

TYPES AND WEIGHTS					
Bearing Bar Size In.	19-W-4 Wt. Lbs. Sq. Ft.	15-W-4 Wt. Lbs. Sq. Ft.	19-W-2 Wt. Lbs. Sq. Ft.	15-W-2 Wt. Lbs. Sq. Ft.	11-W-4 Wt. Lbs. Sq. Ft.
3/4 x 3/16	5.46	7.02	6.10	7.66	9.28
1 x 1/8	5.00	6.30	5.64	7.72	8.29
1 x 3/16	6.62	8.36	7.26	10.56	12.16
1-1/4 x 1/8	6.14	7.76	6.78	8.40	10.18
1-1/4 x 3/16	8.15	10.31	8.79	10.95	15.04
1-1/2 x 1/8	7.24	9.13	7.88	10.56	12.16
1-1/2 x 3/16	9.98	12.55	10.84	13.41	18.28
1-3/4 x 3/16	11.47	14.45	12.33	15.31	21.16
2 x 3/16	12.95	16.36	13.81	17.23	24.04
2-1/4 x 3/16	14.43	18.28	15.30	19.15	26.74
2-1/2 x 3/16	15.97	20.25	16.84	21.12	29.62

PANEL WIDTH CHART IN INCHES

No. of Bars		2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
19W4 or 19W2	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"	15-9/16"	16-3/4"	17-15/16"
	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

No. of Bars		17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
19W4 or 19W2	1/8 Bar	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"
	3/16 Bar	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"

No. of Bars		2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
15W4 or 15W2	1/8 Bar	1-1/16"	2"	2-15/16"	3-7/8"	4-13/16"	5-3/4"	6-11/16"	7-5/8"	8-9/16"	9-1/2"	10-7/16"	11-3/8"	12-5/16"	13-1/4"	14-3/16"	15-1/8"	16-1/16"	17"
	3/16 Bar	1-1/8"	2-1/16"	3"	3-15/16"	4-7/8"	5-13/16"	6-3/4"	7-11/16"	8-5/8"	9-9/16"	10-1/2"	11-7/16"	12-3/8"	13-5/16"	14-1/4"	15-3/16"	16-1/8"	17-1/16"

No. of Bars		22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39
15W4 or 15W2	1/8 Bar	19-13/16"	20-3/4"	21-11/16"	22-5/8"	23-9/16"	24-1/2"	25-7/16"	26-3/8"	27-5/16"	28-1/4"	29-3/16"	30-1/8"	31-1/16"	32	32-15/16"	33-7/8"	34-13/16"	35-3/4"
	3/16 Bar	19-7/8"	20-13/16"	21-3/4"	22-11/16"	23-5/8"	24-9/16"	25-1/2"	26-7/16"	27-3/8"	28-5/16"	29-1/4"	30-3/16"	31-1/8"	32-1/16"	33	33-15/16"	34-7/8"	35-13/16"

DIMENSIONS SHOWN ARE OUT TO OUT OF BEARING BARS

WELDED STEEL BAR GRATING 19-W-4 LOAD TABLE

15-W-4 (15/16" c.c. of Bearing Bars) - Multiply by 1.28 11-W-4 (11/16" c.c. of Bearing Bar) - Multiply by 1.71

CLEAR SPAN

Main Bar Size Inches	Lbs. Sq. Ft.		1'-0"	1'-6"	2'-0"	2'-6"	3'-0"	3'-6"	4'-0"	4'-6"	5'-0"	5'-6"	6'-0"	6'-6"	7'-0"	8'-0"	
3/4 X 3/16	5.46	U	2323	1033	581	372	258	190	145	115	U=Safe uniform load in lbs./sq. ft. C=Safe concentrated load in lbs./sq. ft. of grating width D=Deflection in inches						
		D	0.025	0.056	0.099	0.155	0.223	0.303	0.396	0.504							
		C	1162	774	581	465	387	332	290	258							
1 X 1/8	5.00	U	2746	1220	686	439	305	224	172	136	110	91	76	Loads and deflection given are theoretical and are based on a unit stress of 18,000 psi.			
		D	0.019	0.044	0.074	0.116	0.168	0.228	0.298	0.377	0.466	0.563	0.67				
		C	1373	915	686	549	458	392	343	305	275	250	229				
1 X 3/16	6.62	U	4132	1836	1033	661	459	337	258	204	165	137	115				
		D	0.019	0.042	0.074	0.117	0.168	0.229	0.299	0.378	0.467	0.565	0.672				
		C	2066	1377	1033	826	689	590	516	459	413	376	344				
1-1/4 X 1/8	6.14	U	4304	1913	1076	689	478	351	269	213	172	142	120	102	88		
		D	0.015	0.034	0.06	0.093	0.135	0.183	0.239	0.303	0.374	0.452	0.538	0.632	0.733		
		C	2152	1434	1076	861	717	615	538	478	430	391	359	331	307		
1-1/4 X 3/16	8.15	U	6442	2863	1610	1031	716	526	403	318	258	213	179	152	131		
		D	0.015	0.034	0.06	0.093	0.134	0.182	0.238	0.302	0.372	0.45	0.536	0.629	0.73		
		C	3221	2147	1610	1288	1073	920	805	716	644	586	537	495	460		
1-1/2 X 1/8	7.24	U	6191	2751	1548	991	688	505	387	306	248	205	172	147	126	96	0.794
		D	0.012	0.028	0.05	0.077	0.112	0.152	0.198	0.251	0.31	0.375	0.447	0.524	0.608	0.794	
		C	3095	2064	1548	1238	1032	884	774	688	619	563	516	476	442	387	
1-1/2 X 3/16	9.98	U	9280	4124	2320	1485	1031	758	580	458	371	307	258	220	189	145	0.794
		D	0.012	0.028	0.05	0.078	0.112	0.152	0.199	0.251	0.31	0.376	0.477	0.524	0.608	0.794	
		C	4640	3093	2320	1856	1547	1326	1160	1031	927	843	773	714	663	580	
1-3/4 X 3/16	11.47	U	12632	5614	3158	2021	1404	1031	790	624	505	418	351	299	258	197	0.681
		D	0.011	0.024	0.043	0.066	0.096	0.13	0.17	0.216	0.266	0.322	0.383	0.45	0.521	0.681	
		C	6316	4211	3158	2526	2105	1805	1579	1404	1263	1148	1053	972	902	789	
2 X 3/16	12.95	U	16500	7333	4125	2640	1833	1347	1031	815	660	545	458	391	337	288	0.596
		D	0.009	0.021	0.037	0.058	0.083	0.114	0.149	0.189	0.233	0.282	0.335	0.393	0.456	0.596	
		C	8250	5500	4125	3300	2750	2357	2063	1833	1650	1500	1375	1269	1178	1031	
2-1/4 X 3/16	14.43	U	20882	9281	5221	3341	2320	1705	1305	1031	835	690	580	494	426	326	0.529
		D	0.008	0.019	0.033	0.051	0.074	0.101	0.132	0.167	0.206	0.25	0.297	0.349	0.405	0.529	
		C	10441	6961	5220	4176	3480	2983	2610	2320	2088	1898	1740	1606	1491	1305	
2-1/2 X 3/16	15.97	U	25779	11457	6445	4125	2864	2104	1611	1273	1031	852	716	610	526	403	0.476
		D	0.007	0.017	0.029	0.046	0.067	0.091	0.119	0.151	0.186	0.225	0.268	0.314	0.365	0.476	
		C	12890	8593	6445	5155	4296	3683	3222	2864	2578	2343	2148	1983	1841	1611	

Based on 10.5 bars/ft of grating width. Bearing Bars 1-3/16" CC

NOTE: Grating for spans to the left of the heavy line have a deflection less than 1/4" for uniform loads of 100 lbs./sq ft. This is the maximum deflection to afford pedestrian comfort and can be exceeded for other types of load at the discretion of the engineer.