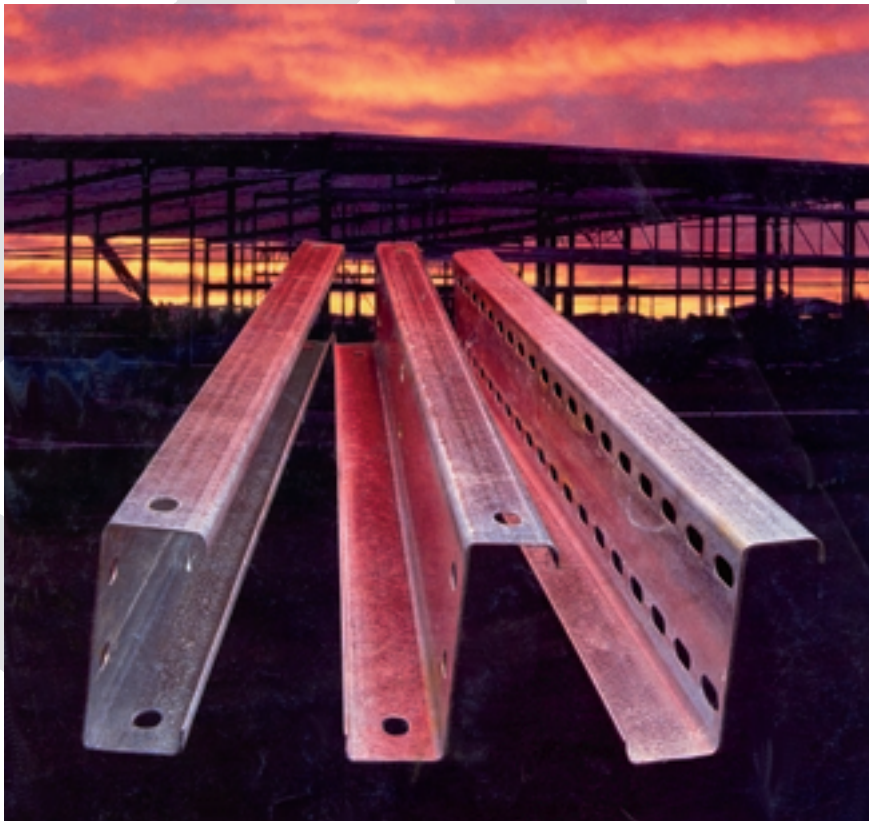


Fielders Purlins & Girts



Fielders Purlins and Girts are manufactured from Hi Tensile Galvanised Steel to conform with the Australian standard for cold form Steel Structures.

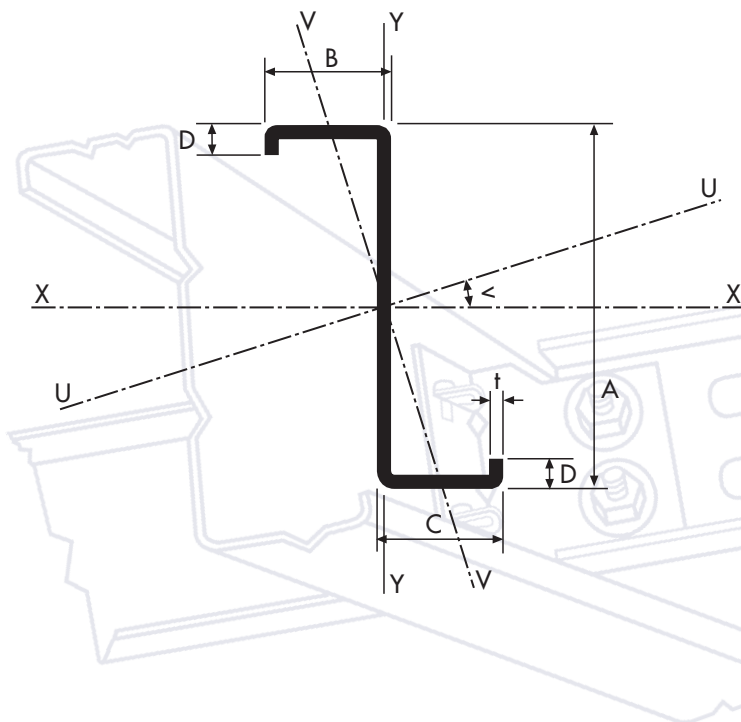
Fielders Purlins and Girts incorporate the latest computerised technology and is coupled with efficiency in production. Thus, Fielders is able to offer the user a quality product at a competitive price.



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Section Properties of the Fielders Z System

Cat No.	A	B	C	D	t	Area mm ²	Mass kg/m	I _x 10 ⁶ mm ⁴	I _y 10 ⁶ mm ⁴	Z _x 10 ³ mm ³	Z _y 10 ³ mm ³	r _x mm	r _y mm	J mm ⁴	I _w 10 ⁶ mm ⁴
100Z10	102	49	42	14	0.95	197.4	1.55	0.323	0.098	6.132	2.111	40.5	22.3	59.38	154.61
100Z12	102	49	42	14	1.2	247.9	1.95	0.403	0.122	7.651	2.617	40.3	22.2	118.98	190.53
100Z15	102	49	42	15	1.5	310.7	2.44	0.501	0.154	9.501	3.324	40.1	22.3	233.00	241.93
100Z19	102	49	42	15	1.9	389.8	3.06	0.622	0.189	11.797	4.085	39.9	22.0	469.08	294.54
100Z24	102	50	43	15	2.4	491.4	3.86	0.778	0.242	14.763	5.157	39.8	22.2	943.42	374.10
150Z12	152	65	59	19	1.2	359.5	2.82	1.299	0.322	16.762	5.123	60.1	29.9	172.55	1200.22
150Z15	152	65	59	19	1.5	447.2	3.51	1.608	0.395	20.741	6.300	60.0	29.7	335.37	1469.37
150Z19	152	65	60	19	1.9	564.6	4.43	2.020	0.498	26.147	7.936	59.8	29.7	679.42	1882.13
150Z24	152	65	60	20	2.4	712.2	5.59	2.524	0.627	32.671	10.032	59.5	29.7	1367.36	2371.14
200Z15	203	79	73	17	1.5	559.7	4.39	3.556	0.643	34.483	8.374	79.7	33.9	419.75	4322.87
200Z19	203	79	73	20	1.9	716.6	5.63	4.535	0.860	43.981	11.227	79.5	34.6	862.33	5807.85
200Z24	203	79	74	21	2.4	906.6	7.12	5.709	1.103	55.513	14.397	79.4	34.9	1740.61	7563.49
250Z19	254	79	74	18	1.9	808.0	6.50	7.62	0.833	59.300	10.800	97.1	32.1	972.00	9480.00
250Z24	254	79	73	21	2.4	1030.0	8.16	9.64	1.080	74.900	14.200	96.9	32.5	1970.00	12400.00



Steel quality specification

High tensile galvanized steel

F_y = 450 MPa Minimum yield stress

For 1.5 mm, 1.9 mm and 2.4 mm section

F_y = 500 MPa Minimum yield stress

For 1.2 mm section

Zinc coating thickness 350 g/m²

Note: The standard galvanized coating for Purlins is Z 350 (350 grams of zinc per m²) used in non aggressive areas. For severe and aggressive environments where build-up of airborne corrosive contaminants can affect the coating Z 450 is recommended (450 grams of zinc per m²).

Section Properties of the Fielders C System

Cat No.	A mm	B mm	D mm	t mm	CY mm	Area mm ²	Mass kg/m	I _x 10 ⁶ mm ⁴	I _y 10 ⁶ mm ⁴	Z _x 10 ³ mm ³	Z _y 10 ³ mm ³	r _x mm	r _y mm	J mm ⁴	I _w 10 ⁶ mm ⁴
75LC10	76	44	13	.95	15.9	167.9	1.32	0.159	0.046	4.184	1.639	30.8	16.6	50.52	46.62
75LC12	76	44	13	1.20	15.9	210.7	1.65	0.198	0.057	5.211	2.025	30.7	16.4	101.13	56.99
75CL15	76	45	14	1.50	16.6	267.2	2.10	0.249	0.076	6.553	2.669	30.5	16.8	200.37	78.10
100LC10*	102	44	15	.95	14.5	196.4	1.54	0.319	0.054	6.255	1.845	40.3	16.6	59.10	92.84
100LC12*	102	44	15	1.20	14.5	246.7	1.94	0.398	0.067	7.804	2.283	40.2	16.5	118.41	113.76
100LC15*	102	45	15	1.50	14.9	309.2	2.43	0.498	0.087	9.762	2.880	40.1	16.7	231.87	145.82
100LC19*	102	45	15	1.90	14.9	387.9	3.05	0.618	0.106	12.118	3.530	39.9	16.6	446.79	175.88
100LC24*	102	46	15	2.40	15.3	489.0	3.84	0.744	0.136	15.176	4.427	39.8	16.7	938.82	222.41
150LC12	152	64	18	1.20	19.9	361.9	2.84	1.320	0.205	17.368	4.639	60.4	23.8	173.70	788.36
150LC15	152	64	18	1.50	19.9	450.2	3.53	1.633	0.251	21.487	5.700	60.2	23.6	337.62	957.58
150LC19	152	64	18	1.90	19.9	566.5	4.45	2.041	0.311	26.855	7.055	60.0	23.4	681.71	1168.01
150LC24	152	64	18	2.40	19.9	709.8	5.57	2.535	0.382	33.355	8.655	59.8	23.2	1362.75	1407.25
200LC15	203	74	19	1.50	21.0	559.7	4.39	3.539	0.399	34.867	7.535	79.5	26.7	419.75	2653.78
200LC19	203	75	21	1.90	21.9	716.6	5.63	4.524	4.534	44.571	10.058	79.5	27.3	862.33	3582.10
200LC24	203	76	21	2.40	22.3	904.2	7.10	5.687	0.679	56.030	12.644	79.3	27.4	1736.00	4489.93
250LC19	254	71	21	1.90	18.1	798.3	6.27	7.425	0.499	58.465	9.437	96.4	25.0	96.064	5022.51
250LC24	254	71	21	2.40	18.1	1002.6	7.87	9.267	0.615	72.969	11.635	96.1	24.8	1924.93	6083.45
300LC24	300	96	27	2.40	25.0	1260.0	10.09	17.000	1.510	113.000	21.700	116.0	34.6	2430.00	26800.00
300LC30	300	96	31	3.00	25.8	1600.0	12.76	21.300	1.960	142.000	28.500	116.0	35.0	4790.00	35700.00

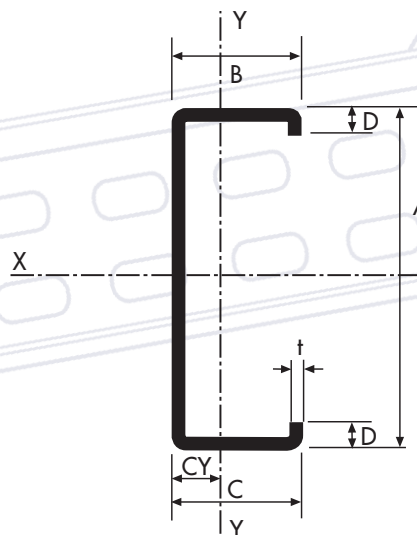
350LC30 Details available on request.

400LC30 Details available on request.

Available in South Australia and Victoria.

* Available in South Australia only.

Refer below for Victorian 100 C sections.



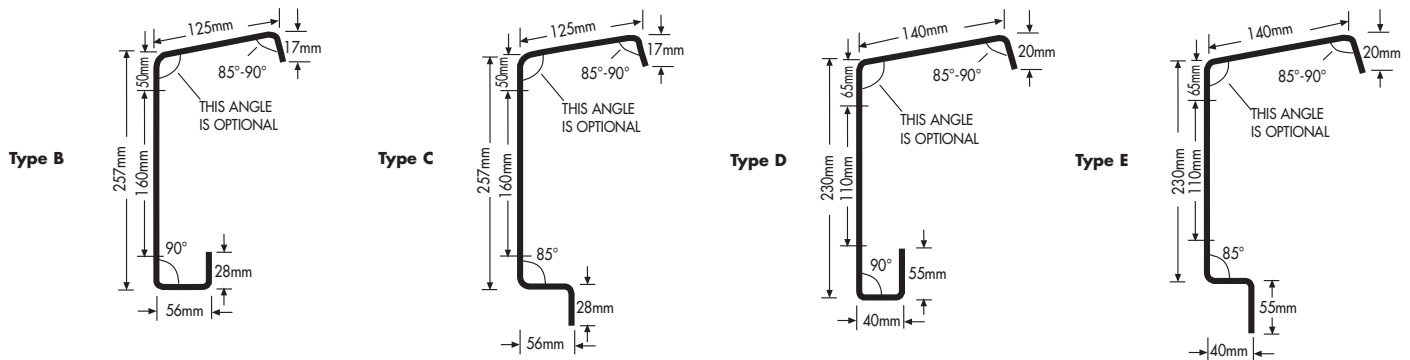
Section Properties of the Fielders Victorian C System*

Cat No.	A mm	B mm	D mm	t mm	CY mm	Area mm ²	Mass kg/m	I _x 10 ⁶ mm ⁴	I _y 10 ⁶ mm ⁴	Z _x 10 ³ mm ³	Z _y 10 ³ mm ³	r _x mm	r _y mm	J mm ⁴	I _w 10 ⁶ mm ⁴
100FC10	102	51	12.5	1.0	16.1	216	1.78	0.36	0.0755	7.130	2.190	41.1	18.7	71.90	160.00
100FC12	102	51	12.5	1.2	16.0	258	2.10	0.4320	0.892	8.480	2.590	41.0	18.6	124.00	188.00
100FC15	102	51	13.5	1.5	16.1	323	2.62	0.5370	0.112	10.50	3.290	40.8	18.7	242.00	241.00
100FC19	102	51	14.5	1.9	16.2	409	3.29	0.673	0.142	13.20	4.210	40.6	18.7	492.00	311.00

* Available in Victoria only.

Fielders Fascia Options

The following Fascia Sections have been designed to supply the structural trade with four options. Each option has been designed to be used with the standard punched purlin and girt system and the Fastspan purlin and girt system.



Fascia Purlin – Section Properties

Fascia Purlin Type	Area (mm ²)	Second Moment of Area (10E6 mm ⁴)				Torsion Constant J (mm ⁴)	Warping Constant I _w (10E9 mm ⁶)	Monosymmetric Constant (mm)		Shear Centre (mm)		Centroid (mm)		α (deg)
		I _x	I _y	I _x	I _y			β _x	β _y	x _o	y _o	x _c	y _c	
Type C	757.7	8.124	1.151	7.91	9.88	646.6	5.46	-134.52	296.19	-66.31	60.69	28.51	110.8	-9.689
Type E	760.3	7.537	1.483	7.4	1.19	648.8	2.56	-148.8	296.91	-72.97	66.63	33.79	96.87	-13.457

Allowable loads for Fascia Purlin Type C (kN/m)

SPAN (mm)	6000	6600	7200	7800	8400	9000	9600	10000
One Bridge	1.69	1.22	0.91	0.69	0.53	0.42	0.33	0.27
Two Bridge	2.30	1.84	1.47	1.19	0.97	0.79	0.64	0.52
Fully Braced	2.30	1.90	1.60	1.36	1.18	1.02	0.90	0.80
Defl. (L150)	3.75	2.82	2.17	1.71	1.37	1.11	0.92	0.76

Allowable loads for Fascia Purlin Type E (kN/m)

SPAN (mm)	6000	6600	7200	7800	8400	9000	9600	10000
One Bridge	1.35	0.97	0.72	0.54	0.42	0.33	0.26	0.21
Two Bridge	2.18	1.69	1.32	1.03	0.80	0.63	0.51	0.41
Fully Braced	2.36	1.95	1.64	1.40	1.21	1.05	0.92	0.82
Defl. (L150)	3.51	2.63	2.03	1.60	1.28	1.04	0.86	0.71

Notes:

1. Yield stress is 300MPa.
2. Top flange is assumed to be at 90° to web for load capacity calculations.
3. Load capacities for one and two bridging cases assume roof sheeting attached to top flange.

4. Load capacities for fully braced case assume roof sheeting attached to top flange and wall sheeting attached to bottom lip.
5. Standard M12 Purlin bolts to be used.

Calculated in accordance with AS-NZS4600 - 1996.



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