

## Warranty, Support & End of Life Disposal

### Warranty

The WC Direct Flushing System is guaranteed for 5 years from purchase against defective material and assembly.

The solenoid valve is guaranteed for 12 months, subject to water condition, however, it is expected that the valve internals will operate efficiently for many years.

### Support

For technical support please visit our technical pages on our website at [www.dartvalley.co.uk](http://www.dartvalley.co.uk) or contact us by e-mail at [techsupport@dartvalley.co.uk](mailto:techsupport@dartvalley.co.uk) Alternatively, you can telephone us direct on 01803 529021 and our customer service team will be pleased to help you.

### Disposal of electrical and electronic equipment



The use of this crossed out wheeled bin logo indicates that this product needs to be disposed of separately to any other household waste.

Within each of the European Union member countries, provisions have been made for the collection and recycling of unwanted electrical and electronic equipment. Outside of the EU it will be necessary to dispose of this product at your local community waste collection or recycling centre. In order to help preserve our environment we ask that you dispose of this product correctly. Please contact your local council for collection centre details.

### Head Office

Dart Valley Systems Ltd  
Kemings Close  
Long Road  
Paignton  
Devon  
UK  
TQ4 7TW

### Contact Details

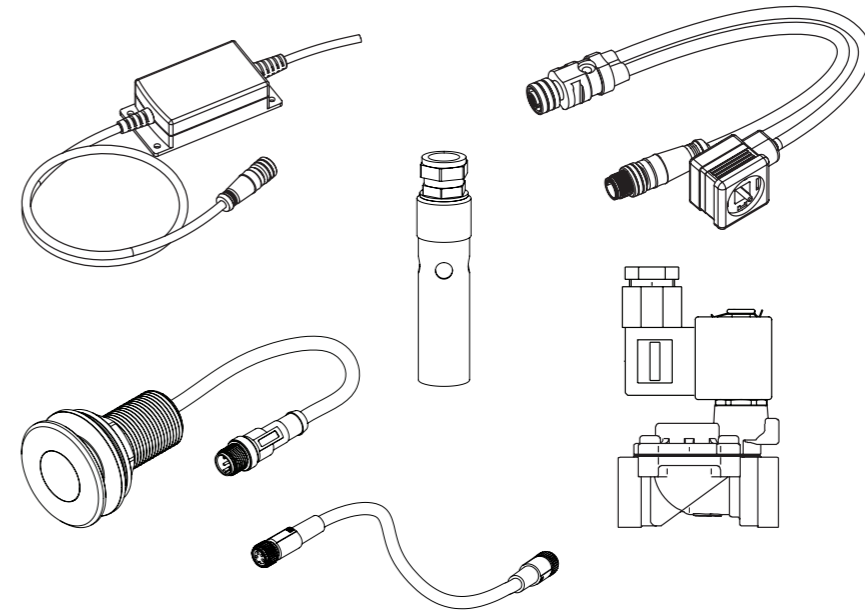
t : +44 (0) 1803 529021  
f : +44 (0) 1803 559016  
e : [techsupport@dartvalley.co.uk](mailto:techsupport@dartvalley.co.uk)  
w : [www.dartvalley.co.uk](http://www.dartvalley.co.uk)



# WC DIRECT FLUSHING KIT

## INSTALLATION & OPERATION INSTRUCTIONS

WC03-043



\*not to scale

### Step 1 : Safety First

These instructions relate to the installation of the Standard WC Direct Flushing System only. Any external or 'add-on' parts will be supplied with separate instructions.

Appropriate personal protective equipment must be worn when installing, calibrating and commissioning this product.

It is recommended that any plumbing is carried out by a qualified plumber. The electrical part of the installation must be carried out by a qualified electrician in accordance with the latest electrical regulations.

This is a sophisticated product which must be installed correctly to perform correctly.

If the appliance is used by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, they must be given adequate supervision or instruction concerning use of the appliance by a person responsible for their safety.

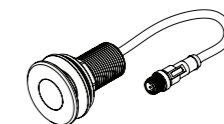
Children should be supervised to ensure that they do not play with the product.



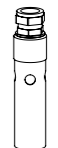
**IMPORTANT:** Please read these instructions carefully and follow each stage in order!

### Step 2 : Kit Contents

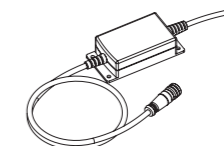
A typical kit will include the following parts\*:



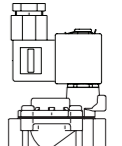
Sensor  
AC02-034



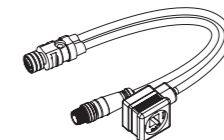
Air Break  
WC00-098



DVS Power Supply  
AT00-029



Valve  
AC17-015

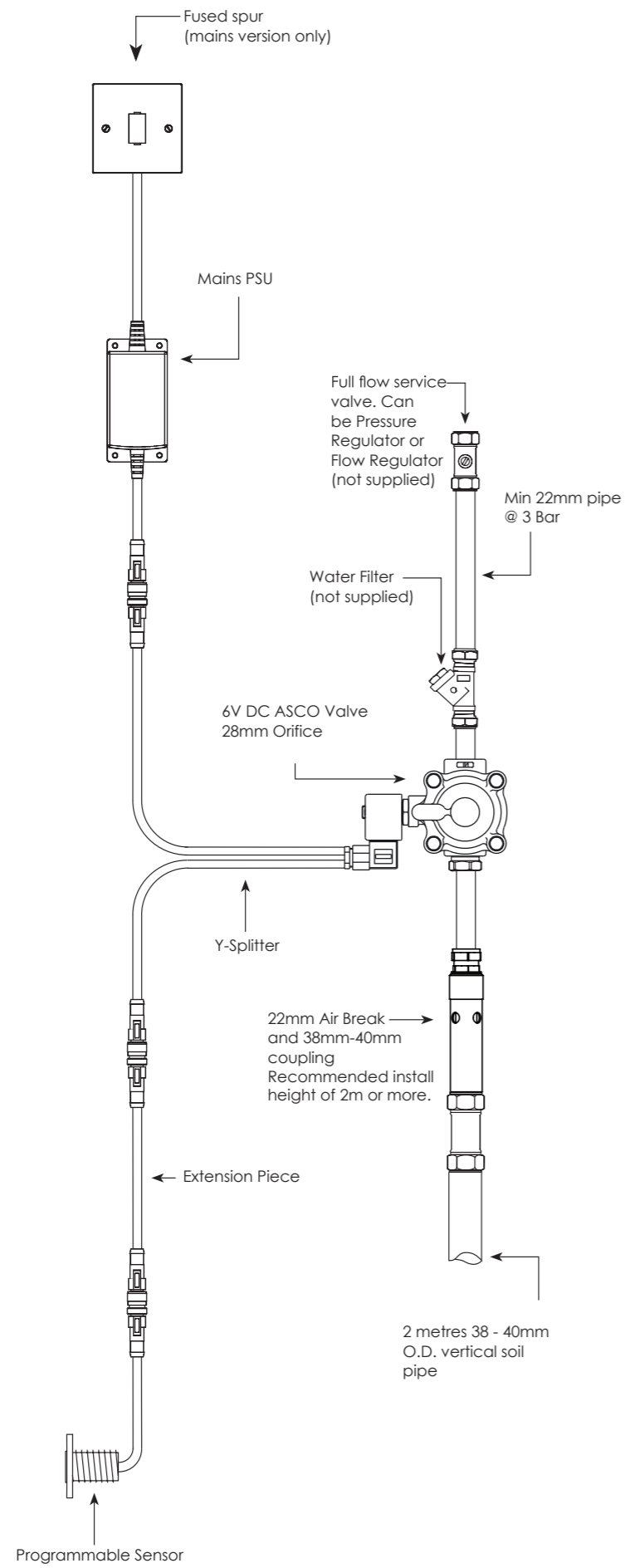


Y Splitter Lead  
AT00-202



3 MTR Extension  
AT00-224

### Step 3 : Typical Installation



### Notes

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## Step 4 : Preperation

You must read these instructions thoroughly before attempting the installation. First check the solenoid valve supplied is suitable for the sites water pressure and conditions.

The standard valve requires 1-10 BAR water pressure. If your water pressure is low (0.5 bar or less) low pressure valves should be obtained from your supplier. See Fault finding & General Cleaning overleaf.

### Pre-Fitting

First turn off the water supply. If possible select an upright position for the solenoid valve. Check correct water flow direction on installation of the solenoid valve. The fitting of an isolator (AC17-038) and Y-strainer (AC03-019) prior to the solenoid valve is highly recommended (not supplied).

The sensor can be affected by highly reflective surfaces. Avoid mounting too close to reflective surfaces or direct sunlight.

**IMPORTANT:** Plumbing compound should not be used to seal the pipework as oils leaching from the compound will prevent the solenoid valve from functioning correctly.

## Step 6 : Plug & Socket Connections

**Caution!** Mount the battery box or power supply with care, in a dry location, away from extremes in temperature and not exposed to dirt, dust or damp.

**Ensure the battery box or power supply is left disconnected at this stage.**

### Electrical cable connection for Power Supply Unit (PSU)

It is recommended that the electrical part of the installation be carried out by a qualified electrician in accordance with the latest electrical regulations.

A 1m length of 0.5mm 2 core flex is supplied with the PSU - this must not be extended.

Each PSU should be connected separately via a **3 amp** fused spur. The PSU must be permanently connected to the supply. A suitable means of disconnection should be provided, in accordance with local electrical regulations. If the mains lead becomes damaged, the product should not be used. Contact DVS for replacement parts.

**NOTE:** Incorrect fuses may void warranty.

### Final Stage

Ensure all cable sockets and plug connections are clean and dry, then connect the sensor lead to the split connector and solenoid valve firmly, ensuring all connections are secured tightly.

## Step 5 : Installation

To mount the sensor, drill a clearance hole of Ø27mm through the mounting surface. Position the sensor thread through the hole and tighten from behind using the supplied washer and back nut.

Cut the pipework with a plumbers pipe cutter, remove sharp edges and burrs. The diaphragm in the solenoid valve will be damaged by oil, grease and debris. The valve should be used on oil free pipe work only.

To prevent long term contamination the pipework must be thoroughly purged prior to fitting the solenoid valve.

Fit the isolator, Y-strainer and solenoid valve and ensure pipes are fully engaged in joints. Take care that the valve is fitted with the correct direction of flow as indicated on the valve. Be careful not to over tighten any joints.

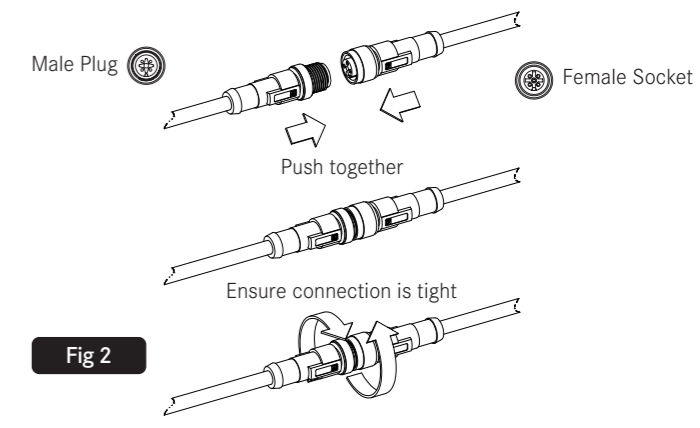
Check pipework, solenoid valve etc. and turn on the water supply, checking for leaks.

Connect the power supply unit or battery pack unit to the remaining split connector socket.

Once the sensor is powered up, allow 30 seconds for the sensor to calibrate. Attempting to operate the sensor within this period may cause the sensor to false trigger. If false triggering occurs, disconnect power for 1 minute, then reconnect and allow the sensor to recalibrate.

### Plug and Socket Connections

Optional extension cables (1 and 2 metre) are all available from the manufacturer to extend the low voltage output of the PSU to the vicinity of the taps. See Section 8: General Cleaning.



## Step 7 : Valve Installation

### Pre-fitting

The solenoid valve requires 0.5 to 0.8 bar water pressure delivered by ¾ inch full flow pipe work and fittings. The pipe work must be capable of delivering at least 1.5L per second.

The fitting of a water filter prior to the solenoid valve is mandatory (not supplied). The fitting of a full flow service valve prior to the solenoid valve is also highly recommended (not supplied).

### Installation

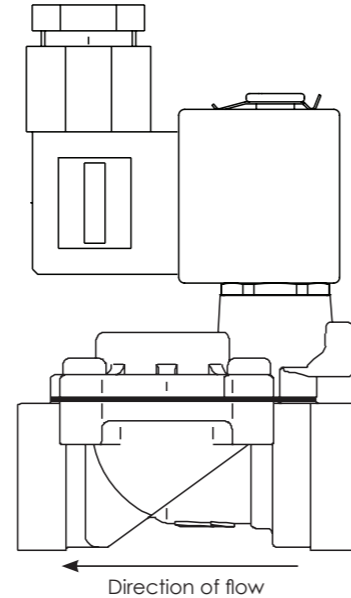
First turn off the water supply. The solenoid valve must be fitted at least 2.2 metres above the WC discharge level.

Cut the pipe with a plumbers pipe cutter, remove the sharp edges and burrs. Purge the pipework to remove all debris and dislodged scale.

It is important to purge the system before connecting the solenoid valve to avoid getting contamination into the solenoid valve.

Fit the full flow service valve, filter and solenoid and ensure pipes are fully engaged in the joints. Take care that the valve is fitted with the correct direction of water flow as indicated on the valve. Be careful not to over tighten any joints.

When all the water fittings are secure, slowly turn on the water supply and check for leaks. Ensure all pipe work is securely clamped.



## Fault finding & General cleaning

### 1. SENSOR WILL NOT OPERATE AT ALL

- Check all electrical connections (see Page 4 Step 7).
- Check fuse (Mains/PSU model only) max 3 amp fuse
- Check / Clean all connections.
- Check for cable damage.
- For mains/PSU and battery models, disconnect for 1 minute then reconnect and allow sensor to recalibrate.
- Check water is turned on.
- Check the solenoid valve is fitted correctly.
- Check valve operation.
- Check for dirt or debris in the solenoid valve.
- Water pressure is too low/too high.

### 2. SENSOR OPERATES INTERMITTENTLY

- Clean sensor lens (with nonabrasive materials only).
- Shower may be installed too close to an R.F. interference source or direct sunlight.
- Water pressure too low for valve to operate reliably (minimum 1.0 BAR required) for standard solenoid valves.
- Disconnect power for 1 minute, then reconnect and allow the sensor to recalibrate.

### General Cleaning

**IMPORTANT** : Do not use abrasive materials or cleaners. Only use soap and water or nonabrasive cleaners.

### Valve Servicing

The valve will require periodical servicing and cleaning, please contact DVS for servicing.

Do not attempt to dismantle the valve if you are unfamiliar with electronic solenoid valves.

### Optional Parts

AT00-033	1m PSU cable extension
AT00-034	2m PSU cable extension
AT00-035	3m PSU cable extension

## Step 8 : Sensor Menu Options

### WAVE FLUSH VALVE MENU

Flush Type	Single	Single or Dual
Flush Time(s)	4 Seconds	2, 2.5, 3, 3.5, 4, 4.5, 5, 5.5, 6 & 6.5 Seconds
Range	2	1-3
Automatic Purge	OFF	OFF, 3, 6, 12, 24, 36, 48 & 72 Hours
Purge Run Time	4 Seconds	2, 3, 3.5, 4, 4.5, 5, 5.5, 6 & 6.5 Seconds
Lock Outs	OFF	OFF, 2-10 Ops

**NOTE:** Default settings are shown in the table above, any changes can only be made with a hand held programmer (not included)

For more information regarding The DVS Handheld Programmer and its adjustable settings, please visit;

[www.dartvalley.co.uk](http://www.dartvalley.co.uk)

Reference Code; AC01-001

