

Dimensionless numbers

Re	Reynolds number
Pr	Prandtl number
Nu	Nusselt number
j	Colburn j -factor
f	Friction factor
F'	Collector efficiency factor
F _R	Collector heat removal factor

Greek letters

\dot{m}	Mass flow rate (kg/hr)
ΔP	Pressure drop (N/m ²)

ρ	Density of air (kg/m ³)
θ	Collector tilt angle (°)
σ	Stefan-Boltzmann Constant (5.67*10 ⁻⁸ W/m ² K ⁴)
ϵ_C	Emissivity of glass cover (0.88)
η_{eff}	Effective efficiency
η_f	Fan efficiency (0.65)
δ_i	Thickness of insulation (m)
ϵ_p	Absorber plate emissivity (0.95)
λ	Wavelength of wavy fin (mm)
Φ_f	Fin efficiency