

FACTA v EN 124

What are the differences between FACTA and EN 124?

Fabricated Access Covers Trade Association (FACTA) is a specification that allows fabricated access covers to be made from a variety of materials and offer flexibility in its design, something that isn't achievable for cast covers. EN 124 was initially introduced to bring clarity to loading expectations of access covers that were manufactured and supplied to the market. But instead brought about concerns and questions on how the standard determined such important details and caused confusion between manufacturers and suppliers alike. The test loads for both specifications are different, FACTA takes into consideration the elastic nature of steel, whilst EN 124 includes allowances for dynamic effects caused by fast moving vehicles (FACTA specifies this isn't required as steel covers are only used in slow moving areas).

What are the similarities between FACTA and EN 124?

FACTA have produced a classification table that outlines what each of its loading classes can withstand (in terms of both gross laden and slow moving) as well as show the equivalent loading of the EN124 specification as comparison. For example; FACTA B is seen as a direct equivalent to B125. The typical application for each loading on both specifications is also detailed, please see the table below:

4. CLASSIFICATION - TABLE 1

Fabricated access covers complying with the requirements of this specification shall be graded as follows:

FACTA Class	Comparisons***		GLW Gross Laden Vehicle Weight (slow moving)	Wheel Loads		Load Test Data		Typical Applications	
	EN124 Class	BS497 approximate equivalent class		Wheel Loads ** (slow moving) Pneumatic	Wheel Loads ** (slow moving) Solid	Acceptance Test (Static Wheel Load plus overload & dynamic effects)	Strength Test (Acceptance Test load plus ultimate safety factor)	Pneumatic Tyres	Solid Tyres
A	A15	C	Pedestrian duty	0.6 tonne (5kN)	N/A	5.0 x 1.0 x 1.0 = 5.0kN	5.0 x 1.6 = 8.0kN	Internal and external areas which can only be used by pedestrians or cycles i.e. toilets, changing rooms, footways and cycle tracks.	
AA	N/A	N/A	5 tonne	1.5 tonne (15kN)	N/A	15.0 x 1.1 x 1.15 = 19.0kN	19.0 x 1.6 = 31.0kN	Very light industrial areas, where small trolleys and private cars/vans can manoeuvre i.e. Domestic driveways, trolley parks, hospital wards.	
AAA	N/A	N/A	10 tonne	2.5 tonne (25kN)	0.5 tonne	25.0 x 1.1 x 1.15 = 32.0kN	32.0 x 1.6 = 52.0kN	Delivery/service areas, shopping malls, light industrial areas	Light industrial areas, where trolleys and light pallet trucks operate.
B	B125	B	Up to 44 tonne *	5.0 tonne (50kN)	0.75 tonne	50.0 x 1.1 x 1.15 = 63.25kN	63.25 x 1.6 = 101.0kN	Pedestrian precincts, forecourts, commercial delivery/parking areas.	Factories, industrial plants, where pick-up trucks and small pallet trucks operate.
C	C250		Up to 44 tonne but under special conditions *	6.5 tonne (65kN)	1.0 tonne	65.0 x 1.1 x 1.15 or 50.0 x 1.1 x 1.5 = 82.5kN	82.5 x 1.6 = 132.0kN	Factories, industrial plants, special axle loads, kerb side drainage	Industrial areas where pallet and small fork-lift trucks operate
D	D400	A	Up to 44 tonne but under special conditions *	11.0 tonne (108kN)	3.0 tonne	108.0 x 1.1 x 1.15 or 50.0 x 1.1 x 2.5 = 137.5kN	137.5 x 1.6 = 220.0kN	Heavy duty plant areas carriageways and industrial service roads where fast moving HGVs reach speeds of 20mph max.	Heavy duty industrial areas where medium duty fork-lift trucks operate
E	E600	N/A	Special application vehicles	16.0 tonne (158kN)	5.0 tonne	158.0 x 1.1 x 1.15 = 200.0kN	200.0 x 1.6 = 320.0kN	Dockside and container storage areas where heavy transporters operate	Very heavy industrial areas where large heavy duty fork-lift trucks operate
F	F900	N/A	Special application vehicles	24.0 tonne (237kN)	N/A	237.0 x 1.1 x 1.15 = 300.0kN	300.0 x 1.6 = 480.0kN	Civil and military airfield aprons, where particularly heavy wheel loads are imposed by aircraft and towing vehicles.	

* Under the "Road Vehicles (Authorised Weight) Regulations 1998", Axle weights for the UK are limited to 11.5 tonnes maximum 'Refer to 'Acceptance Test for maximum design load/load bearing capacity)

** Slow moving wheel loads are deemed to be speeds no greater than 20mph.

*** These comparisons are for guidance only and are not intended to be exact.



How do I know when to specify FACTA or EN 124?

Historically, access covers were designated in three wheel load categories;

5kN (0.5Tonne)

50kN (5.0 Tonne)

115kN (11.5 Tonne)

The first two of these align with the guidance on the application of BS EN 124 contained in the FACTA publication 'Specification for Fabricated Access Covers' as follows;

A15 Slow Moving Pneumatic Wheel Load of 5kN

B125 Slow Moving Pneumatic Wheel Load of 50kN

The FACTA specification indicates a 6.5 Tonne rating for a C250 cover and 11.0 Tonne for a D400 cover, the latter being the closest to the upper 'historic' requirement. However, the load factors applied to these covers include allowances for the dynamic effects caused by fast moving vehicles, a condition that has been specified as not usually relevant on sites, due to speed restrictions. A typical application for a D400, for example, is indicated as "Heavy duty plant areas, carriageways and industrial service roads where fast moving HGVs reach speeds of 20mph max." Moreover, the maximum wheel load currently allowed on a British road is 6.5 Tonne. Abnormal loads may only impose a higher load by special arrangement and even then, the abnormal load tends to be distributed over a large number of axles to keep the wheel load within acceptable limits. Consequently, it is considered more practical and economic to specify a C250 cover as the standard maximum requirement in access roads.

