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An ideal gas has an initial volume of  $2.0 \times 10^{-3} \text{ m}^3$  and at a pressure of  $1.0 \times 10^5 \text{ Pa}$ . When 125 J of energy is supplied to the gas, its volume increases to  $2.5 \times 10^{-3} \text{ m}^3$  while its pressure remains constant.

What is the change in internal energy?

**A**

50 J

**B**

-50 J

**C**

75 J

**D**

170 J