

Sectional Properties : AM 45/250® GI (Galvanized Iron)

Thickness (mm)	Self weight (kg/m ²)	Moment of Inertia (cm ⁴ /m)	Section Modulus (cm ³ /m)	Ultimate +ve moment of Resistance KN-m/m
0.35 (28ga)	3.351	4.64	1.84	0.65
0.40 (26ga)	3.830	5.31	2.10	0.74
0.45 (25ga)	4.380	5.98	2.36	0.83
0.50 (24ga)	4.870	6.65	2.62	0.92
0.55 (23ga)	5.360	7.31	2.89	1.01
0.60 (22ga)	5.750	7.98	3.15	1.10
0.70 (21ga)	6.700	9.31	3.67	1.29

Material : GI sheets conforming to ASTM A-653, Yield Strength 350 N/mm²

Steel : Permissible Span (mm)

U. D. unfactored Loads KN/LM	Single Span			Double Span			Triple Span		
	Deflection			Deflection			Deflection		
	L/100	L/150	L/200	L/100	L/150	L/200	L/100	L/150	L/200

0.50 mm Thick

0.50	3543	3095	2812	3654	3654	3654	3868	3379	3070
0.75	3095	2703	2456	2984	2984	2984	3336	2952	2682
1.00	2812	2456	2232	2584	2584	2584	2889	2682	2437
1.50	2370	2146	1950	2110	2110	2110	2359	2343	2129
2.00	2053	1950	1771	1827	1827	1827	2043	2043	1934
2.50	1836	1810	1644	1634	1634	1634	1827	1827	1796

0.60 mm Thick

0.50	3779	3301	2999	4028	4028	4021	4127	3605	3275
0.75	3301	2884	2620	3289	3289	3289	3605	3149	2861
1.00	2999	2620	2381	2848	2848	2848	3184	2861	2600
1.50	2618	2289	2080	2325	2325	2325	2600	2500	2271
2.00	2268	2080	1890	2014	2014	2014	2252	2252	2063
2.50	2028	1931	1754	1801	1801	1801	2014	2014	1915

0.70 mm Thick

0.50	3977	3474	3156	4373	4373	4231	4342	3793	3446
0.75	3474	3035	2757	3571	3571	3571	3793	3314	3011
1.00	3156	2757	2505	3092	3092	3092	3446	3011	2735
1.50	2757	2409	2188	2525	2525	2525	2823	2630	2390
2.00	2450	2188	1988	2187	2187	2187	2445	2390	2171
2.50	2191	2032	1846	1956	1956	1956	2187	2187	2016

0.80 mm Thick

0.50	4149	3625	3293	4696	4696	4415	4531	3958	3596
0.75	3625	3167	2877	3834	3834	3834	3958	3458	3142
1.00	3293	2877	2614	3321	3321	3321	3596	3142	2854
1.50	2877	2513	2283	2711	2711	2711	3031	2744	2494
2.00	2612	2283	2075	2348	2348	2348	2625	2494	2266
2.50	2336	2120	1926	2100	2100	2100	2348	2315	2103

0.90 mm Thick

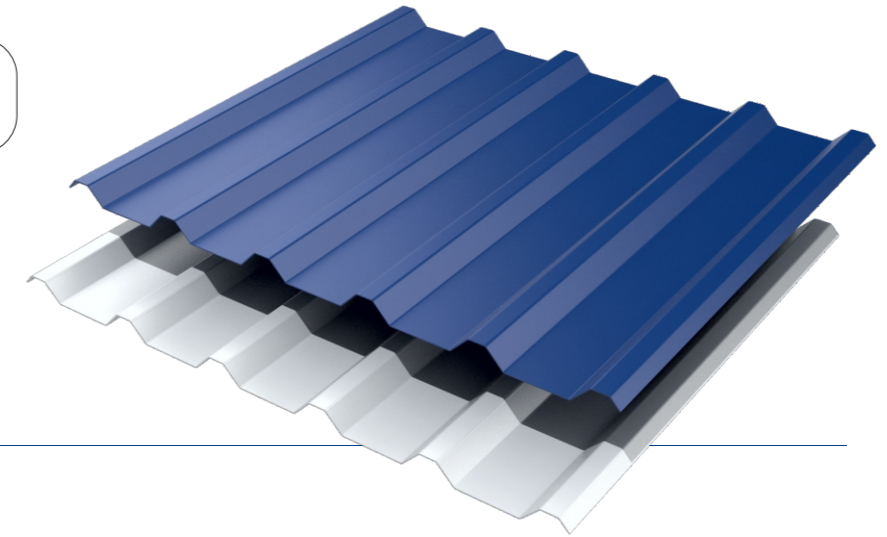
0.50	4305	3761	3417	5000	5000	4581	4701	4107	3731
0.75	3761	3286	2985	4082	4082	4002	4107	3588	3260
1.00	3417	2985	2712	3536	3536	3536	3731	3260	2962
1.50	2985	2608	2369	2887	2887	2887	3227	2848	2587
2.00	2712	2369	2153	2500	2500	2500	2795	2588	2351
2.50	2470	2199	1998	2236	2236	2236	2500	2402	2182

1.00 mm Thick

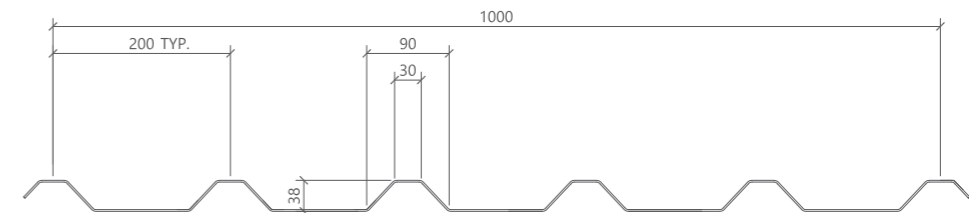
0.50	4448	3886	3531	5287	5209	4733	4857	4243	3855
0.75	3886	3395	3084	4317	4317	4134	4243	3707	3368
1.00	3531	3084	2802	3739	3739	3739	3855	3368	3060
1.50	3084	2694	2448	3053	3053	3053	3368	2942	2673
2.00	2802	2448	2224	2644	2644	2644	2956	2673	2429
2.50	2594	2273	2065	2365	2365	2365	2644	2482	2255

Figures in bold represent spans that are governed by bending moment.
Calculations are based on BS 5950 - Part 5 (1987) and on a yield stress of 350 N/MM²

AM 38/200®



Design Information



Sectional Properties : AM 38/200® Aluminum

Thickness (mm)	Self weight (kg/m ²)	Moment of Resistance (KN-m/m)		Moment of Inertia (cm ⁴ /m)
		Positive	Negative	
0.50	1.674	0.290	0.240	12.000
0.60	2.008	0.420	0.380	14.000
0.70	2.323	0.550	0.520	16.000
0.80	2.655	0.680	0.660	18.000
0.90	3.013	0.810	0.805	20.000
1.00	3.318	0.970	0.950	22.000

Material : Aluminium sheets conforming to Grade AA-3105, Temper H-16



Aluminium: Permissible Span (mm)

Loads KN/m²	Single Span			Double Span			Triple Span		
	Stress	Deflection		Stress	Deflection		Stress	Deflection	
		L/100	L/150		L/100	L/150		L/100	L/150

0.55mmThick

0.50	2620	2384	2082	1892	2608	3196	2792	2537	2830	2966	2591	2354
0.75	2139	2082	1819	1653	2129	2792	2439	2216	2311	2591	2263	2056
1.00	1853	1892	1653	1502	1844	2537	2216	2013	2001	2354	2056	1868
1.25	1657	1756	1534	1394	1649	2355	2057	1869	1790	2185	1909	1734
1.50	1513	1653	1444	1312	1506	2216	1936	1759	1634	2056	1796	1632
1.75	1400	1570	1372	1246	1394	2105	1839	1671	1513	1953	1706	1550
2.00	1310	1502	1312	1192	1304	2013	1759	1598	1415	1868	1632	1483
2.25	1235	1444	1261	1146	1229	1936	1691	1536	1334	1796	1569	1426
2.50	1172	1394	1218	1107	1166	1869	1633	1483	1266	1734	1515	1377

0.70mmThick

0.50	3382	2582	2255	2049	3289	3461	3023	2747	3654	3211	2806	2549
0.75	2762	2255	1970	1790	2685	3023	2641	2400	2984	2805	2451	2227
1.00	2392	2049	1790	1626	2326	2747	2400	2180	2584	2549	2227	2023
1.25	2139	1902	1662	1510	2080	2550	2228	2024	2311	2366	2067	1878
1.50	1953	1790	1564	1421	1899	2400	2096	1905	2110	2227	1945	1767
1.75	1808	1700	1485	1350	1758	2279	1991	1809	1953	2115	1848	1679
2.00	1691	1626	1421	1291	1644	2180	1905	1730	1827	2023	1767	1606
2.25	1594	1564	1366	1241	1550	2096	1831	1664	1723	1945	1699	1544
2.50	1513	1510	1319	1198	1471	2024	1768	1606	1634	1878	1641	1491

0.80mmThick

0.50	3761	2685	2346	2131	3705	3599	3144	2857	4065	3340	2917	2651
0.75	3071	2345	2049	1862	3025	3144	2747	2496	3319	2917	2549	2316
1.00	2659	2131	1862	1691	2620	2857	2496	2267	2874	2651	2316	2104
1.25	2379	1978	1728	1570	2343	2652	2317	2105	2571	2461	2150	1953
1.50	2171	1862	1626	1478	2139	2496	2180	1981	2347	2316	2023	1838
1.75	2010	1768	1545	1404	1980	2371	2071	1882	2173	2200	1921	1746
2.00	1880	1691	1478	1342	1853	2267	1981	1800	2032	2104	1838	1670
2.25	1773	1626	1421	1291	1747	2180	1905	1730	1916	2023	1767	1605
2.50	1682	1570	1372	1246	1657	2105	1839	1671	1818	1953	1706	1550

1.00mmThick

0.50	4492	2871	2508	2278	4445	3848	3362	3054	4853	3571	3120	2835
0.75	3668	2508	2191	1990	3630	3362	2937	2668	3962	3120	2725	2476
1.00	3176	2278	1990	1808	3143	3054	2668	2424	3431	2835	2476	2250
1.25	2841	2115	1848	1679	2811	2836	2477	2251	3069	2631	2299	2088
1.50	2593	1990	1739	1580	2566	2668	2331	2118	2802	2476	2163	1965
1.75	2401	1891	1652	1501	2376	2535	2214	2012	2594	2352	2055	1867
2.00	2246	1808	1580	1435	2223	2424	2118	1924	2426	2250	1965	1786
2.25	2117	1739	1519	1380	2095	2331	2036	1850	2288	2163	1890	1717
2.50	2009	1679	1467	1332	1988	2251	1966	1786	2170	2088	1824	1658



Sectional Properties : AM 38/200® GI (Galvanized Iron)

Thickness (mm)	Self weight (kg/m²)	Moment of Inertia (cm⁴/m)	Section Modulus (cm³/m)	Ultimate +ve moment of Resistance KN-m/m
0.35 (28ga)	3.351	4.64	1.84	0.65
0.40 (26ga)	3.830	5.31	2.10	0.74
0.45 (25ga)	4.380	5.98	2.36	0.83
0.50 (24ga)	4.870	6.65	2.62	0.92
0.55 (23ga)	5.360	7.31	2.89	1.01
0.60 (22ga)	5.750	7.98	3.15	1.10
0.70 (21ga)	6.700	9.31	3.67	1.29

Material : GI sheets conforming to ASTM A-653, Yield Strength 350 N/mm²

Steel : Permissible Span (mm)

Loads KN/m²	Single Span			Double Span			Triple Span		
	Stress	Deflection		Stress	Deflection		Stress	Deflection	
		L/100	L/150		L/100	L/150		L/200	L/100

0.45mmThick

0.50	3594	3183	2781	2527	3555	4253	3715	3375	3883	3969	3467	3150
0.75	2934	2781	2429	2208	2902	3715	3246	2949	3170	3467	3028	2752
1.00	2541	2527	2207	2006	2514	3375	2949	2679	2745	3150	2751	2500
1.25	2273	2346	2049	1862	2248	3134	2737	2487	2456	2924	2554	2321
1.50	2075	2207	1928	1752	2052	2949	2576	2340	2242	2752	2404	2184
1.75	1921	2097	1831	1664	1900	2801	2447	2223	2075	2614	2283	2075
2.00	1797	2005	1752	1592	1777	2679	2340	2126	1941	2500	2184	1984
2.25	1694	1928	1684	1531	1676	2576	2250	2045	1830	2404	2100	1908
2.50	1607	1862	1626	1478	1590	2487	2173	1974	1736	2321	2027	1842

0.50mmThick

0.50	3784	3286	2871	2608	3769	4390	3835	3485	4088	4097	3579	3252
0.75	3090	2871	2508	2278	3078	3835	3351	3044	3338	3579	3126	2841
1.00	2676	2608	2279	2070	2665	3485	3044	2766	2891	3252	2841	2581
1.25	2393	2421	2115	1922	2384	3235	2826	2568	2586	3019	2637	2396
1.50	2185	2278	1991	1808	2176	3044	2659	2416	2360	2841	2481	2255
1.75	2023	2164	1891	1718	2015	2892	2526	2295	2185	2698	2357	2142
2.00	1892	2070	1808	1643	1885	2766	2416	2195	2044	2581	2255	2048
2.25	1784	1990	1739	1580	1777	2659	2323	2111	1927	2481	2168	1970
2.50	1692	1922	1679	1525	1686	2567	2243	2038	1828	2396	2093	1902

0.60mmThick

0.50	4598	3509	3066	2786	4543	4689	4096	3721	4968	4375	3822	3473
0.75	3754	3066	2678	2434	3709	4096	3578	3251	4056	3822	3339	3034
1.00	3251	2785	2433	2211	3212	3721	3251	2954	3513	3473	3034	2756
1.25	2908	2586	2259	2053	2873	3455	3018	2742	3142	3224	2816	2559
1.50	2655	2433	2126	1932	2623	3251	2840	2580	2868	3034	2650	2408
1.75	2458	2311	2019	1835	2428	3088	2698	2451	2655	2882	2517	2287
2.00	2299	2211	1931	1755	2271	2954	2580	2344	2484	2756	2408	2188
2.25	2168	2126	1857	1687	2142	2840	2481	2254	2342	2650	2315	2103
2.50	2056	2052	1793	1629	2032	2742	2395	2176	2222	2559	2235	2031

0.70mmThick

0.50	5678	3723	3252	2956	5578	4974	4346	3948	6134	4642	4055	3684
0.75	4636	3253	2841	2582	4554	4345	3796	3449	5008	4055	3542	3218
1.00	4015	2955	2581	2346	3944	3948	3449	3134	4337	3684	3218	2924
1.25	3591	2743	2396	2178	3528	3665	3202	2909	3879	3420	2988	2714
1.50	3278	2582	2255	2049	3220	3449	3013	2737	3541	3218	2811	2554
1.75	3035	2452	2142	1947	2981	3276	2862	2600	3279	3057	2671	2426
2.00	2839	2346	2049	1862	2789	3134	2738	2487	3067	2924	2554	2321
2.25	2676	2255	1970	1790	2629	3013	2632	2391	2891	2811	2456	2231
2.50	2539	2177	1902	1728	2494	2909	2541	2309	2743	2714	2371	2154