MILLFORM AUSTRALIA

Where strength matters

EXTREME PURLIN™

MILLFORM EXTREME PURLIN GUIDE & CAPACITY TABLES

C & Z EXTREME PURLINS

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With the strength of steel, Millform is dedicated to building a better Australia. We provide quality products, ensure efficient delivery standards, and offer proven solutions for commercial, construction, industrial, and government clients.

You can find other Millform items on our website.

www.millform.com.au

EXTREME PURLIN™

TABLE OF CONTENT

GENERAL INFORMATION

EXTREME PURLIN™

Application

At Millform, we supply purlins and girts to support roof and wall sheeting. Our products are used in a variety of industrial, commercial, construction, and civil applications.

Construction Materials

Our ***Extreme Purlin™*** purlins and girts are manufactured from high-quality galvanised steel. We use G450, G500, and G550 products with a minimum Z350 coating. All materials conform to AS 1397.

Installation Process

We have access to an expansive shipping network, with all materials delivered quickly and safely to avoid project delays. We can deliver to most addresses across Australia.

Sheeting and Expansion Joint Sizing

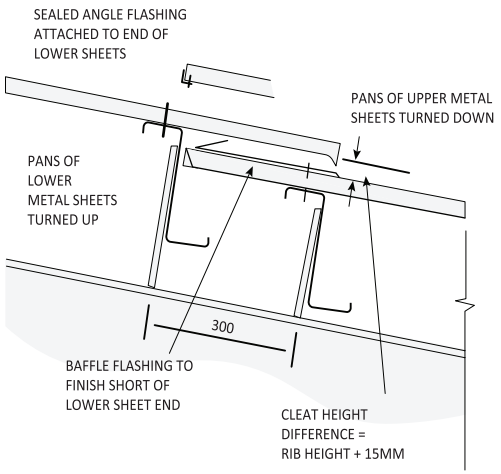
We adapt roof sheeting sizes based on thermal expansion, transportation, and handling requirements. Recommended roof sheeting lengths may vary between projects and state locations.

MAXIMUM ROOF SHEET LENGTH

ROOF COLOUR	THROUGH FIX	CONCEALED FIX
Light	25m	33m
Dark	17m	25 m

Where buildings are designed with roofing runs greater than the table above, expansion joints are necessary.

TYPICAL EXPANSION JOINT



Welding Not Required

Welding is not recommended for purlins, girts, or bridging materials. Cold rolled steel is a high-tensile material, with welding likely to remove the galvanised coating and reduce the lifespan of the product.

Safe Work Practices

Millform strives for the highest levels of safe work practice both internally in our production process and externally in the delivery and handling of our products. Be aware that when material gets wet or moist it can lead to a hazardous situation. We strongly recommend not to walk on steel in these conditions and take extreme care when moving or lifting steel as it can slip off forklifts or cranes. Take time to perform a risk assessment and use the correct equipment.

Material Protection and Compatibility

Some building materials and environmental conditions function poorly with coated steel products. It's important to avoid run-off exposure or contact that results from aggressive atmospheric conditions, incompatible materials, excessive moisture, and treated materials. Incompatible metals include lead and copper, excessive moisture is likely with non-seasoned timber, and treated materials include CCa and tanalith.

When installed correctly in the right locations, standard Z350 galvanised coating will provide a long and maintenance-free life. Typical applications include enclosed buildings and open-sided rural applications in standard environments. While Z450 is available for extreme corrosive settings, this product is subject to extended lead times and minimum order amounts.

On-site Storage

Safe above-ground storage is critical for Z and C sections or bundles. If extended storage is needed, it's important to store materials with a small incline to avoid water from pooling. Materials and equipment should be protected with waterproof covers and never left exposed to the elements for a long period of time.

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PRODUCT RANGE & PROPERTIES

EXTREME PURLIN™

Extreme Purlin™ C & Z Sections and Other Shapes

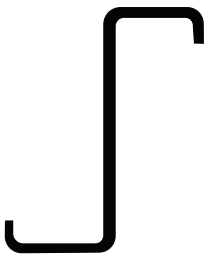
C and Z sections are readily available, and other shapes are available subject to extended lead times and minimum order requirements. Purlins and girts are available in the following sizes:

C SECTIONS

EXTREME C

Z SECTIONS

EXTREME Z



C – Section Extreme Purlin

C150 Purlin

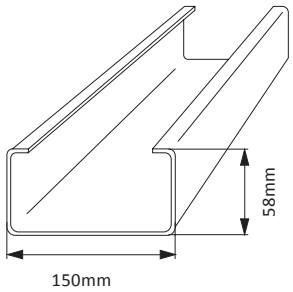
PURLIN - EX_C150 X 58 X 1.20 BMT: **EX_C150_58_1.20G** (2.83kg/m)

PURLIN - EX_C150 X 58 X 1.50 BMT: **EX_C150_58_1.50G** (3.52kg/m)

PURLIN - EX_C150 X 58 X 1.90 BMT: **EX_C150_58_1.90G** (4.45kg/m)

PURLIN - EX_C150 X 58 X 2.40 BMT: **EX_C150_58_2.40G** (5.60kg/m)

Standard Pack: 50 Lengths



C200 Purlin

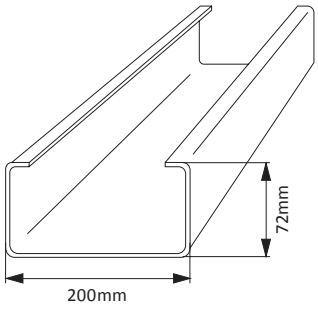
PURLIN - EX_C200 X 72 X 1.20 BMT: **EX_C200_72_1.20G** (3.59kg/m)

PURLIN - EX_C200 X 72 X 1.50 BMT: **EX_C200_72_1.50G** (4.47kg/m)

PURLIN - EX_C200 X 72 X 1.90 BMT: **EX_C200_72_1.90G** (5.65kg/m)

PURLIN - EX_C200 X 72 X 2.40 BMT: **EX_C200_72_2.40G** (7.12kg/m)

Standard Pack: 50 Lengths



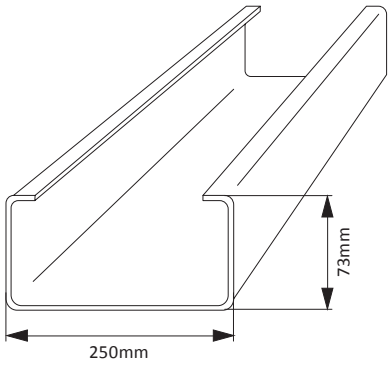
C250 Purlin

PURLIN - EX_C250 X 73 X 1.50 BMT: **EX_C250_73_1.50G** (5.07kg/m)

PURLIN - EX_C250 X 73 X 1.90 BMT: **EX_C250_73_1.90G** (6.41kg/m)

PURLIN - EX_C250 X 73 X 2.40 BMT: **EX_C250_73_2.40G** (8.07kg/m)

Standard Pack: 40 Lengths



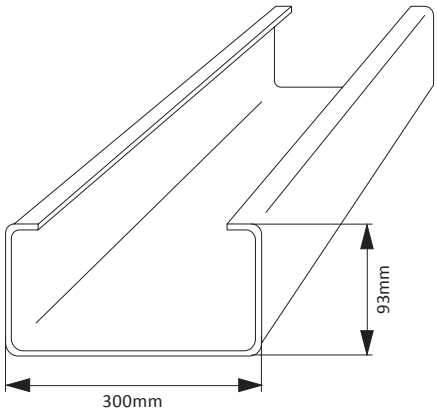
C300 Purlin

PURLIN - EX_C300 X 93 X 1.90 BMT: **EX_C300_93_1.90G** (7.91kg/m)

PURLIN - EX_C300 X 93 X 2.40 BMT: **EX_C300_93_2.40G** (9.97kg/m)

PURLIN - EX_C300 X 93 X 3.00 BMT: **EX_C300_93_3.00G** (12.51kg/m)

Standard Pack: 20 Lengths



NOTE: C & Z Purlins are only manufactured down to 2m lengths, shorter lengths will need to be cut by the purchaser.
C Purlins - Part cut any length under 2m **Z Purlin -** Any length under 2m is joined together with no part cut.

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Z – Section Extreme Purlin

Z150 Purlin

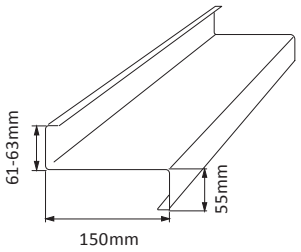
PURLIN - EX_Z150 X 58 X 1.20 BMT: **EX_Z150_58_1.20G** (2.83kg/m)

PURLIN - EX_Z150 X 58 X 1.50 BMT: **EX_Z150_58_1.50G** (3.52kg/m)

PURLIN - EX_Z150 X 58 X 1.90 BMT: **EX_Z150_58_1.90G** (4.45kg/m)

PURLIN - EX_Z150 X 58 X 2.40 BMT: **EX_Z150_58_2.40G** (5.60kg/m)

Standard Pack: 20 Lengths



Z200 Purlin

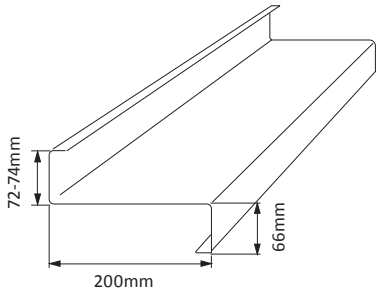
PURLIN - EX_Z200 X 72 X 1.20 BMT: **EX_Z200_72_1.20G** (3.59kg/m)

PURLIN - EX_Z200 X 72 X 1.50 BMT: **EX_Z200_72_1.50G** (4.47kg/m)

PURLIN - EX_Z200 X 72 X 1.90 BMT: **EX_Z200_72_1.90G** (5.65kg/m)

PURLIN - EX_Z200 X 72 X 2.40 BMT: **EX_Z200_72_2.40G** (7.12kg/m)

Standard Pack: 20 Lengths



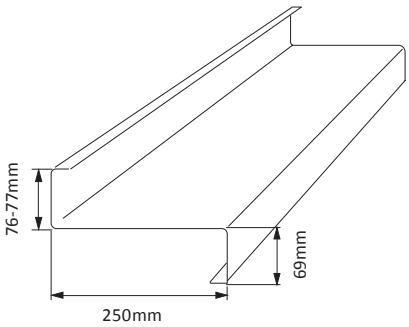
Z250 Purlin

PURLIN - EX_Z250 X 73 X 1.50 BMT: **EX_Z250_73_1.50G** (5.07kg/m)

PURLIN - EX_Z250 X 73 X 1.90 BMT: **EX_Z250_73_1.90G** (6.41kg/m)

PURLIN - EX_Z250 X 73 X 2.40 BMT: **EX_Z250_73_2.40G** (8.07kg/m)

Standard Pack: 20 Lengths



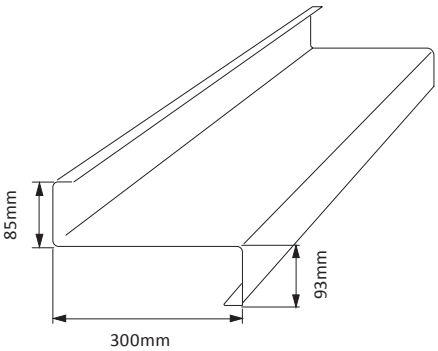
Z300 Purlin

PURLIN - EX_Z300 X 93 X 1.90 BMT: **EX_Z300_93_1.90G** (7.91kg/m)

PURLIN - EX_Z300 X 93 X 2.40 BMT: **EX_Z300_93_2.40G** (9.97kg/m)

PURLIN - EX_Z300 X 93 X 3.00 BMT: **EX_Z300_93_3.00G** (12.51kg/m)

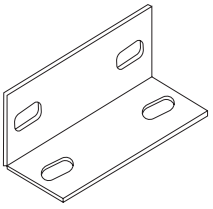
Standard Pack: 20 Lengths



NOTE: C & Z Purlins are only manufactured down to 2m lengths, shorter lengths will need to be cut by the purchaser.
C Purlins - Part cut any length under 2m **Z Purlin -** Any length under 2m is joined together with no part cut.

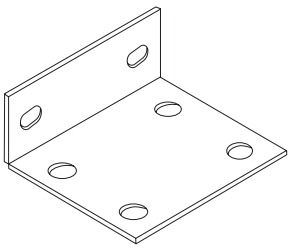
Brackets

Angle Connector Bracket
ANGLE CONNECTOR - C100: **MF-AC100** (0.19kg/ea.)
ANGLE CONNECTOR - C150: **MF-AC150** (0.30kg/ea.)
ANGLE CONNECTOR - C200: **MF-AC200** (0.39kg/ea.)
ANGLE CONNECTOR - C250: **MF-AC250** (0.56kg/ea.)
ANGLE CONNECTOR - C300: **MF-AC300** (0.69kg/ea.)
Standard Pack: 50 Brackets



Angle Connector Bracket

General Pupose Bracket
GENERAL PURPOSE BRACKET C100: **GPB100** (0.23kg/ea.)
GENERAL PURPOSE BRACKET C150: **GPB150** (0.41kg/ea.)
GENERAL PURPOSE BRACKET C200: **GPB200** (0.61kg/ea.)
GENERAL PURPOSE BRACKET C250: **GPB250** (0.80kg/ea.)
GENERAL PURPOSE BRACKET C300: **GPB300** (1.00kg/ea.)
Standard Pack: 50 Brackets



General Purpose Bracket

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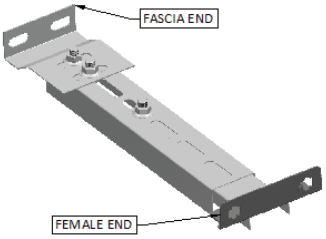
HookFast® BRIDGING SYSTEM

Hook Fast Purlin Bridging

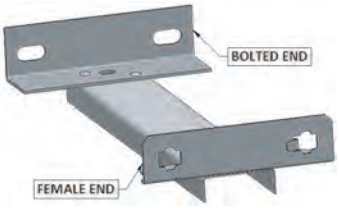
Millform *HookFast*® Bridging System

(available to suit C/Z100, 150, 200 & 250)

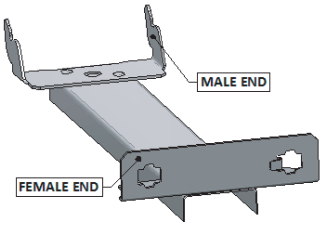
AdJ Starter – Adjustable Female / Facia Cheat



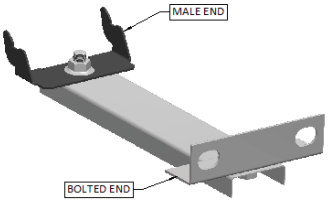
Starter – Bolted / Female



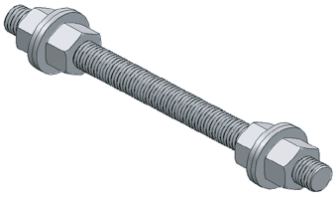
Intermediate – Male / Female



Finisher – Male / Bolted

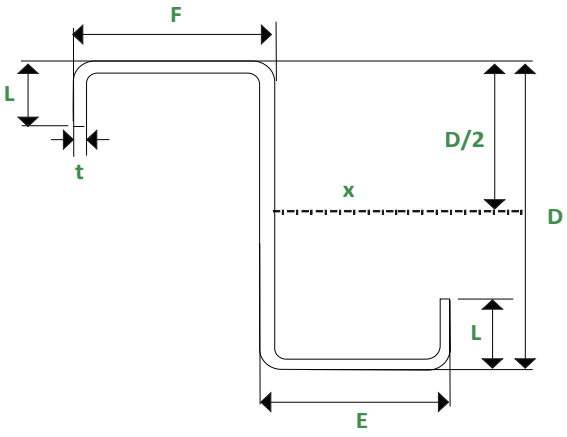


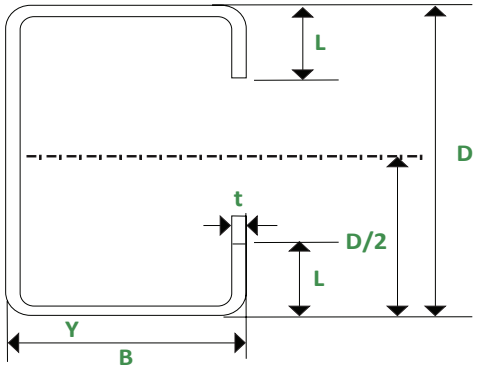
12 mm Sag Rod Ridge Tie (add 100 mm to centres)



DIMENSIONS & PROPERTIES

EXTREME PURLIN™





C & Z EXTREME PURLIN SIZE & MASS TABLE

Section	Thickness (t) mm	Height (D) mm	Z PURLINS			C PURLINS		Mass kg/m
			E	F	L	B	L	
100 10*	1.0	102	53	49	12.5	51	12.5	1.75
100 12	1.2	102	53	49	13	51	12.5	2.09
100 15	1.5	102	53	49	13.5	51	13.5	2.59
100 19	1.9	102	53	48	14.5	51	14.5	3.26
150 12	1.2	152	65	61	15.5	64	14.5	2.86
150 15	1.5	152	65	61	16.5	64	15.5	3.55
150 19	1.9	152	65	61	17.5	64	16.5	4.48
150 24	2.4	152	66	60	19.5	64	18.5	5.81
200 15	1.5	203	79	74	18	76	15.5	4.46
200 19	1.9	203	79	74	18.5	76	19	5.69
200 24	2.4	203	79	73	21.5	76	21	7.39
250 19	1.9	254	79	74	18	76	18.5	6.45
250 24	2.4	254	79	73	21	76	20.5	8.37
300 24	2.4	300	100	93	27	96	27.5	10.11
300 30	3.0	300	100	93	31	96	31.5	12.66
350 24*	2.4	350	129	121	30	125	30	12.23
350 30*	3.0	350	129	121	30	125	30	15.15
400 24*	2.4	400	100	93	30	96	30	12.23
400 30*	3.0	400	100	93	30	96	30	15.15

*Minimum order quantity and longer lead times may apply

Please contact Millform for more information.

Material Tolerances

All steel sections are produced with the following tolerances:

- Length ±5 mm
- Flange width ±1 mm
- Depth ±1 mm
- Hole centre ±1.5 mm

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C & Z PURLIN DIMENSIONS & PROPERTIES

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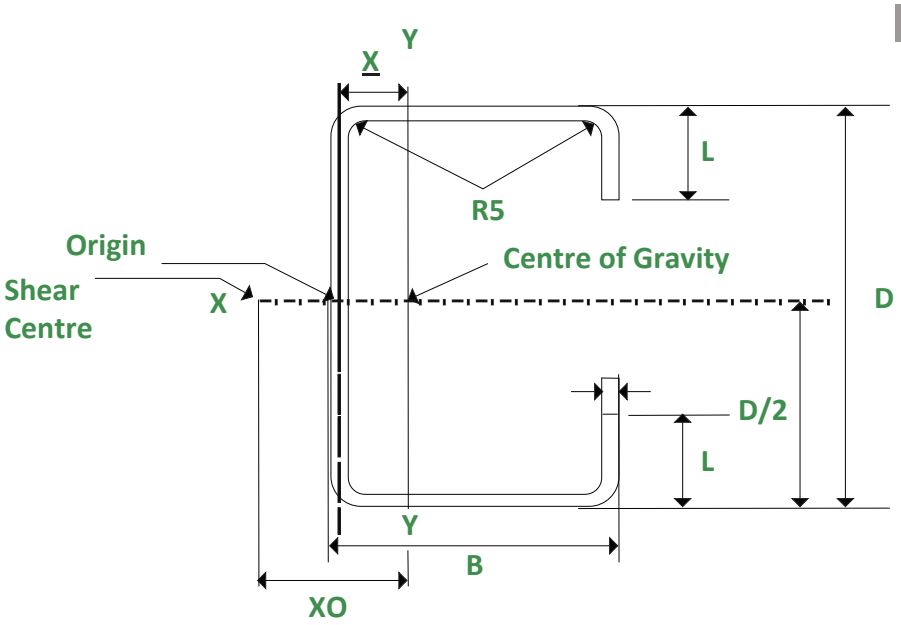

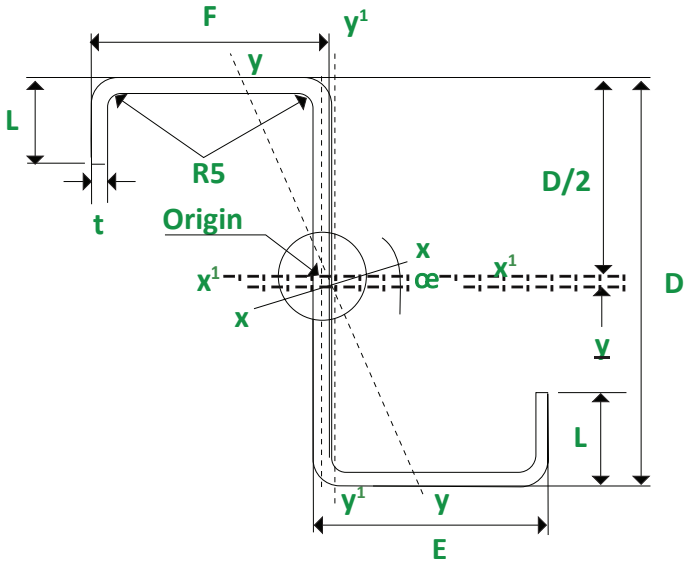

C SECTION PROPERTIES

EXTREME PURLIN™

Section	Area mm²	Second Moment of Area (x10 ^6 mm4)		Form Factor	Torsion Constant mm4	Warping Constant (x10^9 mm6)	Monosymmetry Constant mm	Shear Centre mm	Centre of Gravity
		Ix	Iy	Q	J	Iw	by	xo	x
C100 10	215	0.361	0.075	0.644	71.7	0.158	123.3	-39.85	16.03
C100 12	258	0.429	0.088	0.731	123.8	0.186	122.8	-39.61	15.93
C100 15	321.7	0.531	0.111	0.824	241.3	0.238	122	-39.9	16
C100 19	408.5	0.667	0.41	0.879	491.6	0.307	121.7	-40.28	16.18
C150 12	354	1.28	0.186	0.573	169.9	0.835	170.7	-46.38	18.22
C150 15	441.4	1.593	0.234	0.671	331	1.059	170.1	-46.7	18.3
C150 19	560.5	2.009	0.297	0.76	674.5	1.358	169.8	-47.07	18.49
C150 24	708	2.527	0.382	0.813	1359.4	1.79	168.5	-47.93	18.82
C200 15	555	3.509	0.393	0.557	416.3	3.042	223.2	-51.54	19.89
C200 19	710.7	4.472	0.522	0.647	855.2	4.157	220.8	-53.4	20.7
C200 24	901.5	5.642	0.673	0.726	1722.8	5.483	218.8	-54.2	21
C250 19	807.5	7.585	0.557	0.574	971.7	6.82	2764	-48.46	18.1
C250 24	1020	9.577	0.716	0.645	1958.4	8.859	273.9	-49.21	18.39
C300 24	1260	16.919	1.504	0.592	2419.2	26.671	319.8	-65.97	24.99
C300 30	1590	21.253	1.948	0.672	4770	35.487	315.8	-67.88	25.74
C350 24	1545	29.12	3.18	0.52	3015	77.379	386.9	-91.11	34.07
C350 30	1905	35.708	3.799	0.596	5715	89.651	378.4	-86.24	33.18
C400 24	1665	39.8	3.31	0.54	3246	103.979	439.9	-86.23	31.61
C400 30	2072	49.32	4.07	0.63	6318	127.269	440	-85.69	31.33

Z SECTION PROPERTIES

Section	Area mm²	Second Moment of Area (x10 ^6 mm4)				Form Factor	Torsion Constant mm4	Warping Constant (x10^9 mm6)	Monosymmetry Constant mm		Shear Centre mm		Centre of Gravity		Angle (Deg)
		Ix¹	Iy¹	Ix	Iy	Q	J	Iw	bx	by	xo	yo	x	y	œ
Z100 10	215	0.361	0.13	1.448	0.043	0.644	71.7	0.213	9.9	11.8	-1.94	-4.73	1.11	-0.94	27.6
Z100 12	258	0.429	0.153	0.532	0.051	0.731	123.8	0.25	9.9	11.8	-1.94	-4.75	1.11	-0.94	27.5
Z100 15	322.5	0.533	0.194	0.663	0.064	0.826	241.9	0.317	9.9	11.8	-1.95	-4.75	1.11	-0.94	27.8
Z100 19	408.5	0.667	0.248	0.833	0.081	0.879	491.6	0.404	9.9	11.7	-1.96	-4.77	1.12	-0.94	28
Z150 12	352.4	1.274	0.3	1.46	0.114	0.576	169.2	1.145	12.4	12.7	-1.9	-5.9	1	-1	21.7
Z150 15	441.4	1.586	0.379	1.822	0.144	0.676	331	1.447	12.4	12.6	-1.9	-5.9	1	-1	21.9
Z150 19	559.2	1.995	0.482	2.294	0.181	0.725	672.9	1.839	12.5	12.6	-1.9	-5.9	1	-1	22
Z150 24	705.9	2.506	0.625	2.897	0.235	0.811	1363.3	2.381	18.6	18.5	-2.9	-8.8	1.5	-1.5	22.4
Z200 15	555	3.512	0.616	3876	0.253	0.555	416.3	4.235	17.6	17.1	-2.26	-8.3	1.17	-1.36	18.5
Z200 19	712.5	4.496	0.837	4.994	0.339	0.647	857.4	5.795	17.4	16.8	-2.3	-8.24	1.19	-1.34	19.1
Z200 24	900	5.673	1.089	6.324	0.438	0.726	1728	7.58	21	19.8	-2.79	-9.94	1.45	-1.6	19.4
Z250 19	805.4	7.808	0.916	8.318	0.407	0.57	969.2	10.235	25.8	23.4	-2.7	-12.1	1.3	-1.9	14.7
Z250 24	1023.5	9.572	1.074	10.158	0.487	0.643	1952.5	12.261	26.9	23.4	-2.6	-12.8	1.3	-1.8	14.3
Z300 24	1260	17.117	2.381	18.471	1.027	0.59	2419.2	37.465	20.9	17.2	-1.99	-10.19	0.94	-1	16.2
Z300 30	1590	21.513	3.119	23.3	1.332	0.672	4770	49.318	21.3	16.9	-2.02	-10.42	0.94	-0.94	16.6
Z350 24	1545	29.1	4.98	32.02	2.07	0.52	2965	101	21.1	18.6	-2.1	-10.4	1.87	-2.16	18.2
Z350 30	1905	36.03	6.069	39.583	2.516	0.596	5715	126.23	21.6	19.1	-2.38	-10.49	1.16	-1.19	18
Z400 24	1665	39.8	4.98	42.55	2.22	0.54	3196	136	23.3	20.5	-2.4	-11.5	1.74	-2.29	15.2
Z400 30	2072	49.3	6.11	52.69	2.73	0.63	6250	166	23.7	21	-2.5	-11.8	1.73	-2.3	15.1

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PRODUCT MANUAL — PURPOSE AND APPLICATION

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How to Use This Manual

This manual lists detailed product capacities that should be considered during installation along with real applied loads. All spans are considered to be loaded concurrently, and allowances have not been made for uneven or skip loading. If loading conditions are likely to be inconsistent or vary from this manual, a structural engineer should be employed to verify compliance with AS/NZS 4600:2005.

Real loading capacity can vary widely, with reduced loading not enough to ensure competency. Member adequacy is also dependent on member profiles and movement application within the member span. Design actions can vary widely under applied loads, however, with each project design engineer needing to verify project specific material selection in compliance with AS/NZS 4600:2005 and AS/ANZ 1170 Assessed Loading.

Design Considerations and Assumptions

The information presented in this manual applies to limit state capacity. Any load amounts beyond tabulated totals will prevent the member from meeting its intended function. In this situation, potential outcomes include collapse and loss of structural integrity.

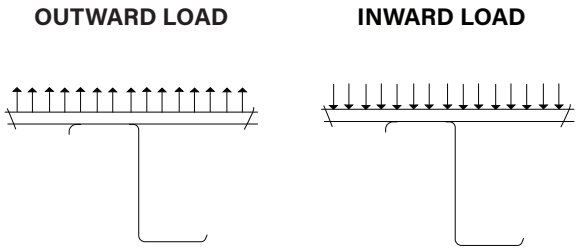
Limit state tables are listed for specific purlin combinations in order to affirm economic design solutions. In special projects, the following elements can be adjusted to optimise design: material specifications, bolt quantity, bolt specifications, bridging quantity, span range, lap length, end span sizes, cantilevers, and loading requirements.

All design calculations are based on AS/NZS 4600:2005 Cold Formed Steel Structures. All measurements are based on industry best practice.

Assumptions inherent in and validated by code provisions:

- The Z shaped section behaves as an equivalent C shaped channel.
- In regard to its initial displacement, the Z shaped section may be seen as physically attached to and acting with the sheeting incurring the loads.
- For Inward loading, full compressive bending stress is allowed on the flange that is attached to the sheeting. The following diagram shows the centre span condition.
- For Outward loading, full compressive bending stress is allowed on the flange that is attached to the sheeting. The following diagram shows span support condition.
- For any sections or lengths that experience distortions or buckling effects, bending moment gradient and magnitude are considered.
- For all systems, loading distribution is assumed to be uniform and acting on all spans simultaneously.
- All section properties have been calculated with the holes deducted from the web.

LOADING CONDITIONS



Design Considerations and Assumptions Disclaimer

This document is intended to provide accurate information relating to Millform C and Z E***xtreme purlins™***. It does not attempt to provide a complete description of the products. It does not describe the suitability of materials for specific projects or applications. All published information is intended as a guide only. Millform Pty Ltd does not accept any liability for loss or damage resulting from the use of data in this document.

DESIGN & SPECIFICATION

EXTREME PURLIN™

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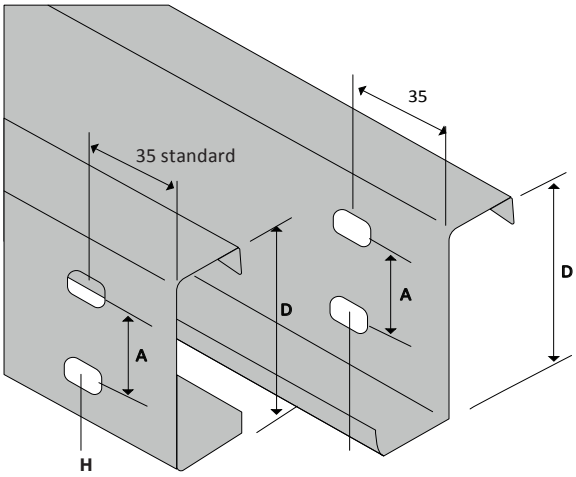
Hole Punching

Millform C and Z ***Extreme purlin™*** sections are typically supplied with hole punch measurements that comply with the AISC guide. Measurements are different in Victoria, however, with 150 mm sections punched with 70 mm centres in accordance with Structural Steel Fabricator Association Victoria guidelines.

Punched holes are needed at cleat supports, laps, bridging points, and other locations as specified on data sheets prior to manufacture. Our system is left-to-right cumulative from one end to ensure accuracy. A complete purlin length measurement is needed to enable a data entry dimensional check.



HOLE CENTRES

PURLIN SIZE	AISC CENTRES		STATE
D mm	A mm	H mm	
100	40	18 x 22	ALL
150	60	18 x 22	ALL EXCEPT VICTORIA
200	110	18 x 22	ALL
250	160	18 x 22	ALL
300	210	18 x 22	ALL
350	260	18 x 22	ALL
400	310	18 x 22	ALL

Alternative hole sizes, shapes and centres are available.
Please enquire with your local Millform branch.

Structural Lap Lengths

Millform Z sections feature one broad flange and one narrow flange in direct proportion. If both sections are the same size, and one section is rotated by 180 degrees, they can be fitted and will align with a bolt connection. This makes them suitable for lapping. While structural continuity enables improved economy, lapping helps to increase strength, improve load capacity, and enhance system rigidity. C sections can't be lapped.

When Z sections are lapped, there are two thicknesses installed over interior supports. Depending on the length of the lap, this can alter deflection and reaction coefficients along with bending movements. These elements are determined by a nominal lap of 10% span in all lapped spans. When a lighter internal section combines with a heavier gauge end span, the difference in thickness accounts for a maximum of two sections.

At more complex points with three or four lapped span configurations, the greater thickness exists in the end spans. Regardless of configuration, the structural lap at interior supports must provide enough structural continuity. Each lap end must be bolted, with one bolt placed through the flanges furthermost from the cladding and another bolt placed through the webs near the flanges connected to the cladding.

Z sections can be used over simple spans and applied continuously over two or more shorter spans without laps. Z sections with a single lip turned outwards can be used with the ends butted in simple or continuous spans; however, these sections can't be overlapped.

In terms of bridging, three rows should be selected, with additional rows offering no benefits. Bridging should be selected and installed with a maximum un-braced length of 20 x D (purlin height) or 4,000 mm. This helps to enhance purlin performance and also assists with the installation of roof sheeting. A design engineer should assist in locating an ideal bridging location to the nearest 50 mm.

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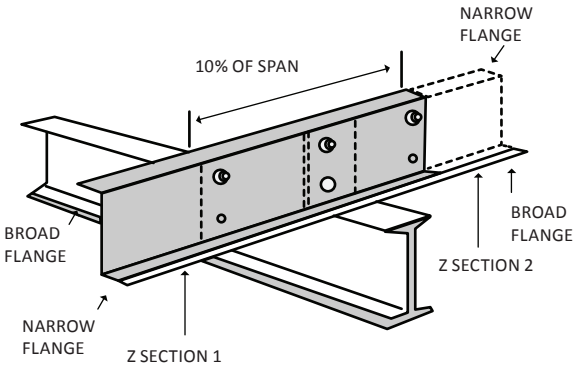
LAP LENGTHS

Nominal Section Size (mm)	Span (mm)	Lap Length (mm)
100	≤6000	600
	>6000	900
150, 200, 250	≤9000	900
	>9000≤12000	1200
	>1200	1800
300, 350	≤9000	900
	>9000≤12000	1200
	>1200≤1800	1800
	>18000	2400



BRIDGING

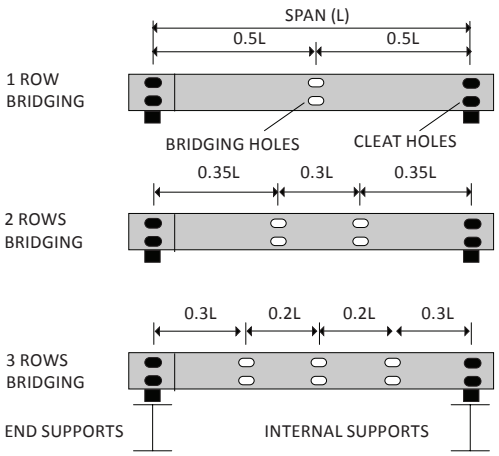
The limit state capacity tables provide design solutions for an equal number of rows of bridging in each span. Provision is made for 0,1, 2 or 3 rows.

RECOMMENDED MAX. BRIDGING SPACING

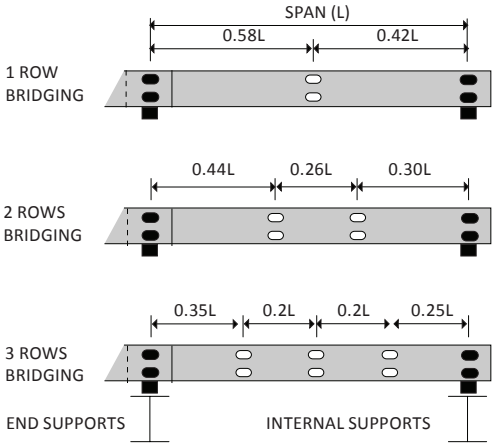
PURLIN SIZE MM	MAX. BRIDGING SPACING MM
100	2000
150	3000
200, 250, 300, 350, 400	4000

BRIDGING HOLE LOCATIONS

SINGLE OR INTERNAL SPANS



DOUBLE OR END SPANS



Member Weight

Limit state loads are measured in kN/m and make no allowance for the mass of the member. In some cases, limit state loads are limited by the bolting.

Deflection

Structural codes provide guidance surrounding deflections; however, there are no specific rules in place. It's important to consider the specific requirements of the structure in question. It may be necessary to design under multiple load combinations, with critical span loads calculated with a deflection of Span/150.

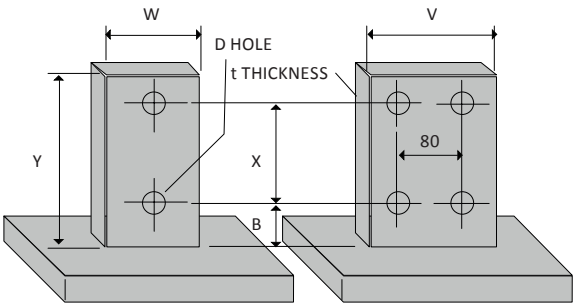
Cleat Connections

Limit state capacity for cleat connections is based on sections being fastened through the web to the cleats. When this occurs, the load is transferred through the section web. This connection can be either single section thickness, like it is for end connections, or as an internal support for continuous configurations. Connections with double section thickness occur at the internal support point of lapped configurations.

With this style of connection, two bolts are used, with the size and grade of each bolt based on the overall size and design load of the section. In many cases, it's possible to eliminate cleats and bolts through the bottom flange of the Z and C sections. Overall, the number of bolts is halved compared to conventional cleated mechanisms.

Single cleats are often used with Z sections, and double cleats are used with C sections. Double cleats are also applied when there is a high reaction load used to reduce bolt stress and shear. Extra care is needed in the case of hole detailing for double cleat applications to a single purlin. Industry standard sizes and purlin clearances are illustrated in the following table.

CLEAT NOMINAL DIMENSIONS - MM



SIZE	X	B+	Y+	t	GAP	hd	W	V
100	40	40	105	8	10	18	50	130
150	60*	50†	145	8	10	18	60	140
200	110	55	195	8	10	18	60	140
250	160	55	245	8	10	18	60	140
300	210	65	305	12	20	22	60	140
350	260	65	355	12	20	22	60	140
400	310	75	405	12	20	22	60	104

* 70mm in VIC
† 50mm in VIC
+ When using down turned lip purlins or girts the lip length must be added to the dimension B and Y. Cleat lengths may be increased in some design situations (e.g. above an expansion joint).

As a guide, increase the cleat thickness by 2mm for each 40mm of additional length.

BOLTS

When you fasten sections to cleats, standard bolts are required. High strength bolts are also needed for some applications, with this situation marked in the limit state capacity tables. In these situations, the overall section capacity is not fully utilised, and an alternative configuration may be more economical. It may also be possible to change the spacing or increase the number of bolts in the section.

Purlin laps need to be bolted to the top web hole and lower flange holes at both ends of the lap. If only the web is bolted, excessive loads can be placed on roofing screws and structural integrity is compromised. It's important that all bolts are tightened prior to roof installation, and the design engineer ensures the correct size and grade of purlin bolts.

BOLT SPECIFICATION

NOMINAL SECTION SIZE MM	BOLT SPECIFICATION
100, 150, 200, 250	Standard M12 Purlin Bolt High Strength M12 Purlin Bolt
300, 350, 400	Standard M16 Purlin Bolt High Strength M16 Purlin Bolt

Point Loads (SEE TABLE OVER PAGE)

The limit state loads listed in the following tables are distributed evenly based on uniform values. There are key differences based on applications, with all design loads needing to be converted to ensure correct use. In some applications, design loads are point loads. Point-loaded configurations have been linked to uniformly loaded configurations and presented with the correct conversion. For continuous unlapped configurations, a different conversion formula is needed.

In the case of single spans, the formula given is accurate. For lapped spans, the accuracy of the conversion is dependent on the number of spans, their position in the continuity, and the lapping ratio. The lapped span formula shown is based on worst-case loading conditions, which means it can be safely applied for interior spans, end spans, and lapping ratios greater than 0:10. A separate set of conversion formula is needed for deflections.

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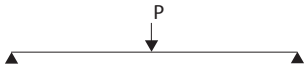
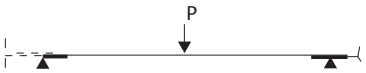
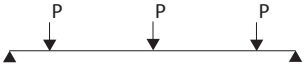
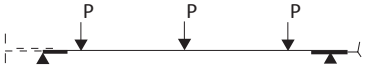
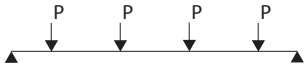
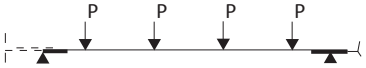
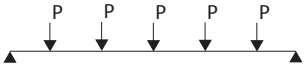
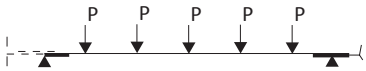
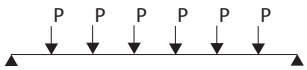
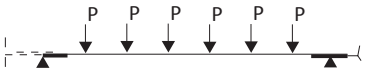
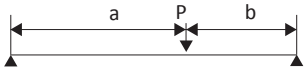
POINT LOADS

SYMMETRICAL EQUIDISTANT POINT LOADS

EXTREME PURLIN™

LOADING CONDITION		DIAGRAM	CONVERSION FORMULA
SINGLE LOAD	Simple		$w = \frac{2P}{L}$
	Lapped		$w = \frac{2.22P}{L}$
2 LOADS	Simple		$w = \frac{2.67P}{L}$
	Lapped		$w = \frac{3.16P}{L}$
3 LOADS	Simple		$w = \frac{4P}{L}$
	Lapped		$w = \frac{3.78P}{L}$
4 LOADS	Simple		$w = \frac{4.80P}{L}$
	Lapped		$w = \frac{5.12P}{L}$
5 LOADS	Simple		$w = \frac{6P}{L}$
	Lapped		$w = \frac{6.65P}{L}$
6 OR MORE LOADS	Simple		$w = \frac{1.14P}{L}$
	Lapped		$w = \frac{1.22P}{L}$

SINGLE ECCENTRIC & TWO SYMMETRICAL POINT LOADS

SINGLE ECCENTRIC POINT LOAD	Simple		$w = \frac{8abP}{L^3}$
	Lapped		$w = \frac{17.76ab^2P}{L^4}$
TWO SYMMETRICAL POINT LOADS	Simple		$w = \frac{8bP}{L^2}$
	Lapped		$w = \frac{9.45(2L-3b)P}{L^3}$

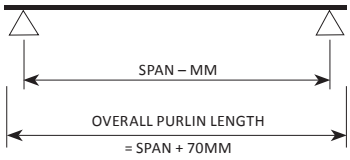
P = Single Point Load (kN)
L = Span (m)
a = Larger distance from suppot (m)
b = Smaller distance from support (m)
w = Equivalent uniform load (kN/m)
N = Number of Point Loads over one span

HOW TO USE THE TABLES

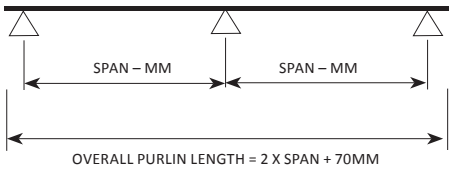
EXTREME PURLIN™

The tables shown below highlight the maximum limit state capacity of the sections. Capacities are based on loads that have been distributed uniformly, with any point loads needing to be converted. Required loads need to be established by a project designer using the correct building codes and standards. It's important to calculate the purlin and girt outward and inward loads based on the preferred span configuration. The ***Hookfast®*** bridging system can be used for 3 rows of bridging.

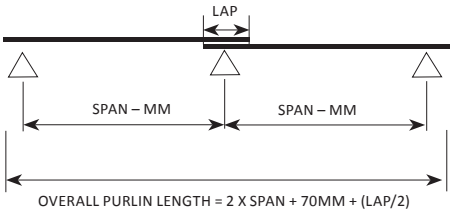
SINGLE SPAN



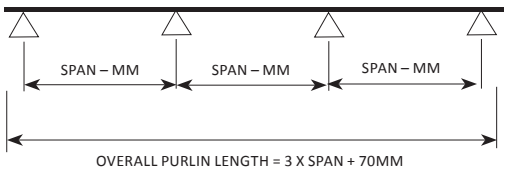
2 SPAN CONTINUOUS UNLAPPED



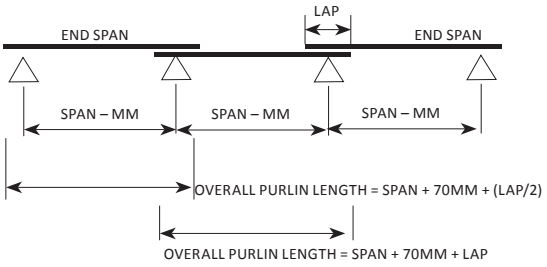
2 SPAN LAPPED



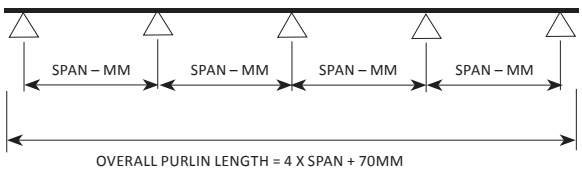
3 SPAN CONTINUOUS UNLAPPED



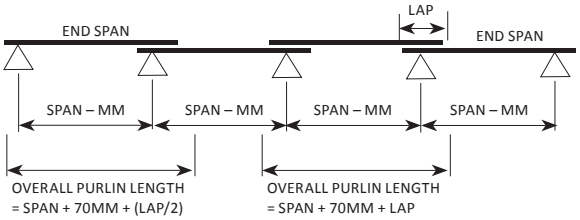
3 SPAN LAPPED



4 SPAN CONTINUOUS UNLAPPED



4 SPAN LAPPED



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MILLFORM PURLIN SPAN TABLES & SECTION PROPERTIES FOR EXTREME C & Z PURLINS

The following section contains span tables and section properties tables.

EXTREME PURLIN™

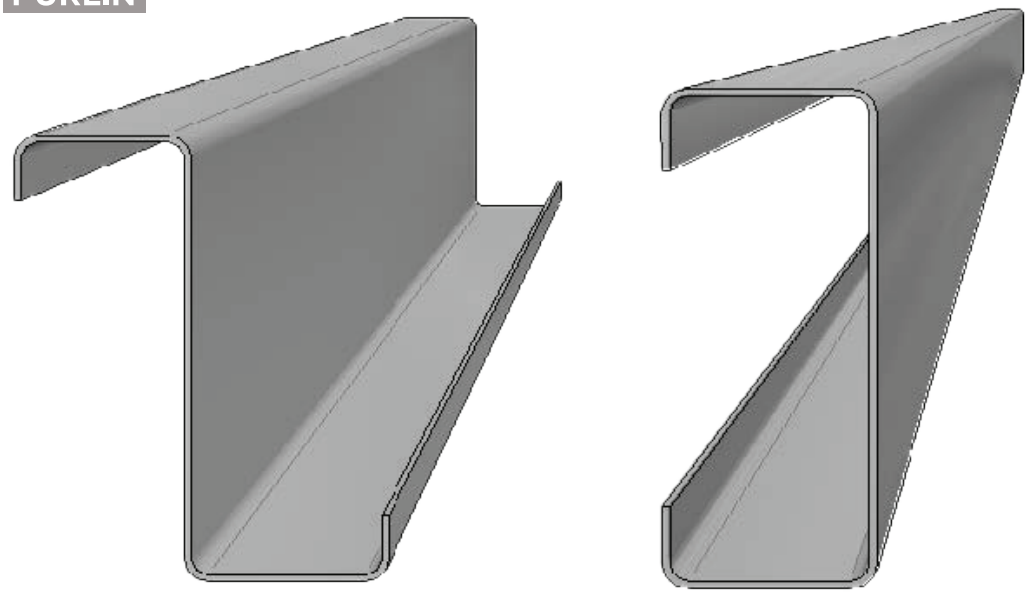

TABLE 1.1 Product Dimensions

EXTREME PURLIN™

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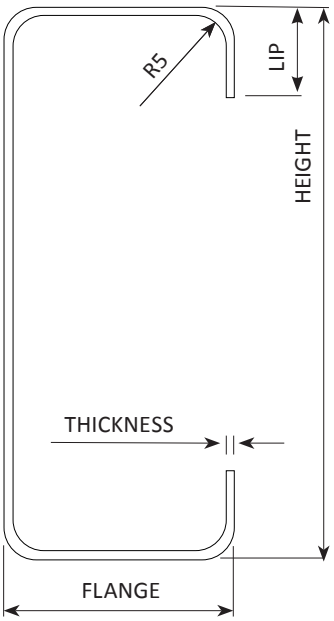
Extreme "C" Purlins

Type	Overall Height	Flange	Lip Wifth	Thick ness	Mpa	Kg/M
EC15012	150	58	21.8	1.2	G500	2.89
EC15015	150	58	22.5	1.5	G450	3.59
EC15019	150	58	23.5	1.9	G450	4.52
EC15024	150	58	24.7	2.4	G450	5.67
EC20012	200	72	22.8	1.2	G500	3.68
EC20015	200	72	23.5	1.5	G450	4.56
EC20019	200	72	24.5	1.9	G450	5.74
EC20024	200	72	25.7	2.4	G450	7.21
EC25015	250	73	22.5	1.5	G450	5.17
EC25019	250	73	23.5	1.9	G450	6.51
EC25024	250	73	24.7	2.4	G450	8.17
EC30019	300	93	28.5	1.9	G450	8.04
EC30024	300	93	29.7	2.4	G450	10.1
EC30030	300	93	31.2	3.0	G450	12.6

Extreme "Z" Purlins

Type	Overall Height	Narrow Flange	Wide Flange	Lip Wisth	Thick ness
EZ15012	151.7	55	61	20.9	1.2
EZ15015	152.0	55	61	21.5	1.5
EZ15019	152.4	55	62	21.8	1.9
EZ15024	152.9	55	63	22.2	2.4
EZ20012	201.7	66	72	24.9	1.2
EZ20015	202.0	66	72	25.5	1.5
EZ20019	202.4	66	73	25.8	1.9
EZ20024	202.9	66	74	26.2	2.4
EZ25015	252.0	69	76	22.0	1.5
EZ25019	252.4	69	76	22.8	1.9
EZ25024	252.9	69	77	23.2	2.4
EZ30019	302.4	85	93	31.3	1.9
EZ30024	302.9	85	93	32.2	2.4
EZ30030	303.5	85	95	32.4	3.0



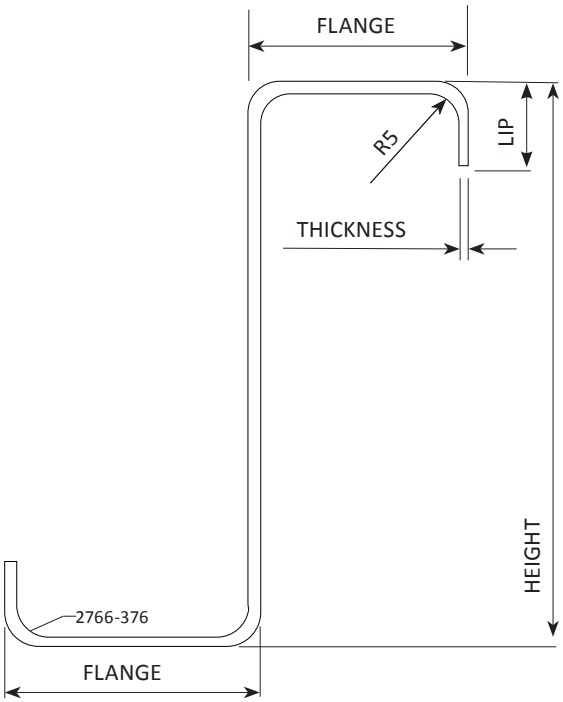
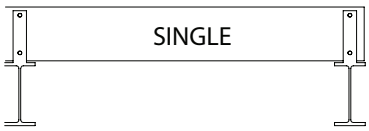
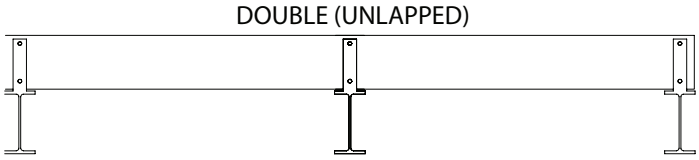
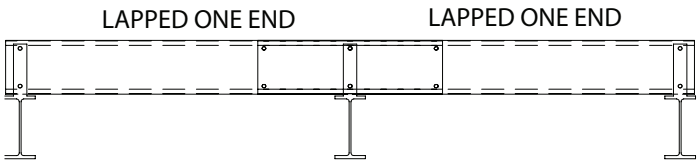


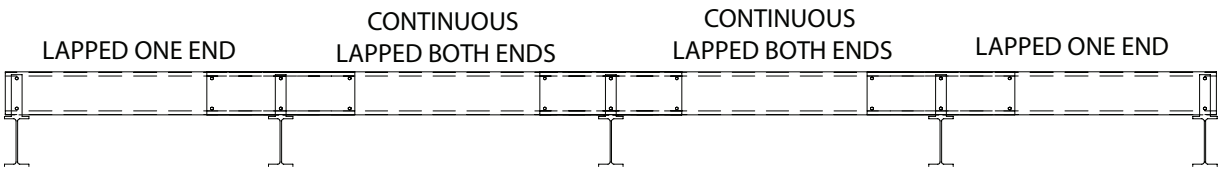
TABLE 2.1 Purlin Spans Explained



SPAN VARIETIES
1 - SINGLE
2 - DOUBLE (UNLAPPED)
3 - LAPPED ONE END
4 - CONTINUOUS - LAPPED BOTH ENDS







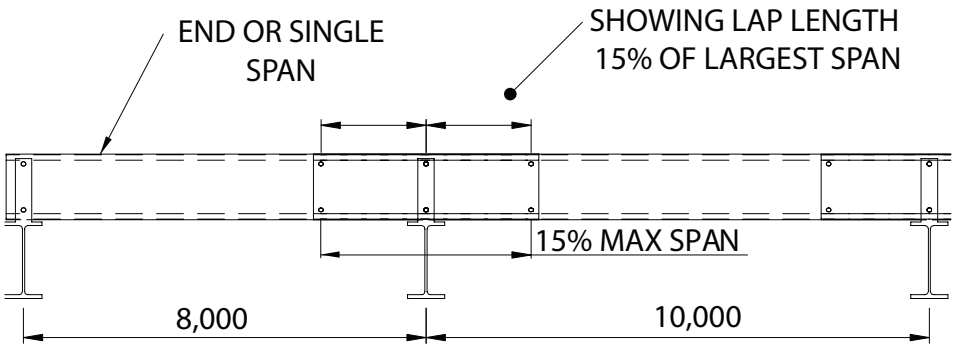


TABLE 3.1 C SECTION RANGE

EXTREME PURLIN™

MILLFORM AUSTRALIA

Where strength matters

MILLFORM EXTREME C PURLINS AND GIRTS SECTION PROPERTIES

	BMT	Area	Ixx	Iyy	Zxx	Zyy	rx	ry	Iw	J	β_y	X_0	X* (CG)
	mm	mm^2	mm^4	mm^4	mm^3	mm^3	mm	mm	mm^6	mm^3		mm	mm
C15015	1.5	454	1605403	297533	21405	6983	59.44	24.36	7.80E+08	341	164	40.30	21.39
EFFECTIVE		*370*	*1506871*	*242322*	*20092*	*5687*							
C15019	1.9	575	1947487	346615	25966	8050	58.94	23.88	9.35E+08	690	185	40.35	20.94
EFFECTIVE		*489*	*1947487*	*304978*	*25966*	*7083*							
C15024	2.4	726	2364172	404638	31522	9315	58.44	23.39	1.11E+09	1383	204	40.30	20.56
EFFECTIVE		*614*	*2364172*	*363885*	*31522*	*8377*							
C20015	1.2	456	2934938	435450	29349	8385	79.27	29.10	2.07E+09	220	213	46.77	24.07
EFFECTIVE		*399*	*2934938*	*370898*	*29349*	*7142*							
C20019	1.9	722	4325400	594282	43254	11225	78.16	28.05	3.00E+09	867	269	46.83	23.06
EFFECTIVE		*610*	*4103791*	*504433*	*41038*	*9528*							
C20024	2.4	912	5292915	700896	52929	13139	77.62	27.52	3.61E+09	1741	293	46.75	22.66
EFFECTIVE		*796*	*5292915*	*638203*	*52929*	*11964*							
C25015	1.5	653	6050100	563209	48401	10372	96.19	28.35	4.36E+09	490	294	44.67	21.70
EFFECTIVE		*532*	*5363419*	*447984*	*42907*	*8250*							
C25019	1.9	827	7424877	665628	59399	12155	95.54	27.81	5.30E+09	994	331	44.61	21.24
EFFECTIVE		*710*	*7077288*	*571755*	*56618*	*10441*							
C25024	2.4	1045	9114807	788034	72918	14292	94.93	27.28	6.41E+09	1996	364	44.48	20.86
EFFECTIVE		*923*	*9114807*	*722597*	*72918*	*13105*							
C30024	2.4	1307	16870995	1660935	112473	24705	115.12	35.47	2.25E+10	2498	435	61.74	27.77
EFFECTIVE		*1110*	*15958247*	*1477820*	*106388*	*21981*							
C30030	3	1633	20658984	1983978	137727	29391	114.56	34.98	2.71E+10	4864	468	61.63	27.50
EFFECTIVE		*1445*	*20658984*	*1882046*	*137727*	*27881*							

Both Gross Section Properties & Effective Section Properties shown on alternate rows.

MATERIAL PROPERTIES

	BMT	1.0mm	>1.0
Fy	mPa	550	450
E	mPa	2.00E+05	
G	mPa	8.00E+04	

TABLE 3.2 Z SECTION RANGE

EXTREME PURLIN™

MILLFORM EXTREME Z PURLINS AND GIRTS SECTION PROPERTIES

	BMT	Area	Ixx	Iyy	Zxx	Zyy	rx	ry	Iw	J	β_y	X_0	X* (CG)
	mm	mm^2	mm^4	mm^4	mm^3	mm^3	mm	mm	mm^6	mm^3		mm	mm
Z15015	1.5	454	1846704	526909	24623	8233	60.69	34.08	5.15E+09	341	126	0.00	0.00
EFFECTIVE		*370*	*1748172*	*497638*	*23309*	*7776*							
Z15019	1.9	575	2186120	613034	29148	9579	59.97	32.66	6.36E+09	690	149	0.00	0.00
EFFECTIVE		*489*	*2186120*	*613034*	*29148*	*9579*							
Z15024	2.4	726	2599491	716793	34660	11200	59.30	31.43	7.78E+09	1383	171	0.00	0.00
EFFECTIVE		*614*	*2599491*	*716793*	*34660*	*11200*							
Z20015	1.2	456	3375598	733338	33756	9649	81.02	40.10	1.40E+10	220	164	0.00	0.00
EFFECTIVE		*399*	*3375598*	*733338*	*33756*	*9649*							
Z20019	1.9	722	4759734	995543	47597	13099	79.39	37.13	2.15E+10	867	224	0.00	0.00
EFFECTIVE		*610*	*4538125*	*941810*	*45381*	*12392*							
Z20024	2.4	912	5722758	1175383	57228	15466	78.63	35.90	2.64E+10	1741	252	0.00	0.00
EFFECTIVE		*796*	*5722758*	*1175383*	*57228*	*15466*							
Z25015	1.5	653	6743561	893098	53948	11751	98.08	36.98	3.13E+10	490	244	0.00	0.00
EFFECTIVE		*532*	*6056880*	*792428*	*48455*	*10427*							
Z25019	1.9	827	8113787	1053364	64910	13860	97.11	35.68	3.88E+10	994	283	0.00	0.00
EFFECTIVE		*710*	*7766197*	*999631*	*62130*	*13153*							
Z25024	2.4	1045	9798048	1247958	78384	16421	96.21	34.56	4.78E+10	1996	319	0.00	0.00
EFFECTIVE		*923*	*9798048*	*1247958*	*78384*	*16421*							
Z30024	2.4	1307	17866509	2678004	119110	28190	116.34	45.27	1.69E+11	2498	392	0.00	0.00
EFFECTIVE		*1110*	*16953761*	*2521739*	*113025*	*26545*							
Z30030	3	1633	21646314	3207785	144309	33766	115.55	44.32	2.06E+11	4864	430	0.00	0.00
EFFECTIVE		*1445*	*21646314*	*3207785*	*144309*	*33766*							

Both Gross Section Properties & Effective Section Properties shown on alternate rows.

MATERIAL PROPERTIES

	BMT	1.0mm	>1.0
Fy	mPa	550	450
E	mPa	2.00E+05	
G	mPa	8.00E+04	

TABLE 4.1 SINGLE / END SPAN

EXTREME PURLIN™

MILLFORM AUSTRALIA

Where strength matters

Span	EC/EZ_I50-12						EC/EZ_I50-15						EC/EZ_I50-19						EC/EZ_I50-19						Span
	In	L/150	Outward				In	L/150	Outward				In	L/150	Outward				In	L/150	Outward				
			0	1	2	3			0	1	2	3			0	1	2	3			0	1	2	3	
2500	6.44	6.44	6.44	6.44	6.44	6.44	8.31	9.80	8.07	8.31	8.31	8.31	11.6	12.6	11.2	11.6	11.6	11.6	15.8	16.0	14.1	15.8	15.8	15.8	2500
3000	4.47	4.44	3.97	4.47	4.47	4.47	5.77	5.68	5.02	5.77	5.77	5.77	8.03	7.30	6.66	8.03	8.03	8.03	11.0	9.27	8.51	11.0	11.0	11.0	3000
3500	3.29	2.80	2.34	3.29	3.29	3.29	4.24	3.57	3.10	4.24	4.24	4.24	5.90	4.60	4.02	5.90	5.90	5.90	8.05	5.84	5.24	8.05	8.05	8.05	3500
4000	2.52	1.88	1.44	2.52	2.52	2.52	3.25	2.40	1.88	3.25	3.25	3.25	4.52	3.08	2.45	4.52	4.52	4.52	6.16	3.91	3.25	5.88	6.16	6.16	4000
4500	2.03	1.34	0.95	2.03	2.03	2.03	2.61	1.72	1.22	2.54	2.61	2.61	3.64	2.21	1.62	3.51	3.64	3.64	4.97	2.80	2.17	4.45	4.97	4.97	4500
5000	1.65	0.98	0.64	1.57	1.65	1.65	2.12	1.25	0.83	1.93	2.12	2.12	2.95	1.61	1.10	2.63	2.95	2.95	4.02	2.05	1.50	3.36	4.02	4.02	5000
5500	1.36	0.74		1.17	1.36	1.36	1.76	0.94	0.58	1.50	1.76	1.76	2.43	1.21	0.79	1.98	2.43	2.43	3.33	1.54	1.08	2.55	3.28	3.33	5500
6000	1.15	0.57		0.86	1.15	1.15	1.48	0.73		1.14	1.48	1.48	2.05	0.94	0.58	1.49	2.05	2.05	2.79	1.18	0.81	1.95	2.65	2.79	6000
6500	0.97	0.45		0.64	0.97	0.97	1.26	0.57		0.85	1.23	1.26	1.75	0.74		1.11	1.71	1.75	2.38	0.93	0.62	1.48	2.16	2.38	6500
7000	0.84	0.37			0.84	0.84	1.09	0.46		0.63	1.02	1.09	1.50	0.59		0.84	1.40	1.50	2.06	0.75		1.12	1.78	2.06	7000
7500	0.74	0.29			0.68	0.74	0.94	0.38			0.85	0.94	1.32	0.48		0.65	1.15	1.32	1.79	0.61		0.87	1.47	1.77	7500
8000	0.64	0.24			0.56	0.64	0.83	0.31			0.72	0.83	1.15	0.40			0.95	1.15	1.57	0.50		0.69	1.22	1.51	8000
8500						0.58	0.75	0.27			0.61	0.75	1.05	0.34			0.80	1.05	1.43	0.43		0.56	1.04	1.32	8500
9000							0.67	0.23				0.66	0.93	0.29			0.66	0.90	1.27	0.36			0.86	1.14	9000
9500												0.57	0.84	0.25			0.54	0.78	1.13	0.31			0.71	0.99	9500
10000																		0.68	1.01	0.27			0.59	0.87	10000
10500																		0.58	0.92	0.23				0.75	10500
11000																								0.66	11000
11500																								0.57	11500
12000																									12000
12500																									12500
13000																									13000
13500																									13500
14000																									14000
14500																									14500
15000																									15000

Span	EC/EZ_200-24						EC/EZ_250-15						EC/EZ_250-19						EC/EZ_250-24						Span
	In	L/150	Outward				In	L/150	Outward				In	L/150	Outward				In	L/150	Outward				
			0	1	2	3			0	1	2	3			0	1	2	3			0	1	2	3	
2500	24.2	35.3	24.2	24.2	24.2	24.2	10.0	35.3	10.0	10.0	10.0	10.0	20.5	46.2	20.5	20.5	20.5	20.5	31.3	60.1	31.3	31.3	31.3	31.3	2500
3000	16.9	20.5	16.1	16.9	16.9	16.9	8.34	20.4	8.34	8.34	8.34	8.34	15.4	26.7	15.4	15.4	15.4	15.4	21.7	34.7	21.3	21.7	21.7	21.7	3000
3500	12.4	12.9	10.4	12.3	12.4	12.3	7.15	12.9	7.15	7.15	7.15	7.15	11.4	16.8	10.3	11.4	11.4	11.4	16.0	22.0	14.0	16.0	16.0	16.0	3500
4000	9.45	8.61	6.76	9.45		9.45	6.11	8.59	5.02	6.11	6.11	6.11	8.67	11.3	6.88	8.67	8.67	8.67	12.2	14.7	9.03	12.2	12.2	12.2	4000
4500	7.62	6.18	4.47	7.62	7.62	7.62	4.92	6.16	3.42	4.92	4.92	4.92	6.98	8.07	4.58	6.98	6.98	6.98	9.82	10.5	5.90	9.82	9.82	9.82	4500
5000	6.17	4.50	3.01	6.17	6.17	6.17	3.99	4.49	2.38	3.99	3.99	3.99	5.65	5.88	3.06	5.65	5.65	5.65	7.96	7.66	3.95	7.96	7.96	7.96	5000
5500	5.10	3.38	2.12	4.85	5.10	5.10	3.30	3.37	1.65	3.24	3.30	3.30	4.68	4.42	2.12	4.68	4.68	4.68	6.57	5.75	2.76	6.42	6.57	6.57	5500
6000	4.29	2.60	1.55	3.80	4.29	4.29	2.77	2.60	1.18	2.60	2.77	2.77	3.93	3.41	1.52	3.68	3.93	3.93	5.53	4.43	1.99	5.07	5.53	5.53	6000
6500	3.65	2.05	1.16	2.99	3.65	3.65	2.36	2.04	0.87	2.10	2.36	2.36	3.35	2.69	1.13	2.94	3.35	3.35	4.71	3.49	1.48	4.03	4.71	4.71	6500
7000	3.15	1.65	0.89	2.36	3.15	3.15	2.04	1.64	0.65	1.70	2.04	2.04	2.89	2.15	0.85	2.36	2.89	2.89	4.06	2.80	1.13	3.14	4.06	4.06	7000
7500	2.75	1.34	0.69	1.84	2.73	2.75	1.77	1.33		1.37	1.77	1.77	2.52	1.75	0.66	1.87	2.52	2.52	3.54	2.27	0.88	2.43	3.54	3.54	7500
8000	2.42	1.10	0.56	1.44	2.32	2.42	1.56	1.10		1.09	1.54	1.56	2.21	1.44	0.52	1.46	2.21	2.21	3.11	1.88	0.70	1.90	3.06	3.11	8000
8500	2.18	0.94		1.17	1.99	2.18	1.41	0.94		0.90	1.35	1.41	2.00	1.22		1.17	1.93	2.00	2.81	1.60	0.57	1.53	2.65	2.81	8500
9000	1.94	0.79		0.94	1.69	1.94	1.26	0.79		0.73	1.17	1.26	1.78	1.03		0.94	1.64	1.78	2.50	1.34		1.23	2.26	2.50	9000
9500	1.74	0.68		0.77	1.44	1.74	1.13	0.68		0.59	1.01	1.13	1.60	0.88		0.76	1.41	1.60	2.25	1.14		1.00	1.93	2.25	9500
10000	1.58	0.58		0.63	1.23	1.58	1.02	0.58			0.88	1.02	1.44	0.75		0.63	1.21	1.44	2.03	0.97		0.82	1.64	2.03	10000
10500	1.43	0.50			1.04	1.41	0.93	0.50			0.76	0.93	1.31	0.66			1.05	1.31	1.84	0.85		0.68	1.39	1.84	10500
11000	1.30	0.43			0.88	1.24	0.84	0.44			0.66	0.83	1.19	0.57			0.89	1.19	1.68	0.74		0.57	1.16	1.64	11000
11500	1.20	0.38			0.75	1.10	0.77	0.38			0.56	0.74	1.10	0.50			0.75	1.07	1.53	0.65			0.97	1.46	11500
12000	1.09	0.34			0.63	0.98	0.71	0.34				0.67	1.00	0.44			0.64	0.95	1.42	0.57			0.83	1.30	12000
12500	1.01	0.30			0.54	0.87	0.66	0.30				0.60	0.93	0.39			0.54	0.85	1.30	0.50			0.71	1.16	12500
13000	0.94	0.27				0.77	0.60	0.27				0.54	0.86	0.34				0.76	1.21	0.45			0.61	1.04	13000
13500	0.86	0.24				0.69							0.79	0.31				0.68	1.12	0.41				0.92	13500
14000						0.61							0.74	0.28				0.60	1.04	0.36				0.81	14000
14500						0.54							0.69	0.25				0.54	0.96	0.32				0.71	14500
15000																			0.90	0.29				0.63	15000

MILLFORM AUSTRALIA

Where strength matters

TABLE 4.1 SINGLE / END SPAN

EXTREME PURLIN™

Span	EC/EZ_200-12						EC/EZ_200-15						EC/EZ_200-19						Span
	In	L/150	Outward				In	L/150	Outward				In	L/150	Outward				
			0	1	2	3			0	1	2	3			0	1	2	3	
2500	6.52	16.2	6.52	6.52	6.52	6.52	12.1	21.0	12.1	12.1	12.1	12.1	17.6	27.8	17.6	17.6	17.6	17.6	2500
3000	5.43	9.35	5.43	5.43	5.43	5.43	8.39	12.2	8.39	8.39	8.39	8.39	12.3	16.1	11.8	12.3	12.3	12.3	3000
3500	4.66	5.89	4.19	4.66	4.66	4.66	6.17	7.65	5.58	6.17	6.17	6.17	8.99	10.2	7.91	8.99	8.99	8.99	3500
4000	3.63	3.95	2.83	3.63	3.63	3.63	4.72	5.13	3.65	4.72	4.72	4.72	6.88	6.79	5.33	6.88	6.88	6.88	4000
4500	2.93	2.83	1.91	2.93	2.93	2.93	3.81	3.68	2.47	3.81	3.81	3.81	5.54	4.87	3.49	5.54	5.54	5.54	4500
5000	2.37	2.07	1.30	2.37	2.37	2.37	3.09	2.68	1.71	3.09	3.09	3.09	4.50	3.55	2.34	4.50	4.50	4.50	5000
5500	1.96	1.55	0.93	1.89	1.96	1.96	2.55	2.01	1.19	2.55	2.55	2.55	3.72	2.67	1.63	3.55	3.72	3.72	5500
6000	1.65	1.20	0.67	1.51	1.65	1.65	2.15	1.56	0.85	2.02	2.15	2.15	3.13	2.06	1.18	2.84	3.13	3.13	6000
6500	1.40	0.95		1.20	1.40	1.40	1.82	1.23	0.64	1.59	1.82	1.82	2.66	1.62	0.88	2.29	2.66	2.66	6500
7000	1.22	0.75		0.96	1.22	1.22	1.58	0.98		1.25	1.58	1.58	2.30	1.30	0.67	1.84	2.30	2.30	7000
7500	1.06	0.62		0.76	1.05	1.06	1.37	0.80		0.98	1.37	1.37	2.00	1.05		1.44	2.00	2.00	7500
8000	0.93	0.51		0.61	0.90	0.93	1.20	0.66		0.78	1.20	1.20	1.76	0.87		1.11	1.70	1.76	8000
8500	0.84	0.43			0.79	0.84	1.09	0.56		0.66	1.06	1.09	1.59	0.74		0.90	1.47	1.59	8500
9000	0.75	0.36			0.67	0.75	0.97	0.47			0.90	0.97	1.42	0.63		0.72	1.27	1.42	9000
9500	0.67	0.31			0.58	0.67	0.88	0.41			0.76	0.88	1.27	0.53		0.59	1.10	1.27	9500
10000	0.61	0.27				0.61	0.78	0.34			0.65	0.78	1.15	0.46			0.96	1.15	10000
10500	0.55	0.24				0.54	0.72	0.30			0.55	0.72	1.04	0.40			0.82	1.03	10500
11000							0.66	0.26				0.66	0.95	0.34			0.68	0.91	11000
11500							0.60	0.23				0.58	0.87	0.30			0.58	0.82	11500
12000													0.80	0.27				0.73	12000
12500													0.73	0.24				0.66	12500
13000																		0.59	13000
13500																			13500
14000																			14000
14500																			14500
15000																			15000

Span	EC/EZ_300-19						EC/EZ_300-24						EC/EZ_300-30						Span
	In	L/150	Outward				In	L/150	Outward				In	L/150	Outward				
			0	1	2	3			0	1	2	3			0	1	2	3	
2500																			2500
3000																			3000
3500	10.6	19.8	10.6	10.6	10.6	10.6	16.7	26.0	16.2	16.7	16.7	16.7	23.6	33.4	22.7	23.6	23.6	23.6	3500
4000																			4000
4500	9.49	14.2	8.66	9.49	9.49	9.49	13.5	18.6	11.9	13.5	13.5	13.5	19.0	23.9	16.7	19.0	19.0	19.0	4500
5000	7.69	10.4	6.49	7.69	7.69	7.69	10.9	13.6	8.63	10.9	10.9	10.9	15.4	17.5	11.8	15.4	15.4	15.4	5000
5500	6.35	7.76	4.67	6.35	6.35	6.35	8.99	10.2	6.31	8.99	8.99	8.99	12.7	13.2	8.34	12.8	12.8	12.8	5500
6000	5.34	5.97	3.43	5.34	5.34	5.34	7.56	7.83	4.53	7.56	7.56	7.56	10.7	10.1	5.98	10.7	10.7	10.7	6000
6500	4.56	4.70	2.58	4.56	4.56	4.56	6.44	6.16	3.33	6.44	6.44	6.44	9.08	7.95	4.41	9.08	9.08	9.08	6500
7000	3.93	3.76	1.95	3.87	3.93	3.93	5.56	4.94	2.51	5.51	5.56	5.56	7.83	6.36	3.33	7.69	7.83	7.83	7000
7500	3.42	3.06	1.49	3.27	3.42	3.42	4.84	4.01	1.93	4.57	4.84	4.84	6.83	5.17	2.57	6.45	6.83	6.83	7500
8000	3.01	2.52	1.17	2.77	3.01	3.01	4.25	3.31	1.52	3.81	4.25	4.25	6.00	4.27	2.02	5.39	6.00	6.00	8000
8500	2.72	2.14	0.94	2.40	2.72	2.72	3.84	2.81	1.23	3.24	3.84	3.84	5.41	3.62	1.65	4.56	5.41	5.41	8500
9000	2.42	1.80	0.76	2.05	2.42	2.42	3.43	2.37	0.99	2.73	3.43	3.43	4.83	3.05	1.33	3.77	4.83	4.83	9000
9500	2.17	1.54	0.62	1.70	2.17	2.17	3.08	2.01	0.81	2.30	3.08	3.08	4.34	2.60	1.10	3.10	4.34	4.34	9500
10000	1.96	1.32		1.41	1.96	1.96	2.77	1.73	0.67	1.92	2.77	2.77	3.92	2.23	0.91	2.56	3.89	3.92	10000
10500	1.78	1.14		1.18	1.74	1.78	2.52	1.49	0.56	1.59	2.47	2.52	3.56	1.92	0.76	2.11	3.45	3.56	10500
11000	1.63	0.99		1.00	1.55	1.63	2.30	1.30		1.32	2.17	2.30	3.24	1.67	0.65	1.77	3.06	3.24	11000
11500	1.49	0.87		0.86	1.38	1.49	2.10	1.13		1.11	1.92	2.10	2.97	1.47	0.55	1.49	2.71	2.97	11500
12000	1.36	0.76		0.73	1.25	1.36	1.93	1.00		0.94	1.69	1.93	2.72	1.29		1.26	2.40	2.72	12000
12500	1.26	0.68		0.63	1.11	1.26	1.78	0.89		0.81	1.50	1.78	2.50	1.14		1.08	2.11	2.50	12500
13000	1.16	0.60		0.53	0.99	1.16	1.64	0.79		0.69	1.34	1.64	2.32	1.02		0.93	1.86	2.32	13000
13500	1.08	0.54			0.89	1.08	1.53	0.70		0.60	1.19	1.53	2.13	0.91		0.81	1.63	2.14	13500
14000	1.00	0.49			0.78	0.99	1.42	0.64			1.06	1.41	1.98	0.82		0.70	1.43	1.97	14000
14500	0.94	0.44			0.69	0.91	1.32	0.58			0.93	1.28	1.83	0.73		0.62	1.25	1.81	14500
15000	0.88	0.39			0.60	0.84	1.24	0.51			0.82	1.18	1.69	0.67		0.54	1.10	1.65	15000

Span	EC/EZ_I50-12						EC/EZ_I50-15						EC/EZ_I50-19						EC/EZ_I50-24						Span
	In	L/150	Outward				In	L/150	Outward				In	L/150	Outward				In	L/150	Outward				
			0	1	2	3			0	1	2	3			0	1	2	3			0	1	2	3	
2500	5.35	18.5	5.35	5.35	5.35	5.35	8.13	23.7	8.13	8.13	8.13	8.13	11.6	30.5	11.6	11.6	11.6	11.6	15.8	38.6	15.8	15.8	15.8	15.8	2500
3000	4.10	10.8	4.10	4.10	4.10	4.10	5.77	13.7	5.77	5.77	5.77	5.77	8.03	17.6	8.03	8.03	8.03	8.03	11.0	22.4	11.0	11.0	11.0	11.0	3000
3500	3.22	6.75	3.22	3.22	3.22	3.22	4.24	8.61	4.24	4.24	4.24	4.24	5.90	11.1	5.90	5.90	5.90	5.90	8.05	14.1	8.05	8.05	8.05	8.05	3500
4000	2.52	4.53	2.52	2.52	2.52	2.52	3.25	5.77	3.25	3.25	3.25	3.25	4.52	7.42	4.52	4.52	4.52	4.52	6.16	9.43	6.04	6.16	6.16	6.16	4000
4500	2.03	3.24	2.03	2.03	2.03	2.03	2.61	4.14	2.61	2.61	2.61	2.61	3.64	5.32	3.64	3.64	3.64	3.64	4.97	6.75	4.64	4.97	4.97	4.97	4500
5000	1.65	2.36	1.65	1.65	1.65	1.65	2.12	3.02	2.06	2.12	2.12	2.12	2.95	3.88	2.82	2.95	2.95	2.95	4.02	4.93	3.57	4.02	4.02	4.02	5000
5500	1.36	1.76	1.31	1.36	1.36	1.36	1.76	2.26	1.61	1.76	1.76	1.76	2.43	2.91	2.19	2.43	2.43	2.43	3.33	3.70	2.79	3.33	3.33	3.33	5500
6000	1.15	1.37	1.02	1.15	1.15	1.15	1.48	1.75	1.29	1.48	1.48	1.48	2.05	2.25	1.72	2.05	2.05	2.05	2.79	2.85	2.20	2.78	2.79	2.79	6000
6500	0.99	1.10	0.81	0.99	0.99	0.99	1.29	1.40	1.06	1.29	1.29	1.29	1.79	1.81	1.39	1.79	1.79	1.79	2.42	2.29	1.79	2.35	2.42	2.42	6500
7000	0.85	0.89	0.62	0.85	0.85	0.85	1.11	1.12	0.84	1.11	1.11	1.11	1.53	1.45	1.09	1.53	1.53	1.53	2.10	1.84	1.44	1.96	2.10	2.10	7000
7500	0.75	0.72		0.75	0.75	0.75	0.96	0.92	0.66	0.94	0.96	0.96	1.34	1.17	0.87	1.30	1.34	1.34	1.82	1.49	1.15	1.65	1.82	1.82	7500
8000	0.66	0.59		0.64	0.66	0.66	0.85	0.75		0.79	0.85	0.85	1.17	0.96	0.69	1.09	1.17	1.17	1.60	1.23	0.93	1.39	1.60	1.60	8000
8500	0.58	0.50		0.55	0.58	0.58	0.75	0.63		0.68	0.75	0.75	1.05	0.81	0.56	0.92	1.05	1.05	1.43	1.03	0.76	1.18	1.39	1.43	8500
9000																									9000
9500																									9500
10000																									10000
10500																									10500
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14500																									14500
15000																									15000

Span	EC/EZ_200-24						EC/EZ_250-15						EC/EZ_250-19						EC/EZ_250-24						Span
	In	L/150	Outward				In	L/150	Outward				In	L/150	Outward				In	L/150	Outward				
			0	1	2	3			0	1	2	3			0	1	2	3			0	1	2	3	
2500	16.1	85.0	16.1	16.1	16.1	16.1	7.35	84.8	7.35	7.35	7.35	7.35	12.8	111.3	12.8	12.8	12.8	12.8	16.2	145.1	16.2	16.2	16.2	16.2	2500
3000	13.4	49.3	13.4	13.4	13.4	13.4	5.93	49.1	5.93	5.93	5.93	5.93	10.7	64.5	10.7	10.7	10.7	10.7	13.5	83.8	13.5	13.5	13.5	13.5	3000
3500	11.5	31.1	11.5	11.5	11.5	11.5	4.90	30.9	4.90	4.90	4.90	4.90	8.89	40.6	8.89	8.89	8.89	8.89	11.6	52.8	11.6	11.6	11.6	11.6	3500
4000	9.45	20.8	9.45	9.45	9.45	9.45	4.12	20.7	4.12	4.12	4.12	4.12	7.32	27.2	7.32	7.32	7.32	7.32	10.2	35.3	10.2	10.2	10.2	10.2	4000
4500	7.62	14.9	7.62	7.62	7.62	7.62	3.59	14.9	3.59	3.59	3.59	3.59	6.24	19.5	6.24	6.24	6.24	6.24	9.16	25.4	9.2	9.2	9.2	9.2	4500
5000	6.17	10.9	6.17	6.17	6.17	6.17	3.09	10.9	3.09	3.09	3.09	3.09	5.29	14.2	5.29	5.29	5.29	5.29	7.96	18.5	7.96	7.96	7.96	7.96	5000
5500	5.10	8.15	5.04	5.10	5.10	5.10	2.69	8.12	2.69	2.69	2.69	2.69	4.54	10.7	4.54	4.54	4.54	4.54	6.57	13.9	6.57	6.57	6.57	6.57	5500
6000	4.29	6.28	4.03	4.29	4.29	4.29	2.36	6.26	2.36	2.36	2.36	2.36	3.92	8.21	3.90	3.92	3.92	3.92	5.53	10.7	5.34	5.53	5.53	5.53	6000
6500	3.72	5.04	3.31	3.72	3.72	3.72	2.13	5.02	2.13	2.13	2.13	2.13	3.41	6.58	3.21	3.41	3.41	3.41	4.80	8.56	4.40	4.80	4.80	4.80	6500
7000	3.21	4.04	2.69	3.21	3.21	3.21	1.89	4.02	1.88	1.89	1.89	1.89	2.95	5.27	2.63	2.95	2.95	2.95	4.14	6.86	3.59	4.14	4.14	4.14	7000
7500	2.80	3.28	2.18	2.80	2.80	2.80	1.69	3.27	1.57	1.69	1.69	1.69	2.57	4.28	2.16	2.57	2.57	2.57	3.61	5.57	2.90	3.61	3.61	3.61	7500
8000	2.47	2.71	1.77	2.47	2.47	2.47	1.53	2.70	1.31	1.53	1.53	1.53	2.25	3.54	1.78	2.25	2.25	2.25	3.17	4.59	2.33	3.17	3.17	3.17	8000
8500	2.18	2.26	1.45	2.16	2.18	2.18	1.38	2.25	1.07	1.38	1.38	1.38	2.00	2.95	1.46	2.00	2.00	2.00	2.81	3.83	1.88	2.81	2.81	2.81	8500
9000																									9000
9500																									9500
10000																									10000
10500																									10500
11000																									11000
11500																									11500
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MILLFORM AUSTRALIA

Where strength matters

TABLE 4.2 DOUBLE UNLAPPED

EXTREME PURLIN™

Span	EC/EZ_200-12						EC/EZ_200-15						EC/EZ_200-19						Span
	In	L/150	Outward				In	L/150	Outward				In	L/150	Outward				
			0	1	2	3			0	1	2	3			0	1	2	3	
2500	4.73	39.0	4.73	4.73	4.73	4.73	8.39	50.6	8.39	8.39	8.39	8.39	12.9	67.1	12.9	12.9	12.9	12.9	2500
3000	3.79	22.6	3.79	3.79	3.79	3.79	6.55	29.3	6.55	6.55	6.55	6.55	10.7	38.8	10.7	10.7	10.7	10.7	3000
3500	3.12	14.3	3.12	3.12	3.12	3.12	5.24	18.5	5.24	5.24	5.24	5.24	8.79	24.5	8.79	8.79	8.79	8.79	3500
4000	2.62	9.51	2.62	2.62	2.62	2.62	4.27	12.4	4.27	4.27	4.27	4.27	6.88	16.4	6.88	6.88	6.88	6.88	4000
4500	2.26	6.81	2.26	2.26	2.26	2.26	3.62	8.85	3.62	3.62	3.62	3.62	5.54	11.8	5.54	5.54	5.54	5.54	4500
5000	1.95	4.97	1.95	1.95	1.95	1.95	3.06	6.46	3.06	3.06	3.06	3.06	4.50	8.55	4.50	4.50	4.50	4.50	5000
5500	1.69	3.73	1.69	1.69	1.69	1.69	2.55	4.85	2.55	2.55	2.55	2.55	3.72	6.42	3.70	3.70	3.70	3.70	5500
6000	1.48	2.87	1.48	1.48	1.48	1.48	2.15	3.74	2.15	2.15	2.15	2.15	3.13	4.95	2.97	3.13	3.13	3.13	6000
6500	1.34	2.31	1.32	1.34	1.34	1.34	1.86	3.00	1.79	1.86	1.86	1.86	2.71	3.97	2.48	2.71	2.71	2.71	6500
7000	1.18	1.85	1.09	1.18	1.18	1.18	1.61	2.40	1.45	1.61	1.61	1.61	2.34	3.18	2.05	2.34	2.34	2.34	7000
7500	1.05	1.50	0.90	1.05	1.05	1.05	1.40	1.95	1.17	1.40	1.40	1.40	2.03	2.58	1.71	2.03	2.03	2.03	7500
8000	0.94	1.24	0.74	0.94	0.94	0.94	1.23	1.61	0.95	1.23	1.23	1.23	1.79	2.13	1.40	1.79	1.79	1.79	8000
8500	0.84	1.04	0.61	0.84	0.84	0.84	1.09	1.34	0.78	1.09	1.09	1.09	1.59	1.78	1.13	1.58	1.59	1.59	8500
9000																			9000
9500																			9500
10000																			10000
10500																			10500
11000																			11000
11500																			11500
12000																			12000
12500																			12500
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13500																			13500
14000																			14000
14500																			14500
15000																			15000

Span	EC/EZ_300-19						EC/EZ_300-24						EC/EZ_300-30						Span
	In	L/150	Outward				In	L/150	Outward				In	L/150	Outward				
			0	1	2	3			0	1	2	3			0	1	2	3	
2500																			2500
3000	7.22	47.7	7.22	7.22	7.22	7.22	13.2	62.5	13.2	13.2	13.2	13.2	21.4	80.6	21.4	21.4	21.4	21.4	3000
3500																			3500
4000																			4000
4500	6.32	34.1	6.32	6.32	6.32	6.32	11.2	44.8	11.2	11.2	11.2	11.2	18.1	57.7	18.1	18.1	18.1	18.1	4500
5000	5.48	24.9	5.48	5.48	5.48	5.48	9.60	32.7	9.60	9.60	9.60	9.60	15.1	42.1	15.1	15.1	15.1	15.1	5000
5500	4.81	18.7	4.81	4.81	4.81	4.81	8.27	24.5	8.27	8.27	8.27	8.27	12.8	31.7	12.8	12.8	12.8	12.8	5500
6000	4.25	14.4	4.25	4.25	4.25	4.25	7.21	18.9	7.21	7.21	7.21	7.21	10.7	24.3	10.7	10.7	10.7	10.7	6000
6500	3.84	11.6	3.84	3.84	3.84	3.84	6.44	15.2	6.44	6.44	6.44	6.44	9.26	19.5	9.26	9.3	9.3	9.3	6500
7000	3.45	9.24	3.45	3.45	3.45	3.45	5.67	12.2	5.67	5.67	5.67	5.67	7.98	15.6	7.97	8.0	8.0	8.0	7000
7500	3.10	7.52	3.09	3.09	3.10	3.10	4.94	9.86	4.86	4.94	4.94	4.94	6.96	12.7	6.76	6.96	6.96	6.96	7500
8000	2.79	6.19	2.79	2.79	2.79	2.79	4.33	8.12	4.10	4.33	4.33	4.33	6.12	10.5	5.73	6.12	6.12	6.12	8000
8500	2.53	5.16	2.53	2.53	2.53	2.53	3.84	6.77	3.47	3.84	3.84	3.84	5.41	8.73	4.86	5.41	5.41	5.41	8500
9000																			9000
9500																			9500
10000																			10000
10500																			10500
11000																			11000
11500																			11500
12000																			12000
12500																			12500
13000																			13000
13500																			13500
14000																			14000
14500																			14500
15000																			15000

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Where strength matters

TABLE 4.3 LAPPED ONE END

EXTREME PURLIN™

Span	EZ_I50-12						EZ_I50-15						EZ_I50-19						EZ_I50-24						Span
	In	L/150	Outward				In	L/150	Outward				In	L/150	Outward				In	L/150	Outward				
			0	1	2	3			0	1	2	3			0	1	2	3			0	1	2	3	
2500	6.41	21.0	6.41	6.41	6.41	6.41	10.3	26.8	10.3	10.3	10.3	10.3	15.7	34.4	15.7	15.7	15.7	15.7	20.0	43.8	20.0	20.0	20.0	20.0	2500
3000	4.99	12.2	4.99	4.99	4.99	4.99	7.61	15.5	7.61	7.61	7.61	7.61	10.9	19.9	10.9	10.9	10.9	10.9	14.8	25.3	14.8	14.8	14.8	14.8	3000
3500	3.99	7.64	3.99	3.99	3.99	3.99	5.74	9.75	5.74	5.74	5.74	5.74	7.98	12.6	7.98	7.98	7.98	7.98	10.9	15.9	10.8	10.9	10.9	10.9	3500
4000	3.25	5.12	3.25	3.25	3.25	3.25	4.39	6.54	4.39	4.39	4.39	4.39	6.11	8.41	6.11	6.11	6.11	6.11	8.33	10.8	7.82	8.33	8.33	8.33	4000
4500	2.69	3.60	2.69	2.69	2.69	2.69	3.47	4.59	3.36	3.47	3.47	3.47	4.83	5.91	4.61	4.83	4.83	4.83	6.58	7.50	5.81	6.58	6.58	6.58	4500
5000	2.18	2.63	2.10	2.18	2.18	2.18	2.82	3.35	2.57	2.82	2.82	2.82	3.91	4.30	3.48	3.91	3.91	3.91	5.34	5.47	4.41	5.34	5.34	5.34	5000
5500	1.80	1.97	1.59	1.80	1.80	1.80	2.32	2.52	2.01	2.32	2.32	2.32	3.23	3.24	2.65	3.23	3.23	3.23	4.41	4.11	3.39	4.36	4.41	4.41	5500
6000	1.52	1.52	1.20	1.52	1.52	1.52	1.96	1.94	1.56	1.96	1.96	1.96	2.72	2.50	2.03	2.72	2.72	2.72	3.71	3.17	2.62	3.54	3.71	3.71	6000
6500	1.32	1.22	0.92	1.32	1.32	1.32	1.70	1.56	1.22	1.69	1.70	1.70	2.36	2.00	1.59	2.33	2.36	2.36	3.22	2.54	2.08	2.96	3.22	3.22	6500
7000	1.14	0.98	0.72	1.14	1.14	1.14	1.47	1.25	0.93	1.40	1.47	1.47	2.04	1.61	1.23	1.92	2.04	2.04	2.78	2.04	1.61	2.44	2.78	2.78	7000
7500	0.99	0.80	0.56	0.95	0.99	0.99	1.27	1.02	0.73	1.17	1.27	1.27	1.77	1.31	0.96	1.59	1.77	1.77	2.42	1.66	1.27	2.03	2.42	2.42	7500
8000	0.87	0.65		0.79	0.87	0.87	1.12	0.84	0.57	0.98	1.12	1.12	1.57	1.08	0.76	1.32	1.57	1.57	2.13	1.37	1.03	1.70	2.09	2.13	8000
8500	0.78	0.55		0.64	0.78	0.78	0.99	0.70		0.84	0.99	0.99	1.38	0.89	0.62	1.10	1.38	1.38	1.88	1.14	0.84	1.43	1.80	1.88	8500
9000	0.69	0.47		0.53	0.69	0.69	0.89	0.59		0.70	0.89	0.89	1.24	0.76		0.91	1.24	1.24	1.66	0.96	0.70	1.20	1.56	1.69	9000
9500	0.62	0.40			0.62	0.62	0.80	0.50		0.58	0.78	0.80	1.11	0.65		0.76	1.07	1.11	1.46	0.82	0.58	1.01	1.37	1.51	9500
10000	0.56	0.34			0.56	0.56	0.72	0.43			0.69	0.72	1.00	0.55		0.64	0.94	1.00	1.29	0.71		0.85	1.19	1.35	10000
10500							0.67	0.38			0.61	0.67	0.92	0.49		0.54	0.84	0.92	1.18	0.62		0.73	1.07	1.21	10500
11000							0.60	0.33			0.54	0.60	0.84	0.43			0.73	0.85	1.06	0.54		0.62	0.94	1.09	11000
11500							0.55	0.29				0.55	0.75	0.37			0.64	0.76	0.95	0.47			0.83	0.97	11500
12000													0.68	0.33			0.56	0.69	0.86	0.42			0.73	0.88	12000
12500																									12500
13000																									13000
13500																									13500
14000																									14000
14500																									14500
15000																									15000

Span	EZ_200-24						EZ_250-15						EZ_250-19						EZ_250-24						Span
	In	L/150	Outward				In	L/150	Outward				In	L/150	Outward				In	L/150	Outward				
			0	1	2	3			0	1	2	3			0	1	2	3			0	1	2	3	
2500	19.9	96.4	20.7	20.7	20.7	20.7	8.38	96.1	8.7	8.7	8.7	8.7	16.3	126.4	17.0	17.0	17.0	17.0	20.0	164.3	20.8	20.8	20.8	20.8	2500
3000	16.6	55.8	17.2	17.2	17.2	17.2	6.82	55.6	7.10	7.09	7.09	7.09	13.0	72.9	13.5	13.5	13.5	13.5	16.7	94.9	17.3	17.3	17.3	17.3	3000
3500	14.2	35.2	14.8	14.8	14.8	14.8	5.70	35.1	5.92	5.92	5.92	5.92	10.7	76.3	11.1	11.1	11.1	11.1	14.3	59.8	14.9	14.9	14.9	14.9	3500
4000	12.4	23.6	12.9	12.9	12.9	12.9	4.84	23.5	5.03	5.03	5.03	5.03	8.87	30.8	9.22	9.22	9.22	9.22	12.5	40.1	13.0	13.0	13.0	13.0	4000
4500	10.1	16.6	10.5	10.5	10.5	10.5	4.16	16.5	4.33	4.33	4.33	4.33	7.51	21.7	7.80	7.80	7.80	7.80	11.1	28.1	11.5	11.5	11.5	11.5	4500
5000	8.18	12.1	8.37	8.51	8.51	8.51	3.63	12.1	3.77	3.77	3.77	3.77	6.42	15.8	6.68	6.68	6.68	6.68	9.99	20.5	10.4	10.4	10.4	10.4	5000
5500	6.76	9.05	6.53	7.03	7.03	7.03	3.19	9.03	3.32	3.32	3.32	3.32	5.56	11.9	5.77	5.77	5.77	5.77	8.72	15.5	8.67	9.06	9.06	9.06	5500
6000	5.68	6.97	5.14	5.91	5.91	5.91	2.82	6.96	2.93	2.93	2.93	2.93	4.85	9.11	5.03	5.04	5.04	5.04	7.33	11.9	6.87	7.61	7.61	7.61	6000
6500	4.93	5.59	4.07	5.03	5.03	5.03	2.57	5.58	2.62	2.62	2.62	2.62	4.35	7.31	4.03	4.43	4.43	4.43	6.36	9.52	5.45	6.49	6.49	6.49	6500
7000	4.26	4.48	3.22	4.34	4.34	4.34	2.30	4.47	2.34	2.34	2.34	2.34	3.85	5.86	3.25	3.93	3.93	3.93	5.50	7.62	4.29	5.60	5.60	5.60	7000
7500	3.71	3.64	2.56	3.77	3.78	3.78	2.07	3.64	1.95	2.11	2.11	2.11	3.41	4.77	2.61	3.47	3.47	3.47	4.78	6.20	3.37	4.87	4.87	4.87	7500
8000	3.16	3.00	2.03	3.21	3.32	3.32	1.88	3.00	1.55	1.91	1.91	1.91	2.99	3.92	2.08	3.05	3.05	3.05	4.20	5.10	2.65	4.23	4.28	4.28	8000
8500	2.89	2.50	1.64	2.73	2.95	2.95	1.70	2.50	1.26	1.74	1.74	1.74	2.65	3.27	1.66	2.63	2.71	2.71	3.73	4.25	2.12	3.61	3.80	3.80	8500
9000	2.58	2.11	1.33	2.33	2.63	2.63	1.56	2.10	1.04	1.59	1.59	1.59	2.37	2.76	1.34	2.25	2.41	2.41	3.32	3.58	1.72	3.09	3.39	3.39	9000
9500	2.32	1.79	1.10	1.99	2.36	2.36	1.43	1.80	0.85	1.38	1.45	1.45	2.12	2.35	1.10	1.94	2.16	2.16	2.98	3.06	1.42	2.66	3.04	3.04	9500
10000	2.09	1.55	0.93	1.70	2.13	2.13	1.31	1.54	0.71	1.20	1.34	1.34	1.91	2.02	0.91	1.68	1.95	1.95	2.69	2.62	1.19	2.27	2.75	2.75	10000
10500	1.93	1.36	0.78	1.46	1.93	1.93	1.23	1.36	0.59	1.05	1.23	1.23	1.77	1.77	0.76	1.44	1.77	1.77	2.49	2.30	1.00	1.93	2.49	2.49	10500
11000	1.76	1.18	0.66	1.25	1.73	1.76	1.14	1.18		0.92	1.14	1.14	1.61	1.54	0.65	1.26	1.61	1.61	2.27	2.01	0.84	1.64	2.27	2.27	11000
11500	1.61	1.03	0.57	1.06	1.54	1.61	1.04	1.03		0.78	1.03	1.04	1.48	1.35	0.55	1.07	1.48	1.48	2.08	1.75	0.72	1.39	2.04	2.08	11500
12000	1.48	0.92		0.91	1.38	1.48	0.96	0.91		0.68	0.93	0.96	1.36	1.19		0.91	1.33	1.36	1.91	1.54	0.62	1.19	1.82	1.91	12000
12500	1.35	0.81		0.78	1.23	1.37	0.89	0.80		0.58	0.83	0.89	1.26	1.06		0.78	1.18	1.26	1.75	1.36	0.53	1.02	1.63	1.75	12500
13000	1.23	0.72		0.68	1.10	1.26	0.82	0.72			0.76	0.82	1.16	0.94		0.67	1.07	1.16	1.60	1.22		0.88	1.46	1.63	13000
13500	1.11	0.64		0.59	0.99	1.17	0.75	0.64			0.69	0.76	1.08	0.84		0.58	0.96	1.08	1.46	1.09		0.76	1.31	1.51	13500
14000	1.02	0.58			0.88	1.07	0.70	0.57			0.62	0.71	0.98	0.75			0.87	1.00	1.33	0.97		0.67	1.17	1.41	14000
14500	0.93	0.52			0.79	0.98	0.63	0.52			0.56	0.64	0.90	0.68			0.78	0.93	1.22	0.88		0.58	1.05	1.29	14500
15000	0.85	0.47			0.71	0.89	0.59	0.47				0.59	0.82	0.61			0.70	0.86	1.12	0.80			0.93	1.17	15000

MILLFORM AUSTRALIA

Where strength matters

TABLE 4.3 LAPPED ONE END

MILLFORM AUSTRALIA

EXTREME PURLIN™

Where strength matters

Span	EZ_200-12						EZ_200-15						EZ_200-19						Span
	In	L/150	Outward				In	L/150	Outward				In	L/150	Outward				
			0	1	2	3			0	1	2	3			0	1	2	3	
2500	5.41	44.1	5.41	5.41	5.41	5.41	9.85	57.3	9.85	9.85	9.85	9.85	18.2	75.9	18.2	18.2	18.2	18.2	2500
3000	4.38	25.6	4.39	4.39	4.38	4.38	7.80	33.2	7.80	7.80	7.80	7.80	14.0	44.0	14.0	14.0	14.0	14.0	3000
3500	3.65	16.1	3.65	3.65	3.65	3.65	6.33	20.9	6.33	6.33	6.33	6.33	11.0	27.7	11.0	11.0	11.0	11.0	3500
4000	3.09	10.8	3.09	3.09	3.09	3.09	5.25	14.0	5.25	5.25	5.25	5.25	8.89	18.6	8.89	8.89	8.89	8.89	4000
4500	2.66	7.57	2.66	2.66	2.66	2.66	4.41	9.83	4.41	4.41	4.41	4.41	7.33	13.1	7.33	7.33	7.33	7.33	4500
5000	2.30	5.52	2.30	2.30	2.30	2.30	3.75	7.16	3.75	3.75	3.75	3.75	5.95	9.49	5.91	5.95	5.95	5.95	5000
5500	2.02	4.15	2.02	2.02	2.02	2.02	3.22	5.39	3.22	3.22	3.22	3.22	4.93	7.13	4.65	4.93	4.93	4.93	5500
6000	1.78	3.20	1.78	1.78	1.78	1.78	2.79	4.15	2.68	2.79	2.79	2.79	4.13	5.50	3.73	4.14	4.13	4.13	6000
6500	1.61	2.56	1.61	1.61	1.61	1.61	2.47	3.33	2.18	2.47	2.47	2.47	3.59	4.41	3.08	3.59	3.59	3.59	6500
7000	1.45	2.06	1.33	1.45	1.45	1.45	2.14	2.66	1.73	2.14	2.14	2.14	3.11	3.53	2.50	3.11	3.11	3.11	7000
7500	1.30	1.67	1.08	1.30	1.30	1.30	1.86	2.17	1.37	1.86	1.86	1.86	2.70	2.88	1.98	2.70	2.70	2.70	7500
8000	1.18	1.38	0.86	1.18	1.18	1.18	1.63	1.79	1.10	1.63	1.63	1.63	2.38	2.37	1.56	2.31	2.38	2.38	8000
8500	1.06	1.15	0.70	1.05	1.06	1.06	1.44	1.49	0.90	1.42	1.44	1.44	2.11	1.98	1.25	1.98	2.11	2.11	8500
9000	0.97	0.97	0.57	0.91	0.97	0.97	1.29	1.26	0.75	1.21	1.29	1.29	1.88	1.66	1.02	1.71	1.88	1.88	9000
9500	0.89	0.82		0.78	0.89	0.89	1.16	1.07	0.62	1.04	1.16	1.16	1.68	1.42	0.83	1.48	1.68	1.68	9500
10000	0.80	0.71		0.68	0.80	0.80	1.05	0.91		0.89	1.05	1.05	152	1.22	0.70	1.29	1.52	1.52	10000
10500	0.74	0.63		0.60	0.74	0.74	0.96	0.81		0.77	0.96	0.96	1.41	1.07	0.60	1.41	1.41	1.41	10500
11000	0.68	0.54			0.67	0.68	0.88	0.70		0.66	0.88	0.88	1.28	0.94		0.97	1.26	1.28	11000
11500	0.62	0.48			0.61	0.62	0.81	0.62			0.81	0.81	1.18	0.82		0.82	1.14	1.18	11500
12000	0.58	0.42			0.54	0.58	0.74	0.54			0.73	0.74	1.08	0.72		0.70	1.01	1.08	12000
12500							0.68	0.48			0.66	0.68	1.00	0.64		0.60	0.91	1.00	12500
13000							0.64	0.43			0.58	0.64	0.90	0.57			0.83	0.92	13000
13500							0.58	0.38				0.58	0.83	0.50			0.74	0.85	13500
14000							0.54	0.34				0.54	0.76	0.46			0.68	0.79	14000
14500													0.69	0.41			0.62	0.71	14500
15000													0.64	0.37			0.55	0.65	15000

Span	EZ_300-19						EZ_300-24						EZ_300-30						Span
	In	L/150	Outward				In	L/150	Outward				In	L/150	Outward				
			0	1	2	3			0	1	2	3			0	1	2	3	
2500																			2500
3000	8.39	54.0	8.73	8.73	8.73	8.73	15.7	70.8	16.3	16.3	16.3	16.3	23.7	91.3	24.6	24.6	24.6	24.6	3000
3500																			3500
4000																			4000
4500	7.27	37.9	7.56	7.56	7.56	7.56	13.4	49.7	1.39	1.39	1.39	1.39	21.0	64.1	21.9	21.9	21.9	21.9	4500
5000	6.37	27.7	6.62	6.62	6.62	6.62	11.5	36.3	12.0	12.0	12.0	12.0	18.8	46.8	19.5	19.5	19.5	19.5	5000
5500	5.63	20.8	5.85	5.85	5.85	5.85	10.0	27.3	10.4	10.4	10.4	10.4	16.1	35.1	16.7	16.7	16.7	16.7	5500
6000	5.01	16.0	5.21	5.21	5.21	5.21	8.78	21.0	9.13	9.12	9.13	9.13	13.9	27.1	14.5	14.5	14.5	14.5	6000
6500	4.58	12.8	4.67	4.67	4.67	4.67	7.91	16.8	8.06	8.06	8.06	8.06	12.4	21.8	12.4	12.6	12.6	12.6	6500
7000	4.12	10.3	4.20	4.20	4.20	4.20	7.04	13.5	7.18	7.18	7.18	7.18	10.6	17.4	10.4	10.8	10.8	10.8	7000
7500	3.73	8.35	3.80	3.80	3.80	3.80	6.29	11.0	6.13	6.41	6.41	6.41	9.23	14.2	8.60	9.41	9.41	9.41	7500
8000	3.39	6.88	3.46	3.46	3.46	3.46	5.66	9.03	5.11	5.77	5.77	5.77	8.11	11.6	7.12	8.27	8.27	8.27	8000
8500	3.09	5.74	3.15	3.15	3.15	3.15	5.09	7.53	4.28	5.19	5.19	5.19	7.18	9.70	5.89	7.32	7.32	7.32	8500
9000	2.83	4.83	2.74	2.89	2.89	2.89	4.54	6.33	3.62	4.63	4.63	4.63	6.41	8.17	4.87	6.53	6.53	6.53	9000
9500	2.61	4.11	2.29	2.66	2.66	2.66	4.08	5.39	3.06	4.16	4.16	4.16	5.75	6.95	4.02	5.87	5.87	5.87	9500
10000	2.40	3.52	1.91	2.45	2.45	2.45	3.68	4.63	2.56	3.75	3.75	3.75	5.20	5.96	3.33	5.26	5.30	5.30	10000
10500	2.26	3.11	1.61	2.26	2.26	2.26	3.41	4.07	2.14	3.35	3.41	3.41	4.80	5.25	2.79	4.67	4.80	4.80	10500
11000	2.09	2.70	1.37	2.09	2.09	2.09	3.10	3.54	1.80	2.96	3.10	3.10	4.38	4.57	2.34	4.16	4.38	4.38	11000
11500	1.94	2.36	1.19	1.89	1.94	1.94	2.84	3.10	1.53	2.61	2.84	2.84	4.00	4.00	2.00	3.69	4.00	4.00	11500
12000	1.81	2.08	1.03	1.7	1.81	1.81	2.60	2.73	1.30	2.32	2.60	2.60	3.67	3.51	1.71	3.27	3.67	3.67	12000
12500	1.69	1.85	0.88	1.52	1.69	1.69	2.40	2.41	1.12	2.05	2.40	2.40	3.39	3.11	1.48	2.89	3.39	3.39	12500
13000	1.57	1.64	0.76	1.36	1.57	1.57	2.22	2.15	0.98	1.83	2.22	2.22	3.14	2.77	1.28	2.56	3.14	3.14	13000
13500	1.46	1.47	0.66	1.23	1.46	1.46	2.06	1.92	0.85	1.63	2.06	2.06	2.90	2.47	1.12	2.25	2.90	2.90	13500
14000	1.35	1.31	0.57	1.09	1.35	1.35	1.92	1.72	0.74	1.46	1.92	1.92	2.70	2.22	0.99	1.99	2.70	2.70	14000
14500	1.27	1.18		0.96	1.26	1.27	1.79	1.55	0.66	1.30	1.79	1.79	2.52	2.00	0.87	1.74	2.49	2.52	14500
15000	1.18	1.07					1.67	1.40	0.59	1.16	1.64	1.67	2.33	1.81	0.77	1.54	2.29	2.36	15000

TABLE 4.4 LAPPED BOTH ENDS (CONTINUOUS)

EXTREME PURLIN™

Span	EZ_I50-12						EZ_I50-15						EZ_I50-19						EZ_I50-24						Span
	In	L/150	Outward				In	L/150	Outward				In	L/150	Outward				In	L/150	Outward				
			0	1	2	3			0	1	2	3			0	1	2	3			0	1	2	3	
2500	7.10	16.5	7.10	7.10	7.10	7.10	11.9	21.1	11.9	11.9	11.9	11.9	18.7	27.1	18.7	18.7	18.7	18.7	22.2	34.5	22.2	22.2	22.2	22.2	2500
3000	5.63	9.55	5.64	5.64	5.63	5.63	9.02	12.3	9.03	9.03	9.02	9.01	13.0	15.8	13.0	13.0	13.0	13.0	17.7	20.0	17.5	17.7	17.7	17.7	3000
3500	4.58	6.02	4.58	4.58	4.58	4.58	6.83	7.68	6.83	6.83	6.83	6.83	9.51	9.88	9.48	9.51	9.51	9.51	13.0	12.6	12.0	13.0	13.0	13.0	3500
4000	3.79	4.03	3.79	3.79	3.79	3.79	5.23	5.15	4.89	5.23	5.23	5.23	7.29	6.62	6.67	7.29	7.29	7.29	9.93	8.41	8.43	9.93	9.93	9.93	4000
4500	3.18	2.83	2.86	3.18	3.18	3.18	4.13	3.61	3.60	4.13	4.13	4.13	5.75	4.65	4.76	5.75	5.75	5.75	7.85	5.90	6.07	7.85	7.85	7.85	4500
5000	2.60	2.06	2.02	2.60	2.60	2.60	3.35	2.63	2.64	3.35	3.35	3.35	4.66	3.39	3.42	4.66	4.66	4.66	6.36	4.31	4.40	6.11	6.36	6.36	5000
5500	2.15	1.56	1.44	2.15	2.15	2.15	2.77	1.99	1.90	2.74	2.77	2.77	3.85	2.55	2.45	3.80	3.85	3.85	5.26	3.24	3.19	4.81	5.26	5.26	5500
6000	1.81	1.20	1.05	1.80	1.81	1.81	2.33	1.53	1.37	2.20	2.33	2.33	3.24	1.96	1.78	3.02	3.24	3.24	4.42	2.49	2.34	3.83	4.42	4.42	6000
6500	1.57	0.96	0.81	1.47	1.57	1.57	2.03	1.23	1.04	1.82	2.03	2.03	2.82	1.58	1.35	2.46	2.82	2.82	3.83	2.01	1.79	3.13	3.82	3.83	6500
7000	1.35	0.78	0.61	1.17	1.35	1.35	1.75	0.98	0.79	1.49	1.75	1.75	2.42	1.27	1.04	1.97	2.42	2.42	3.31	1.60	1.39	2.53	3.19	3.31	7000
7500	1.18	0.63		0.92	1.18	1.18	1.52	0.80	0.61	1.21	1.52	1.52	2.11	1.03	0.81	1.58	2.11	2.11	2.88	1.31	1.09	2.05	2.79	2.88	7500
8000	1.04	0.52		0.73	1.04	1.04	1.33	0.66		0.96	1.30	1.33	1.86	0.85	0.65	1.26	1.80	1.86	2.53	1.08	0.87	1.66	2.29	2.53	8000
8500	0.92	0.44		0.58	0.92	0.92	1.19	0.55		0.77	1.12	1.19	1.65	0.71		1.01	1.54	1.65	2.24	0.90	0.72	1.34	1.96	2.21	8500
9000	0.82	0.37			0.78	0.82	1.06	0.47		0.61	0.96	1.06	1.47	0.59		0.81	1.31	1.47	2.00	0.76	0.59	1.08	1.67	1.92	9000
9500	0.74	0.31			0.66	0.74	0.95	0.40			0.84	0.95	1.32	0.51		0.66	1.12	1.32	1.77	0.64		0.89	1.43	1.69	9500
10000	0.66	0.27			0.56	0.66	0.86	0.35			0.73	0.85	1.19	0.44		0.54	0.96	1.17	1.57	0.55		0.74	1.23	1.48	10000
10500	0.61	0.24				0.61	0.79	0.30			0.64	0.76	1.10	0.38			0.83	1.05	1.44	0.49		0.63	1.08	1.33	10500
11000						0.55	0.72	0.27			0.54	0.68	1.01	0.33			0.71	0.92	1.29	0.43		0.53	0.93	1.17	11000
11500							0.67	0.23				0.60	0.92	0.29			0.61	0.82	1.16	0.37			0.79	1.04	11500
12000												0.54	0.84	0.26				0.72	1.05	0.33			0.69	0.92	12000
12500																									12500
13000																									13000
13500																									13500
14000																									14000
14500																									14500
15000																									15000

Span	EZ_200-24						EZ_250-15						EZ_250-19						EZ_250-24						Span
	In	L/150	Outward				In	L/150	Outward				In	L/150	Outward				In	L/150	Outward				
			0	1	2	3			0	1	2	3			0	1	2	3			0	1	2	3	
2500	22.1	75.9	22.1	22.1	22.1	22.1	8.89	75.6	8.89	8.89	8.89	8.89	17.5	99.2	17.5	17.5	17.5	17.5	22.3	128.8	22.3	22.3	22.3	22.3	2500
3000	18.5	44.0	18.5	18.5	18.5	18.5	7.29	43.8	7.31	7.31	7.29	7.29	14.3	57.5	14.3	14.3	14.2	14.2	18.6	74.7	18.6	18.6	18.6	18.6	3000
3500	15.9	27.6	15.9	15.9	15.9	15.9	6.14	27.6	6.14	6.14	6.14	6.14	11.8	36.1	11.8	11.8	11.8	11.8	16.0	47.1	16.0	16.0	16.0	16.0	3500
4000	13.8	18.6	13.8	13.8	13.8	13.8	5.27	18.5	5.27	5.27	5.27	5.27	9.95	24.2	9.95	9.95	9.95	9.95	13.9	31.6	13.9	13.9	13.9	13.9	4000
4500	12.0	13.0	11.4	12.0	12.0	12.0	4.58	13.1	4.58	4.58	4.58	4.58	8.52	17.0	8.52	8.52	8.52	8.52	12.4	22.2	12.4	12.4	12.4	12.4	4500
5000	9.75	9.48	8.53	9.75	9.75	9.75	4.02	9.46	4.03	4.02	4.02	4.02	7.38	12.5	7.38	7.38	7.38	7.38	11.2	16.2	11.2	11.2	11.2	11.2	5000
5500	8.06	7.12	6.41	8.06	8.06	8.06	3.57	7.11	3.57	3.57	3.57	3.57	6.45	9.32	6.40	6.45	6.45	6.45	10.2	12.1	8.65	10.2	10.2	10.2	5500
6000	6.77	5.49	4.82	6.77	6.77	6.77	3.19	5.47	3.19	3.18	3.19	3.19	5.68	7.18	4.93	5.68	5.68	5.68	8.74	9.33	6.44	8.74	8.74	8.74	6000
6500	5.88	4.41	3.68	5.82	5.88	5.88	2.93	4.39	2.83	2.93	2.93	2.93	5.14	5.76	3.81	5.14	5.14	5.14	7.58	7.49	4.88	7.58	7.58	7.58	6500
7000	5.08	3.53	2.79	4.80	5.08	5.08	2.64	3.51	2.18	2.64	2.64	2.64	4.58	4.61	2.87	4.58	4.58	4.58	6.55	6.00	3.69	6.35	6.55	6.55	7000
7500	4.42	2.87	2.16	3.97	4.42	4.42	2.39	2.87	1.73	2.39	2.39	2.39	4.06	3.75	2.21	3.84	4.06	4.06	5.70	4.88	2.84	5.28	5.70	5.70	7500
8000	3.89	2.37	1.71	3.28	3.89	3.89	2.19	2.36	1.35	2.19	2.19	2.19	3.56	3.09	1.74	3.21	3.56	3.56	5.01	4.02	2.24	4.40	5.01	5.01	8000
8500	3.45	1.98	1.37	2.73	3.45	3.45	2.00	1.97	1.08	1.94	2.00	2.00	3.16	2.58	1.38	2.70	3.16	3.16	4.44	3.36	1.78	3.66	4.44	4.44	8500
9000	3.08	1.66	1.11	2.25	3.08	3.08	1.84	1.66	0.87	1.65	1.84	1.84	2.82	2.17	1.12	2.26	2.82	2.82	3.97	2.83	1.44	3.00	3.97	3.97	9000
9500	2.76	1.41	0.92	1.86	2.69	2.76	1.69	1.41	0.70	1.38	1.69	1.69	2.53	1.85	0.91	1.89	2.53	2.53	3.55	2.40	1.18	2.46	3.54	3.55	9500
10000	2.49	1.22	0.76	1.54	2.35	2.49	1.56	1.21	0.58	1.16	1.56	1.56	2.28	1.58	0.75	1.56	2.26	2.28	3.21	2.06	0.99	2.02	3.10	3.21	10000
10500	2.30	1.07	0.66	1.30	2.09	2.30	1.47	1.06		0.99	1.42	1.47	2.11	1.39	0.64	1.32	2.01	2.11	2.97	1.82	0.84	1.70	2.77	2.97	10500
11000	2.10	0.93	0.56	1.09	1.83	2.10	1.36	0.93		0.84	1.25	1.36	1.93	1.21	0.54	1.10	1.77	1.93	2.70	1.58	0.71	1.43	2.44	2.70	11000
11500	1.92	0.81		0.93	1.60	1.92	1.24	0.81		0.72	1.12	1.24	1.76	1.07		0.93	1.56	1.76	2.47	1.39	0.61	1.21	2.14	2.47	11500
12000	1.76	0.72		0.79	1.40	1.73	1.14	0.72		0.61	0.99	1.14	1.62	0.94		0.78	1.38	1.61	2.27	1.22		1.03	1.87	2.27	12000
12500	1.63	0.63		0.68	1.23	1.55	1.05	0.63			0.89	1.03	1.49	0.84		0.67	1.22	1.49	2.09	1.08		0.88	1.63	2.05	12500
13000	1.49	0.57		0.58	1.07	1.40	0.97	0.56			0.79	0.94	1.38	0.74		0.58	1.08	1.34	1.93	0.96		0.75	1.42	1.85	13000
13500	1.37	0.51			0.94	1.25	0.91	0.51			0.70	0.85	1.28	0.66			0.95	1.21	1.79	0.86		0.66	1.23	1.67	13500
14000	1.25	0.46			0.81	1.13	0.84	0.46			0.61	0.78	1.19	0.59			0.82	1.10	1.64	0.76		0.57	1.07	1.50	14000
14500	1.15	0.41			0.72	1.02	0.78	0.40			0.54	0.71	1.11	0.53			0.72	0.99	1.50	0.69			0.93	1.36	14500
15000	1.06	0.37			0.62	0.92	0.72	0.37				0.64	1.02	0.48			0.64	0.90	1.39	0.63			0.82	1.23	15000

MILLFORM AUSTRALIA

Where strength matters

TABLE 4.4 LAPPED BOTH ENDS (CONTINUOUS)

EXTREME PURLIN™

MILLFORM AUSTRALIA

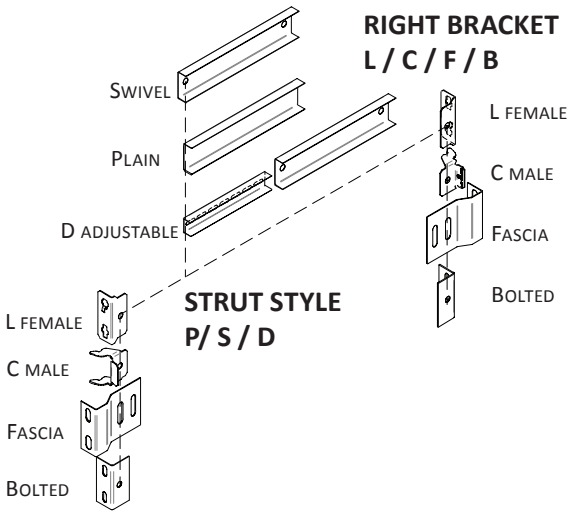
Where strength matters

Span	EZ_200-12						EZ_200-15						EZ_200-19						Span
	In	L/150	Outward				In	L/150	Outward				In	L/150	Outward				
			0	1	2	3			0	1	2	3			0	1	2	3	
2500	5.76	34.8	5.76	5.76	5.76	5.76	10.8	45.2	10.8	10.8	10.8	10.8	20.3	59.8	20.3	20.3	20.3	20.3	2500
3000	4.71	20.2	4.72	4.72	4.71	4.71	8.61	26.1	8.63	8.62	8.62	8.62	15.9	34.6	15.9	15.9	15.9	15.9	3000
3500	3.96	12.7	3.96	3.96	3.96	3.96	7.10	16.5	7.10	7.10	7.10	7.10	12.9	21.8	12.9	12.9	12.9	12.9	3500
4000	3.39	8.49	3.39	3.39	3.39	3.39	5.96	11.1	5.96	5.96	5.96	5.96	10.5	14.6	10.5	10.5	10.5	10.5	4000
4500	2.93	5.96	2.93	2.93	2.93	2.93	5.06	7.74	5.06	5.06	5.06	5.06	8.75	10.3	8.42	8.75	8.75	8.75	4500
5000	2.58	4.34	2.58	2.58	2.58	2.58	4.37	5.64	4.37	4.36	4.37	4.36	7.10	7.48	6.42	7.10	7.10	7.10	5000
5500	2.27	3.27	2.27	2.27	2.27	2.27	3.79	4.24	3.48	3.79	3.79	3.79	5.86	5.62	4.99	5.86	5.86	5.86	5500
6000	2.03	2.51	2.03	2.03	2.03	2.03	3.32	3.17	2.63	3.32	3.32	3.32	4.94	4.33	3.82	4.94	4.94	4.94	6000
6500	1.85	2.03	1.59	1.85	1.85	1.85	2.94	2.62	2.03	2.94	2.94	2.94	4.29	3.47	2.90	4.26	4.29	4.29	6500
7000	1.67	1.62	1.23	1.67	1.67	1.67	2.54	2.10	1.59	2.54	2.54	2.54	3.70	2.78	2.19	3.53	3.70	3.70	7000
7500	1.51	1.32	0.96	1.51	1.51	1.51	2.21	1.71	1.25	2.11	2.21	2.21	3.22	2.27	1.70	2.95	3.22	3.22	7500
8000	1.37	1.08	0.76	1.31	1.37	1.37	1.95	1.41	0.98	1.75	1.95	1.95	2.84	1.86	1.33	2.49	2.84	2.84	8000
8500	1.26	0.91	0.61	1.10	1.26	1.26	1.72	1.17	0.78	1.45	1.72	1.72	2.50	1.56	1.06	2.11	2.50	2.50	8500
9000	1.15	0.76		0.93	1.15	1.15	1.54	0.99	0.63	1.20	1.54	1.54	2.23	1.31	0.87	1.77	2.23	2.23	9000
9500	1.06	0.65		0.77	1.04	1.06	1.38	0.84		1.00	1.38	1.38	2.01	1.11	0.71	1.46	1.96	2.01	9500
10000	0.96	0.55		0.65	0.92	0.96	1.25	0.73		0.83	1.25	1.25	1.82	0.96	0.59	1.19	1.73	1.82	10000
10500	0.89	0.49		0.55	0.82	0.89	1.15	0.64		0.72	1.11	1.15	1.68	0.84		1.01	1.55	1.68	10500
11000	0.81	0.43			0.72	0.81	1.05	0.55		0.62	0.97	1.05	1.53	0.73		0.84	1.37	1.53	11000
11500	0.74	0.37			0.64	0.74	0.96	0.49			0.85	0.96	1.40	0.64		0.71	1.22	1.40	11500
12000	0.68	0.33			0.56	0.67	0.88	0.43			0.74	0.88	1.28	0.57		0.61	1.08	1.26	12000
12500							0.82	0.38			0.65	0.82	1.19	0.50			0.96	1.14	12500
13000							0.75	0.34			0.57	0.74	1.09	0.45			0.84	1.03	13000
13500							0.70	0.30				0.67	1.02	0.40			0.72	0.94	13500
14000							0.65	0.27				0.61	0.94	0.36			0.63	0.85	14000
14500							0.61	0.25				0.54	0.86	0.32			0.55	0.78	14500
15000													0.79	0.29				0.70	15000

Span	EZ_300-19						EZ_300-24						EZ_300-30						Span
	In	L/150	Outward				In	L/150	Outward				In	L/150	Outward				
			0	1	2	3			0	1	2	3			0	1	2	3	
2500																			2500
3000																			3000
3500	9.07	42.6	9.07	9.07	9.07	9.07	17.3	55.7	17.3	17.3	17.3	17.3	30.5	71.8	30.5	30.5	30.5	30.5	3500
4000																			4000
4500	7.92	29.9	7.92	7.92	7.92	7.92	15.0	39.2	15.0	15.0	15.0	15.0	23.4	50.4	23.4	23.4	23.4	23.4	4500
5000	6.99	21.8	7.00	6.99	6.99	6.99	13.1	28.6	13.1	13.1	13.1	13.1	21.0	36.9	21.0	21.0	21.0	21.0	5000
5500	6.23	16.3	6.23	6.23	6.23	6.23	11.4	21.5	11.4	11.4	11.4	11.4	19.1	27.6	19.1	19.1	19.1	19.1	5500
6000	5.59	12.6	5.59	5.58	5.59	5.59	10.2	16.5	10.2	10.2	10.2	10.2	16.7	21.3	16.7	16.7	16.7	16.7	6000
6500	5.14	10.1	5.14	5.14	5.14	5.14	9.22	13.3	9.22	9.22	9.22	9.22	14.7	17.1	13.3	14.7	14.7	14.7	6500
7000	4.67	8.09	4.67	4.67	4.67	4.67	8.26	10.6	7.55	8.26	8.26	8.26	12.7	13.7	10.6	12.7	12.7	12.7	7000
7500	4.26	6.58	4.26	4.26	4.26	4.26	7.44	8.62	6.15	7.44	7.44	7.44	11.0	11.1	8.36	11.0	11.0	11.0	7500
8000	3.90	5.42	3.73	3.90	3.90	3.90	6.74	7.10	5.01	6.74	6.74	6.74	9.67	9.16	6.62	9.67	9.67	9.67	8000
8500	3.58	4.51	3.01	3.58	3.58	3.58	6.07	5.92	4.02	6.07	6.07	6.07	8.57	7.64	5.26	8.54	8.57	8.57	8500
9000	3.30	3.80	2.46	3.30	3.30	3.30	5.41	4.99	3.24	5.31	5.41	5.41	7.64	6.44	4.23	7.43	7.65	7.64	9000
9500	3.04	3.24	2.05	3.04	3.04	3.04	4.86	4.24	2.64	4.58	4.86	4.86	6.86	5.47	3.46	6.46	6.86	6.86	9500
10000	2.82	2.78	1.70	2.82	2.82	2.82	4.39	3.64	2.17	3.97	4.39	4.39	6.19	4.69	2.85	5.62	6.19	6.19	10000
10500	2.67	2.45	1.44	2.58	2.67	2.67	4.06	3.20	1.84	3.50	4.06	4.06	5.72	4.14	2.42	4.94	5.72	5.72	10500
11000	2.49	2.13	1.20	2.27	2.49	2.49	3.70	2.79	1.55	3.06	3.70	3.70	5.21	3.60	2.04	4.26	5.21	5.21	11000
11500	2.32	1.87	1.01	2.00	2.32	2.32	3.38	2.44	1.30	2.67	3.38	3.38	4.77	3.15	1.73	3.66	4.77	4.77	11500
12000	2.17	1.64	0.87	1.73	2.17	2.17	3.11	2.15	1.11	2.33	3.11	3.11	4.38	2.77	1.48	3.15	4.38	4.38	12000
12500	2.02	1.46	0.74	1.49	2.00	2.02	2.87	1.91	0.96	2.02	2.85	2.87	4.04	2.45	1.28	2.70	3.97	4.04	12500
13000	1.88	1.29	0.65	1.30	1.82	1.88	2.64	1.69	0.83	1.75	2.56	2.64	3.74	2.18	1.10	2.32	3.60	3.74	13000
13500	1.74	1.15	0.56	1.13	1.66	1.74	2.45	1.52	0.72	1.50	2.32	2.45	3.46	1.94	0.96	2.01	3.26	3.46	13500
14000	1.61	1.04		0.99	1.51	1.61	22.9	1.36	0.63	1.31	2.09	2.29	3.22	1.74	0.85	1.74	2.96	3.22	14000
14500	1.51	0.93		0.88	1.37	1.51	2.13	1.22	0.55	1.15	1.88	2.13	2.99	1.58	0.74	1.52	2.67	3.00	14500
15000	1.40	0.85		0.77	1.26	1.40	1.99	1.10		1.01	1.71	1.9	2.77	1.42	0.66	1.34	2.41	2.81	15000

HOOKFAST BRIDGING SYSTEM

Millform recently developed the ***Hookfast®*** bridging system to gain better control over key processes. We carry out all aspects of manufacturing, quality control, and delivery. This offers a range of benefits, with the lead time for bridging systems greatly reduced, the strength improved, and the packaging enhanced.

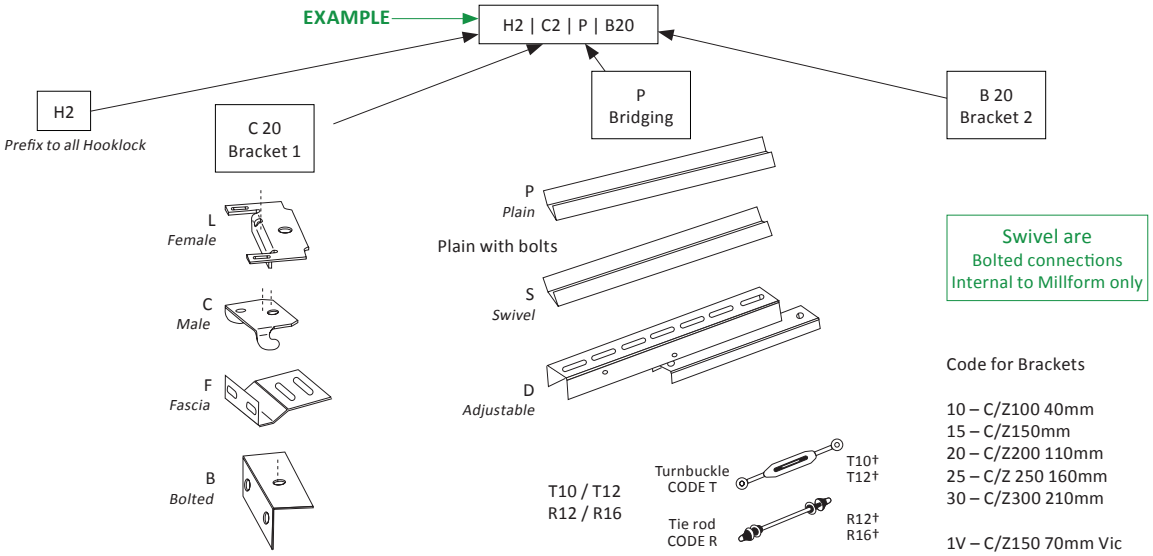


We spent considerable time researching and selecting the best riveting system available. We utilise the Henrob™ riveting system for a reliable and robust bridging solution. Henrob™ is owned and operated by a large and talented company dedicated to self-pierce riveting technology. This technology combines reliable design principles with robust production techniques.

Hookfast® bridging solutions offer a fast and simple installation process. Bridging is available in adjustable or fixed lengths, including Bolted Bracket and Fascia Clip designs with male or female Hookfast ends. We supply products in 40 mm, 60 mm, 70 mm, 110 mm, 160 mm, and 210 mm widths to suit purlins ranging from 100 mm to 300 mm in width. We also offer the standard speedy spacer system, which includes brackets and 12 mm diameter sag rods with threaded ends.

BRIDGING CODING MILLFORM OCT 18

This document explains how the codes are interpreted for Hook lock bridging.



Swivel are
Bolted connections
Internal to Millform only

Code for Brackets

10 – C/Z100 40mm
15 – C/Z150mm
20 – C/Z200 110mm
25 – C/Z 250 160mm
30 – C/Z300 210mm

1V – C/Z150 70mm Vic

FIND OUT MORE ABOUT OUR RANGE OF STEEL BUILDING PRODUCTS

MILLFORM AUSTRALIA

TOPHAT & BATTENS

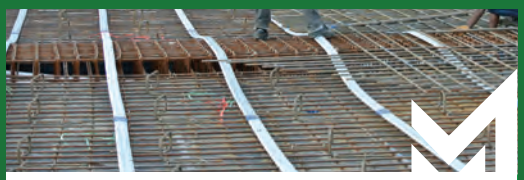
PURLIN & CHANNEL

HOOKFAST PURLIN BRIDGING SYSTEM

ROOFING & WALLING

ROOFING ACCESSORIES

JUNCTION STUD & FACADE SYSTEM



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