



Single-stage process

Evaporator

Refrigerating cap.	:	3.00 kW
Temperature	:	-30.00 °C
Superheating	:	0.00 K
Pressure drop	:	0.00 bar

Condenser

Temperature	:	35.00 °C
Subcooling	:	0.00 K
Pressure drop	:	0.00 bar

Compressor

Isentr. efficiency	:	0.734
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Suction line

Superheat	:	0.00 K
Pressure drop	:	0.00 bar

Discharge line

Temperature loss	:	0.00 K
Pressure drop	:	0.00 bar

Point	p bar	t °C	v dm ³ /kg	h kJ/kg	s kJ/(kgK)	x --
1	1.64	-30.00	135.37	392.68	1.8016	
2s	13.55	70.86	21.19	446.76	1.8016	
2	13.55	94.47	23.43	466.34	1.8566	
3	13.55	94.47	23.43	466.33	1.8566	
3'	13.55	35.00	17.25	415.31	1.7049	
3"4'm	13.55	35.00	N.N.	329.22	1.4256	
4'	13.55	35.00	0.87	243.14	1.1462	
4	13.55	35.00	0.87	243.14	1.1462	
5	1.64	-30.00	46.63	243.14	1.1866	0.341
5"6'm	1.64	-30.00	N.N.	317.91	1.4941	
6"	1.64	-30.00	135.37	392.68	1.8016	
6	1.64	-30.00	135.37	392.68	1.8016	

Power

Condenser	:	4.48 kW
Compressor	:	1.48 kW

Suction line	:	0.000 kW
Discharge line	:	0.000 kW

Pressure ratio	:	8.27
Pressure difference	:	11.91 bar
Mass flow	:	20.062 g/s
Volume flow (Suction line)	:	9.78 m ³ /h
Volum. capacity	:	1105 kJ/m ³
COP	:	2.03