

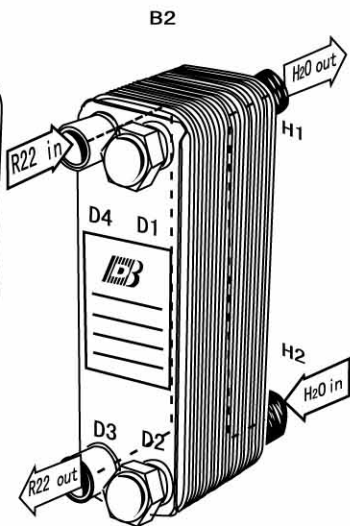
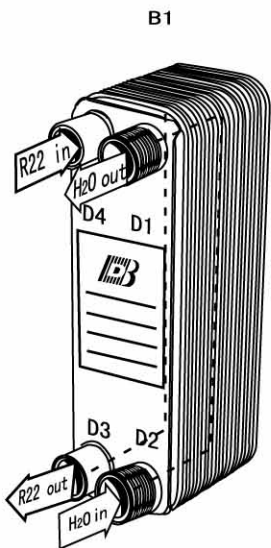
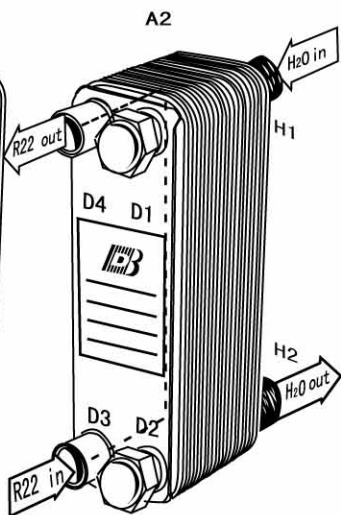
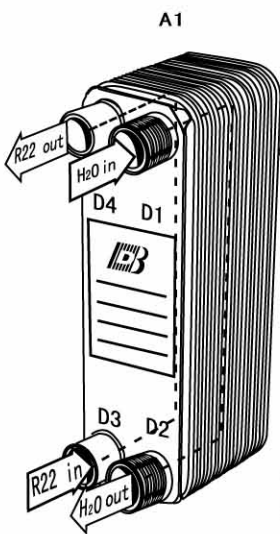


**Baode Heat Exchanger**



**Installation Manual  
Plate Heat Exchangers  
as Evaporators and  
Condensers**

**用作冷凝器和  
蒸发器时热  
交换器安装指南**



## Installation

Figures A1 and A2 show the installation of an evaporator, B1 and B2 that of a condenser.

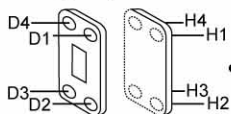
Connect the refrigerant to the side with the soldered connections (D3, D4) and make it enter the unit at the bottom for evaporators.

Connect the liquid to that side of the BHE that suits your installation (D1, D2) or (H1, H2).

**BA** BAODE HEAT EXCHANGER

MANUFACTURER: BAODE  
 No.: 06130  
 YEAR: 2006-07-18  
 MODEL: BL95A-42  
 H2112-D3, H4114-D4, N514-D1-D2

SIDE:	D3.D4.H3.H4.	D1.D2.H1.H2.
DESIGN P. (MPa) MAX	3.0	3.0
TEST P. (MPa) MAX	4.5	4.5
DESIGN TEMP. (°C) MAX	+225	+225
	MIN -160	-160
VOLUME (L)		
WEIGHT (Kg)		



Jiangsu Baode Heat-Exchanger Equipment Co., Ltd

(1)

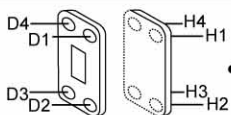
(2)

**江苏宝得换热设备有限公司**

名称: 钎焊式换热器 制造日期: 2006-07-18  
 出厂编号: 06131  
 型号: BL50D-60

H1053-D3, H2116-D4, P102-D1-D2  
 W312-H1-H2

侧:	D3.D4.H3.H4.	D1.D2.H1.H2.
设计压力 (MPa) 最大	3.0	3.0
试验压力 (MPa) 最大	4.5	4.5
设计温度 (°C) 最大	+225	+225
	最小 -160	-160
滞液 (L)		
重量 (Kg)		



厂址: 江苏省江阴市锡澄路33号

(1)

(2)

BL95A-42(H2112-D3, H4114-D4, H514-D1-D2)

(3)

(4)

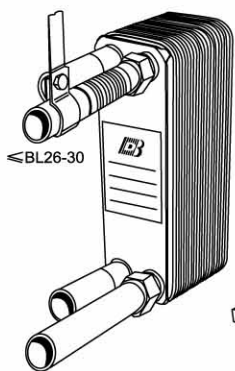
(5)

## Data plate

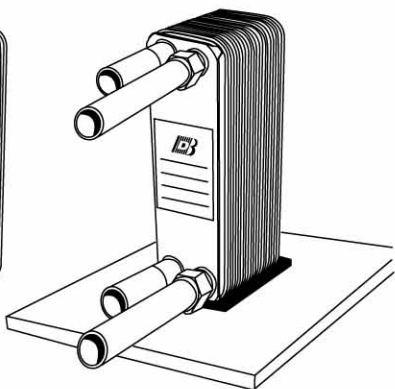
The label gives the manufacturing number(1) and indicates the position of the connections(2).

The model number gives the quantity of the plates(3) and connection type on the refrigerant side(4) and liquid side (5).

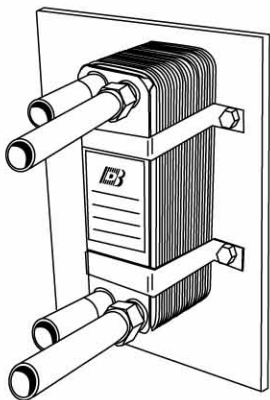
A



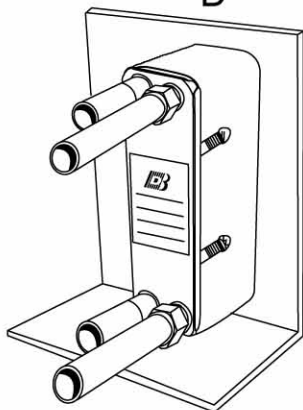
B



C



D

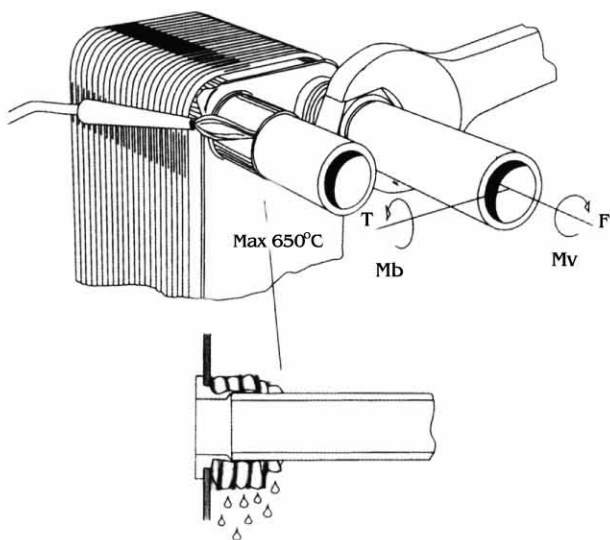


## Mounting

Always mount the unit vertically. Units  $\leq$  BL26-30 can be mounted directly in the pipes (fig. A. ). Mount larger units on anti-vibration plates (fig. B) or fastened with steelclamps (fig. C) or bolts, (fig. D). If risk of vibrations use anti-vibration connection as in fig. A. Never expose the unit to pulsations or excessive cyclic pressure or temperature changes.

Fig.A

BHE SIDE	T(kN)	F(kN)	Mb(Nm)	Mv(Nm)
BL26,BL50	24.7	9.6(-7.4)	61	385
BL95	111	27(-21)	740	1007

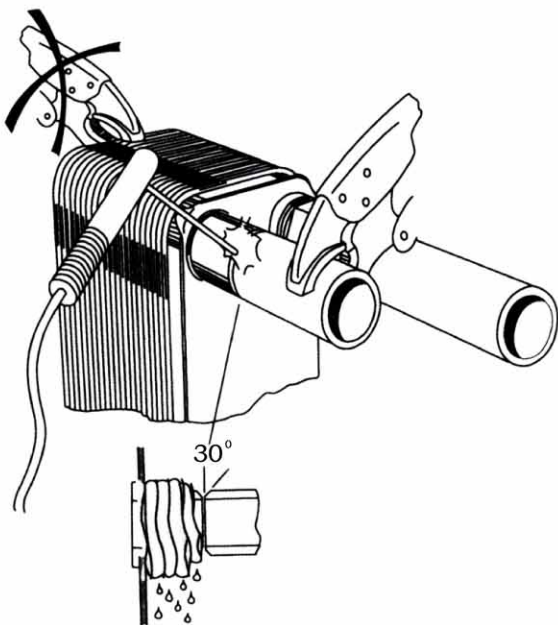


## Connection Process side(water)

Connect the pipe using a dynamometric wrench respecting the indicated limits (fig.A).

Brazing: polish the contact surface and degrease them. Apply chlorid flux by a brush. Insert the copper tube into the connection and braze with 40 -55% silver solder. Point the flame towards the piping and braze at max. 650°C. To avoid internal oxidation, protect the inside of the refrigerant side with N<sub>2</sub>-gas.

Fig.A



## Welding

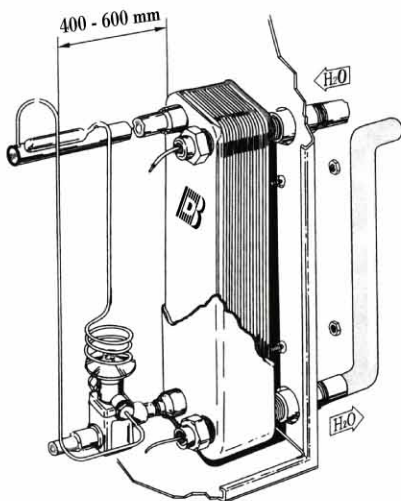
(only for BL95)

Protect the unit from excessive heating by a wet cloth around the connection (Fig.A).

To limit the heated area make an angle between the tube and connection edges as shown. Use TIG or MIC welding.

Internal oxidation can be reduced by filling nitrogen flow.

Fig.A

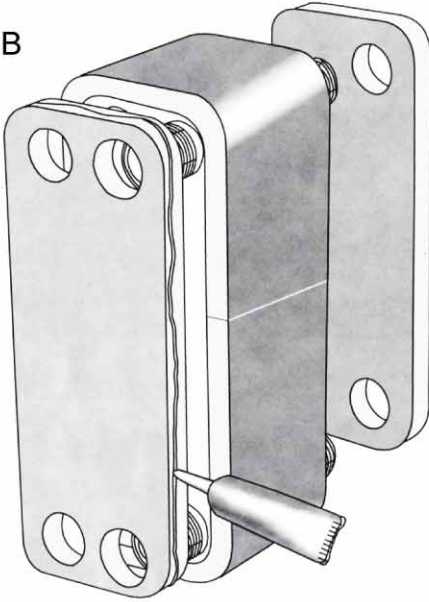


## Freeze prevention

(see also page 14)

For freeze protection use thermostats and/or temperature controls in the spare connections if any. Connect water side pipes as Fig.A make sure the unit filled with water during working.

Fig.B



## Insulation

Insulation is recommended and can be made using extruded insulation sheets (Armaflex or similar) cut into appropriate sizes and glued together as shown Fig.B.

## Cleaning

Clean with detergents for fatty deposits. For heavier fouling use chemicals compatible with copper like formic , citric , vinegar or other organic acids.

## Freezing protection

To avoid freezing :

- use a filter <1 mm mesh.
- use antifreeze when the evaporation temperature is close to liquid side freezing.
- use a freeze protection thermostat and a flow switch to ensure a constant water flow before, during and after compressor operation.
- avoid pump stopping.

## Trouble shooting

To assure correct performance of the unit, please check that:

- Connect correctly follow the guide as page 2 shown.
- Make sure it's absolutely clean and formdeposits free. Increased pressure indicates fouling.
- Adjust the equipment correctly and make sure freezing free.



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**POST CODE: 214433**