SINGLE PHASE - Design
Heat Exchanger : E8ASW-Nx24

Fluid Side 1 : Water
Fluid Side 2 : Water

Flow Type : Counter-Current

DUTY REQUIREMENTS		**Side 1**		**Side 2**
Heat load	kW		37.61	
Inlet temperature	°C	70.00		10.00
Outlet temperature	°C	28.52		55.00
Flow rate	kg/s	0.2168		0.2000
Max. pressure drop	kPa	10.0		10.0
Thermal length		2.48		2.69

PLATE HEAT EXCHANGER		**Side 1**		**Side 2**
Total heat transfer area	m²		0.556	
Heat flux	kW/m²		67.6	
Mean temperature difference	K		16.70	
O.H.T.C. (available/required)	W/m²,°C		3980/4050	
Pressure drop -total*	kPa	4.14		8.16
- in ports	kPa	0.562		0.472
Port diameter	mm	16.0		16.0
Number of channels		12W		11N
Number of plates			24	
Oversurfacing	%		0	
Fouling factor	m²,°C/kW		-0.004	
Reynolds number		893		658
Port velocity	m/s	1.09		1.000

PHYSICAL PROPERTIES		**Side 1**		**Side 2**
Reference temperature	°C	49.26		32.50
Dynamic viscosity	cP	0.554		0.757
Dynamic viscosity - wall	cP	0.648		0.658
Density	kg/m³	988.4		994.9
Heat capacity	kJ/kg,°C	4.181		4.178
Thermal conductivity	W/m,°C	0.6427		0.6194
Min. fluid temperature at wall	°C	19.19		
Max. fluid temperature at wall	°C			61.13
Film coefficient	W/m²,°C	7900		9730
Minimum wall temperature	°C	40.47		39.63
Channel velocity	m/s	0.128		0.128
Shear stress	Pa	12.5		27.0

Totals		**Side 1**		**Side 2**
Carbon Footprint	kg		0.000	

DIMENSIONS

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.