

Specification sheet

Project: HEX 19 - HEAT PUMP & POOL

Date: 20/05/2020

Contact:

Direct Line:

Plate & Frame Heat Exchanger

Version: 1.08.6.9

Item:	Unit: K042-19-1-N
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<u>Technical data per HX</u>		Hot side		Cold side	
Fluid	Water	Water		Water	
Mass flow rate	[kg/s]	1.20		[kg/s]	0.40
Volume flow rate	[l/min]	72.830		[l/min]	24.121
Inlet temperature	[°C]	50.00		[°C]	28.00
Outlet temperature	[°C]	45.00		[°C]	43.00
Operating pressure	[barg]	0.00		[barg]	0.00

Physical properties		In	Out	In	Out
Dynamic viscosity	[cP]	0.549	0.599	0.830	0.620
Density	[kg/m³]	986.1	988.2	994.7	989.0
Specific heat capacity	[kJ/kgK]	4.174	4.175	4.184	4.176
Thermal conductivity	[W/mK]	0.640	0.638	0.628	0.637

P.H.E characteristic values

Heat duty	[kW]	25.00			
Eff. heat transfer area	[m²]	0.70			
Log./Effective temperature difference	[K]	11.27 / 11.27			
Heat transfer coefficient reqd./act.	[W/m²K]	3162 / 5046			
Fouling factor	[m²K/W]	0.0001181			
Overdesign	[%]	59.6			
Pressure loss	[kPa]	27.863		[kPa]	3.423
Channel Velocity	[m/s]	0.52 / 0.52		[m/s]	0.17 / 0.17
Connection Velocity	[m/s]	1.35		[m/s]	0.45
No. of passes in series		1			1
Mix of Channeltype			19		
Mix of Channeltyp			9*HH		

Construction

Weight Dry/Wet	[kg]	approx. 33/35			
Volume	[dm³]	0.891			0.891
Design pressure	[barg]	10.0			
Max. working temperature	[°C]	110.00			
Material	DIN				
Plates	1.4404 (0.50 mm)				
Gaskets	NBR				
Frame	S 355 J2+N (Pressure Plates), max. no. of plates: 38, Extensibility 100%				
Painting	C2, RAL 5002 Standard, <= 150°C,				
Connection	Hot side	F1 => F4 : Threaded pipe, male, DN 32, Stainless steel, G 1 1/4"			
	Cold side	F3 => F2 : Threaded pipe, male, DN 32, Stainless steel, G 1 1/4"			
Design Code:	AD-2000				
Inspection Code:	PED 97/23/EC				

Remark

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