

1) Datos

$$P_1 = 2 \text{ bar (manómetro)} = 3 \text{ bar (abs)}$$

$$V_1 = 300 \text{ L} = 300,000 \text{ cm}^3$$

$$\text{diámetro} = 40 \text{ cm}$$

$$\text{retracción} = 40 \text{ cm} = L$$

Entonces

$$\begin{aligned} V_2 &= V_1 - \left(\frac{\pi}{4} D^2 L \right) = 300,000 - (0.7854 \times (40)^2 \times 40) = \\ &= 249,734.518 \text{ cm}^3 \\ &\approx 249.735 \text{ L} \end{aligned}$$

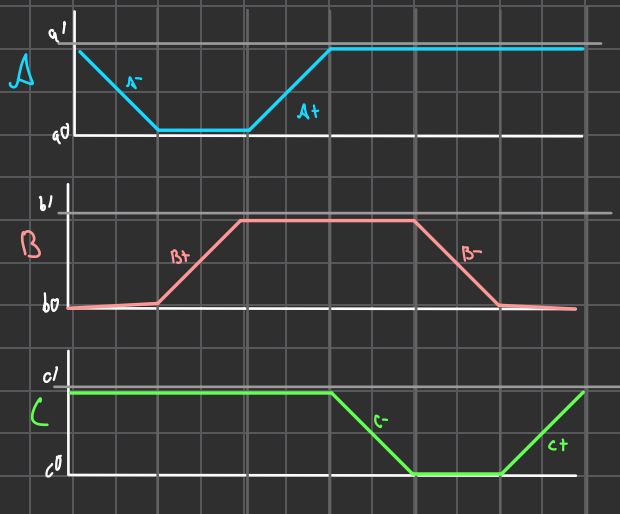
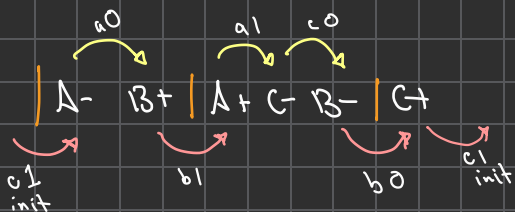
Ley Boyle

$$P_1 V_1 = P_2 V_2$$

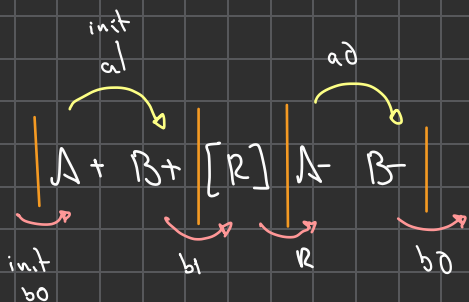
$$P_2 = \frac{P_1 V_1}{V_2} = \frac{3 \cdot 300}{249.735} = 3.604 \text{ bar (abs)}$$

$$\underline{P_2 = 2.604 \text{ bar (manómetro)}}$$

2-3) Condiciones cambio de fase



4)



$$R = 3 \text{ seg}$$