



Brazed Plate Heat Exchanger

The compact and flexible solution

Heat exchangers are used in refrigeration plants as condensers, evaporators or with other specific function.

Danfoss offers a wide range of heat exchangers in a modular system based on a platform of high quality components. You can define both the capacity and the connections you need for your specific application. The heat exchangers are compact and space saving.

Technical data - Select the type that fits your application

BPHE Data	B3-012	B3-014	B3-014B	B3-014C	B3-014D	B3-020
Cooling Capacity/Heat Load (ton) (Max)	0.14 - 1.14	0.14 - 1.42	0.14 - 1.42	0.14 - 1.42	0.14 - 1.42	0.57 - 2.84
Heat exchange area (ft ²)	(n-2) x 0.129	(n-2) x 0.151	(n-2) x 0.151	(n-2) x 0.151	(n-2) x 0.151	(n-2) x 0.240
Design temperature (°F)	-320.8/+392	-320.8/+392	-320.8/+392	-320.8/+392	-320.8/+392	-320.8/+392
Standard Design pressure Q1-Q2/Q3-Q4 (psi)	145.04	145.04	145.04	145.04	145.10	145.10
High Design pressure Q1-Q2/Q3-Q4 (psi)	435.11	580.15	435.11	435.11	435.11	435.11
Test pressure standard (psi)	217.56/652.67	217.56/870.23	217.56/652.67	217.56/652.67	217.56/652.67	217.56/652.67
Distribution						
Dual circuit						
Channel pattern	H	H,L,M	H	H	H	H,L,M
Max. number of plates	50	60	50	50	50	60
Height/Width (inch) 1)	7.32/2.83	8.15/3.03	7.60/3.27	7.60/3.37	8.19/3.11	12.36/2.83
Weight (lbs), empty (n=number of plates)	0.6+0.10 x n	0.7+0.13 x n	0.4+0.13 x n	0.4+0.13x n	0.7+0.13 x n	1.1+0.20 x n
Max. size of welded connection 2)	7/8"	7/8"	7/8"	7/8"	7/8"	7/8"
Max. size of thread connection 2)	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"
Standard plate material 3)	AISI 304	AISI 304	AISI 304	AISI 304	AISI 316L	AISI 304
Brazing material	Copper or Nickel	Copper or Nickel	Copper	Copper	Copper	Copper or Nickel

- 1) Look for all dimensions and drawings in data sheet
- 2) Find various thread and welded connections in the table
- 3) SMO 254 or AISI 316L Steel plates on demand

Heat Exchanger plates and channels

BPHE type B is available with 2 different types of plates and 3 types of channels, that are responsible for the thermal characteristics of the heat exchanger.

The H type plate has obtuse angles that result in higher heat transfer efficiency by increasing the turbulence of the fluid.

The L type plate has acute angles. This reduces the pressure drop and reduces the turbulence and lowers heat transfer efficiency.

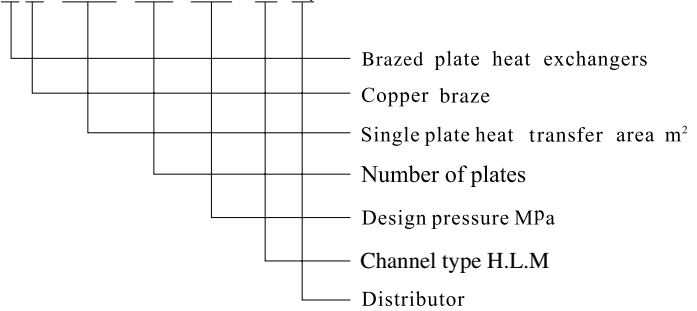
The H channel is made by two H plates, with high heat transfer coefficient and high pressure drop

The L channel is made by two L plates, with lower heat transfer coefficient and lower pressure drop

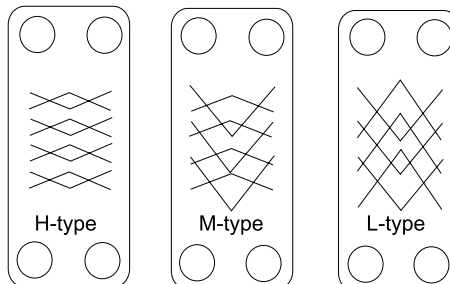
The M channel is made by one H plate and one L plate, with both medium of pressure drop and heat transfer coefficient.

Expression of Type of BPHE

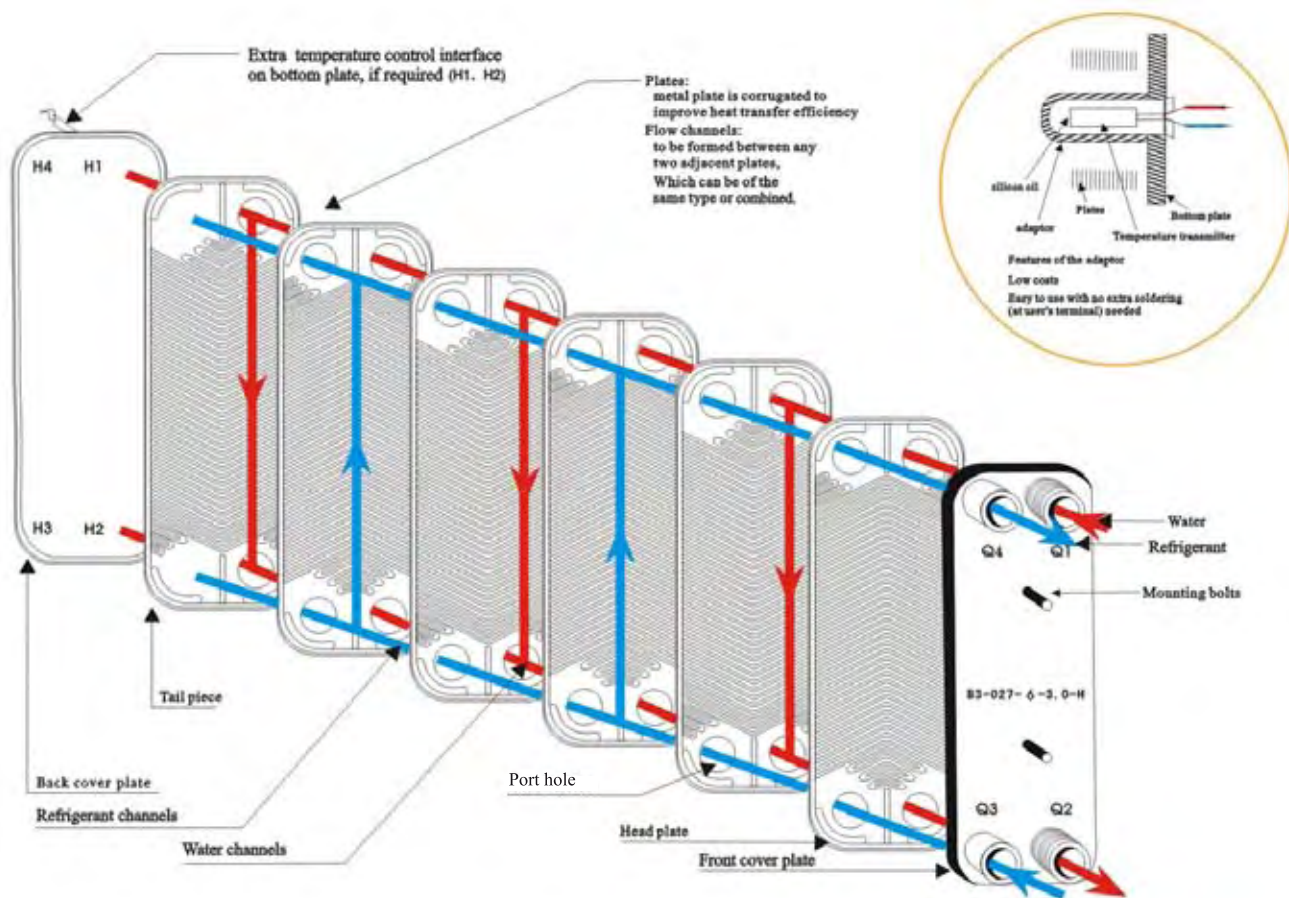
B3-052-50-3.0-H Q



Channel Type H-L-M



B3-027	B3-030	B3-048	B3-052	B3-095	B3-113	B3-136	B3-210	B3-260
1.42 - 4.27	0.85 - 8.53	8.53 - 22.75	2.84 - 17.06	8.53 - 56.87	17.06 - 56.87	17.06 - 56.87	42.65 - 127.96	42.65 - 142.17
(n-2) x 0.280	(n-2) x 0.323	(n-2) x 0.520	(n-2) x 0.540	(n-2) x 1.022	(n-2) x 1.226	(n-2) x 1.464	(n-2) x 2.260	(n-2) x 2.800
-320.8/+392	-320.8/+392	-320.8/+392	-320.8/+392	-320.8/+392	-320.8/+392	-320.8/+392	-320.8/+392	-320.8/+392
435.11	435.11	435.11	435.11	435.11	435.11	435.11	435.11	362.60
652.67	652.67	580.15	652.67	652.67	580.15	580.15	580.15	
652.67/979	652.67/979	652.67/870.23	652.67/979	652.67/979	652.67/870.23	652.67/870.23	652.67/870.23	543.90
	Q	Q	Q	Q	Q		Q	
		D			D		D	
H,L,M	H	H	H,L,M	H,L,M	H	H	H	H
150	150	118	150	250	198	200	250	250
12.24/4.37	12.80/3.74	15.35/7.68	20.75/4.37	24.29/7.56	19.29/9.84	19.29/9.84	29.09/12.68	31.42/14.29
1.2+0.28 x n	1+0.198 x n	1.8+0.51 x n	1.8+0.51 x n	4.6+0.90 x n	6.5+0.84 x n	6.5+0.84 x n	13+01.76 x n	13.5+2.14 x n
1 3/8"	1 3/8"	1 5/8"	1 5/8"	2 1/8"	2 5/8"	3"	3 1/8"	4"
1 1/4"	1 1/4"	1 1/2"	1 1/4"	2"	2 1/2"	3"	3 1/8" clamp	4" clamp
AISI 316L	AISI 316L	AISI 316L	AISI 316L	AISI 316L	AISI 316L	AISI 316L	AISI 316L	AISI 316L
Copper or Nickel	Copper	Copper	Copper or nickel	Copper or nickel	Copper	Copper	Copper	Copper



Connections data

Type	Factory code	Internal diameter in inch	External diameter inch	Length inch	Conne- ction	Thread	PHE B3 - 012 PHE B3 - 014 PHE B3 - 014B PHE B3 - 014C PHE B3 - 014D PHE B3 - 020	PHE B3-027 PHE B3-030	PHE B3-048	PHE B3-052	PHE B3-095	PHE B3-113	PHE B3-136	PHE B3-210	PHE B3-260
H 1/4	052	1/4	0.43	1.14	Solder		X	X	X	X	X	X	X	X	X
H 3/8	001	3/8	0.55	1.14	Solder		X	X	X	X	X	X	X	X	X
H 1/2	002	1/2	0.67	1.14	Solder		X	X	X	X	X	X	X	X	X
H 5/8	003	5/8	0.79	1.14	Solder		X	X	X	X	X	X	X	X	X
H 3/4A	058	3/4	0.94	1.14	Solder		X	X	X	X	X	X	X	X	X
H 7/8	006	7/8	1.10	1.14	Solder		X	X	X	X	X	X	X	X	X
H 1 1/8A	059	1 1/8	1.30	1.14	Solder			X	X	X	X	X	X	X	X
H 3/2A	056	x	1.46	1.14	Solder			X	X	X	X	X	X	X	X
H 1 3/8A	012	1 3/8	1.57	1.14	Solder			X	X	X	X	X	X	X	X
H 1 5/8A	016	1 5/8	1.85	1.14	Solder				X	X	X	X	X	X	X
H 1 5/8A	017	1 5/8	1.85	1.14	Solder				X	X	X	X	X	X	X
H 2 1/8A	072	2 1/8	2.36	1.14	Solder					X	X	X	X	X	X
H 3/8A	063	3/4	0.55	0.98	Solder		X	X	X	X	X	X	X	X	X
H 1/2D	078	1/2	0.67	0.98	Solder		X	X	X	X	X	X	X	X	X
H 5/8A	085	5/8	0.79	0.98	Solder		X	X	X	X	X	X	X	X	X
H 3/4B	101	3/4	0.84	0.79	Solder		X	X	X	X	X	X	X	X	X
H 1 5/8D	194	1 5/8	1.85	1.57	Solder				X	X	X	X	X	X	X
H 2 1/8C	195	2 1/8	2.36	1.57	Solder					X	X	X	X	X	X
H 2 1/8D	187	2 1/8	2.36	1.57	Solder						X	X	X	X	X
H 2 5/8B	190	2 5/8	2.97	2.05	Solder							X	X	X	X
H 2 3/4B	196	2 3/4	3.07	2.05	Solder								X	X	X
H 1 3/8E	193	1 3/8	1.57	1.57	Solder				X	X	X	X	X	X	X
H 1/4A	086	1/4	0.43	0.98	Solder		X	X	X	X	X	X	X	X	X
N 1/2C	035	R 1/2	1.06	1.14	DIN	Internal	X	X	X	X	X	X	X	X	X
N 3/4C	043	R 3/4	1.18	1.14	DIN	Internal	X	X	X	X	X	X	X	X	X
N 1B	109	R 1	1.57	1.14	DIN	Internal		X	X	X	X	X	X	X	X
N 1/2	025	G c	1.06	1.14	BSP	Internal	X	X	X	X	X	X	X	X	X
N 3/4	028	G 3/4	1.30	1.14	BSP	Internal	X	X	X	X	X	X	X	X	X
N 1	029	G 1	1.57	1.14	BSP	Internal		X	X	X	X	X	X	X	X
N 3/4A	041	NPT 3/4	1,18	1.14	NPT	Internal	X	X	X	X	X	X	X	X	X
N 1C	124	NPT 1	x	1.14	NPT	Internal		X	X	X	X	X	X	X	X
L 1/2D	084	x	1.30	0.67	DIN	External	X	X	X	X	X	X	X	X	X
L 3/4I	093	x	G 1/2	0.59	DIN	External	X	X	X	X	X	X	X	X	X
L 1/2C	073	x	G 3/4	0.67	BSP	External	X	X	X	X	X	X	X	X	X
L 3/4F	074	x	G 1/2	0.59	BSP	External	X	X	X	X	X	X	X	X	X
L 1/2E	090	x	G 3/4	0.79	NPT	External	X	X	X	X	X	X	X	X	X
L 3/4H	089	x	NPT 1/2	0.79	NPT	External	X	X	X	X	X	X	X	X	X
N 1/2F	184	G 1/2	NPT 3/4	0.98	BSP	Internal	X	X	X	X	X	X	X	X	X
L 3/4B	030	x	1.06	1.14	DIN	External	X	X	X	X	X	X	X	X	X
L 1A	031	x	R 3/4	1.14	DIN	External		X	X	X	X	X	X	X	X
L 1 1/4C	033	x	R 1	1.14	DIN	External		X	X	X	X	X	X	X	X
L 1 1/2A	034	x	R 1 1/4	1.14	DIN	External			X		X	X	X	X	X
L2	071	x	R 1 1/2	1.89	DIN	External					X	X	X	X	X
L 3/4	019	x	R 2	1.14	BSP	External	X	X	X	X	X	X	X	X	X
L 1	021	x	G 3/4	1.14	BSP	External		X	X	X	X	X	X	X	X
L 1 1/4A	023	x	G 1 1/4	1.14	BSP	External		X	X	X	X	X	X	X	X
L 1 1/2	024	x	G 1 1/2	1.14	BSP	External			X		X	X	X	X	X
L 2A	079	x	G 2	1.89	BSP	External					X	X	X	X	X
L 3/4C	037	x	NPT 3/4	1.14	NPT	External	X	X	X	X	X	X	X	X	X
L 1 1/4F	137	x	NPT 1	1.14	C	External		X	X	X	X	X	X	X	X
L 1B	038	x	NPT 1	1.14	NPT	External		X	X	X	X	X	X	X	X
L 1 1/2B	039	x	NPT 1 1/2	1.14	NPT	External			X		X	X	X	X	X
L 2B	099	x	NPT 2	1.89	NPT	External					X	X	X	X	X
NNPT 1/4	108	NPT 1/4	0.79	1.14	NPT	Internal	X	X	X	X	X	X	X	X	X
L 3C	192	x	G3	2.05	BSP	External							X	X	X
L 3D	199	x	NPT 3	2.05	NPT	External							X	X	X
L 3E	200	x	R 3	2.05	DIN	External							X	X	X
H 3 1/8D	189	3 1/8	3.5	2.05	Clamp (victaulic)	External								X	X
H 4	134	4	4.4	2.05	Clamp (victaulic)	External									X

NPT: National Pipe Thread R: DIN standard, thread seal G/BSP: DIN standard (ISO228/1), surface seal

Technical leaflet

Brazed plate heat exchanger B3-012

Introduction

B3-012 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: 0.142 - 1.137 TR



Features

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

Approvals

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

Product Options

- Adapter/Temperature Monitoring
- Nickel Brazed

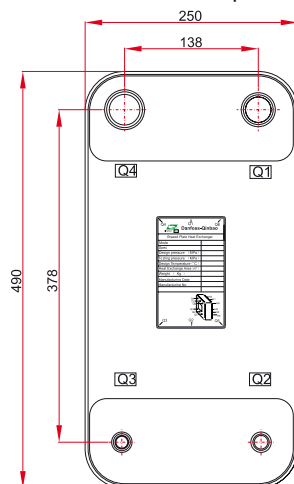
Material Specification

The standard plate material is stainless steel AISI 304. For other material (AISI 316L, SMO

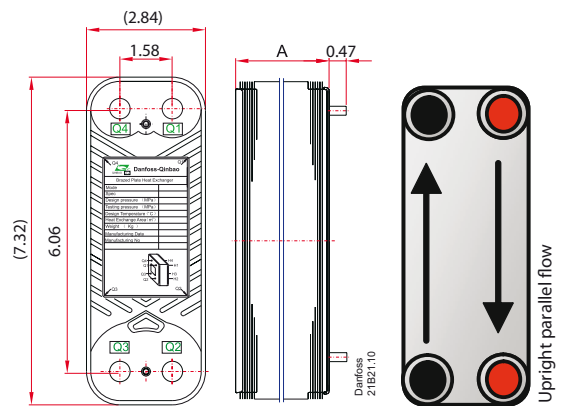
254, Titanium) please contact your local sales organization.

Dimensional Data

Flat front / back cover plate



Corrugated front / back cover plate



Number of plates	A (in)	Weight (lbs)	Channel volume (gal) Q1 Q2 side/ Q3 Q4side	Heat transfer area (ft ²)
n	7 + 0.09n	0.6 + 0.097n	0.0047 x n/2 0.0047 x (n-2)/2	(n - 2) 0.13

Technical Data

Design pressure	145 psi (A type)	Design temperature	-328.8 ~ + 392°F
	435 psi (B type)		Plate type
Testing pressure	218 psi (A type)	Heat load	~1.137 TR
	653 psi (B type)	Number of max plates	50

Technical leaflet

Brazed plate heat exchanger B3-014

Introduction

B3-014 brazed plate heat exchanger is the ideal choice for air driers and chillers, heat pump, economizers, desuperheaters and can be used for numerous other applications. The heat exchanger is designed to combine high thermal efficiency with energy savings.
Capacity: 0.142 - 1.421 TR



Features

- Compact design
- High efficiency
- Low internal hold-up volume
- Flexible design
- Solder and threaded connection types
- Wide variety of connections styles and sizes

Approvals

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

Product Options

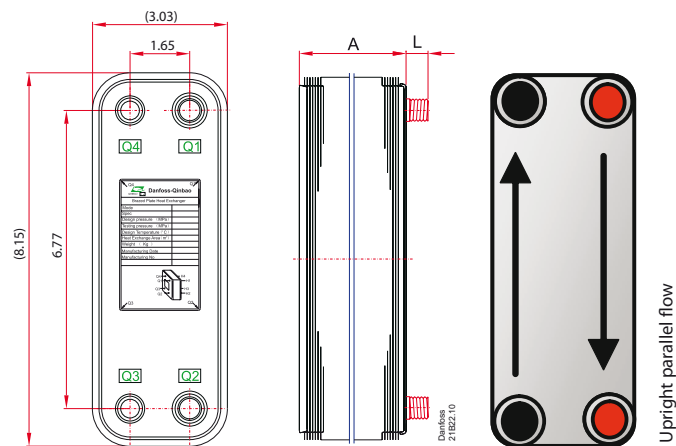
- A Adapter/Temperature Monitoring
- HP High Pressure
- Ni Nickel Brazed
- BB Back to Back
- AD Air Drier

Material Specification

The standard plate material is stainless steel AISI 304. For other material (AISI 316L, SMO

254, Titanium) please contact your local sales organization.

Dimensional Data



Number of plates	A (in)	Weight (lbs)	Channel volume (gal) Q1 Q2 side/ Q3 Q4side	Heat transfer area (ft ²)
n	7 + 0.09n	0.7 + 0.132n	0.0052 x n/2 0.0052 x (n-2)/2	(n - 2) 0.15

Technical Data

Design pressure	145 psi (A type)	Design temperature	-320,8 ~ + 392°F
	580 psi (B type)		Plate type
Testing pressure	218 psi (A type)	Heat load	~1.422TR
	870 psi (B type)	Number of max plates	60

Introduction

B3-014B 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: 0.142 - 1.42 TR

Features

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

Approvals

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

Product Options

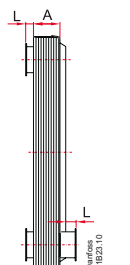
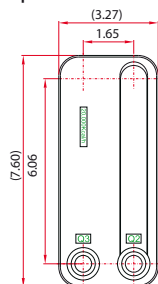
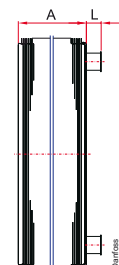
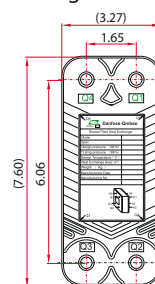
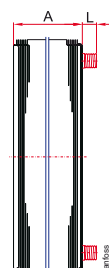
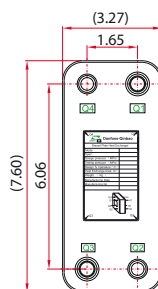
A Adapter/Temperature Monitoring

Material Specification

The standard plate material is stainless steel AISI 304. For other material (AISI 316L, SMO



254, Titanium) please contact your local sales organization.

Dimensional Data
Specialist

Corrugated front cover plate

Flat front cover plate


Diagonal flow

Number of plates	A (in)	Weight (lbs)	Channel volume (gal) Q1 Q2 side/ Q3 Q4side	Heat transfer area (ft ²)
n	7 + 0.09n	0.4 + 0.132n	0.0058 x n/2 0.0058 x (n-2)/2	(n - 2) 0.15

Technical Data

Design pressure	145 psi (A type)	Design temperature	-320,8 ~ + 392°F
	435 psi (B type)		Plate type
Testing pressure	218 psi (A type)	Heat load	~1.422 TR
	653 psi (B type)	Number of max plates	50

Introduction

B3-014C 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: 0.142 - 1.42 TR


Features

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

Approvals

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

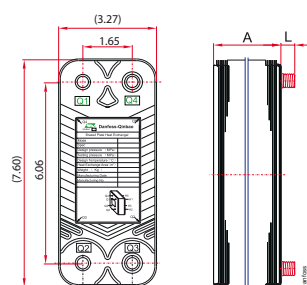
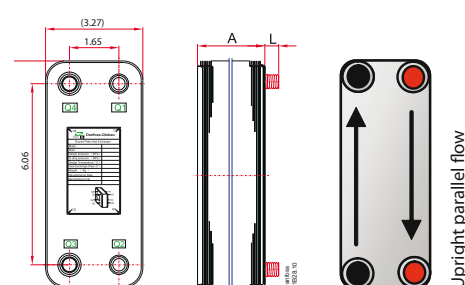
Product Options

A Adapter/Temperature Monitoring

Material Specification

The standard plate material is stainless steel AISI 304. For other material (AISI 316L, SMO

254, Titanium) please contact your local sales organization.

Dimensional Data
Corrugated front cover plate

Flat front cover plate


Number of plates	A (in)	Weight (lbs)	Channel volume (gal) Q1 Q2 side/ Q3 Q4side	Heat transfer area (ft ²)
n	7 + 0.3n	0.4 + 0.132n	0.058 x n/2 0.058 x (n-2)/2	(n - 2) 0.15

Technical Data

Design pressure	145 psi (A type)	Design temperature	-320,8 ~ + 392°F
	435 psi (B type)		Plate type
Testing pressure	218 psi (A type)	Heat load	~1.422 TR
	653 psi (B type)	Number of max plates	50

Introduction

B3-014D 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: 0.14 - 1.42 TR


Features

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

Approvals

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

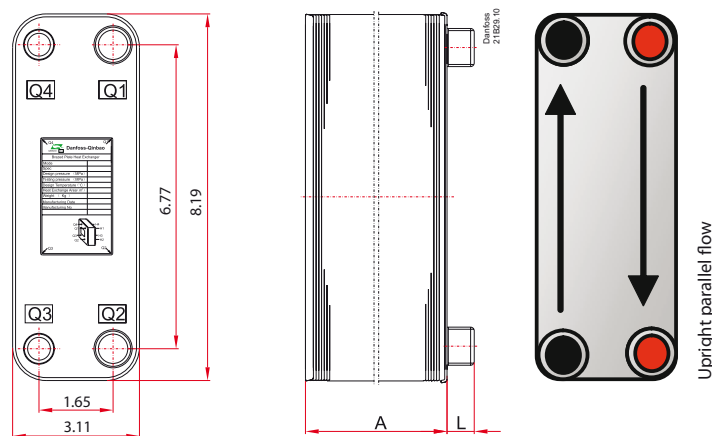
Product Options

A Adapter/Temperature Monitoring

Material Specification

The standard plate material is stainless steel AISI 304. For other material (AISI 316L, SMO

254, Titanium) please contact your local sales organization.

Dimensional Data


Number of plates	A (in)	Weight (lbs)	Channel volume (gal) Q1 Q2 side/ Q3 Q4side	Heat transfer area (ft ²)
n	7 + 0.09n	0.7 + 0.132n	0.0058 x n/2 0.0058 x (n-2)/2	(n - 2) 0.15

Technical Data

Design pressure	145 psi (A type)	Design temperature	-320,8 ~ + 392°F
	435 psi (B type)		Plate type
Testing pressure	218 psi (A type)	Heat load	~1.422 TR
	653 psi (B type)	Number of max plates	50

Introduction

B3-020 brazed plate heat exchanger is the ideal choice for boilers and 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: 0.57 - 2.84 TR


Features

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

Approvals

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

Product Options

- A** Adapter/Temperature Monitoring
- Ni** Nickel Brazed

- BB** Back to Back

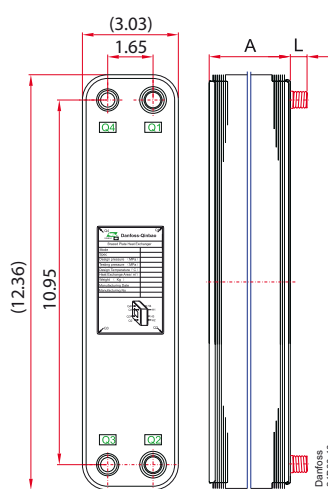
Material Specification

The standard plate material is stainless steel AISI 304. For other material (AISI 316L, SMO

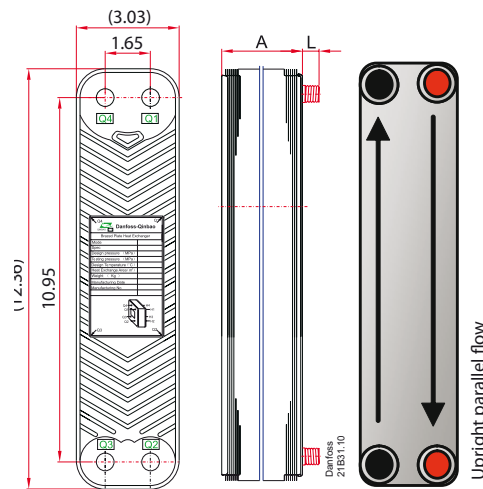
254, Titanium) please contact your local sales organization.

Dimensional Data

Flat front / Back cover plate



Corrugated front / back cover plate



Number of plates	A (in)	Weight (lbs)	Channel volume (gal) Q1 Q2 side/ Q3 Q4side	Heat transfer area (ft ²)
n	7 + 0.09n	1.1 + 0.20n	0.00105 x n/2 0.00105 x (n-2)/2	(n - 2) 0.24

Technical Data

Design pressure	145 psi (A type)	Design temperature	-320,8 ~ + 392°F
	435 psi (B type)		Plate type
Testing pressure	218 psi (A type)	Heat load	0.57-2.84 TR
	653 psi (B type)	Number of max plates	60

Introduction

B3-027 brazed plate heat exchanger is the ideal choice for air driers and 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: 1.42 - 4.27 TR


Features

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

Approvals

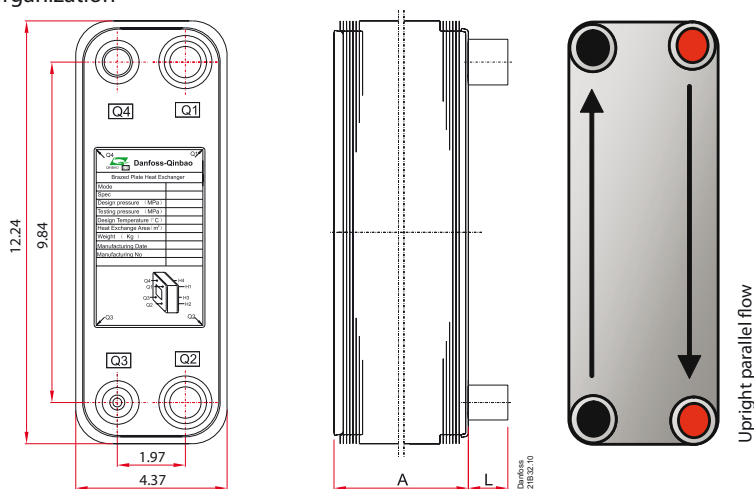
- CE0035 certificate according (PED) 97/23/EC
- UL
- ISO 9000 1: 2000

Product Options

- A Adapter/Temperature Monitoring
- BB Back to Back
- HP High Pressure
- AD Air Drier
- Ni Nickel Brazed

Material Specification

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

Dimensional Data


Number of plates	A (in)	Weight (lbs)	Channel volume (gal) Q1 Q2 side/ Q3 Q4side	Heat transfer area (ft ²)
n	9 + 0.09n	1.2 + 0.28n	0.0132 x n/2 0.0132 x (n-2)/2	(n - 2) 0.28

Technical Data

Design pressure	435 psi (A type)	Design temperature	-320,8 ~ + 392°F
	653 psi (B type)		Plate type
Testing pressure	653 psi (A type)	Heat load	1.42-4.27 TR
	979 psi (B type)	Number of max plates	150

Introduction

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: 1.42 - 8.53 TR


Features

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

Approvals

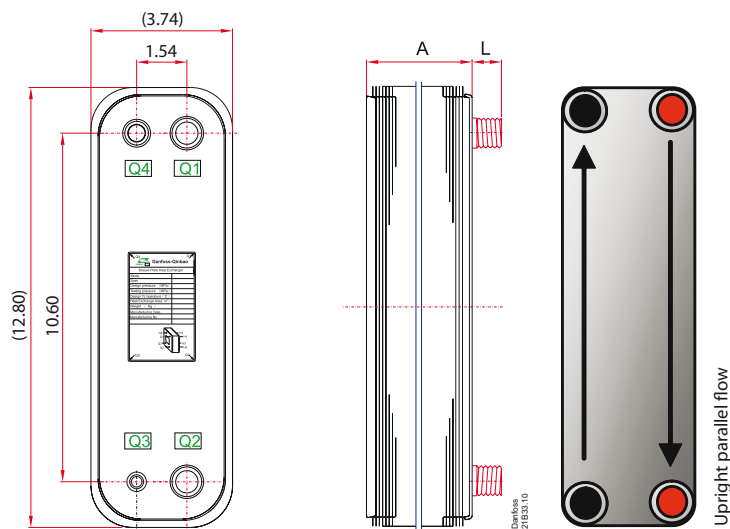
- CE₀₀₃₅ certificate according (PED) 97/23/EC
- UL
- ISO 9000 1: 2000

Product Options

- Distributor
- High Pressure
- Adapter/Temperature
- 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.

Dimensional Data


Number of plates	A (in)	Weight (lbs)	Channel volume (gal) Q1 Q2 side/ Q3 Q4side	Heat transfer area (ft ²)
n	9 + 0.06n	1 + 0.20n	0.0073 x n/2 0.0073 X (n-2)/2	(n - 2) 0.32

Technical Data

Design pressure	435 psi (A type)	Design temperature	-320,8 ~ + 392°F
	653 psi (B type)		Plate type
Testing pressure	653 psi (A type)	Heat load	0.85-8.53 TR
	979 psi (B type)	Number of max plates	150

Introduction

The complete range of Brazed Plate Heat Exchangers for refrigeration and A/C application is the ideal choice for many chillers, heat pumps, economizers, desuperheaters and can be used for numerous other applications. The heat exchanger plate pattern is designed to combine high thermal efficiency with energy savings. B3-048 is with a special patented design of different corrugation depths on the same plate. It allows larger water flow rates, low pressure drop and lower refrigerant charge.

Capacity: 8.53 – 22.75 TR.



Features

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

Approvals

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

Product Options

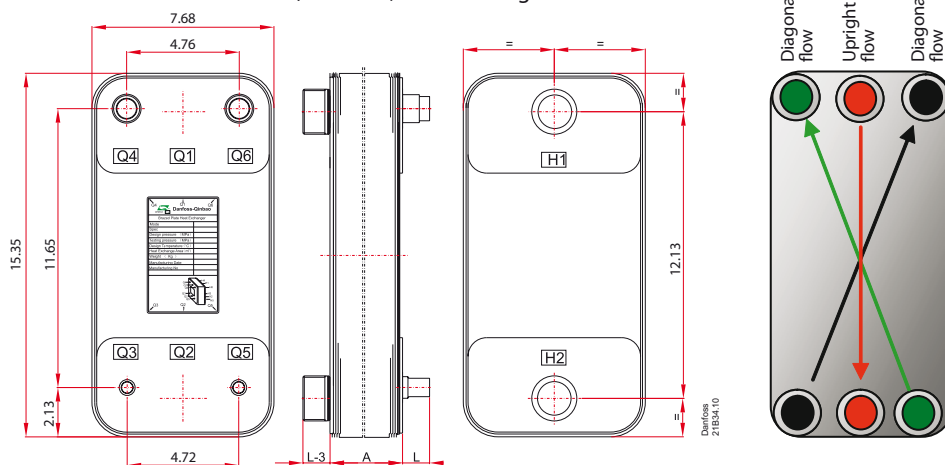
- Distributor
- Adapter/Temperature
- High Pressure
- Dual Circuit

Material Specification

The standard plate material is stainless steel AISI 316L. For other material (SMO 254,

Titanium) please contact your local sales organization.

Dimensional Data



Number of plates	A (in)	Weight (lbs)	Channel volume (gal) Q1 Q2 side/ Q3 Q4side	Heat transfer area (ft ²)
n	10 + 0.078n	1.8 + 0.51n	0.0073 x n/2 0.0073 X (n-2)/2	(n - 2) 0.52

Technical Data

Design pressure	435 psi (A type)	Design temperature	-320,8 ~ + 392°F
	580 psi (B type)		Plate type
Testing pressure	653 psi (A type)	Heat load	8.53-22.75 TR
	870 psi (B type)	Number of max plates	118

Introduction

B3-052 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: 2.84 - 17.06 TR


Features

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

Approvals

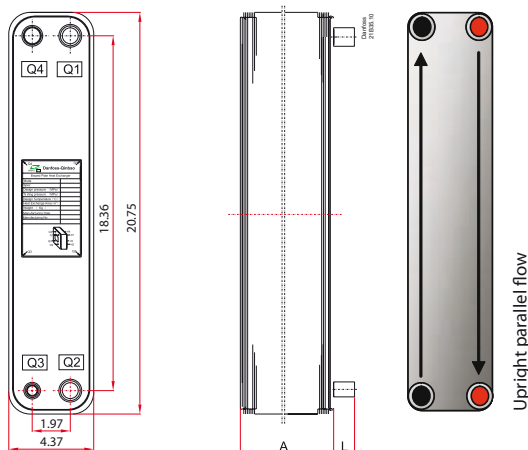
- CE₀₀₃₅ certificate according (PED) 97/23/EC
- UL
- ISO 9000 1: 2000

Product Options

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

Material Specification

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

Dimensional Data


Number of plates	A (in)	Weight (lbs)	Channel volume (gal) Q1 Q2 side/ Q3 Q4side	Heat transfer area (ft ²)
n	9 + 0.09n	1.8 + 0.51n	0.0248 x n/2 0.0248 x (n-2)/2	(n - 2) 0.54

Technical Data

Design pressure	435 psi (A type)	Design temperature	-320,8 ~ + 392°F
	653 psi (B type)		Plate type
Testing pressure	653 psi (A type)	Heat load	2.84-17.06 TR
	979 psi (B type)	Number of max plates	150

Introduction

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: 8.53 - 56.87 TR

Features

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

Approvals

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

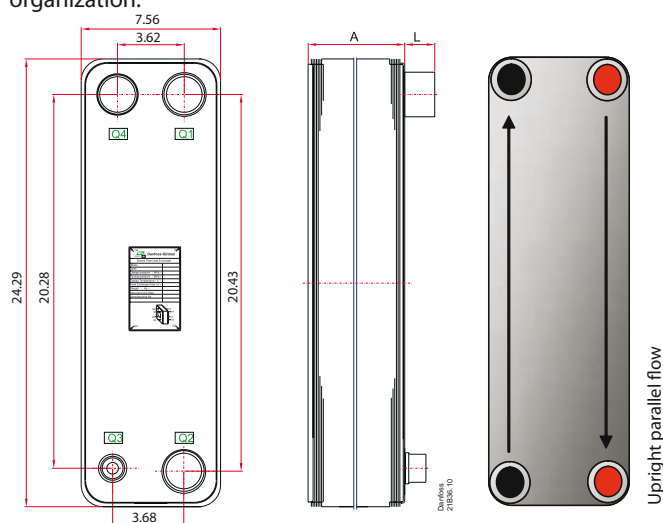
Product Options

- 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.

Dimensional Data



Number of plates	A (in)	Weight (lbs)	Channel volume (gal) Q1 Q2 side/ Q3 Q4side	Heat transfer area (ft ²)
n	10 + 0.09n	4.6 + 0.90n	0.0660 x n/2 0.0660x (n-2)/2	(n - 2) 1.02

Technical Data

Design pressure	435 psi (A type)	Design temperature	-320,8 ~ + 392°F
	653 psi (B type)		Plate type
Testing pressure	653 psi (A type)	Heat load	8.53-56.87TR
	979 psi (B type)	Number of max plates	250

Introduction

B3-113 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: 17.06 - 56.90 TR



Features

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

Approvals

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

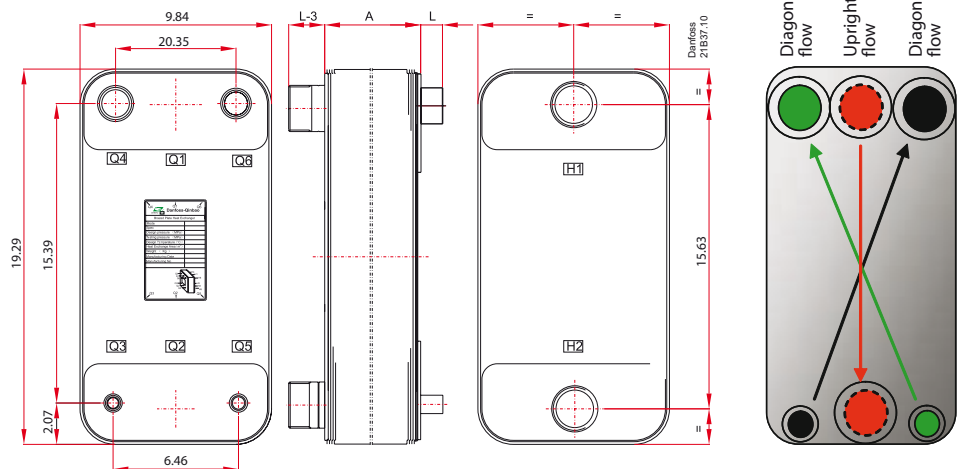
Product Options

- Q Distributor
- HP High Pressure
- A Adapter / Temperature
- DC Dual Circuit

Material Specification

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

Dimensional Data



Number of plates	A (in)	Weight (lbs)	Channel volume (gal) Q1 Q2 side/ Q3 Q4side	Heat transfer area (ft ²)
n	10 + 0.09n	6.5 + 0.84n	0.0422 x n/2 0.0422x (n-2)/4	(n - 2) 1.22

Technical Data

Design pressure	435 psi (A type)	Design temperature	-320,8 ~ + 392°F
	580 psi (B type)		Plate type
Testing pressure	653 psi (A type)	Heat load	17.06-56.90TR
	870 psi (B type)	Number of max plates	200

Introduction

B3-136 brazed plate heat exchanger is the ideal choice for air driers and 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: 17.06 – 56.90 TR.


Features

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

Approvals

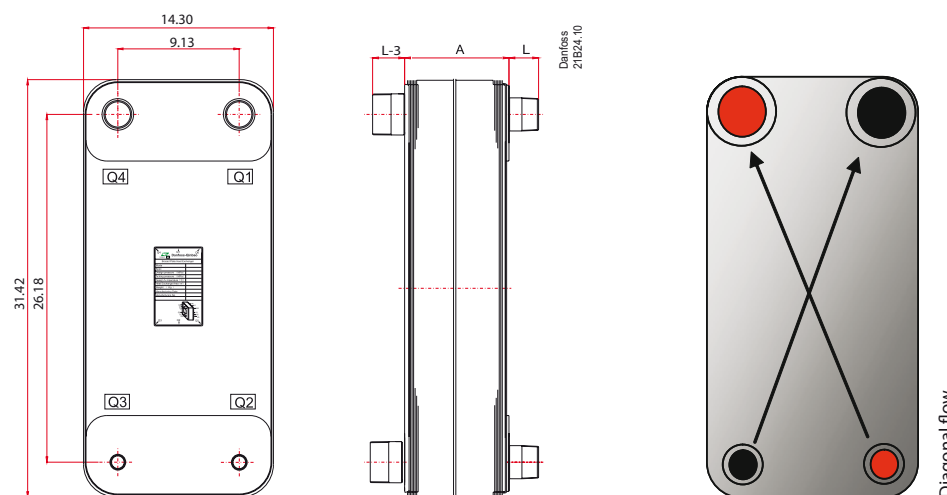
- CE₀₀₃₅ certificate according (PED) 97/23/EC
- UL
- ISO 9000 1: 2000

Product Options

- Q Distributor
- A Adapter / Temperature
- HP High Pressure
- BB Back to Back
- AD Air drier

Material Specification

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

Dimensional Data


Number of plates	A (in)	Weight (lbs)	Channel volume (gal) Q1 Q2 side/ Q3 Q4side	Heat transfer area (ft ²)
n	10 + 0.11n	6.5 + 0.84n	0.0512 x n/2 0.0512x (n-2)/2	(n - 2) 1.46

Technical Data

Design pressure	435 psi (A type)	Design temperature	-320,8 ~ + 392°F
	580 psi (B type)		Plate type
Testing pressure	653 psi (A type)	Heat load	17.06-56.90 TR
	870 psi (B type)	Number of max plates	200

Technical leaflet

Brazed plate heat exchanger B3-210

Introduction

B3-210 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: 42.65 - 127.96 TR

Features

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

Approvals

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

Product Options



Distributor



High Pressure



Adapter / Temperature

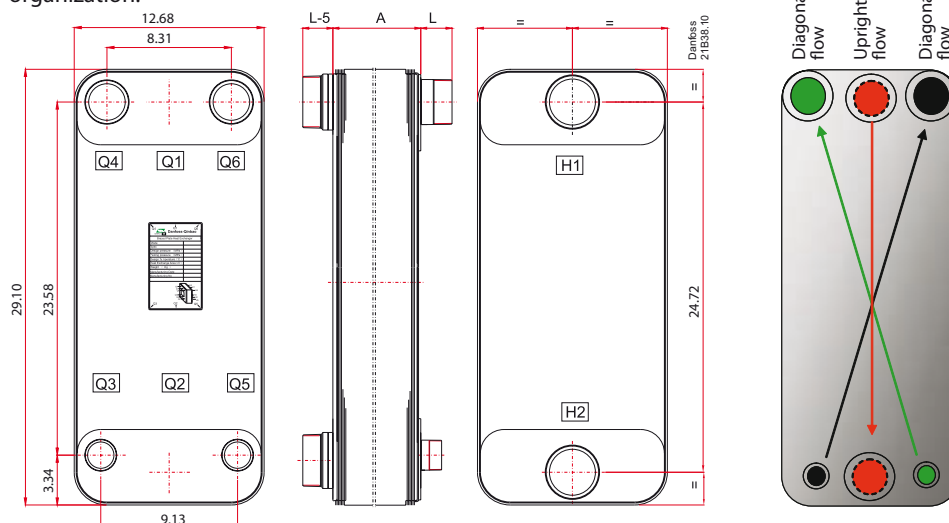


Dual Circuit

Material Specification

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

Dimensional Data



Number of plates	A (in)	Weight (lbs)	Channel volume (gal) Q1 Q2 side/ Q3 Q4side	Heat transfer area (ft ²)
n	13 + 0.11n	13 + 1.76n	0.1056 x n/2 0.1056x (n-2)/4	(n - 2) 2.26

Technical Data

Design pressure	435 psi (A type)	Design temperature	-320,8 ~ + 392°F
	580 psi (B type)		Plate type
Testing pressure	652 psi (A type)	Heat load	42.65-127.96 TR
	870 psi (B type)	Number of max plates	250

Introduction

B3-260 brazed plate heat exchanger is the ideal choice for HVAC and 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: 42.65 - 142.17 TR



Features

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

Approvals

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

Product Options

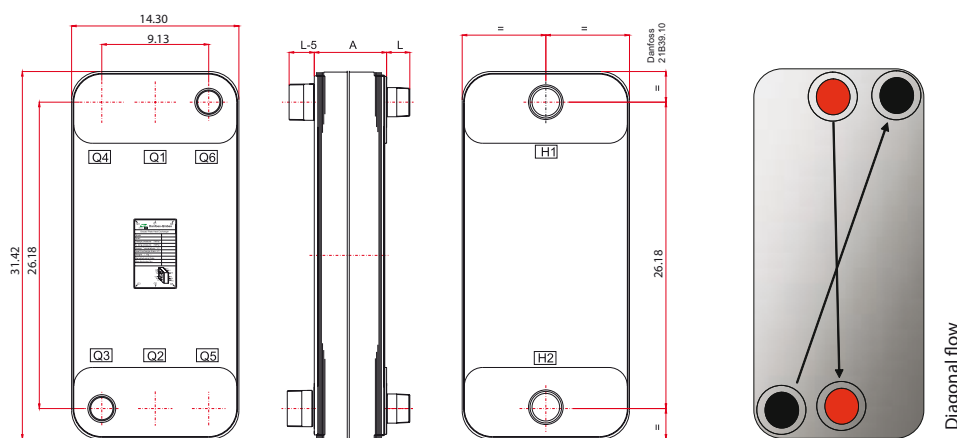
A Adapter / Temperature

Material Specification

The standard plate material is stainless steel AISI 316. For other material (SMO 254,

Titanium) please contact your local sales organization.

Dimensional Data





Number of plates	A (in)	Weight (lbs)	Channel volume (gal) Q1 Q2 side/ Q3 Q4side	Heat transfer area (ft ²)
n	13 + 0.11n	13.5 + 2.14n	0.1585 x n/2 0.1585(n-2)/2	(n - 2) 2.78


Technical Data


Design pressure	363 psi (A type)	Design temperature	-320,8 ~ + 392°F
Testing pressure	544 psi (A type)	Plate type	H
		Heat load	42.65-142.17 TR
		Number of max plates	250


Product Options


-  **Distributor**
Optimized BPHE for evaporator duties. Inlets at the refrigerant side are equipped with devices that evenly distribute the refrigerant in each channel.

-  **Adapter / Temperature**
One or two temperature sensor ports enable easy installation of temperature sensors for accurate system control.


-  **High Pressure**
Danfoss can offer a wide “High Pressure” range to meet the design requirements of new environmental friendly refrigerants (e.g: R410a), “HP” BPHE are design to withstand up to 45 psi of design pressure.

-  **Nickel Brazed**
For deionized water, ammonia solvents and other fluids not compatible with copper.

-  **Dual Circuit**
The real Dual Circuit connects two independent refrigerants circuit with the entire water circuit. This allows lower water-outlet temperatures and means full heat transfer at any load.

-  **Back to Back**
Danfoss “BB” type BPHE consists of back to back refrigerant circuits and handle two compressors at the same time.

Special Application

-  **Air Drier**
Designed specially for air driers application. BPHE for air driers available. All models deliver dry, high-quality air with a very low dew point



The Danfoss product range for the refrigeration and air conditioning industry

Danfoss Refrigeration & Air Conditioning is a worldwide manufacturer with a leading position in industrial, commercial and supermarket refrigeration as well as air conditioning and climate solutions.

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Controls for Commercial Refrigeration



Controls for Industrial Refrigeration



Electronic Controls & Sensors



Industrial Automation



Household Compressors



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Brazen plate heat exchanger

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