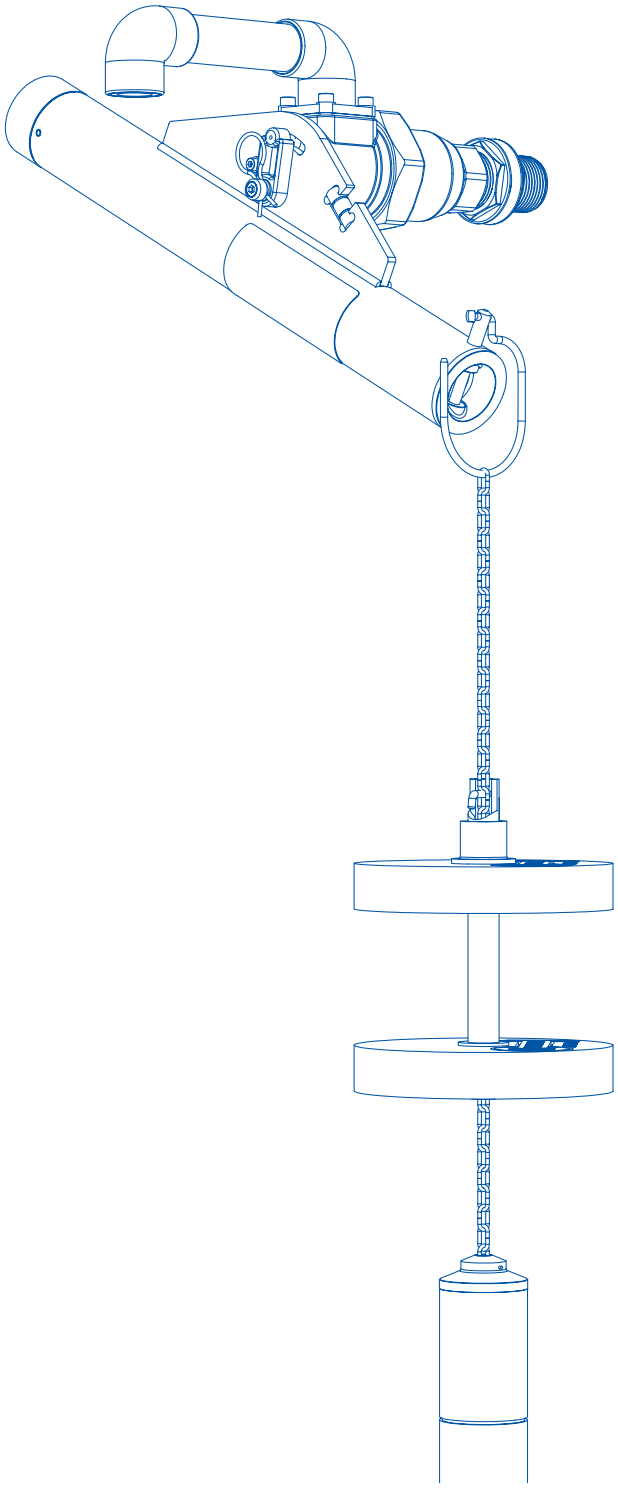
AYLESBURY

KB VALVE

INSTALLATION GUIDE



FOR VALVE SIZES (DN):

- ¾”(20)
- 1”(25)
- 1¼”(32)
- 1½”(40)SF
- 1½”(40)HF
- 2”(50)SF

IMPORTANT

PLEASE KEEP FOR FUTURE REFERENCE.

PLEASE READ THESE INSTRUCTIONS CAREFULLY AND REFER TO ANY DIAGRAMS BEFORE INSTALLATION.

These instructions contain important information which will help you install your **KERAFLO** delayed action float valve correctly and ensure safe use and maintenance.

For further assistance please ring our Customer Helpline: **0118 921 9920**

THORNE & DERRICK INTERNATIONAL

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KERAFLO AYLESBURY VALVES ARE UNLIKE ANY OTHER FLOAT OPERATED VALVE, BALLCOCK OR FLOAT VALVE.

KERAFLO Aylesbury delayed action float valves contain a pair of maintenance free ceramic discs.

There are rare occasions when it may be necessary to partially disassemble the valve, for example, to clear a blockage or to replace some parts.

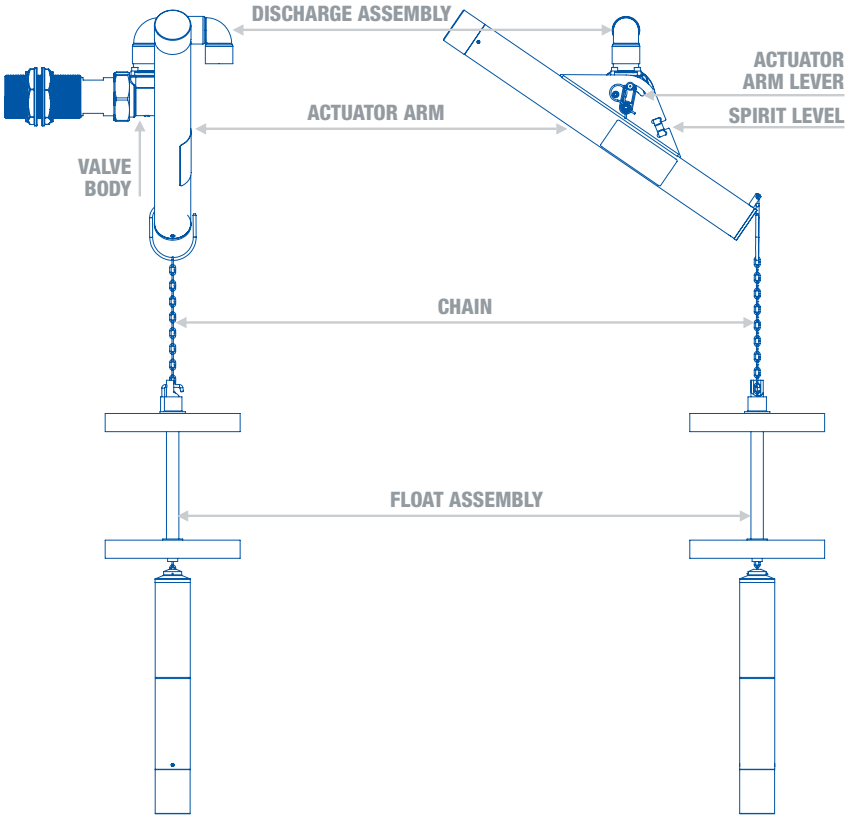
If the problem you are experiencing cannot be solved by using a spares kit contact **KERAFLO** or your supplier.

IMPORTANT

PLEASE READ THESE INSTRUCTIONS CAREFULLY AND REFER TO ANY DIAGRAMS BEFORE INSTALLATION.

INSTALLATION OF VALVES SHOULD BE IN ACCORDANCE WITH THE WATER SUPPLY (WATER FITTINGS) REGULATIONS 2010 AND BS 8558:2011.

TANKS AND PIPES SHOULD BE DISINFECTED USING THE PROCEDURES IN BS EN 806-4:2010 SECTION 6: COMMISSIONING.



5 YEAR EXTENDED WARRANTY

Once the valve has been installed and tested, complete and apply the tank label to the tank and send a photograph of the label in place to warranties@keraflo.co.uk in order to receive a full five years' extended warranty for the valve. See warranty sheets for full details.

PRE-INSTALLATION CHECKS

MINIMUM TANK DEPTH:

A KB Type valve can be used in a tank that is at least 1.3m deep for KB40HF & KB50SF and 1.0m for KB20, KB25, KB32, KB40SF.

RAISED VALVE CHAMBERS:

Use a KAX or KB Type valve for tanks with raised valve chambers.
DO NOT USE A K TYPE VALVE FOR THESE TANKS.

OPERATING SPACE:

Check for sufficient clearance. The working dimensions are shown on the attached drawings.

OVERFLOW/WARNING PIPES:

Check the position of the overflow and warning pipe (where fitted).
See drawing on page 7.

TURBULENT WATER:

Exceptionally turbulent waters, such as in cooling towers, should be avoided directly beneath the float. Calming measures such as baffle plates, still ponds etc. should be used in these installations.

FLANGED TANKS:

The design of the valves, allows sufficient clearance between the float and most internal tank flanges and ribs (dimension G shown on drawing on page 7). The valve backnuts may be adjusted to enable fitting to tanks with large flanges; provided a minimum of 20mm exists between the float and tank wall throughout the arc of the float.

ROUND TANKS:

Minimum tank diameters required.

VALVE	¾”	1”	1¼”	1½”SF	1½”HF	2”S F
MIN TANK DIAMETER (M)	0.5M	0.5M	0.6M	0.6M	0.8M	0.8M

SLOPING TANK WALL:

The wall to which the Aylesbury KB Valve is to be attached must be vertical. If the wall around the fixing hole is sloped, tapered washers must be used. These should be available from the tank supplier.

PIPEWORK SUPPORT:

KERAFLO Aylesbury valves create virtually no tank wall stress. It is therefore not necessary to provide additional support to the pipework as long as the Code of Practice for the Support of Pipework in general is met.

ISOLATING VALVE:

An isolating valve must be fitted as near as is reasonably practicable to the **KERAFLO** valve.

INSTALLATION INSTRUCTIONS

The valve is supplied with the actuator arm and discharge assemblies detached. To avoid damage it is recommended, where possible, to fit both of these assemblies **AFTER** installing the valve in the tank.

1. Before fitting the valve, flush the supply pipes to clear all debris.
2. Remove and retain the double-R clip and actuator lever from the valve body.
3. Remove and discard the red protective cap from the tail.
4. Remove and retain one backnut.
5. Insert the valve tail through the hole in the tank wall, replace the backnut with the flanged side against the tank wall.
6. Connect the supply pipe then hand tighten the backnut to hold the valve in place. To prevent the valve turning when tightening the pipe fitting, use either a wrench or a spanner on the valve tail where indicated in Diagram 2. **DO NOT USE A WRENCH ON ANY OTHER PART OF THE VALVE.**
7. Fit the actuator arm over the spigot and refit the actuator lever, ensuring that the pin on the actuator lever engages with the actuator disk in the valve body. **THE HANGER MUST BE ON THE RIGHT AS SHOWN IN DIAGRAM 3.**
8. Refit the double-R clip on to the spigot, retained at step 2, to hold the actuator lever in place.

WARNING!

THE BUILT-IN SPIRIT LEVEL MUST BE USED TO ALIGN THIS VALVE. FAILURE TO FOLLOW THE PROCEDURE LISTED BELOW WILL PREVENT THE VALVE OPERATING CORRECTLY.

INSTALLATION OF VALVES SHOULD BE IN ACCORDANCE WITH THE WATER SUPPLY (WATER FITTINGS) REGULATIONS 2010 AND BS 8558:2011.

TANKS AND PIPES SHOULD BE DISINFECTED USING THE PROCEDURES IN BS EN 806-4:2010 SECTION 6: COMMISSIONING.

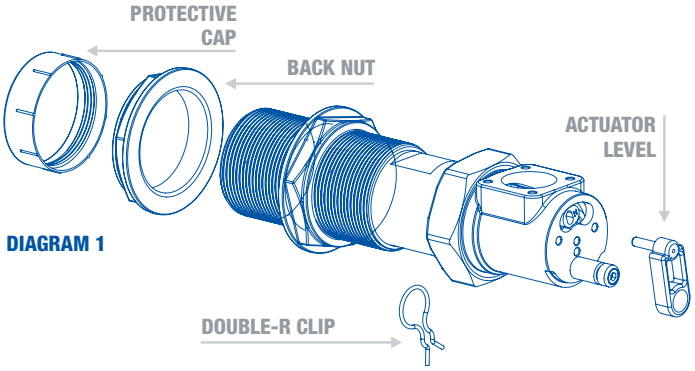


DIAGRAM 1

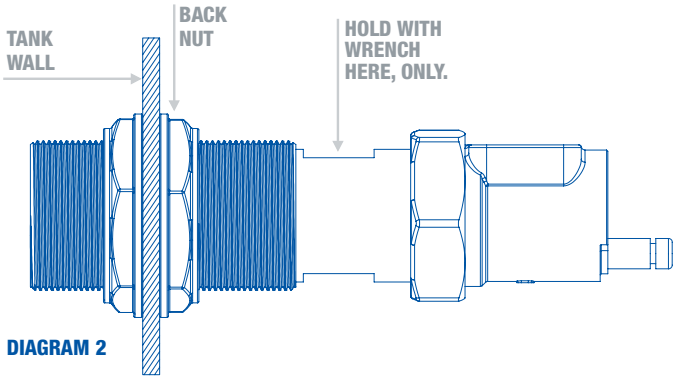


DIAGRAM 2

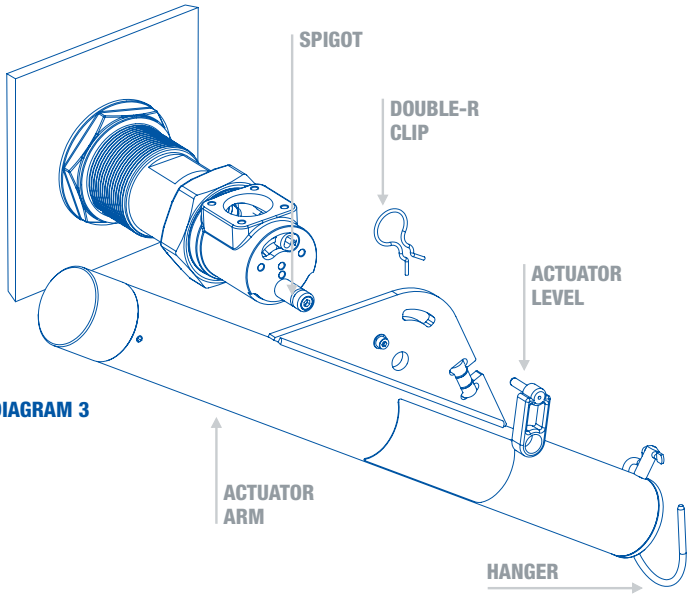


DIAGRAM 3

9 The actuator tube should be tilting down to the left (brass end lowest). **NOTE:** the chain is not connected at this stage.

10 Rotate the tail of the valve with a wrench until the spirit level indicates that the valve is **ABSOLUTELY LEVEL**. The actuator tube is actually angled 26° from horizontal at this point.

11 Tighten the backnuts then **CHECK ALIGNMENT AGAIN. THE BUBBLE MUST BE PRECISELY BETWEEN THE BLACK LINES.**

12 Using the 4mm Allen key supplied, fit the discharge assembly (referring to Diagram 5 for the direction).

13 Remove and discard the protective cap from the discharge assembly, before adjusting closing level, testing and use.

14 Hang the chain on the hanger. **DO NOT CUT OR REMOVE ANY PART OF THE CHAIN; IT IS CRITICAL TO THE CORRECT OPERATION OF THE VALVE.**

15 The length of this chain determines the opening water level and the position of the float on the chain determines the closing level and the delay.

16 **CLOSING WATER LEVEL (TWL)** When the actuator tube is held horizontal, the closing water level is indicated by the base of the closing float. Identify the desired maximum water level & measure the distance from the centre line of the valve; this is X.

17 **OPENING WATER LEVEL (LWL)** When the actuator tube is held horizontal, the opening water level is indicated by a line on the opening buoy. Identify the desired minimum water level & measure the distance from the centre line of the valve; this is Y.

DIAGRAM 4

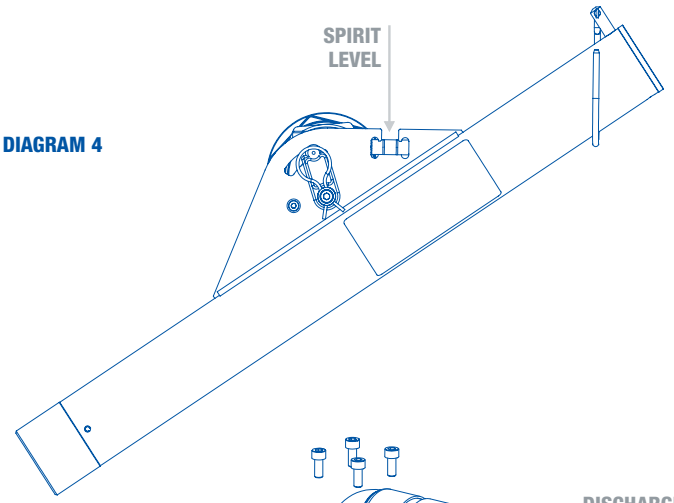


DIAGRAM 5

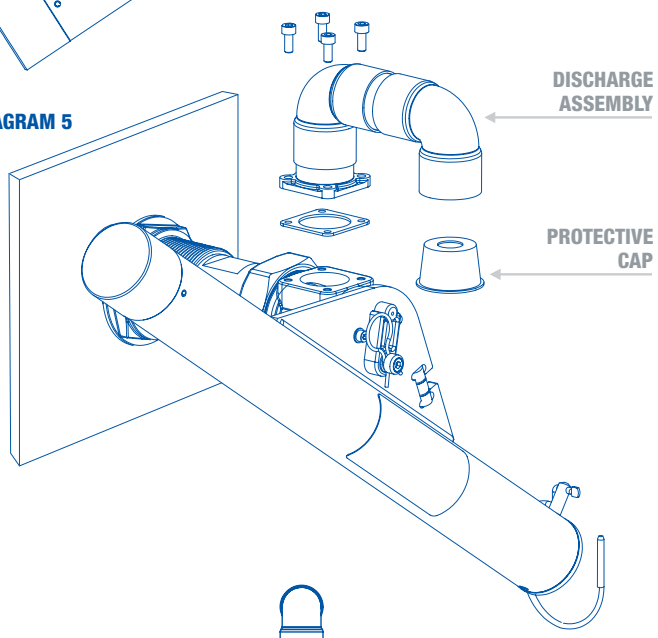
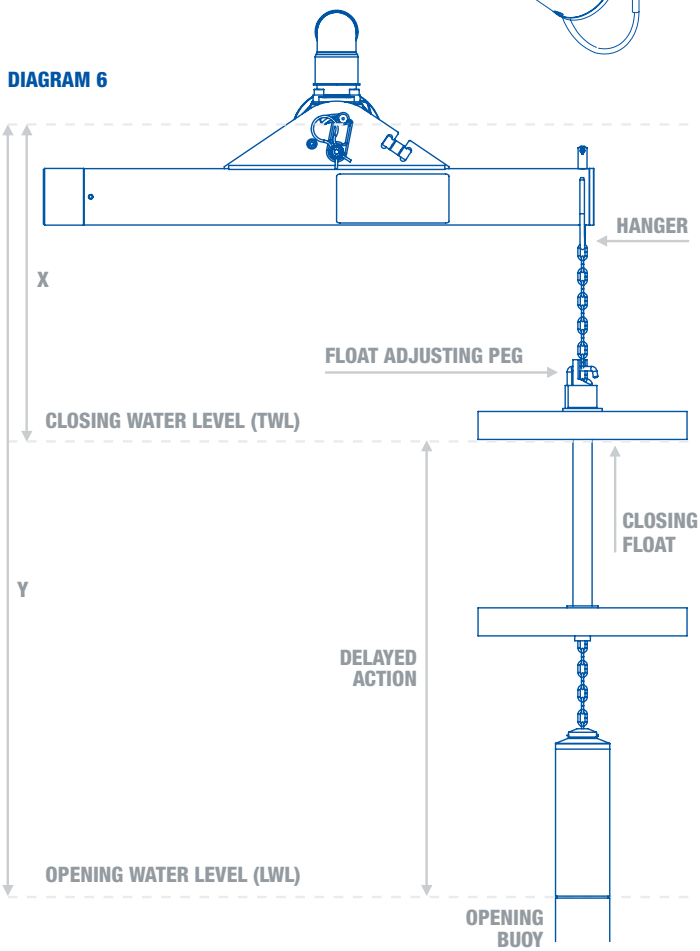


DIAGRAM 6



18 Adjust the length of the chain from the buoy to the hanger to match the following:

Chain length = Y - 190mm (20,25,32 & 40SF)

Chain length = Y - 250mm (40HF & 50HF)

Do not cut the chain, loop any excess chain on to the hanger.

19 Unhook the Float Adjusting Peg and move the float along the chain so the distance from the Hanger to the Float Peg is as follows: **X - 163mm**

20 The highest closing water level (JMIN page 7) can be achieved by having no spare chain links between the hanger and the float adjusting peg. The lowest closing water level (JMAX page 7) can be achieved by having the float touching the top of the opening buoy whilst using all of the available chain (last link on hanger).

21 Applications where the top water level (TWL) can rise after the valve has closed will cause the chain to become slack. A cable tie/ratchet strap should be fitted over the float adjusting peg in such a way as to prevent the chain from slipping off. Ensure the chain cannot become entangled with tank tie bars etc.

IT MAY BE EASIER TO ADJUST THE CHAIN LENGTH BEFORE INSTALLATION.

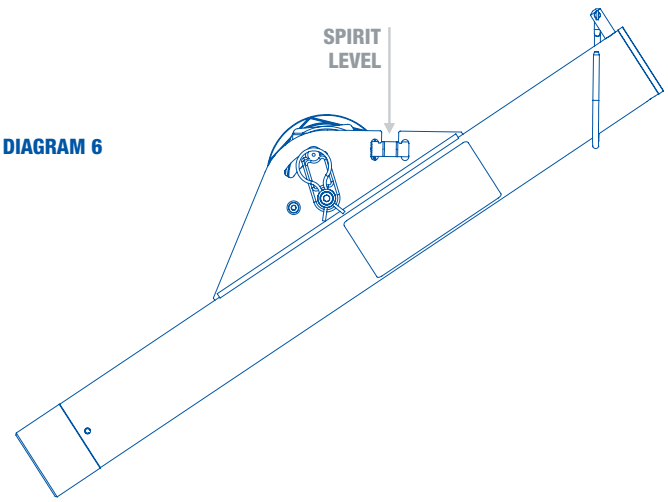
22 **DELAYED ACTION (LEVEL DIFFERENTIAL)**

The delayed action is the distance the water level will drop from before the valve opens i.e. the difference between opening and closing water levels. This is adjustable between PMIN (Float touching top of Opening Buoy) and PMAX (Float Adjusting Peg almost touching Hanger whilst using all of the available chain) see page 7.

ALIGNMENT WARNING!

THE ACTUATOR ARM MUST BE FITTED WITH THE BRASS END TILTED DOWN WHEN IN THE CLOSED POSITION AND ENSURE THE BUBBLE IN THE SPIRIT LEVEL IS BETWEEN THE LINES. THIS IS CRITICAL TO THE OPERATION OF THE VALVE.

DIAGRAM 6



TESTING

Before leaving the installation, manually move the valves to test their operation a number of times, ensuring that they move freely from the open to the closed position and from the closed to the open position.

Where a valve has not been in operation for one month it is also recommended that the above procedure is carried out.

SIZES (DN):

¾”(20) 1¼”(32) 1½”(40)HF

1”(25) 1½”(40)SF 2”(50)SF

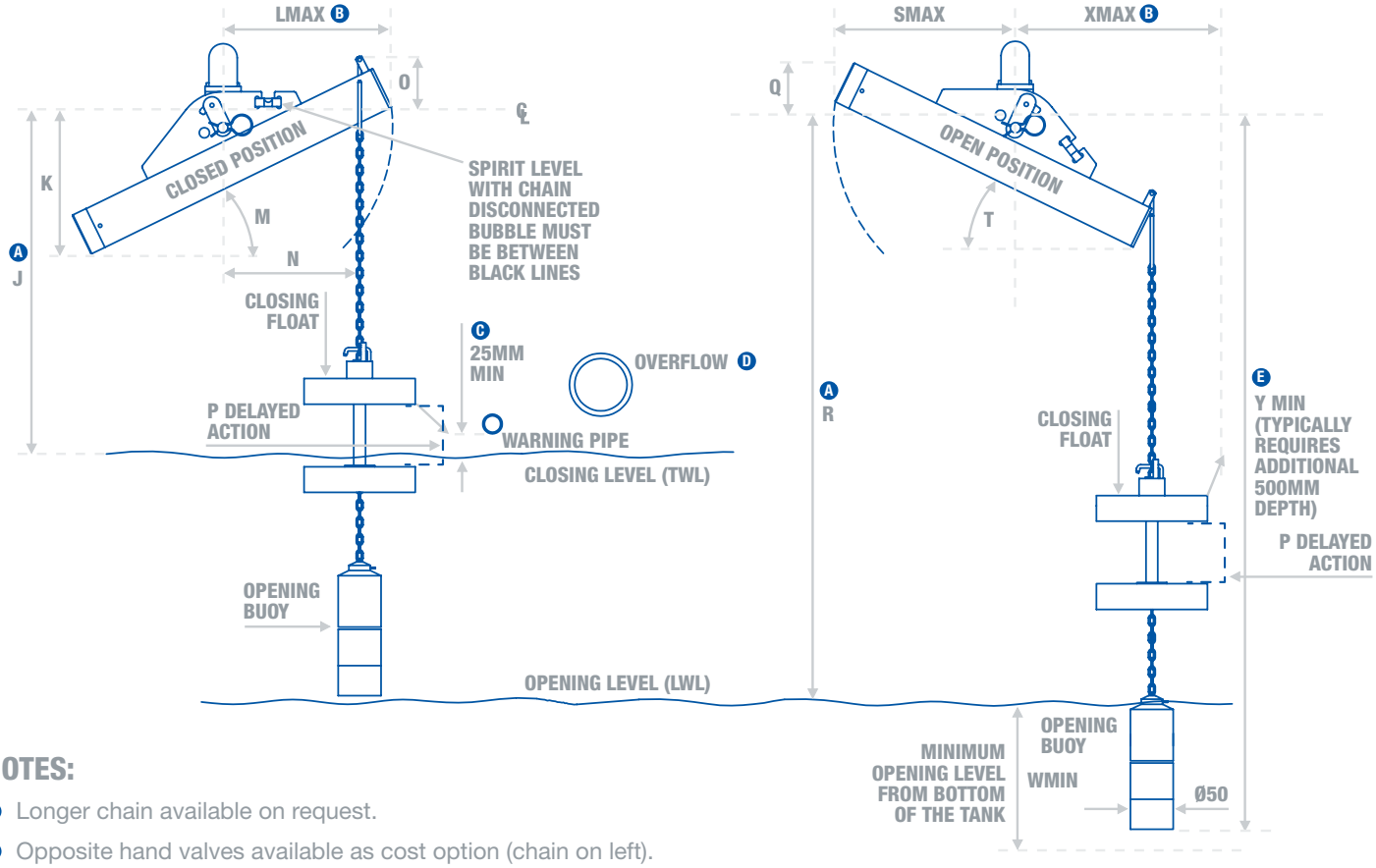
WARNING

THE FLOAT ARM MUST BE FITTED ABSOLUTELY VERTICALLY (IN THE OPEN POSITION) AS INDICATED BY THE SPIRIT LEVEL. (SEE BELOW)

MISALIGNMENT WILL PREVENT THE VALVE FROM CLOSING. ENSURE OVERFLOW LEVEL (B) IS NOT LOWER THAN 200MM FROM THE CENTRE LINE OF THE VALVE.

THE WARNING PIPE AND OVERFLOW OUTLET SHOULD ALWAYS BE ABOVE THE HIGHEST WATER LEVEL ACHIEVED BEFORE THE VALVE CLOSES.

DN	20	25	32	40SF	40HF	50SF
SIZE	¾”	1”	1¼”	1½”SF	1½”HF	2”SF
JMIN	175	175	175	175	210	210
JMAX	1800	1800	1800	1800	1670	1670
K	168	168	168	168	210	210
LMAX	200	200	200	200	237	237
M	260	260	260	260	340	340
NMIN	160	160	160	160	180	180
NMAX	180	180	180	180	220	220
O	70	70	70	70	115	115
PMIN	200	200	200	200	330	330
PMAX	1825	1825	1825	1825	1815	1815
Q	65	65	65	65	120	120
RMIN	375	375	375	375	540	540
RMAX	2000	2000	2000	2000	2000	2000
SMAX	215	215	215	215	268	268
T	26°	26°	26°	26°	34°	34°
WMIN	170	170	170	170	320	320
XMAX	245	245	245	245	305	305
YMIN	500	500	500	500	800	800

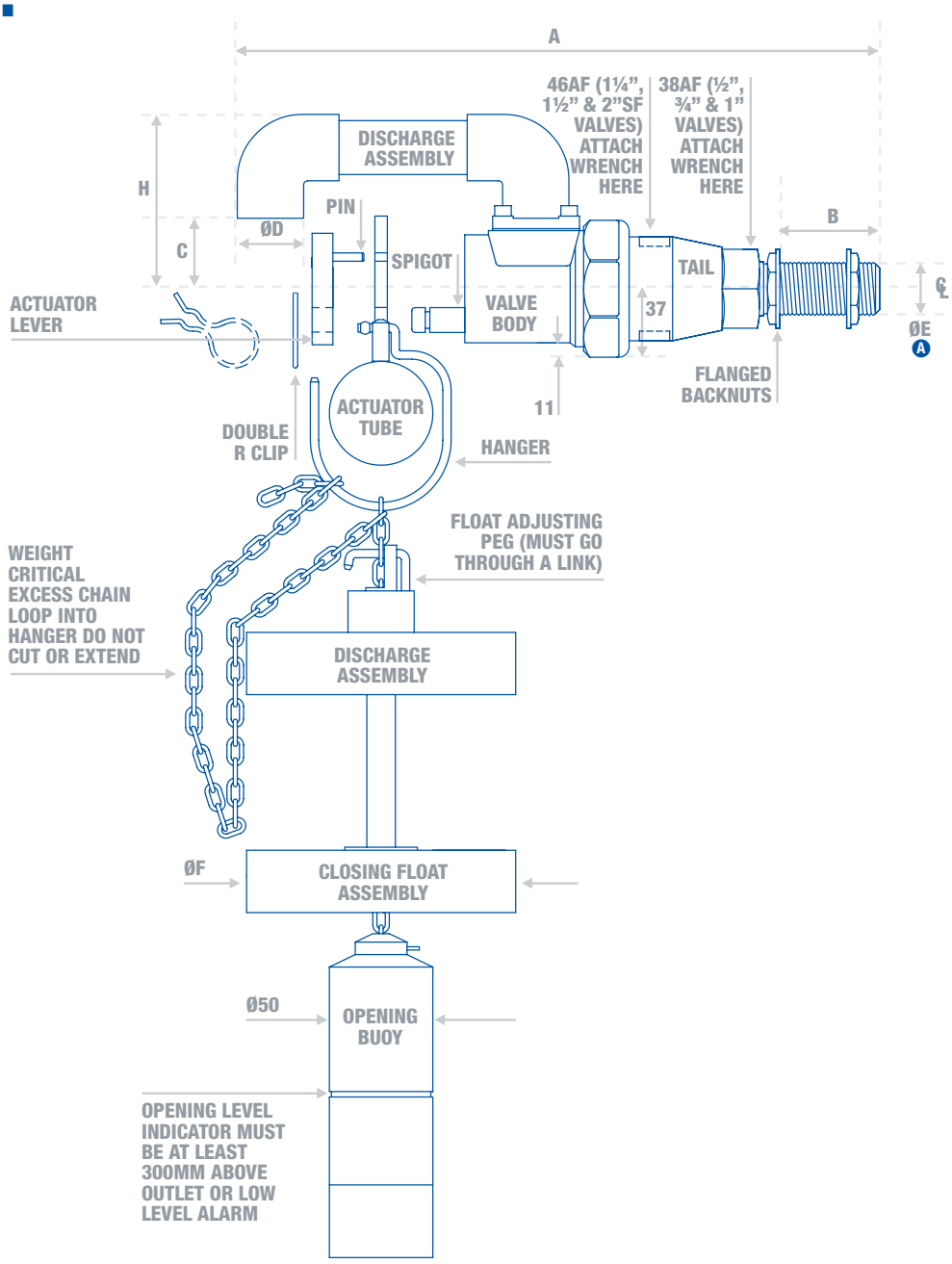


NOTES:

- **A** Longer chain available on request.
- **B** Opposite hand valves available as cost option (chain on left).
- **C** SCHD2, SECT 7, G16.5 Water Regs. Gaps should be more if water is turbulent – especially if near valve discharge. 40mm minimum for valves 1½“ (DN 40mm) or larger – recommended by **KERAFLO**.
- **D** Typically twice inlet bore. SECT 7, SCHD 2G16.10 Water Regs. Warning/overflow pipes should be capable of taking any possible flow in the pipe arising from inlet valve failure. See page 8 for side view.

SIZES (DN):

- ¾”(20)
- 1”(25)
- 1¼”(32)
- 1½”(40)SF
- 1½”(40)HF
- 2”(50)SF



BASIC SPECIFICATION:

Maximum static pressure: 10bar

Maximum flow rate: 3m/s nominal pipe velocity (Flow Rate and Pipe Velocity chart is available at www.keraflo.co.uk)

Temperature range: 1° – 60°C

Parallel male BSP (G) connection.

DN	20	25	32	40SF	40HF	50SF
SIZE	¾”	1”	1¼”	1½”SF	1½”HF	2”SF
A	330	330	277	277	277	315
BMAX	44	44	55	55	55	92
C	34	34	73	73	73	73
ØD	19.5	26.9	35.4	35.4	35.4	35.4
ØE	26.5	33	42	47.5	47.5	60
ØF	142	142	142	142	186	186
GMIN	92	92	74	74	54	55
H	83	83	111	111	111	111

NOTES:

Ⓐ Suitable for spigot and fibre washer fittings on ¾” and 1” valves. See page 7 for front view

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