

# Corrosion Resistant

HI-TENSILE  
LOW MAINTENANCE  
LONG-LIFE  
TECHNICAL SUPPORT  
CUT TO LENGTH

## CORROSION RESISTANT & MATERIAL COMPATIBILITY

Some building materials and environmental conditions can be detrimental to coated steel products.

These include contact with or exposure to runoff from:

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

A zinc coating of Z350 (350 g/m<sup>2</sup> minimum coating mass) is the standard coating class provided with Lysaght® Zed and Cee sections. This will provide a long and trouble-free life for enclosed buildings and open-sided rural buildings, in a non-aggressive environment.

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

Direct contact of incompatible materials with the coating must be avoided. In such applications, and in very corrosive environments, suitable paint systems may be obtained from paint manufacturers. The BlueScope Steel technical information booklet, Painting zinc-coated or ZINCALUME steel sheet, offers guidance.

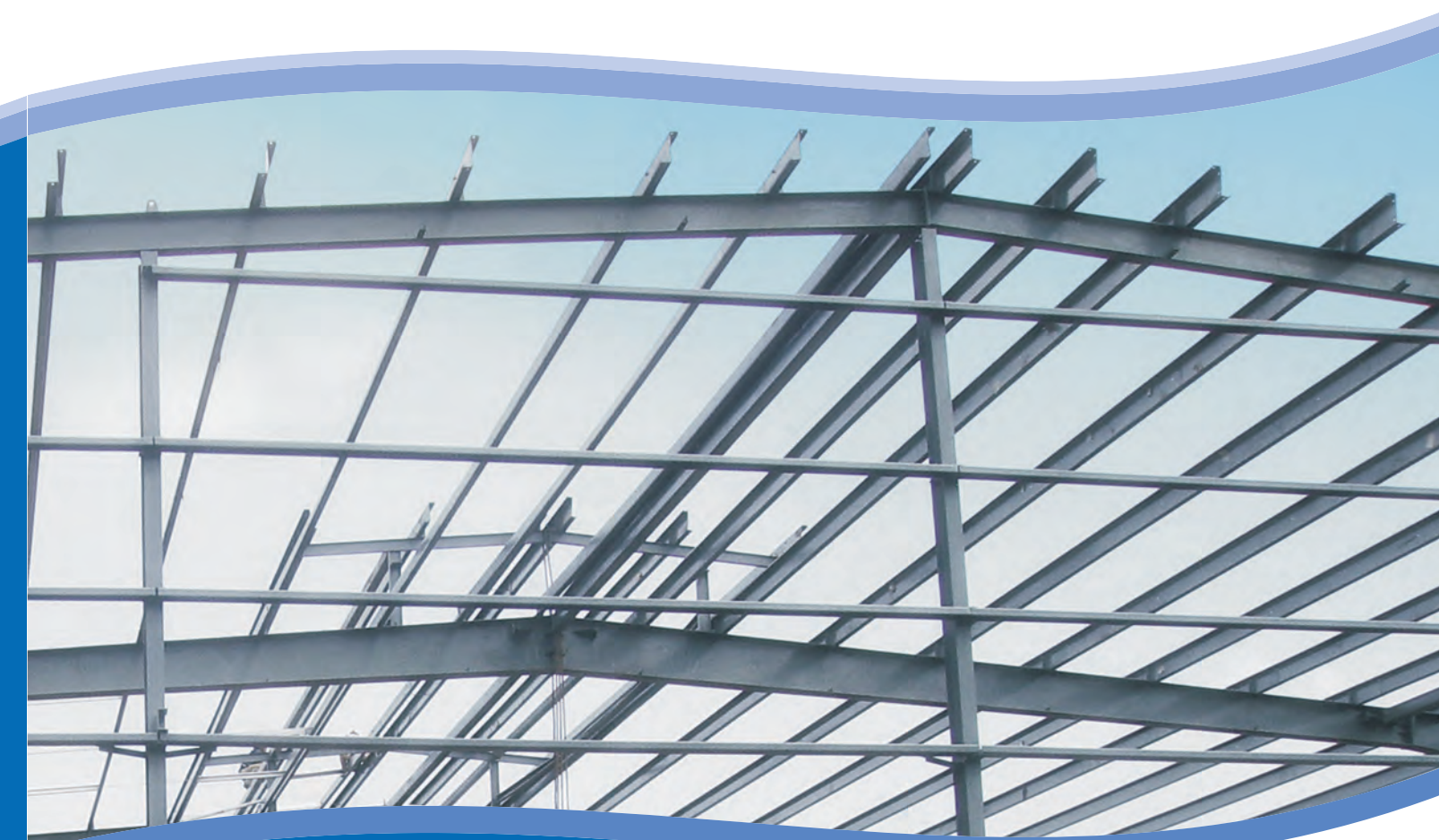
In applications where particular attention is required for corrosion, or the buildup of substances like dust or grain, then consideration should be given to the shape of the sections (either Zed, or Cee, or Zed with downturned lip); orientation of the sections; and coating class.



# CORROSION RESISTANT

**LYSAGHT**  
THERE IS NO EQUIVALENT

IT'S A  
**BLUESCOPE**  
COMPANY



## PURLIN & GIRTS Lysaght® Zeds and Cees Purlin



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**BLUESCOPE**  
**LYSAGHT**



DESIGN FLEXIBILITY



DURABILITY/ SECURITY



RECYCLING



WARRANTY

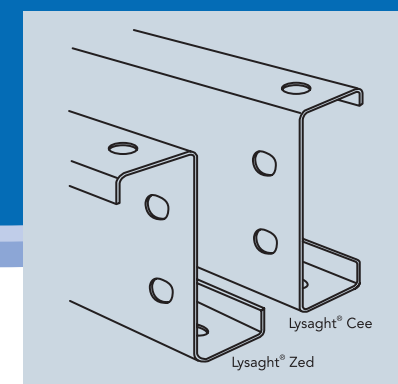
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# LYSAGHT® Zeds & Cees Purlin General Data

Purlins and girts made from galvanized steel are proven performers, delivering cost effective, design-efficient, highly innovative building solutions.

## Specifications

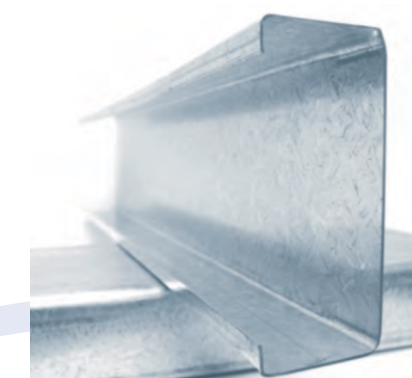
## Dimensions & Properties



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

### SHAPES AND SECTIONS: WHICH ONE?

Lysaght® purlins are roll-formed into two standard shapes - Z and C sections. Both perform effectively, and in many instances the choice comes down to personal preference.



#### When to use Z sections

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

#### When to use C sections

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

### PERFORMANCE

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

### PRODUCT

Our wide range includes:

- A full range of Lysaght® Zeds and Cees.
- A full range of Lysaght® Zeds and Cees with downturned-lip.
- Zees section sizes from 150 mm to 350 mm.
- Cees section sizes from 150 mm to 350 mm.
- Bolting systems to suit project needs.



### MATERIAL SPECIFICATION

Lysaght Zed and Cee purlin are roll-formed from galvanized steel with hot dipped, zinc coated, chromate - passivated, and high strength grade steel strip complying with AS1397-1993.

Thickness (BMT)	Coating Mass (g/m <sup>2</sup> )	Yield Stress	Standard
1.5 mm	350	450 Mpa	AS1397-1993
1.9 mm	350	450 Mpa	
2.4 mm	350	450 Mpa	
3.0 mm	350	450 Mpa	

### LYSAGHT ZEDS & CEES RANGE

#### Product Range

The following range can be manufactured

Section Size (mm)	BMT (mm)
Z & C 150	1.5, 1.9, 2.4
Z & C 200	1.5, 1.9, 2.4
Z & C 250	1.9, 2.4
Z & C 300	2.4, 3.0
Z & C 350	3.0

#### Non-standard sections

We can supply a wide range of nonstandard sizes (up to 350 mm) and shapes, including Cees and Zeds with downturned lip—the Zeds can also be made to lap.

#### Available lengths

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

For minimum lengths, and lengths over 12000 mm, contact BlueScope Lysaght® office.

For normal deliveries nominal lengths should not exceed 12000 mm. Lengths greater than 12000 mm require special transportation and on-site handling facilities. Law restricts the hours of transportation and permits may be required. Lengths greater than 19500 mm require a special transportation permit.

Length tolerance for all sections is 0 to + 5 mm

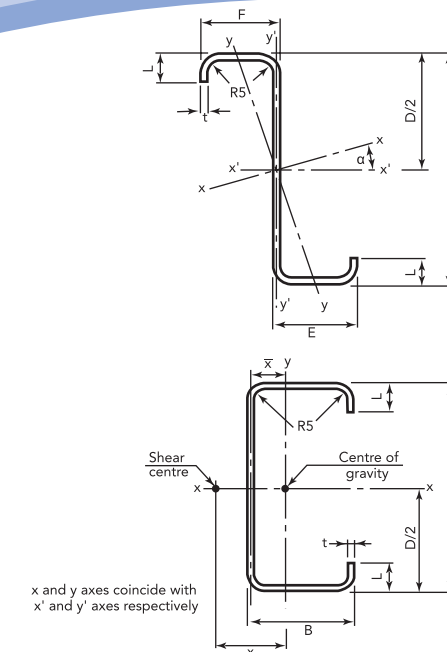
### PACKING

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

BlueScope Lysaght® Products accessories are delivered in strapped or wired bundles, bags, or packages as appropriate.

### STORAGE ON-SITE

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



### DIMENSIONS

Catalogue number	t (mm)	D (mm)	Mass (kg/m)	Zeds			Cees	
				E (mm)	F (mm)	L (mm)	B (mm)	L (mm)
Z/C15015	1.5	152	3.58	65	61	16.5	64	16.0
Z/C15019	1.9	152	4.51	65	61	17.5	64	17.5
Z/C15024	2.4	152	5.67	66	60	19.5	64	19.0
Z/C20015	1.5	203	4.49	79	74	16.0	76	16.0
Z/C20019	1.9	203	5.73	79	74	20.0	76	19.5
Z/C20024	2.4	203	7.20	79	73	21.5	76	21.5
Z/C25019	1.9	254	6.50	79	74	19.0	76	19.5
Z/C25024	2.4	254	8.16	79	73	21.0	76	21.0
Z/C30024	2.4	300	10.09	100	93	28.0	96	27.5
Z/C30030	3.0	300	12.76	100	93	29.5	96	29.5
Z/C35030	3.0	350	15.23	129	121	31.5	125	30.5

### SECTION PROPERTIES

Catalogue Number	FULL SECTION PROPERTIES										COLUMN PROPERTIES		EFFECTIVE SECTION PROPERTIES at yield stress				
	Area	Second moment of area		Section modulus	Radius of gyration	Second moment of area		Product of moment of area	Section modulus	Radius of gyration	Torsion constant	Warping constant	Section modulus in bending	Area in compression			
Z15015	433	1.84	0.145	3.96	18.1	22.0	1.60	0.383	0.588	2.08	6.06	60.1	29.4	332	1460	17.2	248
Z15019	561	2.32	0.184	5.02	18.1	22.1	2.01	0.487	0.744	26.1	7.73	59.9	29.5	675	1860	22.4	347
Z15024	712	2.92	0.238	6.38	18.3	22.5	2.53	0.632	0.950	3.26	10.0	59.6	29.8	1370	2410	31.4	535
Z20015	555	3.89	0.255	5.53	21.4	18.5	3.53	0.621	1.09	34.3	8.05	79.7	33.4	416	4260	23.8	248
Z20019	713	5.02	0.342	7.45	21.9	19.1	4.52	0.843	1.45	43.9	11.0	79.6	34.4	858	5830	36.4	378
Z20024	907	6.36	0.443	9.64	22.1	19.4	5.70	1.10	1.86	55.3	14.4	79.3	34.8	1740	7630	48.4	546
Z25019	808	8.08	0.381	7.82	21.7	14.0	7.62	0.833	1.81	59.3	10.8	97.1	32.1	972	9480	45.7	379
Z25024	1030	10.2	0.493	10.2	21.9	14.3	9.64	1.08	2.33	74.9	14.2	96.9	32.5	1970	12400	66.0	547
Z30024	1260	18.3	1.01	16.8	28.3	16.0	17.0	2.32	4.57	112	23.8	116	42.8	2430	36600	89.9	628
Z30030	1600	23.1	1.32	21.9	28.7	16.3	21.3	3.04	5.88	140	31.4	116	43.6	4790	48200	125	908
Z35030	1910	39.2	2.49	32.8	36.1	17.8	35.8	5.93	10.7	202	47.2	137	55.7	5730	124000	159	940

### Lap lengths

Nominal section size (mm)	Span (mm)	Span (mm)
100	≤ 6000	600
	> 6000 ≤ 9000	900
	> 9000	900
150, 200, 250	> 9000 ≤ 12000	1200
	> 12000*	1800
	≤ 9000	900
300, 350	> 9000 < 12000	1200
	> 12000 ≤ 18000	1800
	> 18000	2400

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

# HI-TENSILE