

A Primer on No-Water Urinals

Overview

No-Water Urinals require no water for flushing by using a cartridge in the urinal that contains a special biodegradable liquid within a unique trap system. This special liquid is lighter than other liquids and, therefore, floats on and seals the urine from the room atmosphere. The sealing liquid and/or cartridge needs to be replaced periodically in these systems.

Urinals that function without water were first offered in the U.S. marketplace around 1991. Half a dozen companies manufacture no-water urinals worldwide, and most use similar technologies.

Installation

No-water urinals can be installed in new construction or used to retrofit existing conventional fixtures. Installation of a no-water urinal is no more labor intensive than for a water-using fixture. However, care must be taken to ensure proper drain-line slopes are achieved, as no-water fixtures lack the flushing power of a conventional flushometer valve to overcome poor drain-line slopes.

When installing a no-water urinal, it is strongly advised that certain pre- and post-installation procedures are followed, such as:

- Snaking the drain line before installation of the no-water urinal
- upgrade plumbing to meet all current code requirements
- adopt the specified janitorial/maintenance procedures

MMWD recommends working only with installers that are familiar with no-water urinal installations. If installations are to be performed with “in-house” staff, MMWD strongly suggests requesting staff training from the manufacturer.

Janitorial Maintenance

No-water urinals require different, though not necessarily more, maintenance than water-using fixtures. It is essential that janitorial staff follow the correct procedures when cleaning a no-water urinal. Improper cleaning, such as dumping a bucket of water into the urinal, may significantly reduce the life of the replacement cartridge or wash out the sealant liquid. This will not only increase costs (i.e. purchasing more cartridges or sealant than should be necessary) but may lead to odor problems and, therefore, complaints.

Water Savings

Although manufacturers commonly estimate annual water savings of 40,000 gallons per fixture, MMWD staff estimates potential annual water savings per fixture of roughly 23,000 gallons for an office building and 15,000 gallons for school restrooms. (Water savings estimates assume a 260-day business work year and a 180-day school year.) Currently, an independent water savings analysis of no-water urinals is being conducted with results expected by mid-2007. MMWD is co-funding this study with three other water agencies from the US and Canada.

Building Code Issues

The State of California has officially stated that no-water urinals are acceptable fixtures for all California public schools and state-owned buildings. However, due to differing interpretations of the California Plumbing Code, local building departments ultimately make the determination if no-water urinals are acceptable under their building codes for sites other than public schools or state-owned buildings.

No-Water Urinal Retrofit Costs

Complete retrofit costs per fixture are estimated at \$380 - \$650, depending on the no-water urinal model installed. Fixture costs range from roughly \$230 - \$500 and the installation costs are estimated at \$150 - \$200 per fixture.