Note on installation

for heating engineers

VIESMANN

System boiler wiring instructions

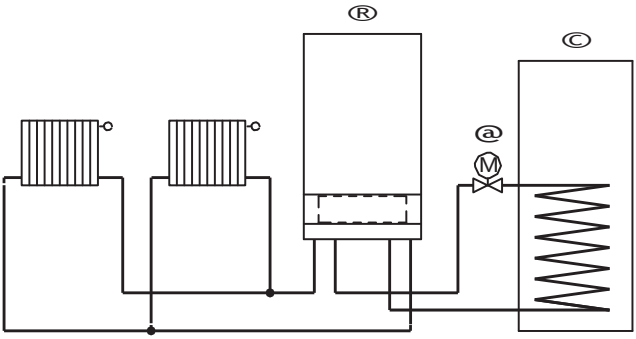
for Vitodens 100-W, Typ WB1B & Typ WB1C

The Vitodens 100-W system boiler offers several installation alternatives.
From traditional 'Y' or 'S' plan (2-pipe system) to weather compensated 4-pipe system connected to an un-vented DHW cylinder using the integral expansion vessel and diverter valve.

The advantages of connecting the system boiler to a 4-pipe system are as follows:

- The DHW circuit operates independently of the CH circuit
- Dual temperature control, which means the CH circuit can be operated on weather compensated system (reduced flow temperature)
- Using the boilers temperature cut-out device and integral diverter valve to protect the cylinder from overheating.

Option 1: 4-pipe system using an un-vented cylinder



Radiators
® Boiler
© DHW-cylinder
@ Motorised valve (Energy cut-out)

Viessmann 4-pipe system

Note: It is recommended that the coil output of the cylinder is greater than 10 kW to prevent long hot water re-heat periods.
DHW has priority.

The boiler is factory fitted with an 8 l expansion vessel, pressure safety valve (3 bar) and diverter valve.

If an existing or third party un-vented cylinder is used in conjunction with the Vitodens 100-W system boiler a 2-port (Energy cut-out) valve may be fitted in the DHW circuit. In this case the 2-port valve, cylinder thermostat and timer has to be electrically wired through the provided control box (see wiring example).

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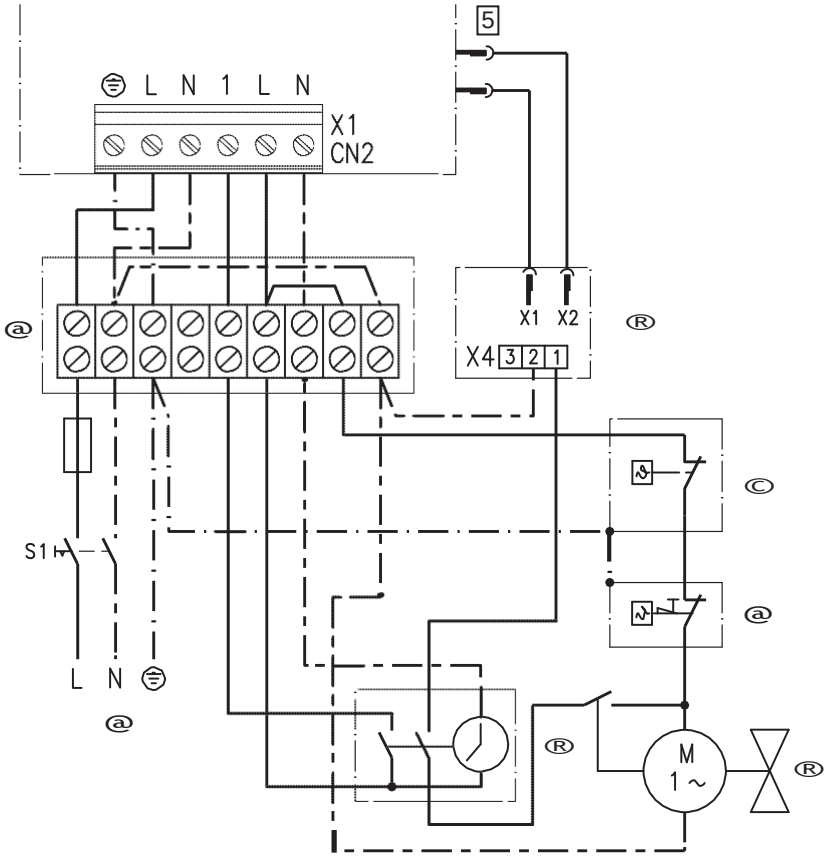
Electrical wiring example for Option 1

With existing CH/DHW programmer



Terminals in the control unit
® Cylinder demand terminal box
© Cylinder thermostat
@ Safety temperature sensor
® Valve
® Room thermostat (clock thermostat)
@ Terminal box (on site)
@ Power supply 230 V, 50 Hz

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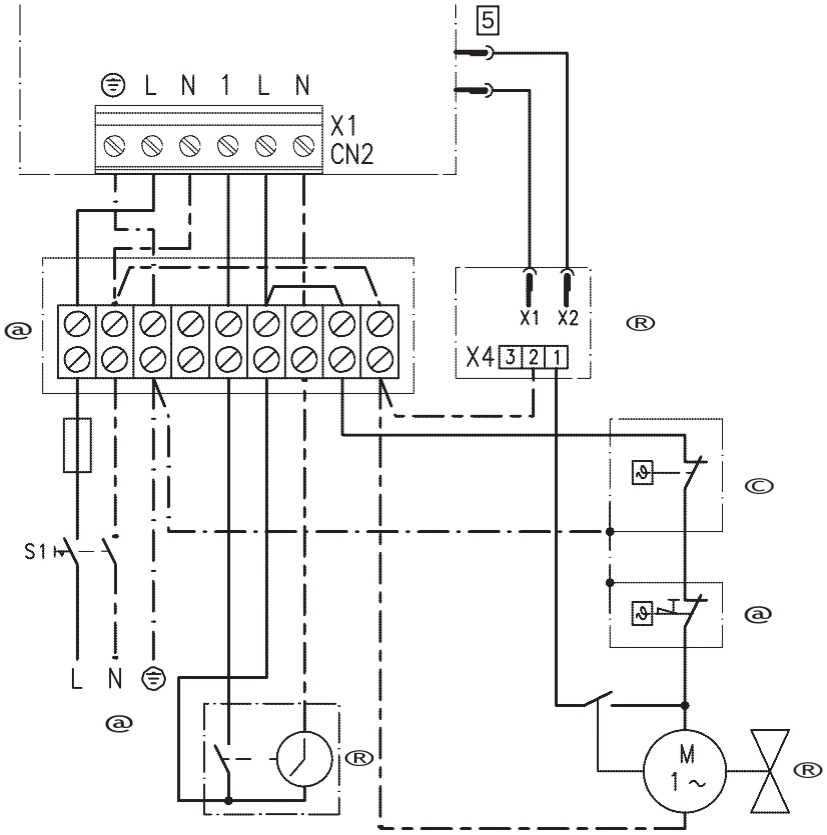
Electrical wiring example for Option 1 (cont.)

With Viessmann Vitotrol 100, RF/RF2 or standard room thermostat



Terminals in the control unit
® Cylinder demand terminal box
© Cylinder thermostat
@ Safety temperature sensor
® Valve

® Room thermostat (clock thermostat)
@ Terminal box (on site)
@ Power supply 230 V, 50 Hz

Other Viessmann secondary controls (existing programmer to be omitted) - see separate matrix.

- Weather compensation + 2-channel digital timer
- Vitotrol 100, RF1 - analog; DHW time function limited (either as CH or constant)
- Vitotrol 100, RF2 - digital; 2-channel with CH and DHW time control options.

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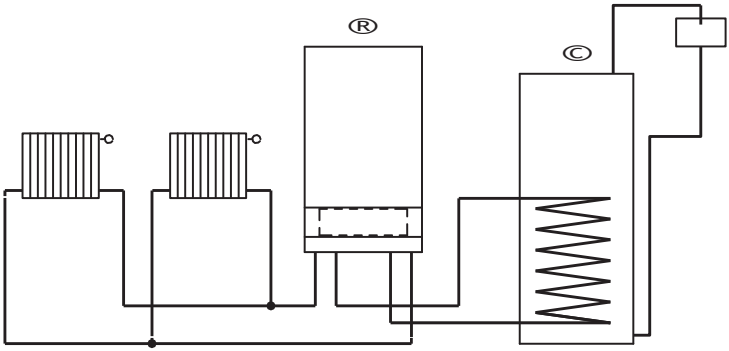
Option 2: 4-pipe system with open vented cylinder

Viessmann 4-pipe system with open vented hot water or with Vitocell unvented cylinder



Radiators
® Boiler
© Open vent DHW-cylinder or Vitocell

Note: It is recommended that the cylinder coil output is greater than 10 kW to prevent long hot water re-heat periods.
DHW has priority.

The primary circuit is sealed system. The boiler is factory fitted with an 8 l expansion vessel, pressure safety valve (3 bar) and diverter valve.

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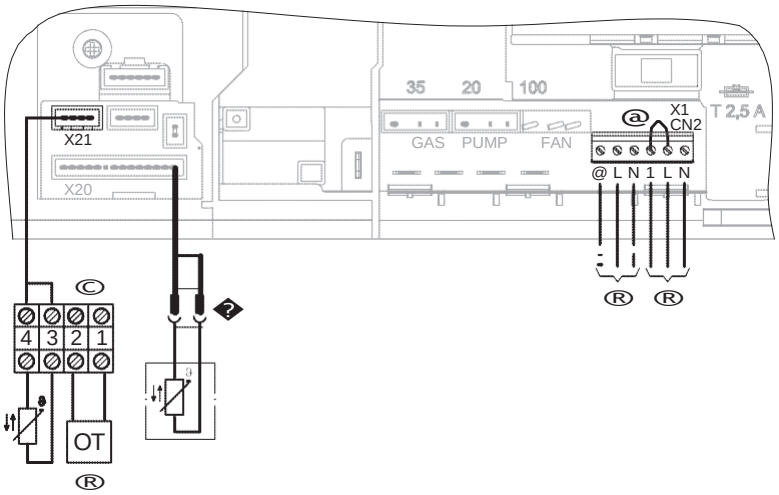
Electrical wiring example for option 2



Tank sensor connection
(sensor is optional - part no. 7178 348)

Outside temperature sensor (accessory)
® Open Therm device
© Connection Line (accessory)
@ Jumper (remove when connecting a room thermostat)
® Power supply (230 V, 50 Hz)
® Vitotrol 100 (room temperature ontroller)

Other Viessmann secondary controls (existing programmer to be omitted) - see separate matrix

- Weather compensation + 2-channel digital timer
- Vitotrol 100, RF1 - analog; DHW time function limited (either as CH or constant)
- Vitotrol 100, RF2 - digital; 2-channel with CH and DHW time control options.

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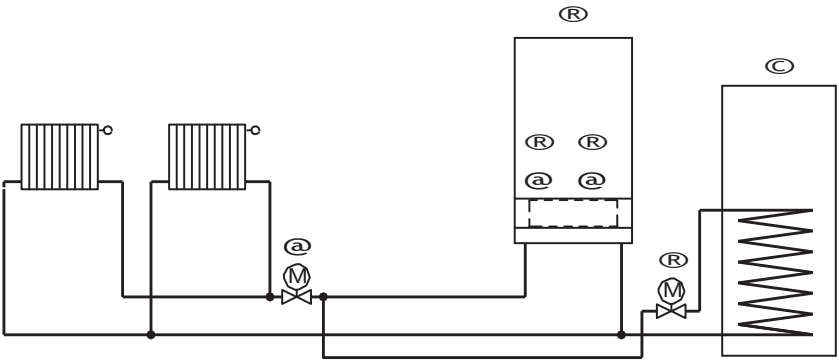
Option 3: Traditional 'Y' or 'S'-plan system (2-pipe)

Schematic Sealed Primary System



Radiators
® Boiler
© DHW-cylinder
@ Motorised valve
® Pump
® Gauge
@ Expansion vessel
@ Savety valve

Note: Schematic shows safety valve, expansion vessel, pressure gauge and pump being external of the boiler. The Vitodens 100-W system boiler has all these components already factory fitted.

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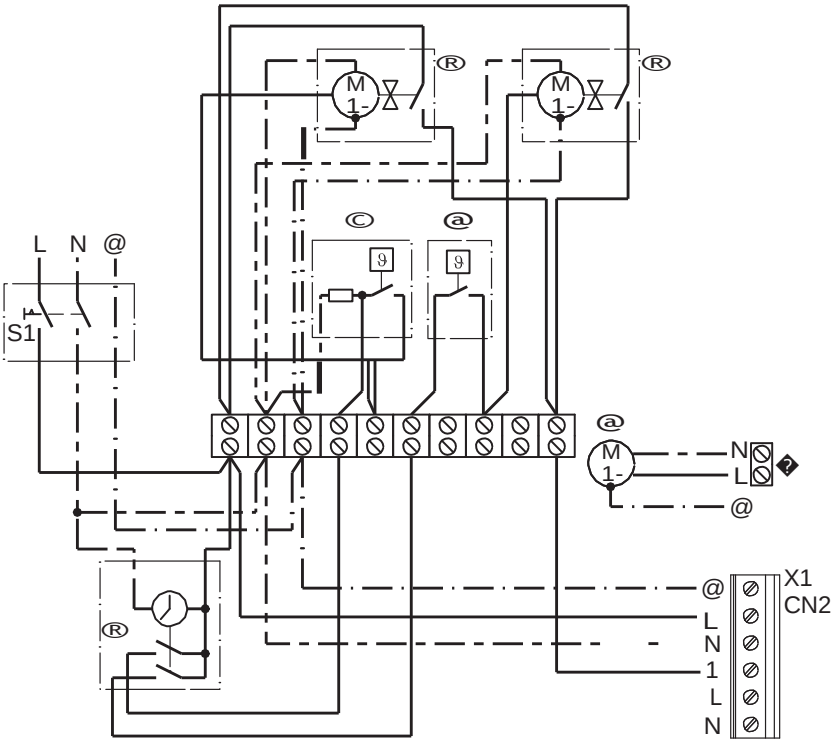
Electrical wiring example - S-plan system with Vitodens 100-W



Power supply 230 V, 50 Hz
® Time controller
© Room thermostat (clock thermostat)
@ Cylinder thermostat
® Zone valve
® Pump
X9 Terminals in the control unit
Pump connection

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