



# *Engineering Your Quality Livestock*

*Assuring you of our best attention at all times*



## 04 Corrosion Resistance

Made from 100% Galvanized steel without welding and painting. Galvanized Iron section are corrosion resistant and dimensionally stable, no warp, split, rot, settle or attract termites. It can provide the maximum protection.



## 06 High Density Insulated Door



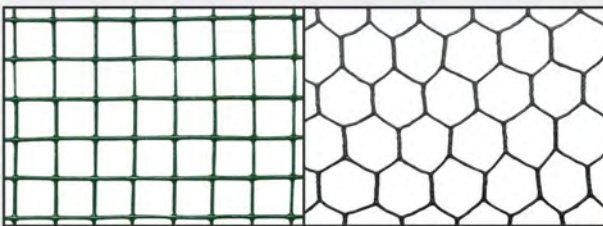
Insulated with injected polyurethane foam, and finished with door lock set.

## 05 Poultry Equipment Supports



Designed to complement with suspension system of poultry equipment such as feeding & watering system, winch, egg trolley track etc.

## 07 PVC Coated Bird Wire Netting

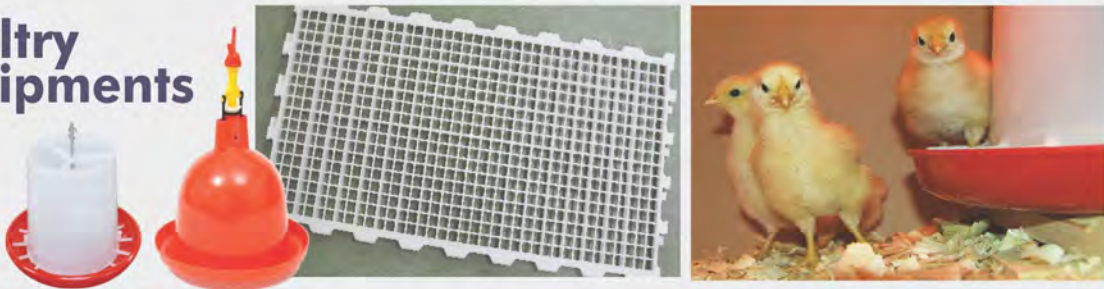


Reduce the risk of corrosion and last longer.

## 08 Ventilation Equipments



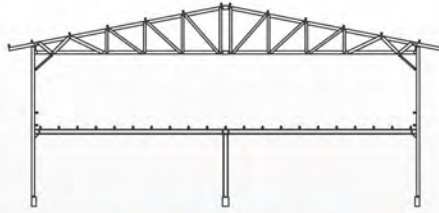
## 09 Poultry Equipments



# BUILDING TYPE



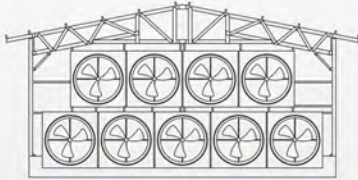
CURVE CEILING



DOUBLE STOREY



FLAT CEILING



SLOPING CEILING

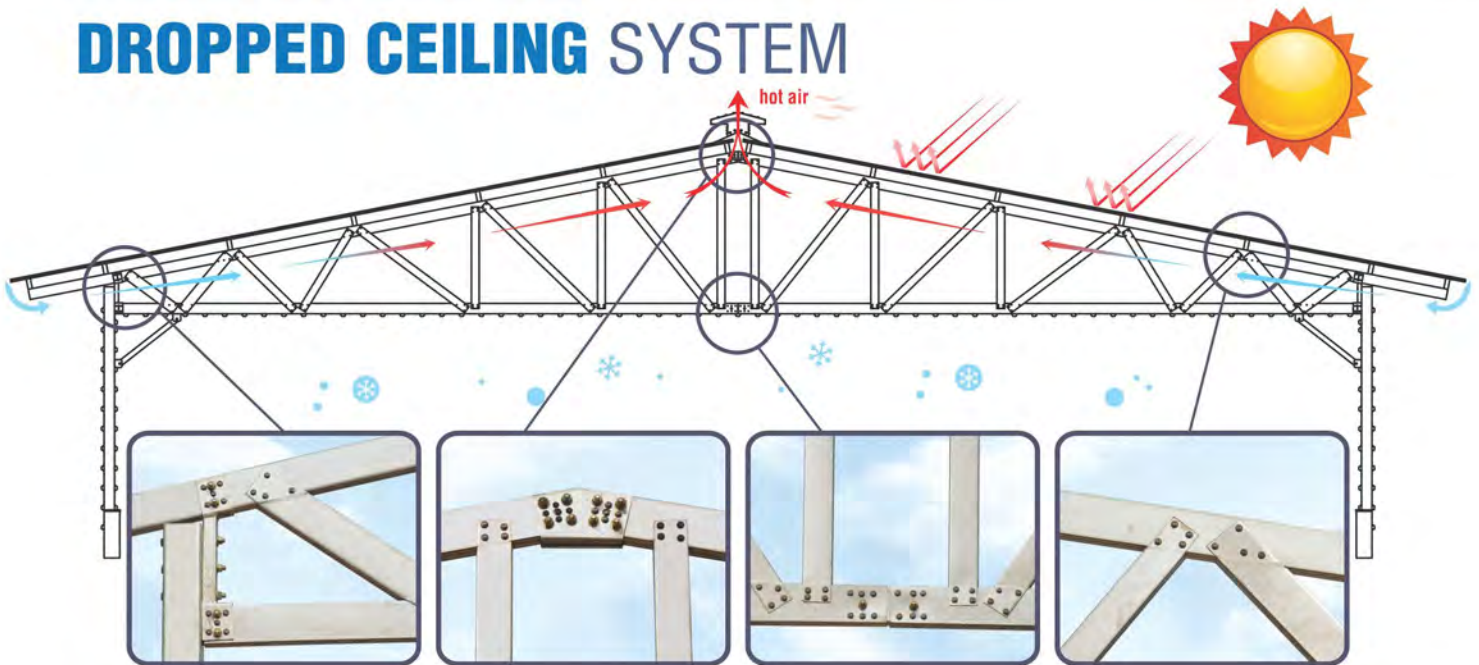


FLAT CEILING WITH INTERNAL COLUMN

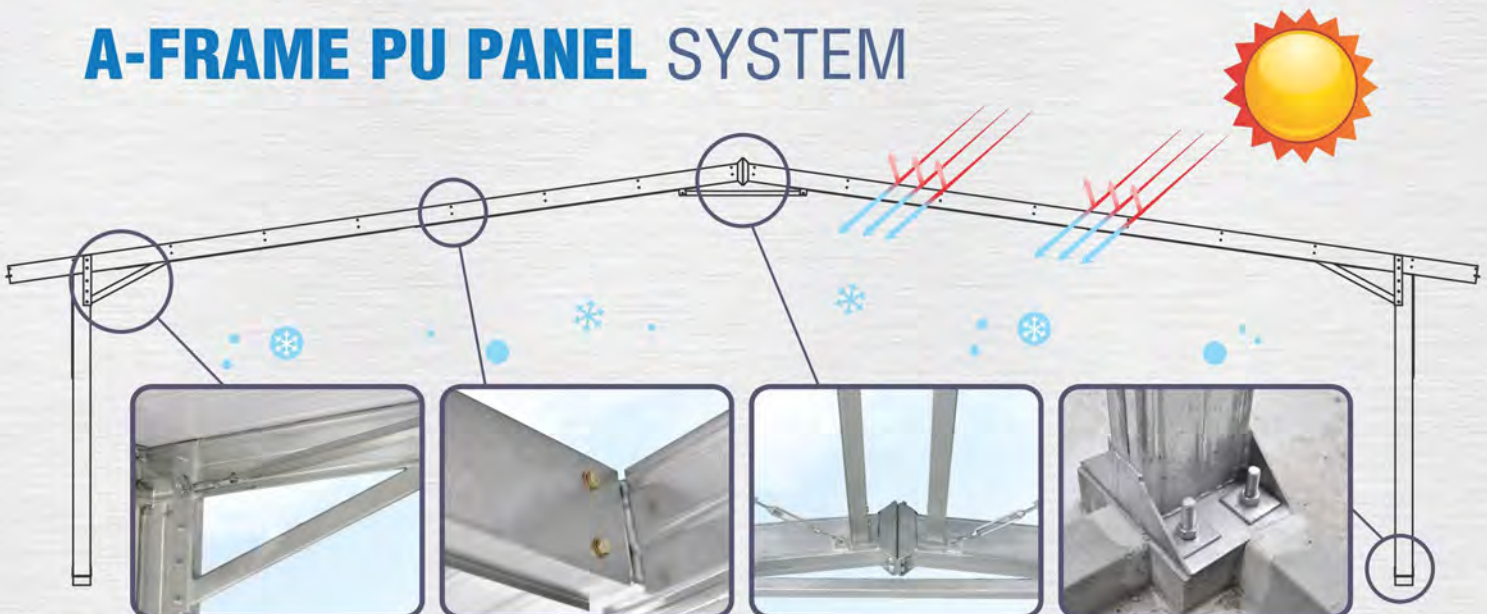


A-FRAME

## DROPPED CEILING SYSTEM



## A-FRAME PU PANEL SYSTEM



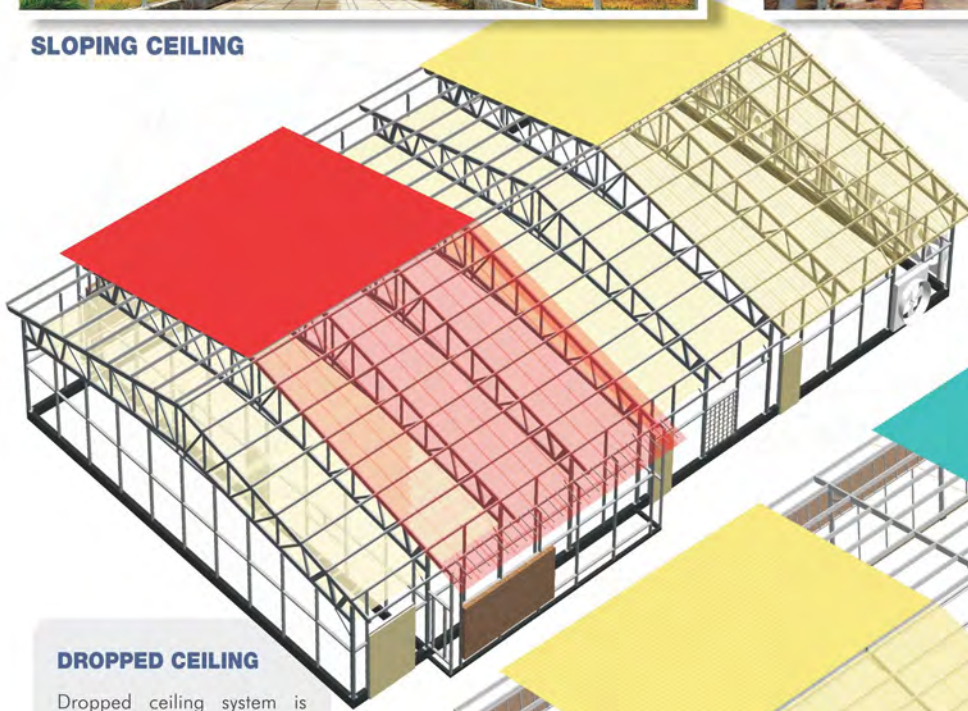
# BUILDING TYPE



**SLOPING CEILING**

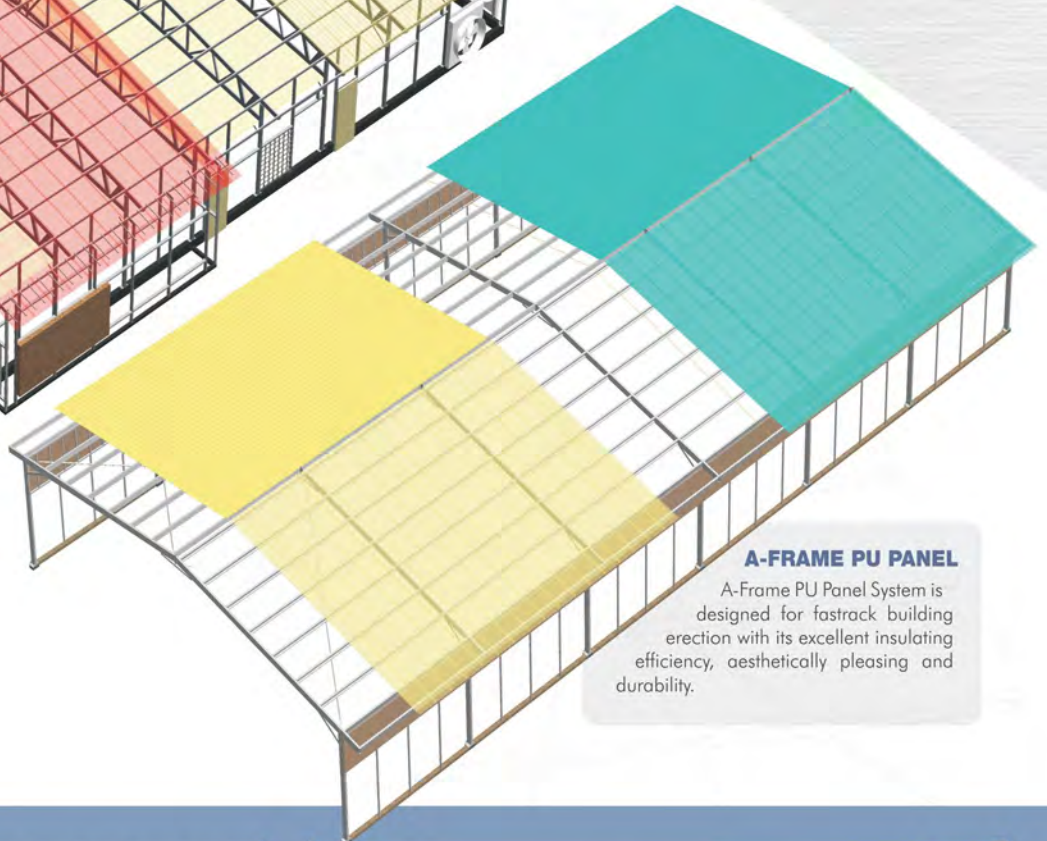


**FLAT CEILING**



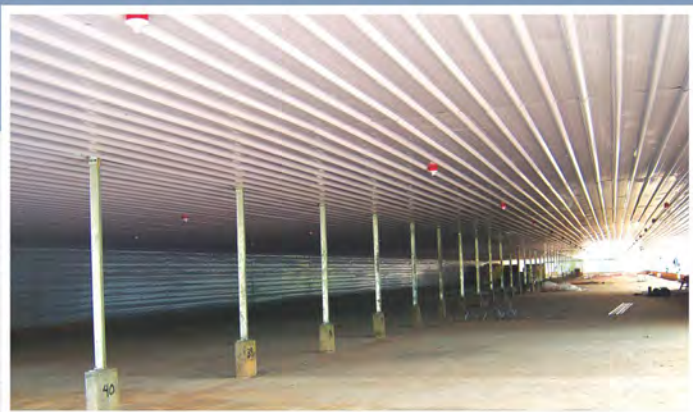
**DROPPED CEILING**

Dropped ceiling system is designed to exhaust hot air in the attic space naturally with the use of strategically placed vents and inlets, resulting to better environment control inside the structure.



**A-FRAME PU PANEL**

A-Frame PU Panel System is designed for fasttrack building erection with its excellent insulating efficiency, aesthetically pleasing and durability.



**FLAT CEILING WITH INTERNAL COLUMN**



**DOUBLE STOREY**

# UNI-INTERLOCKED™ HIGH-TENSILE HOLLOW SECTION

UK Patent No. GB 2371816 and Taiwan Patent No. 159385 for "A Light Weight Building Material".

Registered Industrial Design in Malaysia, UK, USA, Australia, Japan, Taiwan, China, Korea, Thailand, India, Sri Lanka, and etc. with title "Roof Truss" and "Metal Pipe"



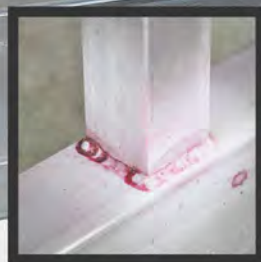
*Original always The Right Choice!!!*

*An Intelligent & Innovative System*

## CONNECTION RECOMMENDATION

### Welding Connection

INNER VIEW  
(COATING DAMAGED)



DEFECT PART (RED)

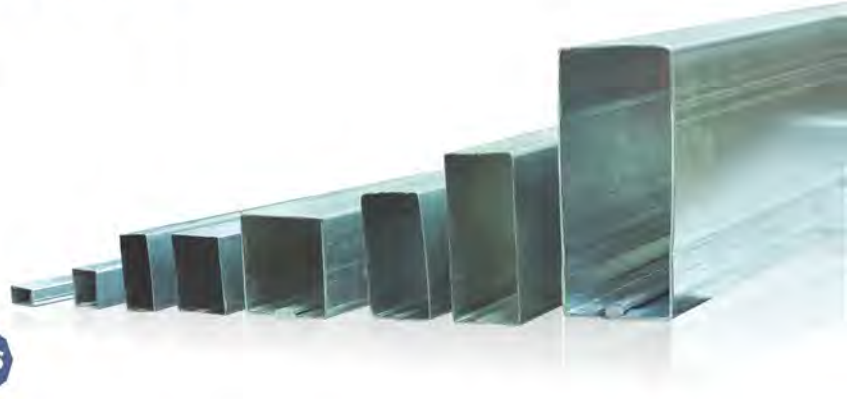
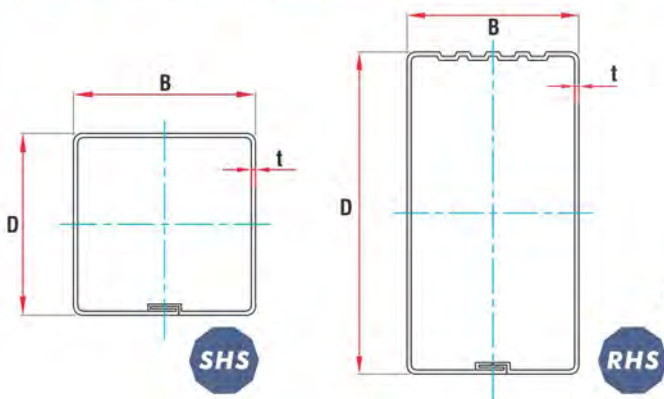
### Screw Connection



Tested & Proven by:



# COLD-FORMED RECTANGULAR / SQUARE HOLLOW SECTION PROPERTIES



RHS/SHS (mm)	Exact Dimension			Weight w kg/m	Area A mm <sup>2</sup>	Second Moment of Area		Radius of Gyration		Elastic Modulus	
	Depth D mm	Base B mm	Thickness t mm			$I_x$ 10 <sup>3</sup> mm <sup>4</sup>	$I_y$ 10 <sup>3</sup> mm <sup>4</sup>	$r_x$ mm	$r_y$ mm	$Z_x$ 10 <sup>3</sup> mm <sup>3</sup>	$Z_y$ 10 <sup>3</sup> mm <sup>3</sup>
	13x25x0.42	13	25			0.42	0.31	31.20	2.60	1.00	9.19
25x25x0.42	25	25	0.42	0.40	42.00	4.30	4.30	10.03	10.03	0.34	0.34
25x25x0.45	25	25	0.45	0.42	45.00	4.40	4.40	10.02	10.02	0.36	0.36
25x25x0.55	25	25	0.55	0.52	55.00	5.30	5.30	9.90	9.90	0.43	0.43
25x25x0.70	25	25	0.70	0.66	70.00	6.70	6.70	9.92	9.92	0.54	0.54
31x31x0.70	31	31	0.70	0.84	86.80	12.73	12.73	12.25	12.25	0.84	0.84
31x31x0.80	31	31	0.80	0.96	99.20	14.37	14.37	12.19	12.19	0.95	0.95
25x50x0.42	50	25	0.42	0.57	63.00	21.70	7.50	18.45	10.84	0.87	0.60
25x50x0.55	50	25	0.55	0.75	82.50	27.20	9.40	18.16	10.67	1.10	0.76
25x50x0.70	50	25	0.70	0.95	103.00	34.70	11.90	18.34	10.73	1.39	0.95
50x50x0.80	50	50	0.80	1.42	160.00	62.65	62.65	20.05	20.05	2.55	2.55
50x50x1.00	50	50	1.00	1.78	196.00	78.50	78.50	20.01	20.01	3.14	3.14
50x50x1.20	50	50	1.20	2.14	234.20	93.00	93.00	19.93	19.93	3.72	3.72
50x50x1.60	50	50	1.60	2.92	320.00	117.63	117.63	19.49	19.49	4.86	4.86
63x63x0.80	63	63	0.80	1.87	201.60	126.94	126.94	25.25	25.25	4.08	4.08
63x63x1.00	63	63	1.00	2.34	252.00	156.72	156.72	25.14	25.14	5.06	5.06
63x63x1.20	63	63	1.20	2.81	302.40	185.74	185.74	25.02	25.02	6.01	6.01
63x63x1.60	63	63	1.60	3.81	403.20	241.54	241.54	24.79	24.79	7.87	7.87
40x50x0.45	50	40	0.45	0.73	81.00	31.00	22.10	19.65	16.59	1.24	1.10
40x75x0.55	75	40	0.55	1.12	126.50	98.00	37.50	27.96	17.30	2.61	1.88
40x75x0.60	75	40	0.60	1.23	136.60	106.60	40.80	27.94	17.28	2.84	2.04
40x75x0.80	75	40	0.80	1.63	184.00	140.80	53.70	27.86	17.20	3.76	2.68
40x75x1.00	75	40	1.00	2.04	226.00	174.40	66.20	27.78	17.11	4.65	3.31
40x100x0.55	100	40	0.55	1.36	154.00	197.50	48.20	35.95	17.76	3.95	2.41
40x100x0.60	100	40	0.60	1.48	166.60	215.00	52.40	35.92	17.74	4.30	2.62
40x100x0.80	100	40	0.80	1.97	224.00	284.50	69.00	35.84	17.66	5.69	3.45
40x100x1.00	100	40	1.00	2.46	276.00	352.90	85.20	35.76	17.57	7.06	4.26
50x125x1.00	50	125	1.00	3.22	350.00	687.65	166.84	44.58	21.96	11.09	6.81
50x125x1.20	50	125	1.20	3.87	420.00	818.46	197.82	44.45	21.85	13.22	8.11
50x125x1.60	50	125	1.60	5.23	560.00	1073.51	257.48	44.19	21.64	17.40	10.64
50x125x2.00	50	125	2.00	6.53	700.00	1319.94	314.16	43.93	21.43	21.46	13.09
65x150x1.00	150	65	1.00	3.73	426.00	1261.80	349.00	54.42	28.62	16.83	10.74
65x150x1.20	150	65	1.20	4.48	510.20	1506.70	415.50	54.34	28.53	20.09	12.78
65x150x1.60	150	65	1.60	6.04	688.00	1963.00	538.30	53.82	28.18	26.46	16.98
65x150x2.00	150	65	2.00	7.55	860.00	2421.10	660.27	53.56	27.97	32.72	20.96
80x200x1.60	200	80	1.60	8.27	885.76	4506.57	1093.40	71.33	35.13	45.43	27.89
80x200x2.00	200	80	2.00	10.34	1104.00	5575.90	1346.40	71.07	34.92	56.32	34.52

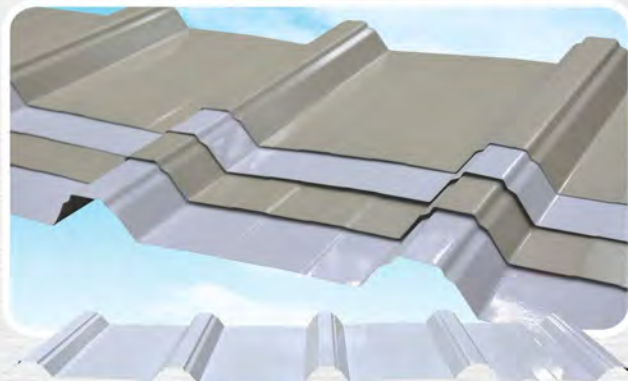
# CLADDING & INSULATION

## Insulation

**ECOWOOL** Blanket is a specifically designed glass mineral wool for fire safety, thermal and acoustical insulation for roofing application to achieve the optimum level of indoor comfort deserved. Once installed, the high performance insulation blanket acts as a highly effective barrier to heat flow, keeping your building cool during hot weather and conserving the cool air indoor.



## Aluzinc / PPGI Metal Sheathing

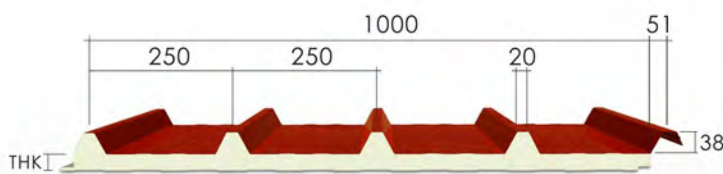


**01 PPGI** (OFF WHITE COLOR)

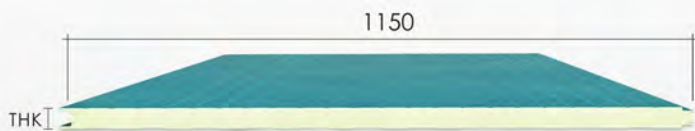


**02 PPGI** (DUSK BEIGE COLOR)

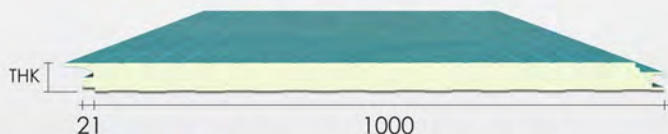
## PU Sandwich Panel



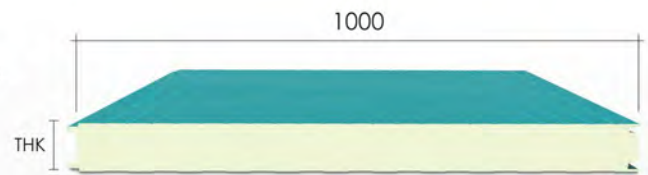
**01 Roof Panel**  
THK(mm): 30/50/75/100/150



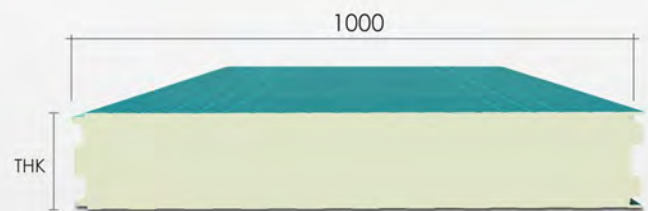
**02 Wall Panel "Standard Joint"**  
THK(mm): 40/50/75/100



**03 Wall Panel "Hidden Fix"**  
THK(mm): 50/75/100



**04 Wall Panel "Fire Rated Joint"**  
THK(mm): 100/150



**05 Wall Panel "Fire Rated Joint"**  
THK(mm): 175/200/250

# COLD-FORMED C SECTION PROPERTIES

**UNITED IVORY** produces an extensive C sections depth range from 75mm to massive 350mm capable of impressive spans. C sections are accurately roll formed from high strength zinc coated steel to provide an efficient, lightweight and economical engineered structural profile.

The sections are crisp, clean and square and by any assessment are quality products. There is no need to tolerate rounded corners, inaccurate lengths, painting, or out of square sections any more. Insist on quality United Ivory C sections for your project as to minimize maintenance throughout the life span of the building.

Identification	Section Dimension				MASS kg/m	AREA mm <sup>2</sup>	Second Moment of Area		Second Modulus		Radius of Gyration		Torsional Constant		Centroid x mm
	D mm	F mm	L mm	t mm			I <sub>xx</sub> 10 <sup>6</sup> mm <sup>4</sup>	I <sub>yy</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>	
TCP 07506	75	38	8	0.6	0.80	98	0.092	0.019	2.446	0.748	30.621	14.034	12	0.022	12.2
TCP 07507	75	38	8	0.7	0.93	114	0.106	0.022	2.832	0.862	30.564	13.978	19	0.025	12.2
TCP 07508	75	38	8	0.8	1.06	129	0.120	0.025	3.211	0.973	30.507	13.922	28	0.028	12.2
TCP 07510	75	38	8	1.0	1.31	160	0.148	0.031	3.952	1.186	30.393	13.809	53	0.034	12.2
TCP 07512	75	38	8	1.2	1.57	191	0.175	0.036	4.668	1.387	30.277	13.695	92	0.039	12.2
TCP 07516	75	38	8	1.6	2.05	250	0.226	0.045	6.027	1.756	30.045	13.467	214	0.049	12.1
TCP 10012	100	50	16	1.2	2.15	269	0.438	0.099	8.763	3.052	40.365	19.175	129	0.228	17.6
TCP 10016	100	50	16	1.6	2.80	355	0.571	0.127	11.420	3.931	40.142	18.967	303	0.290	17.6
TCP 10020	100	50	16	2.0	3.45	441	0.697	0.154	13.948	4.745	39.917	18.758	584	0.345	17.6
TCP 10025	100	50	16	2.5	4.40	548	0.847	0.184	16.931	5.674	39.634	18.496	1123	0.406	17.6
TCP 10030	100	50	16	3.0	5.29	636	0.986	0.211	19.719	6.507	39.348	18.231	1911	0.457	17.6
TCP 12512	125	50	16	1.2	2.39	299	0.734	0.107	11.737	3.128	49.537	18.891	143	0.356	15.9
TCP 12516	125	50	16	1.6	3.10	394	0.958	0.138	15.332	4.032	49.293	18.679	337	0.454	15.9
TCP 12520	125	50	16	2.0	3.82	491	1.173	0.166	18.772	4.870	49.047	18.467	651	0.542	15.9
TCP 12525	125	50	16	2.5	4.89	610	1.429	0.199	22.856	5.827	48.737	18.199	1253	0.640	15.9
TCP 12530	125	50	16	3.0	5.90	711	1.669	0.229	26.706	6.689	48.424	17.930	2136	0.723	15.8
TCP 15016	150	65	16	1.6	3.85	483	1.733	0.275	23.106	6.113	59.939	23.857	412	1.232	20.1
TCP 15020	150	65	16	2.0	4.73	601	2.130	0.334	28.400	7.430	59.697	23.635	797	1.485	20.1
TCP 15025	150	65	16	2.5	5.89	748	2.606	0.403	34.752	8.961	59.392	23.355	1539	1.771	20.0
TCP 15030	150	65	16	3.0	7.35	877	3.061	0.466	40.813	10.371	59.085	23.074	2631	2.026	20.0
TCP 17516	175	65	16	1.6	4.15	523	2.476	0.288	28.294	6.215	68.844	23.492	446	1.720	18.6
TCP 17520	175	65	16	2.0	5.10	651	3.047	0.351	34.819	7.556	68.584	23.268	864	2.076	18.6
TCP 17525	175	65	16	2.5	6.35	810	3.734	0.423	42.672	9.117	68.258	22.985	1670	2.481	18.6
TCP 17530	175	65	16	3.0	8.08	952	4.392	0.491	50.194	10.555	67.928	22.701	2856	2.843	18.5
TCP 20016	200	75	16	1.6	4.73	595	3.697	0.426	36.966	7.873	78.860	26.770	507	3.244	20.9
TCP 20020	200	75	16	2.0	5.82	741	4.558	0.520	45.577	9.599	78.600	26.540	984	3.930	20.9
TCP 20025	200	75	16	2.5	7.39	923	5.599	0.630	55.993	11.626	78.270	26.250	1904	4.721	20.8
TCP 20030	200	75	16	3.0	9.02	1087	6.602	0.732	66.025	13.512	77.940	25.960	3261	5.439	20.8
TCP 22516	225	75	16	1.6	5.28	634	4.863	0.441	43.224	7.966	87.550	26.370	541	4.218	19.6
TCP 22520	225	75	16	2.0	6.55	788	6.000	0.538	53.334	9.715	87.280	26.140	1050	5.114	19.6
TCP 22525	225	75	16	2.5	8.16	976	7.378	0.652	65.585	11.769	86.930	25.840	2034	6.151	19.6
TCP 22530	225	75	16	3.0	9.80	1162	8.709	0.758	77.412	13.681	86.580	25.550	3486	7.096	19.6
TCP 25016	250	75	18	1.6	5.42	680	6.302	0.474	50.413	8.472	96.210	26.390	581	5.665	19.0
TCP 25020	250	75	18	2.0	6.62	845	7.782	0.579	62.255	10.340	95.930	26.160	1128	6.880	19.0
TCP 25025	250	75	18	2.5	8.36	1049	9.579	0.702	76.634	12.542	95.560	25.870	2185	8.290	19.0
TCP 25030	250	75	18	3.0	10.37	1249	11.318	0.818	90.546	14.597	95.200	25.590	3747	9.583	19.0
TCP 30020	300	96	18	2.0	8.63	1030	13.873	1.123	92.486	15.573	116.070	33.020	1373	18.769	23.9
TCP 30025	300	96	18	2.5	10.84	1279	17.125	1.370	114.165	18.988	115.720	32.720	2664	22.764	23.9
TCP 30030	300	96	18	3.0	12.66	1525	20.291	1.603	135.274	22.219	115.360	32.430	4574	26.494	23.9

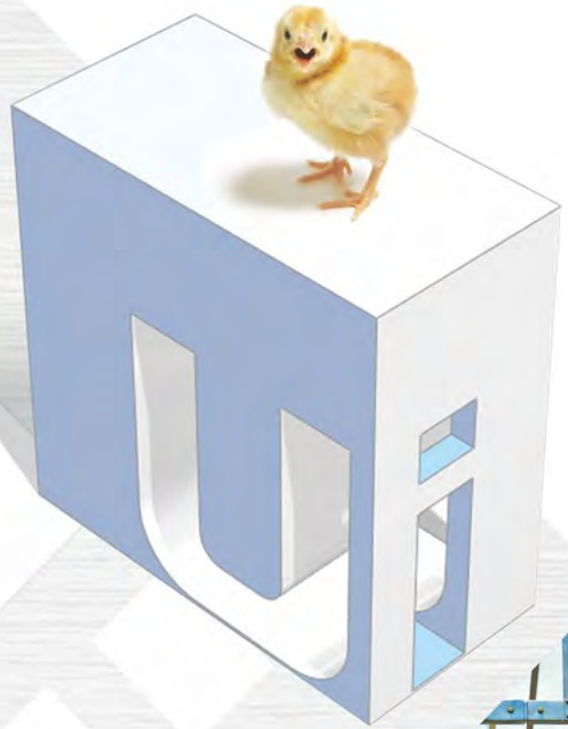


# MANUFACTURER'S CERTIFICATION

Items	Description	Materials	Remarks
1	Structural Truss	High Tensile GI Steel (Z27 – min 275g/m <sup>2</sup> )	Conform to JIS 3302 : SGC 570 or SGC 440 (thk ≥1.2mm)
2	Structural Column	Hot-dip Galvanized High Tensile Steel (min 400g/m <sup>2</sup> )	Conform to ASTM-A500 Grade A
3	Connection Plate	Hot-dip Mild Steel (min 400g/m <sup>2</sup> )	Conform to BS4360 : 86 43A
4	Connection Bracket	High Tensile GI Steel	Conform to JIS G 3302 : 2010
5	Roof Boxed Purlin	High Tensile GI Steel (Z27 – min 275g/m <sup>2</sup> )	Conform to JIS 3302 : SGC 570 or SGC 440 (thk ≥1.2mm)
6	Roof Covering Wall Sheathing Ceiling Sheathing	High Tensile Pre-painted Galvanized Iron Steel	Conform to JIG G3312 : 2008 Early Fire Hazard Ratings -AS 1530 (Part 3) - Ignitability Index : 0 - Spread of Flame Index : 0 - Heat evolved Index : 0 - Smoke developed Index : 0-1
7	Structural Bolt, Nut & Washer	Steel with 'Rainbow' Coating (Property Class 8.8)	Conform to DIN933 / ISO 3269 : 2000 Conform to DIN931 / ISO 4014 Conform to DIN934 (Nuts)
8	Self Drilling Screw & Tapping Screw	Steel with 'Ruspert' Coating	Conform to AS 3566.1 - 2002
9	Uni-Interlocked Section Framing	High Tensile GI Steel (Z27 – min 275g/m <sup>2</sup> )	Conform to JIS 3302 : SGC 570 or SGC 440 (thk ≥1.2mm)
10	Flashing & Trim	High Tensile Pre-painted Galvanized Iron Steel	Conform to JIG G3312 : 2008
11	Insulation	Fiberglass Batt	Fire Rating certified Class 'O' material tested to BS 476 : Part 6 : 1989 & BS 476 : Part 7 : 1987
12	Vapor barrier	Plastic	
13	Wire Netting Hex PVC Coated	Galvanized wire with PVC coated	ISO 4782 : 1987 (E)
14	Manhole Board	Polystyrene	

## THE MERITS & ADVANTAGES





**UNITED IVORY SDN. BHD.**  
ENGINEERING (Co. No. 893803-A)

**Head Quarter**

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☎ 604 - 5521 770

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