TDV-6v battery operated Timed Discharge Valve

INSTALLATION INSTRUCTIONS

please read carefully

PLUMBING Install valve supplied onto pipe to be flushed using the appropriate fittings. Choose a location as far downstream as possible and ideally close to a suitable drain for the water to be dumped. Ensure water supply is connected to valve inlet - see arrow or other markings to denote direction of flow. Fit isolating valve (supplied) on inlet side of valve, leave in fully open position. Fix unit to wall using screws and plugs provided.

ELECTRICAL Insert free end of pre-wired solenoid valve cable into hole in TDV-6v enclosure. Squeeze and push home rubber cable gland. Cable should protrude approximately 6" into enclosure. Push 2 pin connector onto PCB connector marked VALVE ensuring locking barb engages.

Brass valve with DIN connector: Fit rubber sealing gasket on mating face of connector and push onto terminals of valve. Lock in position using mounting screw provided.

Nylon Valve: Fit 2x Faston connectors onto valve terminals. Polarity is important, ensure Brown wire is connected to + terminal and Blue wire is connected to - terminal of valve. **If extending or shortening cable observe this polarity.**

COMMISSIONING Turn on water supply to the TDV-6v. Insert batteries (supplied) into holder, connect lead from PCB to battery holder. Red LED will flash twice upon connection and is now in SETUP mode.

DISCHARGE (VALVE OPENING) TIME

This is the time period that the valve opens for and hence determines the volume of water that is discharged or dumped. It may be set from 1 second through to 240 minutes by following a simple pushbutton or wand procedure - see below.

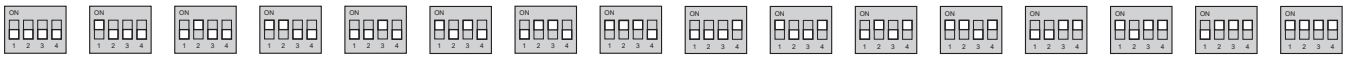
Once set, the time period is stored in memory and remains even when the batteries are changed. It may however be changed as many time as required by resetting the control and repeating the setup procedure below.
For handy hints and tips on setting the TDV-6v please see overleaf.

TO SET THE DISCHARGE (VALVE OPENING) TIME

Press and release blue FILL button or swipe with wand, the valve will click open after a few seconds, LED flashes continuously while valve is open. When sufficient time has elapsed or water has been discharged press and release blue FILL button again or swipe with wand. Valve closes immediately and setup is complete.
TIP to abort procedure, disconnect battery while LED is flashing, re-connect again to close valve, repeat sequence if required.

TO SET THE DISCHARGE INTERVAL

The discharge interval is the time period that elapses between each discharge or dumping of water.
This can be set from 1 hour - all switches down (off) or from 6 hours to 90 hours by setting dipswitches 1 to 4 as below:



1 hr	6 hrs	12 hrs	18 hrs	24 hrs	30 hrs	36 hrs	42 hrs	48 hrs	54 hrs	60 hrs	66 hrs	72 hrs	78 hrs	84 hrs	90 hrs

Note that the switches 1 to 4 have weightings of 6, 12, 24 & 48 hours and are additive.
eg. for twice weekly dumping every 84 hours, set switches 2,3 & 4 up (12+24+48 = 84 hours)

TO RESET THE TDV-6v During the Interval press and hold blue FILL button or offer wand for 4 seconds. The LED flashes twice to indicate the TDV-6v is now in SETUP mode again.

REPLACING BATTERIES LED flashes briefly once per second to indicate a low battery condition. Simply replace with 4 x 1.5v AA size alkaline cells. **Batteries should be replaced every 3 years.**

Watersavers

Watersavers Ltd Earl Road
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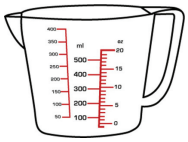
FOR TECHNICAL SUPPORT

Tel 01603 720999
email: sales@watersavers.co.uk
website: watersavers.co.uk

TDV-6v Timed Discharge Valve - handy hints and tips

USE A STOPWATCH & MEASURING JUG



If you're not sure how long to open the valve for when setting the discharge (valve open) time, use the measuring jug to catch say 10 seconds flow of water. This volume can then be used to help calculate daily or weekly volumes. **See also pipe volumes and flow factors below:**

HOW CAN I VERIFY THE TDV-6v IS WORKING?
- consider plumbing a water meter upstream of the TDV-6v. This can be used to monitor the volume of water that has been dumped daily or weekly.

A pulsed water meter may be connected to a BMS for automatic checking and the possible raising of an alarm should insufficient or no flow be detected.

Please call our sales department for pulse meters or further help.

USE the Magi-Test wand for setup or verification

MAGI-TEST WAND

Touch the area above LED as shown:- The TDV-6v will do an immediate discharge cycle.

With valve open hold wand for 2 seconds to abort cycle and close valve.

Hold wand for 4 seconds during Interval to reset TDV-6v. Use wand to set opening time.

VOLUMES AND FLOW FACTORS - for various copper pipe sizes (approx)

Copper pipe OD (mm)	**15**	**22**	**28**	**35**	**42**	**54**
Litres per metre	0.145	0.32	0.539	0.835	1.232	2.091
Metres per litre	6.896	3.125	1.855	1.197	0.811	0.478
Litres per second (quiet flow)	0.22	0.45	0.82	1.3	1.9	3.1

EXAMPLE: To flush 20m of 15mm pipe, the volume is 20x 0.145 = 2.9 litres. At a flow rate of 0.22 litres per second this equates to 2.9/0.22 = 13.18 seconds. We would recommend setting the discharge time to 20 seconds to be sure.

PLEASE CALL 01603 720999 FOR TECHNICAL HELP

TECHNICAL SPECIFICATIONS

Discharge Time / Interval: Valve opening time user set from 1 seconds to 240 minutes in 1 second increments. Interval may be set at every 1 hour or 6 to 90 hours in 6 hour increments via a dipswitch (see overleaf).

Solenoid valve: Nylon latching valve, 1/2" BSP male threads, WRAS approved, 0.2 - 10 BAR, 11mm orifice or - Brass latching valve, 15mm copper fittings, WRAS approved, 4mm orifice, pressure range 0 - 2 BAR.

Batteries: 4x Alkaline AA cells (supplied) - average life 3 - 4 years, no need to reset when changing.

Low Battery Warning: LED blinks every 2 seconds to indicate low battery status.

Valve cable: supplied to a nominal 2m length, core size is 0.75mm². Cable may be shortened or extended - using suitable cable. Please contact out Technical Department for advice.

Enclosure: size 148 x 88 x 41mm, (excluding cable gland) in white PVC.