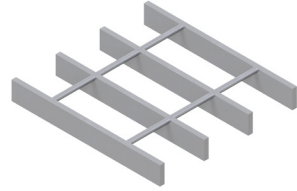


LOAD TABLES | HEAVY DUTY, IMPERIAL

LOAD TABLES - EXTRA-WIDE-GAP

Grating Type: **38HW4**
 Design Code: **NAAMM MBG 534-19**
 Material: **ASTM A1011CS Grade 36**
 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"	5.62	51	U	2,807	1,248	702	449	312	229	175	139											0.211	0.105							
			D _u	0.02	0.05	0.08	0.13	0.19	0.25	0.33	0.42																			
			C	1,404	936	702	561	468	401	351	312																			
			D _c	0.02	0.04	0.07	0.10	0.15	0.20	0.26	0.34																			
1 1/4" x 1/4"	6.70	61	U	4,386	1,949	1,096	702	487	358	274	217	175	145											0.329	0.206					
			D _u	0.02	0.04	0.07	0.10	0.15	0.20	0.26	0.34	0.41	0.50																	
			C	2,193	1,462	1,096	877	731	627	548	487	439	399																	
			D _c	0.01	0.03	0.05	0.08	0.12	0.16	0.21	0.27	0.33	0.40																	
1 1/2" x 1/4"	7.77	70	U	6,316	2,807	1,579	1,011	702	516	395	312	253	209	175											0.474	0.355				
			D _u	0.01	0.03	0.06	0.09	0.12	0.17	0.22	0.28	0.34	0.42	0.50																
			C	3,158	2,105	1,579	1,263	1,053	902	789	702	632	574	526																
			D _c	0.01	0.02	0.04	0.07	0.10	0.14	0.18	0.22	0.28	0.33	0.40																
1 1/2" x 3/8"	11.17	77	U	9,474	4,211	2,368	1,516	1,053	773	592	468	379	313	263	224											0.711	0.533			
			D _u	0.01	0.03	0.06	0.09	0.12	0.17	0.22	0.28	0.34	0.42	0.50																
			C	4,737	3,158	2,368	1,895	1,579	1,353	1,184	1,053	947	861	789	729															
			D _c	0.01	0.02	0.04	0.07	0.10	0.14	0.18	0.22	0.28	0.33	0.40																
2" x 1/4"	9.92	87	U	11,228	4,990	2,807	1,796	1,248	917	702	554	449	371	312	266	229	200											0.842	0.842	
			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													
			C	5,614	3,743	2,807	2,246	1,871	1,604	1,404	1,248	1,123	1,021	936	864	802	749													
			D _c	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													
2 1/2" x 1/4"	12.06	102	U	17,544	7,797	4,386	2,807	1,949	1,432	1,096	866	702	580	487	415	358	312	274											1.316	1.645
			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	8,772	5,848	4,386	3,509	2,924	2,506	2,193	1,949	1,754	1,595	1,462	1,350	1,253	1,170	1,096												
			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"	14.21	117	U	25,263	11,228	6,316	4,042	2,807	2,062	1,579	1,248	1,011	835	702	598	516	449	395											1.895	2.842
			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	12,632	8,421	6,316	5,053	4,211	3,609	3,158	2,807	2,526	2,297	2,105	1,943	1,805	1,684	1,579												
			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"	21.37	130	U	37,895	16,842	9,474	6,063	4,211	3,093	2,368	1,871	1,516	1,253	1,053	897	773	674	592											2.842	4.263
			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	18,947	12,632	9,474	7,579	6,316	5,414	4,737	4,211	3,789	3,445	3,158	2,915	2,707	2,526	2,368												
			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												

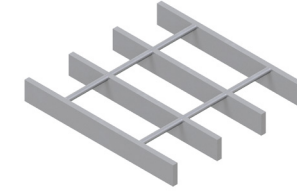
Spans and loads in red exceed a deflection of 1/4" for uniform loads of 100 lbs./sq. ft. Experience has shown that 1/4" deflection is the maximum deflection to give pedestrian comfort, but can be exceeded for other types of loads at the discretion of the specifying professional.

38HW4 (in)

# of Bars	2	3	4	5	6	7	8	9	10	11
1/4" Bars	2-5/8	5	7-3/8	9-3/4	12-1/8	14-1/2	16-7/8	19-1/4	21-5/8	24
3/8" Bars	2-3/4	5-1/8	7-1/2	9-7/8	12-1/4	14-5/8	17	19-3/8	21-3/4	24-1/8
# of Bars	12	13	14	15	16	17	18	19	20	21
1/4" Bars	26-3/8	28-3/4	31-1/8	33-1/2	35-7/8	38-1/4	40-5/8	43	45-3/8	47-3/4
3/8" Bars	26-1/2	28-7/8	31-1/4	33-5/8	36	38-3/8	40-3/4	43-1/8	45-1/2	47-7/8

LOAD TABLES - EXTRA-WIDE-GAP

Grating Type: **38HW4**
 Design Code: **NAAMM MBG 534-19**
 Material: **ASTM A1011CS Grade 36**
 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										
3 1/2" x 1/4"	16.36	132	U	34,386	15,283	8,596	5,502	3,821	2,807	2,149	1,698	1,375	1,137	955	814	702	611	537											2.579	4.513
			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	17,193	11,462	8,596	6,877	5,731	4,912	4,298	3,821	3,439	3,126	2,865	2,645	2,456	2,292	2,149												
			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"	24.60	146	U	51,579	22,924	12,895	8,253	5,731	4,211	3,224	2,547	2,063	1,705	1,433	1,221	1,053	917	806											3.868	6.770
			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	25,789	17,193	12,895	10,316	8,596	7,368	6,447	5,731	5,158	4,689	4,298	3,968	3,684	3,439	3,224												
			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"	18.51	146	U	44,912	19,961	11,228	7,186	4,990	3,666	2,807	2,218	1,796	1,485	1,248	1,063	917	798	702											3.368	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	22,456	14,971	11,228	8,982	7,485	6,416	5,614	4,990	4,491	4,083	3,743	3,455	3,208	2,994	2,807												
			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"	27.82	161	U	67,368	29,942	16,842	10,779	7,485	5,499	4,211	3,327	2,695	2,227	1,871	1,595	1,375	1,198	1,053											5.053	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	33,684	22,456	16,842	13,474	11,228	9,624	8,421	7,485	6,737	6,124	5,614	5,182	4,812	4,491	4,211												
			D _c	0.00	0.01	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											
5" x 3/8"	34.26	191	U	105,263	46,784	26,316	16,842	11,696	8,593	6,579	5,198	4,211	3,480	2,924	2,491	2,148	1,871	1,645											7.895	19.737
			D _u	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												
			C	52,632	35,088	26,316	21,053	17,544	15,038	13,158	11,696	10,526	9,569	8,772	8,097	7,519	7,018	6,579												
			D _c	0.00	0.01	0.01	0.02	0.03	0.04	0.05	0.07	0.08	0.10	0.12	0.14	0.16	0.19	0.21												
6" x 3/8"	40.70	218	U	151,579	67,368	37,895	24,253	16,842	12,374	9,474	7,485	6,063	5,011	4,211	3,588	3,093	2,695	2,368											11.368	34.105
			D _u	0.00	0.01	0.01	0.02	0.03	0.04	0.06	0.07	0.09	0.10	0.12	0.15	0.17	0.19	0.22												
			C	75,789	50,526	37,895	30,316	25,263	21,654	18,947	16,842	15,158	13,780	12,632	11,660	10,827	10,105	9,474												
			D _c	0.00	0.01	0.01	0.02	0.03	0.04	0.06	0.07	0.08	0.10	0.12	0.14	0.16	0.18													

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.

38HW4 (in)

# of Bars	2	3	4	5	6	7	8	9	10	11
1/4" Bars	2-5/8	5	7-3/8	9-3/4	12-1/8	14-1/2	16-7/8	19-1/4	21-5/8	24
3/8" Bars	2-3/4	5-1/8	7-1/2	9-7/8	12-1/4	14-5/8	17	19-3/8	21-3/4	24-1/8
# of Bars	12	13								

