Albion SECTIONS

TECHNICAL MANUAL
www.albionsections.co.uk

Albion Polycoat

Zed, Cee Section and Eaves Beam

The Albion Polycoat is a range of sections with a factory applied polyester finish. The coating, which provides an alternative to powder coating after manufacture, is both more economic and readily available.

Advantages of Polycoat:

- High quality, durable, factory applied thermosetting paint
- Colour RAL 9002, commonly adopted for ceilings
- Adds light, improves the open internal appearance & ambience
- Chemical and corrosion resistance greatly improved when compared to standard Z275 galvanised material
- Good UV resistance
- No additional lead times
- Cost effective solution due to reduced operations, handling and transportation.
- Non-flake coating

raising your expectations

Introduction

Welcome to Albion Section's Polycoat brochure.

The Polycoat range of zed, cee and eaves beam sections has been developed to provide a competitive alternative to powder coated or painted finishes.

The factory applied polyester finish is available in RAL 9002, a light colour which enhances the open ambiance of internal areas.

The Polycoat provides improved corrosion resistances, when compared to Z275 galvanised coatings, and has a smooth, non peel finish.

Delivery times show a significant improvement when compared to the powder coated route, being available in the same lead time as our non-coated sections, 5-7 working days.

For pricing, and any further information, please contact our sales and technical personnel.

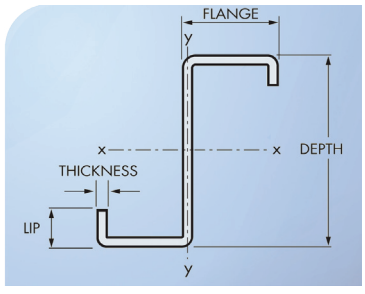
Contents

Polycoat Zed Sections

Albion 'Polycoat' Zed sections are manufactured by cold roll forming galvanised steel sheet that has a factory applied polyester finish.

The steel grade is S350, with a minimum yield strength of 350 N/mm2. The thickness noted in the table below is the nominal thickness of the steel sub strata.

The performance of Albion Polycoat Sections conforms to the performance laid down in BS 5950 Part 5 in conjunction with full scale testing undertaken at the University of Birmingham.



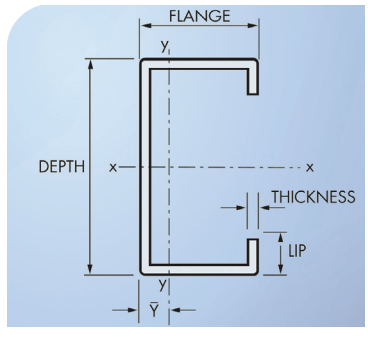
Section Ref	Weight (Kg/m)	Depth mm	Flange mm	Lips mm	Thickness mm	Area cm^2	Ixx cm^4	Zxx cm^3	Zxxc cm^2	Iyy cm^4	Zyy cm^3	Rxx cm	Ryy cm	Po N/mm^2	Q
PZ14615	3.56	145	62.5	20	1.5	4.56	153.62	21.19	19.83	44.19	7.16	5.80	3.11	324.37	0.67
PZ14620	4.68	145	62.5	20	2.0	6.04	201.90	27.85	27.55	57.36	9.33	5.78	3.08	342.34	0.80
PZ17615	3.92	175	62.5	20	1.5	5.01	237.54	27.15	25.67	44.19	7.16	6.89	2.97	309.50	0.61
PZ17620	5.16	175	62.5	20	2.0	6.64	312.66	35.73	35.41	57.36	9.33	6.86	2.94	331.19	0.73
PZ20615	4.27	200	65	20	1.5	5.46	331.99	33.20	31.32	48.90	7.61	7.80	2.99	297.11	0.57
PZ20620	5.64	200	65	20	2.0	7.24	437.47	43.75	43.29	63.52	9.92	7.77	2.96	321.89	0.68

Polycoat Cee Sections

Albion 'Polycoat' Cee sections are manufactured by cold roll forming galvanised steel sheet that has a factory applied polyester finish.

The steel grade is S350, with a minimum yield strength of 350 N/mm2. The thickness noted in the table below is the nominal thickness of the steel sub strata.

The performance of Albion Polycoat Sections conforms to the performance laid down in BS 5950 Part 5 in conjunction with full scale testing undertaken at the University of Birmingham.



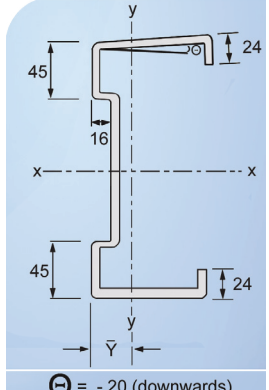
Section Ref	Weight (Kg/m)	Depth mm	Flange mm	Lips mm	Thickness mm	Area cm^2	Ixx cm^4	Zxx cm^3	Zxxc cm^2	Iyy cm^4	Zyy cm^3	Rxx cm	Ryy cm	Y mm	Po N/mm^2	Q
PC14615	3.56	145	62.5	20	1.5	4.56	153.62	21.19	19.83	26.01	6.23	5.80	2.39	20.72	324.37	0.67
PC14620	4.68	145	62.5	20	2.0	6.04	201.90	27.85	27.55	33.84	8.10	5.78	2.37	20.73	342.34	0.80
PC17615	3.92	175	62.5	20	1.5	5.01	237.54	27.15	25.67	27.65	6.34	6.89	2.35	18.92	309.50	0.61
PC17620	5.16	175	62.5	20	2.0	6.64	312.66	35.73	35.41	35.96	8.26	6.86	2.33	18.95	331.19	0.73
PC20615	4.27	200	65	20	1.5	5.46	331.99	33.20	31.32	31.61	6.80	7.80	2.41	18.54	297.11	0.57
PC20620	5.64	200	65	20	2.0	7.24	437.47	43.75	43.29	41.15	8.86	7.77	2.38	18.58	321.89	0.68

Polycoat Eaves Beam

Polycoat Eaves Beam is available in one size; 200mm deep.

The geometric properties of the Eaves Beam Section are listed below.

Section Ref	Weight (Kg/m)	Depth mm	Flange mm	Thickness mm	Area cm^2	Ixx cm^4	Zxx cm^3	Iyy cm^4	Zyy cm^3	Rxx cm	Ryy cm	Y mm
PEB20020	7.07	200	100	2.0	9.44	603.09	60.31	110.16	16.97	7.99	3.42	35.10



Θ = - 20 (downwards) to + 26 (upwards)

Polycoat Eaves Beam - Load Tables

The Polycoat Eaves Beam is available in one section size; PEB20020.

Eaves beam load tables are valid when the beams are fixed as shown in our Zed Purlin, Cee Section and Eaves Beam Technical Manual.

Material grade S350, minimum yield strength 350N/mm2.

Maximum vertical loads are indicated for a co-existent horizontal wind force varying from 5kN to 15kN. Vertical deflection limited to span/200.

NOTES:

These load tables apply to eaves beams with top flange level or inclined upwards.

When top flange is inclined downwards consult our Technical Department

		APPLIED VERTICAL LOADS										
Span	Lateral Supports	5	6	7	8	9	10	11	12	13	14	15
		Horizontal Windloads (kN)										
4.00	1	22.69	21.93	21.16	20.39	19.63	18.86	18.1	17.33	16.56	15.8	15.03
4.50	1	19.64	18.87	18.11	17.34	16.57	15.8	15.04	14.27	13.5	12.73	11.97
5.00	1	17.2	16.43	15.66	14.89	14.13	13.36	12.59	11.82	11.05	10.29	9.52
5.50	1	15.2	14.43	13.66	12.89	12.13	11.36	10.59	9.82	9.05	8.28	7.51
6.00	1	13.53	12.76	11.99	11.23	10.46	9.69	8.92	8.15	7.38	6.61	5.84
6.00	2	15.45	15.45	15.45	15.45	15.45	15.45	15.36	15.05	14.75	14.44	14.13
6.50	2	13.12	13.12	13.12	13.12	13.12	13.12	13.12	13.12	13.12	12.91	12.61
7.00	2	11.29	11.29	11.29	11.29	11.29	11.29	11.29	11.29	11.29	11.29	11.29
7.50	2	9.81	9.81	9.81	9.81	9.81	9.81	9.81	9.81	9.81	9.81	9.81
8.00	2	8.61	8.61	8.61	8.61	8.61	8.61	8.61	8.61	8.61	8.61	8.61
8.50	2	7.61	7.61	7.61	7.61	7.61	7.61	7.61	7.61	7.61	7.61	7.61

Polycoat Purlin:
Load Tables for Sleeved Purlin System

Sleeved Polycoat Purlin load tables for buildings with two bays or more are valid when fixed exactly as described in our Zed Purlin, Cee Section, and Eaves Beam Technical Manual.

Working loads have been calculated in accordance with BS5950 Part 5 using a load factor of 1.6, a deflection limitation of L/180 and with the self weight of the section deducted.

Material grade S350, minimum yield strength 350N/mm2.

For structural engineers wishing to check individual cases, ultimate loads are shown together with loads at different deflection criteria.

In these cases the self weight of the purlin has not been deducted.

Tables are valid for roof pitches up to 25 degree slope.

NOTES:

1. When using ultimate loads, load factors must be applied.
2. Wind uplift figures shown are for screw fixed cladding, for hook bolt type fixing please contact our technical department.

				PURLIN CENTRES IN METRES							ULTIMATE LOADS				DEFLECTION	
Span (m)	Section Ref	Weight (Kg/m)	Working Load (kN)	1.00	1.375	1.50	1.65	1.80	2.0	2.50	Gravity	UPLIFT (kN) LATERAL RESTRAINTS 0 Rows	1 Row	2 Rows	Span/180 (kN)	Span/360 (kN)
4.00	**14615**	3.56	11.97	2.99	2.18	2.00	1.81	1.66	1.50	1.20	19.35	17.42	19.35	19.35	16.40	10.99
	14620	4.68	17.58	4.39	3.20	2.93	2.66	2.44	2.20	1.76	28.38	23.16	27.88	28.38	22.89	14.44
4.50	**14615**	3.56	10.58	2.35	1.71	1.57	1.42	1.31	1.18	0.94	17.14	13.90	17.14	17.14	13.72	8.63
	14620	4.68	15.53	3.45	2.51	2.30	2.09	1.92	1.73	1.38	25.14	18.67	23.76	25.14	19.21	11.34
5.00	**14615**	3.56	9.47	1.89	1.38	1.26	1.15	1.05	0.95	0.76	15.39	10.98	15.39	15.39	11.73	6.95
	14620	4.68	13.91	2.78	2.02	1.85	1.69	1.55	1.39	1.11	22.57	15.05	20.40	22.57	16.48	9.13
	17615	3.92	11.71	2.34	1.70	1.56	1.42	1.30	1.17	0.94	19.01	14.24	19.01	19.01	16.12	10.75
	17620	5.16	17.32	3.46	2.52	2.31	2.10	1.92	1.73	1.39	28.06	19.22	26.35	28.06	22.54	14.15
5.50	**14615**	3.56	8.56	1.56	1.13	1.04	0.94	0.86	0.78	0.62	13.96	9.55	13.33	13.96	10.21	5.72
	14620	4.68	12.58	2.29	1.66	1.52	1.39	1.27	1.14	0.91	20.47	13.24	17.57	20.47	14.39	7.52
	17615	3.92	10.59	1.93	1.40	1.28	1.17	1.07	0.96	0.77	17.24	11.80	17.24	17.24	13.96	8.84
	17620	5.16	15.67	2.85	2.07	1.90	1.73	1.58	1.42	1.14	25.46	17.02	22.72	25.46	19.57	11.64
6.00	**14615**	3.56	7.80	1.30	0.95	0.87	0.79	0.72	0.65	0.52	12.77	8.74	11.47	12.77	9.02	4.79
	14620	4.68	11.47	1.91	1.39	1.27	1.16	1.06	0.96	0.76	18.73	11.71	12.77	18.35	12.59	6.29
	17615	3.92	9.66	1.61	1.17	1.07	0.98	0.89	0.81	0.64	15.78	10.80	14.87	15.78	12.27	7.41
	17620	5.16	14.30	2.38	1.73	1.59	1.44	1.32	1.19	0.95	23.30	15.04	19.62	23.30	17.24	9.75
	20615	4.27	11.33	1.89	1.37	1.26	1.14	1.05	0.94	0.76	18.48	12.65	18.48	18.48	15.50	10.35
	20620	5.64	17.01	2.84	2.06	1.89	1.72	1.58	1.42	1.13	27.68	18.64	24.61	27.68	22.00	13.64
6.50	**17615**	3.92	8.87	1.37	0.99	0.91	0.83	0.76	0.68	0.55	14.54	9.95	12.80	14.54	10.92	6.29
	17620	5.16	13.13	2.02	1.47	1.35	1.22	1.12	1.01	0.81	21.47	13.35	16.92	21.29	15.38	8.28
	20615	4.27	10.41	1.60	1.16	1.07	0.97	0.89	0.80	0.64	17.03	11.66	16.17	17.03	13.74	8.79
	20620	5.64	15.63	2.41	1.75	1.60	1.46	1.34	1.20	0.96	25.51	16.56	21.33	25.51	19.55	11.59
7.00	**17615**	3.92	8.20	1.17	0.85	0.78	0.71	0.65	0.59	0.47	13.49	8.89	10.96	13.49	9.81	5.41
	17620	5.16	12.14	1.73	1.26	1.16	1.05	0.96	0.87	0.69	19.91	11.87	13.41	19.19	13.85	7.12
	20615	4.27	9.62	1.37	1.00	0.92	0.83	0.76	0.69	0.55	15.80	10.81	13.95	15.80	12.31	7.56
	20620	5.64	14.45	2.06	1.50	1.38	1.25	1.15	1.03	0.83	23.66	14.75	18.44	23.66	17.56	9.96
7.50	**17615**	3.92	7.61	1.01	0.74	0.68	0.61	0.56	0.51	0.41	12.57	7.87	9.32	12.57	8.90	4.70
	17620	5.16	11.27	1.50	1.09	1.00	0.91	0.84	0.75	0.60	18.56	10.58	12.17	17.33	12.38	6.19
	20615	4.27	8.93	1.19	0.87	0.79	0.72	0.66	0.60	0.48	14.73	9.86	11.96	14.73	11.13	6.57
	20620	5.64	13.43	1.79	1.30	1.19	1.08	0.99	0.90	0.72	22.06	13.16	15.86	21.60	15.91	8.66
8.00	**17615**	3.92	7.09	0.89	0.64	0.59	0.54	0.49	0.44	0.35	11.78	6.97	8.06	11.78	8.13	4.12
	17620	5.16	10.46	1.31	0.95	0.87	0.79	0.73	0.65	0.52	17.39	9.43	11.07	15.68	10.86	5.43
	20615	4.27	8.33	1.04	0.76	0.69	0.63	0.58	0.52	0.42	13.79	8.75	10.17	13.79	10.14	5.77
	20620	5.64	12.53	1.57	1.14	1.04	0.95	0.87	0.78	0.63	20.66	11.75	13.76	19.59	14.53	7.60

Polycoat Purlin:
Load Tables for Double Span Butt System

Double span purlin load tables for buildings with two bays or more are valid when fixed exactly as described in our Zed Purlin, Cee Section and Eaves Beam Technical Manual.

Working loads have been calculated in accordance with BS5950 Part 5 using a load factor of 1.6, a deflection limitation of span/180 and with the self weight of the section deducted.

Material grade S350, minimum yield strength 350N/mm2.

For structural engineers wishing to check individual cases, ultimate loads are shown together with loads at different deflection criteria.

In these cases the self weight of the purlin has not been deducted.

Tables are valid for roof pitches up to 25 degree slope.

NOTES:

1. When using ultimate tables, load factors must be applied.
2. Wind uplift figures shown are for screw fixed cladding, for hook bolt type fixing please contact our technical department.
3. In order to distribute load within the main frame, purlin joints should be staggered. This is achieved by using a sleeved joint at every alternate purlin row on the penultimate rafter. The purlin joints can be in line if necessary as long as the main frame is checked for extra stresses.

				PURLIN CENTRES IN METRES							ULTIMATE LOADS				DEFLECTION	
Span (m)	Section Ref	Weight (Kg /m)	Working Load (kN)	1.00	1.375	1.50	1.65	1.80	2.00	2.50	Gravity kN	UPLIFT (kN) LATERAL RESTRAINTS			Span/180 (kN)	Span/360 (kN)
				ALLOWABLE LOADINGS (Kn / M²)								0 Rows	1 Row	2 Rows		
4.00	**14615**	3.56	11.00	2.75	2.00	1.83	1.67	1.53	1.38	1.10	17.80	15.27	17.80	17.80	15.49	10.99
	14620	4.68	16.16	4.04	2.94	2.69	2.45	2.24	2.02	1.62	26.10	20.39	25.49	26.10	21.91	14.44
4.50	**14615**	3.56	9.72	2.16	1.57	1.44	1.31	1.20	1.08	0.86	15.77	11.97	15.77	15.77	13.14	8.63
	14620	4.68	14.28	3.17	2.31	2.11	1.92	1.76	1.59	1.27	23.13	17.21	21.68	23.13	18.65	11.34
5.00	**14615**	3.56	8.70	1.74	1.26	1.16	1.05	0.97	0.87	0.70	14.16	10.53	14.11	14.16	11.38	6.95
	14620	4.68	12.78	2.56	1.86	1.70	1.55	1.42	1.28	1.02	20.76	15.05	18.57	20.76	16.19	9.13
	17615	3.92	10.76	2.15	1.57	1.44	1.30	1.20	1.08	0.86	17.49	13.01	17.49	17.49	15.24	10.75
	17620	5.16	15.92	3.18	2.32	2.12	1.93	1.77	1.59	1.27	25.82	19.21	24.00	25.82	21.60	14.15
5.50	**14615**	3.56	7.86	1.43	1.04	0.95	0.87	0.79	0.71	0.57	12.84	9.55	12.10	12.84	10.01	5.72
	14620	4.68	11.55	2.10	1.53	1.40	1.27	1.17	1.05	0.84	18.83	13.24	15.96	18.83	14.28	7.52
	17615	3.92	9.73	1.77	1.29	1.18	1.07	0.98	0.88	0.71	15.86	11.80	15.67	15.86	13.35	8.84
	17620	5.16	14.40	2.62	1.90	1.74	1.59	1.45	1.31	1.05	23.42	17.02	20.64	23.42	18.97	11.64
6.00	**14615**	3.56	7.16	1.19	0.87	0.80	0.72	0.66	0.60	0.48	11.75	8.74	10.37	11.75	8.93	4.79
	14620	4.68	10.53	1.76	1.28	1.17	1.06	0.98	0.88	0.70	17.23	11.71	12.77	16.85	12.59	6.29
	17615	3.92	8.87	1.48	1.08	0.99	0.90	0.82	0.74	0.59	14.52	10.80	13.46	14.52	11.85	7.41
	17620	5.16	13.13	2.19	1.59	1.46	1.33	1.22	1.09	0.88	21.43	15.04	17.76	21.43	16.88	9.75
	20615	4.27	10.41	1.73	1.26	1.16	1.05	0.96	0.87	0.69	17.00	12.65	16.93	17.00	14.66	10.35
	20620	5.64	15.63	2.60	1.89	1.74	1.58	1.45	1.30	1.04	25.46	18.64	22.31	25.46	21.14	13.64
6.50	**17615**	3.92	8.15	1.25	0.91	0.84	0.76	0.70	0.63	0.50	13.38	9.95	11.53	13.38	10.65	6.29
	17620	5.16	12.06	1.86	1.35	1.24	1.12	1.03	0.93	0.74	19.75	13.35	15.26	19.54	15.19	8.28
	20615	4.27	9.56	1.47	1.07	0.98	0.89	0.82	0.74	0.59	15.67	11.66	14.60	15.67	13.12	8.79
	20620	5.64	14.36	2.21	1.61	1.47	1.34	1.23	1.10	0.88	23.47	16.56	19.27	23.47	18.96	11.59
7.00	**17615**	3.92	7.52	1.07	0.78	0.72	0.65	0.60	0.54	0.43	12.41	8.89	9.83	12.41	9.65	5.41
	17620	5.16	11.14	1.59	1.16	1.06	0.96	0.88	0.80	0.64	18.32	11.87	13.41	17.60	13.79	7.12
	20615	4.27	8.83	1.26	0.92	0.84	0.76	0.70	0.63	0.50	14.53	10.81	12.54	14.53	11.85	7.56
	20620	5.64	13.27	1.90	1.38	1.26	1.15	1.05	0.95	0.76	21.76	14.75	16.59	21.76	17.18	9.96
7.50	**17615**	3.92	6.98	0.93	0.68	0.62	0.56	0.52	0.47	0.37	11.57	7.87	8.61	11.57	8.82	4.70
	17620	5.16	10.34	1.38	1.00	0.92	0.84	0.77	0.69	0.55	17.08	10.58	12.17	15.89	12.38	6.19
	20615	4.27	8.19	1.09	0.79	0.73	0.66	0.61	0.55	0.44	13.55	9.86	10.69	13.55	10.80	6.57
	20620	5.64	12.32	1.64	1.19	1.10	1.00	0.91	0.82	0.66	20.29	13.16	15.10	19.81	15.68	8.66
8.00	**17615**	3.92	6.50	0.81	0.59	0.54	0.49	0.45	0.41	0.33	10.83	6.97	8.06	10.83	8.11	4.12
	17620	5.16	9.64	1.21	0.88	0.80	0.73	0.67	0.60	0.48	15.99	9.43	11.07	14.37	10.86	5.43
	20615	4.27	7.64	0.95	0.69	0.64	0.58	0.53	0.48	0.38	12.69	8.75	9.44	12.69	9.91	5.77
	20620	5.64	11.49	1.44	1.04	0.96	0.87	0.80	0.72	0.57	19.00	11.75	13.76	17.96	14.42	7.60

Polycoat Purlin:
Load Tables for Heavy End Bay System

The heavy end bay system of Polycoat purlins offers an economic solution to the larger and multi span type buildings with five bays or more and are valid when fixed exactly as described in our Zed Purlin, Cee Section and Eaves Beam Technical Manual.

Working loads have been calculated in accordance with BS5950 Part 5 using a load factor of 1.6, a deflection limitation of span/180 and with the self weight of the section deducted.

Material grade S350, minimum yield strength 350N/mm2.

For structural engineers wishing to check individual cases, ultimate loads are shown together with loads at different deflection criteria.

In these cases the self weight of the purlin has not been deducted.

Tables are valid for roof pitches up to 25 degree slope.

NOTES:

1. When using ultimate tables, load factors must be applied.
2. Wind uplift figures shown are for screw fixed cladding, for hook bolt type fixing please contact our technical department.

Span (m)	Section Ref	Weight (Kg / m)	WORKING LOADS (kN)		ULTIMATE LOADS								DEFLECTION (kN)			
					Gravity		UPLIFT (kN) LATERAL RESTRAINTS									
							0 Rows		1 Row		2 Rows		Span/180		Span/360	
			End Bay	Inner Bay	End Bay	Inner Bay	End Bay	Inner Bay	End Bay	Inner Bay	End Bay	Inner Bay	End Bay	Inner Bay	End Bay	Inner Bay
5.00	**14615**	3.56	-	12.43	-	20.13	-	18.82	-	20.13	-	20.13	-	18.14	-	14.42
	14620	4.68	13.91	-	22.57	-	15.05	-	20.40	-	22.57	-	16.48	-	9.13	-
	17615	3.92	-	15.37	-	24.86	-	24.32	-	24.86	-	24.86	-	23.56	-	20.94
	17620	5.16	17.32	-	28.06	-	19.22	-	26.35	-	28.06	-	22.54	-	14.15	-
5.50	**14615**	3.56	-	11.25	-	18.26	-	15.88	-	18.26	-	18.26	-	16.17	-	11.87
	14620	4.68	12.58	-	20.47	-	13.24	-	17.57	-	20.47	-	14.39	-	7.52	-
	17615	3.92	-	13.91	-	22.56	-	20.56	-	22.56	-	22.56	-	20.93	-	18.35
	17620	5.16	15.67	-	25.46	-	17.02	-	22.72	-	25.46	-	19.57	-	11.64	-
6.00	**14615**	3.56	-	10.26	-	16.71	-	13.95	-	16.39	-	16.71	-	14.58	-	9.94
	14620	4.68	11.47	-	18.73	-	11.71	-	12.77	-	18.35	-	12.59	-	6.29	-
	17615	3.92	-	12.70	-	20.64	-	17.32	-	20.64	-	20.64	-	18.82	-	15.37
	17620	5.16	14.30	-	23.30	-	15.04	-	19.62	-	23.30	-	17.24	-	9.75	-
	20615	4.27	-	14.89	-	24.17	-	21.90	-	24.17	-	24.17	-	22.65	-	20.12
	20620	5.64	17.01	-	27.68	-	18.64	-	24.61	-	27.68	-	22.00	-	13.64	-
6.50	**17615**	3.92	-	11.67	-	19.02	-	15.88	-	18.60	-	19.02	-	17.08	-	13.05
	17620	5.16	13.13	-	21.47	-	13.35	-	16.92	-	21.29	-	15.38	-	8.28	-
	20615	4.27	-	13.69	-	22.28	-	18.60	-	22.28	-	22.28	-	20.51	-	18.24
	20620	5.64	15.63	-	25.51	-	16.56	-	21.33	-	25.51	-	19.55	-	11.59	-
7.00	**17615**	3.92	-	10.79	-	17.64	-	14.73	-	16.33	-	17.64	-	15.63	-	11.23
	17620	5.16	12.14	-	19.91	-	11.87	-	13.41	-	19.19	-	13.85	-	7.12	-
	20615	4.27	-	12.66	-	20.66	-	17.25	-	20.53	-	20.66	-	18.73	-	15.69
	20620	5.64	14.45	-	23.66	-	14.75	-	18.44	-	23.66	-	17.56	-	9.96	-
7.50	**17615**	3.92	-	10.03	-	16.45	-	13.73	-	14.31	-	16.45	-	14.41	-	9.76
	17620	5.16	11.27	-	18.56	-	10.58	-	12.17	-	17.33	-	12.38	-	6.19	-
	20615	4.27	-	11.77	-	19.26	-	16.08	-	18.08	-	19.26	-	17.23	-	13.64
	20620	5.64	13.43	-	22.06	-	13.16	-	15.86	-	21.60	-	15.91	-	8.66	-
8.00	**17615**	3.92	-	9.36	-	15.40	-	12.86	-	12.86	-	15.40	-	13.36	-	8.56
	17620	5.16	10.46	-	17.39	-	9.43	-	11.07	-	15.68	-	10.86	-	5.43	-
	20615	4.27	-	10.98	-	18.04	-	15.06	-	15.88	-	18.04	-	15.95	-	11.96
	20620	5.64	12.53	-	20.66	-	11.75	-	13.76	-	19.59	-	14.53	-	7.60	-

Polycoat Purlin:
Load Tables for Single Span Butt System

Single span Polycoat Purlin load tables may be used where purlins are required to span in the depth of the rafters, or where continuity of the system cannot be achieved.

The tables are valid when the purlins are fixed exactly as described in our Technical Manual.

Working loads have been calculated in accordance with BS5950 Part 5 using a load factor of 1.6, a deflection limitation of span/180 and with the self weight of the section deducted.

Material grade S350, minimum yield strength 350N/mm2.

For structural engineers wishing to check individual cases, ultimate loads are shown together with loads at different deflection criteria.

In these cases the self weight of the purlin has not been deducted.

Tables are valid for roof pitches up to 25 degree slope.

NOTES:

When using ultimate tables, load factors must be applied.

Wind uplift figures shown are for screw fixed cladding, for hook bolt type fixing please contact our technical department.

				PURLIN CENTRES IN METRES							ULTIMATE LOADS				DEFLECTION	
Span (m)	Section Ref	Weight (Kg / m)	Working Load (kN)	1.00	1.375	1.50	1.65	1.80	2.00	2.50	Gravity (kN)	UPLIFT (kN) LATERAL RESTRAINTS			Span/180 (kN)	Span/360 (kN)
				ALLOWABLE LOADINGS (Kn / M²)								0 Rows	1 Row	2 Rows		
4.00	**14615**	3.56	8.98	2.25	1.63	1.50	1.36	1.25	1.12	0.90	14.57	10.59	14.57	14.57	10.13	5.07
	14620	4.68	13.14	3.28	2.39	2.19	1.99	1.82	1.64	1.31	21.36	14.30	20.27	21.36	13.32	6.66
4.50	**14615**	3.56	7.80	1.73	1.26	1.16	1.05	0.96	0.87	0.69	12.91	7.74	12.91	12.91	7.95	3.98
	14620	4.68	10.25	2.28	1.66	1.52	1.38	1.27	1.14	0.91	18.93	10.72	17.15	18.93	10.45	5.23
5.00	**14615**	3.56	6.24	1.25	0.91	0.83	0.76	0.69	0.62	0.50	11.59	5.74	11.07	11.59	6.41	3.20
	14620	4.68	8.20	1.64	1.19	1.09	0.99	0.91	0.82	0.66	16.99	8.06	14.58	16.99	8.42	4.21
	17615	3.92	8.78	1.76	1.28	1.17	1.06	0.98	0.88	0.70	14.31	7.43	14.31	14.31	9.91	4.96
	17620	5.16	12.80	2.56	1.86	1.71	1.55	1.42	1.28	1.02	21.13	10.25	18.85	21.13	13.05	6.52
5.50	**14615**	3.56	5.08	0.92	0.67	0.62	0.56	0.51	0.46	0.37	10.51	4.39	9.41	10.51	5.27	2.64
	14620	4.68	6.68	1.22	0.88	0.81	0.74	0.68	0.61	0.49	15.41	6.26	12.42	15.15	6.93	3.47
	17615	3.92	7.93	1.44	1.05	0.96	0.87	0.80	0.72	0.58	12.98	5.66	12.20	12.98	8.16	4.08
	17620	5.16	10.46	1.90	1.38	1.27	1.15	1.06	0.95	0.76	19.17	7.89	16.08	19.17	10.74	5.37
6.00	**14615**	3.56	4.21	0.70	0.51	0.47	0.43	0.39	0.35	0.28	9.62	3.46	7.97	9.62	4.42	2.21
	14620	4.68	5.53	0.92	0.67	0.61	0.56	0.51	0.46	0.37	14.10	5.00	10.57	13.50	5.80	2.90
	17615	3.92	6.60	1.10	0.80	0.73	0.67	0.61	0.55	0.44	11.88	4.43	10.37	11.88	6.83	3.41
	17620	5.16	8.69	1.45	1.05	0.97	0.88	0.80	0.72	0.58	17.54	6.25	13.69	17.43	8.99	4.49
	20615	4.27	8.48	1.41	1.03	0.94	0.86	0.79	0.71	0.57	13.91	5.68	13.10	13.91	9.54	4.77
	20620	5.64	12.25	2.04	1.48	1.36	1.24	1.13	1.02	0.82	20.84	7.87	17.27	20.84	12.58	6.29
6.50	**17615**	3.92	5.55	0.85	0.62	0.57	0.52	0.47	0.43	0.34	10.95	3.54	8.76	10.95	5.80	2.90
	17620	5.16	7.31	1.12	0.82	0.75	0.68	0.62	0.56	0.45	16.17	5.06	11.62	15.61	7.64	3.82
	20615	4.27	7.78	1.20	0.87	0.80	0.73	0.66	0.60	0.48	12.82	4.53	11.16	12.82	8.11	4.05
	20620	5.64	10.33	1.59	1.16	1.06	0.96	0.88	0.79	0.64	19.21	6.33	14.74	19.21	10.68	5.34
7.00	**20615**	4.27	6.68	0.95	0.69	0.64	0.58	0.53	0.48	0.38	11.89	3.67	9.44	11.89	6.97	3.49
	20620	5.64	8.81	1.26	0.91	0.84	0.76	0.70	0.63	0.50	17.81	5.19	12.51	17.46	9.19	4.59

Polycoat Rail:
Load Tables for Sleeved System

Polycoat sleeved side rail load tables are for buildings with two bays or more and are valid when fixed as shown in our Zed Purlin, Cee Section and Eaves Beam Technical Manual.

Loads have been calculated in accordance with BS 5950 Part 5 using a load factor of 1.4.

Material grade S350, minimum yield strength 350N/mm2

An allowance for a cladding weight of 0.15kN/m2 has been made and the loads are shown for horizontal wind pressures,limited by deflection of span/150.

For suction cases, multiply the tabulated values by 0.9.

For structural engineers wishing to check individual cases ultimate wind pressures are shown together with limiting loads for span/150 and span/300 deflection criteria.

				RAIL CENTRES IN METRES									DEFLECTION	
Span (m)	Section Ref	Weight (Kg/m)	Working Load (kN)	1.00	1.25	1.50	1.65	1.80	2.00	2.50	3.00	ULTIMATE LOAD (kN)	L/150 (kN)	L/300 (kN)
				ALLOWABLE LOADINGS (Kn / M²)										
4.00	**14615**	3.56	13.37	3.34	2.67	2.23	2.03	1.86	1.67	1.34	1.11	18.72	17.74	12.91
	14620	4.68	19.61	4.90	3.92	3.27	2.97	2.72	2.45	1.96	1.63	27.45	24.61	17.33
4.50	**14615**	3.56	11.85	2.63	2.11	1.76	1.60	1.46	1.32	1.05	0.88	16.59	14.74	10.35
	14620	4.68	17.37	3.86	3.09	2.57	2.34	2.14	1.93	1.54	1.29	24.32	20.52	13.60
5.00	**14615**	3.56	10.63	2.13	1.70	1.42	1.29	1.18	1.06	0.85	0.71	14.89	12.54	8.34
	14620	4.68	15.60	3.12	2.50	2.08	1.89	1.73	1.56	1.25	1.04	21.83	17.50	10.96
	17615	3.92	13.14	2.63	2.10	1.75	1.59	1.46	1.31	1.05	0.88	18.39	17.43	12.70
	17620	5.16	19.39	3.88	3.10	2.59	2.35	2.15	1.94	1.55	1.29	27.15	24.22	16.98
5.50	**14615**	3.56	9.65	1.75	1.40	1.17	1.06	0.97	0.88	0.70	0.58	13.51	10.86	6.86
	14620	4.68	14.15	2.57	2.06	1.71	1.56	1.43	1.29	1.03	0.86	19.81	15.20	9.02
	17615	3.92	11.92	2.17	1.73	1.44	1.31	1.20	1.08	0.87	0.72	16.68	15.01	10.61
6.00	**14615**	3.56	8.83	1.47	1.18	0.98	0.89	0.82	0.74	0.59	0.49	12.36	9.54	5.75
	14620	4.68	12.95	2.16	1.73	1.44	1.31	1.20	1.08	0.86	0.72	18.12	13.39	7.55
	17615	3.92	10.90	1.82	1.45	1.21	1.10	1.01	0.91	0.73	0.61	15.27	13.13	8.89
	17620	5.16	16.10	2.68	2.15	1.79	1.63	1.49	1.34	1.07	0.89	22.54	18.35	11.70
	20615	4.27	12.77	2.13	1.70	1.42	1.29	1.18	1.06	0.85	0.71	17.88	16.77	12.21
	20620	5.64	19.13	3.19	2.55	2.13	1.93	1.77	1.59	1.28	1.06	26.78	23.61	16.37
6.50	**17615**	3.92	10.05	1.55	1.24	1.03	0.94	0.86	0.77	0.62	0.52	14.07	11.63	7.55
	17620	5.16	14.84	2.28	1.83	1.52	1.38	1.27	1.14	0.91	0.76	20.77	16.29	9.94
	20615	4.27	11.77	1.81	1.45	1.21	1.10	1.01	0.91	0.72	0.60	16.48	14.80	10.55
	20620	5.64	17.63	2.71	2.17	1.81	1.64	1.51	1.36	1.08	0.90	24.68	20.89	13.90
7.00	**17615**	3.92	9.32	1.33	1.07	0.89	0.81	0.74	0.67	0.53	0.44	13.05	10.42	6.49
	17620	5.16	13.76	1.97	1.57	1.31	1.19	1.09	0.98	0.79	0.66	19.26	14.62	8.55
	20615	4.27	10.92	1.56	1.25	1.04	0.95	0.87	0.78	0.62	0.52	15.28	13.20	9.07
	20620	5.64	16.35	2.34	1.87	1.56	1.42	1.30	1.17	0.93	0.78	22.89	18.69	11.96
7.50	**17615**	3.92	8.69	1.16	0.93	0.77	0.70	0.64	0.58	0.46	0.39	12.17	9.41	5.64
	17620	5.16	12.83	1.71	1.37	1.14	1.04	0.95	0.86	0.68	0.57	17.96	13.23	7.43
	20615	4.27	10.18	1.36	1.09	0.90	0.82	0.75	0.68	0.54	0.45	14.25	11.89	7.89
	20620	5.64	15.24	2.03	1.63	1.35	1.23	1.13	1.02	0.81	0.68	21.34	16.87	10.39
8.00	**17615**	3.92	8.14	1.02	0.81	0.68	0.62	0.57	0.51	0.41	0.34	11.39	8.57	4.95
	17620	5.16	12.02	1.50	1.20	1.00	0.91	0.83	0.75	0.60	0.50	16.82	12.07	6.52
	20615	4.27	9.53	1.19	0.95	0.79	0.72	0.66	0.60	0.48	0.40	13.34	10.79	6.92
	20620	5.64	14.28	1.78	1.43	1.19	1.08	0.99	0.89	0.71	0.59	19.99	15.35	9.12
8.50	**17615**	3.92	7.65	0.90	0.72	0.60	0.55	0.50	0.45	0.36	0.30	10.71	7.85	4.38
	17620	5.16	11.08	1.30	1.04	0.87	0.79	0.72	0.65	0.52	0.43	15.82	11.08	5.76
	20615	4.27	8.96	1.05	0.84	0.70	0.64	0.59	0.53	0.42	0.35	12.55	9.86	6.12
	20620	5.64	13.42	1.58	1.26	1.05	0.96	0.88	0.79	0.63	0.53	18.79	14.06	8.06

Polycoat Rail:
Load Tables for Double Span Butt System

Polycoat double span butt jointed side rail load tables are for buildings with two bays or more and are valid when fixed as shown in our Zed Purlin, Cee Section and Eaves Beam Technical Manual.

Loads have been calculated in accordance with BS 5950 Part 5 using a load factor of 1.4.

Material grade S350, minimum yield strength 350N/mm2.

An allowance for a cladding weight of 0.15kN/m2 has been made and the loads are shown for horizontal wind pressures, limited by deflection of span/150.

For suction cases, multiply the tabulated values by 0.9.

For structural engineers wishing to check individual cases ultimate wind pressures are shown together with limiting loads for span/150 and span/300 deflection criteria.

				RAIL CENTRES IN METRES									DEFLECTION	
Span (m)	Section Ref	Weight (Kg/m)	Working Load (kN)	1.00	1.25	1.50	1.65	1.80	2.00	2.50	3.00	ULTIMATE LOAD (kN)	L/150 (kN)	L/300 (kN)
				ALLOWABLE LOADINGS (Kn / M²)										
4.00	**14615**	3.56	12.30	3.08	2.46	2.05	1.86	1.71	1.54	1.23	1.03	17.22	16.33	12.86
	14620	4.68	18.04	4.51	3.61	3.01	2.73	2.51	2.25	1.80	1.50	25.25	22.97	17.33
4.50	**14615**	3.56	10.90	2.42	1.94	1.61	1.47	1.35	1.21	0.97	0.81	15.26	13.77	10.35
	14620	4.68	15.98	3.55	2.84	2.37	2.15	1.97	1.78	1.42	1.18	22.38	19.43	13.60
5.00	**14615**	3.56	9.78	1.96	1.57	1.30	1.19	1.09	0.98	0.78	0.65	13.70	11.86	8.34
	14620	4.68	14.35	2.87	2.30	1.91	1.74	1.59	1.43	1.15	0.96	20.09	16.78	10.96
	17615	3.92	12.08	2.42	1.93	1.61	1.46	1.34	1.21	0.97	0.81	16.92	16.06	12.67
	17620	5.16	17.84	3.57	2.85	2.38	2.16	1.98	1.78	1.43	1.19	24.98	22.63	16.98
5.50	**14615**	3.56	8.87	1.61	1.29	1.08	0.98	0.90	0.81	0.65	0.54	12.42	10.39	6.86
	14620	4.68	13.01	2.37	1.89	1.58	1.43	1.31	1.18	0.95	0.79	18.22	14.74	9.02
	17615	3.92	10.96	1.99	1.59	1.33	1.21	1.11	1.00	0.80	0.66	15.35	14.00	10.61
	17620	5.16	16.18	2.94	2.35	1.96	1.78	1.63	1.47	1.18	0.98	22.66	19.77	13.97
6.00	**14615**	3.56	8.12	1.35	1.08	0.90	0.82	0.75	0.68	0.54	0.45	11.37	9.22	5.75
	14620	4.68	11.91	1.98	1.59	1.32	1.20	1.10	0.99	0.79	0.66	16.67	13.12	7.55
	17615	3.92	10.03	1.67	1.34	1.11	1.01	0.93	0.84	0.67	0.56	14.04	12.38	8.89
	17620	5.16	14.81	2.47	1.97	1.65	1.50	1.37	1.23	0.99	0.82	20.73	17.52	11.70
	20615	4.27	11.75	1.96	1.57	1.31	1.19	1.09	0.98	0.78	0.65	16.45	15.45	12.18
	20620	5.64	17.60	2.93	2.35	1.96	1.78	1.63	1.47	1.17	0.98	24.63	22.12	16.37
6.50	**17615**	3.92	9.25	1.42	1.14	0.95	0.86	0.79	0.71	0.57	0.47	12.94	11.07	7.55
	17620	5.16	13.65	2.10	1.68	1.40	1.27	1.17	1.05	0.84	0.70	19.11	15.71	9.94
	20615	4.27	10.83	1.67	1.33	1.11	1.01	0.93	0.83	0.67	0.56	15.16	13.77	10.55
	20620	5.64	16.22	2.50	2.00	1.66	1.51	1.39	1.25	1.00	0.83	22.71	19.76	13.90
7.00	**17615**	3.92	8.57	1.22	0.98	0.82	0.74	0.68	0.61	0.49	0.41	12.00	10.00	6.49
	17620	5.16	12.66	1.81	1.45	1.21	1.10	1.00	0.90	0.72	0.60	17.72	14.21	8.55
	20615	4.27	10.04	1.43	1.15	0.96	0.87	0.80	0.72	0.57	0.48	14.06	12.39	9.07
	20620	5.64	15.04	2.15	1.72	1.43	1.30	1.19	1.07	0.86	0.72	21.06	17.84	11.96
7.50	**17615**	3.92	7.99	1.07	0.85	0.71	0.65	0.59	0.53	0.43	0.36	11.19	9.10	5.64
	17620	5.16	11.80	1.57	1.26	1.05	0.95	0.87	0.79	0.63	0.52	16.52	12.97	7.43
	20615	4.27	9.36	1.25	1.00	0.83	0.76	0.69	0.62	0.50	0.42	13.11	11.25	7.89
	20620	5.64	14.02	1.87	1.50	1.25	1.13	1.04	0.93	0.75	0.62	19.63	16.23	10.39
8.00	**17615**	3.92	7.49	0.94	0.75	0.62	0.57	0.52	0.47	0.37	0.31	10.48	8.35	4.95
	17620	5.16	11.05	1.38	1.11	0.92	0.84	0.77	0.69	0.55	0.46	15.47	11.91	6.52
	20615	4.27	8.77	1.10	0.88	0.73	0.66	0.61	0.55	0.44	0.37	12.28	10.29	6.92
	20620	5.64	13.13	1.64	1.31	1.09	0.99	0.91	0.82	0.66	0.55	18.39	14.88	9.12

Polycoat Rail:
Load Tables for Single Span Butt System

Polycoat single span side rails have been designed as simply supported members fixed between the columns, where continuity of the system cannot be achieved.

The tables are valid when the rails are fixed as shown in our Zed Purlin, Cee Section and Eaves Beam Technical Manual.

Loads have been calculated in accordance with BS 5950 Part 5 using a load factor of 1.4.

Material grade S350, minimum yield strength 350N/mm2.

An allowance for a cladding weight of 0.15kN/m2 has been made and the loads are shown for horizontal wind pressures, limited by deflection of span/150.

For suction cases, multiply the tabulated values by 0.9.

For structural engineers wishing to check individual cases ultimate wind pressures are shown together with limiting loads for span/150 and span/300 deflection criteria.

				RAIL CENTRES IN METRES									DEFLECTION	
Span (m)	Section Ref	Weight (Kg /m)	Working Load (kN)	1.00	1.25	1.50	1.65	1.80	2.00	2.50	3.00	ULTIMATE LOAD (kN)	L/150 (kN)	L/300 (kN)
				ALLOWABLE LOADINGS (Kn / M²)										
4.00	**14615**	3.56	10.07	2.52	2.01	1.68	1.53	1.40	1.26	1.01	0.84	14.09	12.16	6.08
	14620	4.68	14.76	3.69	2.95	2.46	2.24	2.05	1.85	1.48	1.23	20.67	15.98	7.99
4.50	**14615**	3.56	8.92	1.98	1.59	1.32	1.20	1.10	0.99	0.79	0.66	12.49	9.55	4.77
	14620	4.68	12.55	2.79	2.23	1.86	1.69	1.55	1.39	1.12	0.93	18.31	12.55	6.27
5.00	**14615**	3.56	7.69	1.54	1.23	1.03	0.93	0.85	0.77	0.62	0.51	11.21	7.69	3.85
	14620	4.68	10.11	2.02	1.62	1.35	1.23	1.12	1.01	0.81	0.67	16.44	10.11	5.05
	17615	3.92	9.89	1.98	1.58	1.32	1.20	1.10	0.99	0.79	0.66	13.85	11.89	5.95
	17620	5.16	14.60	2.92	2.34	1.95	1.77	1.62	1.46	1.17	0.97	20.44	15.65	7.83
5.50	**14615**	3.56	6.33	1.15	0.92	0.77	0.70	0.64	0.58	0.46	0.38	10.17	6.33	3.16
	14620	4.68	8.32	1.51	1.21	1.01	0.92	0.84	0.76	0.61	0.50	14.91	8.32	4.16
	17615	3.92	8.97	1.63	1.31	1.09	0.99	0.91	0.82	0.65	0.54	12.56	9.79	4.89
	17620	5.16	12.88	2.34	1.87	1.56	1.42	1.30	1.17	0.94	0.78	18.54	12.88	6.44
6.00	**14615**	3.56	5.30	0.88	0.71	0.59	0.54	0.49	0.44	0.35	0.29	9.30	5.30	2.65
	14620	4.68	6.97	1.16	0.93	0.77	0.70	0.64	0.58	0.46	0.39	13.65	6.97	3.48
	17615	3.92	8.19	1.37	1.09	0.91	0.83	0.76	0.68	0.55	0.46	11.49	8.19	4.10
	17620	5.16	10.79	1.80	1.44	1.20	1.09	1.00	0.90	0.72	0.60	16.97	10.79	5.39
	20615	4.27	9.62	1.60	1.28	1.07	0.97	0.89	0.80	0.64	0.53	13.46	11.45	5.73
	20620	5.64	14.40	2.40	1.92	1.60	1.45	1.33	1.20	0.96	0.80	20.16	15.09	7.55
6.50	**17615**	3.92	6.96	1.07	0.86	0.71	0.65	0.60	0.54	0.43	0.36	10.59	6.96	3.48
	17620	5.16	9.16	1.41	1.13	0.94	0.85	0.78	0.70	0.56	0.47	15.64	9.16	4.58
	20615	4.27	8.86	1.36	1.09	0.91	0.83	0.76	0.68	0.55	0.45	12.41	9.73	4.87
	20620	5.64	12.82	1.97	1.58	1.32	1.20	1.10	0.99	0.79	0.66	18.58	12.82	6.41
7.00	**17615**	3.92	5.99	0.86	0.68	0.57	0.52	0.48	0.43	0.34	0.29	9.82	5.99	2.99
	17620	5.16	7.88	1.13	0.90	0.75	0.68	0.63	0.56	0.45	0.38	14.50	7.88	3.94
	20615	4.27	8.22	1.17	0.94	0.78	0.71	0.65	0.59	0.47	0.39	11.51	8.37	4.18
	20620	5.64	11.03	1.58	1.26	1.05	0.95	0.88	0.79	0.63	0.53	17.23	11.03	5.51
7.50	**17615**	3.92	5.20	0.69	0.56	0.46	0.42	0.39	0.35	0.28	0.23	9.16	5.20	2.60
	17620	5.16	6.85	0.91	0.73	0.61	0.55	0.51	0.46	0.37	0.30	13.52	6.85	3.42
	20615	4.27	7.27	0.97	0.78	0.65	0.59	0.54	0.48	0.39	0.32	10.73	7.27	3.64
	20620	5.64	9.58	1.28	1.02	0.85	0.77	0.71	0.64	0.51	0.43	16.07	9.58	4.79
8.00	**17615**	3.92	4.56	0.57	0.46	0.38	0.35	0.32	0.29	0.23	0.19	8.58	4.56	2.28
	17620	5.16	6.01	0.75	0.60	0.50	0.46	0.42	0.38	0.30	0.25	12.66	6.01	3.00
	20615	4.27	6.38	0.80	0.64	0.53	0.48	0.44	0.40	0.32	0.27	10.05	6.38	3.19
	20620	5.64	8.41	1.05	0.84	0.70	0.64	0.58	0.53	0.42	0.35	15.05	8.41	4.20

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