



MOS 1314-2  
VPB 500, 750, 1000  
031723

# VPB 500, 750, 1000

- SE** MONTERINGS- OCH SKÖTSELANVISNING
- GB** INSTALLATION AND MAINTENANCE INSTRUCTIONS
- NL** INSTALLATIE EN MONTAGE INSTRUCTIES
- FI** ASENNUS- JA HOITO-OHJEET





# VPB 500, 750, 1000

## General

VPB is a series of water heaters, which are suitable for connection to heat pumps, gas or oil-fired boilers.

The water tank consists of a steel jacket, with a copper lining to protect against corrosion. The water heater is equipped with a copper coil of finned tube (two finned tubes VPB 1000).

The water heater is designed and manufactured for a maximum cut-off pressure of 10 bar. Maximum permitted temperature is 95 °C.

The insulation is polyurethane, which provides excellent heat insulation. The insulation and outer shell of grey plastic is easy to remove. On VPB 750/1000, the top insulation must be removed to provide access to the lifting eyes.

The VPB is equipped with a immersion heater connection and an submerge tube for control of water heating.

## Removing the insulation

The insulation on VPB can be removed in order to facilitate handling in confined spaces (the heater's diameter without insulation is Ø 650/770/870 mm).

1. Remove all screws along the joining plates.
2. Lift off the top cover.
3. Pull the insulated jacket halves straight off.

Carry out assembly in reverse order. If the screws are difficult to fit in the old holes, the plate can be turned upside down, which produces new holes in the insulated jacket halves.

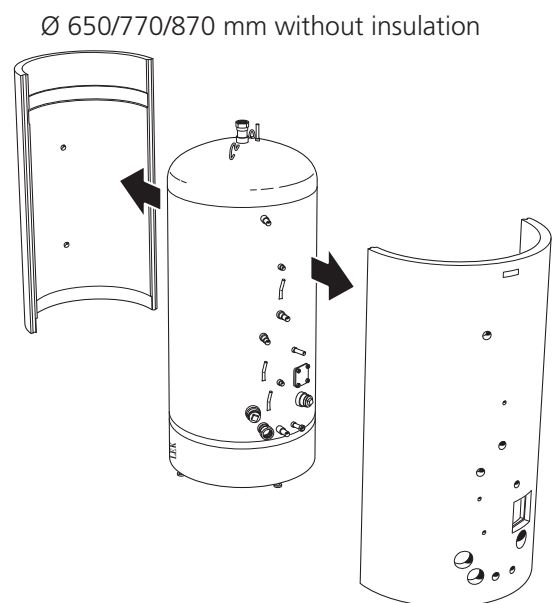
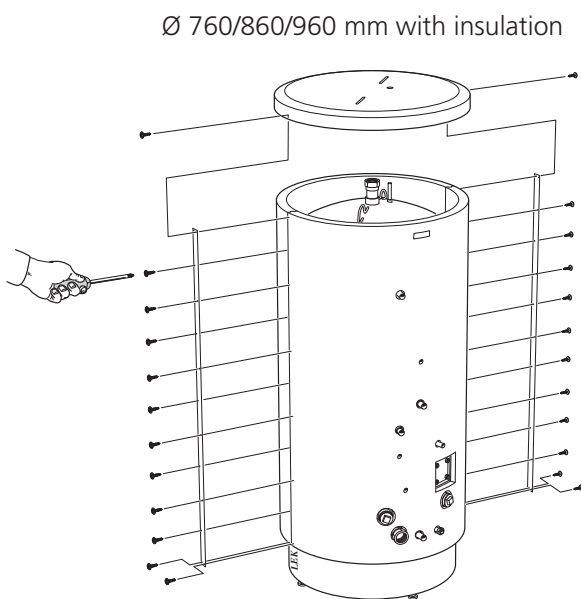
## Installation

The hot water heater is unscrewed from the pallet and lifted into position, use the lifting eyes if necessary. The water heater must be installed in an upright position. The four feet are height-adjustable. VPB 500, 750, 1000 can be equipped with the following immersion heaters, connection dimension G2. When installing the water heater, ensure that there is enough room for removing the immersion heater in front of the connection area, see following table.

Fit the supplied cover discs before pipe installation. The cover discs, with self-adhesive backs, must be fitted on the relevant connection by pushing them over the connections.

All connections (including those not used) must be insulated to minimise idle losses.

Immersion heater	Power output	Free space
IU 31	1500 W	250 mm
IU 33	2250 W	260 mm
IU 34	3000 W	280 mm
IU 36	4500 W	400 mm
IU 39	6000 W	400 mm
IU 310	7500 W	400 mm
IU 311	9000 W	400 mm



This appliance is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning use of the appliance by a person responsible for their safety.

Children should be supervised to ensure that they do not play with the appliance.

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## Pipe installation

The water heater must be supplied with a thermometer and pressure gauge as well as shut-off valve, drain valve, non-return valve, mixing valve, safety valve, and vacuum valve as per applicable standards.

The supplied drain valve with corresponding plug is installed as follows:

1. Remove the compression ring and compression ring nut from the drain valve.
2. Install the valve using the existing compression ring and compression ring nut on the drain pipe.
3. Replace the compression ring with a plug on the open part of the drain valve.

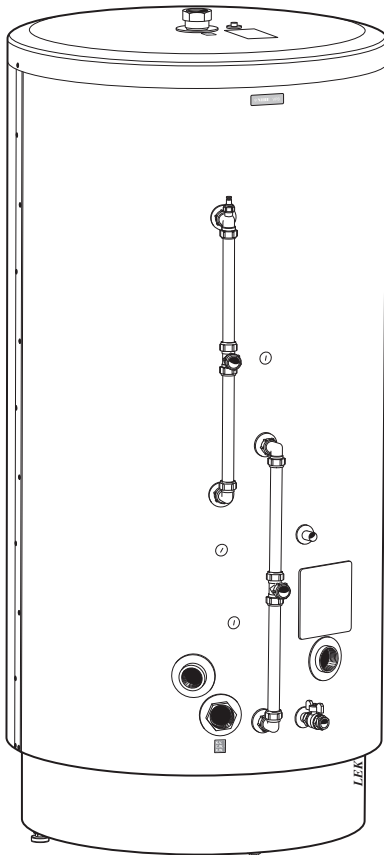
The heater must be supplied with a mixing valve, which limits the temperature of outgoing hot water to 60°C. If this valve is not fitted, some other measure must be taken to prevent the risk of scalding.

The safety valve must have a maximum opening pressure in accordance to the applicable regulations (however max 10 bar/1.0 MPa). The overflow pipe must be the same size as the safety valve. The overflow pipe must be routed downwards along its entire length and be frost-proof. It must run freely over a drain.

The coils in VPB 1000 must be connected in parallel (see image below). The venting nipple with corresponding T-pipe connector must be installed at the highest point on the upper coil.

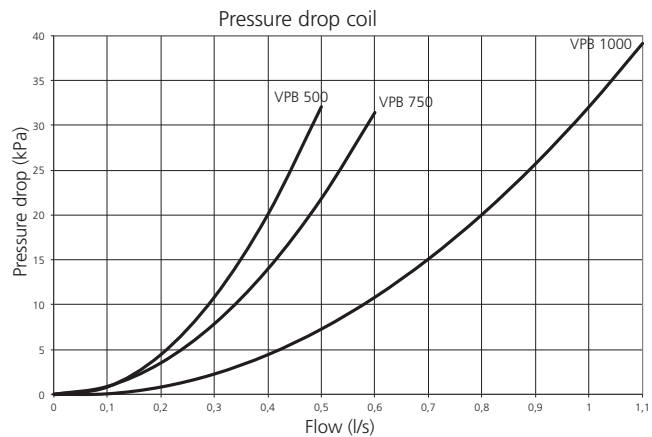
**Note!**

*Fit the cover discs before commencing pipe installation.*



## Pressure drop diagram

Primary side (coil).



## Electrical connections

**Note!**

*Electrical installation and service must be carried out under the supervision of a qualified electrician.*

VPB 500 can be supplemented with an immersion heater with a maximum output of 9 kW.

VPB 750, 1000 can be supplemented with up to two immersion heaters, maximum output of 2x9 kW.

Each immersion heater is supplemented with junction box type K11 (2 pole thermostat, 3 pole temperature limiter). Do not modify or reconnect!

Separate supply from group central is routed to each immersion heater.

**Note!**

*The water heater must be completely filled with water before it is connected on the electrical side.*

## Filling

Fill the water heater as follows

1. Open a hot water tap in the system.
2. Open the shut-off valve on the incoming cold water. This valve should then be fully open during operation.
3. The hot water tap can only be shut off when the water heater is filled, which is when only water comes out of the tap (initially an air-water mixture comes out of the tap).

## Maintenance

The safety valve must be inspected regularly, about 4 times a year, to prevent blockages.

To inspect the valve, open the safety valve manually and check that water flows through the overflow pipe. If this does not happen then the safety valve is defective and must be changed.

The safety valve sometimes releases a little water after hot water has been used. This discharge is caused by the expansion of the cold water taken into the water heater, resulting in a pressure increase, whereby the safety valve opens.

## Emptying

1. Turn off the power to the heater.
2. Shutoff the incoming cold water.
3. Open the drain valve.

During draining air must be let into the heater by loosening a hot water heater connector or a hot water tap. When mounted in locations exposed to the risk of frost, the hot water heater must be emptied whenever not in operation. Freezing will result in the heater bursting.

## Dealing with malfunctions

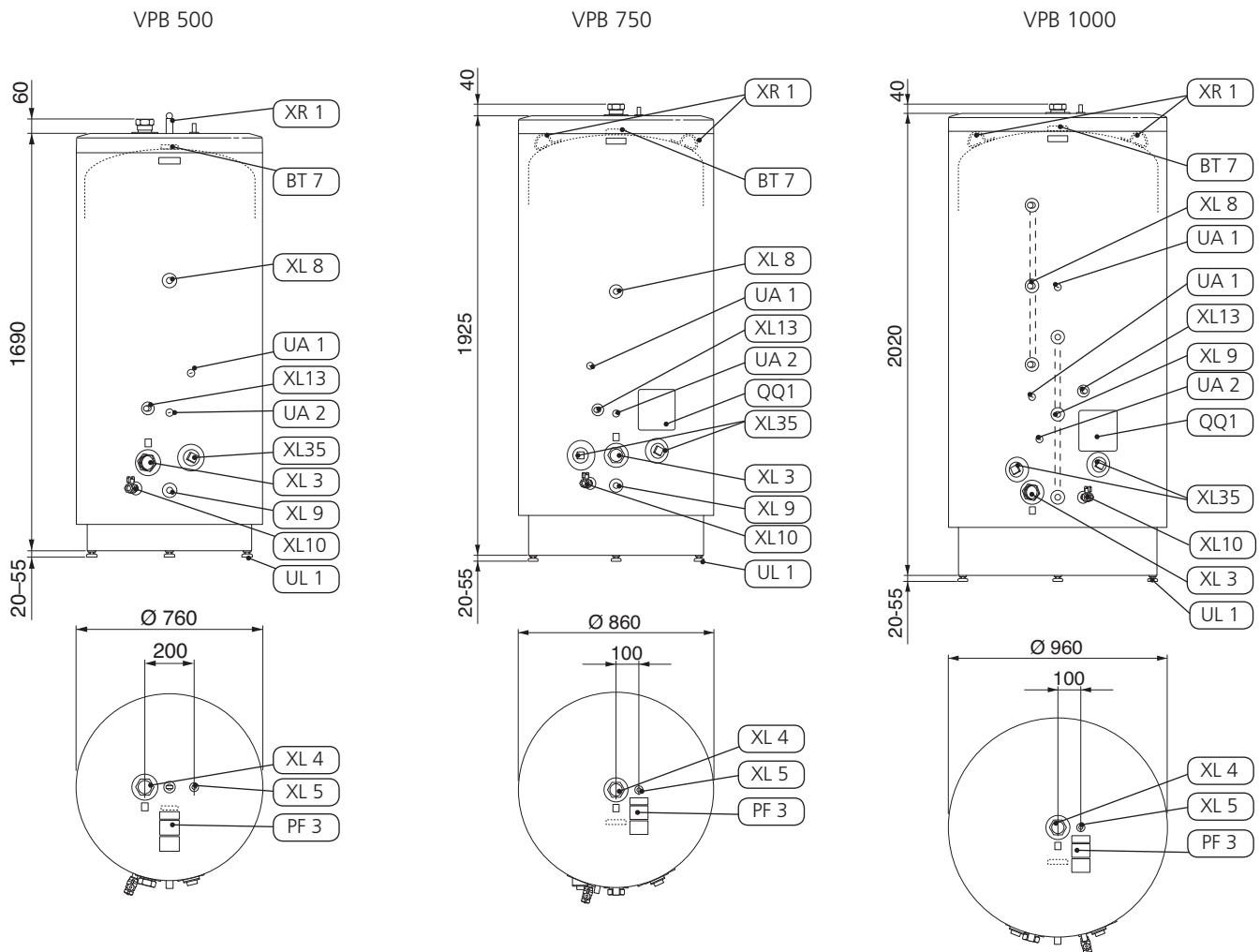
If the water fails to heat up, check the fuses in the distribution box. If none of the fuses have blown, the reason may be that the temperature limiter has tripped as a result of a fault in the hot water heater. Once the fault has been remedied, the temperature limiter can be reset. This must be done under the supervision of a qualified electrician.

## Service

When servicing is required, contact the main contractor; you will always need to provide the manufacturing number (95) and installation date.

Only spare parts supplied by NIBE AB in Markaryd may be used.

## Components and dimensions



## List of components

### Pipe connections

- XL 3 Cold water connection, (solar connection, out), G50, internal thread
- XL 4 Hot water connection, G50, internal thread
- XL 5 HWC connection, Ø 15 mm
- XL 8 Docking connection, incoming from other heat source Ø 28 mm
- XL 9 Docking connection, outgoing from other heat source Ø 28 mm.
- XL10 Drain connection, Ø 22 mm
- XL13 Solar connection, in, Ø 22 mm
- XL35 Immersion heater connection, G50, internal thread

### VVS-komponenter

- UA 1 Submerged tube, docking, Ø 11 mm (int)
- UA 2 Submerged tube, solar, Ø 11 mm (int)

### Sensors, etc.

- BT 7 Hot water sensor, top

### Miscellaneous

- PF 3 Serial number plate
- QQ 1 Inspection hatch
- UL 1 Adjustable feet
- XR 1 Lifting eye

## Technical Data

		500	750	1000
Corrosion protection		Copper		
Volume, hot water heater	litre	490	740	980
Volume, coil	litre	6	7	2x6
Length, coil	m	15.7	18.8	2x15.7
Heating surface, coil	m <sup>2</sup>	5.2	7.6	2x5.2
Heat transfer, primary 60/50 °C, 50 °C HW temp at the top	kW	15.8	20.2	31.6
Heat transfer, primary 80/60 °C, 50 °C HW temp at the top	kW	47	60	95
Heat content at 50 °C	kWh	23	35	46
Equivalent amount of hot water (40°C)*	litre	590	890	1180
Heating time 10-60 °C, 9 kW	min	190	290	380
Max. pressure, hot water heater	bar/MPa	10/1.0		
Max. pressure, coil	bar/MPa	10/1.0		
Max. immersion heater length	mm	400		
Height (excl. feet)	mm	1750	1965	2060
Net weight	kg	190	220	280
Part no.		083 220	083 231	083 240

\* With a supply temperature of 10°C and hot water usage of 24 l/min.

### Enclosed kit VPB 500

Cover discs  
 Drain valve with plug  
 Insulation plug

### Enclosed kit VPB 750

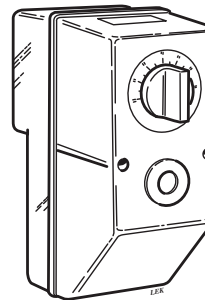
Cover discs  
 Drain valve with plug

### Enclosed kit VPB 1000

Cover discs  
 Drain valve with plug  
 Copper pipe Ø 28 mm  
 3 x Angle connectors  
 3 x T-pipe connectors  
 Venting nipple  
 Insulation

### Accessories

K11 Junction box  
 Part no 018 893



Immersion heater IU 31 - IU 311

