

**Structural Loading of Fire Engine on Access way**

The following information will assist structural engineers in the design of accessway.

(i) Access way sizes

In general, the minimum width of the access way shall be 6m wide and the minimum length shall be 15m long. Diagram A shows the relationship between the access way and parked fire engine with its front and rear jacks extended

(ii) Access way sizes loading

Access way shall be on

- (a) suspended slabs, or
- (b) on metalled or paved ground, or
- (c) ground laid with strengthened perforated slabs or
- (d) approved materials

to withstand the loading requirements of fire engine.

(iii) The access way required to serve building shall be constructed to sustain the load of a 30 tonnes fire engine. The wheel load shall be considered separately with the jack loads for both global and local effects.

(iv) Axles load

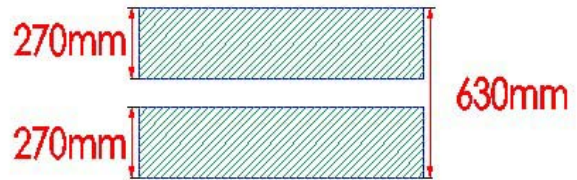
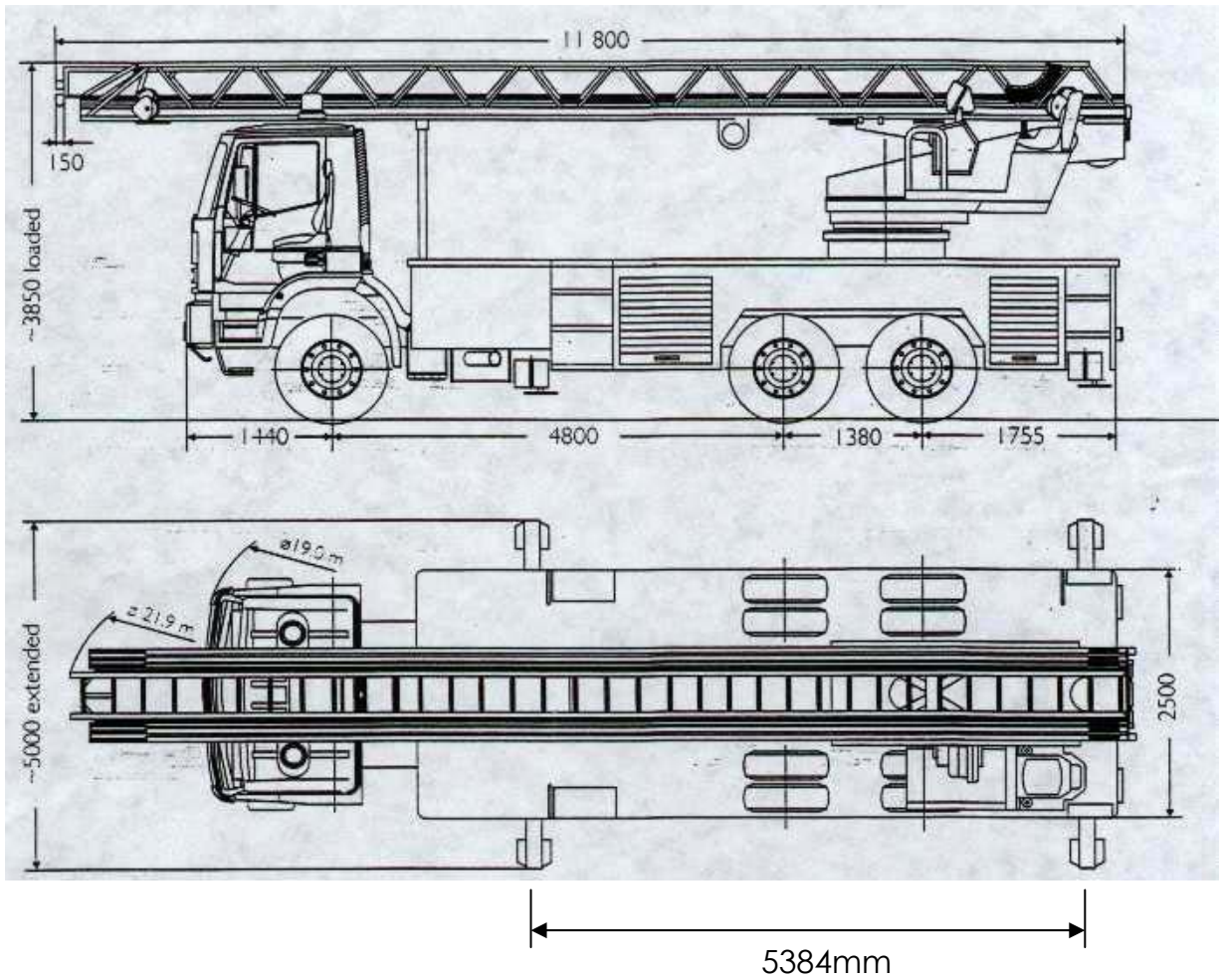
Axles load for access way shall be as follows :

Front Axle	7500kg	2 wheels
Rear Axle	21,000kg	8 wheels

(v) The jack load shall be assumed to be uniformly distributed over a rectangular contact area of 923 cm<sup>2</sup> for both local and global analysis.

- (v) The maximum pressure on one jack, even in the worst case, will not exceed  $80\text{N/cm}^2$ .
- (vi) In the absence of more exact calculations, live load surcharge for accessway on suitable material properly consolidated may be assumed to be at least  $10\text{KN/m}^2$ .

**ACCESSWAY (WHEELS & JACKS LAYOUT)**



Wheel Spacing