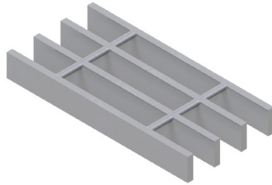


# LOAD TABLES | STANDARD DUTY, METRIC

## STANDARD DUTY - METRIC

### Load Tables - SD

Grating Type: **30W102**  
 Design Code: **NAAMM MBG 534-19**  
 Material: **ASTM A1011CS Type B**  
 Surface: **Smooth**



U = Safe Uniform Load (kPa)  
 D<sub>u</sub> = Deflection Due to Safe Uniform Load (mm)  
 C = Safe Concentrated Load (kN/meter of grating width)  
 D<sub>c</sub> = Deflection Due to Safe Concentrated Load (mm)  
 Allowable Extreme Fiber Stress = 124.11 MPa

Bearing Bar Size (mm)	Approx. Weight (kg/m <sup>2</sup> )	Ped. Span (mm)	Load / Deflection	SPAN (mm)												Section Properties			
				610	762	915	1067	1220	1372	1524	1677	1829	1982	2134	2286	2438	S <sub>x</sub> (mm <sup>3</sup> /m)	I <sub>x</sub> (mm <sup>4</sup> /m)	
25 x 3	24.1	1,312.00	U	30.6	19.6	13.6	10.0	7.7	6.0									11,470	
			D <sub>u</sub>	1.9	3.0	4.3	5.8	7.6	9.6										145.66E+3
			C	9.3	7.5	6.2	5.3	4.7	4.2										
			D <sub>c</sub>	1.5	2.4	3.4	4.6	6.1	7.7										
25 x 5	34.7	1,452.00	U	45.9	29.4	20.4	15.0	11.5	9.1	7.4								17,200	
			D <sub>u</sub>	1.9	3.0	4.3	5.8	7.6	9.6	11.8									218.49E+3
			C	14.0	11.2	9.3	8.0	7.0	6.2	5.6									
			D <sub>c</sub>	1.5	2.4	3.4	4.6	6.1	7.7	9.5									
32 x 3	29.5	1,552.00	U	48.0	30.7	21.3	15.7	12.0	9.5	7.7	6.3							17,980	
			D <sub>u</sub>	1.5	2.4	3.4	4.6	6.0	7.7	9.4	11.4								285.84E+3
			C	14.6	11.7	9.8	8.4	7.3	6.5	5.9	5.3								
			D <sub>c</sub>	1.2	1.9	2.7	3.7	4.8	6.1	7.6	9.1								
32 x 5	42.8	1,718.00	U	72.0	46.1	32.0	23.5	18.0	14.2	11.5	9.5	8.0						26,970	
			D <sub>u</sub>	1.5	2.4	3.4	4.6	6.0	7.7	9.4	11.4	13.6							428.77E+3
			C	21.9	17.6	14.6	12.5	11.0	9.8	8.8	8.0	7.3							
			D <sub>c</sub>	1.2	1.9	2.7	3.7	4.8	6.1	7.6	9.1	10.9							
38 x 3	34.3	1,778.00	U	68.9	44.1	30.6	22.5	17.2	13.6	11.0	9.1	7.7						25,810	
			D <sub>u</sub>	1.3	2.0	2.8	3.9	5.0	6.4	7.9	9.5	11.4							491.61E+3
			C	21.0	16.8	14.0	12.0	10.5	9.3	8.4	7.6	7.0							
			D <sub>c</sub>	1.0	1.6	2.3	3.1	4.0	5.1	6.3	7.6	9.1							
38 x 5	51.5	1,967.00	U	103.3	66.1	45.9	33.7	25.8	20.4	16.5	13.7	11.5	9.8					38,710	
			D <sub>u</sub>	1.3	2.0	2.8	3.9	5.0	6.4	7.9	9.5	11.4	13.3						737.42E+3
			C	31.5	25.2	21.0	18.0	15.8	14.0	12.6	11.5	10.5	9.7						
			D <sub>c</sub>	1.0	1.6	2.3	3.1	4.0	5.1	6.3	7.6	9.1	10.7						
45 x 5	59.5	2,210.00	U	140.9	90.2	62.7	46.0	35.2	27.9	22.6	18.6	15.7	13.4	11.5	10.0			52,810	
			D <sub>u</sub>	1.1	1.7	2.4	3.3	4.3	5.5	6.8	8.2	9.7	11.4	13.2	15.2				1.17E+6
			C	43.0	34.4	28.7	24.6	21.5	19.1	17.2	15.6	14.3	13.2	12.3	11.5				
			D <sub>c</sub>	0.9	1.4	1.9	2.6	3.5	4.4	5.4	6.5	7.8	9.1	10.6	12.1				
51 x 5	67.4	2,441.00	U	183.6	117.6	81.6	60.0	45.9	36.3	29.4	24.3	20.4	17.4	15.0	13.1	11.5		68,820	
			D <sub>u</sub>	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			1.75E+6
			C	56.0	44.8	37.3	32.0	28.0	24.9	22.4	20.4	18.7	17.2	16.0	14.9	14.0			
			D <sub>c</sub>	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	83.4	2,886.00	U	286.9	183.7	127.6	93.7	71.8	56.7	45.9	38.0	31.9	27.2	23.4	20.4	18.0		107,530	
			D <sub>u</sub>	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			3.41E+6
			C	87.5	70.0	58.4	50.0	43.8	38.9	35.0	31.8	29.2	26.9	25.0	23.3	21.9			
			D <sub>c</sub>	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.

### 30W102 (mm)

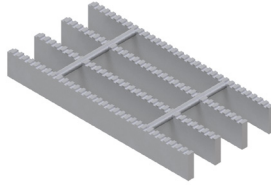
# of Bars	2	3	4	5	6	7	8	9	10	11
5mm Bars	35	65	95	125	155	185	215	245	275	305
# of Bars	12	13	14	15	16	17	18	19	20	21
5mm Bars	335	365	395	425	455	485	515	545	575	605
# of Bars	22	23	24	25	26	27	28	29	30	31
5mm Bars	635	665	695	725	755	785	815	845	875	905

Deduct 1.5mm for 3mm bearing bars

# STANDARD DUTY - METRIC

## Load Tables - SD

Grating Type: **30W102**  
 Design Code: **NAAMM MBG 534-19**  
 Material: **ASTM A1011CS Type B**  
 Surface: **Serrated**



U = Safe Uniform Load (kPa)  
 D<sub>u</sub> = Deflection Due to Safe Uniform Load (mm)  
 C = Safe Concentrated Load (kN/meter of grating width)  
 D<sub>c</sub> = Deflection Due to Safe Concentrated Load (mm)  
 Allowable Extreme Fiber Stress = 124.11 MPa

Bearing Bar Size (mm)	Approx. Weight (kg/m <sup>2</sup> )	Ped. Span (mm)	Load / Deflection	SPAN (mm)												Section Properties	
				610	762	915	1067	1220	1372	1524	1677	1829	1982	2134	2286	2438	S <sub>x</sub> (mm <sup>3</sup> )/m
25 x 3	19.1	1,072.00	U	17.9	11.4	7.9	5.8	4.5									6,690
			D <sub>u</sub>	2.5	3.9	5.6	7.6	9.9									64.90E+3
			C	5.4	4.4	3.6	3.1	2.7									
			D <sub>c</sub>	2.0	3.1	4.5	6.1	7.9									
25 x 5	27.2	1,186.00	U	26.8	17.1	11.9	8.7	6.7									10,040
			D <sub>u</sub>	2.5	3.9	5.6	7.6	9.9									97.35E+3
			C	8.2	6.5	5.4	4.7	4.1									
			D <sub>c</sub>	2.0	3.1	4.5	6.1	7.9									
32 x 3	24.4	1,327.00	U	31.6	20.2	14.0	10.3	7.9	6.2								11,830
			D <sub>u</sub>	1.9	2.9	4.2	5.7	7.5	9.4								152.65E+3
			C	9.6	7.7	6.4	5.5	4.8	4.3								
			D <sub>c</sub>	1.5	2.3	3.4	4.6	6.0	7.5								
32 x 5	35.2	1,469.00	U	47.4	30.3	21.1	15.5	11.8	9.4	7.6							17,750
			D <sub>u</sub>	1.9	2.9	4.2	5.7	7.5	9.4	11.6							228.98E+3
			C	14.4	11.6	9.6	8.3	7.2	6.4	5.8							
			D <sub>c</sub>	1.5	2.3	3.4	4.6	6.0	7.5	9.3							
38 x 3	29.7	1,563.00	U	48.9	31.3	21.7	16.0	12.2	9.7	7.8	6.5						18,320
			D <sub>u</sub>	1.5	2.3	3.4	4.6	6.0	7.6	9.4	11.3						294.01E+3
			C	14.9	11.9	9.9	8.5	7.5	6.6	6.0	5.4						
			D <sub>c</sub>	1.2	1.9	2.7	3.7	4.8	6.1	7.5	9.1						
38 x 5	43.2	1,730.00	U	73.3	46.9	32.6	24.0	18.3	14.5	11.7	9.7	8.2					27,480
			D <sub>u</sub>	1.5	2.3	3.4	4.6	6.0	7.6	9.4	11.3	13.5					441.02E+3
			C	22.4	17.9	14.9	12.8	11.2	9.9	8.9	8.1	7.5					
			D <sub>c</sub>	1.2	1.9	2.7	3.7	4.8	6.1	7.5	9.1	10.8					
45 x 5	52.0	1,983.00	U	105.5	67.5	46.9	34.5	26.4	20.8	16.9	14.0	11.7	10.0	8.6			39,530
			D <sub>u</sub>	1.2	2.0	2.8	3.8	5.0	6.3	7.8	9.4	11.2	13.2	15.3			760.89E+3
			C	32.2	25.7	21.5	18.4	16.1	14.3	12.9	11.7	10.7	9.9	9.2			
			D <sub>c</sub>	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	59.9	2,222.00	U	142.8	91.4	63.5	46.7	35.7	28.2	22.9	18.9	15.9	13.5	11.7	10.2		53,520
			D <sub>u</sub>	1.1	1.7	2.4	3.3	4.3	5.4	6.7	8.1	9.7	11.3	13.1	15.1		1.20E+6
			C	43.6	34.9	29.0	24.9	21.8	19.4	17.4	15.8	14.5	13.4	12.5	11.6		
			D <sub>c</sub>	0.9	1.3	1.9	2.6	3.4	4.3	5.4	6.5	7.7	9.1	10.5	12.1		
64 x 5	75.8	2,679.00	U	235.3	150.6	104.6	76.9	58.9	46.5	37.7	31.1	26.2	22.3	19.2	16.7	14.7	88,170
			D <sub>u</sub>	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	
			C	71.8	57.4	47.8	41.0	35.9	31.9	28.7	26.1	23.9	22.1	20.5	19.1	18.0	
			D <sub>c</sub>	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	2.53E+6

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.

### 30W102 (mm)

# of Bars	2	3	4	5	6	7	8	9	10	11
5mm Bars	35	65	95	125	155	185	215	245	275	305
# of Bars	12	13	14	15	16	17	18	19	20	21
5mm Bars	335	365	395	425	455	485	515	545	575	605
# of Bars	22	23	24	25	26	27	28	29	30	31
5mm Bars	635	665	695	725	755	785	815	845	875	905

Deduct 1.5mm for 3mm bearing bars