

# MACDONALD INDUSTRIES LIMITED INSTALLATION INSTRUCTIONS

## 6.0 ELECTRICAL INSTALLATION

(cont)

- The Clipsal 4 pin socket should be mounted adjacent to the controller and wired to mains as per Diagram 4.
- Removal of the plug may revoke warranty offers.

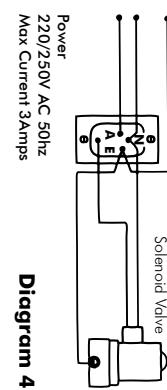
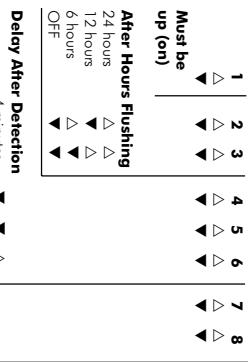
When the controller is plugged in, the red LED on the front of the controller should come on and flicker when movement is detected. Adjust the position of the controller to achieve detection of urinal users where possible.

## 7.0 OPTIONS

Located on the back panel of the control unit is a small circular cover plate. Behind this plate is a series of 8 switches which give you the option of changing the flush cycle to suit your client's needs. There are 3 sections to these programme options;

### a) AFTER HOURS FLUSHING

Gives the option of regular after hours flushing to reduce likelihood of trap dry-out.



**Diagram 4**

## 2.0 GENERAL DESCRIPTION

These Zurn mains pressure flushing valves are designed to conserve flushing water, normally wasted with conventional cistern tank installations. By using a Zurn mains pressure flushing valve, the urinals can be directly connected to mains pressure water, without the need for a cistern tank, or any other form of back flow protection. The Water Guard will detect people using the urinal and set up a cycle of flushing that minimises water usage.

## 3.0 OPERATING PRINCIPLE

On detection of a person stepping up to the urinal, the Water Guard will initiate a flush after a delay period. The delay period is set on site to suit the client's needs. Once the flush has finished, a new cycle will not occur until another person is detected. Water Guard is programmable to suit individual customers needs and the options are shown in Section 6.0.

**RECOMMENDED SETTING**

1 ▲ 2 ▼ 3 ▲ 4 ▼ 5 ▲ 6 ▼ 7 ▲ 8 ▼

**Diagram 5**

## URINAL WATER CONTROL

### Models Z-6190-WG & Z-6195-WG Series 3 Water Guard

## 1.0 CONTENTS OF STANDARD WATER GUARD INSTALLATION KIT

- 1 x Water Guard control unit complete with adjustable mounting bracket and Clipsal 4 pin plug
2. 1 x Clipsal No 408 4 pin socket
3. 2 x Installation Instruction sheets, and Zurn instruction and this one
4. 1 x 1/8" mm 230V AC solenoid valve with short tubing and brass connections
5. 1 x Guarantee form
6. 1 x Zurn mains pressure flushing valve c/w stop valve and vacuum breaker tube

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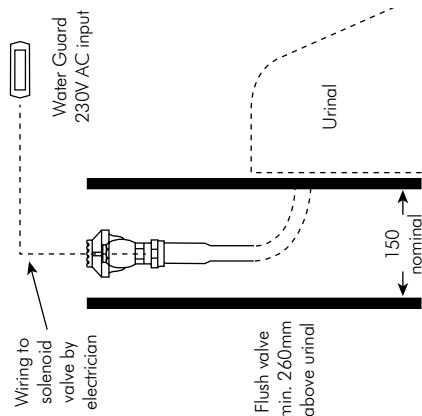
## 4.0 PLUMBING INSTALLATION

The Zurn flush valve should be installed as per the attached Zurn Installation Instructions but to the dimensions on Diagram 1.

The Z-6190 valve is supplied with a 32mm copper tail (1/2" BSP for Z-6195) from which it is necessary to run a pipe to the urinal.

Generally a 25mm mains supply (19mm for Z-6195) will be sufficient, but it is imperative that the pipe can supply a minimum of 100L/min (49 L/min for Z-6195) at a maximum velocity of 1.5m/sec. Dynamic pressure should be in the 200 - 600kPa range. Where pressures exceed this, or fluctuate, fit a Wilkins Model 600HLR pressure reducing valve.

Where multiple bowls are fitted and flushed from one Zurn valve, please take particular care you read and comply with Section 4.7 of the enclosed Installation Instructions.



**Diagram 1**

## 6.0 ELECTRICAL INSTALLATION

Electrical work should be carried out by a registered electrician.

The control unit should be positioned, if possible, to detect only people using the urinal. Detection field patterns are as per Diagram 2, but smaller "lobes" of detection can occur outside these main lobes.

Avoid pointing the control unit towards hallways or other areas where traffic patterns may encourage false triggering. Remember, Water Guard will detect through walls and ceilings up to a maximum distance of 4m.

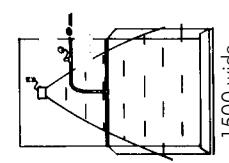
Where there are multiple urinals and Water Guards, avoid pointing the control unit towards other urinals as water movement on these can also cause false triggering.

The control unit can be mounted above a ceiling for out of sight installation, provided the thickness of the ceiling does not exceed 15mm and it is a non-conductive material such as Hardboard, Gliboard, Pinex, Hardiflex plastic or glass. Materials such as sheet metal, foil or foil-backed boards and wire re-inforced glass should be avoided. See Diagram 3 for minimum clearances.

## 5.0 COMMISSIONING

Once the electrician has wired up the Water Guard, it is necessary to ensure the flushing function is correct.

The switches located behind the panel on the back of the Water Guard give options on the flush cycle. They have been pre-set to suit a "typical" installation, however you may wish to modify them to suit your clients needs. Refer to Section 7.



**Diagram 2**

### WARNING!!

When Water Guard is first plugged in, it will immediately start a flush. Therefore DO NOT PLUG IN until you are absolutely sure all plumbing connections are correct and the stop valve on the ZURN valve is shut off.

When it is first plugged in the Water Guard will immediately open the solenoid valve for 2 seconds, thus initiating a flush. It will not flush again until the "Delay After Detection" period is completed. (refer Section 7 b). If the switches have not been altered since supplied, this period will be 5.5 minutes. The cycle can always be overridden by pressing the reset button, thus giving you the opportunity to adjust and set the flow rate through the ZURN valve.