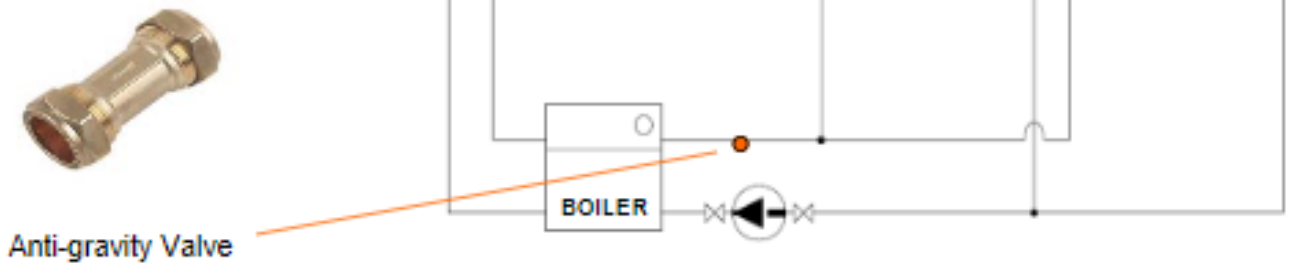
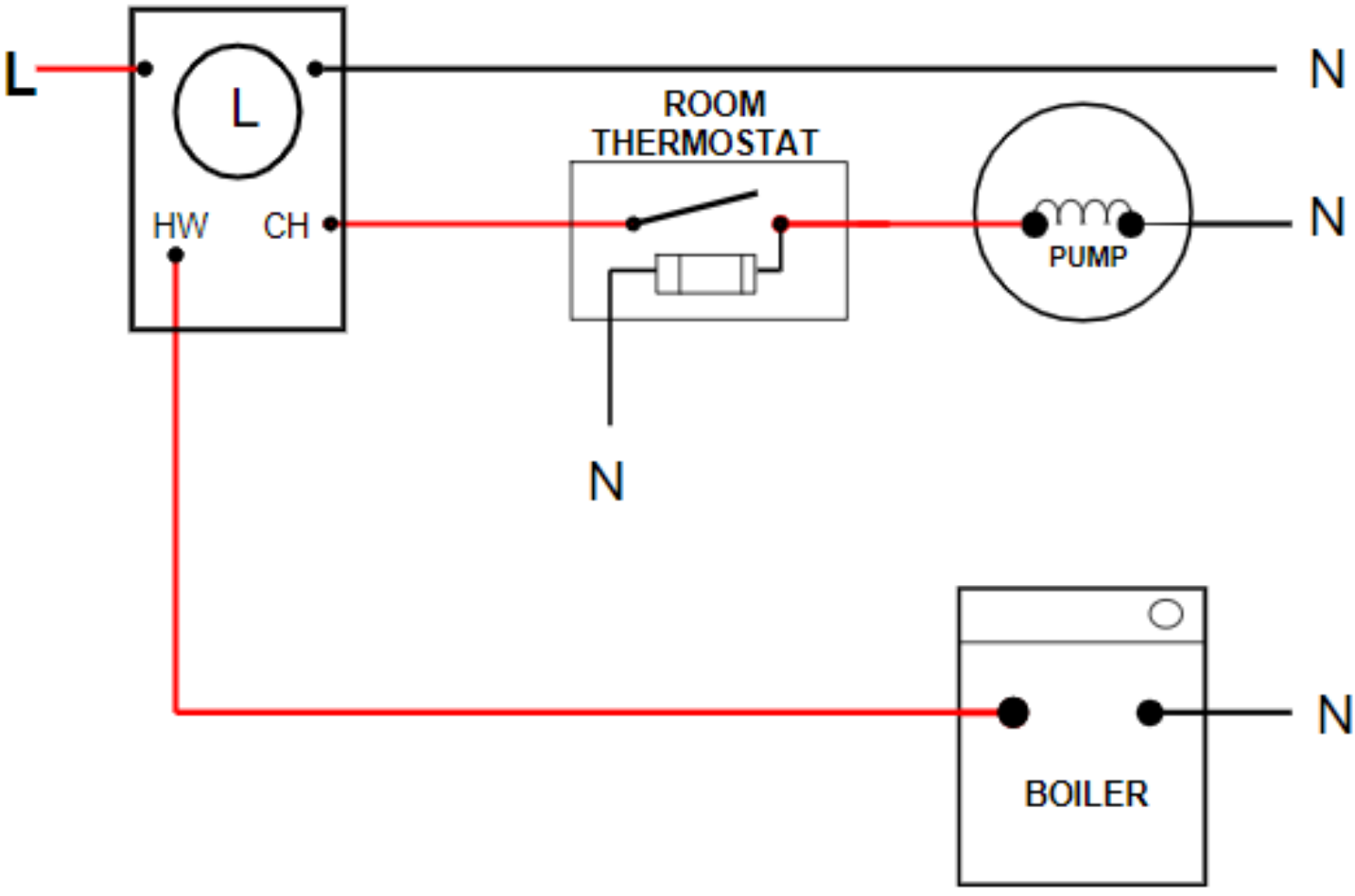
Gravity Domestic Hot Water, Pumped Central Heating Support Guide



Anti-gravity Valve



System Description

Used to provide Gravity Hot water and Pumped Central Heating. This system does not include any interlock devices (zone valve etc) to turn off the appliance fully when system temperatures are met. The only interlock device is the time control, which makes this type of system inefficient and unreliable.

Note:- On most types of Gravity Hot water systems a mechanical anti-gravity valve is usual fitted on the central heating flow pipe feeding the radiators (where applicable) If a mechanical valve is not fitted when the appliance is in a hot water only demand (especially in the summer) the radiators above the appliance may heat, due to a similar gravity operation as like the Hot Water circuit.

Hot Water Demand.

230Vac demand from the programmer / or clock is sent to the "switch live" at the boiler, the boilers internal thermostat demands heat and boiler fires. Primary temperature increases as the boiler operates causing natural Gravity hot water flow to the hot water cylinder. On demand the cylinder hot water temperature is under the control of the boiler thermostat setting. The boiler will constantly cycle On/ Off whist the time clock is calling.

Heating Demand.

On this demand the hot water would also require to be in demand due to the switch live requirement to the appliance and also the gravity operation of the system.

230Vac Hot water demand from the programmer / or clock operates the appliance. The boiler thermostat controlling the appliances primary temperature.

230Vac Heating Demand from the programmer / or clock is sent to the "Common" on the Room Thermostat. Providing there is a demand from the Room Thermostat the "Calling" connection of the Room Thermostat will supply 230Vac to the pump. Pump operates causing primary heat to the circulate around the Central Heating circuit. Where fitted the pump operation will also operate the mechanical Non-return valve as required.

Hot water and Heating Demand.

See above re:-Heating demand