



V4043 Motorised Zone Valve

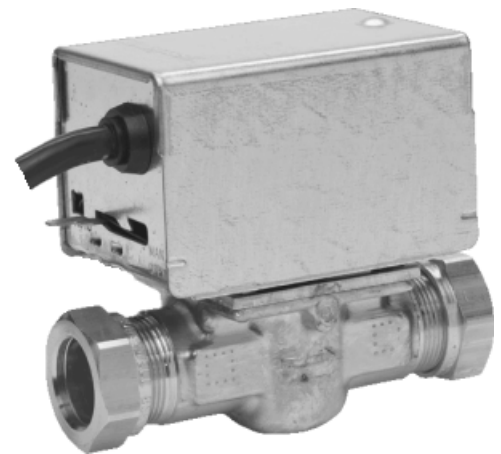
INSTALLATION INSTRUCTIONS

APPLICATIONS

The V4043 valve has been designed to control the flow of water in iron and copper pipe in diameters 1/2" to 1" and 15 mm to 28 mm.

Although specifically designed to control water flow in small bore domestic central heating systems, the V4043 valve can be used in many other applications, e.g. commercial and industrial heating systems.

- **NORMALLY CLOSED VALVES:**
 V4043H – Has auxiliary switch. Used with domestic central heating systems.
 V4043C – Has high differential pressure close off. Used with district heating systems.
- **NORMALLY OPEN VALVE:**
 V4043B – Usually used in conjunction with solid fuel boilers or dual fuel boiler link-ups.
- The V4043H forms part of SUNDIAL S & C PLANS used to control domestic central heating systems and, as such, is designed for quick, simple wiring either to a T6160B or T6060B room thermostat, or a L641A cylinder or pipe thermostat.



SPECIFICATIONS

Voltage: 240 V, 50 Hz

Power Consumption: 6W

Leads Supplied: 1 m, 5 Core.

Operating Temperature Range: +5° C to +88° C
 (Special models available for chilled water applications).

Maximum Ambient Temperature: +50° C

Pipe Fitting Size: 1/2", 3/4", 1" BSPP, 15 mm, 22 mm & 28 mm compression.

Dimensions: See Diagram.
 Arrow on centre of brass body indicated direction of flow.

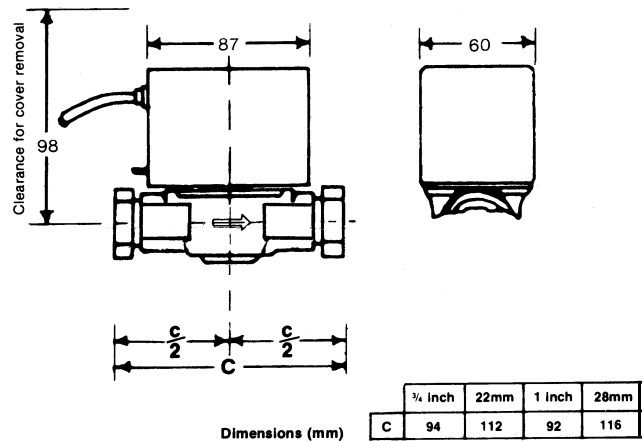


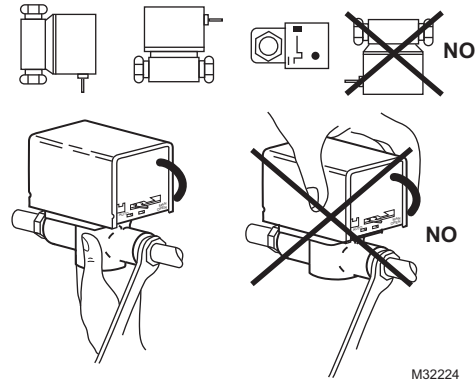
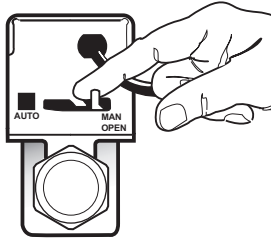
Fig. 1. Dimensions



V4043 MOTORISED ZONE VALVE

Normally-closed V4043 models incorporate a manual lever; this should normally be in 'AUTO' position, but can be moved to centre 'MAN. OPEN' position for system draindown/filling, etc.

N.B. With the manual lever in the 'MAN. OPEN' position, the auxiliary switch remains in the de-energized position until power is restored.



When used to form part of a central heating system, positioning of the valve will depend on whether it is being used on heating or hot water circuit. On either circuit, it must not be fitted so that system vent, cold feed, or any bypass is blocked when valve is closed. Typical SUNDIAL SYSTEM CONTROL applications:

INSTALLATION

Before commencing the fitting of the valve, read through the plumbing and wiring instructions.

PLUMBING

The valve may be plumbed in at any angle, but must not be mounted so that the valve head is below horizontal level of pipework. In the highly unlikely event of a leak, a safety hazard could result.

Do not grip valve head while making and tightening up plumbing connections. Either hold brass body in your hand or attach adjustable spanner (32 mm or 1 1/4") across hexagonal or flat faces in valve body at each port's screw thread.

Tighten the compression nuts enough to make watertight seal. TAKE CARE NOT TO OVER TIGHTEN.

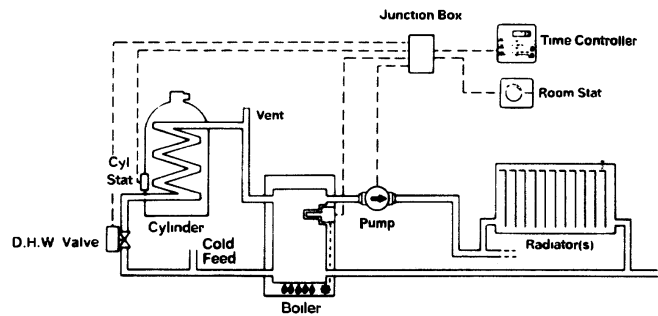


Fig. 2. Plumbing Diagram: C Plan.

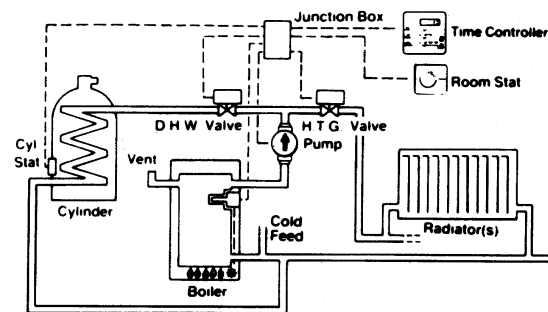


Fig. 3. Plumbing Diagram: S Plan.

WIRING

Below are the wiring connections. Ensure the fixed wiring connection to the mains supply is via a fuse rated at not more than 3 amps and with a Class 'A' switch (having contact separation of at least 3 mm in all poles).

SUNDIAL PLANS

Start with valve(s), making sure each numbered or lettered terminal - or coloured wire in case of valve - on unit being connected, is wired correctly to numbered terminal at junction box. Ensure all connections are good and all terminal screws are firmly tightened.

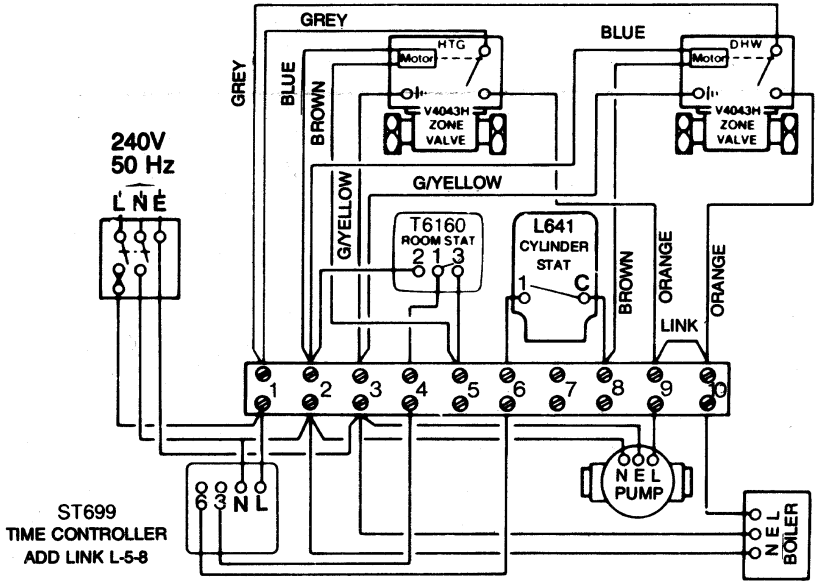


Fig. 4. Wiring Diagram: S Plan.

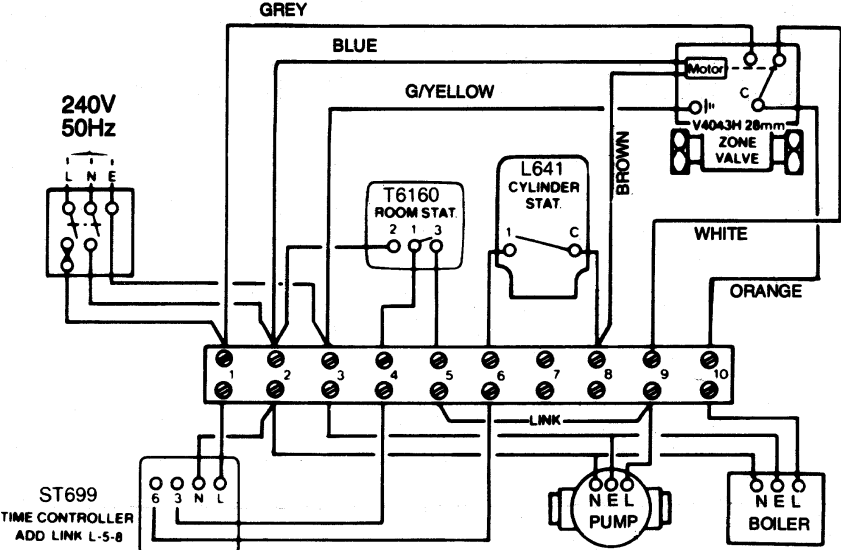
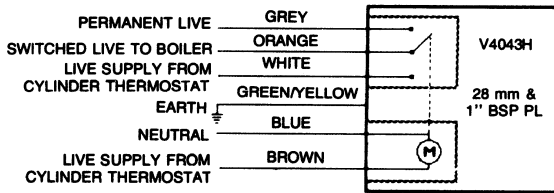
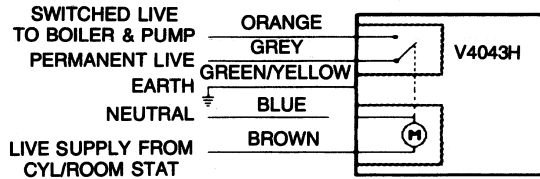


Fig. 5. Wiring Diagram: C Plan.

NOTES:

- a. Wiring diagrams show connections necessary to a twin switched live output programmer, i.e. one with separate control of heating and hot water.
- b. If simple, single switched, live timeclock is used, connect switched live supply to both room thermostat and cylinder thermostat, e.g. connect switched live to either terminal 4 or 6 at junction box, then link 4 and 6 with a bridge wire.
- c. If using boiler with integral programmer, refer to boiler manufacturers instructions on wiring.

GENERAL



N.B. if using 6" wire, V4043H in S-Plan White wire is not needed and must be made electrically safe.

CHECKOUT PROCEDURES

For SUNDIAL CONTROL PLANS or similar central heating applications:

1. Check manual lever is in 'AUTO' position.
2. Check timeclock/programmer has power.
3. Check boiler is switched on and its thermostat set to about 80° C.

(C & S PLAN) confirm correct hot water function as follows:

1. Turn room thermostat right down or switch off heating at programmer. Ensure 'Hot Water' is ON at programmer.
2. Set cylinder thermostat to maximum.
3. Boiler should fire and pump should run. Feel pipe approximately 12" from valve outlet port on cylinder circuit; it should get hot.

(S PLAN) confirm correct heating function as follows:

1. Turn cylinder thermostat right down and switch hot water off at programmer, if programmer enables 'Heating Only'. Ensure heating is ON at programmer.
2. Set room thermostats to maximum.
3. Boiler should fire and pump should run. Feel pipe approximately 12" from valve outlet port on radiator circuit; it should get hot.

COMPLETION

Set both thermostats to temperatures required by householder – recommended temperatures: 60° C for cylinder thermostat and 20° C for room thermostat.

Full installation, wiring, and operating instructions for Sundial Products are included in every pack. For special wiring applications, contact your local Resideo Office for the Sundial Wiring Booklet.

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