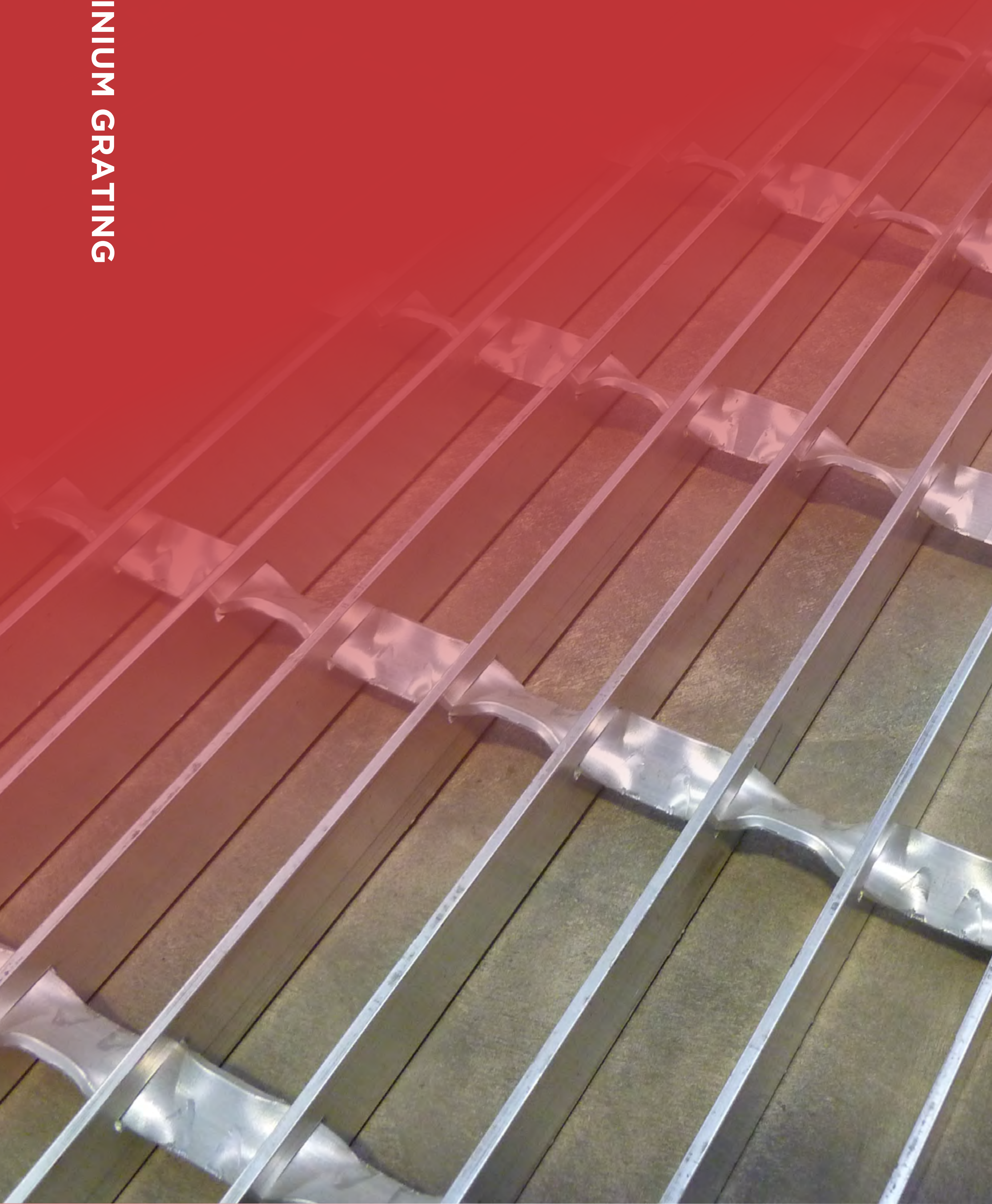
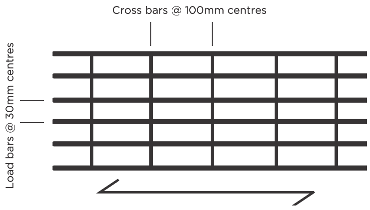
ALUMINIUM GRATING

STEEL GRATING

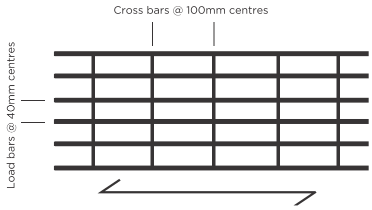


ALUMINIUM GRATING

SERIES 1



SERIES 2



MATERIAL

Aluminium grating load bars are manufactured from aluminium grade 6063 T6.

TOP SURFACE

Typically supplied with a plain surface. On our most popular products a Serrated surface is also available. Please enquire to see which aluminuim grating products are available with a Serrated surface.

- The **"S"** at the end of the code represents a **S**errated surface, no notation represents a plain surface. Grating will be assumed plain surface unless **S** is dictated at the end of the product code or is clearly specified as Serrated. Eg- 255/1S or 255/1 Serrated

FINISH

- Mill Finish **(M)**
- Anodised **(A)**
- Powder coated **(P)**

STANDARD SHEET SIZE

Series 1 grating: 995mm (wide) x 5000mm (span)

Series 2 grating: 995mm (wide) x 5000mm (span)

**Standard panel widths may vary slightly to what is indicated as there are minor manufacturing tolerances allowable during the process of manufacturing grating.*

ALUMINIUM GRATING QUICK REFERENCE LOAD CHARTS

ALUMINIUM GRATING SERIES 1

Product Code	Load Bar Size (mm)	Maximum Span (mm) for various Loads with 5.00mm Deflections			
		5mm deflection span @2.5kPa	5mm deflection span @4kPa	5mm deflection span @ 5kPa	5mm deflection span @7.5kPa
203/1	20 x 3	920	818	774	699
205/1	20 x 5	1045	930	879	794
253/1	25 x 3	1088	967	915	827
255/1	25 x 5	1236	1099	1039	939
255/1S	25 x 5 serrated	1142	1015	960	868
323/1	31.8 x 3.2	1324	1177	1113	1006
325/1	32 x 4.5	1449	1288	1218	1101
325/1S	32 x 4.5 serrated	1363	1212	1146	1036
403/1	38 x 3	1489	1324	1252	1131
405/1	38 x 4.5	1648	1465	1386	1252
405/1S	38 x 4.5 serrated	1566	1392	1317	1190
505/1	50 x 4.5	2025	1800	1702	1538

ALUMINIUM GRATING SERIES 2

Product Code	Load Bar Size (mm)	Maximum Span (mm) for various Loads with 5.00mm Deflections			
		5mm deflection span @2.5kPa	5mm deflection span @4kPa	5mm deflection span @ 5kPa	5mm deflection span @7.5kPa
203/2	20 x 3	856	761	720	651
205/2	20 x 5	973	865	818	739
253/2	25 x 3	1012	900	851	769
255/2	25 x 5	1150	1023	967	874
255/2S	25 x 5 serrated	1063	945	894	808
323/2	31.8 x 3.2	1232	1096	1036	936
325/2	32 x 4.5	1348	1199	1134	1024
325/2S	32 x 4.5 serrated	1268	1128	1067	964
403/2	38 x 3	1386	1232	1165	1053
405/2	38 x 4.5	1534	1364	1290	1165
405/2S	38 x 4.5 serrated	1457	1296	1225	1107
505/2	50 x 4.5	1884	1675	1584	1432

- 2.5 kPa, 5mm deflection- Light use for access and working, AS 1657
- 4 kPa, 5mm deflection- High / Repetitive use, AS/NZS 1170
- 5 kPa, 5mm deflection – High / Repetitive use with placement of objects (infrequent), AS/NZS 1170
- 7.5 kPa, 5mm deflection – High / Repetitive use with placement of objects (frequent), AS/NZS 1170

SERIES 1: ALUMINIUM GRATING LOAD CHART

SAFE LOAD AND DEFLECTION TABLE

Product Code	Load Bar Size (mm)	Mass (kg/sqm)		Span (mm)- maximum allowable Q load (kPa) under strength design										Span (mm) for 5mm deflection at 4kPa
				150	300	450	600	750	900	1050	1200	1500	1800	
203/1	20 x 3	6.696	U	321.16	80.24	35.63	20.01	12.78						818
			D	0.45	1.81	4.08	8.84	17.26						
			D4	0.01	0.09	0.46	1.45	3.53						
205/1	20 x 5	10.296	U	535.27	133.74	59.38	33.36	21.31	14.77					930
			D	0.45	1.81	4.08	7.24	11.29	17.90					
			D4	0.00	0.05	0.27	0.87	2.12	4.39					
253/1	25 x 3	8.046	U	486.79	121.64	54.02	30.35	19.40	13.45					967
			D	0.35	1.41	3.16	5.62	8.84	15.27					
			D4	0.00	0.05	0.23	0.74	1.81	3.75					
255/1	25 x 5	12.546	U	836.39	209.01	92.82	52.16	33.34	23.11	16.95				1099
			D	0.36	1.45	3.26	5.79	9.04	13.00	17.66				
			D4	0.00	0.03	0.14	0.44	1.08	2.25	4.17				
255/1S	25 x 5 serrated	11.421	U	677.46	169.28	75.17	42.24	26.99	18.71	13.72				1015
			D	0.40	1.61	3.62	6.44	10.04	14.43	19.96				
			D4	0.00	0.04	0.19	0.61	1.49	3.09	5.72				
323/1	31.8 x 3.2	10.454	U	817.90	204.40	90.79	51.02	32.62	22.62	16.59				1177
			D	0.27	1.08	2.42	4.30	6.72	9.66	13.12				
			D4	0.00	0.02	0.11	0.34	0.82	1.71	3.16				
325/1	32 x 4.5	14.256	U	1233.35	308.23	136.91	76.95	49.20	34.12	25.03	19.13			1288
			D	0.28	1.13	2.55	4.53	7.07	10.17	13.82	18.02			
			D4	0.00	0.01	0.07	0.24	0.57	1.19	2.21	3.77			
325/1S	32 x 4.5 serrated	13.244	U	1048.16	261.94	116.35	65.39	41.80	28.99	21.26	16.25			1212
			D	0.31	1.23	2.77	4.91	7.67	11.02	14.98	19.53			
			D4	0.00	0.02	0.10	0.30	0.73	1.52	2.82	4.81			
403/1	38 x 3	11.556	U	1003.72	250.85	111.42	62.63	40.04	27.77	20.37	15.57			1324
			D	0.21	0.83	1.86	3.30	5.15	7.41	10.07	13.13			
			D4	0.00	0.01	0.07	0.21	0.51	1.07	1.98	3.37			
405/1	38 x 4.5	16.686	U	1739.25	434.69	193.10	108.55	69.41	48.15	35.33	27.01			1465
			D	0.24	0.95	2.15	3.82	5.96	8.57	11.65	15.19			
			D4	0.00	0.01	0.04	0.14	0.34	0.71	1.32	2.25			
405/1S	38 x 4.5 serrated	15.674	U	1517.92	379.36	168.52	94.73	60.57	42.01	30.83	23.57			1392
			D	0.26	1.02	2.30	4.08	6.37	9.17	12.46	16.25			
			D4	0.00	0.01	0.05	0.17	0.42	0.87	1.62	2.76			
505/1	50 x 4.5	21.546	U	2998.16	749.38	332.94	187.19	119.72	83.08	60.98	46.64	29.77	20.61	1800
			D	0.18	0.72	1.63	2.89	4.51	6.49	8.82	11.51	17.94	25.76	
			D4	0.00	0.00	0.02	0.06	0.15	0.31	0.58	0.99	2.41	5.00	

Check Deflection for Loads and Span for this side of Shadow Line

- **U:** Safe Superimposed Uniformly Distributed Load - kPa
- **D:** Deflection due to the Safe Superimposed Load - mm
- **D4:** Deflection due to 4 kPa applied Load - mm
- Span to the left of the heavy line have a deflection of less than 5mm for 4 kPa UDL
- The design has been based on the principal of the aluminium Allowable Stress Design and Ultimate Limit State Design according to AS/NZS 1664.1:1997 and AS/NZS 1664.2:1997

SERIES 2: ALUMINIUM GRATING LOAD CHART

SAFE LOAD AND DEFLECTION TABLE

Product Code	Load Bar Size (mm)	Mass (kg/sqm)		Span (mm)- maximum allowable Q load (kPa) under strength design 150	300	450	600	750	900	1050	1200	1500	1800	Span (mm) for 5mm deflection at 4kPa
203/2	20 x 3	5.346	U	240.86	60.18	26.72	15.00	9.58						761
			D	0.45	1.81	4.97	11.79	23.02						
			D4	0.01	0.12	0.61	1.93	4.71						
205/2	20 x 5	8.046	U	401.45	100.30	44.54	25.02	15.98						865
			D	0.45	1.81	4.08	7.24	13.81						
			D4	0.00	0.07	0.37	1.16	2.83						
253/2	25 x 3	6.359	U	365.09	91.22	40.51	22.76	14.54	10.08					900
			D	0.35	1.41	3.16	6.03	11.79	20.37					
			D4	0.00	0.06	0.31	0.99	2.41	5.00					
255/2	25 x 5	9.734	U	627.29	156.75	69.61	39.12	25.00	17.33					1023
			D	0.36	1.45	3.26	5.79	9.04	13.00					
			D4	0.00	0.04	0.19	0.59	1.45	3.00					
255/2S	25 x 5 serrated	8.890	U	508.09	126.96	56.38	31.67	20.24	14.03					945
			D	0.40	1.61	3.62	6.44	10.04	16.76					
			D4	0.00	0.05	0.26	0.81	1.98	4.11					
323/2	31.8 x 3.2	8.165	U	613.42	153.29	68.09	38.26	24.46	16.96	12.44				1096
			D	0.27	1.08	2.42	4.30	6.72	9.66	14.73				
			D4	0.00	0.03	0.14	0.45	1.10	2.28	4.22				
325/2	32 x 4.5	11.016	U	925.01	231.17	102.68	57.71	36.90	25.59	18.77				1199
			D	0.28	1.13	2.55	4.53	7.07	10.17	13.82				
			D4	0.00	0.02	0.10	0.31	0.77	1.59	2.94				
325/2S	32 x 4.5 serrated	10.257	U	786.11	196.45	87.26	49.04	31.35	21.74	15.94				1128
			D	0.31	1.23	2.77	4.91	7.67	11.02	14.98				
			D4	0.00	0.03	0.13	0.40	0.98	2.03	3.76				
403/2	38 x 3	8.991	U	752.79	188.13	83.56	46.97	30.03	20.83	15.28	11.68			1232
			D	0.21	0.83	1.86	3.30	5.15	7.41	10.07	13.75			
			D4	0.00	0.02	0.09	0.28	0.69	1.42	2.64	4.50			
405/2	38 x 4.5	16.484	U	1304.43	326.01	144.83	81.41	52.06	36.11	26.50	20.26			1364
			D	0.24	0.95	2.15	3.82	5.96	8.57	11.65	15.19			
			D4	0.00	0.01	0.06	0.19	0.46	0.95	1.76	3.00			
405/2S	38 x 4.5 serrated	12.079	U	1138.43	284.52	126.39	71.04	45.42	31.51	23.12	17.67			1296
			D	0.26	1.02	2.30	4.08	6.37	9.17	12.46	16.25			
			D4	0.00	0.01	0.07	0.23	0.56	1.16	2.16	3.68			
505/2	50 x 4.5	16.484	U	2248.61	562.03	249.70	140.39	89.79	62.30	45.73	34.98	22.33		1675
			D	0.18	0.72	1.63	2.89	4.51	6.49	8.82	11.51	17.94		
			D4	0.00	0.01	0.03	0.08	0.20	0.42	0.77	1.32	3.21		

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HOW TO SPECIFY / ORDER ALUMINIUM GRATING

- Use the quick reference load charts or the main load charts to determine a suitable load bar size and series to suit your requirements. Eg- 255/1 or 325/2 etc...
- Designate at the end of the code with an **S** if you require a **S**errated surface, No designation will be assumed a Plain surface.
- Designate that you require Aluminium grating by referencing **A= A**luminium grating
- Designate the finish / treatment you require;
    - **M=** Mill finish
    - **A=** Anodised finish (specify to what thickness)
    - **P=** Powder coated finish
- Specify the size of the area or panel size(s) for the grating you require along with the load bar direction (span)
- Specify an additional information we need to know for example if there are cut outs or penetrations in the grating, do we need to split cut outs between panels for installation, is kick plate required, are the grates banded or cut to size only etc....

EXAMPLES OF ORDERING/SPECIFYING ALUMINIUM GRATING

253/1 AM = 25x3mm plain load bars (series 1 grating , load bars at 30mm centres, cross bars at 100mm centres), **A**luminium, **M**ill finish

255/2S AA = 25x5mm serrated load bars (series 2, load bars at 40mm centres, cross bars at 100mm centres) **A**luminium, **A**nodised finish.

ADDITIONAL INFORMATION

MINIMUM SUPPORT DIMENSION

- A minimum support of 25mm for grating up to 50mm deep.

It is generally recommended that the minimum grating support should be equal to the height of the grating load bar.

RECOMMENDED CLEARANCES

- 5mm (min) to 10mm (max) spacing between grates.
- 10mm clearance of grating from the edge of a wall or end of a support
- When grating sits in an angle minimum recommended clearance each side is equal to the thickness of the angle.