



11 SPACE (11/16") STEEL GRATING LOAD TABLE

When considering spans and loads for any type of steel grating, be sure to use this handy table.:11-W-4,11-W-2,11-SL-4,11-SL-2,11-DT-4,11-DT-2

Bearing Bar Size (inches)	Approx. Weight psf*	Max. Ped. Span**	Sec. Prop.*** Sx in3 Ix in4	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	9'-0		
3/4 x 3/16	9.1	4'-4"	0.307 0.115	U 921	589	409	301	230	182	147	All loads and deflections are theoretical and based upon the gross sections of the bearing bars, using a fiber stress of 18,000 psi.							
				D 0.099	0.155	0.223	0.304	0.397	0.503	0.621								
				C 921	736	614	526	460	409	368								
				D 0.079	0.124	0.179	0.243	0.318	0.402	0.497								
1 x 1/8	8.1	4'-11"	0.364 0.182	U 1,091	698	485	356	273	216	175	144	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 0.074	0.116	0.168	0.228	0.298	0.377	0.466	0.563							
				C 1,091	873	727	623	546	485	436	397							
				D 0.060	0.093	0.134	0.182	0.238	0.302	0.372	0.451							
1 x 3/16	11.9	5'-5"	0.545 0.273	U 1,636	1,047	727	534	409	323	262	216	182	Grating for spans to the left of the heavy line have a deflection ≤ 1/4" for uniform loads of 100 psf.					
				D 0.074	0.116	0.168	0.228	0.298	0.377	0.466	0.563	0.670						
				C 1,636	1,309	1,091	935	818	727	655	595	546						
				D 0.060	0.093	0.134	0.182	0.238	0.302	0.372	0.451	0.536						
1-1/4 x 1/8	10.0	5'-9"	0.568 0.355	U 1,705	1,091	758	557	426	337	273	225	189	161	U = uniform load in pounds/sq. ft. C = concentrated load in pounds/ft. of grating width D = deflection in inches				
				D 0.060	0.093	0.134	0.182	0.238	0.302	0.372	0.451	0.536	0.629					
				C 1,705	1,364	1,136	974	852	758	682	620	568	525					
				D 0.048	0.074	0.107	0.146	0.191	0.241	0.298	0.360	0.429	0.504					
1-1/4 x 3/16	14.7	6'-5"	0.852 0.533	U 2,557	1,636	1,136	835	639	505	409	338	284	242	209				
				D 0.060	0.093	0.134	0.182	0.238	0.302	0.372	0.451	0.536	0.629	0.730				
				C 2,557	2,046	1,705	1,461	1,278	1,136	1,023	930	852	787	731				
				D 0.048	0.074	0.107	0.146	0.191	0.241	0.298	0.360	0.429	0.504	0.584				
1-1/2 x 1/8	11.9	6'-8"	0.818 0.614	U 2,455	1,571	1,091	802	614	485	393	325	273	232	200	153			
				D 0.050	0.078	0.112	0.152	0.199	0.251	0.310	0.376	0.447	0.524	0.608	0.794			
				C 2,455	1,964	1,636	1,403	1,227	1,091	982	893	818	755	701	614			
				D 0.040	0.062	0.089	0.122	0.159	0.201	0.248	0.300	0.358	0.420	0.487	0.636			
1-1/2 x 3/16	17.7	7'-4"	1.227 0.920	U 3,682	2,356	1,636	1,202	921	727	589	487	409	349	301	230	182		
				D 0.050	0.078	0.112	0.152	0.199	0.251	0.310	0.376	0.447	0.524	0.608	0.794	1.006		
				C 3,682	2,946	2,455	2,104	1,841	1,636	1,473	1,339	1,227	1,133	1,052	921	818		
				D 0.040	0.062	0.089	0.122	0.159	0.201	0.248	0.300	0.358	0.420	0.487	0.636	0.804		
1-3/4 x 1/8	13.9	7'-5"	1.114 0.974	U 3,341	2,138	1,485	1,091	835	660	535	442	371	316	273	209	165		
				D 0.043	0.067	0.096	0.130	0.170	0.215	0.266	0.322	0.383	0.450	0.521	0.681	0.862		
				C 3,341	2,673	2,227	1,909	1,671	1,485	1,336	1,215	1,114	1,028	955	835	742		
				D 0.034	0.053	0.077	0.104	0.136	0.172	0.213	0.257	0.306	0.360	0.417	0.545	0.689		
1-3/4 x 3/16	20.5	8'-3"	1.670 1.462	U 5,011	3,207	2,227	1,636	1,253	990	802	663	557	474	409	313	248		
				D 0.043	0.067	0.096	0.130	0.170	0.215	0.266	0.322	0.383	0.450	0.521	0.681	0.862		
				C 5,011	4,009	3,341	2,864	2,506	2,227	2,005	1,822	1,671	1,542	1,432	1,253	1,114		
				D 0.034	0.053	0.077	0.104	0.136	0.172	0.213	0.257	0.306	0.360	0.417	0.545	0.689		
2 x 1/8	15.8	8'-3"	1.455 1.455	U 4,364	2,793	1,939	1,425	1,091	862	698	577	485	413	356	273	216		
				D 0.037	0.058	0.084	0.114	0.149	0.189	0.233	0.282	0.335	0.393	0.456	0.596	0.754		
				C 4,364	3,491	2,909	2,494	2,182	1,939	1,746	1,587	1,455	1,343	1,247	1,091	970		
				D 0.030	0.047	0.067	0.091	0.119	0.151	0.186	0.225	0.268	0.315	0.365	0.477	0.603		
2 x 3/16	23.3	9'-1"	2.182 2.182	U 6,546	4,189	2,909	2,137	1,636	1,293	1,047	866	727	620	534	409	323		
				D 0.037	0.058	0.084	0.114	0.149	0.189	0.233	0.282	0.335	0.393	0.456	0.596	0.754		
				C 6,546	5,236	4,364	3,740	3,273	2,909	2,618	2,380	2,182	2,014	1,870	1,636	1,455		
				D 0.030	0.047	0.067	0.091	0.119	0.151	0.186	0.225	0.268	0.315	0.365	0.477	0.603		
2-1/4 x 3/16	26.1	10'-0"	2.761 3.107	U 8,284	5,302	3,682	2,705	2,071	1,636	1,326	1,095	921	784	676	518	409		
				D 0.033	0.052	0.074	0.101	0.132	0.168	0.207	0.250	0.298	0.350	0.406	0.530	0.670		
				C 8,284	6,627	5,523	4,734	4,142	3,682	3,314	3,012	2,761	2,549	2,367	2,071	1,841		
				D 0.026	0.041	0.060	0.081	0.106	0.134	0.166	0.200	0.238	0.280	0.324	0.424	0.536		
2-1/2 x 3/16	28.9	10'-9"	3.409 4.261	U 10,227	6,546	4,546	3,340	2,557	2,020	1,636	1,352	1,136	968	835	639	505		
				D 0.030	0.047	0.067	0.091	0.119	0.151	0.186	0.225	0.268	0.315	0.365	0.477	0.603		
				C 10,227	8,182	6,818	5,844	5,114	4,546	4,091	3,719	3,409	3,147	2,922	2,557	2,273		
				D 0.024	0.037	0.054	0.073	0.095	0.121	0.149	0.180	0.215	0.252	0.292	0.381	0.483		

*Weight per square foot based upon 11-W-4 grating. Add .60 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) ***Section properties per foot of width.

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.

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 vary from the spacing throughout the remainder of the panel.

Number of Bearing Bars	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Panel Width	7/8"	1-9/16"	2-1/4"	2-15/16"	3-5/8"	4-5/16"	5"	5-11/16"	6-3/8"	7-1/16"	7-3/4"	8-7/16"	9-1/8"	9-13/16"	10-1/2"
Number of Bearing Bars	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Panel Width	11-3/16"	11-7/8"	12-9/16"	13-1/4"	13-15/16"	14-5/8"	15-5/16"	16"	16-11/16"	17-3/8"	18-1/16"	18-3/4"	19-7/16"	20-1/8"	20-13/16"
Number of Bearing Bars	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46
Panel Width	21-1/2"	22-3/16"	22-7/8"	23-9/16"	24-1/4"	24-15/16"	25-5/8"	26-5/16"	27"	27-11/16"	28-3/8"	29-1/16"	29-3/4"	30-7/16"	31-1/8"
Number of Bearing Bars	47	48	49	50	51	52	53								
Panel Width	31-13/16"	32-1/2"	33-3/16"	33-7/8"	34-9/16"	35-1/4"	35-15/16"								

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.

■ Indicates stock panel widths.