ALULA

ALUMINIUM & STEEL

مؤسسة العلا للأعمال الحديدية والألمنيوم

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الابداع

ان عملنا الابداعي يرتكز الى خبرتنا الطويلة في ابتكار الحلول العملية التي تساهم في تطوير الأعمال والارتقاء بها .

خدمة العملاء

العملاء دائماً على حق ، شعار نلتزم به منذ أمد طويل واتخذناه مرتكزاً ومنطلقاً لأعمالنا وخدماتنا المتعدده

دقة التنفيذ

الدقة في اختيار المواد الأولية والعمالة المدربة والموظفين الأكفاء من أجل مشاريع متناهية في الدقة والاتقان

شركتنا

تفخر مؤسسة العلا للأعمال الحديدية والألمنيوم ذات السمعه الحسنة التي استطاعت وبفضل اللّه ثم بفضل العمل الدؤوب والرؤية النافذة من تحقيق النجاحات المتتالية والتي سمحت لها بالحصول على مكانتنا المرموقة

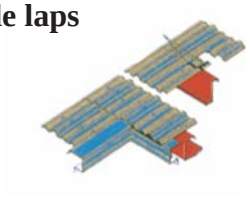
Contents

AU BUILDING TERMINOLOGE

Pop Rivets cutter strap

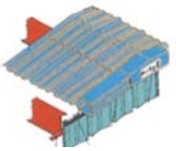
Earve trim rok trim

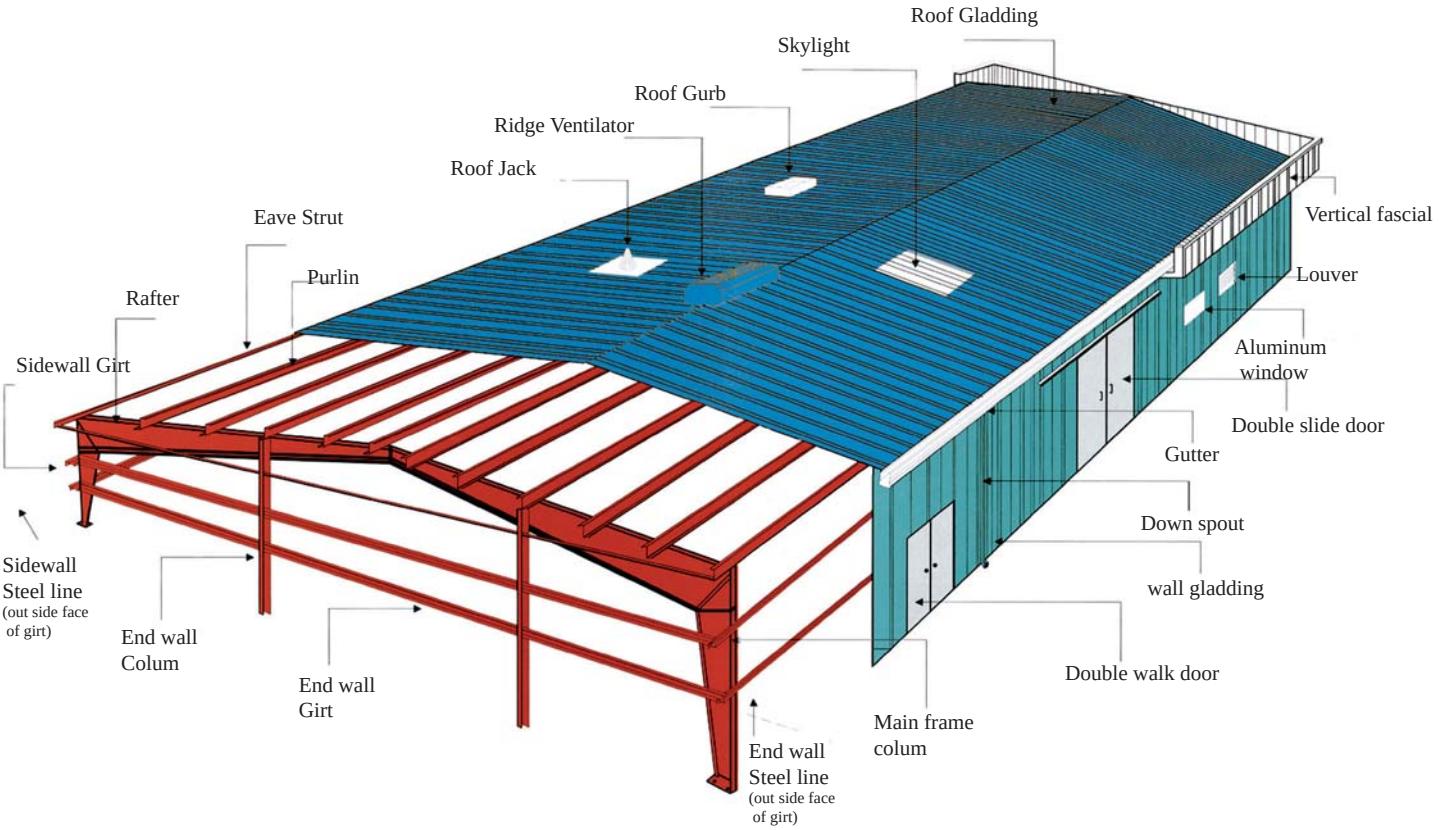
Sialing Tape at all panel end laps and side laps



peak box rake trim closure strip

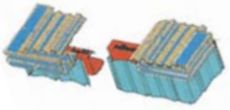
peak purlin peak panels purlin rake angle





Down spout
Down spout strop
Down spout installation

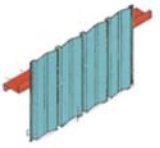
Rake trim cutter
Eano strut
panel cop flashing
filter strip
Rake trim



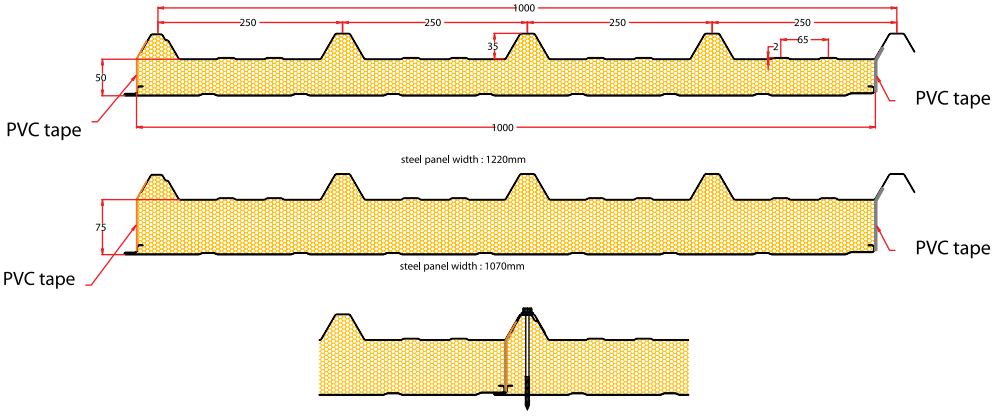
Inside Corner trim

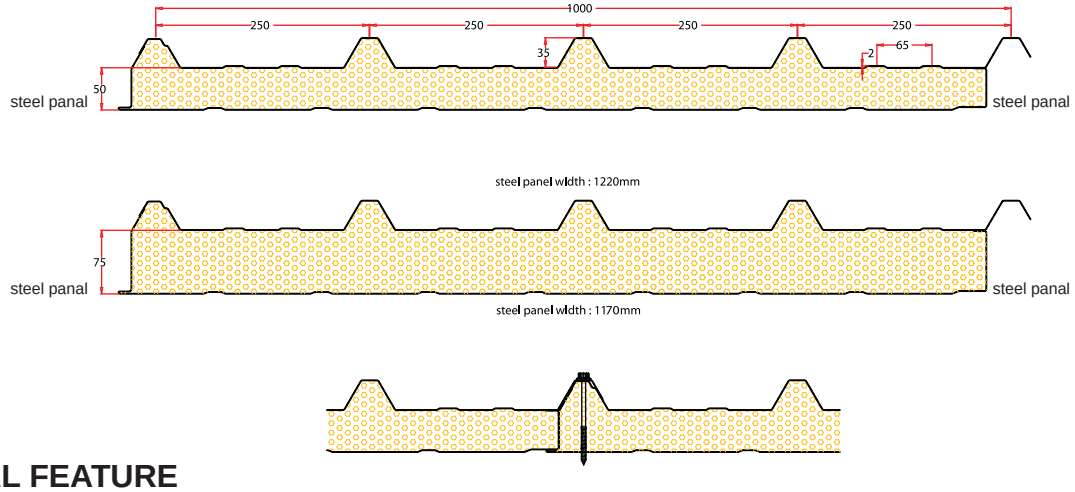
Girt base angle corner trim

End wall grit wall Panels



Data Sheet compstie panel AU 34/250





GENERAL FEATURE

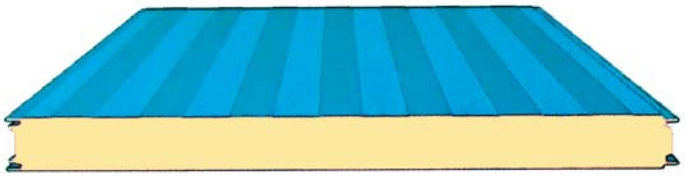
a. Mechanical Characteristic of the foam
(At Overall Density of 37 - 39 kg/m3)
- Tensile stress : >120 kpa
- Compression reistance : >100 kpa
- Shear resistance : >100 kpa
- Fire property : B3 as per DIN 4102 (B2 PIR)

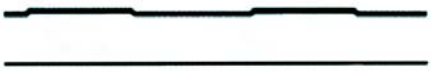
Pu thickness	U-Value
50mm	0.38
75mm	0.27

b. Insulation capacity
- K value (Thermal Conductivity of PU) - 0.022 W/mK
- Tolerance + / - 0.002

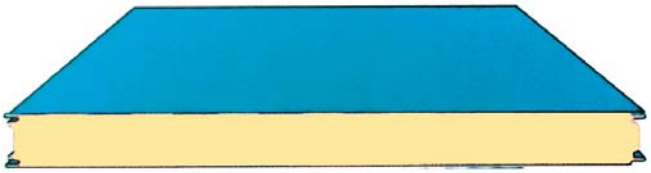
c. Water absorption of the foam
- After 24 hours : 1.0% of volume

DATA SHEET FLAT PANEL - TONGUE AND GROOVE

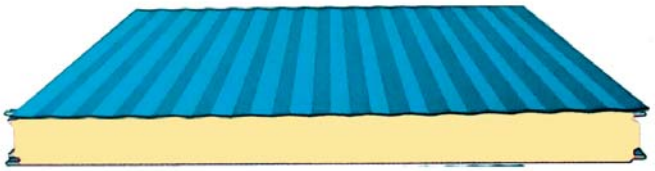




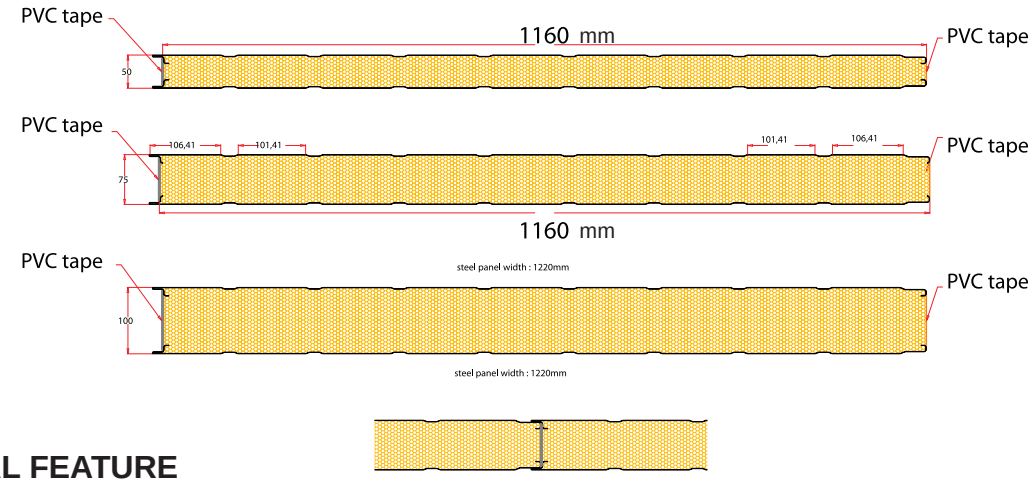
LOW RIB



FLAT



MICRO WAVE



GENERAL FEATURE

a. Mechanical Characteristic of the foam
(At Overall Density of 37 - 41 kg/m3)
- Tensile stress : >120 kpa
- Compression reistance : >100 kpa
- Shear resistance : >100 kpa
- Fire property : B3 as per DIN 4102 (B2 PIR)

Pu thickness	U-Value
50mm	0.44
75mm	0.30
100mm	0.22

b. Insulation capacity
- K value (Thermal Conductivity of PU) - 0.022 W/mK
- Tolerance + / - 0.002

c. Water absorption of the foam
- After 24 hours : 1.0% of volume

Alloy

Aluminium alloy, used in the production of profiled roof and wall cladding panels, is EN AW 3105 which conforms to BS 3105 Alloy N31, and DIN 1725 Alloy Al Mn 0.50 Mg 0.50

Material Properties

Ultimate Strength: Min 152 N/mm^2

Yield Strength: Min 124 N/mm^2

Modulus of elasticity: 69000 N/mm^2

Coef. of linear thermal expansion: 24×10^{-6} per deg. C.

Fire

Aluminium is classified as a non-combustible material, as defined by BS 476: part 4:1970. Roof coverings of aluminum alloy are rated EXT AA when tested in accordance with BS 476: part 3: 1958.

Combining With Other Material

These roof coverings can come into direct contact with plastics, galvanized steel, high-grade and pre-painted steel and zinc sheets.

Direct contact with ordinary steel, copper, brass and lead should be avoided by introducing a continuous separating element such as PVC tape, or bitumen felt strips or alternatively, painting with zinc chromate or aluminium paint. This also applies to direct contact with mortar and concrete.

Timber parts which come into contact with aluminium should be treated with impregnating agents which do not contain copper salts, mercury salts, phenol compounds or fluorine compounds.

Finishes

Mill Finish

This is the natural untreated surface of the metal as it leaves the rolling mill.

Polyester Color-Coated

An economical, long-life coating, factory applied polyester on the exposed side, and a lacquer coating on the reverse side. This is available in RAL as well as BS color shades.

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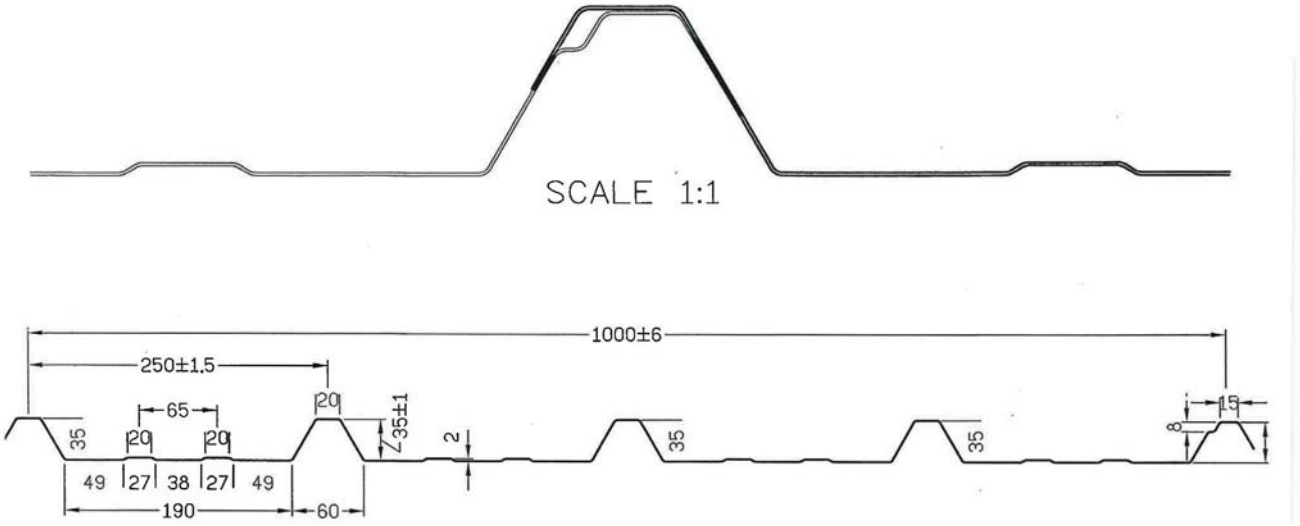
DATA SHEET ALUMINUM - AU 35/250

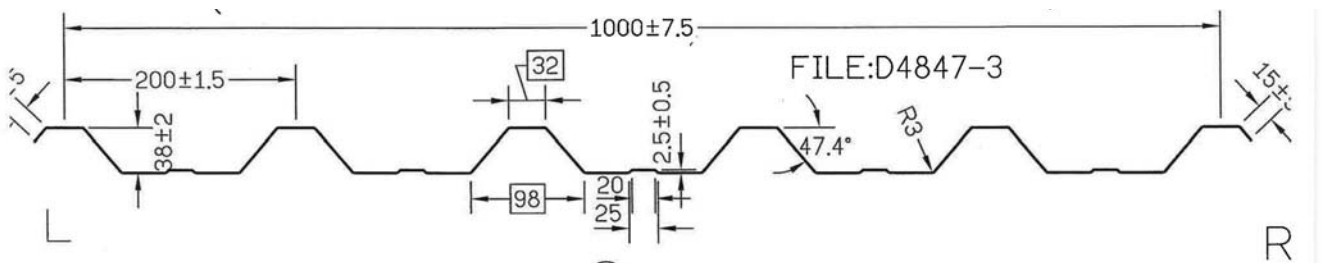


Allowable Load Table N/m²

	Span condition	Purlins centres in mm									
		1000	1250	1500	1750	2000	2250	2500	mm⁴/M	ZxTOP	ZxBOTT.
mm										mm³/M	mm³/M
0.45	⊥⊥	4332	2773	1925	1415	1083	806	587	113782	4536	8809
	⊥⊥⊥	5415	3464	2407	1768	1354	1070	866			
0.55	⊥⊥	5260	3367	2338	1718	1315	978	713	138092	5508	10681
	⊥⊥⊥	6575	4208	2922	2142	1644	1299	1052			
0.65	⊥⊥	6176	3953	2745	2017	1544	1147	836	162054	6467	12523
	⊥⊥⊥	7720	4941	3431	2521	1930	1525	1235			
0.70	⊥⊥	6625	4243	2946	2165	1657	1231	898	173906	6942	13433
	⊥⊥⊥	8287	5303	3683	2706	2072	1637	1326			
0.80	⊥⊥	7527	4817	3345	2458	1882	1397	1019	197353	7881	15230
	⊥⊥⊥	9408	6021	4181	3072	2352	1858	1505			
0.90	⊥⊥	8412	5384	7393	2747	2103	1561	1138	220460	8809	16997
	⊥⊥⊥	10515	6730	4673	3433	2629	2077	1682			

Working load in N/m² and limiting deflection L/200

Data sheet aluminum - AU 38/200



Allowable Load Table N/m²

	Span condition	Purlins centres in mm									
		1000	1250	1500	1750	2000	2250	2500	mm⁴/M	ZxTOP	ZxBOTT.
mm										mm³/M	mm³/M
0.45	⊥⊥	3855	2467	1713	1259	939	660	481	93172	4036	7819
	⊥⊥⊥	4818	3084	2141	1573	1205	952	769			
0.55	⊥⊥	4679	2994	2072	1528	1139	800	583	113028	4899	9476
	⊥⊥⊥	5848	3743	2599	1918	1462	1155	933			
0.65	⊥⊥	5491	3514	2441	1793	1336	939	684	132580	5750	11102
	⊥⊥⊥	6864	4393	3051	2241	1716	1356	1095			
0.70	⊥⊥	5893	3722	2619	1924	1434	1007	734	142244	6171	11904
	⊥⊥⊥	7366	4714	3274	2405	1842	1455	1175			
0.80	⊥⊥	6688	4281	2973	2184	1626	1142	833	161348	7008	13489
	⊥⊥⊥	8361	5351	3716	2730	2090	1651	1332			
0.90	⊥⊥	7472	7472	3321	2440	1816	1275	930	180157	7825	15045
	⊥⊥⊥	9341	5978	4151	3050	2335	1845	1488			

Working load in N/m² and limiting deflection L/200

Profile steel sheet

Alloy

The base material shall be galvanized conform to ASTM A653
(Lock Forming Quality) or structural quality

ASTM A446 Grade D (Yield strength of 345 N/mm2) subject to availability.
or aluzinc coated a5 per ASTM A792 (Y.S.340 N/mm2).

Finishes

Plain Galvanized

The base steel material shall be hot dipped galvanized Zinc coating thickness as per ASTM A525-G90 (Zinc coating 275g/m2 total both sides) subject to availability.

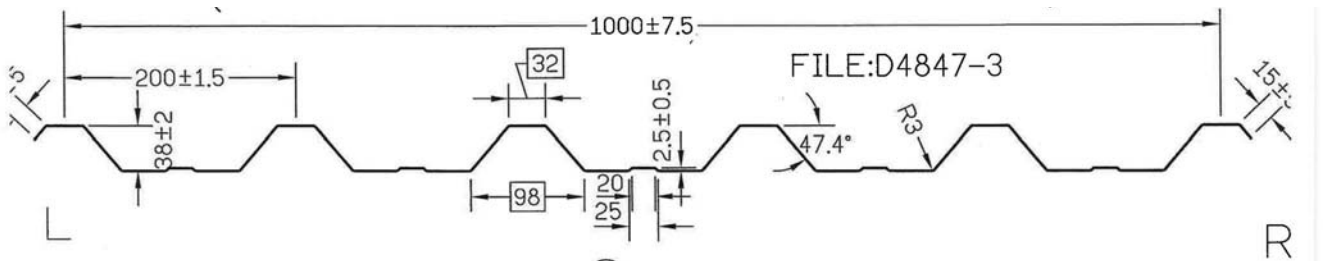
Paint Finishes

(Applies for galvanized as well as Alu-Zinc).

Polyester

An economical long-life coating. External side coated in 15 - 20 microns polyester and internal side coated in 5 - 7 microns primer.

Data sheet aluminum - AU 38/200



Allowable Load Table N/m²

	Span condition	Purlins centres in mm							
		1000	1250	1500	1750	2000	mm⁴/M	ZxTop	ZxBOTT.
mm								mm³/M	mm³/M
0.50	⊥⊥	1979	1267	821	517	347	103138	4470	8651
	⊥⊥⊥	2474	1584	1100	808	554			
0.60	⊥⊥	2359	1510	978	616	413	122842	5326	10293
	⊥⊥⊥	2949	1887	1310	963	660			
0.70	⊥⊥	2733	1749	1133	713	478	142244	6171	11905
	⊥⊥⊥	3416	2186	1518	1116	765			
0.80	⊥⊥	3102	1985	1285	809	542	161348	7004	13489
	⊥⊥⊥	3877	2482	1723	1266	867			
0.90	⊥⊥	3465	2218	1435	904	605	180157	7825	15045
	⊥⊥⊥	4332	2772	1925	1414	969			
1.00	⊥⊥	3824	2447	1582	996	668	198672	8634	16572
	⊥⊥⊥	4780	3059	2124	1561	1068			
1.20	⊥⊥	4525	2869	1870	1178	789	234838	10217	19545
	⊥⊥⊥	5657	3620	2514	1847	1262			

Working load in N/m² and limiting deflection L/200

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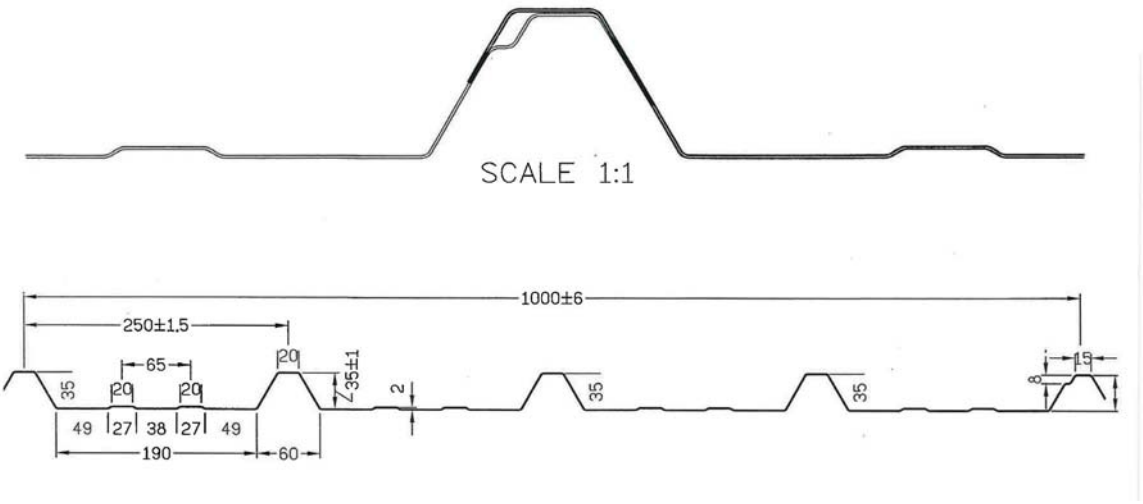
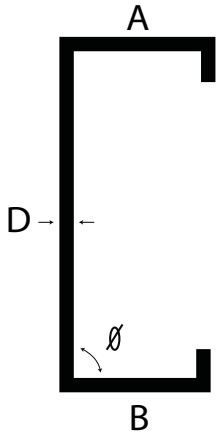
DATA SHEET ALUMINUM - AU 34/250

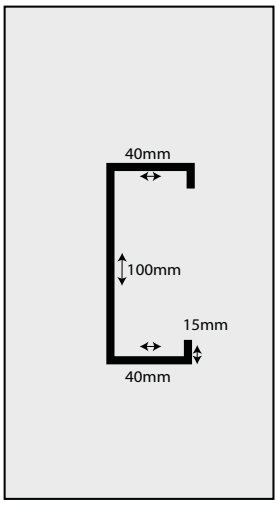


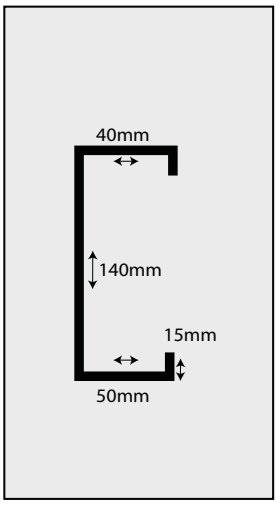
Allowable Load Table N/m²

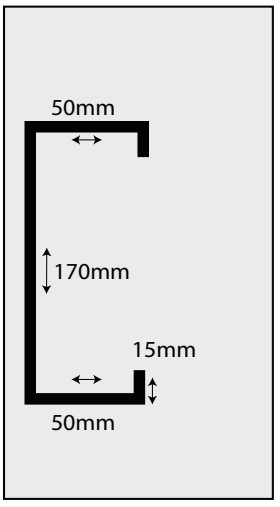
	Span condition	Purlins centres in mm							
		1000	1250	1500	1750	2000	mm⁴/M	ZxTop	ZxBOTT.
mm								mm³/M	mm³/M
0.50	⊥⊥	2225	1424	989	632	423	125981	5024	9748
	⊥⊥⊥	2781	1780	1236	908	677			
0.60	⊥⊥	2653	1698	1179	753	504	150116	5989	11606
	⊥⊥⊥	3316	2122	1474	1083	807			
0.70	⊥⊥	3074	1968	1366	872	584	173906	6942	13433
	⊥⊥⊥	3843	2460	1708	1255	935			
0.80	⊥⊥	3491	2234	1551	990	663	197355	7882	15229
	⊥⊥⊥	4363	2792	1939	1425	1061			
0.90	⊥⊥	3901	2497	1734	1106	471	220460	8809	16997
	⊥⊥⊥	4876	3121	2167	1592	1185			
1.00	⊥⊥	4306	2756	1914	1220	817	243231	9723	18735
	⊥⊥⊥	5383	3445	2392	1758	1308			
1.20	⊥⊥	5100	3264	2267	1443	967	287776	11515	22124
	⊥⊥⊥	6376	4080	2833	2082	1547			

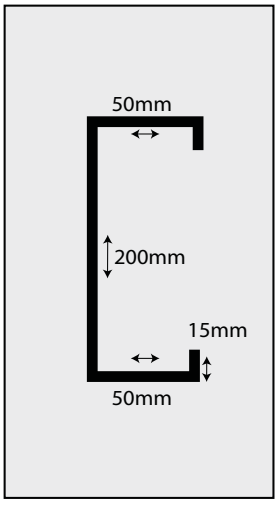
Working load in N/m² and limiting deflection L/200

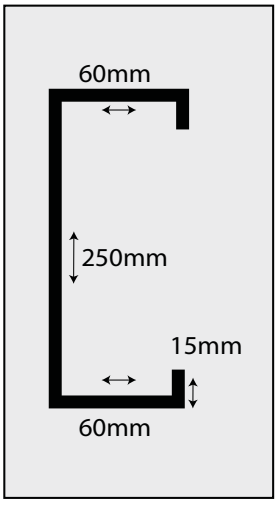

A
D
Ø
B

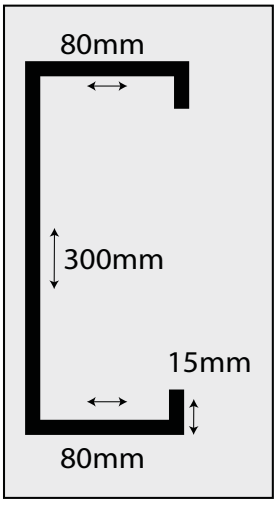

40mm
100mm
15mm
40mm


40mm
140mm
15mm
50mm

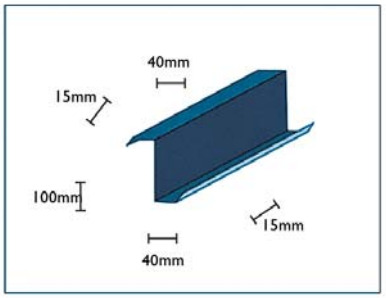

50mm
170mm
15mm
50mm

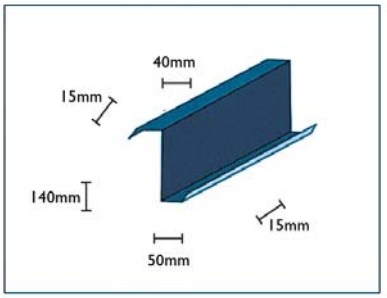

50mm
200mm
15mm
50mm

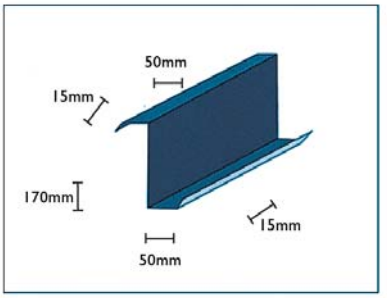

60mm
250mm
15mm
60mm

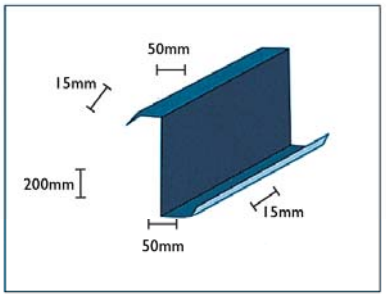

80mm
300mm
15mm
80mm

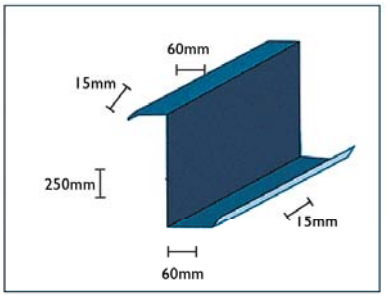
STANDARD PURLIN DETAILS

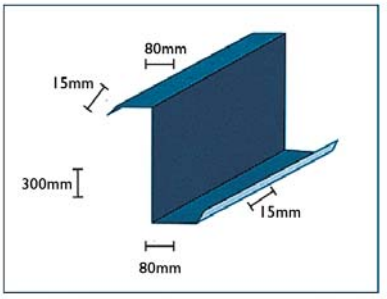










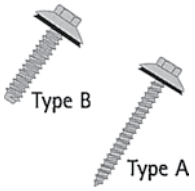


SECTION		12220	14220	17220	20220	23220	25020
Depth	D mm	122	142	172	202	232	250
Thickness	t mm	2.0	2.0	2.0	2.0	2.0	2.0
Top Flange	a mm	45	45	55	55	75	65
Bottom Flange	b mm	40	40	50	50	67	60
Weight	Kg/m	3.75	3.93	4.85	5.24	6.37	6.37
Area	mm^2	432	471	571	631	765	767
Ixx	cm^4	92	133	241	355	595	659
Zxx (Top)	cm^3	15.5	19.1	28.5	35.7	52.3	53.4
Iyy (Top)	cm^4	8.7	8.7	15.3	15.4	35.4	24.4
ryy	mm	19.3	18.47	22.3	21.22	29.1	24.4

SECTION		12215	14215	17215	20215	23215	25015
Depth	D mm	122	142	172	202	232	250
Thickness	t mm	1.5	1.5	1.5	1.5	1.5	1.5
Top Flange	a mm	45	45	55	55	75	65
Bottom Flange	b mm	40	40	50	50	67	60
Weight	Kg/m	2.8	2.95	3.63	3.93	4.78	4.78
Area	mm^2	327	357	432	477	578	579
Ixx	cm^4	71	102	184	271	452	501
Zxx (Top)	cm^3	11.85	14.0	21.3	27.2	39.8	40.6
Iyy (Top)	cm^4	6.8	6.9	11.87	11.9	27.4	18.9
ryy	mm	19.64	18.8	22.65	21.55	29.5	24.74

Self Drilling & Self Tapping Screws

Application: Fixing of sandwich panels – Fixing of single skin sections



Type A: Thread of 2,54 – Pointed end
On wood purlins
On steel purlins less than 3 mm thickness
Screw with Ø 19 mm washer
6,5 x 25 mm
6,5 x 75 mm
6,5 x 115 mm

Type B: Thread of 1,81 – Flat end
On steel purlins exceeding 3 mm thickness
Screw with Ø 19 mm washer
6,3 x 25 mm
6,3 x 75 mm
6,3 x 115 mm

Screw Cap (optional)

Colored plastic caps to fit hexagonal head of screw and cover washer.

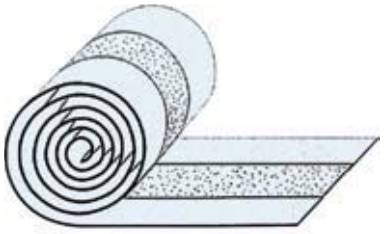
POP Blind Rivets

Sealed type – 99.5% pure aluminium material composition to BS 1475 A199.5
Mandrel: Aluminium (A)
PD 68A 48 x 11.4 mm

Tensile	1060N
Strength	(240 lbf)
Shear	1060N
Strength	(240 lfb)

Butyl Strip

Roofing and cladding – gutter joints, side and end laps (special U-shape strip available for double seal on end laps), joining single skin roof lights.
Composition: Blend of cross-linked butyl and inert fillers extruded into strip or bead to form a roll, with paper backing.
Application: By hand direct from roll. Apply firmly to one joint surface, remove backing paper, and press other surface firmly onto strip face.



Purlin Tape

Construction: Polyester/cotton cloth laminated to a polyethylene backing with a high tack, natural rubber adhesive.
Color: Silver

Filler Block Top – Filler Block Bottom

Sealing all roofing/cladding profiles against water/water vapors ingress. Roof light fillers. Eaves and ridge fillers.

ALULA

ALUMINIUM & STEEL

مؤسسة العلا للأعمال الحديدية والألمنيوم

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