



## CB20

### Alfa Laval plate heat exchangers

The CB20 is a plate heat exchanger that has been specially designed for district heating, heating and service water applications.

Design temperature: 175 °C.

Design pressure: 16 bar.

The external dimensions have been minimised to increase the efficiency of heat transfer. This extremely compact heat exchanger can be flexibly used in all heating systems.

Most of the standard sizes are held in stock and can be supplied at short notice. All four connecting pieces are supplied with an ISO-G 1" male thread as standard.

#### Accessories

Thermal insulation made from PU hard foam ISO G 1".  
140 °C.

#### Screw fittings

Welded end made from C steel or soldered end made from red bronze.

#### Quality assurance

Alfa Laval plate heat exchangers are subject to various lab tests to guarantee a high quality standard. These include the pressure test for thermal fatigue that serves both a secure application and a long service life



CB20

## Applications in drinking water preparation (in the flow principle)

1. Primary temperatures 70/30 °C  
 Drinking water 10/60 °C

Drinking water Flow rate in l/min	Drinking water Flow rate in l/h	Power in kW	Type	Connection size Primary & secondary
4	240	14	CB20-12H	ISO-G1"
6	360	21	CB20-12H	ISO-G1"
8	480	28	CB20-18H	ISO-G1"
10	600	35	CB20-18H	ISO-G1"
12	720	42	CB20-24H	ISO-G1"
14	840	49	CB20-24H	ISO-G1"
16	960	56	CB20-30H	ISO-G1"
18	1080	63	CB20-30H	ISO-G1"
20	1200	70	CB20-40H	ISO-G1"
22	1320	77	CB20-40H	ISO-G1"
24	1440	84	CB20-40H	ISO-G1"
26	1560	91	CB20-50H	ISO-G1"
28	1680	98	CB20-50H	ISO-G1"
30	1800	105	CB20-50H	ISO-G1"

2. Primary temperature 65/25 °C  
 Drinking water 10/60 °C

Drinking water Flow rate in l/min	Drinking water Flow rate in l/h	Power in kW	Type	Connection size Primary & secondary
4	240	14	CB20-18H	ISO-G1"
6	360	21	CB20-24H	ISO-G1"
8	480	28	CB20-30H	ISO-G1"
10	600	35	CB20-40H	ISO-G1"
12	720	42	CB20-40H	ISO-G1"
14	840	49	CB20-50H	ISO-G1"
16	960	56	CB20-60H	ISO-G1"
18	1080	63	CB20-60H	ISO-G1"
20	1200	70	CB20-80H	ISO-G1"
22	1320	77	CB20-80H	ISO-G1"
24	1440	84	CB20-80H	ISO-G1"
26	1560	91	CB20-90H	ISO-G1"
28	1680	98	CB20-90H	ISO-G1"
30	1800	105	CB20-110H	ISO-G1"

## Applications in thermal solar systems

### Primary

(Solar temperatures)

75/35 °C

### Secondary

1. Drinking water preparation (service water heater) 10/60 °C

Flate plate collector Area in m <sup>2</sup>	Solar fuel Flow rate in l/h	Heating water Flow rate in l/h	Power in kW	Type	Connector size Primary + secondary
8	120	87	5,1	CB20-12H	ISO-G1"
12	180	130	7,6	CB20-12H	ISO-G1"
16	240	175	10,2	CB20-12H	ISO-G1"
20	300	220	12,8	CB20-12H	ISO-G1"
24	360	260	15,3	CB20-12H	ISO-G1"
28	420	300	17,9	CB20-12H	ISO-G1"
32	480	350	20,5	CB20-18H	ISO-G1"

2. Heating support (buffer storage)

30/65 °C

Flate plate collector Area in m <sup>2</sup>	Solar fuel Flow rate in l/h	Heating water Flow rate in l/h	Power in kW	Type	Connector size Primary + secondary
8	120	126	5,1	CB20-18H	ISO-G1"
12	180	190	7,6	CB20-24H	ISO-G1"
16	240	250	10,2	CB20-30H	ISO-G1"
20	300	315	12,8	CB20-40H	ISO-G1"
24	360	380	15,3	CB20-50H	ISO-G1"
28	420	440	17,9	CB20-50H	ISO-G1"
32	480	505	20,5	CB20-60H	ISO-G1"

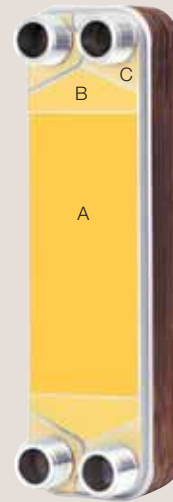
### Calculation principles

- Solar flow rate ca. 15 l/h pro m<sup>2</sup> (low flow principle)
- Pressure loss ≤ 20 kPa
- Heat exchanger Tyfocor 40 % or propylene glycol 50 % (frost protection up to -30 °C)

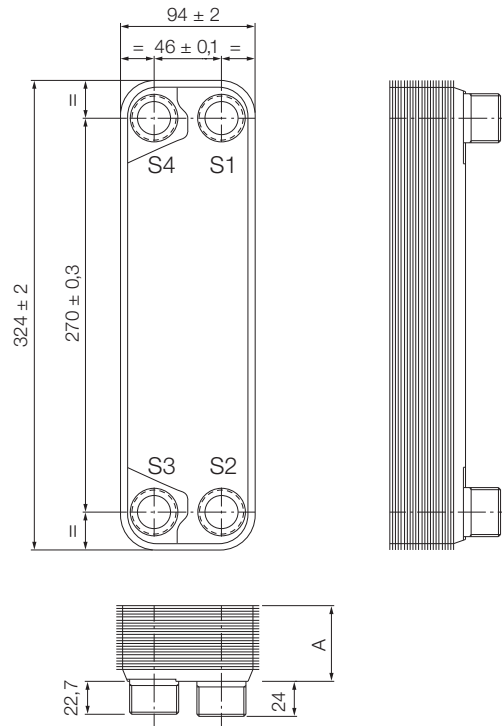
### Alfa Laval performance system™

The patented Alfa Laval system was developed to increase the performance of the compact heat exchanger. The device combines three key features:

- A) A completely new relief pattern of the transfer plates increases the turbulences and therefore heat transfer. Equally, the pressure losses are minimised as a result of fewer soldering points.
- B) A new distribution area between flow opening and heat transfer area guarantee a 100% utilisation of the available surface.
- C) A new design in the entrance ports minimizes flow speed as well as the pressure loss in the connecting branches.



### Sizes



Weight (kg)  $0,9 + 0,08 \times n$ ,  $n$  = Number of plates  
Content (litres/channel) 0,028

PCT00068EN 0706

#### How to contact Alfa Laval

Up-to-date Alfa Laval contact details for all countries are always available on our website at [www.alfalaval.com](http://www.alfalaval.com)

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