



*The Best Part
of Innovation*

**BLUE
LINE**

PAPER

NEW!

*– Your new source for
state-of-the-art inline
coating in digitally printed
folding cartons.*



TRESU Digital Solutions

Welcome to the **TRESU** BlueLine Paper

from Søren Maarssø, COO and Erik Gaj Nielsen, CFO

Unveiling the world of TRESU Group

We have expertise at almost every stage of machine building. Several of the world's leading original equipment manufacturers choose our tooling and ancillary technology because of our reputation for precision and craftsmanship. Our multi-station flexo printing lines are driving productivity round-the-clock, at the plants of the world's leading packaging converters.

Focusing on our core competences

What makes TRESU so special is that we are more than just a precision engineering company.

In an industry challenged by margin pressure and tight lead-times, we understand that printers seek solutions that help them stay as lean and as productive as possible. Everything we do at TRESU is centered around overcoming these challenges.

With a strong focus on our core competences, as well as the financial backing, we are able to make long-term research and development commitments to bring unique, performance-enhancing solutions to all niches of the flexo and coating markets. Learn more about the five TRESU Group members on Page 3 and throughout the TRESU BlueLine Paper.

*"Unique,
performance-enhancing
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markets"*

TRESU TimeLine

1981: TRESU is founded in Denmark 1989: TRESU delivers the first modern 5-colour flexo printing machine 1989: The TRESU seal is patented
1987: The first chamber doctor blade system is developed 1991: TRESU Printer #1 is delivered – a complete high-performance flexo printing machine

The people

Our success is driven by our people and their unrelenting focus on delivering results the right way – by operating responsibly, executing with excellence, applying innovative technologies and capturing new opportunities for profitable growth. We realize that the best part of innovation comes through working with the customer every step of the way.

Our technicians are supporting customers around the world with training, inspection and maintenance programmes, to ensure the printing operation is performing to the max. And should the need arise, our service team is on stand-by to offer on-site troubleshooting, wherever you are.

Keeping you ahead of the game

With a full understanding of our customers' needs and intentions, we not only build machines with the right printing, coating, converting capabilities suited to the printer's specific niche, but continuously ensure they are optimised so that the customer is ahead of the game in terms of performance, versatility and creativity. With the technology, know-how and vision to support you every step of the way, in TRESU you have a partner to help you innovate and stay ahead in the market place.

Meet the *family...*

TRESU Group is comprised of five business areas:

DigitalSolutions ●●

TRESU DigitalSolutions, the latest addition to the TRESU Group family, is your new source for state-of-the-art inline coating in digital printing. Our solutions are 100% modular, enabling full integration into many digital printing lines from the world's leading manufacturers. Both water-based, UV varnishes and special coatings can be used, for a wide range of applications for the folding carton market, including pharmaceutical, media, food and confectionery, cosmetics, consumer electronics, gifts etc.

KeyLine ●●●●●

TRESU KeyLine offers world-leading food processing and packaging corporations a long-term, total partnership for building and maintenance of multiple lines. From the concept stage, TRESU Group works closely with the client to custom-design complete application-specific converting lines that deliver the very highest levels of performance, ergonomics and flexibility. A network of technical engineers ensures first-class global support, including on-line diagnostics, twenty-four hours a day.

Solutions ●●●

TRESU Solutions offers bespoke solutions to meet the demanding needs of today's printer. Complete state-of-the-art inline flexo printing machines as well as unique units are constantly being developed for a wide range of needs within the printing industry. Key words in all developments are flexibility and innovation.

Concept ●●●

TRESU Concept provides bespoke, multi-process, single-pass printing and converting lines for speciality folding carton, paper and film products.

With TRESU Concept, we integrate the latest in flexo and gravure printing technology, with specially configured printing, converting and finishing systems from leading value-chain partners. This means almost all packaging products can be completed in one single pass.

Ancillary ●●

TRESU Ancillary offers a wide range of high-performance offset- and flexo ancillary equipment. All products are designed to support optimum performance of the printing process within the label, flexible packaging, coating, wide web, corrugated, tissue, and other market segments.

TRESU Ancillary is the leading supplier of chamber doctor blade technology along with a wide range of complementary ancillary products.

TRESU
Group


Erik Gaj Nielsen
CFO, TRESU Group


Søren Maarssø
Director COO, TRESU Group

TRESU Ancillary

Applied innovation through close partnership

The benchmark for the printing industry

TRESU Ancillary is the world's leading supplier of chamber doctor blade systems for printing and coating applications. Our division is also an accredited supplier of ink supply systems, conditioners, drying systems, and printing plate cleaning systems to many global press makers. We enhance the competitiveness of flexo, offset and digital printing technologies.

Clean ink laydowns at faster speeds

Our new generation of chamber doctor blade systems enables printers in many printing and coating markets to achieve clean ink laydowns at faster speeds, with minimum make-ready times so presses can run to true potential. We have developed pressure-controlled chambers that prevent air mixing with the ink or coating when it is transferred to the anilox roll. This has overcome the problem of micro-foaming and blistering after it is applied to the substrate.

Another groundbreaking development is the TRESU F10 iCon with ViscoFlow. An intelligent ink control and fully automatic cleaning for water- and solvent based flexo printing. The TRESU F10 iCon is energy-efficient, reduces waste and downtime.

It is the ideal setup for common impression (CI) printing machines, stack presses and other press configurations.

The offset coating system

Based on these innovations we have also launched the UniPrint Combi chamber doctor blade system, so offset printers can add high-value coated features to folding cartons and numerous products, ranging from glue-applied labels to brochures.

1993: TRESU GmbH is established in Celle, Germany
1997: TRESU receives DS/EN ISO 9001 Quality

1993: Chamber doctor blade technology is introduced to the offset industry
Management System certification 2000: E-Line and P-Line doctor blade

Flexo and coating drying technology

F10 iCon - Intelligent ink control system

"High-performance offset- and flexo ancillary equipment"

UniPrint Combi - Chamber doctor blade system

FlexiPrint Reservoir

Next generation seals

Henrik Kristensen

Vice President,
TRESU Ancillary

"Your new source for state-of-the-art inline coating in digital printing and packaging"

Christian Matzen

Vice President,
TRESU DigitalSolutions

2000: H2 - High-pressure chamber doctor blade and pump system for metallure ink is developed
clamping systems with new patented technology are introduced 2001: TRESU Italia is established in Milan 2002: The high-performance TRESU Printer #25 is now operating 100% shaft-less
2003: TRESU receives DS/EN ISO 14001 Environmental Management System certification



TRESU DigitalSolutions

State-of-the-art inline coating solutions

TRESU DigitalSolutions is the newest member of the TRESU Group family. We develop state-of-the-art coating solutions for the digital printing industry through close strategic partnerships and OEM-agreements.

Series production

With more than 30 years experience in contract manufacturing, producing some of the industry's largest and most versatile flexo printing machines, TRESU DigitalSolutions is aimed at series production. And the proof of our success lies in our partners, especially within digital package printing.

With the inclusion of TRESU iCoat 30000, our innovative, inline coating solution, HP Indigo 30000 offers a complete digital printing packaging line – for printing, full surface or selective coating and stacking. With TRESU Pinta, our flexo coating system for full surface or selective coating, Xerox now offers state-of-the-art inline coating in their iGen™-series.

Perfect Integration

Our state-of-the-art inline coating solutions are 100% modular, designed for perfect integration into both sheetfed and roll-to-roll digital printing lines from some of the world's leading manufacturers. We are excited to continue these groundbreaking partnerships in our newest business area.

TRESU Concept

Innovative and customised product solutions

TRESU Concept provides modular multi-process, single-pass printing and converting lines for folding carton board, film, laminates, metallic substrates and paper.

Close partnerships – new and creative product packaging

We work in close partnership with the customer to develop and inspire brand new possibilities and creative product packaging in all categories. New ways of thinking, innovative design and strong research and development are at the centre of TRESU Concept.

Point proven – The Flexo Innovator FI 1100

The Flexo Innovator FI 1100 is the first solution from TRESU Concept – a mid-web flexo printing and finishing concept offering a modular platform, relatively low tooling costs and fast change-over times. Available in roll-to-roll, roll-to-sheet or roll-to-die cutting line, FI 1100 offers the option to include a multitude of possible technologies, such as die-cutting, laminating, embossing, rotary screen, rotogravure and cutting.

Modular flexibility

TRESU Concept goes beyond features and benefits and offers true customisation, from start to finish – thinking, testing, researching and developing with experts in all areas of the workflow - from sleeves to finishing systems - in order to bring the customer's thoughts and ideas to life. With 30 years of research and development expertise at hand, we offer solutions that provide ultimate flexibility and modularity in configuration.

- 2004: Royle Inc. is acquired – a US company producing pump systems and chillers for offset industries
- 2005: TRESU Japan is established in Osaka
- 2004: TRESU Royle Inc. is established in Dallas
- 2004: The first Modular Coating System (MCS) is developed
- 2006: TRESU China is established in Beijing



- 2007: A 21-colour flexo/digital printing machine is installed at SGI, USA
- 2009: UniPrint Combi for offset OEMs is released
- 2009: TRESU Printer #50 is delivered
- 2010: TRESU introduces FlexiPrint Reservoir for the Label segment

TRESU Solutions

Increased flexibility for higher profit margins

Wide range of projects

TRESU Solutions is our customised machine and component-building operation for very precise flexo and gravure printing specifications. The scope of our projects is wide in terms of size and end-use application.

These range from integrating a printing or coating unit on to an existing machine, in order to add specialist features inline, i.e. for hygiene products, to building complete multi-station lottery ticket printing and converting lines.

Competitive edge with bespoke solutions

The need for unique solutions has become more acute in an industry where brand owners and retailers are desperate to find a niche. Standard machines can limit the possibilities, in terms of materials, processes and sequences.

Our team of engineers has helped scores of customers to find competitive edge with precision and bespoke printing solutions for many applications. In the search for the perfect solution, we know that the best part of innovation comes through working with the customer every step of the way.

The possibilities have no horizon!



Allan Sander
Sales Director,
TRESU Solutions

"Let's get started on a long-term, strategic partnership"



Frank Paulsen
Frank Paulsen
Key Account Manager,
TRESU KeyLine

2011: The launch of FlexiPrint IMW (Inline Mid Web)

2010: TRESU is acquired by Erhvervsinvest, a Danish financial investment company

2011: Release of patented Next Generation Seals
2011: TRESU China opens sales office in Shanghai

Research
The customer has a 'known process'
- we research to get to know it.
We check similar processes
- investigate thoroughly to be prepared optimally - in order to deliver, construct and ensure ROI.

Customisation
Accommodating our customers' needs with adaptable, tailor-made solutions. Whatever we do, we must be able to create optimal processing equipment.

Innovation
We're engaged and ready to take on new ideas. Always with our feet on the ground, seeking new ways of creative solutions, meeting our customers' demands.

Construction

Lean in-house construction and production facilities. Focus on quality in every detail. Know-how and routines - proven, tried and tested - according to current, international certifications and standards.

Development

Continuous improvement and optimisation of all processes and press parts. We ourselves come up with new products, enhancement proposals etc. and offer them to the market place. We are 'cross-innovative' throughout the business units, ensuring optimal results in the cooperation with our customers.



Morten Lind Støhs
Morten Lind Støhs
Technical Manager,
TRESU Group

2012: TRESU Concept line is introduced
2013: The F10 iCon coating control system is launched

2013: TRESU DigitalSolutions is successfully introduced to the digital printing world

KeyLine – means partnership for a lifetime...

At TRESU KeyLine, we're about much more than building a machine.

We're the building block for a long-term, continuous strategic partnership - a turnkey service that includes not merely building a machine, but constant maintenance and enhancement of the technology through complete life cycles and across multiple locations.

Leading edge

Through KeyLine, we ensure our customers remain at the leading edge of competition, with the specification that is adapted to the market requirements.

Supporting the world's largest carton board converter

TRESU KeyLine has been supporting the world's largest carton board converter of liquid dairy packaging products

for 21 years. During this time, we have custom-built 57 presses for plants on four continents, and co-developed unique components, exclusive to the client, that enhance performance and versatility.

Top of the line – across the board

As a result, the customer, which supplies billions of products each year, is capable of including the latest substrate and ink innovations into its packaging. That means the company can deliver to higher quality and productivity standards, while meeting ever more stringent health, safety and environmental standards.

The source of development and construction

Highly skilled, highly involved

The TRESU Development and Construction team consists of 30 highly skilled engineers with a keen focus on true innovation. We take on complete projects and handle the entire process flow. This is where everything is 'shaped' – and thanks to a strong involvement from our sales department, we remain an integral part of the ongoing process and dialogue with the customer.

Cooperating for continuous improvement

In our industry it is essential to cooperate with customers on all levels – meeting and understanding customers requirements, and truly evaluating their needs and possibilities.

TRESU Development and Construction continues to adapt and customise without compromising quality.

Understanding the machine-users

We know that achieving the best possible performance depends on understanding and accommodating the needs and concerns of our customers.

We don't just want TRESU technology to be the leanest, most productive experience in town - we strive to make it the safest, cleanest, easiest and most ergonomic too.

TRESU Development and Construction is constantly trying to reduce process and production cost by developing energy-saving methods - with a keen focus on the environment.



The Best Part of Innovation

R&D

TRESU Research and Development starts with you, the customer. Interaction is at the centre of our approach – working closely together, identifying problems and needs in order to optimise, innovate, and simplify production processes. We develop the complete package. We research the technology at hand, put together only the necessary components, and deliver creative, strong and lean solutions.

That is where we at TRESU make a difference.

Christian Fogh

Christian Fogh
Head of R&D,
TRESU Group

Design and Engineering

At TRESU Group we strive to maintain our leading position with constant investment in design and engineering. Together with our quality partners we are innovating 24 hours a day, driving growth for our customers and redefining what's possible.

"This is where we at TRESU make a difference!"

Project Management

We are with you every step of the way, managing and achieving your unique project goals and objectives, while honouring the scope, time, and budget involved.

LEAN, in-house production

At TRESU we continue to optimise all stages of production, constantly introducing new procedures to ensure efficient flow and perfect results. This approach has resulted in a modern factory with flexible practices, high productivity, and effective quality control, ensuring the same high standard every time a product leaves our factory – creating added value for our customers.

Customer Care

The TRESU Service Team offers all our customers the most complete and competent customer service and technical support, 24-hours a day, worldwide.

TRESUOnline

"Original spare parts and consumable products at highly competitive prices"



Steen Rasmussen

Steen Rasmussen
Back Office Manager
TRESU Group

2014: A new 23 colour printing machine is installed in USA
2014: A new 21 colour printing machine is installed in China

High quality,
original parts

Direct, fast, secure,
and convenient

Worldwide delivery

Order around the clock

Patented
TRESU products

Worldwide delivery

Save time and
money

Let's *pull together* *and drive* **INNOVATION!**

"TRESU Group
has production facilities
in Denmark, Lithuania and
the USA, sales subsidiaries in
Germany, Italy, China and
Japan, and an international
agency network providing
around-the-clock,
local support and
know-how"

2014: A new 24 colour printing machine is delivered to Pollard, USA



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