**6.19**	**6.19**	**6.19**	10.923
11000	2.29	**5.73**	**5.73**	**5.73**	**4.88**	**5.73**	**5.73**	**5.73**	9.500
11500	2.03	**5.32**	**5.32**	**5.32**	**4.21**	**5.32**	**5.32**	**5.32**	8.314
12000	1.82	**4.85**	**4.95**	**4.95**	3.65	**4.95**	**4.95**	**4.95**	7.317
12500	1.64	**4.41**	**4.61**	**4.61**	3.19	**4.61**	**4.61**	**4.61**	6.474
13000	1.48	**4.02**	**4.31**	**4.31**	2.81	**4.28**	**4.31**	**4.31**	5.755
13500	1.35	**3.65**	**4.02**	**4.02**	2.48	**3.91**	**4.02**	**4.02**	5.139
14000	1.23	**3.33**	**3.74**	**3.74**	2.18	**3.58**	**3.74**	**3.74**	4.608
14500	1.12	3.04	**3.49**	**3.49**	1.93	**3.29**	**3.49**	**3.49**	4.147
15000	1.03	2.79	**3.26**	**3.26**	1.71	**3.01**	**3.26**	**3.26**	3.746

NOTES: 1. Interpolation is permitted for intermediate spans.
2. Design loads are for purlins supported by cleats using 2 bolts per cleat.
3. Self-weight of purlins and roof sheets are not included.
4. Loads shown in BOLD require Grade 8.8 bolts.

5-LAPPED SPANS



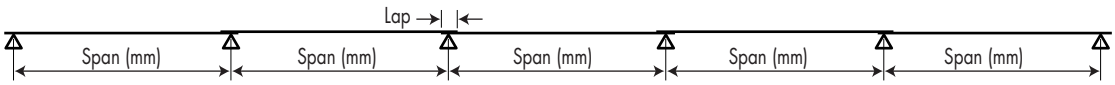
LOAD TYPE >	INWARDS				OUTWARDS				LOAD FOR
BRIDGING >	0	1	2	3	0	1	2	3	SPAN/150
SPAN									DEFLECTION
2000	6.62	6.62	6.62	6.62	6.62	6.62	6.62	6.62	9.148
2500	4.67	4.67	4.67	4.67	4.67	4.67	4.67	4.67	4.684
3000	3.17	3.24	3.24	3.24	3.05	3.24	3.24	3.24	2.711
3500	2.26	2.38	2.38	2.38	1.97	2.38	2.38	2.38	1.707
4000	1.68	1.82	1.82	1.82	1.27	1.82	1.82	1.82	1.143
4500	1.28	1.44	1.44	1.44	0.84	1.37	1.44	1.44	0.803
5000	1.00	1.17	1.17	1.17	0.59	1.02	1.17	1.17	0.585
5500	0.79	0.96	0.96	0.96	0.43	0.76	0.96	0.96	0.440
6000	0.63	0.81	0.81	0.81	0.32	0.56	0.77	0.81	0.339
6500	0.51	0.69	0.69	0.69	0.24	0.42	0.61	0.69	0.266
7000	0.41	0.60	0.60	0.60	0.18	0.32	0.49	0.58	0.213
7500	0.34	0.52	0.52	0.52	0.14	0.26	0.39	0.48	0.173
8000	0.28	0.46	0.46	0.46	0.11	0.21	0.31	0.40	0.143

LOAD TYPE >	INWARDS				OUTWARDS				LOAD FOR
BRIDGING >	0	1	2	3	0	1	2	3	SPAN/150
SPAN									DEFLECTION
2000	8.60	8.81	8.81	8.81	8.81	8.81	8.80	8.80	11.055
2500	5.33	5.63	5.63	5.63	5.63	5.63	5.63	5.63	5.660
3000	3.60	3.91	3.91	3.91	3.59	3.91	3.91	3.91	3.275
3500	2.57	2.87	2.87	2.87	2.36	2.87	2.87	2.87	2.063
4000	1.91	2.20	2.20	2.20	1.57	2.16	2.20	2.20	1.382
4500	1.47	1.74	1.74	1.74	1.06	1.61	1.74	1.74	0.971
5000	1.15	1.41	1.41	1.41	0.75	1.21	1.41	1.41	0.707
5500	0.92	1.16	1.16	1.16	0.53	0.92	1.13	1.16	0.532
6000	0.74	0.98	0.98	0.98	0.39	0.70	0.90	0.98	0.409
6500	0.60	0.83	0.83	0.83	0.30	0.53	0.73	0.82	0.322
7000	0.50	0.72	0.72	0.72	0.23	0.41	0.59	0.69	0.258
7500	0.41	0.62	0.63	0.63	0.18	0.33	0.48	0.57	0.210
8000	0.34	0.53	0.55	0.55	0.14	0.26	0.39	0.48	0.173

NOTES: 1. Interpolation is permitted for intermediate spans.
2. Design loads are for purlins supported by cleats using 2 bolts per cleat.
3. Self-weight of purlins and roof sheets are not included.
4. Loads shown in BOLD require Grade 8.8 bolts.

Rev.10122018

5-LAPPED SPANS



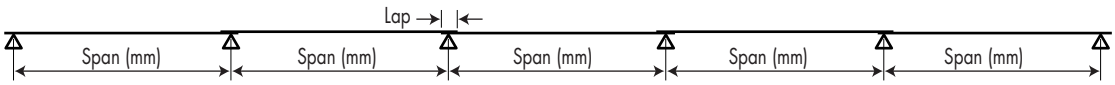
LOAD TYPE >	INWARDS				OUTWARDS				LOAD FOR
BRIDGING >	0	1	2	3	0	1	2	3	SPAN/150
SPAN									DEFLECTION
2000	10.50	11.48	11.48	11.48	11.48	11.48	11.48	11.48	14.075
2500	6.51	7.35	7.35	7.35	7.04	7.35	7.35	7.35	7.207
3000	4.40	5.10	5.10	5.10	4.57	5.10	5.10	5.10	4.171
3500	3.16	3.75	3.75	3.75	3.09	3.69	3.75	3.75	2.626
4000	2.37	2.87	2.87	2.87	2.15	2.72	2.87	2.87	1.759
4500	1.83	2.27	2.27	2.27	1.46	2.05	2.26	2.27	1.236
5000	1.44	1.83	1.84	1.84	1.01	1.58	1.78	1.84	0.901
5500	1.16	1.50	1.52	1.52	0.73	1.22	1.42	1.51	0.677
6000	0.95	1.24	1.28	1.28	0.54	0.96	1.15	1.24	0.521
6500	0.78	1.05	1.09	1.09	0.41	0.74	0.94	1.03	0.410
7000	0.65	0.89	0.94	0.94	0.31	0.57	0.78	0.87	0.328
7500	0.54	0.77	0.81	0.82	0.25	0.45	0.65	0.73	0.267
8000	0.45	0.66	0.70	0.72	0.20	0.36	0.54	0.62	0.220

LOAD TYPE >	INWARDS				OUTWARDS				LOAD FOR
BRIDGING >	0	1	2	3	0	1	2	3	SPAN/150
SPAN									DEFLECTION
2000	**13.79**	**15.98**	**15.98**	**15.98**	**15.98**	**15.98**	**15.98**	**15.98**	**18.132**
2500	8.43	10.22	10.22	10.22	9.63	10.22	10.22	10.22	9.284
3000	5.65	7.10	7.10	7.10	6.19	7.10	7.10	7.10	5.372
3500	4.02	5.21	5.21	5.21	4.15	5.09	5.21	5.21	3.383
4000	3.00	3.98	3.99	3.99	2.86	3.72	3.99	3.99	2.267
4500	2.31	3.11	3.15	3.15	2.00	2.79	3.11	3.15	1.592
5000	1.82	2.48	2.56	2.56	1.39	2.13	2.44	2.56	1.160
5500	1.47	2.03	2.11	2.11	1.00	1.65	1.94	2.09	0.872
6000	1.20	1.68	1.78	1.78	0.74	1.29	1.57	1.71	0.672
6500	1.00	1.41	1.51	1.51	0.57	1.01	1.28	1.42	0.528
7000	0.83	1.20	1.30	1.30	0.45	0.79	1.05	1.18	0.423
7500	0.70	1.03	1.11	1.14	0.36	0.62	0.87	1.00	0.344
8000	0.59	0.89	0.96	1.00	0.29	0.49	0.72	0.85	0.283

NOTES: 1. Interpolation is permitted for intermediate spans.
2. Design loads are for purlins supported by cleats using 2 bolts per cleat.
3. Self-weight of purlins and roof sheets are not included.
4. Loads shown in BOLD require Grade 8.8 bolts.

Rev.10122018

5-LAPPED SPANS



LOAD TYPE >	INWARDS				OUTWARDS				LOAD FOR
BRIDGING >	0	1	2	3	0	1	2	3	SPAN/150
SPAN									DEFLECTION
2000	8.93	8.92	8.93	8.93	8.93	8.92	8.93	8.93	31.861
2500	6.76	6.76	6.76	6.76	6.76	6.76	6.76	6.76	16.312
3000	5.32	5.32	5.32	5.32	5.32	5.32	5.32	5.32	9.440
3500	4.29	4.29	4.29	4.29	4.29	4.29	4.29	4.29	5.945
4000	3.49	3.53	3.53	3.53	3.53	3.53	3.53	3.53	3.983
4500	2.67	2.95	2.95	2.95	2.59	2.95	2.95	2.95	2.797
5000	2.10	2.46	2.46	2.46	1.84	2.46	2.46	2.46	2.039
5500	1.68	2.04	2.04	2.04	1.31	2.02	2.04	2.04	1.532
6000	1.37	1.71	1.71	1.71	0.97	1.63	1.71	1.71	1.180
6500	1.12	1.46	1.46	1.46	0.74	1.31	1.46	1.46	0.928
7000	0.93	1.26	1.26	1.26	0.58	1.04	1.26	1.26	0.743
7500	0.78	1.10	1.10	1.10	0.45	0.82	1.08	1.10	0.604
8000	0.66	0.96	0.96	0.96	0.36	0.65	0.92	0.96	0.498
8500	0.56	0.85	0.85	0.85	0.29	0.53	0.78	0.85	0.415
9000	0.48	0.76	0.76	0.76	0.23	0.43	0.65	0.76	0.350
9500	0.41	0.68	0.68	0.68	0.19	0.35	0.55	0.66	0.297
10000	0.36	0.61	0.62	0.62	0.16	0.30	0.46	0.58	0.255
10500	0.31	0.55	0.56	0.56	0.13	0.25	0.39	0.51	0.220
11000	0.27	0.49	0.51	0.51	0.11	0.21	0.33	0.44	0.192
11500	0.24	0.44	0.47	0.47	0.09	0.18	0.28	0.38	0.168
12000	0.21	0.40	0.43	0.43	0.08	0.16	0.24	0.33	0.147

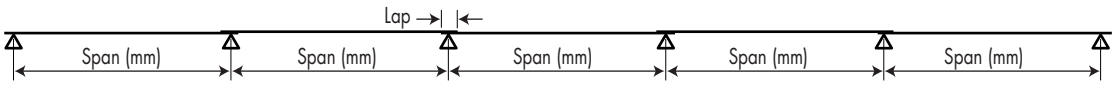
5-LAPPED SPANS DESIGN CAPACITY Z15015 (kN/m)

LOAD TYPE >	INWARDS				OUTWARDS				LOAD FOR
BRIDGING >	0	1	2	3	0	1	2	3	SPAN/150
SPAN									DEFLECTION
2000	**15.60**	**15.60**	**15.60**	**15.60**	**15.60**	**15.60**	**15.60**	**15.60**	**41.293**
2500	**11.36**	**11.36**	**11.36**	**11.36**	**11.36**	**11.36**	**11.36**	**11.36**	**21.142**
3000	7.89	8.62	8.62	8.62	8.62	8.62	8.62	8.62	12.235
3500	5.58	6.60	6.60	6.60	6.43	6.60	6.60	6.60	7.705
4000	4.13	5.06	5.06	5.06	4.58	5.06	5.06	5.06	5.162
4500	3.16	4.00	4.00	4.00	3.31	4.00	4.00	4.00	3.625
5000	2.48	3.24	3.24	3.24	2.42	3.24	3.24	3.24	2.643
5500	2.00	2.68	2.68	2.68	1.78	2.58	2.68	2.68	1.986
6000	1.63	2.25	2.25	2.25	1.33	2.06	2.25	2.25	1.529
6500	1.35	1.92	1.92	1.92	1.00	1.66	1.92	1.92	1.203
7000	1.13	1.65	1.65	1.65	0.77	1.34	1.63	1.65	0.963
7500	0.95	1.44	1.44	1.44	0.60	1.09	1.37	1.44	0.783
8000	0.81	1.27	1.27	1.27	0.47	0.88	1.16	1.27	0.645
8500	0.70	1.11	1.12	1.12	0.38	0.72	0.98	1.11	0.538
9000	0.60	0.98	1.00	1.00	0.31	0.59	0.84	0.97	0.453
9500	0.52	0.86	0.90	0.90	0.25	0.49	0.71	0.84	0.385
10000	0.45	0.77	0.81	0.81	0.21	0.40	0.61	0.74	0.330
10500	0.40	0.68	0.73	0.73	0.18	0.34	0.52	0.65	0.285
11000	0.35	0.61	0.67	0.67	0.15	0.29	0.45	0.57	0.248
11500	0.31	0.55	0.61	0.61	0.13	0.24	0.38	0.50	0.217
12000	0.27	0.50	0.55	0.56	0.11	0.21	0.33	0.44	0.191

NOTES: 1. Interpolation is permitted for intermediate spans.
2. Design loads are for purlins supported by cleats using 2 bolts per cleat.
3. Self-weight of purlins and roof sheets are not included.
4. Loads shown in BOLD require Grade 8.8 bolts.

Rev.10122018

5-LAPPED SPANS



LOAD TYPE >	INWARDS				OUTWARDS				LOAD FOR
BRIDGING >	0	1	2	3	0	1	2	3	SPAN/150
SPAN									DEFLECTION
2000	**25.83**	**26.08**	**26.08**	**26.08**	**26.08**	**26.08**	**26.08**	**26.08**	52.848
2500	**15.57**	**17.84**	**17.84**	**17.84**	**17.84**	**17.84**	**17.84**	**17.84**	27.059
3000	**10.28**	**12.65**	**12.65**	**12.65**	**12.47**	**12.65**	**12.65**	**12.66**	15.658
3500	7.21	**9.29**	**9.29**	**9.29**	**8.67**	**9.29**	**9.29**	**9.29**	9.861
4000	5.26	**7.12**	**7.12**	**7.12**	6.23	**7.12**	**7.12**	**7.12**	6.606
4500	3.98	5.62	5.62	5.62	4.57	5.60	5.62	5.62	4.640
5000	3.10	4.56	4.56	4.56	3.33	4.39	4.56	4.56	3.382
5500	2.47	3.74	3.76	3.76	2.41	3.49	3.76	3.76	2.541
6000	2.01	3.11	3.16	3.16	1.79	2.81	3.15	3.16	1.957
6500	1.65	2.62	2.69	2.69	1.33	2.28	2.62	2.69	1.539
7000	1.38	2.23	2.32	2.32	1.02	1.87	2.20	2.32	1.233
7500	1.17	1.92	2.02	2.02	0.79	1.51	1.86	2.01	1.002
8000	1.00	1.67	1.78	1.78	0.63	1.22	1.58	1.73	0.826
8500	0.85	1.46	1.58	1.58	0.51	0.98	1.35	1.50	0.688
9000	0.74	1.29	1.41	1.41	0.41	0.81	1.16	1.31	0.580
9500	0.64	1.14	1.25	1.26	0.34	0.66	1.00	1.15	0.493
10000	0.56	1.02	1.12	1.14	0.29	0.54	0.85	1.01	0.423
10500	0.49	0.91	1.00	1.03	0.24	0.45	0.72	0.89	0.365
11000	0.43	0.82	0.90	0.94	0.21	0.38	0.61	0.78	0.318
11500	0.38	0.74	0.81	0.86	0.18	0.32	0.52	0.69	0.278
12000	0.34	0.67	0.74	0.78	0.16	0.28	0.45	0.61	0.245

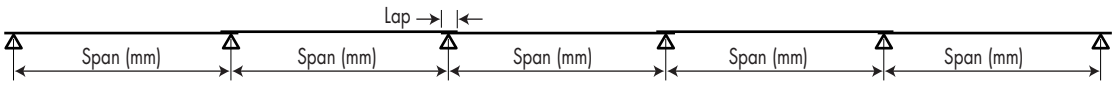
5-LAPPED SPANS DESIGN CAPACITY Z15024 (kN/m)

LOAD TYPE >	INWARDS				OUTWARDS				LOAD FOR
BRIDGING >	0	1	2	3	0	1	2	3	SPAN/150
SPAN									DEFLECTION
3000	**13.07**	**17.89**	**17.89**	**17.89**	**17.12**	**17.89**	**17.89**	**17.89**	20.270
3500	**8.94**	**13.13**	**13.13**	**13.13**	**11.84**	**13.13**	**13.13**	**13.14**	12.764
4000	6.43	**10.04**	**10.06**	**10.06**	**8.46**	**10.06**	**10.06**	**10.06**	8.551
4500	4.81	**7.78**	**7.95**	**7.95**	**6.18**	**7.71**	**7.95**	**7.95**	6.006
5000	3.71	**6.20**	**6.44**	**6.44**	4.50	**6.03**	**6.44**	**6.44**	4.378
5500	2.94	**5.04**	**5.32**	**5.32**	3.27	4.78	**5.30**	**5.32**	3.290
6000	2.39	4.17	**4.47**	**4.47**	2.39	3.84	4.35	**4.47**	2.534
6500	1.97	3.50	3.81	3.81	1.79	3.12	3.61	3.81	1.993
7000	1.65	2.98	3.29	3.29	1.38	2.55	3.02	3.25	1.596
7500	1.39	2.56	2.85	2.86	1.08	2.07	2.55	2.77	1.297
8000	1.19	2.22	2.48	2.52	0.87	1.67	2.16	2.38	1.069
8500	1.03	1.94	2.18	2.23	0.71	1.35	1.85	2.06	0.891
9000	0.90	1.71	1.93	1.99	0.58	1.09	1.59	1.79	0.751
9500	0.78	1.51	1.71	1.78	0.49	0.90	1.36	1.57	0.638
10000	0.69	1.35	1.53	1.60	0.41	0.74	1.16	1.38	0.547
10500	0.61	1.20	1.37	1.45	0.35	0.62	0.99	1.21	0.473
11000	0.54	1.08	1.23	1.30	0.30	0.53	0.84	1.07	0.411
11500	0.49	0.97	1.11	1.18	0.26	0.45	0.72	0.95	0.360
12000	0.44	0.88	1.00	1.07	0.23	0.39	0.61	0.83	0.317

NOTES: 1. Interpolation is permitted for intermediate spans.
2. Design loads are for purlins supported by cleats using 2 bolts per cleat.
3. Self-weight of purlins and roof sheets are not included.
4. Loads shown in BOLD require Grade 8.8 bolts.

Rev.10122018

5-LAPPED SPANS



LOAD TYPE >	INWARDS				OUTWARDS				LOAD FOR
BRIDGING >	0	1	2	3	0	1	2	3	SPAN/150
SPAN									DEFLECTION
2000	7.05	7.05	7.05	7.05	7.05	7.05	7.05	7.05	66.640
2500	5.52	5.52	5.52	5.52	5.52	5.52	5.52	5.52	34.119
3000	4.51	4.51	4.51	4.51	4.51	4.51	4.51	4.51	19.746
3500	3.76	3.76	3.76	3.76	3.76	3.76	3.76	3.76	12.434
4000	3.21	3.21	3.21	3.21	3.21	3.21	3.21	3.21	8.330
4500	2.77	2.76	2.76	2.76	2.76	2.76	2.76	2.76	5.850
5000	2.41	2.41	2.41	2.41	2.41	2.41	2.41	2.41	4.265
5500	2.12	2.12	2.12	2.12	2.12	2.12	2.12	2.12	3.204
6000	1.82	1.88	1.88	1.88	1.75	1.88	1.88	1.88	2.468
6500	1.52	1.68	1.68	1.68	1.37	1.68	1.68	1.68	1.941
7000	1.28	1.51	1.51	1.51	1.08	1.51	1.51	1.51	1.554
7500	1.09	1.36	1.36	1.36	0.85	1.33	1.36	1.36	1.264
8000	0.94	1.23	1.23	1.23	0.67	1.11	1.23	1.23	1.041
8500	0.81	1.12	1.12	1.12	0.54	0.93	1.12	1.12	0.868
9000	0.71	1.02	1.02	1.02	0.45	0.78	0.98	1.02	0.731
9500	0.62	0.93	0.93	0.93	0.37	0.66	0.86	0.93	0.622
10000	0.55	0.83	0.84	0.84	0.31	0.57	0.75	0.84	0.533
10500	0.48	0.75	0.76	0.76	0.26	0.48	0.65	0.74	0.461
11000	0.43	0.67	0.69	0.69	0.22	0.41	0.57	0.66	0.401
11500	0.38	0.61	0.63	0.63	0.19	0.35	0.50	0.59	0.351
12000	0.34	0.55	0.58	0.58	0.16	0.30	0.44	0.53	0.309

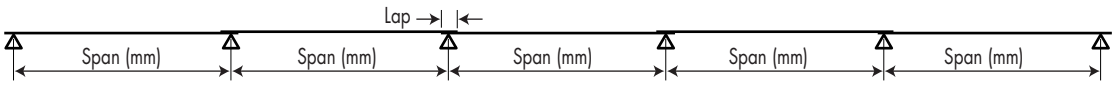
5-LAPPED SPANS DESIGN CAPACITY Z20015 (kN/m)

LOAD TYPE >	INWARDS				OUTWARDS				LOAD FOR
BRIDGING >	0	1	2	3	0	1	2	3	SPAN/150
SPAN									DEFLECTION
2000	**13.29**	**13.29**	**13.29**	**13.29**	**13.29**	**13.29**	**13.29**	**13.29**	86.639
2500	10.22	10.22	10.22	10.22	10.22	10.22	10.22	10.22	44.358
3000	8.18	8.18	8.18	8.18	8.18	8.18	8.18	8.18	25.671
3500	6.69	6.69	6.69	6.69	6.69	6.69	6.69	6.69	16.165
4000	5.59	5.59	5.59	5.57	5.59	5.59	5.59	5.57	10.829
4500	4.54	4.72	4.72	4.72	4.72	4.72	4.72	4.72	7.606
5000	3.53	4.04	4.04	4.05	4.05	4.04	4.04	4.05	5.545
5500	2.81	3.50	3.50	3.50	3.18	3.50	3.50	3.50	4.166
6000	2.28	3.02	3.02	3.02	2.39	3.02	3.02	3.02	3.209
6500	1.88	2.57	2.57	2.57	1.81	2.57	2.57	2.57	2.524
7000	1.57	2.22	2.22	2.22	1.39	2.21	2.22	2.22	2.021
7500	1.33	1.93	1.93	1.93	1.10	1.86	1.93	1.93	1.643
8000	1.13	1.70	1.70	1.70	0.88	1.57	1.70	1.70	1.354
8500	0.98	1.50	1.50	1.50	0.72	1.31	1.50	1.50	1.129
9000	0.85	1.34	1.34	1.34	0.59	1.08	1.34	1.34	0.951
9500	0.74	1.20	1.20	1.20	0.48	0.89	1.19	1.20	0.808
10000	0.65	1.09	1.09	1.09	0.40	0.74	1.05	1.09	0.693
10500	0.57	0.99	0.99	0.99	0.34	0.62	0.92	0.99	0.599
11000	0.51	0.90	0.90	0.90	0.29	0.53	0.81	0.90	0.521
11500	0.45	0.82	0.82	0.82	0.24	0.45	0.70	0.82	0.456
12000	0.41	0.75	0.75	0.75	0.21	0.39	0.61	0.74	0.401

NOTES: 1. Interpolation is permitted for intermediate spans.
2. Design loads are for purlins supported by cleats using 2 bolts per cleat.
3. Self-weight of purlins and roof sheets are not included.
4. Loads shown in BOLD require Grade 8.8 bolts.

Rev.10122018

5-LAPPED SPANS



5-LAPPED SPANS DESIGN CAPACITY Z20019 (kN/m)

LOAD TYPE >	INWARDS				OUTWARDS				LOAD FOR
BRIDGING >	0	1	2	3	0	1	2	3	SPAN/150
SPAN									DEFLECTION
2000	**25.75**	**25.75**	**25.76**	**25.76**	**25.76**	**25.76**	**25.76**	**25.76**	116.468
2500	**19.40**	**19.40**	**19.40**	**19.40**	**19.40**	**19.40**	**19.40**	**19.40**	59.631
3000	**15.19**	**15.19**	**15.19**	**15.19**	**15.19**	**15.19**	**15.19**	**15.19**	34.509
3500	**10.69**	**12.18**	**12.18**	**12.18**	**12.18**	**12.18**	**12.18**	**12.18**	21.732
4000	**7.72**	**9.97**	**9.97**	**9.97**	**9.97**	**9.97**	**9.97**	**9.97**	14.559
4500	5.78	**8.19**	**8.19**	**8.19**	**7.86**	**8.19**	**8.19**	**8.19**	10.225
5000	4.48	**6.64**	**6.64**	**6.64**	**5.94**	**6.64**	**6.64**	**6.64**	7.454
5500	3.56	**5.48**	**5.48**	**5.48**	4.51	**5.48**	**5.48**	**5.48**	5.600
6000	2.90	**4.61**	**4.61**	**4.61**	3.46	**4.61**	**4.61**	**4.61**	4.314
6500	2.39	3.93	3.93	3.93	2.66	3.91	3.93	3.93	3.393
7000	1.99	3.39	3.39	3.39	2.08	3.23	3.39	3.39	2.716
7500	1.68	2.95	2.95	2.95	1.62	2.69	2.95	2.95	2.209
8000	1.44	2.59	2.59	2.59	1.28	2.24	2.59	2.59	1.820
8500	1.24	2.29	2.30	2.30	1.04	1.88	2.30	2.30	1.517
9000	1.08	2.01	2.05	2.05	0.84	1.57	2.00	2.05	1.278
9500	0.95	1.78	1.84	1.84	0.69	1.32	1.74	1.84	1.087
10000	0.83	1.59	1.66	1.66	0.57	1.11	1.51	1.66	0.932
10500	0.74	1.42	1.51	1.51	0.48	0.94	1.32	1.51	0.805
11000	0.66	1.28	1.37	1.37	0.40	0.79	1.15	1.35	0.700
11500	0.59	1.15	1.25	1.25	0.34	0.67	1.01	1.20	0.613
12000	0.53	1.04	1.15	1.15	0.29	0.58	0.88	1.07	0.539

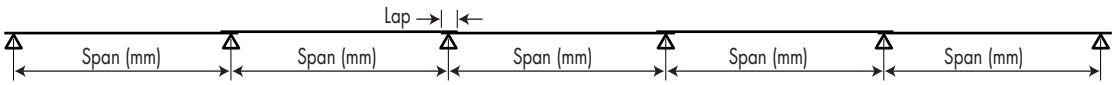
5-LAPPED SPANS DESIGN CAPACITY Z20024 (kN/m)

LOAD TYPE >	INWARDS				OUTWARDS				LOAD FOR
BRIDGING >	0	1	2	3	0	1	2	3	SPAN/150
SPAN									DEFLECTION
4500	**7.23**	**11.93**	**11.93**	**11.93**	**10.91**	**11.93**	**11.93**	**11.93**	13.188
5000	**5.49**	**9.67**	**9.67**	**9.67**	**8.34**	**9.67**	**9.67**	**9.67**	9.614
5500	4.30	**7.98**	**7.99**	**7.99**	**6.38**	**7.99**	**7.99**	**7.99**	7.223
6000	3.45	**6.61**	**6.72**	**6.72**	**4.86**	**6.55**	**6.72**	**6.72**	5.564
6500	2.83	**5.54**	**5.72**	**5.72**	3.71	**5.41**	**5.72**	**5.72**	4.376
7000	2.36	**4.71**	**4.93**	**4.93**	2.84	**4.51**	**4.93**	**4.93**	3.504
7500	1.99	**4.05**	**4.30**	**4.30**	2.20	**3.78**	**4.29**	**4.30**	2.849
8000	1.70	**3.51**	**3.78**	**3.78**	1.73	3.19	**3.69**	**3.78**	2.347
8500	1.47	3.07	**3.35**	**3.35**	1.39	2.67	**3.20**	**3.35**	1.957
9000	1.28	2.70	**2.99**	**2.99**	1.13	2.24	2.78	**2.99**	1.649
9500	1.12	2.40	2.68	2.68	0.93	1.87	2.43	2.65	1.402
10000	0.99	2.14	2.42	2.42	0.77	1.57	2.13	2.35	1.202
10500	0.88	1.91	2.18	2.19	0.65	1.31	1.88	2.09	1.038
11000	0.78	1.72	1.97	2.00	0.55	1.10	1.65	1.87	0.903
11500	0.70	1.56	1.79	1.83	0.47	0.93	1.44	1.68	0.790
12000	0.63	1.41	1.63	1.68	0.41	0.79	1.26	1.51	0.695

NOTES: 1. Interpolation is permitted for intermediate spans.
2. Design loads are for purlins supported by cleats using 2 bolts per cleat.
3. Self-weight of purlins and roof sheets are not included.
4. Loads shown in BOLD require Grade 8.8 bolts.

Rev.10122018

5-LAPPED SPANS



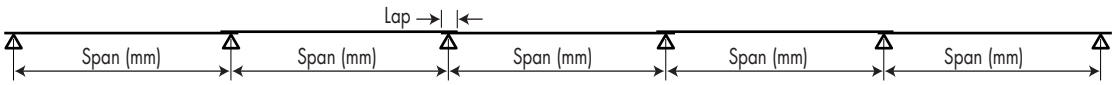
5-LAPPED SPANS DESIGN CAPACITY Z25015 (kN/m)

LOAD TYPE >	INWARDS				OUTWARDS				LOAD FOR
BRIDGING >	0	1	2	3	0	1	2	3	SPAN/150
SPAN									DEFLECTION
3000	7.08	7.08	7.08	7.08	7.08	7.08	7.08	7.08	43.807
3500	5.94	5.94	5.94	5.94	5.94	5.94	5.94	5.94	27.587
4000	5.09	5.09	5.09	5.08	5.09	5.09	5.09	5.07	18.480
4500	4.41	4.41	4.41	4.41	4.41	4.41	4.41	4.41	12.980
5000	3.87	3.87	3.87	3.88	3.87	3.87	3.87	3.88	9.462
5500	3.43	3.43	3.43	3.43	3.43	3.43	3.43	3.43	7.109
6000	3.06	3.06	3.06	3.06	3.06	3.06	3.06	3.06	5.476
6500	2.54	2.74	2.74	2.74	2.62	2.74	2.74	2.74	4.307
7000	2.12	2.47	2.47	2.47	2.03	2.47	2.47	2.47	3.448
7500	1.79	2.24	2.24	2.24	1.59	2.24	2.24	2.24	2.804
8000	1.53	2.04	2.04	2.04	1.28	2.04	2.04	2.04	2.310
8500	1.32	1.86	1.86	1.86	1.04	1.77	1.86	1.86	1.926
9000	1.14	1.71	1.71	1.71	0.84	1.50	1.71	1.71	1.622
9500	1.00	1.57	1.57	1.57	0.69	1.28	1.57	1.57	1.380
10000	0.88	1.45	1.45	1.45	0.57	1.09	1.39	1.45	1.183
10500	0.78	1.31	1.34	1.34	0.47	0.91	1.22	1.34	1.022
11000	0.70	1.19	1.23	1.23	0.40	0.77	1.08	1.21	0.889
11500	0.62	1.07	1.13	1.13	0.34	0.66	0.95	1.09	0.778
12000	0.56	0.98	1.04	1.04	0.29	0.57	0.84	0.98	0.684
12500	0.50	0.89	0.96	0.96	0.25	0.50	0.75	0.88	0.606
13000	0.45	0.81	0.88	0.88	0.21	0.43	0.66	0.80	0.538
13500	0.41	0.74	0.82	0.82	0.18	0.37	0.58	0.72	0.481
14000	0.37	0.68	0.75	0.76	0.16	0.33	0.51	0.65	0.431
14500	0.33	0.63	0.69	0.71	0.14	0.29	0.45	0.59	0.388
15000	0.30	0.58	0.64	0.66	0.12	0.25	0.40	0.53	0.350

NOTES: 1. Interpolation is permitted for intermediate spans.
2. Design loads are for purlins supported by cleats using 2 bolts per cleat.
3. Self-weight of purlins and roof sheets are not included.
4. Loads shown in BOLD require Grade 8.8 bolts.

Rev.10122018

5-LAPPED SPANS

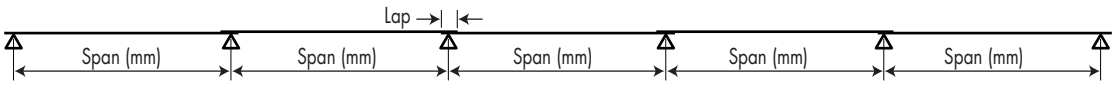


5-LAPPED SPANS DESIGN CAPACITY Z25019 (kN/m)

LOAD TYPE >	INWARDS				OUTWARDS				LOAD FOR
BRIDGING >	0	1	2	3	0	1	2	3	SPAN/150
SPAN									DEFLECTION
3000	**13.71**	**13.71**	**13.72**	**13.72**	**13.71**	**13.72**	**13.72**	**13.72**	57.215
3500	**11.34**	**11.34**	**11.34**	**11.34**	**11.34**	**11.34**	**11.34**	**11.34**	36.030
4000	**9.54**	**9.54**	**9.54**	**9.54**	**9.54**	**9.54**	**9.54**	**9.54**	24.137
4500	**7.35**	**8.17**	**8.17**	**8.17**	**8.17**	**8.17**	**8.17**	**8.17**	16.951
5000	**5.67**	**7.05**	**7.05**	**7.06**	**7.05**	**7.05**	**7.05**	**7.06**	12.359
5500	4.50	**6.16**	**6.16**	**6.16**	**6.01**	**6.16**	**6.16**	**6.16**	9.285
6000	3.63	**5.41**	**5.41**	**5.42**	**4.56**	**5.41**	**5.41**	**5.42**	7.152
6500	2.98	**4.79**	**4.79**	**4.79**	3.47	**4.79**	**4.79**	**4.80**	5.625
7000	2.48	**4.27**	**4.27**	**4.27**	2.68	**4.27**	**4.27**	**4.27**	4.504
7500	2.10	**3.72**	**3.72**	**3.72**	2.08	**3.61**	**3.72**	**3.72**	3.662
8000	1.79	3.27	3.27	3.27	1.65	3.00	3.27	3.27	3.017
8500	1.54	2.90	2.90	2.90	1.33	2.49	2.90	2.90	2.516
9000	1.34	2.58	2.58	2.58	1.07	2.08	2.58	2.58	2.119
9500	1.17	2.32	2.32	2.32	0.88	1.73	2.32	2.32	1.802
10000	1.03	2.09	2.09	2.09	0.72	1.45	2.03	2.09	1.545
10500	0.92	1.89	1.90	1.90	0.60	1.22	1.77	1.90	1.334
11000	0.82	1.70	1.73	1.73	0.51	1.02	1.54	1.73	1.161
11500	0.73	1.53	1.58	1.58	0.43	0.87	1.34	1.58	1.016
12000	0.65	1.38	1.45	1.45	0.37	0.74	1.17	1.44	0.894
12500	0.59	1.25	1.34	1.34	0.32	0.64	1.02	1.29	0.791
13000	0.53	1.14	1.24	1.24	0.27	0.55	0.89	1.15	0.703
13500	0.48	1.04	1.15	1.15	0.24	0.48	0.78	1.03	0.628
14000	0.43	0.94	1.07	1.07	0.21	0.42	0.68	0.92	0.563
14500	0.39	0.86	1.00	1.00	0.18	0.36	0.60	0.82	0.507
15000	0.36	0.79	0.93	0.93	0.16	0.32	0.53	0.73	0.458

NOTES: 1. Interpolation is permitted for intermediate spans.
2. Design loads are for purlins supported by cleats using 2 bolts per cleat.
3. Self-weight of purlins and roof sheets are not included.
4. Loads shown in BOLD require Grade 8.8 bolts.

5-LAPPED SPANS



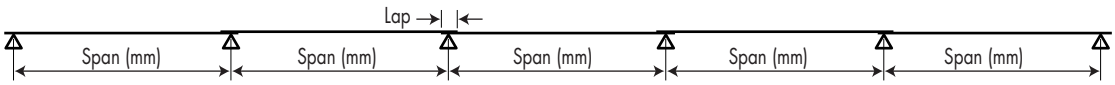
5-LAPPED SPANS DESIGN CAPACITY Z25024 (kN/m)

LOAD TYPE >	INWARDS				OUTWARDS				LOAD FOR
BRIDGING >	0	1	2	3	0	1	2	3	SPAN/150
SPAN									DEFLECTION
4500	**8.91**	Purlin capacity exceeds bolt capacity							22.339
5000	**6.74**								16.285
5500	**5.27**	Purlin capacity exceeds bolt capacity			**8.39**	Purlin capacity exceeds bolt capacity			12.235
6000	4.22	**8.54**	**8.54**	**8.54**	**6.32**	**8.54**	**8.54**	**8.54**	9.424
6500	3.45	**7.27**	**7.27**	**7.27**	**4.78**	**7.26**	**7.27**	**7.27**	7.413
7000	2.87	**6.28**	**6.28**	**6.28**	3.63	**6.03**	**6.28**	**6.28**	5.935
7500	2.42	**5.39**	**5.46**	**5.46**	2.80	**5.03**	**5.46**	**5.46**	4.825
8000	2.07	**4.67**	**4.80**	**4.80**	2.20	**4.22**	**4.80**	**4.80**	3.976
8500	1.78	**4.07**	**4.25**	**4.25**	1.76	**3.51**	**4.25**	**4.25**	3.315
9000	1.55	**3.58**	**3.80**	**3.80**	1.42	2.91	**3.73**	**3.80**	2.792
9500	1.36	**3.16**	**3.41**	**3.41**	1.16	2.41	**3.25**	**3.41**	2.374
10000	1.20	**2.81**	**3.08**	**3.08**	0.96	2.01	**2.84**	**3.08**	2.036
10500	1.06	2.51	**2.79**	**2.79**	0.81	1.68	2.49	**2.79**	1.758
11000	0.94	2.26	**2.54**	**2.54**	0.68	1.40	2.17	**2.51**	1.529
11500	0.85	2.03	**2.32**	**2.32**	0.58	1.18	1.89	2.24	1.338
12000	0.76	1.83	2.14	2.14	0.50	1.00	1.64	2.01	1.178
12500	0.69	1.65	1.97	1.97	0.43	0.86	1.42	1.80	1.042
13000	0.62	1.50	1.82	1.82	0.38	0.74	1.24	1.62	0.927
13500	0.56	1.36	1.67	1.69	0.33	0.64	1.08	1.45	0.827
14000	0.51	1.24	1.53	1.57	0.29	0.56	0.94	1.29	0.742
14500	0.47	1.13	1.41	1.46	0.26	0.49	0.82	1.15	0.668
15000	0.43	1.04	1.30	1.37	0.23	0.43	0.72	1.03	0.603

NOTES: 1. Interpolation is permitted for intermediate spans.
2. Design loads are for purlins supported by cleats using 2 bolts per cleat.
3. Self-weight of purlins and roof sheets are not included.
4. Loads shown in BOLD require Grade 8.8 bolts.

Rev.10122018

5-LAPPED SPANS

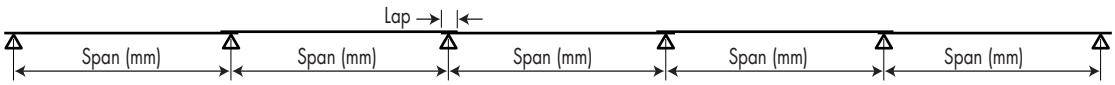


5-LAPPED SPANS DESIGN CAPACITY Z30019 (kN/m)

LOAD TYPE >	INWARDS				OUTWARDS				LOAD FOR
BRIDGING >	0	1	2	3	0	1	2	3	SPAN/150
SPAN									DEFLECTION
3000	12.32	12.32	12.32	12.32	12.32	12.32	12.32	12.32	99.785
3500	10.39	10.39	10.39	10.39	10.39	10.39	10.39	10.39	62.835
4000	8.95	8.95	8.95	8.95	8.95	8.95	8.95	8.95	42.096
4500	7.80	7.80	7.80	7.80	7.80	7.80	7.80	7.80	29.564
5000	6.89	6.89	6.88	6.89	6.89	6.89	6.89	6.89	21.552
5500	6.13	6.13	6.13	6.13	6.13	6.13	6.13	6.13	16.193
6000	5.36	5.50	5.50	5.50	5.50	5.50	5.50	5.50	12.473
6500	4.36	4.96	4.96	4.96	4.96	4.96	4.96	4.96	9.810
7000	3.62	4.50	4.50	4.50	4.50	4.50	4.50	4.50	7.854
7500	3.06	4.10	4.10	4.10	4.10	4.10	4.10	4.10	6.386
8000	2.63	3.75	3.75	3.75	3.70	3.75	3.75	3.75	5.262
8500	2.27	3.44	3.44	3.44	2.98	3.44	3.44	3.44	4.387
9000	1.96	3.17	3.17	3.17	2.44	3.17	3.17	3.17	3.696
9500	1.71	2.93	2.93	2.93	2.02	2.93	2.93	2.93	3.142
10000	1.51	2.71	2.71	2.71	1.70	2.71	2.71	2.71	2.694
10500	1.33	2.52	2.52	2.52	1.43	2.47	2.52	2.52	2.327
11000	1.19	2.35	2.35	2.35	1.19	2.18	2.35	2.35	2.024
11500	1.06	2.19	2.19	2.19	1.01	1.92	2.19	2.19	1.771
12000	0.96	1.99	2.05	2.05	0.86	1.70	2.05	2.05	1.559
12500	0.86	1.82	1.91	1.91	0.74	1.48	1.85	1.91	1.379
13000	0.78	1.66	1.79	1.79	0.63	1.28	1.68	1.79	1.226
13500	0.71	1.53	1.67	1.67	0.55	1.12	1.53	1.67	1.095
14000	0.65	1.41	1.56	1.56	0.48	0.98	1.39	1.54	0.982
14500	0.59	1.30	1.45	1.45	0.42	0.87	1.27	1.42	0.884
15000	0.54	1.20	1.36	1.36	0.37	0.77	1.15	1.31	0.798

NOTES: 1. Interpolation is permitted for intermediate spans.
2. Design loads are for purlins supported by cleats using 2 bolts per cleat.
3. Self-weight of purlins and roof sheets are not included.
4. Loads shown in BOLD require Grade 8.8 bolts.

5-LAPPED SPANS

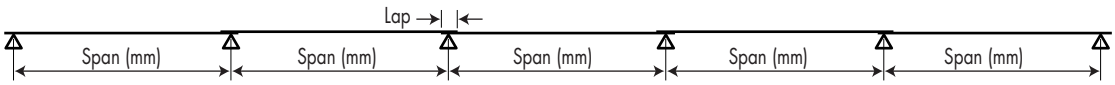


5-LAPPED SPANS DESIGN CAPACITY Z30024 (kN/m)

LOAD TYPE >	INWARDS				OUTWARDS				LOAD FOR
BRIDGING >	0	1	2	3	0	1	2	3	SPAN/150
SPAN									DEFLECTION
3000	**23.92**	**23.92**	**23.92**	**23.92**	**23.92**	**23.92**	**23.92**	**23.92**	129.235
3500	**19.92**	**19.92**	**19.92**	**19.92**	**19.92**	**19.92**	**19.92**	**19.92**	81.375
4000	**16.89**	**16.89**	**16.89**	**16.89**	**16.89**	**16.89**	**16.89**	**16.89**	54.518
4500	**13.94**	**14.57**	**14.57**	**14.57**	**14.57**	**14.57**	**14.57**	**14.57**	38.288
5000	**10.36**	**12.67**	**12.67**	**12.69**	**12.69**	**12.67**	**12.67**	**12.69**	27.912
5500	7.98	**11.14**	**11.14**	**11.14**	**11.14**	**11.14**	**11.14**	**11.14**	20.970
6000	6.26	**9.86**	**9.86**	**9.86**	**9.86**	**9.86**	**9.86**	**9.86**	16.154
6500	5.03	**8.78**	**8.78**	**8.78**	**8.78**	**8.78**	**8.78**	**8.78**	12.705
7000	4.13	**7.86**	**7.86**	**7.86**	**7.24**	**7.86**	**7.86**	**7.86**	10.173
7500	3.45	**7.09**	**7.09**	**7.09**	5.84	**7.09**	**7.09**	**7.09**	8.271
8000	2.92	**6.41**	**6.41**	**6.41**	4.75	**6.41**	**6.41**	**6.41**	6.815
8500	2.50	5.82	5.82	5.82	3.88	5.82	5.82	5.82	5.681
9000	2.16	5.19	5.23	5.23	3.17	5.10	5.23	5.23	4.786
9500	1.89	4.57	4.69	4.69	2.60	4.42	4.69	4.69	4.070
10000	1.66	4.06	4.24	4.24	2.14	3.83	4.24	4.24	3.489
10500	1.47	3.62	3.84	3.84	1.78	3.33	3.84	3.84	3.014
11000	1.31	3.24	3.50	3.50	1.49	2.89	3.50	3.50	2.621
11500	1.17	2.92	3.20	3.20	1.26	2.51	3.20	3.20	2.294
12000	1.06	2.63	2.94	2.94	1.08	2.19	2.88	2.94	2.019
12500	0.96	2.39	2.71	2.71	0.93	1.92	2.58	2.71	1.786
13000	0.87	2.17	2.51	2.51	0.80	1.68	2.32	2.51	1.588
13500	0.79	1.98	2.32	2.32	0.70	1.47	2.09	2.32	1.418
14000	0.72	1.81	2.16	2.16	0.61	1.29	1.88	2.16	1.272
14500	0.66	1.66	2.01	2.01	0.53	1.13	1.69	2.00	1.144
15000	0.61	1.53	1.88	1.88	0.47	0.99	1.52	1.83	1.034

NOTES: 1. Interpolation is permitted for intermediate spans.
2. Design loads are for purlins supported by cleats using 2 bolts per cleat.
3. Self-weight of purlins and roof sheets are not included.
4. Loads shown in BOLD require Grade 8.8 bolts.

5-LAPPED SPANS

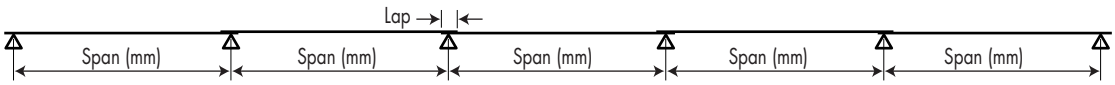


5-LAPPED SPANS DESIGN CAPACITY Z30030 (kN/m)

LOAD TYPE >	INWARDS				OUTWARDS				LOAD FOR SPAN/150 DEFLECTION
BRIDGING >	0	1	2	3	0	1	2	3	
SPAN									
5500	**9.43**	**18.58**	**18.58**	**18.58**	**18.58**	**18.58**	**18.58**	**18.58**	27.110
6000	7.35	**16.19**	**16.19**	**16.20**	**15.45**	**16.19**	**16.19**	**16.20**	20.883
6500	5.88	**14.12**	**14.12**	**14.12**	**12.57**	**14.12**	**14.12**	**14.12**	16.424
7000	4.80	**12.27**	**12.37**	**12.37**	**10.17**	**12.37**	**12.37**	**12.37**	13.151
7500	3.99	**10.51**	**10.77**	**10.77**	**8.24**	**10.77**	**10.77**	**10.77**	10.692
8000	3.37	**9.08**	**9.47**	**9.47**	**6.55**	**9.33**	**9.47**	**9.47**	8.810
8500	2.88	**7.90**	**8.39**	**8.39**	5.21	**8.07**	**8.39**	**8.39**	7.345
9000	2.49	**6.93**	**7.48**	**7.48**	4.19	**7.02**	**7.48**	**7.48**	6.187
9500	2.17	**6.12**	**6.71**	**6.71**	3.42	**6.13**	**6.71**	**6.71**	5.261
10000	1.91	**5.43**	**6.06**	**6.06**	2.82	**5.37**	**6.06**	**6.06**	4.511
10500	1.69	**4.85**	**5.50**	**5.50**	2.35	4.69	**5.46**	**5.50**	3.897
11000	1.51	4.34	**5.01**	**5.01**	1.98	4.09	**4.89**	**5.01**	3.389
11500	1.35	3.89	**4.58**	**4.58**	1.68	3.57	**4.40**	**4.58**	2.966
12000	1.22	3.50	**4.20**	**4.21**	1.43	3.10	3.96	**4.21**	2.610
12500	1.10	3.17	3.84	3.88	1.23	2.67	3.58	3.88	2.309
13000	1.00	2.87	3.52	3.59	1.07	2.30	3.24	3.56	2.053
13500	0.92	2.62	3.24	3.33	0.93	1.98	2.93	3.26	1.833
14000	0.84	2.39	3.00	3.09	0.82	1.73	2.65	3.00	1.644
14500	0.77	2.18	2.76	2.88	0.72	1.51	2.39	2.74	1.480
15000	0.71	1.99	2.56	2.69	0.64	1.32	2.16	2.52	1.336

NOTES: 1. Interpolation is permitted for intermediate spans.
2. Design loads are for purlins supported by cleats using 2 bolts per cleat.
3. Self-weight of purlins and roof sheets are not included.
4. Loads shown in BOLD require Grade 8.8 bolts.

5-LAPPED SPANS

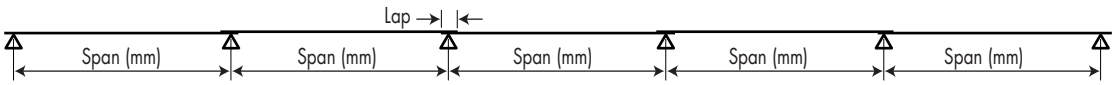


5-LAPPED SPANS DESIGN CAPACITY Z35024 (kN/m)

LOAD TYPE >	INWARDS				OUTWARDS				LOAD FOR
BRIDGING >	0	1	2	3	0	1	2	3	SPAN/150
SPAN									DEFLECTION
3000	**21.24**	**21.24**	**21.24**	**21.24**	**21.24**	**21.24**	**21.24**	**21.24**	210.103
3500	**17.92**	**17.92**	**17.92**	**17.92**	**17.92**	**17.92**	**17.92**	**17.92**	132.311
4000	**15.40**	**15.40**	**15.40**	**15.40**	**15.40**	**15.40**	**15.40**	**15.40**	88.636
4500	**13.48**	**13.48**	**13.48**	**13.48**	**13.48**	**13.48**	**13.48**	**13.48**	62.250
5000	**11.89**	**11.89**	**11.89**	**11.92**	**11.89**	**11.89**	**11.89**	**11.92**	45.382
5500	**10.61**	**10.61**	**10.61**	**10.61**	**10.61**	**10.61**	**10.61**	**10.61**	34.095
6000	**9.15**	**9.52**	**9.52**	**9.52**	**9.52**	**9.52**	**9.52**	**9.52**	26.262
6500	7.29	**8.60**	**8.60**	**8.60**	**8.60**	**8.60**	**8.60**	**8.60**	20.655
7000	5.93	**7.80**	**7.80**	**7.80**	**7.80**	**7.80**	**7.80**	**7.80**	16.538
7500	4.92	**7.11**	**7.11**	**7.11**	**7.11**	**7.11**	**7.11**	**7.11**	13.447
8000	4.17	**6.51**	**6.51**	**6.51**	**6.51**	**6.51**	**6.51**	**6.51**	11.080
8500	3.57	**5.98**	**5.98**	**5.98**	**5.98**	**5.98**	**5.98**	**5.98**	9.237
9000	3.07	5.51	5.51	5.51	5.51	5.51	5.51	5.51	7.782
9500	2.67	5.10	5.10	5.10	4.94	5.10	5.10	5.10	6.616
10000	2.34	4.72	4.72	4.72	4.16	4.72	4.72	4.72	5.673
10500	2.06	4.39	4.39	4.39	3.50	4.39	4.39	4.39	4.900
11000	1.82	4.09	4.09	4.09	2.97	4.09	4.09	4.09	4.262
11500	1.62	3.81	3.81	3.81	2.54	3.81	3.81	3.81	3.730
12000	1.46	3.51	3.57	3.57	2.19	3.52	3.57	3.57	3.283
12500	1.31	3.20	3.34	3.34	1.90	3.18	3.34	3.34	2.904
13000	1.19	2.93	3.13	3.13	1.66	2.88	3.13	3.13	2.582
13500	1.08	2.69	2.93	2.93	1.47	2.61	2.93	2.93	2.306
14000	0.99	2.47	2.75	2.75	1.30	2.37	2.73	2.75	2.067
14500	0.90	2.28	2.57	2.57	1.14	2.15	2.51	2.57	1.861
15000	0.83	2.11	2.40	2.40	1.01	1.94	2.32	2.40	1.681

NOTES: 1. Interpolation is permitted for intermediate spans.
2. Design loads are for purlins supported by cleats using 2 bolts per cleat.
3. Self-weight of purlins and roof sheets are not included.
4. Loads shown in BOLD require Grade 8.8 bolts.

5-LAPPED SPANS

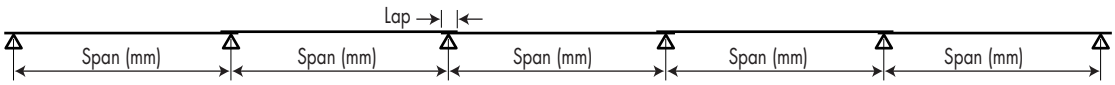


5-LAPPED SPANS DESIGN CAPACITY Z35030 (kN/m)

LOAD TYPE >	INWARDS				OUTWARDS				LOAD FOR SPAN/150 DEFLECTION
BRIDGING >	0	1	2	3	0	1	2	3	
SPAN									
6000	**11.17**	**16.81**	**16.81**	**16.82**	**16.81**	**16.81**	**16.81**	**16.82**	33.761
6500	**8.83**	**15.01**	**15.01**	**15.01**	**15.01**	**15.01**	**15.01**	**15.01**	26.553
7000	**7.15**	**13.46**	**13.46**	**13.46**	**13.46**	**13.46**	**13.46**	**13.46**	21.261
7500	5.86	**12.16**	**12.16**	**12.16**	**12.16**	**12.16**	**12.16**	**12.16**	17.285
8000	4.86	**11.02**	**11.02**	**11.02**	**10.54**	**11.01**	**11.02**	**11.02**	14.243
8500	4.10	**10.02**	**10.02**	**10.02**	**8.87**	**10.02**	**10.02**	**10.02**	11.874
9000	3.50	**9.12**	**9.12**	**9.12**	**7.47**	**9.12**	**9.12**	**9.12**	10.003
9500	3.02	**8.18**	**8.18**	**8.18**	**6.29**	**8.18**	**8.18**	**8.18**	8.505
10000	2.63	**7.29**	**7.38**	**7.38**	**5.28**	**7.38**	**7.38**	**7.38**	7.292
10500	2.31	**6.48**	**6.70**	**6.70**	4.48	**6.70**	**6.70**	**6.70**	6.299
11000	2.04	**5.79**	**6.10**	**6.10**	3.84	**6.07**	**6.10**	**6.10**	5.479
11500	1.82	**5.19**	**5.58**	**5.58**	3.32	**5.41**	**5.58**	**5.58**	4.795
12000	1.63	**4.68**	**5.13**	**5.13**	2.84	**4.83**	**5.13**	**5.13**	4.220
12500	1.47	**4.22**	**4.72**	**4.72**	2.45	**4.32**	**4.72**	**4.72**	3.734
13000	1.33	3.83	**4.37**	**4.37**	2.14	**3.86**	**4.37**	**4.37**	3.319
13500	1.21	3.48	**4.05**	**4.05**	1.87	3.46	**4.05**	**4.05**	2.964
14000	1.11	3.17	**3.77**	**3.77**	1.63	3.10	**3.77**	**3.77**	2.658
14500	1.01	2.90	**3.51**	**3.51**	1.43	2.77	**3.51**	**3.51**	2.392
15000	0.93	2.65	3.28	3.28	1.26	2.48	3.23	3.28	2.160

NOTES: 1. Interpolation is permitted for intermediate spans.
2. Design loads are for purlins supported by cleats using 2 bolts per cleat.
3. Self-weight of purlins and roof sheets are not included.
4. Loads shown in BOLD require Grade 8.8 bolts.

5-LAPPED SPANS



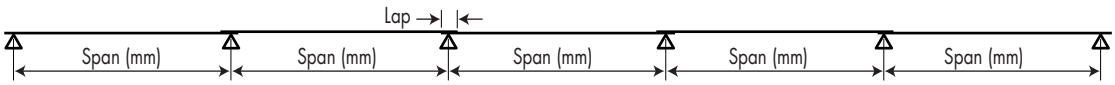
5-LAPPED SPANS DESIGN CAPACITY Z40024 (kN/m)

LOAD TYPE >	INWARDS				OUTWARDS				LOAD FOR
BRIDGING >	0	1	2	3	0	1	2	3	SPAN/150
SPAN									DEFLECTION
3000	**18.81**	**18.81**	**18.81**	**18.81**	**18.81**	**18.81**	**18.81**	**18.81**	283.676
3500	**15.96**	**15.96**	**15.96**	**15.96**	**15.95**	**15.95**	**15.95**	**15.96**	178.633
4000	**13.80**	**13.80**	**13.80**	**13.80**	**13.80**	**13.80**	**13.80**	**13.80**	119.676
4500	**12.16**	**12.16**	**12.16**	**12.16**	**12.16**	**12.16**	**12.16**	**12.16**	84.049
5000	**10.80**	**10.80**	**10.80**	**10.83**	**10.80**	**10.80**	**10.80**	**10.83**	61.275
5500	**9.71**	**9.71**	**9.71**	**9.71**	**9.71**	**9.71**	**9.71**	**9.71**	46.036
6000	**8.77**	**8.77**	**8.77**	**8.78**	**8.77**	**8.77**	**8.77**	**8.78**	35.460
6500	**7.98**	**7.98**	**7.98**	**7.98**	**7.98**	**7.98**	**7.98**	**7.99**	27.889
7000	6.87	**7.30**	**7.30**	**7.30**	**7.30**	**7.30**	**7.30**	**7.30**	22.331
7500	5.73	**6.71**	**6.71**	**6.71**	**6.71**	**6.71**	**6.71**	**6.71**	18.155
8000	4.84	6.19	6.19	6.19	6.19	6.19	6.19	6.19	14.960
8500	4.11	5.73	5.73	5.73	5.73	5.73	5.73	5.73	12.472
9000	3.54	5.32	5.32	5.32	5.32	5.32	5.32	5.32	10.507
9500	3.06	4.95	4.95	4.95	4.95	4.95	4.95	4.95	8.933
10000	2.67	4.61	4.61	4.61	4.61	4.61	4.61	4.61	7.659
10500	2.35	4.32	4.32	4.32	4.14	4.32	4.32	4.32	6.616
11000	2.08	4.04	4.05	4.05	3.53	4.04	4.05	4.05	5.755
11500	1.85	3.79	3.79	3.79	3.01	3.79	3.79	3.79	5.036
12000	1.66	3.57	3.57	3.57	2.59	3.57	3.57	3.57	4.432
12500	1.49	3.36	3.36	3.36	2.24	3.36	3.36	3.36	3.922
13000	1.35	3.17	3.17	3.17	1.96	3.18	3.18	3.18	3.486
13500	1.23	3.00	3.00	3.00	1.73	2.94	3.00	3.00	3.113
14000	1.12	2.78	2.84	2.84	1.52	2.67	2.84	2.84	2.791
14500	1.03	2.56	2.69	2.69	1.35	2.42	2.69	2.69	2.512
15000	0.94	2.36	2.55	2.55	1.18	2.19	2.55	2.55	2.269

NOTES: 1. Interpolation is permitted for intermediate spans.
2. Design loads are for purlins supported by cleats using 2 bolts per cleat.
3. Self-weight of purlins and roof sheets are not included.
4. Loads shown in BOLD require Grade 8.8 bolts.

Rev.10122018

5-LAPPED SPANS



5-LAPPED SPANS DESIGN CAPACITY Z40030 (kN/m)

LOAD TYPE >	INWARDS				OUTWARDS				LOAD FOR
BRIDGING >	0	1	2	3	0	1	2	3	SPAN/150
SPAN									DEFLECTION
4500	**22.84**	**22.84**	**22.84**	**22.84**	**22.84**	**22.84**	**22.84**	**22.84**	108.829
5000	**20.13**	**20.13**	**20.13**	**20.17**	**20.13**	**20.13**	**20.13**	**20.17**	79.343
5500	**17.24**	**17.93**	**17.93**	**17.93**	**17.93**	**17.93**	**17.93**	**17.93**	59.611
6000	**13.24**	**16.07**	**16.07**	**16.08**	**16.07**	**16.07**	**16.07**	**16.08**	45.917
6500	**10.45**	**14.49**	**14.49**	**14.49**	**14.50**	**14.50**	**14.50**	**14.50**	36.114
7000	**8.34**	**13.13**	**13.13**	**13.13**	**13.14**	**13.14**	**13.14**	**13.14**	28.914
7500	**6.79**	**11.97**	**11.97**	**11.97**	**11.97**	**11.97**	**11.97**	**11.97**	23.508
8000	5.62	**10.94**	**10.94**	**10.94**	**10.94**	**10.94**	**10.94**	**10.95**	19.370
8500	4.72	**10.04**	**10.04**	**10.04**	**10.04**	**10.04**	**10.04**	**10.04**	16.149
9000	4.02	**9.25**	**9.25**	**9.25**	**9.11**	**9.25**	**9.25**	**9.25**	13.605
9500	3.46	**8.54**	**8.54**	**8.54**	**7.65**	**8.54**	**8.54**	**8.54**	11.567
10000	3.01	**7.90**	**7.90**	**7.90**	**6.41**	**7.90**	**7.90**	**7.90**	9.918
10500	2.64	**7.34**	**7.34**	**7.34**	**5.44**	**7.34**	**7.34**	**7.34**	8.567
11000	2.33	**6.83**	**6.83**	**6.83**	**4.66**	**6.83**	**6.83**	**6.83**	7.451
11500	2.08	**6.24**	**6.36**	**6.36**	4.00	**6.36**	**6.36**	**6.36**	6.521
12000	1.86	**5.65**	**5.95**	**5.95**	3.43	**5.81**	**5.95**	**5.95**	5.740
12500	1.67	**5.10**	**5.55**	**5.55**	2.97	**5.25**	**5.55**	**5.55**	5.078
13000	1.51	**4.61**	**5.17**	**5.17**	2.57	**4.71**	**5.17**	**5.17**	4.514
13500	1.38	**4.18**	**4.79**	**4.79**	2.23	**4.22**	**4.79**	**4.79**	4.031
14000	1.25	**3.81**	**4.46**	**4.46**	1.94	**3.77**	**4.46**	**4.46**	3.614
14500	1.15	**3.47**	**4.16**	**4.16**	1.70	3.37	**4.15**	**4.16**	3.253
15000	1.06	3.17	**3.88**	**3.88**	1.50	3.01	**3.83**	**3.88**	2.939

NOTES: 1. Interpolation is permitted for intermediate spans.
2. Design loads are for purlins supported by cleats using 2 bolts per cleat.
3. Self-weight of purlins and roof sheets are not included.
4. Loads shown in BOLD require Grade 8.8 bolts.