



## Single-stage process

### Evaporator

Refrigerating cap. : 0.60 kW  
 Temperature : -80.00 °C  
 Superheating : 7.00 K  
 Pressure drop : 0.00 bar

### Condenser

Temperature : -25.00 °C  
 Subcooling : 0.00 K  
 Pressure drop : 0.00 bar

### Compressor

Isentr. efficiency : 0.711

### Suction line

Superheat : 30.00 K  
 Pressure drop : 0.00 bar

### Discharge line

Temperature loss : 30.00 K  
 Pressure drop : 0.00 bar

Point	p bar	t °C	v dm <sup>3</sup> /kg	h kJ/kg	s kJ/(kgK)	x --
1	1.14	-43.00	234.35	351.81	1.8799	
2s	11.96	71.65	32.41	428.62	1.8799	
2	11.96	107.21	36.39	459.89	1.9662	
3	11.96	77.21	33.04	433.45	1.8938	
3'	11.96	-25.00	19.35	340.80	1.5792	
3"4'm	11.96	-25.00	10.09	251.71	1.2202	
4'	11.96	-25.00	0.84	162.62	0.8612	
4	11.96	-25.00	0.84	162.62	0.8612	
5	1.14	-80.00	60.27	162.62	0.9114	0.313
5"6"m	1.14	-80.00	125.69	244.69	1.3363	
6"	1.14	-80.00	191.10	326.77	1.7612	
6	1.14	-73.00	199.69	331.57	1.7857	

### Power

Condenser : 0.96 kW  
 Compressor : 0.38 kW

Suction line : 0.072 kW  
 Discharge line : 0.094 kW

Pressure ratio : 10.51  
 Pressure difference : 10.82 bar  
 Mass flow : 3.551 g/s  
 Volume flow (Suction line) : 3.00 m<sup>3</sup>/h  
 Volum. capacity : 721 kJ/m<sup>3</sup>  
 COP : 1.56