

Issue 4



Steel Sections

**Zed Purlins**

*and*

**Cee Sections**

*Manufactured to Your Satisfaction*



# Steel Sections

Steel Sections is one of the leading independent manufacturers of rollformed section with over 40 years experience

Steel Sections offer **Zed** Purlins, **Cee** Sections and **Eaves** Beams manufactured to customers specification, supplied cut to length and fully pierced.

Also available is a full range of accessories including Anti-Sag rods, Side Rails, Cleats etc.

Single point contact with our Sales and Production team gives you the flexibility and reassurance to amend and track the progress of your order.


Our expert knowledge, commitment to quality, excellent service and competitive prices offer products second to none.

## Accreditations

 All of our Structural products are CE marked



Our commitment to quality is maintained by ISO:9001 accreditations

 We are registered members of the British Standards Institute

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## Load Tables

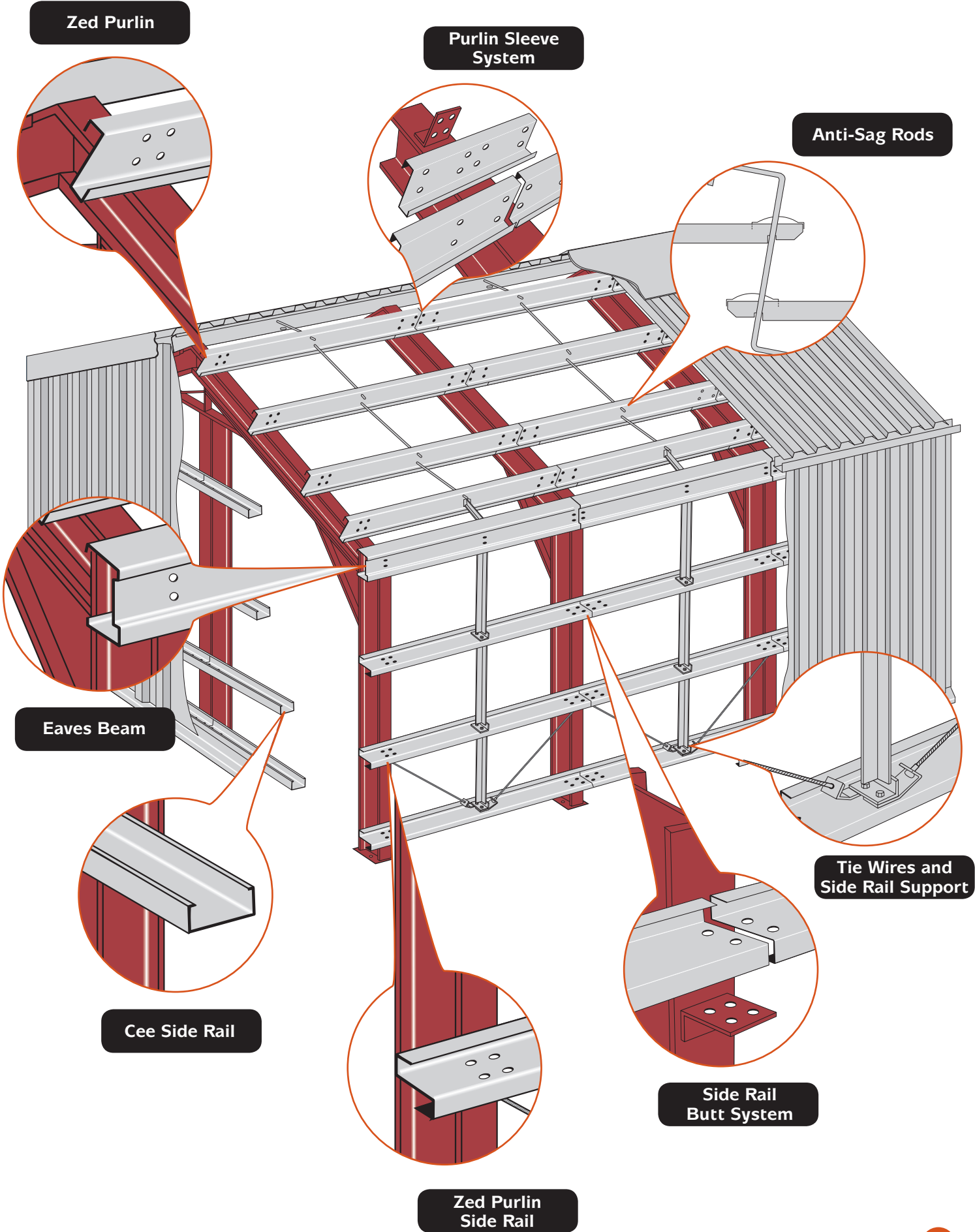
<b>10-11</b>	Zed Purlin	- Sleeved
<b>12-13</b>	Zed Purlin	- Butted
<b>14-15</b>	Zed Side Rails	- Sleeved
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<b>20-21</b>	Eaves Beams	
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*All of our products are available on the following drawing packages:*

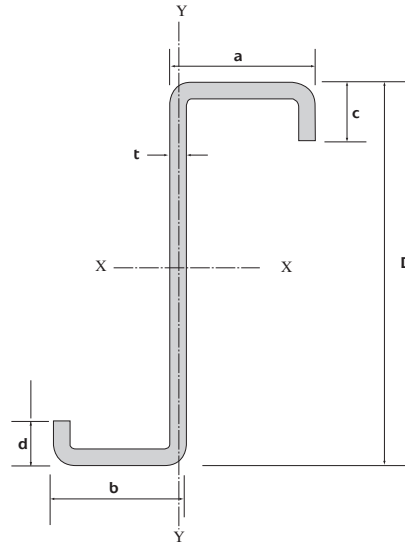


Advanced Steel

# Product Range



# Zed Section Properties

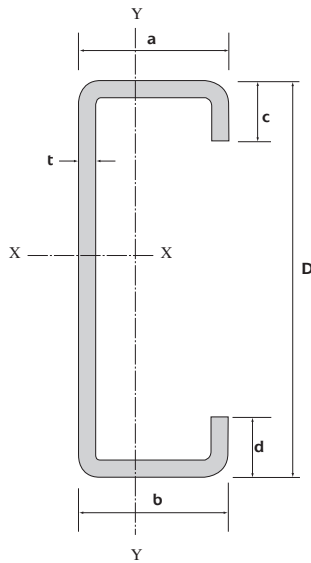


## Section Dimensions and Properties - Metric

Section Ref	Depth	Thick-ness	Top Flange	Bottom Flange	Top Lip	Bottom Lip	Wt/m	Second Moment of Area			Section Modulus		Radius of Gyration		Moment Capacity	
								Area	Major Axis I <sub>xx</sub>	Minor Axis I <sub>yy</sub>	Major Axis Z <sub>xx</sub>	Minor Axis Z <sub>yy</sub>	Major Axis r <sub>gx</sub>	Minor Axis r <sub>gy</sub>	Major Axis M <sub>cx</sub>	Minor Axis M <sub>cy</sub>
	D mm	t mm	a mm	b mm	c mm	d mm	Kg/m	cm <sup>2</sup>	cm <sup>4</sup>	cm <sup>4</sup>	cm <sup>3</sup>	cm <sup>3</sup>	cm	cm	kNm	kNm
PI21-16	121	1.6	55	50	18	16	3.19	4.06	94.56	27.59	15.25	5.26	4.83	2.61	6.68	2.24
PI40-14	140	1.4	55	50	18	16	3.00	3.83	116.82	24.46	16.3	4.64	5.3	2.54	6.7	2.11
PI40-16	140	1.6	55	50	18	16	3.42	4.36	132.67	27.6	18.51	5.25	5.52	2.52	7.85	2.17
PI40-18	140	1.8	55	50	18	16	3.84	4.89	148.32	30.65	20.7	5.84	5.51	2.50	9.19	2.48
PI40-20	140	2	55	50	18	16	4.25	5.42	163.75	33.62	22.85	6.42	5.50	2.49	10.45	2.78
PI40-25	140	2.5	55	50	18	16	5.28	6.73	201.45	40.68	28.11	7.8	5.47	2.46	13.44	3.49
PI77-14	177	1.4	55	50	18	16	3.41	4.35	202.35	24.47	22.39	4.63	6.82	2.37	8.30	1.72
PI77-16	177	1.6	55	50	18	16	3.89	4.95	229.99	27.61	25.45	5.23	6.81	2.36	10.15	2.03
PI77-18	177	1.8	55	50	18	16	4.36	5.56	257.31	30.67	28.47	5.82	6.80	2.35	11.93	2.34
PI77-20	177	2	55	50	18	16	4.84	6.16	284.32	33.64	31.46	6.4	6.79	2.34	13.63	2.64
PI77-25	177	2.5	55	50	18	16	6.01	7.65	350.48	40.7	38.77	7.77	6.77	2.31	17.72	3.36
P200-14	200	1.4	61	55	17	17	3.78	4.82	285.53	31.65	28.07	5.36	7.70	2.56	9.59	1.89
P200-16	200	1.6	61	55	17	17	4.32	5.5	324.7	35.75	31.92	6.07	7.69	2.55	11.91	2.26
P200-18	200	1.8	61	55	17	17	4.84	6.17	363.47	39.74	35.73	6.75	7.68	2.54	14.17	2.62
P200-20	200	2	61	55	17	17	5.37	6.84	401.84	43.64	39.5	7.43	7.66	2.53	16.35	2.97
P200-25	200	2.5	61	55	17	17	6.67	8.5	496.04	52.94	48.75	9.05	7.64	2.50	21.54	3.82
P235-14	235	1.4	65	60	20	18	4.31	5.49	441.39	40.55	36.94	6.44	8.96	2.72	11.52	2.10
P235-16	235	1.6	65	60	20	18	4.92	6.27	502.24	45.84	42.03	7.29	8.95	2.70	14.54	2.55
P235-18	235	1.8	65	60	20	18	5.52	7.03	562.55	51.01	47.08	8.13	8.94	2.69	17.51	2.98
P235-20	235	2	65	60	20	18	6.12	7.8	622.32	56.06	52.08	8.94	8.93	2.68	20.41	3.41
P235-25	235	2.5	65	60	20	18	7.61	9.7	769.37	68.18	64.38	10.92	8.91	2.65	27.32	4.44
P265-14	265	1.4	65	60	20	18	4.64	5.91	587.81	40.55	43.67	6.43	9.97	2.62	12.82	1.94
P265-16	265	1.6	65	60	20	18	5.3	6.75	669.04	45.85	49.71	7.28	9.96	2.61	16.30	2.39
P265-18	265	1.8	65	60	20	18	5.95	7.57	749.6	51.02	55.69	8.11	9.95	2.60	19.74	2.83
P265-20	265	2	65	60	20	18	6.59	8.4	829.48	56.07	61.62	8.93	9.94	2.58	23.11	3.26
P265-25	265	2.5	65	60	20	18	8.2	10.45	1026.25	68.19	76.24	10.9	9.91	2.55	31.22	4.29

All sections are manufactured from pre-hot dipped galvanised steel coil to BS EN 10346 with a minimum yield strength of 450 N/mm<sup>2</sup> and Z275 coating.

# Cee Section Properties



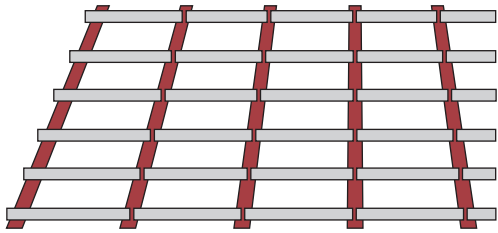
## Section Dimensions and Properties - Metric

Section Ref	Depth	Thick-ness	Top Flange	Bottom Flange	Top Lip	Bottom Lip	Wt/m.	Area	Second Moment of Area		Section Modulus		Radius of Gyration		Moment Capacity	
									Major Axis I <sub>xx</sub>	Minor Axis I <sub>yy</sub>	Major Axis Z <sub>xx</sub>	Minor Axis Z <sub>yy</sub>	Major Axis r <sub>gx</sub>	Minor Axis r <sub>gy</sub>	Major Axis M <sub>cx</sub>	Minor Axis M <sub>cy</sub>
	D mm	t mm	a mm	b mm	c mm	d mm	Kg/m	cm <sup>2</sup>	cm <sup>4</sup>	cm <sup>4</sup>	cm <sup>3</sup>	cm <sup>3</sup>	cm	cm	kNm	kNm
C140-14	140	1.4	65	65	15	15	3.24	4.12	132.12	23.86	18.87	5.37	5.66	2.41	6.61	2.40
C140-16	140	1.6	65	65	15	15	3.69	4.70	150.10	26.99	21.44	6.08	5.65	2.40	8.20	2.73
C140-18	140	1.8	65	65	15	15	4.14	5.27	167.86	30.05	23.98	6.77	5.64	2.39	9.77	3.05
C140-20	140	2	65	65	15	15	4.58	5.84	185.40	33.05	26.49	7.45	5.63	2.38	11.27	3.35
C140-25	140	2.5	65	65	15	15	5.69	7.25	228.29	40.27	32.61	9.08	5.61	2.36	14.74	4.09
C177-14	177	1.4	65	65	15	15	3.64	4.64	226.56	25.68	25.60	5.51	6.99	2.35	8.50	2.47
C177-16	177	1.6	65	65	15	15	4.15	5.29	257.59	29.05	29.11	6.24	6.98	2.34	10.59	2.80
C177-18	177	1.8	65	65	15	15	4.66	5.94	288.28	32.36	32.57	6.95	6.97	2.33	12.65	3.13
C177-20	177	2	65	65	15	15	5.17	6.58	318.64	35.59	36.00	7.64	6.96	2.33	14.65	3.44
C177-25	177	2.5	65	65	15	15	6.42	8.18	393.11	43.36	44.42	9.31	6.93	2.30	19.32	4.19
C200-14	200	1.4	65	65	15	15	3.89	4.96	301.05	26.62	30.11	5.58	7.79	2.32	9.66	2.50
C200-16	200	1.6	65	65	15	15	4.44	5.66	342.39	30.12	34.24	6.31	7.78	2.31	12.07	2.84
C200-18	200	1.8	65	65	15	15	4.99	6.35	383.33	33.54	38.33	7.03	7.77	2.30	14.45	3.16
C200-20	200	2	65	65	15	15	5.53	7.04	423.85	36.89	42.38	7.73	7.76	2.29	16.76	3.48
C200-25	200	2.5	65	65	15	15	6.87	8.75	523.37	44.95	52.34	9.43	7.73	2.27	22.23	4.24
C235-14	235	1.4	65	65	15	15	4.28	5.45	439.87	27.84	37.44	5.65	8.98	2.26	11.31	2.53
C235-16	235	1.6	65	65	15	15	4.88	6.22	500.49	31.50	42.59	6.40	8.97	2.25	14.23	2.88
C235-18	235	1.8	65	65	15	15	5.48	6.98	560.56	35.08	47.71	7.13	8.96	2.24	17.12	3.21
C235-20	235	2	65	65	15	15	6.08	7.74	620.08	38.58	52.77	7.84	8.95	2.23	19.95	3.53
C235-25	235	2.5	65	65	15	15	7.56	9.63	766.50	47.00	65.23	9.56	8.92	2.21	26.69	4.30
C265-14	265	1.4	65	65	15	15	4.61	5.87	585.32	28.73	44.17	5.71	9.98	2.21	12.58	2.56
C265-16	265	1.6	65	65	15	15	5.26	6.70	666.18	32.50	50.28	6.46	9.97	2.20	15.96	2.91
C265-18	265	1.8	65	65	15	15	5.90	7.52	746.35	36.19	56.33	7.20	9.96	2.19	19.32	3.24
C265-20	265	2	65	65	15	15	6.55	8.34	825.85	39.80	62.33	7.92	9.95	2.18	22.61	3.56
C265-25	265	2.5	65	65	15	15	8.14	10.38	1021.62	48.48	77.10	9.66	9.92	2.16	30.53	4.35

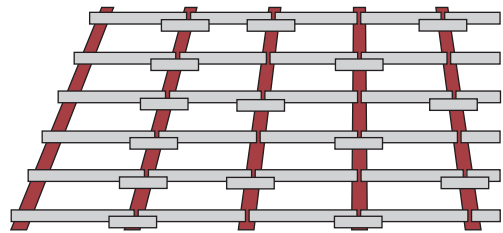
All sections are manufactured from pre-hot dipped galvanised steel coil to BS EN 10346 with a minimum yield strength of 450 N/mm<sup>2</sup> and Z275 coating.



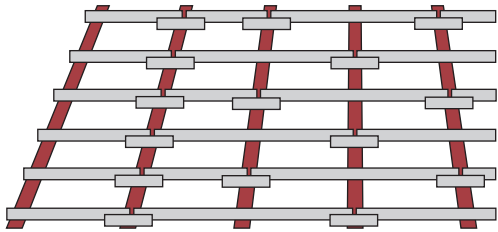
# Typical Purlin Layouts



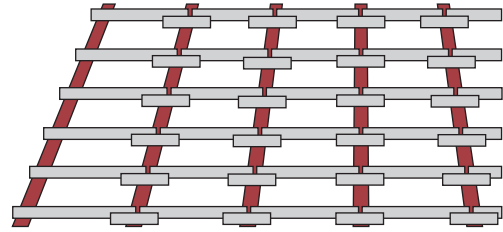
Butt purlin arrangement



Staggered sleeve arrangement



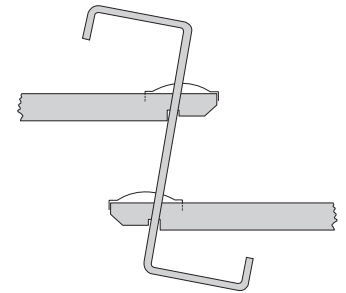
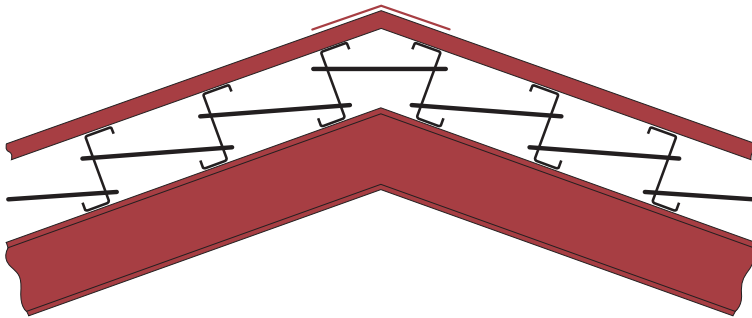
Double span with sleeves



Fully sleeved arrangement

## Anti-Sag Rod Fixings

'Easy Fix' anti-sag rods form an integral part of the roofing system and fulfil important functions in stabilising the purlins during erection and fixing of the roof cladding and subsequently under loading, particularly wind suction.

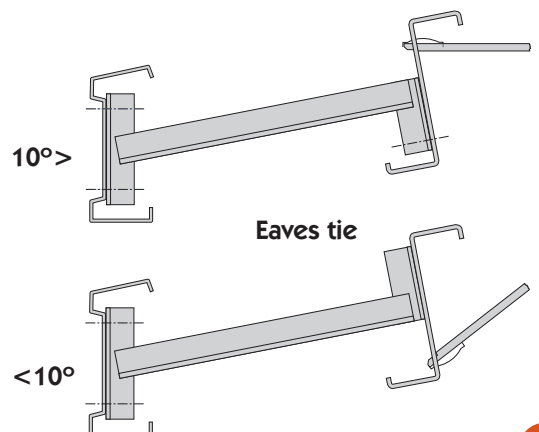
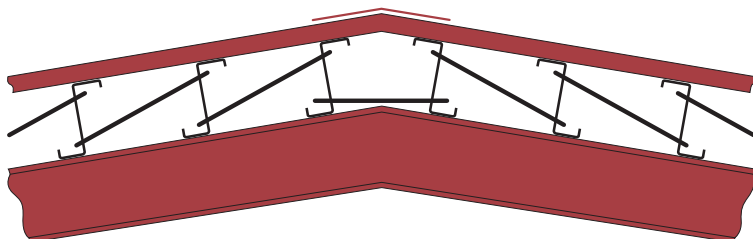


Easy-fix anti-sag rods

**For roof slopes of 10° or more:** – Sag rods should be fixed continuously over the apex and fixed from the bottom hole to top hole down the slope.

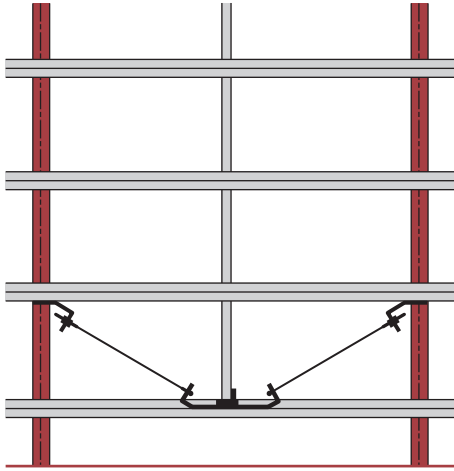
**Below 10° pitch fixing is reversed:** – Where the slope is below 10° then the sag rods are fixed as shown below.

We also recommend that the lowest purlin is connected to the eaves structural member.

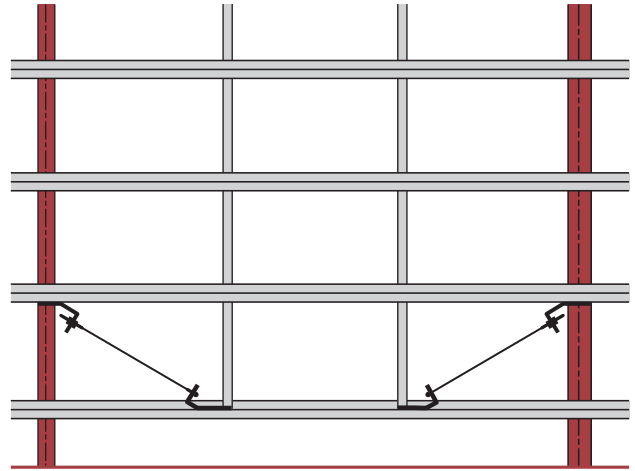


Eaves tie

# Side Rail Restraint Systems

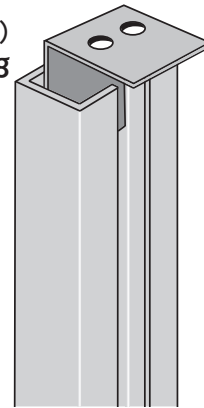


Spans up to 6.1 metres  
Single side rail support arrangement

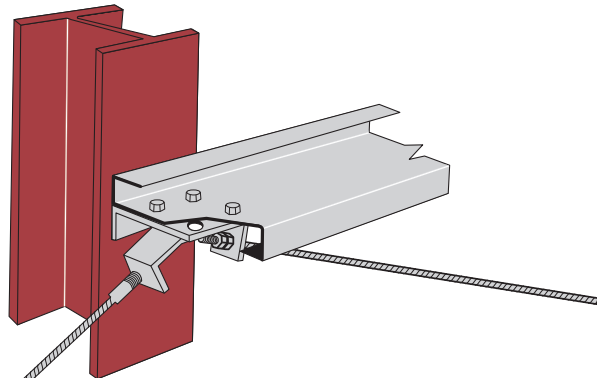


Spans over 6.1 metres  
Double side rail support arrangement

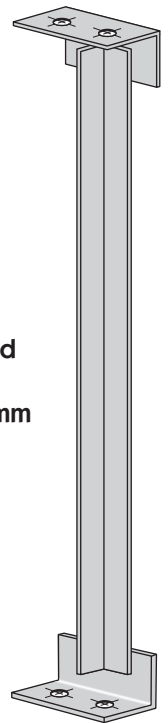
Panel Jointing Rail (PJR)  
for Horizontal Cladding  
Support System



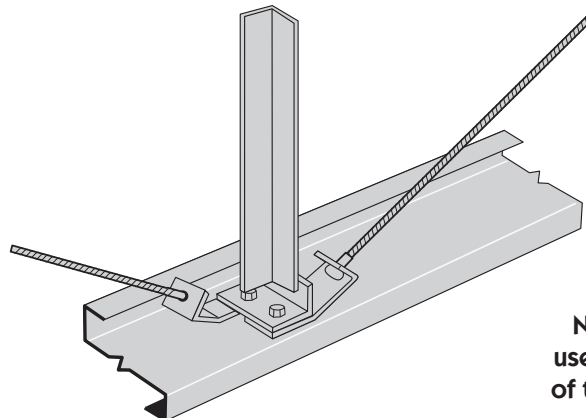
Diagonal tie wires  
fixings arrangement



Side rail  
support  
constructed  
from  
45 x 45 x 2mm  
angle



Designed with a 75mm  
adjustment on length  
and an angular  
movement from 20° up  
to a maximum of 60°

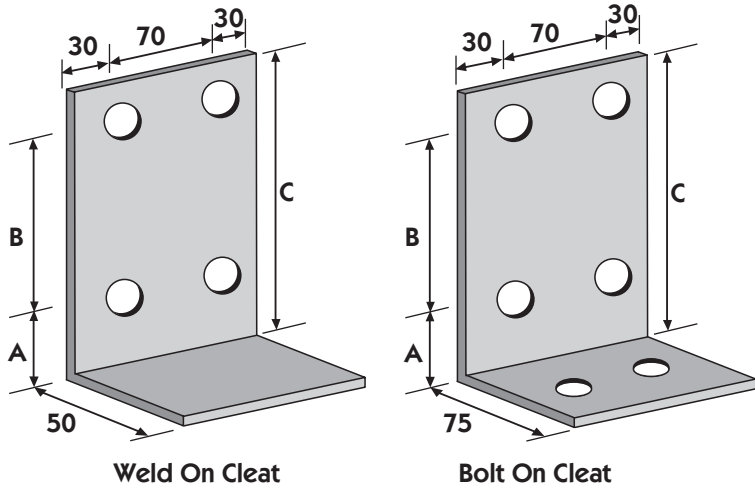


NOTE: When side rail supports are used at a mid point the overall length of the rail should be reduced by 6mm (Brackets fitted under side rail)

Cleider Rails: Available in 45x45x2mm, 50x50x16mm, 50x50x2mm, 70x70x2mm and 100x100x2mm.  
Supplied in 6 metre lengths as standard



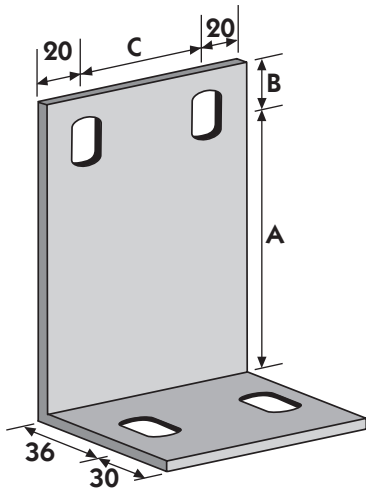
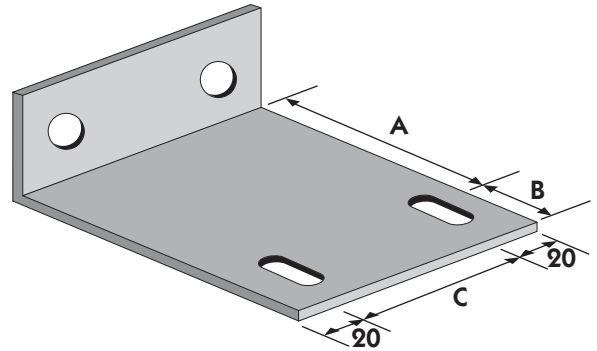
# Cleats



	Bolt-On Cleat Prefix: BC		Weld-On Cleat Prefix: WC			
Reference:	121	140	177	200	235	265
Thickness	6	6	6	6	8	8
Dimension A	50	50	50	50	50	50
Dimension B	40	60	80	116	146	176
Dimension C	120	140	160	196	226	256
Hole Diameter	18	18	18	18	18	18

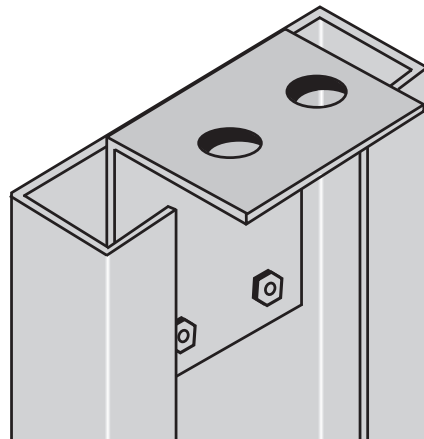
Weld on cleats are supplied plain finish  
Bolt on cleats are supplied Hot Dipped Galvanised

Inset Cleat Prefix: IC		Finish: HDG				
Reference:	121	140	177	200	235	265
Thickness	6	6	6	6	6	6
Dimension A	120	120	120	120	120	120
Dimension B	40	40	40	40	40	40
Dimension C	40	60	80	116	146	176
Hole Diameter	18	18	18	18	18	18



Trimmer Cleat Prefix: TC		Finish: Pre Galv				
Reference:	121	140	177	200	235	265
Thickness	3	3	3	3	3	3
Dimension A	110	110	110	110	110	110
Dimension B	30	30	30	30	30	30
Dimension C	40	60	80	116	146	176
Hole Diameter	18	18	18	18	18	18

Non-standard cleats available on request.



# Zed Purlin Sleeved Systems

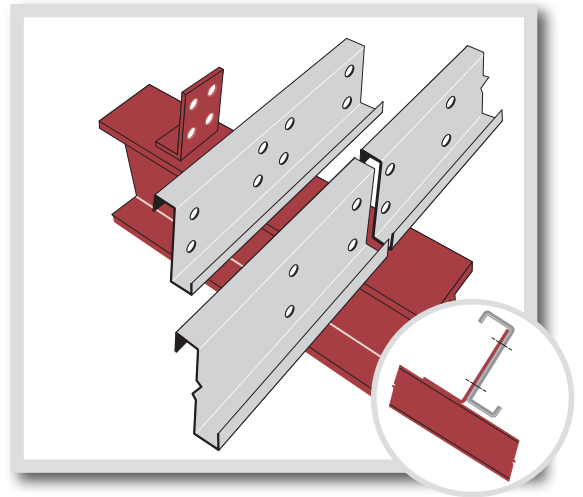
Grade S450

## Performance

The performance of the systems shown in the tables below have been derived by calculation in accordance with BS EN 1993-1-3:2006. Purlin load tables are valid up to and including 25° roof slopes.

## Load Factors

Loading	Factor
Dead load	1.40
Dead load restraining uplift or overturning	1.00
Dead load acting with wind and imposed loads combined	1.20
Imposed load	1.60
Imposed load acting with wind load	1.20
Wind load	1.40
Wind load acting with imposed load	1.20
Forces due to temperature effects	1.20
Drifting Snow	1.05



Span Metres	Section	UDL kN	Allowable Loads (kN/sq.m) for Varying Purlin Centres (mm)							
			1000	1200	1375	1500	1675	1800	2000	2500
3.5m	P121-16	12.36	3.53	2.94	2.57	2.35	2.11	1.96	1.77	1.41
	P140-14	13.07	3.73	3.11	2.72	2.49	2.23	2.07	1.87	1.49
	P140-16	15.91	4.55	3.79	3.31	3.03	2.71	2.53	2.27	1.82
	P140-18	18.62	5.32	4.43	3.87	3.55	3.18	2.95	2.66	2.13
	P177-14	16.82	4.81	4.00	3.50	3.20	2.87	2.67	2.40	1.92
	P177-16	20.58	5.88	4.90	4.28	3.92	3.51	3.27	2.94	2.35
4.0m	P121-16	9.42	2.36	1.96	1.71	1.57	1.41	1.31	1.18	0.94
	P140-14	11.41	2.85	2.38	2.07	1.90	1.70	1.58	1.43	1.14
	P140-16	13.26	3.32	2.76	2.41	2.21	1.98	1.84	1.66	1.33
	P140-18	14.83	3.71	3.09	2.70	2.47	2.21	2.06	1.85	1.48
	P140-20	16.37	4.09	3.41	2.98	2.73	2.44	2.27	2.05	1.64
	P177-14	14.69	3.67	3.06	2.67	2.45	2.19	2.04	1.84	1.47
4.5m	P121-16	7.40	1.65	1.37	1.20	1.10	0.98	0.91	0.82	0.66
	P140-14	9.19	2.04	1.70	1.49	1.36	1.22	1.13	1.02	0.82
	P140-16	10.44	2.32	1.93	1.69	1.55	1.38	1.29	1.16	0.93
	P140-18	11.66	2.59	2.16	1.89	1.73	1.55	1.44	1.30	1.04
	P140-20	12.88	2.86	2.38	2.08	1.91	1.71	1.59	1.43	1.14
	P177-14	13.02	2.89	2.41	2.10	1.93	1.73	1.61	1.45	1.16
5.0m	P177-16	15.94	3.54	2.95	2.58	2.36	2.11	1.97	1.77	1.42
	P121-16	5.96	1.19	0.99	0.87	0.79	0.71	0.66	0.60	0.48
	P140-14	7.40	1.48	1.23	1.08	0.99	0.88	0.82	0.74	0.59
	P140-16	8.41	1.68	1.40	1.22	1.12	1.00	0.93	0.84	0.67
	P140-18	9.40	1.88	1.57	1.37	1.25	1.12	1.04	0.94	0.75
	P140-20	10.37	2.07	1.73	1.51	1.38	1.24	1.15	1.04	0.83
	P177-14	11.69	2.34	1.95	1.70	1.56	1.40	1.30	1.17	0.94
	P177-16	14.31	2.86	2.38	2.08	1.91	1.71	1.59	1.43	1.14
	P177-18	16.42	3.28	2.74	2.39	2.19	1.96	1.82	1.64	1.31
	P177-20	18.14	3.63	3.02	2.64	2.42	2.17	2.02	1.81	1.45
5.5m	P200-18	20.00	4.00	3.33	2.91	2.67	2.39	2.22	2.00	1.60
	P200-20	23.10	4.62	3.85	3.36	3.08	2.76	2.57	2.31	1.85
	P140-16	6.90	1.25	1.05	0.91	0.84	0.75	0.70	0.63	0.50
	P140-18	7.71	1.40	1.17	1.02	0.94	0.84	0.78	0.70	0.56
	P140-20	8.52	1.55	1.29	1.13	1.03	0.92	0.86	0.77	0.62
	P140-25	10.48	1.90	1.59	1.39	1.27	1.14	1.06	0.95	0.76
	P177-14	10.59	1.93	1.61	1.40	1.28	1.15	1.07	0.96	0.77
	P177-16	12.07	2.20	1.83	1.60	1.46	1.31	1.22	1.10	0.88
	P177-18	13.51	2.46	2.05	1.79	1.64	1.47	1.36	1.23	0.98
	P177-20	14.93	2.71	2.26	1.97	1.81	1.62	1.51	1.36	1.09
6.0m	P200-16	15.23	2.77	2.31	2.01	1.85	1.65	1.54	1.38	1.11
	P200-18	18.14	3.30	2.75	2.40	2.20	1.97	1.83	1.65	1.32
	P200-20	20.95	3.81	3.17	2.77	2.54	2.27	2.12	1.90	1.52
	P140-20	7.10	1.18	0.99	0.86	0.79	0.71	0.66	0.59	0.47
	P140-25	8.73	1.46	1.21	1.06	0.97	0.87	0.81	0.73	0.58
	P177-14	8.88	1.48	1.23	1.08	0.99	0.88	0.82	0.74	0.59
	P177-16	10.09	1.68	1.40	1.22	1.12	1.00	0.93	0.84	0.67
	P177-18	11.29	1.88	1.57	1.37	1.25	1.12	1.05	0.94	0.75
P177-20	12.48	2.08	1.73	1.51	1.39	1.24	1.16	1.04	0.83	
P177-25	15.38	2.56	2.14	1.86	1.71	1.53	1.42	1.28	1.03	

# Zed Purlin Sleeved Systems

Grade S450

Span Metres	Section	UDL kN	Allowable Loads (kN/sq.m) for Varying Purlin Centres (mm)							
			1000	1200	1375	1500	1675	1800	2000	2500
6.0m cont'd	P200-16	13.92	2.32	1.93	1.69	1.55	1.39	1.29	1.16	0.93
	P200-18	16.03	2.67	2.23	1.94	1.78	1.59	1.48	1.34	1.07
	P200-20	17.72	2.95	2.46	2.15	1.97	1.76	1.64	1.48	1.18
	P235-16	17.02	2.84	2.36	2.06	1.89	1.69	1.58	1.42	1.13
	P235-18	20.52	3.42	2.85	2.49	2.28	2.04	1.90	1.71	1.37
6.5m	P177-18	9.56	1.47	1.23	1.07	0.98	0.88	0.82	0.74	0.59
	P177-20	10.56	1.63	1.35	1.18	1.08	0.97	0.90	0.81	0.65
	P177-25	13.02	2.00	1.67	1.46	1.34	1.20	1.11	1.00	0.80
	P200-16	12.14	1.87	1.56	1.36	1.25	1.12	1.04	0.93	0.75
	P200-18	13.59	2.09	1.74	1.52	1.39	1.25	1.16	1.05	0.84
	P200-20	15.03	2.31	1.93	1.68	1.54	1.38	1.28	1.16	0.92
	P200-25	18.54	2.85	2.38	2.07	1.90	1.70	1.59	1.43	1.14
	P235-16	15.66	2.41	2.01	1.75	1.61	1.44	1.34	1.20	0.96
	P235-18	18.89	2.91	2.42	2.11	1.94	1.74	1.61	1.45	1.16
	P235-20	22.04	3.39	2.83	2.47	2.26	2.02	1.88	1.70	1.36
	P265-16	17.57	2.70	2.25	1.97	1.80	1.61	1.50	1.35	1.08
	P265-18	21.31	3.28	2.73	2.38	2.19	1.96	1.82	1.64	1.31
	7.0m	P200-16	10.41	1.49	1.24	1.08	0.99	0.89	0.83	0.74
P200-18		11.65	1.66	1.39	1.21	1.11	0.99	0.92	0.83	0.67
P200-20		12.88	1.84	1.53	1.34	1.23	1.10	1.02	0.92	0.74
P200-25		15.90	2.27	1.89	1.65	1.51	1.36	1.26	1.14	0.91
P235-16		14.49	2.07	1.73	1.51	1.38	1.24	1.15	1.04	0.83
P235-18		17.49	2.50	2.08	1.82	1.67	1.49	1.39	1.25	1.00
P235-20		20.10	2.87	2.39	2.09	1.91	1.71	1.60	1.44	1.15
P235-25		24.85	3.55	2.96	2.58	2.37	2.12	1.97	1.77	1.42
P265-16		16.26	2.32	1.94	1.69	1.55	1.39	1.29	1.16	0.93
P265-18		19.74	2.82	2.35	2.05	1.88	1.68	1.57	1.41	1.13
P265-20	23.13	3.30	2.75	2.40	2.20	1.97	1.84	1.65	1.32	
7.5m	P200-18	10.08	1.34	1.12	0.98	0.90	0.80	0.75	0.67	0.54
	P200-20	11.15	1.49	1.24	1.08	0.99	0.89	0.83	0.74	0.59
	P200-25	13.76	1.83	1.53	1.33	1.22	1.10	1.02	0.92	0.73
	P235-16	13.48	1.80	1.50	1.31	1.20	1.07	1.00	0.90	0.72
	P235-18	15.75	2.10	1.75	1.53	1.40	1.25	1.17	1.05	0.84
	P235-20	17.43	2.32	1.94	1.69	1.55	1.39	1.29	1.16	0.93
	P235-25	21.54	2.87	2.39	2.09	1.91	1.71	1.60	1.44	1.14
	P265-16	15.13	2.02	1.68	1.47	1.34	1.20	1.12	1.01	0.81
	P265-18	18.36	2.45	2.04	1.78	1.63	1.46	1.36	1.22	0.98
P265-20	21.53	2.87	2.39	2.09	1.91	1.71	1.59	1.44	1.15	
8.0m	P200-25	12.00	1.50	1.25	1.09	1.00	0.90	0.83	0.75	0.60
	P235-16	12.29	1.54	1.28	1.12	1.02	0.92	0.85	0.77	0.61
	P235-18	13.77	1.72	1.43	1.25	1.15	1.03	0.96	0.86	0.69
	P235-20	15.23	1.90	1.59	1.38	1.27	1.14	1.06	0.95	0.76
	P235-25	18.83	2.35	1.96	1.71	1.57	1.40	1.31	1.18	0.94
	P265-16	14.13	1.77	1.47	1.28	1.18	1.05	0.98	0.88	0.71
	P265-18	17.16	2.14	1.79	1.56	1.43	1.28	1.19	1.07	0.86
	P265-20	20.12	2.51	2.10	1.83	1.68	1.50	1.40	1.26	1.01
	P265-23	23.34	2.92	2.43	2.12	1.95	1.74	1.62	1.46	1.17
P265-25	25.27	3.16	2.63	2.30	2.11	1.89	1.75	1.58	1.26	
8.5m	P235-18	12.12	1.43	1.19	1.04	0.95	0.85	0.79	0.71	0.57
	P235-20	13.41	1.58	1.31	1.15	1.05	0.94	0.88	0.79	0.63
	P235-25	16.57	1.95	1.62	1.42	1.30	1.16	1.08	0.97	0.78
	P265-16	13.25	1.56	1.30	1.13	1.04	0.93	0.87	0.78	0.62
	P265-18	16.09	1.89	1.58	1.38	1.26	1.13	1.05	0.95	0.76
	P265-20	18.00	2.12	1.76	1.54	1.41	1.26	1.18	1.06	0.85
	P265-25	22.27	2.62	2.18	1.91	1.75	1.56	1.46	1.31	1.05
9.0m	P235-20	11.87	1.32	1.10	0.96	0.88	0.79	0.73	0.66	0.53
	P235-25	14.68	1.63	1.36	1.19	1.09	0.97	0.91	0.82	0.65
	P265-16	12.47	1.39	1.15	1.01	0.92	0.83	0.77	0.69	0.55
	P265-18	14.43	1.60	1.34	1.17	1.07	0.96	0.89	0.80	0.64
	P265-20	15.96	1.77	1.48	1.29	1.18	1.06	0.99	0.89	0.71
P265-25	19.75	2.19	1.83	1.60	1.46	1.31	1.22	1.10	0.88	
9.5m	P265-18	12.87	1.35	1.13	0.98	0.90	0.81	0.75	0.68	0.54
	P265-20	14.24	1.50	1.25	1.09	1.00	0.89	0.83	0.75	0.60
	P265-25	17.61	1.85	1.54	1.35	1.24	1.11	1.03	0.93	0.74
10.0m	P265-20	12.76	1.28	1.06	0.93	0.85	0.76	0.71	0.64	0.51
	P265-25	15.78	1.58	1.31	1.15	1.05	0.94	0.88	0.79	0.63

# Zed Purlin Butt Systems

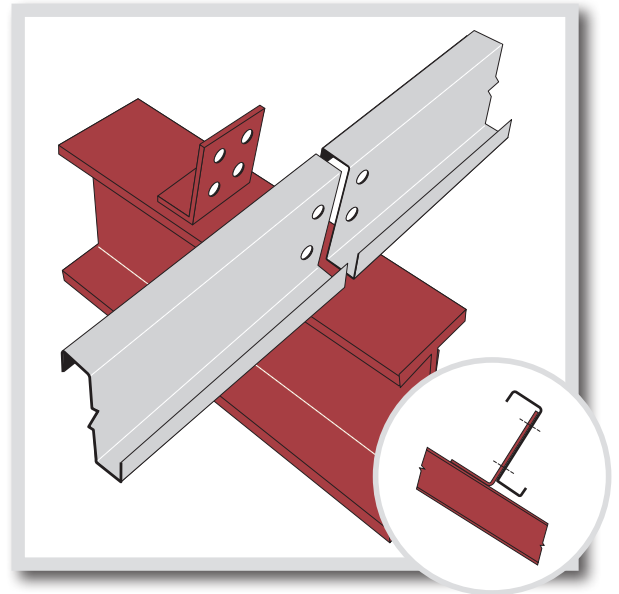
Grade S450

## Performance

The performance of the systems shown in the table below have been derived by calculation in accordance with BS EN 1993-1-3:2006. Purlin load tables are valid up to and including 25° roof slopes.

## Load Factors

Loading	Factor
Dead load	1.40
Dead load restraining uplift or overturning	1.00
Dead load acting with wind and imposed loads combined	1.20
Imposed load	1.60
Imposed load acting with wind load	1.20
Wind load	1.40
Wind load acting with imposed load	1.20
Forces due to temperature effects	1.20
Drifting Snow	1.05



Span Metres	Section	UDL kN	Allowable Loads (kN/sq.m) for Varying Purlin Centres (mm)							
			1000	1200	1375	1500	1675	1800	2000	2500
3.5m	PI21-16	6.64	1.90	1.58	1.38	1.27	1.13	1.05	0.95	0.76
	PI40-14	8.24	2.35	1.96	1.71	1.57	1.41	1.31	1.18	0.94
	PI40-16	9.36	2.67	2.23	1.94	1.78	1.60	1.49	1.34	1.07
	PI40-18	10.46	2.99	2.49	2.17	1.99	1.78	1.66	1.49	1.20
	PI40-20	11.55	3.30	2.75	2.40	2.20	1.97	1.83	1.65	1.32
	PI77-14	13.43	3.84	3.20	2.79	2.56	2.29	2.13	1.92	1.54
	PI77-16	16.29	4.65	3.88	3.38	3.10	2.78	2.59	2.33	1.86
	PI77-18	19.15	5.46	4.51	3.91	3.58	3.21	2.99	2.69	2.16
4.0m	PI21-16	5.04	1.26	1.05	0.92	0.84	0.75	0.70	0.63	0.50
	PI40-14	6.27	1.57	1.31	1.14	1.04	0.94	0.87	0.78	0.63
	PI40-16	7.12	1.78	1.48	1.29	1.19	1.06	0.99	0.89	0.71
	PI40-18	7.96	1.99	1.66	1.45	1.33	1.19	1.11	0.99	0.80
	PI40-20	8.78	2.20	1.83	1.60	1.46	1.31	1.22	1.10	0.88
	PI77-14	10.93	2.73	2.28	1.99	1.82	1.63	1.52	1.37	1.09
	PI77-16	12.42	3.11	2.59	2.26	2.07	1.85	1.73	1.55	1.24
	PI77-18	13.90	3.47	2.89	2.53	2.32	2.07	1.93	1.74	1.39
	P200-14	13.55	3.39	2.82	2.46	2.26	2.02	1.88	1.69	1.35
	P200-16	16.84	4.21	3.51	3.06	2.81	2.51	2.34	2.11	1.68
4.5m	PI40-16	5.58	1.24	1.03	0.90	0.83	0.74	0.69	0.62	0.50
	PI40-18	6.24	1.39	1.15	1.01	0.92	0.83	0.77	0.69	0.55
	PI40-20	6.89	1.53	1.28	1.11	1.02	0.91	0.85	0.77	0.61
	PI40-25	8.47	1.88	1.57	1.37	1.25	1.12	1.05	0.94	0.75
	PI77-14	8.59	1.91	1.59	1.39	1.27	1.14	1.06	0.95	0.76
	PI77-16	9.76	2.17	1.81	1.58	1.45	1.30	1.21	1.08	0.87
	PI77-18	10.92	2.43	2.02	1.77	1.62	1.45	1.35	1.21	0.97
	PI77-20	12.07	2.68	2.23	1.95	1.79	1.60	1.49	1.34	1.07
	PI77-25	14.87	3.31	2.75	2.40	2.20	1.97	1.84	1.65	1.32
	P200-14	12.01	2.67	2.22	1.94	1.78	1.59	1.48	1.33	1.07
	P200-16	13.83	3.07	2.56	2.24	2.05	1.84	1.71	1.54	1.23
	P200-18	15.49	3.44	2.87	2.50	2.29	2.05	1.91	1.72	1.38
P200-20	17.12	3.80	3.17	2.77	2.54	2.27	2.11	1.90	1.52	
5.0m	PI40-20	5.52	1.10	0.92	0.80	0.74	0.66	0.61	0.55	0.44
	PI40-25	6.79	1.36	1.13	0.99	0.91	0.81	0.75	0.68	0.54
	PI77-14	6.91	1.38	1.15	1.01	0.92	0.83	0.77	0.69	0.55
	PI77-16	7.86	1.57	1.31	1.14	1.05	0.94	0.87	0.79	0.63
	PI77-18	8.79	1.76	1.46	1.28	1.17	1.05	0.98	0.88	0.70
	PI77-20	9.71	1.94	1.62	1.41	1.29	1.16	1.08	0.97	0.78
	PI77-25	11.97	2.39	1.99	1.74	1.60	1.43	1.33	1.20	0.96
	P200-16	11.15	2.23	1.86	1.62	1.49	1.33	1.24	1.11	0.89
	P200-18	12.48	2.50	2.08	1.82	1.66	1.49	1.39	1.25	1.00
	P200-20	13.80	2.76	2.30	2.01	1.84	1.65	1.53	1.38	1.10

# Zed Purlin Butt Systems

Grade S450

Span Metres	Section	UDL kN	Allowable Loads (kN/sq.m) for Varying Purlin Centres (mm)							
			1000	1200	1375	1500	1675	1800	2000	2500
5.5m	P140-25	5.54	1.01	0.84	0.73	0.67	0.60	0.56	0.50	0.40
	P177-16	6.44	1.17	0.98	0.85	0.78	0.70	0.65	0.59	0.47
	P177-18	7.20	1.31	1.09	0.95	0.87	0.78	0.73	0.65	0.52
	P177-20	7.96	1.45	1.21	1.05	0.96	0.86	0.80	0.72	0.58
	P177-25	9.81	1.78	1.49	1.30	1.19	1.06	0.99	0.89	0.71
	P200-16	9.16	1.66	1.39	1.21	1.11	0.99	0.92	0.83	0.67
	P200-18	10.25	1.86	1.55	1.36	1.24	1.11	1.04	0.93	0.75
	P200-20	11.33	2.06	1.72	1.50	1.37	1.23	1.14	1.03	0.82
	P200-25	13.98	2.54	2.12	1.85	1.69	1.52	1.41	1.27	1.02
6.0m	P177-20	6.62	1.10	0.92	0.80	0.74	0.66	0.61	0.55	0.44
	P177-25	8.16	1.36	1.13	0.99	0.91	0.81	0.76	0.68	0.54
	P200-16	7.64	1.27	1.06	0.93	0.85	0.76	0.71	0.64	0.51
	P200-18	8.55	1.42	1.19	1.04	0.95	0.85	0.79	0.71	0.57
	P200-20	9.45	1.57	1.31	1.15	1.05	0.94	0.87	0.79	0.63
	P200-25	11.66	1.94	1.62	1.41	1.30	1.16	1.08	0.97	0.78
	P235-14	10.47	1.75	1.45	1.27	1.16	1.04	0.97	0.87	0.70
	P235-16	11.91	1.99	1.65	1.44	1.32	1.19	1.10	0.99	0.79
	P235-18	13.34	2.22	1.85	1.62	1.48	1.33	1.24	1.11	0.89
6.5m	P200-18	7.22	1.11	0.93	0.81	0.74	0.66	0.62	0.56	0.44
	P200-20	7.98	1.23	1.02	0.89	0.82	0.73	0.68	0.61	0.49
	P200-25	9.84	1.51	1.26	1.10	1.01	0.90	0.84	0.76	0.61
	P235-14	8.86	1.36	1.14	0.99	0.91	0.81	0.76	0.68	0.55
	P235-16	10.08	1.55	1.29	1.13	1.03	0.93	0.86	0.78	0.62
	P235-18	11.29	1.74	1.45	1.26	1.16	1.04	0.97	0.87	0.70
	P235-20	12.49	1.92	1.60	1.40	1.28	1.15	1.07	0.96	0.77
	P265-16	13.51	2.08	1.73	1.51	1.39	1.24	1.15	1.04	0.83
	P265-18	15.14	2.33	1.94	1.69	1.55	1.39	1.29	1.16	0.93
7.0m	P200-25	8.40	1.20	1.00	0.87	0.80	0.72	0.67	0.60	0.48
	P235-16	8.63	1.23	1.03	0.90	0.82	0.74	0.68	0.62	0.49
	P235-18	9.66	1.38	1.15	1.00	0.92	0.82	0.77	0.69	0.55
	P235-20	10.69	1.53	1.27	1.11	1.02	0.91	0.85	0.76	0.61
	P265-16	11.58	1.65	1.38	1.20	1.10	0.99	0.92	0.83	0.66
	P265-18	12.97	1.85	1.54	1.35	1.24	1.11	1.03	0.93	0.74
	P265-20	14.35	2.05	1.71	1.49	1.37	1.22	1.14	1.03	0.82
7.5m	P235-16	7.45	0.99	0.83	0.72	0.66	0.59	0.55	0.50	0.40
	P235-18	8.34	1.11	0.93	0.81	0.74	0.66	0.62	0.56	0.44
	P235-20	9.23	1.23	1.03	0.89	0.82	0.73	0.68	0.62	0.49
	P235-25	11.40	1.52	1.27	1.11	1.01	0.91	0.84	0.76	0.61
	P265-16	10.01	1.34	1.11	0.97	0.89	0.80	0.74	0.67	0.53
	P265-18	11.22	1.50	1.25	1.09	1.00	0.89	0.83	0.75	0.60
	P265-20	12.41	1.66	1.38	1.20	1.10	0.99	0.92	0.83	0.66
	P265-25	15.35	2.05	1.71	1.49	1.36	1.22	1.14	1.02	0.82
8.0m	P235-25	9.92	1.24	1.03	0.9	0.83	0.74	0.69	0.62	0.50
	P265-16	8.73	1.09	0.91	0.79	0.73	0.65	0.61	0.55	0.44
	P265-18	9.78	1.22	1.02	0.89	0.81	0.73	0.68	0.61	0.49
	P265-20	10.82	1.35	1.13	0.98	0.90	0.81	0.75	0.68	0.54
	P265-25	13.38	1.67	1.39	1.22	1.12	1.00	0.93	0.84	0.67
8.5m	P235-25	8.68	1.02	0.85	0.74	0.68	0.61	0.57	0.51	0.41
	P265-16	7.66	0.90	0.75	0.66	0.60	0.54	0.50	0.45	0.36
	P265-18	8.58	1.01	0.84	0.73	0.67	0.60	0.56	0.50	0.40
	P265-20	9.49	1.12	0.93	0.81	0.74	0.67	0.62	0.56	0.45
	P265-25	11.74	1.38	1.15	1.00	0.92	0.82	0.77	0.69	0.55
9.0m	P265-18	7.57	0.84	0.70	0.61	0.56	0.50	0.47	0.42	0.34
	P265-20	8.37	0.93	0.78	0.68	0.62	0.56	0.52	0.47	0.37
	P265-25	10.36	1.15	0.96	0.84	0.77	0.69	0.64	0.58	0.46
9.5m	P265-20	7.42	0.78	0.65	0.57	0.52	0.47	0.43	0.39	0.31
	P265-25	9.18	0.97	0.81	0.70	0.64	0.58	0.54	0.48	0.39
10.0m	P265-20	6.61	0.66	0.55	0.48	0.44	0.39	0.37	0.33	0.26
	P265-25	8.17	0.82	0.68	0.59	0.54	0.49	0.45	0.41	0.33

# Zed Side Rail Sleeve Systems

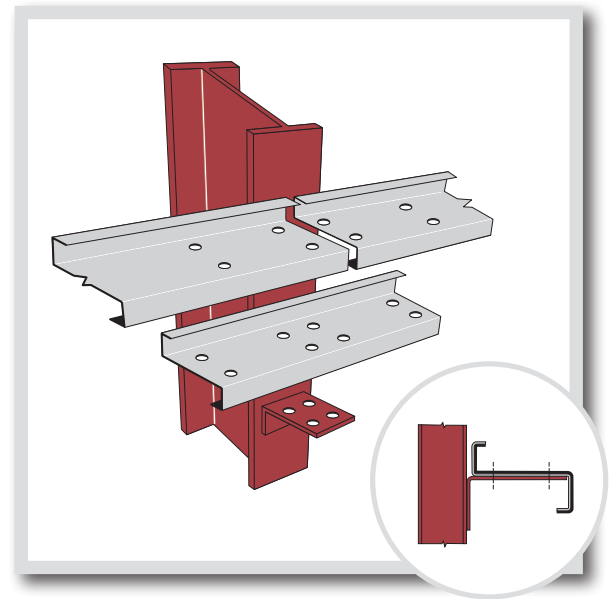
Grade S450

Metric load tables for sleeved side rails for spans up to 10 metres.

## Types of Cladding

The loads shown relate directly to metal cladding and allowance for its weight has been made. Figures shown are for horizontal wind pressure and assume 1 row of side rail supports at mid span up to 6 metres and 2 rows for larger spans.

For suction multiply values by a factor of 0.8.



Span Metres	Section	UDL kN	Allowable Loads (kN/sq.m) for Varying Purlin Centres (mm)							
			1000	1200	1375	1500	1675	1800	2000	2500
3.5m	P121-16	15.72	4.49	3.74	3.27	2.99	2.68	2.49	2.25	1.80
	P140-14	18.01	5.15	4.29	3.74	3.43	3.07	2.86	2.57	2.06
	P140-16	21.97	6.28	5.23	4.56	4.18	3.75	3.49	3.14	2.51
	P140-18	24.69	7.05	5.88	5.13	4.70	4.21	3.92	3.53	2.82
4.0m	P121-16	11.99	3.00	2.50	2.18	2.00	1.79	1.67	1.50	1.20
	P140-14	14.85	3.71	3.09	2.70	2.48	2.22	2.06	1.86	1.49
	P140-16	16.87	4.22	3.51	3.07	2.81	2.52	2.34	2.11	1.69
	P140-18	18.85	4.71	3.93	3.43	3.14	2.81	2.62	2.36	1.89
4.5m	P121-16	9.43	2.10	1.75	1.52	1.40	1.25	1.16	1.05	0.84
	P140-16	13.28	2.95	2.46	2.15	1.97	1.76	1.64	1.48	1.18
	P140-18	14.85	3.30	2.75	2.40	2.20	1.97	1.83	1.65	1.32
	P140-20	16.39	3.64	3.04	2.65	2.43	2.17	2.02	1.82	1.46
	P177-14	17.75	3.94	3.29	2.87	2.63	2.35	2.19	1.97	1.58
5.0m	P177-16	21.79	4.84	4.03	3.52	3.23	2.89	2.69	2.42	1.94
	P140-14	9.44	1.89	1.57	1.37	1.26	1.13	1.05	0.94	0.75
	P140-16	10.71	2.14	1.79	1.56	1.43	1.28	1.19	1.07	0.86
	P140-18	11.97	2.39	2.00	1.74	1.60	1.43	1.33	1.20	0.96
	P140-20	13.22	2.64	2.20	1.92	1.76	1.58	1.47	1.32	1.06
	P177-14	15.82	3.16	2.64	2.30	2.11	1.89	1.76	1.58	1.27
5.5m	P177-16	18.67	3.73	3.11	2.72	2.49	2.23	2.07	1.87	1.49
	P140-14	7.76	1.41	1.18	1.03	0.94	0.84	0.78	0.71	0.56
	P140-16	8.81	1.60	1.33	1.16	1.07	0.96	0.89	0.80	0.64
	P140-18	9.85	1.79	1.49	1.30	1.19	1.07	0.99	0.90	0.72
	P140-20	10.87	1.98	1.65	1.44	1.32	1.18	1.10	0.99	0.79
	P177-14	13.53	2.46	2.05	1.79	1.64	1.47	1.37	1.23	0.98
	P177-16	15.38	2.80	2.33	2.03	1.86	1.67	1.55	1.40	1.12
6.0m	P177-18	17.20	3.13	2.61	2.27	2.09	1.87	1.74	1.56	1.25
	P140-16	7.36	1.23	1.02	0.89	0.82	0.73	0.68	0.61	0.49
	P140-18	8.22	1.37	1.14	1.00	0.91	0.82	0.76	0.69	0.55
	P140-20	9.08	1.51	1.26	1.10	1.01	0.90	0.84	0.76	0.61
	P177-14	11.33	1.89	1.57	1.37	1.26	1.13	1.05	0.94	0.76
	P177-16	12.87	2.14	1.79	1.56	1.43	1.28	1.19	1.07	0.86
	P177-18	14.40	2.40	2.00	1.75	1.60	1.43	1.33	1.20	0.96
	P200-14	15.03	2.50	2.09	1.82	1.67	1.50	1.39	1.25	1.00
6.5m	P200-16	18.24	3.04	2.53	2.21	2.03	1.81	1.69	1.52	1.22
	P177-14	9.61	1.48	1.23	1.07	0.99	0.88	0.82	0.74	0.59
	P177-16	10.91	1.68	1.40	1.22	1.12	1.00	0.93	0.84	0.67
	P177-18	12.21	1.88	1.57	1.37	1.25	1.12	1.04	0.94	0.75
	P177-20	13.49	2.08	1.73	1.51	1.38	1.24	1.15	1.04	0.83
	P200-14	13.62	2.10	1.75	1.52	1.40	1.25	1.16	1.05	0.84
	P200-16	15.48	2.38	1.99	1.73	1.59	1.42	1.32	1.19	0.95
7.0m	P200-18	17.33	2.67	2.22	1.94	1.78	1.59	1.48	1.33	1.07
	P200-20	19.16	2.95	2.46	2.14	1.96	1.76	1.64	1.47	1.18

# Zed Side Rail Sleeve Systems

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Span Metres	Section	UDL kN	Allowable Loads (kN/sq.m) for Varying Purlin Centres (mm)							
			1000	1200	1375	1500	1675	1800	2000	2500
7.0m	P177-16	9.36	1.34	1.11	0.97	0.89	0.80	0.74	0.67	0.53
	P177-18	10.47	1.50	1.25	1.09	1.00	0.89	0.83	0.75	0.60
	P177-20	11.56	1.65	1.38	1.20	1.10	0.99	0.92	0.83	0.66
	P200-16	13.29	1.90	1.58	1.38	1.27	1.13	1.05	0.95	0.76
	P200-18	14.88	2.13	1.77	1.55	1.42	1.27	1.18	1.06	0.85
	P200-20	16.44	2.35	1.96	1.71	1.57	1.40	1.31	1.17	0.94
	P235-14	15.61	2.23	1.86	1.62	1.49	1.33	1.24	1.11	0.89
P235-16	19.76	2.82	2.35	2.05	1.88	1.69	1.57	1.41	1.13	
7.5m	P177-18	9.06	1.21	1.01	0.88	0.81	0.72	0.67	0.60	0.48
	P177-20	10.01	1.33	1.11	0.97	0.89	0.80	0.74	0.67	0.53
	P200-16	11.52	1.54	1.28	1.12	1.02	0.92	0.85	0.77	0.61
	P200-18	12.89	1.72	1.43	1.25	1.15	1.03	0.96	0.86	0.69
	P200-20	14.25	1.90	1.58	1.38	1.27	1.13	1.06	0.95	0.76
	P200-25	17.59	2.34	1.95	1.71	1.56	1.40	1.30	1.17	0.94
	P235-16	17.40	2.32	1.93	1.69	1.55	1.39	1.29	1.16	0.93
P235-18	19.49	2.60	2.17	1.89	1.73	1.55	1.44	1.30	1.04	
8.0m	P200-16	10.07	1.26	1.05	0.92	0.84	0.75	0.70	0.63	0.50
	P200-18	11.27	1.41	1.17	1.02	0.94	0.84	0.78	0.70	0.56
	P200-20	12.45	1.56	1.30	1.13	1.04	0.93	0.86	0.78	0.62
	P200-25	15.37	1.92	1.60	1.40	1.28	1.15	1.07	0.96	0.77
	P235-16	15.23	1.90	1.59	1.38	1.27	1.14	1.06	0.95	0.76
	P235-18	17.05	2.13	1.78	1.55	1.42	1.27	1.18	1.07	0.85
	P265-14	15.18	1.90	1.58	1.38	1.27	1.13	1.05	0.95	0.76
P265-16	19.42	2.43	2.02	1.77	1.62	1.45	1.35	1.21	0.97	
8.5m	P200-18	9.91	1.17	0.97	0.85	0.78	0.70	0.65	0.58	0.47
	P200-20	10.96	1.29	1.07	0.94	0.86	0.77	0.72	0.64	0.52
	P200-25	13.52	1.59	1.33	1.16	1.06	0.95	0.88	0.80	0.64
	P235-16	13.42	1.58	1.32	1.15	1.05	0.94	0.88	0.79	0.63
	P235-18	15.03	1.77	1.47	1.29	1.18	1.06	0.98	0.88	0.71
	P235-20	16.62	1.96	1.63	1.42	1.30	1.17	1.09	0.98	0.78
	P235-25	20.54	2.42	2.01	1.76	1.61	1.44	1.34	1.21	0.97
	P265-16	18.16	2.14	1.78	1.55	1.42	1.28	1.19	1.07	0.85
	P265-18	20.78	2.44	2.04	1.78	1.63	1.46	1.36	1.22	0.98
P265-20	22.99	2.70	2.25	1.97	1.80	1.61	1.50	1.35	1.08	
9.0m	P200-20	9.70	1.08	0.90	0.78	0.72	0.64	0.60	0.54	0.43
	P235-16	11.91	1.32	1.10	0.96	0.88	0.79	0.73	0.66	0.53
	P235-18	13.33	1.48	1.23	1.08	0.99	0.88	0.82	0.74	0.59
	P235-20	14.74	1.64	1.37	1.19	1.09	0.98	0.91	0.82	0.66
	P235-25	18.22	2.02	1.69	1.47	1.35	1.21	1.12	1.01	0.81
	P265-16	16.47	1.83	1.53	1.33	1.22	1.09	1.02	0.92	0.73
	P265-18	18.45	2.05	1.71	1.49	1.37	1.22	1.14	1.03	0.82
	P265-20	20.41	2.27	1.89	1.65	1.51	1.35	1.26	1.13	0.91
P265-25	25.25	2.81	2.34	2.04	1.87	1.67	1.56	1.40	1.12	
9.5m	P235-18	11.89	1.25	1.04	0.91	0.83	0.75	0.70	0.63	0.50
	P235-20	13.15	1.38	1.15	1.01	0.92	0.83	0.77	0.69	0.55
	P235-25	16.24	1.71	1.42	1.24	1.14	1.02	0.95	0.85	0.68
	P265-16	14.71	1.55	1.29	1.13	1.03	0.92	0.86	0.77	0.62
	P265-18	16.48	1.73	1.45	1.26	1.16	1.04	0.96	0.87	0.69
	P265-20	18.23	1.92	1.60	1.40	1.28	1.15	1.07	0.96	0.77
P265-25	22.55	2.37	1.98	1.73	1.58	1.42	1.32	1.19	0.95	
10.0m	P235-20	11.78	1.18	0.98	0.86	0.79	0.70	0.65	0.59	0.47
	P235-25	14.56	1.46	1.21	1.06	0.97	0.87	0.81	0.73	0.58
	P265-16	13.20	1.32	1.10	0.96	0.88	0.79	0.73	0.66	0.53
	P265-18	14.79	1.48	1.23	1.08	0.99	0.88	0.82	0.74	0.59
	P265-20	16.36	1.64	1.36	1.19	1.09	0.98	0.91	0.82	0.65
P265-25	20.23	2.02	1.69	1.47	1.35	1.21	1.12	1.01	0.81	

# Zed Side Rail Butt System

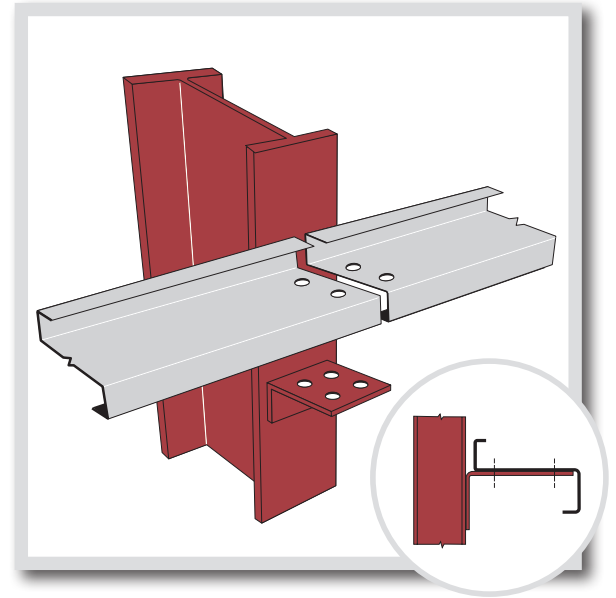
Grade S450

Side Rail Butt System suitable for buildings with single bays or more.

## Types of Cladding

The loads shown relate directly to metal cladding and allowance for its weight has been made. Figures shown are for horizontal wind pressure and assume 1 row of side rail supports at mid span up to 6 metres and 2 rows for larger spans.

For suction multiply values by a factor of 0.8.



Span Metres	Section	UDL kN	Allowable Loads (kN/sq.m) for Varying Purlin Centres (mm)							
			1000	1200	1375	1500	1675	1800	2000	2500
3.5m	PI21-16	7.99	2.28	1.90	1.66	1.52	1.14	0.92	0.76	0.45
	PI40-14	9.91	2.83	2.36	2.06	1.89	1.41	1.14	0.94	0.56
	PI40-16	11.25	3.21	2.68	2.34	2.14	1.60	1.30	1.07	0.64
	PI40-18	12.58	3.59	2.99	2.61	2.40	1.79	1.45	1.20	0.72
	PI77-14	17.14	4.90	4.08	3.56	3.27	2.44	1.98	1.63	0.97
	PI77-16	19.57	5.59	4.66	4.07	3.73	2.78	2.26	1.86	1.11
4.0m	PI21-16	6.08	1.52	1.27	1.11	1.01	0.76	0.61	0.51	0.30
	PI40-16	8.57	2.14	1.79	1.56	1.43	1.07	0.87	0.71	0.43
	PI40-18	9.58	2.39	2.00	1.74	1.60	1.19	0.97	0.80	0.48
	PI40-20	10.58	2.64	2.20	1.92	1.76	1.32	1.07	0.88	0.53
	PI77-14	13.14	3.29	2.74	2.39	2.19	1.63	1.33	1.10	0.65
	PI77-16	14.94	3.73	3.11	2.72	2.49	1.86	1.51	1.24	0.74
	PI77-18	16.71	4.18	3.48	3.04	2.78	2.08	1.69	1.39	0.83
4.5m	PI40-14	5.93	1.32	1.10	0.96	0.88	0.66	0.53	0.44	0.26
	PI40-16	6.73	1.50	1.25	1.09	1.00	0.74	0.60	0.50	0.30
	PI40-18	7.52	1.67	1.39	1.22	1.11	0.83	0.68	0.56	0.33
	PI40-20	8.30	1.84	1.54	1.34	1.23	0.92	0.75	0.61	0.37
	PI77-14	10.34	2.30	1.91	1.67	1.53	1.14	0.93	0.77	0.46
	PI77-16	11.75	2.61	2.18	1.90	1.74	1.30	1.06	0.87	0.52
	PI77-18	13.15	2.92	2.43	2.12	1.95	1.45	1.18	0.97	0.58
	PI77-20	14.52	3.23	2.69	2.35	2.15	1.61	1.30	1.08	0.64
	P200-16	16.64	3.70	3.08	2.69	2.47	1.84	1.49	1.23	0.74
5.0m	PI40-16	5.40	1.08	0.90	0.79	0.72	0.54	0.44	0.36	0.22
	PI40-18	6.04	1.21	1.01	0.88	0.81	0.60	0.49	0.40	0.24
	PI40-20	6.67	1.33	1.11	0.97	0.89	0.66	0.54	0.44	0.27
	PI40-25	8.20	1.64	1.37	1.19	1.09	0.82	0.66	0.55	0.33
	PI77-14	8.33	1.67	1.39	1.21	1.11	0.83	0.67	0.56	0.33
	PI77-16	9.47	1.89	1.58	1.38	1.26	0.94	0.77	0.63	0.38
	PI77-18	10.59	2.12	1.76	1.54	1.41	1.05	0.86	0.71	0.42
	PI77-20	11.70	2.34	1.95	1.70	1.56	1.16	0.95	0.78	0.47
	P200-14	11.81	2.36	1.97	1.72	1.57	1.17	0.95	0.79	0.47
	P200-16	13.42	2.68	2.24	1.95	1.79	1.34	1.08	0.89	0.53
	P200-18	15.02	3.00	2.50	2.19	2.00	1.49	1.21	1.00	0.60
5.5m	PI40-20	5.45	0.99	0.83	0.72	0.66	0.49	0.40	0.33	0.20
	PI40-25	6.71	1.22	1.02	0.89	0.81	0.61	0.49	0.41	0.24
	PI77-14	6.84	1.24	1.04	0.90	0.83	0.62	0.50	0.41	0.25
	PI77-16	7.77	1.41	1.18	1.03	0.94	0.70	0.57	0.47	0.28
	PI77-18	8.69	1.58	1.32	1.15	1.05	0.79	0.64	0.53	0.31
	P200-14	9.71	1.77	1.47	1.28	1.18	0.88	0.71	0.59	0.35
	P200-16	11.04	2.01	1.67	1.46	1.34	1.00	0.81	0.67	0.40
	P200-18	12.35	2.25	1.87	1.63	1.50	1.12	0.91	0.75	0.45
	P200-20	13.65	2.48	2.07	1.81	1.66	1.24	1.00	0.83	0.49



# Zed Side Rail Butt System

Grade S450

Span Metres	Section	UDL kN	Allowable Loads (kN/sq.m) for Varying Purlin Centres (mm)							
			1000	1200	1375	1500	1675	1800	2000	2500
6.0m	P177-18	7.25	1.21	1.01	0.88	0.81	0.60	0.49	0.40	0.24
	P177-20	8.01	1.33	1.11	0.97	0.89	0.66	0.54	0.44	0.27
	P177-25	9.87	1.64	1.37	1.20	1.10	0.82	0.66	0.55	0.33
	P200-16	9.22	1.54	1.28	1.12	1.02	0.76	0.62	0.51	0.31
	P200-18	10.31	1.72	1.43	1.25	1.15	0.86	0.69	0.57	0.34
	P200-20	11.40	1.90	1.58	1.38	1.27	0.95	0.77	0.63	0.38
	P235-14	12.18	2.03	1.69	1.48	1.35	1.01	0.82	0.68	0.40
	P235-16	14.36	2.39	1.99	1.74	1.60	1.19	0.97	0.80	0.48
	P235-18	16.08	2.68	2.23	1.95	1.79	1.33	1.08	0.89	0.53
6.5m	P177-20	6.76	1.04	0.87	0.76	0.69	0.52	0.42	0.35	0.21
	P177-25	8.32	1.28	1.07	0.93	0.85	0.64	0.52	0.43	0.25
	P200-16	7.80	1.20	1.00	0.87	0.80	0.60	0.48	0.40	0.24
	P200-18	8.72	1.34	1.12	0.98	0.89	0.67	0.54	0.45	0.27
	P200-20	9.64	1.48	1.24	1.08	0.99	0.74	0.60	0.49	0.30
	P235-14	10.70	1.65	1.37	1.20	1.10	0.82	0.67	0.55	0.33
	P235-16	12.17	1.87	1.56	1.36	1.25	0.93	0.76	0.62	0.37
	P235-18	13.63	2.10	1.75	1.52	1.40	1.04	0.85	0.70	0.42
	P235-20	15.07	2.32	1.93	1.69	1.55	1.15	0.94	0.77	0.46
7.0m	P177-25	7.10	1.01	0.84	0.74	0.68	0.50	0.41	0.34	0.20
	P200-18	7.46	1.07	0.89	0.77	0.71	0.53	0.43	0.36	0.21
	P200-20	8.24	1.18	0.98	0.86	0.78	0.59	0.48	0.39	0.23
	P200-25	10.17	1.45	1.21	1.06	0.97	0.72	0.59	0.48	0.29
	P235-14	9.17	1.31	1.09	0.95	0.87	0.65	0.53	0.44	0.26
	P235-16	10.43	1.49	1.24	1.08	0.99	0.74	0.60	0.50	0.30
	P235-18	11.67	1.67	1.39	1.21	1.11	0.83	0.67	0.56	0.33
	P235-20	12.91	1.84	1.54	1.34	1.23	0.92	0.75	0.61	0.37
	P265-14	10.52	1.50	1.25	1.09	1.00	0.75	0.61	0.50	0.30
P265-16	13.97	2.00	1.66	1.45	1.33	0.99	0.81	0.67	0.40	
7.5m	P235-16	9.02	1.20	1.00	0.87	0.80	0.60	0.49	0.40	0.24
	P235-18	10.10	1.35	1.12	0.98	0.90	0.67	0.54	0.45	0.27
	P235-20	11.16	1.49	1.24	1.08	0.99	0.74	0.60	0.50	0.30
	P235-25	13.80	1.84	1.53	1.34	1.23	0.92	0.74	0.61	0.37
	P265-16	12.10	1.61	1.34	1.17	1.08	0.80	0.65	0.54	0.32
	P265-18	13.55	1.81	1.51	1.31	1.20	0.90	0.73	0.60	0.36
	P265-20	14.99	2.00	1.67	1.45	1.33	0.99	0.81	0.67	0.40
	P265-25	18.55	2.47	2.06	1.80	1.65	1.23	1.00	0.82	0.49
	P235-18	8.80	1.10	0.92	0.80	0.73	0.55	0.44	0.37	0.22
8.0m	P235-20	9.73	1.22	1.01	0.88	0.81	0.60	0.49	0.41	0.24
	P235-25	12.02	1.50	1.25	1.09	1.00	0.75	0.61	0.50	0.30
	P265-16	10.56	1.32	1.10	0.96	0.88	0.66	0.53	0.44	0.26
	P265-18	11.83	1.48	1.23	1.08	0.99	0.74	0.60	0.49	0.29
	P265-20	13.09	1.64	1.36	1.19	1.09	0.81	0.66	0.55	0.33
	P265-25	16.19	2.02	1.69	1.47	1.35	1.01	0.82	0.67	0.40
	P265-16	9.28	1.09	0.91	0.79	0.73	0.54	0.44	0.36	0.22
8.5m	P265-18	10.40	1.22	1.02	0.89	0.82	0.61	0.49	0.41	0.24
	P265-20	11.50	1.35	1.13	0.98	0.90	0.67	0.55	0.45	0.27
	P265-25	14.23	1.67	1.39	1.22	1.12	0.83	0.68	0.56	0.33
9.0m	P265-16	8.21	0.91	0.76	0.66	0.61	0.45	0.37	0.30	0.18
	P265-18	9.19	1.02	0.85	0.74	0.68	0.51	0.41	0.34	0.20
	P265-20	10.17	1.13	0.94	0.82	0.75	0.56	0.46	0.38	0.22
	P265-25	12.57	1.40	1.16	1.02	0.93	0.70	0.56	0.47	0.28
9.5m	P265-20	9.04	0.95	0.79	0.69	0.63	0.47	0.38	0.32	0.19
	P265-25	11.17	1.18	0.98	0.86	0.78	0.59	0.48	0.39	0.23
10.0m	P265-20	8.06	0.81	0.67	0.59	0.54	0.40	0.33	0.27	0.16
	P265-25	9.97	1.00	0.83	0.72	0.66	0.50	0.40	0.33	0.20

# Cee Side Rail Sleeved System

Grade S450

Span Metres	Section	UDL kN	Allowable Loads (kN/sq.m) for Varying Purlin Centres (mm)							
			1000	1200	1375	1500	1675	1800	2000	2500
3.5m	C140-14	18.49	5.28	4.40	3.84	3.52	3.15	2.93	2.64	2.11
	C140-16	22.98	6.57	5.47	4.78	4.38	3.92	3.65	3.28	2.63
4.0m	C140-14	16.07	4.02	3.35	2.92	2.68	2.40	2.23	2.01	1.61
	C140-16	19.99	5.00	4.16	3.63	3.33	2.98	2.78	2.50	2.00
4.5m	C140-14	13.23	2.94	2.45	2.14	1.96	1.76	1.63	1.47	1.18
	C140-16	16.05	3.57	2.97	2.59	2.38	2.13	1.98	1.78	1.43
	C140-18	17.94	3.99	3.32	2.90	2.66	2.38	2.22	1.99	1.59
	C140-20	19.82	4.40	3.67	3.20	2.94	2.63	2.45	2.20	1.76
	C177-14	18.26	4.06	3.38	2.95	2.71	2.42	2.25	2.03	1.62
	C177-16	22.83	5.07	4.23	3.69	3.38	3.03	2.82	2.54	2.03
5.0m	C140-14	10.68	2.14	1.78	1.55	1.42	1.27	1.19	1.07	0.85
	C140-16	12.95	2.59	2.16	1.88	1.73	1.55	1.44	1.29	1.04
	C177-14	16.30	3.26	2.72	2.37	2.17	1.95	1.81	1.63	1.30
	C177-16	20.40	4.08	3.40	2.97	2.72	2.44	2.27	2.04	1.63
5.5m	C140-14	8.78	1.60	1.33	1.16	1.06	0.95	0.89	0.80	0.64
	C140-16	10.65	1.94	1.61	1.41	1.29	1.16	1.08	0.97	0.77
	C140-18	11.91	2.17	1.80	1.57	1.44	1.29	1.20	1.08	0.87
	C177-14	14.69	2.67	2.23	1.94	1.78	1.59	1.48	1.34	1.07
	C177-16	18.40	3.34	2.79	2.43	2.23	2.00	1.86	1.67	1.34
6.0m	C140-16	8.90	1.48	1.24	1.08	0.99	0.89	0.82	0.74	0.59
	C140-18	9.95	1.66	1.38	1.21	1.11	0.99	0.92	0.83	0.66
	C140-20	10.99	1.83	1.53	1.33	1.22	1.09	1.02	0.92	0.73
	C177-14	13.33	2.22	1.85	1.62	1.48	1.33	1.23	1.11	0.89
	C177-16	15.40	2.57	2.14	1.87	1.71	1.53	1.43	1.28	1.03
	C177-18	17.24	2.87	2.39	2.09	1.92	1.72	1.60	1.44	1.15
	C177-20	19.05	3.18	2.65	2.31	2.12	1.90	1.76	1.59	1.27
	C200-16	19.07	3.18	2.65	2.31	2.12	1.90	1.77	1.59	1.27
	C200-18	22.95	3.83	3.19	2.78	2.55	2.28	2.13	1.91	1.53
6.5m	C177-14	11.49	1.77	1.47	1.29	1.18	1.06	0.98	0.88	0.71
	C177-16	13.07	2.01	1.68	1.46	1.34	1.20	1.12	1.01	0.80
	C177-18	14.62	2.25	1.87	1.64	1.50	1.34	1.25	1.12	0.90
	C200-16	17.44	2.68	2.24	1.95	1.79	1.60	1.49	1.34	1.07
	C200-18	19.52	3.00	2.50	2.18	2.00	1.79	1.67	1.50	1.20
7.0m	C177-18	12.54	1.79	1.49	1.30	1.19	1.07	1.00	0.90	0.72
	C177-20	13.86	1.98	1.65	1.44	1.32	1.18	1.10	0.99	0.79
	C200-16	14.97	2.14	1.78	1.56	1.43	1.28	1.19	1.07	0.86
	C200-18	16.76	2.39	2.00	1.74	1.60	1.43	1.33	1.20	0.96
	C200-20	18.54	2.65	2.21	1.93	1.77	1.58	1.47	1.32	1.06
	C235-16	19.52	2.79	2.32	2.03	1.86	1.67	1.55	1.39	1.12
7.5m	C235-18	23.58	3.37	2.81	2.45	2.25	2.01	1.87	1.68	1.35
	C200-16	12.98	1.73	1.44	1.26	1.15	1.03	0.96	0.87	0.69
	C200-18	14.53	1.94	1.61	1.41	1.29	1.16	1.08	0.97	0.78
	C200-20	16.07	2.14	1.79	1.56	1.43	1.28	1.19	1.07	0.86
	C235-16	18.11	2.41	2.01	1.76	1.61	1.44	1.34	1.21	0.97
	C235-18	21.39	2.85	2.38	2.07	1.90	1.70	1.58	1.43	1.14
8.0m	C235-20	23.66	3.15	2.63	2.29	2.10	1.88	1.75	1.58	1.26
	C200-18	12.71	1.59	1.32	1.16	1.06	0.95	0.88	0.79	0.64
	C200-20	14.05	1.76	1.46	1.28	1.17	1.05	0.98	0.88	0.70
	C235-16	16.72	2.09	1.74	1.52	1.39	1.25	1.16	1.04	0.84
	C235-18	18.72	2.34	1.95	1.70	1.56	1.40	1.30	1.17	0.94
	C235-20	20.71	2.59	2.16	1.88	1.73	1.55	1.44	1.29	1.04
	C265-16	18.94	2.37	1.97	1.72	1.58	1.41	1.32	1.18	0.95
8.5m	C265-18	23.03	2.88	2.40	2.09	1.92	1.72	1.60	1.44	1.15
	C235-16	14.74	1.73	1.45	1.26	1.16	1.04	0.96	0.87	0.69
	C235-18	16.51	1.94	1.62	1.41	1.29	1.16	1.08	0.97	0.78
	C235-20	18.26	2.15	1.79	1.56	1.43	1.28	1.19	1.07	0.86
	C265-16	17.71	2.08	1.74	1.51	1.39	1.24	1.16	1.04	0.83
	C265-18	21.54	2.53	2.11	1.84	1.69	1.51	1.41	1.27	1.01
9.0m	C235-18	14.65	1.63	1.36	1.18	1.09	0.97	0.90	0.81	0.65
	C235-20	16.20	1.80	1.50	1.31	1.20	1.07	1.00	0.90	0.72
	C265-16	16.60	1.84	1.54	1.34	1.23	1.10	1.02	0.92	0.74
	C265-18	19.63	2.18	1.82	1.59	1.45	1.30	1.21	1.09	0.87
	C265-20	21.72	2.41	2.01	1.75	1.61	1.44	1.34	1.21	0.97
9.5m	C235-20	14.46	1.52	1.27	1.11	1.01	0.91	0.85	0.76	0.61
	C235-25	17.87	1.88	1.57	1.37	1.25	1.12	1.04	0.94	0.75
	C265-18	17.53	1.85	1.54	1.34	1.23	1.10	1.03	0.92	0.74
	C265-20	19.40	2.04	1.70	1.49	1.36	1.22	1.13	1.02	0.82
10m	C265-18	15.74	1.57	1.31	1.14	1.05	0.94	0.87	0.79	0.63
	C265-20	17.42	1.74	1.45	1.27	1.16	1.04	0.97	0.87	0.70
	C265-25	21.54	2.15	1.80	1.57	1.44	1.29	1.20	1.08	0.86

# Cee Side Rail Butt System

Grade S450

Span Metres	Section	UDL kN	Allowable Loads (kN/sq.m) for Varying Purlin Centres (mm)							
			1000	1200	1375	1500	1675	1800	2000	2500
3.5m	C140-14	11.21	3.20	2.67	2.33	2.14	1.91	1.78	1.60	1.28
	C140-16	12.73	3.64	3.03	2.65	2.43	2.17	2.02	1.82	1.46
4.0m	C140-14	8.54	2.14	1.78	1.55	1.42	1.27	1.19	1.07	0.85
	C140-16	9.70	2.43	2.02	1.76	1.62	1.45	1.35	1.21	0.97
4.5m	C140-14	6.71	1.49	1.24	1.08	0.99	0.89	0.83	0.75	0.60
	C140-16	7.62	1.69	1.41	1.23	1.13	1.01	0.94	0.85	0.68
	C140-18	8.52	1.89	1.58	1.38	1.26	1.13	1.05	0.95	0.76
	C140-20	9.41	2.09	1.74	1.52	1.39	1.25	1.16	1.05	0.84
	C177-14	11.58	2.57	2.14	1.87	1.72	1.54	1.43	1.29	1.03
	C177-16	13.17	2.93	2.44	2.13	1.95	1.75	1.63	1.46	1.17
5.0m	C140-18	6.84	1.37	1.14	1.00	0.91	0.82	0.76	0.68	0.55
	C140-20	7.56	1.51	1.26	1.10	1.01	0.90	0.84	0.76	0.60
	C177-14	9.33	1.87	1.56	1.36	1.24	1.11	1.04	0.93	0.75
	C177-16	10.61	2.12	1.77	1.54	1.41	1.27	1.18	1.06	0.85
	C177-18	11.87	2.37	1.98	1.73	1.58	1.42	1.32	1.19	0.95
	C200-16	14.16	2.83	2.36	2.06	1.89	1.69	1.57	1.42	1.13
5.5m	C140-25	7.61	1.38	1.15	1.01	0.92	0.83	0.77	0.69	0.55
	C177-16	8.71	1.58	1.32	1.15	1.06	0.95	0.88	0.79	0.63
	C177-18	9.75	1.77	1.48	1.29	1.18	1.06	0.98	0.89	0.71
	C177-20	10.78	1.96	1.63	1.43	1.31	1.17	1.09	0.98	0.78
	C200-16	11.64	2.12	1.76	1.54	1.41	1.26	1.18	1.06	0.85
	C200-18	13.03	2.37	1.97	1.72	1.58	1.41	1.32	1.18	0.95
6.0m	C177-16	7.27	1.21	1.01	0.88	0.81	0.72	0.67	0.61	0.48
	C177-18	8.13	1.36	1.13	0.99	0.90	0.81	0.75	0.68	0.54
	C177-20	8.99	1.50	1.25	1.09	1.00	0.89	0.83	0.75	0.60
	C200-16	9.72	1.62	1.35	1.18	1.08	0.97	0.90	0.81	0.65
	C200-18	10.88	1.81	1.51	1.32	1.21	1.08	1.01	0.91	0.73
	C200-20	12.03	2.01	1.67	1.46	1.34	1.20	1.11	1.00	0.80
6.5m	C200-16	8.22	1.27	1.05	0.92	0.84	0.76	0.70	0.63	0.51
	C200-18	9.20	1.42	1.18	1.03	0.94	0.85	0.79	0.71	0.57
	C200-20	10.18	1.57	1.30	1.14	1.04	0.93	0.87	0.78	0.63
	C235-16	12.12	1.86	1.55	1.36	1.24	1.11	1.04	0.93	0.75
	C235-18	13.85	2.09	1.74	1.52	1.39	1.25	1.16	1.04	0.84
7.0m	C200-25	10.74	1.53	1.28	1.12	1.02	0.92	0.85	0.77	0.61
	C235-16	10.39	1.48	1.24	1.08	0.99	0.89	0.82	0.74	0.59
	C235-18	11.63	1.66	1.38	1.21	1.11	0.99	0.92	0.83	0.66
	C235-20	12.87	1.84	1.53	1.34	1.23	1.10	1.02	0.92	0.74
	C265-16	13.17	1.88	1.57	1.37	1.25	1.12	1.05	0.94	0.75
	C265-18	15.58	2.23	1.85	1.62	1.48	1.33	1.24	1.11	0.89
7.5m	C200-25	9.26	1.23	1.03	0.90	0.82	0.74	0.69	0.62	0.49
	C235-18	10.06	1.34	1.12	0.98	0.89	0.80	0.74	0.67	0.54
	C235-20	11.12	1.48	1.24	1.08	0.99	0.89	0.82	0.74	0.59
	C265-16	11.59	1.55	1.29	1.12	1.03	0.92	0.86	0.77	0.62
	C265-18	13.49	1.80	1.50	1.31	1.20	1.07	1.00	0.90	0.72
8.0m	C235-18	8.76	1.10	0.91	0.80	0.73	0.65	0.61	0.55	0.44
	C235-20	9.69	1.21	1.01	0.88	0.81	0.72	0.67	0.61	0.48
	C265-18	11.78	1.47	1.23	1.07	0.98	0.88	0.82	0.74	0.59
	C265-20	13.03	1.63	1.36	1.18	1.09	0.97	0.90	0.81	0.65
8.5m	C235-18	7.69	0.90	0.75	0.66	0.60	0.54	0.50	0.45	0.36
	C235-20	8.50	1.00	0.83	0.73	0.67	0.60	0.56	0.50	0.40
	C265-16	8.86	1.04	0.87	0.76	0.69	0.62	0.58	0.52	0.42
	C265-18	10.35	1.22	1.01	0.89	0.81	0.73	0.68	0.61	0.49
9.0m	C235-25	9.27	1.03	0.86	0.75	0.69	0.61	0.57	0.51	0.41
	C265-18	9.15	1.02	0.85	0.74	0.68	0.61	0.56	0.51	0.41
	C265-20	10.12	1.12	0.94	0.82	0.75	0.67	0.62	0.56	0.45
9.5m	C265-20	8.99	0.95	0.79	0.69	0.63	0.57	0.53	0.47	0.38
	C265-25	11.12	1.17	0.98	0.85	0.78	0.70	0.65	0.59	0.47
10.0m	C265-20	8.03	0.80	0.67	0.58	0.54	0.48	0.45	0.40	0.32
	C265-25	9.92	0.99	0.83	0.72	0.66	0.59	0.55	0.50	0.40

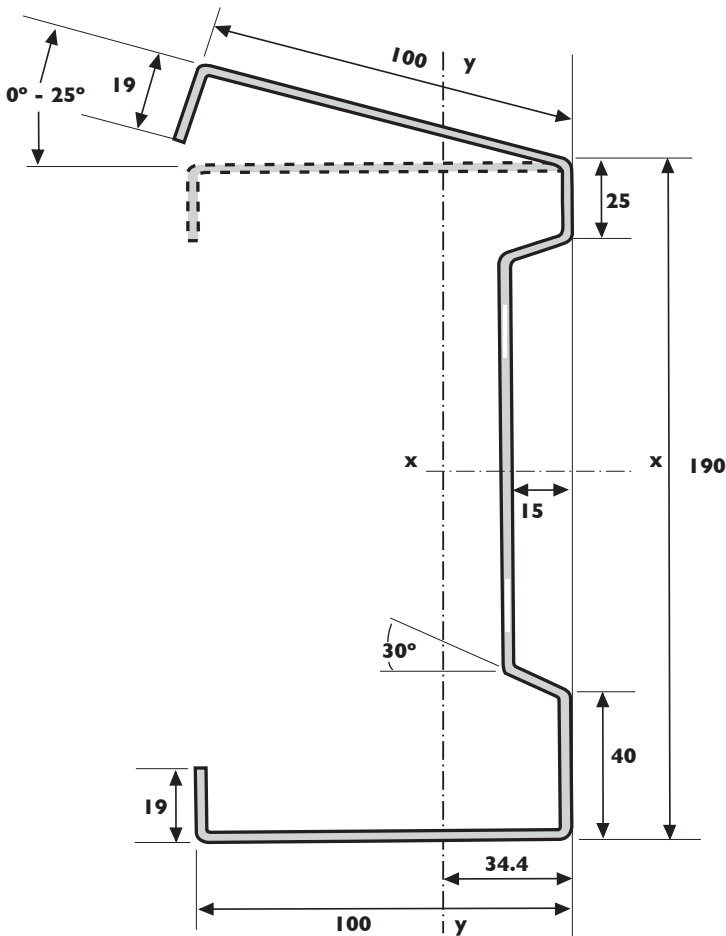
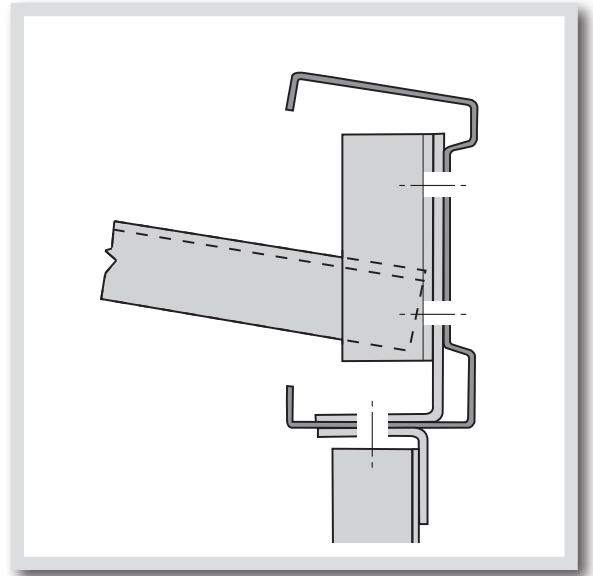
# Eaves Beam

Grade S450

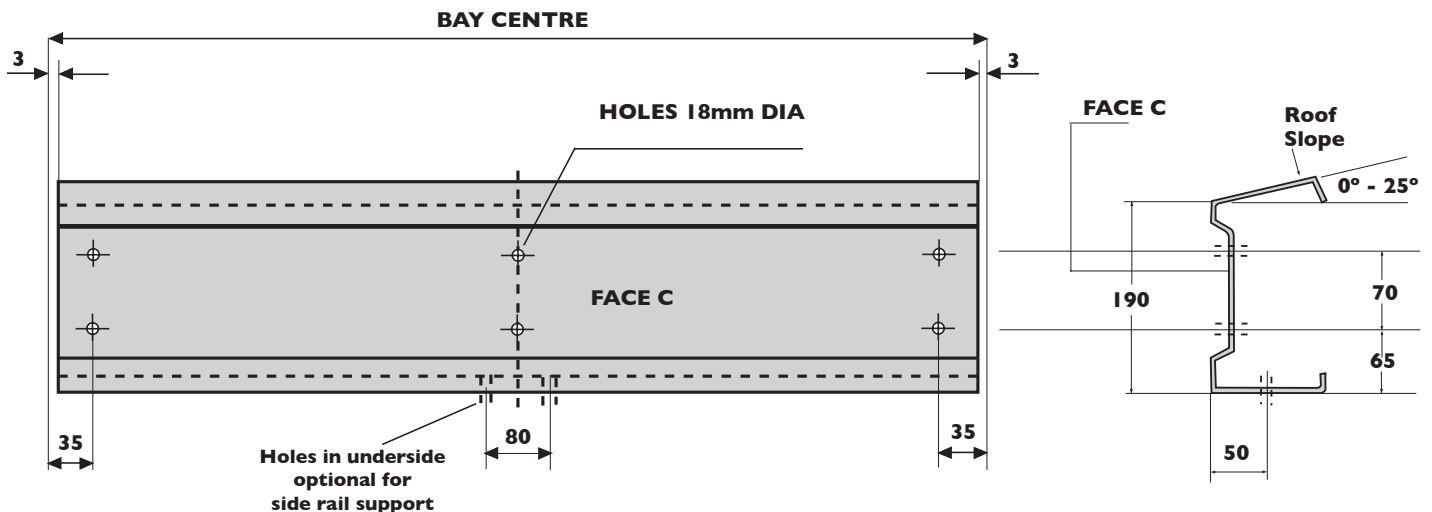
Steel Sections Eaves Beam is a purpose-designed profile for use as an eaves purlin, top sheeting rail and gutter support. We offer 2 profiles for our eaves beams, a recessed profile available in 190mm x 2.0mm thick and a flat faced range in various depths and thicknesses.

## Recessed Eaves Beam

190mm deep x 2.0mm thick and has been designed to cater for spans up to 8m long, with an angled top flange from 0° to 25°



Section Ref:	EB19020
<b>Weight Kg/m</b>	6.66
<b>Second Moment of Area</b>	
Major Axis $I_{xx}$ cm <sup>4</sup>	512
Minor Axis $I_{yy}$ cm <sup>4</sup>	94.6
<b>Section Modulus</b>	
Major Axis $Z_{xx}$ cm <sup>3</sup>	54
Minor Axis $Z_{yy}$ cm <sup>3</sup>	14.5
<b>Radius of Gyration</b>	
Major Axis $R_{xx}$ cm	7.7
Minor Axis $R_{yy}$ cm	3.3
<b>Moment of Capacity</b>	
Major Axis $M_{cx}$ kNm	21.6
Minor Axis $M_{cy}$ kNm	5.8

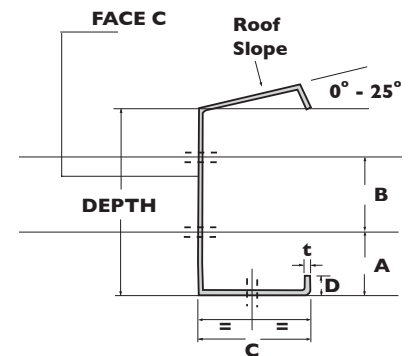
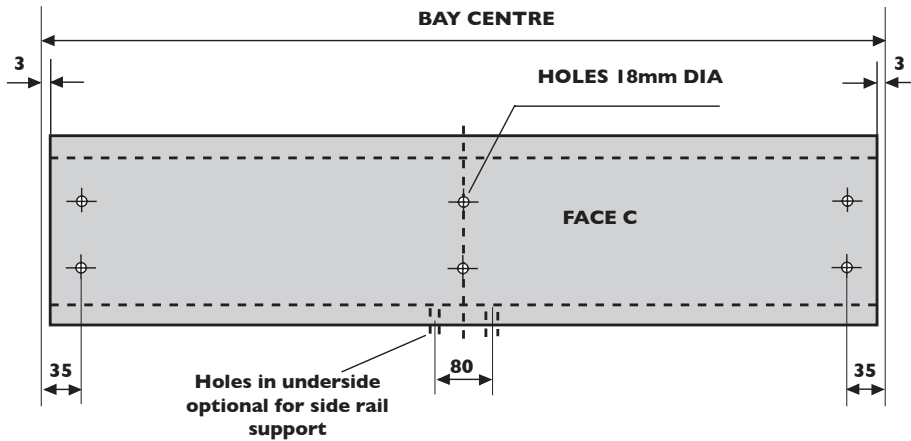


# Eaves Beam

Grade S450

## Flat Faced Eaves Beam

Steel Sections offer a range of flat faced Eaves beams available in 2.0mm and 2.5mm thickness. All Eaves beams have been designed to cater for spans up to 12m long, with angled top flange available from 0° to 25°. (Holes can be plain or counterformed to suit fixing requirement.)

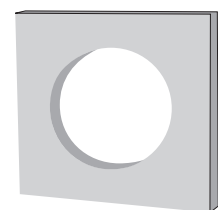
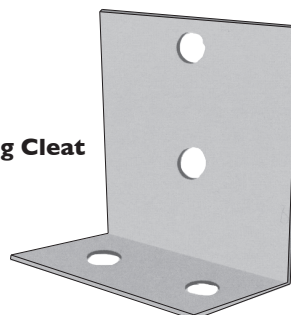


Section Ref:	EB19020 FF	EB23520 FF	EB26520 FF	EB26525 FF
<b>Depth mm</b>	190	235	265	265
<b>A mm</b>	65	43	43	43
<b>B mm</b>	70	146	176	176
<b>C mm</b>	100	85	100	100
<b>D mm</b>	19	17	19	19
<b>t mm</b>	2.0	2.0	2.0	2.5
<b>Second Moment of Area</b>				
Major Axis I <sub>xx</sub> cm <sup>4</sup>	509	632	1070	1331
Minor Axis I <sub>yy</sub> cm <sup>4</sup>	112.52	88.2	122	151
<b>Section Modulus</b>				
Major Axis Z <sub>xx</sub> cm <sup>3</sup>	53.61	66.5	80.8	110
Minor Axis Z <sub>yy</sub> cm <sup>3</sup>	16.4	12.85	16.9	20.8
<b>Radius of Gyration</b>				
Major Axis R <sub>xx</sub> cm	7.8	8.7	10.5	10.5
Minor Axis R <sub>yy</sub> cm	3.7	3.2	3.5	3.5
<b>Moment of Capacity</b>				
Major Axis M <sub>cx</sub> kNm	21.7	25	29.2	42.6
Minor Axis M <sub>cy</sub> kNm	6.2	5.0	6.1	8.1



Counterformed holes are available

Stiffening Cleat



Packer Plates available for use with counterformed holes

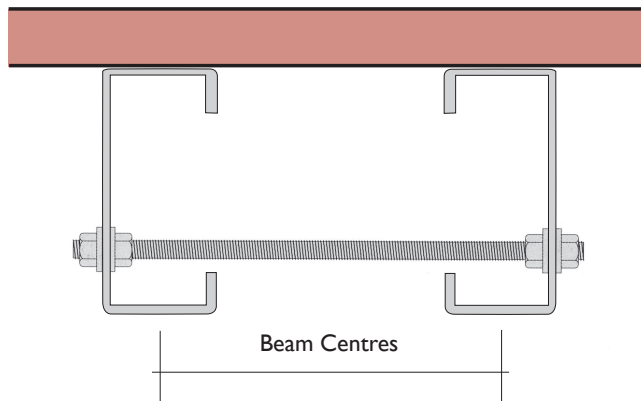
# Mezzanine Floor Systems

## Mezzanine Floor Beams

Steel Sections Cee Sections have a wide range of applications, primarily for use within mezzanine floors, our Cee sections can also be used for door framing, roof trimming, window trimming parapet rails and side rails. Our mezzanine floor beams are available in the following depths of 140, 177, 200, 235 and 265mm. Our sections are all punched with 18mm diameter holes as standard, with smaller hole sizes available on request along with the option of counterformed holes.

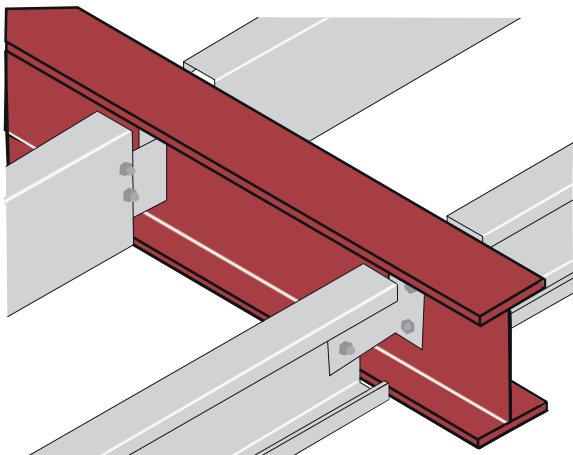
## Restraint Requirements

As the bottom flange of the cee sections are usually unrestrained we recommend using a threaded bar to prevent the floor beam from twisting. Tie bars are fitted at mid span location to the lower gauge holes, with the channels facing toe to toe.



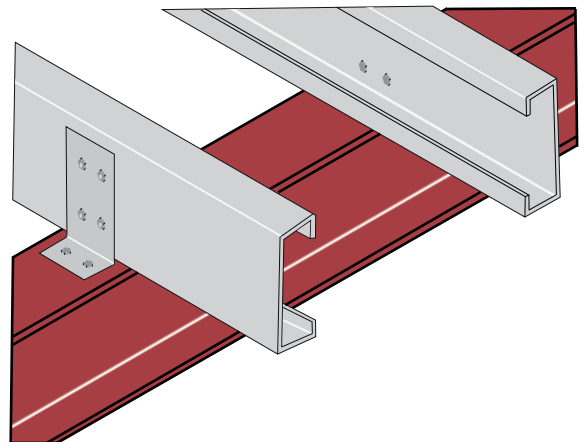
## Single Span System

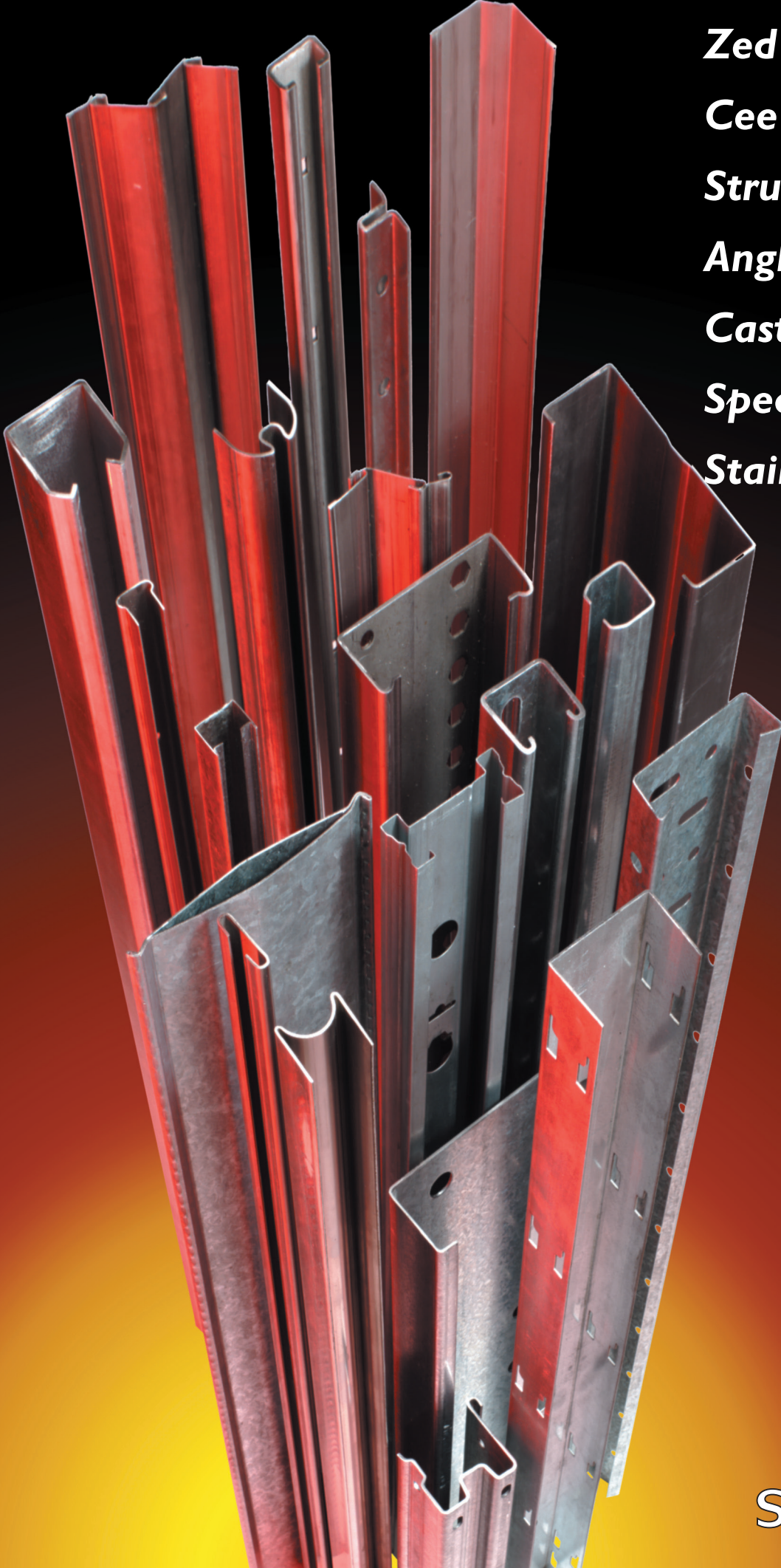
Single span cee sections are more commonly used due to the floor depth restrictions. The cee sections are fitted within the depth of the primary steelwork keeping the floor depth to a minimum. Our inset cleats are best used for this case, please ensure the cleat projects beyond the flange of the primary steelwork to allow an adequate fixing to our cee section.



## Double Span System

Is used when floor depth isn't an issue, the benefits with this system is using a continuous spanning cee section will mean reduced deflections and in turn will lead to using a reduced section size. Standard cleats can be used with this system.





***Zed Purlins***

***Cee Sections***

***Strut Framing***

***Angles & Channels***

***Cast in Channels***

***Special Profiles***

***Stainless Steel***



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