Let:

$$P1 = 0.71Pa, V1 = 0.75m^3, \ V2 = 2 * V1, T1 = 137°C$$

$$P2-?, V2-?, T2-?$$

At isothermal process temperature is constant and according to Boyle's law the product:
$P * V = constant$.

From this follows:

$$P1 * V1 = P2 * V2, T2 = T1,$$

$$P1 * V1 = P2 * 2 * V1,$$

$$P2 = \frac{P1}{2},$$

$$P2 = \frac{0.71}{2} = 0.355Pa, T2 = 137°C$$

Answer: at final state temperature: 137°C, pressure: 0.355Pa.