The FPC is equipped with a wide array of state-of-the-art machines boosting development expertise along the entire composite value chain: from materials to components.

The FPC is a cooperation between SGL Carbon, Fraunhofer IGCV, BA Composites GmbH, Cevotec GmbH, Compositence GmbH and Coriolis Group SAS.

The FPC has already bilateral projects with aerospace companies, development projects with various automotive companies worldwide and application-specific collaborative projects with system developers in place.

**ADVANTAGE**

**DEVELOPMENT AND MANUFACTURING CENTER FOR ADVANCED FIBER PLACEMENT TECHNOLOGIES**

With more than 500 m² of lab space and various high tech machines, the new development and manufacturing center offers customers the possibility to realize production concepts and demonstrate their feasibility by prototyping.
GOALS

- Development of customized materials and fiber placement solutions for efficient and sustainable lightweight composite components.
- Application of cost-effective materials
- Scrap and cycle time reduction
- Combination of technologies to implement an efficient process route for a given composite component.

FROM MATERIAL TO FINAL COMPONENT

FIELDS OF SERVICES

- Material and process development
- Manufacturing engineering
- Product design and process simulation
- Fiber/tape placement technology
- Online process monitoring
- Prototyping and testing
- Virtual factory and industrialization solutions
- Cost and efficiency analysis
- Serial composite production
- Technology and process transfer
- Technology-specific training for employee qualification

EXPERTISE

ACCORDING TO YOUR NEEDS YOU GET

- Attendance and support from scratch
- Guidance for the selection of materials and processes
- Customized manufacturing engineering
- Access to novel and state-of-the-art fiber placement technologies
- Additional access to various forming-, consolidation- and curing technologies
- Feasibility studies
- Multiple prototypes
- Technology, cost and risk assessment
- Improving knowledge of composites and production technologies

WHAT YOU GET
FRAUNHOFER IGCV CONTINUOUS FIBER TAILORING
- Materials: different dry 50k rovings
- Layer fixation: infrared activation of binder systems
- Variable number of rovings: 1-30
- Tape width: 20 mm
- Max. part size with prototype setup: continuous production of UD layers; layup width 600 mm

FIBERFORGE RELAY 2000 TAPELAYING
- Materials: thermoplastic tapes based on glass or/and carbon fibers
- Material fixation: ultrasonic spot welding
- Number of tapes: 2
- Flexible tape width range: 50 mm - 150 mm
- Max. part size: 2x2 m²
- Part geometries: 2D

BA COMPOSITES STAXX 1700 FIBER PLACEMENT
- Composite materials: thermoplastic and thermoset
- Heating systems for material fixation: infrared or diode laser
- Number of tows/tapes: 16
- Width of the material: ½” thermoplastic and thermoset
- Max. part size: 1,4 x 1,1 m²
- Part geometries: 2 - 2.5D
CEVOTEC SAMBA PREPREG FIBER PLACEMENT
- Material processing: carbon-, glass-, metall-fibers, adhesive films with low scrap on highly complex geometries
- Fast and high-performance product development incl. FEM thanks to dedicated engineering software
- Industry 4.0 machine equipped with relevant quality inspection sensors
- Machine type: robot-based system
- CFRP material: dry fiber and thermoset tapes
- 10 cooperating robot axes for maximum flexibility
- Form-adaptive gripper for maximum part complexity
- Width of the material: 1/2” – 2”
- Max. part size: length 1,2 m, diameter 1 m
- Part geometries: 2D - 3D

CORIOLIS COMPOSITES C1 FIBER PLACEMENT
- Composite materials: thermoplastic and thermoset systems, dry fibers with different binder systems
- Heating systems for material fixation: infrared activation or 6 kw diode laser
- Head configuration: 8 tows / tapes
- Width of the material: ¼” thermoplastic and thermosets
- Max. part size: length 7 m, diameter 3 m by using robot based system
- Part geometries: 3D

CORIOLIS COMPOSITES CSOLO FIBER PLACEMENT
- Composite materials: thermoplastic and thermoset systems, dry fibers with different binder systems
- Heating systems for material fixation: infrared activation or 3 kW diode Laser
- Head configuration: single fiber / tape
- Variable material width: ¼”, ½”, 1”, 1½”
- Max. part size: length 3 m; width 1,3 m by using a robot based system
- Part geometries: 2-3D
EXPRESS YOUR NEEDS
Let the Fiber Placement Center, its competences and vision, inspire you. Your ideas and requirements drive innovation in our solutions.

OPEN FOR NEW SYNERGIES
Get in touch and share with us your specific interests and requirements. We are always striving to collaborate and expand our network.

WE PROVIDE YOU WITH TAILOR-MADE FIBER PLACEMENT SOLUTIONS

FPC FIBER PLACEMENT CENTER

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