FUCHS
A Metawater Company

Aeration
Mixing
Experts

Biofilm
Technology

Trickling Filter
Media

Municipal
& Industrial

SESSIL®
BIOFILM CARRIER

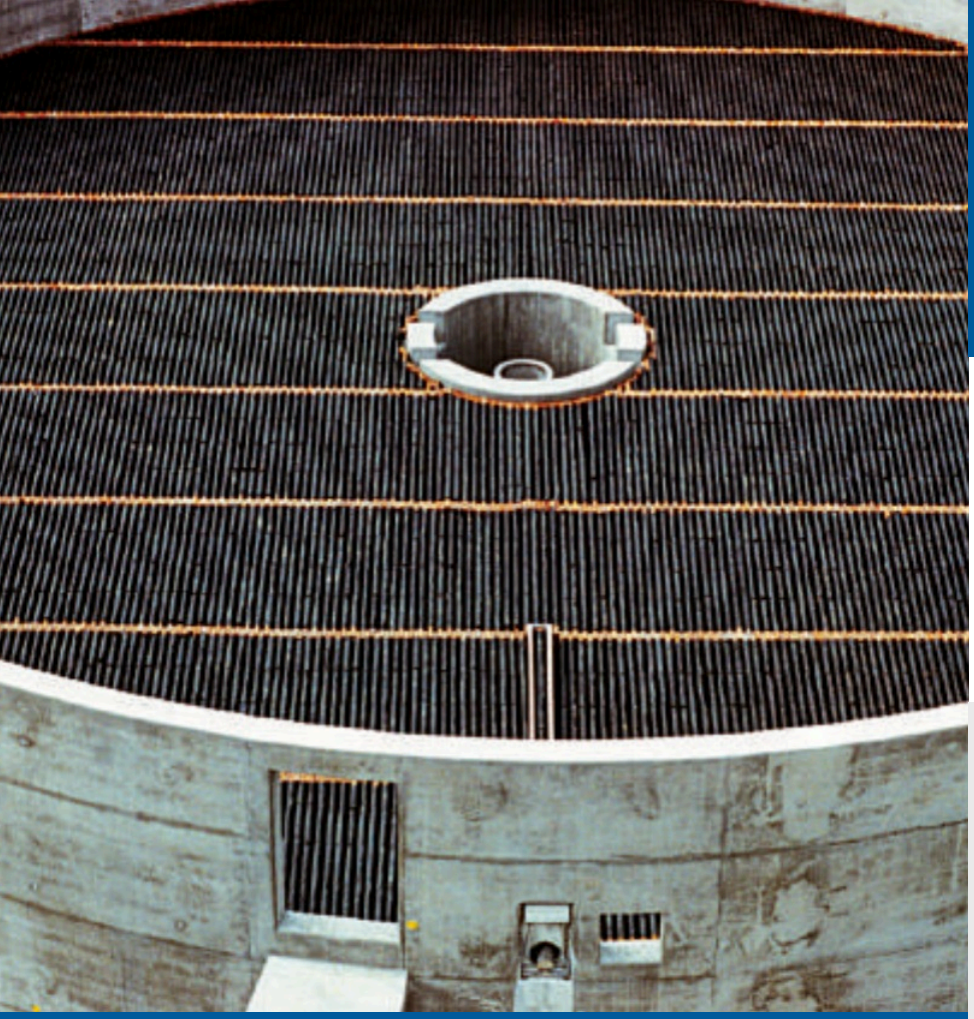
Media for trickling filter plants

Robust …UV-resistant PE film strips with polyester filament

Flexible …Specific surface area from 100 to 250 m²/m³

Proven …now manufactured and distributed by FUCHS

FUCHS Quality Control MADE IN GERMANY



Trickling filter with SESSIL® media

SESSIL® BY FUCHS

Proven trickling filter technology from a single source

Municipal and industrial plants around the world have relied on SESSIL® biofilm carriers for more than 40 years. SESSIL® is now manufactured and distributed by FUCHS.

The film strips are still made in Germany, on the same machine and in the proven design. FUCHS has the manufacturing know-how for SESSIL®. Whether you are refurbishing an existing trickling filter, expanding your plant or building a new one, FUCHS is your direct point of contact.

For more than 50 years, FUCHS has developed and built machines for aerating and mixing wastewater and sludge. With the FUCHS biofilm process, we design and supply submerged fixed-bed systems and trickling filters. SESSIL® adds a dedicated biofilm carrier for trickling filter plants to this range.

SESSIL® BIOFILM CARRIER

Film strips with embedded filament reinforcement

SESSIL® consists of film strips made of UV-resistant polyethylene. The strips are exceptionally tear-resistant and have a high tensile strength. Embedded polyester filament threads stabilise each strip, keep its length constant and make SESSIL® extremely durable.

The wave shape makes the difference. It keeps the strips apart and prevents them from sticking together. Wastewater trickles over the entire surface, while air flows through the vertical gaps and supplies the biofilm with oxygen. Excess biomass sloughs off and falls downwards.

Compared with carrier materials of a different structure, this design protects your plant better against clogging and loss of performance. We set the specific surface area between 100 and 250 m²/m³ to match the load.

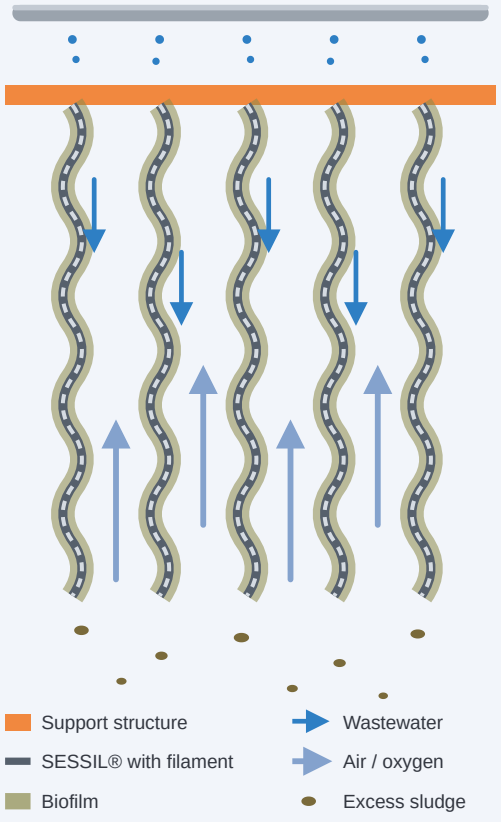
KEY FEATURES

- **Specific surface area customisable from 100 to 250 m²/m³**
- **Vertical structure for optimum sludge discharge**
- **Fully three-dimensional flow-through**
- **High static load capacity for large packing heights**
- **Can be inspected from below over the entire packing height**
- **Light and compact, economical to transport**
- **Low installation weight for easy assembly on site**
- **Excellent protection against loss of performance**



SESSIL® film strips with their typical wave shape

HOW IT WORKS



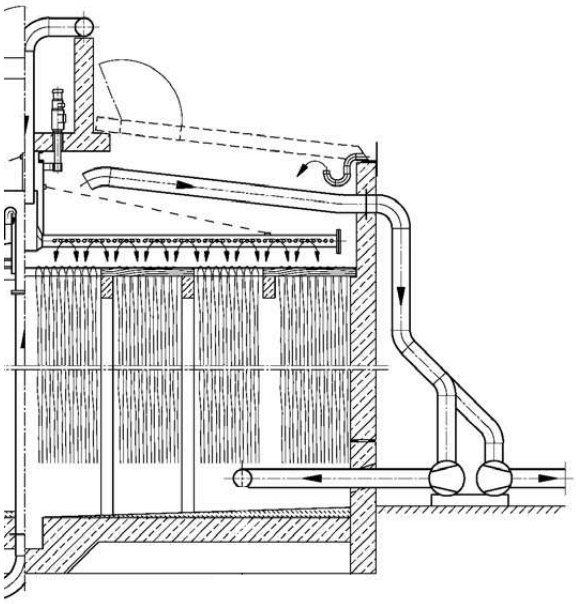
TRICKLING FILTERS

Low-energy biological treatment with SESSIL®

In a trickling filter, the biomass is firmly attached to the carrier material. Hydraulic shock loads therefore hardly wash it out, and the biology operates reliably. Only little excess sludge is produced, which lowers your sludge disposal costs. Trickling filters need little energy and work with minimal process control.

The SESSIL® strips are fixed overhead to a support structure and hang freely. A rotary distributor spreads the wastewater evenly across the entire surface. In open plants, the biomass receives its oxygen through natural air circulation; in closed reactors, through forced ventilation.

SESSIL® is suitable for new builds as well as for refurbishing existing trickling filters. The lightweight elements can be installed in existing tanks with little effort.



Half section through a covered trickling filter with SESSIL® media and rotary distributor

YOUR BENEFITS

- **Design in accordance with DIN and DWA standards**
- **Cost-effective refurbishment of existing trickling filters**
- **Stable operation under hydraulic shock loads**
- **Little excess sludge, low disposal costs**
- **Low energy demand and minimal process control**

APPLICATIONS

- Roughing treatment in high-rate plants
- Full biological treatment
- Nitrification
- Denitrification
- Anaerobic reactors

For municipal and industrial wastewater treatment plants, as a new build or retrofit.



Rotary distributor above SESSIL® media

TECHNICAL DATA

SESSIL® BIOFILM CARRIER	
Film strip material	UV-resistant polyethylene (PE)
Reinforcement	embedded polyester filament threads
Width of one film strip	approx. 30 mm
Width of one SESSIL® element	approx. 700 mm (50 film strips)
Strip length	customisable
Specific surface area	100 to 250 m²/m³, customisable
Mounting	overhead on a support structure
Field of application	municipal and industrial trickling filter plants
Manufacturing	Made in Germany

MADE IN GERMANY

SESSIL® continues to be made in Germany, on the same machine and in the proven design.

Light and compact, so easy to transport and install.

YOUR PROJECT WITH FUCHS

From design to installation

FUCHS supports your trickling filter project as far as you wish. We design the SESSIL® media for your load, manufacture the elements to the right length and deliver them to your site. Our team carries out the installation on site, or we supervise installation by your own staff.

1

Design

Specific surface area and packing height matched to your load and treatment target

2

Manufacturing

Strip length made to measure for your tank and support structure

3

Delivery

Compactly packed and delivered directly to your site

4

Installation

Installation by FUCHS or under the supervision of our fitters

TYPICAL PROJECTS

- **Refurbishment of existing trickling filters with new carrier material**
- **New municipal and industrial trickling filter plants**
- **Replacement and extension of existing SESSIL® media**
- **Upgrading of pond systems and single-stage activated sludge plants**
- **Downstream stage for nitrification**

FUCHS
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YOUR WAY TO A CLEAN SOLUTION

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