



## **ZonePlus Z322 zone valve Installation and commissioning instructions**



The Z322 mid-position valve has been designed to control the water circulation in fully pumped systems, which employ a single pump for both hot water and central heating circuits by diverting the flow to either or both simultaneously using a single valve.

## Operation

Valve position - In the event that mains power is disconnected the valve automatically spring-returns to the HW position.

Override lever: For manually operating systems to open valve for system draining or filling. During normal operation, the lever must be in the auto position.

**The Z322 consists of a 3 port valve body (Ref. B322) to which a self contained actuator (Ref. A322) is attached**

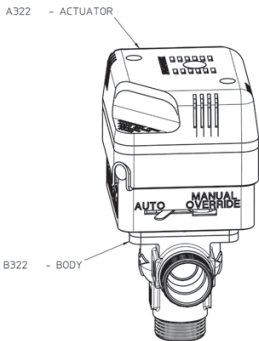
Position of valve during the various operations:

HW only - Port A closed

HW & CH only - Valve in position AB (Middle) :

CH only - Port B closed

The valve operates both boiler and pump when either heating or hot water is required.

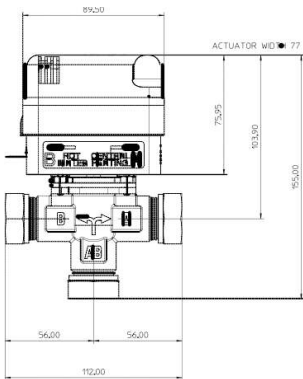


# Installation

## Positioning of valve

On new installations ensure that the Z322 valve is fitted on the flow from the boiler only. Also check that the actuator head is NOT below the horizontal level of the pipe work and that neither the open vent or the cold feed are isolated. This will ensure system and product safety at all times. Remember to make allowances for working, maintenance and replacement.

*For safety, please ensure that all vents on the valve are clear of any obstructions, e.g. Clothing, towels, etc... Especially if fitted in airing cupboards as this could lead to overheating within the valve.*

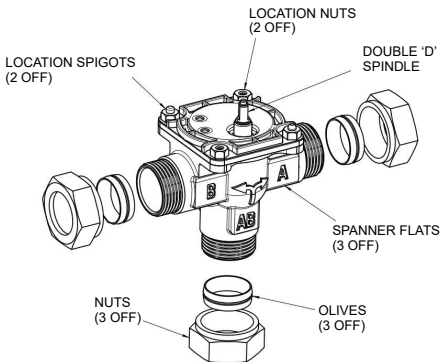


# Installation

## Fitting of valve body to pipework

Fit the valve body using the 22mm compression fittings provided with the flow from the boiler to AB, the radiator circuit to Port A and the hot water cylinder to Port B.

Tighten the compression nuts sufficiently to make a watertight seal, only gripping the valve by its body. Take care not to over tighten.

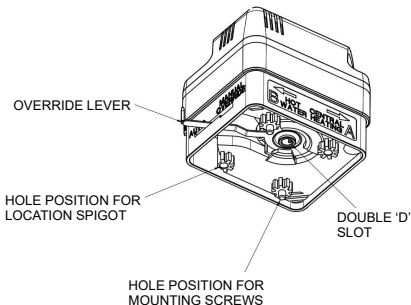


# Installation

## Fit actuator to valve body

Position the actuator on the valve body lining up the valve spindle with the 'D' shape slot. A yellow guide strip has been inserted behind the override lever to assist installation; please remove the guide once the actuator installation is complete and before the system is used. The actuator guide holes should line up with the spigots on the valve body.

Fix with the screws provided and tighten lightly. The override lever should now be on the Port B side. Set the override lever to manual. Fill, test and thoroughly flush the system.



## Wiring connections - Standard installation

The 4 core cable fitted to the actuator can now be connected to the system following the simple colour-coded guide below

<b>Wire Colour</b>	<b>System Connection</b>
Blue	Any Neutral supply.
Orange	'Call' terminal of cylinder stat if fitted, otherwise the 'HW ON' terminal of the programmer. Also link to Pump/Boiler live.
White	'Call' terminal of room stat if fitted, otherwise on the 'CH ON' terminal of programmer.
Grey	'Satisfied' terminal of cylinder stat if fitted, otherwise the 'HW OFF' terminal of the programmer.

### Using a ZonePlus Z322 as a diverter valve

<b>Wire Colour</b>	<b>System Connection</b>
Blue	Any Neutral supply.
Orange	'Call' terminal of cylinder stat if fitted, otherwise the HW ON terminal of the programmer. Also link to Pump/Boiler live.
White+Grey	'Call' terminal of room stat if fitted, otherwise the 'CH ON' terminal of the programmer.

No earth connection is required. Ensure all connections are good and the screws secure. A torque of 0.75Nm is recommended for fixing the wires in place.

Installation and connection should only be carried out by a suitably qualified person and in accordance with the current edition of the IET wiring regulations. A class 'A' switch (having contact separation of at least 3mm in all poles) must be incorporated in the fixed wiring as a means of disconnecting the supply, normally at the consumer unit. The system must be appropriately fused.

**Warning: Isolate mains supply before commencing installation**

## Commissioning

To check whether the valve is operating correctly, carry out the following checks after the system is filled and vented. Ensure that the override lever is in the Auto position and the insert guide is removed.

### Hot water only

Set the room thermostat to minimum and/or turn the CH off at the programmer. Set the cylinder thermostat to maximum and turn the HW on at the programmer.

The valve should close port A. The boiler should fire, the pump run and the pipe on Port B side should get hot.

### Central heating only

Set the room thermostat to minimum and/or turn the HW off at the programmer. Set the room thermostat to maximum and turn the CH on at the programmer.

The valve should close port B. The boiler should fire, the pump run and the pipe on the Port A side should get hot.

### Hot water and central heating

Set the room and cylinder thermostats to maximum and/or turn the HW and CH on at the programmer.

The valve should be in the mid position. The boiler should fire, the pump run and the pipes on both Port A and Port B should get hot.

### To reset:

Return both the thermostats and the programmer to their normal settings.

Please note the above assumes that both the programmer and thermostats are being used. If this is not the case, ignore the action described for the item not fitted.

### Spares

The actuator and body for the Z322 mid position valve can be purchased separately as spares or as replacement parts (see page 2).

## Specification

Motor supply voltage:	230V AC, 50Hz
Power consumption:	5w
Lead supplied:	1.4 metre 4 core cable. Industry standard wire colours
No earth connection required:	Unit is double insulated
Operating flow temperature:	+5°C to 88°C
Switch rating:	3Amps
Maximum ambient temperature:	50°C
Maximum static pressure:	8.6 bar
Maximum differential pressure:	0.5 bar
Pipe fitting size:	22mm compression
Actuator:	Maximum time to power Open - 20 seconds Maximum time to spring Close 10 seconds
Standard(s)	EN 60730-1, EN 60730-2-8, BS EN 60730-1, BS EN 60730-2-8



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