

Alfa Laval CB16 / CB400 - Brazed Plate Heat Exchanger

Brazed Plate Heat Exchangers

Alfa Laval CB brazed plate heat exchangers provide efficient heat transfer with a small footprint.

Applications

- HVAC heating and cooling
- Oil cooling
- Industrial heating and cooling

Benefits

- Compact
- Easy to install
- Self-cleaning
- Low level of service and maintenance is required
- All units are pressure and leak tested
- Gasket free

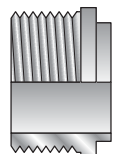
Design

The brazing material seals and holds the plates together at the contact points ensuring optimal heat transfer efficiency and pressure resistance. Using advanced design technologies and extensive verification guarantees the highest performance and longest possible service life.

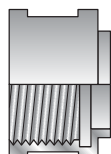
Different pressure ratings are available for different needs.

Based on standard components and a modular concept, including symmetric and asymmetric channels, each unit is custom-built to meet the specific requirements of each individual installation.

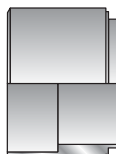
Examples of connections*



External threaded



Internal threaded



Soldering



Technical Data CB11/CBH11

Standard materials

Cover plates	Stainless steel
Connections	Stainless steel
Plates	Stainless steel
Brazing filler	Copper

Dimensions and weight¹

A measure (mm)	$7.4 + (2.14 * n)$
A measure (inches)	$0.29 + (0.08 * n)$
Weight (kg) ²	$0.132 + (0.04 * n)$
Weight (lb) ²	$0.29 + (0.09 * n)$

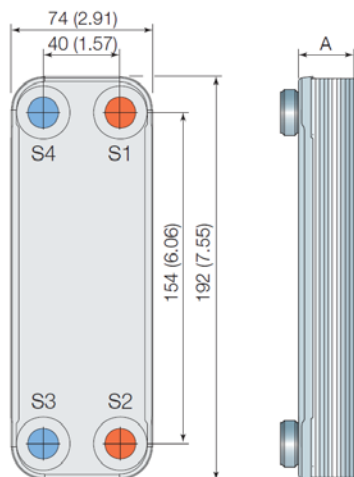
1. n = number of plates
2. Excluding connections

Standard data

Volume per channel, litres (gal)	A (S1-S2): 0.02531 (0.02531)
	A (S3-S4): 0.02431 (0.0064)
Max. particle size, mm (inch)	1.2 (0.047)
Max. flowrate ¹ m ³ /h (gpm)	2.8 (12.3)
Flow direction	Parallel
Min. number of plates	4
Max. number of plates	60
1. Water at 5 m/s (16.4 ft/s) (connection velocity)	

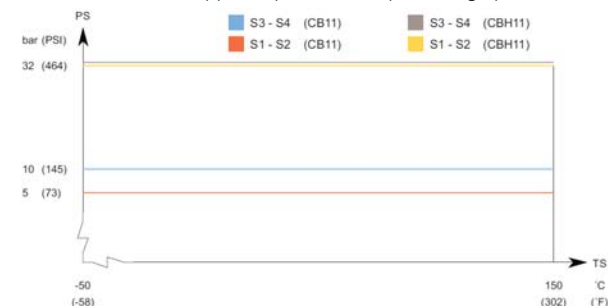
Dimensional drawing

Measurements in mm (inches)



Design pressure and temperature

CB11/CBH11 – PED approval pressure/temperature graph



Designed for full vacuum.

Alfa Laval plate heat exchangers are available with a wide range of pressure vessel approvals. Please contact your Alfa Laval representative for more information.

NOTE: Values above are to be used as an indication. For exact values, please use the drawing generated by the Alfa Laval configurator or contact your local Alfa Laval representative.

Technical Data CB16/CBH16

Standard materials

Cover plates	Stainless steel
Connections	Stainless steel
Plates	Stainless steel
Brazing filler	Copper

Dimensions and weight¹

A measure (mm)	$7 + (2.16 * n)$
A measure (inches)	$0.28 + (0.09 * n)$
Weight (kg) ²	$0.14 + (0.04 * n)$
Weight (lb) ²	$0.3 + (0.09 * n)$

1. n = number of plates
2. Excluding connections

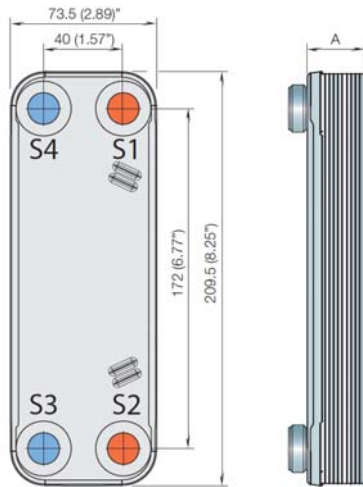
Standard data

Volume per channel, litres (gal)	A (S1-S2): 0.030
	(0.0078)
	A (S3-S4): 0.024
	(0.0063)
	H: 0.027 (0.0070)
Max. particle size, mm (inch)	1.1 (0.043)
Max. flowrate ¹ m ³ /h (gpm)	4.1 (18)
Flow direction	Parallel
Min. number of plates	4
Max. number of plates	60

1. Water at 5 m/s (16.4 ft/s) (connection velocity)

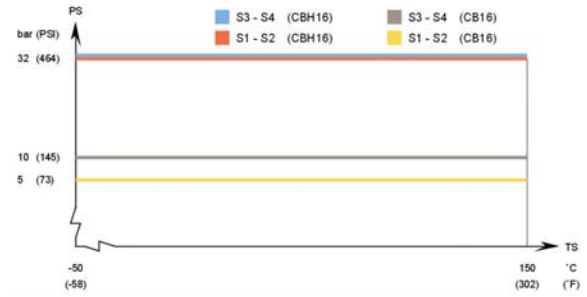
Dimensional drawing

Measurements in mm (inches)

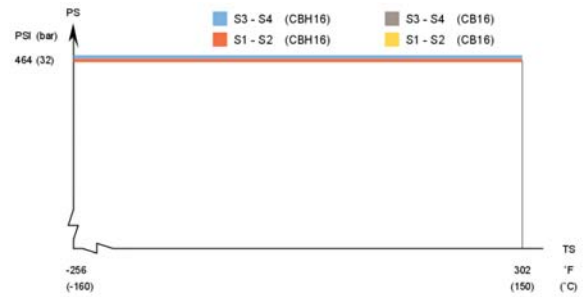


Design pressure and temperature

CB16/CBH16 – PED approval pressure/temperature graph



CB16AQ – UL/CRN approval pressure/temperature graph



Designed for full vacuum.

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Technical Data CB30

Standard materials

Cover plates	Stainless steel
Connections	Stainless steel
Plates	Stainless steel
Brazing filler	Copper

Dimensions and weight¹

A measure (mm)	$7 + (2.31 * n)$
A measure (inches)	$0.51 + (0.09 * n)$
Weight (kg) ²	$1.2 + (0.11 * n)$
Weight (lb) ²	$2.65 + (0.24 * n)$

1. n = number of plates

2. Excluding connections

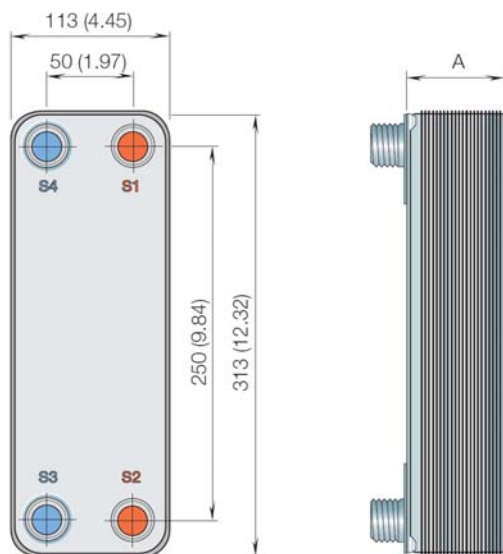
Standard data

Volume per channel, litres (gal)	0.054 (0.014)
Max. particle size, mm (inch)	1 (0.039)
Max. flowrate ¹ m ³ /h (gpm)	14 (62)
Flow direction	Parallel
Min. number of plates	4
Max. number of plates	150

1. Water at 5 m/s (16.4 ft/s) (connection velocity)

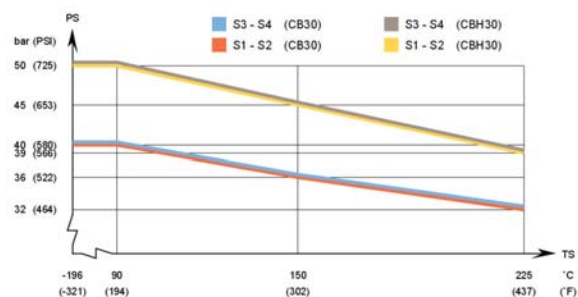
Dimensional drawing

Measurements in mm (inches)

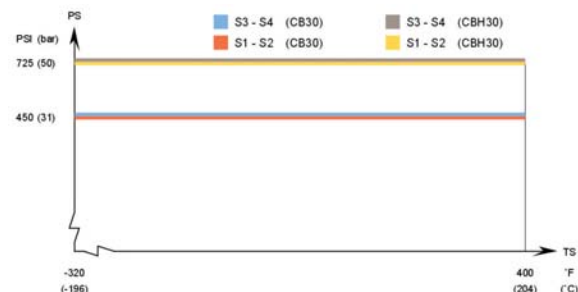


Design pressure and temperature

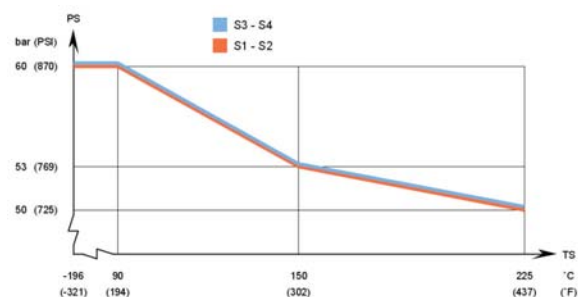
CB30 – PED approval pressure/temperature graph



CB30 – UL approval pressure/temperature graph



CBP30 – PED approval pressure/temperature graph



Designed for full vacuum.

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Technical Data CB60/CBH60

Standard materials

Cover plates	Stainless steel
Connections	Stainless steel
Plates	Stainless steel
Brazing filler	Copper

Dimensions and weight¹

A measure (mm)	CB, CBH: $13 + (2.32 * n)$
	n) 2 CBP: $17 + (2.32 * n)3$
A measure (inches)	CB, CBH: $0.51 + (0.09$
	$* n) 3$ CBP: $0.67 + (0.09 * n) 3$
Weight (kg) ²	CB, CBH: $2.1 + (0.18 * n)$
	n) CBP: $2.26 + (0.18 * n)$
Weight (lb) ²	CB, CBH: $4.63 + (0.4 * n)$
	n) CBP: $4.98 + (0.4 * n)$

1. n = number of plates
2. Excluding reinforcements
3. Excluding reinforcements
4. Excluding connections

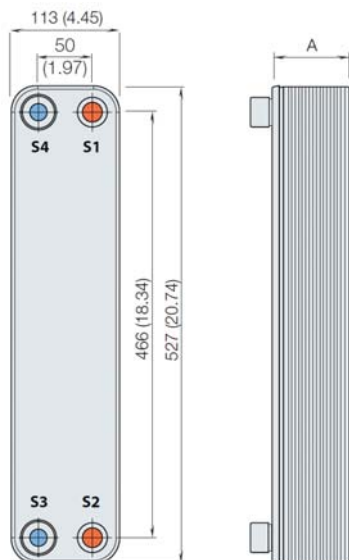
Standard data

Volume per channel, litres (gal)	0.103 (0.027)
Max. particle size, mm (inch)	1 (0.039)
Max. flowrate ¹ m ³ /h (gpm)	14 (62)
Flow direction	Parallel
Min. number of plates	4
Max. number of plates	150

1. Water at 5 m/s (16.4 ft/s) (connection velocity)

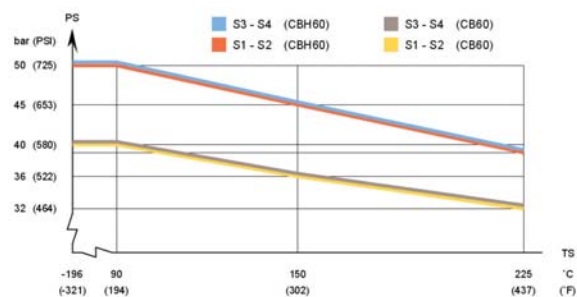
Dimensional drawing

Measurements in mm (inches)

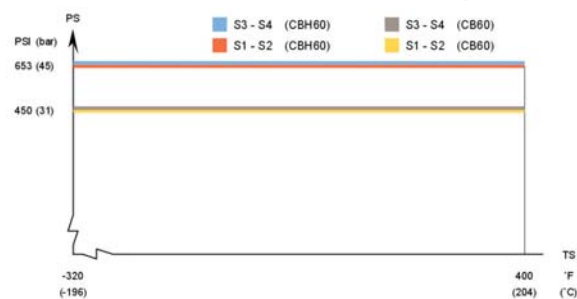


Design pressure and temperature

CB60/CBH60 – PED approval pressure/temperature graph



CB60/CBH60 – UL approval pressure/temperature graph



CBP60 – PED approval pressure/temperature graph

Designed for full vacuum.

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Technical Data CB62/CBH62

Standard materials

Cover plates	Stainless steel
Connections	Stainless steel
Plates	Stainless steel
Brazing filler	Copper

Dimensions and weight¹

A measure (mm)	$13 + (1.98 * n)$
A measure (inches)	$0.51 + (0.08 * n)$
Weight (kg) ²	$2.1 + (0.18 * n)$
Weight (lb) ²	$4.63 + (0.4 * n)$

1. n = number of plates

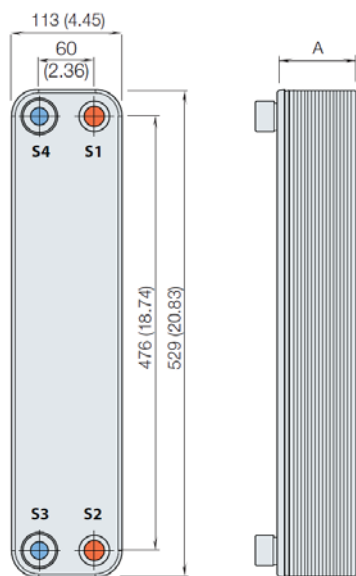
2. Excluding connections

Standard data

Volume per channel, litres (gal)	AH (S1-S2): 0.104 (0.027) AH (S3-S4): 0.084 (0.022) H: 0.094 (0.024)
Max. particle size, mm (inch)	1 (0.039)
Max. flowrate ¹ m ³ /h (gpm)	8.8 (39)
Flow direction	Parallel
Min. number of plates	4
Max. number of plates	150
1. Water at 5 m/s (16.4 ft/s) (connection velocity)	

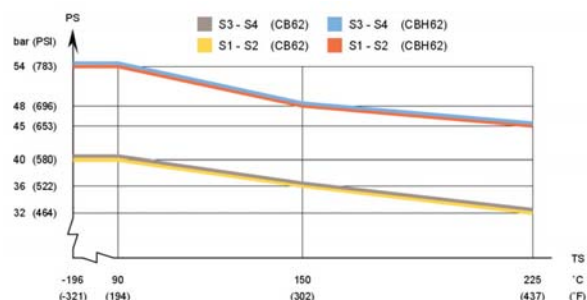
Dimensional drawing

Measurements in mm (inches)

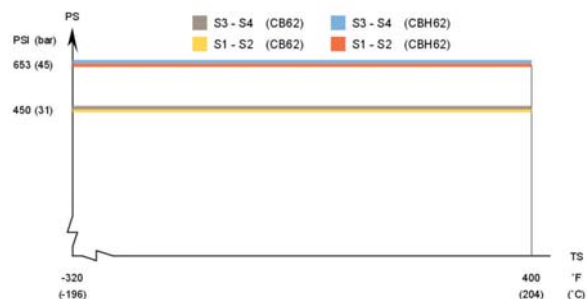


Design pressure and temperature

CB62/CBH62 – PED approval pressure/temperature graph



CB62/CBH62 – UL approval pressure/temperature graph



Designed for full vacuum.

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Technical Data CB65/CBH65

Standard materials

Cover plates	Stainless steel
Connections	Stainless steel
Plates	Stainless steel
Brazing filler	Copper

Dimensions and weight¹

A measure (mm)	$11.5 + (1.4 * n)$
A measure (inches)	$0.45 + (0.06 * n)$
Weight (kg) ²	$2.1 + (0.14 * n)$
Weight (lb) ²	$4.63 + (0.31 * n)$

1. n = number of plates

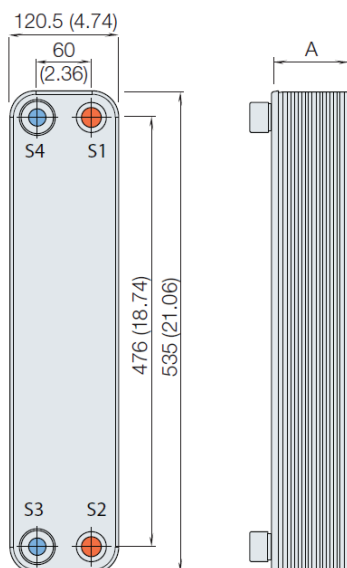
2. Excluding connections

Standard data

Volume per channel, litres (gal)	(S1-S2): 0.088 (0.023) (S3-S4): 0.046 (0.012)
Max. particle size, mm (inch)	0.7 (0.028)
Max. flowrate ¹ m ³ /h (gpm)	8.8 (39)
Flow direction	Parallel
Min. number of plates	10
Max. number of plates	150
1. Water at 5 m/s (16.4 ft/s) (connection velocity)	

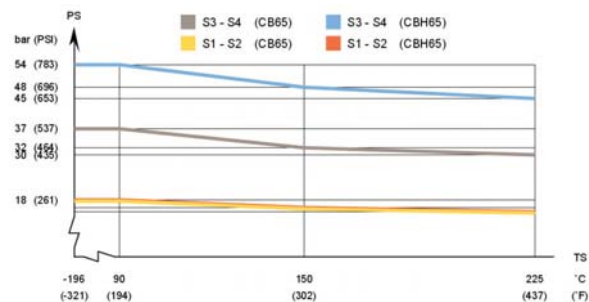
Dimensional drawing

Measurements in mm (inches)



Design pressure and temperature

CB65/CBH65 – PED approval pressure/temperature graph



Designed for full vacuum.

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Technical Data CB110/CBH110

Standard materials

Cover plates	Stainless steel
Connections	Stainless steel
Plates	Stainless steel
Brazing filler	Copper

Dimensions and weight¹

A measure (mm)	$15 + (2.56 * n)$
A measure (inches)	$0.59 + (0.1 * n)$
Weight (kg) ²	$4.82 + (0.35 * n)$
Weight (lb) ²	$10.63 + (0.77 * n)$

1. n = number of plates
2. Excluding reinforcements

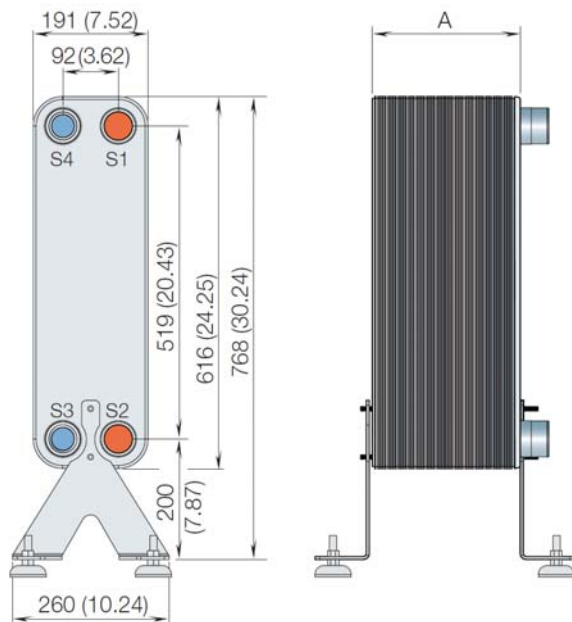
Standard data

Volume per channel, litres (gal)	0.21 (0.054)
Max. particle size, mm (inch)	1.2 (0.047)
Max. flowrate ¹ m ³ /h (gpm)	51 (224)
Flow direction	Parallel
Min. number of plates	10
Max. number of plates	240

1. Water at 5 m/s (16.4 ft/s) (connection velocity)

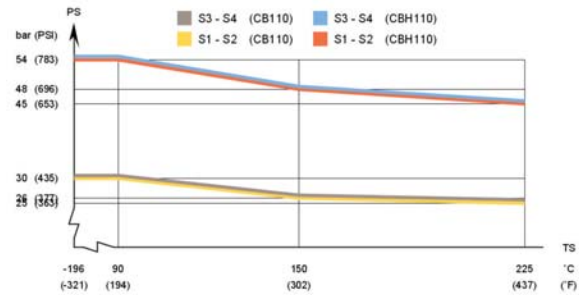
Dimensional drawing

Measurements in mm (inches)

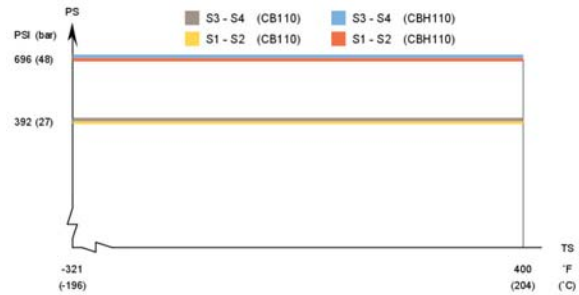


Design pressure and temperature

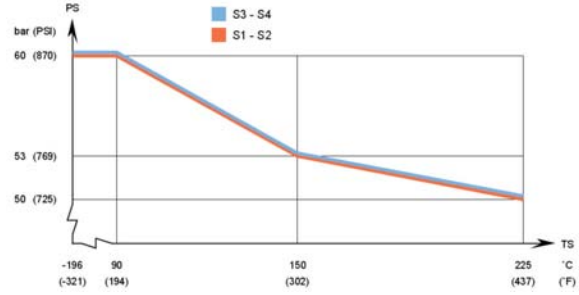
CB110/CBH110 – PED approval pressure/temperature graph



CB110/CBH110– UL approval pressure/temperature graph



CBP110 – PED approval pressure/temperature graph



Designed for full vacuum.

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Marine Approvals

CBM110 can be delivered with marine classification certificate (ABS, BV, CCS, ClassNK, DNV, GL, LR, RINA, RMRS)

Technical Data CB112/CBH112

Standard materials

Cover plates	Stainless steel
Connections	Stainless steel
Plates	Stainless steel
Brazing filler	Copper

Dimensions and weight¹

A measure (mm)	$16 + (2.07 * n)$
A measure (inches)	$0.63 + (0.08 * n)$
Weight (kg) ²	$4.82 + (0.35 * n)$
Weight (lb) ²	$10.63 + (0.77 * n)$

1. n = number of plates
2. Excluding reinforcements

Standard data

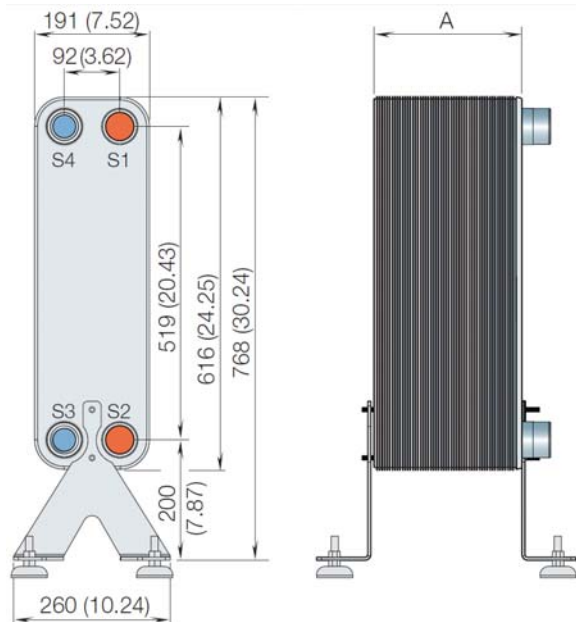
Volume per channel, litres (gal)	H, L, M: 0.18 (0.046) CB/CBH/CBP AH, AM (S1-S2): 0.20 (0.052) CB/CBH/CBPAH, AM (S3-S4): 0.16 (0.041)
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Max. particle size, mm (inch)	1 (0.039)
Max. flowrate ¹ m ³ /h (gpm)	51 (224)
Flow direction	Parallel
Min. number of plates	10
Max. number of plates	300

1. Water at 5 m/s (16.4 ft/s) (connection velocity)

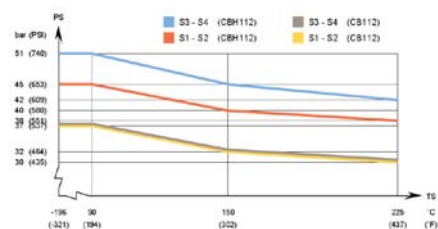
Dimensional drawing

Measurements in mm (inches)

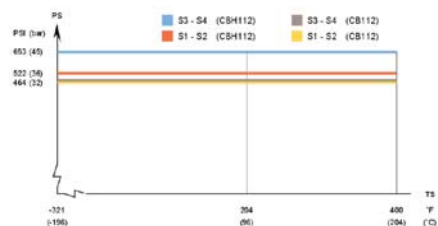


Design pressure and temperature

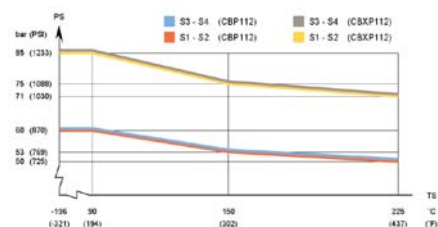
CB112/CBH112 – PED approval pressure/temperature graph



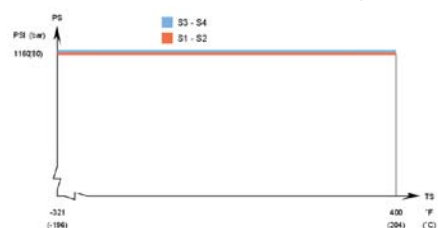
CB112/CBH112 – UL approval pressure/temperature graph



CBP112 / CBXP112 – PED approval pressure/temperature graph



CBXP112 – UL approval pressure/temperature graph



Designed for full vacuum.

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Technical Data CB200/CBH200

Standard materials

Cover plates	Stainless steel
Connections	Stainless steel
Plates	Stainless steel
Brazing filler	Copper

Dimensions and weight¹

A measure (mm)	11 + (2.7 * n)
A measure (inches)	0.43 + (0.11 * n)
Weight (kg) ²	12 + (0.6 * n)
Weight (lb) ²	26.46 + (1.32 * n)

1. n = number of plates
2. Excluding reinforcements

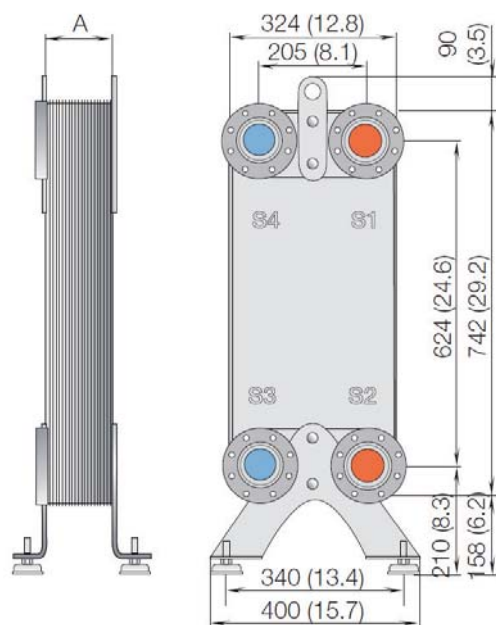
Standard data

Volume per channel, litres (gal)	0.51 (0.132)
Max. particle size, mm (inch)	1.8 (0.071)
Max. flowrate ¹ m ³ /h (gpm)	128 (563)
Flow direction	Parallel
Min. number of plates	10
Max. number of plates	230

1. Water at 5 m/s (16.4 ft/s) (connection velocity)

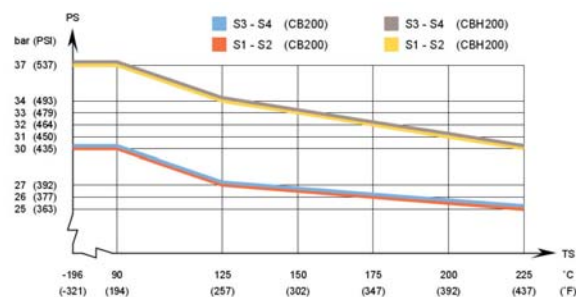
Dimensional drawing

Measurements in mm (inches)



Design pressure and temperature

CB200/CBH200 – PED approval pressure/temperature graph



Designed for full vacuum.

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Marine Approvals

CBMH200 can be delivered with marine classification certificate (ABS, BV, CCS, ClassNK, DNV, GL, LR, RINA, RMRS)

Technical Data CB300/CBH300

Standard materials

Cover plates	Stainless steel
Connections	Stainless steel
Plates	Stainless steel
Brazing filler	Copper

Dimensions and weight¹

A measure (mm)	$11 + (2.62 * n)$
A measure (inches)	$0.43 + (0.1 * n)$
Weight (kg) ²	$21 + (1.26 * n)$
Weight (lb) ²	$46.3 + (2.78 * n)$

1. n = number of plates
2. Excluding reinforcements

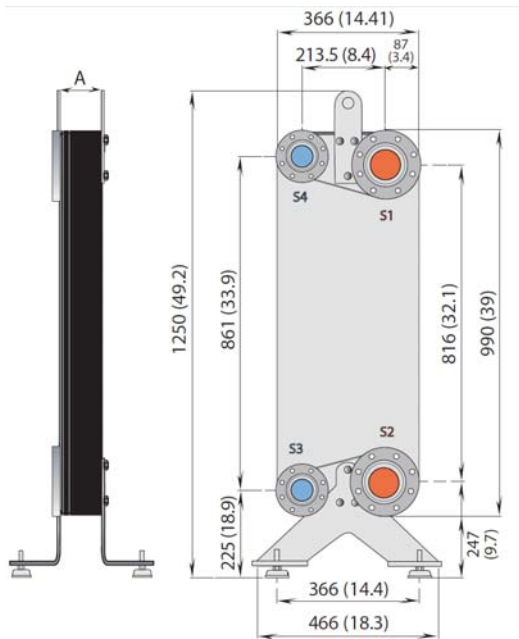
Standard data

Volume per channel, litres (gal)	(S1-S2): 0.69 (0.178) (S3-S4): 0.58 (0.150)
Max. particle size, mm (inch)	1.8 (0.071)
Max. flowrate ¹ m ³ /h (gpm)	200 (880)
Flow direction	Parallel
Min. number of plates	10
Max. number of plates	250

1. Water at 5 m/s (16.4 ft/s) (connection velocity)

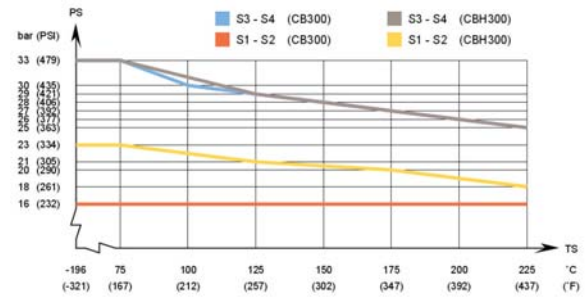
Dimensional drawing

Measurements in mm (inches)

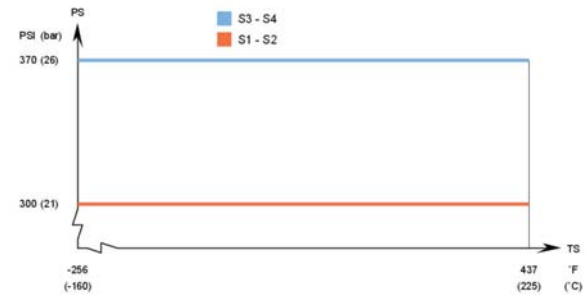


Design pressure and temperature

CB300/CBH300 – PED approval pressure/temperature graph



CB300/CBH300 – UL approval pressure/temperature graph



Designed for full vacuum.

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Technical Data CB400

Standard materials

Cover plates	Stainless steel
Connections	Stainless steel
Plates	Stainless steel
Brazing filler	Copper

Dimensions and weight¹

A measure (mm)	$14 + (2.56 * n)$
A measure (inches)	$0.55 + (0.1 * n)$
Weight (kg) ²	$24 + (1.35 * n)$
Weight (lb) ²	$52.91 + (2.98 * n)$

1. n = number of plates
2. Excluding reinforcements

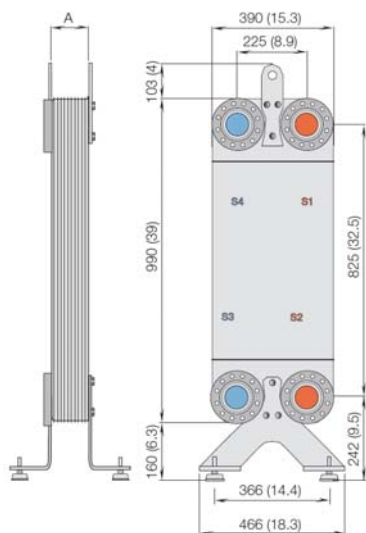
Standard data

Volume per channel, litres (gal)	0.74 (0.19)
Max. particle size, mm (inch)	1.8 (0.071)
Max. flowrate ¹ m ³ /h (gpm)	200 (880)
Flow direction	Parallel
Min. number of plates	10
Max. number of plates	270

1. Water at 5 m/s (16.4 ft/s) (connection velocity)

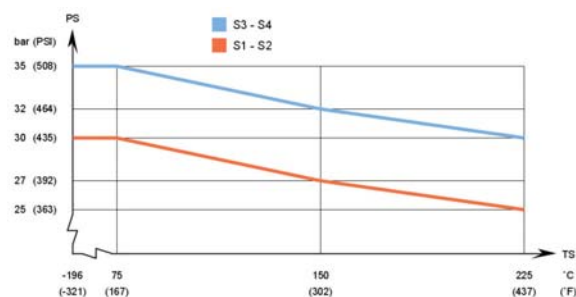
Dimensional drawing

Measurements in mm (inches)

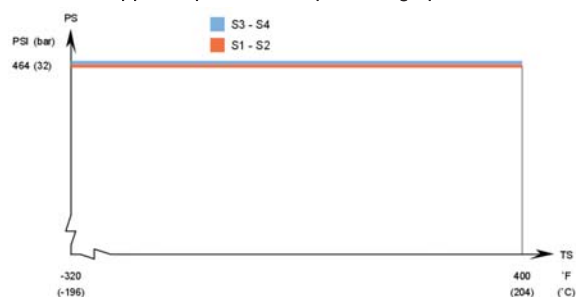


Design pressure and temperature

CB400 – PED approval pressure/temperature graph



CB400 – UL approval pressure/temperature graph



Designed for full vacuum.

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Marine Approvals

CBM400 can be delivered with marine classification certificate (ABS, BV, CCS, ClassNK, DNV, GL, LR, RINA, RMRS)

Technical Data CB410

Standard materials

Cover plates	Stainless steel
Connections	Stainless steel
Plates	Stainless steel
Brazing filler	Copper

Dimensions and weight¹

A measure (mm)	$14.2 + (2.17 * n)$
A measure (inches)	$0.56 + (0.09 * n)$
Weight (kg) ²	$30 + (1.14 * n)$
Weight (lb) ²	$66.14 + (2.51 * n)$

1. n = number of plates
2. Excluding connections

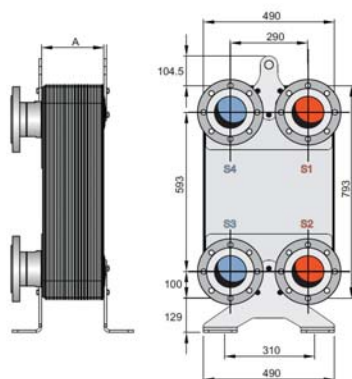
Standard data

Volume per channel, litres (gal)	0.69 (0.1823)
Max. particle size, mm (inch)	1 (0.039)
Max. flowrate ¹ m ³ /h (gpm)	285 (1254.8)
Flow direction	Parallel
Min. number of plates	10
Max. number of plates	300

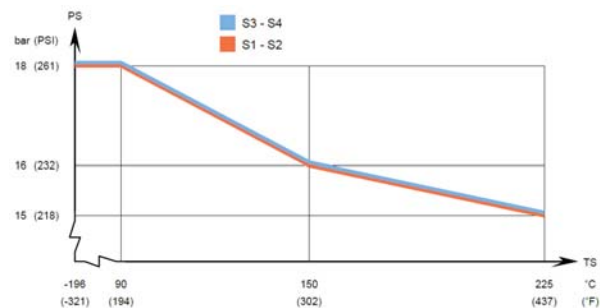
1. Water at 5 m/s (16.4 ft/s) (connection velocity)

Dimensional drawing

Measurements in mm (inches)

**Design pressure and temperature**

CB410 – PED approval pressure/temperature graph



Designed for full vacuum.

Alfa Laval plate heat exchangers are available with a wide range of pressure vessel approvals. Please contact your Alfa Laval representative for more information.

NOTE: Values above are to be used as an indication. For exact values, please use the drawing generated by the Alfa Laval configurator or contact your local Alfa Laval representative.

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Brazed Plate Heat Exchangers

CB20

Alfa Laval CB20

Brazed plate heat exchanger

Alfa Laval CB brazed plate heat exchangers provide efficient heat transfer with a small footprint.

Applications

- HVAC heating and cooling
- Refrigeration
- Oil cooling
- Industrial heating and cooling

Benefits

- Compact
- Easy to install
- Self-cleaning
- Low level of service and maintenance is required
- All units are pressure and leak tested
- Gasket free

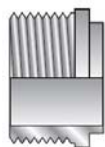
Design

The brazing material seals and holds the plates together at the contact points ensuring optimal heat transfer efficiency and pressure resistance. Using advanced design technologies and extensive verification guarantees the highest performance and longest possible service life.

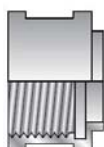
Based on standard components and a modular concept, each unit is custom-built to meet the specific requirements of each individual installation.



Examples of connections



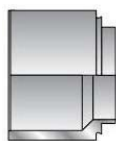
External thread



Internal thread



Soldering



Welding

Technical Data

Standard materials

Cover plates	Stainless steel
Connections	Stainless steel
Plates	Stainless steel
Brazing filler	Copper

Dimensions and weight¹

A measure (mm)	$8 + (1.5 * n)$
A measure (inches)	$0.31 + (0.06 * n)$
Weight (kg) ²	$0.6 + (0.08 * n)$
Weight (lb) ²	$1.32 + (0.18 * n)$

1. 1. n = number of plates
2. 2. Excluding connections

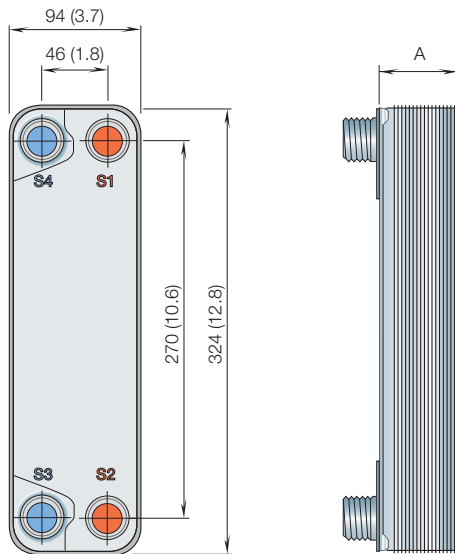
Standard data

Volume per channel, litres (gal)	0.028 (0.0072)
Max. particle size, mm (inch)	0.6 (0.024)
Max. flowrate ¹ m ³ /h (gpm)	8.8 (39)
Flow direction	Parallel
Min. number of plates	10
Max. number of plates	110

1. 1. Water at 5 m/s (16.4 ft/s) (connection velocity)

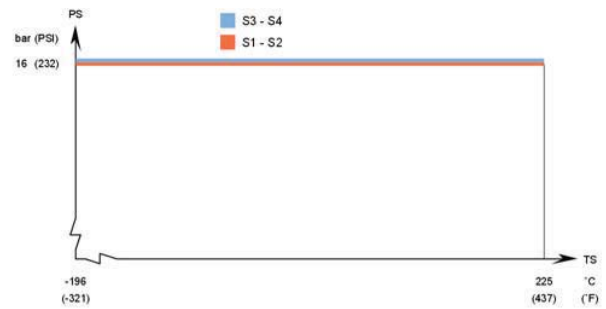
Dimensional drawing

Measurements in mm (inches)



Design pressure and temperature

CB20 – PED approval pressure/temperature graph



Designed for full vacuum.

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