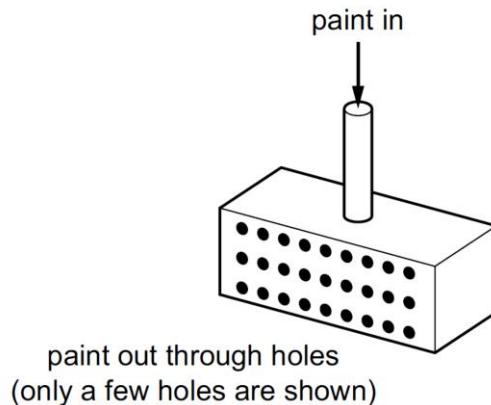


- 5 A device for spraying paint consists of a box with its axes horizontal and vertical. One of its vertical faces contains small holes. Paint is fed into the box under pressure via a vertical tube and exits through the holes as fine horizontal streams.



The paint is ejected at a speed of 3.0 m s^{-1} through 27 holes, each of area 0.4 mm^2 . The density of the paint is 900 kg m^{-3} .

What is the horizontal force required to hold the device stationary as it ejects the paint?

- A 21 mN B 29 mN C 44 mN D 87 mN