



Optimal heat transfer

– EnFusion™ PHE B3-030 brazed plate heat exchanger

Introduction

PHE B3-030 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: 3 - 30 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)
	45 bar (B type)
Testing pressure	45 bar (A type)
	67,5 bar (B type)

Design temperature	-196 ~ + 200°C
Plate type	H
Heat load	3-30 kW
Number of max plates	150

Approvals

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

Product Options

- Distributor
- Adapter/Temperature
- High Pressure
- Back to Back

Material Specification

The standard plate material is stainless steel AISI 316L. 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		
10	G1" External Thread	H 3/4"A Solder	021B2095	
14	G1" External Thread	H 3/4"A Solder	021B2096	
20	G1" External Thread	H 3/4"A Solder	021B2097	021B2106
26	G1" External Thread	H 3/4"A Solder	021B2098	021B2107
30	G1" External Thread	H 3/4"A Solder	021B2099	021B2108
34	G1" External Thread	H 3/4"A Solder	021B2100	021B2109
40	G1" External Thread	H 3/4"A Solder	021B2101	021B2110
44	G1" External Thread	H 3/4"A Solder	021B2102	021B2111
50	G1" External Thread	H 3/4"A Solder	021B2103	021B2112
60	G1" External Thread	H 3/4"A Solder	021B2104	021B2113
70	G1" External Thread	H 3/4"A Solder	021B2105	021B2114

Capacity

R22

No. of plates	Evaporator		Condenser	
	Heat load kW	Pressure drop kPa	Heat Load kW	Pressure drop kPa
10	2.0	41	1.6	1.1
14	3.0	47	2.3	1.1
20	4.0	41	3.2	0.9
26	5.0	45	4.2	0.9
30	6.5	48	5.0	0.9
34	7.5	50	5.5	0.9
40	8.5	47	6.8	0.9
44	9.5	48	7.5	0.9
50	10.8	49	8.5	0.9
60	13.0	50	10.0	0.9
70	15.0	49	11.5	0.9

Capacity without distributor correction factor: multiply by 0,95

Conditions

Evap			Tc	40°C
Te	-14°C		1) T inlet	32°C
Tc	40°C		1) T outlet	38°C
SH	5K			
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
10	3.0	35	2.5	22.8	1.2	6.2	1.5	40
14	5.0	49	3.5	22.9	1.7	6.3	2.4	50
20	7.5	53	5.3	25.5	2.4	6.2	3.2	44
26	10.0	56	6.5	23.0	3.2	6.5	4.2	45
30	11.5	56	7.5	23.0	3.8	6.9	5.0	47
34	13.0	56	8.5	23.0	4.2	6.6	5.8	50
40	15.5	58	10.0	23.0	5.0	6.8	6.8	50
44	17.0	58	11.5	25.5	5.5	6.8	7.4	49
50	19.5	59	13.0	25.5	6.2	6.8	8.4	49
60	23.5	60	15.5	25.6	7.5	7.0	10.0	49
70	28.0	64	18.5	27.3	9.0	7.5	11.5	48

Capacity without distributor correction factor: multiply by 0,95

Conditions

Te	3°C	Tc	50°C	Tc	40°C	Te	-7°C
Tc	40°C	water in	40°C	water in	32°C	Tc	40°C
SH	5K	water out	45°C	water out	37°C	SH	5°C
Water T inlet	12°C					30% ethanol	0°C
Water T outlet	7°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
10	2.5	25	4.0	54	2.2	18	1.4	2.47	1.4	29	1.25	7
14	3.5	26	5.8	58	3.2	20	2.0	2.47	2.3	36	1.8	7
20	5.5	31	8.0	54	4.5	20	3.0	2.47	3.7	43	2.6	7
26	7.0	30	10.5	55	6.0	20	3.8	2.47	5.0	45	3.4	7
30	8.5	33	12.0	55	6.8	20	4.5	2.47	6.0	48	3.8	7
34	10.0	35	13.5	54	7.6	20	5.0	2.47	6.8	48	4.3	7
40	12.0	37	15.5	52	9.1	20	5.8	2.47	7.8	46	5.2	7
44	13.0	36	17.0	52	10.0	20	6.3	2.47	8.5	46	5.8	7
50	15.0	37	19.5	54	11.2	20	7.2	2.60	9.8	47	6.6	7
60	18.0	38	23.5	55	13.5	20	9.0	2.70	12.0	49	8.0	7
70	21.5	40	27.5	57	16.0	21	10.5	2.80	13.5	47	9.3	7

Capacity without distributor correction factor: multiply by 0,95

Conditions

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

1) 30% propylen glycol

Capacity

R404A

No. of plates	Evaporator		Condenser	
	Heat load kW	Pressure drop kPa	Heat Load kW	Pressure drop kPa
10	1.5	25	1.4	7.6
14	2.5	34	2.1	8.6
20	3.5	33	3.0	8.6
26	4.8	36	4.0	9.0
30	5.8	40	4.6	9.0
34	6.5	39	5.2	9.0
40	8.0	42	6.0	8.7
44	8.8	42	6.6	8.8
50	10.0	42	7.8	9.5
60	12.0	43	9.2	9.3
70	14.0	43	11.0	9.9

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

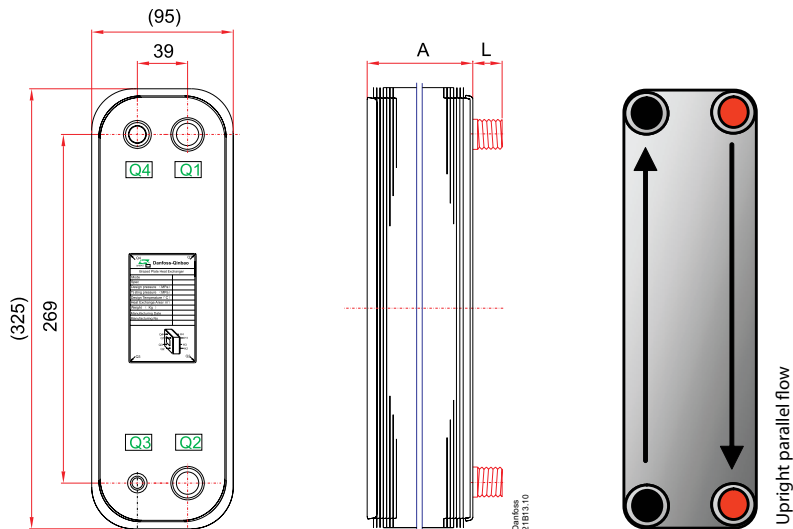
No. of plates	Evaporator		Condenser		Condenser	
	Heat load kW	Pressure drop kPa	Heat Load kW	Pressure drop kPa	Heat Load kW	Pressure drop kPa
10	4.0	60	3.5	42	2.0	16
14	6.0	68	5.0	44	2.8	16
20	8.5	67	7.0	42	4.0	16
26	11.0	67	9.0	42	5.2	16
30	13.0	70	10.0	39	6.0	16
34	15.0	73	11.5	41	6.8	16
40	17.5	72	13.5	41	8.0	16
44	19.5	74	15.0	42	8.8	16
50	22.5	77	17.0	42	10.0	16
60	26.5	77	20.5	43	12.0	16
70	30.0	73	24.0	44	14.2	17

Capacity without distributor correction factor: multiply by 0,95

Conditions

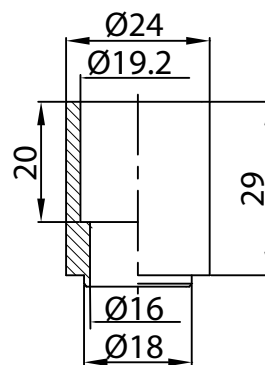
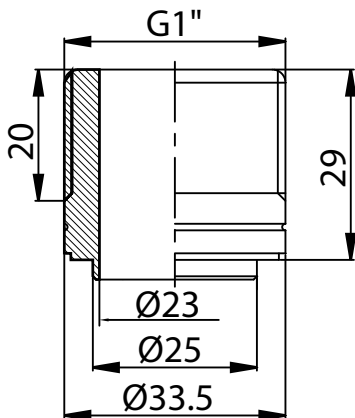
Te	2 °C	Tc	50 °C	Tc	40 °C
Tc	40 °C	water in	40 °C	water in	32 °C
SH	5 K	water out	45 °C	water out	37 °C
Water T inlet	12 °C				
Water T outlet	7 °C				

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)
10	24	1.90	0.14 / 0.11	0.112
14	30	2.26	0.20 / 0.17	0.168
20	39	2.80	0.28 / 0.25	0.252
26	48	3.34	0.36 / 0.34	0.336
30	54	3.70	0.42 / 0.39	0.392
34	60	4.06	0.48 / 0.45	0.448
40	69	4.60	0.56 / 0.53	0.532
44	75	4.96	0.62 / 0.59	0.588
50	84	5.50	0.70 / 0.67	0.672
60	99	6.40	0.84 / 0.81	0.812
70	114	7.30	0.98 / 0.95	0.952





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