

Product Information 2024





Product Introduction



Our pilot unit on site

Our flush toilet containers can be used anywhere where sanitation is in need. Featuring an enclosed water cycle, an ideal application where water is scarce, and a sewer system is not present or functioning.

Made-to-order solutions depending on site conditions. These can include solar options where no power is available, or handwash basins where water is.

- Robust design
- Save precious water
- Proven technology
- An Instant solution
- Eco-Friendly

• Low maintenance and running costs

Product Information - 8 Series



Waterloo SA Flush Toilet Container Model 8A

- Dimensions are 6 x 2.4 x 3.55m high
- seat and lid.

Optional:

- Solar power
- Hand wash bay



• 8 Stalls with low flush, polymer toilets. At 2lt per flush, the system is capable of 3 000 flushes per day. These polymer toilets are designed to withstand high usage, and have an extremely high tolerance built in

• Each toilet uses a 60lt demand cistern, to allow for continual flushing when needed as well as flushing for a limited time when power is an issue. This utilises a pull cord, and is designed for rural conditions. • 3-chamber, 9 000 litre capacity septic tank • 6 500 litre capacity recycled water tank • Bio-reactor and disinfection tank housed adjacent • Can be commissioned in a few hours on site

• Disability stall - landing ramp installed instead of stairs



Side View of Waterloo SA 8 Series - 8 Stall

Solar Panels with Anti-Theft Locks (Optional)

Recycled Water Tank

Solar Inverter & Battery (Optional)

Bio-reactor & Disinfection Tanks

3 - Chamber Septic Tank with Invert Junctions

How it Works



A Flush Toilet Container with a self-contained water cycle





Bio-reactor

The Process

- Waste water is flushed into a 3-chamber septic tank, built into a false floor in the hi cube ightarrowcontainer
- Three chambers facilitate settling of solids in the first chamber for natural decomposition, ulletan anaerobic process due to lack of oxygen. Water then flows through invert junctions to the third chamber, where a float switch pumps it to the bio-reactor
- Air introduced through small bubbles in the bio-reactor supports bacteria growth on plastic disks, cycling water to reduce impurities, an aerobic process
- The water is then released into a disinfection tank for further treatment with chlorine
- A float switch then pumps this to the water tank on the top of the unit, ready to reflush ightarrow

Maintenance

- On-site training, manuals, and checklists are provided to ensure the unit performs effectively and efficiently as intended. The daily checks are basic and include ensuring the unit has power and checking the water level (i.e., no blockages from external abuse).
- Conventional septic tank maintenance is required. If used correctly and without abuse to the system, should be pumped every 3-5 years. Not like conventional systems that utilise a conservancy tank that require constant attention and high monthly costs.
- Minimal Chlorine needs to be added as required, with an estimated use of 720 grams per month. This can be bought in the form of spa tablets from most general retailers. We are looking at at ozone option to elimate the use of chlorine.
- Electrical components total 0.75kw, being LED lights, 2 water pumps and an air blower.

Safety Precautions

- The flushed, recycled water, is treated to a suitable standard to discharge into the environment, if somehow necessary
 An everflow in the recycled water teck is installed. This water can eafaly be discharged as per
- An overflow in the recycled water tank is installed. This water can safely be discharged as per regulations and above
- Users are educated on the workings of the unit, and the dos and dont's
- Stack pipes have been fitted for excess gas in the septic tank
- All entry points to the septic tank have been sealed
- All doors are lockable, and locks are provided
- In times with extended power outages, because of the design of the 3 chamber septic tank, the float switches will always ensure the third chamber has capacity before losing power. This ensures the recycled water tank always is capable, (up to 6500 litres), to flush toilets for a period of 24 hours
- Each unit has electrcial C.O.C.
- The units have a grounding spike for lightning protection

Gallery









CSR - Corporate Social Responsibility



- initiatives
- A tangible option
- safe sanitation solution

Ideal for Corporate Social Investment (CSI)

• Enhancing a brand's credibility, while positively impacting a community or organisation in need of a

• A perfect canvas for marketing strategies

Product Information - 4 Series



Waterloo SA Flush Toilet Container Model 4T

- Dimensions are 3 x 2.4 x 2.7m high
- seat and lid.
- 3-chamber, 3 000 litre capacity septic tank
- 2 200 litre capacity recycled water tank
- stairs

Optional:

- Roadworthy Trailer
- Solar power

• 4 Stalls with low flush, polymer toilets. At 2lt per flush, the system is capable of 1 000 flushes per day. These polymer toilets are designed to withstand high usage, and have an extremely high tolerance built in

• Each toilet uses a 60lt demand cistern, to allow for continual flushing when needed as well as flushing for a limited time when power is an issue. This utilises a pull cord, and is designed for rural conditions.

• Bio-reactor and disinfection tank housed adjacent access by way of

Can be commissioned in a few hours on site





St Lewis Bertrand's Secondary School is a high performing academic and culturally significant school in Blaauwbosch, Newcastle KZN. Due to high demand, the school has attracted more learners than its infrastructure can reasonably accommodate.

At our initial inspection, only 12 toilets were available for 1600 learners. The result has meant the sewage and toilet infrastructure has broken down, and flowing into the school grounds, causing unsanitary conditions for the learners and teachers alike.



In October 2023, Waterloo SA donated the use of the first Waterloo SA Series 8 Flush Toilet Container to the school.

This as part of NACOSA's Imagine project, which aims to improve the health of young women in South Africa.





Each learner is educated on how the sytem works, and engages with the assistance of our Sanitation Partnership worksheet and contract.

Highlighting the importance of self-dignity, and the value of saving water.

WATERLOODSA FLUSH FOILTY CONTAINERS	<u>UKUBAMBISANA KWENKONTAKELA</u> <u>YENKUNDLA</u>
IGAMA:	IMINYAKE:
ISIKOLE:	AMABANGA:
Indawo yoki ibalulekile kir	ugezela ephephile, ehlanzekile 🛛 🖌 ni, esikoleni sami nakubangane 📄 bami.
Njengoba am yangasese a ngawaphuz	anzi asetshenziswa ukugeza indlu aphinde asetshenziswe, angisoze a amanzi endaweni yokugezela
Ngizowashi encane, t onikeziwe,	aya ahambe nendle amaphepha asendlini nama yini enye izolahlwa emugqonyeni okuhlanganisa amaphepha okusebenzisa endlini encane, nemisubelo.
	giyaqonda ukuthi isetshenziswa kanjani indawo yokugezela ngendlela efanele.
Isayin Isayin	iwe: Umfundi iwe: Uthisha

ECO TOILETS BOOST YOUNG WOMEN'S HEALTH IN **SCHOOLS**

News | 16 Feb 2024



St Lewis Bertrand's Secondary School, one of the top performing schools in Newcastle, KwaZulu-Natal now has better toilets, thanks to Waterloo SA. The safe eco-friendly flush toilets are making a big difference for the school and NACOSA's Imagine programme. The Imagine programme, which works to prevent HIV and unwanted pregnancy amongst young women, has established Safe Spaces at schools like St Lewis Bertrand's. In these safe spaces, near-peer facilitators, nurses, and

social workers provide a number of services such as testing, health support and counselling. Imagine aims to help girls and young women imagine and bring to life a happy,...

Endorsed by NACOSA and the Department of Education KZN







of Sponsorship of Waterloo Flush Toilet Con

Dear Waterloo SA

I am writing to express our heartfelt gratitude on behalf of the Imagine Programme, the Amajuba Department of Education, and St Lewis Bertrand High School for your invaluable sponsorship of the Waterloo Flush Toilet Container at the Imagine Safe Space situated within St Lewis Bertrand's school premises. We are delighted to acknowledge your sponsorship of the Waterloo Flush Toilet System for the period starting from September 1st, 2023, until June 30th, 2025.

Your commitment to improving the sanitation and health outcomes of adolescent girls and young women is deeply appreciated and aligns seamlessly with our shared vision for a brighter future. We recognize that access to proper sanitation facilities is not only a basic necessity but also a fundamental right that contributes significantly to the overall well-being and dignity of learners.

Your generous sponsorship of the flushing toilet system will contribute to the holistic empowerment of young women and help them to focus on their education and personal development with confidence. Your contribution towards this innovative and water-conscious product is commendable. By deploying it within the framework of the Imagine Social Impact Bond, you are directly contributing to the enhancement of health outcomes for the girls and young women under our care

Furthermore, we extend our gratitude for the provision of sanitary bins, sanitary bags, and toilet paper that accompany the Waterloo Flush Toilet Container. Your thoughtful support ensures that the sanitation experience is comprehensive and complete, enabling our students to maintain their hygiene with ease and convenience.

We want to assure you that St Lewis Bertrand High School and the Imagine Programme are fully committed to the upkeep and cleanliness of the toilet system. We will diligently follow the checklist provided and educate our learners on the responsible use of the facilities, emphasizing the importance of not disposing of any foreign objects into the toilet to ensure its continued

Once again, we extend our deepest gratitude for your sponsorship and your commitment to making a positive impact in our community. We look forward to a continued partnership that transfo lives and paves the way for a brighter future.

Mrs Dudu Makhoba

on behalf of

Mrs Nonhalnhla Sithole on behalf of St Lewis Bertrand High School Amajuba District Dol

Mr Nate van Blydenstei on behalf of the Imagine Programm

Parameter	Units	Test result	General Limit*	Pass
Total Alkalinity	mg CaCO₃/ℓ	<1.25	-	
Chemical Oxygen Demand (Total)	mg O₂/ℓ	<25	75	
Electrical Conductivity at 25°C	mS/m	61	70	
Total Ammonia	mg N/ℓ	<1.5	6	
Nitrate	mg N/ℓ	<0.25	15	
Oxygen Absorbed	mg O₂/ℓ	<6	-	
Calc. Orthophosphate	mg PO₄/ℓ	<0.31	10	
pH at 25°C	pH units	6.5	5.5 - 9.5	
Suspended Solids at 105°C	mg/ℓ	18	25	
Faecal Coliforms (E.coli)	MPN/100mℓ	151	1000	

*Final Discharge General Limit in terms of General Authorisation

Water quality test results - sample taken 19 December 2023 (Independant Testing)

Talbot Laboratories (Pty) Ltd

Analytical Results

Methods	Determinands	Units	035131/23	
			NEWCASTLE 19.12.2023	
Chemical				
10G	Total Alkalinity	mg CaCO₃/ℓ	<1.25	
3	Chemical Oxygen Demand (Total)	mg O₂/ℓ	<25	
2B	Electrical Conductivity at 25°C	mS/m	61	
64G	Total Ammonia	mg N/ℓ	<1.5	
65Gc	Nitrate	mg N/ℓ	<0.25	
39	Oxygen Absorbed	mg O₂/ℓ	<6	
Calc.	Orthophosphate*	mg PO₄/ℓ	<0.31	
1	pH at 25°C	pH units	6.5	
5	Suspended Solids at 105°C	mg/t	18	
Microbiolo	gical			
32	Faecal Coliforms*	MPN/100mt	151	

WATERLOD

FLUSH TOILET CONTAINERS



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waterloosa.co.za