

ОДНОФАЗОВЫЙ ТЕПЛООБМЕННИК - Design

ТИП ТЕПЛООБМЕННИКА : B10THx30/1P

Рабочая среда, сторона 1 : Water
 Рабочая среда, сторона 2 : Water

СТОРОНА 1 : внутренняя цепь
 СТОРОНА 2 : внешний контур

Flow Type : Counter-Current
 SSP Alias : B10T

ИСХОДНЫЕ ДАННЫЕ

		СТОРОНА 1	СТОРОНА 2
Передаваемая мощность	kW	48,00	
Температура на входе	°C	80,00	50,00
Температура на выходе	°C	60,00	70,00
Расход	kg/s	0,5726	0,5734
Потери напора, заданные	kPa	50,0	50,0
Тепловая длина		2,000	2,000

ТЕХНИЧЕСКИЕ ПАРАМЕТРЫ

		СТОРОНА 1	СТОРОНА 2
Поверхность нагрева	m ²	0,868	
Тепловой поток	kW/m ²	55,3	
Логарифм средней разности температур K		10,00	
Кэф. теплопередачи (расч./требуемый) W/m ² ,°C		5460	
Потеря напора*	kPa	6,90	6,27
- в портах	kPa	0,781	0,780
Диаметр порта	mm	24,0	24,0
Number of channels per pass		14	15
Количество пластин		30	
Поправка на загрязнение	%	0	
Кэфф. загрязнения	m ² ,°C/kW	-0,002	
Число Рейнольдса		1790	1450
скорость порта	m/s	1,29	1,29

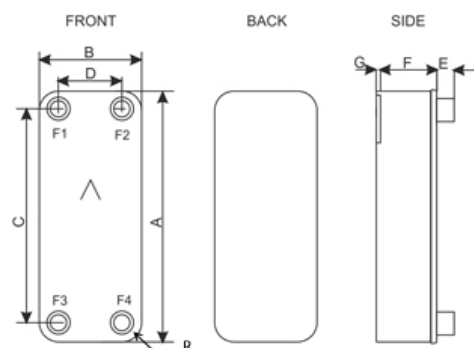
ФИЗИЧЕСКИЕ СВОЙСТВА

		СТОРОНА 1	СТОРОНА 2
Реперная температура	°C	70,00	60,00
Вязкость	cP	0,404	0,467
Вязкость на стенках	cP	0,430	0,435
Плотность	kg/m ³	977,7	983,2
Теплоемкость	kJ/kg,°C	4,192	4,185
Теплопроводность	W/m,°C	0,6631	0,6544
Largest wall temperature difference	K	1,16	
Средняя температура поверхности стенок	°C	55,76	54,60
Maximum wall temperature	°C	75,76	74,60
Коэффициент теплопередачи пленки	W/m ² ,°C	12900	11900
Average wall temperature	°C	65,65	64,78
Скорость потока в канале	m/s	0,185	0,172
Напряжение на сдвиг	Pa	25,2	22,6

TOTALS

Total weight empty	kg	3,73 - 4,98
Total weight filled	kg	5,46 - 6,71
Hold-up volume, inner circuit	dm ³	0,854
Hold-up volume, outer circuit	dm ³	0,915
Port size F1/P1	mm	24,0
Port size F2/P2	mm	24,0
Port size F3/P3	mm	24,0
Port size F4/P4	mm	24,0
NND F1/P1	mm	18,0 and/or 27,0
NND F2/P2	mm	18,0 and/or 27,0
NND F3/P3	mm	18,0 and/or 27,0
NND F4/P4	mm	18,0 and/or 27,0
Carbon footprint	kg	28,3

РАЗМЕРЫ



A	mm	289 +/-2
B	mm	119 +/-1
C	mm	243 +/-1
D	mm	72 +/-1
E	mm	20 (opt. 45) +/-1
F	mm	71,20 to 75,20 +2%/-1,5%
G	mm	4 to 6 +/-1
R	mm	22 to 23

This is a schematic sketch. For correct drawings please use the order drawing function or contact your SWEP representative.

Disclaimer: Data used in this calculation is subject to change without notice. SWEP strives to use "best practice" for the calculations leading to the above results. 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. To the maximum extent permitted by applicable law, the software, the calculations and the results are provided without warranties of any kind, whether express or implied. No advice or information obtained through use of the software (including information provided in the results), will create any warranty not expressly stated in the applicable license terms. Without limiting the foregoing, SWEP does not warrant that the content (including the calculations and the results) is accurate, reliable or correct. SWEP does not warrant that any system comprising heat exchanger and other components, installed on the basis of calculations in this software, will meet your requirements or function to your satisfaction or expectations.

*Excluding pressure drop in connections.



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