Direct-Fired Formulas

Heating Requirements

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

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

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

Output BTU/Hr

Output BTU/Hr = Input BTU/Hr \times .92

Profile Velocity

Profile Velocity = \(945 \times \sqrt{\frac{\text{Profile Pressure}}{0.075}}\)

Burner Areas

6 Inch Straight = .32 sq ft.
12 Inch Straight = .65 sq ft.
T Section = .77 sq ft.
El Section = .65 sq ft.