TEST CODE SHEET

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1. TYPE OF TEST(S)

Closure.

2. BYELAW REQUIREMENTS FOR FITTINGS

Byelaw 42

Every float-operated valve .....shall (b) when it is closed, be watertight .....and (e) have a float which .....(ii) has a lifting effort such that when not more than half immersed, the valve is capable of droptight closure against the highest pressure to which that valve is likely to be subject, and (f) have a lever which.....
(ii) In the case of ½ " valve, is constructed so that the water shut off level may be altered or adjusted without bending the float lever.

Byelaw 43

No float-operated valve shall.....convey hot water.....unless - (a) it is constructed of materials capable of withstanding without leaking any ordinary operating water temperature to which it is or may be subject.....

3. BRITISH STANDARDS DEEMED TO SATISFY BYELAW REQUIREMENTS

(See Water Supply Byelaws Guide)

BS1212: Part 1 Clause 15b (Excepting ½" size)
BS1212: Part 2 Clause 5.2
BS1212: Part 3 Clause 24.2
NOTE BS 1212 does not include requirements meeting Byelaw 43.

4. **TEST PROCEDURE**

Note Unless stated otherwise the temperature of the test fluid hall be 20 ± 10°C.

4.1 Tests applicable to the following fittings:

VALVES
- Float operated (all types)

(A) NON-BS FITTINGS

TEST METHOD

The fitting shall be assembled in a working condition, with the float with which it is to be used, and installed in a suitable test cistern. Connect the inlet to a water supply that can be controlled in pressure. With the float immersed to not more than half its volume apply a hydraulic pressure equal to the claimed maximum operating pressure rating (± 0.2 bar within the range 1-4 bar, and ± 0.5 bar within the range 4-30 bar) with water at ambient temperature to the inlet side as follows:-

Fittings up to and including a nominal size of 50mm - 60 ± 5 seconds.

Fittings above 50mm up to and inluding a nominal size of 150mm - 15 minutes ± 30 seconds.

Fittings of nominal size above 150mm - 60 ± 5 minutes.

Fittings claimed to be suitable for conveying hot water shall be subject to a second pressure test as above but with water at the claimed maximum operating pressure rating ± 5°C.

5. ACCEPTANCE CRITERIA

There shall be no visible leakage from the outlet of the fitting.

(B) BS FITTINGS

As detailed in extracts from relevant BS's given below;

(i) BS 1212: Part 1 Float operated valves - piston type

TEST METHOD

Clause 15b - Shutting off test. Every float operated valve when assembled in working condition, shall with the float immersed to not more than half its volume, be capable of shutting off against the appropriate maximum hydraulic pressure specified.....(see below).....with which it is to be used.

Size of float operated valve	Body Pattern	Length of lever fulcrum to face of lock nut	Bore of loose seat	Diagram of suitable standard spherical float			Screwing size of lever for attachment of float boss
				For HP 200	For MP 100	For LP 40	
				p.s.i	p.s.i	p.s.i	
				Max	Max	Max	
3/4	III	12½	¼	6	5	4½	$^{5}/_{16}$
1	IV	15¼	$^{3}/_{8}$	7	6	5	$^{7}/_{16}$
1½	V	21 $^{3}/_{4}$	$^{3}/_{4}$	10(11)	9(10)	8	$^{9}/_{16}$
1½	V	21 $^{3}/_{4}$	15/16	-	10(11)	8	$^{9}/_{16}$
2	VI	28	1	12	11	10	$^{5}/_{8}$
2	VI	28	1¼	-	12	10	$^{5}/_{8}$

* Body Pattern III - any bore not exceeding ½
* Body Pattern IV - any bore not exceeding $^{5}/_{8}$
* Body Pattern V - any bore not exceeding $^{15}/_{16}$
* Body Pattern VI - any bore not exceeding $1^{1}/_{4}$

(NOTE reference to ½" sizes excluded as they do not meet the requirements of the 1986 Byelaws)

(WBS - the duration of the above test shall be 60 ± 5 seconds)

5. ACCEPTANCE CRITERIA

There shall be no visible leakage from the outlet of the fitting.

(ii) BS 1212: Part 2 Float operated valves - diaphragm type (brass body)

TEST METHOD

Clause 5.2 - Shutting off requirement. Every float operated valve, when assembled in working condition, with the float with which it will be used, when immersed to not more than half its volume, shall be capable of shutting off against the appropriate maximum hydraulic pressure specified ..... (see below)

Nom bore of seat	Recommended colour of seat if of plastics	Diagram of suitable spherical float For high pressure (up to 14 bar) (142 mH20) (203 p. s. i) Copper Plastics		For medium pressure (up to 7 bar) (71 mH20) (101 p. s. i) Copper Plastics		For low pressure (up to 3 bar) (30 mH20) (43.5 p. s .i) Copper Plastics	
in		in.	mm	in.	mm	in.	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

(WBS The duration of the above test shall be 60 ± 5 seconds).

5. ACCEPTANCE CRITERIA

There shall be no visible leakage from the outlet of the fitting.

(iii) BS 1212: Part 3. Float operated valves - diaphragm type (plastic body)

TEST METHOD

Clause 24.2 Every float operated (diaphragm type) valve 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 shutting off against the appropriate maximum pressure given ..... (see below)

Nom bore of seat	Recommended colour of seat if of plastics	D iagram of suitable spherical float for a lever ratio of 13 :1					
		For high pressure (up to 14 bar) Copper Plastics		For medium pressure (up to 7 bar) Copper Plastics		For low pressure (up to 3 bar) Copper Plastics	
in		in	mm	in	mm	in	mm
1/8	white	5	127	4½	114	-	-
3/16	black	6	152	4½	114	4½	114
¼	red	6	152	5	127	4½	114
3/8	green	7	178	6	152	5	127

(WBS - the duration of the above test shal be 60 ± 5 seconds)

5. ACCEPTANCE CRITERIA

There shall be no visible leakage from the outlet of the fitting.