

# *Installation, operation and maintenance*

## *Accumulator tank*

*Acc-tank 500 CU*

*Acc-tank 500 UB*



# General information

**Read through these instructions carefully before carrying out installation, adjustment or servicing; follow the instructions.**

- Keep these instructions close to the boiler!
- Do not carry out any modifications, alterations or conversions.
- A correctly completed installation will result in a reliable system.
- The type and serial number of the accumulator tank must always be quoted in any communication with Värmebaronen; see the manufacturer's plate.
- Contact your installer concerning servicing.
- In accordance with its policy of continual improvement and development, Värmebaronen AB reserves the right to alter the specifications without prior notice.

## Notes

To be completed when the Acc-tank 500 UB/CB has been installed!

Type / serial number:  Acc-tank 500 UB .....

Acc-tank 500 CU .....

Date of installation: .....

Installed by: .....

Tel.: .....

Other: .....

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**Accumulation for more convenient wood-firing**

In order to make full use of a wood-fired boiler, the surplus energy that the boiler produces must be accumulated. This energy is then used to heat the house when the fire has burnt out. With an accumulator tank, the firing frequency is reduced, making wood-firing more convenient.

If you are on a differentiated electricity tariff, it may be worthwhile accumulating when the price of electricity is low and then consuming the heat when it is more expensive.

**Acc-tank 500 CU**

The Acc-tank 500 CU has a copper-lined hot water heater and two immersion heaters.

The Acc-tank 500 CU can be used as an electric boiler only.

The tank also features three thermometers for top, middle and bottom temperatures.

**Acc-tank 500 UB**

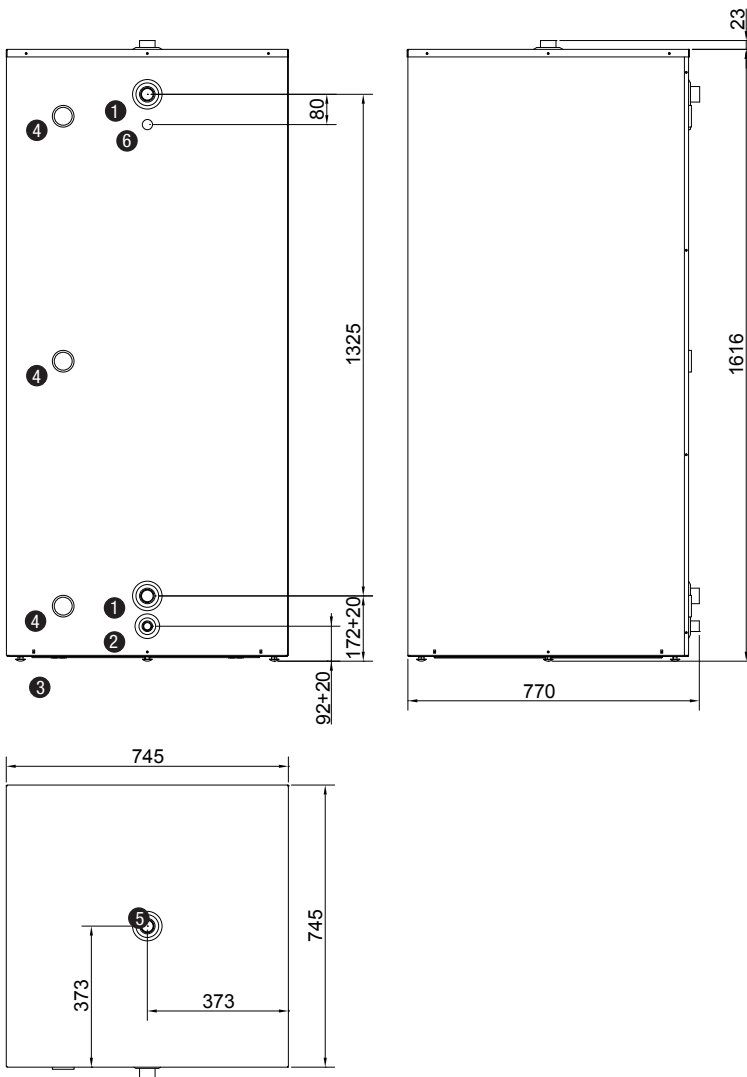
The Acc-tank 500 UB has no hot water heater or immersion heaters.

**Dimensions**

Assume 8-10 litres of tank volume for every square metre of heated surface.

**Optional extras**

	<b>Art.No.</b>	<b>Rsk</b>
<b>Acc. Control 3</b> , charging pack for systems with a hot water heater in the accumulator tank.	2912	687 60 16
<b>Acc. Control 11</b> , charging pack for systems with a hot water heater in the boiler.	2923	687 60 48
<b>VB 1510</b> , immersion heater 1.5 kW.	1001	621 08 86
<b>VB 2210</b> , immersion heater 2.2 kW.	1002	621 08 87
<b>VB 3010</b> , immersion heater 3 kW.	1003	621 07 02
<b>VB 4510</b> , immersion heater 4.5 kW.	1004	621 07 10
<b>VB 6010</b> , immersion heater 6 kW.	1005	621 07 28
<b>VB 6002</b> , immersion heater 6 kW (3 + 3 kW).	1020	621 07 51
<b>VBB 222</b> , load monitor suitable for the above immersion heaters, 16 - 35 A.	1910	621 09 09
<b>VB 9002</b> , immersion heater 9 kW (4.5 + 4.5 kW).	1021	621 08 56
<b>VB 6003 F</b> , immersion heater 6 kW (3 + 3 kW).	1032	621 07 78
<b>VB 9003 F</b> , immersion heater 9 kW (4.5 + 4.5 kW).	1034	621 08 57
<b>VBB 12TX</b> , load monitor suitable for the VB 6003 F and VB 9003 F, 16 - 35 A.	1901	621 09 00



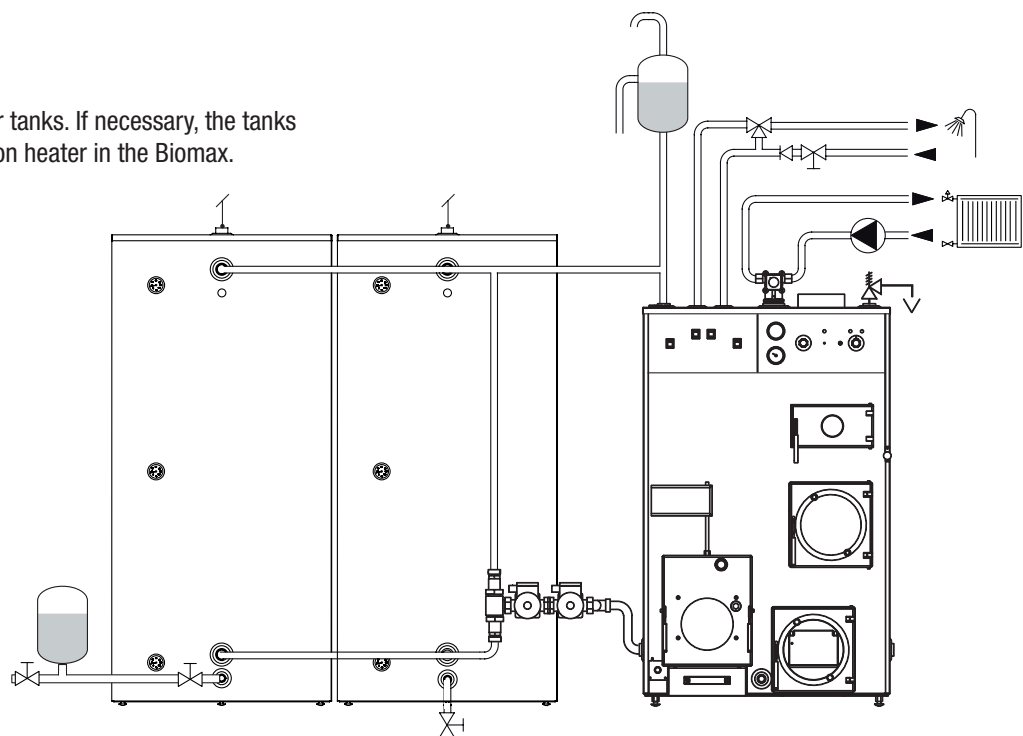
<b>Volume</b>		500 litres
<b>Weight</b>	empty	135 kg
	full	635 kg
<b>Design pressure</b>		1.5 bar
<b>Test pressure</b>		2.2 bar
<b>Design temperature</b>		110 °C
<b>Insulation</b>		mineral wool 70 mm
<b>Height required for installation</b>		1780 mm
<b>Manufactured to</b>		PED 97/23/EC article 3.3
<b>Art. no.</b>		2131
<b>RSK</b>		687 60 67

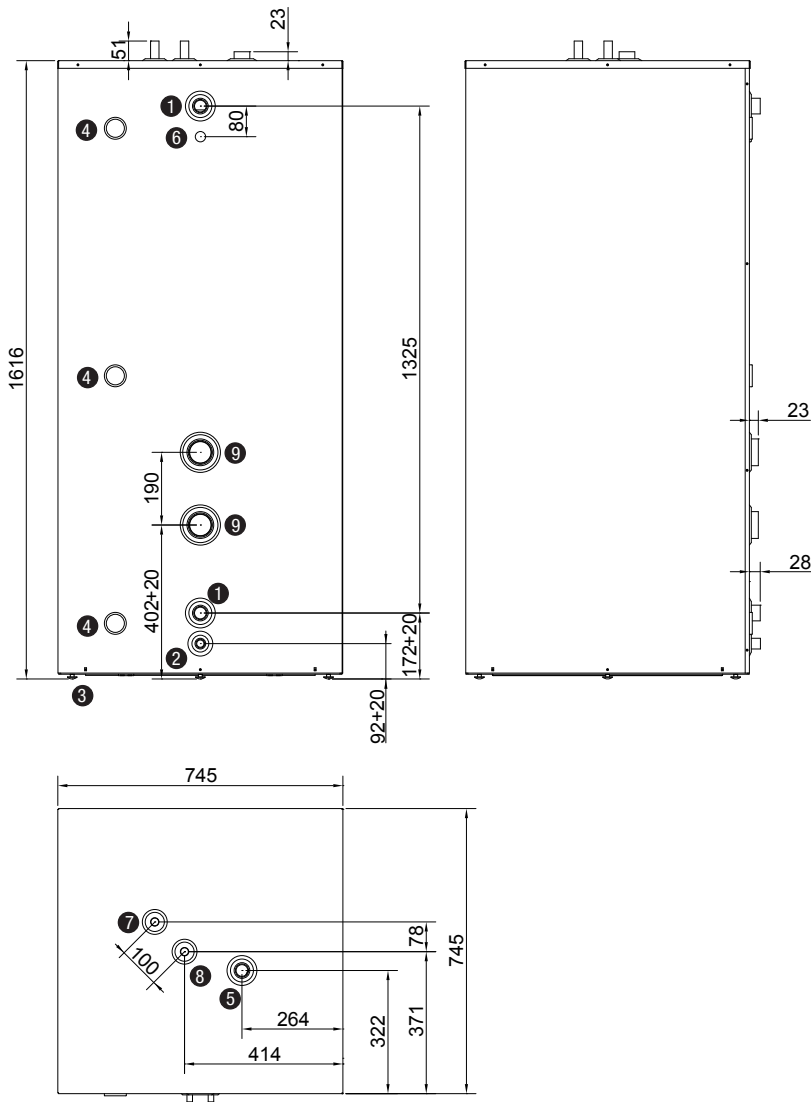
1. Docking socket, G25 int.
2. Drain, G15 int.
3. Adjustable base bolts.
4. Thermometers. VB art. no. 380003.
5. Vent, G25 int. can be used as a lifting sleeve.
6. Sensor tube for sensor Ø8 mm.

## System principle - wood-fired boiler with hot water heater

Acc-tank 500 UB  
Acc control 11

The Biomax heats the accumulator tanks. If necessary, the tanks can also be heated by an immersion heater in the Biomax.





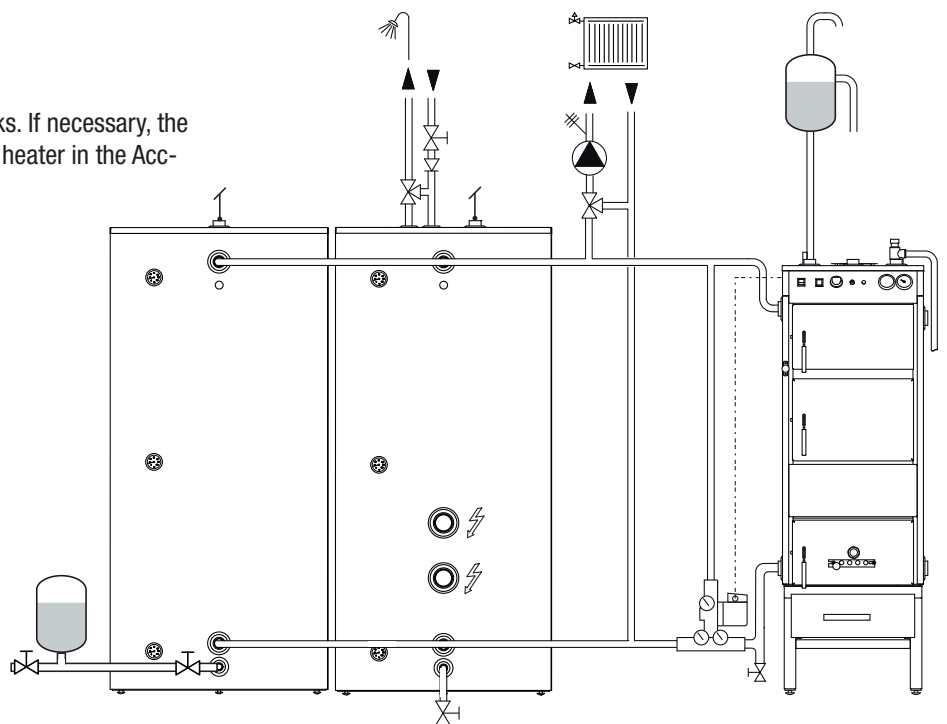
<b>Volume</b>	jacket	380 litres
	hot water heater	120 litres
<b>Weight</b>	empty	170 kg
	full	670 kg
<b>Design pressure</b>	tank	1.5 bar
	hot water heater	10 bar
<b>Test pressure</b>	tank	2.2 bar
	hot water heater	13 bar
<b>Design temperature</b>	tank	110 °C
	hot water heater	110 °C
<b>Insulation</b>	mineral wool 70 mm	
<b>Height required for installation</b>	1780 mm	
<b>Manufactured to</b>	PED 97/23/EC article 3.3	
<b>Art. no.</b>	2130	
<b>RSK</b>	687 60 66	

1. Docking socket, G25 int.
2. Drain, G15 int.
3. Adjustable base bolts.
4. Thermometers. VB art. no. 380003.
5. Vent, G25 int. Can be used as a lifting sleeve.
6. Sensor tube for sensor Ø8 mm.
7. Domestic hot water, Ø22 cu.
8. Incoming cold water, Ø22 cu.
9. Sleeve for immersion heater, G50 int.  
Max. insertion length 600 mm.

### System principle - wood-fired boiler without hot water heater

Acc-tank 500 CU  
Acc-tank 500 UB  
Acc control 3

The Vedolux 30 heats the accumulator tanks. If necessary, the tanks can also be heated by an immersion heater in the Acc-tank 500 CU.



**The installation must be carried out in accordance with applicable standards and regulations.**

**The accumulator tank should be installed indoors, vertically, in a basement or on the ground floor. The installation site must be capable of bearing the weight of the accumulator tanks.**

**Adjust the bolts on the base of the tank so that the tank is level.**

**Hard, calcium-rich water is unsuitable for HVAC use.**

**If a private well is used, the water quality must be checked to ensure that it will not give rise to damage in the domestic hot water installation. Copper components in the hot water heater and pipes must not be exposed to abnormally marble-aggressive water. A water analysis will indicate whether this is the case. If the water quality is poor, a water filter must be installed.**

**Under current rules, boiler systems with a closed expansion vessel must undergo an installation inspection before they are used. This inspection must be documented and carried out by a qualified person. A further inspection will be required if the boiler or expansion vessel is replaced.**

## Design

To maintain operation in the event of a power failure, the installation should be carried out so that self-circulation can be achieved between the boiler and the tanks. The pipes between the boiler and the tanks must be made as short as possible and with as few bends as possible. If the boiler and tanks are located next to each other, a pipe diameter of Ø28-35 cu is recommended.

The system must be fitted with accumulator control.

Pipes should be routed so that air pockets are eliminated and so that all air can be vented naturally from the system. A venting valve must be fitted to the top of the tank.

The domestic hot water system must be fitted with a shut-off valve, non-return valve, mixing valve and safety valve with an opening pressure not exceeding 9 bar. The waste pipe from the safety valve must be routed to a floor sump. The outlet must be visible.

A refilling device should be fitted so that the system can be drained from underneath.

## Expansion system

The accumulator tank must be connected to an open or closed expansion system.

The volume of the expansion vessel should be dimensioned according to the heating system's volume, static height and estimated temperature. The guideline value is for the volume in an open system to be approximately 5% of the total system volume or 13-15% in the case of a closed system.

**Open** The distance between the top of the highest situated radiator and the expansion vessel must not be less than 2.5m in order to prevent oxygen getting into the heating system.

The expansion vessel should be connected via a non-closing, uninterrupted riser from the boiler's expansion connection point.

To prevent damage in the event of a blockage in the expansion system, e.g. as a result of frost, the boiler should be fitted with a safety valve.

**Closed** The expansion vessel should preferably be connected as shown in the system principles.

The boiler must be fitted with a safety valve on a unisolatable connection from the connection point on the top of the boiler and a venting valve. The waste pipe from the safety valve must be routed to a floor sump. The outlet must be visible.



**The opening pressure of the safety valve is determined by the component in the system which tolerates the least pressure.**

## Radiator system

If the flow rate in the heating system is too high, it can affect the temperature stratification in the tank and thereby also its method of operation. It is therefore important that the flow is adjusted.

***After installation, check with the installer that the system is in good working order.***

***Make sure the installer shows you the controls and functions, so that you know how the system works and how to maintain it.***

### **Inspection - Start-up**

Before start-up, check that the tank and heating system are filled with water.

### **Safety valves**

The safety valves in the system must be operated regularly in order to maintain the safety function.

### **Venting/refilling**

You should regularly check that there is sufficient water in the heating system.

Air will remain in the system for a while after installation. Further venting should therefore take place on several occasions. After venting, check the pressure and top up the water if necessary.

The pressure in the system will vary with the boiler temperature. Do not add more water unnecessarily.

### **Water pressure in the hot water heater**

During normal operation, the hot water heater's safety valve should release water when the heater is heated up. This will occur after each drainage of hot water and upon charging of the tank.

### **Measures to prevent possible frost damage**

In very low temperatures, no part of the heating system must be shut off, as this would result in a risk of frost bursting.

Never light the fire if you suspect any part of the heating system might be frozen. ***Call an installer!***

In accordance with its policy of continual improvement and development, Värmebaronen AB reserves the right to alter the specifications of constituent components.

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