Prelab 9

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1.

K1 = Ko,ideal * Ao * (2*g/Acan)^(1/2) where Ko,ideal = 1/(1-(Ao/Acan)^2)^(1/2)

Ao = pi*do^2/4 = 0.01188 in^2 Acan = 7.1016 in^2

Ko,ideal = 1/(1-(Ao/Acan)^2)^(1/2) = 1

K1 = 1 * .01188*(2*32.2/7.1016)^(1/2) **= 0.03577 in^3/2/s**

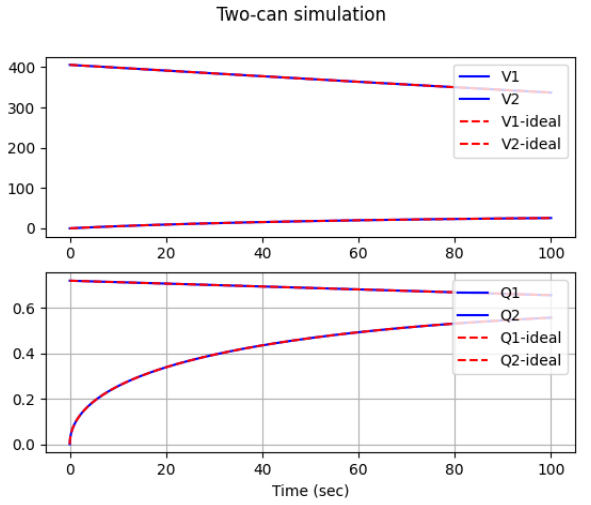
Using same process for K2

Ao = 0.0487 in^2 Acan = 12.5978 in^2

Ko,ideal = 1

K2 = 1 * 0.0487 * (2*32.2/12.5978)^(1/2) = **0.11 in^3/2/s**

2.



3. Lab procedure for one-can experiment
   a) Fill can with water with exit blocked
   b) Allow water to begin flowing out
   c) Measure water level at a constant time interval
   d) Use difference in water level to find difference in volume over interval
   e) Use difference in volume to find flowrate over time interval
   f) Plot data and adjust K until it lines up with measured data