

# Steel Bar Grating

## IGtru™ Load Table

IGtru™ is manufactured to NAAMM standards and is fully ADA compliant with a minimum 3/16" bearing bar thickness

Use this table when evaluating spans and loads for the following types of steel grating:  
11-W-4, 11-W-2, 11-DT-4, 11-DT-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"	9'-0"															
3/4 x 3/16	9.3	4'-4"	U	964	617	429	315	241	190	154	128	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.																			
			D	0.099	0.155	0.223	0.304	0.397	0.503	0.621	0.751																				
			C	964	771	643	551	482	429	386	351						0.601														
1 x 1/8	8.4	4'-11"	U	1,143	731	508	373	286	226	183	151						U = Safe Uniform Load in pounds/sq. ft. C = Concentrated Load in pounds/ft. of grating width D = Deflection in inches														
			D	0.074	0.116	0.168	0.228	0.298	0.377	0.466	0.563																				
			C	1,143	914	762	653	571	508	457	416											0.451									
1 x 3/16	12.3	5'-5"	U	1,714	1,097	762	560	429	339	274	227											190	For pedestrian comfort, deflection in excess of .250 inches is not recommended.								
			D	0.074	0.116	0.168	0.228	0.298	0.377	0.466	0.563																				
			C	1,714	1,371	1,143	980	857	762	686	623											571						0.536			
1-1/4 x 1/8	10.3	5'-9"	U	1,786	1,143	794	583	446	353	286	236											198						169	146	For pedestrian comfort, deflection in excess of .250 inches is not recommended.	
			D	0.060	0.093	0.134	0.182	0.238	0.302	0.372	0.451											0.536									
			C	1,786	1,429	1,190	1,020	893	794	649	595											549						0.504	0.584		
1-1/4 x 3/16	15.2	6'-5"	U	2,679	1,714	1,190	875	670	529	429	354	298	254	219	167																
			D	0.060	0.093	0.134	0.182	0.238	0.302	0.372	0.451	0.536																			
			C	2,679	2,143	1,786	1,531	1,339	1,190	1,071	974	893	824	765	725							670						623	571		
1-1/2 x 1/8	12.3	6'-8"	U	2,571	1,646	1,143	840	643	508	411	340	286	243	210	161		127														
			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	2,571	2,057	1,714	1,469	1,286	1,143	1,029	935	857	791	735	643		571		0.804												
1-1/2 x 3/16	18.3	7'-4"	U	3,857	2,469	1,714	1,259	964	762	617	510	429	365	315	241		190														
			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	3,857	3,086	2,571	2,204	1,929	1,714	1,543	1,403	1,286	1,187	1,102	964		857			0.804											
1-3/4 x 1/8	14.4	7'-5"	U	3,500	2,240	1,556	1,143	875	691	560	463	389	331	286	219		173														
			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	3,500	2,800	2,333	2,000	1,750	1,556	1,400	1,273	1,167	1,077	1,000	875		778				0.689										
1-3/4 x 3/16	21.2	8'-1"	U	5,250	3,360	2,333	1,714	1,313	1,037	840	694	583	497	429	328	259															
			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	5,250	4,200	3,500	3,000	2,625	2,333	2,100	1,909	1,750	1,615	1,500	1,313	1,167					0.689										
2 x 1/8	16.3	8'-3"	U	4,571	2,926	2,032	1,493	1,143	903	731	604	508	433	373	286	226															
			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	4,571	3,657	3,048	2,612	2,286	2,032	1,829	1,662	1,524	1,407	1,306	1,143	1,016					0.603										
2 x 3/16	24.1	9'-1"	U	6,857	4,389	3,048	2,239	1,714	1,354	1,097	907	762	649	560	429	339															
			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	6,857	5,486	4,571	3,918	3,429	3,048	2,743	2,494	2,286	2,110	1,959	1,714	1,524					0.603										
2-1/4 x 3/16	27.0	10'-0"	U	8,679	5,554	3,857	2,834	2,170	1,714	1,389	1,148	964	822	708	542	429															
			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	8,679	6,943	5,786	4,959	4,339	3,857	3,471	3,156	2,893	2,670	2,480	2,170	1,929					0.536										
2-1/2 x 3/16	29.9	10'-9"	U	10,714	6,857	4,762	3,499	2,679	2,116	1,714	1,417	1,190	1,014	875	670	529															
			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	10,714	8,571	7,143	6,122	5,357	4,762	4,286	3,896	3,571	3,297	3,061	2,879	2,381					0.483										
			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 IGtru™ 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.

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 deviate from the spacing throughout the remainder of the panel. Spacing is based on 21/32".

No. of Bearing Bars Panel Width	2 7/8"	3 1-1/2"	4 2-3/16"	5 2-13/16"	6 3-1/2"	7 4-1/8"	8 4-13/16"	9 5-7/16"	10 6-1/8"	11 6-3/4"	12 7-7/16"	13 8-1/16"	14 8-3/4"	15 9-3/8"	16 10-1/16"
No. of Bearing Bars Panel Width	17 10-11/16"	18 11-3/8"	19 12"	20 12-11/16"	21 13-5/16"	22 14"	23 14-5/8"	24 15-5/16"	25 15-15/16"	26 16-5/8"	27 17-1/4"	28 17-15/16"	29 18-9/16"	30 19-1/4"	31 19-7/8"
No. of Bearing Bars Panel Width	32 20-9/16"	33 21-3/16"	34 21-7/8"	35 22-1/2"	36 23-3/16"	37 23-13/16"	38 24-1/2"	39 25-1/8"	40 25-13/16"	41 26-3/16"	42 27-1/8"	43 27-3/4"	44 28-7/16"	45 29-1/16"	46 29-3/4"
No. of Bearing Bars Panel Width	47 30-3/8"	48 31-1/16"	49 31-11/16"	50 32-3/8"	51 33"	52 33-11/16"	53 34-5/16"	54 35"	55 35-5/8"	56 36-5/16"					

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.