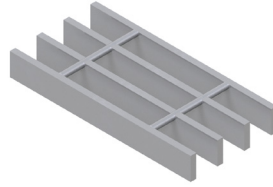


LOAD TABLES | HEAVY DUTY, IMPERIAL

LOAD TABLES - HD

Grating Type: 19HW4
Design Code: NAAMM MBG 534
Material: ASTM A36
Surface: Smooth



U = Safe Uniform Load (lbs/ft²)
D_u = Deflection Due to Safe Uniform Load (in)
C = Safe Concentrated Load (lbs/ft of grating width)
D_c = Deflection Due to Safe Concentrated Load (in)
Allowable Extreme Fiber Stress = 20 ksi

Bearing Bar Size (inches)	Approx. Weight (lbs/ft ²)	Ped. Span (inches)	Load / Deflection	Span (ft -in)																Section Properties	
				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"	7' - 6"	8' - 0"	S _x (in ³ /ft)	I _x (in ⁴ /ft)	
1" x 1/4"	9.53	61	U	5,614	2,495	1,404	898	624	458	351	277	225							0.421		
			D _u	0.02	0.05	0.08	0.13	0.19	0.25	0.33	0.42	0.52									
			C	2,807	1,871	1,404	1,123	936	802	702	624	561									
			D _c	0.02	0.04	0.07	0.10	0.15	0.20	0.26	0.34	0.41	186 0.63 510 0.50								
1 1/4" x 1/4"	11.72	72	U	8,772	3,899	2,193	1,404	975	716	548	433	351	290						0.658		
			D _u	0.02	0.04	0.07	0.10	0.15	0.20	0.26	0.34	0.41	0.50								
			C	4,386	2,924	2,193	1,754	1,462	1,253	1,096	975	877	797								
			D _c	0.01	0.03	0.05	0.08	0.12	0.16	0.21	0.27	0.33	0.40	244 0.60 731 0.48							
1 1/2" x 1/4"	13.92	83	U	12,632	5,614	3,158	2,021	1,404	1,031	789	624	505	418	351	299				0.947		
			D _u	0.01	0.03	0.06	0.09	0.12	0.17	0.22	0.28	0.34	0.42	0.50	0.58	258 0.68					
			C	6,316	4,211	3,158	2,526	2,105	1,805	1,579	1,404	1,263	1,148	1,053	972						
			D _c	0.01	0.02	0.04	0.07	0.10	0.14	0.18	0.22	0.28	0.33	0.40	0.47	902 0.54					
1 1/2" x 3/8"	20.78	92	U	18,947	8,421	4,737	3,032	2,105	1,547	1,184	936	758	626	526	448	387	337	296	1.421		
			D _u	0.01	0.03	0.06	0.09	0.12	0.17	0.22	0.28	0.34	0.42	0.50	0.58	0.68	0.78	0.88			
			C	9,474	6,316	4,737	3,789	3,158	2,707	2,368	2,105	1,895	1,722	1,579	1,457	1,353	1,263	1,184			
			D _c	0.01	0.02	0.04	0.07	0.10	0.14	0.18	0.22	0.28	0.33	0.40	0.47	0.54	0.62	0.71			
2" x 1/4"	18.31	103	U	22,456	9,981	5,614	3,593	2,495	1,833	1,404	1,109	898	742	624	532	458	399	351	1.684		
			D _u	0.01	0.02	0.04	0.06	0.09	0.13	0.17	0.21	0.26	0.31	0.37	0.44	0.51	0.58	0.66			
			C	11,228	7,485	5,614	4,491	3,743	3,208	2,807	2,495	2,246	2,041	1,871	1,727	1,604	1,497	1,404			
			D _c	0.01	0.02	0.03	0.05	0.07	0.10	0.13	0.17	0.21	0.26	0.31	0.37	0.44	0.51	0.58		0.66	
2 1/2" x 1/4"	22.70	122	U	35,088	15,595	8,772	5,614	3,899	2,864	2,193	1,733	1,404	1,160	975	830	716	624	548	2.632		
			D _u	0.01	0.02	0.03	0.05	0.07	0.10	0.13	0.17	0.21	0.25	0.30	0.35	0.41	0.47	0.53			
			C	17,544	11,696	8,772	7,018	5,848	5,013	4,386	3,899	3,509	3,190	2,924	2,699	2,506	2,339	2,193			
			D _c	0.01	0.01	0.03	0.04	0.06	0.08	0.11	0.13	0.17	0.20	0.24	0.28	0.32	0.37	0.42			
3" x 1/4"	27.10	140	U	50,526	22,456	12,632	8,084	5,614	4,125	3,158	2,495	2,021	1,670	1,404	1,196	1,031	898	789	3.789		
			D _u	0.01	0.02	0.03	0.04	0.06	0.08	0.11	0.14	0.17	0.21	0.25	0.29	0.34	0.39	0.44			
			C	25,263	16,842	12,632	10,105	8,421	7,218	6,316	5,614	5,053	4,593	4,211	3,887	3,609	3,368	3,158			
			D _c	0.01	0.01	0.02	0.03	0.05	0.07	0.09	0.11	0.14	0.17	0.20	0.23	0.27	0.31	0.35			
3" x 3/8"	40.99	154	U	75,789	33,684	18,947	12,126	8,421	6,187	4,737	3,743	3,032	2,505	2,105	1,794	1,547	1,347	1,184	5.684		
			D _u	0.01	0.02	0.03	0.04	0.06	0.08	0.11	0.14	0.17	0.21	0.25	0.29	0.34	0.39	0.44			
			C	37,895	25,263	18,947	15,158	12,632	10,827	9,474	8,421	7,579	6,890	6,316	5,830	5,414	5,053	4,737			
			D _c	0.01	0.01	0.02	0.03	0.05	0.07	0.09	0.11	0.14	0.17	0.20	0.23	0.27	0.31	0.35			
3 1/2" x 1/4"	31.49	157	U	68,772	30,565	17,193	11,004	7,641	5,614	4,298	3,396	2,751	2,273	1,910	1,628	1,404	1,223	1,075	5.158		
			D _u	0.01	0.01	0.02	0.04	0.05	0.07	0.09	0.12	0.15	0.18	0.21	0.25	0.29	0.33	0.38			
			C	34,386	22,924	17,193	13,754	11,462	9,825	8,596	7,641	6,877	6,252	5,731	5,290	4,912	4,585	4,298			
			D _c	0.00	0.01	0.02	0.03	0.04	0.06	0.08	0.10	0.12	0.14	0.17	0.20	0.23	0.27	0.30			
3 1/2" x 3/8"	47.57	173	U	103,158	45,848	25,789	16,505	11,462	8,421	6,447	5,094	4,126	3,410	2,865	2,442	2,105	1,834	1,612	7.737		
			D _u	0.01	0.01	0.02	0.04	0.05	0.07	0.09	0.12	0.15	0.18	0.21	0.25	0.29	0.33	0.38			
			C	51,579	34,386	25,789	20,632	17,193	14,737	12,895	11,462	10,316	9,378	8,596	7,935	7,368	6,877	6,447			
			D _c	0.00	0.01	0.02	0.03	0.04	0.06	0.08	0.10	0.12	0.14	0.17	0.20	0.23	0.27	0.30			
4" x 1/4"	35.88	173	U	89,825	39,922	22,456	14,372	9,981	7,333	5,614	4,436	3,593	2,969	2,495	2,126	1,833	1,597	1,404	6.737		
			D _u	0.01	0.01	0.02	0.03	0.05	0.06	0.08	0.10	0.13	0.16	0.19	0.22	0.25	0.29	0.33			
			C	44,912	29,942	22,456	17,965	14,971	12,832	11,228	9,981	8,982	8,166	7,485	6,910	6,416	5,988	5,614			
			D _c	0.00	0.01	0.02	0.03	0.04	0.05	0.07	0.08	0.10	0.13	0.15	0.17	0.20	0.23	0.26			
4" x 3/8"	54.16	192	U	134,737	59,883	33,684	21,558	14,971	10,999	8,421	6,654	5,389	4,454	3,743	3,189	2,750	2,395	2,105	10.105		
			D _u	0.01	0.01	0.02	0.03	0.05	0.06	0.08	0.10	0.13	0.16	0.19	0.22	0.25	0.29	0.33			
			C	67,368	44,912	33,684	26,947	22,456	19,248	16,842	14,971	13,474	12,249	11,228	10,364	9,624	8,982	8,421			
			D _c	0.00	0.01	0.02	0.03	0.04	0.05	0.07	0.08	0.10	0.13	0.15	0.17	0.20	0.23	0.26			

Spans and loads in red exceed a deflection of 1/4" for uniform loads of 100 lbs./sq. ft. Experience has shown that 1/4" deflection is the maximum deflection to give pedestrian comfort, but can be exceeded for other types of loads at the discretion of the specifying professional.

