

WC Mains Pressure Flush Valves INSTALLATION INSTRUCTIONS ZEM-6152XL

CONTENT OF STANDARD PACK

- 1. 1 x rough brass ZURN Aquaflush flush valve
- 2. 1 x ZURN rough brass angled stop valve1 1" BSP
- 3. 1 x flush pipe set including Vertical r/b vaccum breaker pipe, rubber duck bill, c/p horizontal flush pipe, elbow, wall escutcheon, rubber pan connector
- 4. 1 x ZURN EMS motorised actuator.



VALVE DESCRIPTION

ZURN ZEM-6152XL is a commercial quality, diaphram operated, motorised actuated, recess mounted brass WC flush valve designed to be connected to mains pressure (potable) water.

Valve is suitable for connection to back entry 6L WCs

Valve should be coupled to a Zurn ES sensor supplied separately as specified. Details that follow show assembly of valve and sensor irrespective of the model of sensor mounting plate/ access panel.

APPROVALS

ZURN flush valves are approved under Watermark Schedule Licence No WMK00307 for Quality Assurance

Under AS/NZS6400:2005 ZURN flush valves have WELS Registration. All dual flush valves acheive a 3 Star rating and single flush valves a 1 Star rating



PIPE SIZING AND DESIGN

ZURN flush valves rely on the capacity of the supply pipe to maintain the flow rate and pressure needed to evacuate the pan. A minimum of 25mm (nominal ID) supply is necessary to acheive this however much larger supply pipes may be required depending on;

- a) Supply pressure
- b) Length of pipe
- c) Number of valves installed
- d) Other fixtures using the supply pipe

All pipework must be designed by a suitably qualified person (services engineer or other) to acheive the necessary flow rate. Pressures given are dynamic pressure (under flow) not static head

Flow rate: 90L/min Pressure: 150 - 500kPa (ideally 300 - 400kPa) Connection: 25mm BSP

Where it is not possible to acheive the pressure required, a roof supply tank should be fitted and an equivalent Non-Potable valve ordered. In those circumstances the pipe sizing should be as per the Drainage and Plumbing Regs 1978.

As a rough guide the following chart can be used for mains pressure installations - this is intended as a guide only and pipe sizing should be checked by an engineer. The pipe size shown is the final horizontal pipe where the takeoff to the Zurn valve will be connected. Preceding pipe sizes may be larger depending on the size of the total contract. These sizes assume <u>dynamic pressure</u> in the 150 - 500kPa range.

No of Valves	Pipe Size (mm)
1	25
2 - 3	32
4 - 12	38
13 - 24	50
25 - 50	65

NOTE: We recommend the use of Wilkins 1250 water hammer arrestors and 20g strainers where water quality is likely to cause problems to the Zurn valve

INSTALLATION

- 1. Fit isolator valve to 1 1/2" BSP threaded pipe. Refer to Page 1 for position of valve and nipple outlet position. Ensure minimum distance between water inlet and toilet is maintained to ensure effectiveness of backflow preventer
- Prior to fitting flush valve tailpiece onto stop valve, ensure O ring is properly located in the seal groove at the end of the tail and that the snap ring is properly aligned. ALWAYS wet the O ring before fitting the stop valve.
- Insert the flush valve tailpiece into the stop valve and hand tighten the lock nut. Connect the rough brass vertical tube to the bottom of the valve ensuring the hard rubber seal is fitted to the top of the tube.
- 4. It may be necessary to cut the vertical tube to suit the pan, but minimum heights must be observed. To prevent back pressure, the top of the tube MUST be a minimum of 200mm above the flood level of the WC. Fit the elbow and horizontal pipe, using the rubber pan connector to seal into the horn of the pan.
- 5. Hand tighten nuts only, adjust valve for plumb and then tighten all nuts.
- 6. Assembly of valve should be as per drawing on last page
- 7. When all valves are installed and full water pressure is available it is necessary to flush out all lines to ensure no debris is left in the pipework.
 a) close isolator
 - b) remove main brass cap from valve
 - c) remove plastic cover and diaphram assembly
 - d) replace plastic cover and brass cap (less diphram assembly)
 - e) Open stop valve and flush out debris
 - f) Shut stop valve and reassemble valve
- 8. Refer to addendum sheet on installation of sensor and motorised actuator.
- The ZURN Aquaflush valve is designed to flush 6L of water over a wide range of pressures however some adjustment of the stop valve may be necessary to ensure correct operation and to minimise pan splash, particularly at higher pressures.
- Compliance with Watermark approvals means this valve must not be modified in any way. Warrantee may be void if valve is installed in any other way than recommended in this document

ASSEMBLY DIAGRAM



MAINTENANCE

It is recommended the valve is annually checked for leaks and correct performance.

Problem	Cause	Remedy
Poor/inadequate flush	Incorrect pipe sizing or inadequate pressure	Increase pipe supply, boost pressure
Short flush	Faulty diaphram - bypass hole oversize Stop valve not correctly adjusted	Replace diaphram assembly Turn down stop valve to extend flush time
Valve won't shut off	Insufficient line pressure to repressurize valve By pass hole blocked/debris under diaphram Trip mechanism not sealing	Increase pipe supply, boost pressure Clear debris Replace diaphram assembly
Valve will not flush	Water supply cut off Motorised Actuator jammed	Turn water on Remove and clean / replace
	Sensor not activating	Check power supply, replace it necessary

