

# hydraulic valve

## installation guide



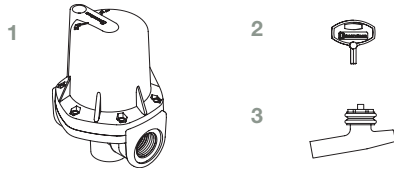
## 1 Introduction

the **hydraulic valve** is an automatic urinal flush control valve. The valve uses a simple patented mechanism which prevents water waste by ensuring that the auto-flush cistern is only filled, and can only flush, when the washroom is used.

The Cistermiser **hydraulic valve** is installed on the supply pipe to the urinal cistern. The valve is activated by short-term pressure drops created by use of taps or WCs on the same supply. The valve is normally closed; when it is activated, it allows water to pass to the urinal cistern until the internal pressures inside the valve stabilise. When the cistern is full the auto-siphon will flush. The length of time the valve takes to close can be set by the installer.

## supplied parts

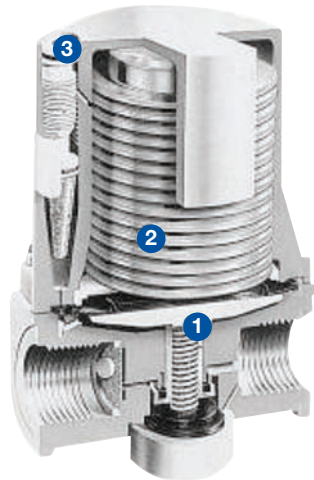
- 1 Valve
- 2 Key
- 3 Hygiene flush (where supplied)



## product diagram

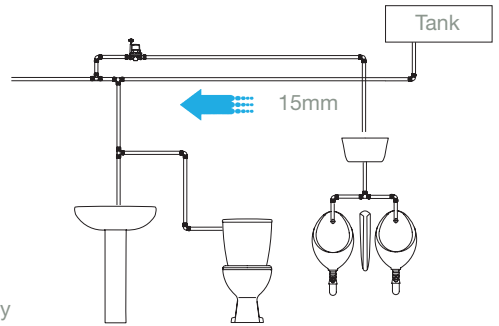
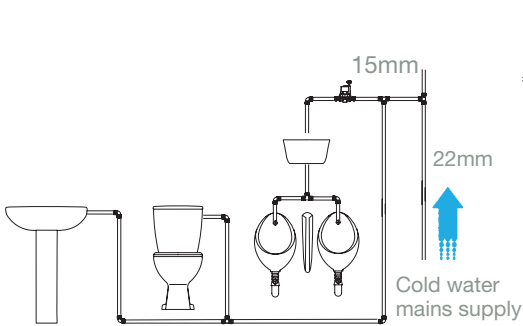
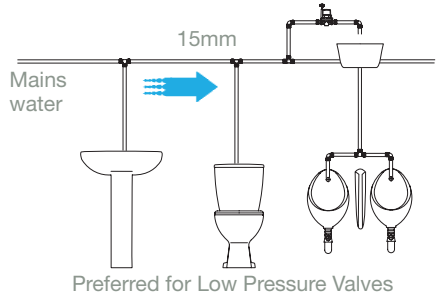
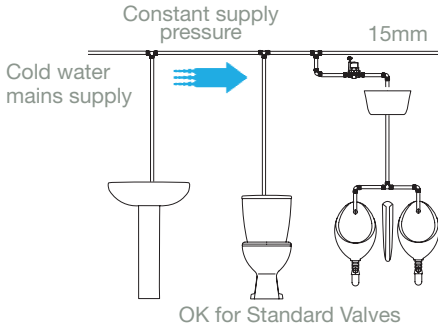
The Cistermiser **hydraulic valve** consists of three main elements as shown here:

- 1 Diaphragm operated valve which, when opened, allows water to pass to the urinal cistern
- 2 Hydraulic accumulator, pressurised to the supply pressure, keeps pressure on both sides of the diaphragm equal and valve closed. When pressure on the inlet (supply) side is reduced, as other services are used, the pressure imbalance causes the valve (1) to open
- 3 Adjustment (restrictor) screw which can be set during installation to determine the volume of water discharged into the cistern at each operation by altering the duration of the 'open' period

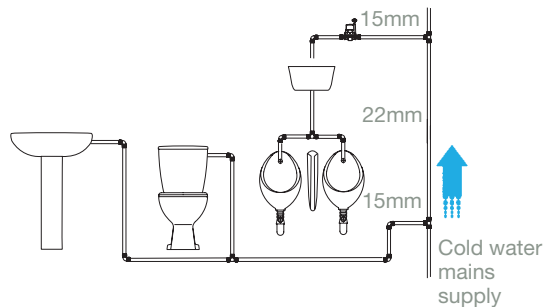
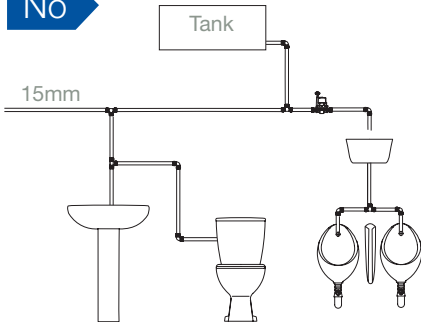


## 2 Positioning (valve orientation)

Yes



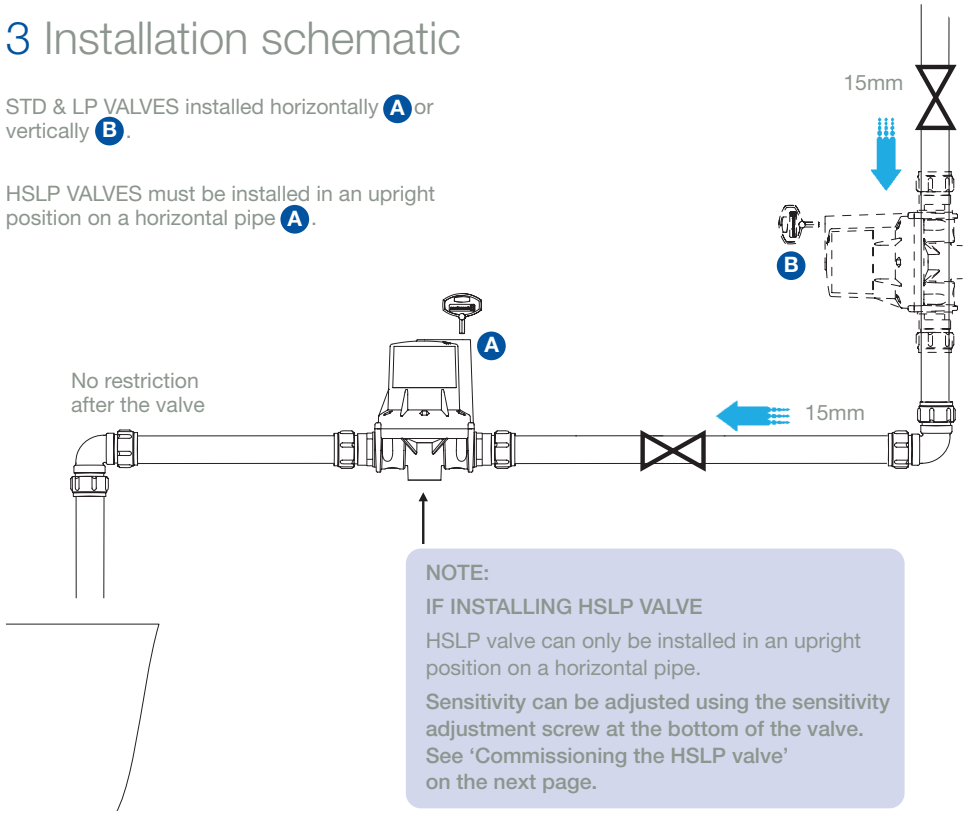
No



### 3 Installation schematic

STD & LP VALVES installed horizontally **A** or vertically **B**.

HSLP VALVES must be installed in an upright position on a horizontal pipe **A**.



### 4 Commissioning

#### commissioning the STD & LP Valve

1. Trapped air must be vented from the valve. Restrict the water supply and, using the red key (2) supplied, unscrew the restrictor screw (anticlockwise) to reveal the 'O' Ring.
2. Increase the water supply until all trapped air has been exhausted and water runs freely from the restrictor.
3. Turn the restrictor screw clockwise until the top is flush with the outer body of the valve (On STD models it may be necessary to turn down the water pressure momentarily to ensure the pressure does not cause the 'O' Ring to become dislodged from the restrictor).
4. Wait approximately one minute for the valve to charge up. Turn the restrictor three and a half complete turns clockwise so that it is recessed into the valve body. The valve is now ready. Turn on a hand basin tap or flush a WC on the same 15mm supply and the valve will open.
5. To increase the time that the valve remains open once activated, turn the restrictor screw clockwise. This will allow more water to enter the cistern at each operation and increase cistern flushing frequency. This should be set according to the number of urinals served / size of cistern and the number of activations desired between flushes.

## commissioning the HSLP Valve

The HSLP valve MUST be on the horizontal pipe run and installed in the upright position. Follow instructions 1 to 5 above.

There is an additional venting nut on the top of the valve.

Sensitivity can be adjusted using the sensitivity adjustment screw at the bottom of the HSLP valve.



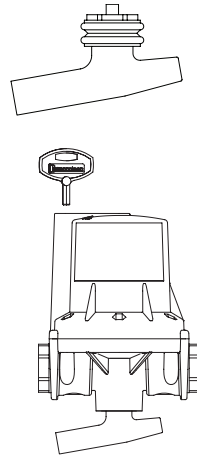
## hygiene flush attachment (for use with STD & LP only)

The hygiene flush attachment permits a slow drip into the cistern to initiate a flush approximately every 12 hours. For correct operation it is essential that the siphon of the auto flushing cistern does not leak.

Remove the black plastic plug from the bottom of the hydraulic valve using circlip pliers: the plug is no longer required but take care to retain the spring.

Insert the hygiene flush attachment in place of the plug making sure to align it to the hexagon shaped end.

When fully engaged secure the circlip and adjust the drip into the cistern to the required rate with the allen key provided.



## 5 Power connection

There are no power requirements because the valve is activated by pressure fluctuations within the water supply.

# 6 Usage advice and specification

## choosing the right valve for your application

There are three models in the range of hydraulic valves, each suited to different water supply pressure. The table below will help to specify the right model for your application.

### standard valve (STD) and standard valve with hygiene flush (STDIF)

Supply: Mains water pressures 0.5 bar to 6 bar or tank-fed systems above 5m head.

Operating sensitivity: 15% of supply pressure.

Colour coded packaging

### low pressure valve (LP) and low pressure valve with hygiene flush (LPIF)

Supply: Tank-fed systems, 3m to 5m head.

Operating sensitivity: 20% of supply pressure.

Colour coded packaging

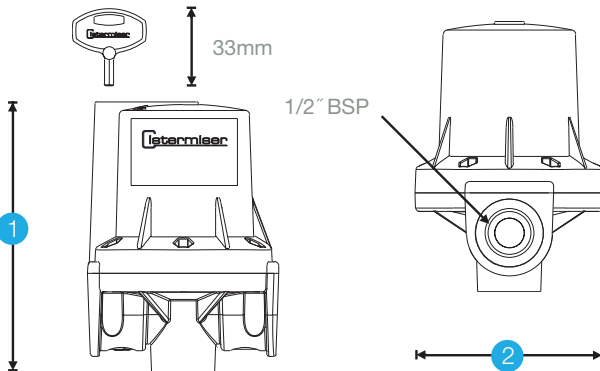
### high sensitivity low pressure valve (HSLP)

Supply: Tank-fed systems, 0.5m to 3m head.

Operating sensitivity: 20% of supply pressure.

Colour coded packaging

# 7 Component dimensions



	1	2
Standard Valve (STD)	116mm	81mm
Low Pressure Valve (LP)	116mm	81mm
High Sensitivity Low Pressure Valve (HSLP)	130mm	112mm

## 8 Frequently asked questions

### there is a continuous flow of water through the valve

The valve has been installed in reverse	Remove the valve and fit with arrow (located at the base of the valve) in the direction of water flow.
Water pressure too high for valve: may crush bellows	Purchase a valve suitable for your water pressure.
Valve is being triggered by a drop in pressure from another room	Change pipework or change valve to a Cistermiser IRC which can be powered by either batteries or mains electricity.

### the valve is permanently closed

Water supply	Ensure water supply is turned on and is reaching the valve.
Restriction on the outlet of the pipework into the cistern	The pipework after the valve should have no other valves or petcocks fitted and should be open ended: anything fitted after the valve can cause back pressure which stops the valve from opening.
No draw-off point. Is there a draw-off point that will activate the valve on a common 15mm supply pipe?	Change pipework or change valve to a Cistermiser IRC which can be powered by either batteries or mains electricity.
Water pressure too low for valve	Change valve to one suitable for the water pressure on site.
Valve not vented	The valve requires to be vented as per the commissioning instructions; trapped air will cause a malfunction.
Restrictor screw adjustment incorrect	The restrictor screw should be approx 3.5 turns (for STD and LP) and 2 turns (for HSLP) below the level of the main valve on initial installation (not flush or above the valve body).
Sensitivity screw adjustment incorrect (HSLP ONLY)	Unscrew the brass cap turn anti-clockwise to increase sensitivity.
Pipework. Is all pipework between the draw-off point (which is activating the valve) and the valve in 15mm? If the pipework is larger than 15mm the ability to detect a pressure drop will be reduced	Change pipework or change valve to a Cistermiser IRC which can be powered by either batteries or mains electricity.
Valve installed too far away from draw-off point. The valve must be no further away than 5m from the draw-off point. Distance reduces the ability of the valve to sense pressure changes	If possible move the valve/draw off point closer together. Change pipework or change valve to a Cistermiser IRC which can be powered by either batteries or mains electricity.

## the valve is permanently closed

Draw-off points used to activate the valve.  
Are the taps mixer or aerated?  
Such taps do not always register a significant pressure drop and may not activate the valve

Purchase a Cistermiser IRC valve which does not rely on pressure drops and can be powered by either batteries or mains electricity.

Water supply is pressurised or pumped.  
A supply that immediately makes up a pressure loss as services are used reduces the capability of the valve

Install a Cistermiser IRC.

## flow through valve is inadequate/too great

Restrictor screw adjustment incorrect

Turn the restrictor screw clockwise to increase the volume of water allowed though with each activation of the valve and anti-clockwise to decrease. If this has no effect then a Cistermiser IRC valve, which does not rely on pressure drops, should be installed. The IRC can be powered by either batteries or mains electricity.

## faulty valve or installation error

You have tried the above FAQs and the valve is still not working

Remove pipework from the outlet side of the valve, put your thumb over the outlet and activate the draw-off. If you feel a slight suction there may be a fault with the valve and you should contact Cistermiser Ltd.

The valve is leaking

The leak is coming from the join with the pipework. The bonded seal may have slipped out during installation. Ensure the bonded seal is fitted before tightening pipework.

## cistermiser product warranty and extended warranty

Cistermiser products are guaranteed for twelve months from the date of manufacture. The guarantee is for faulty products and parts only: there is no labour warranty. If you believe your product is faulty, please either contact Cistermiser directly on **0118 969 1611** or at [warranty@cistermiser.co.uk](mailto:warranty@cistermiser.co.uk), with a photograph and the serial number, to diagnose the cause of the problem.

The warranty on Cistermiser products can be extended, within one year of date of manufacture, at no cost to three years from the date of installation by completing the enclosed warranty card or at [www.cistermiser.co.uk/warranty](http://www.cistermiser.co.uk/warranty). Please make a note of the serial number and take a photograph of the installation before you leave site.

