Optimal heat transfer

– EnFusion™ PHE B3-095 brazed plate heat exchanger

Introduction

PHE B3-095 brazed plate heat exchanger is the ideal choice for chillers, heat pumps, economizers, desuperheaters and can be used for numerous other applications. The heat exchanger is designed to combine high thermal efficiency with energy savings.
Capacity: 30 - 200 kW

Features

- Compact design
- High efficiency
- Flexible in size
- Connection in solder or flare
- Flexible connection programme
- 100 % inspected

Design pressure	30 bar (A type)	Design temperature	-196 ~ + 200°C
	45 bar (B type)	Plate type	H, L, M
Testing pressure	45 bar (A type)	Heat load	30-200 kW
	67,5 bar (B type)	Number of max plates	250

Approvals

- CE0035 certificate according (PED) 97/23/EC
- UL
- ISO 9000 1: 2000

Product Options

- Q Distributor
- A Adapter / Temperature
- HP High Pressure
- Ni Nickel Brazed
- BB Back to Back

Material Specification

The standard plate material is stainless steel AISI 316. For other material (SMO 254, Titanium) please contact your local sales organization.

Ordering

No. of plates	Connections		Without distributor Code no.	With distributor Code no
	Q1, Q2	Q3, Q4		
44	BSP 2" External Thread	2 1/8" Solder	**021B6533**	**021B6544**
50	BSP 2" External Thread	2 1/8" Solder	**021B6534**	**021B6545**
60	BSP 2" External Thread	2 1/8" Solder	**021B6535**	**021B6546**
70	BSP 2" External Thread	2 1/8" Solder	**021B6536**	**021B6547**
80	BSP 2" External Thread	2 1/8" Solder	**021B6537**	**021B6548**
90	BSP 2" External Thread	2 1/8" Solder	**021B6538**	**021B6549**
100	BSP 2" External Thread	2 1/8" Solder	**021B6539**	**021B6550**
110	BSP 2" External Thread	2 1/8" Solder	**021B6540**	**021B6551**
120	BSP 2" External Thread	2 1/8" Solder	**021B6541**	**021B6552**
130	BSP 2" External Thread	2 1/8" Solder	**021B6542**	**021B6553**

Capacity

R22

Type	Evaporator		Condenser	
	Heat load kW	Pressure drop kPa	Heat Loadkw	Pressure drop kPa
44	29.0	22	18	3.5
50	33.0	22	21	3.5
60	39.5	22	25	3.5
70	47.0	23	29	3.5
80	53.5	23	33	3.5
90	58.5	23	37	3.5
100	64.5	23	41	3.5
110	70.0	23	45	3.5
120	74.0	22	49	3.5
130	78.5	22	53	3.5

Capacity without distributor correction factor: multiply by 0,95

Conditions

	Evap			
	Te	-14 °C	Tc	40 °C
	Tc	40 °C	1) T inlet	32 °C
	SH	5 K	1) T outlet	38 °C
	1) T inlet	-4 °C		
	1) T outlet	-8 °C		

1) 30% propylen glycol

Capacity

R407C

No. of plates	Evaporator		Condenser		Condenser		Evaporator	
	Heat load kW	Pressure drop kPa	Heat Load kW	Pressure drop kPa	Heat Load kW	Pressure drop kPa	Heat Load kW	Pressure drop kPa
44	58	37	29.0	9.5	14.5	2.6	35	49
50	65	37	32.5	9.3	16.8	2.7	40	50
60	80	39	39.5	9.6	20.0	2.7	47	48
70	93	39	46.0	9.8	23.5	2.8	54	47
80	108	41	53.0	9.7	26.5	2.7	62	49
90	120	41	58.5	9.9	30.0	2.8	70	50
100	135	43	64.0	9.9	33.0	2.8	77	50
110	148	44	70.0	10.0	36.5	2.9	83	49
120	161	44	77.0	10.4	39.5	2.9	90	49
130	175	46	83.0	10.6	42.5	3.0	96	49

Capacity without distributor correction factor: multiply by 0,95

Conditions

Te 3 °C Tc 40 °C SH 5 K Water T inlet 12 °C Water T outlet 7 °C	Tc 50 °C water in 40 °C water out 45 °C	Tc 40 °C water in 32 °C water out 37 °C	Te -7 °C Tc 40 °C SH 5 °C 30% ethanol 0 °C 30% ethanol Tinlet -3 °C

Capacity

R134a

No. of plates	Evaporator		Condenser		Condenser		Condenser		Evaporator		Condenser	
	Heat load kW	Pressure drop kPa/bar	Heat Load kW	Pressure drop kPa	Heat Load kW	Pressure drop kPa	Heat Load kW	Pressure drop kPa	Heat Load kW	Pressure drop kPa	Heat Load kW	Pressure drop kPa
44	43	21	36.0	14	22.0	5.7	15.8	0.82	26.5	19	14	2
50	50	22	41,5	15	25.0	5.7	18	0.82	31	20	16	2
60	60	22	50.0	15	30.0	5.8	21	0.82	38	21	19	2
70	70	23	58.0	15	35.0	5.9	25	0.82	44	21	22	2
80	81	24	66.0	15	40.0	6.0	28	0.82	48	20	25	2
90	91	24	73.0	15	45.0	6.1	32	0.82	53	20	28	2
100	101	25	81.0	15	49.0	6.0	35	0.82	58	20	31	2
110	111	25	89.0	16	54.0	6.2	38.5	0.82	63	20	34	2
120	120	25	96.0	16	59.0	6.3	42	0.82	68	19	37	2
130	126	25	103.0	16	63.5	6.4	45	0.88	71	18	40	2

Capacity without distributor correction factor: multiply by 0,95

Conditions

Te 2 °C Tc 40 ° C SH 5 K Water T inlet 12 °C Water T outlet 7 °C	Tc 50 °C water in 40 °C water out 45 °C	Tc 40 °C water in 32 °C water out 37 °C	Tc 46 °C water in 35 °C water out 45 °C	Te - 14 °C Tc 40 °C SH 5 K 1) T inlet -4 °C 1) T inlet -8 °C	Tc 40 °C 1) T inlet 32 °C 1) T inlet 38 °C

1) 30% propylen glycol

Capacity

R404A

No. of plates	Evaporator		Condenser	
	Heat load kW	Pressure drop kPa	Heat Load kW	Pressure drop kPa
44	34	30	16.5	2.8
50	38	29	19.0	2.9
60	47	30	22.5	2.9
70	54	30	26.5	2.9
80	62	31	30.0	2.9
90	70	31	34.0	3.0
100	78	32	37.5	3.0
110	86	33	41.0	3.0
120	95	34	45.0	3.2
130	103	35	48.0	3.0

Capacity without distributor correction factor: multiply by 0,95

Conditions

	Te	-14 °C	Tc	40 °C
	Tc	40 °C	1) T inlet	32 °C
	SH	5 K	1) T outlet	38 °C
	1) T inlet	-4 °C		
	1) T outlet	-8 °C		

1) 30% propylen glycol

Capacity

R410A

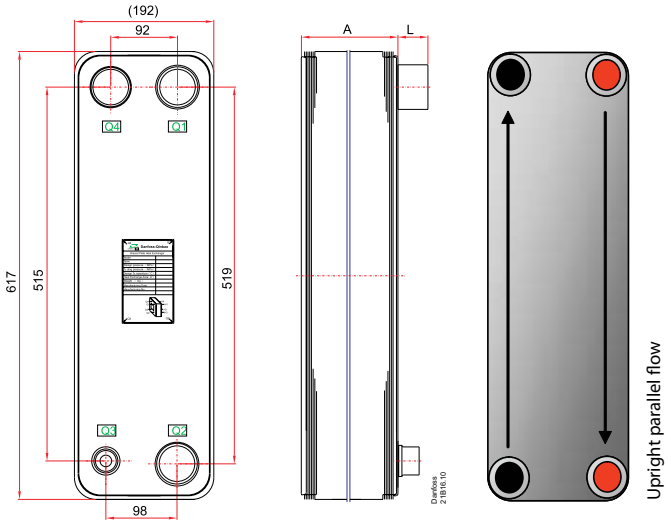
No. of plates	Evaporator		Condenser		Condenser	
	Heat load kW	Pressure drop kPa	Heat Load kW	Pressure drop kPa	Heat Load kW	Pressure drop kPa
44	64	45	64	42	34	13
50	72	44	73	42	38	13
60	88	46	86	42	46	13
70	105	49	99	42	54	13
80	117	47	112	42	61	13
90	130	48	127	43	68	13
100	148	48	140	44	75	13
110	155	48	152	44	82	14
120	165	47	165	44	89	14
130	176	46	180	46	97	14

1) Capacity without distributor correction factor: multiply by 0,95

Conditions

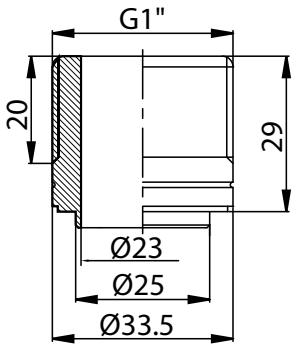
	Te	2 °C	Tc	50 °C	Tc	40 °C
	Tc	40 °C	water in	40 °C	water in	32 °C
	SH	5 K	water out	45 °C	water out	37 °C
	Water T inlet	12 °C				
	Water T outlet	7 °C				

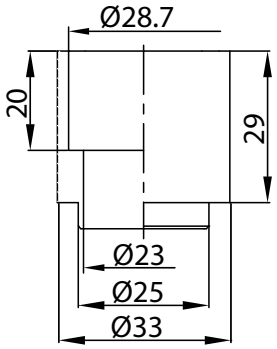
Dimensional Data



Dimensions and weight

Number of plates	A (mm)	Weight (kg)	Channel volume (L) Q1 Q2 side/ Q3 Q4side	Heat transfer area (m^2)
44	116	23.68	50.50 / 5.25	3.99
50	130	26.14	6.25 / 6.00	4.56
60	154	30.24	7.50 / 7.25	5.51
70	177	34.34	8.75 / 8.50	4.46
80	211	38.44	10.00 / 9.75	7.41
90	224	42.54	11.25 / 11.00	8.36
100	248	46.64	12.50 / 12.25	9.31
110	272	50.74	13.75 / 13.50	10.26
120	295	54.84	15.00 / 14.75	11.21
130	319	58.94	16.25 / 16.00	12.16





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