BGFMA Heavy Duty Riveted Open Grid Design

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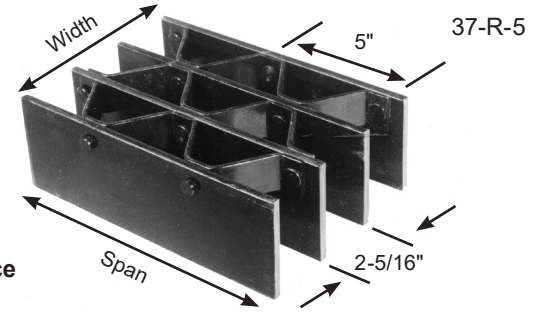
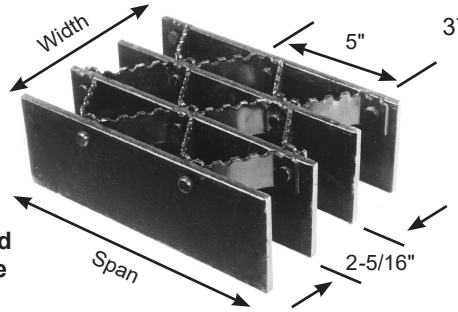
The classic form of industrial grating, Heavy Duty Riveted, was the first of its kind and continues to be a top choice among engineers for its exceptional durability, strength and stiffness under rolling loads. Reticuline connecting bars are permanently joined to straight bearing bars with rivets at each contact point. These connecting bars extend in the direction of the grating span, increasing load carrying capacity and lateral stability. Serrated surfaces are available to increase skid resistance.



Plain Surface



Serrated Surface

% Open Area*	
1/4"	3/8"
82%	**78%**

Bar Size, Inches**	Wt.* Lbs. Sq. Ft.	Section Properties		Cross Bar Size, Inches	Maximum Safe **ClearSpan**, Inches- Partially Distributed Load			
		Sx*, in³ Ft. Width	Ix*, in⁴ Ft. Width		1 Ton	3 Ton	5 Ton	H15/H20
2 x 1/4	14.63	0.991	1.080	1-1/2 x 3/16	19	12	13	16
2 x 3/8	17.91	1.319	1.409	1-1/2 x 3/16	25	16	16	19
2-1/4 x 1/4	15.68	1.185	1.482	1-1/2 x 3/16	22	14	15	17
2-1/4 x 3/8	19.41	1.606	1.957	1-1/2 x 3/16	30	18	18	21
2-1/2 x 1/4	17.02	1.422	1.999	1-1/2 x 3/16	26	16	17	20
2-1/2 x 3/8	20.84	1.946	2.657	1-1/2 x 3/16	37	22	21	24
3 x 1/4	19.27	2.006	3.420	1-1/2 x 3/16	37	22	21	25
3 x 3/8	23.96	2.769	4.568	1-1/2 x 3/16	51	29	28	31
3-1/2 x 1/4	21.52	2.723	5.427	1-1/2 x 3/16	49	28	27	31
3-1/2 x 3/8	27.09	3.764	7.252	1-1/2 x 3/16	65	38	36	40
4 x 1/4	23.78	3.560	8.097	1-1/2 x 3/16	63	36	33	38
4 x 3/8	30.21	4.923	10.818	1-1/2 x 3/16	74	49	45	50
4-1/2 x 1/4	26.03	4.513	11.508	1-1/2 x 3/16	74	44	41	46
4-1/2 x 3/8	33.34	6.238	15.372	1-1/2 x 3/16	83	61	55	60
5 x 1/4	28.28	5.577	15.735	1-1/2 x 3/16	83	54	49	54
5 x 3/8	36.46	7.705	21.021	1-1/2 x 3/16	92	74	67	72

*Based on approximately 4.5 bars/ft of grating width. Bearing bars 2-5/16" face-to-face. **Larger bar sizes are available.

Bar Size, Inches	Maximum Safe Concentrated Load*, Lbs. - **ClearSpan**													
	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"
2 x 1/4	6607	4404	3303	2643	2202	1888	1652	1468	1321	1201	1101	1016	944	826
2 x 3/8	8792	5862	4396	3517	2931	2512	2198	1954	1758	1599	1465	1353	1256	1099
2-1/4 x 1/4	7903	5268	3951	3161	2634	2258	1976	1756	1581	1437	1317	1216	1129	988
2-1/4 x 3/8	10706	7137	5353	4282	3569	3059	2677	2379	2141	1947	1784	1647	1529	1338
2-1/2 x 1/4	9481	6321	4741	3793	3160	2709	2370	2107	1896	1724	1580	1459	1354	1185
2-1/2 x 3/8	12974	8649	6487	5190	4325	3707	3244	2883	2595	2359	2162	1996	1853	1622
3 x 1/4	13373	8916	6687	5349	4458	3821	3343	2972	2675	2432	2229	2057	1910	1672
3 x 3/8	18457	12304	9228	7383	6152	5273	4614	4101	3691	3356	3076	2839	2637	2307
3-1/2 x 1/4	18151	12101	9076	7261	6050	5186	4538	4034	3630	3300	3025	2793	2593	2269
3-1/2 x 3/8	25096	16731	12548	10038	8365	7170	6274	5577	5019	4563	4183	3861	3585	3137
4 x 1/4	23735	15823	11867	9494	7912	6781	5934	5274	4747	4315	3956	3651	3391	2967
4 x 3/8	32821	21880	16410	13128	10940	9377	8205	7293	6564	5967	5470	5049	4689	4103
4-1/2 x 1/4	30087	20058	15044	12035	10029	8596	7522	6686	6017	5470	5015	4629	4298	3761
4-1/2 x 3/8	41587	27724	20793	16635	13862	11882	10397	9241	8317	7561	6931	6398	5941	5198
5 x 1/4	37181	24787	18590	14872	12394	10623	9295	8262	7436	6760	6197	5720	5312	4648
5 x 3/8	51366	34244	25683	20546	17122	14676	12842	11415	10273	9339	8561	7902	7338	6421

**Based on Bearing bars/ Ft of Width = No. of Connecting bars/ Ft of Width = 4.683 for b =1/4" & Based on Bearing bars/ Ft of Width = No. of Connecting bars/ Ft of Width = 4.465 for b = 3/8"
Allowable Fiber Stress = 20,000 psi

Panel Width Chart (in.) - 37-R-5 **Dimensions Are Out-to-Out of Bearing Bars****

No. of Bars	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1/4" Bars	2-13/16	5-3/8	7-15/16	10-1/2	13-1/16	15-5/8	18-3/16	20-3/4	23-5/16	25-7/8	28-7/16	31	33-9/16	36-1/8	38-11/16
3/8" Bars	3-1/16	5-3/4	8-7/16	11-1/8	13-13/16	16-1/2	19-3/16	21-7/8	24-9/16	27-1/4	29-15/16	32-5/8	35-5/16	38	40-11/16

Design Note: The maximum clear span and load ratings are based on a single span with simple supports.