F19.

The pressure-tank reservoir for a paint sprayer contains air at 50 psi $(3.45 \times 10^5 \,\mathrm{Pa})$, and $T = 300 \,\mathrm{K}^\circ$. Air is to be supplied to the spray gun at a rate of $10 \,\mathrm{grams/s}$. What is the absolute minimum diameter of the air hose that's required to supply this air?