SWEP International AB
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CONDENSER - RATING

SWEP SSP G8 2024.116.2.0

HEAT EXCHANGER: B80Hx60/1P

Date: 07/03/2024

SSP Alias: B80

DUTY REQUIREMENTS		Side 1		Side 2
Fluid		**R410A**		**Water**
Flow type			**Counter-Current**	
Circuit		Inner		Outer
Heat load	kW		**56,50**	
Inlet vapor quality		**1,000**		
Outlet vapor quality		**0,000**		
Inlet temperature	°C	**70,00**		**35,00**
Condensation temperature (dew)	°C	**45,00**		
Subcooling	K	**3,00**		
Outlet temperature	°C	41,90		**40,00**
Flow rate	kg/h | m³/h	1072		9,803
Fluid condensed	kg/h	1072		

PLATE HEAT EXCHANGER		Side 1		Side 2
Total heat transfer area	m²		3,48	
Heat flux	kW/m²		16,2	
Mean temperature difference	K		7,37	
O.H.T.C. (available/required)	W/m²,°C		2460/2200	
Pressure drop - total*	kPa	1,82		50,0
- in ports (Inlet/Outlet)	kPa	-0,318/0,0785		4,79
Operating pressure (outlet)	kPa	2720		
Number of channels per pass		29		30
Number of plates			60	
Oversurfacing	%		12	
Fouling factor	m²,°C/kW		0,048	
Port diameter (up/down)	mm	33,0/33,0		33,0/33,0
Recommended inlet connection diameter	mm	11,8 - 26,4		
Recommended outlet connection diameter	mm	14,1 - 28,3		
Reynolds number				2328
Inlet Port velocity	m/s	3,19		3,18
Channel velocity	m/s	0,417		0,402
Shear stress	Pa			96,3
Largest wall temperature difference	K		0,34	
Min./Max. wall temperature	°C	35,72/40,79		35,57/40,61

**Excluding pressure drop in connections.*

PHYSICAL PROPERTIES		Side 1	Side 2
Reference temperature	°C	44,96	37,50
Liquid • Dynamic viscosity	cP	0,0899	0,685
• Density	kg/m³	947,3	993,2
• Heat capacity	kJ/kg,°C	2,033	4,178
• Thermal conductivity	W/m,°C	0,08406	0,6270
Vapor • Dynamic viscosity	cP	0,0143	
• Density	kg/m³	109,0	
• Heat capacity	kJ/kg,°C	1,490	
• Thermal conductivity	W/m,°C	0,01363	
• Latent heat	kJ/kg	149,3	
Film coefficient	W/m²,°C	3550	18000

TOTALS	Side 1	Side 2

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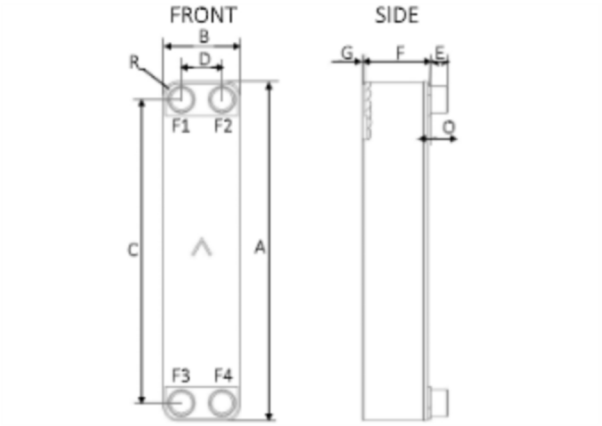
TOTALS		Side 1	Side 2
Total weight (no connections)*	kg		11,93 - 15,41
Hold-up volume (Inner Circuit)	dm³		3,1
Estimated refrigerant charge	kg		1,1
Hold-up volume (Outer Circuit)	dm³		3,21
Port size F1/P1	mm		33
Port size F2/P2	mm		33
Port size F3/P3	mm		33
Port size F4/P4	mm		33
Carbon footprint	kg		87,59

**Weight depends on the selected product.*

DIMENSIONS



**This is a schematic sketch. For correct drawings please use the order drawing function or contact your SWEP representative.*

A	mm	526 ±2
B	mm	119 ±1
C	mm	470 ±1
D	mm	63 ±1
E	mm	27 (opt. 45) ±1
F*	mm	138,4 - 146,4 ±2,5%
G*	mm	2 - 6 ±1
O	mm	4
R	mm	23

**Dimensions depend on the selected product.*