

Product
Catalogue

STRUCTURAL SERIES

C- PURLIN & Z-PURLIN



TH C-PURLIN



TH C-Purlin is produced from Hi-tensile galvanised steel. The technology used in cold roll forming process ensures stability and accuracy in its dimensions and lengths. The purlins supplied are cut to length and pre-punched hole(s) to ease with roofing designs, cladding supports and light weight frame structures.

MATERIAL SPECIFICATION

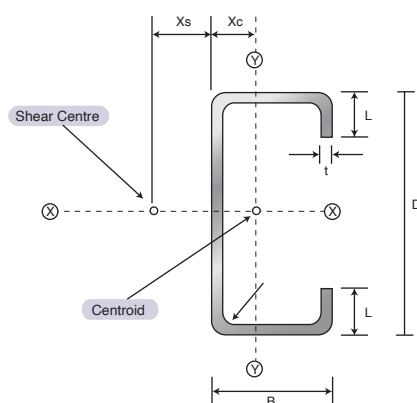
Material thickness : 1.6mm, 2.0mm, 2.5mm, 3.0mm
 Steel grade : ASTM-A446 Grade D
 Yield Stress : (440MPa - 530MPa)
 Coating mass : Z/12 - Z/27 (120-275)

TOLERANCES

The following tolerances apply to C-Purlin

Depth, D	: ±1mm	Hole centres	: ±1.5mm
Flange Width, F	: ±3mm	Lip, L	: ±3mm
Length	: ±3mm	Thickness, t	: ±8%

DIMENSIONS & PROPERTIES

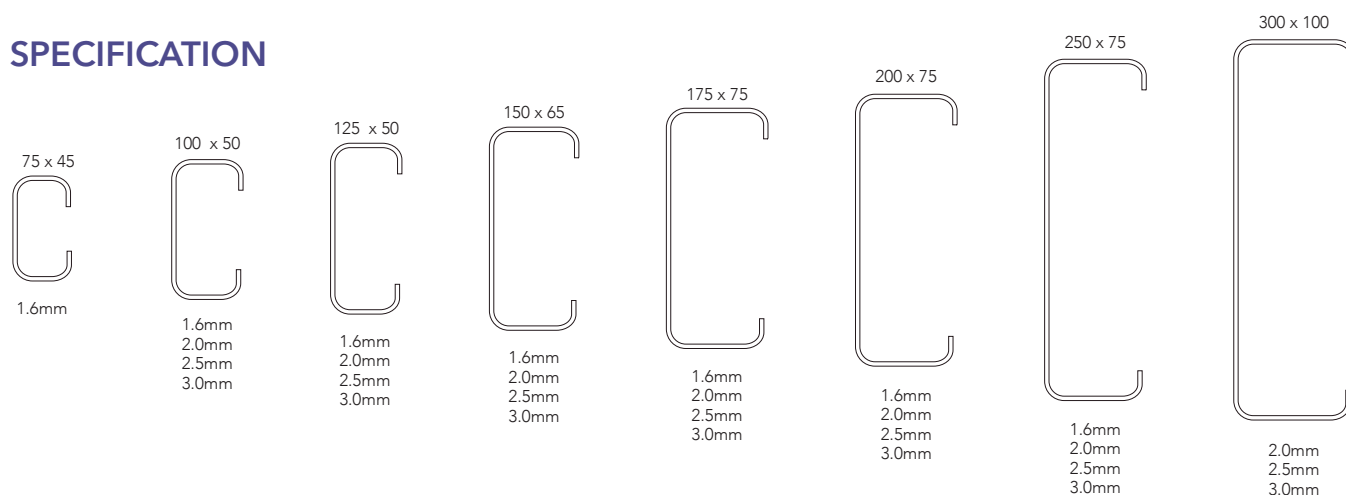


RECOMMENDED HOLE, CLETS AND FASTENING DETAILS

Standard TH C-sections are supplied with optional holes punched to order. Punched C-section can be supplied with H14, H16, H18 or elongated holes, with recommended cleat size as stated in table below.

SECTION DEPTH (mm)	A (mm)	B (mm)	C (mm)	T _{min} (mm)
100	50	35	110	6
125	50	45	120	6
150	80	45	150	6
200	110	55	190	6
250	150	60	235	8
300	200	60	285	10

SPECIFICATION



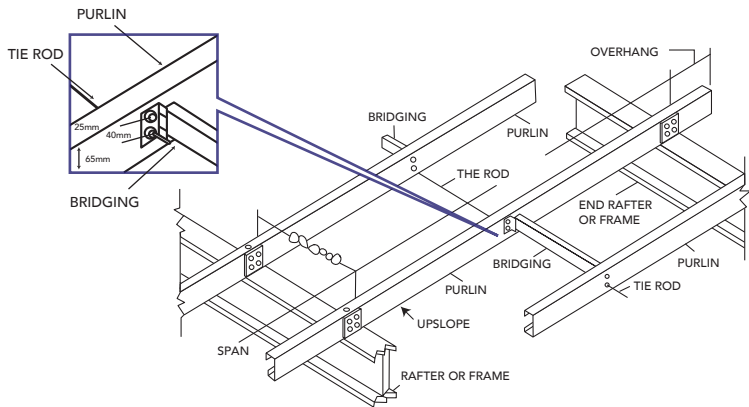
SECTION PROPERTIES

Purlins	Dimensions				Area	Mass Per Unit	Second Moment of Area		Section Modulus		Radius of Gyration		Torsional Constant	
Type	D mm	B mm	L mm	T mm	AS mm ²	Length Kg/m	I _x 10 ⁶ mm ⁴	I _y 10 ⁶ mm ⁴	Z _x 10 ³ mm ³	Z _y 10 ³ mm ³	r _x mm	r _y mm	J mm ⁴	C _w 10 ⁹ mm ⁶
THC 07516	75	45	8	1.6	250	2.36	0.226	0.045	6.027	1.756	30.045	13.467	214	0.049
THC 10016	100	50	12	1.6	351	2.80	0.59	0.14	11.17	4.03	40.142	18.967	303	0.290
THC 10020	100	50	14	2.0	440	3.45	0.76	0.19	14.84	5.45	39.917	18.758	584	0.345
THC 10025	100	50	14	2.5	548	4.40	0.96	0.24	18.48	6.97	39.634	18.496	1123	0.406
THC 10030	100	50	14	3.0	636	5.29	0.986	0.211	19.719	6.507	39.348	18.231	1911	0.457
THC 12516	125	50	12	1.6	391	3.10	1.02	0.15	15.74	4.30	49.293	18.679	337	0.454
THC 12520	125	50	14	2.0	485	3.82	1.24	0.18	19.70	5.51	49.047	18.467	651	0.542
THC 12525	125	50	14	2.5	610	4.89	1.59	0.25	24.46	7.10	48.737	18.199	1253	0.640
THC 12530	125	50	14	3.0	711	5.82	1.669	0.229	26.706	6.689	48.424	17.930	2136	0.723
THC 15016	150	65	14	1.6	476	3.85	1.78	0.29	23.60	6.32	59.939	23.857	412	1.232
THC 15020	150	65	14	2.0	597	4.73	2.21	0.35	29.30	7.77	59.697	23.635	797	1.485
THC 15025	150	65	14	2.5	748	5.87	2.70	0.43	35.92	9.45	59.392	23.355	1539	1.771
THC 15030	150	65	14	3.0	877	7.35	3.061	0.466	40.813	10.371	59.085	23.074	2631	2.026
THC 17516	175	65	14	1.6	523	4.15	2.476	0.288	28.294	6.215	68.844	23.492	446	1.720
THC 17520	175	65	14	2.0	651	5.10	3.047	0.351	34.819	7.556	68.584	23.268	864	2.076
THC 17525	175	65	14	2.5	810	6.35	3.734	0.423	42.672	9.117	68.258	22.985	1670	2.481
THC 17530	175	65	14	3.0	952	8.08	4.392	0.491	50.194	10.555	67.928	22.701	2856	2.843
THC 20016	200	75	14	1.6	591	4.76	3.79	0.45	37.69	7.07	78.860	26.770	507	3.244
THC 20020	200	75	14	2.0	740	5.82	4.78	0.55	46.80	9.47	78.600	26.540	984	3.930
THC 20025	200	75	14	2.5	923	7.39	5.94	0.67	58.51	12.27	78.270	26.250	1904	4.721
THC 20030	200	75	14	3.0	1087	9.02	6.602	0.732	66.025	13.512	77.940	25.960	3261	5.439
THC 25016	250	75	16	1.6	680	5.42	6.302	0.474	50.413	8.472	96.210	26.390	581	5.665
THC 25020	250	75	16	2.0	845	6.62	7.782	0.579	62.255	10.340	95.930	26.160	1128	6.880
THC 25025	250	75	16	2.5	1049	8.36	9.579	0.702	76.634	12.542	95.560	25.870	2185	8.290
THC 25030	250	75	16	3.0	1249	10.37	11.318	0.818	90.546	14.597	95.200	25.590	3747	9.583
THC 30020	300	100	16	2.0	1030	8.63	13.873	1.123	92.486	15.573	116.070	33.020	1373	18.769
THC 30025	300	100	16	2.5	1279	10.84	17.125	1.370	114.165	18.988	115.720	32.720	2664	22.764
THC 30030	300	100	16	3.0	1525	12.66	20.291	1.603	135.274	22.219	115.360	32.430	4574	26.494
THC 35020	350	100	22	2.0	1274	9.92	23.97	2.451	137.700	28.300	137.200	43.860	1699	-
THC 35025	350	100	22	2.5	1586	12.37	29.72	3.018	171.100	34.960	136.900	43.620	3305	-
THC 35030	350	100	22	3.0	1896	14.89	35.39	3.566	204.000	41.430	136.600	43.370	5689	-

CONSTRUCTION DETAILS

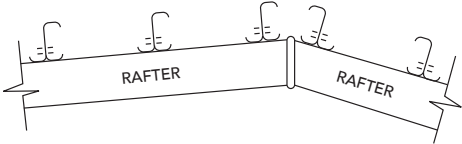
Galvanised Steel C-Purlin

Upper lip of C-Purlin should face upper slope.
Outside lips of girts should face upwards.



TYPICAL ARRANGEMENT OF IN-LINE C-PURLINS

PURLIN-RAFTER-CONNECTION DETAILS

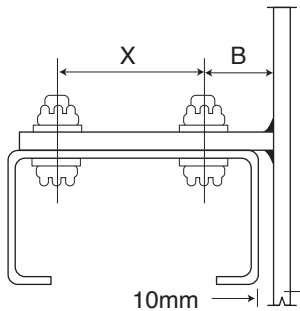
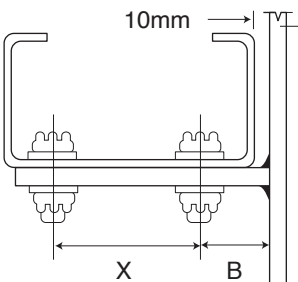
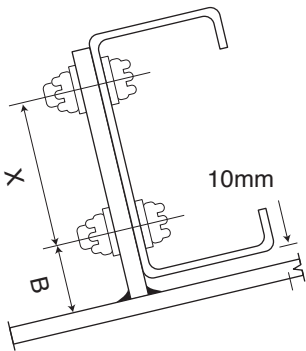


C-LIPPED CHANNEL

HOLES DETAILS, CLEATS, FASTENING

The Purlin Quick Selection Table is derived in accordance to BS5950: Part5: 1987, "Code Of Practice for Design of Cold Formed Section" with a maximum roof pitch of 50 degrees and roofing sheet distributable load of 6.55kg

Span (mm)	Purlin Spacing 1200mm	Purlin Spacing 1500mm	Purlin Spacing 1800mm	Purlin Spacing 2100mm
5000	THC10016	THC10020	THC10025	THC12516
6000	THC12520	THC12520	THC12525	THC15016
7000	THC15020	THC15025	THC20016	THC20016
7500	THC20016	THC20016	THC20016	THC20020
8000	THC20016	THC20016	THC20020	THC20015
9000	THC20016	THC20020	THC20025	THC20025
10000	THC20020	THC20025	-	-
11000	THC20025	-	-	-



TH Z-PURLIN



TH Z-Purlin is produced from Hi-tensile galvanised steel. The technology used in cold roll forming process ensures stability and accuracy in its dimensions and lengths. The purlins supplied are cut to length and pre-punched hole(s) to ease with roofing designs, cladding supports and light weight frame structures.

MATERIAL SPECIFICATION

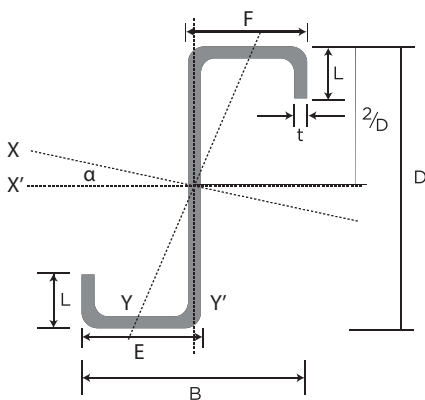
Material thickness : 1.6mm, 2.0mm, 2.5mm, 3.0mm
 Steel grade : ASTM-A446 Grade D
 Yield Stress : (440MPa - 530MPa)
 Coating mass : Z/12 - Z/27 (120-275)

TOLERANCES

The following tolerances apply to Z-Purlin

Depth, D	: $\pm 1\text{mm}$	Hole centres	: $\pm 1.5\text{mm}$
Flange Width, F	: $\pm 3\text{mm}$	Lip, L	: $\pm 3\text{mm}$
Length	: $\pm 3\text{mm}$	Thickness, t	: $\pm 8\%$

DIMENSIONS & PROPERTIES



RECOMMENDED HOLE, CLETS AND FASTENING DETAILS

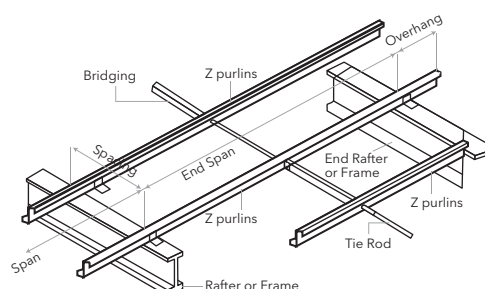
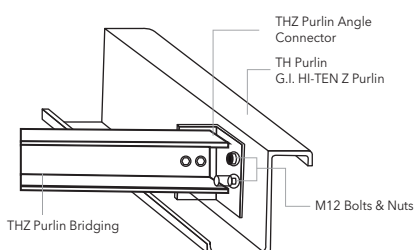
Standard THI Z-sections are supplied with optional holes punched to order. Punched Z-section can be supplied with H14, H16, H18 or elongated holes, with recommended cleat size as stated in table below.

SECTION DEPTH (mm)	A (mm)	B (mm)	C (mm)	T _{min} (mm)
100	50	35	110	6
125	50	45	120	6
150	80	45	150	6
200	110	55	190	6
250	150	60	235	8
300	200	60	285	10

CONSTRUCTION DETAILS

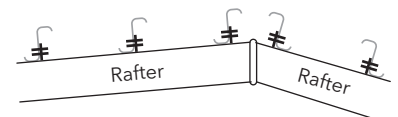
Galvanised Steel Z-Purlin

Upper lip of Z-Purlin should face upper slope. Outside lips of girts should face upwards.



PURLIN-RAFTER-CONNECTION DETAILS

Z-lipped Channel

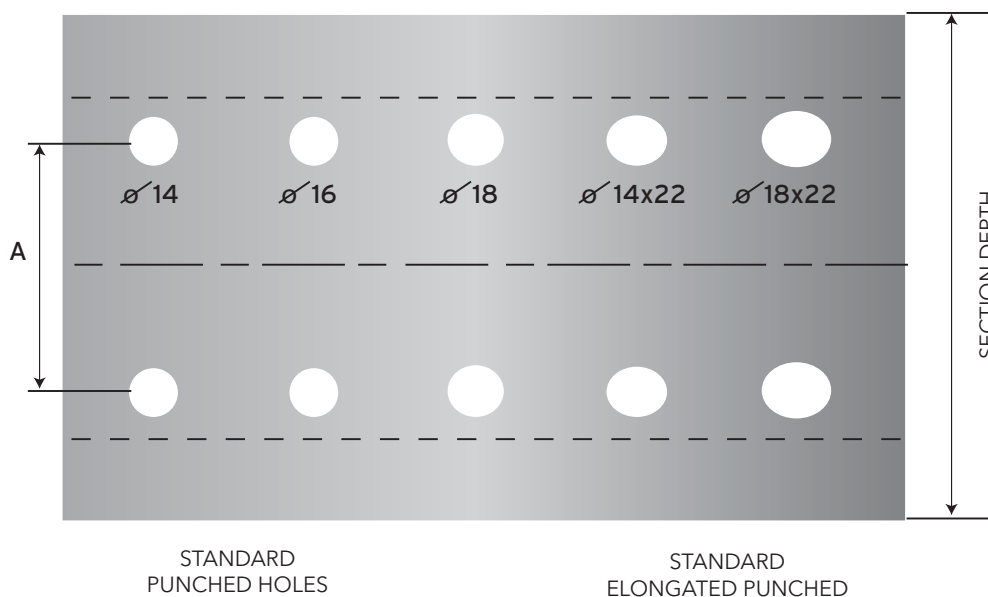
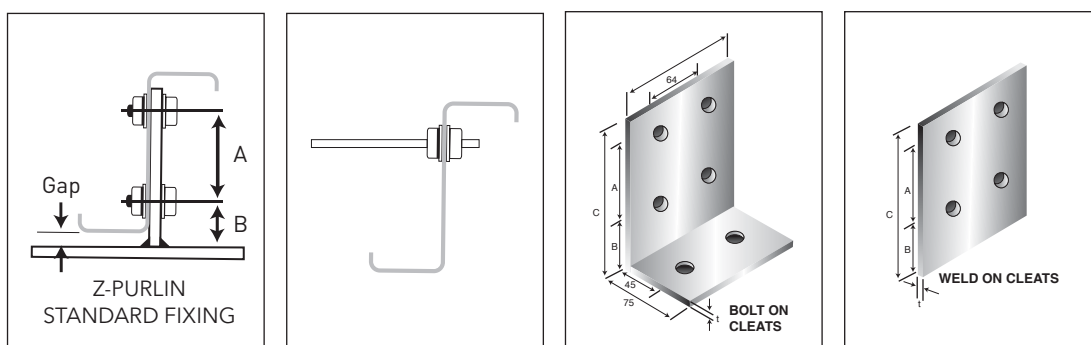
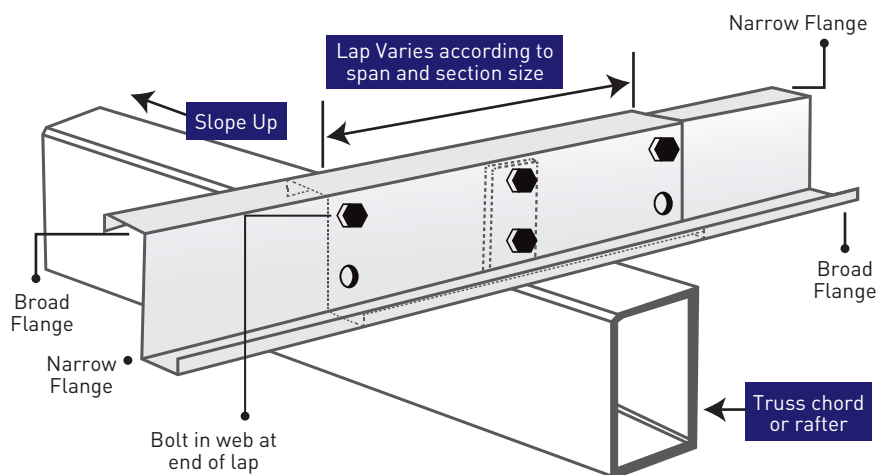


GALVANISED STEEL Z-PURLIN

DIMENSIONS and PROPERTIES

The Z-Purlins are normally used as simple supports. Sections to be used continuously over two or more spans to reduce deflection.

Z-PURLIN LAPPING DETAILS AT SUPPORT



SECTION PROPERTIES

Z Purlin	Dimensions					Mass Per Unit	Area	Second Moment of Area		Section Modulus		Radius of Gyration		Form Factor Q	Torsional Constant
Type	D mm	E mm	F mm	L mm	t mm	Length Kg/m	AS mm ²	I _x 10 ⁶ mm ⁴	I _y 10 ⁶ mm ⁴	Z _x 10 ³ mm ³	Z _y 10 ³ mm ³	r _x mm	r _y mm		J mm ⁴
THZ 07516	75	45	32	8	1.6	2.36	250	0.226	0.045	6.027	1.756	30.045	13.467	-	214
THZ 10016	100	57	51	16	1.6	3.05	362	0.606	0.266	11.753	4.952	40.930	27.113	0.868	322
THZ 10020	100	57	51	16	2.0	3.72	444	0.732	0.316	14.256	5.939	40.609	26.696	0.942	624
THZ 10025	100	57	51	16	2.5	4.60	542	0.876	0.371	17.134	7.029	40.188	26.152	0.996	1208
THZ 10030	100	57	51	16	3.0	5.29	636	1.004	0.416	19.730	7.959	39.743	25.580	1.000	2070
THZ 12516	125	57	51	16	1.6	3.20	402	1.007	0.266	15.691	4.938	50.086	25.733	0.781	356
THZ 12520	125	57	51	16	2.0	3.94	494	1.222	0.317	19.083	5.922	49.733	25.314	0.853	691
THZ 12525	125	57	51	16	2.5	4.89	605	1.469	0.371	23.020	7.009	49.273	24.770	0.936	1339
THZ 12530	125	57	51	16	3.0	5.90	711	1.692	0.416	26.616	7.935	48.789	24.199	0.989	2295
THZ 15016	150	68	62	16	1.6	4.01	497	1.865	0.549	24.137	7.762	61.281	33.233	0.712	437
THZ 15020	150	68	62	16	2.0	4.92	613	2.277	0.659	29.528	9.381	60.946	32.798	0.793	849
THZ 15025	150	68	62	16	2.5	6.01	754	2.760	0.783	35.900	11.223	60.514	32.238	0.869	1648
THZ 15030	150	68	62	16	3.0	7.35	889	3.208	0.891	41.860	12.862	60.064	31.657	0.935	2831
THZ 17516	175	68	62	16	1.6	4.27	532	2.544	0.549	28.778	7.751	69.153	32.118	0.666	467
THZ 17520	175	68	62	16	2.0	5.26	657	3.109	0.660	35.244	9.367	68.794	31.684	0.740	908
THZ 17525	175	68	62	16	2.5	6.67	809	3.776	0.783	42.914	11.206	68.332	31.125	0.810	1763
THZ 17530	175	68	62	16	3.0	8.08	955	4.398	0.891	50.120	12.843	67.853	30.547	0.877	3029
THZ 20016	200	74	68	16	1.6	4.70	577	3.594	0.549	35.063	7.739	78.945	30.848	0.616	505
THZ 20020	200	74	68	16	2.0	5.74	713	4.400	0.660	42.914	9.352	78.557	30.417	0.683	983
THZ 20025	200	74	68	16	2.5	7.13	879	5.354	0.784	52.432	11.188	78.058	29.863	0.745	1909
THZ 20030	200	74	68	16	3.0	8.79	1039	6.249	0.892	61.341	12.822	77.542	29.290	0.807	3281
THZ 22016	220	78	72	18	1.6	5.28	718	4.400	0.741	34.742	12.150	78.300	32.100	0.458	626
THZ 22020	220	78	72	18	2.0	6.55	890	5.390	0.904	42.585	14.906	77.800	31.900	0.532	1219
THZ 22025	220	78	72	18	2.5	8.16	1100	6.560	1.090	51.913	18.193	77.200	31.500	0.610	2370
THZ 22030	220	78	72	18	3.0	9.80	1305	7.670	1.270	60.711	21.302	76.700	31.200	0.689	4077
THZ 25020	250	78	72	20	2.0	6.69	840	7.651	0.859	60.829	11.495	95.440	31.981	0.618	1152
THZ 25025	250	78	72	20	2.5	8.34	1042	9.400	1.053	74.882	14.184	94.963	31.782	0.673	2250
THZ 25030	250	78	72	20	3.0	10.20	1236	11.020	1.207	87.941	16.368	94.426	31.250	0.723	3870
THZ 30020	300	100	93	25	2.0	8.71	1046	14.060	1.875	93.128	19.442	115.950	42.343	0.563	1427
THZ 30025	300	100	93	25	2.5	10.84	1295	17.260	2.265	114.492	23.608	115.456	41.827	0.635	2776
THZ 30030	300	100	93	25	3.0	12.10	1539	20.330	2.625	135.084	27.496	114.952	41.301	0.681	4779
THZ 35020	350	100	93	22	2.0	9.92	1274	23.970	2.451	137.700	28.300	137.200	43.860	-	1699
THZ 35025	350	100	93	22	2.5	12.37	1586	29.720	3.018	171.100	34.960	136.900	43.620	-	3305
THZ 35030	350	100	93	22	3.0	14.89	1896	35.390	3.566	204.000	41.430	136.600	43.370	-	5689

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EAST MALAYSIA

SABAH :

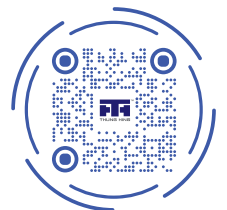
Lot No 19, Jalan 3 KKIP Timur, Industrial Zone 12, KKIP Telipok, 88460 Kota Kinabalu, Sabah, Malaysia.

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