PlanetDISK®

Biological Waste Water Treatment Systems.
Rotating **B**iological **C**ontactor **(RBC)**

On-Location, Decentralized
Waste Water Treatment
Technology upto 20,000 people capacity

Reliable German Technology
Robust and Proudly **MADE IN TÜRKİYE**

Lowest carbon footprint

Lowest energy consumption

Operated with renewable energy

Easy operation and easy maintenance

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ENVIRONMENT AND TREATMENT TECHNOLOGIES INC

We are one of the most important companies for the world because one day everything will be cheaper than water ®

YouTube

Letter of the Founder

The most significant problem of the 21st century is depleting natural resources, water scarcity, and rapidly deteriorating environment. In 2004, recognizing the urgency of environmental issues threatening future generations, I saw an opportunity to serve the planet and make a difference.

When I was born in 1960, the world's population was less than 4 billion. Now, it's over 8 billion! By 2050, the population is expected to exceed 9 billion. While the world economy had a volume of 4 trillion Euros in 1950, it has now surpassed 63 trillion Euros in terms of production. The cost that the world pays for this increase, more than 15 times, in terms of the environment and natural resources is enormous. At this rate, we may leave our children and grandchildren with the most advanced technological products like smartphones and autonomous cars, but will they thank us if they inherit a world without clean drinking water or breathable air?

I consider myself a social entrepreneur than a businessperson. Preserving the most valuable natural resource, water, and leaving it as clean as possible for future generations has become the purpose of my life. That's why I decided to locally produce biological treatment systems using German biodisc technology, which is widely recognized globally. This technology, 100% MADE IN TÜRKİYE, utilizes biologically advanced treatment systems capable of treating wastewater from 200 to 20,000 people, allowing the reuse of water. The biodisc technology ensures nearly 80% energy savings, ease of maintenance, and operates odorless and noiseless.

A sustainable future requires the adoption of wastewater treatment technologies. The Rotating Biological Contactor (RBC) system stands out as the technology with the least energy consumption among all known technologies. Equally significant is its possession of the lowest carbon footprint among all the waste water treatment technologies. The system can be easily operated with solar and other types of renewable energy.

I am so proud to have established PlanetTEK at the age of 44, in 2004, after quitting my management positions at Blue Chip companies such as Pepsi-Cola and Beiersdorf. The Word "TEK" stands for technology but it has another meaning in Turkish language; "The Only One". Planet Earth is the only home we must care about!

We take pride in having contributed to significant projects in nearly 40 countries across five continents. From the NATO Base in Kosovo to the refugee camps in Australia, United Nations temporary earthquake housing in Hatay, campuses of Boğaziçi and Bilkent Universities, Coca-Cola factory to Aramco oil well sites, we are dedicated to serving humanity in diverse locations and conditions.

Being one of the 16 international companies who can manufacture Rotating Biological Contactor (RBC) units according to international engineering standards, we are one of the most important companies for the World. Simply because "one day everything will be cheaper than water"® due to escalating climate crisis.

Come talk to us. Let our engineers explain why PlanetDISK® RBC System has the lowest carbonfoot print and the highest energy savings. We will continue our relentless efforts for the most crucial issue for the humanity; water.

Best regards and greetings from Istanbul.

Hürriyet Necdet Aydoğan
Social Entrepreneur, Founder and CEO

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After many successful implementations on 5 continents, PlanetDISK® has become the RBC brand name of reliable, robust, solid state on-location, decentralized biological waste water treatment for capacities between 200 - 20.000 people.

Why Choose PlanetDISK® RBC Systems for On-Location, Decentralized Waste Water Treatment and Reuse of Water?

Technology Inspired by Nature

What makes PlanetDISK® so perfect is the shear simplicity behind its design and principle of how it works. This brings along simplicity in operation and maintenance.

Lowest Carbon Footprint Technology

Half-a-century proven German technology RBC has the lowest carbon footprint among all the technologies. This is vital for the 21st century!

Low Energy Demand

RBC System saves up to 90% in energy costs. Among all known wastewater treatment technologies, RBC is the one that consumes the least amount of energy. Typical blower for an activated sludge treatment plant with a capacity of 250-350 people requires aproximately 80kW/day. Similar capacity, PlanetDISK® uses a 9kW/day for a small size electrical motor and a reduction gear to rotate the rotor at 3-4 rpm. That is all the energy required in the reactor part! Monthly energy costs per person per month at a typical PlanetDISK® plant is less than $0.14.

Renewable Energy Resources

Due to system's low energy demand, it is easily operable with either solar or wind power.

No Smell, No Noise

No annoying smell or noise. The rotor rotates at 3-4 rpm and requires merely 0.37 kW power. It is quiet at 40 db! Each time the rotor surface is exposed to the atmosphere, plenty of oxygen diffuses to all the bacteria in the biofilm on the disks. There is no blower to blow the smell out of the system.

European Effluent Standards

Nitirification, denitrification and phosporus removal are all succesfully achieved by RBC systems.

Reliable Under Variable Loads

Consistent process results despite the organic load that may vary up or down by 250% for 2-3 days. Since the microorganisms in a fixed film system are attached to a media, they can not be washed out with increased flows as it does in most other systems. In places like villages or gray water projects, even though the bacteria levels are low and the waste water is diluted, the system still performs well and delivers required effluent standards.

Reuse of Waste Water

With tertiary treatment (sand+activated carbon filter) and disinfection (UV or chlorine) treated waste water can be used for irrigation, car wash, toilet flushing, cooling tower water and also at construction sites.

Easy Maintenance

Simple and economical to run. Does not require constant maintenance as required in other technologies.

Long Lasting

All the materials used to manufacturing PlanetDISK® units are corrosion proof. HDPP disks, GRP body tank, will last over 50 years. Rotor which is in contact with water has SS and/or galvanized metal parts. 85 mm C1045-1050 solid shaft is epoxy paint protected.It is designed and built to last. Heavy duty bearings are pillow block type with self-aligning spherical roller bearings.

CO2 Carbon Footprint
Low Carbon

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Why Choose PlanetDISK® Rotating Biological Disk?

Quotations from our reference letters...

"...one our most recent system for Boarder Force for the Australian Government we are achieving effluents... of BOD 10.0 mg/l and Suspended Solids of 15.0 mg/l. The PlanetTEK/Heal System meets these requirements and exceeds. RBC technology has advance from being a simple mechanical biological filter and well engineered with stable conditions with and good operation will be an economical and energy efficient means of sewage treatment.

David Herbert,
HEAL Group of Companies, Brisbane, AU

"...The RBC Biological Wastewater Treatment System has won our admiration with its easy maintenance, lack of odor, and very low energy consumption. We also appreciate your team's professional approach to problem-solving..."

Mesa Mesken San. A.Ş.

"...The PlanetDISK® RBC system is preferred by our customer BP, especially for its easy maintenance, reliable, and consistently effective treatment results in their stations worldwide. Biodisc technology has proven to be the perfect choice in terms of low energy costs as well... If we needed wastewater treatment units today, we would choose the RBC technology and your company without hesitation."

TEKFEN Construction and Installation Co. Inc. – Partner to BP BTC Pipeline Construction

We are one of the 16 companies worldwide that produce Rotating Biological Contactor units according to international standards.

PlanetDISK® units are transferred to project locations in Western Australia by ABCO WATER SYSTEMS.

Our first PlanetDISK® unit, which has been successfully operating in Iskenderun since 2005, marks a milestone in our achievements.

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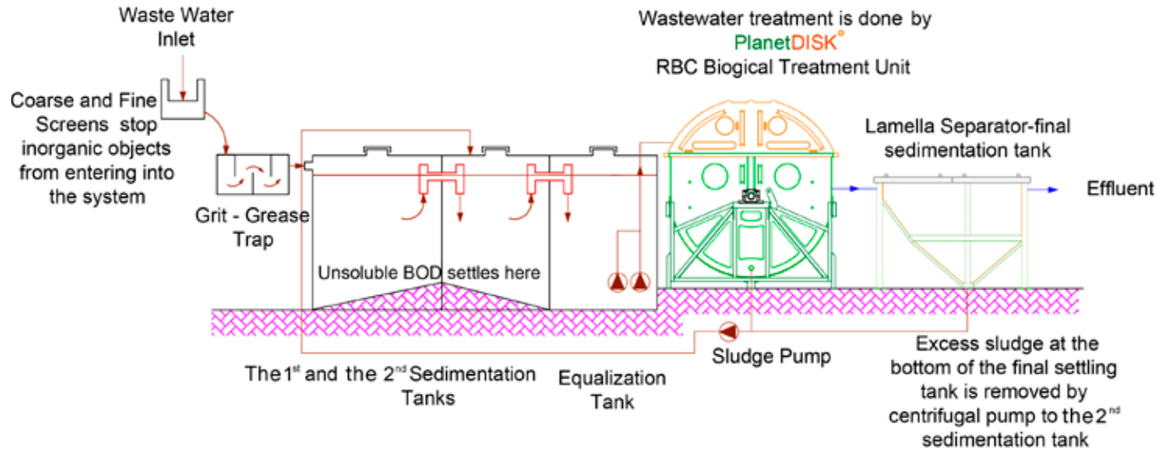
The operating principle of PlanetDISK® RBC System

1. PlanetDISK® unit is a fixed film system where disks made of corrosion-resistant, specially formulated, high-density polypropylene (HDPP) material are arranged side by side on an epoxy-coated steel shaft, rotating at a speed of 3-4 revolutions per minute.
2. Before introducing wastewater into the Rotating Biological Contactor system, it must pass through the inlet structure, consisting of a screen and grease trap, and then through sedimentation tanks. It should be noted that in the biofilm method, the bacteria to be retained on the disks consume only soluble BOD in the wastewater.
3. 40% of the disks on the shaft are submerged in wastewater. The bacteria formed on the disks (biological sludge) take in the oxygen needed to oxidize and "digest" organic matter in the water, as they rotate and emerge from the wastewater, in a natural way from the air. This leads to a rapid increase in the number of bacteria.
4. The formation of these bacteria occurs entirely naturally. The thickness of the biological sludge on the disks can vary between 1-2.5 mm, and the accumulating sludge naturally detaches from the disk by decomposition. This ensures that the desired bacterial population is always present on the disks.
5. The treated water coming out of the Rotating Biological Contactor unit contains dead bacteria detached from the surface of the disks and some suspended solids. These bacteria must be settled in the final sedimentation unit or passed through filtration. After this stage, the treated water can be used for irrigation, car washing, cooling tower water, or toilet flushing following chlorination and passing through sand and activated carbon filter systems.

Flow Diagram of PlanetDISK® Rotating Biological Contactor Wastewater Treatment Plant



Technical Data

Facility Capacity – 40 – 4000 m³/day

BOD (organic pollution) and hydraulic load input-output values, depending on the water's other characteristics, for each unit's capacity = 40-85 m³/day

Required power for each unit = 0.37 kW

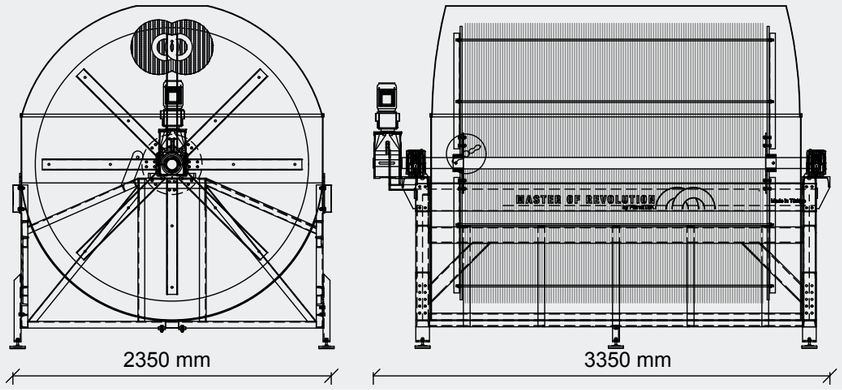
Surface area of each RBC unit disk = 650-850 m²

MATERIALS RESISTANT TO CORROSION

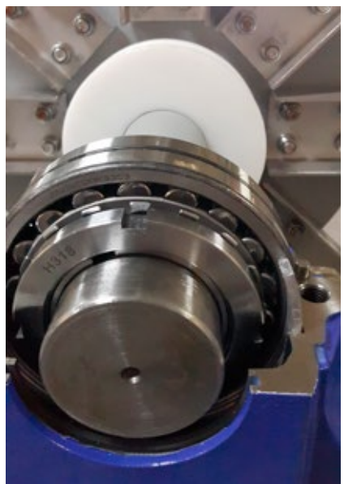
- CTP/Fiberglass body (with UV Protection and other special Additives that will not harm the bacteria.
- HDPP (High-Density Polypropylene) Virgin Material Disks with Special Additives including UV Protection Additive. (min. 1.7 mm thickness, 2,050 mm diameter)
- Epoxy-coated or chrome-plated shaft, all materials in contact with water are galvanized or stainless steel.
- Heavy-duty, spherical bearings suitable for tough working conditions.
- Epoxy paint, resistant to corrosion or galvanized chasis frame.

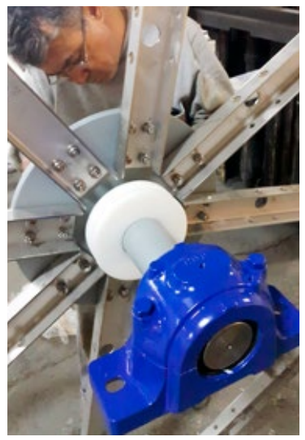
DELIVERY AND PACKAGING

- Unit dimensions = 2350mm x 3200mm x 2500mm (h)
- Unit empty weight ≈ 1900kg.
- Full weight ≈ 7500-8000kg.
- 3 Rotating Biological Contactor units fit into a 40ft HC container, and 4 units fit into a truck for transportation.



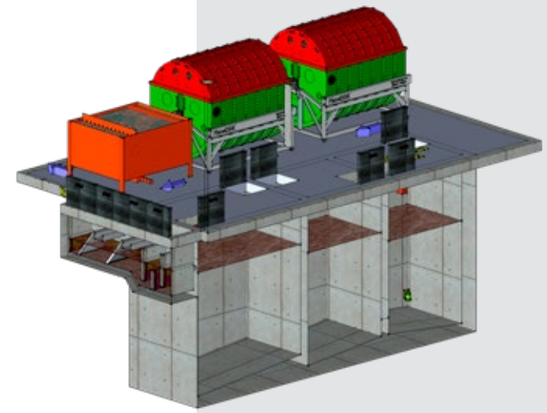
With proper maintenance and regular use, its useful life is approximately 25 years. Its parts are readily available and can be supplied worldwide.





PlanetDISK® Rotating Biological Contactor (RBC) Domestic Wastewater Treatment Plant Capacity of 160m³/day

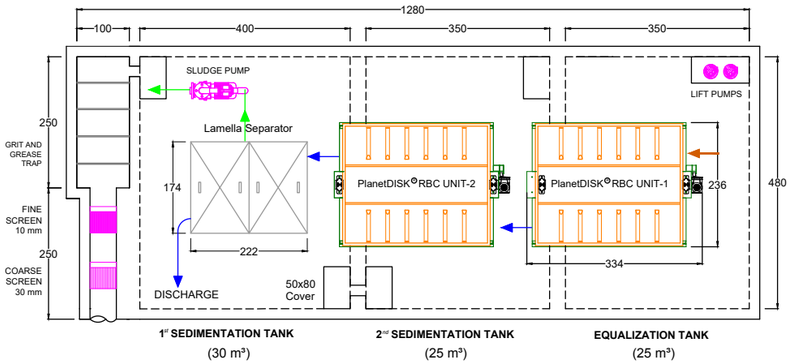
500-800 p.e. (Winter) - 600-1000 p.e. (Summer)

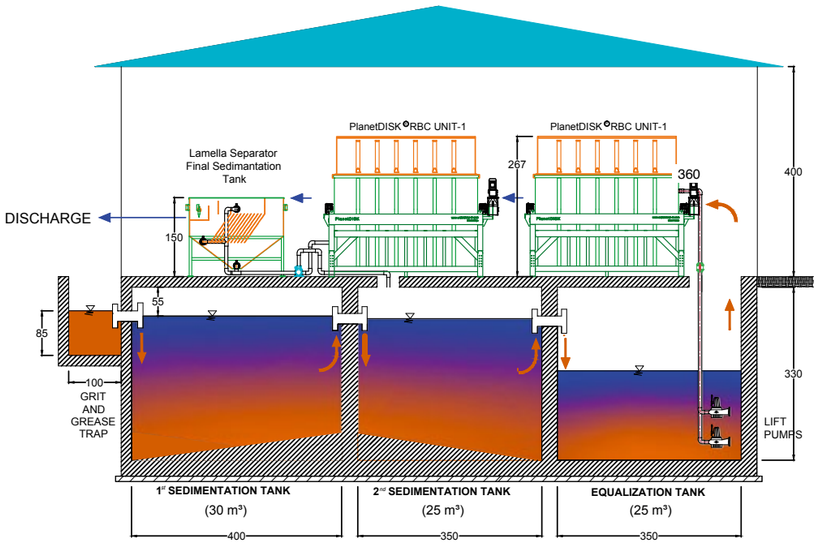


Wastewater Inlet Parameters
BOD = 300 mg/L
Organic Load = <60 g/person-day
Hydraulic Load = <200 L/person-day

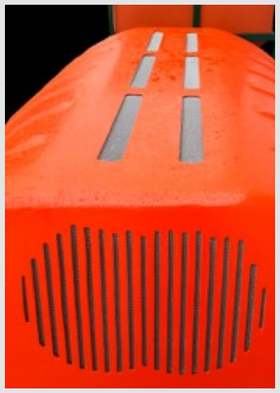
Treated Water Outlet Parameters
BOD < 25 mg/L

Required Area
50-60 m²





The biofilm layer forms on the surface of HDPP disks. The rotation of the rotor provides air (oxygen) to the biomass. There is no need to monitor parameters such as Dissolved Oxygen, MLSS, SVI.



The required oxygen reaches the disks through the windows located on the unit cover. The use of the cover is optional and may not be used in some cases.

Coca-Cola Elazığ Türkiye Factory

Coca-Cola chose the Rotating Biological Contactor (RBC) system due to its low carbon footprint and energy consumption. Additionally, the system's placement at the factory entrance played a crucial role in minimizing noise and odor. With RBC technology, the industrial wastewater is biologically treated at a rate of 680 m3/day, and a portion of it is reclaimed for irrigation purposes. The system is highly adaptable to capacity increases, presenting an additional advantage.

CAPACITY : 680 m³/day
INPUT COD : 3.500 mg/l
OUTPUT COD : 1.000 mg/l

Key features of the 680 m3/day WWTP include construction and turnkey project delivery.

Case Study NATO Military Base, Kosovo

NATO officially chose the Rotating Biological Contactor technology for the following reasons:

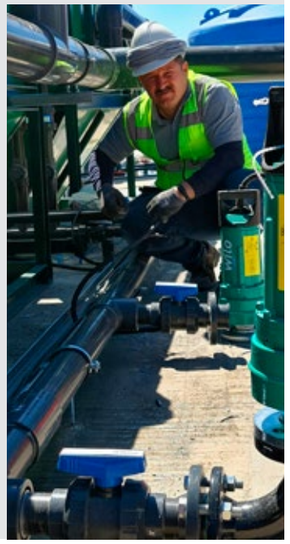
1. Operability without the need for trained personnel
2. Low energy requirements
3. Reliable and consistently high-quality treatment even in cold weather conditions

The Rotating Biological Contactor, proudly manufactured in Türkiye, has successfully passed rigorous field/factory tests conducted by NATO engineers. We take great pride in being chosen over British, French, Italian and German RBC manufacturers.

Investment, energy, personnel, sludge disposal, maintenance, repair, and spare part costs are included in tender. Our system is consistently delivering excellent performance in cold weather conditions since 2020.

In this project, nitrogen and phosphorus are also removed.

CAPACITY : 257 m³/day
INPUT BOD : 300 mg/l
OUTPUT BOD : 25 mg/l



Funded by
the European Union

Our Greek partner SOLIS A.E. did all the installation himself at the village of Larissa. The system has been working according to EU norms since 2017.

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Case Study

BALIKESİR / TÜRKİYE

A treatment plant with a capacity of 350 m3/day using Rotating Biological Contactor Units is operated in the Balya and İvrindi districts of Balıkesir. In İvrindi, some of the 5 RBD units located in the schools area are deactivated when schools are closed.

After experimenting with MBR (Membrane Bioreactor), SBR (Sequential Batch Reactor), and electrocoagulation technologies, BASKİ (Balıkesir Water and Sewerage Administration) decided to utilize the Rotating Biological Contactor system.

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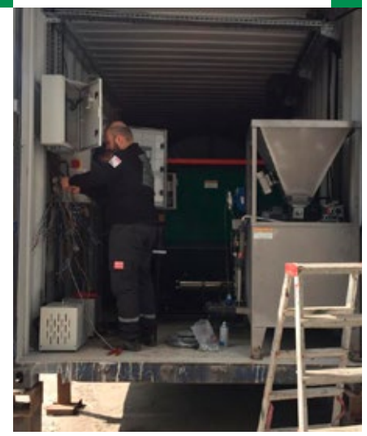
In this project, as in all other municipalities, the most critical issues are energy efficiency and operational costs. The Rotating Biological Contactor has been the preferred choice for BASKİ due to its lower energy consumption compared to all known wastewater treatment technologies worldwide.

SIDERIDRAULIC Spa
SYSTEM



Case Study

BAYTOWN, TEXA
UNITED STATES OF AMERICA

A steel processing facility located in the Baytown, Texas region has been equipped with two Rotating Biological Contactor plants. Treatment plants, each with a capacity of 137 m3/day, for domestic wastewater treatment. Wastewater will be treated using two containers placed at different points within the factory. All electrical works have been carried out in accordance with UL certification standards, and all equipment has been selected to meet the export requirements of the United States. The wastewater input, discharge, and sludge lines in the field will be connected and operated using the plug-and-play method. It has been quickly made ready for shipment. Fieldwork has been minimized. All mechanical and electrical projects have been approved by the relevant authorities.

Why did KfW German Development Bank make it a requirement to use Biodisk in the wastewater treatment projects it financed in Georgian villages?

Building wastewater treatment facilities for small populations is a challenge in itself. In large projects, there are technical staff and engineers to operate the facility. However, in small areas, this may not be feasibleor possible at all. The system should have low energy costs and easy maintenance. For these reasons, KfW has made the Biodisk system a requirement for sustainable small-scale wastewater treatment projects. Taking into account the long-term experience and international references of PlanetTEK Inc., KfW has chosen the Biodisk system, which is 100% Turkish-made, over its European competitors.

In the KfW tender documents, the reasons for choosing RBC are stated as follows:

- **Low energy consumption**
- **Safe operation with low maintenance**
- **Does not require Process Engineering**
- **Easy and stable operation with minimal supervision**
- **Modular system that saves space**
- **Capacity can be increased and Nitrogen and phosphorus removal can be achieved through the addition of units.**


KFW

GEORGIA

Rehabilitation of Municipal Water Supply & Wastewater Infrastructure in Batumi – Phase III

Georgia Municipality of Batumi – German Financial Co-operation with Georgia

6.5 **Recommended Option: Rotating Biological Contactors (RBC)**

As the land requirements for the implementation of constructed wetlands are out of scale, particularly considering Area C, the Consultant investigated to identify another treatment option that would result in (at least) comparable effluent qualities while saving land. A prerequisite was that the process operates stable, with limited operation and maintenance requirements and that the concept can be amplified and is sustainable.

The biological treatment process based on rotating biological contactors was identified as a suitable solution.

The advantages of the process are:

- low energy consumption
- reliable operation at minimum expenditures for maintenance
- no process engineering required
- optimal biological regeneration due to open and easy to control surfaces
- Bearings and axles are located above water level thus all parts of the discs are exposed to oxygen
- Simple and stable to operate, limited supervision requirements.
- Compact design in order to save space
- The system is composed of modules. An extension of the plant (as well as an increased treatment efficiency with regard to N- and P-removal) can be achieved by adding further modules

The reasons for choosing RBC are clearly stated in the tender announcement made by KfW above.

Case Study


The wastewater treatment system with a capacity of 1500 m3/day and consisting of 21 units for the Riyadh, Saudi Arabia Military Airbase was manufactured for VEOLIA.

MADE IN TÜRKİYE

CE

Why do prestigious companies in Türkiye such as MESA, TEKFEN, and globally respected firms like VEOLIA France, METITO Qatar, ARAMCO Saudi Arabia, esteemed institutions/organizations like KfW, EU, NATO, UN, İLBANK, TOKİ, AZERSU, the Australian Government, the Ministry of Justice, and the Turkish Armed Forces trust us?

We are an engineering and contracting company that has repeatedly proven its success with numerous Project Approval Files and Environmental Permit documents. Our systems, manufactured in our Istanbul factory since 2004, and our project experience on five continents are preferred worldwide. Our Rotating Biological Contactor unit is one of fewer than 15 registered brands worldwide. Proudly manufactured in Türkiye according to European standards, it is CE certified.

Thanks to the Rotating Biological Contactor, there have been no noise or odor problems at the Boğaziçi University Kilyos Campus, and approximately €20,000 in energy savings is achieved annually. The energy needs are met with a wind turbine located on the campus, making it crucial for the treatment plant to be the least energy-consuming treatment technology. All the treated water is used for irrigating the green areas on the campus during the summer months, which was not possible with conventional treatment systems.

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Boğaziçi - Bosphorus University had previously used conventional treatment systems for many years. Due to the rising energy costs and frequent malfunctions of the blower-type equipment, the university administration decided to switch to the RBC system, which provides almost 80% energy savings.

Why did Bosphorus University switched to RBC Systems for 3500 people/day capacity waste water treatment?

Case Study

The wastewater treatment plant of Kırklareli Çakıllı Municipality with a capacity of 315 m3/day was tendered by İLBANK in the year 2021. İLBANK recognized the advantages of using RBC in small settlements in this project.

In Turkey, conventional systems are generally used in urban and municipal wastewater treatment plants. Following the experiences gained over the years and the continuously improving quality of Rotating Biological Contactor applications, İLBANK deemed it appropriate to implement this technology in Çakıllı Municipality. The Rotating Biological Contactor system provides significant savings for public institutions when we consider the investment and operating costs up to certain capacities. Its easy operation, low energy consumption, minimal sludge formation, and reduced personnel requirements are the main factors contributing to these savings.

İLBANK
TÜRKİYE'NİN YAPICI GÜCÜ

Case Study

Hatay Temporary Earthquake Housing
(Konteyner Kent)

PROBLEMS:
Energy Problem, Qualified Operation Personnel, Odor, Noise, Variable Organic and Hydraulic Load, Urgent Needs

How should the wastewater of a container city, prepared for a temporary period with problems of energy and qualified personnel, be treated?

A solution has been provided for the treatment of domestic wastewater using the Rotating Biological Contactor technology in a facility designed to minimize construction needs. The entire facility is designed to require minimal construction. There is no need for personnel constantly maintaining the treatment plant. The RBC system, which provides an 80% energy saving compared to conventional systems and does not create noise or odor, can be easily transported and used in villages, agricultural areas, schools, and hospitals when people move to permanent living spaces. With simple and periodical maintenance, the system will serve for many years. The manufacturing and electromechanical assembly of the treatment plant, including transportation and commisioning took only a total of 16 days.

CAPACITY : 150 m^3/day **INLET BOD : 300 mg/l** **OUTPUT BOD : 25 mg/l**

COMPARISON OF ROTATING BIOLOGICAL CONTACTOR (RBC) SYSTEM AND AERATED ACTIVATED SLUDGE SYSTEM WITHIN THE 15-YEAR ECONOMIC LIFESPAN

Investment, energy, personnel, sludge disposal, maintenance, repair, and spare part costs are included.

Total Savings over 15 Years : 285.981 €

COMPARISON OF RBC SYSTEM AND MBR SYSTEM WITHIN THE 15-YEAR ECONOMIC LIFESPAN

Investment, energy, personnel, sludge disposal, maintenance, repair, and spare part costs are included.

Total Savings over 15 Years : 391.740 €

Mardin Sürgücü Town Wastewater Treatment Plant

Case Study

PROBLEMS:
Qualified Operation Personnel, Difficult Access to Energy (Desire to Use Renewable Energy), Poor-Old Infrastructure.

Why does Sürgücü, a town in Mardin with a population of 4500 people, have a Rotating Biodisk instead of the activated sludge system found in other villages and towns?

Mardin and other cities in the Southeast face water shortages. One of the most effective ways to protect limited clean water sources is to ensure that wastewater is treated, preventing it from polluting limited resources. Mardin Water and Sewerage Administration (MARSU), being sensitive to the issue, sought a sustainable solution, considering its past negative experiences with wastewater treatment. The Biyodisk system can be operated with solar energy due to its low energy consumption. It is easy to maintain. For these two main reasons, MARSU's preference has been the Biyodisk.

Moreover, in old infrastructures where stormwater mixes with wastewater, hydraulic load increases. The Biyodisk system is the most tolerant among known technologies against flow and pollution fluctuations.

CAPACITY : 800 m^3/day **INLET BOD : 300 mg/l** **OUTPUT BOD : 45 mg/l**

COMPARISON OF ROTATING BIOLOGICAL CONTACTOR (RBC) SYSTEM AND AERATED ACTIVATED SLUDGE SYSTEM WITHIN THE 15-YEAR ECONOMIC LIFESPAN

Investment, energy, personnel, sludge disposal, maintenance, repair, and spare part costs are included.

Total Savings over 15 Years : 689.039 €

COMPARISON OF RBC SYSTEM AND MBR SYSTEM WITHIN THE 15-YEAR ECONOMIC LIFESPAN

Investment, energy, personnel, sludge disposal, maintenance, repair, and spare part costs are included.

Total Savings over 15 Years : 764.337 €

Different Installation Methods for RBC Equipment

Simple pools shaped like bathtubs will reduce space requirements and overall costs by cutting costs of fiberglass body and steel chasis. Rotating Biological Contactor rotors are mounted inside these pools.

Australian Refugee Camp

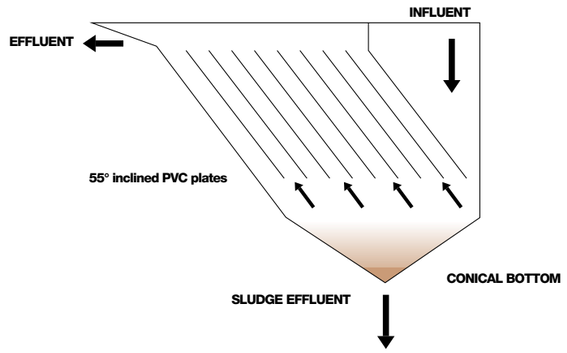
Rotating Biological Disks assembled in containers are used in various facilities. The plant can be operated with minimal construction requirements using polyethylene tanks.

In construction sites, refugee camps, and similar locations, the **“PLUG-AND-PLAY”** plant inside a container can be relocated to another place when the project is over.

Saudi Arabia ARAMCO
Pipeline Project

The portable mobile wastewater treatment system was built in Australia for rental purposes.

The Lamella Separator Used for Final Sedimentation and Other Equipment Manufactured at our Factory



PROBLEMS:
FINAL SEDIMENTATION TANK (LAMELLA)

- Lamella final sedimentation tanks provide efficient sedimentation in small volumes at high hydraulic loads by increasing the active surface area. Plastic lamella plates, placed at a 55° angle inside the unit, increase the surface area. The solid particles pass between the PVC plastic plates, resulting in clear water at the outlet.
- The sludge accumulated at the bottom of the unit is removed periodically with a sludge pump. The sludge pump works for 1-2 minutes per hour to efficiently remove the sludge at the conical bottom.
- Lamella separators take up very little space compared to conventional sedimentation to concrete tanks and do not consume energy.

OTHER EQUIPMENT MANUFACTURED AT OUR FACTORY:

- COARSE SCREEN
- FINE SCREEN
- BASKET SCREEN
- PIPE FLOCCULATOR
- RAPID and SLOW MIXERS
- GANTRY CRANE
- PENDULUM
- FLOW DISTRIBUTION STRUCTURE
- CTP SCREEN STRUCTURE (WITH CHASSIS)
- AUTOMATIC POLYMER PREPARATION UNIT

MATERIALS USED IN MANUFACTURING:

- Fiber Glass body
- PVC Lamella Plates
- Epoxy painted, Galvanized, or ST 37 Carbon steel chassis

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OUR PRIDE LIST

Our Worldwide Pride List
(Partial List)

- **SIDERIDRAULIC SYSTEM, ITALY – INDUSTRIAL ESTABLISHMENT – TEXAS, USA**
- DÖVEÇ CONSTRUCTION COMPANY – LONG BEACH PANORAMA RESIDENCES – NEW DOCK BEACH PROJECT –
- **NEWTECH – DURA HOSPITAL – PALESTINE**
- ORIENT ENGINEERING – ISLAMABAD SHIFA HOSPITAL – PAKISTAN
- **ABCO WATER SYSTEMS – NEWMONT TWINHILL VILLA PROJECT – AUSTRALIA**
- AGE/AZERSU – ALAT FREE ECONOMIC ZONE – AZERBAIJAN
- **METITO – RESIDENTIAL SITE PROJECT – SAUDI ARABIA**
- VEOLIA - MILITARY BASE - RIYADH, SAUDI ARABIA
- **ORIENT ENGINEERING – CANCER CARE HOSPITAL & RESEARCH CENTER – PAKISTAN**
- TML CONSTRUCTION – MISURATA FREE ZONE – LIBYA
- **HEAL GROUP OF COMPANIES - CUNNAMULLA TOWN – AUSTRALIA**
- ORIENT ENGINEERING – EMAAR RESIDENCES, KARACHI – PAKISTAN
- **PROTECH AL - NATO MILITARY BASE – PRISTINA, KOSOVO**
- METSITEC WATER RECYCLING SYSTEMS - HUMMINGBIRD PROJECT SOUTH AFRICA
- **MULTI WASTE LTD - GABORONE SETTLEMENT AREA BOTSWANA**
- EL ZEYTUNE SCIENCE AND TECHNOLOGY UNIVERSITY - SALFEET, PALESTINE
- **METITO - ANSE AUX PINS HOTELS - SEYCHELLES**
- ABCO WATER SYSTEMS - GOLD MINE CAMP SITE - AUSTRALIA
- **XELERA - THYSSEN KRUPP FACTORY - PUEBLA, MEXICO**
- SOLIS S.A. CONSTRUCTION COMPANY - LARISA CITY VILLAGES - GREECE
- **DDFC LTD. - MANGLA DAM CAMP AREA - PAKISTAN**
- HEAL TREATMENT - AUSTRALIAN GOVERNMENT REFUGEE CAMP - PAPUA NEW GUINEA
- **ARAMCO - JEDDAH YANBU PIPELINE CAMPS - SAUDI ARABIA**
- ECETAS CONSTRUCTION - FINANCED BY KFW GERMAN BANK, CHAKVI VILLAGE - BATUM, GEORGIA
- **AQUAFELIX - ITALIAN HOSPITAL - DJIBOUTI**
- METITO – WAREHOUSE PROJECT - DOHA, QATAR
- **CAPITAL WATER (CHILE) - LUXURY RESIDENTIAL PROJECT - GHANA**
- JOB SITE – CHEVRON OIL DRILLING SITE - KAZAKHSTAN
- **ENKA CONSTRUCTION - DAM CONSTRUCTION SITE - ALGERIA**

Our Pride List In Türkiye
(Partial List)

- **UNDP&DKM – EXPO CENTER EARTHQUAKE ZONE CONTAINER CITY PROJECT – HATAY**
- BILKENT UNIVERSITY – ANKARA
- **COCA-COLA ELAZIG FACTORY (INDUSTRIAL)**
- ISTANBUL BEYKOZ MUNICIPALITY – PARKS AND GARDENS DIRECTORATE
- **ÇAKILLI VILLAGE – ILBANK PROJECT – KIRKLARELI (PUBLIC PROJECT)**
- GENERAL STAFF PRESIDENCY - GARRISON, MILITARY BASE - ANKARA
- **CITLEKCI TUNCLAR HIGHWAY BUS TERMINAL – KIRIKKALE**
- BARTONE CONSTRUCTION – NIGDE PROVINCIAL ADMINISTRATION – CIFTEHAN THERMAL TOURISM AREA (PUBLIC PROJECT)
- **PROJECT SYSTEM – AFAD HOUSES – ILBANK – EZINE, CANAKKALE (PUBLIC PROJECT)**
- CANAKKALE PROVINCIAL ADMINISTRATION - BIGA, KEMER VILLAGE (PUBLIC PROJECT)
- **BILISIM VADISI TECHNOLOGY DEVELOPMENT – KOCAELI**
- PUPA LTD. - GARANTI KOZA – ENERGY POWER PLANT - BODRUM, MUGLA
- **CANAKKALE PROVINCIAL SPECIAL ADMINISTRATION – TECHNOPARK TECHNOLOGY DEVELOPMENT ZONE INC. (PUBLIC PROJECT)**
- NORM CONSTRUCTION – FIERRA VISTA HOUSES - BODRUM
- **ÇINAR ELITE CONSTRUCTION – SOUL OF BODRUM – BODRUMM**
- KIRSEHIR PROVINCIAL SPECIAL ADMINISTRATION – YAYLAOZU VILLAGE – KIRSEHIR (OPERATING WITH SOLAR ENERGY) (PUBLIC PROJECT)
- **BASKI BALIKESIR WATER AND SEWERAGE ADMINISTRATION – IVRINDI DISTRICT – BALIKESIR (PUBLIC PROJECT)**
- EMT CONSTRUCTION – TOKI – KERIM KOK BARRACKS – SEREFLIKOCHISAR, ANKARA (PUBLIC PROJECT)
- **AMASYA PROVINCIAL SPECIAL ADMINISTRATION – KAYABASI VILLAGE (PUBLIC PROJECT)**
- BOGAZICI UNIVERSITY CAMPUS – KILYOS, ISTANBUL
- **LE MERIDIEN - MILA'S DAPHNE RESIDENCE - BODRUM, MUGLA**
- INANLAR CONSTRUCTION - VALLEY TERRACE - ZEKERIYAKOY, ISTANBUL
- **MARSU MARDIN WATER AND SEWERAGE ADMINISTRATION (WITH SOLAR PANEL) – SURGUCU (PUBLIC PROJECT)**
- EDIRNE PROVINCIAL SPECIAL ADMINISTRATION – SULTANICE, GULCAVUS, KUCUKEVREN VILLAGES (PUBLIC PROJECT)
- **TEKFEN – BRITISH PETROLEUM- BTC PT1 – POSOF, ARDAHAN**
- ISTANBUL METROPOLITAN MUNICIPALITY DRAGOS SOCIAL FACILITY – ISTANBUL (PUBLIC PROJECT)
- **MESA CONSTRUCTION – ADNAN MENDERES CULTURE CENTER – YASSIADA, ISTANBUL**
- UNILEVER LIPTON TEA – DIKKAYA VILLAGE – SOCIAL RESPONSIBILITY PROJECT – RIZE
- **IGNEADA MUNICIPALITY – KIRKLARELI (PUBLIC PROJECT)**
- • ASKI ANKARA WATER AND SEWERAGE ADMINISTRATION – UPPER CAVUNDUR VILLAGE (PUBLIC PROJECT)

RBC or conventional systems?

	RBC		Activated Sludge System
Carbon Footprint	It has the minimum carbon footprint among all known wastewater treatment technologies.	✓	It has 6-7 times more carbon footprint compared to Rotating Biological Contactor technology.
Noise Level	Very low noise level <60db.	✓	Disturbing roar >90 db.
Odor	Virtually non-existent.	✓	High
Corrosion and Decay	All metal components in contact with wastewater are either stainless steel or hot-dip galvanized. PP and PE materials are durable for a minimum of 50 years. The chassis metal material is galvanized or epoxy coated.	✓	Typically, excessive rusting and corrosion occur within 3-4 years.
Maintenance	A system that does not require continuous supervision and complex measurements. The bacterial film accumulated on the surface of the Biyodisk units' disks naturally falls off. It does not require special maintenance except for lubricating the bearings once a month and washing the lamella separator unit for 15-20 minutes once a week. Regular cleaning of the existing grid in each treatment plant is important.	✓	Requires maintenance. It may be necessary to decide on the discharge of excess activated sludge. The stable operation of such a system, where the human factor is crucial, is challenging.
Energy and Operating Cost	It is the least energy-consuming system among all known wastewater treatment methods, with an energy cost of $0.1 per person per month. Due to the low number of moving parts, the need for spare parts is minimal.	✓	Due to the powerful blower, it consumes 8-9 times more energy. Blower and diffusers frequently experience malfunctions.
Space Requirement	It occupies 50% less space. In the area of a 2.5 m x 3 m PlanetDISK® unit, more than 750m2 of disk surface can be accommodated.	✓	It may require twice as much space compared to Biyodisk units.
Sludge Quantity and Characteristics	It is half the amount of sludge generated in other systems.	✓	Intensive generation of concentrated sludge.
Operation and Parameter Monitoring	There is no need for any instrument as there are no parameters to be monitored. Sludge return is not performed.	✓	Dissolved Oxygen, SVI, and MLSS should be monitored by continuously trained personnel, requiring additional instruments and laboratory equipment for this purpose.

On-LOcation,Decentralized RBC Systems are most commonly used at such sites:

Domestic and Industrial Wastewater, Residential Areas, Hotels, Schools, Factories, Camps (Displaced and Refugee), Construction Sites, Mining Fields, Shopping Malls and Stadiums, Prisons, Mass Housing, Greywater treatment

Please scan QR code to reach PDF version of this catalog and YouTube link of a PlanetDISK® STP in Istanbul.

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