AFRISAN™ OWNER'S MANUAL

Before *you start to enjoy the benefits of your toilet, please familiarize yourself with some of the basic dehydration and composting principles. This will help you to understand how and why your toilet works.*

The AFRISAN TOILET is a specialized, self-contained dehydration toilet, which utilizes nature's micro-bacteria and bacterial processes to convert human excreta, urine and toilet paper into an odorless, dry, inoffensive waste material that can be easily disposed of. Urine is collected and diverted to a activated carbon filter. The process is further enhanced by the continual addition of radiant heat and oxygen rich air. The dehydration toilet utilizes two 20 watt solar panels and one 15 watt silicone heat panel to generate the required heat energy within the composting chamber. Further dehydration is ensured by the wind driven air vent mounted on top of the vent pipe.

The units are designed to be used at room temperatures and their capacity is designed as such.

Toilet Specifications

User Capacity
AFRISAN Elite: 1-6 people – everyday use

Measurements and Weight

Depth: 730 mm
Width: 550 mm
Height: 550 mm
Seat Height: 480 mm
Total Weight including packaging 35 kg

Toilet Main Components		
A	Toilet Seat	1
B	Housing	1
C	Ventilation Basket	1
D	Grid Slide Cover	1
E	Urine Bowl	1
F	Dehydration Basket	1
G	Toilet Base	1

BEFORE USING YOUR AWCT PLEASE ENSURE THE FOLLOWING:

1. Contact your closets Afrisan Branch (Cape Town or Johannesburg 0860 379566 – 0860 DRY LOO) if you are unsure how to use your AWCT.
2. Ensure that the flow of air into the bathroom is directed from the living room area (preferably not from outdoors). A 20mm (20 cm) gap under the bathroom door or a vent cavity in the bottom of the door or wall will ensure sufficient airflow in the direction of the toilet. Overhead vents and open windows should be used with caution as these may cause negative pressure in the room and promote a back draft through the toilet causing the presence of unpleasant odors.
3. Ensure that the interior room temperature can be maintained above 18°C during the periods while the toilet is being used.
4. Please refer to your warranty certificate and related terms and conditions.

1. THE TOILET SYSTEM: EVERYDAY USE INSTRUCTIONS

1. The Afrisan toilet comes fully assembled and is ready for use once installed
2. The unit is designed to divert urine away from fecal matter and the urine diversion plate diverts all collected urine into the urine trough. When the toilet is used for urination, ensure that the diversion lever is in the closed position or pushed against the toilet housing.
3. For the purposes of depositing fecal matter into the toilet, open the diversion plate by pulling the lever forwards.
4. After depositing fecal matter ensure that the diversion lever is pushed back into the closed position for optimal ventilation. Toilet paper can be disposed of within the dehydration chamber.
5. Evenly distribute a 1/3 plastic scoop measurement per person of agricultural lime on the top of all deposits. By adding the bulking agent you aerate the pile and decomposition is stimulated.

PLEASE NOTE: The diversion lever should always be in the closed position after use as this prevents odours occurring around the unit.

2. BASIC MAINTENANCE: THE DAY-TO-DAY OPERATION

1. After 4 weeks of everyday use or when the dehydration basket has reached capacity, remove the toilet housing by dislocating the pan connector and prepare to remove the plastic bag.
2. Using protective gloves pull the loose ends of the plastic bag and tie up to remove from the dehydration basket. Carefully pull bag from the dehydration basket to avoid any potential liquids draining in the basket area.
3. Do this every time during the maintenance procedure. Find your additional plastic bag supplies in the Afrisan Kit.

3. BASIC MAINTENANCE: WHAT TO DO EVERY COUPLE OF DAYS

1. When the toilet paper hardens or piles up too fast, sprinkle a little amount of water over the paper, enough to only soak and collapse it. The toilet paper will only decompose if kept moist hence reduce user capacity.
2. After you have wet the paper, remember to add bulking agent evenly over the pile.

4. BASIC HEATLH AND HYGIENE: CLEANING YOUR AWCT

1. Clean the outside of the toilet with Handy-Andy or any similar cleaning agent on a regular basis.
2. Clean the inside of the rim and the urine using a toilet brush and associated chemical agents. Prevent excessive cleaning agents entering the dehydration chamber as this will have a negative impact on the composting processes.

PLEASE NOTE: DO NOT pour any chemicals or any cleaning agents into the dehydration chamber This

The AFRISAN TOILET is a natural and eco-friendly technology and does not use nor require any additives or chemicals to work. Chemicals of any kind are detrimental to the natural composting process as it impedes negatively on the natural microbial process.

5. HARMFUL ADDITIONS TO YOUR AWCT

Certain items should not be added to your AFRISAN TOILET system. Please take note of the preventative measures pasted onto the toilet seat lid. The following items cannot be deposited into the dehydration chamber:

1. Disposable nappies of any kind
2. Plastic bags or condoms
3. Wet- or dry wipes
4. Flammable materials such as cigarettes, matches, gasoline, hot ashes, etc.
5. Harsh chemicals such as bleach, toilet cleaners, detergents, septic tank chemicals, anti-freeze, etc.
6. Oils or Greases such as cooking oil, motor oil, grease, cooking fats, etc.
7. Meat by-products
8. Any female sanitary products

6. THE THEORY OF COMPOSTING TOILETS

There are 4 main factors that affect the efficiency of dehydration/composting toilets:

1. MOISTURE REQUIREMENT

- In optimum/ideal conditions, the composting material has the consistency of a well-wrung sponge – about sufficient moisture. When there is not sufficient moisture for the microorganisms to function, saturated conditions begin to develop, and oxygen depletion becomes a limiting factor.

- In your AFRISAN TOILET the moisture content is maintained by proper ventilation, the addition of proper bulking material, and a slight sprinkling of normal household water.

IMPORTANT: If you add to much water, you will drown the system and halt the composting process in its tracks.

2. TEMPERATURE REQUIREMENT

- Most composting toilets operate within temperatures ranging from between 20°C to 40°C. Since there is a constant flow of air through your toilet, the ambient room temperature needs to be maintained above 18°C during periods while the unit is in use.
- Lower temperatures result in a smoldering process that takes a significantly longer period of time to compost and therefore it requires a much larger composting chamber or alternatively it will present the user with a reduced holding capacity.
- To achieve and maintain sufficient heat energy a 40 watt solar panel with a silicone heat panel is provided. The silicone heat panel is situated on the inside of the dehydration basket and can produce up to 75 Degrees Celsius in optimal sunny conditions.

3. AERATION

The aerobic organisms responsible for the composting process require atmospheric or molecular oxygen to survive. Without oxygen, they will die and be replaced by anaerobic microorganisms and which existence will slow the composting process and generate odors. For the toilet to work effectively, the materials being composted should be unsaturated with liquids, and ventilation should never be obstructed.

Maximum aeration will be achieved by:

1. Ensuring minimal additions of liquids in the dehydration chamber;
2. Proper installation of the ventilation pipe with maximum wind-driven ventilation capacity; and
3. Ensuring a good flow of air into the bathroom from the living area by having a 20 MM (2cm) gap underneath the door. Avoid open windows for potential backdrafts.

4. CARBON TO NITROGEN RATIO (C:N)

- Microorganisms require digestible carbon as an energy source for growth, nitrogen and other nutrients for protein synthesis. When measured on a dry weight basis, an optimum C: N ratio for aerobic bacteria is in the 25:1 range.

MAINTAINING C: N

A small handful of bulking agent per person per day is efficient to maintain a helpful C: N ratio, absorb excess moisture, and maintain pores in the composting material.

7. SHUTTING DOWN YOUR AWCT

Should you plan not to use you AFRISAN TOILET for periods of 2 weeks or more:

1. Empty the plastic bag in the dehydration chamber and replace once you return.
2. Ensure that the diversion plate is in the closed position at al times

8. TROUBLESHOOTING

Toilet odors in bathroom

If you detect pungent ammonia odors in your bathroom there is a possibility that ventilation is insufficient or obstructed. Please check the following:

1. Does the vent pipe extend at least 30cm above anything else on the roof? (refer to the Installation manual)
2. Is the vent pipe unobstructed?
3. If there is a window in your bathroom? If so, is the air drawn out through it? Close the window.
4. Hold a smoke source approximately 5cm in front of the toilet seat and see if the smoke is drawn to the toilet.
5. If the silicone heat panel does not heat up during sunny conditions, check all wiring between the heat panel, the electrical connector on the base of the unit and the solar panel.

For all troubleshooting, complaints or defective parts, please contact your nearest Afrisan .