

Specification sheet

Project: HEX 13 - HEAT PUMP & POOL

Date: 20/05/2020

Contact:

Direct Line:

Plate & Frame Heat Exchanger

Version: 1.08.6.9

Item:	Unit: K042-13-1-N
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<u>Technical data per HX</u>		Hot side		Cold side	
Fluid	Water	Water		Water	
Mass flow rate	[kg/s]	0.81		[kg/s]	0.27
Volume flow rate	[l/min]	49.525		[l/min]	16.402
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/m ³]	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]	17.00			
Eff. heat transfer area	[m ²]	0.45			
Log./Effective temperature difference	[K]	11.27 / 11.27			
Heat transfer coefficient reqd./act.	[W/m ² K]	3323 / 5105			
Fouling factor	[m ² K/W]	0.0001051			
Overdesign	[%]	53.65			
Pressure loss	[kPa]	28.213		[kPa]	3.470
Channel Velocity	[m/s]	0.53 / 0.53		[m/s]	0.18 / 0.18
Connection Velocity	[m/s]	0.92		[m/s]	0.30
No. of passes in series		1			1
Mix of Channeltype			13		
Mix of Channeltyp			6*HH		

Construction

Weight Dry/Wet	[kg]	approx. 31/32	
Volume	[dm ³]	0.594	0.594
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: 14, Extensibility 8%		
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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