

<b>Test Code Sheet Number</b>	<b>1</b>	<b>3</b>	<b>1</b>	<b>2</b>	<b>17</b>
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## TEST CODE SHEET

**1. TYPE OF TEST(S)**

Bending strength.

**2. WATER REGULATIONS REQUIREMENTS FOR FITTINGS**Schedule 2

15-(1) .... every water system shall contain an adequate device or devices for preventing backflow of fluid from any appliance, fitting or process from occurring.

**3. BRITISH STANDARDS OR WATER SPECIFICATION, DEEMED TO SATISFY WATER REGULATIONS REQUIREMENTS**

3.1 Fittings with 'kitemarks' which are deemed to satisfy the requirements of regulations are listed in the directory.

**4. TEST PROCEDURE**Note Unless otherwise stated the temperature of the test fluid shall be  $20 \pm 10^{\circ}\text{C}$ .

4.1 Tests applicable to the following:-

**HOSE UNION BACKFLOW PREVENTER HA**

DN15 to DN32.

Devices for the prevention of contamination by backflow.

(A) **HOSE UNION BACKFLOW PREVENTER HA** (Derived from prEN W1 108. Clause 6.4)  
DN15 to DN32.**TEST METHOD****APPARATUS** The following apparatus is required.

A supply of water to achieve the test pressure.

A stop valve '1' at the inlet 'A'.

A pressure gauge 'P1', accurate to  $\pm 2\%$  of reading.

A mounting '2' to which the hose union backflow preventer under test is fixed.

A 1m long steel pipe '3'. The pipe is threaded at one end to be connected to outlet of the hose union backflow preventer and the other end equipped with a connection to load (W). The hose union backflow preventer has the intermediate parts removed.

A stop valve '4'.

**PROCEDURE** The procedure shall be as follows:-

- (1) Mount the device in the test system in its normal working position. (Reference Figure 65).
- (2) The bending moment is measured at the connection to the pipe. In calculating the bending moment, make due allowances for the mass of the pipework, valves and any loads imposed by the test equipment.
- (3) Close all valves. Purge the air from the pipe '3' by means of valves '1' and '4'.

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- (4) Apply a load W as shown in Figure 65, to produce a bending moment given in Table 65.
- (5) Gradually apply pressure through valve '1', at a rate not exceeding 1 bar per 5 seconds, up to 16 bar  $\pm$  0.5 bar.

**Test 1**

- (6) Hold this pressure for 10 minutes  $\pm$  60 seconds.
- (7) Carry out the tightness test as detailed in TCS 1111.20 whilst the bending moment is applied (See (8)).
- (8) Set up the device as shown in Figure 65. Purge the test system, then close valve '4'. Gradually apply pressure at a rate not exceeding 1 bar per 5 seconds up to 10 bar  $\pm$  0.5 bar. Close valve '1'.

**Test 2**

- (9) Hold this pressure for 10minutes  $\pm$  60 seconds.

**Test 3**

- (10) Carry out the tightness test as detailed in TCS 1111.20 without the bending moment being applied.

**5. ACCEPTANCE CRITERIA**

**Test 1**

The test requirement shall be satisfied, with the appropriate bending moment applied to the valve, as given in Table 65.

There shall be no breakage, permanent deformation or leakage of the body of the valve or leakage of the air inlets.

**Table 65**

Nominal size DN	15	20	25	32
Bending moment for thread ends -Nm	50	70	150	190

**Test 2**

After a balance has been achieved between the upstream and downstream pressures, and after turning off the water supply, the downstream pressure must be maintained after a further 2 minutes  $\pm$  10 seconds.

After aeration of the upstream circuit, no upstream flow must occur and there must be an obvious drop in the downstream pressure until p atm is reached.

**Test 3**

The backflow preventer must meet the requirements of TCS 1111.20.

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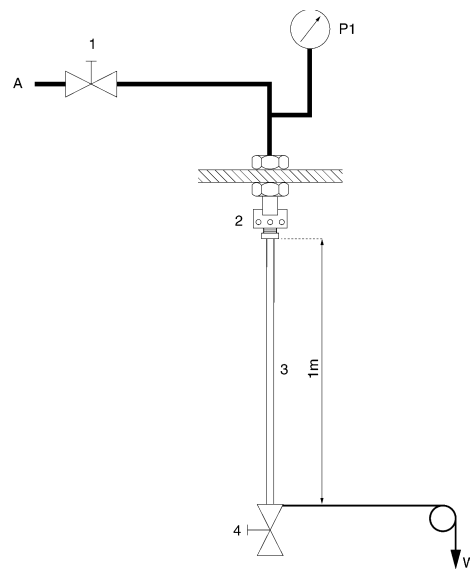


FIG 65