Many are familiar with carbon fiber. Very few people know that it has been forged into a new, revolutionary material: **Forged Composites®**.

### COMPONENT PARTS

**CARBON FIBER**
- Discontinuous

**RESIN**
- Vinyl ester or epoxy.

### PROPERTIES

- **Superior resistance to fatigue and moisture**
- **Lower resistance than preimpregnated composite**
- **Adapts better to meet the specific needs of designers**
- **Same density as preimpregnated composite**
- **Highly resistant to flaws and damage**
- **Thicker than 1.2 mm**
- **Lower modulus of elasticity than aluminum**
- **Excellent mechanical workability**
HOW FORGED COMPOSITES® IS MADE

THE FINAL MATERIAL IS A "PRE-IMPREGNATED" ROLL OF SHORT CARBON FIBER IMMERSED IN A RESIN FILM.
THE FORGED COMPOSITES® MOLDING PROCESS

1. Cutting of material
2. Measurement of the weight of the load
3. Preparation of load
4. Positioning of load in mold
5. Molded parts

**Cutting of material**

**Measurement of the weight of the load**

**Preparation of load**

**Positioning of load in mold**

**Molded parts**

**Positioning of load in mold**

**Molding cycle. Heating and pressure (135°C, 80 bar).**

**Removal of component**

**TOTAL TIME: < 5 MINUTES**

**ADVANTAGES**

**TEMPERATURE**

**PRESSURE**

**TIME**
Forged Composites® technology is perfect for creating complex forms with undercuts.

- Combined molds: mold and matched mold
- High-quality steel and surface finish
- Automatic removal systems
- Multi-axis pressure
- Localized, distributed heating is possible
IMPLICATIONS OF FORGED COMPOSITES® FOR DESIGN

- Built-in ribbing or reinforcements
- Variations in section are possible without having to laminate additional material
- Any thickness can be created: there are no limitations due to the thickness of material plies. The only limit refers to the minimum thickness
- It is possible to do mechanical machining, such as drilling or trimming, because the material is hardly affected by cutting
- Ideal for the use of fasteners (load-bearing capacity)
REASONS FOR CHOOSING FORGED COMPOSITES®

ADVANTAGES

**HIGHER**
- Production volume
- Design freedom
- Integration
- Automated process

**LOWER**
- Expenses
- Number of components
- Labor