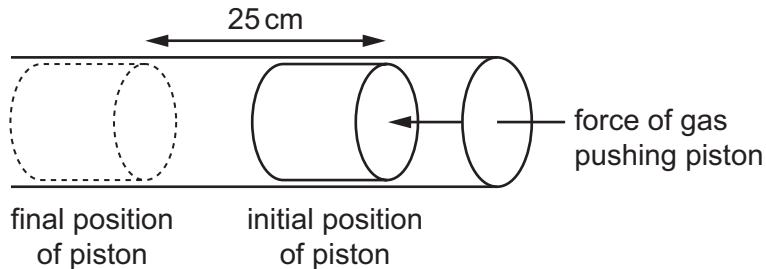


- 17 The gas in an engine does work on a piston of cross-sectional area  $80 \text{ cm}^2$ . The pressure on the piston has a constant value of  $4.6 \times 10^5 \text{ Pa}$ .



How much work is done by the gas on the piston when it moves through a distance of 25 cm?

- A**  $9.2 \times 10^2 \text{ J}$       **B**  $9.2 \times 10^4 \text{ J}$       **C**  $9.2 \times 10^6 \text{ J}$       **D**  $9.2 \times 10^8 \text{ J}$

- 18 A loaded aeroplane has a total mass of  $1.2 \times 10^5 \text{ kg}$  while climbing after take off. It climbs at an