

LOAD TABLES - CLOSE-MESH

Grating Type: 15W4
Design Code: NAAMM MBG 534-19
Material: ASTM A1011CS Type B
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 = 18 ksi

Bearing Bar Size (inches)	Approx. Weight (lbs/ft²)	Ped. Span (inches)	Load / Deflection	Span (ft -in)													Section Properties	
				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 (in³)/ft	I _x (in⁴)/ft
1" x ½"	6.15	55	U	800	512	356	261	200	158	128							0.267	
			D _u	0.07	0.12	0.17	0.23	0.30	0.38	0.47								
			C	800	640	533	457	400	356	320								
			D _c	0.06	0.09	0.13	0.18	0.24	0.30	0.37							0.133	
1" x ⅝"	8.87	60	U	1,200	768	533	392	300	237	192							0.400	
			D _u	0.07	0.12	0.17	0.23	0.30	0.38	0.47								
			C	1,200	960	800	686	600	533	480								
			D _c	0.06	0.09	0.13	0.18	0.24	0.30	0.37							0.200	
1 ¼" x ½"	7.51	65	U	1,250	800	556	408	313	247	200	165						0.417	
			D _u	0.06	0.09	0.13	0.18	0.24	0.30	0.37	0.45							
			C	1,250	1,000	833	714	625	556	500	455							
			D _c	0.05	0.07	0.11	0.15	0.19	0.24	0.30	0.36						0.260	
1 ¼" x ⅝"	10.91	71	U	1,875	1,200	833	612	469	370	300	248	208					0.625	
			D _u	0.06	0.09	0.13	0.18	0.24	0.30	0.37	0.45	0.54						
			C	1,875	1,500	1,250	1,071	938	833	750	682	625						
			D _c	0.05	0.07	0.11	0.15	0.19	0.24	0.30	0.36	0.43					0.391	
1 ½" x ½"	8.87	74	U	1,800	1,152	800	588	450	356	288	238	200	170				0.600	
			D _u	0.05	0.08	0.11	0.15	0.20	0.25	0.31	0.38	0.45	0.52					
			C	1,800	1,440	1,200	1,029	900	800	720	655	600	554					
			D _c	0.04	0.06	0.09	0.12	0.16	0.20	0.25	0.30	0.36	0.42				0.450	
1 ½" x ⅝"	12.95	82	U	2,700	1,728	1,200	882	675	533	432	357	300	256	220			0.900	
			D _u	0.05	0.08	0.11	0.15	0.20	0.25	0.31	0.38	0.45	0.52	0.61				
			C	2,700	2,160	1,800	1,543	1,350	1,200	1,080	982	900	831	771				
			D _c	0.04	0.06	0.09	0.12	0.16	0.20	0.25	0.30	0.36	0.42	0.49			0.675	
1 ¾" x ⅝"	15.18	92	U	3,675	2,352	1,633	1,200	919	726	588	486	408	348	300	261	230	1.225	
			D _u	0.04	0.07	0.10	0.13	0.17	0.22	0.27	0.32	0.38	0.45	0.52	0.60	0.68		
			C	3,675	2,940	2,450	2,100	1,838	1,633	1,470	1,336	1,225	1,131	1,050	980	919		
			D _c	0.03	0.05	0.08	0.10	0.14	0.17	0.21	0.26	0.31	0.36	0.42	0.48	0.54	1.072	
2" x ⅝"	17.22	102	U	4,800	3,072	2,133	1,567	1,200	948	768	635	533	454	392	341	300	1.600	
			D _u	0.04	0.06	0.08	0.11	0.15	0.19	0.23	0.28	0.34	0.39	0.46	0.52	0.60		
			C	4,800	3,840	3,200	2,743	2,400	2,133	1,920	1,745	1,600	1,477	1,371	1,280	1,200		
			D _c	0.03	0.05	0.07	0.09	0.12	0.15	0.19	0.23	0.27	0.31	0.36	0.42	0.48	1.600	
2 ½" x ⅝"	21.30	120	U	7,500	4,800	3,333	2,449	1,875	1,481	1,200	992	833	710	612	533	469	2.500	
			D _u	0.03	0.05	0.07	0.09	0.12	0.15	0.19	0.23	0.27	0.31	0.36	0.42	0.48		
			C	7,500	6,000	5,000	4,286	3,750	3,333	3,000	2,727	2,500	2,308	2,143	2,000	1,875		
			D _c	0.02	0.04	0.05	0.07	0.10	0.12	0.15	0.18	0.21	0.25	0.29	0.34	0.38	3.125	

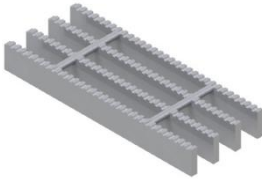
Spans and loads in red exceed a deflection of 1/4" for uniform loads of 100 lbs./sq. ft. Experience has shown that 1/4" deflection is the maximum deflection to give pedestrian comfort, but can be exceeded for other types of loads at the discretion of the specifying professional.

15W4 (in)										
# of Bars	2	3	4	5	6	7	8	9	10	11
3/16" Bars	1-1/8	2-1/16	3	3-15/16	4-7/8	5-13/16	6-3/4	7-11/16	8-5/8	9-9/16
# of Bars	12	13	14	15	16	17	18	19	20	21
3/16" Bars	10-1/2	11-7/16	12-3/8	13-5/16	14-1/4	15-3/16	16-1/8	17-1/16	18	18-15/16
# of Bars	22	23	24	25	26	27	28	29	30	31
3/16" Bars	19-7/8	20-13/16	21-3/4	22-11/16	23-5/8	24-9/16	25-1/2	26-7/16	27-3/8	28-5/16
# of Bars	32	33	34	35	36	37	38	39	40	41
3/16" Bars	29-1/4	30-3/16	31-1/8	32-1/16	33	33-15/16	34-7/8	35-13/16	36-3/4	37-11/16

Deduct 1/16" for 1/8" bearing bars

LOAD TABLES - CLOSE-MESH

Grating Type: 15W4
Design Code: NAAMM MBG 534-19
Material: ASTM A1011CS Type B
Surface: Serrated



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 = 18 ksi

Bearing Bar Size (inches)	Approx. Weight (lbs/ft ²)	Ped. Span (inches)	Load / Deflection	Span (ft -in)														Section Properties									
				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 ½"	6.15	44	U	450	288	200	147											0.150									
			D _u	0.10	0.16	0.22	0.30	0.40																			
			C	450	360	300	257	225																			
			D _c	0.08	0.12	0.18	0.24	0.32											0.056								
1" x ⅝"	8.87	49	U	675	432	300	220	169	133										0.225								
			D _u	0.10	0.16	0.22	0.30	0.40	0.50																		
			C	675	540	450	386	338	300											0.084							
			D _c	0.08	0.12	0.18	0.24	0.32	0.40																		
1 ¼" x ½"	7.51	55	U	800	512	356	261	200	158	128										0.267							
			D _u	0.07	0.12	0.17	0.23	0.30	0.38	0.47																	
			C	800	640	533	457	400	356	320											0.133						
			D _c	0.06	0.09	0.13	0.18	0.24	0.30	0.37																	
1 ¼" x ⅝"	10.91	60	U	1,200	768	533	392	300	237	192										0.400							
			D _u	0.07	0.12	0.17	0.23	0.30	0.38	0.47																	
			C	1,200	960	800	686	600	533	480											0.200						
			D _c	0.06	0.09	0.13	0.18	0.24	0.30	0.37																	
1 ½" x ½"	8.87	65	U	1,250	800	556	408	313	247	200	165										0.417						
			D _u	0.06	0.09	0.13	0.18	0.24	0.30	0.37	0.45																
			C	1,250	1,000	833	714	625	556	500	455											0.260					
			D _c	0.05	0.07	0.11	0.15	0.19	0.24	0.30	0.36																
1 ½" x ⅝"	12.95	71	U	1,875	1,200	833	612	469	370	300	248	208										0.625					
			D _u	0.06	0.09	0.13	0.18	0.24	0.30	0.37	0.45	0.54															
			C	1,875	1,500	1,250	1,071	938	833	750	682	625											0.391				
			D _c	0.05	0.07	0.11	0.15	0.19	0.24	0.30	0.36	0.43															
1 ¾" x ⅝"	14.99	82	U	2,700	1,728	1,200	882	675	533	432	357	300	256	220										0.900			
			D _u	0.05	0.08	0.11	0.15	0.20	0.25	0.31	0.38	0.45	0.52	0.61													
			C	2,700	2,160	1,800	1,543	1,350	1,200	1,080	982	900	831	771											0.675		
			D _c	0.04	0.06	0.09	0.12	0.16	0.20	0.25	0.30	0.36	0.42	0.49													
2" x ⅝"	17.22	92	U	3,675	2,352	1,633	1,200	919	726	588	486	408	348	300	261	230										1.225	
			D _u	0.04	0.07	0.10	0.13	0.17	0.22	0.27	0.32	0.38	0.45	0.52	0.60	0.68											
			C	3,675	2,940	2,450	2,100	1,838	1,633	1,470	1,336	1,225	1,131	1,050	980	919											1.072
			D _c	0.03	0.05	0.08	0.10	0.14	0.17	0.21	0.26	0.31	0.36	0.42	0.48	0.54											
2 ½" x ⅝"	21.30	111	U	6,075	3,888	2,700	1,984	1,519	1,200	972	803	675	575	496	432	380	2.025										
			D _u	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	6,075	4,860	4,050	3,471	3,038	2,700	2,430	2,209	2,025	1,869	1,736	1,620	1,519											
			D _c	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											