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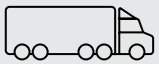
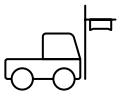
Load Classification

	LOAD CLASS	TRAFFIC CONDITIONS	SERVICEABILITY DESIGN LOAD (kN)	ULTIMATE LIMIT DESIGN LOAD (kN)	NOMINAL WHEEL LOADING (kg)
	**A** **Extra Light Duty**	Areas (including footways) accessible only to pedestrians and pedal cyclists and closed to other traffic	6.7kN	10kN	330
	**B** **Light Duty**	Areas (including footways and light tractor paths) accessible to vehicles (excluding commercial vehicles) or livestock	53kN	80kN	2,670
	**C** **Medium Duty**	Malls and areas open to slow moving commercial vehicles	100kN	150kN	5,000
	**D** **Heavy Duty**	Carriageways of roads and areas open to commercial vehicles	140kN	210kN	8,000
	**E** **Extra Heavy Duty**	General docks and aircraft pavements	267kN	400kN	13,700
	**F** **Extra Heavy Duty**	Docks and aircraft pavements subject to high wheel loads	400kN	600kN	20,000
	**G** **Extra Heavy Duty**	Docks and aircraft pavements subject to very high wheel loads	400kN	600kN	20,000

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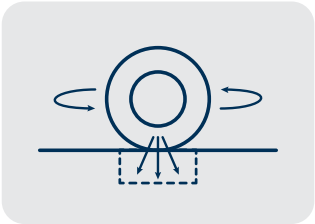
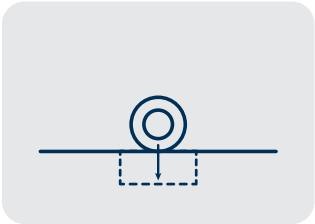
Load Considerations

Selecting an appropriate cover or grate also depends on the where it will be installed and the various types of traffic that it may receive. Whilst load classifications provide a guide, nominal loads are based on stationary loads, which poorly simulate real world traffic conditions. Also consider:



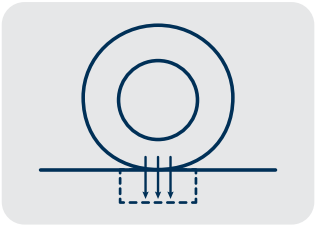
Dynamic Loads

Areas subject to moving traffic will exert a dynamic load which will try to twist a cover out of position. If traffic moves quickly or turns on a cover, a higher load class should be selected and extra design features should be sought such as slotted drainage, locking grates down with bolts or steel reinforcement.



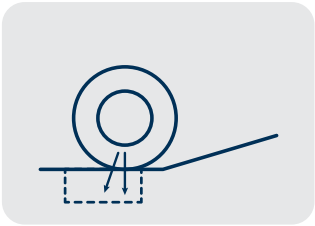
Small or Solid Wheels

Small or solid wheels concentrate a heavy load to a very small point where it is transferred to the cover. This can be the case with forklifts and rubbish skips which often feature solid wheels and cause massive damage to underspecified covers. A grate or cover with a higher load class will be required in these situations.



Large or Pneumatic

Large or pneumatic wheels will spread a load over a larger area and exert a lower stress on the grate or cover. This is why a heavy tractor can be classified in load class B with smaller vehicles.



Areas at the base of a steep decline

Covers at the base of a decline will experience short periods of increased load as a large portion of the vehicles total weight can be transferred to the front wheels. The cover will be under high stress and a higher load class will be required in these situations.

Notes

- Nominal wheel loads are given for guidance only.
  Consideration should be given to the type, size and pneumatic pressure of the load applied.
- Class B design loads exceed AS 5100.2 requirements for footway loading.
- Class D design loads exceed AS 5100.2 requirements for a W80 wheel load.
- Class C units are based on an intermediate load.
- The serviceability load is set at 2/3 of the ultimate limit state design load.
- A force of 1 kN approximately equal to the weight of 100 kg.