SINGLE PHASE - Performance
Heat Exchanger : E8Tx40

Fluid Side 1 : Water
Fluid Side 2 : Water

Flow Type : Counter-Current

DUTY REQUIREMENTS		**Side 1**		**Side 2**
Heat load	kW		13.61	
Inlet temperature	°C	80.00		64.00
Outlet temperature	°C	67.02		75.00
Flow rate	kg/s	0.2500		0.2953
Max. pressure drop	kPa	50.0		50.0
Thermal length		3.31		2.80

PLATE HEAT EXCHANGER		**Side 1**		**Side 2**
Total heat transfer area	m²		0.874	
Heat flux	kW/m²		15.6	
Mean temperature difference	K		3.92	
O.H.T.C. (available/required)	W/m²,°C		3970/3970	
Pressure drop -total*	kPa	2.73		3.51
- in ports	kPa	0.769		1.07
Port diameter	mm	16.0		16.0
Number of channels		19		20
Number of plates			40	
Oversurfacing	%		0	
Fouling factor	m²,°C/kW		0.000	
Reynolds number		935		994
Port velocity	m/s	1.27		1.50

PHYSICAL PROPERTIES		**Side 1**	**Side 2**
Reference temperature	°C	73.51	69.50
Dynamic viscosity	cP	0.386	0.407
Dynamic viscosity - wall	cP	0.396	0.397
Density	kg/m³	975.7	978.0
Heat capacity	kJ/kg,°C	4.194	4.191
Thermal conductivity	W/m,°C	0.6657	0.6627
Min. fluid temperature at wall	°C	65.59	
Max. fluid temperature at wall	°C		77.21
Film coefficient	W/m²,°C	8400	8990
Minimum wall temperature	°C	71.57	71.32
Channel velocity	m/s	0.0924	0.103
Shear stress	Pa	6.23	7.74

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Totals		Side 1	Side 2
Total weight empty	kg	3.39	
Total weight filled	kg	4.88	
Total weight (no connections)	kg	3.39	
Hold-up volume, inner circuit	dm^3	0.741	
Hold-up volume, outer circuit	dm^3	0.780	
PortSize F1/P1	mm	16.0	
PortSize F2/P2	mm	16.0	
PortSize F3/P3	mm	16.0	
PortSize F4/P4	mm	16.0	
NND F1/P1	mm	16.0	
NND F2/P2	mm	16.0	
NND F3/P3	mm	16.0	
NND F4/P4	mm	16.0	
Carbon Footprint	kg	0.000	

DIMENSIONS

A	mm	315 +/-2
B	mm	73 +/-1
C	mm	278 +/-1
D	mm	40 +/-1
E	mm	12 (opt. 20) +/-1
F	mm	87.10
G	mm	7 +/-1
Q	mm	2
R	mm	16

Disclaimer: Data used in this calculation is subject to change without notice. Calculation is intended to show thermal and hydraulic performance, no consideration has been taken to mechanical strength of the product. Product restrictions - such as pressure, temperatures and corrosion resistance- can be found in SWEP product sheets and other technical documentation. SWEP may have patents, trademarks, copyrights or other intellectual property rights covering subject matter in this document. Except as expressly provided in any written license agreement from SWEP, the furnishing of this document does not give you any license to these patents, trademarks, copyrights, or other intellectual property.

*Excluding pressure drop in connections.