

HS Compr. LS Compr. Evaporator Condenser

Temperature (deg C)

Temperature (deg C)

discharge line loss (%)

Percentage of Compound

Superheat (%)

Subcool (%)

Log (%)

Low stage

actual suction superheat (%)

non-suction superheat (%)

interstage line loss (%)

evaporator line loss (%)

discharge line loss (%)

recip compressor type: SMC 116L

refrigerant designation: R717

no. of compressor(s): 1.00

load percentage: 100.0 %

drive shaft speed: 1480 RPM (1st)

drive type(direct/belt): direct

cooling capacity: 769.0 kW

power consumption: 194.1 kW

heating capacity: 837.7 kW

capacity/power ratio: 3.96

evaporating temperature: -5.0 deg C

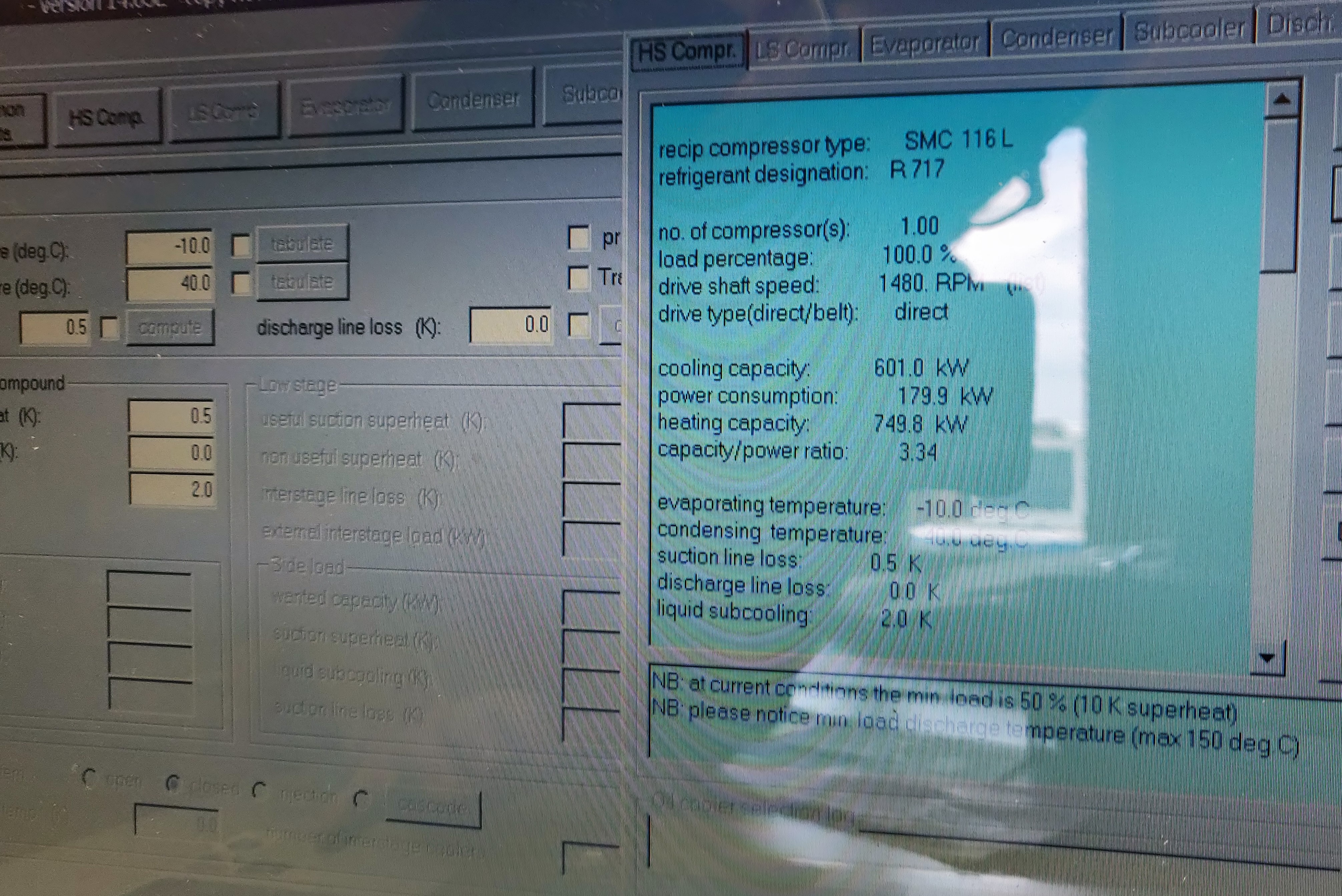
condensing temperature: 40.0 deg C

suction line loss: 0.5 K

discharge line loss: 0.0 K

liquid subcooling: 2.0 K

All motor size corrected - too small for computed power cons



HS Compr. LS Compr. Evaporator Condenser Subcooler Disch.

recip compressor type: SMC 116 L  
refrigerant designation: R717

no. of compressor(s): 1.00  
load percentage: 100.0 %  
drive shaft speed: 1480. RPM  
drive type(direct/belt): direct

cooling capacity: 601.0 kW  
power consumption: 179.9 kW  
heating capacity: 749.8 kW  
capacity/power ratio: 3.34

evaporating temperature: -10.0 deg C  
condensing temperature: 40.0 deg C  
suction line loss: 0.5 K  
discharge line loss: 0.0 K  
liquid subcooling: 2.0 K

NB: at current conditions the min. load is 50 % (10 K superheat)  
NB: please notice min. load discharge temperature (max 150 deg C)

HS Comp.

LS Comp.

Evaporator

Condenser

Subco

Temperature (deg.C): -10.0

tabulate

Temperature (deg.C): 40.0

tabulate

0.5 compute

discharge line loss (K): 0.0

Compound  
at (K): 0.5

(K): 0.0

(K): 2.0

Low stage  
useful suction superheat (K):

non useful superheat (K):

interstage line loss (K):

external interstage load (kW):

Side load  
wanted capacity (kW):

suction superheat (K):

liquid subcooling (K):

suction line loss (K):

open closed reheat calculate

0.0

number of interstage coolers:

Common Data HS Comp LS Comp Evaporator Condenser Subcool

evaporating temperature (deg.C)   tabulate  
 condensing temperature (deg.C)   tabulate  
 suction line loss (K)   compute discharge line loss (K)

useful suction superheat (K)   
 non useful superheat (K)   
 liquid subcooling (K)

Low stage  
 useful suction superheat (K)   
 non useful superheat (K)   
 interstage line loss (K)   
 external interstage load (kW)   
 Side load  
 wanted capacity (kW)   
 suction superheat (K)   
 liquid subcooling (K)   
 suction line loss (K)

open  staged  reversion  cascade  
 interstage condenser

recip compressor type: SMC 116 L  
 refrigerant designation: R717  
 no. of compressor(s): 1.00  
 load percentage: 100.0 %  
 drive shaft speed: 1480. RPM (list)  
 drive type(direct/belt): direct  
 cooling capacity: 459.6 kW  
 power consumption: 162.9 kW  
 heating capacity: 587.2 kW  
 capacity/power ratio: 2.82  
 evaporating temperature: -15.0 deg.C  
 condensing temperature: 40.0 deg.C  
 suction line loss: 0.5 K  
 discharge line loss: 0.0 K  
 liquid subcooling: 2.0 K

NB: at current conditions the min. load is 50 % (10 K superheat)  
 NB: please notice min. load discharge temperature (max 150 deg.C)

limits  
 HLL (P)  
 S...  
 Or...  
 Ref. data  
 Diagrams

Compressor selection log