

19-4 / 19-2 Load Table

Bearing Bar Size	Unsupported Span													Weight Per sq. ft. (LBS.)								
	2'-0"	2'-6"	3'-0"	3'-6"	4'-0"	4'-6"	5'-0"	5'-6"	6'-0"	6'-6"	7'-0"	7'-6"	8'-0"	19-4	19-2	15-4	15-2	11-4	11-2	7-4	7-2	
1 x 1/8	U	.421	.269	.187	.137	.105	.083							<i>Loads and deflections are theoretical values based on 12,000 PSI unit stress. For pedestrian comfort deflections in excess of 1/4" are not recommended.</i>	1.8	2.2	2.2	2.6	2.9	3.3	4.4	4.7
	D	.144	.225	.324	.441	.576	.729															
	C	.421	.337	.281	.241	.211	.187															
	D	.115	.180	.259	.353	.461	.583															
1 x 3/16	U	.632	.404	.281	.206	.158	.125								2.6	2.9	3.2	3.5	4.2	4.5	6.4	6.7
	D	.144	.225	.324	.441	.576	.729															
	C	.632	.505	.421	.361	.316	.281															
	D	.115	.180	.259	.353	.461	.583															
1-1/4 x 1/8	U	.658	.421	.292	.215	.164	.130	.105	.087	.073					2.2	2.5	2.7	3.0	3.6	3.9	5.4	5.7
	D	.115	.180	.259	.353	.461	.583	.720	.871	1.037												
	C	.658	.526	.439	.376	.329	.292	.263	.239	.219												
	D	.092	.144	.207	.282	.369	.467	.576	.697	.829												
1-1/4 x 3/16	U	.987	.632	.439	.322	.247	.195	.158	.130	.110	.093	.081			3.1	3.5	3.9	4.2	5.2	5.5	7.9	8.3
	D	.115	.180	.259	.353	.461	.583	.720	.871	1.037	1.217	1.411										
	C	.987	.789	.658	.564	.493	.439	.395	.359	.329	.304	.282										
	D	.092	.144	.207	.282	.369	.467	.576	.697	.829	.973	1.129										
1-1/2 x 1/8	U	.947	.606	.421	.309	.237	.187	.152	.125	.105	.090	.077	.067	.059	2.6	2.9	3.2	3.5	4.2	4.5	6.4	6.7
	D	.096	.150	.216	.294	.384	.486	.600	.726	.864	1.014	1.176	1.350	1.536								
	C	.947	.758	.632	.541	.474	.421	.379	.344	.316	.291	.271	.253	.237								
	D	.077	.120	.173	.235	.307	.389	.480	.581	.691	.811	.941	1.080	1.229								
1-1/2 x 3/16	U	1.421	.909	.632	.464	.355	.281	.227	.188	.158	.135	.116	.101	.089	3.7	4.0	4.6	4.9	6.1	6.5	9.4	9.8
	D	.096	.150	.216	.294	.384	.486	.600	.726	.864	1.014	1.176	1.350	1.536								
	C	1.421	1.137	.947	.812	.711	.632	.568	.517	.474	.437	.406	.379	.355								
	D	.077	.120	.173	.235	.307	.389	.480	.581	.691	.811	.941	1.080	1.229								
1-3/4 x 3/16	U	1.934	1.238	.860	.632	.484	.382	.309	.256	.215	.183	.158	.138	.121	4.2	4.6	5.3	5.6	7.1	7.4	10.9	11.3
	D	.082	.129	.185	.252	.329	.417	.514	.622	.741	.869	1.008	1.157	1.317								
	C	1.934	1.547	1.289	1.105	.967	.860	.774	.703	.645	.595	.553	.516	.484								
	D	.066	.103	.148	.202	.263	.333	.411	.498	.592	.695	.806	.926	1.053								
2 x 3/16	U	2.526	1.617	1.123	.825	.632	.499	.404	.334	.281	.239	.206	.180	.158	4.8	5.1	6.0	6.3	8.0	8.4	12.4	12.8
	D	.072	.113	.162	.221	.288	.365	.450	.545	.648	.761	.882	1.013	1.152								
	C	2.526	2.021	1.684	1.444	1.263	1.123	1.011	.919	.842	.777	.722	.674	.632								
	D	.058	.090	.130	.176	.230	.292	.360	.436	.518	.608	.706	.810	.922								
2-1/4 x 3/16	U	3.197	2.046	1.421	1.044	.799	.632	.512	.423	.355	.303	.261	.227	.200	5.4	5.7	6.7	7.0	9.0	9.3	14.0	14.3
	D	.064	.100	.144	.196	.256	.324	.400	.484	.576	.676	.784	.900	1.024								
	C	3.197	2.558	2.132	1.827	1.599	1.421	1.279	1.163	1.066	.984	.914	.853	.799								
	D	.051	.080	.115	.157	.205	.259	.320	.387	.461	.541	.627	.720	.819								
2-1/2 x 3/16	U	3.947	2.526	1.754	1.289	.987	.780	.632	.522	.439	.374	.322	.281	.247	5.9	6.3	7.4	7.7	10.0	10.3	15.5	15.8
	D	.058	.090	.130	.176	.230	.292	.360	.436	.518	.608	.706	.810	.922								
	C	3.947	3.158	2.632	2.256	1.974	1.754	1.579	1.435	1.316	1.215	1.128	1.053	.987								
	D	.046	.072	.104	.141	.184	.233	.288	.348	.415	.487	.564	.648	.737								

U = Safe Uniform Load, Lbs. per sq. ft.

C = Safe Concentrated Mid-Span Load, lbs. per ft. of grating width

D = Deflection in Inches

Conversion Table

The loads shown above are for type 19-4 and 19-2 gratings. To determine the load carrying capacity for alternative bar spacings, multiply the loads given by the following conversion factors (DEFLECTION REMAINS CONSTANT): **FOR TYPES 15-4 AND 15-2: 1.26 FOR TYPES 11-4 AND 11-2: 1.72 FOR TYPES 7-4 AND 7-2: 2.71**

Selection Guide: 19-4 and 19-2 Aluminum Grating

For deflection of not more than 1/4" when subjected to the severest of the following: (1) the uniform loads below; (2) under concentrated mid-span loads of 300 lbs. up to 6'-0" span; or (3) 400 lbs. for spans 6'-0" and over.

Safe Uniform Load lbs./sq. ft.	2'-0"	2'-6"	3'-0"	3'-6"	4'-0"	4'-6"	5'-0"	5'-6"	6'-0"	6'-6"	7'-0"
50	1 x 1/8	1 x 1/8	1 x 3/16	1 x 3/16	1 x 3/16	1-1/4 x 3/16	1-1/2 x 3/16	1-3/4 x 3/16	2 x 3/16	2-1/4 x 3/16	2-1/2 x 3/16
75	1 x 1/8	1 x 1/8	1 x 3/16	1 x 3/16	1-1/4 x 3/16	1-1/4 x 3/16	1-1/2 x 3/16	1-3/4 x 3/16	2 x 3/16	2-1/4 x 3/16	2-1/2 x 3/16
100	1 x 1/8	1 x 1/8	1 x 3/16	1 x 3/16	1-1/4 x 3/16	1-1/2 x 3/16	1-3/4 x 3/16	1-3/4 x 3/16	2 x 3/16	2-1/4 x 3/16	2-1/2 x 3/16
125	1 x 1/8	1 x 1/8	1 x 3/16	1-1/4 x 3/16	1-1/4 x 3/16	1-1/2 x 3/16	1-3/4 x 3/16	2 x 3/16	2-1/4 x 3/16	2-1/2 x 3/16	-
150	1 x 1/8	1 x 1/8	1 x 3/16	1-1/4 x 3/16	1-1/2 x 3/16	1-3/4 x 3/16	1-3/4 x 3/16	2 x 3/16	2-1/4 x 3/16	2-1/2 x 3/16	-
200	1 x 1/8	1 x 1/8	1 x 3/16	1-1/4 x 3/16	1-1/2 x 3/16	1-3/4 x 3/16	2 x 3/16	2-1/4 x 3/16	2-1/2 x 3/16	-	-
300	1 x 1/8	1 x 3/16	1-1/4 x 3/16	1-1/2 x 3/16	1-3/4 x 3/16	2 x 3/16	2-1/4 x 3/16	2-1/2 x 3/16	-	-	-