"How to determine Air Flow through a Electric Heater"

Test for Correct System Airflow: Heating

Electric Heating - To calculate the airflow (CFM*):
Follow the directions below or use the formula: CFM = (Amps x Volts x 3.412) / (1.08 x ΔT)

1. Turn on the heater and allow to run for at least three minutes before taking measurements.
2. Measure supply & return air temps & amps. Subtract the return air from the supply air temp.
3. Multiply the difference of the supply and the return air temps by 1.08. This is your *DIVISOR*.
4. Multiply Volts x Amps x 3412 and divide by the *DIVISOR*. Answer = CFM
   (Important: For accurate results measure the Volts while the system is operating.)

Supply Air Temperature - Return Air Temperature = ?

120º - 70 º = 50º

Difference of Supply & Return Air x 1.08 = ?

50º x 1.08 = 54º

$$\frac{(\text{volts x amps x 3.412})}{54º} = \text{CFM}$$

$$\frac{(240 \text{ volts x 38 amps x 3.412})}{54º} = \frac{31{,}117}{54º} = 576 \text{ CFM}$$

*CFM stands for "cubic feet per minute," which is a standard unit for airflow.
The above calculations are only valid when using temperature in Fahrenheit and BTU.

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