

LOAD TABLES | STANDARD DUTY, METRIC

STANDARD DUTY - METRIC

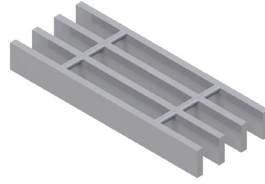
Load Tables - Close-Mesh

Grating Type: **24W102**

Design Code: **NAAMM MBG 534-19**

Material: **ASTM A1011CS Type B**

Surface: **Smooth**



U = Safe Uniform Load (kPa)

D_u = Deflection Due to Safe Uniform Load (mm)

C = Safe Concentrated Load (kN/meter of grating width)

D_c = Deflection Due to Safe Concentrated Load (mm)

Allowable Extreme Fiber Stress = 124.11 MPa

Bearing Bar Size (mm)	Approx. Weight (kg/m ²)	Ped. Span (mm)	Load / Deflection	SPAN (mm)												Section Properties		
				610	762	915	1067	1220	1372	1524	1677	1829	1982	2134	2286	2438	S _x (mm ³)/m	I _x (mm ⁴)/m
25 x 3	29.4	1,387.00	U	38.3	24.5	17.0	12.5	9.6	7.6	6.1								14,340
			D _u	1.9	3.0	4.3	5.8	7.6	9.6	11.8								
			C	11.7	9.3	7.8	6.7	5.8	5.2	4.7								
			D _c	1.5	2.4	3.4	4.6	6.1	7.7	9.5								
25 x 5	42.7	1,535.00	U	57.4	36.7	25.5	18.7	14.4	11.3	9.2	7.6							21,510
			D _u	1.9	3.0	4.3	5.8	7.6	9.6	11.8	14.3							
			C	17.5	14.0	11.7	10.0	8.8	7.8	7.0	6.4							
			D _c	1.5	2.4	3.4	4.6	6.1	7.7	9.5	11.4							
32 x 3	36.1	1,641.00	U	60.0	38.4	26.7	19.6	15.0	11.9	9.6	7.9							22,470
			D _u	1.5	2.4	3.4	4.6	6.0	7.7	9.4	11.4							
			C	18.3	14.6	12.2	10.5	9.1	8.1	7.3	6.7							
			D _c	1.2	1.9	2.7	3.7	4.8	6.1	7.6	9.1							
32 x 5	52.8	1,817.00	U	89.9	57.6	40.0	29.4	22.5	17.8	14.4	11.9	10.0						33,710
			D _u	1.5	2.4	3.4	4.6	6.0	7.7	9.4	11.4	13.6						
			C	27.4	21.9	18.3	15.7	13.7	12.2	11.0	10.0	9.1						
			D _c	1.2	1.9	2.7	3.7	4.8	6.1	7.6	9.1	10.9						
38 x 3	42.3	1,880.00	U	86.1	55.1	38.3	28.1	21.5	17.0	13.8	11.4	9.6	8.2					32,260
			D _u	1.3	2.0	2.8	3.9	5.0	6.4	7.9	9.5	11.4	13.3					
			C	26.3	21.0	17.5	15.0	13.1	11.7	10.5	9.6	8.8	8.1					
			D _c	1.0	1.6	2.3	3.1	4.0	5.1	6.3	7.6	9.1	10.7					
38 x 5	63.4	2,080.00	U	129.1	82.7	57.4	42.2	32.3	25.5	20.7	17.1	14.4	12.2	10.5				48,390
			D _u	1.3	2.0	2.8	3.9	5.0	6.4	7.9	9.5	11.4	13.3	15.5				
			C	39.4	31.5	26.3	22.5	19.7	17.5	15.8	14.3	13.1	12.1	11.3				
			D _c	1.0	1.6	2.3	3.1	4.0	5.1	6.3	7.6	9.1	10.7	12.4				
45 x 5	73.5	2,337.00	U	176.1	112.8	78.3	57.5	44.1	34.8	28.2	23.3	19.6	16.7	14.4	12.5	11.0		66,010
			D _u	1.1	1.7	2.4	3.3	4.3	5.5	6.8	8.2	9.7	11.4	13.2	15.2	17.3		
			C	53.7	43.0	35.8	30.7	26.9	23.9	21.5	19.5	17.9	16.5	15.4	14.3	13.4		
			D _c	0.9	1.4	1.9	2.6	3.5	4.4	5.4	6.5	7.8	9.1	10.6	12.1	13.8		
51 x 5	83.4	2,581.00	U	229.5	146.9	102.1	75.0	57.4	45.4	36.8	30.4	25.5	21.8	18.8	16.3	14.4		86,020
			D _u	0.9	1.5	2.1	2.9	3.8	4.8	5.9	7.2	8.5	10.0	11.6	13.3	15.1		
			C	70.0	56.0	46.7	40.0	35.0	31.1	28.0	25.5	23.3	21.6	20.0	18.7	17.5		
			D _c	0.8	1.2	1.7	2.3	3.0	3.8	4.7	5.7	6.8	8.0	9.3	10.6	12.1		
64 x 5	103.3	3,052.00	U	358.6	229.6	159.5	117.2	89.7	70.9	57.4	47.5	39.9	34.0	29.3	25.5	22.5		134,410
			D _u	0.8	1.2	1.7	2.3	3.0	3.8	4.7	5.7	6.8	8.0	9.3	10.6	12.1		
			C	109.4	87.5	72.9	62.5	54.7	48.6	43.8	39.8	36.5	33.7	31.3	29.2	27.4		
			D _c	0.6	0.9	1.4	1.9	2.4	3.1	3.8	4.6	5.4	6.4	7.4	8.5	9.7		

Spans and loads in red exceed a deflection of 6mm for uniform loads of 5kPa. Experience has shown that 6mm 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.

24W102 (mm)

# of Bars	2	3	4	5	6	7	8	9	10	11
5mm Bars	29	53	77	101	125	149	173	197	221	245
# of Bars	12	13	14	15	16	17	18	19	20	21
5mm Bars	269	293	317	341	365	389	413	437	461	485
# of Bars	22	23	24	25	26	27	28	29	30	31
5mm Bars	509	533	557	581	605	629	653	677	701	725
# of Bars	32	33	34	35	36	37	38	39	40	41
5mm Bars	749	773	797	821	845	869	893	917	941	965

Deduct 1.5mm for 3mm bearing bars

STANDARD DUTY - METRIC

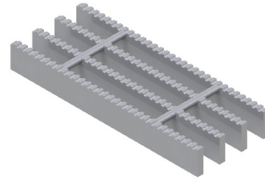
Load Tables - Close-Mesh

Grating Type: **24W102**

Design Code: **NAAMM MBG 534-19**

Material: **ASTM A1011CS Type B**

Surface: **Serrated**



U = Safe Uniform Load (kPa)

D_u = Deflection Due to Safe Uniform Load (mm)

C = Safe Concentrated Load (kN/meter of grating width)

D_c = Deflection Due to Safe Concentrated Load (mm)

Allowable Extreme Fiber Stress = 124.11 MPa

Bearing Bar Size (mm)	Approx. Weight (kg/m ²)	Ped. Span (mm)	Load / Deflection	SPAN (mm)												Section Properties		
				610	762	915	1067	1220	1372	1524	1677	1829	1982	2134	2286	2438	S _x (mm ³ /m)	I _x (mm ⁴ /m)
25 x 3	23.1	1,133.00	U	22.3	14.3	9.9	7.3	5.6									8,360	
			D _u	2.5	3.9	5.6	7.6	9.9										81.13E+3
			C	6.8	5.4	4.5	3.9	3.4										
			D _c	2.0	3.1	4.5	6.1	7.9										
25 x 5	33.3	1,254.00	U	33.5	21.4	14.9	10.9	8.4	6.6								12,550	
			D _u	2.5	3.9	5.6	7.6	9.9	12.5									121.69E+3
			C	10.2	8.2	6.8	5.8	5.1	4.5									
			D _c	2.0	3.1	4.5	6.1	7.9	10.0									
32 x 3	29.8	1,403.00	U	39.5	25.3	17.5	12.9	9.9	7.8	6.3							14,790	
			D _u	1.9	2.9	4.2	5.7	7.5	9.4	11.6								190.82E+3
			C	12.0	9.6	8.0	6.9	6.0	5.4	4.8								
			D _c	1.5	2.3	3.4	4.6	6.0	7.5	9.3								
32 x 5	43.3	1,553.00	U	59.2	37.9	26.3	19.3	14.8	11.7	9.5	7.8						22,190	
			D _u	1.9	2.9	4.2	5.7	7.5	9.4	11.6	14.1							286.23E+3
			C	18.1	14.4	12.0	10.3	9.0	8.0	7.2	6.6							
			D _c	1.5	2.3	3.4	4.6	6.0	7.5	9.3	11.3							
38 x 3	36.4	1,653.00	U	61.1	39.1	27.2	20.0	15.3	12.1	9.8	8.1						22,900	
			D _u	1.5	2.3	3.4	4.6	6.0	7.6	9.4	11.3							367.51E+3
			C	18.6	14.9	12.4	10.7	9.3	8.3	7.5	6.8							
			D _c	1.2	1.9	2.7	3.7	4.8	6.1	7.5	9.1							
38 x 5	53.2	1,829.00	U	91.6	58.7	40.8	29.9	22.9	18.1	14.7	12.1	10.2					34,350	
			D _u	1.5	2.3	3.4	4.6	6.0	7.6	9.4	11.3	13.5						551.27E+3
			C	28.0	22.4	18.6	16.0	14.0	12.4	11.2	10.2	9.3						
			D _c	1.2	1.9	2.7	3.7	4.8	6.1	7.5	9.1	10.8						
45 x 5	64.0	2,097.00	U	131.8	84.4	58.6	43.1	33.0	26.1	21.1	17.4	14.7	12.5	10.8			49,410	
			D _u	1.2	2.0	2.8	3.8	5.0	6.3	7.8	9.4	11.2	13.2	15.3				951.11E+3
			C	40.2	32.2	26.8	23.0	20.1	17.9	16.1	14.6	13.4	12.4	11.5				
			D _c	1.0	1.6	2.2	3.1	4.0	5.1	6.2	7.6	9.0	10.5	12.2				
51 x 5	73.9	2,349.00	U	178.5	114.3	79.4	58.3	44.7	35.3	28.6	23.6	19.9	16.9	14.6	12.7	11.2	66,900	
			D _u	1.1	1.7	2.4	3.3	4.3	5.4	6.7	8.1	9.7	11.3	13.1	15.1	17.2		1.50E+6
			C	54.4	43.6	36.3	31.1	27.2	24.2	21.8	19.8	18.2	16.8	15.6	14.5	13.6		
			D _c	0.9	1.3	1.9	2.6	3.4	4.3	5.4	6.5	7.7	9.1	10.5	12.1	13.7		
64 x 5	93.9	2,833.00	U	294.1	188.3	130.8	96.1	73.6	58.1	47.1	38.9	32.7	27.9	24.0	20.9	18.4	110,210	
			D _u	0.8	1.3	1.9	2.6	3.3	4.2	5.2	6.3	7.5	8.8	10.2	11.8	13.4		3.17E+6
			C	89.7	71.8	59.8	51.3	44.9	39.9	35.9	32.6	29.9	27.6	25.6	23.9	22.4		
			D _c	0.7	1.0	1.5	2.0	2.7	3.4	4.2	5.1	6.0	7.1	8.2	9.4	10.7		

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5mm Bars	509	533	557	581	605	629	653	677	701	725
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