



## KP FLOAT VALVE KIT

### DESIGN AND PRE - INSTALLATION INFORMATION

#### **Installation of valves should be in accordance with The Water Supply (Water Fittings) Regulations 1999 and BS6700:1997 Para. 2.2.4**

KP Type Valves offer a flexible solution to the installation of large Float Operated Valves. KP Type Valves are suitable for most cold water storage tanks. All KP Type Valves are "Delayed Action" - providing an on/off characteristic. When installing a Twin/Partition Tank Kit (see drawing Ki039\*, refer to the Twin/Partition Notes in addition to these. Please note the following:-

**Principle of Operation - Refer to Drawing Ki035\*** The KP Float Valve maintains the water level in a storage tank to the desired level. The standard pilot for the Control Valve is an Aylesbury KB Type Float Valve which enables a wide range of opening and closing levels to be set. Other types can be used as an option.

**Opening -** When the water level in the tank drops to the desired level, the Aylesbury KB Pilot Valve opens, relieving the pressure in the Pilot Line causing the Control Valve to open

**Closing -** When the water level rises to the desired closing level, the Aylesbury KB Pilot Valve closes, causing the Control Valve to close smoothly.

**Control Valve Location** There are four options for the mounting of the Control Valve -

1. Outside the tank at floor level.
2. Outside the tank above the tank water level.
3. Inside the tank above the tank water level.
4. Vertically in the rising main (up to and including 150mm (6 inch) only). **Note: This option does not require a strainer.**

For new installations, options 1 or 4 are recommended since they facilitate installation, maintenance and avoid tank wall stress. For Twin/Partition tank applications, the Control Valve must be mounted as option 1 or 4.

**Strainers** It is recommended that a coarse particle strainer is installed upstream of the control valve to prevent debris entering it unless the control valve is positioned as in option 4.

**Aylesbury KB Pilot Valve Location** The Aylesbury KB Pilot Valve must be inside the tank above the water level. Refer to the KB Installation Instructions. To reduce the effects of turbulence, it is recommended that the KB Valve is mounted away from the main discharge, e.g. on the opposing wall of a raised valve chamber - see drawing Ki035\*.

**Stilling Wells & Baffles** Generally a stilling well around the Aylesbury KB Pilot Float is not necessary. However, if the Float is unavoidably close to the discharge, calming measures around the Float may be required. This could consist of a large plastic tube - at least 150mm internal diameter.

**Discharge Position** If an air gap is required for back flow protection, the discharge must be above the water level. If an air gap is not required, the discharge could be connected towards the bottom of the tank.

**Servicing Valves** A servicing valve (not supplied) must be fitted upstream of the Control Valve. A 15mm Servicing Valve is supplied for the Aylesbury KB Pilot Valve and this must be fitted as near as is reasonably practical to the float operated valve.

**Optional Extras** A range of accessories are available as original equipment or as retrofits. These include -

- Upstream Pressure Sustaining Regulator - the Control Valve will regulate itself to leave the desired minimum upstream pressure (Adjustable 1 - 6 Bar).
- Multiple Discharges - Two or more discharges can be fitted to one tank. A kit is also available for Twin tank / Partitioned Tanks. Please contact Keraflo for specific details.



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Refer to drawing Ki035\* - KP Type Valve Kit.

#### **Packaging**

The KP Type Float Valve Kit is supplied in three packages -

- The Control Valve.
- ¾" Aylesbury KB Type Float Valve.
- KP Type Float Valve Accessories.

#### **Planning**

Before Installation, decide upon the location of the various components. Refer to the Design and Pre-Installation Information and the Consulting Engineer's plans as appropriate.

#### **Aylesbury KB Pilot Valve Installation**

1. Refer to the Installation Instructions supplied with the KB Type Valve.
2. Fit the ¾" female - 15mm connector (supplied) to the KB Tail using a sealant.

#### **Control Valve Installation**

1. Where the Valve is to be fitted to a newly installed system, flush through the supply pipes before connecting the Valve.
2. Connect the Control Valve **Inlet** to the supply flange using an appropriate gasket and bolts. **Note the arrow on the side of the Valve indicating the direction of flow.**
3. Connect the Filling Pipe from the Control Valve outlet to the tank. The right-angle discharge assembly and flanges are normally supplied - the U-PVC pipe and fittings are not supplied. Since the discharge pipe is not subjected to high pressures, class **C** U-PVC pipe is suggested. When using U-PVC flanges, take care not to over-tighten the bolts particularly when mating against raised spigot flanges - as found on the Control Valve.

#### **Connection of Pilot Line**

1. The Pilot Line fittings supplied are for 15mm pipe (outside diameter). Copper, stainless steel or plastic can be used. Please note this is subjected to the upstream supply pressure.
2. Connect the Pilot Line to the Aylesbury KB Pilot Valve (the ¾" - 15mm compression fitting should have been fitted earlier). Connect the 15mm Servicing Valve (supplied) close to the Aylesbury KB Valve.
3. Continue the Pilot Line from the Servicing Valve to the top cover of the Control Valve. A 15mm compression fitting is already fitted to the isolating valve leading from the top cover.

#### **Commissioning & Testing**

1. Set the Opening and Closing Levels of the Aylesbury KB Pilot to the desired levels - see Aylesbury KB Installation Instructions.
2. Gently open the main Servicing Valve.
3. Set the Closing Speed Valve - see Closing Speed Valve.

#### **Closing Speed (CS) Valve**

The CS Valve avoids excessive pressures (Water Hammer) developing in the supply pipe as the Control Valve Closes. The CS Valve is the slotted screw with lock nut found on the top cover of the Control Valve. The CS Valve should be set to provide a delay of 2 - 6 seconds between the Aylesbury KB Pilot Valve closing and the Control Valve closing. Turning the CS Valve clockwise will increase the delay and vice versa. If a "bang" is heard when the Control Valve closes, reduce the speed of closure by turning the CS Valve clockwise.



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### Flow & Pressure Regulation

If the flow rate is too great or the supply pressure drops too much when the Control Valve is open, restrict the flow by means of a suitable Valve. Keraflo can supply automatic devices which can easily be fitted to the Pilot System of the Control Valve.

### Servicing & Maintenance

No routine maintenance should be necessary. If there is debris contained in the water, the Y strainer in the Pilot System on the Control Valve may eventually start to block (symptom - Control Valve Closing time will increase). To clean - isolate supply by closing the Isolating Valve to the Pilot Line, and the Spherical Valve between the Control Valve and the Y Strainer.

### Helpline

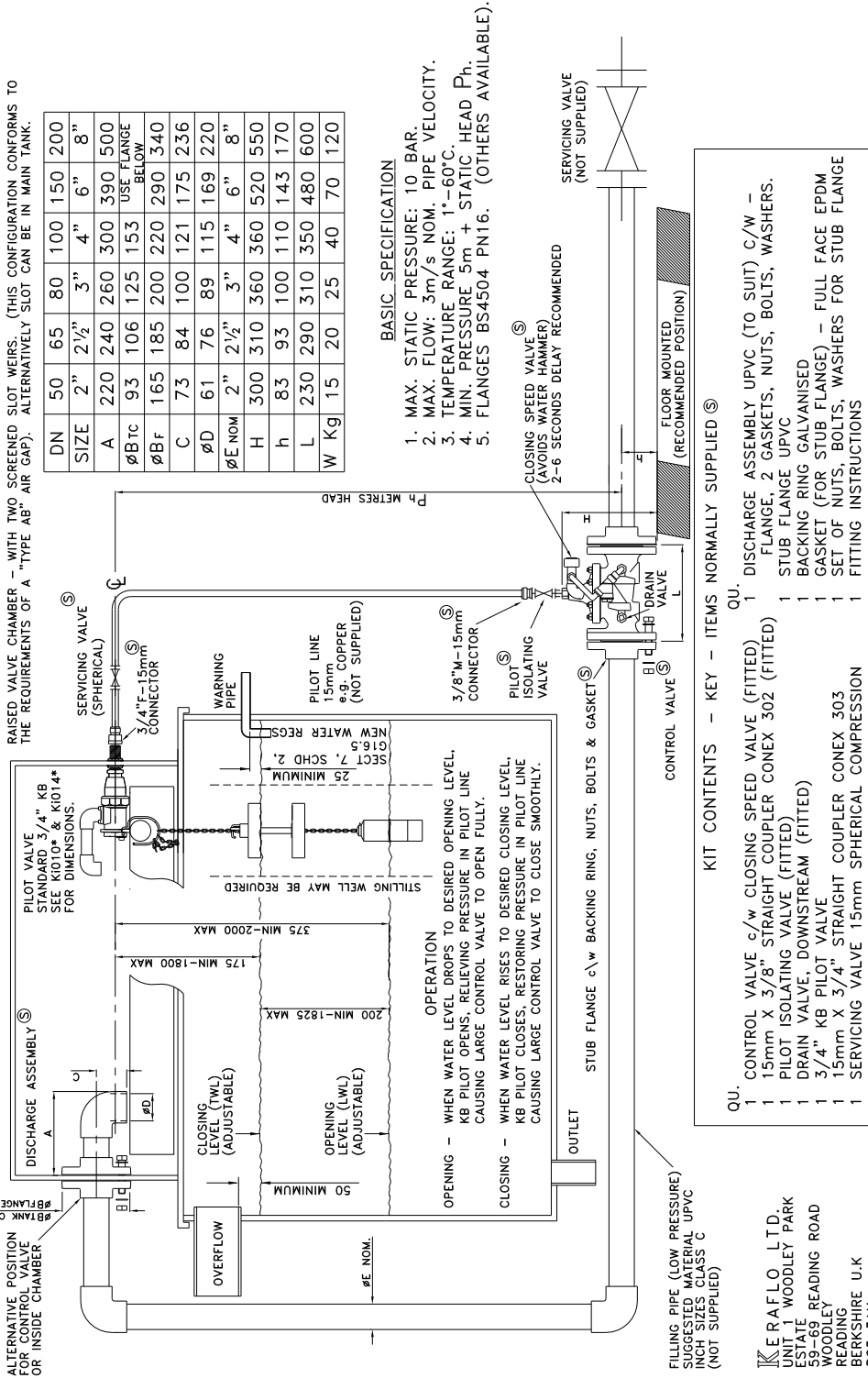
Please telephone Keraflo if further advice or information is required.

ATTACHED DRAWINGS	
KI034G	Aylesbury KP Type Dimensions – All sizes
KI035E	Aylesbury KP Type Dimensions – Standard sizes
KI036B	Aylesbury KP Type – Side View



# KP FLOAT VALVE KIT

## THE KP TYPE FLOAT VALVE KIT - ALL SIZES



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# KP FLOAT VALVE KIT

## THE KP TYPE FLOAT VALVE KIT - STANDARD SIZES

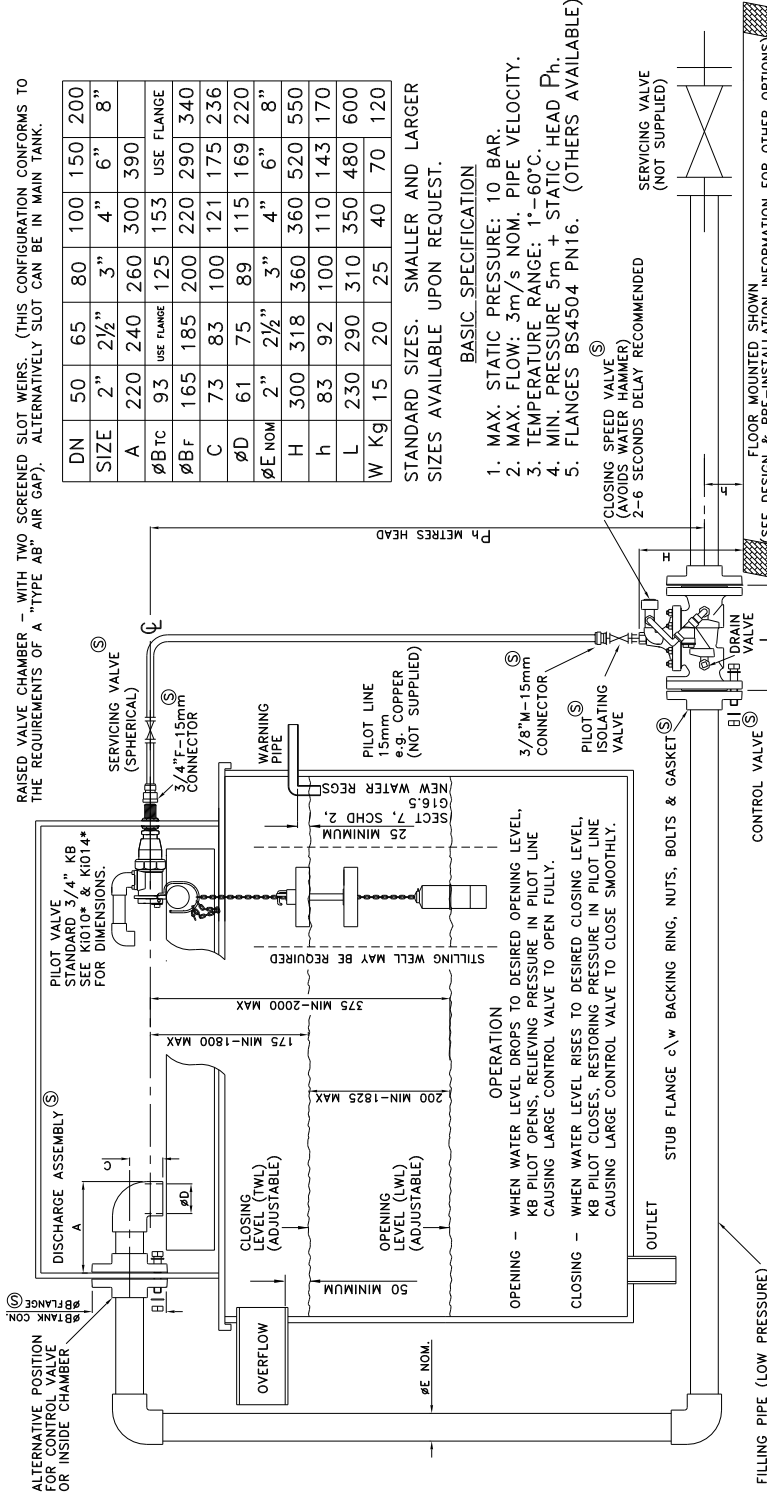
RAISED VALVE CHAMBER - WITH TWO SCREENED SLOT WEIRS. (THIS CONFIGURATION CONFORMS TO THE REQUIREMENTS OF A "TYPE AB" AIR GAP). ALTERNATIVELY SLOT CAN BE IN MAIN TANK.

DN	50	65	80	100	150	200
SIZE	2"	2½"	3"	4"	6"	8"
A	220	240	260	300	390	
ØB TC	93	USE FLANGE	125	153	USE FLANGE	
ØB F	165	185	200	220	290	340
C	73	83	100	121	175	236
ØD	61	75	89	115	169	220
ØE NOM	2"	2½"	3"	4"	6"	8"
H	300	318	360	360	520	550
h	83	92	100	110	143	170
L	230	290	310	350	480	600
W Kg	15	20	25	40	70	120

STANDARD SIZES. SMALLER AND LARGER SIZES AVAILABLE UPON REQUEST.

### BASIC SPECIFICATION

1. MAX. STATIC PRESSURE: 10 BAR.
2. MAX. FLOW: 3m<sup>3</sup>/s NOM. PIPE VELOCITY.
3. TEMPERATURE RANGE: 1°-60°C.
4. MIN. PRESSURE 5m + STATIC HEAD P<sub>h</sub>.
5. FLANGES BS4504 PN16. (OTHERS AVAILABLE).



**OPERATION**  
 OPENING - WHEN WATER LEVEL DROPS TO DESIRED OPENING LEVEL, KB PILOT OPENS, RELIEVING PRESSURE IN PILOT LINE CAUSING LARGE CONTROL VALVE TO OPEN FULLY.  
 CLOSING - WHEN WATER LEVEL RISES TO DESIRED CLOSING LEVEL, KB PILOT CLOSSES, RESTORING PRESSURE IN PILOT LINE CAUSING LARGE CONTROL VALVE TO CLOSE SMOOTHLY.

- QU. KIT CONTENTS - KEY - ITEMS NORMALLY SUPPLIED**
- 1 CONTROL VALVE c/w CLOSING SPEED VALVE (FITTED)
  - 1 15mm x 1/2" STRAIGHT COUPLER (FITTED)
  - 1 PILOT ISOLATING VALVE (FITTED)
  - 1 DRAIN VALVE, DOWNSTREAM (FITTED)
  - 1 3/4" KB PILOT VALVE
  - 1 15mm x 3/4" STRAIGHT COUPLER
  - 1 SERVICING VALVE 15mm SPHERICAL COMPRESSION
- QU. DISCHARGE ASSEMBLY UPVC (TO SUIT) C/W -**
- 1 FLANGE, 2 GASKETS, NUTS, BOLTS, WASHERS.
  - 1 STUB FLANGE UPVC
  - 1 BACKING RING GALVANISED
  - 1 GASKET (FOR STUB FLANGE) - FULL FACE EPDM
  - 1 SET OF NUTS, BOLTS, WASHERS FOR STUB FLANGE
  - 1 FITTING INSTRUCTIONS

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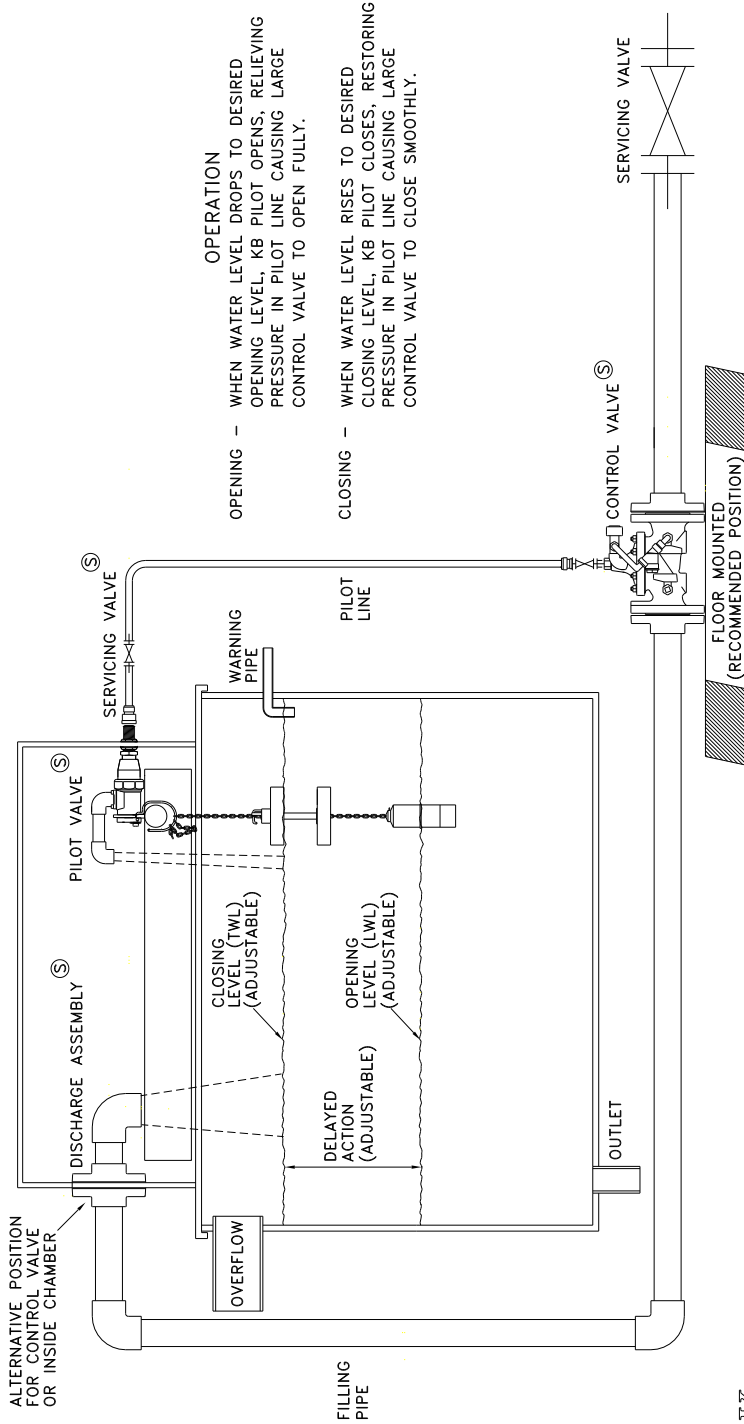
GENERAL NOTES  
 ALL DIMENSIONS IN mm.  
 KERAFLO RESERVE THE RIGHT TO CHANGE SPECIFICATIONS, DESIGN AND MATERIALS WITHOUT PRIOR NOTICE.

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**CLOSING** - WHEN WATER LEVEL RISES TO DESIRED CLOSING LEVEL, KB PILOT CLOSSES, RESTORING PRESSURE IN PILOT LINE CAUSING LARGE CONTROL VALVE TO CLOSE SMOOTHLY.

KIT CONTENTS - KEY - ITEMS NORMALLY SUPPLIED

QU.	ITEMS NORMALLY SUPPLIED
1	CONTROL VALVE c/w CLOSING SPEED VALVE
1	3/4" KB PILOT VALVE
1	DISCHARGE ASSEMBLY UPVC (TO SUIT)
1	SERVICING VALVE 15mm SPHERICAL COMPRESSION
1	15mm X 1/2" STRAIGHT COUPLER (FITTED)
1	15mm X 3/4" STRAIGHT COUPLER
1	STUB FLANGE UPVC
1	BACKING RING GALVANISED
1	GASKET FOR STUB FLANGE EPDM
1	SET OF NUTS & BOLTS FOR STUB FLANGE
1	PILOT ISOLATING VALVE
1	FITTING INSTRUCTIONS

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