Inside realative humidity

temperature outside $T_e := 293.15$

temperature inside $T_i := 293.15$

saturation pressure inside $p_{si} := 611.5 \cdot \left(1 + \dfrac{T_i - 273.15}{109.8} \right)^{8.02}$

vapour pressure outside $p_{em} := 0.0$

air change rate [1/h]: $ach := 0.7$

volumen [m³]: $V := 50$

source [kg/h]: $s := 0.3$

gas constant [J/kgK]: $R_D := 461.659$

$$p_{im} := p_{em} + \frac{s}{ach \cdot V} \cdot R_D \cdot T_i$$

$$\phi_{im} := \frac{p_{im} \cdot 100}{p_{si}}$$

$$\phi_{im} = 49.572$$

$$p_i\left(t, 1000000, 0.000001, \Delta\rho\right) =$$

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