

### Connecting MPB burners with buffer tank

The controller has 2 outputs for connecting the pump.

1. CH pump output
2. WUW pump output



#### 1<sup>st</sup> option - CH pump output connection

If you connect the pump's cable with the CH pump output, the pump will be working continuously.

Set the burner as follows:

##### A. FURNACE SETTINGS

- A1. HEATING WATER TEMPERATURE = temperature you require on the buffer tank (i.e **80 °C**). When temperature in the boiler is **80 °C**, the burner burns off.
- A.2 CH PUMP ACTIVATION TEMPERATURE = temperature for activating the pump (i.e **40 °C**)
- A.3 CH FURNACE HYSTERESIS = the minimum  $\Delta t$  you wish for the buffer (i.e **15 °C**), so when in the boiler goes down at **65 °C**, the burner starts working again.

##### C. BURNER SETTINGS

- C1 BURNER POWER (WORK) = the power you require depending on the heating losses
- C3 BURNER MODE = single

The operation of the system for the 1<sup>st</sup> option is as follows.

- The burner starts working
- Pump is activated when temperature in the boilers reaches **40 °C**
- When temperature in the boiler is at **80 °C**, burner burns off. The temperature in buffer tank will be between 75-80 °C
- When temperature in the boiler goes down at **65 °C** ( $80-15 = 65$  °C), then the burner starts again.

#### 2<sup>nd</sup> option - WUW pump output connection

In this case the WUW (HUW) temperature sensor is required and it takes the measurements of the buffer tank (storage tank). The pump is connected on WUW pump output.

It is important to set WUW PRIORITY on "Yes".

Set the burner as follows:

##### A. FURNACE SETTINGS

- A1. HEATING WATER TEMPERATURE = temperature you require on the boiler when the temperature on the buffer is at the desired temperature (i.e **60 °C**).

### B. WUW BUFFER SETTINGS

- B1. WUW BUFFER TEMPERATURE = the temperature were the pump is activated again (i.e **65 °C**)
- B2. WUW SURPLUS TEMPERATURE = if you set it 15, the boiler will burns off at 80 °C (65+15 = **80**)
- B3. **WUW PRIORITY = YES**

### C. BURNER SETTINGS

- C1 BURNER POWER (WORK) = the power you require depending on the heating losses
- C3 BURNER MODE = single

**The operation of the system for the 2nd option is as follows.**

- The burner starts working
- Pump is activated when temperature difference between boiler and buffer is bigger than 5 °C
- When temperature in the buffer is **80 °C**, burner burns off and the pump stops working
- When temperature in the buffer goes down at **65 °C** ( 80-15 = 65 °C), then the burner starts again.
- When the temperature of the buffer is reached at **80 °C**, the burner keeps the temperature of the boiler at 60 °C

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In the first case the pump works continuously

In the second case the pump stops when the desired temperature in the buffer is reached.