TEST CODE SHEET

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1. TYPE OF TEST(S)

Flushing device physical endurance and leakage

2. WATER REGULATIONS REQUIREMENTS FOR FITTINGS

Schedule 2

25 (1) Subject to the following provisions of this paragraph

(a) every water closet pan shall be supplied with water from a flushing cistern, pressure flushing cistern or pressure flushing valve, and shall be so made and installed that after normal use its contents can be cleared effectively by a single flush, or, where the installation is designed to receive flushes of different volumes, by the largest those flushes;

(b) no pressure flushing valve shall be installed
- (i) in a house, or
- (ii) in any building not being a house where a minimum flow rate of 1.2 litres per second cannot be achieved at the appliance.

(c) where a pressure flushing valve is connected to a supply pipe or distributing pipe, the flushing arrangement shall incorporate a backflow prevention device consisting of a permanently vented pipe interrupter located not less than 300mm above the spillover level of the WC pan or urinal;

(d) no flushing device installed for use with a WC pan shall give a single flush exceeding 6 litres;

(e) no flushing device designed to give flushes of different volumes shall have a lesser flush exceeding two-thirds of the largest flush volume;

(f) every flushing cistern, other than a pressure flushing cistern, shall be clearly marked internally with an indelible line to show the intended volume of flush, together with an indication of that volume.

(g) a flushing cistern designed to give flushes of different volumes
- (i) shall have a readily discernible method of actuating the flush of different volumes; and
- (ii) shall have instructions, clearly and permanently marked on the cistern or displayed nearby, for operating it to obtain the different volumes of flush

(h) every flushing cistern, not being a pressure flushing cistern or a urinal cistern, shall be fitted with a warning pipe or with a no less effective device;
- (i) every urinal that is cleared by water after use shall be supplied with water from a flushing device which
- (ii) in the case of a flushing cistern, is filled at a rate suitable for the installation;
- (iii) in all cases, is designed or adapted to supply no more water than is necessary for effective flow over the internal surface of the urinal and for replacement of the fluid in the trap; and

(j) except in the case of a urinal which is flushed manually, or which is flushed automatically by electronic means after use, every pipe which supplies water to a flushing cistern or trough used for flushing a urinal shall be fitted with an isolating valve controlled by a time switch and a lockable isolating valve, or with some other equally effective automatic device for regulating the periods during which the cistern may fill.

(2) Every water closet, and every flushing device designed for use with a water closet, shall comply with a specification approved by the regulator for the purposes of this schedule.

(3) The requirements of the sub-paragraphs (1) and (2) do not apply where faeces or urine are disposed of through an appliance that does not solely use fluid to remove the contents.

(4) The requirement in sub-paragraph (1)(i) shall be deemed to satisfied

(a) in the case of an automatically appeared flushing cistern servicing urinals which is filled with water at a rate not exceeding

(i) 10 litres per hour for a cistern serving a single urinal;
(ii) 7.5 litres per hour per urinal bowl or stall, or as the case may be, for each 700mm width of urinal slab, for a cistern serving two or more urinals;

(b) in the case of a manually or automatically operated pressure flushing valve used for a flushing urinals which delivers not more than 1.5 litres per bowl or position each time the device is operated.

(5) Until 1 January 2001 paragraphs 1 (a) and (d) shall have effect as if they provided as follows

(a) every water closet pan shall be supplied with water from a flushing cistern or trough of the valveless type which incorporates siphonic apparatus;

(b) no flushing device installed for use with a WC pan shall give a single flush exceeding 7.5 litres.

(6) Notwithstanding sub-paragraph 1(d), a flushing cistern installed before 1st July 1999 may be replaced by a cistern which delivers a similar volume and which may be either single flush or dual flush; but a single flush cistern may not be so replaced by a double flush cistern.

(7) In this paragraph

‘PRESSURE FLUSHING CISTERN’ means a WC Flushing device that utilises the pressure of water within the cistern supply pipe to compress air and increase the pressure of water available for flushing a WC pan.

‘PRESSURE FLUSHING VALVE’ means a self closing valve supplied with water directly from a supply pipe or a distributing pipe which when activated will discharge a pre determined flush volume.

‘TRAP’ means a pipe fitting or part of a sanitary appliance, that retains liquid to prevent the passage of foul air; and

‘WARNING PIPE’ means an overflow pipe whose outlet is located in a position where the discharge of water can be readily seen.

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

3.1 None.

4. TEST PROCEDURE

4.1 Apparatus.

a) cistern, complete with fitments including flushing device, flushpipe (which must be supplied by the manufacturer) and cover, installed in accordance with the manufacturers instructions.
b) means of operating the flushing limiter activator automatically in accordance with the manufacturers instructions.
c) a water supply maintained at a hydraulic pressure (1.5 ± 0.1 bar), or the minimum pressure required to operate the flushing device whichever is the greater, having maintained water hardness not greater than the range (230 ± 20) ppm as calcium carbonate during the course of the test.
d) paper of a type which changes colour when wet.

Procedure.

Supply the test assembly with water at 20 ± 10ºC. For a single flush device operate the flushing device and, if appropriate allow the flushing cistern to refill. Carry out the long term leak test and record result. Three drops or more observed on the paper shall be considered a leak. Initiate automatic operation of the flushing device. Allow the water to rise to the marked water level within the cistern between each cycle. Carry out the short term leakage test and inspect the flushing device after a further 2, 5, 10, 50, 100, 500, 1000, 10000 and every subsequent 10000 cycles and record result. If a leak is detected the leak test interval, but not the test itself shall restart (e.g., the short term leak test shall be undertaken after a further 1, 2, 5, 10, 50, 100, 500, 1000 10000 and every subsequent 10000 cycles and record result.). Continue until 200 000 test cycles have been completed, and then subject the flushing device to the long term leak test. If, at any point during the test, three leaks have been detected, the test terminates and four further flushing devices shall be subjected to the same test, which again terminates if three leaks have been detected for any one of the flushing devices. Every 7 days check the water hardness is within 230 ± 20 ppm of calcium carbonate and record the result.

For flushing devices with reduced flush option operate the flushing device for a full flush and if, appropriate allow the cistern to refill. Carry out long term leak test and record the result. Three drops or more observed on paper shall be considered a leak. The test then continues with the sequence three reduced flushes activated followed by a maximum flush. The flushing device shall be subjected to the short term leak test after 2, 5, 10, 50, 100, 500, 1000, 10 000 and every 10 000 flushes (maximum and reduced flushes each counting as one flush) and record the result. If a leak is detected the leak test interval, but not the test itself shall restart (e.g., the short term leak test shall be undertaken after a further 1, 2, 5, 10 50, 100, 500, 1000, 10 000 and every 10 000 flushes cycles) and record the result. Continue until 200 000 test cycles have been completed, and then subject the flushing device to the long term leak test and record the result. If at any point during the test, three leaks have been detected, the test terminates and four further flushing devices shall be subjected to the same test, which again terminates if three leaks have been detected for any one of the flushing devices.

The flushing device shall be inspected for wear at the same frequency as the short term leak test. If the flushing device or any of its operating linkages suffers structural failure that affects operation, the test terminates.

Expression of results.

Record compliance or any failure to comply, with the requirements.

5. ACCEPTANCE CRITERIA

When tested as described above, the flushing device shall not undergo any failure or permanent distortion of any components including linkages that prevents normal operation of the mechanism. This will be deemed as a failure.

No more than 2 instances of leakage are permitted. A Leak is defined as being visible discharge of water amounting to more than 3 separate drops. If the first flushing device fails the test, the four devices subsequently tested must all satisfy the requirements.