SWEP International AB
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SINGLE PHASE - RATING
HEAT EXCHANGER: B25THx50/1P

SWEP SSP G8 2024.313.7.0

Date: 23/05/2024

SSP Alias: B25T

DUTY REQUIREMENTS		Side 1		Side 2
Fluid		**Ethylene Glycol - Water (25.0 mass%)**		**Water**
Flow type			**Counter-Current**	
Circuit		Inner		Outer
Heat load	kW		**14.00**	
Inlet temperature	°C	**52.00**		**43.00**
Outlet temperature	°C	**47.00**		**48.50**
Flow rate	kg/s	0.7349		0.6090
Thermal length		1.335		1.469

PLATE HEAT EXCHANGER		Side 1		Side 2
Total heat transfer area	m²		3.02	
Heat flux	kW/m²		4.63	
Mean temperature difference	K		3.74	
O.H.T.C. (available/required)	W/m²,°C		3500/1240	
Pressure drop - total*	kPa	11.4		7.36
- in ports	kPa	1.23		0.873
Port diameter (up/down)	mm	24.0/24.0		24.0/24.0
Number of channels per pass		24		25
Number of plates			50	
Oversurfacing	%		183	
Fouling factor	m²,°C/kW		0.514	
Reynolds number		559.1		732.4
Port velocity (up/down)	m/s	1.58/1.58		1.36/1.36
Channel velocity	m/s	0.132		0.109
Shear stress	Pa	21.3		13.6
Average wall temperature	°C	47.57		47.36
Largest wall temperature difference	K		0.29	
Min./Max. wall temperature	°C	44.97/50.22		44.68/49.97

**Excluding pressure drop in connections.*

PHYSICAL PROPERTIES		Side 1	Side 2
Reference temperature	°C	49.50	45.75
Dynamic viscosity	cP	0.969	0.589
Dynamic viscosity - wall	cP	1.01	0.572
Density	kg/m³	1026	990.0
Heat capacity	kJ/kg,°C	3.810	4.180
Thermal conductivity	W/m,°C	0.5042	0.6383
Film coefficient	W/m²,°C	6900	8330

TOTALS		Side 1	Side 2
Total weight empty (no connections)*	kg	9.92 - 12.78	
Total weight filled (no connections)*	kg	15.41 - 18.26	
Hold-up volume (Inner Circuit)	dm³	2.66	
Hold-up volume (Outer Circuit)	dm³	2.78	
Port size F1/P1	mm	24	
Port size F2/P2	mm	24	
Port size F3/P3	mm	24	
Port size F4/P4	mm	24	
Carbon footprint	kg	77.31	

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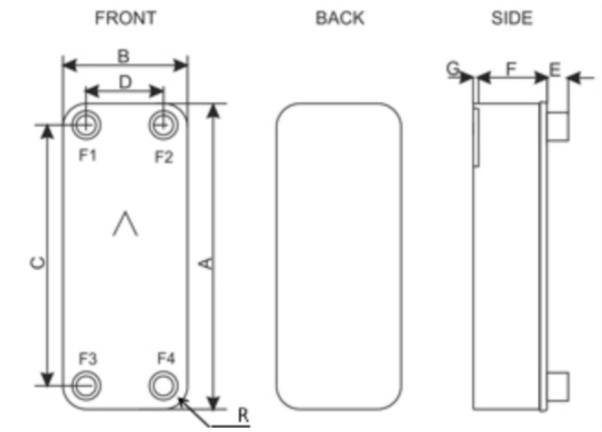
*Weight depends on the selected product.

DIMENSIONS



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

A*	mm	524 - 526 ±2
B*	mm	117 - 119 ±1
C	mm	479 ±1
D	mm	72 ±1
E	mm	20 (opt. 45) ±1
F*	mm	114 - 120 ±3%
G*	mm	4 - 7 ±1
R*	mm	22 - 23

*Dimensions depend on the selected product.