{Section 3b - CP22K8ME-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**(40.82-mdot1)/40.82*100

T_evap2=**converttemp**(C,F,7)
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**(8909-capacity2)/8909*100
powerError2=**abs**(1690-power2)/1690*100
mdotError2=**abs**(47.38-mdot2)/47.38*100

C[0]=-3957.961381
C[1]=1213.724604
C[2]=256.6592867
C[3]=5.913531234
C[4]=-13.25473112
C[5]=-1.168179404
C[6]=0.01720849503
C[7]=-0.03324154833
C[8]=0.04853011721
C[9]=-0.00329759596

W[0]=2318.802413
W[1]=-34.26340731
W[2]=-25.18508254
W[3]=-0.4511599559
W[4]=0.8331550691
W[5]=0.1648776491
W[6]=-0.003695735428
W[7]=0.006614888271
W[8]=-0.004215340349
W[9]=-0.0001600304257

m[0]=104.5511514
m[1]=13.07182007
m[2]=-2.001541182
m[3]=0.03815445222
m[4]=-0.15083255
m[5]=0.04198394854
m[6]=0.000200298596

m[7]=-0.000111599993
m[8]=0.0006744688395
m[9]=-0.0002345065605

SOLUTION

Unit Settings: SI C kPa kJ mass deg

capacity1 = 6219 [W]	capacity2 = 8776 [W]
capacityError1 = 0.1031 [%]	capacityError2 = 1.489 [%]
mdot1 = 40.57 [g/s]	mdot2 = 46.83 [g/s]
mdotError1 = 0.6106 [%]	mdotError2 = 1.162 [%]
power1 = 2081 [W]	power2 = 1693 [W]
powerError1 = 0.8957 [%]	powerError2 = 0.207 [%]
T_{cond1} = 129.2 [F]	T_{cond2} = 100.4 [F]
T_{evap1} = 44.6 [F]	T_{evap2} = 44.6 [F]

12 potential unit problems were detected.