Installation instructions Sanitron Urine Detecting Flush-Valve UDF-01

Description

The UDF-01 is a mains powered, electronic flush valve for single stall flush-rim urinals. The sensor is attached to the trap which detects the actual use when urine enters the trap. A flush is activated within 10 seconds once a user has finished using the urinal. As per requirement, the activation pattern can be selected with the included ***janitor's key***. This WELS 6 star rated flush system flushes urinals with a low 0.8l flush volume. Equipped with an air-brake, the flush valve can be directly connected to the mains water supply. The urinal flush valve is 6 Star WELS rated and should be installed with a 6 Star rated urinal. Also included is an Australian Standards approved syphonic waste trap. This highly efficient trap ensures a rapid water exchange. At low flush volumes the syphonic trap is left cleaner than a conventional waste tap. This ensures maximum hygiene and less odour.

Additional features:

There is a choice of 3 flush programs that can be selected with the ***janitor's key*** (explained in Annex1).
The factory set program performs as follows: If a user is detected the urinal will be flushed within 10 seconds after the user has finished. The sensor can also detect high frequency usage. If there are 2 users visiting the urinal within 2 minutes, the controller switches automatically to high usage. The now activated high usage function conserves water. From now on only half flushes will be triggered for every person that visits the urinal. The half flush will ensure that every user gets to use a clean urinal bowel while water is conserved in the process. If there is no user visiting the urinal for 3 minutes, a full flush (0.8l) is activated to wash down the urinal and flush the trap. Now the controller switches back to full flush after every use.

Janitors Flush: If the sensor does not detect any usage for 48 hours the urinal will be automatically flushed once. This prevents the trap from drying out and prevents a subsequent odour.

Additional Programms There are two more flush programs that can be selected with the **janitor's key**. These exist to customise and minimize water usage for individual installations. The ***janitor's key*** can also activate diagnostic functions and cleansing program options (see annex1),

Overflow protection In the event of a blockage and subsequent water build-up inside the urinal bowl this prevents

Supplied with the Sanitron UDF-01 are the following components

1 x Trap with Sensor
1 x 1/2" Electronic urinal flush valve
1 x Air-brake
1 x Transformer
2 x Extension cables
1x Janitor's key
1 x Installation instruction

Before you start installing, read the complete manual first !

Installation, Operation and Safety Precautions

1) The UDF-01 and its components are for indoor use only.
2) Install all components only in a dry environment. Ambient temperature between 5°C and 40°C.
3) When performing any work on any connected components, ensure the power supply has been disconnected. **Be carful when removing the solenoid it still can be pressurised.**
4) All electrical parts should be installed as far away from the plumbing installation as the local and Standards regulations require.
5) For the installation and operation observe all relevant electrical, safety and building standards.
6) All supplied components should only be used for the purpose they are designed for.
7) Follow all requirements of the urinal installation instructions.
8) The UDF-01 is only recommended for use with urinals (vitreous china) that have a **flush rim** for water dispersal and that can disperse the flush water at a flow rate larger than **20 l/min**.
9) Use only manufacturer recommended spare parts.
10) The built in shut-off valve is designed to be used only for maintenance purposes. It shall not be used as an end of line shut off device. In operation it has to be fully opened.
11) Matched urinals are: Parisi Envy, Vitra S20

Note: FFL = Finished floor level; Technical details, layouts are schematic only; all details for construction by others; dimensions & technical information can change without further notice. This publication edition 3; file name :UDF installation instruction reduced with SV-9 edition4.cdr dated 1/10/2018;supercedes all previous publications.

Installation

Note: All plumbing installation work have to be carried out in accordance with AS/NZS 3500.1&2 Standard.

Rough-in

1) Size and install the water supply pipe **in accordance with AS/NZS 3500.1 Standard** and the flow rate requirements of the urinal. A minimum of DN 20 copper connection pipe is recommended (for 1 Valve).
2) Flush the water supply line.
3) **Caution when** tying up air-brake hold onto the brass body with a shifter (see fig.3 page4). Apply thread sealant to the male thread of the valve outlet and screw the air-brake **all the way on**.
4) **Install the flush valve so that the air-brake is vertical!** Install the flush valve facing into a position so that the solenoid cartridge can be easily accessed and serviced. **As per AS 3500.1 maximum allowable water pressure inside buildings is 500 kPa**. Please refer to technical details regarding the valve on page 4.
5) Install and clip the flush-pipe (DN20 copper, not supplied) leading from the air-brake to the connection position as indicated by the Urinal supplier (see also fig.1). The bend on the bottom of the flush pipe shall be a smooth radius. The minimum length should be 1.1m **no offsets are allowed**. When connecting the flush pipe to the air-brake hold the air-brake with a second shifter when tightening the compression nut.
6) Test the installation for leaks. When finished close the stop cock.
7) Install the supplied cables leading from the ceiling to the urinal. It is recommended to install the cables into a conduit. **Do not connect any cables to the power supply or the solenoid yet!**
10) Make provisions for an ceiling access panel (see fig.1) large enough to be able to service the flush

Studwall installation

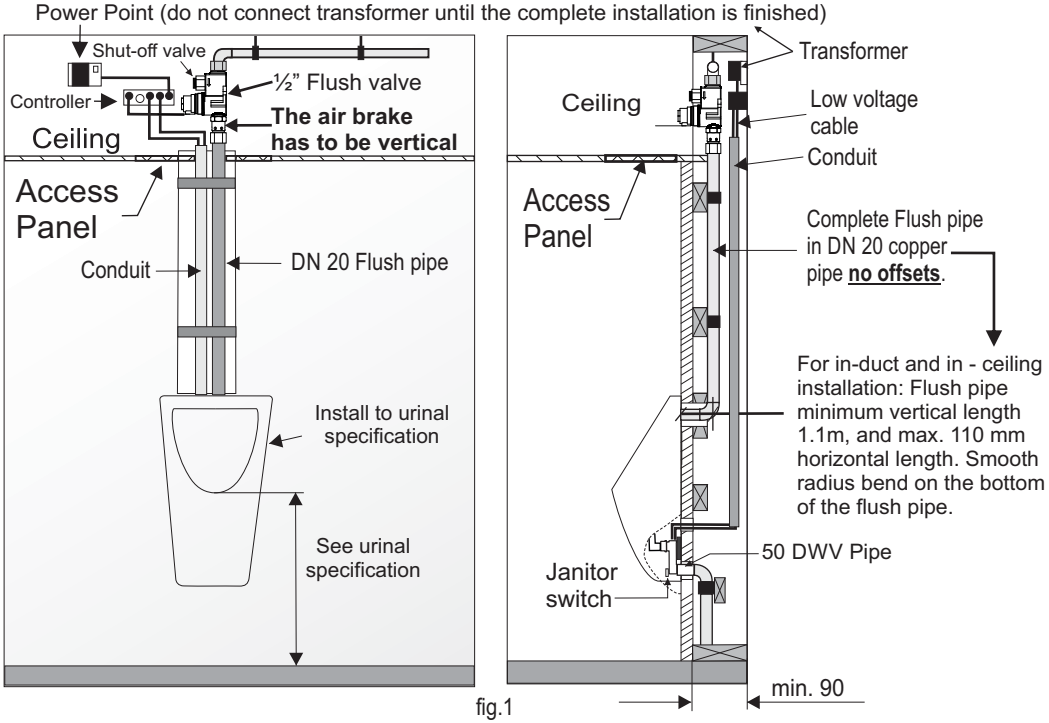


fig.1

Note: FFL = Finished floor level; Technical details, layouts are schematic only; all details for construction by others; dimensions & technical information can change without further notice. This publication edition 3; file name :UDF installation instruction reduced with SV-9 edition4.cdr dated 1/10/2018;supercedes all previous publications.

Fit-out

1) **Important:** The power supply in the ceiling has to be connected last!
2) Follow the below steps 1 to 5.

1

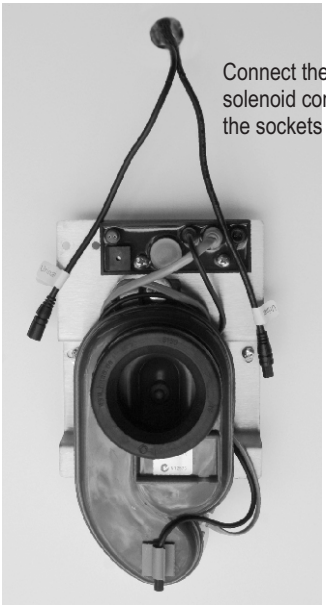
Unpack the Bracket assembly and remove the Janitors key keep it for later

2

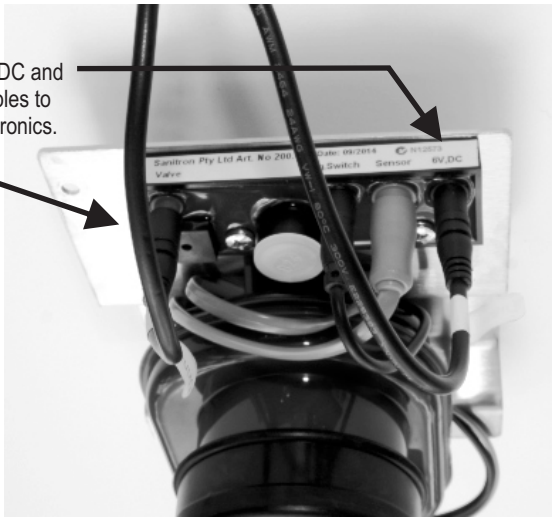
Install the kee seal onto the trap.
Insert the trap into the waste pipe and screw the bracket assembly to the wall

fig.2

3



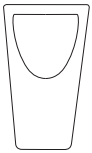
Connect the power 6V, DC and solenoid connection cables to the sockets on the electronics.



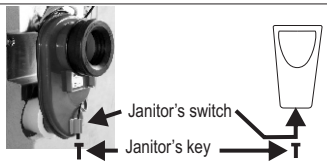
Continued

Note: FFL = Finished floor level; Technical details, layouts are schematic only; all details for construction by others; dimensions & technical information can change without further notice. This publication edition 3; file name :UDF installation instruction reduced with SV-9 edition4.cdr dated 1/10/2018;supercedes all previous publications.

4 Insert the flush pipe kee seal into the urinal. Insert the waste pipe kee seal onto the trap. Lubricate the flush pipe and trap kee seals on the inside only. Mount the urinal onto the wall.



5 A) Now connect the solenoid and power cables in the ceiling space and switch on the power.
B) Now slowly open the water supply.
C) To test the urinal slowly pour warm water into the urinal bowl and wait for about 10 seconds - one flush will be activated. As an alternative, use the janitor's key and hold it close to the janitor's switch on the bottom of the urinal (see fig.2, page 3 or below) Leave the key close to the switch and remove quickly when you hear the second beep. A full flush will be activated. If you miss the second beep - simply remove the key and start over again.



Troubleshooting

A)Unit does not work:	Check all cable connections, un-plug and re-connect, check water supply and transformer.
B) When the unit is first connected it will beep one long and two short beeps.	This is normal and of no concern.
C) When hearing a 2 second beep prior to flushing	This indicates that the battery is weak.
D) When hearing a 2 second beep after use and no flush is activated.	Battery needs replacing
E) G) Water flow volume low:	Check that shut-off valve and water supply is fully opened. Check that the solenoid cartridge strainer is not blocked. Remove solenoid cartridge and clean strainer (see maintenance below).

Please go through above check list first before contacting service.
None-warranty service call outs will attract charges. Phone support is free!!
For after sales service please contact Sanitron Pty Ltd, Ph 07 3875 2465, or via email: service@sanitron.com.au

Maintenance

Prior to performing maintenance refer to Operation and Safety Precautions Page1.
1) To remove the solenoid cartridge use a 17 mm socket or tube spanner.
2) Lubricate the o-rings of the new solenoid and **seats in the valve body**. Use only silicone based o-ring lubricant approved for potable water application.
3) Screw the new solenoid cartridge by **hand** all the way into the valve body (approx. **2½-3** turns). Make sure that solenoid is screwed in straight and apply slight **inward pressure** while screwing in the solenoid. Finally tighten with torque wrench, **do not over tighten**. The maximum torque is **1Nm** which is just a bit above hand tight. If the solenoid cartridge is hard to turn after **1** revolution **STOP**!! Unscrew the cartridge and repeat the above steps. Activate the valve several times and check for leaks.

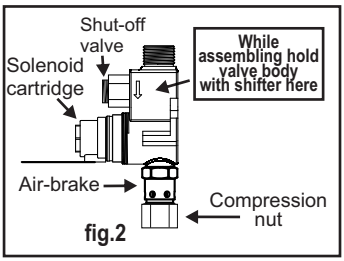


fig.2

4) If solenoid cartridge leaks out the side of the big o-ring, it has not been screwed in properly (cross-threaded). Remove solenoid and check that threads are not damaged. If threads check OK, re-insert solenoid (follow above steps). If not , **replace solenoid.**
5) Check in regular intervals that the equipment functions and inspect the valve and its components.
6) To prevent struvite (calcification) build-up below the water seal of the urinal, trap and pipework apply a suitable cleaning agent on a regular basis which dissolves also struvite below the waterline. Over time struvite build up can cause blockages in the trap and pipework. Use the cleaning program (see annex) to assist in the cleaning process.

Spare Parts

Electronic controller	200.101
Solenoid valve complete	SV-8S
Transformer	TR-6
Sensor	
Sensor Trap	200.110
Solenoid cartridge	SV-4A

Hydraulic conditions required at the valve
Max. operating pressure; to AS/NZS 3500.1 500 kPa
Water temperature Min5º C Max. 50°C
Ambient temperature Min5º C Max. 40ºC
The Solenoid cartridge is designed to be operated of a water supply equivalent to potable water standards.

Electrical details
Transformer 240 AC to 6V DC, switch mode
Electronic controller 6V, DC
Solenoid 6V, DC

Note: FFL = Finished floor level; Technical details, layouts are schematic only; all details for construction by others; dimensions & technical information can change without further notice. This publication edition 3; file name :UDF installation instruction reduced with SV-9 edition4.cdr dated 1/10/2018;supercedes all previous publications.