



# GRATING PACIFIC

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

Use this table when evaluating spans and loads of the following types of stainless steel grating:  
**11-WS-4, 11-WS-2, 11-SLS-4, 11-SLS-2, 11-DTS-4, 11-DTS-2**

Bearing Bar Size (inches)	Approx. Weight psf *	Max. Ped. Span**	Sec. Prop. Sx in <sup>3</sup> Lx in <sup>4</sup>	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	1,023	655	455	334	256	202	164	All loads and deflections are theoretical and based upon the gross sections of the bearing bars, using a fiber stress of 20,000 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 ≤ 1/4" for uniform loads of 100 psf.													
				D	0.114	0.179	0.257	0.350	0.457	0.579	0.714														
				C	1,023	818	682	584	511	455	409														
				D	0.091	0.143	0.206	0.280	0.366	0.463	0.571														
1 x 1/8	8.1	4'-10"	0.364 0.182	U	1,212	776	539	396	303	239	194	160	U = uniform load in pounds/sq. ft. C = concentrated load in pounds/ft. of grating width D = deflection in inches												
				D	0.086	0.134	0.193	0.263	0.343	0.434	0.536	0.648													
				C	1,212	970	808	693	606	539	485	441													
				D	0.069	0.107	0.154	0.210	0.274	0.347	0.429	0.519													
1 x 3/16	11.9	5'-4"	0.545 0.273	U	1,818	1,164	808	594	455	359	291	240	202	U = uniform load in pounds/sq. ft. C = concentrated load in pounds/ft. of grating width D = deflection in inches											
				D	0.086	0.134	0.193	0.263	0.343	0.434	0.536	0.648													
				C	1,818	1,455	1,212	1,039	909	808	727	661	606												
				D	0.069	0.107	0.154	0.210	0.274	0.347	0.429	0.519													
1-1/4 x 1/8	10.0	5'-9"	0.568 0.355	U	1,894	1,212	842	618	474	374	303	250	210	179	U = uniform load in pounds/sq. ft. C = concentrated load in pounds/ft. of grating width D = deflection in inches										
				D	0.069	0.107	0.154	0.210	0.274	0.347	0.429	0.519													
				C	1,894	1,515	1,263	1,082	947	842	758	689	631	583											
				D	0.055	0.086	0.123	0.168	0.219	0.278	0.343	0.415													
1-1/4 x 3/16	14.7	6'-4"	0.852 0.533	U	2,841	1,818	1,263	928	710	561	455	376	316	269	232	U = uniform load in pounds/sq. ft. C = concentrated load in pounds/ft. of grating width D = deflection in inches									
				D	0.069	0.107	0.154	0.210	0.274	0.347	0.429	0.519													
				C	2,841	2,273	1,894	1,623	1,421	1,263	1,136	1,033	947	874	812										
				D	0.055	0.086	0.123	0.168	0.219	0.278	0.343	0.415													
1-1/2 x 1/8	11.9	6'-7"	0.818 0.614	U	2,727	1,746	1,212	891	682	539	436	361	303	258	223	171	U = uniform load in pounds/sq. ft. C = concentrated load in pounds/ft. of grating width D = deflection in inches								
				D	0.057	0.089	0.129	0.175	0.229	0.289	0.357	0.432	0.514	0.604	0.700	0.914									
				C	2,727	2,182	1,818	1,558	1,364	1,212	1,091	992	909	839	779	682									
				D	0.046	0.071	0.103	0.140	0.183	0.231	0.286	0.346	0.411	0.483	0.560	0.731									
1-1/2 x 3/16	17.7	7'-3"	1.227 0.920	U	4,091	2,618	1,818	1,336	1,023	808	655	541	455	387	334	256	202	U = uniform load in pounds/sq. ft. C = concentrated load in pounds/ft. of grating width D = deflection in inches							
				D	0.057	0.089	0.129	0.175	0.229	0.289	0.357	0.432	0.514	0.604	0.700	0.914									
				C	4,091	3,273	2,727	2,338	2,046	1,818	1,636	1,488	1,364	1,259	1,169	1,023	909								
				D	0.046	0.071	0.103	0.140	0.183	0.231	0.286	0.346	0.411	0.483	0.560	0.731									
1-3/4 x 1/8	13.9	7'-5"	1.114 0.974	U	3,712	2,376	1,650	1,212	928	733	594	491	413	351	303	232	183	U = uniform load in pounds/sq. ft. C = concentrated load in pounds/ft. of grating width D = deflection in inches							
				D	0.049	0.077	0.110	0.150	0.196	0.248	0.306	0.370	0.441	0.517	0.600	0.784	0.992								
				C	3,712	2,970	2,475	2,121	1,856	1,650	1,485	1,350	1,237	1,142	1,061	928	825								
				D	0.039	0.061	0.088	0.120	0.157	0.198	0.245	0.296	0.353	0.414	0.480	0.627	0.793								
1-3/4 x 3/16	20.5	8'-2"	1.670 1.462	U	5,568	3,564	2,475	1,818	1,392	1,100	891	736	619	527	455	348	275	U = uniform load in pounds/sq. ft. C = concentrated load in pounds/ft. of grating width D = deflection in inches							
				D	0.049	0.077	0.110	0.150	0.196	0.248	0.306	0.370	0.441	0.517	0.600	0.784	0.992								
				C	5,568	4,455	3,712	3,182	2,784	2,475	2,227	2,025	1,856	1,713	1,591	1,392	1,237								
				D	0.039	0.061	0.088	0.120	0.157	0.198	0.245	0.296	0.353	0.414	0.480	0.627	0.793								
2 x 1/8	15.8	8'-2"	1.455 1.455	U	4,849	3,103	2,155	1,583	1,212	958	776	641	539	459	396	303	239	U = uniform load in pounds/sq. ft. C = concentrated load in pounds/ft. of grating width D = deflection in inches							
				D	0.043	0.067	0.096	0.131	0.171	0.217	0.268	0.324	0.386	0.453	0.525	0.686	0.868								
				C	4,849	3,879	3,232	2,771	2,424	2,155	1,939	1,763	1,616	1,492	1,385	1,212	1,077								
				D	0.034	0.054	0.077	0.105	0.137	0.174	0.214	0.259	0.309	0.362	0.420	0.549	0.694								
2 x 3/16	23.3	9'-0"	2.182 2.182	U	7,273	4,655	3,232	2,375	1,818	1,437	1,164	962	808	689	594	455	359	U = uniform load in pounds/sq. ft. C = concentrated load in pounds/ft. of grating width D = deflection in inches							
				D	0.043	0.067	0.096	0.131	0.171	0.217	0.268	0.324	0.386	0.453	0.525	0.686	0.868								
				C	7,273	5,818	4,849	4,156	3,636	3,232	2,909	2,645	2,424	2,238	2,078	1,818	1,616								
				D	0.034	0.054	0.077	0.105	0.137	0.174	0.214	0.259	0.309	0.362	0.420	0.549	0.694								
2-1/4 x 3/16	26.1	9'-10"	2.761 3.107	U	9,205	5,891	4,091	3,006	2,301	1,818	1,473	1,217	1,023	871	751	575	455	U = uniform load in pounds/sq. ft. C = concentrated load in pounds/ft. of grating width D = deflection in inches							
				D	0.038	0.060	0.086	0.117	0.152	0.193	0.238	0.288	0.343	0.402	0.467	0.610	0.771								
				C	9,205	7,364	6,136	5,260	4,602	4,091	3,682	3,347	3,068	2,832	2,630	2,301	2,046								
				D	0.030	0.048	0.069	0.093	0.122	0.154	0.190	0.230	0.274	0.322	0.373	0.488	0.617								
2-1/2 x 3/16	28.9	10'-8"	3.409 4.261	U	11,364	7,273	5,051	3,711	2,841	2,245	1,818	1,503	1,263	1,076	928	710	561	U = uniform load in pounds/sq. ft. C = concentrated load in pounds/ft. of grating width D = deflection in inches							
				D	0.034	0.054	0.077	0.105	0.137	0.174	0.214	0.259	0.309	0.362	0.420	0.549	0.694								
				C	11,364	9,091	7,576	6,494	5,682	5,051	4,546	4,132	3,788	3,497	3,247	2,841	2,525								
				D	0.027	0.043	0.062	0.084	0.110	0.139	0.171	0.207	0.247	0.290	0.336	0.439	0.555								

\* Weight per square foot based upon 11-WS-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"
17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
Number of Bearing Bars	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"
32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	
Number of Bearing Bars	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"
47	48	49	50	51	52	53									
Number of Bearing Bars	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.