GRAVITY VENTILATORS SIZING

Sizing
The tables shown offer quick selections at common static pressure points. Selection choices vary widely due to field conditions and size choices. The following formulas are useful in making selections:

(A) Throat Area = \( \frac{\text{CFM}}{\text{Velocity}} \)

(B) Throat Velocity = \( \frac{\text{CFM}}{\text{Throat Area}} \)

(C) Velocity Pressure = \( \left[ \frac{\text{Throat Velocity}}{4005} \right]^2 \)

(D) Determine new static pressure when CFM is known:
\[
\text{SP}_2 = \text{SP}_1 \times \left[ \frac{\text{CFM}_2^2}{\text{CFM}_1^2} \right]
\]

CFM\(_i\) = Specified airflow
CFM\(_i\) = Known CFM from table selection
SP\(_i\) = Static pressure to be determined
SP\(_i\) = Static pressure in table corresponding to CFM

(Ex.) Determine new unknown CFM when static pressure is known:
\[
\text{CFM}_2 = \text{CFM}_1 \times \left[ \frac{\text{SP}_2^2}{\text{SP}_1} \right]
\]

CFM\(_2\) = Unknown
CFM\(_i\) = Catalog CFM
SP\(_2\) = New static pressure where CFM is unknown
SP\(_i\) = Known static pressure from known CFM (CFM\(_i\))