

NOWA's Innovative Designs for Waterless Public Urinals

Waterless Public Urinal Kiosk (WPUK): WPUK is a pre-fabricated concrete men's urinal kiosk (for 4 users). The surrounding area of the urinal kiosk is covered with a planted hedge to offer privacy to the users. This hedge can be replaced by a billboard to provide revenue for maintenance of the urinal. So far pre-fabricated urinals have not been installed in public places in India.



The WPUK is suitable for parks, roadside sites, schools, institutions and individual homes.

Green Waterless Urinals (GWU): GWU is a low-cost option that can be promoted in public places and locations where there is space for the on-site distribution of urine collected to plant beds. Urine collected is diverted to plant beds of Canna Indica surrounded by a plant hedge like Ficus around the urinal to provide privacy.



The plants utilize essential nutrients such as nitrogen, phosphate & potassium from the urine for their growth.

The GWU is suitable for parks, roadside sites, schools, institutions and individual homes.

NOWA

waterless urinals powered by Zerodor™

(An initiative by Moneyplant Estates Pvt Ltd)

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A GREEN PRODUCT

NOWA (No Water) urinals can save between 56,800 to 170,000 litres of water per urinal per year



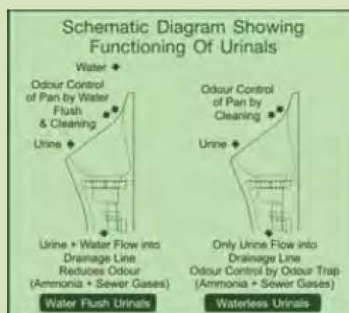
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OUR TECHNOLOGY

NOWA Urinals have been created in partnership with IIT Delhi to conserve water and energy, and to reduce the volume of waste water generation. A recent World Bank report states that most major Indian cities will run dry by the year 2020.



Zerodor Urinal Trap Waterless Urinal with Zerodor (Front View & Back View)

NOWA Urinals use a ground-breaking odour trap called Zerodor. It does not require replaceable parts or consumables. This results in low maintenance costs as compared to other solutions in the market like sealant liquid traps, membrane traps & biological blocks.

Zerodor fitted waterless urinals will prevent odour developed inside the drainage lines connected to urinals from entering rest rooms.

8 REASONS TO GO WATERLESS

ADVANTAGES	SAVINGS
No fresh water pipes	Saves money, material & labor
No flushing mechanism	Touch-free hygienic operation
No mechanical or electrical parts	No cost on mechanical parts & timers
No water needed	Max water savings, 20% to 30% of total water consumption
Reduces waste	Less waste released into treatment process
Fibre glass or vitreous China construction	Durable & easy to handle for installation
Ease of cleaning	Atomizer bottle with biodegradable cleaner
Odorless	Saving on air fresheners & perfumed tablets

DEMERITS OF CONVENTIONAL URINALS

- Conventional water flush urinals use approx 4 ltr of water for flushing. This figure goes up to 10-15 ltr when a toilet pan with flush is used for urinating.
- Water used for flushing urine increases volume of sewage generated in cities
- Use of hard water for flushing urine leads to scale formation that causes blockage in the drains
- Dampness in urinals offers favorable environment for microbes & air-borne infections
- High nitrate & phosphorous levels are found in sewage which can be reduced substantially if urine is separated from sewage for productive use such as agricultural & industrial purposes

COMPARITIVE ANALYSIS OF POPULAR ODOUR TRAPS

DESCRIPTION	MEMBRANE TRAP	SEALANT LIQUID	BIOLOGICAL BLOCKS	ZERODOR
Odour Control	Good	Good	Good	Very Good
System Cost	Trap can be fitted to existing pan. Cost Rs. 500 -1750. Trap cost Rs.1200	New pan with cartridge has to be fixed. A single urinal costs Rs.1000-20000	Any urinal can be made waterless. Cost of bio-block Rs.20 (lasts for about 5 days)	Trap can be used with existing pan. Also used with new pan. Negligible cost
Retrofitting of existing urinal	Traps can be fitted to existing pan	New sealant liquid based pans is reqd	Bio-blocks can be placed in existing pan	Traps can be fixed to new or existing pans
Replacement of parts	Membrane has to be replaced once a year	Sealant liquid & cartridge replacement	Bio-blocks has to be replaced every 5 days	Traps has to be cleaned once in a way. No costs
Clogging Frequency	High	Medium	Low	Very Low
Maintenance of trap & pan	High	Medium	Low (only parts)	Very Low (only trap)
Urine Flow thru traps	2mm size particle	Accumulate of particle in cartridge	Same as in normal urinals	Faster flow compared to normal urinals