

Application:
Combinated system, heat pump until 10 KW
electrical heating element, solar - hot water and
back up heating operation.

Functioning:
heat pump is the first generator
and could be supported by electrical element in Latento,
(if necessary), it is the second generator.
In normal heating operation, the heat pump could be give off surplus
power into the storage (to the line magnetic valve 5)
If the Latento is loaded by solar, the heat pump and E-element
switched off to sensor 5
The thermostat in the storage (3) is switching on the three way valve (1) from
Line A to Line B (back up heating).
Both at the same time the magnetic valve (5) will be closed to thermostat (3), so the
heating water could be circulated to both exchanger in the Latento.
The heatingsystem now get the power of the storage.
The magnetic valve (2) is closed by switching off the heat pump, the return line
to the heat pump. So the hot water could not flow through the heat pump
while the back up heating operation

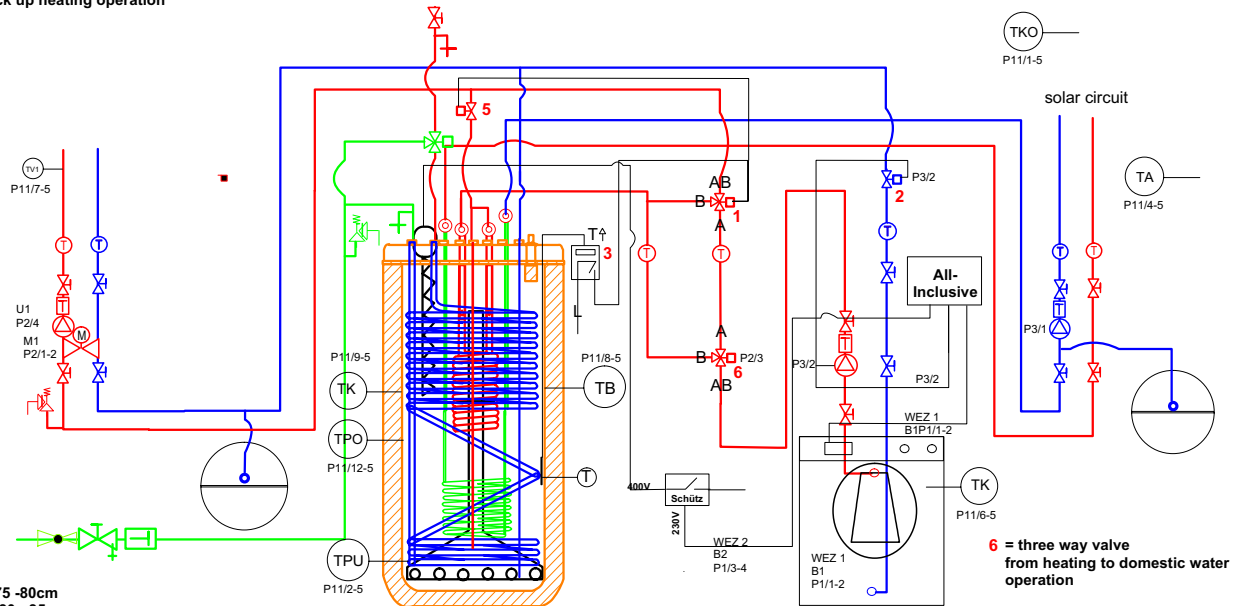
1 = three-way-valve:
A= heating operating (de-energised)
B= Back-up heating (current on)

2 = magnetic valve
de-energised: closed
triggered = open

3 = thermostat : back-up heating
closing the magnetic valve 2, if the storage
is loaded (with solar) and then he switch on the
the 3- Wegeventil (1) to pipe B
The heat pump will switched off to relais 4

4 = Relais back-up heating:
switch off the heat pump, if latento
is heating (back-up heating)

5 = magnetic valve de energised - open:
By back-up heating magnetic valve is closing
and so the heating circuit could circulate to both
heat exchanger in the storage

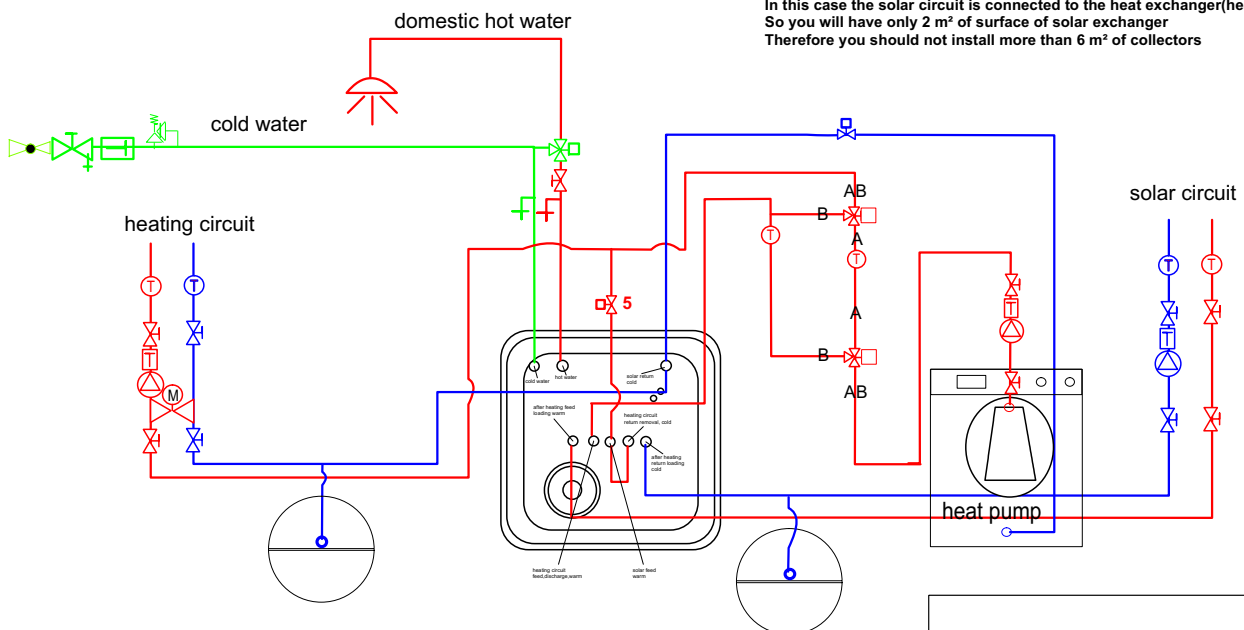


Sensor Fitting:
TB (hot water): 75 -80cm
TK (in Latento): 80 - 85cm
TPO (Temp. top buffer sensor): 85 - 90cm
TPU (Temp. bottom puffer sensor): 125cm
T (for Thermostat 1): 100cm

important information:

The surface of exchanger (domestic water) in this case 4,8 m²
Heat pumps over 10 kW power - you should connect
the manufacturer of the heat pump
Surface to small - the heat pump could get overheated

In this case the solar circuit is connected to the heat exchanger(heating,down).
So you will have only 2 m² of surface of solar exchanger
Therefore you should not install more than 6 m² of collectors



Schema	
ST WP EI 2 K T WE	E- Heating directly heating- circuit operation