

# Steel Bar Grating

**IGtru™**  
Load Table

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**

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

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.  U = Safe Uniform Load in pounds/sq. ft. C = Concentrated Load in pounds/ft. of grating width D = Deflection in inches  For pedestrian comfort, deflection in excess of .250 inches in not recommended.							
			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							301	
			D	0.079	0.124	0.179	0.243	0.318	0.402	0.497	0.601								
1 x 1/8	8.4	4'-11"	U	1,143	731	508	373	286	226	183	151								
			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								
			D	0.060	0.093	0.134	0.182	0.238	0.302	0.372	0.451								
1 x 3/16	12.3	5'-5"	U	1,714	1,097	762	560	429	339	274	227								
			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
			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	10.3	5'-9"	U	1,786	1,143	794	583	446	353	286	236								
			D	0.060	0.093	0.134	0.182	0.238	0.302	0.372	0.451								
			C	1,786	1,429	1,190	1,020	893	794	714	649		595						
			D	0.048	0.074	0.107	0.146	0.191	0.241	0.298	0.360		0.429						
1-1/4 x 3/16	15.2	6'-5"	U	2,679	1,714	1,190	875	670	529	429	354								
			D	0.060	0.093	0.134	0.182	0.238	0.302	0.372	0.451								
			C	2,679	2,143	1,786	1,531	1,339	1,190	1,071	974		893						
			D	0.048	0.074	0.107	0.146	0.191	0.241	0.298	0.360		0.429						
1-1/2 x 1/8	12.3	6'-8"	U	2,571	1,646	1,143	840	643	508	411	340								
			D	0.050	0.078	0.112	0.152	0.199	0.251	0.310	0.376								
			C	2,571	2,057	1,714	1,469	1,286	1,143	1,029	935		857						
			D	0.040	0.062	0.089	0.122	0.159	0.201	0.248	0.300		0.358						
1-1/2 x 3/16	18.3	7'-4"	U	3,857	2,469	1,714	1,259	964	762	617	510								
			D	0.050	0.078	0.112	0.152	0.199	0.251	0.310	0.376								
			C	3,857	3,086	2,571	2,204	1,929	1,714	1,543	1,403		1,286						
			D	0.040	0.062	0.089	0.122	0.159	0.201	0.248	0.300		0.358						
1-3/4 x 1/8	14.4	7'-5"	U	3,500	2,240	1,556	1,143	875	691	560	463								
			D	0.043	0.067	0.096	0.130	0.170	0.215	0.266	0.322								
			C	3,500	2,800	2,333	2,000	1,750	1,556	1,400	1,273		1,167						
			D	0.034	0.053	0.077	0.104	0.136	0.172	0.213	0.257		0.306						
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								
			D	0.043	0.067	0.096	0.130	0.170	0.215	0.266	0.322								
			C	5,250	4,200	3,500	3,000	2,625	2,333	2,100	1,909		1,750						
			D	0.034	0.053	0.077	0.104	0.136	0.172	0.213	0.257		0.306						
2 x 1/8	16.3	8'-3"	U	4,571	2,926	2,032	1,493	1,143	903	731	604								
			D	0.037	0.058	0.084	0.114	0.149	0.189	0.233	0.282								
			C	4,571	3,657	3,048	2,612	2,286	2,032	1,829	1,662		1,524						
			D	0.030	0.047	0.067	0.091	0.119	0.151	0.186	0.225		0.268						
2 x 3/16	24.1	9'-1"	U	6,857	4,389	3,048	2,239	1,714	1,354	1,097	907								
			D	0.037	0.058	0.084	0.114	0.149	0.189	0.233	0.282								
			C	6,857	5,486	4,571	3,918	3,429	3,048	2,743	2,494		2,286						
			D	0.030	0.047	0.067	0.091	0.119	0.151	0.186	0.225		0.268						
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								
			D	0.033	0.052	0.074	0.101	0.132	0.168	0.207	0.250								
			C	8,679	6,943	5,786	4,959	4,339	3,857	3,471	3,156		2,893						
			D	0.026	0.041	0.060	0.081	0.106	0.134	0.166	0.200		0.238						
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								
			D	0.030	0.047	0.067	0.091	0.119	0.151	0.186	0.225								
			C	10,714	8,571	7,143	6,122	5,357	4,762	4,286	3,896		3,571						
			D	0.024	0.037	0.054	0.073	0.095	0.121	0.149	0.180		0.215						

\* 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."

Number of Bearing Bars	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
<b>Panel Width</b>	7/8"	1-1/2"	2-3/16"	2-13/16"	3-1/2"	4-1/8"	4-13/16"	5-7/16"	6-1/8"	6-3/4"	7-7/16"	8-1/16"	8-3/4"	9-3/8"	10-1/16"
<b>Number of Bearing Bars</b>	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
<b>Panel Width</b>	10-11/16"	11-3/8"	12"	12-11/16"	13-5/16"	14"	14-5/8"	15-5/16"	15-15/16"	16-5/8"	17-1/4"	17-15/16"	18-9/16"	19-1/4"	19-7/8"
<b>Number of Bearing Bars</b>	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46
<b>Panel Width</b>	20-9/16"	21-3/16"	21-7/8"	22-1/2"	23-3/16"	23-13/16"	24-1/2"	25-1/8"	25-13/16"	26-7/16"	27-1/8"	27-3/4"	28-7/16"	29-1/16"	29-3/4"
<b>Number of Bearing Bars</b>	47	48	49	50	51	52	53	54	55	56					
<b>Panel Width</b>	30-3/8"	31-1/16"	31-11/16"	32-3/8"	33"	33-11/16"	34-5/16"	35"	35-5/8"	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.