



Automatic Creel Loader

A complete solution for creel preparation

The ACL automates every operation required to transform incoming bobbins into perfectly prepared production-ready bobbins. By combining robotics, AI vision, cleaning, weighing and automatic splicing, the system guarantees a continuous, reliable and fully traceable creel loading process.

Designed around Vandewiele Automation's modular philosophy, the ACL can be integrated into new or existing production lines and adapted to different yarn types and production capacities.



AUTOMATIC BOBBIN HANDLING

Removes manual bobbin loading operations



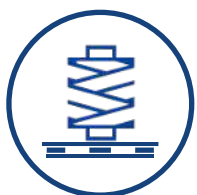
AI VISION CONTROL

Automatic verification of bobbin presence, position and quality



AUTOMATIC BOBBIN CLEANING

Removal of knots, loose fibers and unwanted yarn tails before cleaning



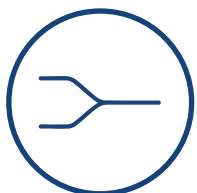
INTEGRATED BOBBIN WEIGHING

Weight verification and production traceability



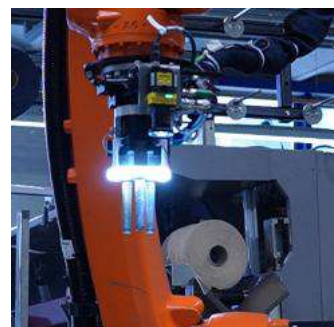
REDUCED YARN WASTE

Less manual handling, fewer damaged bobbins and optimised yarn consumption



AUTOMATIC SPLICING

Reliable, repeatable yarn joints which allow reduced machine stops



Pallet unloading
①



Vision Control
②



CLEANING PROCESS



Loose yarn tails



Outside knot opening



Yarn tails positioned

SPLICING PROCESS



MESDAN

Prepared yarn tails

Automatic splicing

Continuous yarn

PATENT PENDING

Carrousel buffer
④



Creel Loading
⑤



Splicing
⑥



Cleaning
③

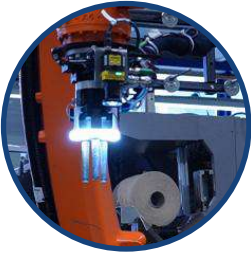




1. BOBBIN UNLOADING

Automated bobbin handling

A robotic arm automatically unloads bobbins from the pallet (trolley, overhead conveyor, others...) and transfers them into the production flow.



2. VISION CONTROL

Deep learning inspection

Each bobbin is automatically identified and inspected using deep learning technology to detect defects and ensure only compliant packages continue through the process.



3. CLEANING

Yarn tail preparation

Loose yarn tails are automatically identified, cleaned and positioned to ensure reliable downstream handling and splicing.



4. CAROUSEL BUFFER

Intelligent bobbin buffering

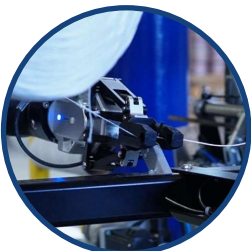
Prepared bobbins are temporarily stored and sequenced on the carousel before automatic loading onto the creel.



5. CREEL LOADING

Automatic creel loading

A robotic handling system accurately loads and positions each prepared bobbin onto its designated creel location, optimizing weight distribution for balanced yarn consumption.



6. AUTOMATIC SPLICING

Reliable yarn continuity

The splicing process is developed in close collaboration with **MESDAN**, a **Vandewiele Group** company, ensuring reliable and repeatable yarn splicing for continuous production.



Material	PP, PA & PES BCF YARNS
Count range	600 to 10,000 dTex or 540 to 9,000 den
Layout	Suitable for face-to-face or in-line creels, from 36 to 72 yarn positions, with up to two production lots managed simultaneously.
Cadence	Up to 100 bobbins / hour
Air consumption	115 Nm ³ / hour
Electric consumption	20 kVA
Bobbin weight	Up to 20kg
Bobbin dimensions	Up to 400mm Ø
Compressed air supply	6 to 8 bars or 87 to 116 psi
Compressed air quality	Clean, dry & oil free air
Machine compatibility	Designed for seamless integration with existing heat-setting lines.



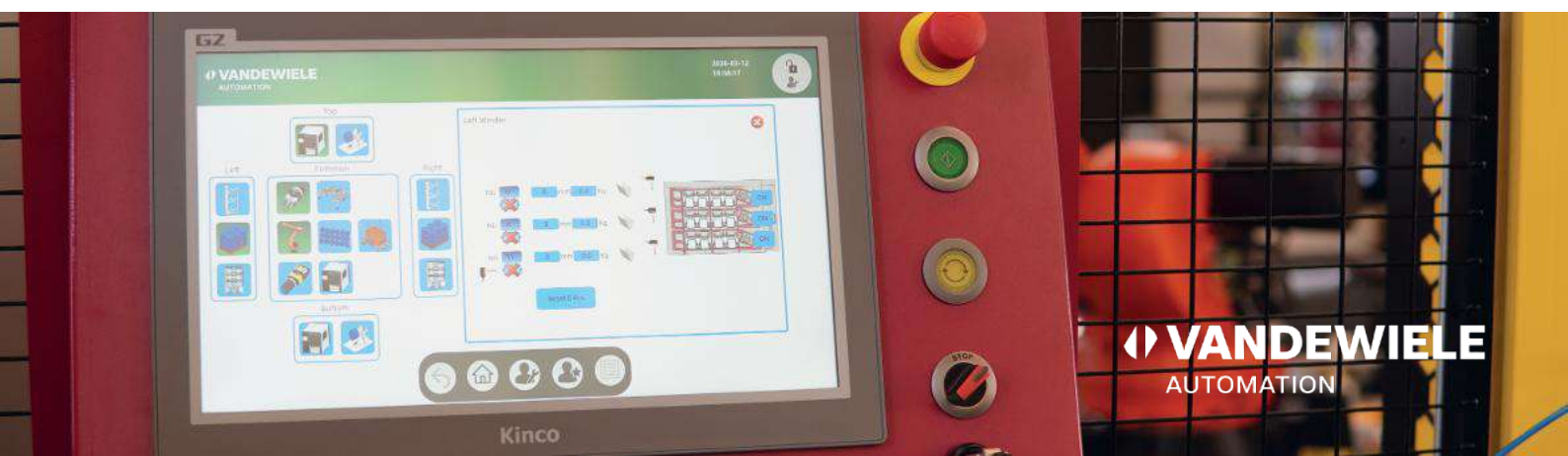
Tailor-made Solutions

Vandewiele Automation delivers exceptional value and enhances production capabilities by combining well-coordinated, high-performance components.

We develop fully integrated, end-to-end solutions that enable seamless production, ensuring consistent quality, maximum efficiency, and scalable performance.

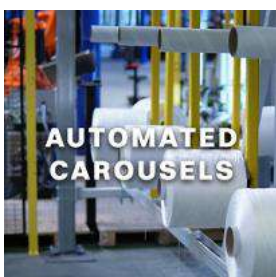
ALL OF VANDEWIELE AUTOMATION INTEGRATED AND AUTOMATED SOLUTIONS GUARANTEE :

- High level of integration
- Product traceability
- Modular and flexible solutions
- Advanced features



VANDEWIELE
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FUTURE INNOVATIONS TOGETHER



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