



**THE PEOPLE OF AFRICA  
DESERVE BETTER**

# ABOUT ENVIROSAN

Envirosan's core business (established in 2006) is to provide a comprehensive range of plastic injection moulded sanitation systems and solutions, specialising in waterless and low water usage sanitary products.

Our company uses the most technologically advanced plastic injection moulding machinery and techniques. Quality and reliability are of paramount importance to our customers and ourselves.

Envirosan is committed to building mutually beneficial relationships with our customers by providing cost effective products, technical excellence, superior quality and unrivaled levels of service, thereby empowering us to not only meet, but also exceed their expectation.

# WHAT MAKES ENVIROSAN UNIQUE?



Envirosan is unique as we are the only company in our field that focuses solely on the Development and Manufacturing of Sanitation and Hygiene related products and solutions.



Extensively researching new systems, products and applications and taking our customer's needs in consideration.



We supply the complete package, from R&D to testing and piloting to production and even installation and training.

# SANITATION IN SOUTHERN AFRICA



“Schools should be places where kids are safe and empowered. They should be centres for building communities. This initiative goes beyond the brick and mortar of sanitation, it touches the young souls of our nation,”



There are two main sanitation systems currently being used in Southern Africa, both with their own challenges

## DRY TOILETS (VIP / UDDT)

- Potentially unsafe – especially for Woman and Children
- Presence of Flies – unhygienic
- Users tend to use the pit as a “rubbish dump”
- Very little dignity

## FLUSHING TOILETS

- Expensive (homeowner and municipality)
- Potable water being wasted to flush
- Pressure on treatment facilities and sewer networks

## Retro fitting existing Full VIPs to the EaziFlush

- The Sanitation Shortfall in Africa may be defined as a combination of the following:
- Service Delivery Backlogs (People who have never been served with any form of sanitation)
- Refurbishment Backlogs (Sanitation Infrastructure that has deteriorated beyond regular maintenance requirements)
- Extension Backlogs (Existing Infrastructure that needs to be extended to provide the service to new households in the Communities)
- Upgrade Needs (Infrastructure that does not meet the minimum standards)
- Operation and Maintenance (O&M) Backlogs (Infrastructure that has not been properly operated and maintained, but can be adequate if funds are allocated to ensure proper operation and maintenance)
- EnviroSan Sanitation Solutions has seen the extent of the problem regarding South Africa's sanitation issues, especially pertaining to failed sanitation systems and/or sanitation systems that are unusable due to lack of servicing. This include the eradication of the bucket toilets as well as VIP toilets that have filled up and cannot be emptied nor can the top structure be relocated.



1.8 MILLION PEOPLE DIE EVERY YEAR FROM DIARRHOEAL DISEASES, 90% ARE CHILDREN UNDER 5!

# The New Normal

**WHY FLUSH USING 9L OF WATER WHEN YOU CAN FLUSH WITH 2L?**

DESIGNED TO EFFICIENTLY AND EFFECTIVELY FLUSH THE TOILET USING AS LITTLE AS 2L OF GREY WATER OR POTABLE WATER

POUR FLUSH OR CONVENTIONAL FLUSH WITH LEAK FREE CISTERN USING LESS THAN 2L OF WATER PER FLUSH

**17 MILLION HOUSEHOLDS IN SOUTH AFRICA WOULD RESULT IN A SAVING OF 2.4 BILLION LITRES OF WATER EVERY DAY!**

PROUDLY MADE IN SOUTH AFRICA

**Envirosan**  
SANITATION SOLUTIONS

**AGREEMENT SOUTH AFRICA**  
Innovative Construction Product Association

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**THE EVOLUTION OF THE TOILET**

# Product Testing

Various flow and flush tests have been conducted, both for pour flush and econo-flush



Pour Flush



Econo-Flush

2 litre flush, 4 stool samples, 5 balls of toilet paper

## What are the Advantages of this System?

- Grey water / rain water can be used to flush the pour-flush system.
- The main principles followed during the development of the Eaziflush sanitation unit were to ensure that there is absolutely no smell and no access for flies. This is only 100% possible through the inclusion of an effective water seal within the P-trap.
- The P-trap is extremely smooth with a reduced inlet, opening into a larger outlet. This reduced inlet design makes the P-Trap function more effectively with less water.
- The Eaziflush system is ultimately designed to ensure a higher standard of basic sanitation with increased dignity to the end user.
- There is no open pit, making the unit very safe with no potential risk for children to fall into the system.
- Sludge accumulation is a third of a conventional VIP pit
- Sludge is predominantly free of any rubbish, making the emptying process much easier
- Looks and operates similar to a conventional flush toilet



# Water Savings with the EaziFlush™

Water Saving – Conventional Toilet VS Eazi-Flush			
<u>Household of 6 people:</u>	<u>In 1 Yr</u>	<u>In 5 Yrs</u>	<u>In 10 Yrs</u>
Conventional Toilet uses:	98 550 l.	492 750 l.	985 500 l.
Eazi-Flush™ uses:	13 140 l.	65 700 l.	131 400 l.
Water Savings	85 410 l.	427 050 l.	854 100 l.

Water saving PER DAY:  
**>230 litres per household**

# A NEW SANITATION SYSTEM HAD TO BE DEVELOPED



science  
& technology

Department:  
Science and Technology  
REPUBLIC OF SOUTH AFRICA

*This new toilet technology is based on the “pour flush” system which is widely used in Asia. Its adaptation for South Africa has been researched and tested in the field since 2010 by the engineering company Partners in Development, working on behalf of the Water Research Commission of South Africa. The injection moulded pedestal and P Trap has been made by the company EnviroSan. This demonstration project has been funded by the national Department of Science and Technology, and facilitated by the Amajuba District Municipality.*

*The advantages of the Pour Flush Toilet are:*

#### Advantages compared with VIP

- Has a water seal, which eliminates odours and insects
- Users do not see contents of pit when using toilet
- Users do not use toilet as a solid waste disposal pit, so it lasts longer
- Leach pit is not under toilet, so structure is safer
- Leach pit is fully offset from structure, making it easier to access for maintenance
- Pit sludge is easier to remove than VIP sludge as it is trash free

#### Advantages compared with full flush

- Uses only 1 to 2 litres to flush (depends on whether users have urinated or defaecated, and on whether toilet paper or newspaper is used for anal cleansing)
- No toilets leaking 24/7, using up precious and limited water resources

Note that this toilet can be upgraded to work with a cistern so that you do not need a jug to flush. Any competent plumber can help with that. To save water the cistern should be set to flush using 3 litres or less.

#### PROJECT PARTNERS



The master copy of this document  
will appear on the website:

<http://www.agrement.co.za>

**Validity**

Users of any Agrément certificate  
should check its status: All  
currently valid certificates are  
listed on the website. In addition,  
check whether the certificate is  
[Active or Inactive](#).

The certificate holder is in  
possession of a confirmation  
certificate attesting to his/her  
status.

**SANS 10400** The application of the  
National Building Regulations

**Quick guide**

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**Subject:**  
**Eaziflush Sanitation Systems**

**Certificate holder:**  
**Envirosan Sanitation Solutions cc**  
PO Box 1769 New Germany, 3620  
Tel: 031 700 1866 Fax: 013 700 1867  
Email: [info@envirosan.co.za](mailto:info@envirosan.co.za)



**Use**

The certificate covers the use of Eaziflush Sanitation Systems for use  
in water- and non-water-borne, for off-grid, formal and informal  
applications in all regions of South Africa for internal and external  
use.

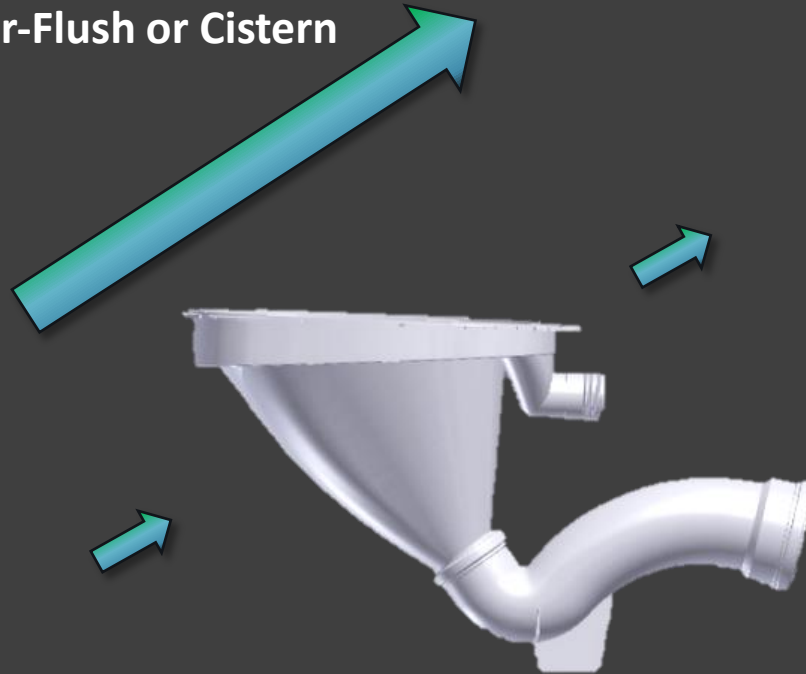
This certificate and Agrément South Africa's assessment apply only  
to Eaziflush Sanitation Systems components manufactured by  
Envirosan Sanitation Solution cc. The sanitation system components  
must be installed in accordance with the certificate holder's  
installation manual and as described and illustrated in this  
certificate, and where the terms and conditions of certification are  
complied with.

# Upgradeability of Pedestal

Envirosan is the ONLY Sanitation supplier that has a fully upgradeable system from VIP, to UD, to Pour-Flush or Cistern Flush



Pre-moulded rear cut-away sections



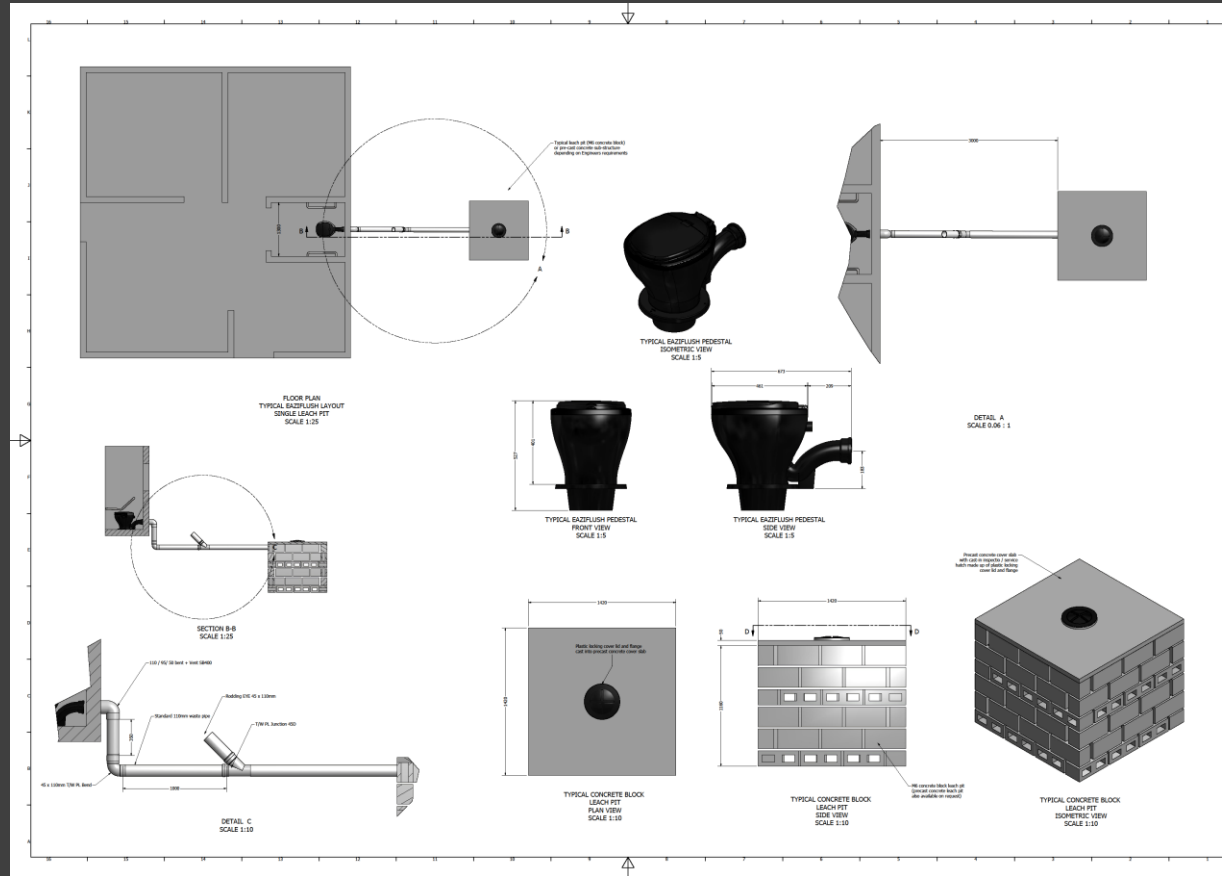
## RETROFIT EXISTING FULL VIP WITH EAZIFLUSH SANITATION SYSTEM AND POLYMER DOOR





EaziFlush (Low Flush) with concrete Wash trough. Dual Leach Pit with mounted cistern tank that feeds Low pressure cistern

# ABT - Ndwedwe Housing Project (KZN)



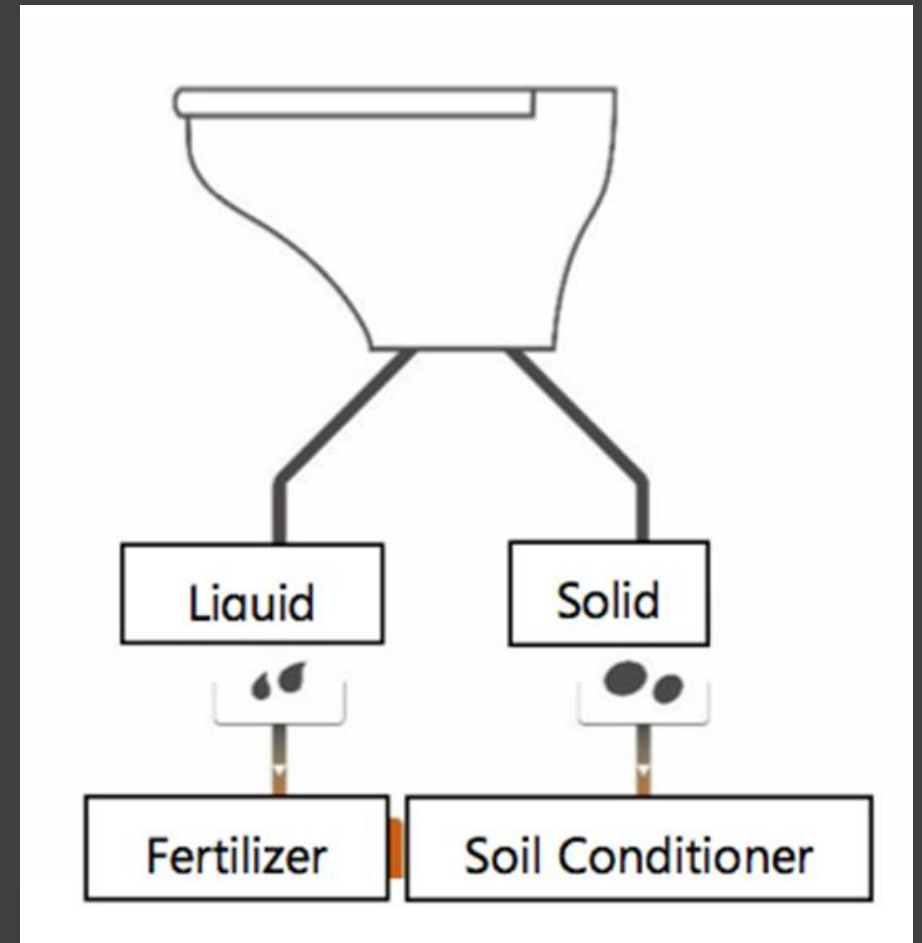
Ceramic EaziFlush™ installed inside Low Cost house. 42L Cistern Tank is mounted on outside of house and can be manually filled with non-potable water i.e. rain harvested, certain grey waters etc. Unit can be connected to mainline at later stage if/when connection becomes available.

# EAZISPLIT

Envirosan has embarked on a new technology which is a hybrid low flush / pour flush urine diversion sanitation technology based upon the EOOS design and the Bill & Melinda Gates Foundation (BMFG) “Reinvent the Toilet” initiative

The aim of this technology is to bridge the gap between the currently used full flush and dry sanitation technologies (VIP’s / UDDT’s)

*The Ultimate aim is to establish a new benchmark and higher standard of sanitation for rural, peri-urban and urban areas and explore the potential benefits that could be derived from the segregated waste streams*









# EaziSplit

## LOW FLUSH URINE DIVERSION TOILET

IN COLLABORATION WITH EOOS & SASTEP



**SASTEP**

South African Sanitation Technology  
Enterprise Programme



THE EVOLUTION OF THE TOILET

Head Office: Durban, Tel: +27 31 700 1866,  
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# THANK YOU

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