



DEVISE HIGH-RATE™ Packaged Plants for the Treatment of Industrial Effluents

DEVISE ENGINEERING is an experienced Technology Provider and a successful Plant Manufacturer in the field of Water and Wastewater Treatment for the Industrial and Municipal sector. For **INDUSTRIAL** clients, DEVISE provides **Smart Solutions for the treatment of highly contaminated industrial wastewater**, covering the following main sectors.

Typical Industrial Applications

Food manufacture / processing
Soft drinks production
Wineries, Breweries
Pharmaceuticals
Textile industry
Cosmetics
Chemical industry, Petrochemical
Poulties, Slaughter Houses
Sanitary landfill sites



DEVISE's technical approach in such applications is characterized by the analytical investigation of the wastewater's treatability and the provision of a solution that is implemented using **compact, prefabricated and modular units**. These features greatly benefit the industrialists, as the DEVISE solutions require much less plan-foot area and on-site works than the conventional construction methods. The DEVISE pre-engineered, prefabricated and packaged method of construction, offers an effective solution that limits the land requirements and the disruption of the factory's business.

DEVISE Packaged Plants for Industrial Wastewater Treatment are of the **highest quality and performance**.



Effective Physical-Chemical Pretreatment using DEVISE Solids-Separators (Micro-Band-Filter, DAF, Rapid-Clarifiers)

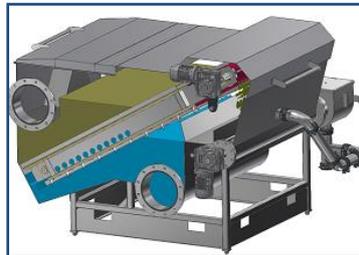
The most common pre-treatment method for industrial effluents is the use of chemicals so to brake-down and remove pollutants such oil & fat, emulsions, heavy metals and other organic or inorganic compounds. For this process DEVISE provides the full scope of ergonomically & safe design of **chemical dosing stations**, coagulation & flocculation reactors and finally a number of effective separators such as the very compact machine suitable for high solids content '**MBT**' (**Micro-Band-Filter**) which also provides solids dewatering and compaction, **DAF** (**Dissolved-Air-Flotation**) units, and a number of **Rapid Gravity Clarifiers** using tube-settlers and skimmers to achieve reliable and high-rate solids separation.



**CONTAINERIZED
GRAVITY CLARIFIER**



**CHEMICALS
PREPARATION UNIT**



MICRO-BAND FILTER



DAF UNIT

High-Rate Biodegradation of Industrial Effluent using DEVISE Advanced MBBR-IFAS Process in Containerized or Site Erected Reactors

For Industrial effluents we incorporate both well proven treatment processes as well as innovative high-end technologies, so to provide **Total Solutions for a vast range of Wastewater Treatment facilities**.

The DEVISE High-Rate MBBR-IFAS process is used for extensive and fast bio-degradation in a wide range of Industrial effluents. The reactors can be either prefabricated ready to install modular units or easy to erect on site reactors made from durable GRP prefabricate panels. The process includes the use of stainless steel "clog-resistant" medium bubble diffusers with 'self-cleaning' mechanism and high-performance 'clog-free' Bio-Carriers with long life guarantee.

Characteristics of DEVISE HIGH-RATE™ Bio Plant

'HIGH-RATE Bioplant'™ is a compact and heavy duty **containerised biological treatment unit**, suitable for indoor and outdoor installation, which can operate in all weather conditions. It incorporates robust design and innovative engineering for minimum maintenance and reduced supervision. The BIOMAX is an effective High-Rate bio-treatment unit based on the Moving Bed Biofilm Reactor (MBBR) with Integrated Fixed Film Activated Sludge (IFAS) and TUBE-Settling technology. It is unique due to its compactness and performance with respect to volumetric efficiency. These units are especially prefabricated, having standard ISO container dimensions with length varying according to capacity requirements are suitable for overseas transportation. The system's machine rooms with PLC equipped Electrical Panels is either integrated in the same containerised unit or it constitutes a separate unit



Advantages

Smart Design

- Pre-engineered & prefabricated plants
- Modular design
- Compact and high-rate performance
- Fully tested before dispatch
- Ready to plug & play
- Space saving - Small foot print

Easy & Reliable Operation

- Fully automatic – PLC controlled system
- User friendly interface (touch screen HMI)
- Remote monitoring
- Low maintenance requirements
- Self-cleaning mechanisms incorporated



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