BROETJE AUTOMATION

STAXX ONE

SINGLE TOW END-EFFECTOR

- Highly Flexible and Reliable Robotic Fiber Placement
- Ideal Solution for Prototyping, R+D Applications, Complex Parts
- Multiple Material Capability

COMPOSED TO COMPETE

COMPOSITE
SYSTEMS

STAXX ONE - SINGLE TOW END-EFFECTOR

Area of Application

The STAXX ONE Single Tow End-Effector is a highly flexible small and lightweight automated fiber placement end-effector. With its mass of about 40kg it can be mounted on any standard industrial robot.

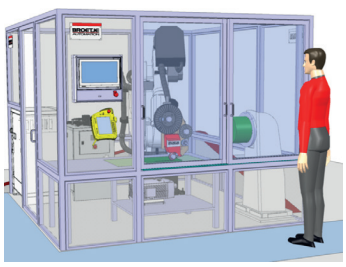
It allows automated fiber placement of complex parts and it supports a wide range of materials such as as PrePreg, TowPreg and Dry Fiber material.

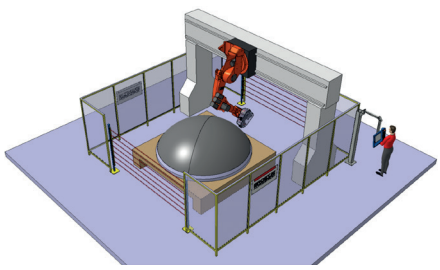
The optional heated layup table can additionally be equipped with an NC-controlled turning device.

Technical Data

Material spool with tow tension control Optional: Level measurement	Deflection roll Optional: Tow break detection
Compaction roller out of stainless steel or anti-stick polymer coating	Robust cutting unit for tows above 50k
Controlled pneumatic compaction unit force up to 30dN (~kg)	Controlled Heating unit with infrared emitter, diode laser or flash-lamp
Backfilm collection spool	Material flexibility: Any given width from 1/8'' width up to 2'' (50,08 mm)
Internal water cooling for prepreg material	2 Sets of compaction rollers for ¼" and ½"

Flexible Work Cell Configuration





Special Features

R+D flexibility combined with industrial readiness

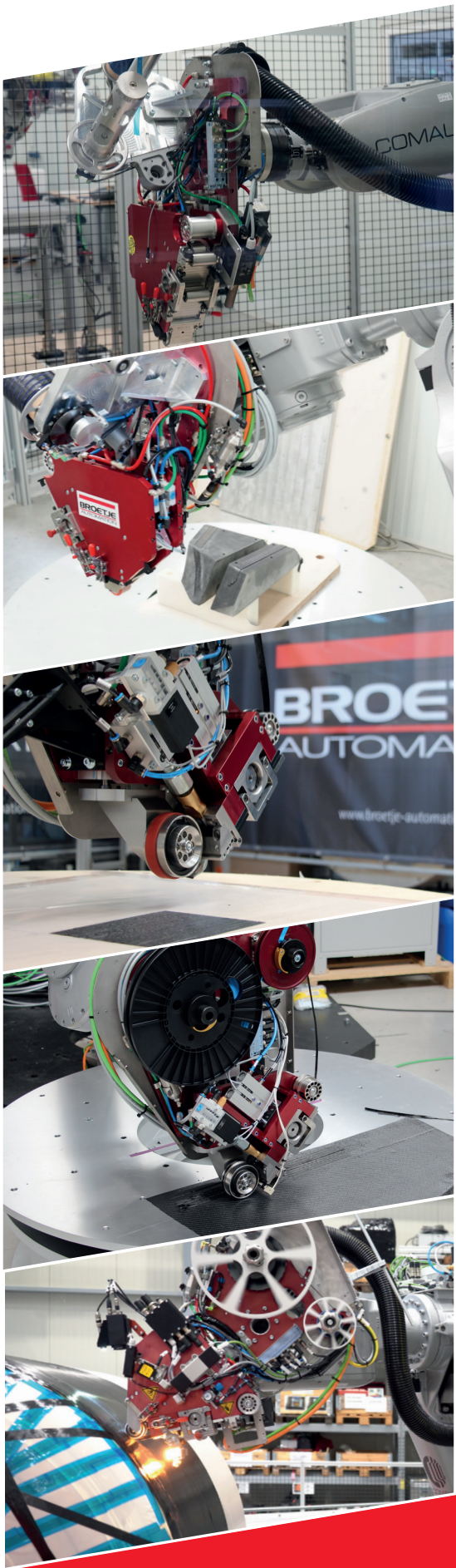
- Various material types (PrePreg, TowPreg, Adhesives, DryFiber, etc.)
- Flexible Material size
- Siemens NC Controls
- Good accessibility for complex parts
- Modular cell concept

Cost efficient approach

- No foundation needed
- Standardized system components

Digital Twin

- Cell Layout
- CAM System for offline programmin based on 3D/2D CAD data
- Collision analysis
- Simulation for both, machine and layup concept



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