

ОДНОФАЗОВЫЙ ТЕПЛООБМЕННИК - Design

ТИП ТЕПЛООБМЕННИКА : B25THx16/1P

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

СТОРОНА 1 : внутренняя цепь
 СТОРОНА 2 : внешний контур

Flow Type : Counter-Current
 SSP Alias : B25T

ИСХОДНЫЕ ДАННЫЕ

		СТОРОНА 1	СТОРОНА 2
Передаваемая мощность	kW	43,00	
Температура на входе	°C	80,00	50,00
Температура на выходе	°C	60,00	70,00
Расход	kg/s	0,5129	0,5137
Потери напора, заданные	kPa	50,0	50,0
Тепловая длина		2,000	2,000

ТЕХНИЧЕСКИЕ ПАРАМЕТРЫ

		СТОРОНА 1	СТОРОНА 2
Поверхность нагрева	m ²	0,882	
Тепловой поток	kW/m ²	48,8	
Логарифм средней разности температур K		10,00	
Коэф. теплопередачи (расч./требуемый) W/m ² ,°C		7810	
Потеря напора*	kPa	49,7	38,7
- в портах	kPa	0,622	0,620
Диаметр порта	mm	24,0	24,0
Number of channels per pass		7	8
Количество пластин		16	
Поправка на загрязнение	%	60	
Коэфф. загрязнения	m ² ,°C/kW	0,072	
Число Рейнольдса		3208	2435
скорость порта	m/s	1,16	1,15

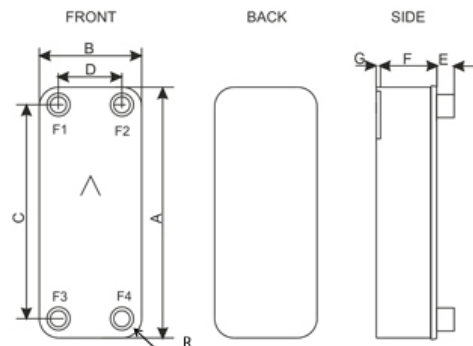
ФИЗИЧЕСКИЕ СВОЙСТВА

		СТОРОНА 1	СТОРОНА 2
Реперная температура	°C	70,00	60,00
Вязкость	cP	0,404	0,467
Вязкость на стенках	cP	0,428	0,436
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	1,81	
Средняя температура поверхности стенок	°C	56,17	54,36
Maximum wall temperature	°C	76,17	74,36
Коэффициент теплопередачи пленки	W/m ² ,°C	20400	17900
Average wall temperature	°C	65,92	64,64
Скорость потока в канале	m/s	0,332	0,289
Напряжение на сдвиг	Pa	103	79,7

TOTALS

Total weight empty	kg	3,89 - 6,75
Total weight filled	kg	5,52 - 8,38
Hold-up volume, inner circuit	dm ³	0,777
Hold-up volume, outer circuit	dm ³	0,888
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	27,0
NND F2/P2	mm	27,0
NND F3/P3	mm	27,0
NND F4/P4	mm	27,0
Carbon footprint	kg	34,9

РАЗМЕРЫ



A	mm	524 to 526 +/-2
B	mm	117 to 119 +/-1
C	mm	479 +/-1
D	mm	72 +/-1
E	mm	20 (opt. 45) +/-1
F	mm	38 to 44 +/-3%
G	mm	4 to 7 +/-1
R	mm	22 to 23

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

Disclaimer: Data used in this calculation is subject to change without notice. SWEF 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 SWEF product sheets and other technical documentation. SWEF 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 SWEF, 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, SWEF does not warrant that the content (including the calculations and the results) is accurate, reliable or correct. SWEF 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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