

zerodor™

saves water, removes odour





Million

people die every year because of water, sanitation and hygiene-related causes.



Million

people lack access to clean safe water every day.



Every 21 seconds another child dies from a water-related illness.

BY 2025 OVER

3.4 BILLION PEOPLE

WILL BE LIVING IN COUNTRIES
DEFINED AS WATER - SCARCE



GLOBAL DEMAND FOR WATER WILL
OUTSTRIP SUPPLY BY **40%** IN 2030



* Source - The Ripple Effect by Alex Prud'homme

a small steady leak can waste

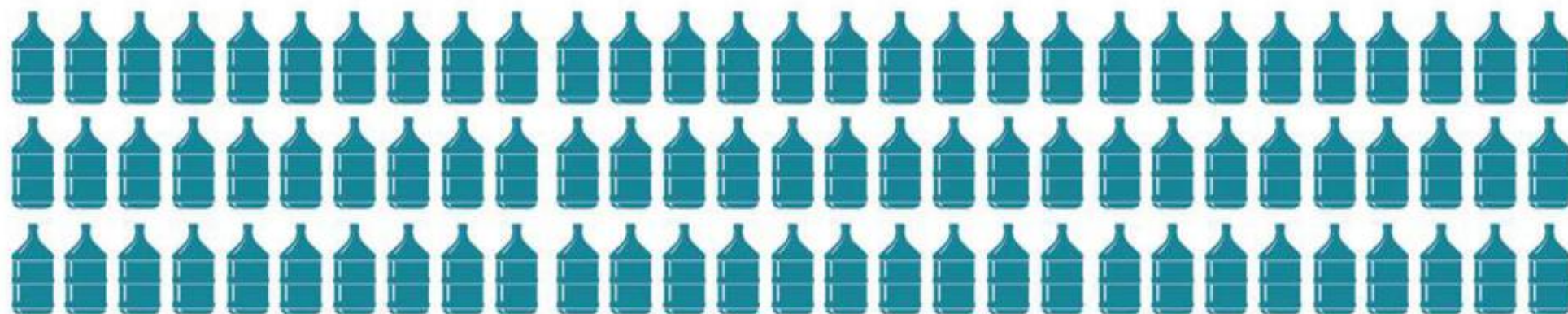
227,125 of Water
LITERS per year

a stuck flush valve can waste

64,000 of Water
LITERS per year

ZERODOR WATERLESS URINALS

CAN SAVE OVER **1,51,000** LITERS



OF WATER
PER URINAL EACH YEAR

SAVE WATER

SAVE WATER

SAVES UPTO **1,51,000 LTRS** OF **FRESH WATER** PER URINAL PER YEAR *



no power required



no consumable cartridge



low in maintenance



no flushing required



saves water



easy to clean



fresh & odour free



cost effective

zerodor™
saves water, removes odour

WATERLESS URINALS



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eXam
ECO SOLUTIONS

DESCRIPTION	zerodor™	MEMBRANE TRAP [Ⓐ]	SEALANT LIQUID TRAP [Ⓑ]
MECHANISM OF OPERATION	Ball valve prevents odour	LDPE membrane prevents odour	Liquid seal prevents odour
COST OF NEW SYSTEM	Cheaper than the existing solutions	Cost of entire system- Rs.5,600/-	Cost of entire system - Rs.10,000/- to 12,000
REPLACEMENT OF PARTS	No replacement needed	Membrane needs to be replaced	Sealant liquid and cartridge to be replaced atleast 4-5 times / year
MAINTENANCE COST	No recurring expenditure	Rs.1000-1200 (trap needs to be replaced at least once in six months)	Rs.2,475/- (Sealant liquid Rs.1700/- and Cartridge Rs.775/- for urinals with 50 uses per day- needs to be replaced at least 4-5 times a year)
MAINTENANCE ROUTINE INVOLVES	Ball to be retracted from the trap and cleaned	Trap has to be dismantled from urinal and waste pipe	a) Liquid seal replacement for every 1000 uses b) Replacement of cartridge 4-5 times a year
TIME REQUIRED FOR MAINTENANCE	10 minutes	30 minutes	10 minutes
RETROFITTING OF EXISTING URINALS	Traps can be installed in existing urinals	Traps can be installed in existing urinals	New pans have to be installed
ISSUES / CONSTRAINTS	Nil (Limited dependence on suppliers)	Supply of membranes	Supply of cartridge and sealant liquid

Ⓐ Data based on manufacturer of membrane traps Enswico AG, Switzerland

Ⓑ Data based on manufacturer of sealant liquid based waterless urinals Parryware Roca (Falcon Waterfree)

over 5000 successful installations across India



- Conventional water flush urinals use approx 4 ltrs of water for flushing. This figure goes upto 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 favourable environment for microbes & air-borne infections.
- High nitrates and phosphorous levels are found in sewage which can be reduced if urine is separated from sewage for productive use such as agricultural & industrial purposes.

- Zerodor™ is a proprietary technology relating to waterless urinals IPR of which rests with IIT Delhi and Ekam Eco Solutions has acquired all rights to disseminate this technology widely nationally and internationally.
- Waterless urinals do not require water for flushing and can be promoted at homes, institutions and public places to save water, energy and to harvest urine as a resource.
- Reduction in infrastructure required for water supply and waste water treatment is also a spinoff arising from installing waterless urinals. The concept, founded on the principles of ecological sanitation helps in preventing environmental damage caused by conventional flush sanitation systems.
- Zerodor™ does not require replaceable parts or consumables. It can be retrofitted to most existing urinal pans. This results in very low maintenance costs.

Supported By:



IIT Delhi

NGO Partner:



Peheil : an initiative of Dainik Jagran



water for people

Technology Partners:



IIT Delhi



Vision Earth Care



VASPAR

PATENTED PRODUCT
BY IIT DELHI 

WATERLESS URINAL TECHNOLOGIES

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