



Single-stage process

Evaporator

Refrigerating cap.	:	8.00 kW
Temperature	:	-30.00 °C
Superheating	:	10.00 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
--------------------	---	-------

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	-20.00	142.03	399.06	1.8273	
2s	13.55	81.66	22.23	455.75	1.8273	
2	13.55	106.56	24.52	476.28	1.8832	
3	13.55	106.56	24.52	476.27	1.8832	
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	-20.00	142.03	399.06	1.8273	

Power

Condenser	:	12.0 kW
Compressor	:	3.96 kW

Suction line	:	0.000 kW
Discharge line	:	0.000 kW

Pressure ratio	:	8.27
Pressure difference	:	11.91 bar
Mass flow	:	51.306 g/s
Volume flow (Suction line)	:	26.23 m ³ /h
Volum. capacity	:	1098 kJ/m ³
COP	:	2.02