

17 An escalator in an underground station has 25 people standing on it and is moving with a speed of 4.3 ms^{-1} . The average mass of a person is 78 kg and the angle of the escalator to the horizontal is 40° .

What is the minimum power required to lift these people?

A 5.4 kW

B 6.4 kW

C 53 kW

D 63 kW

18 An elevator car of constant total mass 18.0 tonnes is moving upwards at a constant speed of $2.0 \times 10^{-6}\text{ m s}^{-2}$.