

15-H-4 & 15-H-2 Heavy-Duty Steel Grating

Heavy-Duty Welded

15/16" Center to Center of Bearing Bars



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



15-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 Marco's 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 Ft 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"	15-4-44	11.7	0.533	U	1,778	1,138	790	580	444	351	284	235	198	145	111	
	15-2-44	12.3		C	1,778	1,422	1,185	1,016	889	790	711	646	593	508	444	
1" x 5/16"	15-4-45	15.3	0.667	U	2,222	1,422	988	726	556	439	356	294	247	181	139	
	15-2-45	16.8		C	2,222	1,778	1,481	1,270	1,111	988	889	808	741	635	556	
1" x 3/8"	15-4-46	18.1	0.800	U	2,667	1,707	1,185	871	667	527	427	353	296	218	167	
	15-2-46	19.6		C	2,667	2,133	1,778	1,524	1,333	1,185	1,067	970	889	762	667	
1-1/4" x 1/4"	15-4-54	14.5	0.833	U	2,778	1,778	1,235	907	694	549	444	367	309	227	174	
	15-2-54	15.1		C	2,778	2,222	1,852	1,587	1,389	1,235	1,111	1,010	926	794	694	
1-1/4" x 5/16"	15-4-55	18.8	1.042	U	3,472	2,222	1,543	1,134	868	686	556	459	386	283	217	
	15-2-55	20.3		C	3,472	2,778	2,315	1,984	1,736	1,543	1,389	1,263	1,157	992	868	
1-1/4" x 3/8"	15-4-56	22.2	1.250	U	4,167	2,667	1,852	1,361	1,042	823	667	551	463	340	260	
	15-2-56	23.7		C	4,167	3,333	2,778	2,381	2,083	1,852	1,667	1,515	1,389	1,190	1,042	
1-1/2" x 1/4"	15-4-64	17.2	1.200	U	4,000	2,560	1,778	1,306	1,000	790	640	529	444	327	250	
	15-2-64	17.7		C	4,000	3,200	2,667	2,286	2,000	1,778	1,600	1,455	1,333	1,143	1,000	
1-1/2" x 5/16"	15-4-65	22.3	1.500	U	5,000	3,200	2,222	1,633	1,250	988	800	661	556	408	313	
	15-2-65	23.8		C	5,000	4,000	3,333	2,857	2,500	2,222	2,000	1,818	1,667	1,429	1,250	
1-1/2" x 3/8"	15-4-66	26.4	1.800	U	6,000	3,840	2,667	1,959	1,500	1,185	960	793	667	490	375	
	15-2-66	27.9		C	6,000	4,800	4,000	3,429	3,000	2,667	2,400	2,182	2,000	1,714	1,500	
1-3/4" x 1/4"	15-4-74	20.0	1.633	U	5,444	3,484	2,420	1,778	1,361	1,075	871	720	605	444	340	
	15-2-74	20.6		C	5,444	4,356	3,630	3,111	2,722	2,420	2,178	1,980	1,815	1,556	1,361	
1-3/4" x 5/16"	15-4-75	25.7	2.042	U	6,806	4,356	3,025	2,222	1,701	1,344	1,089	900	756	556	425	
	15-2-75	27.2		C	6,806	5,444	4,537	3,889	3,403	3,025	2,722	2,475	2,269	1,944	1,701	
1-3/4" x 3/8"	15-4-76	30.5	2.450	U	8,167	5,227	3,630	2,667	2,042	1,613	1,307	1,080	907	667	510	
	15-2-76	32.0		C	8,167	6,533	5,444	4,667	4,083	3,630	3,267	2,970	2,722	2,333	2,042	
2" x 1/4"	15-4-84	22.8	2.133	U	7,111	4,551	3,160	2,322	1,778	1,405	1,138	940	790	580	444	
	15-2-84	23.4		C	7,111	5,689	4,741	4,063	3,556	3,160	2,844	2,586	2,370	2,032	1,778	
2" x 5/16"	15-4-85	29.2	2.667	U	8,889	5,689	3,951	2,902	2,222	1,756	1,422	1,175	988	726	556	
	15-2-85	30.7		C	8,889	7,111	5,926	5,079	4,444	3,951	3,556	3,232	2,963	2,540	2,222	
2" x 3/8"	15-4-86	34.7	3.200	U	10,667	6,827	4,741	3,483	2,667	2,107	1,707	1,410	1,185	871	667	
	15-2-86	36.2		C	10,667	8,533	7,111	6,095	5,333	4,741	4,267	3,879	3,556	3,048	2,667	
2-1/4" x 1/4"	15-4-94	25.6	2.700	U	9,000	5,760	4,000	2,939	2,250	1,778	1,440	1,190	1,000	735	563	
	15-2-94	26.2		C	9,000	7,200	6,000	5,143	4,500	4,000	3,600	3,273	3,000	2,571	2,250	
2-1/4" x 5/16"	15-4-95	32.6	3.375	U	11,250	7,200	5,000	3,673	2,813	2,222	1,800	1,488	1,250	918	703	
	15-2-95	34.1		C	11,250	9,000	7,500	6,429	5,625	5,000	4,500	4,091	3,750	3,214	2,813	
2-1/4" x 3/8"	15-4-96	38.8	4.050	U	13,500	8,640	6,000	4,408	3,375	2,667	2,160	1,785	1,500	1,102	844	
	15-2-96	40.3		C	13,500	10,800	9,000	7,714	6,750	6,000	5,400	4,909	4,500	3,857	3,375	
2-1/2" x 1/4"	15-4-104	28.3	3.333	U	11,111	7,111	4,938	3,628	2,778	2,195	1,778	1,469	1,235	907	694	
	15-2-104	28.9		C	11,111	8,889	7,407	6,349	5,556	4,938	4,444	4,040	3,704	3,175	2,778	
2-1/2" x 5/16"	15-4-105	36.1	4.167	U	13,889	8,889	6,173	4,535	3,472	2,743	2,222	1,837	1,543	1,134	868	
	15-2-105	37.6		C	13,889	11,111	9,259	7,937	6,944	6,173	5,556	5,051	4,630	3,968	3,472	
2-1/2" x 3/8"	15-4-106	42.9	5.000	U	16,667	10,667	7,407	5,442	4,167	3,292	2,667	2,204	1,852	1,361	1,042	
	15-2-106	44.4		C	16,667	13,333	11,111	9,524	8,333	7,407	6,667	6,061	5,556	4,762	4,167	
2-3/4" x 1/4"	15-4-114	32.0	4.033	U	13,444	8,604	5,975	4,390	3,361	2,656	2,151	1,778	1,494	1,098	840	
	15-2-114	33.5		C	13,444	10,756	8,963	7,683	6,722	5,975	5,378	4,889	4,481	3,841	3,361	
2-3/4" x 5/16"	15-4-115	40.1	5.042	U	16,806	10,756	7,469	5,488	4,201	3,320	2,689	2,222	1,867	1,372	1,050	
	15-2-115	42.1		C	16,806	13,444	11,204	9,603	8,403	7,469	6,722	6,111	5,602	4,802	4,201	
2-3/4" x 3/8"	15-4-116	47.6	6.050	U	20,167	12,907	8,963	6,585	5,042	3,984	3,227	2,667	2,241	1,646	1,260	
	15-2-116	49.7		C	20,167	16,133	13,444	11,524	10,083	8,963	8,067	7,333	6,722	5,762	5,762	

15-H-4 & 15-H-2 Heavy-Duty Steel Grating

15-H-4 & 15-H-2 (continued)

15/16" 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"	15-4-124	34.8	4.800	U	16,000	10,240	7,111	5,224	4,000	3,160	2,560	2,116	1,778	1,306	1,000	
	15-2-124	36.3		C	16,000	12,800	10,667	9,143	8,000	7,111	6,400	5,818	5,333	4,571	4,000	
3" x 5/16"	15-4-125	43.6	6.000	U	20,000	12,800	8,889	6,531	5,000	3,951	3,200	2,645	2,222	1,633	1,250	
	15-2-125	45.6		C	20,000	16,000	13,333	11,429	10,000	8,889	8,000	7,273	6,667	5,714	5,000	
3" x 3/8"	15-4-126	51.8	7.200	U	24,000	15,360	10,667	7,837	6,000	4,741	3,840	3,174	2,667	1,959	1,500	
	15-2-126	53.8		C	24,000	19,200	16,000	13,714	12,000	10,667	9,600	8,727	8,000	6,857	6,000	
3-1/4" x 1/4"	15-4-134	37.5	5.633	U	18,778	12,018	8,346	6,132	4,694	3,709	3,004	2,483	2,086	1,533	1,174	
	15-2-134	39.0		C	18,778	15,022	12,519	10,730	9,389	8,346	7,511	6,828	6,259	5,365	4,694	
3-1/4" x 5/16"	15-4-135	47.0	7.042	U	23,472	15,022	10,432	7,664	5,868	4,636	3,756	3,104	2,608	1,916	1,467	
	15-2-135	49.1		C	23,472	18,778	15,648	13,413	11,736	10,432	9,389	8,535	7,824	6,706	5,868	
3-1/4" x 3/8"	15-4-136	55.9	8.450	U	28,167	18,027	12,519	9,197	7,042	5,564	4,507	3,725	3,130	2,299	1,760	
	15-2-136	58.0		C	28,167	22,533	18,778	16,095	14,083	12,519	11,267	10,242	9,389	8,048	7,042	
3-1/2" x 1/4"	15-4-144	40.3	6.533	U	21,778	13,938	9,679	7,111	5,444	4,302	3,484	2,880	2,420	1,778	1,361	
	15-2-144	41.8		C	21,778	17,422	14,519	12,444	10,889	9,679	8,711	7,919	7,259	6,222	5,444	
3-1/2" x 5/16"	15-4-145	50.5	8.167	U	27,222	17,422	12,099	8,889	6,806	5,377	4,356	3,600	3,025	2,222	1,701	
	15-2-145	52.5		C	27,222	21,778	18,148	15,556	13,611	12,099	10,889	9,899	9,074	7,778	6,806	
3-1/2" x 3/8"	15-4-146	60.1	9.800	U	32,667	20,907	14,519	10,667	8,167	6,453	5,227	4,320	3,630	2,667	2,042	
	15-2-146	62.1		C	32,667	26,133	21,778	18,667	16,333	14,519	13,067	11,879	10,889	9,333	8,167	
4" x 1/4"	15-4-164	45.9	8.533	U	28,444	18,204	12,642	9,288	7,111	5,619	4,551	3,761	3,160	2,322	1,778	
	15-2-164	47.4		C	28,444	22,756	18,963	16,254	14,222	12,642	11,378	10,343	9,481	8,127	7,111	
4" x 5/16"	15-4-165	57.4	10.667	U	35,556	22,756	15,802	11,610	8,889	7,023	5,689	4,702	3,951	2,902	2,222	
	15-2-165	59.4		C	35,556	28,444	23,704	20,317	17,778	15,802	14,222	12,929	11,852	10,159	8,889	
4" x 3/8"	15-4-166	68.3	12.800	U	42,667	27,307	18,963	13,932	10,667	8,428	6,827	5,642	4,741	3,483	2,667	
	15-2-166	70.4		C	42,667	34,133	28,444	24,381	21,333	18,963	17,067	15,515	14,222	12,190	10,667	
4-1/2" x 1/4"	15-4-184	51.4	10.800	U	36,000	23,040	16,000	11,755	9,000	7,111	5,760	4,760	4,000	2,939	2,250	
	15-2-184	52.9		C	36,000	28,800	24,000	20,571	18,000	16,000	14,400	13,091	12,000	10,286	9,000	
4-1/2" x 5/16"	15-4-185	64.3	13.500	U	45,000	28,800	20,000	14,694	11,250	8,889	7,200	5,950	5,000	3,673	2,813	
	15-2-185	66.4		C	45,000	36,000	30,000	25,714	22,500	20,000	18,000	16,364	15,000	12,857	11,250	
4-1/2" x 3/8"	15-4-186	76.6	16.200	U	54,000	34,560	24,000	17,633	13,500	10,667	8,640	7,140	6,000	4,408	3,375	
	15-2-186	78.7		C	54,000	43,200	36,000	30,857	27,000	24,000	21,600	19,636	18,000	15,429	13,500	
5" x 1/4"	15-4-204	56.9	13.333	U	44,444	28,444	19,753	14,512	11,111	8,779	7,111	5,877	4,938	3,628	2,778	
	15-2-204	58.4		C	44,444	35,556	29,630	25,397	22,222	19,753	17,778	16,162	14,815	12,698	11,111	
5" x 5/16"	15-4-205	71.2	16.667	U	55,556	35,556	24,691	18,141	13,889	10,974	8,889	7,346	6,173	4,535	3,472	
	15-2-205	73.3		C	55,556	44,444	37,037	31,746	27,778	24,691	22,222	20,202	18,519	15,873	13,889	
5" x 3/8"	15-4-206	84.9	20.000	U	66,667	42,667	29,630	21,769	16,667	13,169	10,667	8,815	7,407	5,442	4,167	
	15-2-206	87.0		C	66,667	53,333	44,444	38,095	33,333	29,630	26,667	24,242	22,222	19,048	16,667	
6" x 1/4"	15-4-244	68.0	19.200	U	64,000	40,960	28,444	20,898	16,000	12,642	10,240	8,463	7,111	5,224	4,000	
	15-2-244	69.5		C	64,000	51,200	42,667	36,571	32,000	28,444	25,600	23,273	21,333	18,286	16,000	
6" x 5/16"	15-4-245	85.1	24.000	U	80,000	51,200	35,556	26,122	20,000	15,802	12,800	10,579	8,889	6,531	5,000	
	15-2-245	87.1		C	80,000	64,000	53,333	45,714	40,000	35,556	32,000	29,091	26,667	22,857	20,000	
6" x 3/8"	15-4-246	101.5	28.800	U	96,000	61,440	42,667	31,347	24,000	18,963	15,360	12,694	10,667	7,837	6,000	
	15-2-246	103.5		C	96,000	76,800	64,000	54,857	48,000	42,667	38,400	34,909	32,000	27,429	24,000	

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-15 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
1/4" Bar	1 3/6	2 1/8	3 1/16	4	4 15/16	5 7/8	6 13/16	7 3/4	8 11/16	9 5/18	10 9/16	11 1/2	12 7/16	13 3/8
5/16" Bar	1 1/4	2 3/16	3 1/8	4 1/16	5	5 15/16	6 7/8	7 13/16	8 3/4	9 11/15	10 5/8	11 9/16	12 1/2	13 7/16
3/8" Bar	1 5/16	2 1/4	3 3/16	4 1/8	5 1/16	6	6 15/16	7 7/8	8 13/16	9 3/4	10 11/16	11 5/8	12 9/16	13 1/2
No. of Bars	16	17	18	19	20	21	22	23	24	25	26	27	28	29
1/4" Bar	14 5/16	15 1/4	16 3/16	17 1/8	18 1/16	19	19 15/16	20 7/8	21 13/16	22 3/4	23 11/16	24 5/8	25 9/16	26 1/2
5/16" Bar	14 3/8	15 5/16	16 1/4	17 3/16	18 1/8	19 1/16	20	20 15/16	21 7/8	22 13/16	23 3/4	24 11/16	25 5/8	26 9/16
3/8" Bar	14 7/16	15 3/8	16 5/16	17 1/4	18 3/16	19 1/8	20 1/16	21	21 15/16	22 7/8	23 13/16	24 3/4	25 1/16	26 5/8
No. of Bars	30	31	32	33	34	35	36	37	38	39				
1/4" Bar	27 7/16	28 3/8	29 5/16	30 1/4	31 3/16	32 1/8	33 1/16	34	35 15/16	35 7/8				
5/16" Bar	27 1/2	28 7/16	29 3/8	30 5/16	31 1/4	32 3/16	33 1/8	34 1/16	35	35 15/16				
3/8" Bar	27 5/8	28 1/2	29 7/16	30 3/8	31 5/16	32 1/4	33 3/16	34 1/8	35 1/16	36				