Supreme
Distribution Australia Pty. Ltd.

URINAL WATER CONTROLLER
Fully inclusive Installation Kit & Troubleshooting Guide

Total variable flush times from 2 seconds to 4 minutes

Low battery warning - eliminates valve being stuck open

50mm beam width - reduces risk of phantom flushing

5 Year Warranty

Every unit is individually tested

SENSING INDICATOR
Detects arrival at urinal

LOW BATTERY WARNING
Indicates voltage loss

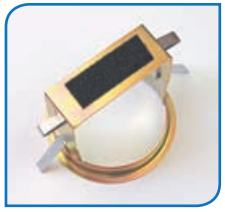
CONTENTS

At any time during Installation, Operating or Troubleshooting, if you have a problem or question, DO NOT HESITATE to contact us on 1800 008 282.

This instruction booklet covers Installation, Operating and Troubleshooting
The system comes with the following parts:

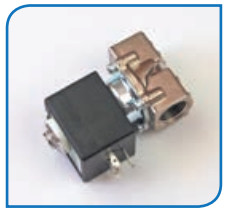
- Sensor containing PCB Board
- Chassis to contain the Sensor in the ceiling
- Clips to hold the Chassis in place (x2)
- Solenoid Cable from Sensor to Solenoid Valve (2m)
- Strainer
- Mini Ball Valve
- Nipples (x3)
- Solenoid Valve
- Power Supply, either Battery or 9 volt Power Supply from mains
- Roll of Plumbers Tape
- Template for 100mm ceiling cut out


Sensor


Chassis with Clips


Strainer


Mini Ball Valve


Solenoid Valve


Battery


Power Supply Cable


Solenoid Valve Cable

IMPORTANT: *Warranty will be void if instructions are not followed.*
All equipment supplied in the package must be installed with the new Sensor.
Urinal Water Controllers must be installed in compliance with AS 3500.

GENERAL SPECIFICATION OF SENSOR

The Supreme Urinal Water Controller uses passive infra-red sensors to detect approach to urinal. The Sensor activates a 9 volt Solenoid Valve following detection of a user.

The sensing indicator LED will flash blue when it has detected arrival at the urinal. A low battery warning LED will flash red every 5 seconds to indicate when the voltage has dropped to 7.2 volts and every 2 seconds at 6.9 volts. At 6.5 volts, it will turn off the system. Once turned off, the red LED will still flash for a while.

Unless otherwise requested on placing order, the system will come factory programmed to:

- 2 second pre-flush on beam being broken and the system being activated.
- 1 minute following beam being activated, the system will commence the main flush for about 5 seconds.

On direct feed urinals, this setting will be sufficient for most installations. If these settings require change, this is set out on page 7. If you are installing a cistern feed urinal, refer to page 7 for instructions on adjusting timing of flush.

The standard Solenoid Valve Cable supplied is 2 metres. If you require a longer cable please contact us, advising the length of the new cable required and we will send you a replacement.

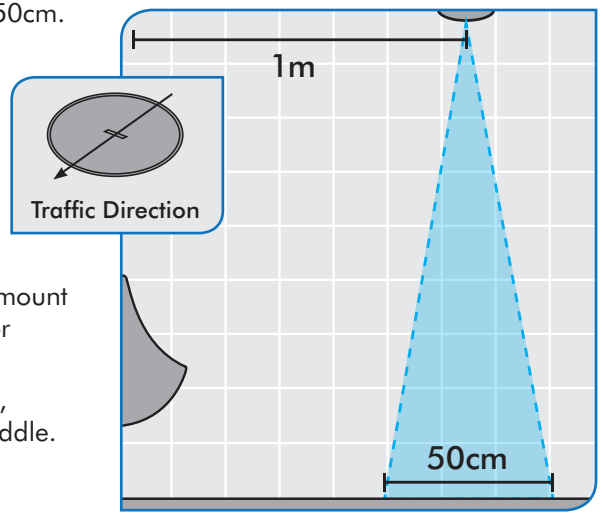
Warranty will not cover altered factory supplied cables.

INSTALLATION // Sensor

Select location of Sensor. Key factors to take into account when positioning the Sensor are:

1. Length of beam is approx. 3m. Width of beam is approx. 50cm.
2. Sensor must be mounted at least 1m away from the urinal. *(1A)*
3. Always keep Sensor at least 1m away from exhaust fans.
4. (a) For single stall urinals, mount sensor in line with urinal, or centre of slab.
   (b) For two or more urinals, mount the sensor in the middle.
   (c) Adjust sensor to avoid passing traffic.

(1A)



INSTALLATION // Sensor (Continued)

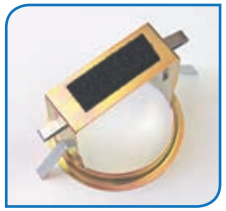
5. When position of Sensor is decided, saw cut out a 100mm diameter circle in the ceiling. *(1B)* *(100mm template supplied in kit.)*

IMPORTANT: *Always check for electrical wiring and other obstructions above the ceiling before cutting.*

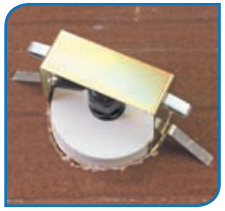
6. Insert Chassis into ceiling from below.
7. Insert Chassis Clips on both sides to hold Chassis in place in the ceiling. *(1C)*
8. Slide Sensor into the Chassis ensuring the slot is running parallel to the wall. *(1D)*

(1B)

(1C)



(1D)



PLUMBING

1. Turn off water supply.
2. Identify suitable location for the Solenoid Valve, Strainer, and Mini Ball Valve.

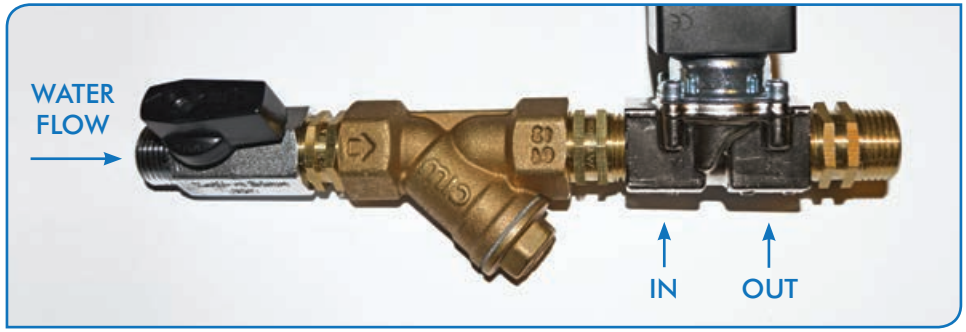
IMPORTANT: *Ensure location of valve is easy to access for future servicing.*

3. Remove section of pipe and Fit Strainer, Mini Ball Valve and Latching Solenoid Valve (3 nipples are supplied in the kit).

Note: Be careful not to have overlap of tape enter water supply and interfere with the operation of the valve. The Solenoid Valve is designed to operate in any position, however, for optimum performance vertical mounting is recommended.

IMPORTANT: *Take notice of the flow direction of both Valve and Strainer. IN and OUT are cast into the body of the valve, in arrows are cast on the Strainer.* ***The valve will not operate if fitted in reverse.*** *Ensure the Strainer is pointing down. (2A)*

(2A)



CONNECTING SENSOR TO VALVE

1. Plug the Solenoid Valve lead into the fly lead from sensor, then plug the other end into the black coil on top of the valve.
2. Slide Sensor into Chassis already in the ceiling connect power supply.
3. When fully connected turn water on and check for leaks.

The unit is now ready for testing.

CONFIGURING FLUSH CYCLES FOR A DIRECT FEED

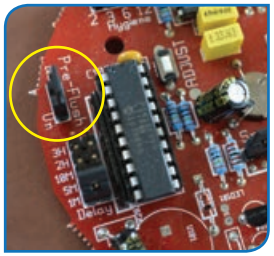
As per factory settings, factory set at:

- 2 second pre-flush on beam being broken and the system being activated.
- 1 minute following beam being activated, the system will commence the main flush for about 5 seconds.

If you are installing for a cistern fed urinal, please refer to set up instructions on the next page.

1. After connecting power supply, **WAIT AT LEAST ONE MINUTE**, then walk under the Sensor, you will note a blue flash from the Sensor indicating that it has recognised you. It will give a 2 second pre-flush, then one minute later, approx. 5 second main flush.
2. If you do not require pre-flush, move pin as illustrated from "ON" to "OFF". *(3A)*

(3A)



Delay before main flush, options are:
1 minute, 5 minutes, 10 minutes, 2 hours and 3 hours.

Just place the pin against the appropriate number.

LENGTH OF MAIN FLUSH

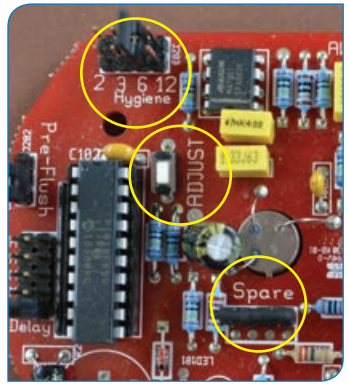
Depress "Adjust" button and then release finger from the button which will open the valve and commence flush. When satisfied with length of flush, depress "Adjust" button again. *(3B)*

Board is programmed to time out after 4 minutes.

By combining two pegs (from "Spare" rack, add 1 minute to 5 minutes and get a 6 minute delay, and so on. *(3B)*

Timing of "Hygiene Flush" is factory set at 6 hours, again this can be altered by moving the peg to either 2, 3, or 12 hours. By combining spare peg, a combination can be programmed. *(3B)*

(3B)



INSTALL FOR CISTERN FED URINALS

Install as above instructions, except disconnect the pre-flush.

Ensure cistern is empty and depress the "Adjust" button and then release finger from the button, which will open the valve. When the cistern starts dumping, depress the "Adjust" button once again and then release your finger.

ADVICE FOR INSTALLATION OF AIR BREAKS & CISTERNS FEEDS

In both cases, the amount of water entering the air break or cistern cannot be greater than what exits the air break or cistern. **Why?** In the case of the air break, if the flow of water is greater entering the air break than leaving and if there is a blockage in the plumbing between the air break and the urinal, the water will flow back and come out through the air break causing water damage.

In the case of a cistern feed, if for some reason the valve is stuck in the open position and the flow of water is greater entering the cistern than can exit the cistern, the cistern will overflow causing water damage.

Overflows can be caused by; flat battery resulting in the valve being stuck in the open position. As the battery loses power, it can have sufficient power to open the valve, but not sufficient to close the valve. Faulty Solenoid Valve lead that has been altered by someone other than the factory, or a build up of dirt in the valve.

We strongly suggest that when installing, depress the valve button on the PCB Board and let it run until it times out (approx. 4 minutes) looking for any evidence of water backing up. To be certain, repeat the operation a second time. Adjust mini ball valve to control volume of water. When satisfied, reset valve button on PCB Board.

Separate installation instructions for air breaks are included with the air break.

TROUBLESHOOTING // After Installation

The SUPREME Urinal Water Controller comes with several check points to isolate the problem.

POWER SUPPLY: If supplied with **power pack**, a green LED is near the connection to the sensor. If LED is glowing, power supply is OK. If not, either there is no power supply or faulty power pack. Plug power tool into power outlet to check power supply.

If **battery operated**, as the battery loses power, it will start flashing a red LED on the surface of the sensor indicating low battery. This will continue for several months until replaced. If not replaced, the system will close down.

WHY?: As the battery loses power, it will reach the stage where it will have sufficient power to open the valve, but not sufficient to close it. This will result in the valve being stuck in the open position causing continuous flow.

SENSING: On the face of the sensor, a blue LED light will flash when it detects your arrival, the system will then commence its operation. *(4A)*

No blue flash indicates a faulty sensor.

NOTE: Allow in excess of one minute when checking sensing after last flush to permit time for sensor to reset itself.

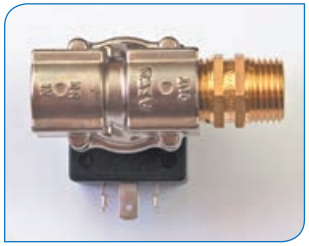
VALVE: When the sensor sends a signal to the valve, a red LED light inside the plug attached to the coil will flash red, this indicates the valve has received a signal from the sensor. No flash indicates a problem with PCB Board.

If signal is received, and valve will not flush:

- Check that water is turned on.
- Check that valve is installed in correct manner, notice "IN" and "OUT" on bottom of body of valve. *(5A)*
- Check that white washer is on top of coil, and not between coil and valve. *(5B)*
- Check that tape has not entered internal of valve. If so, remove valve and undo four screws on top and valve, and carefully remove from valve body ensuring the workings are kept in order.
- Run your fingers around body of valve looking for any residue of tape. Flush valve in water before re installing workings of valve.

(4A)

(5A)



(5B)

TROUBLESHOOTING // After Installation (Continued)

Re installing internals of valve in correct sequence is important, otherwise valve will not work. Refer to page 10 for diagram of valve parts and order of assembly.

Is the water rusty by lack of use over a long period of time. If so, flush out valve, flush pipes until clear water arrives.

OTHER:
Does the valve turn on when it should be off, and visa a versa? Did you have a need to alter the wiring, and it is possible it has been reconnected the wrong way around? If you have used flexible plumbing, check for kinks in the line.

ORDERING // Supreme Spare Parts

ITEM:	PART NUMBER:
Power Pack	AWS111A
Battery Pack	AWS111
Solenoid Valve	AWS105
Sensor	AWS104T

NOTE: New sensor comes complete in casing and ready to replace old sensor

WHY?: With continual upgrades to the operating system, the current PCB Board may not be compatible with the old unit.

ALWAYS CALL ON 1800 008 282 with any questions.

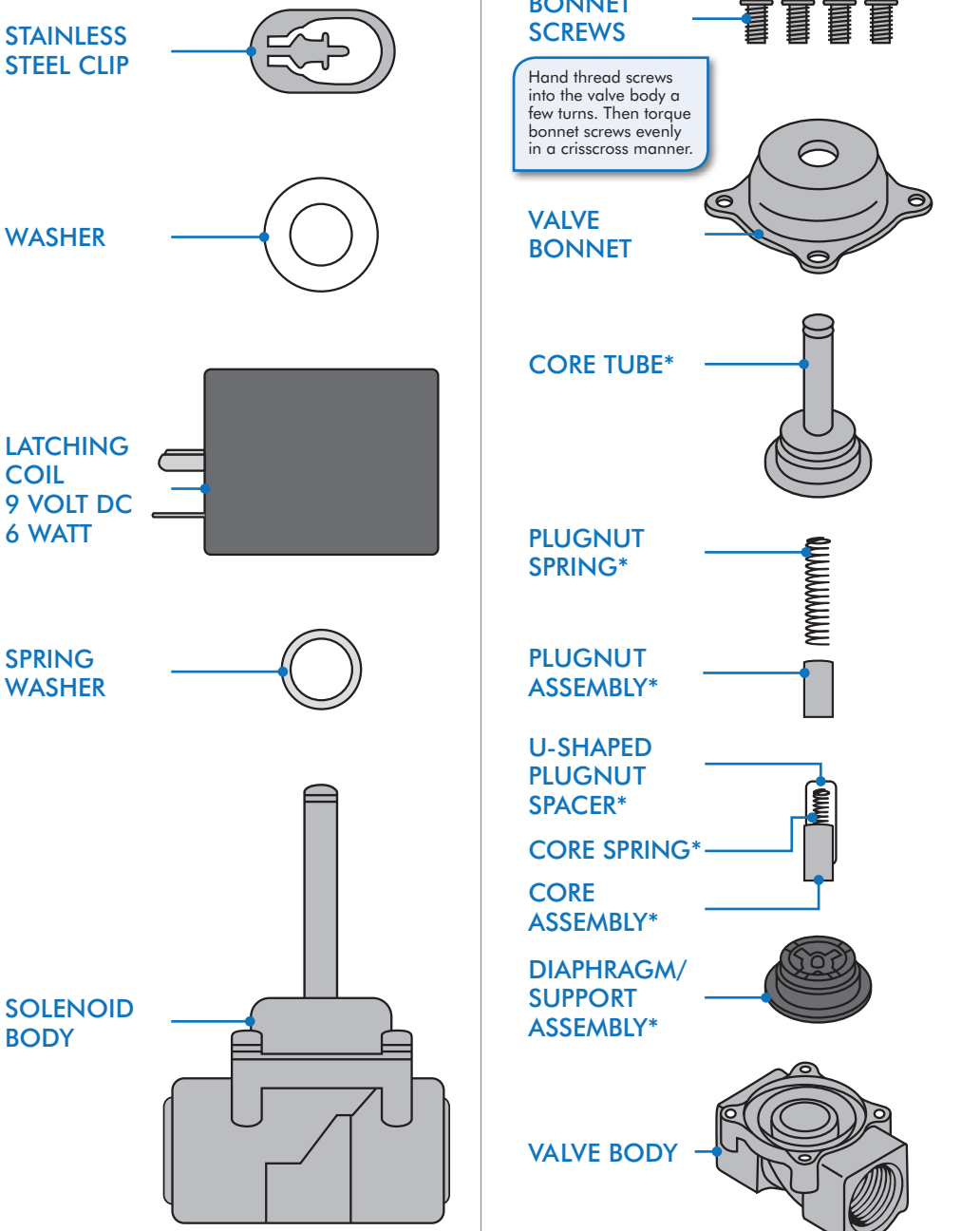
PROUDLY AUSTRALIAN MADE & OPERATED

5 YEAR WARRANTY

OVER 15 YEARS EXPERIENCE

GUIDES // Assembly Diagram

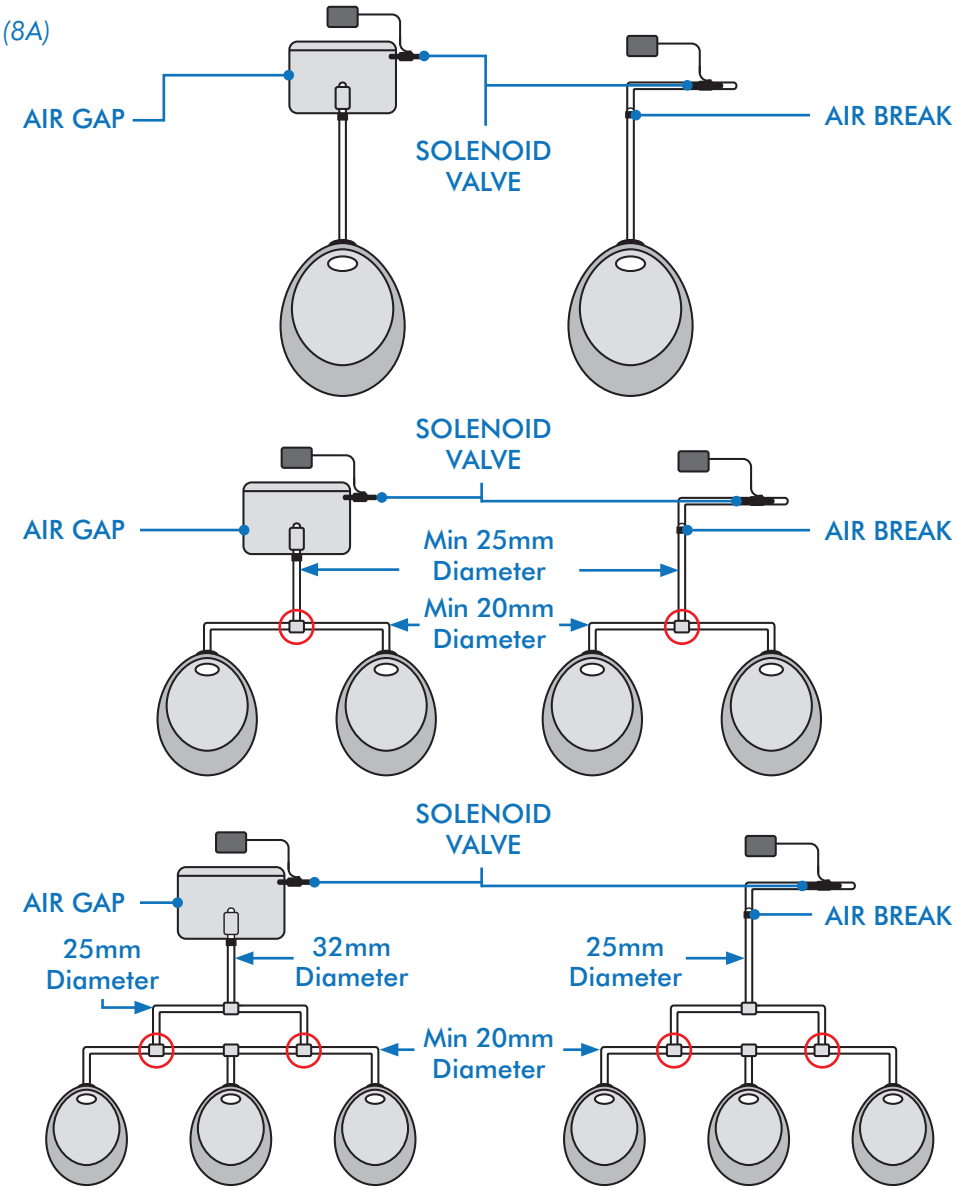
(6A) Solenoid Valve Coil Assembly



(7A) Solenoid Valve Internal Assembly

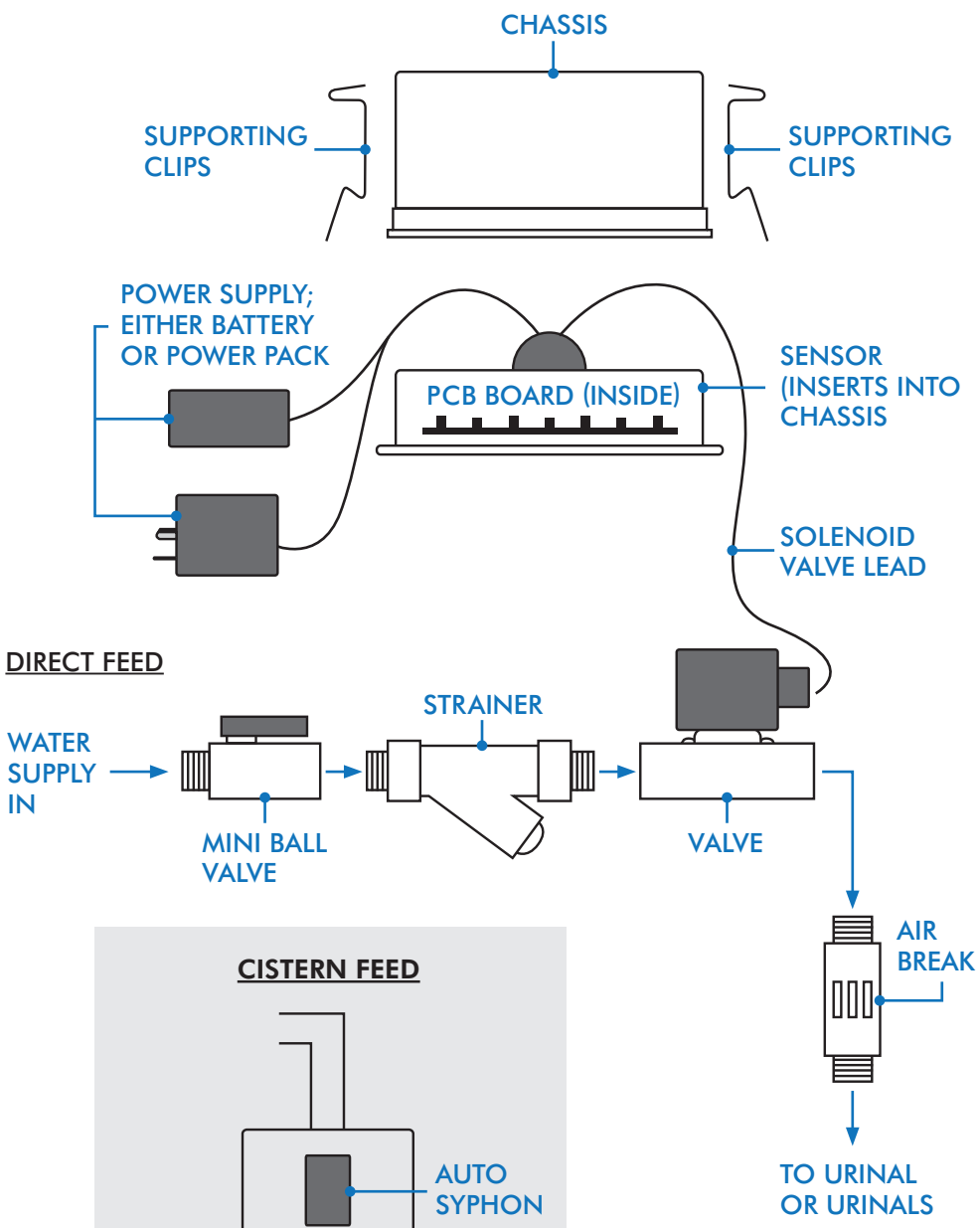
GUIDES // Typical Installation Guide for Water Management Systems

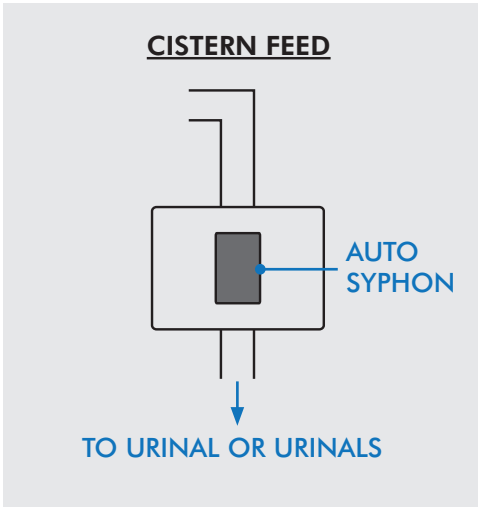
(8A)



ALWAYS: Provide an air gap of no less than 25mm between the water supply and flood level in cisterns. Install an approved air break coupling in or before the sparge pipe for direct feed urinals. Fit a reduced pressure backflow prevention device in the supply line. **NOTE:** Triple installations may require some form of water balancing to achieve uniform flushing to the three stalls. **IMPORTANT:** To Ensure even flow of water to urinals, the joins marked in red ○ must be in the middle of the pipe.

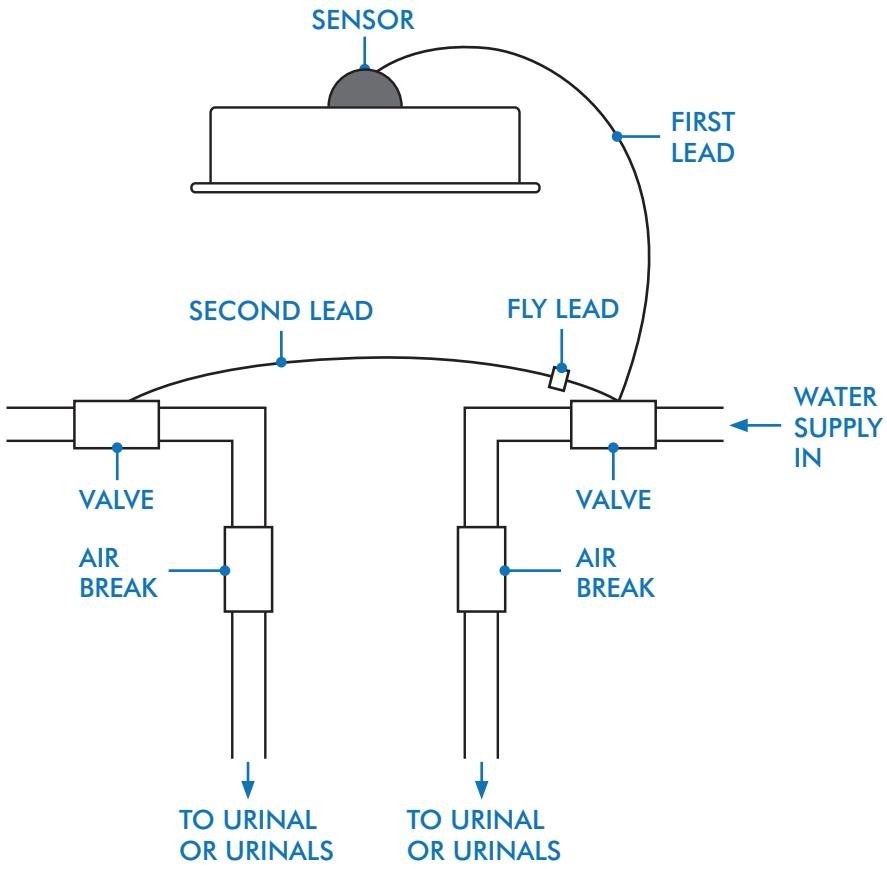
GUIDES // Exploded View of Product





GUIDES // Installation Guide for 1 Sensor Operating 2 Valves

*Same plumbing layout as in previous page (12).



IMPORTANT: *We recommend using a power supply when operating 2 valves (not battery).*

The valve is 2-way normally closed, internal pilot operated Solenoid Valve designed for long life and soft closing. Valves bodies are forged brass; internal parts are plastic and stainless steel, with Buna N elastomers.

NOTICE: Brass valves are not certified as lead-free under the Safe Water Drinking Act SWDA 1417 and are not intended for use on drinking water systems. They are intended for control of water in industrial applications.

OPERATION: Normally closed: Valve is closed when Solenoid is de-energised; open when energised.

IMPORTANT: Minimum operating pressure differential required is 5 psi to obtain full flow.

FUTURE SERVICE CONSIDERATIONS: Provision should be made for performing seat leakage, external leakage, and operational tests on the valve with a nonhazardous, non combustible fluid after disassembly and reassembly.

POSITIONING: This valve is designed to perform properly when mounted in any position. However, for optimum life and performance, the Solenoid should be mounted vertically and upright to reduce the possibility of foreign matter accumulating in the core tube area.

PIPING: Connect piping or tubing to valve according to markings on valve body. Apply pipe compound sparingly to male pipe threads only. If applied to valve threads, the compound may enter the valve and cause operational difficulty. Avoid pipe strain by properly supporting and aligning piping. When tightening the pipe, do not use valve or Solenoid as a lever. Locate wrenches applied to valve body or piping as close as possible to connection point.

IMPORTANT: To protect the Solenoid Valve, install a strainer or filter suitable for the service involved in the inlet side as close to the valve as possible. Clean periodically depending on service conditions.

CLEANING: All Solenoid Valves should be cleaned periodically. The time between cleanings will vary depending on the medium and service conditions. In general, if the voltage to the coil is correct, sluggish valve operation, excessive noise or leakage will indicate that cleaning is required. In the extreme case, faulty valve operation will occur and the valve may fail to open or close. Clean strainer or filter when cleaning the valve.

PREVENTIVE MAINTENANCE:

- Keep the medium flowing through the valve as free from dirt and foreign material as possible.
- Periodic exercise of the valve should be considered if ambient or fluid conditions are such that corrosion, elastomer degradation, fluid contamination build up, or other conditions that could impede Solenoid Valve shifting are possible. The actual frequency of exercise necessary will depend on specific operating conditions. A successful operating history is the best indication of a proper interval between exercise cycles.
- Depending on the medium and service conditions, periodic inspection of internal valve parts for damage or excessive wear is recommended. Thoroughly clean all parts. If parts are worn or damaged, install a complete Rebuild Kit.

CAUSES OF IMPROPER OPERATION:

- Incorrect Pressure: Check valve pressure. Pressure to valve must be within range specified on nameplate.
- Excessive Leakage: Disassemble valve and clean all parts. If parts are worn or damaged, install a complete Rebuild Kit.

VALVE DISASSEMBLY:

(Refer to Diagram 7A on page 10.)

1. Disassemble valve in an orderly fashion. Use exploded view for identification and placement of parts.
2. Remove bonnet screw and valve bonnet from valve body. Then remove core tube, plugnut spring, plugnut assembly, u-shaped retainer, core spring, core assembly, and diaphragm/support assembly.
3. All parts are now accessible for cleaning or replacement. If parts are worn or damaged, install a complete Rebuild Kit.

VALVE REASSEMBLY:

1. Install diaphragm/support assembly into valve body.
2. Holding the core tube upside down, reassemble the parts as follows:

A. Drop the plugnut spring into the core tube.

B. Drop the plugnut assembly (large hole end first) into the core tube.

C. Insert core spring into the core assembly. Then position u-shaped plugnut spacer into grooves of core assembly on top of the core spring.

D. Install the core assembly (with core spring and u-shaped plugnut spacer) into core tube, spacer end first.

NOTE: Push core assembly in and out to be sure of proper plugnut and core spring alignment. Core assembly should depress smoothly and return immediately.

E. While holding this assembly together, position the core tube (with all parts) into the valve body.

3. Replace valve bonnet and bonnet screws. Hand thread screws into the valve body a few turns. Then torque bonnet screws evenly in a crisscross manner, *see diagram 7A on page 10.*

WARNING: *To prevent the possibility of personal injury or property damage, check valve for proper operation before returning to service. Also perform internal seat and external leakage tests with a non hazardous, noncombustible fluid.*

4. Restore water pressure and electrical power to valve.
5. After maintenance is completed, operate the valve a few times to be sure of proper operation. A metallic click signifies the Solenoid is operating.

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