SAMBA Series: Modular 3D fiber lay-up systems

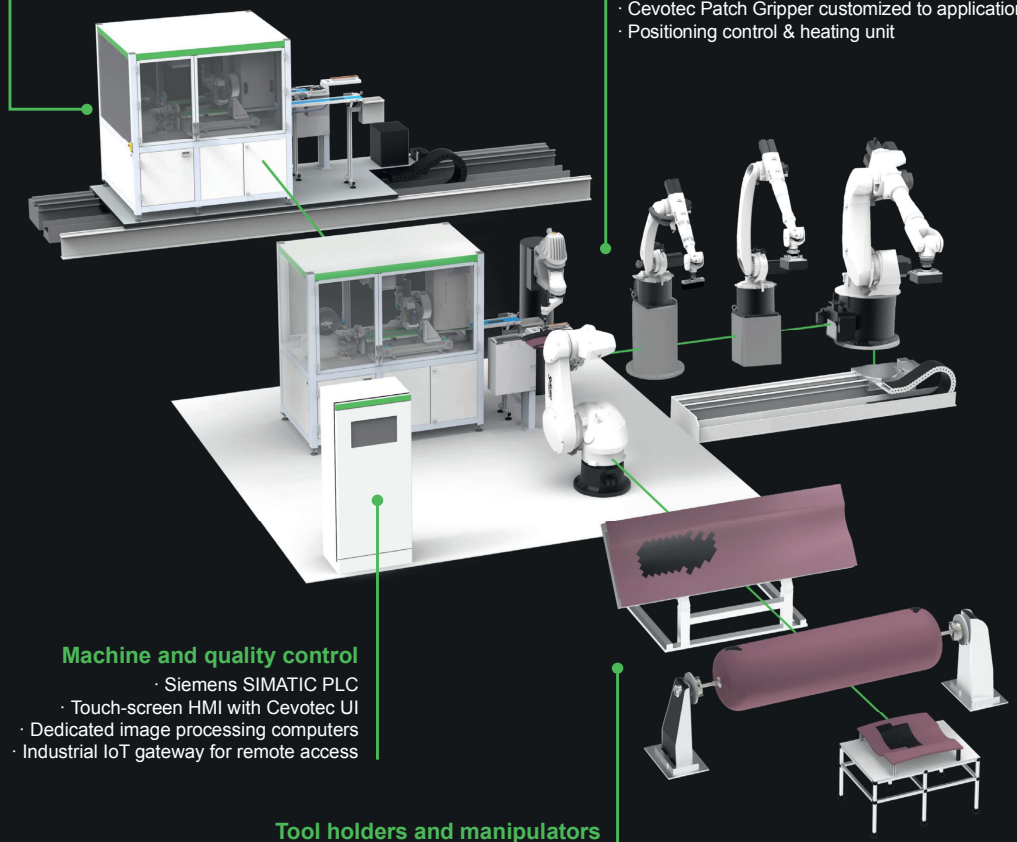
Fiber Patch Placement is a highly scalable and flexible technology. We customize SAMBA systems to your requirements based on four key modules. These modules include solutions for material feeding and cutting, placement, mold manipulation and machine control.

Feeding & cutting units

· Compatible with wide range of materials
· Multiple, parallel material feeds possible
· Customizable tape widths
· Ultrasonic cutting unit by GFM
· High-precision patch quality control

Placement units

· Range of placement robots and rails available
· Cevotec Patch Gripper customized to application
· Positioning control & heating unit



Machine and quality control

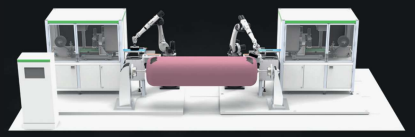
· Siemens SIMATIC PLC
· Touch-screen HMI with Cevotec UI
· Dedicated image processing computers
· Industrial IoT gateway for remote access

Tool holders and manipulators

· Determined by the application
· Combination of 2 x 6-axis robots possible
· Quick-exchange systems for tools available

cevotec

SAMBA Pro PV-2

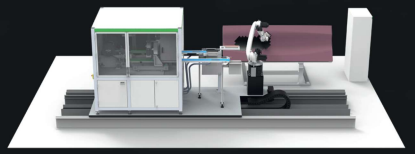


Optimized for composite tank reinforcements

· Simultaneous patching of both tank domes by 2 placement units
· Linear rail for length variation, adjustable to different tank sizes
· GFM ultrasonic cutting unit; cooled material storage
· In-process quality control and monitoring of process parameters

· Compatible with a variety of carbon fiber and glass fiber materials
· Fully automated robot offline programming in ARTIST STUDIO

SAMBA Pro Multi

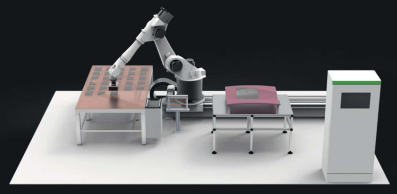


Optimized for multi-material composite aerostructures

· Large 6-axis placement robot with long reach
· Additional linear rail for extended reach across large tools
· Multi-feeding unit for simultaneous processing of different fiber tapes
· Force-torque sensor for controlled placement e.g. on honeycomb cores
· GFM ultrasonic cutting unit; cooled material storage
· In-process quality control and monitoring of process parameters

· Compatible with a variety of carbon and glass fibers, adhesive prepregs, insulation layers, lightning strike protection materials
· Fully automated robot offline programming in ARTIST STUDIO

SAMBA Step L



Optimized for application development, prototyping, R&D

· One 6-axis placement robot (size customizable)
· Additional linear rail for extended reach across large tools
· Maximum material flexibility by feeding pre-cut patches
· In-process quality control and monitoring of process parameters
· Optional advanced sensor package for placement analyses

· Fully automated robot offline programming in ARTIST STUDIO
· Lay-up programs can be transferred to SAMBA Pro systems