

```

to=5
tc=50
psat_e717=pressure(R717; T=to; X=1)
volesp_717=volume(R717; T=to+10; p=psat_e717)
h2_717=enthalpy(R717; T=to+10; p=psat_e717)
s2_717=entropy(R717; T=to+10; p=psat_e717)
psat_c717=pressure(R717; T=tc; X=1)
s3_717=s2_717

```

{R717 compresor de pistones abierto/modelo W2TA-K}

{límites de aplicación: temp.evap de -24,7 a 15 ; temp. cond de 20 a 55}

```

Q_e717= c1 + c2*to + c3*tc + c4*to^2 + c5*to*tc + c6*tc^2 + c7*to^3 + c8*tc*to^2 + c9*to*tc^2 + c10*tc^3
W_c717 = d1 + d2*to + d3*tc + d4*to^2 + d5*to*tc + d6*tc^2 + d7*to^3 + d8*tc*to^2 + d9*to*tc^2 + d10*tc^3
m_717 = e1 + e2*to + e3*tc + e4*to^2 + e5*to*tc + e6*tc^2 + e7*to^3 + e8*tc*to^2 + e9*to*tc^2 + e10*tc^3

```

COP\_717=Q\_e717/W\_c717

eta\_717=vol\_717/19,68

vol\_717=volesp\_717\*m\_717

etaisen\_717=(Wisen\_717\*1000)/W\_c717

```

h3_717=enthalpy(R717;p=psat_c717 ; s=s3_717)
Wisen_717=m_717*(1/3600)*(h3_717-h2_717)

```

efin\_717=Q\_e717/(1000\*19,68)

{potencia frigorífica}

```

c1=18465,0482050523
c2=761,271396061092
c3=73,1288108973097
c4=11,4047156520439
c5=1,6781344364993
c6=-2,64484110022983
c7=0,0741216197324735
c8=0,000398212243335081
c9=-0,0278658484539014
c10=0,0000692305999601506

```

{potencia del compresor}

```

d1=2490,86153925186
d2=-4,88574782612632
d3=-85,9999742770975
d4=-1,06348362453413
d5=-1,75660109853565
d6=4,79918749238976
d7=0,000874837672228852
d8=-0,00497467540733256
d9=0,0713049705925978
d10=-0,0454109868980739

```

{caudal másico}

```

e1=52,1280217792157
e2=2,08546868114287
e3=0,348094148273809
e4=0,0299359856890108
e5=0,0116453393336741
e6=-0,00448737055768984
e7=0,000213913904104626
e8=0,000131458838333975
e9=-0,0000238949220998118
e10=-0,0000404936033351803

```

{R134a compresor de pistones simhermético 4FES-3Y-40S}

```

psat_e134=pressure(R134a; T=to; X=1)
volesp_134=volume(R134a; T=to+10; p=psat_e134)
h2_134=enthalpy(R134a; T=to+10; p=psat_e134)
s2_134=entropy(R134a; T=to+10; p=psat_e134)
psat_c134=pressure(R134a; T=tc; X=1)
s3_134=s2_134

```

$$Q_{e134} = a_1 + a_2 \cdot to + a_3 \cdot tc + a_4 \cdot to^2 + a_5 \cdot to \cdot tc + a_6 \cdot tc^2 + a_7 \cdot to^3 + a_8 \cdot tc \cdot to^2 + a_9 \cdot to \cdot tc^2 + a_{10} \cdot tc^3$$

$$W_{c134} = b_1 + b_2 \cdot to + b_3 \cdot tc + b_4 \cdot to^2 + b_5 \cdot to \cdot tc + b_6 \cdot tc^2 + b_7 \cdot to^3 + b_8 \cdot tc \cdot to^2 + b_9 \cdot to \cdot tc^2 + b_{10} \cdot tc^3$$

$$m_{134} = f_1 + f_2 \cdot to + f_3 \cdot tc + f_4 \cdot to^2 + f_5 \cdot to \cdot tc + f_6 \cdot tc^2 + f_7 \cdot to^3 + f_8 \cdot tc \cdot to^2 + f_9 \cdot to \cdot tc^2 + f_{10} \cdot tc^3$$

$$COP_{134} = Q_{e134} / W_{c134}$$

$$\eta_{134} = vol_{134} / 18,05$$

$$vol_{134} = volesp_{134} \cdot m_{134}$$

$$\eta_{isen_{134}} = (W_{isen_{134}} \cdot 1000) / W_{c134}$$

```

h3_134=enthalpy(R134a;p=psat_c134 ; s=s2_134)
Wisen_134=m_134*(1/3600)*(h3_134-h2_134)

```

$$\eta_{fin_{134}} = Q_{e134} / (1000 \cdot 19,68)$$

{potencia frigorífica}

```

a1=13998,8496674133
a2=602,6080037808
a3=-119,571353276802
a4=9,44050223497353
a5=-4,86267864031135
a6=-0,387298995668337
a7=0,0510294695848661
a8=-0,061942518342804
a9=-0,000844927428964641
a10=0,00278032496214568

```

{potencia del compresor}

```

b1=701,61984169196
b2=-36,4435592577557
b3=54,0154846637746
b4=-1,22344695328952
b5=2,01255085673346
b6=-0,168541425366279
b7=-0,00955172992672456
b8=0,0173200217412944
b9=-0,0043401170947176
b10=-0,00182055825509688

```

{caudal másico}

```

f1=242,760499534743
f2=9,68922227907538
f3=-0,510134379519262
f4=0,140881351449761
f5=-0,0193754546527963
f6=-0,00676760612957051
f7=0,000816396367763415
f8=-0,000253547456739735
f9=-0,000050779314824273
f10=-0,0000246966166043625

```

{R410a compresor de pistones semihermético 4FDC-5Y-40S}

{límites de aplicación: temp. evaporación de -30 a 12,5 ; temp. condensación de 20 a 63}

```

psat_e410=pressure(R410A; T=to; X=1)

```

```
volesp_410=volume(R410A; T=to+10; p=psat_e410)
h2_410=enthalpy(R410A; T=to+10; p=psat_e410)
s2_410=entropy(R410A; T=to+10; p=psat_e410)
psat_c410=pressure(R410A; T=tc; X=1)
s3_410=s2_410
```

$$Q_{e410} = g_1 + g_2 \cdot t_o + g_3 \cdot t_c + g_4 \cdot t_o^2 + g_5 \cdot t_o \cdot t_c + g_6 \cdot t_c^2 + g_7 \cdot t_o^3 + g_8 \cdot t_c \cdot t_o^2 + g_9 \cdot t_o \cdot t_c^2 + g_{10} \cdot t_c^3$$

$$W_{c410} = h_1 + h_2 \cdot t_o + h_3 \cdot t_c + h_4 \cdot t_o^2 + h_5 \cdot t_o \cdot t_c + h_6 \cdot t_c^2 + h_7 \cdot t_o^3 + h_8 \cdot t_c \cdot t_o^2 + h_9 \cdot t_o \cdot t_c^2 + h_{10} \cdot t_c^3$$

$$m_{410} = i_1 + i_2 \cdot t_o + i_3 \cdot t_c + i_4 \cdot t_o^2 + i_5 \cdot t_o \cdot t_c + i_6 \cdot t_c^2 + i_7 \cdot t_o^3 + i_8 \cdot t_c \cdot t_o^2 + i_9 \cdot t_o \cdot t_c^2 + i_{10} \cdot t_c^3$$

$$COP_{410} = Q_{e410} / W_{c410}$$

$$\eta_{410} = vol_{410} / 12,4$$

$$vol_{410} = volesp_{410} \cdot m_{410}$$

$$\eta_{isen410} = (W_{isen410} \cdot 1000) / W_{c410}$$

```
h3_410=enthalpy(R410A;p=psat_c410 ; s=s3_410)
Wisen_410=m_410*(1/3600)*(h3_410-h2_410)
```

$$\eta_{fin410} = Q_{e410} / (1000 \cdot 12,4)$$

{potencia frigorífica}

```
g1=20708,3323758414
g2=701,130790173169
g3=-161,433729558035
g4=9,33895072174653
g5=-4,11857171545237
g6=-0,72209867951475
g7=0,0420437150334644
g8=-0,0665866720644103
g9=-0,0278376645430197
g10=-0,000202211698076347
```

{potencia del compresor}

```
h1=963,715259653184
h2=-75,1698381032341
h3=79,7176920834525
h4=-2,20714227274258
h5=2,43685209224754
h6=0,0860546436454539
h7=-0,0137533596771841
h8=0,0214285560827496
h9=0,00297564210732608
h10=-0,00484837080615897
```

{caudal másico}

```
i1=321,144809411716
i2=10,3849852691185
i3=-0,324106326585539
i4=0,135723232282298
i5=0,00302166208475166
i6=-0,0134648694530399
i7=0,000796072361048565
i8=-0,00020049263402903
i9=-0,000288240613736643
i10=-0,0000442567251542468
```

{R744 compresor de pistones semiherméticos/modelo 4PTC-7K-40S}

{límites de aplicación: 73,8 a 140 bar / -20 a 20 celsius}

{to=5}

{tc=50}

```
psat_e744=pressure(R744; T=to; X=1)
volesp_744=volume(R744; T=to+10; p=psat_e744)
```

```

h2_744=enthalpy(R744; T=to+10; p=psat_e744)
s2_744=entropy(R744; T=to+10; p=psat_e744)
p_HP744=98
s3_744=s2_744

```

```
{p_HP744=1+2,44*tc}
```

```

Q_e744 = w1 + w2*to + w3*p_HP744 + w4*to^2 + w5*to*p_HP744 + w6*p_HP744^2 + w7*to^3 + w8*p_HP744*to^2 + w9*
to*p_HP744^2 + w10*p_HP744^3
W_c744 = p1 + p2*to + p3*p_HP744 + p4*to^2 + p5*to*p_HP744 + p6*p_HP744^2 + p7*to^3 + p8*p_HP744*to^2 + p9*to*
p_HP744^2 + p10*p_HP744^3
m_744 = z1 + z2*to + z3*p_HP744 + z4*to^2 + z5*to*p_HP744 + z6*p_HP744^2 + z7*to^3 + z8*p_HP744*to^2 + z9*to*
p_HP744^2 + z10*p_HP744^3

```

```
COP_744=Q_e744/W_c744
```

```
eta_744=vol_744/4,3
```

```
vol_744=volesp_744*m_744
```

```
etaisen_744=(Wisen_744*1000)/W_c744
```

```

h3_744=enthalpy(R744;p=p_HP744 ; s=s3_744)
Wisen_744=m_744*(1/3600)*(h3_744-h2_744)
efin_744=Q_e744/(1000*4,3)

```

```
{Potencia frigorífica}
```

```

w1=-135130,67756747
w2=-2643,53863888237
w3=3568,72147531309
w4=-17,0586346264126
w5=53,7571256967733
w6=-29,1317421521983
w7=-0,037044597853854
w8=0,209575318086032
w9=-0,236578526047457
w10=0,0791629636328804

```

```
{Potencia de compresión}
```

```

p1=-3821,99999999998
p2=-156,749999999999
p3=161,609999999999
p4=-1,35779999999998
p5=1,89819999999997
p6=-0,886629999999994
p7=-0,0054641999999992
p8=-0,00408040000000022
p9=-0,00167249999999987
p10=0,00218889999999998

```

```
{caudal másico}
```

```

z1=406,1700000000001
z2=12,453
z3=-1,720800000000002
z4=0,17893
z5=-0,0203929999999999
z6=0,00314300000000015
z7=0,00203849999999999
z8=-0,000132299999999996
z9=2,74429999999932E-07
z10=3,48129999999955E-07

```

**Parametric Table: COP\_30**

|        | to         | tc | COP <sub>717</sub> | COP <sub>134</sub> | COP <sub>410</sub> |
|--------|------------|----|--------------------|--------------------|--------------------|
| Run 1  | -20        | 30 | 2,741              | 2,768              | 2,434              |
| Run 2  | -16,67     | 30 | 3,133              | 3,075              | 2,679              |
| Run 3  | -13,33     | 30 | 3,575              | 3,416              | 2,958              |
| Run 4  | -10        | 30 | 4,078              | 3,793              | 3,278              |
| Run 5  | -6,667     | 30 | 4,653              | 4,211              | 3,648              |
| Run 6  | -3,333     | 30 | 5,317              | 4,675              | 4,081              |
| Run 7  | -4,337E-19 | 30 | 6,085              | 5,19               | 4,592              |
| Run 8  | 3,333      | 30 | 6,981              | 5,761              | 5,202              |
| Run 9  | 6,667      | 30 | 8,033              | 6,397              | 5,942              |
| Run 10 | 10         | 30 | 9,277              | 7,105              | 6,855              |

**Parametric Table: COP\_40**

|        | to         | tc | COP <sub>717</sub> | COP <sub>134</sub> | COP <sub>410</sub> |
|--------|------------|----|--------------------|--------------------|--------------------|
| Run 1  | -20        | 40 | 2,157              | 2,244              | 1,881              |
| Run 2  | -16,67     | 40 | 2,457              | 2,484              | 2,058              |
| Run 3  | -13,33     | 40 | 2,784              | 2,746              | 2,252              |
| Run 4  | -10        | 40 | 3,143              | 3,031              | 2,466              |
| Run 5  | -6,667     | 40 | 3,542              | 3,344              | 2,708              |
| Run 6  | -3,333     | 40 | 3,988              | 3,686              | 2,981              |
| Run 7  | -4,337E-19 | 40 | 4,489              | 4,063              | 3,293              |
| Run 8  | 3,333      | 40 | 5,053              | 4,477              | 3,653              |
| Run 9  | 6,667      | 40 | 5,691              | 4,932              | 4,071              |
| Run 10 | 10         | 40 | 6,414              | 5,434              | 4,562              |

**Parametric Table: COP\_50**

|        | to         | tc | COP <sub>717</sub> | COP <sub>134</sub> | COP <sub>410</sub> |
|--------|------------|----|--------------------|--------------------|--------------------|
| Run 1  | -20        | 50 | 1,756              | 1,793              | 1,443              |
| Run 2  | -16,67     | 50 | 1,995              | 1,983              | 1,572              |
| Run 3  | -13,33     | 50 | 2,242              | 2,185              | 1,707              |
| Run 4  | -10        | 50 | 2,505              | 2,402              | 1,853              |
| Run 5  | -6,667     | 50 | 2,79               | 2,637              | 2,013              |
| Run 6  | -3,333     | 50 | 3,099              | 2,893              | 2,191              |
| Run 7  | -4,337E-19 | 50 | 3,439              | 3,171              | 2,39               |
| Run 8  | 3,333      | 50 | 3,812              | 3,476              | 2,614              |
| Run 9  | 6,667      | 50 | 4,223              | 3,808              | 2,868              |
| Run 10 | 10         | 50 | 4,676              | 4,171              | 3,159              |

**Parametric Table: efin\_30**

|        | to         | tc | efin <sub>717</sub> | efin <sub>134</sub> | efin <sub>410</sub> |
|--------|------------|----|---------------------|---------------------|---------------------|
| Run 1  | -20        | 30 | 0,3315              | 0,2403              | 0,5444              |
| Run 2  | -16,67     | 30 | 0,4065              | 0,2838              | 0,631               |
| Run 3  | -13,33     | 30 | 0,4902              | 0,3329              | 0,7271              |
| Run 4  | -10        | 30 | 0,5835              | 0,388               | 0,8335              |
| Run 5  | -6,667     | 30 | 0,6871              | 0,4496              | 0,951               |
| Run 6  | -3,333     | 30 | 0,802               | 0,5181              | 1,08                |
| Run 7  | -4,337E-19 | 30 | 0,9289              | 0,5941              | 1,223               |
| Run 8  | 3,333      | 30 | 1,069               | 0,678               | 1,379               |
| Run 9  | 6,667      | 30 | 1,222               | 0,7704              | 1,549               |
| Run 10 | 10         | 30 | 1,39                | 0,8716              | 1,735               |

**Parametric Table: efin 40**

|        | to         | tc | efin <sub>717</sub> | efin <sub>134</sub> | efin <sub>410</sub> |
|--------|------------|----|---------------------|---------------------|---------------------|
| Run 1  | -20        | 40 | 0,2775              | 0,2085              | 0,4565              |
| Run 2  | -16,67     | 40 | 0,3521              | 0,2477              | 0,534               |
| Run 3  | -13,33     | 40 | 0,4353              | 0,2917              | 0,6195              |
| Run 4  | -10        | 40 | 0,5281              | 0,3409              | 0,7137              |
| Run 5  | -6,667     | 40 | 0,6313              | 0,3958              | 0,8174              |
| Run 6  | -3,333     | 40 | 0,7456              | 0,4569              | 0,9315              |
| Run 7  | -4,337E-19 | 40 | 0,8721              | 0,5246              | 1,057               |
| Run 8  | 3,333      | 40 | 1,011               | 0,5995              | 1,194               |
| Run 9  | 6,667      | 40 | 1,165               | 0,682               | 1,345               |
| Run 10 | 10         | 40 | 1,332               | 0,7726              | 1,509               |

**Parametric Table: efin 50**

|        | to         | tc | efin <sub>717</sub> | efin <sub>134</sub> | efin <sub>410</sub> |
|--------|------------|----|---------------------|---------------------|---------------------|
| Run 1  | -20        | 50 | 0,2025              | 0,1771              | 0,3645              |
| Run 2  | -16,67     | 50 | 0,2756              | 0,212               | 0,4316              |
| Run 3  | -13,33     | 50 | 0,3574              | 0,2508              | 0,505               |
| Run 4  | -10        | 50 | 0,4487              | 0,294               | 0,5855              |
| Run 5  | -6,667     | 50 | 0,5505              | 0,3422              | 0,6741              |
| Run 6  | -3,333     | 50 | 0,6635              | 0,3958              | 0,7715              |
| Run 7  | -4,337E-19 | 50 | 0,7885              | 0,4552              | 0,8786              |
| Run 8  | 3,333      | 50 | 0,9265              | 0,521               | 0,9963              |
| Run 9  | 6,667      | 50 | 1,078               | 0,5936              | 1,125               |
| Run 10 | 10         | 50 | 1,244               | 0,6735              | 1,267               |

**Parametric Table: etavol 30**

|        | to         | tc | $\eta_{717}$ | $\eta_{134}$ | $\eta_{410}$ |
|--------|------------|----|--------------|--------------|--------------|
| Run 1  | -20        | 30 | 0,6971       | 0,7568       | 0,6713       |
| Run 2  | -16,67     | 30 | 0,7417       | 0,782        | 0,6925       |
| Run 3  | -13,33     | 30 | 0,7795       | 0,8053       | 0,7127       |
| Run 4  | -10        | 30 | 0,8118       | 0,8275       | 0,7326       |
| Run 5  | -6,667     | 30 | 0,8396       | 0,8492       | 0,7527       |
| Run 6  | -3,333     | 30 | 0,8637       | 0,8705       | 0,7732       |
| Run 7  | -4,337E-19 | 30 | 0,8847       | 0,8915       | 0,7941       |
| Run 8  | 3,333      | 30 | 0,903        | 0,9122       | 0,8154       |
| Run 9  | 6,667      | 30 | 0,919        | 0,9326       | 0,8368       |
| Run 10 | 10         | 30 | 0,9329       | 0,9525       | 0,8582       |

**Parametric Table: etavol 40**

|        | to         | tc | $\eta_{717}$ | $\eta_{134}$ | $\eta_{410}$ |
|--------|------------|----|--------------|--------------|--------------|
| Run 1  | -20        | 40 | 0,6099       | 0,7146       | 0,6152       |
| Run 2  | -16,67     | 40 | 0,6707       | 0,7429       | 0,6408       |
| Run 3  | -13,33     | 40 | 0,7224       | 0,7686       | 0,6645       |
| Run 4  | -10        | 40 | 0,7667       | 0,7928       | 0,6875       |
| Run 5  | -6,667     | 40 | 0,805        | 0,816        | 0,7103       |
| Run 6  | -3,333     | 40 | 0,8381       | 0,8386       | 0,733        |
| Run 7  | -4,337E-19 | 40 | 0,8669       | 0,8608       | 0,7559       |
| Run 8  | 3,333      | 40 | 0,8919       | 0,8825       | 0,7789       |
| Run 9  | 6,667      | 40 | 0,9136       | 0,9037       | 0,8019       |
| Run 10 | 10         | 40 | 0,9325       | 0,9243       | 0,8247       |

**Parametric Table: etavol 50**

|        | to         | tc | $\eta_{717}$ | $\eta_{134}$ | $\eta_{410}$ |
|--------|------------|----|--------------|--------------|--------------|
| Run 1  | -20        | 50 | 0,4639       | 0,6676       | 0,5473       |
| Run 2  | -16,67     | 50 | 0,5478       | 0,6992       | 0,5773       |
| Run 3  | -13,33     | 50 | 0,6196       | 0,7276       | 0,6049       |
| Run 4  | -10        | 50 | 0,6812       | 0,754        | 0,6312       |
| Run 5  | -6,667     | 50 | 0,7343       | 0,7791       | 0,6568       |
| Run 6  | -3,333     | 50 | 0,7803       | 0,8033       | 0,6822       |
| Run 7  | -4,337E-19 | 50 | 0,8202       | 0,8268       | 0,7074       |
| Run 8  | 3,333      | 50 | 0,8549       | 0,8496       | 0,7326       |
| Run 9  | 6,667      | 50 | 0,885        | 0,8719       | 0,7575       |
| Run 10 | 10         | 50 | 0,9112       | 0,8934       | 0,782        |

**Parametric Table: etaisen 30**

|        | to         | tc | etaisen <sub>717</sub> | etaisen <sub>134</sub> | etaisen <sub>410</sub> |
|--------|------------|----|------------------------|------------------------|------------------------|
| Run 1  | -20        | 30 | 0,6837                 | 0,6012                 | 0,5626                 |
| Run 2  | -16,67     | 30 | 0,7086                 | 0,6145                 | 0,5687                 |
| Run 3  | -13,33     | 30 | 0,7302                 | 0,6248                 | 0,5742                 |
| Run 4  | -10        | 30 | 0,7482                 | 0,6319                 | 0,5792                 |
| Run 5  | -6,667     | 30 | 0,7622                 | 0,6354                 | 0,5838                 |
| Run 6  | -3,333     | 30 | 0,7715                 | 0,6344                 | 0,5876                 |
| Run 7  | -4,337E-19 | 30 | 0,7749                 | 0,6279                 | 0,5898                 |
| Run 8  | 3,333      | 30 | 0,7708                 | 0,6145                 | 0,5896                 |
| Run 9  | 6,667      | 30 | 0,7574                 | 0,5927                 | 0,5856                 |
| Run 10 | 10         | 30 | 0,732                  | 0,5607                 | 0,5759                 |

**Parametric Table: etaisen 40**

|        | to         | tc | etaisen <sub>717</sub> | etaisen <sub>134</sub> | etaisen <sub>410</sub> |
|--------|------------|----|------------------------|------------------------|------------------------|
| Run 1  | -20        | 40 | 0,6733                 | 0,6177                 | 0,5583                 |
| Run 2  | -16,67     | 40 | 0,7031                 | 0,6366                 | 0,5676                 |
| Run 3  | -13,33     | 40 | 0,7287                 | 0,6531                 | 0,5759                 |
| Run 4  | -10        | 40 | 0,7505                 | 0,6674                 | 0,584                  |
| Run 5  | -6,667     | 40 | 0,7688                 | 0,6794                 | 0,5919                 |
| Run 6  | -3,333     | 40 | 0,7832                 | 0,6887                 | 0,5997                 |
| Run 7  | -4,337E-19 | 40 | 0,7933                 | 0,6944                 | 0,607                  |
| Run 8  | 3,333      | 40 | 0,7984                 | 0,6958                 | 0,6133                 |
| Run 9  | 6,667      | 40 | 0,7975                 | 0,692                  | 0,618                  |
| Run 10 | 10         | 40 | 0,7896                 | 0,6817                 | 0,6202                 |

**Parametric Table: etaisen 50**

|        | to         | tc | etaisen <sub>717</sub> | etaisen <sub>134</sub> | etaisen <sub>410</sub> |
|--------|------------|----|------------------------|------------------------|------------------------|
| Run 1  | -20        | 50 | 0,6647                 | 0,6144                 | 0,5449                 |
| Run 2  | -16,67     | 50 | 0,6988                 | 0,6379                 | 0,5564                 |
| Run 3  | -13,33     | 50 | 0,7259                 | 0,6591                 | 0,5667                 |
| Run 4  | -10        | 50 | 0,7482                 | 0,6787                 | 0,5766                 |
| Run 5  | -6,667     | 50 | 0,7665                 | 0,6966                 | 0,5865                 |
| Run 6  | -3,333     | 50 | 0,7812                 | 0,7127                 | 0,5964                 |
| Run 7  | -4,337E-19 | 50 | 0,7922                 | 0,7266                 | 0,6063                 |
| Run 8  | 3,333      | 50 | 0,7993                 | 0,7377                 | 0,6159                 |
| Run 9  | 6,667      | 50 | 0,802                  | 0,7454                 | 0,6247                 |
| Run 10 | 10         | 50 | 0,7998                 | 0,7488                 | 0,6323                 |

**Parametric Table: COP tevapvariable**

|        | to         | COP <sub>717</sub> | COP <sub>134</sub> | COP <sub>410</sub> | COP <sub>744</sub> |
|--------|------------|--------------------|--------------------|--------------------|--------------------|
| Run 1  | -20        | 1,756              | 1,47               | 1,392              | 0,8556             |
| Run 2  | -16,67     | 1,995              | 1,641              | 1,523              | 0,9415             |
| Run 3  | -13,33     | 2,242              | 1,819              | 1,663              | 1,049              |
| Run 4  | -10        | 2,505              | 2,01               | 1,815              | 1,177              |
| Run 5  | -6,667     | 2,79               | 2,216              | 1,981              | 1,324              |
| Run 6  | -3,333     | 3,099              | 2,44               | 2,165              | 1,491              |
| Run 7  | -4,337E-19 | 3,439              | 2,687              | 2,37               | 1,678              |
| Run 8  | 3,333      | 3,812              | 2,96               | 2,601              | 1,888              |
| Run 9  | 6,667      | 4,223              | 3,261              | 2,862              | 2,123              |
| Run 10 | 10         | 4,676              | 3,597              | 3,158              | 2,389              |

**Parametric Table: COP tcvariable**

|        | tc    | COP <sub>717</sub> | COP <sub>134</sub> | COP <sub>410</sub> | COP <sub>744</sub> |
|--------|-------|--------------------|--------------------|--------------------|--------------------|
| Run 1  | 35    | 6,313              | 4,849              | 4,606              | 1,643              |
| Run 2  | 37,22 | 5,864              | 4,52               | 4,25               | 1,874              |
| Run 3  | 39,44 | 5,458              | 4,221              | 3,928              | 1,993              |
| Run 4  | 41,67 | 5,091              | 3,949              | 3,634              | 2,03               |
| Run 5  | 43,89 | 4,76               | 3,699              | 3,365              | 2,012              |
| Run 6  | 46,11 | 4,463              | 3,469              | 3,118              | 1,956              |
| Run 7  | 48,33 | 4,195              | 3,256              | 2,889              | 1,879              |
| Run 8  | 50,56 | 3,954              | 3,059              | 2,676              | 1,792              |
| Run 9  | 52,78 | 3,738              | 2,875              | 2,477              | 1,706              |
| Run 10 | 55    | 3,543              | 2,703              | 2,29               | 1,63               |

**Parametric Table: eta vol tevap variable**

|        | to         | $\eta_{717}$ | $\eta_{134}$ | $\eta_{410}$ | $\eta_{744}$ |
|--------|------------|--------------|--------------|--------------|--------------|
| Run 1  | -20        | 0,4639       | 0,5997       | 0,6285       | 0,5298       |
| Run 2  | -16,67     | 0,5478       | 0,6421       | 0,6564       | 0,5714       |
| Run 3  | -13,33     | 0,6196       | 0,6797       | 0,6804       | 0,6063       |
| Run 4  | -10        | 0,6812       | 0,7132       | 0,7012       | 0,6365       |
| Run 5  | -6,667     | 0,7343       | 0,7434       | 0,7194       | 0,6637       |
| Run 6  | -3,333     | 0,7803       | 0,7707       | 0,7353       | 0,6889       |
| Run 7  | -4,337E-19 | 0,8202       | 0,7953       | 0,7493       | 0,7127       |
| Run 8  | 3,333      | 0,8549       | 0,8176       | 0,7616       | 0,7353       |
| Run 9  | 6,667      | 0,885        | 0,8378       | 0,7722       | 0,7571       |
| Run 10 | 10         | 0,9112       | 0,8559       | 0,7814       | 0,7778       |

**Parametric Table: eta isen tevap variable**

|        | to         | etaisen <sub>717</sub> | etaisen <sub>134</sub> | etaisen <sub>410</sub> | etaisen <sub>744</sub> |
|--------|------------|------------------------|------------------------|------------------------|------------------------|
| Run 1  | -20        | 0,6647                 | 0,6076                 | 0,6257                 | 0,5152                 |
| Run 2  | -16,67     | 0,6988                 | 0,6248                 | 0,6328                 | 0,5415                 |
| Run 3  | -13,33     | 0,7259                 | 0,6374                 | 0,6375                 | 0,5621                 |
| Run 4  | -10        | 0,7482                 | 0,6465                 | 0,6406                 | 0,5792                 |
| Run 5  | -6,667     | 0,7665                 | 0,6528                 | 0,6423                 | 0,5941                 |
| Run 6  | -3,333     | 0,7812                 | 0,6565                 | 0,6429                 | 0,6074                 |
| Run 7  | -4,337E-19 | 0,7922                 | 0,6576                 | 0,6422                 | 0,6195                 |
| Run 8  | 3,333      | 0,7993                 | 0,6562                 | 0,6403                 | 0,6303                 |
| Run 9  | 6,667      | 0,802                  | 0,6521                 | 0,6369                 | 0,6394                 |
| Run 10 | 10         | 0,7998                 | 0,645                  | 0,6318                 | 0,6463                 |



**Parametric Table: eta isen tcond variable**

|        | tc    | etaisen <sub>717</sub> | etaisen <sub>134</sub> | etaisen <sub>410</sub> | etaisen <sub>744</sub> |
|--------|-------|------------------------|------------------------|------------------------|------------------------|
| Run 1  | 35    | 0,7899                 | 0,6131                 | 0,6236                 | 0,6447                 |
| Run 2  | 37,22 | 0,7952                 | 0,6223                 | 0,629                  | 0,6409                 |
| Run 3  | 39,44 | 0,7982                 | 0,6303                 | 0,6331                 | 0,6359                 |
| Run 4  | 41,67 | 0,7998                 | 0,637                  | 0,636                  | 0,63                   |
| Run 5  | 43,89 | 0,8006                 | 0,6428                 | 0,6379                 | 0,6236                 |
| Run 6  | 46,11 | 0,8008                 | 0,6477                 | 0,6389                 | 0,6166                 |
| Run 7  | 48,33 | 0,801                  | 0,6519                 | 0,6391                 | 0,6091                 |
| Run 8  | 50,56 | 0,8013                 | 0,6553                 | 0,6386                 | 0,6012                 |
| Run 9  | 52,78 | 0,8021                 | 0,6582                 | 0,6374                 | 0,593                  |
| Run 10 | 55    | 0,8035                 | 0,6604                 | 0,6357                 | 0,5843                 |

**Parametric Table: eta vol tcond variable**

|        | tc    | $\eta_{717}$ | $\eta_{134}$ | $\eta_{410}$ | $\eta_{744}$ |
|--------|-------|--------------|--------------|--------------|--------------|
| Run 1  | 35    | 0,9101       | 0,8965       | 0,833        | 0,7793       |
| Run 2  | 37,22 | 0,9077       | 0,8874       | 0,8247       | 0,7636       |
| Run 3  | 39,44 | 0,9042       | 0,8778       | 0,8158       | 0,7484       |
| Run 4  | 41,67 | 0,8995       | 0,868        | 0,8065       | 0,7336       |
| Run 5  | 43,89 | 0,8935       | 0,8578       | 0,7967       | 0,7193       |
| Run 6  | 46,11 | 0,8863       | 0,8472       | 0,7863       | 0,7054       |
| Run 7  | 48,33 | 0,8778       | 0,8363       | 0,7755       | 0,6919       |
| Run 8  | 50,56 | 0,8679       | 0,8251       | 0,7642       | 0,6789       |
| Run 9  | 52,78 | 0,8567       | 0,8135       | 0,7524       | 0,6663       |
| Run 10 | 55    | 0,844        | 0,8015       | 0,74         | 0,6541       |