

Load Rated Tree Grates to AS3996 - FAQs

What are load rated grates?

Load rated grates are grates that have been structurally engineered to withstand a certain weight (load).

Are all grates load rated?

No, not all grates are load rated. If a grate has not been certified to AS3996 standard, we call these “decorative grates”.

Do all grates need to be certified to AS3996?

This will depend on the application and installation requirements of the local govt. The majority of grates we supply for projects are decorative non-load rated grates and frames.

How do you achieve load rating?

To achieve load rating there are a number of different factors taken in to account.

1. The grate and frame design including

- the type and thickness of material used
- the finished pattern
- the design of the structural support bars on the grate
- the size and design of the sub frame and material used

2. The kpa rating of the concrete which will support the sub frame

3. The surrounding sub soil compaction rating

All 3 elements combined are what achieves the Load rating.

Urban+ grates have all been structurally engineered and certified to achieve this load rating.

What are the different load ratings?

Load ratings range from:

Class A – Pedestrian use - 330kg nominal wheel load rating

Class B – Light Duty – 2670kg nominal wheel loading

Class C – Medium Duty – 5000kg nominal wheel loading

Class D – heavy duty vehicle use – 8000kg nominal wheel loading – see chart below.

Are there different sizes available?

Yes, load rated grates are available in 1200x1200, 1200x1600 and 1600x 1600 size in ALL 4 classes A through to D.

Is there a price difference between decorative and load rated grates?

Yes, as the design and structure between decorative grates and Class A, B, C & D varies considerably, so does the price as the material and manufacturing process is very different.

Indicative price comparison

Decorative grate and frame price ranges from \$1600 - \$2200 (depending on size)

Class A grate and frame price ranges from \$5000- \$6000 (depending on size)

Class C grate and frame price ranges from \$6000 - \$5800 (depending on size)





How do we install load rated grates?

Installation details are given at the time of despatch. On site lifting equipment is needed as the weight of load rated grates is considerably higher than decorative grates, for example,

1200x 1200 Decorative grate and frame – approx. 100kg

1200x1200 Class A grate and frame – approx. 250kg

1200x1200 Class C grate and Frame – approx. 350kg

LOAD CLASSIFICATIONS OF COVERS & GRATES				
				
RATING	CLASS A	CLASS B	CLASS C	CLASS D
TYPICAL USE	Areas (including footways) accessible ONLY to pedestrians & pedal cyclists & closed to other traffic (extra light duty)	Areas (including footways & light tractor paths) accessible to vehicles (EXCLUDING commercial vehicles) or livestock (light duty)	Malls and areas open to slow moving commercial vehicles (medium duty)	Carriageways or roads & areas open to commercial vehicles (heavy duty)
NOMINAL WHEEL LOADING	330 kg	2670 kg	5000 kg	8000 kg
SERVICEABILITY DESIGN LOAD	6.7 kN	53 kN	100 kN	140 kN
ULTIMATE LIMIT STATE DESIGN LOAD	10 kN	80 kN	150 kN	210 kN