

30-H-4 & 30-H-2 Heavy-Duty Steel Grating

Heavy-Duty Welded

1-3/8" Center to Center of Bearing Bars



30-H-4
Cross Rods 4" C/C



30-H-2
Cross Rods 2" C/C

Material: ASTM A-36

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

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

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. For deflections of uniform and concentrated loads, consult MARC engineering departments.

U= safe uniform load, psf
C= safe concentrated load, pfw
D= deflection, inches
E= modulus of elasticity, 29,000,000 psi
F= fiber stress, 20,000 psi

Load & Deflection Table

Bar Size	Symbol	Approx. Weight psf	Sec mod Per Fl of Width	SPAN (Length of Bearing Bar)	SPAN (Length of Bearing Bar)											
					2'-0"	2'-6"	3'-0"	3'-6"	4'-0"	4'-6"	5'-0"	5'-6"	6'-0"	7'-0"	8'-0"	
1" x 1/4"	30-4-44	6.3		U	889	569	395	290	222	176	142	118	99	73	56	
	30-2-44	6.9	0.267	C	889	711	593	508	444	395	356	323	296	254	222	
1" x 5/16"	30-4-45	8.6		U	1,111	711	494	363	278	219	178	147	123	91	69	
	30-2-45	10.1	0.333	C	1,111	889	741	635	556	494	444	404	370	317	278	
1" x 3/8"	30-4-46	10.0		U	1,333	853	593	435	333	263	213	176	148	109	83	
	30-2-46	11.5	0.400	C	1,333	1,067	889	762	667	593	533	485	444	381	333	
1-1/4" x 1/4"	30-4-54	7.7		U	1,389	889	617	454	347	274	222	184	154	113	87	
	30-2-54	8.3	0.417	C	1,389	1,111	926	794	694	617	556	505	463	397	347	
1-1/4" x 5/16"	30-4-55	10.4		U	1,736	1,111	772	567	434	343	278	230	193	142	109	
	30-2-55	11.9	0.521	C	1,736	1,894	1,157	992	868	772	694	631	579	496	434	
1-1/4" x 3/8"	30-4-56	12.1		U	2,083	1,333	926	680	521	412	333	275	231	170	130	
	30-2-56	13.6	0.625	C	2,083	1,667	1,389	1,190	1,042	926	833	758	694	595	521	
1-1/2" x 1/4"	30-4-64	9.1		U	2,000	1,280	889	653	500	395	320	264	222	163	125	
	30-2-64	9.6	0.600	C	2,000	1,600	1,333	1,143	1,000	889	800	727	667	571	500	
1-1/2" x 5/16"	30-4-65	12.1		U	2,500	1,600	1,111	816	625	494	400	331	278	204	156	
	30-2-65	13.6	0.750	C	2,500	2,000	1,667	1,429	1,250	1,111	1,000	909	833	714	625	
1-1/2" x 3/8"	30-4-66	14.3		U	3,000	1,920	1,333	980	750	593	480	397	333	245	188	
	30-2-66	15.8	0.900	C	3,000	2,400	2,000	1,714	1,500	1,333	1,200	1,091	1,000	857	750	
1-3/4" x 1/4"	30-4-74	10.6		U	2,722	1,742	1,210	889	681	538	436	360	302	222	170	
	30-2-74	11.2	0.817	C	2,722	2,178	1,815	1,556	1,361	1,210	1,089	990	907	778	681	
1-3/4" x 5/16"	30-4-75	13.9		U	3,403	2,178	1,512	1,111	851	672	544	450	378	278	213	
	30-2-75	15.4	1.021	C	3,403	2,722	2,269	1,944	1,701	1,512	1,361	1,237	1,134	972	851	
1-3/4" x 3/8"	30-4-76	16.4		U	4,083	2,613	1,815	1,333	1,021	807	653	540	454	333	255	
	30-2-76	17.9	1.225	C	4,083	3,267	2,722	2,333	2,042	1,815	1,633	1,485	1,361	1,167	1,021	
2" x 1/4"	30-4-84	12.0		U	3,556	2,276	1,580	1,161	702	569	569	470	395	290	222	
	30-2-84	12.6	1.067	C	3,556	2,844	2,370	2,032	1,778	1,580	1,422	1,293	1,185	1,016	889	
2" x 5/16"	30-4-85	15.7		U	4,444	2,844	1,975	1,451	1,111	878	711	588	494	363	278	
	30-2-85	17.2	1.333	C	4,444	3,556	2,963	2,540	2,222	1,975	1,778	1,616	1,481	1,270	1,111	
2" x 3/8"	30-4-86	18.5		U	5,333	3,413	2,370	1,741	1,333	1,053	853	705	593	435	333	
	30-2-86	20.0	1.600	C	5,333	4,267	3,556	3,048	2,667	2,370	2,133	1,939	1,778	1,524	1,333	
2-1/4" x 1/4"	30-4-94	13.4		U	4,500	2,880	2,000	1,469	1,125	889	720	595	500	367	281	
	30-2-94	14.0	1.350	C	4,500	3,600	3,000	2,571	2,250	2,000	1,800	1,636	1,500	1,286	1,125	
2-1/4" x 5/16"	30-4-95	17.5		U	5,625	3,600	2,500	1,837	1,406	1,111	900	744	625	459	352	
	30-2-95	19.0	1.688	C	5,625	4,500	3,750	3,214	2,813	2,500	2,250	2,045	1,875	1,607	1,406	
2-1/4" x 3/8"	30-4-96	20.6		U	6,750	4,320	3,000	2,204	1,688	1,333	1,080	893	750	551	422	
	30-2-96	22.1	2.025	C	6,750	5,400	4,500	3,857	3,375	3,000	2,700	2,455	2,250	1,929	1,688	
2-1/2" x 1/4"	30-4-104	14.8		U	5,556	3,556	2,469	1,814	1,389	1,097	889	735	617	454	347	
	30-2-104	15.4	1.667	C	5,556	4,444	3,704	3,175	2,778	2,469	2,222	2,020	1,852	1,587	1,389	
2-1/2" x 5/16"	30-4-105	19.2		U	6,944	4,444	3,086	2,268	1,736	1,372	1,111	918	772	567	434	
	30-2-105	20.7	2.083	C	6,944	5,556	4,630	3,968	3,472	3,086	2,778	2,525	2,315	1,984	1,736	
2-1/2" x 3/8"	30-4-106	22.8		U	8,333	5,333	3,704	2,721	2,083	1,646	1,333	1,102	926	680	521	
	30-2-106	24.3	2.500	C	8,333	6,667	5,556	4,762	4,167	3,704	3,333	3,030	2,778	2,381	2,083	
2-3/4" x 1/4"	30-4-114	17.1		U	6,722	4,302	2,988	2,195	1,681	1,328	1,076	889	747	549	420	
	30-2-114	18.6	2.017	C	6,722	5,378	4,481	3,841	3,361	2,988	2,689	2,444	2,241	1,921	1,681	
2-3/4" x 5/16"	30-4-115	21.6		U	8,403	5,378	3,735	2,744	2,101	1,660	1,344	1,111	934	686	525	
	30-2-115	23.6	2.521	C	8,403	6,722	5,602	4,802	4,201	3,735	3,361	3,056	2,801	2,401	2,101	
2-3/4" x 3/8"	30-4-116	25.4		U	10,083	6,453	4,481	3,293	2,521	1,992	1,613	1,333	1,120	823	630	
	30-2-116	27.5	3.025	C	10,083	8,067	6,722	5,762	5,042	4,481	4,033	3,667	3,361	2,881	2,521	

30-H-4 & 30-H-2 Heavy-Duty Steel Grating

30-H-4 & 30-H-2 (continued)

1-3/8" Center to Center of Bearing Bars

Load & Deflection Table

Bar Size	Symbol	Approx. Weight psf	Sec mod Per Ft of Width		SPAN (Length of Bearing Bar)										
					2'-0"	2'-6"	3'-0"	3'-6"	4'-0"	4'-6"	5'-0"	5'-6"	6'-0"	7'-0"	8'-0"
3" x 1/4"	30-4-124	18.6	2.400	U	8,000	5,120	3,556	2,612	2,000	1,580	1,280	1,058	889	653	500
	30-2-124	20.1		C	8,000	6,400	5,333	4,571	4,000	3,556	3,200	2,909	2,909	2,286	2,000
3" x 5/16"	30-4-125	23.3	3.000	U	10,000	6,400	4,444	3,265	2,500	1,975	1,600	1,322	1,111	816	625
	30-2-125	25.4		C	10,000	8,000	6,667	5,714	5,000	4,444	4,000	3,636	3,333	2,857	2,500
3" x 3/8"	30-4-126	25.4	3.600	U	12,000	7,680	5,333	3,918	3,000	2,370	1,920	1,587	1,333	980	750
	30-2-126	29.6		C	12,000	9,600	8,000	6,857	6,000	5,333	4,800	4,364	4,000	3,429	3,000
3-1/4" x 1/4"	30-4-134	20.0	2.817	U	9,389	6,009	4,173	3,066	2,347	1,855	1,502	1,242	1,043	766	587
	30-2-134	21.5		C	9,389	7,511	6,259	5,365	4,694	4,173	3,756	3,414	3,130	2,683	2,347
3-1/4" x 5/16"	30-4-135	25.1	3.521	U	11,736	7,511	5,216	3,832	2,934	2,318	1,878	1,552	1,304	958	734
	30-2-135	27.1		C	11,736	9,389	7,824	6,706	5,868	5,216	4,694	4,268	3,912	3,353	2,934
3-1/4" x 3/8"	30-4-136	29.7	4.225	U	14,083	9,013	6,259	4,599	3,521	2,782	2,253	1,862	1,565	1,150	880
	30-2-136	31.7		C	14,083	11,267	9,389	8,048	7,042	6,259	5,633	5,121	4,694	4,024	3,521
3-1/2" x 1/4"	30-4-144	21.4	3.267	U	10,889	6,969	4,840	3,556	2,722	2,151	1,742	1,440	1,210	889	681
	30-2-144	22.9		C	10,889	8,711	7,259	6,222	5,444	4,840	4,356	3,960	3,630	3,111	2,722
3-1/2" x 5/16"	30-4-145	26.9	4.083	U	13,611	8,711	6,049	4,444	3,403	2,689	2,178	1,800	1,512	1,111	851
	30-2-145	28.9		C	13,611	10,889	9,074	7,778	6,806	6,049	5,444	4,949	4,537	3,889	3,403
3-1/2" x 3/8"	30-4-146	31.8	4.900	U	16,333	10,453	7,259	5,333	4,083	3,226	2,613	2,160	1,815	1,333	1,021
	30-2-146	33.8		C	16,333	13,067	10,889	9,333	8,167	7,259	6,533	5,939	5,444	4,667	4,083
4" x 1/4"	30-4-164	24.2	4.267	U	14,222	9,102	6,321	4,644	3,556	2,809	2,276	1,881	1,580	1,161	889
	30-2-164	25.7		C	14,222	11,378	9,481	8,127	7,111	6,321	5,689	5,172	4,741	4,063	3,556
4" x 5/16"	30-4-165	30.4	5.333	U	17,778	11,378	7,901	5,805	4,444	3,512	2,844	2,351	1,975	1,451	1,111
	30-2-165	32.5		C	17,778	14,222	11,852	10,159	8,889	7,901	7,111	6,465	5,926	5,079	4,444
4" x 3/8"	30-4-166	36.0	6.400	U	21,333	13,653	9,481	6,966	5,333	4,214	3,413	2,821	2,370	1,741	1,333
	30-2-166	38.1		C	21,333	17,067	14,222	12,190	10,667	9,481	8,533	7,758	7,111	6,095	5,333
4-1/2" x 1/4"	30-4-184	27.1	5.400	U	18,000	11,520	8,000	5,878	4,500	3,556	2,880	2,380	2,000	1,469	1,125
	30-2-184	28.6		C	18,000	14,400	12,000	10,286	9,000	8,000	7,200	6,545	6,000	5,143	4,500
4-1/2" x 5/16"	30-4-185	34.0	6.750	U	22,500	14,400	10,000	7,347	5,625	4,444	3,600	2,975	2,500	1,837	1,406
	30-2-185	36.0		C	22,500	18,000	15,000	12,857	11,250	10,000	9,000	8,182	7,500	6,429	5,625
4-1/2" x 3/8"	30-4-186	40.3	8.100	U	27,000	17,280	12,000	8,816	6,750	5,333	4,320	3,570	3,000	2,204	1,688
	30-2-186	42.3		C	27,000	21,600	18,000	15,429	13,500	12,000	10,800	9,818	9,000	7,714	6,750
5" x 1/4"	30-4-204	29.9	6.667	U	22,222	14,222	9,877	7,256	5,556	4,390	3,556	2,938	2,469	1,814	1,389
	30-2-204	31.4		C	22,222	17,778	14,815	12,698	11,111	9,877	8,889	8,081	7,407	6,349	5,556
5" x 5/16"	30-4-205	37.5	8.333	U	27,778	17,778	12,346	9,070	6,944	5,487	4,444	3,673	3,086	2,268	1,736
	30-2-205	39.6		C	27,778	22,222	18,519	15,873	13,889	12,346	11,111	10,101	9,259	7,937	6,944
5" x 3/8"	30-4-206	44.5	10.000	U	33,333	21,333	14,815	10,884	8,333	6,584	5,333	4,408	3,704	2,721	2,083
	30-2-206	46.6		C	33,333	26,667	22,222	19,048	16,667	14,815	13,333	12,121	11,111	9,524	8,333
6" x 1/4"	30-4-244	35.6	9.600	U	32,000	20,480	14,222	10,449	8,000	6,321	5,120	4,231	3,556	2,612	2,000
	30-2-244	37.1		C	32,000	25,600	21,333	18,286	16,000	14,222	12,800	11,636	10,667	9,143	8,000
6" x 5/16"	30-4-245	44.6	12.000	U	40,000	25,600	17,778	13,061	10,000	7,901	6,400	5,289	4,444	3,265	2,500
	30-2-245	46.7		C	40,000	32,000	26,667	22,857	20,000	17,778	16,000	14,545	13,333	11,429	10,000
6" x 3/8"	30-4-246	53.0	14.400	U	48,000	30,720	21,333	15,673	12,000	9,481	7,680	6,347	5,333	3,918	3,000
	30-2-246	55.1		C	48,000	38,400	32,000	27,429	24,000	21,333	19,200	17,455	16,000	13,714	12,000

U= safe uniform load, psf - C= safe concentrated load, pfw - D= deflection, inches - E= modulus of elasticity, 29,000,000 psi - F= fiber stress, 20,000 psi

H-30 PANEL WIDTH (inches)

Note: H-Heavy-Duty cross rods may 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
1/4" Bar	2 1/8	4	5 7/8	7 3/4	9 5/8	11 1/2	13 3/8	15 1/4	17 1/8	19	20 7/8	22 3/4	24 5/8	26 1/2	28 3/8	30 1/4	32 1/8	34	35 7/8
5/16" Bar	2 3/16	4 1/16	5 15/16	7 13/16	9 11/16	11 9/16	13 7/16	15 5/16	17 3/16	19 1/16	20 15/16	24 13/16	24 11/16	26 9/16	28 7/16	30 5/16	32 3/16	34 1/15	35 15/16
3/8" Bar	2 1/4	4 1/8	6	7 7/8	9 3/4	11 5/8	13 1/2	15 3/8	17 1/4	19 1/8	21	24 7/8	24 3/4	26 5/8	28 1/2	30 3/8	32 1/4	34 1/8	36