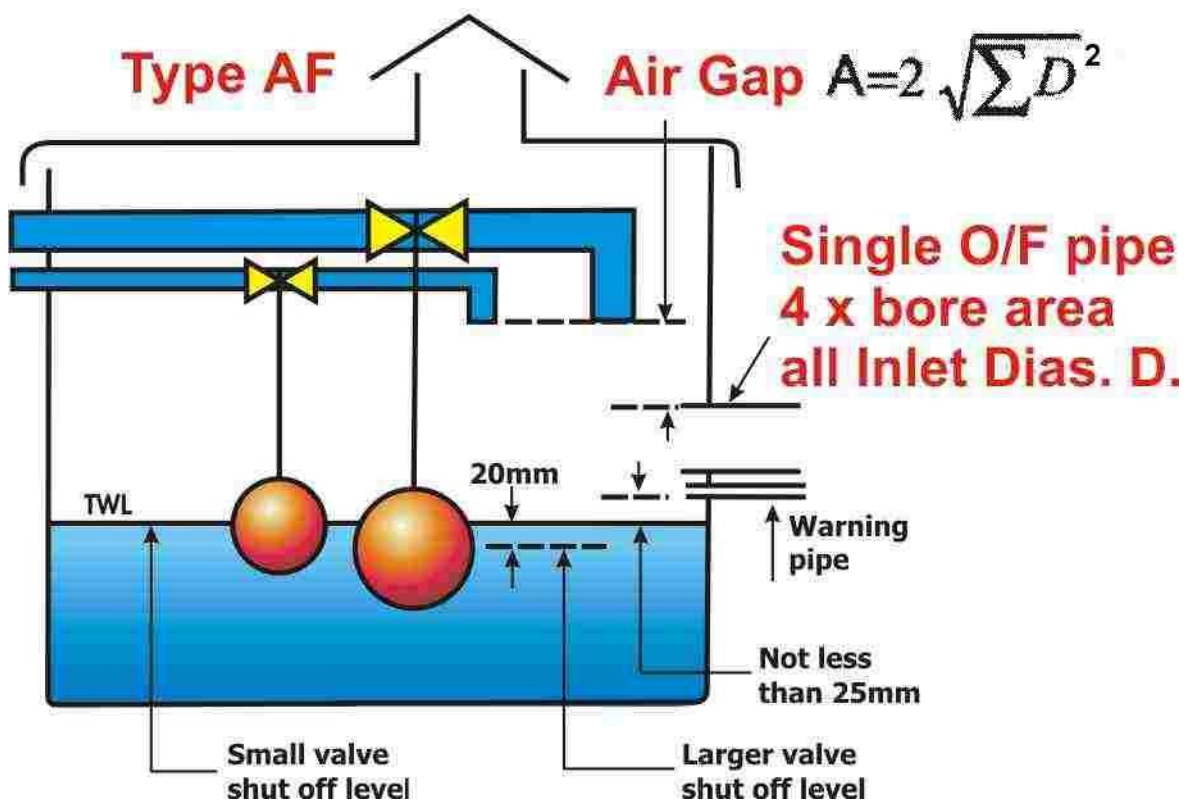


Cistern Inlet Calculations for Type AF or AG Water Regulation compliant Air Gaps for Multiple Inlets to a Cistern or Tank

The new BS EN 14622 and 14623 Standards explained.

Advised below are methods of determining the relative Air Gap values for multiple inlets feeding cisterns and tanks compliant with UK Water Regulations.



For the example advised above the required Air Gap (A) is determined by the formula depicted below.

$$A = 2 \sqrt{\sum D^2}$$

$$D^2$$

being the summation of all Inlet diameters squared

i.e. In other words

$$A=2 \sqrt{D_1^2 + D_2^2 + D_n^2}$$

The following practical examples explain further:

Example 1)

Tank supplied with 2 F/V Inlets, 50mm and 25mm respectively. The appropriate Type 'AF /'AG' Air Gap is advised.

$$A=2 \sqrt{50^2 + 25^2}$$

$$A=2 \sqrt{2500 + 625}$$

$$A=2 \times (55.9)$$

$$A= 111.8$$

say Air Gap = 112mm

Example 2)

Tank with 3 Inlets, say, 100mm and 2 x 50mm respectively. The appropriate Type 'AF' / 'AG' Air Gap is advised.



$$A=2 \sqrt{100^2 + 50^2 + 50^2}$$

$$A=2 \times (122.47)$$

$$A= 244.95$$

say Air Gap = 245mm

The above information is offered for guidance only. For specific information related to Water Regulation Air Gap protection please refer to the BS EN 14622 and 14623 Standards

Note: The above information is advisory only.

*Author: Ian McCrone BSc. CEng. MIMechE
Previous Chairman of ATCM*