

# TECHNOLOGY PORTFOLIO

PROCESS TECHNOLOGY LICENSING  
ENGINEERING SERVICES  
TURNKEY PLANT CONSTRUCTION



INNOVATION    KNOW-HOW  
FAMILY-OWNED    DEDICATION  
CIRCULAR ECONOMY    EXPERTISE

EXPERIENCE  
OF GENERATIONS -  
KNOWHOW FOR THE FUTURE

# OUR EXPERTISE

EPC Engineering & Technologies is a process technology and engineering service provider, as well as a general contractor for turnkey plant construction. The company is owned by the Henkel family, which proudly looks back on over 150 years of engineering tradition. EPC Engineering & Technologies is a member of the EPC Group, which currently employs about 160 professionals at 6 locations in Germany.

Since the foundation of EPC Engineering & Technologies in 1994, we have successfully delivered over 1,000 Projects in more than 40 countries.



CLIENTS & PARTNERS  
FROM ALL OVER  
THE WORLD

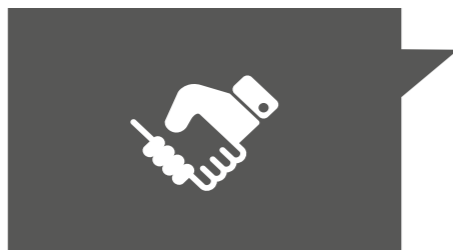
## A BRIEF SELECTION OF OUR CLIENTS



**TURNKEY  
PLANT  
CONSTRUCTION**

# OUR SERVICES FOR YOUR SUCCESS

As a general contractor we offer all services required for the successful delivery of your project. We also provide comprehensive after-sales services, such as training and maintenance. Revamping and optimization of existing plants are also our key competencies.



**FUNCTIONAL  
TURNKEY  
CONTRACT**

**PROCESS TECHNOLOGIES  
& GUARANTEES**

**ENGINEERING PACKAGE  
KEY EQUIPMENT DELIVERY  
SUPERVISION OF LOCAL:**

- Engineering
- Installation & Construction
- Plant Start-Up & Commissioning

**OUR  
TECHNOLOGY  
PORTFOLIO**



**POLYMERS &  
FIBERS**

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**CHEMICALS**

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**PHARMA  
& FINE  
CHEMICALS**

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**BIOTECH-  
NOLOGIES**

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**RENEWABLE  
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**INDUSTRIAL  
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CREATE.  
ENHANCE.  
SUSTAIN.



# POLYMERS & FIBERS

## OVERVIEW AND INSIGHTS

	<b>Polycarbonate</b> variPLANT®	<b>PAN &amp; Carbon Fiber</b>	<b>Biodegradable Polymers</b> PXT
<b>Biopolymers</b>	<b>PA Production Plants</b> PAplant	<b>Polyamide Extraction</b> PAtraction	<b>Copolymers</b>
<b>PBT</b> insidePBT	<b>PET</b> insidePET®	<b>PET-G</b>	<b>Textile Production</b> PET-TEX
<b>Fiber Spinning System</b> variYARN®	<b>Cellulose Fibers</b> EPCell	<b>Flexible Piping</b> variPIPE	<b>Revamping</b> PETvantage®
<b>Pilot Plants</b> variPILOT®	<b>EPCat®</b>		

## PROCESS TECHNOLOGIES

EPC is a leading innovator in the development and licensing of process technologies for the polymer and fiber industry. The market demand for intelligent material solutions is growing, we have the most suitable technology at hand. Our engineers can look back on decades of

experience and success in the industry. In addition, we have joined forces with strong partners from all over the world to further push our innovation potential and shorten the time-to-market of new processes.

**POLYMERS & FIBERS**

**Polycarbonate**  
variPLANT®

Country China  
Client OCC Océanking  
Polycarbonate production plant (100 kt/a)

EPC variPLANT® is a flexible plant concept for polymer manufacturing. Amongst others, we implemented this concept to plan and develop polycarbonate plants. With this continuous process technology, EPC offers you a future-proof plant design backed up with efficient project execution that minimizes time and money. This all comes from one source, starting from the reactor system and progressing through a process-optimized rectification and modern vacuum system and to efficient process controls.

**POLYMERS & FIBERS**

**PAN & Carbon Fiber**

Country Germany  
Client Confidential  
Lab scale Carbon Fiber Production

EPC has developed a reactor material for the production of PAN based on a special aluminum alloy that is inert under the reaction conditions (no material abrasion) and consequently without effect on the reaction medium. Plant components made of this material do not have to be replaced during the projected lifetime of the plant. Less frequent cleaning equals increase of the production capacity. Furthermore, EPC offers the whole production chain from PAN synthesis via precursor spinning to carbon fiber production.

**POLYMERS & FIBERS**

**Biodegradable Polymers**  
PXT

Country Germany  
Client Confidential  
Pilot plant for product testing

Drawing from its long experience and vast knowledge in the polymer industry, EPC has developed a technology to produce biodegradable plastic that fully decomposes. This process technology can produce biodegradable polymers, which comply to DIN EN 13432 and ISO 17088. PBAT (polybutylene adipate terephthalate) is an example of a biodegradable polymer based on synthetic raw materials, i.e. adipic and aromatic carboxylic acid.



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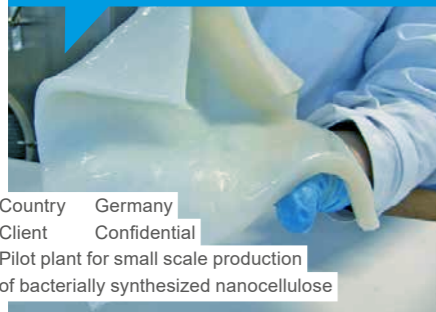
# POLYMERS & FIBERS

INSIGHTS

PROCESS  
TECHNOLOGIES

## POLYMERS & FIBERS

### Biopolymers



Country Germany  
Client Confidential  
Pilot plant for small scale production of bacterially synthesized nanocellulose

EPC has developed a plant for the continuous production of bacterially synthesized cellulose. This patented process has made it possible for the first time to produce the nanomaterial in a large quantity and in different forms. For this innovative product EPC has received an Award for exceptional innovations from the state of Thuringia, Germany.

## POLYMERS & FIBERS

### EPS Recycling



Country Netherlands  
Client Polystyrene Loop Initiative  
EPS recycling plant with a capacity of 3,000 t/a

EPS Recycling Plants based on the CreaSolv® Process are equipped with a highly efficient technology for the recycling of polystyrene. The environmentally friendly process is able to handle multiple sources of EPS waste streams. The process was developed in cooperation with the renowned Fraunhofer Institute and the German company CreaCycle GmbH. It converts EPS waste into an odorless PS recyclate and impurities as well as additives, like flame retardants, can be effectively separated.

## POLYMERS & FIBERS

### PA Production Plants PAplant



Country Germany  
Client Confidential  
Polyamide production plant

Our technology for new production plants and revamps of polyamide plants for production of PA6 and PA6.6 chips for down-stream processing to textiles, technical applications and engineering plastics. Besides the constant high-quality product, this process developed by EPC leads to a considerable reduction in building and equipment costs.

## POLYMERS & FIBERS

### Polyamide Extraction PAtraction



Country Thailand  
Client UBE Nylon Limited  
Installation of a PA6 extraction system, including recovery of recyclables

High-quality PA6-chips with low extract content is a requirement in several industries. Additionally, the recovery of lactam from extraction water is a critical step and is typically high energy consuming. With PAtraction, EPC has developed a special extraction process which is able to reduce production costs, lift the capacity and increase the product quality.

## POLYMERS & FIBERS

### Copolymers

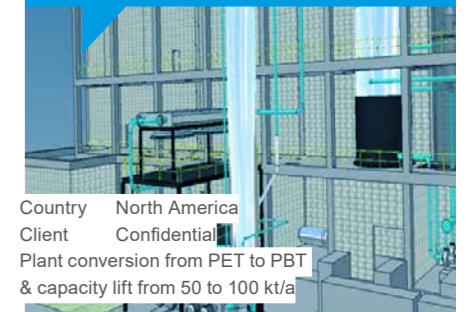


Country Belgium  
Client Confidential  
Polyamide copolymer production

EPC provides innovative technology solutions for the production of high quality polyamide copolymers - e.g. PA6 / PA6.6. We offer a complete technology and engineering package for new-build polymer projects, as well as technology and know-how for the modification of existing polyamide production plants to enable the production of polyamide copolymers. Our in-house polymer experts provide tailor-made process solutions to produce selected copolymer products. Plants that are equipped with our technology are reliable, efficient and low maintenance.

## POLYMERS & FIBERS

### PBT insidePBT



Country North America  
Client Confidential  
Plant conversion from PET to PBT & capacity lift from 50 to 100 kt/a

EPC has developed its PBT production process based on its well known variPLANT® technology. The proprietary EPC Disk ring reactor has hydraulically driven shafts and prevents leaks in the vacuum range. A high level of plant safety is ensured as the hydraulic units do not have to be mounted directly on the shafts. The insidePBT process control minimizes BDO consumption, which reduces not only the costs for raw materials and energy, but also the emissions.



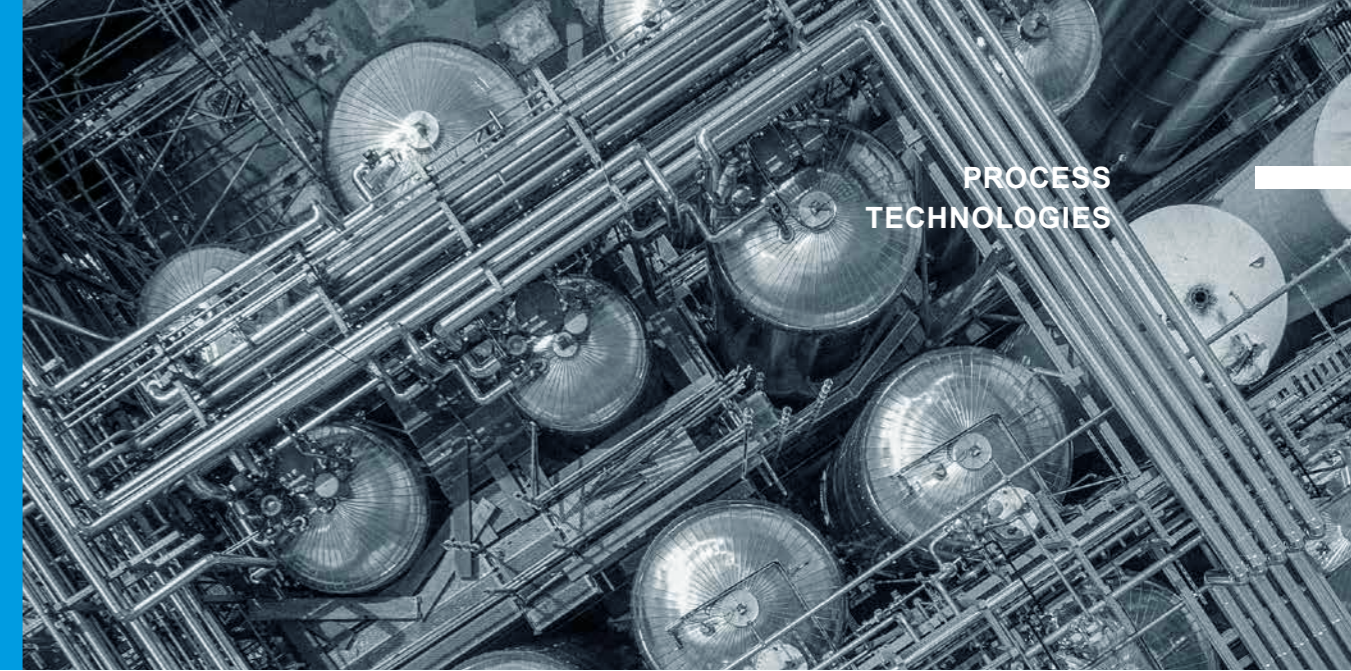
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# POLYMERS & FIBERS

INSIGHTS

PROCESS  
TECHNOLOGIES



POLYMERS & FIBERS

**PET**  
insidePET®

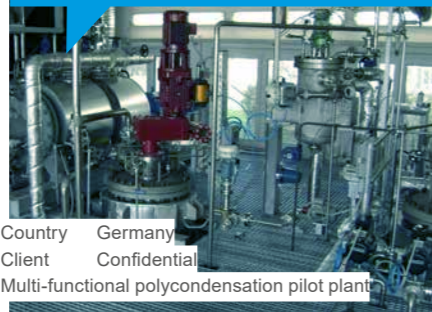


Country Saudi Arabia  
Client Sabic  
Conversion from textile fibers to food grade PET-chip production with simultaneous capacity lift

InsidePET® is a pioneering, tailor-made process control software for PET polycondensation plants. Intelligent software is vital for automatic counter-action in case of deviations in raw materials, to achieve constantly high product quality.

POLYMERS & FIBERS

**PET-G**

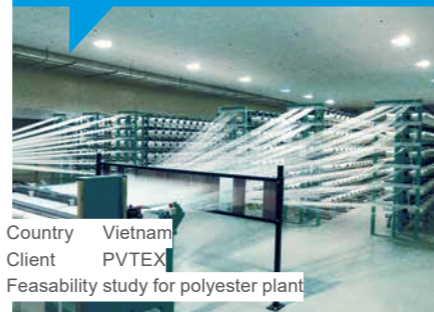


Country Germany  
Client Confidential  
Multi-functional polycondensation pilot plant

PET-G belongs to the family of PET and is commonly defined as glycol-modified polyester. It is produced by partial replacement of the ethylene glycol (MEG) with CHDM (1-4 Cyclohexanedimethanol). EPC offers the turnkey delivery of a PET-G production facility or conversion of PET production facility to produce PET-G.

POLYMERS & FIBERS

**Textile Production**  
PET-TEX



Country Vietnam  
Client PVTEX  
Feasibility study for polyester plant

EPC delivers fully integrated production plants starting from raw material, to individual fabrics, such as tarpolines, tire cord, woven textiles etc. EPC's PET-TEX includes the whole plant design, covering all interfaces combined with a tailor-made selection and combination of individual equipment from various vendors per plant section. EPC supports its clients from the feasibility study to the start-up of the plant and offers after sales services.

POLYMERS & FIBERS

**Fiber Spinning System**  
variYARN®



Country Belarus  
Client Mogilevkhimvolokno  
Plant for the production of polyester - HM/HMLS yarn

EPC variYARN® is a customer-orientated single modular spinning system from extrusion until winding on bobbins. It is available for almost all melt-spinnable polymers. This system can be a new stand alone unit for small scale production or an extension/ flexibilization of existing spinning plants. It can also be designed and used as a R&D unit. One additional advantage for our clients is, that we can adapt the chosen vendors e.g. to existing systems to reduce spare part requirements.

POLYMERS & FIBERS

**Cellulose Fibers**  
EPCell



Country Asia  
Client Confidential  
Pre-engineering for a plant with a capacity of 5,000 t/a

Together with a renowned German textile institute, EPC has developed an alternative process technology for the production of cellulose fibers, including an alternative production process for the spinning and the cellulose spinning. The EPCell technology is applicable for the production of various fibers, e.g. for Lyocell.

POLYMERS & FIBERS

**Flexible Piping**  
variPIPE



Country USA  
Client Unifi Manufacturing Inc.  
Revamp from one to six extruders per spinning line

Thanks to its many years of experience in engineering, EPC has developed a system for the design of pipelines for high viscous polymers. variPIPE ensures less product damage and optimizes the quality of the final product. It is implemented in order to revamp and optimize plants, e.g. to increase capacity, connect further production facilities or to change the polymer composition.



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# POLYMERS & FIBERS

INSIGHTS

## PROCESS TECHNOLOGIES

The design of our plants is customized according to the individual requirements and specific wishes of our clients. Nevertheless, they have the same target: highest product quality, economic feasibility and environmental friendliness.

One way in which we achieve these qualities is through implementing closed loop production processes, following the circular economy approach.

### POLYMERS & FIBERS

#### Revamping PETvantage®



Country Germany  
Client Trevira Germany  
Capacity lift and optimization for a spinning plant from 140 to 280 t/d

EPC PETvantage® is a patented, customer-orientated revamping (upgrading) and de-bottlenecking process to maximize plant profitability with minimum retrofitting costs and downtimes. In most cases, the main reactors will not be replaced. Operational safety, product qualities and production capacities will be increased.

### POLYMERS & FIBERS

#### Pilot Plants variPILOT®



Country Germany  
Client Fraunhofer Institute  
Demonstration center for polymer synthesis

With variPILOT® EPC offers continuous and batch-wise pilot plant concepts for the polymer industry for small-scale production and production of specialties, additives or masterbatch, e.g. for PA6, PA6.6, PET, PBT, PTT, PC, PAN.

### POLYMERS & FIBERS

#### EPCat®

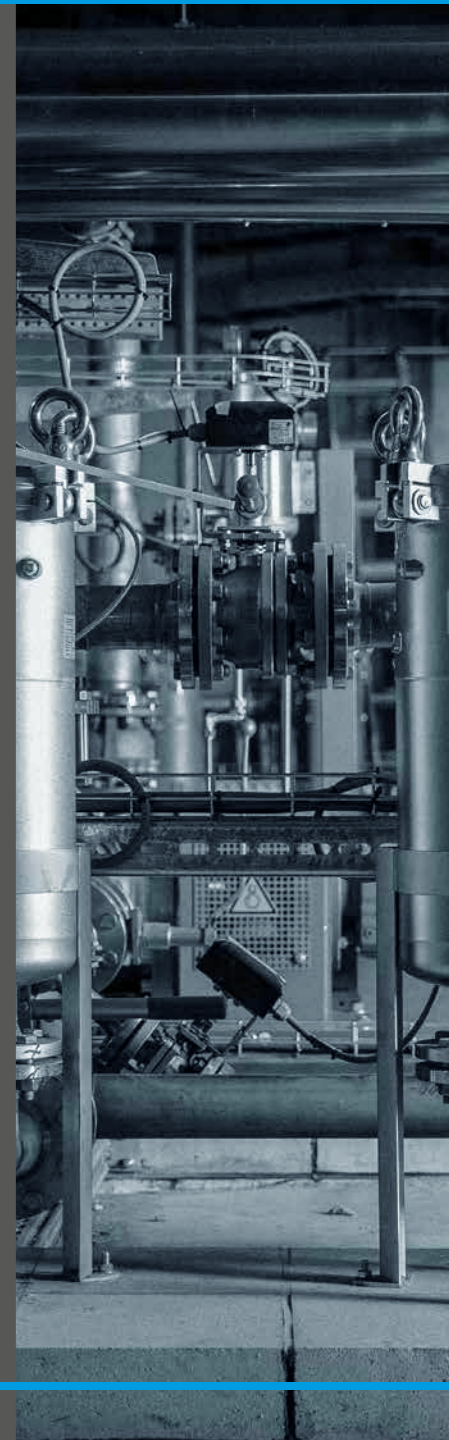


Country Belarus  
Client SPO Chimvolokno Svetlogorsk  
Equipment & catalyst delivery for spinning plant

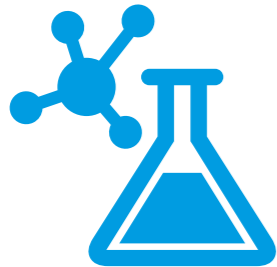
EPCat® is a new catalyst developed by EPC for the removal of hydrazine sulphate from spin bath solutions in order to produce polyoxadiazol. This technology increases the production efficiency of the spinning plant and decreases operating costs.

*From process development to planning and implementation, maintenance and modernization, EPC builds state-of-the-art systems to meet the world's technical, economical and environmental challenges – staying true to its motto:*

*„Ideas Inside“.*



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# CHEMICALS

OVERVIEW AND INSIGHTS

vari  
CARBAMATE

Sodium  
Cyanide

Montan  
Wax

Fertilizer

Syngas  
Scrubbing

## PROCESS TECHNOLOGIES

From a chemical formula to a complete production plant. This is what our experienced engineers are capable of. We provide state-of-the-art process technologies and also gladly develop processes as required by you.

The chemical industry drives us to always strive for new and more efficient solutions, which meet the highest standards in terms of product quality, economic feasibility and environmental friendliness.



### CHEMICALS

#### variCARBAMATE

Country Russia  
Client JSC Volzhsky Orgsynthese  
Plant for the continuous production of 15,000 t/a sodium dimethyldithiocarbamate

With variCARBAMATE, EPC has developed and patented a continuous production process for various kinds of carbamates, e.g. the production of alkyl- and dialkyldithiocarbamate acid (solid route) or thiocarbamate esters (liquid route). With this innovative technology all waste water is reused and processed within the plant, resulting in a higher profitability of the plant as well as a minimized risk for the operating staff and the environment.

### CHEMICALS

#### Sodium Cyanide

Country Russia  
Client SAO „Korund – Zyan“  
Sodium cyanide production plant with a capacity of 60,000 t/a

EPC is deploying a genuinely environmentally-friendly Sodium Cyanide (NaCN) production process, which meets the highest safety standards. Among others the produced NaCN can be used in the leaching of gold from gold ores.

### CHEMICALS

#### Montan Wax

Country Germany  
Client ROMONTA GmbH  
Plant for the production of 2,000 t/a of wax compounds from Lignite

EPC's engineers are keen to take on any chemical challenge and have thus developed an effective and environmentally-friendly technology to extract wax from lignite. This process is feasible even for lignite with low wax content (currently only 8-9 % in Eastern Germany). This so-called „solid-liquid extraction“ creates a constantly high wax yield and avoids an uneven and incomplete extraction of the pellets during operation.



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# CHEMICALS

INSIGHTS

## PROCESS TECHNOLOGIES

We are providing all services for the construction of even the most complex chemical plants from one single source. From investment planning, over all engineering phases, the simulation of critical process stages, to procurement, construction and commissioning and start-up of

plants, we are there to guide our clients through every phase of the project. We ensure that the plants and all auxiliary installations meet the highest standards for the safety of the operating staffs and the environment.

### CHEMICALS

#### Fertilizer



Country Germany  
Client NOVIHUM Technologies GmbH  
Soil enhancer production plant

EPC is deploying a process for the production of a natural fertilizer / soil enhancer based on lignite. This soil enhancer is environmentally-friendly and economically feasible, as small fragments of lignite, which are off-casts from power production plants, are used.

### CHEMICALS

#### Syngas Scrubbing



Country Germany  
Client UCB Chemie GmbH  
Production plant for CO<sub>2</sub> free synthesis gas

EPC has developed a process technology to remove gases, such as CO<sub>2</sub>, H<sub>2</sub>S, HCN and Ammoniak through high-pressure / low-temperature-washing from synthesis gas. Different solutions are used depending on the outgas: e.g. syngas washing with amines, methanol (rectisol process), n-methylpyrrolidon (purisol process) or with dimethylether (selexol process). All processes are technically implemented with an absorption column. Subsequently, the spent solution is purified by being heated in a desorption column. Energy recovery by heat recuperation is possible.



## CHEMICALS

*With a passion for innovation we drive the development of future-prove process technologies for the chemical industry – worldwide.*

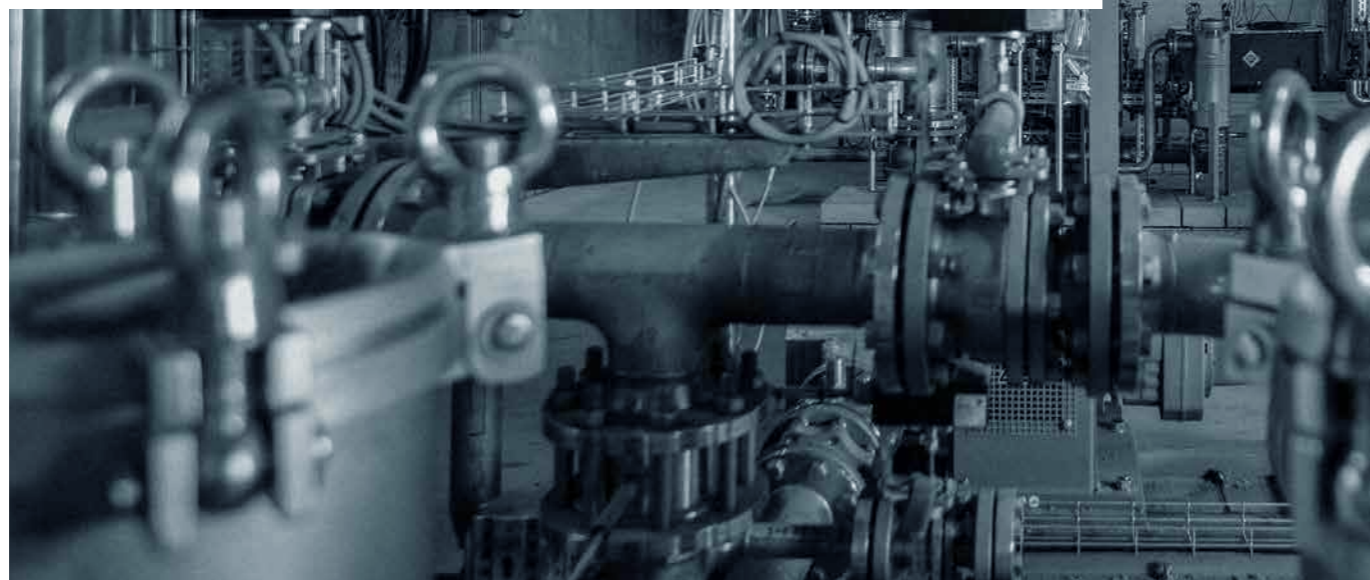


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# PHARMA & FINE CHEMICALS

OVERVIEW AND INSIGHTS



## PROCESS TECHNOLOGIES

There are not many topics as diverse as that of specialty chemicals. The engineering of such projects requires extensive knowledge and experience in simulation, design, layout and safety technology. Each system is unique, tailored to the requirements of the product and to the

requirements of the operators. The engineers at EPC Engineering & Technologies GmbH have the right solution for every requirement. From additives for detergents to basic chemicals for liquid crystals and active pharmaceutical ingredients.

### PHARMA & FINE CHEMICALS

#### Modular Plants



Country Germany  
Client Confidential  
Engineering & delivery of a DMT skid

Ever increasing product changes in the chemical industry call for flexible solutions. At EPC we fulfill this need with modular plants. The plant set-up can be modified quickly, the equipment can be transported with trucks without special permission and despite their flexibility, the systems meet the highest safety standards. The plants are manufactured at the in-house workshop of CRYOTEC Anlagenbau GmbH, an affiliate of EPC, located in Wurzen. CRYOTEC looks back to more than 25 years of experience in designing and manufacturing skid mounted & modular plants.

### PHARMA & FINE CHEMICALS

#### High Pressure Reactions



Country Germany  
Client Sensient Imaging Technologies GmbH  
Mono-product plant with multi-product character, synthesis and distillative fine purification

EPC plans and implements synthesis modules for multi-purpose plants or dedicated equipment within the parameter range of -100 °C to +400 °C (-148°F to 752°F) and up to 100 bar(g), from stainless steel material to Hastelloy. They are built with explosion-proof design (e.g. IIC T4). EPC also designs plants for active ingredients according to the holistic GMP concept.

### PHARMA & FINE CHEMICALS

#### Pharmaceutical Intermediates



Country Germany  
Client Laborchemie Apolda  
Multi-product plant for specialty chemical production

EPC's high understanding of the demands for active pharmaceutical ingredient synthesis is reflected in its process and plant design as well as in the integration of pharmaceutical automation systems. The plants are designed to meet all relevant safety standards and for high flexibility to enable rapid product changeover.



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PROCESS  
TECHNOLOGIES



# BIO-TECHNOLOGIES

OVERVIEW AND INSIGHTS

Holistic plant concepts are a distinctive feature of EPC. This also applies to further and deep processing of raw materials containing starch and oil. Through our variable plant concepts, it is possible to operate the entire production plant

or individual production sections with high flexibility for alternative raw materials. This enables clients to expand or extend the plant in stages in line with market requirements.

**Fermentation Products**

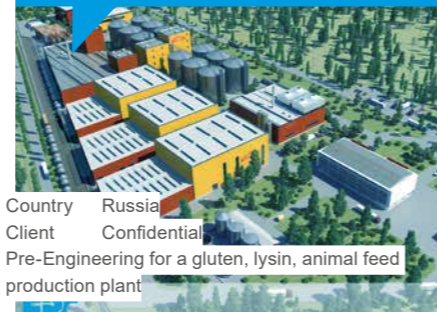
**Extraction Plants**

**Protein Production**

**Sugar Refineries**

BIOTECHNOLOGIES

**Fermentation Products**



Country Russia  
Client Confidential  
Pre-Engineering for a gluten, lysin, animal feed production plant

As a general contractor, EPC offers turnkey delivery of food and biotechnological production plants based on starch containing raw materials (e.g. wheat, corn or potatoes). EPC has the technology for various fermentation products, such as lysine sulfate and lysine monochloride, based on the development of an optimized fermenter design and water-saving product purification. Various amino acids (citric acid, xanthan gum, bioalcohols, lactic acid, etc.) can also be produced through fermentation for the food and animal feed industry.

BIOTECHNOLOGIES

**Extraction Plant**



Country Croatia  
Client Confidential  
Refined vegetable oil production plant

EPC has vast experience in supplying technologies for extraction plants. By applying the multifunctional principle EPC's process can produce various products from different raw materials alternately within the same plant. The plants are often constructed in a modular design so that the production capacity can be adjusted. EPC's technology is safe, environmentally-friendly, while still providing highest extraction efficiency.

BIOTECHNOLOGIES

**Protein Production**



Client: Confidential  
Country: Germany  
Extraction of proteins and bitter compounds from lupines

EPC has developed a gentle aqueous process for the production of proteins (without alcohol-based extraction as in conventional processes). In this efficient plant design, several expansion stages – from protein concentrate to isolate – are possible. Furthermore, additional protein modification is available for various applications in the food industry. EPC offers this process for the production of proteins e.g. from rapeseed, soybeans, sunflowers and peas.

BIOTECHNOLOGIES

**Sugar Refineries**

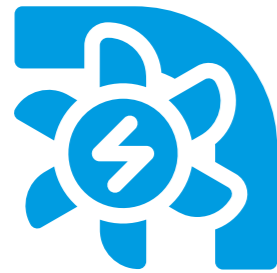


Country Russia  
Capacity 200,000 t/a wheat  
Pre-Engineering for a glucose syrup, maltose syrup, GFS 10, GFS 45, GFS 55 production plant

EPC's flexible production plants are able to produce various types of syrups e.g. glucose, maltose or GFS. Most important is the smart concept implemented, which allows the flexibility to adapt the production of the syrups in correlation to the market demand.

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PROCESS  
TECHNOLOGIES



# RENEWABLE ENERGIES

OVERVIEW AND INSIGHTS

Renewable energies and energy efficiency are the most important pillars of the modern industry. Thereby, resource-saving processes for energy generation and supply are essential. EPC has the technologies needed for the effective use of renewable raw materials and natural energy

sources for a wide range of applications. Our aim is to deliver high-quality and tailor-made technology solutions which provide our customers with long-term competitive advantages.

Polysilicon	Monosilane
Solar Factories EPC Solar®	Biofuels
Heat Recovery	Biogas Infeed
	Cogeneration Systems

RENEWABLE ENERGIES

Polysilicon



Country Ukraine  
Client Activ Solar  
Pre-engineering for polysilicon plant

The synthesis and purification of polycrystalline silicon is the first step in the commercial production of electronic devices. The strong performance of the electrical properties of semiconductor materials requires a high purity of the raw material. With our process EPC is able to produce polysilicon with a purity of >10N (99.99999999%) from raw silicon which includes (TCS Synthesis, Fluid Bed Conversion, Rectification, CVD Reactors and Vent Gas Recovery).

RENEWABLE ENERGIES

Monosilane



Country Germany  
Client Confidential  
Monosilane production plant

Monosilane is used for the deposition of silicon and silicon nitride layers in semiconductor production or in the manufacture of solar cells. The use of special gases such as monosilane must conform to high requirements in terms of purity and plant safety. EPC is offering technologies for cost-effective and efficient production and storage of monosilane. A concept which includes its own tank, filling and distribution systems, EPC is setting new standards for its customers in the semiconductor supply industry.

RENEWABLE ENERGIES

Solar Factories  
EPC Solar®



Country Germany  
Client SCHOTT Solar Wafer GmbH  
Silicon ingot and wafer factory

EPC has experience in all stages of the production process of solar panels - from the production of ingots and micrometer-thin wafers to the finished photovoltaic module. Through raw material recoveries and closed loops, EPC's plants are able to maximize savings of resources and increase efficiency.

RENEWABLE ENERGIES

Biofuels



Country Germany  
Client Emerald / NTR  
Turnkey realization of a biodiesel plant

For decades, EPC has been installing high-performance biodiesel plants, which typically includes a glycerin processing for pharmaceutical quality. Thanks to the excellent plant concept and implementation of high-technology, EPC has become a respected general contractor in this field. Furthermore, through technology alliances EPC offers the whole production chain of bio-ethanol based on starch and sugar containing raw materials as well.



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# RENEWABLE ENERGIES

INSIGHTS

## RENEWABLE ENERGIES

### Heat Recovery



Country Germany  
Client Confidential  
Planning and construction of a sewage gas CHP plant

The waste heat from process gas, sewage or industrial processes can be recovered or used in various forms. This results in numerous advantages such as energy savings, smaller required production plants and lower pollutant emissions. EPC offers comprehensive solutions and concepts for heat recovery.

## RENEWABLE ENERGIES

### Biogas Infeed



Country Germany  
Client ONTRAS Gastransport GmbH  
Compressor station with 84 bar and 700 Nm<sup>3</sup>/h

A biogas feed-in plant essentially consists of the conditioning plant, the liquefied gas or LPG tank, the compressor plant and peripheral equipment such as the emergency flare, the transformer station, the cooling system and the cold water preparation system. Current developments, particularly in the agricultural industry, show that the production and use of biogas can be further expanded, for example by feeding processed biogas into the existing natural gas supply network. Advantages include better primary energy utilisation and thus a better overall efficiency as well as the locally independent use of the energy source.

## RENEWABLE ENERGIES

### Cogeneration Systems



Country Germany  
Client Schlöben Community  
Complete design and construction management of the Bioenergy model village

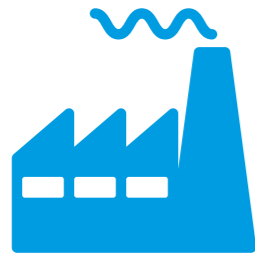
EPC offers complete solutions for cogeneration plants from natural gas and/or biogas/biofuels. EPC has developed a start-up control system, which allows a smooth and therefore efficient operation of the plant for combination of several CHP plants.

# EPC GROUP. PROVIDING INTELLIGENT PROCESS TECHNOLOGIES FOR YOUR SUCCESS.





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# INDUSTRIAL PLANTS

OVERVIEW AND INSIGHTS

OUR TECHNOLOGY  
WORKS



The construction of industrial plants is very complex. It is not only a matter of designing comprehensive chemical and physical processes, but also of examining profitability, safety regulations and legal requirements such as the patent and licensing situations and not least development and improvement of innovative process technologies.

Recycling  
Plants

Precast  
Concrete

## INDUSTRIAL PLANTS

### Recycling Plants



Country Germany  
Client Confidential  
Recycling plant for plastic-metal composites

EPC's technology for chemical recycling provides a technically feasible solution for the recycling of all PET materials. A continuous recycling module is connected to the operating CPUs where a sequence of three polyester monomer purification steps allows a 100% utilization rate of recycling materials. The reactive extrusion technology together with EPC's InsidePET® guarantee production at high purity recycled material which can be injected directly into the main production line.

## INDUSTRIAL PLANTS

### Precast Concrete



Country Russia  
Client SAO SZBI „Strojdetal“  
Plant for the production of reinforced concrete

The use of our plant technology ensures a high quality production of prefabricated concrete parts. With the robust and simple construction of the battery formwork it is possible to build prefabricated parts with a high resistance, static load, sound density and versatility of the parts with a minimum formwork effort. Due to shorter concreting and compaction times as well as simple operation, a high production capacity can be achieved with our plant technology.

*Engineering „Made in Germany“ refers not only to a high degree of innovation, but also to a certain passion for technical challenges. This passion for innovative and intelligent technologies is deeply anchored in our family history for more than 145 years.*



A Member of **EPC** GROUP

EPC Group is an internationally active engineering and plant construction company, as well as a provider of innovative process technologies. With over 145 years of engineering tradition the family business is now represented by about 300 highly motivated professionals at 8 locations in Germany.



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