



## Selection: CO2 Systems

**COP/EER Evaporator: 3,86**

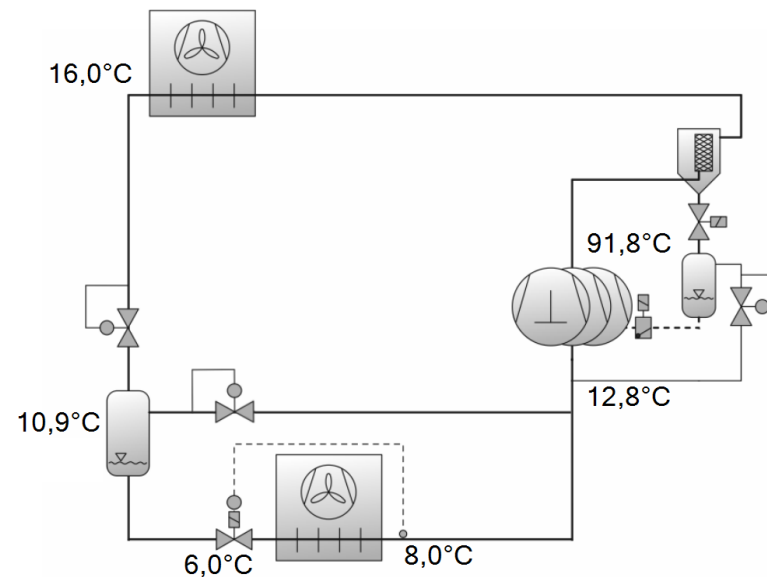
### Input Values

System  
Series  
Operating mode  
Number compressors  
Evaporating SST  
Evaporator superheat  
Suction line superheat  
High pressure  
Gas cooler outlet  
Intermed. pressure

Power frequency 50Hz  
Power voltage 400V

### MT-Stage

Flashgas  
Standard  
Transcritical  
2  
6,00 °C  
2,00 K  
5,00 K  
100,0 bar(a)  
16,00 °C  
46,0 bar(a) / 10,90 °C





### Result

Compressor	MT-Stage	4HTE-20K	4GTE-30K
Frequency compressor	--	68,0 Hz	--
Evaporator capacity	162,1 kW	84,8 kW	77,3 kW
Ratio	--	52,3 %	47,7 %
Gas cooler capacity	212 kW	110,6 kW	101,0 kW
Power input	42,0 kW	21,9 kW	20,1 kW
Current	72,0 A	36,0 A	36,0 A
Voltage range	--	380-420V	380-420V
Mass flow	2944 kg/h	1539 kg/h	1405 kg/h
Flashgas mass flow	66,0 kg/h	--	--
Total superheat	6,70 K	6,70 K	6,70 K
Discharge gas temp. w/o cooling	91,8 °C	91,7 °C	91,9 °C
optimal high pressure	75,0 bar(a)	--	--

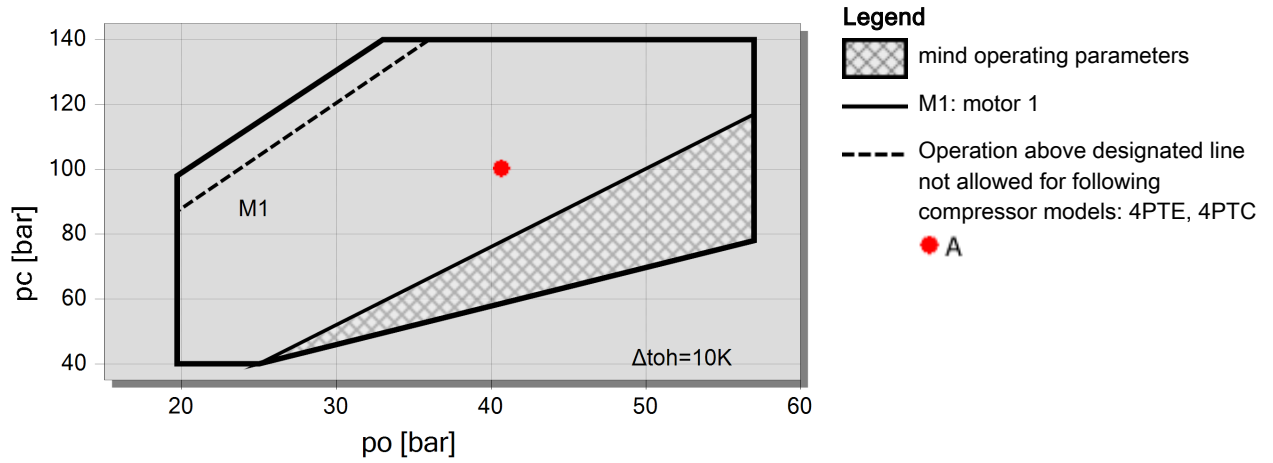
MT-Stage: Tentative Data.

MT-Stage: Power consumption at compressor inlet.

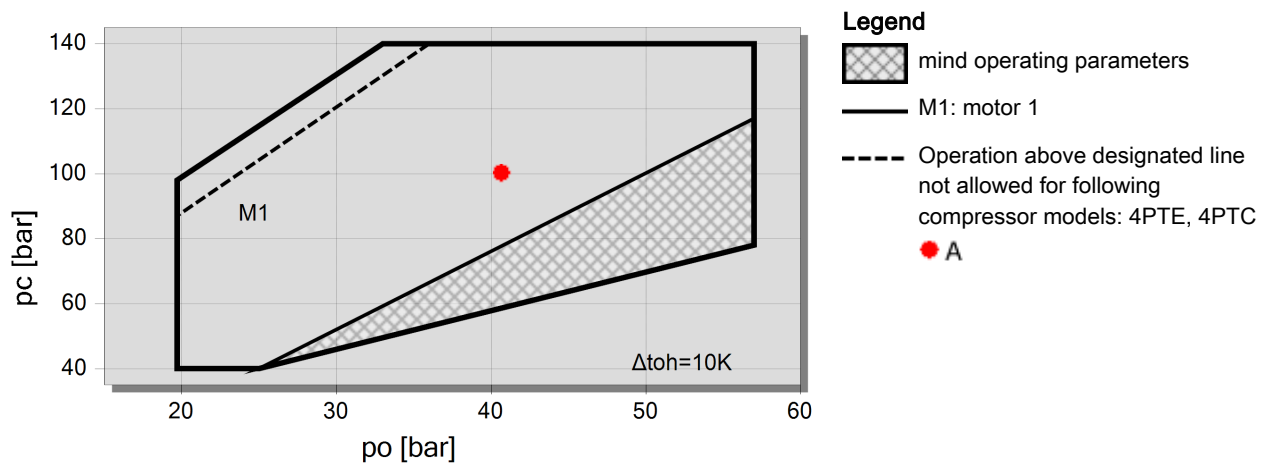
MT-Stage: Total superheat smaller than 10K / 18°F.



## Application Limits 4GTE-30K

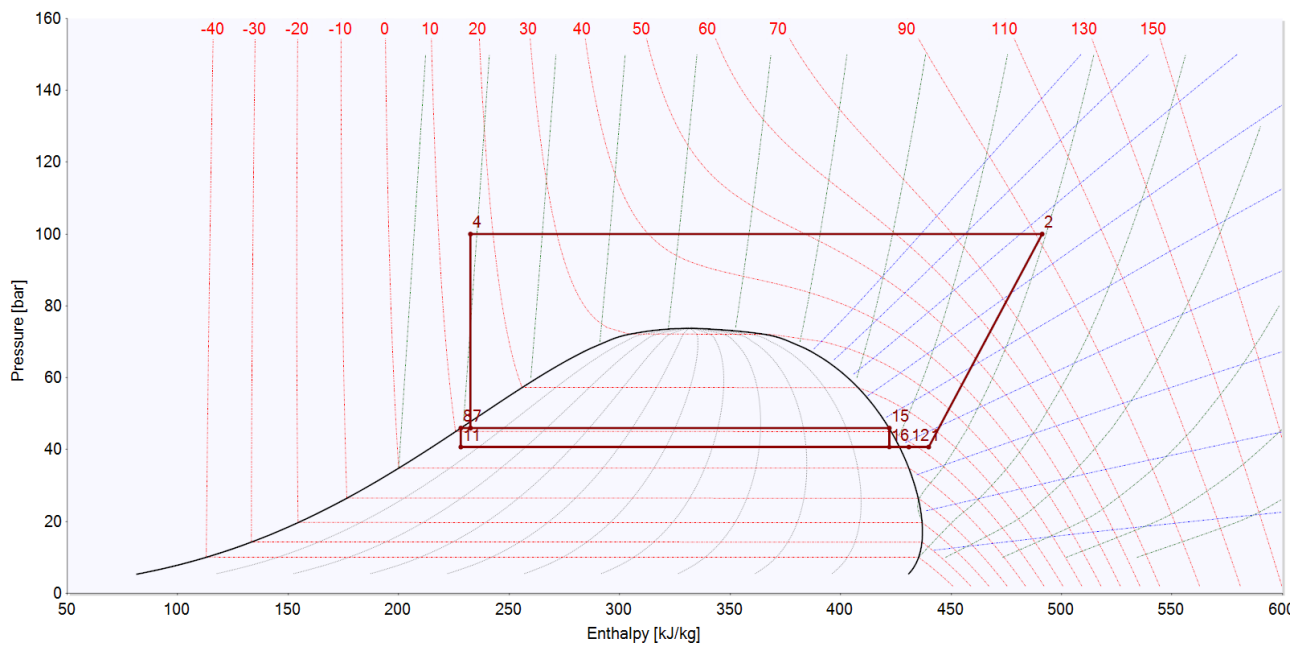


## Application Limits 4HTE-20K





## p,h Diagram



### MT-Stage

- 1 - 2      Compression
- 2 - 4      Gas cooling/Condensation
- 4 - 7      Expansion to intermediate pressure
- 7 - 8      Intermediate receiver: liquid outlet
- 8 - 11     Expansion to evaporation pressure
- 11 - 12    Evaporation
- 12 - 1     Total superheat
- 7 - 15     Intermediate receiver: gas outlet
- 15 - 16    Expansion to evaporation pressure