

CUSTOM MACHINE BUILD · PACKAGING AUTOMATION

High-Speed Automated Coiling & Packaging System

From a labour-intensive manual process to a fully automated, multi-size production platform, engineered, prototyped and built in-house at our Dundalk Design & Build Centre.



7

integrated process stages

4

servo-controlled coiling heads

1

platform for a full product family

End-to-end

automation, from tray denesting to sealing

THE CHALLENGE

A process that depended on people at every step

The existing production process was highly operator-dependent, requiring significant manual intervention across product handling, coiling and packaging.

The brief: design and develop a high-speed, fully automated solution able to handle a complete family of products across multiple sizes, delivering consistent product presentation, higher throughput and reduced labour dependency.

PROJECT SNAPSHOT

APPLICATION

Coiling, tray loading & transfer to sealing

BUILT AT

Reliance Design & Build Centre, Dundalk

OUR SCOPE

Prototyping · process development · proof of concept · mechanical & controls design · build · integration

CORE TECHNOLOGY

Servo motion · multi-head robotic transfer · precision indexing

Design. Build. Automate.

THE SOLUTION

One integrated platform, engineered stage by stage

Through extensive prototyping, process development and proof-of-concept testing, our engineers developed a fully integrated system that optimises every stage of production, from singulation through to final packaging.



- 01 Tray denesting**
Automated denesting for reliable product presentation
- 02 Singulation**
High-speed singulation to accurately control product flow
- 03 Indexing**
Cleated indexing conveyors for precise product positioning
- 04 Robotic transfer**
Multi-head robotic transfer for high-speed handling
- 05 Servo driven multi-head coiling**
Repeatable coil formation across multiple product sizes
- 06 Tray insertion**
Automated product insertion into packaging trays
- 07 Transfer to seal**
Integrated tray handling and transfer to downstream sealing

Servo-driven motion, precision indexing and multi-head handling combine to sustain high throughput with consistent, repeatable product quality.

THE OUTCOME

A labour-intensive process, transformed

Higher throughput Increased production output	Less manual labour Significant reduction in operator intervention	Repeatability Improved process consistency and control
Multi-size handling Automated handling across multiple sizes	Line integration Seamless hand-off to downstream packaging	Data logging & database integration Connectivity for full production traceability

Concept to lifetime support, under one roof. Every stage was designed, prototyped and built at our Dundalk Design & Build Centre and because Reliance Automation also supplies an extensive range of automation components we build with, the same team stands behind the machine for spares and support throughout its life.