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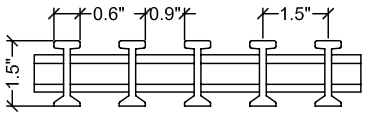
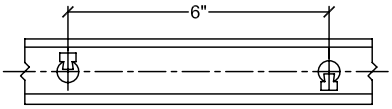
Product Group: Pultruded Fiberglass Grating

1” Deep I-Bearing Bar (I 15-60)

1.5″ Thick / 60% Open



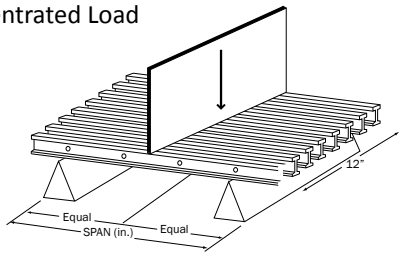


Span (inches)	CONCENTRATED LOAD in lbs/ft of width								Max Load	Apparent EI x 10^6 (lb-in²)
	50	100	150	200	250	500	1000	2000		
12	0.001	0.002	0.003	0.004	0.005	0.009	0.018	0.036	8958	1.99
18	0.002	0.004	0.006	0.008	0.009	0.019	0.038	0.075	5972	3.23
24	0.004	0.007	0.011	0.015	0.018	0.037	0.074	0.147	4479	3.91
30	0.007	0.013	0.020	0.027	0.033	0.066	0.133	0.265	3853	4.24
36	0.011	0.022	0.033	0.044	0.055	0.110	0.220	0.441	2986	4.41
42	0.017	0.035	0.052	0.069	0.086	0.173	0.345	0.691	2559	4.47
48	0.026	0.051	0.077	0.102	0.128	0.255	0.511		2240	4.51
54	0.036	0.073	0.109	0.145	0.181	0.363			1991	4.52
60	0.050	0.099	0.149	0.198	0.248	0.496			1792	4.54
66	0.066	0.132	0.197	0.263	0.329	0.658			1629	4.55
72	0.085	0.171	0.256	0.341	0.427				1493	4.56

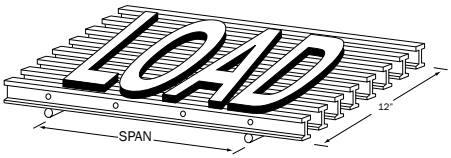
Span (inches)	UNIFORM LOAD in lbs/ft²								Max Load	Apparent EI x 10^6 (lb-in²)
	50	100	150	200	250	500	1000	2000		
12	0.001	0.001	0.002	0.002	0.003	0.006	0.011	0.023	10524	1.99
18	0.002	0.004	0.005	0.007	0.009	0.018	0.035	0.070	7016	3.23
24	0.005	0.009	0.014	0.018	0.023	0.46	0.092	0.184	4585	3.91
30	0.010	0.021	0.031	0.041	0.052	0.104	0.207	0.415	2831	4.24
36	0.021	0.041	0.062	0.083	0.103	0.207	0.413		2006	4.41
42	0.038	0.076	0.113	0.151	0.189	0.378			1454	4.47
48	0.064	0.128	0.192	0.255	0.319	0.639			1117	4.51
54	0.102	0.204	0.306	0.408	0.510				885	4.52
60	0.155	0.310	0.465	0.620					717	4.54
66	0.226	0.453	0.679						592	4.55
72	0.320	0.640							498	4.56

Properties Per Foot of Width	# of Bars	Load Bar Width	Bar Centers	Weight/sq ft
A = 3.11 in² I = 0.88 in⁴ S = 1.17 in³	8	1.5”	1.5”	2.97

Concentrated Load



Uniform Load



1. These tables were developed in accordance with the test method developed by the Fiberglass Grating Manufacturers Council (FGMC) of the American Composites Manufacturers Association (ACMA) for the Fiberglass Grating Standard.
2. The designer should not exceed MAXIMUM RECOMMENDED load at any time. MAXIMUM LOAD represents a factor of safety of 2:1 for pultruded grating on ULTIMATE CAPACITY. ULTIMATE CAPACITY represents MAX LOAD observed at initial fracture.
3. Walking loads for maintenance traffic are typically a live load of 50 PSF. Deflections for worker comfort are typically limited to 0.375” (3/8”) or SPAN divided by 120 under full live load. For a firmer feel under full live load or a line load 250 lbs/ft of width, limit deflections to 0.25” (1/4”) or SPAN divided by 200.
4. The loads represented are for STATIC LOAD CONDITIONS at ambient temperature. Deflections for impact loads or dynamic loads will MULTIPLY the deflections shown by 2. Long term loads will result in added deflection due to creep in the material and will require higher factors of safety to ensure acceptable performance.
5. Deflections are limited to 0.5” (1/2”) as recommended by the Fiberglass Grating Manufacturers Council of the American Composites Manufacturers Association.

When quality counts… Make it Marco!