

**SINGLE PHASE - DESIGN**  
**HEAT EXCHANGER: E6THx20/1P**

SWEP DThermX

Date: 04/02/2026

SSP Alias: E6T

<b>DUTY REQUIREMENTS</b>		<b>Side 1</b>		<b>Side 2</b>
Fluid		<b>Water</b>		<b>Water</b>
Flow type			<b>Counter-Current</b>	
Circuit		Outer		Inner
Heat load	kW		<b>45.00</b>	
Inlet temperature	°C	<b>65.0</b>		<b>10.0</b>
Outlet temperature	°C	<b>45.0</b>		<b>45.0</b>
Flow rate	kg/s	0.5379		0.3076
Pressure drop (Design PD)	kPa	21.1 <b>(30.00)</b>		8.75 <b>(30.00)</b>
Thermal length		0.75		1.31

<b>PLATE HEAT EXCHANGER</b>		<b>Side 1</b>		<b>Side 2</b>
Total heat transfer area	m <sup>2</sup>		0.252	
Heat flux	kW/m <sup>2</sup>		179	
Mean temperature difference	K		26.8	
Overall heat transfer coefficient required	W/m <sup>2</sup> , °C		6660	
Pressure drop - total*	kPa	21.1		8.75
- in ports	kPa	3.48		1.12
Port diameter (up/down)	mm	16.0/16.0		16.0/16.0
Number of channels per pass		10		9
Number of plates			20	
Oversurfacing	%		0	
Fouling factor	m <sup>2</sup> , °C/kW		-0.001	
Reynolds number		2922		1112
Port velocity (up/down)	m/s	2.71/2.71		1.54/1.54
Channel velocity	m/s	0.374		0.235
Shear stress	kPa	0.0841		0.0363
Average wall temperature	°C	45.1		42.2
Largest wall temperature difference	K		5.2	
Min./Max. wall temperature	°C	33.0/58.2		27.8/55.2

\*Excluding pressure drop in connections.

<b>PHYSICAL PROPERTIES</b>		<b>Side 1</b>		<b>Side 2</b>
Reference temperature	°C	55.0		27.5
Dynamic viscosity	cP	0.504		0.842
Density	kg/m <sup>3</sup>	985.7		996.4
Heat capacity	kJ/kg, °C	4.183		4.179
Thermal conductivity	W/m, °C	0.6492		0.6113
Film coefficient	W/m <sup>2</sup> , °C	19300		13000

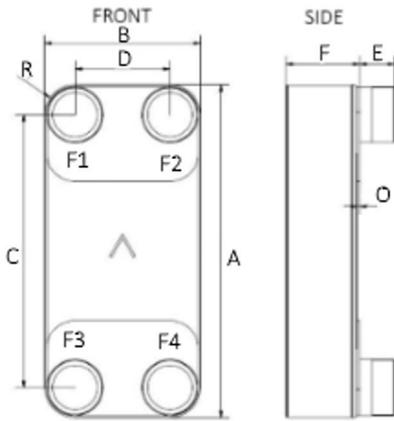
<b>TOTALS</b>		<b>Side 1</b>		<b>Side 2</b>
Total weight empty (no connections)*	kg		1.14	
Total weight filled (no connections)*	kg		1.63	
Hold-up volume (Inner Circuit)	dm <sup>3</sup>		0.23	
Hold-up volume (Outer Circuit)	dm <sup>3</sup>		0.26	
Port size F1/P1	mm		16	
Port size F2/P2	mm		16	
Port size F3/P3	mm		16	
Port size F4/P4	mm		16	

\*Weight depends on the selected product.

**DIMENSIONS**



**DIMENSIONS**



A	mm	210 ±2
B	mm	73 ±1
C	mm	172 ±1
D	mm	40 ±1
E	mm	12 (opt. 20) ±1
F	mm	42.32 +4%/-3.3%
G	mm	7 ±1
Q	mm	2
R	mm	16

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

**CARBON FOOTPRINT**

	Unit	Value
Sweden - Landskrona	kg CO <sub>2</sub> e	5.8
USA - Tulsa	kg CO <sub>2</sub> e	6.1
Slovakia - Košice	kg CO <sub>2</sub> e	6.7
Malaysia - Kuala Lumpur	kg CO <sub>2</sub> e	9.3
China - Suzhou	kg CO <sub>2</sub> e	15.9

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