

12 SPACE (3/4") RIVETED STEEL GRATING LOAD TABLE

Use this table when evaluating spans and loads of the following types of steel grating: **12-R-7, 12-R-3.5**

Bearing Bar Size (inches)	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	10.7	4I-4"	U	858	549	381	280	215	170	All loads and deflections are theoretical and based upon the gross sections of the bearing bars, using a fiber stress of 18,000 psi. 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. Grating for spans to the left of the heavy line have a deflection $\leq 1/4"$ for uniform loads of 100 psf.									
			D	0.099	0.155	0.223	0.304	0.397	0.503										
			C	858	686	572	490	429	381										
			D	0.079	0.124	0.179	0.243	0.318	0.402										
			U	1,525	976	678	498	381	301	244	202	170	144	118	92				
1 x 3/16	12.8	5I-4"	D	0.074	0.116	0.168	0.228	0.298	0.377	0.466	0.563	Grating for spans to the left of the heavy line have a deflection $\leq 1/4"$ for uniform loads of 100 psf.							
			C	1,525	1,220	1,017	872	763	678	610	555					504	451	402	
			D	0.060	0.093	0.134	0.182	0.238	0.302	0.372	0.451					0.536	0.629	0.733	0.858
			U	2,383	1,525	1,059	778	596	471	381	315					265	226	194	168
			1-1/4 x 3/16	15.0	6I-4"	D	0.060	0.093	0.134	0.182	0.238	0.302	0.372	0.451	0.536	0.629	0.733	0.858	
C	2,383	1,907				1,589	1,362	1,192	1,059	953	867	794	733	681	636				
D	0.048	0.074				0.107	0.146	0.191	0.241	0.298	0.360	0.429	0.504	0.584	0.666				
U	3,432	2,196				1,525	1,121	858	678	549	454	381	325	280	241				
1-1/2 x 3/16	17.1	7I-3"				D	0.050	0.078	0.112	0.152	0.199	0.251	0.310	0.376	0.447	0.524	0.608	0.704	
			C	3,432	2,745	2,288	1,961	1,716	1,525	1,373	1,248	1,144	1,056	981	918				
			D	0.040	0.062	0.089	0.122	0.159	0.201	0.248	0.300	0.358	0.420	0.487	0.566				
			U	4,671	2,989	2,076	1,525	1,168	923	747	618	519	442	381	329				
			1-3/4 x 3/16	19.4	8I-2"	D	0.043	0.067	0.096	0.130	0.170	0.215	0.266	0.322	0.383	0.450	0.521	0.601	
C	4,671	3,737				3,114	2,669	2,336	2,076	1,868	1,699	1,557	1,437	1,335	1,248				
D	0.034	0.053				0.077	0.104	0.136	0.172	0.213	0.257	0.306	0.360	0.417	0.484				
U	6,101	3,905				2,712	1,992	1,525	1,205	976	807	678	578	498	431				
2 x 3/16	22.9	9I-0"				D	0.037	0.058	0.084	0.114	0.149	0.189	0.233	0.282	0.335	0.393	0.456	0.526	
			C	6,101	4,881	4,067	3,486	3,050	2,712	2,440	2,219	2,034	1,877	1,743	1,625				
			D	0.030	0.047	0.067	0.091	0.119	0.151	0.186	0.225	0.268	0.315	0.365	0.424				
			U	7,721	4,942	3,432	2,521	1,930	1,525	1,235	1,021	858	731	630	553				
			2-1/4 x 3/16	25.0	9I-10"	D	0.033	0.052	0.074	0.101	0.132	0.168	0.207	0.250	0.298	0.350	0.406	0.470	
C	7,721	6,177				5,148	4,412	3,861	3,432	3,089	2,808	2,574	2,376	2,206	2,066				
D	0.026	0.041				0.060	0.081	0.106	0.134	0.166	0.200	0.238	0.280	0.324	0.384				
U	9,533	6,101				4,237	3,113	2,383	1,883	1,525	1,261	1,059	903	778	681				
2-1/2 x 3/16	27.2	10"-8"				D	0.030	0.047	0.067	0.091	0.119	0.151	0.186	0.225	0.268	0.315	0.365	0.427	
			C	9,533	7,626	6,355	5,447	4,766	4,237	3,813	3,466	3,178	2,933	2,724	2,543				
			D	0.024	0.037	0.054	0.073	0.095	0.121	0.149	0.180	0.215	0.252	0.292	0.341				
			U	11,900	7,721	5,333	4,024	3,113	2,383	1,883	1,525	1,261	1,059	903	778				
			D	0.020	0.030	0.040	0.050	0.060	0.070	0.080	0.090	0.100	0.110	0.120	0.130				

* Weight per square foot based upon rivets spaced at 7" on center. Add .40 psf for steel products with 3-1/2" rivet centers.

** Maximum pedestrian load is defined as a 100# uniform load with deflection $\leq 1/4$ 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.