Unit Settings: SI K MPa kJ mass deg

$A_{dish} = 8125$ [m^2]

$A_{trough} = 52401$ [m^2]

$\Delta T_{stirling,cold} = 25$ [K]

$\Delta T_{stirling,hot} = 30$ [K]

DNI = 0.657 [kW/m^2]

$\eta_{2,total} = 0.2479$

$\eta_{co} = 0.4$

$\eta_{dish} = 0.75$

$\eta_{generator} = 0.975$

$\eta_{i,turbine} = 0.8042$

$\eta_{rankine} = 0.2542$

$\eta_{separate} = 0.1581$

$\eta_{stirling} = 0.1398$

$\eta_{stirling,separate} = 0.2915$

$\eta_{system} = 0.1635$

$\eta_{trough} = 0.6$

$E_{total} = 39765$ [kW]

F1$ = 'air_ha'

F2$ = 'water'

F3$ = 'Therminol_66'

$m_1 = 8.022$ [kg/s]

$m_2 = 8.087$ [kg/s]

$\dot{m} = 8.087$ [kg/s]

$p_{2,stirling} = 0.2$ [MPa]

$p_c = 0.015$ [MPa]

$p_{dish} = 0.5$ [MPa]

$P_{generator} = 6000$ [kW]

$p_s = 2.35$ [MPa]

$P_{stirling} = 500$ [kW]

$p_{trough} = 0.15$ [MPa]

$P_{turbine} = 6154$ [kW]

$Q_{dish} = 4004$ [kW]

$Q_{stirling} = 3577$ [kW]

$Q_{stirling,cold} = 3077$ [kW]

$Q_{trough} = 20656$ [kW]

$T_{1,afterstirling} = 673.2$ [K]

$T_{cold} = 418.4$ [K]

$T_{cold,separate} = 318.2$ [K]

$T_{dish,inlet} = 623.2$ [K]

$T_{dish,outlet} = 1073$ [K]

$T_{environment} = 293.2$ [K]

$T_{hot} = 643.2$ [K]

$T_{hot,seperate} = 1173$ [K]

$T_s = 663.2$ [K]

$T_{trough,inlet} = 473.2$ [K]

$T_{trough,outlet} = 673.2$ [K]