

Hulas Infra

# C-PURLIN & Z-PURLIN

Product  
Catalogue



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# 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

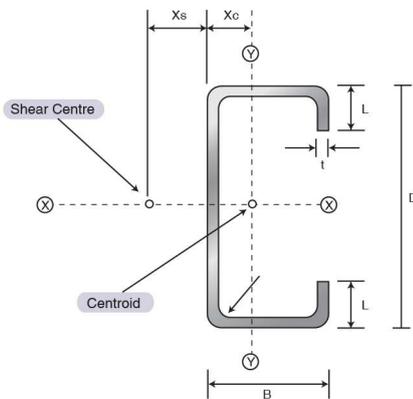
Material thickness : 1.6mm, 2.0mm, 2.5mm, 3.0mm  
 Steel grade : ASTM-A446 Grade D  
 Yield Stress : (440MPa - 530MPa)  
 Coating mass : Z/12 - Z/27 (120-275)

## 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

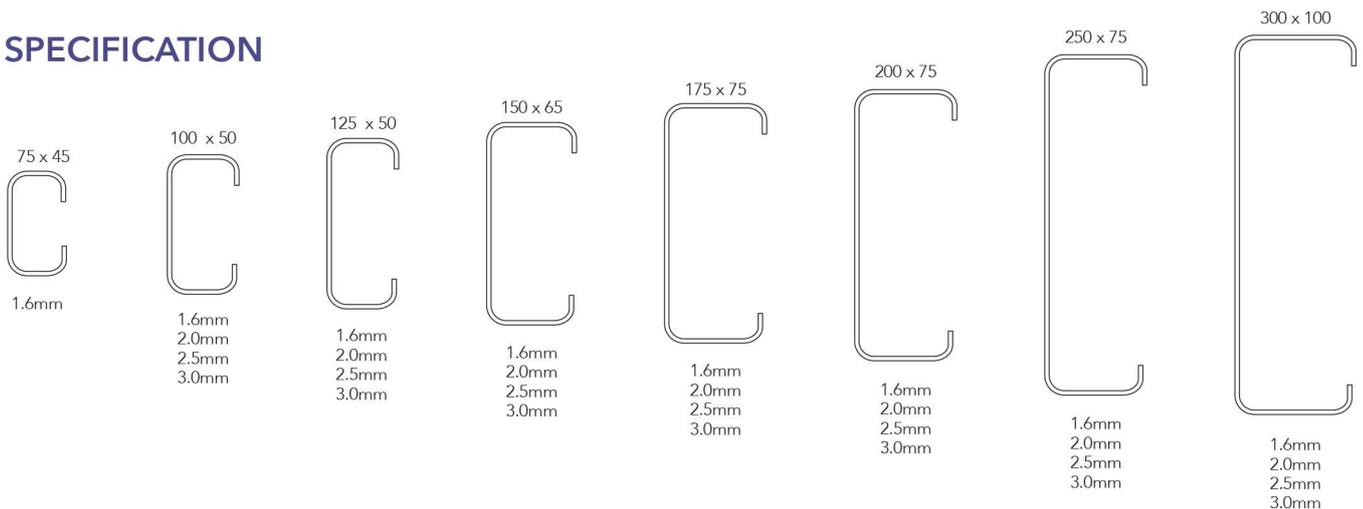


## RECOMMENDED HOLE, CLETS AND FASTENING DETAILS

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 clet size as stated in table below.

SECTION DEPTH (mm)	A (mm)	B (mm)	C (mm)	T <sub>min</sub> (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



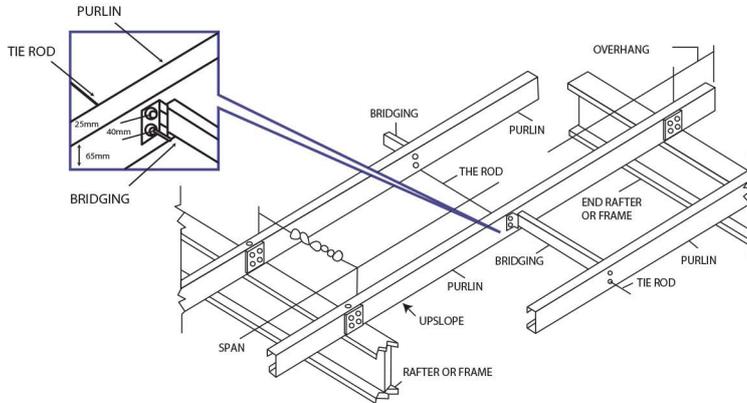
## SECTION PROPERTIES

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

## CONSTRUCTION DETAILS

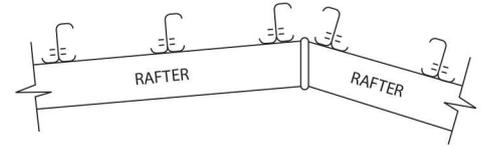
### Galvanised Steel C-Purlin

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

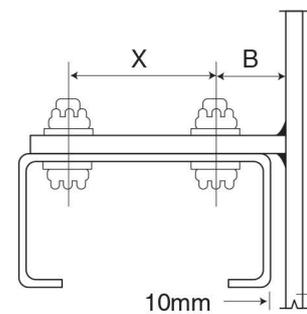
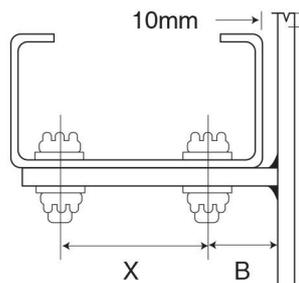
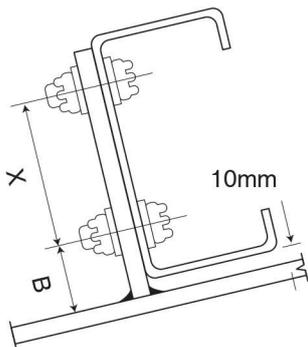


C-LIPPED CHANNEL

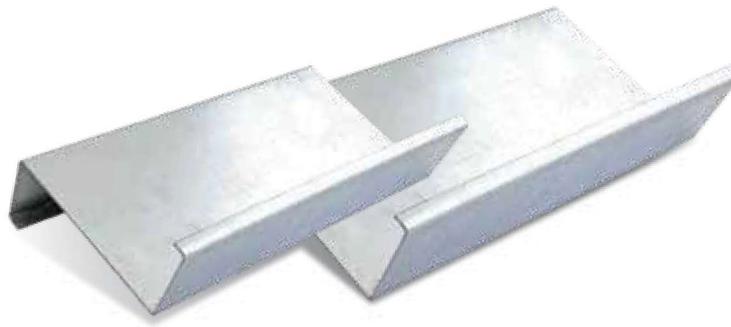
## HOLES DETAILS, CLEATS, FASTENING

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

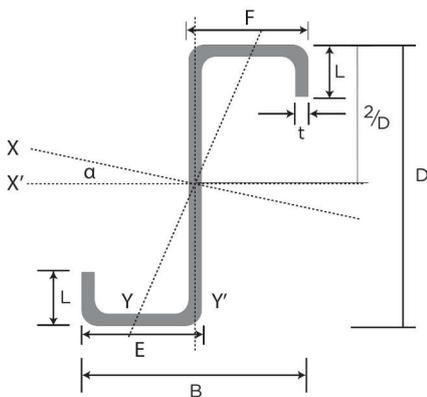
Material thickness : 1.6mm, 2.0mm, 2.5mm, 3.0mm  
 Steel grade : ASTM-A446 Grade D  
 Yield Stress : (440MPa - 530MPa)  
 Coating mass : Z/12 - Z/27 (120-275)

## TOLERANCES

The following tolerances apply to Z-Purlin

Depth, D	: ±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

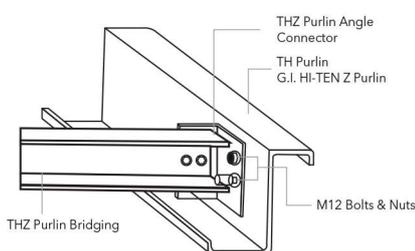
Standard TH Z-sections are supplied with optional holes punched to order. Punched Z-section can be supplied with H14, H16, H18 or elongated holes, with recommended cleft size as stated in table below.

SECTION DEPTH (mm)	A (mm)	B (mm)	C (mm)	T <sub>min</sub> (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

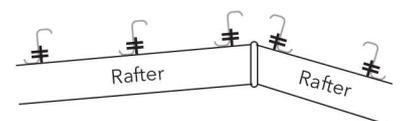
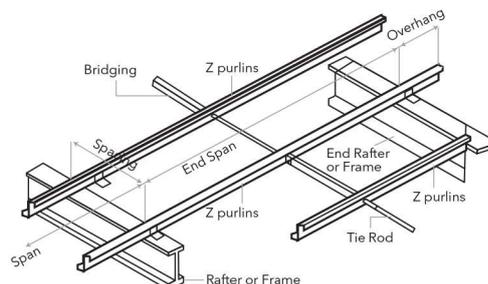
### Galvanised Steel Z-Purlin

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



## PURLIN-RAFTER-CONNECTION DETAILS

### Z-lipped Channel

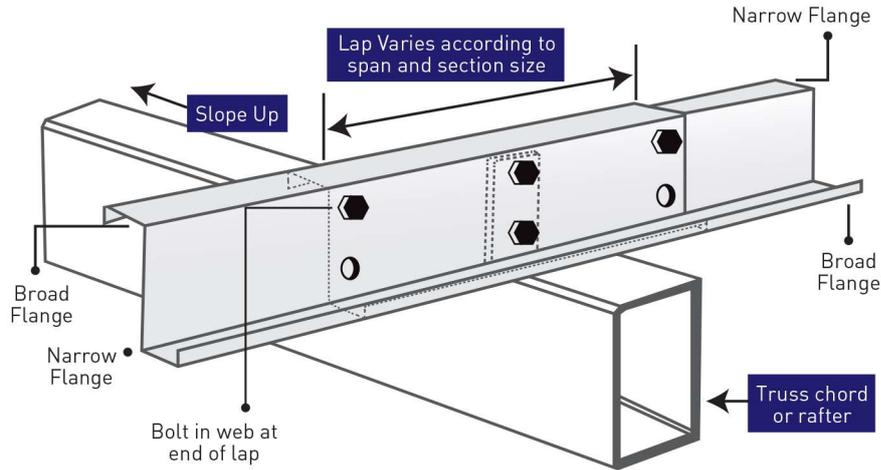


# GALVANISED STEEL Z-PURLIN

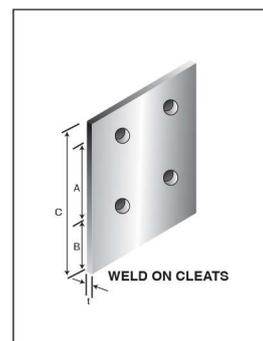
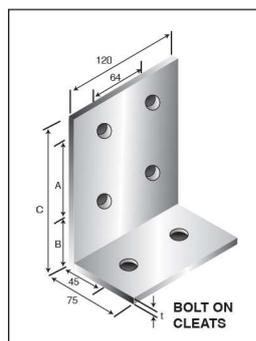
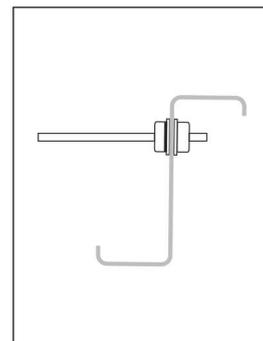
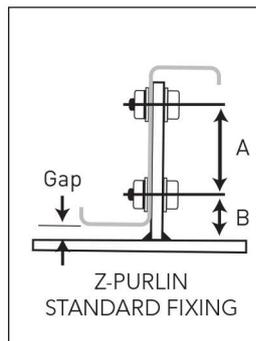
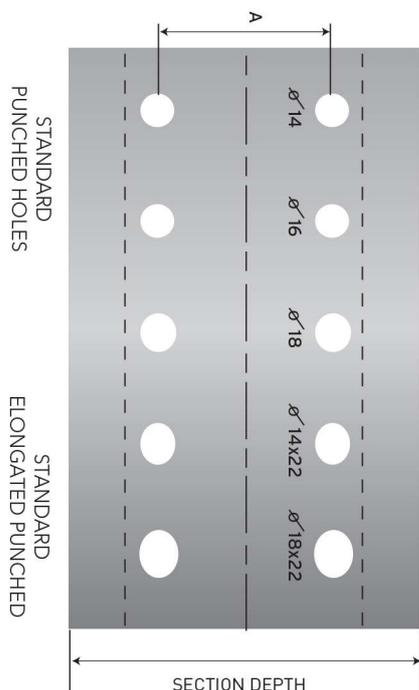
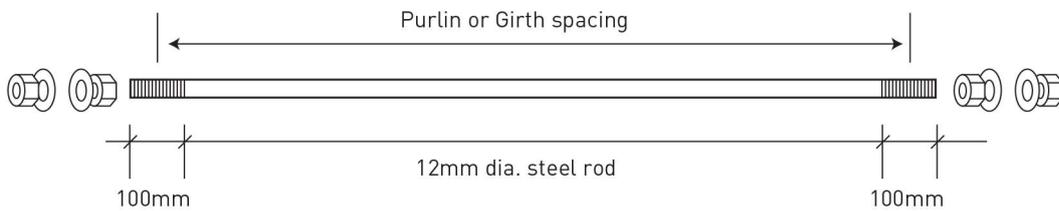
## DIMENSIONS and PROPERTIES

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



### DETAIL OF STANDARD TIE ROD



## 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 <sup>2</sup>	I <sub>x</sub> 10 <sup>6</sup> mm <sup>4</sup>	I <sub>y</sub> 10 <sup>6</sup> mm <sup>4</sup>	Z <sub>x</sub> 10 <sup>3</sup> mm <sup>3</sup>	Z <sub>y</sub> 10 <sup>3</sup> mm <sup>3</sup>	r <sub>x</sub> mm	r <sub>y</sub> mm		J mm <sup>4</sup>
HIZ 07516	75	38	32	8	1.6	2.36	250	0.226	0.045	6.027	1.756	30.045	13.467	-	214
HIZ 10016	102	57	51	16	1.6	3.05	362	0.606	0.266	11.753	4.952	40.930	27.113	0.868	322
HIZ 10020	102	57	51	16	2.0	3.72	444	0.732	0.316	14.256	5.939	40.609	26.696	0.942	624
HIZ 10025	102	57	51	16	2.5	4.60	542	0.876	0.371	17.134	7.029	40.188	26.152	0.996	1208
HIZ 10030	102	57	51	16	3.0	5.29	636	1.004	0.416	19.730	7.959	39.743	25.580	1.000	2070
HIZ 12516	127	57	51	16	1.6	3.20	402	1.007	0.266	15.691	4.938	50.086	25.733	0.781	356
HIZ 12520	127	57	51	16	2.0	3.94	494	1.222	0.317	19.083	5.922	49.733	25.314	0.853	691
HIZ 12525	127	57	51	16	2.5	4.89	605	1.469	0.371	23.020	7.009	49.273	24.770	0.936	1339
HIZ 12530	127	57	51	16	3.0	5.90	711	1.692	0.416	26.616	7.935	48.789	24.199	0.989	2295
HIZ 15016	153	68	62	16	1.6	4.01	497	1.865	0.549	24.137	7.762	61.281	33.233	0.712	437
HIZ 15020	153	68	62	16	2.0	4.92	613	2.277	0.659	29.528	9.381	60.946	32.798	0.793	849
HIZ 15025	153	68	62	16	2.5	6.01	754	2.760	0.783	35.900	11.223	60.514	32.238	0.869	1648
HIZ 15030	153	68	62	16	3.0	7.35	889	3.208	0.891	41.860	12.862	60.064	31.657	0.935	2831
HIZ 17516	175	74	68	16	1.6	4.27	532	2.544	0.549	28.778	7.751	69.153	32.118	0.666	467
HIZ 17520	175	74	68	16	2.0	5.26	657	3.109	0.660	35.244	9.367	68.794	31.684	0.740	908
HIZ 17525	175	74	68	16	2.5	6.67	809	3.776	0.783	42.914	11.206	68.332	31.125	0.810	1763
HIZ 17530	175	74	68	16	3.0	8.08	955	4.398	0.891	50.120	12.843	67.853	30.547	0.877	3029
HIZ 20016	203	74	68	16	1.6	4.70	577	3.594	0.549	35.063	7.739	78.945	30.848	0.616	505
HIZ 20020	203	74	68	16	2.0	5.74	713	4.400	0.660	42.914	9.352	78.557	30.417	0.683	983
HIZ 20025	203	74	68	16	2.5	7.13	879	5.354	0.784	52.432	11.188	78.058	29.863	0.745	1909
HIZ 20030	203	74	68	16	3.0	8.79	1039	6.249	0.892	61.341	12.822	77.542	29.290	0.807	3281
HIZ 22016	225	78	72	18	1.6	5.28	718	4.400	0.741	34.742	12.150	78.300	32.100	0.458	626
HIZ 22020	225	78	72	18	2.0	6.55	890	5.390	0.904	42.585	14.906	77.800	31.900	0.532	1219
HIZ 22025	225	78	72	18	2.5	8.16	1100	6.560	1.090	51.913	18.193	77.200	31.500	0.610	2370
HIZ 22030	225	78	72	18	3.0	9.80	1305	7.670	1.270	60.711	21.302	76.700	31.200	0.689	4077
HIZ 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
HIZ 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
HIZ 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
HIZ 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
HIZ 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
HIZ 30030	350	100	93	25	3.0	12.10	1539	20.330	2.625	135.084	27.496	114.952	41.301	0.681	4779
HIZ 35020	350	100	93	22	2.0	9.92	1274	23.970	2.451	137.700	28.300	137.200	43.860	-	1699
HIZ 35025	350	100	93	22	2.5	12.37	1586	29.720	3.018	171.100	34.960	136.900	43.620	-	3305
HIZ 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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