

REFLEX HEATEXCHANGERS CALCULATION SHEET



Thinking solutions.

Prepared by/Date 03.09.2020
Heat Exchanger Type RHB-31-50-P30
Article Number 8023900

DATA SHEET:

	Side 1		Side 2	
Heat Load		100		kW
LMTD		10		K
Min. Oversizing		0		%
Fluid	Water		Water	
Inlet Temperature	80		50	°C
Outlet Temperature	60		70	°C
Mass Flow	1.19		1.19	kg/s
Inlet Volume Flow	4.42		4.34	m³/h
Outlet Volume Flow	4.36		4.39	m³/h
Max. Pressure Drop	25		25	kPa
Design Pressure	30		30	bar
Design Temperature	230		230	°C

HEAT EXCHANGER SELECTION: (Standard Calculation)

	Side 1		Side 2	
Heat Transfer Area		1.6		m²
Fouling Factor		0.0363		m²K/kW
OHTC Clean		7952.8251		W/m²K
OHTC Fouling		6171.5242		W/m²K
Oversize		28.9		%
Calc. Pressure Drop	12.9		12.2	kPa
Connections Press. Drop	0		0	kPa
Connections Velocity	1.52		1.51	m/s
Internal Velocity	0.23		0.22	m/s
Reynolds No.	2203		1832	[-]
Heat Transfer Coefficient	19952.7		18384.4	W/m²K

PHYSICAL PROPERTIES:

	Side 1		Side 2	
Fluid	Water		Water	
Ref. Temperature	70		60	°C
Density	979.82		985.57	kg/m³
Heat Capacity	4.186		4.185	kJ/kgK
Thermal Conductivity	0.6535		0.6432	W/mK
Dynamic Viscosity	0.0004		0.0005	Ns/m²
Prandtl No.	2.63		3.09	[-]

Reflex Heatexchanger Tool

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