

Coolselector2

Project information

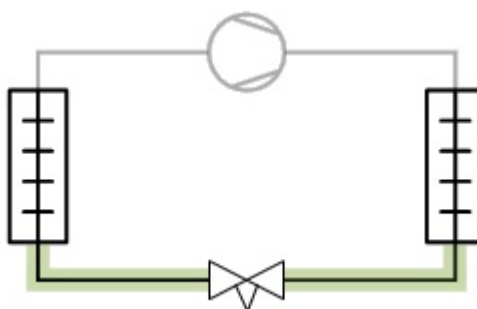
Project name:
 Comments:
 Created by:
 Coolselector2 version: 3.7.1. Database: 52.52.2.23.8.33
 Printed: Wednesday, February 5, 2020
 Preferences used: All applications

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	1.219 bar
Saturation temperature drop	1.4 K

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



Length	1.07 m
Angle	0 deg
Pressure drop	0.021 bar
Saturation temperature drop	0.0 K
Velocity, in	1.15 m/s
Connection	OK

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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

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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

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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