

THE EFFECTS OF URIC SALTS ON OTHER NON-WATER URINALS

For a long time, waterless urinals have received a bad name, mainly because they can incur a number of problems such as smells and blockages. The reason these problems occur is that previous models have been unable to capture and control the uric salts that diffuse out of urine in the housings. At ZeroFlush, we have been able to overcome that problem by increasing the size of the housing, thus allowing the uric salts more time to settle and become captured in the containment section, rather than be flushed through into the sewer mains. Below are examples of how uric salts can be detrimental to some of the other water-free urinals available on the market.



The above photographs show one of three urinals that have been installed in a major shopping centre on the Gold Coast. This urinal uses a non-reusable cartridge which is locked into place and has a capacity of less than 0.5 litres. The right hand picture shows how the salts have been forced through the cartridge and into the body of the housing, effectively blocking the outlet of the fixture. These salts also deposit heavily in the main drains causing blockages which require cleaning with a high pressure water jetrodder.

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Another well known brand on the market has also been susceptible to the problems that can occur when uric acid and salts are able to accumulate in the main sewer outlet of the fixture. At ZeroFlush, we were given the opportunity to perform a case study on the efficiency of our urinal up against what until now had been the leading product on the market.

Case Study: McDonald's Restaurant- Nerang, Gold Coast Queensland

Background: This restaurant on average sees over six thousand five hundred customers pass through its doors every day, and during peak holiday periods, almost ten thousand people. The store had two water flushing urinals installed on the premises, which were converted to Uridan brand water-free urinals. These urinals were installed in position for over one year and had the main drains cleaned on three separate occasions.

Six months after the final drain cleaning procedure, the urinals were removed for installation of two ZeroFlush model ZF-201 urinals. The technicians on site were amazed to find the amount of build up in the drains as demonstrated in the picture below.



THE ZEROFLUSH DIFFERENCE

The Solution: After the Uridan urinals had been removed, high pressure cleaning of the drains was again performed to remove the *massive* build up of uric salts. With the drainage system in now optimal condition, the new ZeroFlush urinals were installed into position and commissioned for immediate use.

The Test: Exactly six months after the installation of the ZeroFlush urinals, one of our technicians returned to remove the adult urinal which receives more than three times the use as the junior fixture.

To perform the test, our technician simply removed the trap insert and poured down a bucket of water, the same as any normal maintenance. This removes the uric sludge from the housing and flushes it through into the sewer main where it relies on the water from other fixtures to move it out of the premises. No chemicals or pressure machines were used to clean the pipes beforehand.

The urinal was removed from position by simply cutting the silicone seal around the outside of the fixture and then disconnecting the rubber Fernco which connects the housing outlet to the fixture discharge pipe. A photograph was taken immediately after this and the results speak for themselves.



THE ZEROFLUSH DIFFERENCE

The Results: Not only have the ZeroFlush Urinals outperformed all other models it has come up against in controlling uric salts, it has also outlasted them all. The following tables are actual logs of the times when maintenance was performed on the urinals at the store. They display the times when a technician was called to the store because blocking agent was showing in the urinal which is an indication that service is required.

McDonald's Nerang Uridan 6 month maintenance period

Date of Maintenance	Adult	Junior	Number Of Weeks Between Service
15/11/2005	Installed	Installed	
26/11/2005	X	X	1 week 4 days
4/12/2005	X	X	1 week 1 day
20/12/2005	X	X	2 Weeks 2 Days
5/01/2006	X	X	2 Weeks 1 Day
21/01/2006	X	X	2 Weeks 2 Days
12/02/2006	X	X	3 Weeks 1 Day
4/03/2006	X	X	2 Weeks 6 Days
24/03/2006	X	X	2 Weeks 6 Days
15/04/2006	X	X	3 Weeks

Increase use during Christmas holiday period

McDonald's Nerang ZeroFlush 6 month maintenance period

Date of Maintenance	Adult	Junior	Number Of Weeks Between Service
26/06/2006	Installed	Installed	
2/08/2006	X		5 weeks 1 day
15/09/2006	X		6 weeks 3 days
21/09/2006		X	12 weeks 2 days
16/10/2006	X		4 weeks 3 days
14/11/2006	X		4 weeks 1 day
16/12/2006	X		4 weeks 4 days
23/12/2006		X	13 weeks 2 days
15/01/2007	X		4 weeks 2 days

Increase use during Christmas holiday period

The above tables show just how effective the ZeroFlush urinal is in comparison to a urinal with a smaller housing. The major blockages that were being caused in the drainage system by the Uridan urinals meant that both urinals required servicing and as a result, maintenance costs went through the roof. The table also displays the difference in usage between the adult and junior urinals, and the increased usage during the peak Christmas period, when maintenance intervals become shorter.