TEST CODE SHEET

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1. TYPE OF TEST(S)

Endurance.

2. BYELAW REQUIREMENT FOR FITTINGS

Byelaw 52

Every water fitting shall be constructed of materials, the nature, the strength and thickness of which .... will prevent, so far as is reasonably practicable, damage from :

a) any external load;
b) vibration, stress

Byelaw 42

Every float operated valve ..... shall:

a) be capable of controlling the flow of water ..... and
b) when it is closed, be watertight; and
c) incorporate either a renewable seat and washer which are resistant to both corrosion and erosion by water or some other no less effective valve assembly .....
d) have a lever which:
i) when the valve is closed will withstand without bending or distorting a force twice that to which it is ordinarily subject .....

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

(See Water Supply Byelaw Guide)

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

BS 1212 Part 1 (except ½in size)
BS 1212 Part 2
BS 1212 Part 3 clause 27, Appendix F and clause 24.

4. TEST PROCEDURE

Note Unless stated otherwise the temperature of the tet fluid shall be 20 ± 10°C.

4.1 Tests applicable to the following:fittings-

VALVES
- float operated, all types except those for use in continuous contact with hot water

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(A) **FLOAT OPERATED VALVES** (Non BS 1212 Part 3)

TEST METHOD

The fitting shall be assembled together with its lever arm, installed in a suitable rig, and subjected to 200,000 operations of its intended function whilst being supplied with water at ambient temperature.

5. **ACCEPTANCE CRITERIA**

Upon completion of this test the fitting shall be capable of meeting the acceptance criteria of the appropriate closure test.

(B) **FLOAT OPERATED VALVES** (BS 1212 Part 3)

TEST METHOD

Every float operated valve (diaphragm type) shall be tested in accordance with the requirements of Appendix F and to a total of 200,000 cycles, and immediately upon conclusion, be capable of satisfying the hydraulic and shut-off requirements of clause 24.

APPENDIX F - ENDURANCE TEST

F.1 General

Every float operated valve (diaphragm type) shall be capable of satisfying this endurance test.

F.2 Apparatus

The following apparatus is required:

Test equipment capable of so operating the lever arm as to open fully and close fully the valve on an automatic cycle.

The travel of the moving parts of the assembly shall be accomplished in not less than 1 second. A water supply to the valve shall be provided and the water temperature shall not exceed 38°C.

F.3 Procedure

Install the float operated valve (diaphragm type) on the test rig and commence the opening the closing operations as follows;

a) Fully open the valve.
b) Allow the valve to remain in the open position for 2 seconds.
c) Fully close the valve.
d) Allow the valve to remain closed for 2 seconds.

The foregoing shall constitute one cycle of at least 6 seconds duration.

5. ACCEPTANCE CRITERIA

(24) Hydraulic and shut-off requirements

Every float operated valve (diaphragm type) shall be capable of withstanding, whilst held in the closed position, a pressure of 20 bar without leaking or sweating.

Every float operated valve (diaphragm type) when assembled in working condition and with the float with which it is to be used immersed to not more than half its volume, shall be capable of shuting off against the appropriate maximum pressure given in Table 1.

Table 1 - Seats and floats

		Diameter of suitable spherical float for a lever ratio of 13:1					
Nominal bore of seat	Recommended colour of seat if of plastics	For high pressure (up to 14 bar)		For medium pressure (up to 7 bar)		For low pressure (up to 3 bar*)	
		Copper (inches)	Plastics (mm)	Copper (inches)	Plastics (mm)	Copper (inches)	Plastics (mm)
1/8	White	5	127	4½	114	-	-
3/16	Black	6	152	4½	114	4½	114
1/4	Red	6	152	5	127	4½	114
3/8	Green	7	178	6	152	5	127