

Stainless Steel Bar Grating Load Table

19-4 / 19-2 LOAD TABLE

BEARING BAR SIZE		UNSUPPORTED SPAN													WEIGHT PER SQ. FT. (LBS.)																
		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"	19-4	19-2	15-4	15-2	11-4	11-2	7-4	7-2									
3/4 x 1/8	U	395	253	175	129	99	78	LOADS AND DEFLECTIONS ARE THEORETICAL VALUES BASED ON 20,000 PSI UNIT STRESS. FOR PEDESTRIAN COMFORT DEFLECTIONS IN EXCESS OF 1/4" ARE NOT RECOMMENDED.													4.0	4.8	4.9	5.7	6.4	7.2	9.7	10.7			
	D	.114	.179	.257	.350	.457	.579																								
	C	395	316	263	226	197	175																								
3/4 x 3/16	U	592	379	263	193	148	117														5.6	6.4	6.9	7.7	9.2	10.0	14.5	16.0			
	D	.114	.179	.257	.350	.457	.579																								
	C	592	474	395	338	296	263																								
1 x 1/8	U	702	449	312	229	175	139														112	93	78	5.1	5.9	6.2	7.1	8.2	9.0	12.9	14.2
	D	.086	.134	.193	.263	.343	.434														.536	.648	.771								
	C	702	561	468	401	351	312														281	255	234								
1 x 3/16	U	1053	674	468	344	263	208														168	139	117	7.4	8.4	9.2	10.2	12.1	13.1	19.4	21.3
	D	.086	.134	.193	.263	.343	.434														.536	.648	.771								
	C	1053	842	702	602	526	468														421	383	351								
1-1/4 x 1/8	U	1096	702	487	358	274	217	175	145	122	104	90	6.4	7.4	7.8	8.8	10.3	11.3	15.8	17.1											
	D	.069	.107	.154	.210	.274	.347	.429	.519	.617																					
	C	1096	877	731	627	548	487	439	399	365	337	313																			
1-1/4 x 3/16	U	1645	1053	731	537	411	325	263	217	183	156	134	9.0	10.0	11.2	12.2	14.9	15.9	23.8	25.7											
	D	.069	.107	.154	.210	.274	.347	.429	.519	.617	.724	.840																			
	C	1645	1316	1096	940	822	731	658	598	548	506	470																			
1-1/2 x 1/8	U	1579	1011	702	516	395	312	253	209	175	149	129	99	78	7.4	8.4	9.2	10.2	12.1	13.1	18.8	20.0									
	D	.057	.089	.129	.175	.229	.289	.357	.432	.514	.604	.700	.914	1.157																	
	C	1579	1263	1053	902	789	702	632	574	526	486	451	395	351																	
1-1/2 x 3/16	U	2368	1516	1053	773	592	468	379	313	263	224	193	148	117	11.1	12.5	13.7	15.1	18.1	19.6	28.1	30.1									
	D	.057	.089	.129	.175	.229	.289	.357	.432	.514	.604	.700	.914	1.157																	
	C	2368	1895	1579	1353	1184	1053	947	861	789	729	677	592	526																	
1-3/4 x 3/16	U	3224	2063	1433	1053	806	637	516	426	358	305	263	201	159	12.7	14.1	15.7	17.1	20.9	22.3	32.5	34.4									
	D	.049	.077	.110	.150	.196	.248	.306	.370	.441	.517	.600	.784	.992																	
	C	3224	2579	2149	1842	1612	1433	1289	1172	1075	992	921	806	716																	
2 x 3/16	U	4211	2695	1871	1375	1053	832	674	557	468	399	344	263	208	14.3	15.7	17.8	19.2	23.7	25.1	36.9	38.8									
	D	.043	.067	.096	.131	.171	.217	.268	.324	.386	.453	.525	.686	.868																	
	C	4211	3368	2807	2406	2105	1871	1684	1531	1404	1296	1203	1053	936																	
2-1/4 x 3/16	U	5329	3411	2368	1740	1332	1053	853	705	592	505	435	333	263	15.9	17.4	19.8	21.2	26.5	27.9	41.3	43.2									
	D	.038	.060	.086	.117	.152	.193	.238	.288	.343	.402	.467	.610	.771																	
	C	5329	4263	3553	3045	2664	2368	2132	1938	1776	1640	1523	1332	1184																	
2-1/2 x 3/16	U	6579	4211	2924	2148	1645	1300	1053	870	731	623	537	411	325	17.5	19.0	21.8	23.3	29.2	30.7	45.6	47.5									
	D	.034	.054	.077	.105	.137	.174	.214	.259	.309	.362	.420	.549	.694																	
	C	6579	5263	4386	3759	3289	2924	2632	2392	2193	2024	1880	1645	1462																	

NOTE: WHEN GRATINGS WITH SERRATED BEARING BARS ARE SELECTED, THE DEPTH OF GRATING REQUIRED TO SERVICE A SPECIFIED LOAD WILL BE 1/4" GREATER THAN THAT SHOWN IN THE TABLES ABOVE.

CONVERSION TABLE

The loads shown above are for type 19-4 and 19-2 gratings. To determine the load carrying capacity for alternative bar spacings, multiply the loads given by the following conversion factors (DEFLECTION REMAINS CONSTANT): **FOR TYPES 15-4 AND 15-2: 1.26 FOR TYPES 11-4 AND 11-2: 1.72 FOR TYPES 7-4 AND 7-2: 2.71**

SELECTION GUIDE: 19-4 PLAIN SURFACE GRATING

For deflection of not more than 1/4" when subjected to the severest of the following: (1) the uniform loads below; (2) under concentrated mid-span loads of 300 lbs. up to 6'-0" span; or (3) 400 lbs. for spans 6'-0" and over.

SAFE UNIFORM LOAD LBS./SQ. FT.	2'-6"	3'-0"	3'-6"	4'-0"	4'-6"	5'-0"	5'-6"	6'-0"	6'-6"	7'-0"	8'-0"	9'-0"
50	1 x 1/8	1 x 1/8	1 x 1/8	1 x 1/8	1 x 3/16	1-1/4 x 1/8	1-1/4 x 3/16	1-1/2 x 3/16	1-3/4 x 3/16	1-3/4 x 3/16	2 x 3/16	2-1/4 x 3/16
75	1 x 1/8	1 x 1/8	1 x 1/8	1 x 1/8	1 x 3/16	1-1/4 x 1/8	1-1/4 x 3/16	1-1/2 x 3/16	1-3/4 x 3/16	1-3/4 x 3/16	2 x 3/16	2-1/4 x 3/16
100	1 x 1/8	1 x 1/8	1 x 1/8	1 x 1/8	1 x 3/16	1-1/4 x 1/8	1-1/4 x 3/16	1-1/2 x 3/16	1-3/4 x 3/16	1-3/4 x 3/16	2-1/4 x 3/16	2-1/2 x 3/16
125	1 x 1/8	1 x 1/8	1 x 1/8	1 x 1/8	1-1/4 x 1/8	1-1/4 x 3/16	1-1/2 x 3/16	1-1/2 x 3/16	1-3/4 x 3/16	2 x 3/16	2-1/4 x 3/16	-
150	1 x 1/8	1 x 1/8	1 x 1/8	1 x 3/16	1-1/4 x 1/8	1-1/4 x 3/16	1-1/2 x 3/16	1-3/4 x 3/16	2 x 3/16	2 x 3/16	2-1/2 x 3/16	-
200	1 x 1/8	1 x 1/8	1 x 1/8	1-1/4 x 1/8	1-1/4 x 3/16	1-1/2 x 3/16	1-3/4 x 3/16	1-3/4 x 3/16	2 x 3/16	2-1/4 x 3/16	-	-
300	1 x 1/8	1 x 1/8	1 x 3/16	1-1/4 x 3/16	1-1/2 x 3/16	1-3/4 x 3/16	2 x 3/16	2 x 3/16	2-1/4 x 3/16	2-1/2 x 3/16	-	-

