ENGINEERING DATA

The following load calculations and recommended operating ranges are based on standard 75°F entering air (comforting heating). Consult factory for other applications.

1. Conversion: 1 KW = 3413 B.T.U.

2. Load Requirement: KW = \( \frac{[\text{cubic Feet per Min.} \times \text{Temperature Rise}]}{3160} \)

3. Ohm’s Law: \( \text{Watts} = \frac{[\text{Volts}]^2}{\text{Resistance}} = \text{Volts} \times \text{Amps} \)

4. Line Current, 1 phase: \( \text{Amps} = \frac{\text{Watts}}{\text{Volts}} \)

5. Line Current, 3 phase: \( \text{Amps} = \frac{\text{Watts}}{[\text{Volts} \times 1.73]} \)

6. Pressure Drop: \( \text{Inches} \quad \text{H}_2\text{O} = \left[ \frac{[\text{KW} \times \text{ft}^2]}{760} \right] \times \left[ \frac{\text{velocity in f.p.m.}}{500} \right]^2 \)

7. C.F.M. / F.P.M. Velocity \( \text{VEL.}/\text{F.P.M.} = \frac{\text{C.F.M.}}{(\text{Duct Area}/\text{Ft.}^2)} \)

8. KW per square foot: \( \text{KW} / \text{sq. ft} = \frac{\text{KW}}{[\text{Duct width (inches)} \times \text{Duct height (inches)}]} / 144 \)

HEAT-VELOCITY RELATIONSHIP

The following graph shows the recommended ranges for combinations of heat and velocity, which will result in safe operating temperatures.