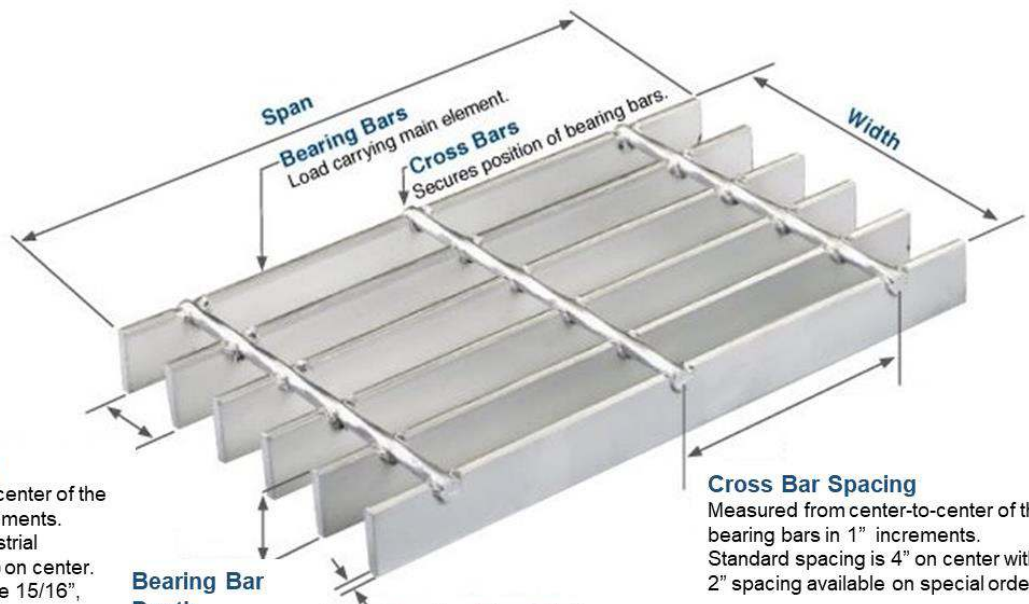


# STEEL BAR GRATING



## Bearing Bar Spacing

Measured from center-to-center of the bearing bars in  $1/16$ " increments. Standard spacing for industrial flooring is  $19/16$ " ( $1-3/16$ ") on center. Other popular spacings are  $15/16$ ",  $11/16$ " and  $1/2$ " on center.

## Bearing Bar Depth

Ranges from  $3/4$ " to 3" depending on anticipated loads.

## Bearing Bar Thickness

Ranges from  $1/8$ " to  $5/16$ " depending on anticipated loads.

## Cross Bar Spacing

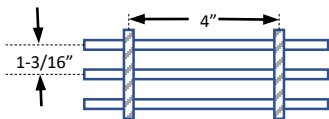
Measured from center-to-center of the bearing bars in 1" increments. Standard spacing is 4" on center with 2" spacing available on special order.

# HEAVY DUTY STEEL BAR GRATING

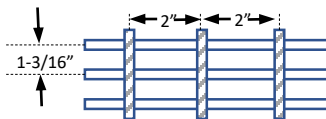
Welded steel bar grating is strong, durable, has an exceptional strength to weight ratio, and can be easily fabricated to many configurations. Welded grating is widely used in many industrial applications including mezzanines, platforms, and walkways.

Metal bar grating is manufactured by welding a series of equally spaced bearing bars to connecting cross using automated forge welding equipment. Bar grating comes in a variety of thicknesses and spacing that can be selected to meet anticipated loads.

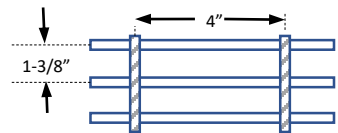
## HD Welded Steel Bar Grating



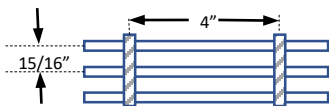
19-W-4



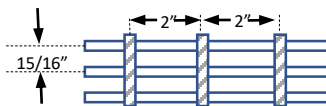
19-W-2



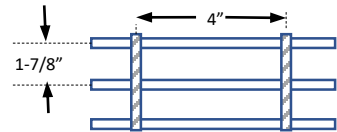
22-W-4



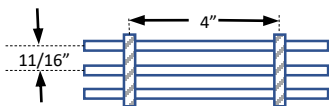
15-W-4



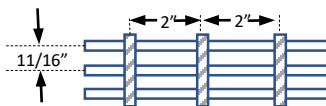
15-W-2



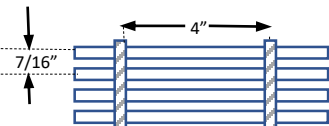
30-W-4



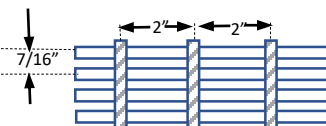
11-W-4



11-W-2



7-W-4



7-W-2

# HEAVY DUTY STEEL BAR GRATING

## 15 Space

Use this table when evaluating spans and loads for the following types of steel grating:

### Load Table

15-W-4 and 15-W-2

Heavy Duty 15/16" C/C Bearing Bars  
Non-Serrated & Serrated



### Maximum Safe Span

Bar Size	Section Modulus psf	Moment of Inertia psf	Approx Weight psf	Maximum Safe Span						
				H-25 Load	H-20 Load	H-15 Load	Auto Traffic	5 Ton Forklift	3 Ton Forklift	1 Ton Forklift
1" x 1/4"	0.533	0.267	12.0	1'-1"	1'-0"	0'-10"	1'-2"	0'-8"	0'-7"	0'-8"
1" x 5/16"	0.667	0.333	14.7	1'-3"	1'-2"	1'-0"	1'-5"	0'-9"	0'-8"	0'-9"
1-1/4" x 1/4"	0.833	0.521	14.7	1'-4"	1'-3"	1'-1"	1'-8"	0'-10"	0'-9"	0'-11"
1-1/4" x 5/16"	1.042	0.651	18.1	1'-6"	1'-5"	1'-3"	1'-11"	1'-0"	0'-10"	1'-1"
1-1/2" x 1/4"	1.200	0.900	17.4	1'-8"	1'-6"	1'-4"	2'-3"	1'-1"	0'-11"	1'-3"
1-1/2" x 5/16"	1.500	1.125	21.5	1'-10"	1'-8"	1'-6"	2'-6"	1'-3"	1'-1"	1'-7"
1-3/4" x 1/4"	1.633	1.429	20.2	1'-11"	1'-9"	1'-7"	2'-10"	1'-3"	1'-2"	1'-8"
1-3/4" x 5/16"	2.042	1.786	24.9	2'-2"	2'-0"	1'-10"	3'-2"	1'-6"	1'-5"	2'-1"
2" x 1/4"	2.133	2.133	22.9	2'-3"	2'-0"	1'-10"	3'-6"	1'-7"	1'-5"	2'-2"
2" x 5/16"	2.667	2.667	28.3	2'-6"	2'-4"	2'-2"	3'-11"	1'-10"	1'-9"	2'-8"
2-1/4" x 1/4"	2.700	3.038	25.6	2'-7"	2'-4"	2'-2"	4'-2"	1'-10"	1'-9"	2'-8"
2-1/4" x 5/16"	3.375	3.797	31.7	2'-11"	2'-9"	2'-7"	4'-5"	2'-2"	2'-2"	3'-4"
2-1/2" x 1/4"	3.333	4.167	28.3	2'-11"	2'-9"	2'-7"	4'-7"	2'-2"	2'-2"	3'-4"
2-1/2" x 5/16"	4.167	5.208	35.1	3'-5"	3'-3"	3'-1"	4'-11"	2'-8"	2'-7"	4'-1"
3" x 1/4"	4.800	7.200	33.8	3'-9"	3'-7"	3'-6"	5'-6"	3'-0"	3'-0"	4'-8"
3" x 5/16"	6.000	9.000	41.9	4'-5"	4'-4"	4'-2"	5'-11"	3'-7"	3'-8"	5'-0"

## 19 Space

Use this table when evaluating spans and loads for the following types of steel grating:

### Load Table

19-W-4 and 19-W-2

Heavy Duty 15/16" C/C Bearing Bars  
Non-Serrated & Serrated



### Maximum Safe Span

Bar Size	Section Modulus psf	Moment of Inertia psf	Approx Weight psf	Maximum Safe Span						
				H-25 Load	H-20 Load	H-15 Load	Auto Traffic	5 Ton Forklift	3 Ton Forklift	1 Ton Forklift
1" x 1/4"	0.421	0.211	9.7	1'-0"	0'-10"	0'-9"	1'-0"	0'-7"	0'-6"	0'-7"
1" x 5/16"	0.526	0.263	11.9	1'-1"	1'-0"	0'-10"	1'-2"	0'-8"	0'-7"	0'-8"
1-1/4" x 1/4"	0.658	0.411	11.9	1'-3"	1'-1"	1'-0"	1'-5"	0'-9"	0'-8"	0'-10"
1-1/4" x 5/16"	0.822	0.514	14.5	1'-4"	1'-3"	1'-1"	1'-8"	0'-10"	0'-9"	1'-0"
1-1/2" x 1/4"	0.947	0.711	14.0	1'-6"	1'-4"	1'-2"	1'-11"	0'-11"	0'-10"	1'-1"
1-1/2" x 5/16"	1.184	0.888	17.2	1'-8"	1'-6"	1'-4"	2'-3"	1'-1"	0'-11"	1'-4"
1-3/4" x 1/4"	1.289	1.128	16.2	1'-9"	1'-7"	1'-5"	2'-5"	1'-2"	1'-0"	1'-5"
1-3/4" x 5/16"	1.612	1.410	19.9	1'-11"	1'-9"	1'-7"	2'-11"	1'-4"	1'-3"	1'-9"
2" x 1/4"	1.684	1.684	18.3	2'-0"	1'-10"	1'-8"	3'-1"	1'-4"	1'-3"	1'-10"
2" x 5/16"	2.105	2.105	22.6	2'-3"	2'-1"	1'-11"	3'-6"	1'-7"	1'-6"	2'-4"
2-1/4" x 1/4"	2.132	2.398	20.4	2'-3"	2'-1"	1'-11"	3'-9"	1'-7"	1'-6"	2'-4"
2-1/4" x 5/16"	2.664	2.998	25.3	2'-7"	2'-5"	2'-3"	4'-2"	1'-11"	1'-10"	2'-11"
2-1/2" x 1/4"	2.632	3.289	22.6	2'-6"	2'-4"	2'-3"	4'-4"	1'-10"	1'-10"	2'-10"
2-1/2" x 5/16"	3.289	4.112	28.0	2'-11"	2'-9"	2'-7"	4'-8"	2'-3"	2'-3"	3'-6"
3" x 1/4"	3.789	5.684	26.9	3'-3"	3'-1"	2'-11"	5'-2"	2'-6"	2'-6"	4'-1"
3" x 5/16"	4.737	7.105	33.3	3'-9"	3'-7"	3'-6"	5'-7"	3'-0"	3'-1"	4'-9"

# HEAVY DUTY STEEL BAR GRATING

## 22 Space

### Load Table

Use this table when evaluating spans and loads for the following types of steel grating:

22-W-4 and 22-W-2

Heavy Duty 15/16" C/C Bearing Bars  
Non-Serrated & Serrated



### Maximum Safe Span

Bar Size	Section Modulus psf	Moment of Inertia psf	Approx Weight psf	H-25 Load	H-20 Load	H-15 Load	Auto Traffic	5 Ton Forklift	3 Ton Forklift	1 Ton Forklift
1" x 1/4"	0.364	0.182	8.5	0'-11"	0'-10"	0'-9"	0'-11"	0'-7"	0'-6"	0'-6"
1" x 5/16"	0.455	0.227	10.4	1'-0"	0'-11"	0'-10"	1'-1"	0'-8"	0'-6"	0'-7"
1-1/4" x 1/4"	0.568	0.355	10.4	1'-2"	1'-0"	0'-11"	1'-4"	0'-9"	0'-7"	0'-9"
1-1/4" x 5/16"	0.710	0.444	12.7	1'-3"	1'-2"	1'-0"	1'-6"	0'-10"	0'-8"	0'-11"
1-1/2" x 1/4"	0.818	0.614	12.2	1'-5"	1'-3"	1'-1"	1'-9"	0'-11"	0'-9"	1'-0"
1-1/2" x 5/16"	1.023	0.767	15.0	1'-7"	1'-5"	1'-3"	2'-1"	1'-0"	0'-11"	1'-3"
1-3/4" x 1/4"	1.114	0.974	14.1	1'-8"	1'-6"	1'-3"	2'-3"	1'-1"	0'-11"	1'-4"
1-3/4" x 5/16"	1.392	1.218	17.3	1'-10"	1'-8"	1'-6"	2'-8"	1'-2"	1'-1"	1'-8"
2" x 1/4"	1.455	1.455	18.0	1'-10"	1'-8"	1'-6"	2'-10"	1'-3"	1'-2"	1'-9"
2" x 5/16"	1.818	1.818	19.7	2'-1"	1'-11"	1'-9"	3'-4"	1'-5"	1'-5"	2'-1"
2-1/4" x 1/4"	1.841	2.071	17.8	2'-1"	1'-11"	1'-9"	3'-5"	1'-6"	1'-5"	2'-2"
2-1/4" x 5/16"	2.301	2.589	22.0	2'-4"	2'-2"	2'-0"	4'-0"	1'-9"	1'-8"	2'-8"
2-1/2" x 1/4"	2.273	2.841	19.7	2'-4"	2'-2"	2'-0"	4'-2"	1'-8"	1'-8"	2'-7"
2-1/2" x 5/16"	2.841	3.551	24.3	2'-8"	2'-6"	2'-5"	4'-6"	2'-0"	2'-0"	3'-3"
3" x 1/4"	3.273	4.909	23.4	2'-11"	2'-9"	2'-8"	5'-0"	2'-3"	2'-3"	3'-8"
3" x 5/16"	4.091	6.136	28.9	3'-5"	3'-3"	3'-2"	5'-4"	2'-9"	2'-9"	4'-7"

## 30 Space

### Load Table

Use this table when evaluating spans and loads for the following types of steel grating:

30-W-4 and 30-W-2

Heavy Duty 15/16" C/C Bearing Bars  
Non-Serrated & Serrated



### Maximum Safe Span

Bar Size	Section Modulus psf	Moment of Inertia psf	Approx Weight psf	H-25 Load	H-20 Load	H-15 Load	Auto Traffic	5 Ton Forklift	3 Ton Forklift	1 Ton Forklift
1" x 1/4"	0.267	0.133	6.6	0'-9"	0'-9"	0'-8"	0'-10"	0'-6"	0'-5"	0'-6"
1" x 5/16"	0.333	0.167	7.9	0'-11"	0'-10"	0'-8"	0'-11"	0'-7"	0'-6"	0'-7"
1-1/4" x 1/4"	0.417	0.260	7.9	1'-0"	0'-11"	0'-10"	1'-1"	0'-8"	0'-6"	0'-8"
1-1/4" x 5/16"	0.521	0.326	9.6	1'-1"	1'-0"	0'-11"	1'-3"	0'-9"	0'-7"	0'-9"
1-1/2" x 1/4"	0.600	0.450	9.3	1'-2"	1'-1"	1'-0"	1'-5"	0'-9"	0'-8"	0'-11"
1-1/2" x 5/16"	0.750	0.563	11.3	1'-4"	1'-3"	1'-1"	1'-9"	0'-10"	0'-9"	1'-1"
1-3/4" x 1/4"	0.817	0.715	10.6	1'-5"	1'-3"	1'-2"	1'-10"	0'-11"	0'-10"	1'-2"
1-3/4" x 5/16"	1.021	0.893	13.0	1'-7"	1'-5"	1'-3"	2'-2"	1'-0"	0'-11"	1'-5"
2" x 1/4"	1.067	1.067	12.0	1'-7"	1'-6"	1'-4"	2'-3"	1'-1"	1'-0"	1'-6"
2" x 5/16"	1.333	1.333	14.7	1'-10"	1'-8"	1'-6"	2'-9"	1'-3"	1'-2"	1'-10"
2-1/4" x 1/4"	1.350	1.519	13.4	1'-10"	1'-8"	1'-6"	2'-10"	1'-3"	1'-2"	1'-10"
2-1/4" x 5/16"	1.688	1.898	16.4	2'-0"	1'-10"	1'-9"	3'-5"	1'-5"	1'-5"	2'-3"
2-1/2" x 1/4"	1.667	2.083	14.7	2'-0"	1'-10"	1'-8"	3'-5"	1'-5"	1'-5"	2'-3"
2-1/2" x 5/16"	2.083	2.604	18.1	2'-3"	2'-1"	2'-0"	4'-2"	1'-8"	1'-8"	2'-9"
3" x 1/4"	2.400	3.600	17.4	2'-6"	2'-4"	2'-2"	4'-7"	1'-11"	1'-11"	3'-2"
3" x 5/16"	3.000	4.500	21.5	2'-10"	2'-8"	2'-7"	5'-0"	2'-3"	2'-4"	3'-11"



# HEAVY DUTY STEEL BAR GRATING

## 38 Space

### Load Table

Use this table when evaluating spans and loads for the following types of steel grating:  
38-W-4 and 38-W-2

Heavy Duty 15/16" C/C Bearing Bars  
Non-Serrated & Serrated



### Maximum Safe Span

Bar Size	Section Modulus psf	Moment of Inertia psf	Approx Weight psf	H-25 Load	H-20 Load	H-15 Load	Auto Traffic	5 Ton Forklift	3 Ton Forklift	1 Ton Forklift
1" x 1/4"	0.211	0.105	5.4	0'-8"	0'-8"	0'-7"	0'-9"	0'-6"	0'-5"	0'-5"
1" x 5/16"	0.263	0.132	6.5	0'-10"	0'-9"	0'-8"	0'-10"	0'-6"	0'-5"	0'-6"
1-1/4" x 1/4"	0.329	0.206	6.5	0'-11"	0'-10"	0'-9"	1'-0"	0'-8"	0'-6"	0'-7"
1-1/4" x 5/16"	0.411	0.257	7.8	1'-0"	0'-11"	0'-10"	1'-2"	0'-8"	0'-7"	0'-9"
1-1/2" x 1/4"	0.474	0.355	7.6	1'-1"	1'-0"	0'-10"	1'-3"	0'-9"	0'-7"	0'-10"
1-1/2" x 5/16"	0.582	0.444	9.2	1'-3"	1'-1"	1'-0"	1'-6"	0'-10"	0'-8"	1'-0"
1-3/4" x 1/4"	0.645	0.564	8.6	1'-4"	1'-2"	1'-0"	1'-7"	0'-10"	0'-9"	1'-0"
1-3/4" x 5/16"	0.806	0.705	10.5	1'-5"	1'-3"	1'-2"	1'-11"	0'-11"	0'-10"	1'-3"
2" x 1/4"	0.842	0.842	9.7	1'-5"	1'-4"	1'-2"	2'-0"	1'-0"	0'-11"	1'-4"
2" x 5/16"	1.053	1.053	11.9	1'-8"	1'-6"	1'-4"	2'-5"	1'-1"	1'-0"	1'-7"
2-1/4" x 1/4"	1.066	1.199	10.8	1'-8"	1'-6"	1'-4"	2'-5"	1'-1"	1'-1"	1'-8"
2-1/4" x 5/16"	1.332	1.499	13.2	1'-10"	1'-8"	1'-6"	3'-0"	1'-3"	1'-3"	2'-0"
2-1/2" x 1/4"	1.316	1.645	11.9	1'-10"	1'-8"	1'-6"	2'-11"	1'-3"	1'-3"	2'-0"
2-1/2" x 5/16"	1.645	2.066	14.5	2'-1"	1'-11"	1'-9"	3'-7"	1'-6"	1'-6"	2'-6"
3" x 1/4"	1.895	2.842	14.0	2'-2"	2'-1"	1'-11"	4'-1"	1'-8"	1'-8"	2'-10"
3" x 5/16"	2.368	3.553	17.2	2'-6"	2'-4"	2'-3"	4'-9"	1'-11"	2'-0"	3'-6"

# STEEL BAR GRATING

## 15 Space

Use this table when evaluating spans and loads for the following types of steel grating:

### Load Table

### 15-W-4 and 15-W-2

U: Safe uniform load (psf)

C: Concentrated load (psf)

### Heavy Duty 15/16" C/C Bearing Bars

### Non-Serrated & Serrated

## LOAD & DEFLECTION TABLE

### SPAN (Direction of Bearing Bar)

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"	84"	96"	
1" x 1/4"	15-W-4	11.7	0.533	U	1,778	1,138	790	580	444	351	284	235	198	145	111	
	15-W-2	12.4		C	1,778	1,422	1,185	1,016	889	790	711	646	593	508	444	
1" x 5/16"	15-W-4	14.9	0.667	U	2,222	1,422	988	726	556	439	356	294	247	181	139	
	15-W-2	16.1		C	2,222	1,778	1,481	1,270	1,111	988	889	808	741	635	556	
1-1/4" x 1/4"	15-W-4	14.5	0.833	U	2,778	1,778	1,235	907	694	549	444	367	309	227	174	
	15-W-2	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-W-4	18.4	1.042	U	3,472	2,222	1,543	1,134	868	686	556	459	386	283	217	
	15-W-2	19.6		C	3,472	2,778	2,315	1,984	1,736	1,543	1,389	1,263	1,157	992	868	
1-1/2" x 1/4"	15-W-4	17.3	1.200	U	4,000	2,560	1,778	1,306	1,000	790	640	529	444	327	250	
	15-W-2	17.9		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-W-4	21.9	1.500	U	5,000	3,200	2,222	1,633	1,250	988	800	661	556	408	313	
	15-W-2	23.1		C	5,000	4,000	3,333	2,857	2,500	2,222	2,000	1,818	1,667	1,429	1,250	
1-3/4" x 1/4"	15-W-4	20.1	1.633	U	5,444	3,484	2,420	1,778	1,361	1,075	871	720	605	444	340	
	15-W-2	20.7		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-W-4	25.3	2.042	U	6,806	4,356	3,025	2,222	1,701	1,344	1,089	900	756	556	425	
	15-W-2	26.8		C	6,806	5,444	4,537	3,889	3,403	3,025	2,722	2,475	2,269	1,944	1,701	
2" x 1/4"	15-W-4	22.8	2.133	U	7,111	4,551	3,160	2,322	1,778	1,405	1,138	940	790	580	444	
	15-W-2	23.5		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-W-4	28.8	2.667	U	8,889	5,689	3,951	2,902	2,222	1,756	1,422	1,175	988	726	556	
	15-W-2	29.9		C	8,889	7,111	5,926	5,079	4,444	3,951	3,556	3,232	2,963	2,540	2,222	
2-1/4" x 1/4"	15-W-4	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-W-2	26.3		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-W-4	32.3	3.375	U	11,250	7,200	5,000	3,673	2,813	2,222	1,800	1,488	1,250	918	703	
	15-W-2	33.4		C	11,250	9,000	7,500	6,429	5,625	5,000	4,500	4,091	3,750	3,214	2,813	
2-1/2" x 1/4"	15-W-4	28.4	3.333	U	11,111	7,111	4,938	3,628	2,778	2,195	1,778	1,469	1,235	907	694	
	15-W-2	29.1		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-W-4	35.7	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-W-2	36.9		C	13,889	11,111	9,259	7,937	6,944	6,173	5,556	5,051	4,630	3,968	3,472	
2-3/4" x 1/4"	15-W-4	31.2	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-W-2	31.8		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-W-4	39.6	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-W-2	41.1		C	16,806	13,444	11,204	9,603	8,403	7,469	6,722	6,111	5,602	4,802	4,201	
3" x 1/4"	15-W-4	34.4	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-W-2	35.5		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-W-4	43.1	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-W-2	44.6		C	20,000	16,000	13,333	11,429	10,000	8,889	8,000	7,273	6,667	5,714	5,000	

Note: When gratings with serrated surface are specified, the depth of the grating required for a specific load will be 1/4" greater than that shown in these tables

# STEEL BAR GRATING

## 19 Space

Use this table when evaluating spans and loads for the following types of steel grating:

### Load Table

19-W-4 and 19-W-2

U: Safe uniform load (psf)

C: Concentrated load (psf)

### Heavy Duty 1-3/16" C/C Bearing Bars

### Non-Serrated & Serrated

## LOAD & DEFLECTION TABLE

SPAN (Direction of Bearing Bar)

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"	84"	96"	
1" x 1/4"	19-W-4	9.5	0.421	U	1,404	898	624	458	351	277	225	186	156	115	88	
	19-W-2	10.1		C	1,404	1,123	936	802	702	624	561	510	468	401	351	
1" x 5/16"	19-W-4	12.1	0.526	U	1,754	1,123	780	573	439	347	281	232	195	143	110	
	19-W-2	13.3		C	1,754	1,404	1,170	1,003	877	780	702	638	585	501	439	
1-1/4" x 1/4"	19-W-4	11.7	0.658	U	2,193	1,404	975	716	548	433	351	290	244	179	137	
	19-W-2	12.3		C	2,193	1,754	1,462	1,253	1,096	975	877	797	731	627	548	
1-1/4" x 5/16"	19-W-4	14.3	0.822	U	2,741	1,754	1,218	895	685	541	439	362	305	224	171	
	19-W-2	16.0		C	2,741	2,193	1,827	1,566	1,031	1,218	1,096	997	914	783	685	
1-1/2" x 1/4"	19-W-4	13.9	0.947	U	3,158	2,021	1,404	1,031	789	624	505	418	351	258	197	
	19-W-2	14.5		C	3,158	2,526	2,105	1,805	1,579	1,404	1,263	1,148	1,053	902	789	
1-1/2" x 5/16"	19-W-4	17.8	1.184	U	3,947	2,526	1,754	1,289	987	780	632	522	439	322	247	
	19-W-2	18.8		C	3,947	3,158	2,632	2,256	1,974	1,754	1,579	1,435	1,316	1,128	987	
1-3/4" x 1/4"	19-W-4	16.1	1.289	U	4,298	2,751	1,910	1,404	1,075	849	688	568	478	351	269	
	19-W-2	16.7		C	4,298	3,439	2,865	2,456	2,149	1,910	1,719	1,563	1,433	1,228	1,075	
1-3/4" x 5/16"	19-W-4	20.4	1.612	U	5,373	3,439	2,388	1,754	1,343	1,061	860	710	597	439	336	
	19-W-2	21.5		C	5,373	4,298	3,582	3,070	2,686	2,388	2,149	1,954	1,791	1,535	1,343	
2" x 1/4"	19-W-4	18.3	1.684	U	5,614	3,593	2,495	1,833	1,404	1,109	898	742	624	458	351	
	19-W-2	18.9		C	5,614	4,491	3,743	3,208	2,807	2,495	2,246	2,041	1,871	1,604	1,404	
2" x 5/16"	19-W-4	23.1	2.105	U	7,018	4,491	3,119	2,291	1,754	1,386	1,123	928	780	573	439	
	19-W-2	24.6		C	7,018	5,614	4,678	4,010	3,509	3,119	2,807	2,552	2,339	2,005	1,754	
2-1/4" x 1/4"	19-W-4	20.5	2.132	U	7,105	4,547	3,158	2,320	1,776	1,404	1,137	940	789	580	444	
	19-W-2	21.1		C	7,105	5,684	4,737	4,060	3,553	3,158	2,842	2,584	2,368	2,030	1,776	
2-1/4" x 5/16"	19-W-4	25.9	2.664	U	8,882	5,684	3,947	2,900	2,220	1,754	1,421	1,174	987	725	555	
	19-W-2	27.0		C	8,882	7,105	5,921	5,075	4,441	3,947	3,553	3,230	2,961	2,538	2,220	
2-1/2" x 1/4"	19-W-4	22.7	2.632	U	8,772	5,614	3,899	2,864	2,193	1,733	1,404	1,160	975	716	548	
	19-W-2	23.3		C	8,772	7,018	5,848	5,013	4,386	3,899	3,509	3,190	2,924	2,506	2,193	
2-1/2" x 5/16"	19-W-4	28.6	3.289	U	10,965	7,018	4,873	3,580	2,741	2,166	1,754	1,450	1,218	895	685	
	19-W-2	29.8		C	10,965	8,772	7,310	6,266	5,482	4,873	4,386	3,987	3,655	3,133	2,741	
2-3/4" x 1/4"	19-W-4	24.9	3.184	U	10,614	6,793	4,717	3,466	2,654	2,097	1,698	1,404	1,179	866	663	
	19-W-2	25.6		C	10,614	8,491	7,076	6,065	5,307	4,717	4,246	3,860	3,538	3,033	2,654	
2-3/4" x 5/16"	19-W-4	31.8	3.980	U	13,268	8,491	5,897	4,332	3,317	2,621	2,123	1,754	1,474	1,083	829	
	19-W-2	33.3		C	13,268	10,614	8,845	7,581	6,634	5,897	5,307	4,825	4,423	3,791	3,317	
3" x 1/4"	19-W-4	27.8	3.789	U	12,632	8,084	5,614	4,125	3,158	2,495	2,021	1,670	1,404	1,031	789	
	19-W-2	28.7		C	12,632	10,105	8,421	7,218	6,316	5,614	5,053	4,593	4,211	3,609	3,158	
3" x 5/16"	19-W-4	34.5	4.737	U	15,789	10,105	7,018	5,156	3,947	3,119	2,526	2,088	1,754	1,289	987	
	19-W-2	36.1		C	15,789	12,632	10,526	9,023	7,895	7,018	6,316	5,742	5,263	4,511	3,947	

Note: When gratings with serrated surface are specified, the depth of the grating required for a specific load will be 1/4" greater than that shown in these tables

# STEEL BAR GRATING

## 22 Space

Use this table when evaluating spans and loads for the following types of steel grating:

### Load Table

22-W-4 and 22-W-2

U: Safe uniform load (psf)

C: Concentrated load (psf)

### Heavy Duty 1-3/8" C/C Bearing Bars

### Non-Serrated & Serrated

## LOAD & DEFLECTION TABLE

SPAN (Direction of Bearing Bar)

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"	84"	96"	
1" x 1/4"	22-W-4	8.3	0.364	U	1212	776	539	396	303	239	194	160	135	99	76	
	22-W-2	9.0		C	1212	970	808	693	606	539	485	441	404	346	303	
1" x 5/16"	22-W-4	10.7	0.455	U	1515	970	673	495	379	299	242	200	168	124	95	
	22-W-2	11.8		C	1515	1212	1010	866	758	673	606	551	505	433	379	
1-1/4" x 1/4"	22-W-4	10.2	0.568	U	1894	1212	842	618	473	374	303	250	210	155	118	
	22-W-2	10.9		C	1894	1515	1263	1082	947	842	758	689	631	541	473	
1-1/4" x 5/16"	22-W-4	13.1	0.710	U	2367	1515	1052	773	592	468	379	313	263	193	148	
	22-W-2	14.2		C	2367	1894	1578	1353	1184	1052	947	861	789	676	592	
1-1/2" x 1/4"	22-W-4	12.1	0.818	U	2727	1745	1212	891	682	539	436	361	303	223	170	
	22-W-2	12.8		C	2727	2182	1818	1558	1364	1212	1091	992	909	779	682	
1-1/2" x 5/16"	22-W-4	15.4	1.023	U	3409	2182	1515	1113	852	673	545	451	379	278	213	
	22-W-2	16.8		C	3409	2727	2273	1948	1705	1515	1364	1240	1136	974	852	
1-3/4" x 1/4"	22-W-4	14.0	1.114	U	3712	2376	1650	1212	928	733	594	491	412	303	232	
	22-W-2	14.7		C	3712	2970	2475	2121	1856	1650	1485	1350	1237	1061	928	
1-3/4" x 5/16"	22-W-4	17.8	1.392	U	4640	2970	2062	1515	1160	917	742	614	516	379	290	
	22-W-2	19.0		C	4640	3712	3093	2652	2320	2062	1856	1687	1547	1326	1160	
2" x 1/4"	22-W-4	16.0	1.455	U	4848	3103	2155	1583	1212	958	776	641	539	396	303	
	22-W-2	16.6		C	4848	3879	3232	2771	2424	2155	1939	1763	1616	1385	1212	
2" x 5/16"	22-W-4	20.2	1.818	U	6061	3879	2694	1979	1515	1197	970	801	673	495	379	
	22-W-2	21.3		C	6061	4848	4040	3463	3030	2694	2424	2204	2020	1732	1515	
2-1/4" x 1/4"	22-W-4	17.9	1.841	U	6136	3927	2727	2004	1534	1212	982	811	682	501	384	
	22-W-2	18.5		C	6136	4909	4091	3506	3068	2727	2455	2231	2045	1753	1534	
2-1/4" x 5/16"	22-W-4	22.6	2.301	U	7670	4909	3409	2505	1918	1515	1227	1014	852	626	479	
	22-W-2	23.7		C	7670	6136	5114	4383	3835	3409	3068	2789	2557	2192	1918	
2-1/2" x 1/4"	22-W-4	19.8	2.273	U	7576	4848	3367	2474	1894	1496	1212	1002	842	618	473	
	22-W-2	20.4		C	7576	6061	5051	4329	3788	3367	3030	2755	2525	2165	1894	
2-1/2" x 5/16"	22-W-4	25.0	2.841	U	9470	6061	4209	3092	2367	1871	1515	1252	1052	773	592	
	22-W-2	26.1		C	9470	7576	6313	5411	4735	4209	3788	3444	3157	2706	2367	
2-3/4" x 1/4"	22-W-4	21.7	2.750	U	9167	5867	4074	2993	2292	1811	1467	1212	1019	748	573	
	22-W-2	22.3		C	9167	7333	6111	5238	4583	4074	3667	3333	3056	2619	2292	
2-3/4" x 5/16"	22-W-4	27.8	3.438	U	11458	7333	5093	3741	2865	2263	1833	1515	1273	935	716	
	22-W-2	29.3		C	11458	9167	7639	6548	5729	5093	4583	4167	3819	3274	2865	
3" x 1/4"	22-W-4	24.1	3.273	U	10909	6982	4848	3562	2727	2155	1745	1443	1212	891	682	
	22-W-2	25.2		C	10909	8727	7273	6234	5455	4848	4364	3967	3636	3117	2727	
3" x 5/16"	22-W-4	30.2	4.091	U	13636	8727	6061	4553	3409	2694	2182	1803	1515	1113	852	
	22-W-2	31.7		C	13636	10909	9091	7792	6818	6061	5455	4959	4545	3896	3409	

Note: When gratings with serrated surface are specified, the depth of the grating required for a specific load will be 1/4" greater than that shown in these tables



# STEEL BAR GRATING

## 30 Space

### Load Table

Use this table when evaluating spans and loads for the following types of steel grating:

30-W-4 and 30-W-2

U: Safe uniform load (psf)

C: Concentrated load (psf)

Heavy Duty 1-7/8" C/C Bearing Bars

Non-Serrated & Serrated

### LOAD & DEFLECTION TABLE

SPAN (Direction of Bearing Bar)

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"	84"	96"	
1" x 1/4"	30-W-4	6.3	0.267	U	889	569	395	290	222	176	142	118	99	73	56	
	30-W-2	7.0		C	889	711	593	508	444	395	356	323	296	254	222	
1" x 5/16"	30-W-4	8.2	0.333	U	1,111	711	494	363	278	219	178	147	123	91	69	
	30-W-2	9.4		C	1,111	889	741	635	556	494	444	404	370	317	278	
1-1/4" x 1/4"	30-W-4	7.8	0.417	U	1,389	889	617	454	347	274	222	184	154	113	87	
	30-W-2	8.4		C	1,389	1,111	926	794	694	617	556	505	463	397	347	
1-1/4" x 5/16"	30-W-4	10.0	0.521	U	1,736	1,111	772	567	434	343	278	230	193	142	109	
	30-W-2	11.1		C	1,736	1,389	1,157	992	868	772	694	631	579	496	434	
1-1/2" x 1/4"	30-W-4	9.2	0.600	U	2,000	1,280	889	653	500	395	320	264	222	163	125	
	30-W-2	9.8		C	2,000	1,600	1,333	1,443	1,000	889	800	727	667	571	500	
1-1/2" x 5/16"	30-W-4	11.8	0.750	U	2,500	1,600	1,111	816	625	494	400	331	278	204	156	
	30-W-2	12.9		C	2,500	2,000	1,667	1,429	1,250	1,111	1,000	909	833	714	625	
1-3/4" x 1/4"	30-W-4	10.6	0.817	U	2,722	1,742	1,210	889	681	538	436	360	302	222	170	
	30-W-2	11.3		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-W-4	13.6	1.021	U	3,403	2,178	1,512	1,111	851	672	544	450	378	278	213	
	30-W-2	14.7		C	3,403	2,722	2,269	1,944	1,701	1,512	1,361	1,237	1,134	972	851	
2" x 1/4"	30-W-4	12.0	1.067	U	3,556	2,276	1,580	1,161	889	702	569	470	395	290	222	
	30-W-2	12.7		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-W-4	15.3	1.333	U	4,444	2,844	1,975	1,451	1,111	878	711	588	494	363	278	
	30-W-2	16.5		C	4,444	3,556	2,963	2,540	2,222	1,975	1,778	1,616	1,481	1,270	1,111	
2-1/4" x 1/4"	30-W-4	13.6	1.350	U	4,500	2,880	2,000	1,469	1,125	889	720	595	500	367	281	
	30-W-2	14.1		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-W-4	17.1	1.688	U	5,625	3,600	2,500	1,837	1,406	1,111	900	744	625	459	352	
	30-W-2	18.3		C	5,625	4,500	3,750	3,214	2,813	2,500	2,250	2,045	1,875	1,607	1,406	
2-1/2" x 1/4"	30-W-4	14.9	1.667	U	5,556	3,556	2,469	1,814	1,389	1,097	889	735	617	454	347	
	30-W-2	15.3		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-W-4	18.9	2.083	U	6,944	4,444	3,086	2,268	1,736	1,372	1,111	918	772	567	434	
	30-W-2	20.0		C	6,944	5,556	4,630	3,968	3,472	3,086	2,778	2,525	2,315	1,984	1,736	
2-3/4" x 1/4"	30-W-4	16.3	2.017	U	6,722	4,302	2,988	2,195	1,681	1,328	1,076	889	747	549	420	
	30-W-2	17.0		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-W-4	21.0	2.521	U	8,403	5,378	3,735	2,744	2,101	1,660	1,344	1,111	934	686	525	
	30-W-2	22.6		C	8,403	6,722	5,602	4,802	4,201	3,735	3,361	3,056	2,801	2,401	2,101	
3" x 1/4"	30-W-4	18.2	2.400	U	8,000	5,120	3,556	2,612	2,000	1,580	1,280	1,058	889	653	500	
	30-W-2	19.3		C	8,000	6,400	5,333	4,571	4,000	3,556	3,200	2,909	2,667	2,286	2,000	
3" x 5/16"	30-W-4	22.8	3.000	U	10,000	6,400	4,444	3,265	2,500	1,975	1,600	1,322	1,111	816	625	
	30-W-2	24.4		C	10,000	8,000	6,667	5,714	5,000	4,444	4,000	3,636	3,333	2,857	2,500	

Note: When gratings with serrated surface are specified, the depth of the grating required for a specific load will be 1/4" greater than that shown in these tables

# STEEL BAR GRATING

## 38 Space

### Load Table

Use this table when evaluating spans and loads for the following types of steel grating:

**38-W-4 and 38-W-2**

U: Safe uniform load (psf)

C: Concentrated load (psf)

Heavy Duty 2-3/8" C/C Bearing Bars

Non-Serrated & Serrated

### LOAD & DEFLECTION TABLE

SPAN (Direction of Bearing Bar)

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"	84"	96"	
1" x 1/4"	38-W-4	5.2	0.211	U	702	449	312	229	175	139	112	93	78	57	44	
	38-W-2	5.9		C	702	561	468	401	351	312	281	255	234	201	175	
1" x 5/16"	38-W-4	6.8	0.263	U	877	561	390	286	219	173	140	116	97	72	55	
	38-W-2	7.9		C	877	702	585	501	439	390	351	319	292	251	219	
1-1/4" x 1/4"	38-W-4	8.3	0.329	U	1096	702	487	358	274	217	175	145	122	90	69	
	38-W-2	7.0		C	1096	877	731	627	548	487	439	399	365	313	274	
1-1/4" x 5/16"	38-W-4	8.2	0.411	U	1,371	877	609	448	343	271	219	181	152	112	86	
	38-W-2	9.4		C	1,371	1,096	914	783	685	609	548	498	457	392	343	
1-1/2" x 1/4"	38-W-4	7.5	0.474	U	1,579	1,011	702	516	395	312	253	209	175	129	99	
	38-W-2	8.1		##	1,579	1,263	1,053	902	789	702	632	574	526	451	395	
1-1/2" x 5/16"	38-W-4	9.6	0.592	U	1,974	1,263	877	644	493	390	316	261	219	161	123	
	38-W-2	10.8		C	1,974	1,579	1,316	1,128	987	877	789	718	658	564	493	
1-3/4" x 1/4"	38-W-4	8.6	0.645	U	2,149	1,375	955	702	537	425	344	284	239	175	134	
	38-W-2	9.3		C	2,149	1,719	1,433	1,228	1,075	955	860	781	716	614	537	
1-3/4" x 5/16"	38-W-4	11.1	0.806	U	2,686	1,719	1,194	877	672	531	430	355	298	219	168	
	38-W-2	12.2		C	2,686	2,149	1,791	1,535	1,343	1,194	1,075	977	895	768	672	
2" x 1/4"	38-W-4	9.8	0.842	U	2,807	1,796	1,248	917	702	554	449	371	312	229	175	
	38-W-2	10.4		C	2,807	2,246	1,871	1,604	1,404	1,248	1,123	1,021	936	802	702	
2" x 5/16"	38-W-4	12.5	1.053	U	3,509	2,246	1,559	1,146	877	693	561	464	390	286	219	
	38-W-2	13.6		C	3,509	2,807	2,339	2,005	1,754	1,559	1,404	1,276	1,170	1,003	877	
2-1/4" x 1/4"	38-W-4	10.9	1.066	U	3,553	2,274	1,579	1,160	888	702	568	470	395	290	222	
	38-W-2	11.5		C	3,553	2,842	2,368	2,030	1,776	1,579	1,421	1,292	1,184	1,015	888	
2-1/4" x 5/16"	38-W-4	13.9	1.332	U	4,441	2,842	1,974	1,450	1,110	877	711	587	493	363	278	
	38-W-2	15.0		C	4,441	3,553	2,961	2,538	2,220	1,974	1,776	1,615	1,480	1,269	1,110	
2-1/2" x 1/4"	38-W-4	12.0	1.316	U	4,386	2,807	1,949	1,432	1,096	866	702	580	487	358	274	
	38-W-2	12.7		C	4,386	3,509	2,924	2,506	2,193	1,949	1,754	1,595	1,462	1,253	1,096	
2-1/2" x 5/16"	38-W-4	15.3	1.645	U	5,482	3,509	2,437	1,790	1,371	1,083	877	725	609	448	343	
	38-W-2	16.5		C	5,482	4,386	3,655	3,133	2,741	2,437	2,193	1,994	1,827	1,566	1,371	
2-3/4" x 1/4"	38-W-4	13.2	1.592	U	5,307	3,396	2,359	1,733	1,327	1,048	849	702	590	433	332	
	38-W-2	13.8		C	5,307	4,246	3,538	3,033	2,654	2,359	2,123	1,930	1,769	1,516	1,327	
2-3/4" x 5/16"	38-W-4	17.2	1.990	U	6,634	4,246	2,948	2,166	1,658	1,310	1,061	877	737	542	415	
	38-W-2	18.7		C	6,634	5,307	4,423	3,791	3,317	2,948	2,654	2,412	2,211	1,895	1,658	
3" x 1/4"	38-W-4	14.9	1.895	U	6,316	4,042	2,807	2,062	1,579	1,248	1,011	835	702	516	395	
	38-W-2	15.9		C	6,316	5,053	4,211	3,609	3,158	2,807	2,526	2,297	2,105	1,805	1,579	
3" x 5/16"	38-W-4	18.6	2.368	U	7,895	5,053	3,509	2,578	1,974	1,559	1,263	1,044	877	644	493	
	38-W-2	20.1		C	7,895	6,316	5,263	4,511	3,947	3,509	3,158	2,871	2,632	2,256	1,974	

Note: When gratings with serrated surface are specified, the depth of the grating required for a specific load will be 1/4" greater than that shown in these tables