{Section 3b - ZP21K6E-PFV}

T_evap1=**converttemp**(C,F,7)
T_cond1=**converttemp**(C,F,54)

capacity1=(C[0]+(C[1]*T_evap1)+(C[2]*T_cond1)+(C[3]*T_evap1^2)+(C[4]*T_evap1*T_cond1)+(C[5]*T_cond1^2)+(C[6]*T_evap1^3)+(C[7]*T_cond1*T_evap1^2)+(C[8]*T_evap1*T_cond1^2)+(C[9]*T_cond1^3))***convert**(Btu/hr,W)

power1=W[0]+(W[1]*T_evap1)+(W[2]*T_cond1)+(W[3]*T_evap1^2)+(W[4]*T_evap1*T_cond1)+(W[5]*T_cond1^2)+(W[6]*T_evap1^3)+(W[7]*T_cond1*T_evap1^2)+(W[8]*T_evap1*T_cond1^2)+(W[9]*T_cond1^3)

mdot1=(M[0]+(M[1]*T_evap1)+(M[2]*T_cond1)+(M[3]*T_evap1^2)+(M[4]*T_evap1*T_cond1)+(M[5]*T_cond1^2)+(M[6]*T_evap1^3)+(M[7]*T_cond1*T_evap1^2)+(M[8]*T_evap1*T_cond1^2)+(M[9]*T_cond1^3))***convert**(lb_m/hr,g/s)

capacityError1=**abs**(6213-capacity1)/6213*100
powerError1=**abs**(2100-power1)/2100*100
mdotError1=**abs**(38.93-mdot1)/38.93*100

T_evap2=**converttemp**(C,F,10)
T_cond2=**converttemp**(C,F,38)

capacity2=(C[0]+(C[1]*T_evap2)+(C[2]*T_cond2)+(C[3]*T_evap2^2)+(C[4]*T_evap2*T_cond2)+(C[5]*T_cond2^2)+(C[6]*T_evap2^3)+(C[7]*T_cond2*T_evap2^2)+(C[8]*T_evap2*T_cond2^2)+(C[9]*T_cond2^3))***convert**(Btu/hr,W)

power2=W[0]+(W[1]*T_evap2)+(W[2]*T_cond2)+(W[3]*T_evap2^2)+(W[4]*T_evap2*T_cond2)+(W[5]*T_cond2^2)+(W[6]*T_evap2^3)+(W[7]*T_cond2*T_evap2^2)+(W[8]*T_evap2*T_cond2^2)+(W[9]*T_cond2^3)

mdot2=(M[0]+(M[1]*T_evap2)+(M[2]*T_cond2)+(M[3]*T_evap2^2)+(M[4]*T_evap2*T_cond2)+(M[5]*T_cond2^2)+(M[6]*T_evap2^3)+(M[7]*T_cond2*T_evap2^2)+(M[8]*T_evap2*T_cond2^2)+(M[9]*T_cond2^3))***convert**(lb_m/hr,g/s)

capacityError2=**abs**(8528-capacity2)/8528*100
powerError2=**abs**(1350-power2)/1350*100
mdotError2=**abs**(44.23-mdot2)/44.23*100

C[0]=9293.460431
C[1]=206.9141431
C[2]=163.3466375
C[3]=3.672799287
C[4]=1.957443702
C[5]=-2.358658254
C[6]=0.008241227732
C[7]=-0.01308792094
C[8]=-0.01510579503
C[9]=0.007534949734

W[0]=-11.64166785
W[1]=-14.20991885
W[2]=24.22068232
W[3]=-0.1159905293
W[4]=0.3229410557
W[5]=-0.2410616324
W[6]=-0.0001343056965
W[7]=0.001119644695
W[8]=-0.002063122392
W[9]=0.001503874012

m[0]=165.7200568
m[1]=2.653310094
m[2]=-0.8551055247
m[3]=0.03212726118
m[4]=0.002873563208
m[5]=0.008444636298
m[6]=7.57E-05

m[7]=-6.65E-05
m[8]=1.41E-05
m[9]=-4.06E-05

SOLUTION

Unit Settings: SI C kPa kJ mass deg

capacity1 = 6216 [W]	capacity2 = 8508 [W]
capacityError1 = 0.05425 [%]	capacityError2 = 0.2388 [%]
mdot1 = 38.75 [g/s]	mdot2 = 44.25 [g/s]
mdotError1 = 0.4552 [%]	mdotError2 = 0.04285 [%]
power1 = 2073 [W]	power2 = 1357 [W]
powerError1 = 1.268 [%]	powerError2 = 0.5387 [%]
T_{cond1} = 129.2 [F]	T_{cond2} = 100.4 [F]
T_{evap1} = 44.6 [F]	T_{evap2} = 50 [F]

12 potential unit problems were detected.