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Customer	-	Date	21.03.2022
Attention	-	Project nbr.	
Description			

Exchanger properties

Capacity	50,00	kW
Obtained Capacity	43,32	kW
Margin	-13,36	
Heat Transfer Area	1,82	m²
Plate Type	MB-07	
Plate Arrangement	40L	
Nbr. Of plates	40	
Global Heat tranfert coefficient	1868	W/(m² K)
LMTD	12,71	°C

	Primary circuit		Secondary circuit	
Fluid type	WATER		R404A	
Nbr. of circuits	1		1	
Flow rate	8,6	m³/h	1192,4	kg/h
Channel velocity	0,32	m/s	0,53	m/s
Connection velocity	0	m/s	0/0	m/s
Inlet temperature	25,00	°C	45,17	°C
Outlet temperature	29,33	°C	34,83	°C
Evaporating temperature			2,00	°C [Middle]
Condensing temperature			40,00	°C [Middle]
Subcooling			2	K
Overheating			5,00	K
Total Pressure drops	3,24	kPa	0,73	kPa
Pressure drops in plates	3,24	kPa	0,73	kPa
Pressure drops in connections	0,00	kPa	0,00	kPa
Fouling factor	0,0000000	(m² K)/W	0,0000000	(m² K)/W

Thermophisical properties	Primary circuit		Secondary circuit	
Fluid density	996,38	kg/m³	95,75	kg/m³
Fluid specific heat	4180	J/(kg K)	1371	J/(kg K)
Fluid thermal conductivity	0,611	W/(m K)	0,019	W/(m K)
Viscosity	0,8417	cP	0,00001346	kg/(m s)

Project data

Plate Material	0,4 mm - AISI 316L	
Brazing material	Copper	
Frame material	Carbon Steel	

Connections

Primary side	M1 => M2	
Secondary side	M3 => M4	
Design / Test Pressure	10 / 15	bar
Min / Max Working Temperature	-196 / 196	°C
Price	0	MPB