MetalsDepot® STAINLESS STEEL BAR GRATING

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STAINLESS WELDED 1-3/16" C/C Bearing Bars

19-S-4

Cross Bars 4" C/C

19-S-2

Cross Bars 2" C/C

NON-SERRATED & SERRATED

STAINLESS PRESS-LOCKED 1-3/16" C/C Bearing Bars

19-SP-4

Cross Bars 4" C/C

19-SP-2

Cross Bars 2" C/C

NON-SERRATED & SERRATED

LOAD & DEFLECTION TABLE

General: Loads and deflections are theoretical and based on static loading.

U = Allowable uniform load, psf
D = Deflection due to U, in.
C = Allowable concentrated load per ft. of grating width, lbs
D = Deflection due to C, in.
Allowable stress = 20,000 psi
Material: ASTM A-167

Deflection: Spans and loads to the right of the bold line exceed 1/4" deflection for uniform load of 100 psf which provides maximum pedestrian comfort. These can be exceeded for other types of loads with engineer's approval.

Serrated Bars: For serrated grating, the depth of grating required for a specified load is 1/4" deeper than that shown in the table.

Fabricated to ANSI/NAAMM standards

Bar Size	Symbol	Approx. Weight psf	Sec. Mod Per Ft. Of Width		SPAN (Direction of Bearing Bar) 24"	30"	36"	42"	48"	54"	60"	66"	72"	78"	84"	96"	108"
3/4" x 1/8" Non-Serrated Only	19-S-4	3.9	0.118	U	395	253	175	129	99	78							
	19-S-2	4.4		D	0.114	0.179	0.257	0.350	0.457	0.579							
	19-SP-4	4.3		C	395	316	263	226	197	175							
	19-SP2	5.2		D	0.091	0.143	0.206	0.280	0.366	0.463							
3/4" x 3/16" Non-Serrated Only	19-S-4	5.6	0.178	U	592	379	263	193	148	117							
	19-S-2	6.2		D	0.114	0.179	0.257	0.350	0.457	0.579							
	19-SP-4	6.4		C	592	474	395	338	296	263							
	19-SP2	7.8		D	0.091	0.143	0.206	0.280	0.366	0.463							
1" x 1/8"	19-S-4	5.0	0.211	U	702	449	312	229	175	139	112	93					
	19-S-2	5.5		D	0.086	0.134	0.193	0.263	0.343	0.434	0.536	0.648					
	19-SP-4	5.4		C	702	561	468	401	351	312	281	255					
	19-SP2	6.3		D	0.069	0.107	0.154	0.210	0.274	0.347	0.429	0.519					
1" x 3/16"	19-S-4	7.2	0.316	U	1053	674	468	344	263	208	168	139					
	19-S-2	7.8		D	0.086	0.134	0.193	0.263	0.343	0.434	0.536	0.648					
	19-SP-4	8.1		C	1053	842	702	602	526	468	421	383					
	19-SP2	9.5		D	0.069	0.107	0.154	0.210	0.274	0.347	0.429	0.519					
1-1/4" x 1/8"	19-S-4	6.1	0.329	U	1096	702	487	358	274	217	175	145	122	104	90		
	19-S-2	6.6		D	0.069	0.107	0.154	0.210	0.274	0.347	0.429	0.519	0.617	0.724	0.840		
	19-SP-4	6.8		C	1096	877	731	627	548	487	439	399	365	337	313		
	19-SP2	8.1		D	0.055	0.086	0.123	0.168	0.219	0.278	0.343	0.415	0.494	0.579	0.672		
1-1/4" x 3/16"	19-S-4	8.9	0.493	U	1645	1053	731	537	411	325	263	217	183	156	134		
	19-S-2	9.5		D	0.069	0.107	0.154	0.210	0.274	0.347	0.429	0.519	0.617	0.724	0.840		
	19-SP-4	10.2		C	1645	1316	1096	940	822	731	658	598	548	506	470		
	19-SP2	12.1		D	0.055	0.086	0.123	0.168	0.219	0.278	0.343	0.415	0.494	0.579	0.672		
1-1/2" x 1/8"	19-S-4	7.2	0.474	U	1579	1011	702	516	395	312	253	209	175	149	129	99	78
	19-S-2	7.7		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
	19-SP-4	7.9		C	1579	1263	1053	902	789	702	632	574	526	486	451	395	351
	19-SP2	9.2		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
1-1/2" x 3/16"	19-S-4	10.5	0.711	U	2368	1516	1053	773	592	468	379	313	263	224	193	148	117
	19-S-2	11.2		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
	19-SP-4	11.8		C	2368	1895	1579	1353	1184	1053	947	861	789	729	677	592	526
	19-SP2	13.8		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 3/16"	19-S-4	12.2	0.967	U	3224	2063	1433	1053	806	637	516	426	358	305	263	201	159
	19-S-2	12.8		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
	19-SP-4	13.5		C	3224	2579	2149	1842	1612	1433	1289	1172	1075	992	921	806	716
	19-SP2	15.4		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 3/16"	19-S-4	13.9	1.263	U	4211	2695	1871	1375	1053	832	674	557	468	399	344	263	208
	19-S-2	14.5		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
	19-SP-4	15.2		C	4211	3368	2807	2406	2105	1871	1684	1531	1404	1296	1203	1053	936
	19-SP2	17.1		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"	19-S-4	15.5	1.599	U	5329	3411	2368	1740	1332	1053	853	705	592	505	435	333	263
	19-S-2	16.1		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
	19-SP-4	16.8		C	5329	4263	3553	3045	2664	2368	2132	1938	1776	1640	1523	1332	1184
	19-SP2	18.7		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"	19-S-4	17.2	1.974	U	6579	4211	2924	2148	1645	1300	1053	870	731	623	537	411	325
	19-S-2	17.8		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
	19-SP-4	18.5		C	6579	5263	4386	3759	3289	2924	2632	2392	2193	2024	1880	1645	1462
	19-SP2	20.4		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

S/SP-19 PANEL WIDTH (inches)

No. of Bars	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
1/8" Bar	1 5/16	2 1/2	3 11/16	4 7/8	6 1/16	7 1/4	8 7/16	9 5/8	10 13/16	12	13 3/16	14 3/8	15 5/16	16 3/4	17 15/16	19 1/8	20 5/16	21 1/2	22 11/16	23 7/8	25 1/16	26 1/4	27 7/16	28 5/8	29 13/16	31	32 3/16	33 3/8	34 9/16	35 3/4	36 15/16
3/16" Bar	1 3/8	2 9/16	3 3/4	4 15/16	6 1/8	7 5/16	8 1/2	9 11/16	10 7/8	12 1/16	13 1/4	14 7/16	15 5/8	16 13/16	18	19 3/16	20 3/8	21 9/16	22 3/4	23 15/16	25 1/8	26 5/16	27 1/2	28 11/16	29 7/8	31 1/16	32 1/4	33 7/16	34 5/8	35 13/16	37

No. of Bars	33	34	35	36	37	38	39	40	41
1/8" Bar	38 1/8	39 5/16	40 1/2	41 11/16	42 7/8	44 1/16	45 1/4	46 7/16	47 5/8
3/16" Bar	38 3/16	39 3/8	40 9/16	41 3/4	42 15/16	44 1/8	45 5/16	46 1/2	47 11/16

Note: SP-Stainless Press-Locked cross bars typically extend 1/8" each side. S-Stainless Welded cross rods may extend 1/8" each side. Panel widths shown in this Panel Width table do not include these extensions.

IMPORTANT NOTE: Information provided herein is for information purposes only and not intended for final design. Professional engineering services should be obtained.