



BioKube wastewater treatment systems. Examples of systems installed worldwide.

BioKube cleans all wastewater.

BioKube develops, manufactures and sells systems for biological cleaning of sewage water. The treated waste water can be either domestic coming from households or industrial wastewater - typically from agricultural industries like slaughterhouses, dairies or fruit and vegetable factories.

Many sizes of wastewater systems.

The systems range in size from single household units (1 m³ / day) up to systems cleaning 3.000 m³ / day.

BioKube systems can be delivered ready to install or they can be produced locally under license.

How clean is the treated water?

Sewage water purified in a BioKube is so clean, that it can be outlet directly to a lake or

river. The purified sewage water can also be reused - typically for irrigation.

Each individual BioKube system is designed to fulfill the local requirements.

The typical requirements are BOD < 25. In some countries the requirements are BOD < 10 and in others BOD < 50.

How do BioKube systems function?

BioKube purifies wastewater using only nature's own bacteria; we add no bacteria to the treatment system. A BioKube is better than comparable systems for the simple reason that every little detail in the system is optimized towards giving the bacteria optimum living conditions. It is quite simple really; the natural bacteria cleaning waste water are like other domestic household animals, the better living conditions they have, the better they will perform.

Example of BioKube BioReactor system.
1.800 m³ / day system for a vegetable factory in Poland.



Example of BioKube Jupiter system.
75 m³ / day system for Hotel Krotiri, Greece under installation in pre built concrete tanks.



BioKube for single houses.

BioKube Pluto, Venus and Mars systems.

Single house systems.

BioKube small systems clean sewage water for from 5 to 30 persons and are offered as 5 PE, 10 PE, 15 PE, 20 PE and 30 PE systems.

Size depends on number of people.

As the amount of sewage water to be cleaned increases – and thereby the organic material to be degraded increases - you simply need more bacteria and consequently a bigger BioKube system. This is true for all BioKube systems whether for a single house or a 2.000 m³ / day system.

On the picture below, it is evident that a BioKube Venus for 10 PE is about twice the size of a Venus for 5 PE

Size depends on the cleaning requirements.

The size of the system also depends on how clean the outgoing water must be according to the local requirements.

As the cleaning requirements increase, you need more bacteria to degrade the nourishment in the wastewater.

The picture below illustrates, that a BioKube Pluto built for cleaning requirements of COD < 125 mg/l and BOD < 25 mg/l is about half the size of a BioKube Venus built for cleaning requirements of BOD < 10 mg/l and COD < 75 mg/l.

BioKube systems can fulfill any requirements.

With our modular design all BioKube systems can be delivered to fulfill any national requirements. These possibilities include only reduction of organic material, reduction of NH₄, reduction of phosphate, removal of total nitrogen, limitation of E-coli including use of UV lighting or Ozone).

Reference list for small systems.

BioKube has installed over 2.300 BioKube small systems in Denmark alone. And there small systems installed by our distributors in the 34 countries where we have distributors.

BioKube small systems Pluto, Venus and Mars for single houses (5 – 30 persons)



BioKube systems for Resorts, Cities and Industry

BioKube Jupiter or BioReactor system?

Plug and Play wastewater systems.

BioKube systems for Resorts, small cities and Industry are delivered completely furnished ready to install. Locally you only need to build concrete tanks. Connect the pipes and power and the system is in operation.

Very little maintenance.

One of the big advantages of a BioKube system is that it is very low on maintenance. There are few mechanical parts that can fail and they are all delivered from first class manufactures guaranteeing a long service life and easy access to service and spare parts.

Local BioKube partner supplies service.

BioKube products are always sold, delivered and installed by a national BioKube agent. He is certified by BioKube.

Remote surveillance via GSM.

BioKube systems can be equipped with remote surveillance over the GSM network. And the systems can be delivered with double water pumps and air blowers that run alternatively. They can be reset over the GSM net if one pump

or blower fails so the system runs on only one. This gives a very high rate of stability.

BioKube Jupiter og BioKube BioReactor?

The cleaning sections of all BioKube systems are divided into an aerated zone where the bacteria live. The difference between a BioReactor system and a Jupiter system is that a Jupiter systems in the delivered tank contains both the aerated zone and the settlement zone.

All BioKube systems are delivered as Plug and Play; they only need to be installed in the onsite built concrete tanks.

Keep total cost down, utilize local labor.

With BioKube BioReactor and Jupiter systems, you to the maximum extent possible use labor. This keeps the total cost down.

How big a system can you buy?

The biggest BioReactors BioKube deliver is the BioReactor/150. Each of these units will clean 150 m³ / day if the requirement is BOD < 25 mg/l. With requirement BOD < 10 mg/l you need two BioReactor/150 to clean 150 m³ wastewater.

Tank for BioReactor/150.

Each unit will for BOD < 25 clean 150 m³ / day. Consists of aerated zone, settlement zone is part of the onsite built concrete tank. Equipped with all air blowers, diffusers and other mechanical parts.



Tank for Jupiter system.

Each unit consists of both an aerated zone and a settlement zone. Requires less concrete work since everything is contained in one unit.



BioReactor for Town Hall.

Town Hall Notamburi, Bangkok Thailand

System is 3 x Jupiter 75 systems with

Cleaning requirements: BOD < 10, COD < 75
SS < 20.

The water is treated with Ozone and outlet to a clean lake next to the Town Hall used by the public for recreation.

The system in Notamburi is built right next to the Town hall. There was very little space in the center of a large city.

The system is placed literally in the Town Hall open air restaurant. The tables are placed on the covers of the waste water system

BioKube installed next to Town Hall.

The BioKube wastewater system is installed below the slightly raised tiles. The little house contains the Technical installation.



BioKube installed next to Town Hall.

The area where the BioKube is installed is now used for the town Hall restaurant. Proof of no noise and no smell.



BioKube BioReactor under installation.

You see the BioReactor installed in onsite built concrete tanks. Settlement zone in concrete tank.



BioKube requires very little space

The BioKube was built directly next to the Town Hall under the pavement. The area is now used for Town Hall outdoor restaurant with seating area directly above the BioKube



BioReactor for industry – 1.800 m³ / day

Vegetable factory, Scandic Food, Poland

System is 8 x BioReactor 150.

The system is only required to pre-clean water from a vegetable factory. After treatment in the BioKube, the water is led to the municipality's wastewater treatment system.

As a independent system 8 BioReactor would treat 1.200 m³ / day if the requirement was BOD < 25 or 600 m³ / day if the requirements were BOD < 10

800 m³ / day system installed.

The system requires a number of BioReactors installed in onsite built concrete tanks.

How big is a BioReactor 150?

Each BioReactor will fit into a 20 foot container – 3 will fit into a 40 foot container.



BioReactor 150 in operation.

You clearly see the aerated zone in each BioReactor and the surrounding settlement zone in the concrete tank.

How big a concrete tank?

Picture illustrates the necessary size for a 1.800 m³ / day BioKube BioReactor system. The footprint is much smaller than a traditional system.



Jupiter for Hotel Brodnica, Poland

System is 3 x Jupiter 75 systems.

The cleaning requirements are EU standard,
COD < 125, BOD < 25, SS < 30

BioKube Jupiter installed at hotel.

The construction work for a BioKube Jupiter system installed at a hotel.



BioKube Jupiter .

The BioKube Jupiter system installed in concrete tanks. Because all systems are contained in the Jupiter system, the concrete can be of less good quality



System under installation

The Jupiters will be placed in the area being built and finished with protective concrete.
Note the septic tank next to the Jupiters.



Detail of Jupiter.

Note that each Jupiter systems have an aerated zone with BioBlocks and a settlement zone with no BioBlocks. A BioReactor has only an aerated zone with settlement zone in the concrete tank.



Jupiter for office building and food facility. International Airport, Addis Ababa, Ethiopia.

System is 3 x Jupiter 75

Cleaning requirements: COD < 75, BOD < 10, SS < 20. The outgoing water treated with UV for safe reuse.

The system is installed in the airport in Addis Ababa.

The water is reused for irrigation.

Installed so it hardly shows.

The system is installed near the office buildings and installed so it can hardly be seen.

Cleans water from Office building and food facility.

The cleaned water comes from the airport production kitchen and office buildings



Jupiter System with two chambers.

Each Jupiter contains an aerated zone and a settlement zone.

UV light for safe reuse of the treated water.

After the BioKube cleaning system, the outgoing water passes a UV lamp for safety.



Jupiter for Brewery.

Krenkerup Brewery, Denmark

BioKube systems treat all wastewater containing organic material. From households this is both black and grey sewage water.

Typical industries using BioKube systems are slaughter houses, dairies, vegetable factories and breweries.

Cleaning values for a small brewery:

	Incoming	Outgoing
BOD	1.600 mg/l	2.3 mg/l (2009.05.14)
COD	2.800 mg/l	52 mg/l (2009.05.14)
BOD	1.600 mg/l	4.9 mg/l (2009.10.07)
COD	3.300 mg/l	60 mg/l (2009.10.07)
(Fluctuating amount of water)		

Jupiter 25 with aerated zone and settlement zone at Krenkerup Micro Brewery.



Jupiter 25 under installation at a Krenkerup Micro Brewery.



3 step Jupiter 25 system.
To achieve the required cleaning, a 3 chamber Jupiter system is required.



The copper kettles at the brewery at Krenkerup, Denmark.



Jupiter for hotel. Hotel Krotiri, Greece.

System 2 x Jupiter 75

Cleaning requirements: COD < 75, BOD < 10, SS < 20. UV for safe reuse.

The water is to be reused.

BioKube systems are very well suited for isolated hotels where the guests require a good local environment and will not accept unclean sewage water or a bad smell.

Jupiter 75 system under installation.
Each Jupiter fits into the onsite built concrete tank.



Jupiter 75 installed in tank.
You see the aerated zone and the settlement zone.



Jupiter 75 under installation.
The tanks are built precisely for each system according to specifications delivered from BioKube.



BioKube systems are delivered complete on site.
Each BioKube system containing all mechanical parts is delivered on site ready to install.



Jupiter for military training center. Kofi Annan UN Training Center, Accra, Ghana.

System is 3 x Jupiter 75

Cleaning requirements: BOD < 10, COD < 75,
SS < 20. UV for safe reuse

Water reused for irrigation.

The system is installed for the United Nations at their Kofi Annan Officers Training Center in Accra in Ghana.

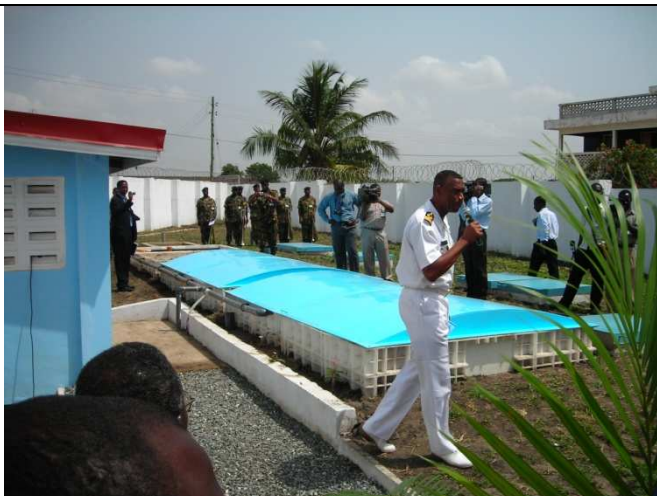
Jupiter system installed next to main building of the Kofi Annan training center.



Aerated zone of Jupiter 75



Opening ceremony at Kofi Annan Officers training Center



Jupiter 75 under installation in the onsite built concrete tanks



Jupiter for slaughter house. Metro food processing facility, Romania

System is 3 x Jupiter 50

Cleaning requirements: COD < 75, BOD < 10,
NH₄ < 5, NH₄ < 5.

The system cleans wastewater from a small
slaughter house on food processing facility for
Metro in Romania.

Jupiter 50 under installation



Jupiter 50 under installation



3 x Jupiter 50 installed



The bacteriological growth on the BioBlocks.
The construction of the BioBlocks guarantee that
the system does not clog up.



Uranus transportable system. Oil installations dessert in Kuwait for KUC.

Uranus systems are built as transportable units.

Cleaning demands: BOD < 10, COD < 75 and equipped with UV for safe water reuse.

Uranus contains the whole system in one 20 foot or 40 foot container.

The systems are built for ver rugged transportation in the dessert.

Uranus system installed in a oil camp.

The water gravitates from the toilet container to the Uranus and from here to a built pond for reuse.

Water can be safely reused.

In the dessert water is a scarce commodity. Treated water is there for led to a pond constructed for this purpose for safe reuse.



Built for rugged transportation.

Uranus systems are moved with the oil production units at regular intervals.

Uranus in 40 foot container.

Built for rugged transportation in the dessert.

