Coolselector2

Project information

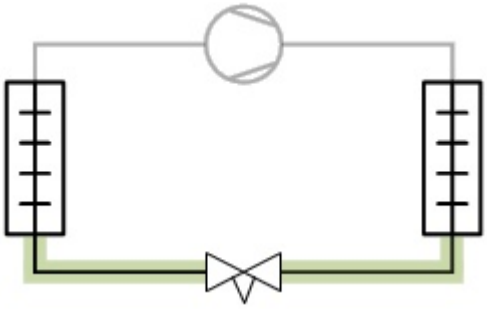
Project name:	
Comments:	
Created by:	
Coolselector2 version:	3.7.1. Database: 52.52.2.23.8.33
Printed:	Wednesday, February 5, 2020
Preferences used:	All applications

Line 1

Operating conditions

Refrigerant:	R744		Cooling capacity:	17.00	kW
Mass flow in line:	0.06779	kg/s	Heating capacity:	21.23	kW
Evaporating temperature:	-35.0	°C	Condensing temperature:	-2.0	°C
Evaporating pressure:	12.05	bar	Condensing pressure:	33.05	bar
Useful superheat:	5.0	K	Subcooling:	2.0	K
Additional superheat:	0	K	Additional subcooling:	0	K
Discharge temperature:	54.5	°C			

System and line: *Dry - Liquid line*



Line total

Pressure drop	1.256	bar
Saturation temperature drop	1.4	K

Position 1. Piping: Stainless steel pipe DIN-EN SS 8

Length	2.89	m
Angle	0	deg
Pressure drop	0.058	bar
Saturation temperature drop	0.1	K
Velocity, in	1.15	m/s
Connection	OK	

Position 2. Piping: Stainless steel bend 90 DIN-EN SS 8-3

Number	1	
Pressure drop	0.001	bar
Saturation temperature drop	0.0	K
Velocity, in	1.15	m/s
Connection	OK	

Position 3. Piping: Stainless steel pipe DIN-EN SS 8

Length	0.17	m
Angle	0	deg
Pressure drop	0.003	bar
Saturation temperature drop	0.0	K
Velocity, in	1.15	m/s
Connection	OK	

Position 4. Piping: Stainless steel expander DIN-EN SS 8 x 10

Number	1	
Pressure drop	0.001	bar
Saturation temperature drop	0.0	K
Velocity, in	1.15	m/s
Connection	OK	

Position 5. Piping: Stainless steel expander DIN-EN SS 10 x 15

Number	1	
Pressure drop	0.000	bar
Saturation temperature drop	0.0	K
Velocity, in	0.57	m/s
Connection	OK	

Position 6. Stop valve: SVA SS 15 straight

Pressure drop	0.003	bar
Saturation temperature drop	0.0	K
Velocity, in	0.33	m/s
Valve state	Open	
Connection	OK	

Position 7. Piping: Stainless steel expander DIN-EN SS 15 x 20

Number	1	
Pressure drop	0.000	bar
Saturation temperature drop	0.0	K
Velocity, in	0.33	m/s
Connection	OK	

Position 8. Piping: Stainless steel reducer DIN-EN SS 20 x 15

Number	1	
Pressure drop	0.000	bar
Saturation temperature drop	0.0	K
Velocity, in	0.18	m/s
Connection	OK	

Position 9. Piping: Stainless steel reducer DIN-EN SS 15 x 10

Number	1	
Pressure drop	0.000	bar
Saturation temperature drop	0.0	K
Velocity, in	0.33	m/s
Connection	OK	

Position 10. Solenoid valve: EVRS 3

Pressure drop	1.185	bar
Saturation temperature drop	1.4	K
Velocity, in	0.57	m/s
Valve state	Open	
Connection	OK	

Position 11. Piping: Stainless steel reducer DIN-EN SS 10 x 8

Number	1	
Pressure drop	0.002	bar
Saturation temperature drop	0.0	K
Velocity, in	0.57	m/s
Connection	OK	

Position 12. Piping: Stainless steel pipe DIN-EN SS 8

Length	0.10	m
Angle	0	deg
Pressure drop	0.002	bar
Saturation temperature drop	0.0	K
Velocity, in	1.15	m/s
Connection	OK	