

Environmental Products



connecting
THE WORLD

BIO-NET® **for biological sewage treatment** **applications**

Main characteristics of BIO-NET® support media

Polyethylene grid tubes thermally welded together to form sturdy, stable blocks

- High mechanical load capacity
- Blocks strong enough to be walked on

Vertically structured; three dimensional trough-flow

- Optimized supply of oxygen to the microorganisms
- Excellent precaution against anaerobic zones
- Good immunity against clogging
- Optimal sludge discharge

Four growth surface area sizes available

- 100 m²/m³
- 150 m²/m³
- 200 m²/m³
- 250 m²/m³



Applications (1) – Trickling Filter

Hadjah, Jemen

- Diameter 20 m
- 950 m³ BIO-NET[®]
- Filling height 3 m
- Specific surface 150 m²/m³



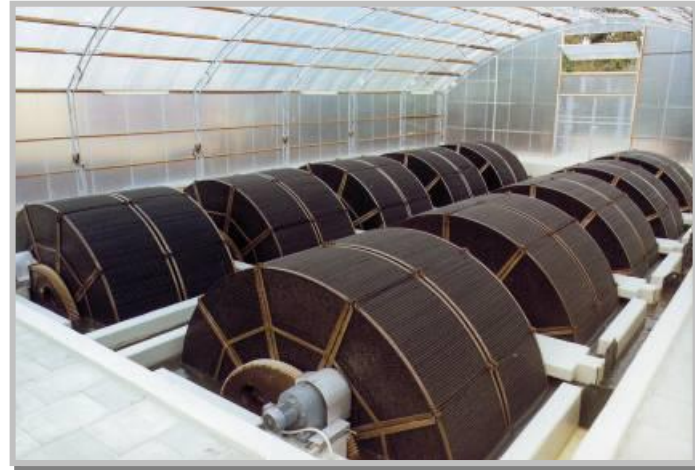
- Cost effective rehabilitation of old trickling filter systems
- Simple technology
- Low operational costs
- Flexible applications



Applications (2) – Rotating biological contactors

Hamburg, Germany

- 16 RBC's
- Diameter 3,6 m
- Width 2 m
- 325 m³ BIO-NET®
- Specific surface 150 and 250 m²/m³



- The system's load-bearing parts are mechanically safe
- Radial arrangement of the support media rigid axis
- Automatic oxygen saturation via rotational movement
- Prefabricated elements permit rapid assembly



Applications (3) – Submerged Fixed Beds

Castrop-Rauxel, Germany

- 12 cascades
- 4.800 m³ BIO-NET®
- Filling height 4,8 m
- Specific surface 150 m²/m³



- Oxygen supply to the biomass via aerators located underneath the support media
- Fixed bed units can be adapted to suit the tank's geometry
- Cascade-style arrangement with one or more tanks in series in which the support media are installed permanently
- Prefabricated elements ensure rapid assembly
- Compact, space-saving design



SESSIL® **for biological sewage treatment** **applications**

Vertically structured film strips

- Maximum immunity against clogging
- Optimal sludge discharge

Three dimensional airflow

- Optimized supply of oxygen to the microorganisms
- Excellent precaution against anaerobic zones

Moderate cost structure with regard to

- material price, transportation cost and installation expenses

Individually adjustable specific surface from 100 up to 250 m²/m³

- The specific surface can exactly be adapted to the process engineering demands
- The specific surface can later be raised or reduced

Face - Element

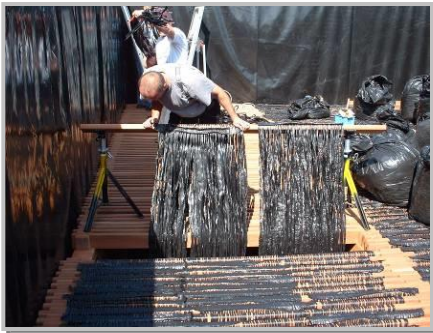
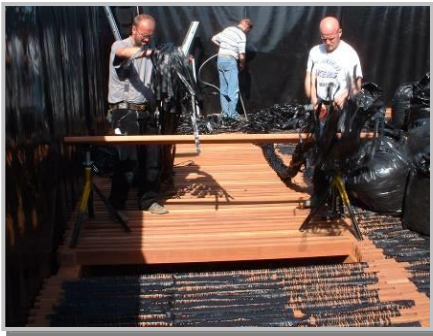


Tension - Filament



Installation

- The installation of SESSIL® for its main application in trickling filters needs no special knowledge and can normally be realized with unskilled workers and one supervisor only
- The antecedent installation of the high grid provides a safe and comfortable installation of the SESSIL® media



Applications (1) – Trickling Filter

Sucre, Bolivia

- 4 trickling filters
- Diameters 25 m
- Filling heights 4 m
- 7.750 m³ SESSIL®
- SESSIL® 130 m²/m³
- Concrete support structure
- “Soto” wood high grid



Applications (1) – Trickling Filter

SESSIL® high grid consisting of “Soto” hardwood slats with concrete support structure



SESSIL® installation on top of the completely closed high grid



Applications (1) – Trickling Filter

Bottom area of the trickling filter, being equipped partly with SESSIL®



Completely installed trickling filter on the Sucre site



Applications (1) – Trickling Filter

Different types of support structures



Concrete support structure



Wood support structure



Steel support structure

Applications (1) – Trickling Filter

Pilot Trickling Filter for paper-mill
wastewater in the Philippines

- Bamboo SESSIL® high grid



Applications (1) – Trickling Filter

Lightweight construction trickling filter for Coca-Cola in Chile

- Zinc coated steel support construction
- Glass-fiber reinforced plastic-plate walls serving as splash guard



Applications (2) – Anaerobic reactor

Kahlenberg, Germany

- Mechanical -biological waste treatment plant
- 3 reactors
- Filling height 5 m
- 1200 m³ SESSIL®
- SESSIL® 100 m²/m³
- Stainless steel support structure
- Stainless steel high grid



Your contact

„It is the policy of NSW to achieve Total Quality Performance in meeting the requirements of external and internal customers. Total Quality Performance means understanding who the customer is, what the requirements are, and meeting those requirements without error, on time, every time.“

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