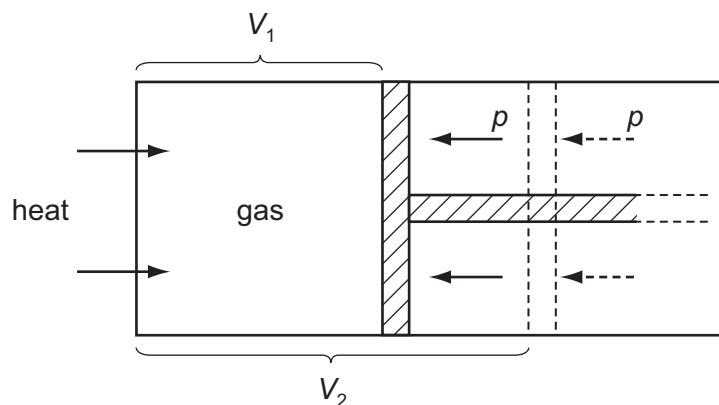


18 A gas is enclosed inside a cylinder which is fitted with a frictionless piston.



Initially, the gas has a volume V_1 and is in equilibrium with an external pressure p . The gas is then heated slowly so that it expands, pushing the piston back until the volume of the gas has increased to V_2 .

How much work is done by the gas during this expansion?

- A** $p(V_2 - V_1)$ **B** $\frac{1}{2}p(V_2 - V_1)$ **C** $p(V_2 + V_1)$ **D** $\frac{1}{2}p(V_2 + V_1)$

Space for working