

Direct-Fired Formulas

Heating Requirements

Input BTU/Hr = $(\text{Blower SCFM} * \text{Temp Rise} * \text{Density Factor}) / .92$

Temp Rise =
$$\frac{(\text{Input BTU/Hr} * .92)}{\text{Blower SCFM} * \text{Density Factor}}$$

Density Factor =
$$\frac{1.08 + (70 - \text{Blower Temp}) * .024}{10}$$

Output BTU/Hr

Output BTU/Hr = $\text{Input BTU/Hr} * .92$

Profile Velocity

Profile Velocity = $945 * \text{sqrt}(\text{Profile Pressure} / 0.075)$

Burner Areas

6 Inch Straight = .32 sq ft.

12 Inch Straight = .65 sq ft.

T Section = .77 sq ft.

Ell Section = .65 sq ft.