A Member of

- Polymers & Fibers
- Chemical & Specialty Chemistry
- Engineering Services & Infrastructure
- Pharmaceuticals & Fine Chemistry
- Building & Civil Engineering
- Technical Building Equipment
- Building Automation
- E/I&C Technology
- Electrical Engineering & Telecommunications
- Heating & Sanitary Systems

As a general contractor we offer you all the necessary services required for the successful delivery of your project. We are experts in the fields of polymers & fibers, as well as in chemical plant construction.

Plant revamping, optimization, maintenance work and staff training are integral parts of our extensive services.

For more than 50 years polycarbonate has demonstrated an inexhaustible potential for innovative applications - and the success story of this polymer material continues. Its market demand is growing and new markets are developing.

We EPC cannot imagine today’s world without polycarbonate and that’s why we developed the state-of-the-art non-phosgene technology. Our PC technology coupled with our most modern design of a turnkey production plant – ensures highest plant flexibility and productivity as well as polycarbonate purity.

In addition, EPC ensures smooth integration with upstream technology providers to achieve an optimally integrated overall plant design providing economical and environmental feasibility and satisfying the highest safety standards.
Polycarbonate production plants. EPC: Your German polycarbonate technology provider

Polycarbonate and its modified copolymers are thermoplastic polymers. Due to their interesting physical properties such as light weight, temperature resistance and high impact resistance as well as outstanding optical properties, polycarbonates are widely used for high-tech products.

Flow Diagram – 100kta Polycarbonate

Down-stream compounding: EPC can also offer a down-stream polymer compounding process technology and recipe formulation assistance as part of the offer. In particular the market of copolymers and flame-resistant polycarbonate (FR-PC) is growing i.e. for LED lighting and other markets. EPC’s plant design includes all necessary utility systems, for example heating medium circulation, vacuum generation, chips cutting after final reactor and chips bagging system.

Polycarbonate Process Overview

EPC Engineering & Technologies GmbH is your one-stop-shop for polycarbonate technology

Technology Key Points

Flexible & Reliable Design

- Two independent finishing lines
- Wide MFR range
- Quick changeovers between grades
- Hermetically sealed system
- Special material selection
- High plant availability

EPC Engineering & Technologies GmbH is your one-stop-shop for polycarbonate technology

• Process Technology Provider
• Extended PDP & Basic Engineering
• Key Equipment Delivery
• Recipe Development & Product Optimization
• Supervision of Commissioning
• Supervision of Installation
• Supervision of Pre-Commissioning
• Supervision of Plant Start-Up

YOU WOULD LIKE TO LEARN MORE ABOUT OUR TECHNOLOGIES?
Let us know! We are looking forward to helping you.

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Other Configurations and Capacities are Provided

VARIPLANT Process description:

BPA and DPC melt are taken over from the raw material production plants and fed into the raw material melt mixing tank. To achieve the high-purity monomer required for the production of high-quality polycarbonates, suitable purification steps such as filtration and stripping of impurities are considered. Then the pre-heated raw materials are fed in liquid form in a defined molar ratio into the transesterification reactor. On its way towards the first reaction stage the raw material melt is mixed with catalysts and heated up to the desired transesterification temperature while adjusting a certain pre-conversion rate.

During the formation of monomer and polymer chains phenol A (BPA) and diphenyl carbonate (DPC) are equipped with a type of disc-ring agitator that provides a high surface area to ensure easy mass transfer and chemical reaction.

In-line additives compounding: The product melt finally passes an in-line additives compounding extruder system where special additive agents like thermal stabilizer, color toner, mold release agent, UV light stabilizer and others can be continuously added to the final polymer melt stream. The final melt stream then is transferred to the pelletizing system where the PC chips are produced.