SWEP International AB
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CONDENSER - RATING
HEAT EXCHANGER: B15THx20/1P

SWEP SSP G8 2024.116.2.0

Date: 07/03/2024

SSP Alias: B15T

DUTY REQUIREMENTS		Side 1		Side 2
Fluid		**R410A**		**Water**
Flow type			**Counter-Current**	
Circuit		Inner		Outer
Heat load	kW		**11,40**	
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	216,3		1,978
Fluid condensed	kg/h	216,3		

PLATE HEAT EXCHANGER		Side 1		Side 2
Total heat transfer area	m²		0,612	
Heat flux	kW/m²		18,6	
Mean temperature difference	K		7,33	
O.H.T.C. (available/required)	W/m²,°C		2550/2540	
Pressure drop - total*	kPa	2,44		50,4
- in ports (Inlet/Outlet)	kPa	-0,191/0,0461		2,83
Operating pressure (outlet)	kPa	2720		
Number of channels per pass		9		10
Number of plates			20	
Oversurfacing	%		0	
Fouling factor	m²,°C/kW		0,001	
Port diameter (up/down)	mm	16,0/16,0		16,0/16,0
Recommended inlet connection diameter	mm	5,30 - 11,8		
Recommended outlet connection diameter	mm	6,35 - 12,7		
Reynolds number				2274
Inlet Port velocity	m/s	2,74		2,73
Channel velocity	m/s	0,437		0,392
Shear stress	Pa			110
Largest wall temperature difference	K		0,35	
Min./Max. wall temperature	°C	35,75/40,75		35,59/40,58

**Excluding pressure drop in connections.*

PHYSICAL PROPERTIES		Side 1	Side 2
Reference temperature	°C	44,95	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	108,9	
• 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	3750	18200

TOTALS	Side 1	Side 2

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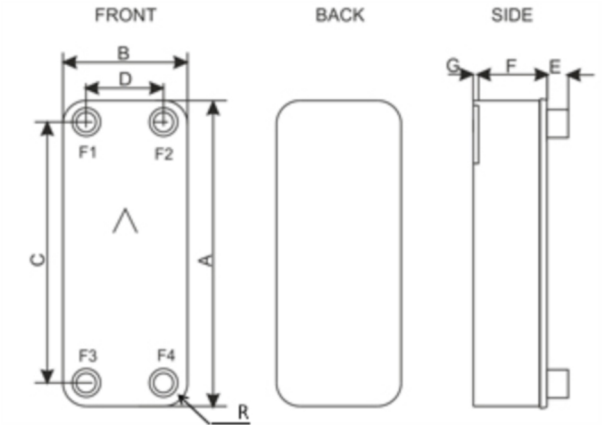
TOTALS		Side 1	Side 2
Total weight (no connections)*	kg		2,71 - 3,33
Hold-up volume (Inner Circuit)	dm³		0,57
Estimated refrigerant charge	kg		0,2
Hold-up volume (Outer Circuit)	dm³		0,63
Port size F1/P1	mm		16
Port size F2/P2	mm		16
Port size F3/P3	mm		16
Port size F4/P4	mm		16
Carbon footprint	kg		23,42

**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	466 - 468 ±2
B*	mm	74 - 76 ±1
C	mm	432 ±1
D	mm	40 ±1
E	mm	20 (opt. 45) ±1
F*	mm	46,8 - 48,8 ±2,5%
G	mm	7 ±1
R*	mm	16 - 18

**Dimensions depend on the selected product.*

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