Decentralised wastewater treatment with modular EnviModul system solutions by EnviroChemie

Resource-friendly and energy-efficient plant technology installed in special modules. EnviModul system solutions are modular plants for water treatment, pre-treatment and wastewater treatment. We deliver the EnviroChemie water technology that has been tried and tested for over 35 years in the form of compact EnviModul high-performance modules.

For a variety of applications in different industries, we build the EnviModules in a way that allows process water and wastewater to be treated in an energy-efficient and resource-friendly manner.

From pre-treatment to circulation and wastewater treatment – we offer different EnviModules that can be combined and expanded flexibly.

Special design
EnviModul roof surface utilised for a photovoltaic plant.

The advantages are clear
Comparison of the conventional plant design and EnviModul plant solutions

<table>
<thead>
<tr>
<th></th>
<th>Conventional design</th>
<th>EnviModul</th>
</tr>
</thead>
<tbody>
<tr>
<td>Planning time</td>
<td>long</td>
<td>short</td>
</tr>
<tr>
<td>Approval</td>
<td>building permit very complex</td>
<td>building permit very easy</td>
</tr>
<tr>
<td>Building costs</td>
<td>high</td>
<td>low</td>
</tr>
<tr>
<td>Assembly time</td>
<td>medium</td>
<td>short</td>
</tr>
<tr>
<td>Commissioning and testing</td>
<td>all on site</td>
<td>pre-tested in factory</td>
</tr>
<tr>
<td>Expansion</td>
<td>often linked</td>
<td>easily possible</td>
</tr>
<tr>
<td>Changes</td>
<td>expensive</td>
<td>easily possible</td>
</tr>
<tr>
<td>Plant moving</td>
<td>no</td>
<td>yes</td>
</tr>
<tr>
<td>Depreciation</td>
<td>long</td>
<td>short</td>
</tr>
<tr>
<td>Complexity</td>
<td>high</td>
<td>low</td>
</tr>
</tbody>
</table>

EnviModul – modular plant systems for the decentralised treatment of process water and wastewater

Examples in practice

An EnviModul plant for decentralized wastewater treatment for cosmetics production in Eastern Europe.

EnviModul compact biological wastewater treatment plant for an industrial plant in Central Africa.

EnviModul plant easily moved for wastewater treatment in the chemical industry.
Decentralised wastewater treatment with modular EnviModul system solutions by EnviroChemie

Resource-friendly and energy-efficient plant technology installed in special modules. EnviModul system solutions are modular plants for water treatment, pre-treatment and wastewater treatment. We deliver the EnviroChemie water technology that has been tried and tested for over 35 years in the form of compact EnviModul high-performance modules.

For a variety of applications in different industries, we build the EnviModules in a way that allows process water and wastewater to be treated in an energy-efficient and resource-friendly manner. From pre-treatment to circulation and wastewater treatment – we offer different EnviModules that can be combined and expanded flexibly.

Examples in practice

An EnviModul plant for decentralised wastewater treatment for cosmetics production in Eastern Europe.

EnviModul compact biological wastewater treatment plant for an industrial plant in Central Africa.

Special design
EnviModul roof surface utilised for a photovoltaic plant.

The advantages are clear
Comparison of the conventional plant design and EnviModul plant solutions

<table>
<thead>
<tr>
<th>Conventional design</th>
<th>EnviModul</th>
</tr>
</thead>
<tbody>
<tr>
<td>Planning time</td>
<td>short</td>
</tr>
<tr>
<td>Approval</td>
<td>building permit very complex</td>
</tr>
<tr>
<td>Building costs</td>
<td>high</td>
</tr>
<tr>
<td>Assembly time</td>
<td>medium</td>
</tr>
<tr>
<td>Commissioning and testing</td>
<td>all on site</td>
</tr>
<tr>
<td>Expansion</td>
<td>urban linked</td>
</tr>
<tr>
<td>Changes</td>
<td>expensive</td>
</tr>
<tr>
<td>Plant moving</td>
<td>no</td>
</tr>
<tr>
<td>Depreciation</td>
<td>long</td>
</tr>
<tr>
<td>Complexity</td>
<td>high</td>
</tr>
</tbody>
</table>

EnviroChemie GmbH
In den Leppsteinswiesen 9
64380 Rossdorf – Germany
Phone +49 6154 6998 0
www.envirochemie.com

Conventional design EnviModul
Planning time
long short
Approval
building permit very complex building permit very easy
Building costs
high low
Assembly time
medium short
Commissioning and testing
all on site pre-tested in factory
Expansion
urban linked ready-made
Changes
expensive easily possible
Plant moving
no possible
Depreciation
long short
Complexity
high low

The advantages are clear
Comparison of the conventional plant design and EnviModul plant solutions
**Split-O-Mat® and Lugan® compact plant systems in EnviModul design**

The physico-chemical wastewater treatment options Split-O-Mat® and Lugan® flotation plants are delivered in factory-ready 6 m EnviModules. They can be easily installed on site. Control units, climate control and safety technology are part of the standard equipment in EnviModul plants.

**Individually planned system solutions in EnviModul design**

We offer all EnviroChemie water technology, such as the biological method Biomar®, the physico-chemical methods Envochem® and Flomar® and the membrane technology Envopur® in 12 m EnviModul design. The ready-to-use plants for the treatment of process water and wastewater can be flexibly combined or expanded depending on the customer’s requirements. If needed, EnviModul plants can be moved as well. They are an ideal solution for the decentralised treatment of industrial water.

**EnviModul with Split-O-Mat® plant technology**

- Physico-chemical treatment based on the precipitation/flocculation/filtration principle for:
  - Removal of hydrocarbons
  - Removal of solids
  - Heavy metal precipitation
- Used in printing, paint and varnish industry, metal industry, glass industry etc.

**EnviModul with Lugan® plant technology**

- Compact flotation with flocculation based on the dissolved-air system.
- Used for example in decentralised further wastewater treatment from production or washing processes, such as those used in wash stations for vehicle and parts cleaning.

**Envopur® Reverse osmosis compact**

- Space-saving two-storey plant.
- Reverse osmosis and filtration with sedimentation, sludge dewatering.
- Complete with all dosing systems and safety equipment.
- Used for example in water recycling from pre-treated production wastewater.

**Biomar® Membrane biology**

- Designed in two EnviModules.
- Used for example for the biological treatment of wastewater from the chemical and pharmaceutical industry.

**Envochem® Physico-chemical wastewater treatment**

- Space-saving two-storey plant.
- Process: Precipitation and flocculation with sedimentation and sludge dewatering.
- Complete with all dosing systems and safety equipment.
- Used for example in the metal industry, mining, disposal.

**Flomar® High-performance flotation plant**

- Compact flotation plant with flocculation, designed in two EnviModules, based on the dissolved-air system.
- In this case implemented as an open design.
- Used for example in the food and beverage industry, woodworking industry and chemical industry.
Split-O-Mat® and Lugan® compact plant systems in EnviModul design

The physico-chemical wastewater treatment options Split-O-Mat® and Lugan® flotation plants are delivered in factory-ready 6 m EnviModules. They can be easily installed on site. Control units, climate control and safety technology are part of the standard equipment in EnviModul plants.

Individually planned system solutions in EnviModul design

We offer all EnviroChemie water technology, such as the biological method Biomar®, the physico-chemical methods Envochem® and Flomar® and the membrane technology Envopur® in 12 m EnviModul design. The ready-to-use plants for the treatment of process water and wastewater can be flexibly combined or expanded depending on the customer’s requirements. If needed, EnviModul plants can be moved as well. They are an ideal solution for the decentralised treatment of industrial water.

EnviModul with Split-O-Mat® plant technology

Physico-chemical treatment based on:
• the precipitation/floculation/filtration principle for:
  • Removal of hydrocarbons
  • Removal of solids
  • Heavy metal precipitation
Use in printing, paint and varnish industry, metal industry, glass industry etc.

EnviModul with Lugan® plant technology

Compact flotation with floculation based on the dissolved-air system.
Used for example in decentralised further wastewater treatment from production or washing processes, such as those used in wash stations for vehicle and parts cleaning.

EnviModul with EnviChem® Physico-chemical wastewater treatment

Space-saving two-storey plant.
Process: Precipitation and floculation with sedimentation, sludge dewatering. Complete with all dosing systems and safety equipment.
Used for example in the metal industry, mining, disposal.

EnviModul with Flomar® High-performance flotation plant

Compact flotation plant with floculation, designed in two EnviModules, based on the dissolved-air system. In this case implemented as an open design.
Used for example in the food and beverage industry, woodworking industry and chemical industry.

EnviChem® Reverse osmosis compact with touch panel control and small control centre.
Used for example in water recycling from pretreated production wastewater.

Biomar® Membrane biology designed in two EnviModules.
Used for example for the biological treat-
ment of wastewater from the chemical and pharmaceutical industry.

Envopur® Reverse osmosis compact with touch panel control and small control centre.
Used for example in water recycling from pretreated production wastewater.
Split-O-Mat® and Lugan® compact plant systems in EnvModul design

The physico-chemical wastewater treatment options Split-O-Mat® and Lugan® flotation plants are delivered in factory-ready 6 m EnvModules. They can be easily installed on site. Control units, climate control and safety technology are part of the standard equipment in EnvModul plants.

Individually planned system solutions in EnvModul design

We offer all EnviChemie water technology, such as the biological method Biomar®, the physico-chemical methods Envochem® and Flomar® and the membrane technology Envopur® in 12 m EnvModul design. The ready-to-use plants for the treatment of process water and wastewater can be flexibly combined or expanded depending on the customer’s requirements. If needed, EnvModul plants can be moved as well. They are an ideal solution for the decentralised treatment of industrial water.

EnviModul with Split-O-Mat® plant technology

Physico-chemical treatment based on the precipitation/flocculation/filtration principle for:
• Removal of hydrocarbons
• Removal of solids
• Heavy metal precipitation

Used in printing, paint and varnish industry, metal industry, glass industry etc.

EnviModul with Lugan® plant technology

Compact flotation with flocculation based on the dissolved-air system.

Used for example in decentralised further wastewater treatment from production or washing processes, such as those used in wash stations for vehicle and parts cleaning.

EnviModul with Envopur® Reverse osmosis compact

With touch panel control and small control centre.

Used for example in water recycling from pretreated production wastewater.

EnviModul with Envochem® Physico-chemical wastewater treatment

Space-saving two-storey plant.

Process: Precipitation and flocculation with sedimentation, sludge dewatering. Complete with all dosing systems and safety equipment.

Used for example in the metal industry, mining, disposal.

EnviModul with Biomar® Membrane biology design

Membrane biology designed in two EnvModules.

Used for example for the biological treatment of wastewater from the chemical and pharmaceutical industries.

EnviModul with Flomar® High-performance flotation plant

Compact flotation plant with flocculation, designed in two EnvModules, based on the dissolved-air system. In this case implemented as an open design.

Used for example in the food and beverage industry, woodworking industry and chemical industry.
Decentralised wastewater treatment with modular EnviModul system solutions by EnviroChemie

Resource-friendly and energy-efficient plant technologies installed in special modules. EnviModul system solutions are modular plants for water treatment, pre-treatment and wastewater treatment. We deliver the EnviroChemie water technology that has been tried and tested for over 35 years in the form of compact EnviModul high-performance modules.

For a variety of applications in different industries, we build the EnviroModules in a way that allows process water and wastewater to be treated in an energy-efficient and resource-friendly manner. From pre-treatment to circulation and wastewater treatment – we offer different EnviroModules that can be combined and expanded flexibly.

Special design
EnviroModul roof surface utilised for a photovoltaic plant.

Examples in practice

EnviModul compact biological wastewater treatment plant for an industrial plant in Central Africa.

An EnviroModul plant easily moved for wastewater treatment in the chemical industry.

EnviroModul plant for decentralised wastewater treatment for cosmetics production in Eastern Europe.

The advantages are clear
Comparison of the conventional plant design and EnviModul plant solutions

<table>
<thead>
<tr>
<th></th>
<th>Conventional-design</th>
<th>EnviModul</th>
</tr>
</thead>
<tbody>
<tr>
<td>Planning time</td>
<td>long</td>
<td>short</td>
</tr>
<tr>
<td>Approval</td>
<td>building permit very complex</td>
<td>building permit very easy</td>
</tr>
<tr>
<td>Building costs</td>
<td>high</td>
<td>low</td>
</tr>
<tr>
<td>Assembly time</td>
<td>medium</td>
<td>short</td>
</tr>
<tr>
<td>Commissioning and testing</td>
<td>all on site</td>
<td>pre-tested in factory</td>
</tr>
<tr>
<td>Expansion</td>
<td>limited</td>
<td>easy to scale</td>
</tr>
<tr>
<td>Changes</td>
<td>expensive</td>
<td>easily manageable</td>
</tr>
<tr>
<td>Plant moving</td>
<td>no</td>
<td>yes</td>
</tr>
<tr>
<td>Depreciation</td>
<td>long</td>
<td>short</td>
</tr>
<tr>
<td>Complexity</td>
<td>high</td>
<td>low</td>
</tr>
</tbody>
</table>

Decentralised wastewater treatment with modular EnviModul system solutions by EnviroChemie

Resource-friendly and energy-efficient plant technologies installed in special modules. EnviModul system solutions are modular plants for water treatment, pre-treatment and wastewater treatment. We deliver the EnviroChemie water technology that has been tried and tested for over 35 years in the form of compact EnviModul high-performance modules.

For a variety of applications in different industries, we build the EnviroModules in a way that allows process water and wastewater to be treated in an energy-efficient and resource-friendly manner.

From pre-treatment to circulation and wastewater treatment – we offer different EnviroModules that can be combined and expanded flexibly.

Special design
EnviroModul roof surface utilised for a photovoltaic plant.

Examples in practice

EnviModul compact biological wastewater treatment plant for an industrial plant in Central Africa.

An EnviroModul plant easily moved for wastewater treatment in the chemical industry.

EnviroModul plant for decentralised wastewater treatment for cosmetics production in Eastern Europe.

The advantages are clear
Comparison of the conventional plant design and EnviModul plant solutions

<table>
<thead>
<tr>
<th></th>
<th>Conventional-design</th>
<th>EnviModul</th>
</tr>
</thead>
<tbody>
<tr>
<td>Planning time</td>
<td>long</td>
<td>short</td>
</tr>
<tr>
<td>Approval</td>
<td>building permit very complex</td>
<td>building permit very easy</td>
</tr>
<tr>
<td>Building costs</td>
<td>high</td>
<td>low</td>
</tr>
<tr>
<td>Assembly time</td>
<td>medium</td>
<td>short</td>
</tr>
<tr>
<td>Commissioning and testing</td>
<td>all on site</td>
<td>pre-tested in factory</td>
</tr>
<tr>
<td>Expansion</td>
<td>limited</td>
<td>easy to scale</td>
</tr>
<tr>
<td>Changes</td>
<td>expensive</td>
<td>easily manageable</td>
</tr>
<tr>
<td>Plant moving</td>
<td>no</td>
<td>yes</td>
</tr>
<tr>
<td>Depreciation</td>
<td>long</td>
<td>short</td>
</tr>
<tr>
<td>Complexity</td>
<td>high</td>
<td>low</td>
</tr>
</tbody>
</table>

Decentralised wastewater treatment with modular EnviModul system solutions by EnviroChemie

Resource-friendly and energy-efficient plant technologies installed in special modules. EnviModul system solutions are modular plants for water treatment, pre-treatment and wastewater treatment. We deliver the EnviroChemie water technology that has been tried and tested for over 35 years in the form of compact EnviModul high-performance modules.

For a variety of applications in different industries, we build the EnviroModules in a way that allows process water and wastewater to be treated in an energy-efficient and resource-friendly manner.

From pre-treatment to circulation and wastewater treatment – we offer different EnviroModules that can be combined and expanded flexibly.

Special design
EnviroModul roof surface utilised for a photovoltaic plant.

Examples in practice

EnviModul compact biological wastewater treatment plant for an industrial plant in Central Africa.

An EnviroModul plant easily moved for wastewater treatment in the chemical industry.

EnviroModul plant for decentralised wastewater treatment for cosmetics production in Eastern Europe.

The advantages are clear
Comparison of the conventional plant design and EnviModul plant solutions

<table>
<thead>
<tr>
<th></th>
<th>Conventional-design</th>
<th>EnviModul</th>
</tr>
</thead>
<tbody>
<tr>
<td>Planning time</td>
<td>long</td>
<td>short</td>
</tr>
<tr>
<td>Approval</td>
<td>building permit very complex</td>
<td>building permit very easy</td>
</tr>
<tr>
<td>Building costs</td>
<td>high</td>
<td>low</td>
</tr>
<tr>
<td>Assembly time</td>
<td>medium</td>
<td>short</td>
</tr>
<tr>
<td>Commissioning and testing</td>
<td>all on site</td>
<td>pre-tested in factory</td>
</tr>
<tr>
<td>Expansion</td>
<td>limited</td>
<td>easy to scale</td>
</tr>
<tr>
<td>Changes</td>
<td>expensive</td>
<td>easily manageable</td>
</tr>
<tr>
<td>Plant moving</td>
<td>no</td>
<td>yes</td>
</tr>
<tr>
<td>Depreciation</td>
<td>long</td>
<td>short</td>
</tr>
<tr>
<td>Complexity</td>
<td>high</td>
<td>low</td>
</tr>
</tbody>
</table>