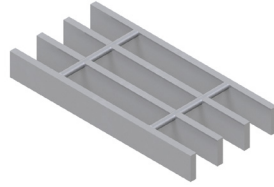


# LOAD TABLES | HEAVY DUTY, METRIC

## LOAD TABLES - HD

Grating Type: **30HW102**  
 Design Code: **NAAMM MBG 534**  
 Material: **ASTM A36M**  
 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)

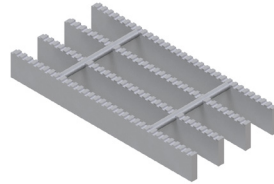
Allowable Extreme Fiber Stress = 137.9 MPa

Bearing Bar Size (mm)	Approx. Weight (kg/m <sup>2</sup> )	Ped. Span (mm)	Load / Deflection	SPAN (mm)														Section Properties			
				305	457	610	762	915	1067	1219	1372	1524	1677	1829	1981	2134	2286	2438	S <sub>x</sub> (mm <sup>3</sup> )/m	I <sub>x</sub> (mm <sup>4</sup> )/m	
25 x 6	46.7	1,560.00	U	272.0	121.0	68.1	43.6	30.3	22.2	17.0	13.4	10.9	9.0								
			D <sub>u</sub>	0.5	1.2	2.1	3.3	4.7	6.4	8.4	10.6	13.1	15.9								22,940
			C	41.5	27.7	20.7	16.6	13.8	11.9	10.4	9.2	8.3	7.5								291.33E+3
			D <sub>c</sub>	0.4	0.9	1.7	2.6	3.8	5.2	6.7	8.5	10.5	12.7								
32 x 6	57.6	1,846.00	U	426.4	189.6	106.7	68.3	47.4	34.8	26.7	21.1	17.1	14.1	11.9	10.1						
			D <sub>u</sub>	0.4	0.9	1.7	2.6	3.8	5.1	6.7	8.5	10.5	12.7	15.1	17.7						35,960
			C	65.0	43.4	32.5	26.0	21.7	18.6	16.3	14.5	13.0	11.8	10.8	10.0						571.69E+3
			D <sub>c</sub>	0.3	0.8	1.3	2.1	3.0	4.1	5.4	6.8	8.4	10.2	12.1	14.2						
38 x 6	68.4	2,114.00	U	612.1	272.2	153.1	98.0	68.1	50.0	38.3	30.3	24.5	20.3	17.0	14.5	12.5					
			D <sub>u</sub>	0.4	0.8	1.4	2.2	3.2	4.3	5.6	7.1	8.8	10.6	12.6	14.8	17.2					51,610
			C	93.3	62.2	46.7	37.4	31.1	26.7	23.3	20.8	18.7	17.0	15.6	14.4	13.3					983.22E+3
			D <sub>c</sub>	0.3	0.6	1.1	1.8	2.5	3.4	4.5	5.7	7.0	8.5	10.1	11.8	13.7					
38 x 10	101.1	2,334.00	U	908.6	404.0	227.3	145.5	101.0	74.2	56.8	44.9	36.4	30.1	25.3	21.5	18.6	16.2	14.2			
			D <sub>u</sub>	0.4	0.8	1.4	2.2	3.2	4.3	5.6	7.1	8.8	10.6	12.6	14.8	17.2	19.7	22.4			76,610
			C	138.6	92.4	69.3	55.4	46.2	39.6	34.7	30.8	27.7	25.2	23.1	21.3	19.8	18.5	17.3			1.46E+6
			D <sub>c</sub>	0.3	0.6	1.1	1.8	2.5	3.4	4.5	5.7	7.0	8.5	10.1	11.8	13.7	15.8	17.9			
51 x 6	90.1	2,623.00	U	1,088.2	483.8	272.2	174.2	121.0	88.9	68.1	53.8	43.6	36.0	30.3	25.8	22.2	19.4	17.0			
			D <sub>u</sub>	0.3	0.6	1.1	1.6	2.4	3.2	4.2	5.3	6.6	7.9	9.5	11.1	12.9	14.8	16.8			91,760
			C	165.9	110.7	83.0	66.4	55.3	47.4	41.5	36.9	33.2	30.2	27.7	25.5	23.7	22.1	20.8			2.33E+6
			D <sub>c</sub>	0.2	0.5	0.8	1.3	1.9	2.6	3.4	4.3	5.3	6.4	7.6	8.9	10.3	11.8	13.4			
64 x 6	111.8	3,101.00	U	1,700.2	756.0	425.3	272.3	189.1	138.9	106.4	84.0	68.1	56.3	47.3	40.3	34.7	30.3	26.6			
			D <sub>u</sub>	0.2	0.5	0.8	1.3	1.9	2.6	3.4	4.3	5.3	6.4	7.6	8.9	10.3	11.8	13.4			143,370
			C	259.3	172.9	129.7	103.8	86.5	74.1	64.9	57.6	51.9	47.2	43.2	39.9	37.1	34.6	32.4			4.55E+6
			D <sub>c</sub>	0.2	0.4	0.7	1.1	1.5	2.1	2.7	3.4	4.2	5.1	6.1	7.1	8.2	9.5	10.8			
76 x 6	133.5	3,556.00	U	2,448.3	1,088.6	612.5	392.0	272.3	200.1	153.2	121.0	98.0	81.0	68.1	58.0	50.0	43.6	38.3			
			D <sub>u</sub>	0.2	0.4	0.7	1.1	1.6	2.1	2.8	3.5	4.4	5.3	6.3	7.4	8.6	9.9	11.2			206,450
			C	373.4	249.0	186.7	149.4	124.5	106.7	93.4	83.0	74.7	67.9	62.3	57.5	53.4	49.8	46.7			7.87E+6
			D <sub>c</sub>	0.1	0.3	0.6	0.9	1.3	1.7	2.2	2.8	3.5	4.2	5.0	5.9	6.9	7.9	9.0			
76 x 10	199.7	3,925.00	U	3,634.3	1,615.9	909.2	581.9	404.2	297.0	227.4	179.7	145.5	120.3	101.1	86.1	74.3	64.7	56.9			
			D <sub>u</sub>	0.2	0.4	0.7	1.1	1.6	2.1	2.8	3.5	4.4	5.3	6.3	7.4	8.6	9.9	11.2			306,450
			C	554.2	369.6	277.2	221.8	184.8	158.4	138.6	123.2	110.9	100.8	92.4	85.3	79.2	73.9	69.3			11.68E+6
			D <sub>c</sub>	0.1	0.3	0.6	0.9	1.3	1.7	2.2	2.8	3.5	4.2	5.0	5.9	6.9	7.9	9.0			
89 x 6	155.2	3,991.00	U	3,332.5	1,481.7	833.7	533.6	370.6	272.3	208.5	164.7	133.4	110.3	92.7	79.0	68.1	59.3	52.2			
			D <sub>u</sub>	0.2	0.3	0.6	0.9	1.4	1.8	2.4	3.0	3.8	4.5	5.4	6.3	7.4	8.4	9.6			281,000
			C	508.2	338.9	254.2	203.4	169.5	145.3	127.1	113.0	101.7	92.4	84.7	78.2	72.6	67.8	63.6			12.49E+6
			D <sub>c</sub>	0.1	0.3	0.5	0.8	1.1	1.5	1.9	2.4	3.0	3.6	4.3	5.1	5.9	6.8	7.7			
89 x 10	231.9	4,406.00	U	4,946.6	2,199.5	1,237.5	792.1	550.1	404.2	309.5	244.5	198.1	163.7	137.6	117.2	101.1	88.0	77.4			
			D <sub>u</sub>	0.2	0.3	0.6	0.9	1.4	1.8	2.4	3.0	3.8	4.5	5.4	6.3	7.4	8.4	9.6			417,110
			C	754.4	503.0	377.3	301.9	251.6	215.6	188.7	167.7	151.0	137.2	125.8	116.1	107.8	100.6	94.4			18.54E+6
			D <sub>c</sub>	0.1	0.3	0.5	0.8	1.1	1.5	1.9	2.4	3.0	3.6	4.3	5.1	5.9	6.8	7.7			
102 x 6	176.9	4,412.00	U	4,352.6	1,935.3	1,088.9	697.0	484.0	355.6	272.3	215.2	174.3	144.0	121.0	103.1	88.9	77.5	68.1			
			D <sub>u</sub>	0.1	0.3	0.5	0.8	1.2	1.6	2.1	2.7	3.3	4.0	4.7	5.6	6.4	7.4	8.4			367,020
			C	663.8	442.6	332.0	265.6	221.4	189.7	166.0	147.6	132.8	120.8	110.7	102.2	94.9	88.6	83.0			18.64E+6
			D <sub>c</sub>	0.1	0.2	0.4	0.7	0.9	1.3	1.7	2.1	2.6	3.2	3.8	4.4	5.1	5.9	6.7			
102 x 10	264.1	4,870.00	U	6,460.9	2,872.8	1,616.3	1,034.6	718.5	527.9	404.2	319.4	258.7	213.8	179.7	153.1	132.0	115.0	101.1			
			D <sub>u</sub>	0.1	0.3	0.5	0.8	1.2	1.6	2.1	2.7	3.3	4.0	4.7	5.6	6.4	7.4	8.4			544,800
			C	985.3	657.0	492.8	394.3	328.6	281.6	246.4	219.1	197.2	179.2	164.3	151.7	140.8	131.4	123.3			27.68E+6
			D <sub>c</sub>	0.1	0.2	0.4	0.7	0.9	1.3	1.7	2.1	2.6	3.2	3.8	4.4	5.1	5.9	6.7			

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.

# LOAD TABLES - HD

**Grating Type:** 30HW102  
**Design Code:** NAAMM MBG 534  
**Material:** ASTM A36M  
**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 = 137.9 MPa

Bearing Bar Size (mm)	Approx. Weight (kg/m <sup>2</sup> )	Ped. Span (mm)	Load / Deflection	SPAN (mm)																Section Properties			
				305	457	610	762	915	1067	1219	1372	1524	1677	1829	1981	2134	2286	2438	S <sub>x</sub> (mm <sup>3</sup> )/m	I <sub>x</sub> (mm <sup>4</sup> )/m			
25 x 6	46.7	1,255.00	U	152.2	67.7	38.1	24.4	16.9	12.4	9.5	7.5											12,840	
			D <sub>u</sub>	0.7	1.6	2.8	4.4	6.3	8.6	11.2	14.2												
			C	23.2	15.5	11.6	9.3	7.7	6.6	5.8	5.2												
			D <sub>c</sub>	0.6	1.3	2.2	3.5	5.1	6.9	9.0	11.4											121.94E+3	
32 x 6	57.6	1,560.00	U	272.0	121.0	68.1	43.6	30.3	22.2	17.0	13.4	10.9	9.0						22,940				
			D <sub>u</sub>	0.5	1.2	2.1	3.3	4.7	6.4	8.4	10.6	13.1	15.9										
			C	41.5	27.7	20.7	16.6	13.8	11.9	10.4	9.2	8.3	7.5										
			D <sub>c</sub>	0.4	0.9	1.7	2.6	3.8	5.2	6.7	8.5	10.5	12.7						291.33E+3				
38 x 6	68.4	1,842.00	U	423.7	188.4	106.0	67.8	47.1	34.6	26.5	20.9	17.0	14.0	11.8	10.0				35,730				
			D <sub>u</sub>	0.4	0.9	1.7	2.6	3.8	5.2	6.7	8.5	10.5	12.7	15.2	17.8								
			C	64.6	43.1	32.3	25.9	21.5	18.5	16.2	14.4	12.9	11.8	10.8	9.9								
			D <sub>c</sub>	0.3	0.8	1.3	2.1	3.0	4.1	5.4	6.8	8.4	10.2	12.1	14.2				566.31E+3				
38 x 10	101.1	2,033.00	U	629.0	279.7	157.3	100.7	69.9	51.4	39.3	31.1	25.2	20.8	17.5	14.9	12.9			53,040				
			D <sub>u</sub>	0.4	0.9	1.7	2.6	3.8	5.2	6.7	8.5	10.5	12.7	15.2	17.8	20.6							
			C	95.9	64.0	48.0	38.4	32.0	27.4	24.0	21.3	19.2	17.4	16.0	14.8	13.7							
			D <sub>c</sub>	0.3	0.8	1.3	2.1	3.0	4.1	5.4	6.8	8.4	10.2	12.1	14.2	16.5			840.62E+3				
51 x 6	90.1	2,371.00	U	831.2	369.6	207.9	133.1	92.4	67.9	52.0	41.1	33.3	27.5	23.1	19.7	17.0	14.8	13.0	70,090				
			D <sub>u</sub>	0.3	0.7	1.2	1.9	2.7	3.7	4.8	6.1	7.5	9.1	10.8	12.7	14.7	16.9	19.2					
			C	126.8	84.5	63.4	50.7	42.3	36.2	31.7	28.2	25.4	23.1	21.1	19.5	18.1	16.9	15.9					
			D <sub>c</sub>	0.2	0.5	1.0	1.5	2.2	2.9	3.8	4.9	6.0	7.3	8.7	10.2	11.8	13.5	15.4	1.56E+6				
64 x 6	111.8	2,864.00	U	1,374.8	611.3	343.9	220.1	152.9	112.3	86.0	68.0	55.0	45.5	38.2	32.6	28.1	24.5	21.5		115,930			
			D <sub>u</sub>	0.2	0.5	0.9	1.5	2.1	2.9	3.7	4.7	5.8	7.1	8.4	9.9	11.5	13.1	15.0					
			C	209.7	139.8	104.9	83.9	69.9	59.9	52.4	46.6	42.0	38.1	35.0	32.3	30.0	28.0	26.2					
			D <sub>c</sub>	0.2	0.4	0.7	1.2	1.7	2.3	3.0	3.8	4.7	5.7	6.7	7.9	9.2	10.5	12.0		3.31E+6			
76 x 6	133.5	3,329.00	U	2,054.3	913.4	513.9	329.0	228.5	167.9	128.5	101.6	82.3	68.0	57.1	48.7	42.0	36.6	32.2		173,230			
			D <sub>u</sub>	0.2	0.4	0.8	1.2	1.7	2.3	3.1	3.9	4.8	5.8	6.9	8.1	9.4	10.8	12.2					
			C	313.3	208.9	156.7	125.4	104.5	89.6	78.4	69.7	62.7	57.0	52.2	48.2	44.8	41.8	39.2					
			D <sub>c</sub>	0.2	0.3	0.6	1.0	1.4	1.9	2.4	3.1	3.8	4.6	5.5	6.5	7.5	8.6	9.8		6.05E+6			
76 x 10	199.7	3,675.00	U	3,049.4	1,355.9	762.9	488.3	339.1	249.2	190.8	150.7	122.1	100.9	84.8	72.3	62.3	54.3	47.7		257,140			
			D <sub>u</sub>	0.2	0.4	0.8	1.2	1.7	2.3	3.1	3.9	4.8	5.8	6.9	8.1	9.4	10.8	12.2					
			C	465.0	310.1	232.6	186.1	155.1	132.9	116.3	103.4	93.1	84.6	77.5	71.6	66.5	62.0	58.2					
			D <sub>c</sub>	0.2	0.3	0.6	1.0	1.4	1.9	2.4	3.1	3.8	4.6	5.5	6.5	7.5	8.6	9.8		8.97E+6			
89 x 6	155.2	3,774.00	U	2,869.9	1,276.1	718.0	459.5	319.2	234.5	179.5	141.9	114.9	95.0	79.8	68.0	58.6	51.1	44.9		242,000			
			D <sub>u</sub>	0.2	0.4	0.6	1.0	1.5	2.0	2.6	3.3	4.0	4.9	5.8	6.8	7.9	9.1	10.3					
			C	437.7	291.8	218.9	175.1	146.0	125.1	109.5	97.3	87.6	79.6	73.0	67.4	62.6	58.4	54.8					
			D <sub>c</sub>	0.1	0.3	0.5	0.8	1.2	1.6	2.1	2.6	3.2	3.9	4.7	5.5	6.3	7.3	8.3		9.98E+6			
89 x 10	231.9	4,166.00	U	4,260.0	1,894.2	1,065.7	682.1	473.8	348.1	266.5	210.6	170.6	141.0	118.5	100.9	87.0	75.8	66.7		359,220			
			D <sub>u</sub>	0.2	0.4	0.6	1.0	1.5	2.0	2.6	3.3	4.0	4.9	5.8	6.8	7.9	9.1	10.3					
			C	649.7	433.2	324.9	260.0	216.6	185.7	162.5	144.4	130.0	118.2	108.3	100.0	92.9	86.7	81.3					
			D <sub>c</sub>	0.1	0.3	0.5	0.8	1.2	1.6	2.1	2.6	3.2	3.9	4.7	5.5	6.3	7.3	8.3		14.82E+6			
102 x 6	176.9	4,202.00	U	3,821.5	1,699.2	956.0	611.9	425.0	312.3	239.1	188.9	153.0	126.5	106.3	90.6	78.1	68.0	59.8		322,240			
			D <sub>u</sub>	0.1	0.3	0.6	0.9	1.3	1.7	2.2	2.8	3.5	4.2	5.0	5.9	6.9	7.9	9.0					
			C	582.8	388.6	291.5	233.2	194.3	166.6	145.8	129.6	116.6	106.0	97.2	89.7	83.3	77.7	72.9					
			D <sub>c</sub>	0.1	0.3	0.4	0.7	1.0	1.4	1.8	2.3	2.8	3.4	4.0	4.7	5.5	6.3	7.2		15.34E+6			
102 x 10	264.1	4,638.00	U	5,672.6	2,522.2	1,419.1	908.3	630.8	463.5	354.9	280.4	227.1	187.7	157.7	134.4	115.9	101.0	88.8		478,330			
			D <sub>u</sub>	0.1	0.3	0.6	0.9	1.3	1.7	2.2	2.8	3.5	4.2	5.0	5.9	6.9	7.9	9.0					
			C	865.1	576.8	432.7	346.2	288.5	247.3	216.4	192.3	173.1	157.4	144.3	133.2	123.7	115.4	108.2					
			D <sub>c</sub>	0.1	0.3	0.4	0.7	1.0	1.4	1.8	2.3	2.8	3.4	4.0	4.7	5.5	6.3	7.2		22.77E+6			

Spans and loads in red indicate 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.

LOAD TABLES - HD METRIC