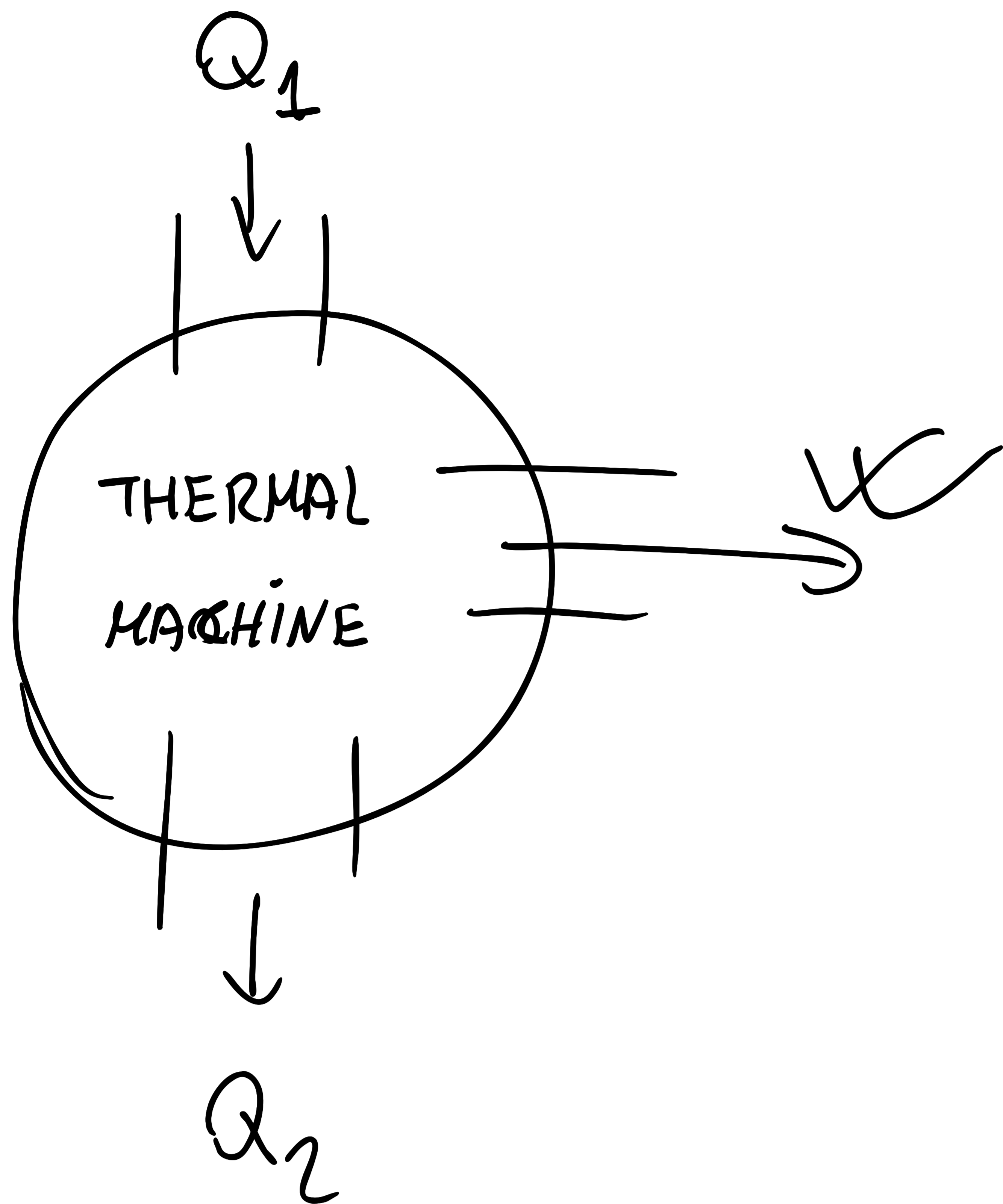


THERMAL MACHINES 1



DATOS:

$$W = 25 \text{ J}$$

$$Q_1 = 85 \text{ cal} \cdot \frac{4.18 \text{ J}}{1 \text{ cal}} =$$

$$Q_1 = 355.3 \text{ J}$$

$$\eta = \frac{Q_1 - Q_2}{Q_1} \cdot 100$$

$$Q_2 = (355.3 - 25) \text{ J} = 330.3 \text{ J}$$

$$W = Q_1 - Q_2 \Rightarrow Q_2 = Q_1 - W$$

$$a) \quad \eta = \frac{Q_1 - Q_2}{Q_1} \cdot 100 = \frac{(355.3 - 330.3) \text{ J}}{355.3 \text{ J}} \cdot 100 =$$

$$\eta = \frac{25 \text{ J}}{355.3 \text{ J}} \cdot 100 = 7\% \Rightarrow \boxed{\eta = 7\%}$$

$$b) \quad Q_{\text{PERDIDA}} = Q_2 = 330.3 \text{ J}$$

$$Q_2 = Q_1 - W = (355.3 - 25) \text{ J} = 330.3 \text{ J}$$