

15 SPACE LOAD TABLE

Use this table when evaluating spans and loads for the following types of aluminum grating:

15-SG-4, 15-SG-2, 15-SGI-4, 15-SGI-2, 15-SGF-4, 15-SGF-2, 15-ADT-4 and 15-ADT-2.

Bearing Bar Size	Approx. Weight Psf*	Maximum Pedestrian Span**		Unsupported Span												
				2'-0"	2'-6"	3'-0"	3'-6"	4'-0"	4'-6"	5'-0"	5'-6"	6'-0"	6'-6"	7'-0"	8'-0"	
3/4" x 3/16"	2.4	3'-1"	U	450	288	200	147	113	All loads and deflections are theoretical and based upon the gross sections of the bearing bars, using a fiber stress of 12,000 psi.							
			D	.192	.300	.432	.588	.768								
3/4" I-Bar	2.0		C	450	360	300	257	225								
			D	.154	.240	.346	.470	.614								
1" x 1/8"	2.1	3'-6"	U	533	341	237	174	133	105	The values are not intended to be absolute since the actual load capacity will be affected by the slight variations in mill and manufacturing tolerances.						
			D	.144	.225	.324	.441	.576	.729							
			C	533	427	356	305	267	237							
			D	.115	.180	.259	.353	.461	.583							
1" x 3/16"	3.1	3'-10"	U	800	512	356	261	200	158	Grating for spans to the left of the heavy line have a deflection ≤ 1/4" for uniform loads of 100 psi.						
			D	.144	.225	.324	.441	.576	.729							
			C	800	640	533	457	400	356							
			D	.115	.180	.259	.353	.461	.583							
1-1/4" x 1/8"	2.6	4'-1"	U	833	533	370	272	208	165	133	U = Safe Uniform Load in pounds/sq. foot C = Concentrated Load in pounds/foot of grating width D = Deflection in inches					
			D	.115	.180	.259	.353	.461	.583	.720						
			C	833	667	556	476	417	370	333						
			D	.092	.144	.207	.282	.369	.467	.576						
1-1/4" x 3/16"	3.8	4'-7"	U	1250	800	556	408	313	247	200	165	139				
			D	.115	.180	.259	.353	.461	.583	.720	.871	1.037				
			C	1250	1000	833	714	625	556	500	455	417				
			D	.092	.144	.207	.282	.369	.467	.576	.697	.829				
1-1/4" I-Bar	2.9	4'-8"	U	1200	768	533	392	300	237	192	159	133	114	98	75	
			D	.096	.150	.216	.294	.384	.486	.600	.726	.864	1.014	1.176	1.536	
			C	1200	960	800	686	600	533	480	436	400	369	343	300	
			D	.077	.120	.173	.235	.307	.389	.480	.581	.691	.811	.941	1.229	
1-1/2" x 1/8"	3.1	4'-8"	U	1200	768	533	392	300	237	192	159	133	114	98	75	
			D	.096	.150	.216	.294	.384	.486	.600	.726	.864	1.014	1.176	1.536	
			C	1200	960	800	686	600	533	480	436	400	369	343	300	
			D	.077	.120	.173	.235	.307	.389	.480	.581	.691	.811	.941	1.229	
1-1/2" x 3/16"	4.5	5'-3"	U	1800	1152	800	588	450	356	288	238	200	170	147	113	
			D	.096	.150	.216	.294	.384	.486	.600	.726	.864	1.014	1.176	1.536	
			C	1800	1440	1200	1029	900	800	720	655	600	554	514	450	
			D	.077	.120	.173	.235	.307	.389	.480	.581	.691	.811	.941	1.229	
1-1/2" I-Bar	3.4	5'-4"	U	1633	1045	726	533	408	323	261	216	182	155	133	102	
			D	.082	.129	.185	.252	.329	.417	.514	.622	.741	.869	1.008	1.317	
			C	1633	1307	1089	933	817	726	653	594	544	503	467	408	
			D	.066	.103	.148	.202	.263	.333	.411	.498	.592	.695	.806	1.053	
1-3/4" x 1/8"	3.6	5'-4"	U	2450	1568	1089	800	613	484	392	324	272	232	200	153	
			D	.082	.129	.185	.252	.329	.417	.514	.622	.741	.869	1.008	1.317	
			C	2450	1960	1633	1400	1225	1089	980	891	817	754	700	613	
			D	.066	.103	.148	.202	.263	.333	.411	.498	.592	.695	.806	1.053	
1-3/4" x 3/16"	5.3	5'-10"	U	2133	1365	948	697	533	421	341	282	237	202	174	133	
			D	.072	.113	.162	.221	.288	.365	.450	.545	.648	.761	.882	1.152	
			C	2133	1707	1422	1219	1067	948	853	776	711	656	610	533	
			D	.058	.090	.130	.176	.230	.292	.360	.436	.518	.608	.706	.922	
2" x 1/8"	4.1	5'-10"	U	3200	2048	1422	1045	800	632	512	423	356	303	261	200	
			D	.072	.113	.162	.221	.288	.365	.450	.545	.648	.761	.882	1.152	
			C	3200	2560	2133	1829	1600	1422	1280	1164	1067	985	914	800	
			D	.058	.090	.130	.176	.230	.292	.360	.436	.518	.608	.706	.922	
2" x 3/16"	6.0	6'-6"	U	4050	2592	1800	1322	1013	800	648	536	450	383	331	253	
			D	.064	.100	.144	.196	.256	.324	.400	.484	.576	.676	.784	1.024	
			C	4050	3240	2700	2314	2025	1800	1620	1473	1350	1246	1157	1013	
			D	.051	.080	.115	.157	.205	.259	.320	.387	.461	.541	.627	.819	
2-1/4" x 3/16"	6.7	7'-1"	U	5000	3200	2222	1633	1250	988	800	661	556	473	408	313	
			D	.058	.090	.130	.176	.230	.292	.360	.436	.518	.608	.706	.922	
			C	5000	4000	3333	2857	2500	2222	2000	1818	1667	1539	1429	1250	
			D	.046	.072	.104	.141	.184	.233	.288	.348	.415	.487	.564	.737	
2-1/4" I-Bar	4.7	7'-8"	U	5000	3200	2222	1633	1250	988	800	661	556	473	408	313	
			D	.058	.090	.130	.176	.230	.292	.360	.436	.518	.608	.706	.922	
			C	5000	4000	3333	2857	2500	2222	2000	1818	1667	1539	1429	1250	
			D	.046	.072	.104	.141	.184	.233	.288	.348	.415	.487	.564	.737	

* Weight per square foot based upon 15-SG-4 grating. Add 0.30 psf for 2" on center cross bars.

** Maximum pedestrian load is defined as a 100# Uniform Load with deflection ≤ 1/4 inch.

The 1/4" maximum deflection criteria is considered consistent with pedestrian comfort, but may be exceeded for other loading conditions at the discretion of the specifying authority.

Note: When gratings with serrated surface are specified, the depth of the grating required for a specific load will be 1/4" greater than that shown in these tables.

15 SPACE

PANEL WIDTHS

Grating panels are available from stock in nominal 24" and 36" widths. When considering alternative widths, consult this table to select widths that will maintain uniform "out-to-out" spacing of the bearing bars. Specified widths deviating from this table will be fabricated to size with side banding and the bar spacing on one side of the finished panel will deviate from the spacing throughout the remainder of the panel.

Number of Bearing Bars	2	3	4	5	6	7	8	9	10	11
Panel Width	1-1/8"	2-1/16"	3"	3-15/16"	4-7/8"	5-13/16"	6-3/4"	7-11/16"	8-5/8"	9-9/16"
Number of Bearing Bars	12	13	14	15	16	17	18	19	20	21
Panel Width	10-1/2"	11-7/16"	12-3/8"	13-5/16"	14-1/4"	15-3/16"	16-1/8"	17-1/16"	18"	18-15/16"
Number of Bearing Bars	22	23	24	25	26	27	28	29	30	31
Panel Width	19-7/8"	20-13/16"	21-3/4"	22-11/16"	23-5/8"	24-9/16"	25-1/2"	26-7/16"	27-3/8"	28-5/16"
Number of Bearing Bars	32	33	34	35	36	37	38	39		
Panel Width	29-1/4"	30-3/16"	31-1/8"	32-1/16"	33"	33-15/16"	34-7/8"	35-13/16"		

Panel widths indicated are for gratings with 3/16" thick bearing bars. For 1/8" thick bearing bars deduct 1/16" from the stated values. Add 1/4" to all dimensions for extended cross bars on all aluminum products.