Load classification (AS3996)

Access Covers and Grates are designated by classes A, B, C, D, E, F & G according to load capacity set out in the table below. This table is an extract from AS3996-2006.

The appropriate class for a cover or grate depends on the location of installation. Some examples are outlined in this table; however it is the responsibility of the designer to ensure an appropriate class is selected and/or specified. Specifics of the location should be taken into consideration when selecting the right cover or grate. The speed of traffic, wheel type and the physical position (turning area) should all be assessed.

Type	Class	Typical use	Ultimate limit state design load (kN)	Serviceability design loading (kN)	Nominal wheel loading (kg)
	A	Areas (including footways) accessible only to pedestrians and cyclists and closed to other traffic (extra light duty)	10kN	6.7kN	330kg
	B	Areas (including footways and light tractor paths) accessible only to vehicles (excluding commercial vehicles) or livestock (light duty)	80kN	53kN	2,670kg
	C	Malls and areas open to slow moving commercial vehicles (heavy duty)	150kN	100kN	5,000kg
	D	Carriageways of roads and areas open to commercial vehicles (heavy duty)	210kN	140kN	8,000kg
	E	General docks and aircraft pavements (extra heavy duty – E)	400kN	267kN	13,700kg
	F	Docks and aircraft pavements subject to high wheel loads (extra heavy duty – F)	600kN	400kN	20,000kg
	G	Docks and aircraft pavements subject to very high wheel loads (extra heavy duty – G)	900kN	600kN	30,000kg

Notes

1. Nominal wheel loads are given as a guide only. Consideration should be given to the type, size and pneumatic pressure of the load applied. 2. Class B design loads exceed AS5100.2 requirements for footway loading. 3. Class D design loads exceed AS5100.2 requirements for a W80 wheel load. 4. Class C loads are based on an intermediate load. 5. The serviceability load is set at 2/3 of the ultimate limit state design load. 6. A force of 1kN approximately equal to 100kg.