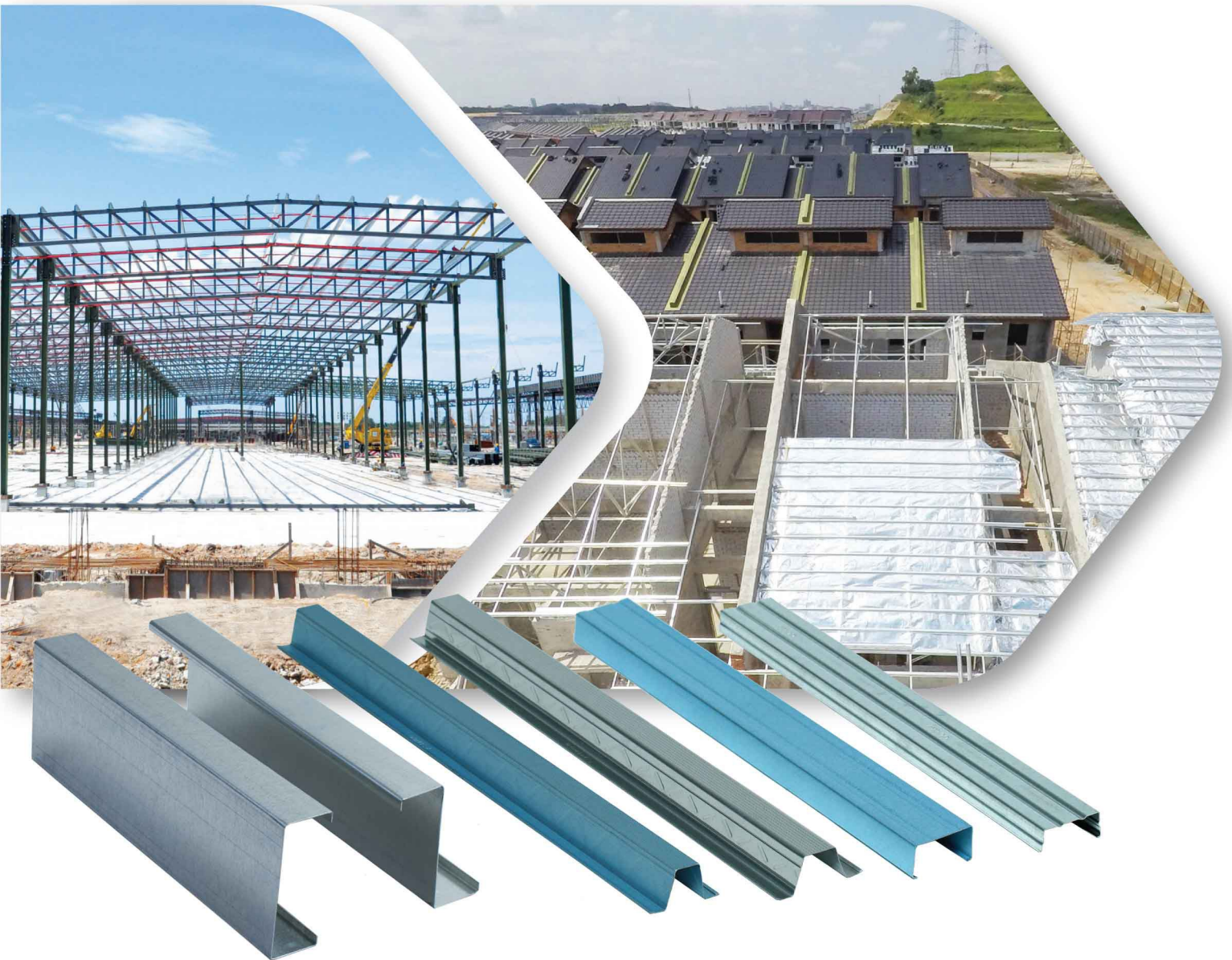




The Symbol Of Quality

C & Z PURLIN MULTI TRUSS & BATTEN



www.astino.com.my

Quality Architectural Products

ASTINO C & Z PURLIN

Astino produces a wide range of C and Z-Purlins. All C and Z-Purlins are roll-formed from high-tensile zinc coated steel. The cold roll forming process ensures a high degree of consistency and accuracy in the dimension of the sections. The C and Z-Purlins are supplied according to length and pre-punched holes either round or elongated on the webs, thus enabling immediate installation at site.



MATERIAL SPECIFICATION

Material	Hot Dip Galvanised Steel
Steel Grade	JIS G 3302 / AS 1397
Tensile	High Tensile
Min Yield Strength (Mpa)	450
Min Tensile Strength	480
Zinc Coating	120 g/m ² to 275 g/m ²
Available Thickness (mm)	1.60, 2.00, 2.50, 3.00

FIRE RATING

Class “O” fire rating according to BS 476: Part 6: 1989 “Method of Test for Fire Propagation for Products” & BS 476: Part 7: 1997 “Fire tests on building materials and structures. Method of test to determine the classification of the surfaces spread of flamed of products”.

TOLERANCES

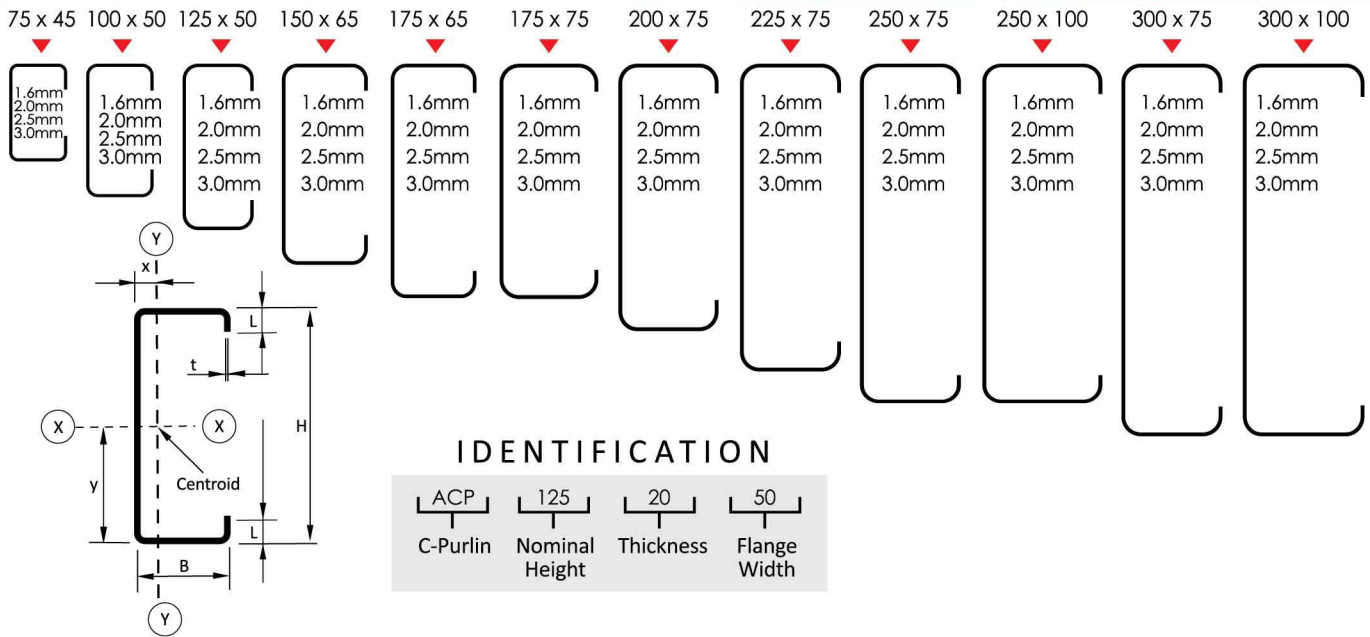
Astino C-Purlins are produced within the following tolerances:

Length	: ±5mm
Web (Dim. H)	: ±3mm
Flange (Dim. B)	: ±3mm
Hole centres	: ±2mm
Thickness	: ±0.18mm

QUALITY ASSURANCE

- QUALITY ASSURANCE, COMPETITIVE PRICE, ON TIME DELIVERY
- QUALITY PRODUCT WITH PROVEN SUPPLY RECORDS
- HIGH DEGREE OF ACCURACY AND CONSISTENCY IN DIMENSIONS
- DIFFERENT THICKNESS AVAILABILITY TO SUIT CUSTOMER'S NEEDS
- HIGH TENSILE STEEL ; LOW WEIGHT
- PRE-PUNCHED HOLES AND CUSTOM CUT LENGTH
- GREATER STIFFNESS AND STRAIGHTER CLADDING LINES

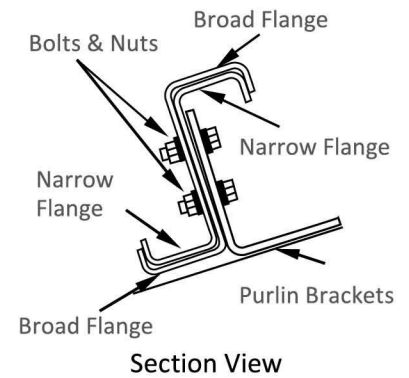
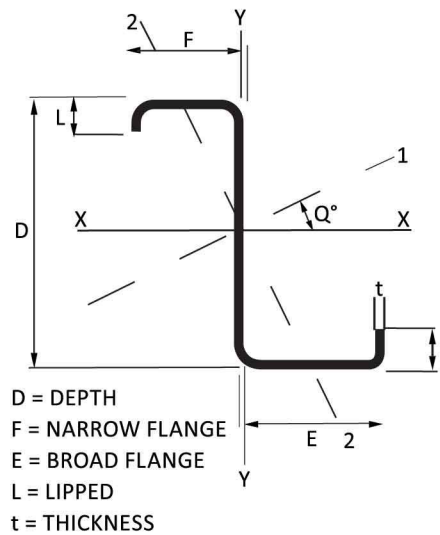
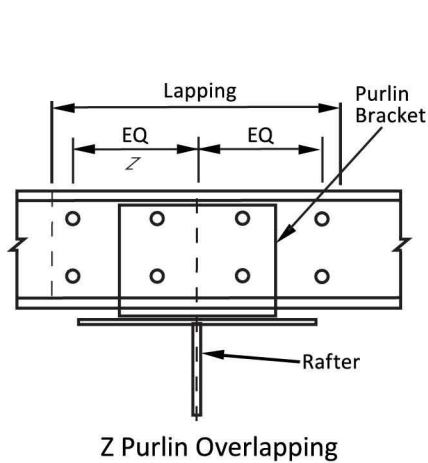
C-PURLIN : SPECIFICATIONS AND SECTION PROPERTIES



Identification	Web	Flange	Thickness	Lip Size	Area	Weight	Ixx	Iyy	Zxx	Zyy	Rxx	Ryy
	H(mm)	B(mm)	t(mm)	L(mm)								
ACP07516	75	45	1.60	16	299	2.46	0.274	0.090	6.373	3.262	30.262	17.323
ACP07520	75	45	2.00	16	371	3.08	0.337	0.011	8.987	4.050	30.111	17.170
ACP07525	75	45	2.50	16	451	3.88	0.400	0.128	10.659	4.670	29.756	16.840
ACP07530	75	45	3.00	16	532	4.65	0.462	0.146	12.327	5.331	29.482	16.577
ACP10016	100	50	1.60	16	355	2.80	0.572	0.128	11.440	3.951	40.160	19.000
ACP10020	100	50	2.00	16	441	3.45	0.706	0.156	14.120	4.815	40.003	18.824
ACP10025	100	50	2.50	16	548	4.40	0.868	0.190	17.360	5.864	39.810	18.631
ACP10030	100	50	3.00	16	637	5.35	0.985	0.211	19.702	6.534	39.330	18.213
ACP12516	125	50	1.60	16	394	3.10	0.960	0.138	15.360	4.047	49.314	18.693
ACP12520	125	50	2.00	16	491	3.82	1.187	0.169	18.992	4.956	49.153	18.534
ACP12525	125	50	2.50	16	610	4.89	1.462	0.205	23.392	6.012	48.951	18.337
ACP12530	125	50	3.00	16	712	6.10	1.668	0.228	26.688	6.709	48.408	17.913
ACP15016	150	65	1.60	16	483	3.85	1.737	0.275	23.160	6.125	59.958	23.872
ACP15020	150	65	2.00	16	601	4.73	2.149	0.338	28.635	7.528	59.794	23.712
ACP15025	150	65	2.50	16	748	5.89	2.654	0.413	35.387	9.219	59.590	23.513
ACP15030	150	65	3.00	16	960	7.89	3.548	0.619	47.310	14.190	60.800	26.400
ACP17516-65	175	65	1.60	16	523	4.15	2.480	0.289	28.343	6.228	68.866	23.508
ACP17520-65	175	65	2.00	16	651	5.10	3.073	0.355	35.120	7.667	68.697	23.346
ACP17525-65	175	65	2.50	16	810	6.35	3.799	0.434	43.417	9.374	68.495	23.145
ACP17530-65	175	65	3.00	16	952	7.96	4.390	0.490	50.176	10.584	67.916	22.688
ACP17516-75	175	75	1.60	16	555	4.41	2.720	0.409	31.086	7.776	70.018	27.164
ACP17520-75	175	75	2.00	16	691	5.42	3.372	0.504	38.537	9.582	69.851	27.002
ACP17525-75	175	75	2.50	16	860	6.75	4.171	0.618	47.669	11.749	69.643	26.801
ACP17530-75	175	75	3.00	16	1012	8.42	4.834	0.702	55.248	13.358	69.121	26.332
ACP20016	200	75	1.60	16	595	4.76	3.702	0.427	37.020	7.893	78.885	26.785
ACP20020	200	75	2.00	16	741	5.90	4.592	0.525	45.920	9.722	78.714	26.622
ACP20025	200	75	2.50	16	923	7.39	5.685	0.644	56.850	11.926	78.500	26.419
ACP20030	200	75	3.00	16	1170	9.55	7.476	0.945	74.760	17.90	79.940	28.240
ACP22516	225	75	1.60	16	633	5.15	4.848	0.439	43.098	22.267	87.500	26.331
ACP22520	225	75	2.00	16	788	6.42	5.999	0.538	53.329	27.279	87.272	26.131
ACP22525	225	75	2.50	16	974	7.98	7.350	0.648	65.334	32.868	86.857	25.791
ACP22530	225	75	3.00	16	1159	10.30	8.674	0.753	77.105	38.209	86.502	25.493
ACP25016-75	250	75	1.60	16	675	5.38	6.236	0.455	49.888	8.053	96.120	25.975
ACP25020-75	250	75	2.00	16	841	6.59	7.742	0.560	61.936	9.929	95.939	25.811
ACP25025-75	250	75	2.50	16	1048	8.35	9.596	0.687	76.768	12.181	95.713	25.607
ACP25030-75	250	75	3.00	16	1320	10.88	12.528	1.011	100.23	18.260	97.420	27.680
ACP25016-100	250	100	1.60	16	754	6.07	7.461	0.972	59.686	12.771	99.449	35.062
ACP25020-100	250	100	2.00	16	938	7.58	9.226	1.137	73.804	15.657	99.189	34.820
ACP25025-100	250	100	2.50	16	1164	9.48	11.376	1.387	91.005	19.096	98.862	34.516
ACP25030-100	250	100	3.00	16	1387	11.37	13.464	1.623	107.713	22.351	98.532	34.209
ACP30016-75	300	75	1.60	16	754	6.28	9.600	0.477	64.000	8.171	112.809	25.140
ACP30020-75	300	75	2.00	16	938	7.67	11.866	0.582	79.104	9.967	112.490	24.904
ACP30025-75	300	75	2.50	16	1164	9.68	14.623	0.705	97.486	12.078	112.088	24.607
ACP30030-75	300	75	3.00	16	1387	11.50	17.298	0.819	115.317	14.044	111.682	24.309
ACP30016-100	300	100	1.60	16	841	6.64	11.526	0.998	76.840	13.289	117.074	34.445
ACP30020-100	300	100	2.00	16	1048	8.35	14.314	1.230	95.427	16.378	116.869	34.261
ACP30025-100	300	100	2.50	16	1305	10.26	17.746	1.511	118.307	20.147	116.613	34.032
ACP30030-100	300	100	3.00	16	1537	13.50	20.605	1.712	137.370	22.769	115.792	33.376

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Z-PURLIN : SPECIFICATIONS AND SECTION PROPERTIES

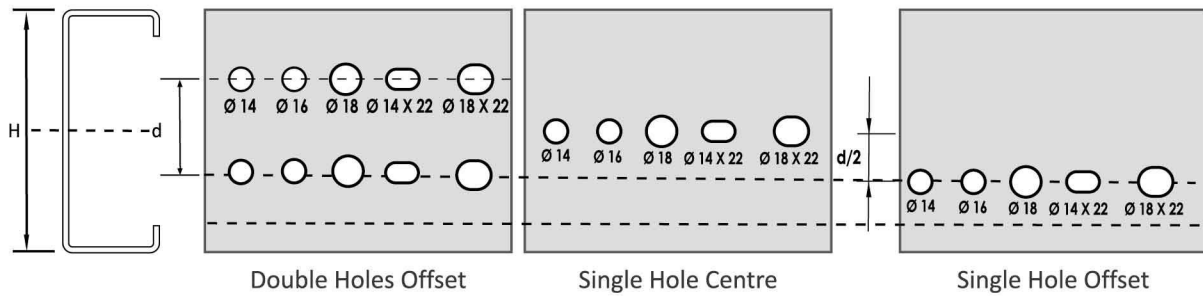


Astino Z-Purlin	Dimension					Area	Mass Per Unit Length	Second Moment Of Area		Section Modulus		Radius Of Cyration	
	D	E	F	L	t			A	I_x	I_y	Z_x	Z_y	r_x
Code no.	mm	mm	mm	mm	mm	mm ²	kg/m	10 ⁶ mm ⁴	10 ⁶ mm ⁴	10 ³ mm ³	10 ³ mm ³	mm	mm
AZP10016	100	54	49	13	1.60	331	2.80	0.601	0.154	9.501	3.324	40.100	22.300
AZP10020	100	54	49	13	2.00	414	3.45	0.622	0.189	11.797	4.085	39.900	22.000
AZP10025	100	54	49	13	2.50	517	4.40	0.776	0.242	14.763	5.157	39.800	22.200
AZP10030	100	54	49	13	3.00	627	5.35	0.983	0.364	18.982	7.024	39.564	24.066
AZP12516	125	54	49	13	1.60	371	3.10	1.030	0.162	15.740	4.300	49.900	24.800
AZP12520	125	54	49	13	2.00	464	3.82	1.250	0.198	16.700	5.510	49.600	24.600
AZP12525	125	54	49	13	2.50	580	4.89	1.590	0.264	21.460	7.100	49.300	24.600
AZP12530	125	54	49	13	3.00	702	6.10	1.659	0.364	25.722	6.997	48.583	22.751
AZP15016	150	70	64	14	1.60	457	3.85	1.612	0.395	17.741	6.300	60.000	29.700
AZP15020	150	70	64	14	2.00	572	4.73	2.020	0.498	26.147	7.936	59.800	29.700
AZP15025	150	70	64	14	2.50	715	5.89	2.524	0.627	32.571	10.032	59.500	29.700
AZP15030	150	70	64	14	3.00	888	7.89	3.141	0.856	40.206	12.122	59.444	31.034
AZP17516	175	79	74	16	1.60	563	4.41	2.785	0.716	31.250	9.260	70.290	35.640
AZP17520	175	79	74	16	2.00	700	5.42	3.441	0.876	38.600	11.350	70.090	35.360
AZP17525	175	79	74	16	2.50	869	6.75	4.241	1.066	47.470	13.830	69.830	35.010
AZP17530	175	79	74	16	3.00	1020	8.42	4.899	1.202	54.763	15.622	69.276	34.319
AZP20016	200	79	73	15	1.60	588	4.76	3.556	0.643	34.483	8.374	79.700	33.900
AZP20020	200	79	73	15	2.00	710	5.90	4.535	0.860	43.981	11.227	79.600	34.600
AZP20025	200	79	73	15	2.50	887	7.39	5.709	1.103	55.513	14.397	79.400	34.900
AZP20030	200	79	73	15	3.00	1086	9.55	6.613	1.150	64.598	14.594	78.006	32.520
AZP22516	225	79	73	15	1.60	636	5.15	4.889	0.689	43.761	8.980	87.690	32.928
AZP22520	225	79	73	15	2.00	792	6.42	6.060	0.849	54.135	11.092	87.492	32.749
AZP22525	225	79	73	15	2.50	981	7.98	7.441	1.029	66.307	13.496	87.116	32.402
AZP22530	225	79	73	15	3.00	1168	10.30	8.802	1.205	78.238	15.852	86.800	32.113
AZP25016	250	79	73	15	1.60	644	5.38	7.283	0.781	54.830	10.030	100.600	33.000
AZP25020	250	79	73	15	2.00	806	6.59	7.620	0.833	59.300	10.800	97.100	32.100
AZP25025	250	79	73	15	2.50	1007	8.35	8.640	1.080	74.900	14.200	96.900	32.500
AZP25030	250	79	73	15	3.00	1236	10.88	11.192	1.150	87.694	14.911	95.125	30.492
AZP30016-79	300	79	73	15	1.60	755	6.28	9.644	0.690	64.294	9.073	112.959	30.220
AZP30020-79	300	79	73	15	2.00	941	7.67	11.969	0.849	79.796	11.174	112.740	30.000
AZP30025-79	300	79	73	15	2.50	1168	9.68	14.732	1.030	98.211	13.547	112.306	29.600
AZP30030-79	300	79	73	15	3.00	1395	11.50	17.519	1.212	116.790	15.953	112.030	29.400
AZP30016-100	300	100	93	20	1.60	822	6.64	11.097	1.336	72.568	14.273	116.196	40.315
AZP30020-100	300	100	93	20	2.00	1024	8.35	13.779	1.650	89.977	16.562	115.987	40.140
AZP30025-100	300	100	93	20	2.50	1276	10.26	17.082	2.033	111.334	20.343	115.724	39.922
AZP30030-100	300	100	93	20	3.00	1524	13.50	20.328	2.404	132.244	25.906	115.461	39.704

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PRE-PUNCHED HOLE ARRANGEMENT AND OPTIONS

Astino Galvanized C and Z-Purlins are manufactured in custom cut lengths. It can be supplied either with or without punched holes. If punched holes are required, the following are prepunched holes arrangements and option.

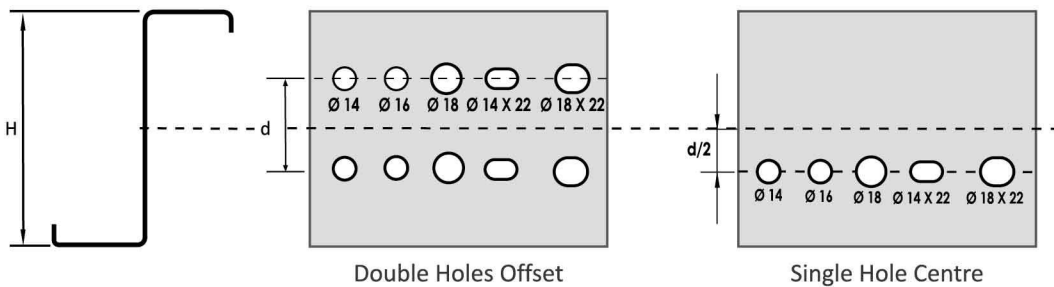


Height H(mm)	$\varnothing 14$ mm		$\varnothing 16$ mm		$\varnothing 18$ mm		$\varnothing 14 \times 22$ mm		$\varnothing 18 \times 22$ mm	
	d(mm)	d/2(mm)	d(mm)	d/2(mm)	d(mm)	d/2(mm)	d(mm)	d/2(mm)	d(mm)	d/2(mm)
100	50	25	50	25	50	25	50	25	50	25
125	50	25	50,70	25,35	50,60	25,30	50,55,60	25,27,5	50	25
150	50,80	25,40	50,70,100	25,35,50	50,60,100	25,35,50	50,60,100	25,27,5,50	50	25
175	50,80	25,40	50,70,100	25,35,50	50,60,100	25,35,50	50,60,100	25,27,5,50	50	25
200	50,80	25,40	50,70,100	25,35,50	50,60,100	25,35,50	50,60,100	25,27,5,50	50	25
250	50,80	25,40	50,70,100	25,35,50	50,60,100	25,35,50	50,60,100	25,27,5,50	50	25
300	50,80	25,40	50,70,100	25,35,50	50,60,100	25,35,50	50,60,100	25,27,5,50	50	25

The following are prepunched holes arrangement and option available from KL Branch.

Height H(mm)	$\varnothing 14$ mm		$\varnothing 16$ mm		$\varnothing 18$ mm		$\varnothing 14 \times 22$ mm		$\varnothing 18 \times 22$ mm	
	d(mm)	d/2(mm)	d(mm)	d/2(mm)	d(mm)	d/2(mm)	d(mm)	d/2(mm)	d(mm)	d/2(mm)
100	40,50	20,25	40,50	20,25	40,50	20,25	40,50	20,25	40,50	20,25
125	40,75	25,37.5	40,75	25,37.5	40,75	25,37.5	40,75	25,37.5	40,75	20,37.5
150	40,100	20,50	40,100	20,50	40,100	20,50	40,100	20,50	40,100	20,50
175	40,125	20,62.5	40,125	20,62.5	40,125	20,62.5	40,125	20,62.5	40,125	20,62.5
200	40,150	20,75	40,150	20,75	40,150	20,75	40,150	20,75	40,150	20,75
250	80,200	40,100	80,200	40,100	80,200	40,100	80,200	40,100	80,200	40,100

Note : The minimum distance from the edge of C-Purlin to the centre of the first set pre-punched holes is 25mm.



Standard Pre-Punched Holes Distance

Height H(mm)	$\varnothing 14$ mm		$\varnothing 16$ mm		$\varnothing 18$ mm		$\varnothing 14 \times 22$ mm		$\varnothing 18 \times 22$ mm	
	d(mm)	d/2(mm)	d(mm)	d/2(mm)	d(mm)	d/2(mm)	d(mm)	d/2(mm)	d(mm)	d/2(mm)
100	50	25	50	25	50	25	50	25	50	25
125	50,75	25,37.5	50,75	25,37.5	50,75	25,37.5	50,75	25,37.5	50,75	25,37.5
150	50,100	25,50	50,100	25,50	50,100	25,50	50,100	25,50	50,100	25,50
175	50,125	25,62.5	50,125	25,62.5	50,125	25,62.5	50,125	25,62.5	50,125	25,62.5
200	50,150	25,75	50,150	25,75	50,150	25,75	50,150	25,75	50,150	25,75
250	50,200	25,100	50,200	25,100	50,200	25,100	50,200	25,100	50,200	25,100
300	50,200	25,100	50,200	25,100	50,200	25,100	50,200	25,100	50,200	25,100

Note : The minimum distance from the edge of Z-Purlin to the centre of the first set pre-punched holes is 25mm.

C AND Z-PURLIN : PRE-PUNCHED HOLE ARRANGEMENTS AND OPTIONS

The purlin load table are derived in a accordance to BS5950 : Part 5 : 1987 “Code of Practice for Design of Cold Formed Section” with maximum roof pitch 30° and roofing sheet distributed load 6.55kg/m².

MAXIMUM ALLOWABLE SPAN (M)

Size	Purlin Spacing					
	0.90	1.20	1.50	1.80	2.10	2.40
75 x 45 x 1.6	4.30	3.90	3.60	3.40	3.30	3.10
75 x 45 x 2.0	4.50	4.10	3.90	3.70	3.50	3.30
75 x 45 x 2.5	4.70	4.30	4.00	3.80	3.60	3.50
75 x 45 x 3.0	4.90	4.50	4.20	4.00	3.80	3.60
100 x 50 x 1.6	5.40	5.00	4.60	4.40	4.20	4.00
100 x 50 x 2.0	5.80	5.30	4.90	4.70	4.40	4.30
100 x 50 x 2.5	6.10	5.60	5.20	5.00	4.70	4.50
100 x 50 x 3.0	6.70	6.20	5.80	5.60	5.30	5.10
125 x 50 x 1.6	6.40	5.90	5.50	5.20	4.90	4.70
125 x 50 x 2.0	6.80	6.30	5.80	5.50	5.30	5.10
125 x 50 x 2.5	7.20	6.70	6.20	5.90	5.60	5.40
125 x 50 x 3.0	8.00	7.50	7.00	6.70	6.40	6.20
150 x 65 x 1.6	7.70	7.10	6.60	6.30	6.00	5.70
150 x 65 x 2.0	8.20	7.60	7.10	6.70	6.40	6.10
150 x 65 x 2.5	8.70	8.00	7.50	7.10	6.80	6.50
150 x 65 x 3.0	9.70	8.80	8.20	7.70	7.30	7.00
175 x 65 x 1.6	8.70	8.00	7.50	7.10	6.70	6.40
175 x 65 x 2.0	9.20	8.50	8.00	7.50	7.20	6.90
175 x 65 x 2.5	9.80	9.00	8.50	8.00	7.70	7.40
175 x 65 x 3.0	10.30	9.50	9.00	8.50	8.10	7.80
175 x 75 x 1.6	9.00	8.20	7.70	7.30	6.90	6.70
175 x 75 x 2.0	9.50	8.80	8.20	7.80	7.40	7.10
175 x 75 x 2.5	10.10	9.30	8.70	8.30	7.90	7.60
175 x 75 x 3.0	10.60	9.80	9.20	8.80	8.40	8.10
200 x 75 x 1.6	9.90	9.10	8.50	8.00	7.70	7.40
200 x 75 x 2.0	10.50	9.70	9.10	8.60	8.20	7.90
200 x 75 x 2.5	11.10	10.20	9.60	9.10	8.70	8.40
200 x 75 x 3.0	12.50	11.40	10.50	9.90	9.40	9.00
225 x 75 x 1.6	10.70	9.70	9.00	8.50	8.10	7.70
225 x 75 x 2.0	11.50	10.40	9.70	9.10	8.60	8.30
225 x 75 x 2.5	12.30	11.20	10.40	9.80	9.30	8.90
225 x 75 x 3.0	13.00	11.80	11.00	10.30	9.80	9.40
250 x 75 x 1.6	11.70	10.70	10.10	9.50	9.10	8.70
250 x 75 x 2.0	12.40	11.40	10.70	10.20	9.70	9.30
250 x 75 x 2.5	13.10	12.10	11.40	10.80	10.30	9.90
250 x 75 x 3.0	14.90	13.60	12.60	11.90	11.30	10.80
300 x 75 x 1.6	13.20	12.20	11.40	10.80	10.30	9.90
300 x 75 x 2.0	14.00	12.90	11.60	11.50	11.00	10.60
300 x 75 x 2.5	14.70	13.70	12.90	12.20	11.70	11.20
300 x 75 x 3.0	15.30	14.30	13.50	12.80	12.30	11.80
300 x 100 x 1.6	14.10	13.00	12.20	11.60	11.10	10.60
300 x 100 x 2.0	14.90	13.90	13.00	12.40	11.80	11.40
300 x 100 x 2.5	15.80	14.70	13.80	13.10	12.60	12.10
300 x 100 x 3.0	16.00	14.90	14.10	13.40	12.90	12.40

Precautions

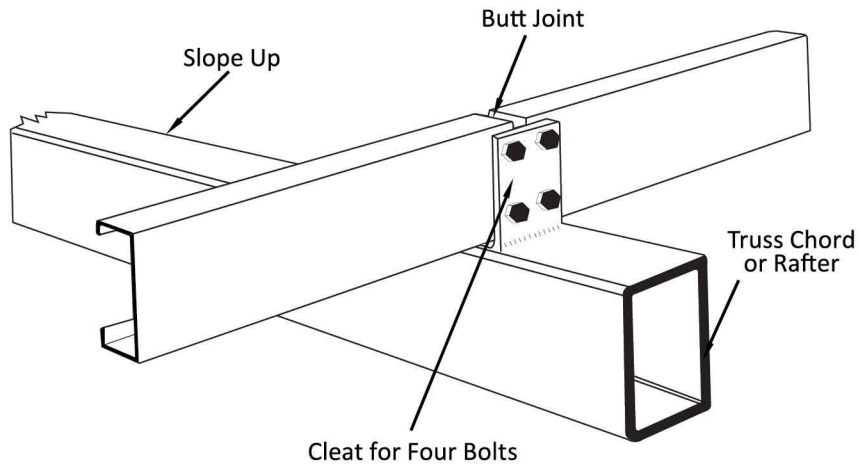
Contact between galvanized steel and incompatible materials (e.g. Copper tube) must be avoided as premature corrosion could happen. Purlins should be stored off the ground on a slightly sloped position.

Delivery, Storage and Handling

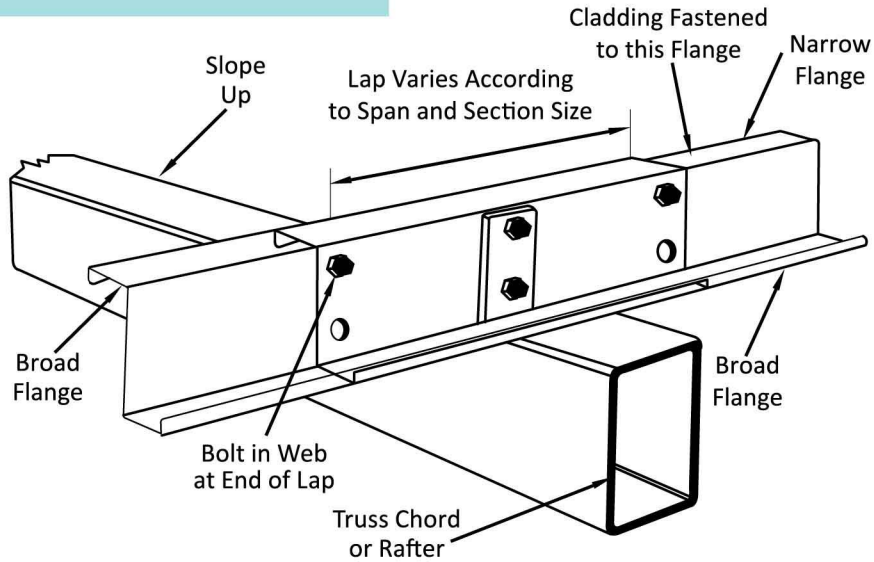
- Upon delivery, exercise care in unloading, stacking, moving, storing and erecting to prevent twisting, bending, scratching, or denting.
- Store it in a safe, dry environment under a waterproof covering.
- Allow adequate ventilation to prevent condensation.
- Purlins should be stored off the ground on a slightly sloped position.

C-PURLIN AND Z-PURLIN SUPPORT DETAILS

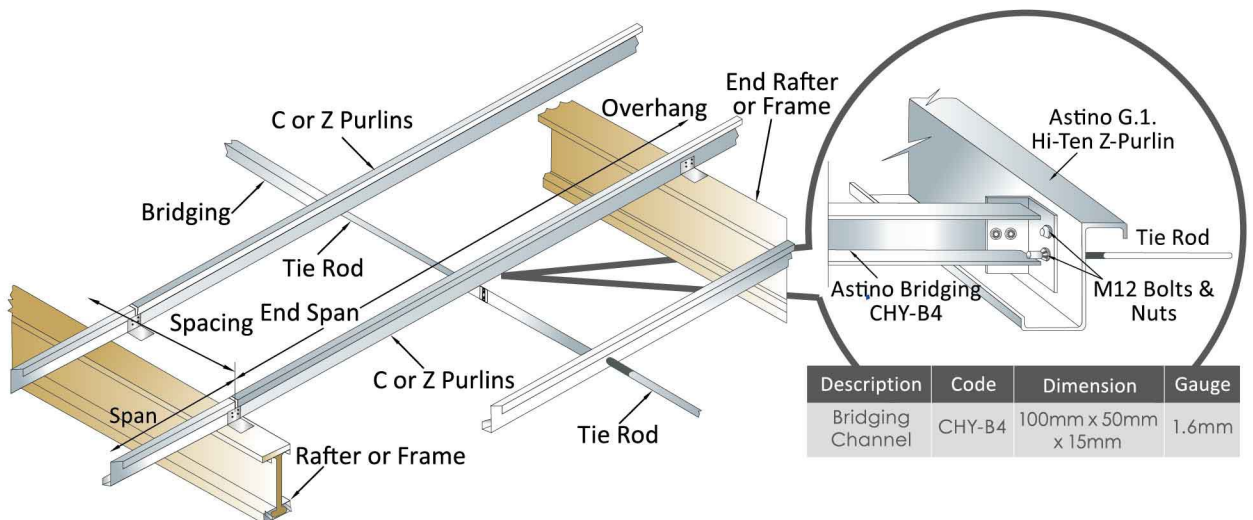
C-PURLIN SIMPLE SPAN SUPPORT DETAILS



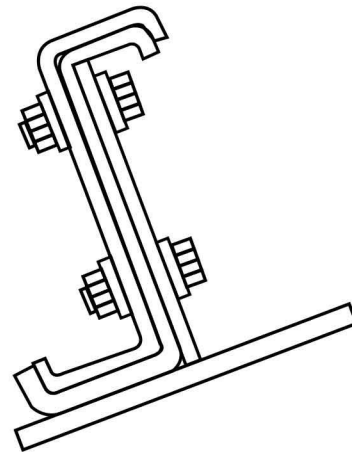
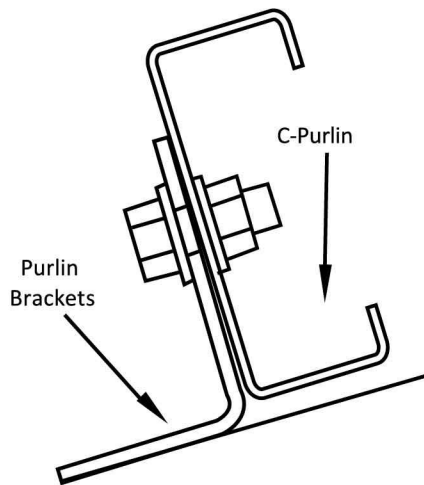
Z-PURLIN LAPPING DETAILS AT SUPPORT



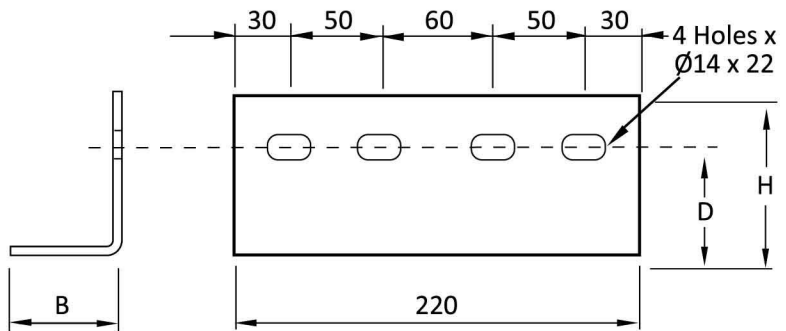
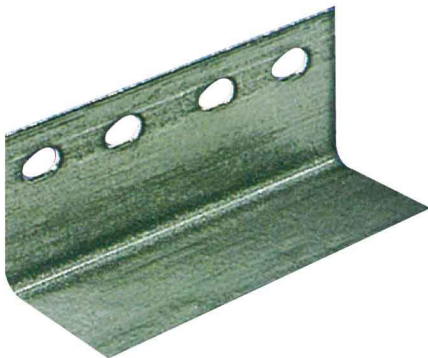
ALTERNATE BRIDGING AND TIE RODS



PURLIN ACCESSORIES

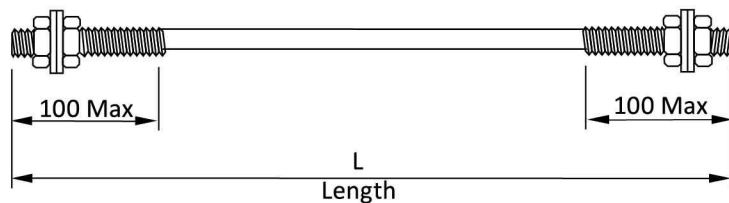


PURLIN BRACKET



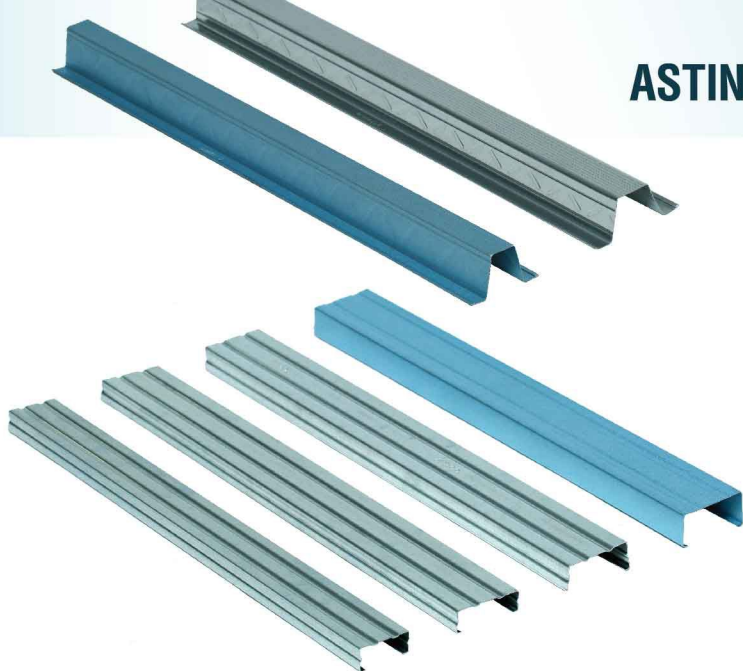
Purlin Height	Base B (mm)	Height H (mm)	Hole Distance D (mm)	Thickness (mm)	Weight (kg)	Materials
100	59	81	56	4.5	0.995	Mild Steel
125	68	92	67	4.5	1.132	Mild Steel
150	76	104	79	4.5	1.289	Mild Steel
200	90	130	105	4.5	1.578	Mild Steel

TIE ROD



Size	Thread Length (mm)	Total Length (mm)
12mm	100 Max	L

ASTINO MULTI TRUSS AND BATTEN



OVERVIEW

Astino Multi Truss and Battens are cold-rolled forming from structure grade galvanized steel, TOC, Aluzinc and Truecore. Astino provides technical support for roof truss layout design and roof frame detailing services with load test analysis according to BS 5950 Part 5. The C-Section can be box-up for wider spans and extra strength.

MATERIALS SPECIFICATIONS

Material	Hop Dip Galvanised Steel / TOC / Aluzinc / Truecore
Steel Grade	JIS G 3302 / ASTM A792 / MS 2384
Tensile	High Tensile
Min Yield Strength (Mpa)	550
Min Tensile Strength	570
Zinc Coating	120 g/m ² to 275 g/m ²
Available Thickness (mm)	0.42, 0.45, 0.48, 0.50, 0.55, 0.75, 0.80, 1.00

FIRE RATING

Class "O" fire rating according to BS 476:Part 6:1989 "Method of Test for Fire Propagation For Products."

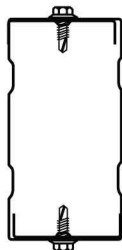
BS 476:Part 7:1997" Fire Tests on Building Materials and Structures. Method of test to determine the classification of the surface spread of flame of products.

TOLERANCES

Astino Multi Trusses are produced within the following tolerance:

- Length : ±5mm
- Web (Dim.H) : ±1mm
- Flange(Dim.B) : ±2mm
- Thickness : ±0.05mm

* BOX UP



The C-shaped steel truss sections box-up bringing extra strength, design flexibility and wider spans.

FEATURE & BENEFITS

- Quality assurance, competitive price, on time delivery
- Quality product with proven supply records
- High degree of accuracy and consistency in dimensions
- Different thickness availability to suit customer's needs
- High tensile steel; light weight
- Detailed design with shop drawings accomplished with state-of-the-art software

* PRECAUTIONS

Contact between galvanized steel and incompatible materials (e.g. Coppertube) must be avoided as premature corrosion could happen.

* DELIVERY, STORAGE AND HANDLING

Upon delivery, exercise care in unloading, stacking, moving, storing and erecting to prevent twisting, bending, scratching or denting.

Store it in a safe, dry environment under a waterproof covering. Allow adequate ventilation to prevent condensation.

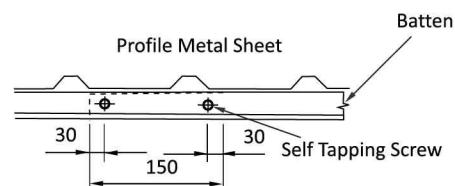
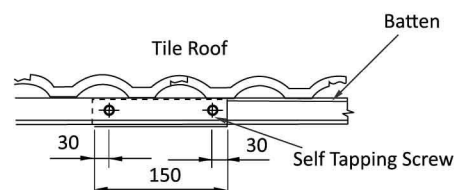
Trusses should be stored off the ground on a slightly sloped position.

* TECHNICAL SUPPORT

Using the latest technology, Astino offers an unrivalled design and support package. Each project is individually designed and tailored to provide a cost effective solutions that meet performance requirements of the clients. Detailed layout design and roof truss assembly drawings plus build quantity calculations allow installations quickly and easily.

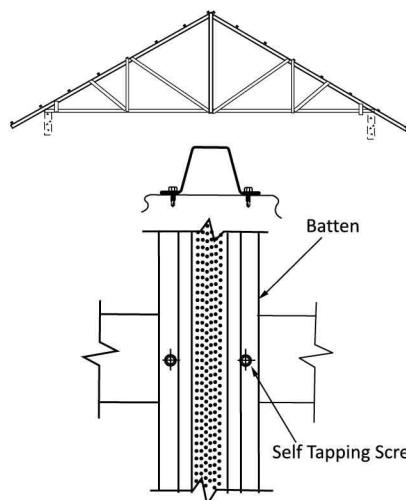
Each truss frame designs are evaluated with load test analysis according to BS 5950:Part 5.

* OVERLAPS



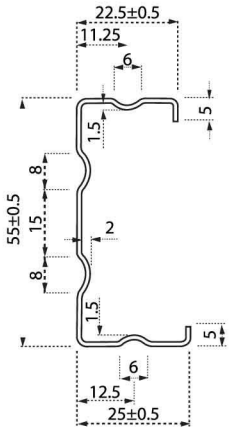
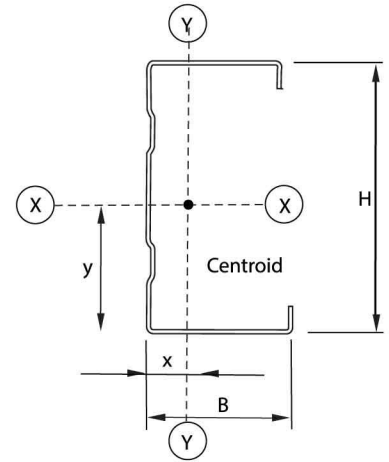
Batten overlaps are recommended to be 150mm in length.

* FIXINGS



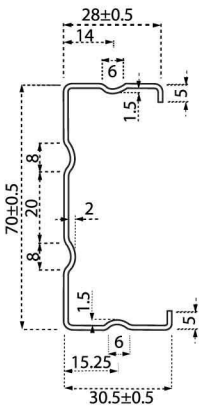
Pairs of screw must be fixed in line. Offset must be avoided.

C-SECTION SPECIFICATIONS



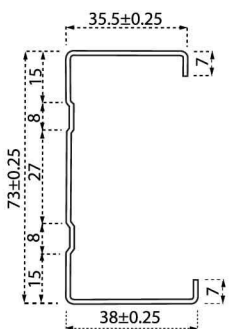
C-SECTION 110

Thickness (mm)	Area (mm ²)	Weight (kg/m)	I_{xx} (10 ⁴ (mm ⁴))	I_{yy} (10 ⁴ (mm ⁴))	Z_{xx} (10 ³ (mm ³))	Z_{yy} (10 ³ (mm ³))	R_{xx} (mm)	R_{yy} (mm)	x (mm)	y (mm)
0.75	82.7	0.72	3.853	0.558	1.371	0.313	21.6	8.2	7.2	26.9
0.80	88.1	0.77	4.096	0.591	1.458	0.332	21.6	8.2	7.2	26.9
1.00	110.0	0.95	5.051	0.721	1.798	0.405	21.5	8.1	7.2	26.9



C-SECTION 135

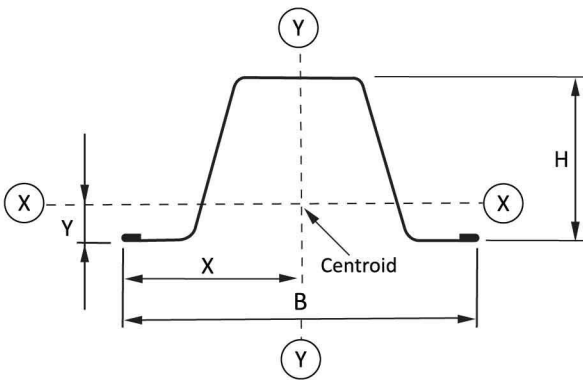
Thickness (mm)	Area (mm ²)	Weight (kg/m)	I_{xx} (10 ⁴ (mm ⁴))	I_{yy} (10 ⁴ (mm ⁴))	Z_{xx} (10 ³ (mm ³))	Z_{yy} (10 ³ (mm ³))	R_{xx} (mm)	R_{yy} (mm)	x (mm)	y (mm)
0.75	102.4	0.89	7.776	1.023	2.178	0.461	27.6	10.0	8.3	34.3
0.80	109.1	0.94	8.272	1.085	2.317	0.489	27.6	10.0	8.3	34.3
1.00	135.7	1.18	10.226	1.328	2.864	0.598	27.5	9.9	8.3	34.3



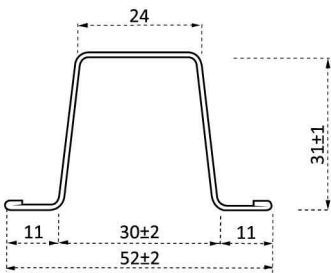
C-SECTION 153

Thickness (mm)	Area (mm ²)	Weight (kg/m)	I_{xx} (10 ⁴ (mm ⁴))	I_{yy} (10 ⁴ (mm ⁴))	Z_{xx} (10 ³ (mm ³))	Z_{yy} (10 ³ (mm ³))	R_{xx} (mm)	R_{yy} (mm)	x (mm)	y (mm)
0.75	116.9	0.99	10.187	2.012	2.738	0.756	29.5	13.1	11.4	35.8
0.80	124.6	1.05	10.840	2.137	2.914	0.803	29.5	13.1	11.4	35.8
1.00	155.1	1.30	13.421	2.628	3.608	0.988	29.4	13.0	11.4	35.8

BATTEN SPECIFICATIONS

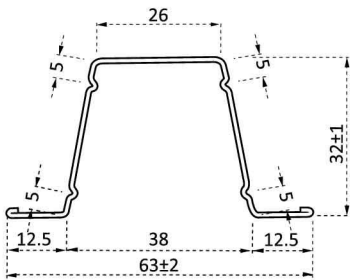


BATTEN 110



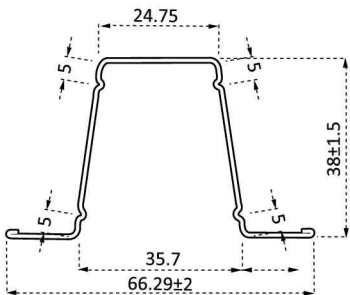
Thickness (mm)	Area (mm ²)	Weight (kg/m)	I _{xx} (10 ⁴ (mm ⁴))	I _{yy} (10 ⁴ (mm ⁴))	Z _{xx} (10 ³ (mm ³))	Z _{yy} (10 ³ (mm ³))	R _{xx} (mm)	R _{yy} (mm)	x (mm)	y (mm)
0.42	45.24	0.41	0.713	1.002	0.45	0.37	12.55	14.88	26	15.11
0.45	48.47	0.44	0.769	1.080	0.48	0.40	12.60	14.93	26	15.11
0.48	51.70	0.47	0.827	1.159	0.52	0.43	12.64	14.97	26	15.11
0.50	53.85	0.49	0.865	1.212	0.54	0.45	12.67	15.00	26	15.11
0.55	59.24	0.54	0.963	1.346	0.61	0.50	12.75	15.08	26	15.11

BATTEN 121



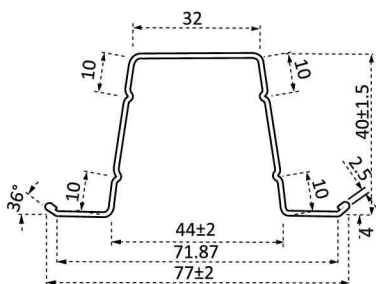
Thickness (mm)	Area (mm ²)	Weight (kg/m)	I _{xx} (10 ⁴ (mm ⁴))	I _{yy} (10 ⁴ (mm ⁴))	Z _{xx} (10 ³ (mm ³))	Z _{yy} (10 ³ (mm ³))	R _{xx} (mm)	R _{yy} (mm)	x (mm)	y (mm)
0.42	51.70	0.45	0.829	1.678	0.512	0.533	12.7	18.0	31.5	15.8
0.45	55.35	0.48	0.887	1.795	0.530	0.570	12.7	18.0	31.5	15.8
0.48	59.00	0.51	0.946	1.911	0.584	0.607	12.7	18.0	31.5	15.8
0.50	61.40	0.53	0.985	1.988	0.608	0.631	12.7	18.0	31.5	15.8
0.55	67.50	0.59	1.082	2.181	0.672	0.692	12.7	18.0	31.5	15.9

BATTEN 135



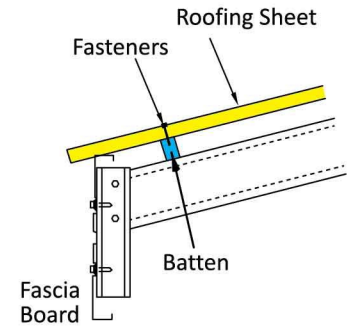
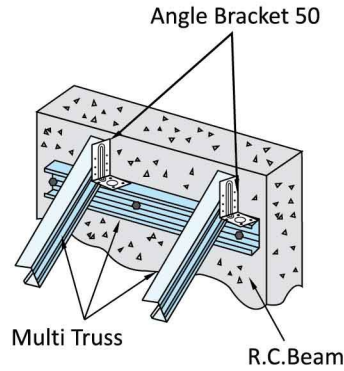
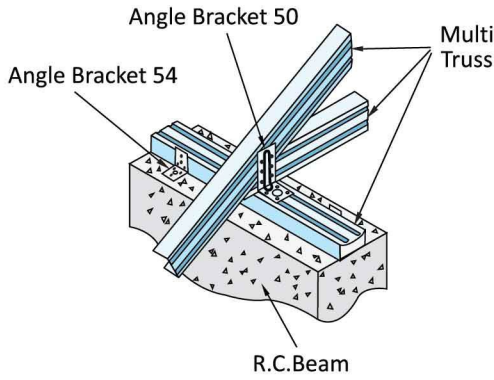
Thickness (mm)	Area (mm ²)	Weight (kg/m)	I _{xx} (10 ⁴ (mm ⁴))	I _{yy} (10 ⁴ (mm ⁴))	Z _{xx} (10 ³ (mm ³))	Z _{yy} (10 ³ (mm ³))	R _{xx} (mm)	R _{yy} (mm)	x (mm)	y (mm)
0.42	58.4	0.50	1.286	1.904	0.640	0.579	14.8	18.1	33.1	17.9
0.45	62.5	0.53	1.377	2.036	0.690	0.620	14.8	18.0	33.1	17.9
0.48	66.6	0.57	1.468	2.169	0.730	0.654	14.8	18.0	33.1	17.9
0.50	69.3	0.59	1.528	2.257	0.760	0.680	14.8	18.0	33.1	17.9
0.55	76.2	0.65	1.679	2.477	0.835	0.746	14.8	18.0	33.1	17.9

BATTEN 152



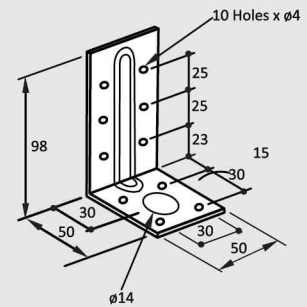
Thickness (mm)	Area (mm ²)	Weight (kg/m)	I _{xx} (10 ⁴ (mm ⁴))	I _{yy} (10 ⁴ (mm ⁴))	Z _{xx} (10 ³ (mm ³))	Z _{yy} (10 ³ (mm ³))	R _{xx} (mm)	R _{yy} (mm)	x (mm)	y (mm)
0.42	63.20	0.57	1.584	3.034	0.765	0.786	15.8	21.9	38.4	19.3
0.45	67.65	0.60	1.696	3.244	0.820	0.840	15.8	21.9	38.4	19.4
0.48	72.10	0.64	1.808	3.455	0.878	0.895	15.8	21.9	38.4	19.4
0.50	75.00	0.67	1.882	3.595	0.914	0.931	15.8	21.9	38.4	19.4
0.55	82.40	0.74	2.068	3.943	1.004	1.022	15.8	21.9	38.4	19.4

TRUSS ACCESSORIES



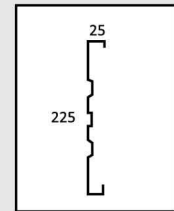
Angle Bracket 50

Size (mm)	Thickness (mm)	Weight (kg)	Material
98 x 50 x 50	1.6	0.087	G.I



Fascia Board

Size (mm)	Available Thickness (mm)	
	Aluzinc	Colour
225	0.48	*



Prima Plank

Size (mm)	Thickness (mm)	Length (mm)	Surface Texture
230	7.5	3660	Smooth
230	9.0	3660	Smooth



ASTINO METAL INDUSTRIES SDN BHD (702367-H) (A wholly owned subsidiary of Astino Berhad)

Office:

1499 & 1500 (Lot Baru 10030), MK 11, Jalan Changkat, 14300 Nibong Tebal, Pulau Pinang, Malaysia.

Tel : 604-585 6666, 6677, 6688 (Hunting Line)

Fax : 604-585 6687, 6689, 6690 (Sales Dept)



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