

TECHNICAL INFORMATION

COMBIBLOCK units are available in the following configurations:

CONFIGURATION	OXIDATION	NITRIFICATION	DENITRIFICATION
COMBIBLOCK B	●		
COMBIBLOCK BN	●	●	
COMBIBLOCK DBN	●	●	●

Typical sizes of the standard COMBIBLOCK BN units:

UNIT	DAILY FLOW (m ³)	WIDTH (m)	HEIGHT (m)	LENGTH (m)
COMBIBLOCK 300 PE	54.0	2.5	2.5	3.5
COMBIBLOCK B 500 PE	90.0	2.5	2.5	5.8
COMBIBLOCK B 750 PE	135.0	2.5	3.0	7.2
COMBIBLOCK B 1000 PE	180	2.5	3.0	8.6
COMBIBLOCK B 1250 PE	225.0	2.5	3.0	10.6
COMBIBLOCK B 1500 PE	270.0	2.5	3.0	11.2

For further details please request the technical specifications and drawings.

COMBIBLOCK Preassembled sewage treatment plants

PREFABRICATED COMBIBLOCK sewage treatment plants are compact, factory-assembled units designed to treat wastewater generated by a number of houses, residential blocks or small communities. Their unique characteristic is that their external dimensions are equivalent to ISO standard containers (same height and width) making these units easy to transport, install and relocate.

COMBIBLOCK units are proprietary designs of Euromarket and are based on an advanced biological treatment process, the Moving Bed Biofilm Process MBBR.

The MBBR process is based on the development of an aerobic bacteria culture on a protected plastic media surface. The media are kept in suspension by air that is diffused into an aerobic reactor or with the use of mixing devices in the case of anoxic denitrification reactors. In turn, the bacteria population biodegrades the organic waste compounds and an effluent of superior quality is produced.

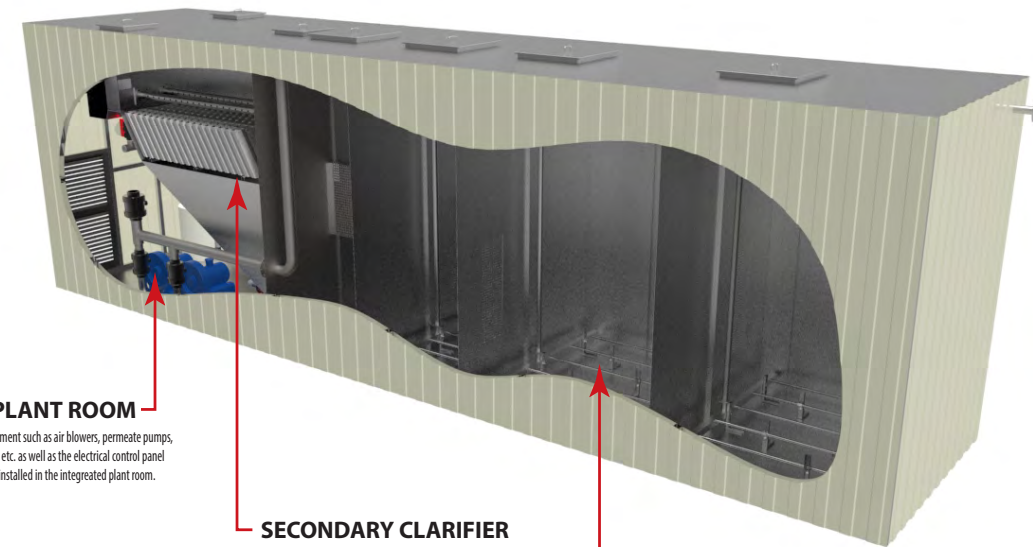
Different COMBIBLOCK models are offered with respect to capacity and treatment configuration. A separate pretreatment unit for FOG removal, primary sedimentation, balancing and aerobic Sludge digestion is normally installed prior to the main COMBIBLOCK unit. This pretreatment unit may be custom made of concrete, or of stainless steel as a prefabricates structure.

In the container-like MBBR unit a number of processes are performed: Two-stage BOD5 removal, Nitrification (optional), Denitrification (Optional) and Sedimentation (gravity or via a lamella plate settler). The mono-block construction also house the control cabinet with the air Blowers, control unit, and dosing stations for chlorine and coagulant/flocculant when required. A final collection tank may be used for the storage and disinfection of the purified effluent before discharge. This collection tank does not form part of the compact unit.

The COMBIBLOCK effluent can either have secondary (BOD5 < 20 mg/l and SS < 30mg/l) or tertiary (BOD5 < 10 mg/l and SS < 10mg/l) quality characteristics. The tertiary quality can be achieved without filtration, simply with the addition of flocculating and coagulating agents to the effluent prior to the sedimentation stage.

COMBIBLOCK treatment units can be installed above or below ground. They are available in seven different sizes ranging from 300 to 1500 PE depending on the treatment configuration. Tailor made designs are also possible to much specific effluent requirements or for the biological treatment of industrial wastewater. COMBIBLOCK units required minimum maintenance and are characterized by very low energy consumption. They cause no nuisance to the surrounding area due to their low noise emission and odourless operation.

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PLANT ROOM
All equipment such as air blowers, permeate pumps, dosing etc. as well as the electrical control panel are installed in the integrated plant room.

SECONDARY CLARIFIER

AERATION SYSTEM
This is a fine bubble membrane aeration system design to operates without clogging problems and at the same time achieves high oxygen transfer efficiency



BENEFITS

- Simple and quick transportation installation and relocation
- Built to last
- Robust on load variations
- Tolerates influent fluctuations
- Low noise emission
- Odourless operation
- Excellent effluent quality
- Low running cost
- Easy trouble free operation
- Very small footprint

FLEXIBILITY

- Above or below ground installation
- Easy to relocate
- Capacity could be increased up to 25%
- Can achieve nitrification below 5°C
- Can achieve denitrification (COMBIBLOCK DBN)
- Wide operating ambient temperature from -20 °C to + 45 °C
- Economy mode for low loading seasons

CONSTRUCTION MATERIALS

- All tanks made of stainless steel AISI 304 (or AISI 316 upon demand). External walls may be covered with thermal insulation and/or cladding when required .
- Aeration system made of stainless steel.
- All wet parts made of corrosion free materials (i.e. stainless steel, UPVC, PE or other plastics)
- Biofilm media carriers made of HDPE