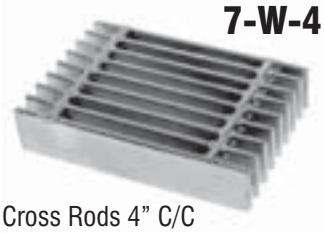
Steel Bar Grating Close-Mesh

WELDED (W) 7/16” C/C Bearing Bars

7-W-4



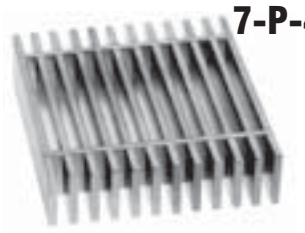
Welded Panels
Max 2’-0 Width

Cross Rods 4” C/C

NON-SERRATED ONLY

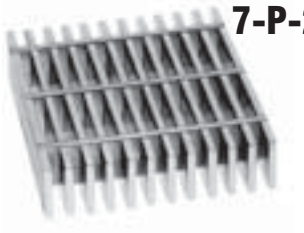
PRESS-LOCKED (P) 7/16” C/C Bearing Bars

7-P-4



Cross Bars 4” C/C

7-P-2



Cross Bars 2” C/C

NON-SERRATED & SERRATED

LOAD & DEFLECTION TABLE

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

U = safe uniform load, psf
C = safe concentrated load, psf
D = deflection, inches
E = modulus of elasticity, 29,000,000 psi
F = fiber stress, 18,000 psi
Material: ASTM A-1011

Deflection: Spans and loads to the right of the bold line exceed 1/4” deflection for uniform load of 100 psf which provides safe 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.

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	7-W-4	9.3	0.321	U	964	617	429	315	241	190	154						
				D	0.099	0.155	0.223	0.304	0.397	0.503	0.621						
	7-P-4	9.8		C	964	771	643	551	482	429	386						
	7-P-2	10.7		D	0.079	0.124	0.179	0.243	0.318	0.402	0.497						
3/4” x 3/16” Non-Serrated Only	7-W-4	13.7	0.482	U	1446	926	643	472	362	286	231	191					
				D	0.099	0.155	0.223	0.304	0.397	0.503	0.621	0.751					
	7-P-4	14.6		C	1446	1157	964	827	723	643	579	526					
	7-P-2	16.1		D	0.079	0.124	0.179	0.243	0.318	0.402	0.497	0.601					
1” x 1/8”	7-W-4	12.3	0.571	U	1714	1097	762	560	429	339	274	227	190	162			
				D	0.074	0.116	0.168	0.228	0.298	0.377	0.466	0.563	0.670	0.787			
	7-P-4	12.7		C	1714	1371	1143	980	857	762	686	623	571	527			
	7-P-2	13.7		D	0.060	0.093	0.134	0.182	0.238	0.302	0.372	0.451	0.536	0.629			
1” x 3/16”	7-W-4	18.1	0.857	U	2571	1646	1143	840	643	508	411	340	286	243	210		
				D	0.074	0.116	0.168	0.228	0.298	0.377	0.466	0.563	0.670	0.787	0.912		
	7-P-4	19.0		C	2571	2057	1714	1469	1286	1143	1029	935	857	791	735		
	7-P-2	20.5		D	0.060	0.093	0.134	0.182	0.238	0.302	0.372	0.451	0.536	0.629	0.730		
1-1/4” x 1/8”	7-W-4	15.3	0.893	U	2679	1714	1190	875	670	529	429	354	298	254	219	167	
				D	0.060	0.093	0.134	0.182	0.238	0.302	0.372	0.451	0.536	0.629	0.730	0.953	
	7-P-4	16.0		C	2679	2143	1786	1531	1339	1190	1071	974	893	824	765	670	
	7-P-2	17.3		D	0.048	0.074	0.107	0.146	0.191	0.241	0.298	0.360	0.429	0.504	0.584	0.763	
1-1/4” x 3/16”	7-W-4	22.5	1.339	U	4018	2571	1786	1312	1004	794	643	531	446	380	328	251	198
				D	0.060	0.093	0.134	0.182	0.238	0.302	0.372	0.451	0.536	0.629	0.730	0.953	1.207
	7-P-4	23.9		C	4018	3214	2679	2296	2009	1786	1607	1461	1339	1236	1148	1004	893
	7-P-2	25.8		D	0.048	0.074	0.107	0.146	0.191	0.241	0.298	0.360	0.429	0.504	0.584	0.763	0.965
1-1/2” x 1/8”	7-W-4	18.1	1.286	U	3857	2469	1714	1259	964	762	617	510	429	365	315	241	190
				D	0.050	0.078	0.112	0.152	0.199	0.251	0.310	0.376	0.447	0.524	0.608	0.794	1.006
	7-P-4	18.9		C	3857	3086	2571	2204	1929	1714	1543	1403	1286	1187	1102	964	857
	7-P-2	20.2		D	0.040	0.062	0.089	0.122	0.159	0.201	0.248	0.300	0.358	0.420	0.487	0.636	0.804
1-1/2” x 3/16”	7-W-4	26.9	1.929	U	5786	3703	2571	1889	1446	1143	926	765	643	548	472	362	286
				D	0.050	0.078	0.112	0.152	0.199	0.251	0.310	0.376	0.447	0.524	0.608	0.794	1.006
	7-P-4	28.3		C	5786	4629	3857	3306	2893	2571	2314	2104	1929	1780	1653	1446	1286
	7-P-2	30.2		D	0.040	0.062	0.089	0.122	0.159	0.201	0.248	0.300	0.358	0.420	0.487	0.636	0.804
1-3/4” x 3/16”			2.625	U	7875	5040	3500	2571	1969	1556	1260	1041	875	746	643	492	389
				D	0.043	0.067	0.096	0.130	0.170	0.215	0.266	0.322	0.383	0.450	0.521	0.681	0.862
	7-P-4	32.7		C	7875	6300	5250	4500	3938	3500	3150	2864	2625	2423	2250	1969	1750
	7-P-2	34.6		D	0.034	0.053	0.077	0.104	0.136	0.172	0.213	0.257	0.306	0.360	0.417	0.545	0.689
2” x 3/16”			3.429	U	10286	6583	4571	3359	2571	2032	1646	1360	1143	974	840	643	508
				D	0.037	0.058	0.084	0.114	0.149	0.189	0.233	0.282	0.335	0.393	0.456	0.596	0.754
	7-P-4	37.1		C	10286	8229	6857	5878	5143	4571	4114	3740	3429	3165	2939	2571	2286
	7-P-2	39.0		D	0.030	0.047	0.067	0.091	0.119	0.151	0.186	0.225	0.268	0.315	0.365	0.477	0.603
2-1/4” x 3/16”			4.339	U	13018	8331	5786	4251	3254	2571	2083	1721	1446	1232	1063	814	643
				D	0.033	0.052	0.074	0.101	0.132	0.168	0.207	0.250	0.298	0.350	0.406	0.530	0.670
	7-P-4	41.5		C	13018	10414	8679	7439	6509	5786	5207	4734	4339	4005	3719	3254	2893
	7-P-2	43.4		D	0.026	0.041	0.060	0.081	0.106	0.134	0.166	0.200	0.238	0.280	0.324	0.424	0.536
2-1/2” x 3/16”			5.357	U	16071	10286	7143	5248	4018	3175	2571	2125	1786	1522	1312	1004	794
				D	0.030	0.047	0.067	0.091	0.119	0.151	0.186	0.225	0.268	0.315	0.365	0.477	0.603
	7-P-4	45.9		C	16071	12857	10714	9184	8036	7143	6429	5844	5357	4945	4592	4018	3571
	7-P-2	47.8		D	0.024	0.037	0.054	0.073	0.095	0.121	0.149	0.180	0.215	0.252	0.292	0.381	0.483

P-7 PANEL WIDTH (inches)

Note: P-Press-Locked cross bars typically extend 1/8” each side. Panel widths do not include these extensions.

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
1/8” Bar	9/16	1	1 7/16	1 7/8	2 5/16	2 3/4	3 3/16	3 5/8	4 1/16	4 1/2	4 15/16	5 3/8	5 13/16	6 1/4	6 11/16	7 1/8	7 9/16	8	8 7/16	8 7/8	9 5/16	9 3/4	10 3/16	10 5/8	11 1/16	11 1/2	11 15/16	12 3/8
3/16” Bar	5/8	1 1/16	1 1/2	1 15/16	2 3/8	2 13/16	3 1/4	3 11/16	4 1/8	4 9/16	5	5 7/16	5 7/8	6 5/16	6 3/4	7 3/16	7 5/8	8 1/16	8 1/2	8 15/16	9 3/8	9 13/16	10 1/4	10 11/16	11 1/8	11 9/16	12	12 7/16

No. of Bars	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57
1/8” Bar	12 13/16	13 1/4	13 11/16	14 1/8	14 9/16	15	15 7/16	15 7/8	16 5/16	16 3/4	17 3/16	17 5/8	18 1/16	18 1/2	18 15/16	19 3/8	19 13/16	20 1/4	20 11/16	21 1/8	21 9/16	22	22 7/16	22 7/8	23 5/16	23 3/4	24 3/16	24 5/8
3/16” Bar	12 7/8	13 5/16	13 3/4	14 3/16	14 5/8	15 1/16	15 1/2	15 15/16	16 3/8	16 13/16	17 1/4	17 11/16	18 1/8	18 9/16	19	19 7/16	19 7/8	20 5/16	20 3/4	21 3/16	21 5/8	22 1/16	22 1/2	22 15/16	23 3/8	23 13/16	24 1/4	24 11/16

No. of Bars	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83
1/8” Bar	25 1/16	25 1/2	25 15/16	26 3/8	26 13/16	27 1/4	27 11/16	28 1/8	28 9/16	29	29 7/16	29 7/8	30 5/16	30 3/4	31 3/16	31 5/8	32 1/16	32 1/2	32 15/16	33 3/8	33 13/16	34 1/4	34 11/16	35 1/8	35 9/16	36
3/16” Bar	25 1/8	25 9/16	26	26 7/16	26 7/8	27 5/16	27 3/4	28 3/16	28 5/8	29 1/16	29 1/2	29 15/16	30 3/8	30 13/16	31 1/4	31 11/16	32 1/8	32 9/16	33	33 7/16	33 7/8	34 5/16	34 3/4	35 3/16	35 5/8	36 1/16