



Specific thrust and specific fuel consumption for turbojet with afterburner.

Non-ideal engine with parameters: $T_a = 420 \text{ R}$ (233 K), $Q_R = 19,500 \text{ Btu/lbm}$ (45,354 kJ/kg), $\gamma_c = 1.4$, $\gamma_t = 1.35$, $c_{pc} = 0.238 \text{ Btu/lbm}\cdot\text{R}$ (0.996 kJ/kg·K), $c_{pt} = 0.262 \text{ Btu/lbm}\cdot\text{R}$ (1.097 kJ/kg·K).

Pressure losses: $\pi_d = 0.9425$, $\pi_b = 0.98$, $\pi_n \pi_{AB} = 0.96$ (ab on), $\pi_n \pi_{AB} = 0.98$ (ab off).

Compressor/turbine polytropic efficiencies: $e_c = 0.92$, $e_t = 0.91$.

Combustion/mechanical efficiencies: $\eta_b = 0.97$, $\eta_m = 0.99$.