

The **AYLESBURY**TM Float Valve Range

Delayed Action Float Valves for Water Storage Tanks

- ▶ Reliable long life cycle
- ▶ Ideal for pumped systems
- ▶ Improve water turnover
- ▶ Reduce legionella risk
- ▶ Save energy with positive pump control
- ▶ High performance and high quality

Full flow during fill
Tank capacity maximised
Fixed & variable level differential
No dribble
No water hammer
No valve bounce
Maintenance free
Suitable for type AA, AB, AF & AG air gaps



The Professional's **Choice**



The AYLESBURY™ Float Valve Range

The range of delayed action Aylesbury Float Valves manufactured in the UK by Keraflo Ltd are especially designed to provide an accurate and efficient method of controlling the level of stored water in tanks with or without raised valve chambers. All types of valve are constructed to operate over a long period without requiring maintenance.

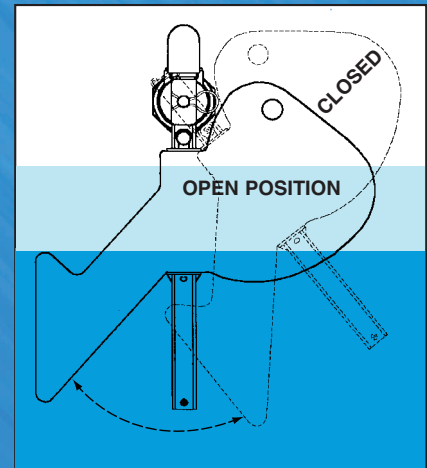
The Aylesbury Float Valve is easy to install; with the “up and over” discharge arrangement facilitating either Type AA, AB, AF or AG air gap requirements under the New Water Regulations.



AYLESBURY ‘K’ TYPE

The weighted key-shaped float which is supplied with Aylesbury ‘K’, ‘KX’ & ‘KA’ Type float valves can be accurately set in a number of positions on the brass float arm, actuating the valve at a predetermined difference in water level, driving it fully open or fully closed without water hammer.

This positive action avoids dribble, reduces noise and allows full flow until the selected closed level is reached. Inherent in the design is a non-adjustable operating differential in water level between opening and closing of approximately 75mm.



Sizes:

1/2"	3/4"	1"	1 1/4"	1 1/2" (SF)	1 1/2" (HF)	2" (SF)
15mm	20mm	25mm	32mm	40mm	40mm	50mm

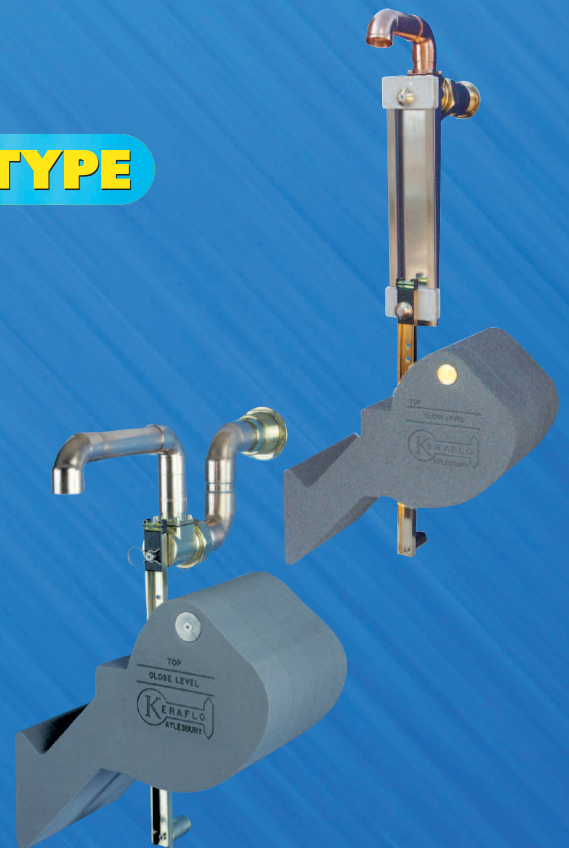
SF - Standard Flow HF - High Flow

AYLESBURY ‘KA’ ‘KX’ & ‘KAX’ TYPE

Identical in operation to the ‘K’ Type, the Aylesbury ‘KA’ ‘KX’ & ‘KAX’ Type Valves have extended drops and are suitable for raised valve chambers.

They are primarily designed to fit into chambers or boxes in the covers of tanks calling for air gaps or where maximum tank capacity is required.

To assist with compliance of air gap requirements the valve discharge is further raised above the centre line. The ‘KAX’ is especially suitable for Type AA & AB air gaps where valve sizes greater than 1” are needed.



‘KA’ & ‘KX’ Sizes:

3/4"	1"
20mm	25mm

‘KAX’ Sizes:	1 1/4"	1 1/2" (SF)	1 1/2" (HF)	2" (SF)
	32mm	40mm	40mm	50mm

SF - Standard Flow HF - High Flow

The AYLESBURY™ Float Valve Range

The Aylesbury Float Valve is ideal for pumped systems as the open to closed 'on/off' operation of the valve avoids pump hunting and water hammer. The set level is unaffected by pressure fluctuation and there is no seat or washer to wear.

The standard DZR brass-bodied valve is common to all valve types. The radical design of the puncture proof float, combined with the unique technology of the valve almost entirely eliminates stress on the tank wall fixing point and can be readily fitted to maximise tank capacity.

AYLESBURY 'KB' TYPE

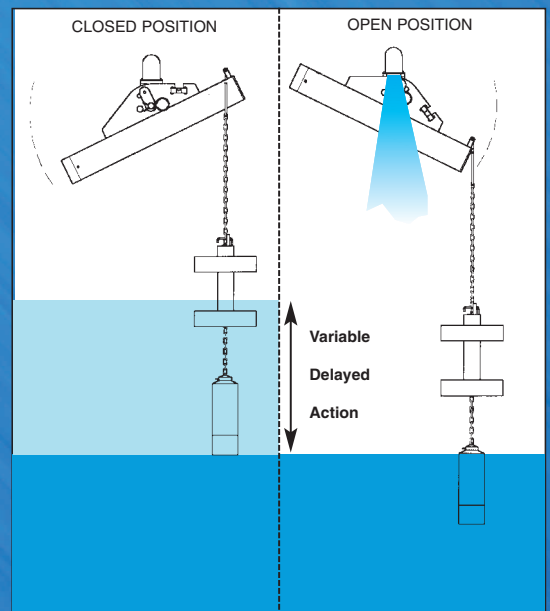
The Aylesbury 'KB' Type Valve offers fully variable operating differential between opening and closing water level settings.

The valve is operated by a transfer of weight in an actuator tube which causes the valve to open or close. The arrangement of the float and buoy assembly produces a delayed change of balance in the actuator as the water level alters. As the total assembly is relatively light and there are no pressure related stresses there is no need for supporting structures.

The versatility of the Aylesbury 'KB' Type makes it suitable for installation either direct into a tank or into a raised valve chamber particularly where air gaps are required. Changes in water levels and differentials can be made quickly by the installer or maintenance engineer without tools. This feature is particularly useful where water demand changes either due to seasonal factors, building occupancy or where the commissioning of a facility is phased, as it reduces the risks associated with excess water being stored for too long.

The unique design makes this valve ideal for use with pumped systems, water treatment plants and many other applications including:

- Industrial tanks
- Pumped systems
- Rain (grey) water tanks and reservoirs
- Process tanks
- Industrial feed and expansion tanks
- Underground tanks



Sizes:

3/4"	1"	1 1/4"	1 1/2" (SF)	1 1/2" (HF)	2" (SF)	2" (HF)	2 1/2" (SF)	3" (RB)
20mm	25mm	32mm	40mm	40mm	50mm	50mm	65mm	80mm
			SF - Standard Flow		HF - High Flow		RB - Reduced Bore	

The AYLESBURY™ Float Valve Range

AYLESBURY 'KB' TYPE Type Valves Applications

Aylesbury 'KB' Type valves have a variable delayed action and feature a chain in place of a rigid float arm - enabling virtually unlimited opening and closing levels. This allows for a considerable drop from the valve to the water level overcoming the problems associated with drop arms.

'KB' Valves are particularly suitable to meet the requirements of the **New Water Regulations** where air gaps are required. In addition their flexibility can assist with **Improving water quality** where **Buildings are partially commissioned or Occupancy varies**.

Air gaps for Industrial tanks - The 'KB' Type is ideal for fitting into a tank without a lid or raised valve chamber and where the vertical drop from the valve to the water level may be considerable.

Pumped systems - The adjustable and potentially large difference between opening and closing levels can allow an immense volume of water to be admitted to the tank each filling cycle. Pumps and pump sets are often controlled to run for a minimum of 3 minutes. If the water demand is satisfied before this time and an auxiliary hydraulic accumulator is not fitted, the pumps will run against a closed valve at 0% efficiency. The fill volume can be set to equal or exceed this volume thereby ensuring the pump(s) run for at least 3 minutes. Where a pump set is used solely for transferring water from a break tank to an elevated storage tank the 'KB' Valve can dispense with the need for an auxiliary hydraulic accumulator.

Pump efficiency and initial sizing can be further enhanced using a float valve with little internal resistance. Consequently the High Flow version is often better suited to these applications than the Standard Flow version which is ideal for mains applications.

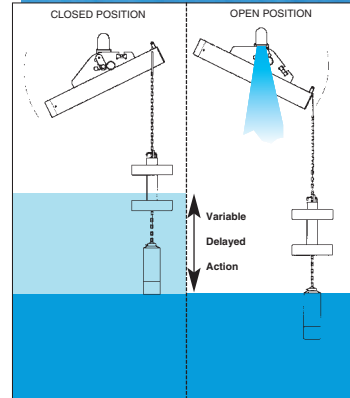
Rain (Grey) water tanks and reservoirs - For economy and environmental reasons, rain water is increasingly being used for applications where drinking water standards are not required. At times of inadequate rainfall, there is no choice but to use mains water. A valve is therefore required to admit mains water when the level in the rain water tank is low. The 'KB' valve is ideal due to a 2 m long chain allowing for a low opening level and the correct air gap requirement.

Process tanks - Tanks storing water in industrial processes are fluid category 5 requiring a Type AA or AB air gap. They may be small and irregular and the flow through the float valve may also need to be constant. 'KB' valves are ideal in these instances.

Industrial feed and expansion tanks - The water level in a large LTHW F&E tank can rise and fall several feet. Since non-domestic F&E tanks are a fluid category 5 risk, they require a Type AA air gap. The 'KB' valve is perfect because it can be mounted high in the tank (maximising the air gap) and the opening level can be set low, allowing sufficient volume for expansion. Maximum temperature 60°C.

Underground tanks - Water storage tanks can be buried underground. Facilitating access to a float valve in this situation is difficult, so it is desirable to mount the valve above ground. Provided the water is ducted from the valve, a 'KB' valve can be mounted above ground with only the closing float and opening buoy in the tank.

Hygienic air gap - Occasionally water needs to be stored to drinking water standards but is considered to be a fluid category 4 or 5 risk. Such an arrangement is described as a "hygienic air gap" and is to be found in dental surgeries and food



processing equipment. The height required to accommodate: - screened slots, free board, overflow, warning pipe and air gap to water level is considerable and often beyond the reach of conventional ball

valves. Fitting a "drop arm" can provide the necessary drop but these suffer from a range of problems including the unscrewing of the drop arm or at the valve connection and failure of the valve to close due to reduced leverage in the open position.

IMPROVED WATER QUALITY

In addition to the benefits of having the facility to match stored capacity to occupancy, the KB valve also reduces the risk of stagnation and stratification due to its high discharge velocity. This, in turn, assists in reducing the risk of levels of bacteria, including legionellae bacterium. The valve discharge diameter is optimised to provide a vertical jet that stirs up the stored water.

Partially commissioned buildings - Water over capacity during initial construction and prior to full occupancy can cause problems. 'KB' valves allow the depth (hence volume) of water in the tank to be set according to the occupancy.

Varying occupancy - Water storage capacity is calculated according to the type of building and occupancy. For example, the required water capacity for peak season in tourist hotels or during term time in educational establishments is vastly more than that required during low season or holidays. During these lower demand times the stored water is not consumed and replenished every day; indeed it may well take weeks for the water to be turned over. Naturally this can lead to stagnation and a temperature rise in excess of 20°C where the legionellae bacterium can proliferate increasing the risk of legionnaires disease and Pontiac fever.

The 'KB' valve is the simple solution since open and closing levels can be simultaneously adjusted by raising or lowering the chain attached to the valve actuator. This operation is quick and does not require tools.

The 'KP' TYPE Float Valve Kit

The 'KP' Type Float Valve Kit comprises an in-line control valve together with an Aylesbury 'KB' Type Valve acting as a pilot. The Aylesbury valve offers almost infinitely variable independent opening and closing water level settings. With the delayed action and on/off operation it is ideal for mains or pumped systems.

Control Valve - Flexible installation: Can be mounted in one of three positions.

- Outside the tank at floor level.
- Outside the tank above the tank water level.
- Inside the tank above the tank water level.

High kv Value: The standard 'KP' Control Valve offers excellent flow rate performance.

Raised Valve Chamber: Can be small as it only has to accommodate a 3/4" 'KB' and discharge assembly.

Facilitates Air gaps: The Aylesbury 'KB' Valve is supplied with 2m long adjustable chain as standard allowing the closing level to be set below any combination of Weir Slot, Overflow and Warning device.

Quiet operation – Valves are quieter than conventional valves due to the elimination of Water Hammer, Valve Bounce, "Hiss" and Dribble.

Ease of Installation – Conventional Float Valves above 3" are heavy and cumbersome often necessitating two installers. When the 'KP' Control Valve is mounted outside the tank at floor level, no heavy lifting is required.

Accessibility – An externally mounted Control Valve can be easily inspected, adjusted and – if required – serviced.

Re-chlorination of the tank is not necessary provided the tank lid is not removed.

Multiple Discharges – To reduce the risk of stagnation two or more discharges can be connected to the outlet of the control valve. Since the Filling Pipe is only subjected to low pressure, thin wall PVC pipe can be used. The 'KP' Valve can also be configured to service twin/partitioned tanks.

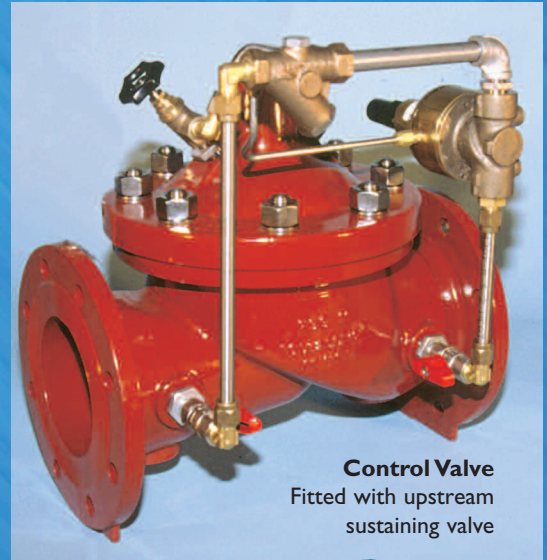
Shallow tanks – 'KP' valves can operate in tanks of only 1 metre in depth.

Deep tanks – The standard Aylesbury 'KB' Pilot valve enables an opening level 2m below the Pilot valve. A longer chain can be supplied to control levels greater than 2m.

Optional Extras - A range of accessories are available as original equipment or as retrofits. Including -

- Upstream Pressure Sustaining Regulator - the Control Valve will regulate itself to leave the desired minimum upstream pressure (Adjustable 1 - 6 Bar).
This can also be used to provide a constant flow rate.
- Check Valve – can be fitted to the Pilot System causing the Control Valve to act as a check valve and float valve.
- Electrical solenoids, pressure gauges and other options are available.

Delayed Action Valves for Water Storage Tanks



Control Valve
Fitted with upstream sustaining valve



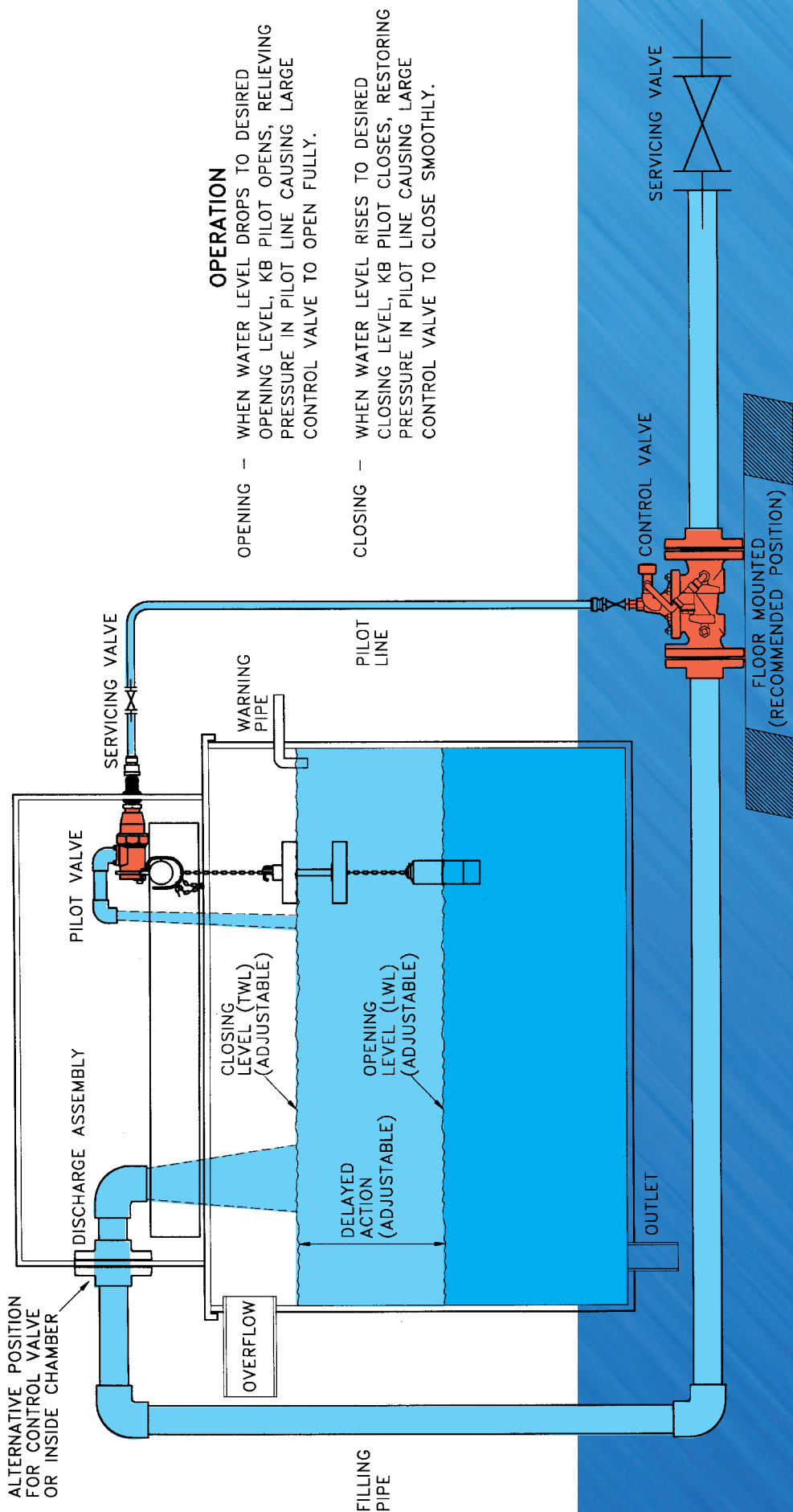
Aylesbury
'KB' Type Valve

- No Water Hammer
- No Valve Bounce
- Full Flow During Fill
- No Dribble
- Maximises Tank Capacity
- Delayed Action
- Maintenance Free
- Tank Wall Stress negligible
- No backing plate required
- Ideal for Fire Sprinkler Systems
- Suitable for all types of Air gap applications

Sizes:

4"	6"	8"
100mm	150mm	200mm

The 'KP' TYPE Float Valve Kit



All the advantages of Equilibrium Valves Plus

'Virtually' Indestructible:

The heart of the valve incorporates pressure compensated rotating ceramic discs with ports where in open position the actuator aligns ports and in closed position the actuator misaligns ports.

Revolutionary Shaped Puncture Proof Float:

Made from Polyethylene closed cell PE foam which is CFC Free and chemically and biologically inert.

Extended Durability:

Non-wearing ceramic disc seal.

Water Pressure:

Suitable for 0 -10 Bar.

Temperature Range:

1 - 60°C

Maintenance Free:

Designed to operate over a long period without requiring maintenance.

Backsiphonage Protection:

"Up and Over discharge" as for BS1212 part 2 to facilitate easier Air gap compliance.

Delayed Action:

'K' 'KA' 'KX' & 'KAX' Types:

Non adjustable operating differential between opening and closing of 75mm.

'KB' & 'KP' Type:

Fully variable operating differential between opening and closing up to 1820mm as standard.

Filterball Service Valves

Incorporating coarse
particle strainer with easy
clean facility



The 'Filterball' service valve is an on-off spherical valve with integral conical strainer which is easy to inspect and remove for normal maintenance operations without draining down.

In the open position, the valve has two important functions. The supply water passes through the strainer safeguarding the storage vessel and the Aylesbury float valve against the ingress of coarse undesirable particles.

All parts conform to requirements for potable water systems.

Available in sizes 1/2" (15mm) to 2" (50mm)
WBS Approved product.

The fitting of a service valve in conjunction with a float valve is mandatory.

The **AYLESBURY**TM Float Valve Range

Delayed Action Float Valves for Water Storage Tanks

Full Technical Specifications or advice
on the New Water Regulations
available on request from Keraflo:

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The Aylesbury valve is a patented product
Keraflo Ltd reserve the right to alter designs without prior
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Keraflo Ltd manufacturers of the
Aylesbury Float Valve Range and
suppliers of specialist equipment for
cold water services.