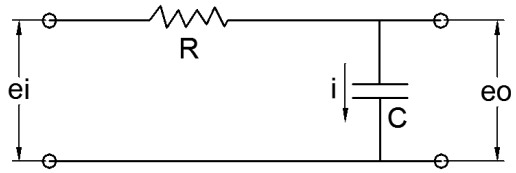
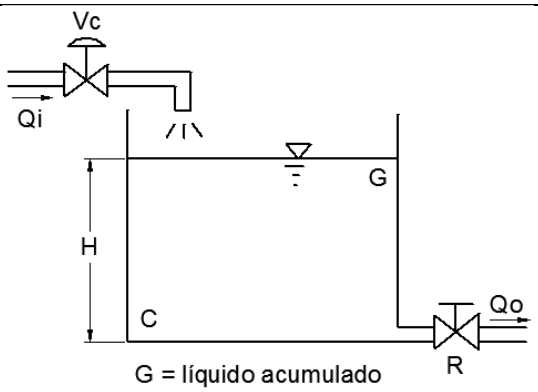
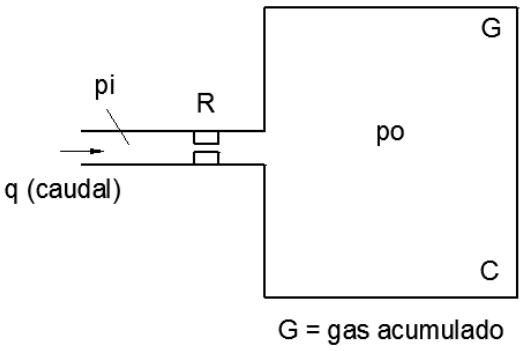
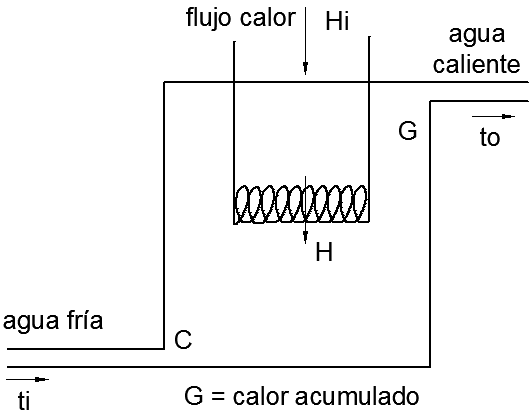
Elementos Capacitivos (retardos lineales simples)

Constante de Tiempo T=R*C

(Tiempo que tarda la variable controlada en alcanzar el 63,2% del valor definitivo)

$$T = Resistencia * Capacitancia = \frac{Volumen}{Caudal} = \frac{Cantidad}{Flujo}$$

SISTEMA	ANÁLISIS DIMENSIONAL	FUNCIÓN TRANSFERENCIA
	$T = R * C = (ohm) * (farad)$ $\frac{Volt}{Coulomb/_s} * \frac{Coulomb}{Volt} = s$	$\frac{E_0(s)}{E_i(s)} = \frac{1}{R * C * s + 1}$
	$R = \frac{\Delta H}{\Delta Q}\frac{(m)}{(m^3/s)} = \left(\frac{s}{m^2}\right)$ $C = \frac{\Delta G}{\Delta H}\left(\frac{m^3}{m}\right) = (m^2)$ $R * C = \left(\frac{s}{m^2}\right) * (m^2) = s = T$	$\frac{H(s)}{Q_i(s)} = \frac{R}{R * C * s + 1}$ $\frac{Q_0(s)}{Q_i(s)} = \frac{1}{R * C * s + 1}$
	$R = \frac{\Delta P}{\Delta q}\frac{(N/m^2)}{(N/s)} = \left(\frac{s}{m^2}\right)$ $C = \frac{\Delta G}{\Delta P}\frac{(N)}{(N\ /\ m^2\ )} = (m^2)$ $R * C = \left(\frac{s}{m^2}\right) * (m^2) = s = T$	$\frac{P_0(s)}{P_i(s)} = \frac{1}{R * C * s + 1}$
	$R = \frac{\Delta t}{\Delta H} = \frac{(°C)}{(cal/s)}$ $C = \frac{\Delta G}{\Delta t} = \frac{(cal)}{(°C)}$ $R * C = \frac{(°C)}{(cal/s)} * \frac{(cal)}{(°C)} = s = T$	$\frac{t_0(s)}{H_i(s)} = \frac{R}{R * C * s + 1}$