



ULTRAVALVE LTD
GI-DBT2 DIGITAL BACKFLOW TEST KIT
OPERATING INSTRUCTIONS (AS AT 1/1/2025)

The GI-DBT2 digital backflow test kit has been developed to provide high accuracy testing of backflow prevention devices, in particular, RPZ's.

The test kit comprises-

The actual test gauge unit

- A set of 3 colour coded test hoses
- A set of BSP test fittings-3 off 1 / 8", 1 / 4", 1 / 2" and 3/4" R/ Bushes A Velcro hanging strap
- A padded, compartmentalised transit case

Testing of backflow prevention devices in the UK is governed by the Water Regs UK RPZ AIM, which must be followed and adhered to, by suitably qualified/ authorised persons. The UK RPZ AIM also dictates that test kits MUST be recalibrated at least on an annual basis, and MUST conform to an accuracy of $\pm 1\%$ (1 kPa), or better.

Firstly, the GI-DBT2 gauge unit has a slot at the top of the handle, in which you can thread the Velcro hanging strap through, to allow the user to hang the gauge up whilst testing. It should be noted that, due to the gauge being very accurate, and sensitive, the gauge should always (where possible), be at the same elevation as the backflow prevention device, to reduce head height errors.

Conversely, if there is a head height difference, and thus a slightly false reading at rest, ie. NOT 0.0 kPa you can always artificially nullify that error by re-zeroing the gauge prior to the test. Of course you should always re-zero prior to any test, with all 3 valves on the test kit open to atmosphere, before the hoses are connected. Re-zeroing is carried out by simultaneously pressing both the SET and the UP ARROW, until the prompt 'OFF' appears, repeat until 0.0 kPa appears.

At the bottom of the gauge set are three connection points, a high pressure connection point, (RED) on the left side, upon which you connect the RED hose, a low pressure connection point, (BLUE) in the centre, upon which you connect the BLUE hose, and finally, a drain connection point, (YELLOW), upon which you connect the YELLOW hose.



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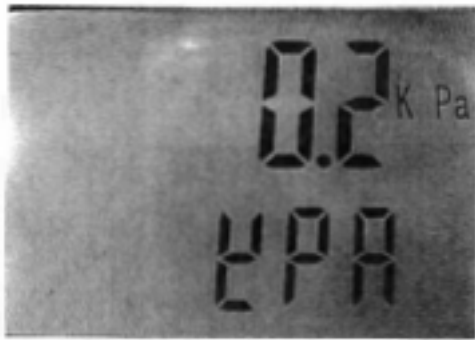
There are three control valves, VALVE A allows water flow through the H.P (RED) internal line in the test gauge, to flush through air and impurities, and out via the DRAIN valve, VALVE C.

Valve B allows flow through the L.P (BLUE) internal line in the test gauge, to flush through air and impurities, and out via the DRAIN valve, VALVE C.

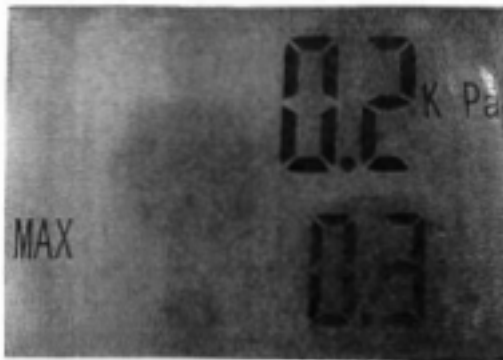
Valves A and C are 90 degree ball valves, the arrow on the handles indicates the flow direction, ie. VALVE A is open when pointing upward, and closed when horizontal, VALVE C is open when pointing downward, and closed when horizontal. VALVE B is a multi-turn needle valve, it is closed when the knob is turned firmly fully clockwise, you open by turning anti-clockwise.

The LCD display on the gauge has a number of functions, the top line indicates the current pressure reading, in kPa, on the lower line, the left side indicates when Min/Max pressure values are selected. The right side of the lower line indicates the selected display options. By simultaneously pressing the UP button, you will step through a number of display options, in this order-

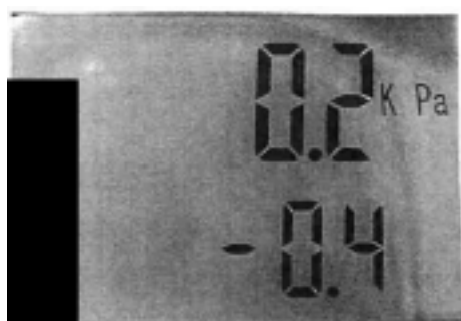
kPa-units of pressure measurement



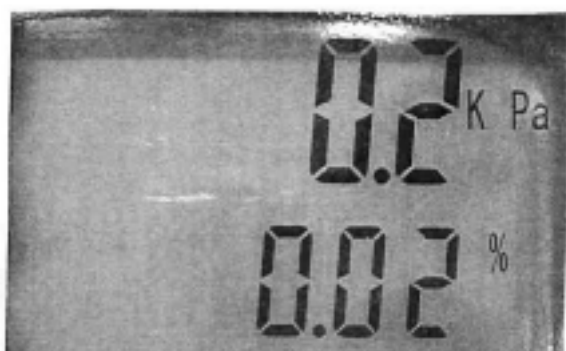
MAX-maximum pressure value recorder since last being reset



MIN-minimum pressure value recorded since last being reset



%- percentage that the current reading represents, as a percentage of the full range (not relevant)



-- Degrees C- current temperature reading





TO RESET Min/ Max recording, step through the menu options until the lower left display indicates either MIN or MAX, then press and hold the UP arrow button, until —appears, the display will now return to 0.0 kPa for the MIN/ MAX values, ready for another test. TO RE-ZERO the gauge, with hoses disconnected, all 3 valves open on the test kit, press and hold both the SET and UP buttons, until the lower display reads 'OFF' (offset), repeat if need be, until the upper pressure display reads 0.0 kPa.

ALWAYS remove hoses, open valves and shake or blow out water before storing the instrument.

RETURN for recalibration, new Lithium batteries and brass line strainers, AT LEAST on an annual basis, in adherence with Water Regs UK stipulation.



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