GRATING PACIFIC

8 SPACE (1/2") STAINLESS STEEL GRATING LOAD TABLE

Use this table when evaluating spans and loads of the following types of stainless steel grating: 8-SLS-4, 8-SLS-2, 8-DTS-4, 8-DTS-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	12.3	4'-8"	0.422 0.158	U	1,406	900	625	459	352	278	225						
				D	0.114	0.179	0.257	0.350	0.457	0.579	0.714						
				C	1,406	1,125	938	804	703	625	563						
				D	0.091	0.143	0.206	0.280	0.366	0.463	0.571						
1 x 1/8	11.0	5'-3"	0.500 0.250	U	1,667	1,067	741	544	417	329	267	220					
				D	0.086	0.134	0.193	0.263	0.343	0.434	0.536	0.648					
				C	1,667	1,333	1,111	952	833	741	667	606					
				D	0.069	0.107	0.154	0.210	0.274	0.347	0.429	0.519					
1 x 3/16	16.2	5'-10"	0.750 0.375	U	2,500	1,600	1,111	816	625	494	400	331	278				
				D	0.086	0.134	0.193	0.263	0.343	0.434	0.536	0.648	0.771				
				C	2,500	2,000	1,667	1,429	1,250	1,111	1,000	909	833				
				D	0.069	0.107	0.154	0.210	0.274	0.347	0.429	0.519	0.617				
1-1/4 x 1/8	13.6	6'-2"	0.781 0.488	U	2,604	1,667	1,157	850	651	514	417	344	289	247			
				D	0.069	0.107	0.154	0.210	0.274	0.347	0.429	0.519	0.617	0.724			
				C	2,604	2,083	1,736	1,488	1,302	1,157	1,042	947	868	801			
				D	0.055	0.086	0.123	0.168	0.219	0.278	0.343	0.415	0.494	0.579			
1-1/4 x 3/16	20.0	6'-10"	1.172 0.732	U	3,906	2,500	1,736	1,276	977	772	625	517	434	370	319	244	
				D	0.069	0.107	0.154	0.210	0.274	0.347	0.429	0.519	0.617	0.724	0.840	1.097	
				C	3,906	3,125	2,604	2,232	1,953	1,736	1,563	1,421	1,302	1,202	1,116	977	
				D	0.055	0.086	0.123	0.168	0.219	0.278	0.343	0.415	0.494	0.579	0.672	0.878	
1-1/2 x 1/8	16.2	7'-1"	1.125 0.844	U	3,750	2,400	1,667	1,225	938	741	600	496	417	355	306	234	
				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	3,750	3,000	2,500	2,143	1,875	1,667	1,500	1,364	1,250	1,154	1,071	938	
				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	24.0	7'-11"	1.688 1.266	U	5,625	3,600	2,500	1,837	1,406	1,111	900	744	625	533	459	352	278
				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	1.157
				C	5,625	4,500	3,750	3,214	2,813	2,500	2,250	2,046	1,875	1,731	1,607	1,406	1,250
				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	0.926
1-3/4 x 1/8	18.9	8'-0"	1.531 1.340	U	5,104	3,267	2,269	1,667	1,276	1,008	817	675	567	483	417	319	252
				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	5,104	4,083	3,403	2,917	2,552	2,269	2,042	1,856	1,701	1,571	1,458	1,276	1,134
				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	27.9	8'-10"	2.297 2.010	U	7,656	4,900	3,403	2,500	1,914	1,512	1,225	1,012	851	725	625	479	378
				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	7,656	6,125	5,104	4,375	3,828	3,403	3,063	2,784	2,552	2,356	2,188	1,914	1,701
				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	21.5	8'-10"	2.000 2.000	U	6,667	4,267	2,963	2,177	1,667	1,317	1,067	882	741	631	544	417	329
				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	6,667	5,333	4,444	3,810	3,333	2,963	2,667	2,424	2,222	2,051	1,905	1,667	1,482
				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	31.8	9'-9"	3.000 3.000	U	10,000	6,400	4,444	3,265	2,500	1,975	1,600	1,322	1,111	947	816	625	494
				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	10,000	8,000	6,667	5,714	5,000	4,444	4,000	3,636	3,333	3,077	2,857	2,500	2,222
				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	35.7	10'-8"	3.797 4.271	U	12,656	8,100	5,625	4,133	3,164	2,500	2,025	1,674	1,406	1,198	1,033	791	625
				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	12,656	10,125	8,438	7,232	6,328	5,625	5,063	4,602	4,219	3,894	3,616	3,164	2,813
				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	39.6	11'-7"	4.688 5.859	U	15,625	10,000	6,944	5,102	3,906	3,086	2,500	2,066	1,736	1,479	1,276	977	772
				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	15,625	12,500	10,417	8,929	7,813	6,944	6,250	5,682	5,208	4,808	4,464	3,906	3,472
				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

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.

U = uniform load in pounds/sq. ft.
C = concentrated load in pounds/ft. of grating width
D = deflection in inches

* Weight per square foot based upon 8-SLS-4 grating. Add .30 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	11/16"	1-3/16"	1-11/16"	2-3/16"	2-11/16"	3-3/16"	3-11/16"	4-3/16"	4-11/16"	5-3/16"	5-11/16"	6-3/16"	6-11/16"	7-3/16"	7-11/16"
Number of Bearing Bars	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Panel Width	8-3/16"	8-11/16"	9-3/16"	9-11/16"	10-3/16"	10-11/16"	11-3/16"	11-11/16"	12-3/16"	12-11/16"	13-3/16"	13-11/16"	14-3/16"	14-11/16"	15-3/16"
Number of Bearing Bars	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46
Panel Width	15-11/16"	16-3/16"	16-11/16"	17-3/16"	17-11/16"	18-3/16"	18-11/16"	19-3/16"	19-11/16"	20-3/16"	20-11/16"	21-3/16"	21-11/16"	22-3/16"	22-11/16"
Number of Bearing Bars	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61
Panel Width	23-3/16"	23-11/16"	24-3/16"	24-11/16"	25-3/16"	25-11/16"	26-3/16"	26-11/16"	27-3/16"	27-11/16"	28-3/16"	28-11/16"	29-3/16"	29-11/16"	30-3/16"
Number of Bearing Bars	62	63	64	65	66	67	68	69	70	71	72				
Panel Width	30-11/16"	31-3/16"	31-11/16"	32-3/16"	32-11/16"	33-3/16"	33-11/16"	34-3/16"	34-11/16"	35-3/16"	35-11/16"				

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.