

Specification sheet

Project: HEX 19 - BOILER & POOL

Date: 20/05/2020

Contact:

Direct Line:

Plate & Frame Heat Exchanger

Version: 1.08.6.9

Item:	Unit: K042-19-1-N
--------------	--------------------------

<u>Technical data per HX</u>		Hot side		Cold side	
Fluid	Water	Water		Water	
Mass flow rate	[kg/s]	0.90		[kg/s]	1.20
Volume flow rate	[l/min]	55.230		[l/min]	72.362
Inlet temperature	[°C]	80.00		[°C]	28.00
Outlet temperature	[°C]	60.00		[°C]	43.00
Operating pressure	[barg]	0.00		[barg]	0.00

Physical properties		In	Out	In	Out
Dynamic viscosity	[cP]	0.354	0.468	0.830	0.620
Density	[kg/m³]	970.8	981.4	994.7	989.0
Specific heat capacity	[kJ/kgK]	4.178	4.173	4.184	4.176
Thermal conductivity	[W/mK]	0.653	0.645	0.628	0.637

P.H.E characteristic values

Heat duty	[kW]	75.00			
Eff. heat transfer area	[m²]	0.70			
Log./Effective temperature difference	[K]	34.44 / 34.44			
Heat transfer coefficient reqd./act.	[W/m²K]	3104 / 6855			
Fouling factor	[m²K/W]	0.0001763			
Overdesign	[%]	120.84			
Pressure loss	[kPa]	15.772		[kPa]	28.175
Channel Velocity	[m/s]	0.39 / 0.39		[m/s]	0.52 / 0.52
Connection Velocity	[m/s]	1.02		[m/s]	1.34
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

--