



BRIEFING 4

FLUSHMATE®

A DIVISION OF SLOAN VALVE COMPANY

New Las Vegas Hotel Puts Odds In Its Favor During Water Closet Changeout With Pressurized-Flushing System From Sloan Valve Company

A popular Las Vegas hotel and casino didn't want to gamble on a less-than-perfect system when the time came to update the water closets in 500 of its 1,735 guest rooms. That's why before making a selection, the engineering staff at Harrah's Las Vegas Hotel/Casino did a comprehensive cost analysis and tested Sloan *FLUSHMATE*® pressure system in its four most problematic rooms. The result? A selection for the changeout that drew rave reviews from guests and brought about reduced maintenance and water costs.

Water closets were replaced in rooms that make up the oldest part of the 1.2 million square foot hotel. The 20-year-old, 5.5 gallon per flush (gpf)/20.8 Lpf gravity-feed, rear discharge system in that section was plagued by rust barnacles. Before installing the water closets, however, Harrah's investigated all the options.

"We installed the Sloan *FLUSHMATE* pressure system and different fixtures in the four rooms that consistently received the most plumbing maintenance calls," explained Ken Teeters, facility manager. "We found that our maintenance problems went away." Teeters adds that the choice of fixtures did make a difference: "not every product is equal," he says, and "we selected these fixtures for their superior performance."



"Floor-mounted back-outlet installations should use only pressure-assist systems to achieve maximum 1.6 performance," explains Paul DeBoo, Product Manager for *FLUSHMATE* at Sloan Valve Company. "Back-outlet gravity units cannot attain enough siphoning action to achieve desired performance levels in such installations."

"Besides, gravity 1.6 systems themselves are more prone to stoppages. The *FLUSHMATE* system, by comparison, features a larger trapway (2 1/8" minimum vs. the 1 5/8" for gravity-type toilets)

with fewer bends for fewer clogs and a deeper trap seal for better safety." DeBoo points out that the larger water surface (10" x 12" vs. the 6" x 8" which is typical in the low-consumption gravity unit) results in less staining, easing daily housekeeping chores.

"When you have a problematic plumbing system, the best option is to 'go pressurized,'" Teeters explains. Clogs are reduced because the water jets break up the discharge. In addition, he says, "Overflows are virtually eliminated because even when solidly plugged, water won't enter the bowl unless water goes out."

As a result of the changeout, Teeters notes that plumbing calls to the 500-room section have dropped by 70%. That translates into substantial labor savings for the hotel. "When you estimate the hourly cost of labor, and the average time it takes to handle a call, you've saved a lot," Teeters says. An additional benefit for Harrah's is improved guest services. "We've not only saved on maintenance, but we've saved embarrassment for guests as well."

The smaller, yet more powerful *FLUSHMATE* system brought about additional, unexpected cost savings that made the water closet changeout even more attractive to Harrah's. The switch from 5.5 gpf/20.8 Lpf to a 1.6 gpf/6.0 Lpf system meant that the hotel could install downsized water lines, saving approximately \$70,000 in plumbing costs. This savings was the real sweetener in our decision to changeout," says Teeters. Although the cost of the pressure units and fixtures was higher than comparable gravity-fed units, Harrah's found that the downsized lines would pay for about two-thirds of the cost of the new water closets. Lower water usage brought about significant savings, too. "We save about \$7,000 a year in water costs," he said.

According to the U.S. Government, traditional toilets use five to seven gallons per flush, which means nearly 4.8 billion gallons of water are flushed down American toilets each day. The U.S. Department of Housing and Urban Development reports that replacing toilets with new low-consumption units that use only 1.6 gallons/6.0 Lpf per flush would save almost 70 percent of the

current U.S. water supply— that's 5,500 gallons/20,814 liters of water per person each year.

"But that's only if it works," challenges Paul DeBoo, "which means using one flush to get the job done. Besides, H.U.D. has calculated that a fixture can leak up to 25 gallons per day, depending on the age of the parts inside. With *FLUSHMATE* inside, you just don't see any of that happening."



The powerful *FLUSHMATE* system uses just 1.6 gpf/6.0 Lpf, meeting the Energy Policy Act of 1992 requirements for toilets manufactured after January 1, 1994. And although most water closets now use 1.6 gpf/6.0 Lpf, the higher force of the pressure system (70 gallons per minute [gpm]/265.0 Lpm vs. 25 gpm/95.0 Lpm common with gravity fed systems) conserves water by eliminating the double-flushing and leakage common with gravity systems. "In fact, based on test reports, gravity units necessitate double-flushing about 40 percent of the time, compared with the *FLUSHMATE*, which cleared the bowl after one flush 100 percent of the time," reports Paul DeBoo.

FLUSHMATE complies with nationally recognized Plumbing

Codes and Standards, and its performance has been verified by independent testing laboratories. *FLUSHMATE* Operating Systems, which are manufactured by Sloan Valve Company, the world's leading producer of pressurized flushing devices, are currently being incorporated in a wide variety of styles and colors by leading fixture manufacturers in the world.

FLUSHMATE-equipped pressure-assist toilets are available from leading fixture manufacturers worldwide in a variety of colors and styles.

FLUSHMATE systems are available in 1.6 gpf (6 lpf) or 1.0 gpf (3.8 lpf) models from leading fixture manufacturers worldwide in a variety of styles and colors. For more information on these systems, including *FLUSHMATE*'s automatic sensor flushing systems, please contact us or visit our website: www.flushmate.com.



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