RESIN IMPREGNATION PROGRAM

“Autonational Composites, your “one-stop-shop” for modular filament winding systems”

Autonational Composites delivers 2 resin tray systems, based on the dip tray or a drum tray design. Both systems have their own advantages.

Our modular resin trays are user friendly, easy to install & easy to clean. They can be applied for use of nearly all possible resin mix recipes. Applying different types of resin mix will require only the exchange of a plastic foil insert insert. As a result, the resin mix changeover time will be approx. 15 minutes. Our resin trays include a resin bath suitable to process 8 to 64 fibers. Other designs are available on request.

Autonational supplies also integrated resin farms including resin storage, pumping, mixing & dosing features. The resin dosing unit automatically supplies new material to the resin tray (impregnation unit) after a resin request from the controller or the automated level control functionality.

Our Resin Impregnation Program

Dip Type Resin Tray

Our resin tray design is optimised to obtain excellent impregnation quality. This results in low void content and optimum consistency of resin fraction and with a good individual controllable roving tension. The impregnation units are designed to be user friendly, easy to install. Resin trays can be provided with resin heating and level control.

- Water bath heated
- Water level & temperature sensor (standard)
- Easy to clean
- Low void content
- Low tension application
- Suitable for glass fiber
- Low resin level in the tray (prevents gelling and sagging)
- Resin bath size (fibers) 8 · 16 · 32 · 64 (2*32)

Drum Type Resin Tray

Our drum type resin tray is optimised for minimum deflection of the fiber, resulting in less fiber damage, allowing high tension. The impregnation units are designed to be user friendly, easy to install. Resin trays can be provided with resin heating and level control.

- Water bath heated
- Water level & temperature sensor (standard)
- Easy to clean
- High tension application
- Suitable for glass and carbon fiber
- Low resin level in the tray (prevents gelling and sagging)
- Resin bath size (fibers) 8 · 16 · 32 · 64 (2*32)
Our Technologies & Competences

- Modular winding systems
- Dedicated winding equipment
- Raw material handling
- Resin dosing & supply
- Curing systems
- Processing equipment
- Mandrels, handling & storage
- Calibration equipment
- Track & Trace equipment
- Prototyping
- System Integration
- Process knowledge
- Product development support
- Turn-key project management
- Production line automation

Our Modular Winders

Our standard winders can be can be performed in many configurations. This is an impression of a standard AMD SW 3000 winder including a creel & electronic servo tensioning, prepared to produce large tanks.

Our Modular Production Lines

This turn-key project example includes 3 standard 3-spindle winding machines integrated in a semi-automatic composite production line. Additional machinery covers functionality like mandrel & tooling preparation & storage, resin preparation, curing, extraction, slitting & grinding and, cleaning & storage of tools.

Our Automated Production Lines

This turn-key project covers 3 fully automated composite production lines. Each line include a dedicated 2-spindle winding machine based on a robust CNC-platform. These lines integrate many functionalities like automated raw material handling & resin dosing, double winding process, curing, extraction, slitting, testing, mandrel preparation/cleaning & storage. Our equipment is designed for 24/7 reliable & maintenance-free operation, resulting in the lowest possible Total Cost of Ownership (TCO).