

ОДНОФАЗОВЫЙ ТЕПЛООБМЕННИК - Design
ТИП ТЕПЛООБМЕННИКА : B15THx20/1P

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

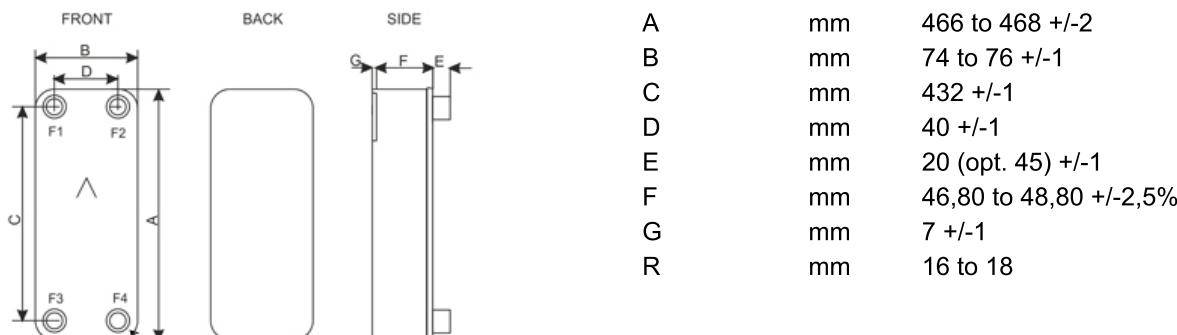
СТОРОНА 1 : внешний контур
СТОРОНА 2 : внутренняя цепь

Flow Type : Counter-Current
SSP Alias : B15T

ИСХОДНЫЕ ДАННЫЕ		СТОРОНА 1	СТОРОНА 2
Передаваемая мощность	kW	38,50	
Температура на входе	°C	80,00	50,00
Температура на выходе	°C	60,00	70,00
Расход	kg/s	0,4593	0,4599
Потери напора, заданные	kPa	50,0	50,0
Тепловая длина		2,000	2,000
ТЕХНИЧЕСКИЕ ПАРАМЕТРЫ		СТОРОНА 1	СТОРОНА 2
Поверхность нагрева	m ²	0,612	
Тепловой поток	kW/m ²	62,9	
Логарифм средней разности температур K		10,00	
Коэф. теплопередачи (расч./требуемый) W/m ² , °C		8170	
Потеря напора*	kPa	42,2	51,4
- в портах	kPa	2,53	2,52
Диаметр порта	mm	16,0	16,0
Number of channels per pass		10	9
Количество пластин		20	
Поправка на загрязнение	%	30	
Коэффиц. загрязнения	m ² , °C/kW	0,035	
Число Рейнольдса		3246	3128
скорость порта	m/s	2,34	2,33
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	0,438
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	1,74	
Средняя температура поверхности стенок	°C	55,79	54,06
Maximum wall temperature	°C	75,79	74,06
Коэффициент теплопередачи пленки	W/m ² , °C	19400	20100
Average wall temperature	°C	65,61	64,29
Скорость потока в канале	m/s	0,336	0,371
Напряжение на сдвиг	Pa	91,9	113

TOTALS

Total weight empty	kg	2,71 - 3,33
Total weight filled	kg	3,88 - 4,50
Hold-up volume, inner circuit	dm ³	0,567
Hold-up volume, outer circuit	dm ³	0,630
Port size F1/P1	mm	16,0
Port size F2/P2	mm	16,0
Port size F3/P3	mm	16,0
Port size F4/P4	mm	16,0
NND F1/P1	mm	18,0
NND F2/P2	mm	18,0
NND F3/P3	mm	18,0
NND F4/P4	mm	18,0
Carbon footprint	kg	23,4

РАЗМЕРЫ


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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