

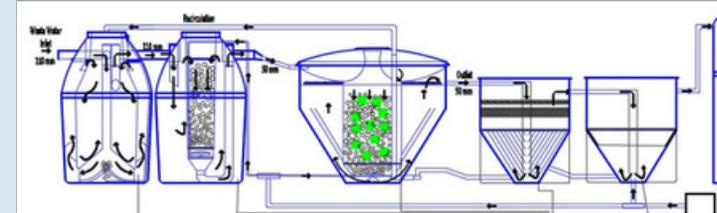
# Waste Water Treatment

## Dynamic Rotational Bio Reactor

- The KYBO DRBR is a Fibreglass Pre Moulded onsite waterborne non sewerred sanitation system (NSSS), consisting of one or more modules capable of treating waste water (Grey and Black water) from a variety of industries including domestic waste water
- The versatility of the KYBO DRBR technology is well suited as a stand alone unit or for upgrading and retrofitting, not only to existing septic tanks, but to a large variety of existing under performing wastewater treatment plants as well.

## The Ultimate Green Eco Sewer System

INNOVATIVE SIMPLICITY IN  
WASTE WATER TREATMENT



**BIOMEK**™  
WATER ENGINEERING & CHEMICAL

032 9470030

info@biomek.co.za

www.biomek.co.za



Protecting and preserving our environment is at the core of our mission, as responsible gatekeepers of our environment. We are committed to manufacturing only the best solutions to safeguard our most valuable resource and commodity

Our vision is clear and precise when it comes to protecting and preserving water, reflecting our commitment towards the sustainable future of our planet



## Advantages

- Dynamic Rotational Bio Reactor (Patent Pending)
- Simplistic continuous free flowing self cleaning and non-clogging design. (Patent Pending)
- Patented Bio-Media carrier (ACIM)  
A light weight microscopically porous carbon impregnated carrier requiring minimal energy for the rotational fluidization thereof.
- Very low, electrical consumption from less than 50 watts per hour.
- Very low sludge buildup
- Manufactured from light weight, strong, durable, non-corrosive fiberglass
- Installation can be above, below or in ground
- Versatile – can be supplied as a complete stand-alone treatment plant, or as a retro fit to an existing septic tank or problem waste water treatment plants.
- Simple, quick and easy installation can be installed and operating the same day.
- Treated effluent exceeds Department of Water, Fisheries and Forestry's general standards for treated waste water effluent.
- 100% of all treated black and grey water is recyclable.

## Benefits

- Low energy consumption, ideal for off grid installations
- Reduced sludge production/sludge removal extended to 3-5 years
- Smaller carbon footprint
- 25 – 30 year life expectancy
- 50 – 400% higher performance compared to any other conventional technology
- Remarkable process stability against shock loads
- Faster process, start up and recovery time
- Shorter retention time/ smaller area required
- Extended servicing intervals
- Reduced maintenance
- Improved clarifier performance
- Delivers lowest possible BOD/COD/TSS & TN making post treatment more economical and sustainable for re use and recycle applications.
- Better results achieved under all operating conditions.

## TYPICAL INSTALLATIONS



IN-GROUND



BELOW-GROUND



ABOVE-GROUND

**BIOMEK**<sup>TM</sup>  
WATER ENGINEERING & CHEMICAL

### Swaziland Branch

LUnit 7, Office 5, Floron Business Centre  
King Sobhuza II Avenue  
Matsapha Industrial Site  
Eswatini  
Contact No : +268 7602 8987  
Email : meluleki@biomek.co.za

### EASTERN CAPE

110 Beach Road Nahoon  
Eastern Cape, South Africa  
Contact No : 073 260 3857  
Email : salesec@biomek.co.za

### KZN Head Office

11 Coconut Grove Shakas Industrial Park,  
Kwa-Zulu Natal, South Africa, 4381  
Office No : 032 947 0030  
Email : info@biomek.co.za  
Email : salesnc@biomek.co.za

### Gauteng Branch

95c Van Dyk Secure Business Park  
Corner van Dyk and Brakpan Road Boksburg  
Industrial East South Africa  
Contact No : 082 372 2528  
Email : brian@biomek.co.za

### LIMPOPO OFFICE

White River,  
South Africa  
Contact No : 071 486 8212  
Email : saleslm@biomek.co.za

### NORTHERN CAPE

3 Hill Street, Danielskuil  
Northern Cape, South Africa  
Contact No : 0662017104  
Email : salesnc@biomek.co.za

## Comparisons on Various Waste Water Treatment Plants

Plant Model	GUESS MBBR 160	Lilliput	Scarab ST 525	Bio Box ER 5000	Clarus ZF 1120	Bio Mite
Material of Construction	No Corrosion Fibreglass	Low Density Plastic	Low Density Plastic	High Density Plastic	Non Corrosion Fibreglass And Plastic	Low Density Plastic BM 25
Single Tank Construction	✓	✗	✗	✓	✓	✗
In or Above Ground Installation	✓	✗	✗	✗	✓	✓
Simple Same Day Installation	✓	✗	✗	✓	✓	✓
No Sediment Buildup	✓ <b>Limited</b>	✗	✗	✗	✓	✓
Patented Self-Cleaning Non Clogging Media	✓	✗	✗	✗	✗	✗
Full Nitrification / De Nitrification Cycle	✓	✓ <b>Limited</b>	✓ <b>Limited</b>	✓ <b>Limited</b>	✓	✓ <b>Limited</b>
	✓	✗	✗	✗	✗	✗
3 Day Microbe Colonization	✓	✗	✗	✗	✗	✗
Bio Media Surface Area m <sup>2</sup> /m <sup>3</sup>	<b>20 000</b>	<b>1500 - 2000</b>	<b>1500 - 2000</b>	<b>3500 - 4000</b>	<b>3500 - 4000</b>	<b>1500</b>
Phosphate Removal	✓	✗	✗	✗	✓ <b>Limited</b>	✗
No Down Time During Service	✓	✗	✗	✗	✓	✗
Electrical Consumption (Watt)	<b>50 - 60</b>	<b>1 000</b>	<b>1 200</b>	<b>0</b>	<b>120</b>	<b>120</b>
Maximum Daily Flow Rate	<b>8 100</b>	<b>4 200</b>	<b>4 200</b>	<b>3 000</b>	<b>4 200</b>	<b>5 000</b>
Maximum Number of People	<b>40</b>	<b>25</b>	<b>25</b>	<b>15</b>	<b>25</b>	<b>25</b>
Effluent Meets South African DWAF General Standards	✓	✗	✓ <b>Limited</b>	✗	✓	✓
Solar Option Available	✓	✗	✗	✓	✓	✓