

# PAPER STORIES



Building  
Future  
Flow



*"Our vision is to be most wanted partner  
from the paper finishing area to the port."*

**Pekka Leino**  
MANAGING DIRECTOR  
RAUMASTER PAPER OY



## Building Future Flow

Working with Raumaster Paper means partnering with a reliable, flexible team with specific know-how in paper industry, built up over decades of experience. We supply solutions for paper and board finishing, pulp bale handling and automated warehouse and loading systems. Our systems are designed to ensure the highest operator and machine safety level, energy efficiency and maximum lifecycle.





# Automation makes machinery move

*At the Raumaster Paper Automation Department, multiple simultaneous projects are ongoing in both Europe and North America. Clients value the high quality and agile reaction capability of the conveniently sized company. Automation enhances factory functions, thereby helping build productivity.*

**J**oni Lahtonen, Head of Automation at Raumaster Paper Oy, joins a Teams-meeting from USA. On the other side of the Atlantic Ocean, a high-capacity wrapping line startup is currently taking place. In addition to the United States, the department also has ongoing projects throughout the following summer and autumn in countries such as Finland, Sweden, Czech Republic, and Turkey.

The Automation Department completes projects for the paper industry worldwide, handling practically all finishing processes from winders to warehousing. This includes conveyors, core cutters, winders, broke handling, wrapping lines, warehouses, grippers, and various loading and warehouse control systems.

– Simply put, the Automation department makes the

machinery move. We pilot the equipment, meaning our job is to get the engines running and the rolls moving, Lahtonen explains.

– Most of the time, the projects start with electrical engineering. Once the electrical work is done, we begin to complete the automation. The Automation Department is typically involved in projects throughout the life cycle, from preliminary planning to start up and service.

## Suitably large, appropriately agile

In its more than two decades of history, Raumaster Paper has stabilized its position among equipment manufacturers. The high quality is widely recognized, as positive references attest.

Of the projects completed over the years, Lahtonen most vividly remembers comprehensive projects such as one delivered to Sweden, which included wrapping equipment, core cutter and a large-scale conveying system. He also highlights the currently ongoing wrapping project in the US.

– The clients appreciate us as a reliable operator that has been in the market for a long time and knows both the field and the equipment and its requirements. We are a suitably large operator, yet simultaneously appropriately agile, which ensures fast reaction capability, says Lahtonen.

The Raumaster Paper Automation department employs a total of 18 professionals, each with their own areas of expertise. Some focus on electrical design, while others work on automation design. Most are specialized in specific product families, such as winders, wrapping lines, core cutters and conveyor lines.

– Everything is done in close cooperation. All our professionals have experience and a broad understanding of the equipment, and that's our key strength. We can send our own people to the construction sites of big projects, which means that we need less subcontracting work compared to other operators. This also means more in-depth knowledge of the work and the equipment is involved, and things progress faster.

## Continuous growth of automation

Lahtonen has worked for Raumaster Paper for more than 20 years. He has seen the industry change from a close perspective, and its direction seems to be increasingly towards automated solutions.

– In traditional industry, changes happen in a calmer cycle as compared to the world of IT, for example. In practical work, the development of remote working

*Personal safety and security are key factors in design and projects. The observation of standards is regulated, and we make sure that things are done right. Nowadays the customers also have requirements for cybersecurity.*

possibilities has had a significant impact. Where situations previously required travel, we are now able to manage certain things remotely through online meetings and video, Lahtonen says.

– The changes in equipment are not always big, but small improvements happen constantly. We've moved on from hydraulics to electric, and we're also moving on from pneumatics where possible. This is an important factor from the perspective of sustainable development.

Lahtonen trusts in the future. Continuous education and updating of personal knowledge, along with customer feedback and needs, provide continuous opportunities for development.

– The need for automation is steadily increasing. Mills compete for efficiency, and automation enables more reliable operations. Even though we've moved on from magazine and newspaper production to cardboard and packaging materials, the total amounts have not decreased.

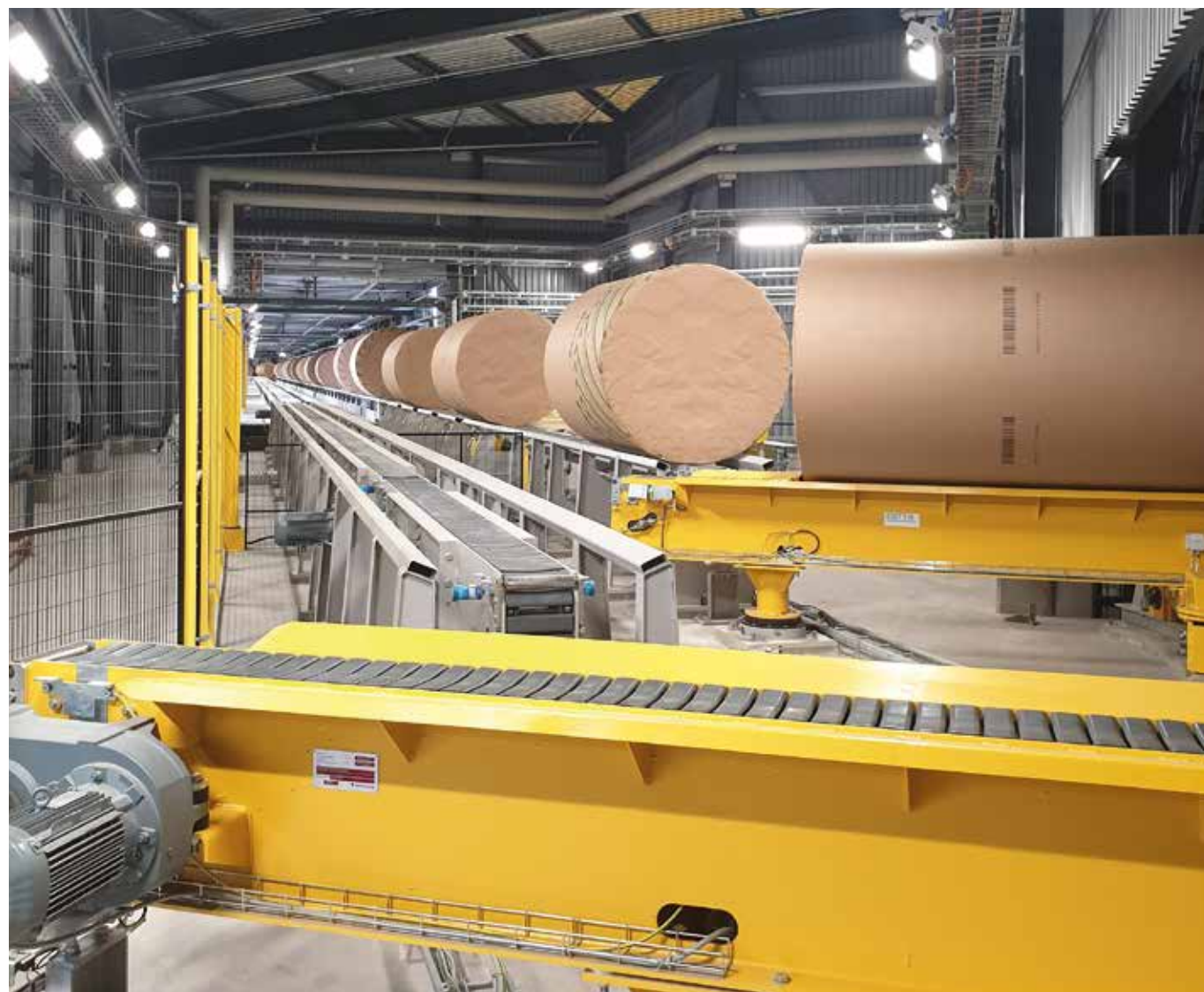
## In-house expertise ensures consistent quality

**OVER THE YEARS**, we have invested into in-house expertise. Nowadays, we are proud to say that we have exceptionally comprehensive knowhow and capacity in paper finishing automation. With our dedicated automation team we can ensure consistent quality throughout the project and also provide the same quality support after delivery.



**Joni Lahtonen**  
HEAD OF AUTOMATION  
RAUMASTER PAPER OY





## Roll Handling Safe and smooth

**W**ith decades of experience in layout planning, this is where Raumaster Paper's core competence lies. We produce tailored solutions with equipment adapting customers premises, production flow, maintenance routes and personnel safety.

Raumaster Paper's conveyor products may be integrated into all paper finishing systems and can be adapted to all roll sizes. Our vertical conveyors, upenders, stoppers, turntables and other devices are capable of handling all diameters, from the narrowest customer rolls until the largest and heaviest jumbo rolls.



*During over four decades in business, we have optimized our products to fulfill the highest demands.*



## Electrical lowering upender

Raumaster was among the first to introduce an electrical lowering upender which was patented in 2002. Until then, the only option to power heavy duty lifting equipment of that kind had been hydraulic drives. Applying counterweights as lifting and safety supports, Raumaster Paper was able to reduce the required amount of energy and achieve the same lifting force with a single electric gear motor. The same motor drives both, lowering and lifting functions.

Additionally to energy efficiency, the new equipment had other benefits as well, since it required a significantly smaller working envelope. Compared to conventional hydraulic devices, the space requirement was almost cut by a half. The innovation also benefited clamp truck handling, since two or more rolls can be piled up together.

Although electrical roll lifting and lowering equipment are the standard today, the patent brought conveyor systems to an entirely new level of sustainability. Raumaster Paper follows that path duly by continuous product development.



MM KOTKAMILLS BOARDS OY

## Roll handling and wrapping line delivered in less than a year

Raumaster Paper supplied roll handling and roll wrapping systems to MM Kotkamills' factory. The successful scheduling of the extensive project required the right kind of resources and smooth operation in all areas.

The project covers the roll handling equipment from the upper machine level to the vertical conveyor leading to the lower-level roll handling and a fully automated wrapping line. After wrapping, the rolls are labeled and marked, then lifted upright and transferred to the storage.

The extensive project was completed in less than a year. Staying on schedule required seamless collaboration with the customer throughout the project.

"FAT-testing the equipment in our own facilities before delivery speeds up the installation and commissioning in customers premises. Customer can also see the machinery in action."



**Kaarlo Talvinen**  
SALES MANAGER  
RAUMASTER PAPER OY





## Roll Wrapping

# Protecting your product

**R**aumaster Paper wrapping systems are modular and applicable for all roll sizes and capacities ranging from 30 to 180 rolls per hour. Radial and axial wrapping methods are possible applying plastic, stretch film, kraft or a combination of materials. Our solutions provide optimal protection against climatic, environmental and mechanical stress.

*All wrapping lines are assembled and tested in our workshops to ensure high quality and quick installation and start up.*



### Modulwrap® product line

Raumaster Paper Modulwrap® wrapping lines are tailored to fit all premises and specific requirements. Each system can be automated to the required level - from basic manual machines to fully automated wrapping lines including graphical user interfaces with comprehensive diagnostics and process monitoring systems.

	Modulwrap®
Method	Full web & overlap
Material	Kraft
Capacity	60 – 180 rph
Automation	Semi- to fully automated

### Master product line

All Master wrapping solutions can be easily integrated with existing roll handling systems, as complementary or bypass lines. When fully automated, Master Wrapping lines perform with a capacity of up to 80 rph featuring a. o. robotized header and label applications. The Master wrapping product family enables lower investment costs and reduces the need for floor space.

Spiralmaster	Swingmaster	Stretchmaster	Combimaster
Radial	Axial	Radial	Radial
Kraft	Stretch film	Stretch film	Kraft Stretch film
20–80 rph			
Semi- to fully automated			

### Operator-friendly user interfaces

Raumaster Paper interfaces are user-friendly and highly adaptable providing modern touch screens and a clear design. Our clients have praised the exceptional diagnostics providing valuable troubleshooting information. Our automation enables seamless communication with the mill system.







## Core Handling

# Market-leading accuracy

**R**aumaster Paper core cutters are state of the art providing the best cutting accuracy on the market. The patented CleanCut technique guarantees smooth core ends with extremely low dust formation. Our automatic core handling systems include entire process from parent core storage to accurate sized core infeed to the winder.

### Greener

- Option for waste management: core residual converted into fueling briquettes
- One single cutter for all core diameters (3"-12")

### Smarter

- Smooth core ends thanks to patented CleanCut technique
- Best accuracy on the market
- High functionality with easy-to-use interface
- Cutting and control parameters fully parameterized
- Comprehensive and clear trouble-shooting

### Safer

- Low level of maintenance – low blade replacement frequency when equipped with diamond blades
- Fire prevention system for dust filter



## Roll Splitting

# Recycling made operator-friendly

**T**he function of the roll splitter is to decrease waste material and contribute to the pulping process. Our cutting technique guarantees a constant infeed into the pulper which allows for smoother reprocessing with less energy consumption.

It also protects the cores from damage thus facilitating re-use of cores, which leads to savings in raw material. The automatic core removal adds considerably to operator safety. We also offer solutions for the re-use of plugs and wrapping material.

*Visualized device page provides helpful sequence and troubleshooting data. If required, roll identification may be included into the MES link.*





## Winders Windmaster - by Raumaster Paper

**W**indmaster is our new generation two-drum slitting winder embodying state-of-the-art engineering, functionality and a modern design. Its modular concept allows for a high level of adaptability to all dimen-

sions, roll widths, paper grades and the desired degree of automation and equipment. Thanks to a stable and robust design, operation is smooth with little vibration producing excellent roll quality.

### Raumaster Paper Windmaster Winder Product Family: Guaranteed Performance

**THE WINDMASTER PRODUCT FAMILY**, released a few years ago, has been well received in the market, fully achieving the high targets set for capacity, safety, and quality. The modular structure of the winders has proven to be a very functional and cost-effective solution for both new winder deliveries and rebuilds. The modularity helps minimize installation and commissioning time and costs. The winders are assembled and FAT tested at Raumaster Paper's new assembly hall in Pori, Finland, where FAT testing can also be performed with the customer's material.

Raumaster Paper delivered a highly automated winder to the Melitta Group's mill in Minden, Germany. The winder is designed to produce narrow rolls of filter paper, featuring specially automated functions for core feeding, end gluing and roll weighing. One of the main criteria for the new

winder was ensuring operator safety.

Raumaster Paper's winder team integrated several special functions into Melitta's winder; an integrated web inspection system, efficient dust extraction and an edge trim handling system. To fit the limited space, a special scale system was integrated before roll releasing. The automatic core in-feed was designed specifically for narrow cores.



**Tommi Torkkeli**  
SALES MANAGER  
RAUMASTER PAPER OY

WATCH VIDEO  
(YOUTUBE)



## Rewinders Tiny footprint with high convertibility

Raumaster Paper applies the modular Windmaster -concept also to its doctor winders, which makes it highly convertible for desired equipment and functions. As this rewinder is able to pick up rolls from the floor, it can be installed on floor-level without a pit. One of its most striking features is, however, its tiny footprint, which makes the rewinder especially interesting for modernization projects with limited production space.



## Rebuilds & Modernization Keeping the pace

Modernizations and rebuilds enable mills to increase productivity and efficiency and – as its best – achieve significant capacity increase. Raumaster Paper has considerable experience in modernization works. Our expertise covers the whole paper finishing product assortment, irrespective of their original manufacturer. Thanks to our own comprehensive product offering we are able to deliver solutions beneficial for your entire paper finishing process.

### We offer:

- partial or entire system rebuilds incl. engineering
- integration of new equipment (mechanical and automation)
- safety upgrades
- increase of level of automation
- optimization of processes and capacity
- removal of bottlenecks and sources of roll defects
- system and product adaptation (eg. growing roll size)

### Increasing Winder capacity, quality and safety

**ONE OF RAUMASTER PAPER'S** recent Winder deliveries was to Smurfit Westrock's Piteå mill in Sweden. The delivery included a new windup section, automatic set change equipment including automatic core feeder with gluing, dual spreader, traversing end gluing equipment and safety upgrade. The winder is designed to web width's up to 6.6 meters, and the production speed for Kraftliner grades is 2500 meters per minute.







## Storage & Mastergrip Solutions

# Sophisticated warehousing

**R**aumaster Paper offers fully automated state-of-the-art warehouse systems covering everything from the roll arriving into the storage until automatic truck loading. The core elements of our modern storage solutions

are our patented **Mastergrip®** roll crane and the flexible **Raumaster Paper Warehouse Management System RWMS**. Combined with our sophisticated conveyor systems, they offer the full package, everything you need for warehousing.

### Introduction to RWMS

#### RWMS can control:

- Cranes
- Conveyors
- Automated Guided Vehicles
- Clamp trucks with mobile terminals
- Other automated handling equipment
- Locations / orders / articles: amount of controlled units practically unlimited

Raumaster Warehouse Management System offers the key to supply chain optimization as it controls the storage roll flow 24h/7d. The innovative modular software is fully expendable. **Its features are:**

- Intelligent and flexible stock placement and routing system
- Data driven (parameters, rules)
- User-friendly graphical interfaces
- Easily customized
- Truck loading
- Link to MES



## Mastergrip®

# Showpiece of modern warehousing

WATCH VIDEO  
(YOUTUBE)



#### Greener

- No hydraulics
- Electrically driven
- Tiny power consumption equaling less than 10% of traditional equipment
- Gripper weighs considerably less than conventional products
- Optimized power transmission

#### Smarter

- Compatible with already existing cranes
- Adaptable for paper, board and tissue
- Handles singles and sets, wrapped or unwrapped
- Handles all roll widths and diameters
- No roll deformation
- Higher roll piles

#### Safer

- Lasting grip even during power cuts
- No need for power back up arrangements
- Gripping force measured by load pin sensors
- Object detectors for collision preventions
- Low maintenance

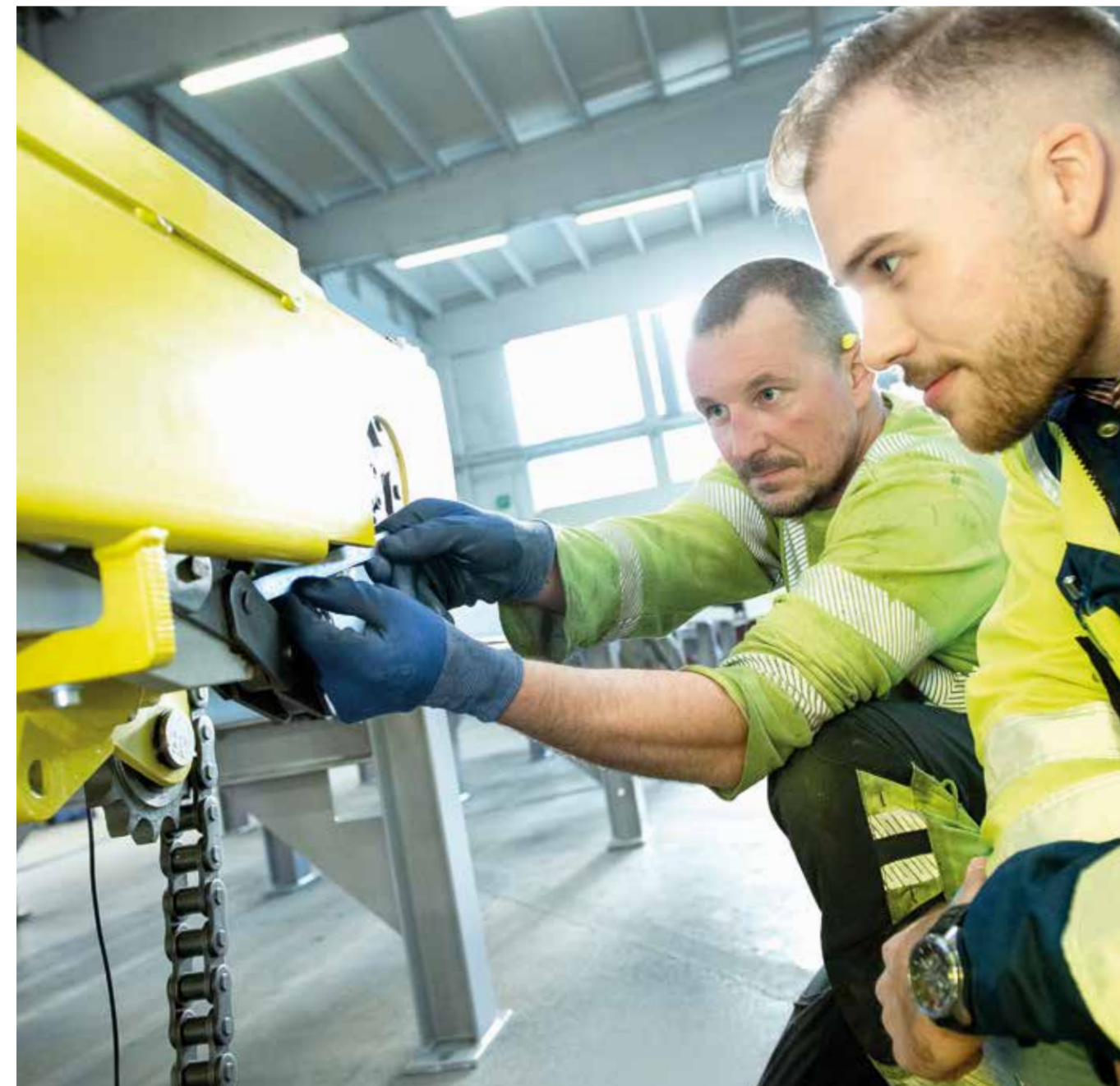




## Automatic loading and unloading **Tailor-made for your cargo**

**B**ased on decades of experience on conveying systems, the Raumaster Paper automatic loading systems have excelled in roll-, pulp bale- and timber handling. The systems can be modified to suit the customers cargo and transportation, whether it's trucks, trains or

containers. The automatic loading systems make the logistics safer for operators, lower the emissions and the energy consumption of the loading process and enable continuous operations.



## Improving safety, quality and environment

Customer ordered fully automated lumber truck loading system. The delivery included conveying systems for finished sawn lumber packages from the production line, load forming and the automatic loading system to the truck trailer.

Before loading was done with forklifts, now the loading area is personnel free zone. The truck driver stays in the cabin during the automatic loading. The load is optimized for the pickup truck so there are no damages to the cargo in the process.

The automated loading system improved the factory's environmental efficiency, occupational and product safety and uninterrupted operations.



**Ville Vuori**  
SALES MANAGER  
RAUMASTER PAPER OY

## Service **Lifecycle partnership**

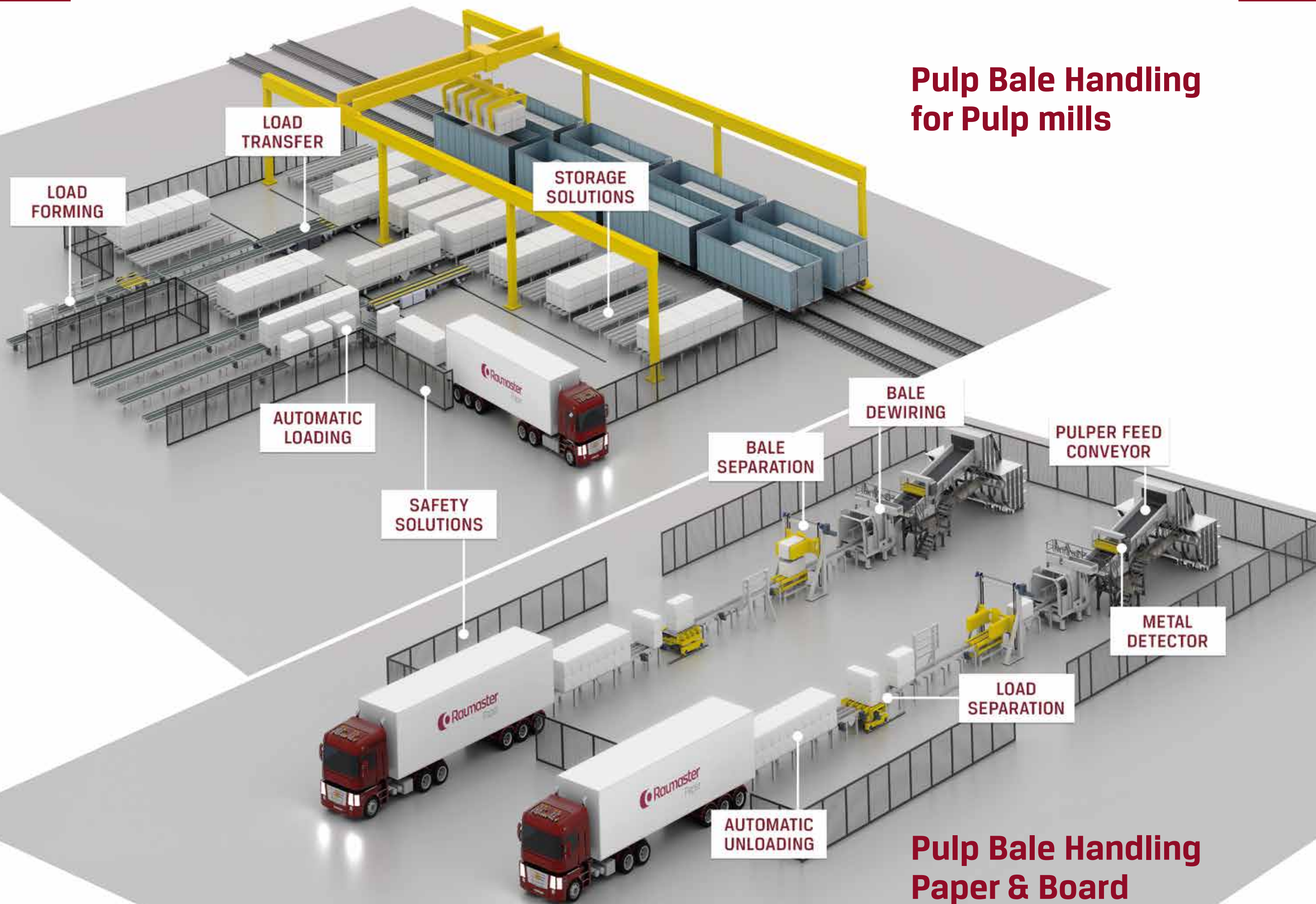
**S**uccessful equipment delivery is only the beginning. To help our customers get the best out of our products, we remain at their service with any kind of assistance needed: technical and operational support, trainings, regular service visits or complete cooperation programs meeting the requirements of each customer. Extension and optimization of the lifecycle of your product is our main objective.

### The cornerstones of Raumaster Paper Customer Care are:

- Tailored service partnership
- Mill audits
- Spare parts logistics
- Preventive maintenance
- IoT data mining systems
- Upgrades and retrofit programs



## Pulp Bale Handling for Pulp mills



## Pulp Bale Handling Paper & Board Industry



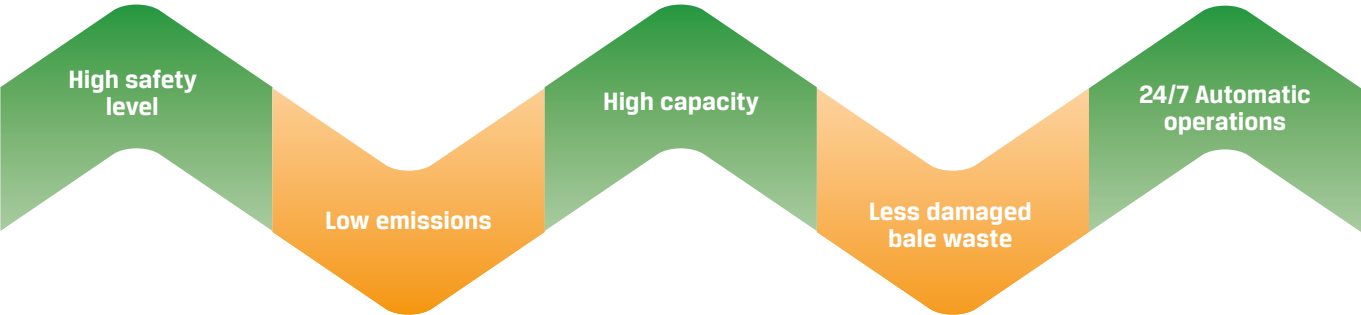


## Pulp Bale handling for Pulp mill

# Step up the load transfer

**R**aumaster Paper bale handling is designed to preserve the pulp bale form throughout the transit process. Fully automated systems form bale loads according to the transportation requirements. Loads can be transferred to storage or to shipment uninterruptedly 24/7. These high-capacity systems do not damage the bales during handling and keep the personnel safe from loading areas.

### Raumaster Paper bale handling benefits



## Pulp Bale handling for Paper & Board Industry

# Streamline production

**R**aumaster Paper systems for pulper infeed include the entire process from unloading the pulp bales to feeding sheets to the pulper. Fully automated systems consist of conveying, load separation and bale stack unloading. Individual bales are conveyed through dewiring station and guided to the pulper feed conveyor. Automatic system also ensures that there are no impurities, such as metal wire pieces, conveyed to the pulper.



WATCH OUR VIDEO ON THE KEMI BOARD MILL PROJECT ON YOUTUBE!



## Enhanced, Safe Production and Streamlined Logistics

**RAUMASTER PAPER DELIVERED** an automated bale handling system, a broke roll line for pulper in-feed and an automated loading system for the Metsä Group Kemi board mill. The automated bale handling system is a new concept for Raumaster Paper, refined based on roll handling systems. The broke roll line includes a de-wrapping station, a conveyor system and a broke roll cutter.

- The fully automated bale handling system only leave staff with supervision of operations
- Truck traffic between the mill and the nearby Ajos harbor enabled fully automated truck loading
- The product delivery streamlines the mill's logistics
- The pulp mill and automated loading system enhance the mill's production and make operations safer



**Matias Lehtinen**  
PROJECT MANAGER  
RAUMASTER PAPER OY



# Every project is a safety project

As the requirements of machine safety standards increase, customers' equipment also requires updating or rebuilding. Especially whenever an old machine is modified, it is also strongly associated with upgrading the safety level. In the industry, all equipment cannot be made completely safe, but the safety level is upgraded as high as current technical solutions allow. Raumaster Paper's team also makes safety level upgrades and rebuilds for other manufacturers' equipment.

Safety upgrade always means that operators have to learn new working methods to operate with new safety devices. Therefore, we want to ensure that the new features are understood by allocating time for personnel training.

*For us, safety and sustainability is not only a trend, but built into our culture and processes and linked to every product.*



## Upgrading winder safety

The customer ordered safety upgrade of the winder area. The winder was structurally very open, allowing access to areas such as the unwinding area during the process. Many parts of the operating device were considered unsafe.

The delivery included safety fences around the machine and lockable safety doors. Safety devices were added to the machine movements inside the fenced safety area. The devices stop the movements if personnel enter the safety area. The equipment had a safety logic, which was combined with the control of new safety functions with separate decentralization.

During the commissioning, operators were trained in the use of the new safety devices, and the revised process

was practiced during practical work shifts. In addition to the safety upgrade, the project involved rebuilding the roll releasing device, which was tailor-made for the winder specifications.



**Juha Sunttila**  
SERVICE MANAGER  
RAUMASTER PAPER

# Sustainability Maximizing positive impact

Sustainability is not only Safety and Environment. It is about making business that benefits all: our clients, partners, employees, and the whole community. We are continuously improving our processes and products to

be a leading partner, business and employer. We want to maximize the positive impact that we have on our whole operational environment.

## Greener

Products & processes designed for maximum lifecycle and optimized energy consumption

- Environmental monitoring throughout the whole supply chain
- Recycling of equipment and parts
- Minimizing waste generation
- Innovative engineering

## Smarter

### Adding value to

#### Customers

Customized turn-key systems, initiative project management, lifecycle services

#### Employees

Enhancing occupational health & wellbeing, promoting safety & participation, low hierarchy

#### Partners

Long-term partnership, continuous improvement of own performance, constructive quality management & process control

#### Community

Social responsibility, local cooperation, reliable employment

## Safer

- Products delivered with complete safety systems
- High level of automation
- Training and long-term support
- Comprehensive risk assessments
- Highly skilled and motivated personnel
- Employee participation and transparency

## Our Safety Standards are World-Class

Raumaster Paper is proud to be part of the Finnish Institute of Occupational Health's Zero Accidents Forum. The company was among the 122 workplaces that received the Institute's safety level classification in 2024. This classification is awarded to member workplaces that have invested in the continuous improvement of occupational safety, with criteria developed in collaboration with Forum members. Raumaster Paper achieved the highest-level classification, 'World Leader,' simultaneously reaching the goal of zero accidents.

"It is important that we have succeeded in achieving the goals we set together. We always approach safety issues from the perspective of our customers, subcontractors, and our own staff. We continue to work to improve safety and aim to be a leading promoter of occupational health and safety now and in the future," says **Pekka Leino**, CEO of Raumaster Paper Oy.

One of the recent developments at Raumaster Paper has been the introduction of an electronic recording system for personal risk assessments. Personnel are requested to complete their site and workshop assessments via a cell phone application that feeds the data into the company's information system.

Raumaster Paper has repeatedly received the Institute's safety classification and aims to continuously improve and develop its safety culture. The Zero Accidents Forum has more than 560 company members nationwide, with the goal of uniting Finnish workplaces in the cause of occupational health and safety and working together for continued development.





## Home Office

### Raumaster Paper Oy

Isometsäntie 4  
26100 RAUMA  
FINLAND

tel. +358 2 8377 4400  
[www.raumasterpaper.fi](http://www.raumasterpaper.fi)

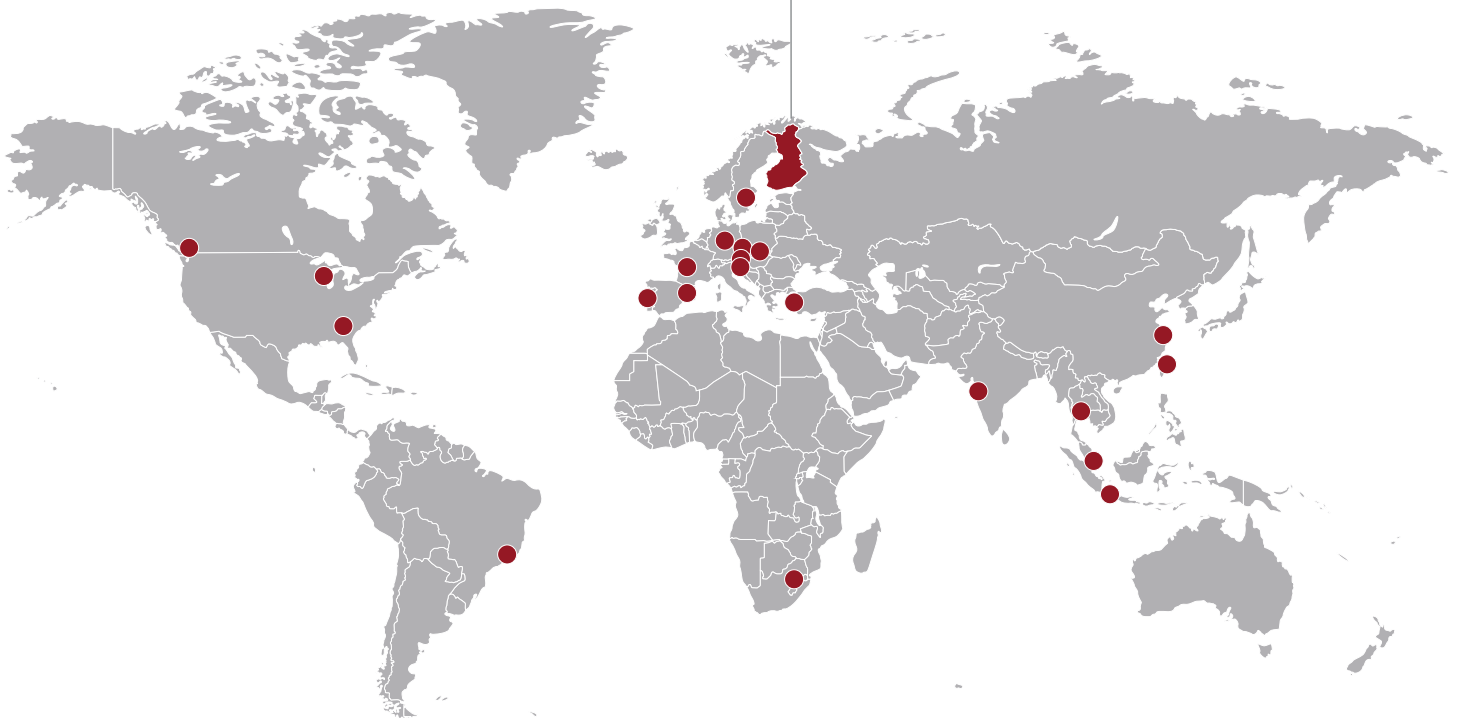


## Production & Testing Facilities

### Raumaster Paper Oy

Lasitie 10 A  
29570 SÖÖRMARKKU  
FINLAND

## Global Contacts



# Building Future Flow

 **Raumaster**  
Paper