FINBOW

GENUINE BOWHOW

FINBOW CUSTOMER MAGAZINE

2024 – 2025

Celebrating Genuine BowHow

You are holding the very first issue of our *Genuine BowHow* magazine! Within these 16 pages you'll find all the latest news and updates from Finbow, your trusted partner for all spreader roll services and needs.

FINBOW'S founder **Tuure Uusitalo** wrote a letter to our customers in November 1987 to celebrate the milestone of 100 delivered Finbow spreader rolls. He wanted to thank our customers for their trust in Finbow's revolutionary bowed design – the benefits of which were largely unproven at the time.

Tuure's message was simple: we are nothing without You. He wrote about listening to our customers' needs and experiences to accumulate know-how and improve our products to perform even better in any environment. He called this process *gathering immaterial capital for the future.*

Well, the future is now. 37 years and over 3,000 delivered spreader rolls later, we are still firm believers in Tuure's guiding principles and continue to listen to our customers and partners with a keen ear.

Manufactured here in Finland, every Finbow roll is designed individually to match your process and improve production. The experience we have accumulated over the years guarantees that our solutions continue to meet the demands of the ever-evolving landscape of the pulp and paper industry.

This is our promise: We will continue to provide individual service and advanced spreader rolls to help make your production more efficient and reliable.

How are we going to do it? What does the future of spreader rolls look like? Hopefully this magazine will answer all these questions and more. You'll learn about our product development, new innovations, plus our spreader roll veterans, some of whom have been with us providing Genuine BowHow since the dawn of Finbow.

Yours,
Joonas Tammisto
Chairman of the Board

FINBOW | GENUINE BOWHOW

Genuine BowHow
Finbow Customer Magazine

Editor-in-chief
Joonas Tammisto
+358 10 423 8703
joonas.tammisto@finbow.fi

Design
Unfair Lean Marketing Oy

Print
Eräsalon Kirjapaino Oy

Cover image
Riku Komi

Genuine BowHow ——— Since 1985

Genius at work

SmartBow™ – Intelligent spreader roll for proactive maintenance

DO YOU KNOW what's happening inside your roll? The SmartBow is a remotely readable and intelligent spreader roll that enables fully proactive maintenance.

The patented SmartBow automatically identifies conditions that lead to problems and shutdowns. It monitors the roll speed and prevents water-caused bearing defects by monitoring the internal moisture, and automating the end-of-roll greasing.

Features
- Roll temperature monitoring
- Internal moisture control
- Electronic bow direction indication and control
- Roll specific speed indication with alarms for critical speeds
- Automated end sealing grease addition

Benefits
- Increased running time
- Predictable removal for service
- Advanced data collection for process development
- Decreased running cost per hour
- Safe reading of bow direction

Finbow+ gives new life to your spreader rolls

TEXT UNFAIR | **IMAGES** ARTTU RANTAKÄRKKÄ AND FINBOW

Avoiding a single shutdown can save the cost of a new spreader roll. With the Finbow+ maintenance you can minimize downtime, increase service intervals, and get more performance out of your rolls.

Finbow's pre-emptive and customer focused **Finbow+** maintenance service can give new life to spreader rolls, whether made by Finbow or other manufacturers. Our patented solutions enable more running metres for the roll and can extend maintenance intervals by several years while avoiding unnecessary shutdowns. Finbow's fast and tailored maintenance service can help you get your production up and running in record speed.

Addressing problems with your spreader rolls before they become actual defects and cause shutdowns can save valuable time and money. Investing in the maintenance of your current equipment is also an important step in making paper and pulp production more sustainable.

A key aspect of the Finbow+ process is meticulous attention to quality assurance. We take special care in considering the operating environments and features of your process when planning and performing maintenance. The roll's performance is always tested by simulating the actual drive conditions as closely as possible. Our experts are always looking to find ways for improving your roll's overall performance, and as an assurance of Finbow+ quality, a 24/36-month guarantee is offered for all serviced rolls.

Tailored service with customer input
When handling, disassembling, servicing, upgrading, and assembling a spreader roll, customer input is vital in determining the right actions for optimizing performance and making the maintenance cost-effective.

"Precise information on the running speed ranges, temperatures and humidity conditions are instrumental. We treat all spreader rolls as individuals and take their operating environments into account when choosing the required solutions," Finbow's long-time Sales Manager **Kalle Kylkilahti** says.

> It is important to us that our customers get the best possible performance out of our products.

Finbow's advantage lies in our expert staff and state-of-the-art equipment for making precise measurements of e.g., anomalies in spool shapes. Customers receive illustrated reports of the evaluations and measurements done during dismantling. After this, decisions concerning the maintenance are made together with the customer, based on facts and precise measurements.

Even if the roll does not require thorough maintenance, dirt or stickies on the roll's surface can still cause issues in paper or pulp quality. Finbow offers a wide variety of coatings material and grooving options for preventing dirt and corrosion. Our greasing, moisture removing and cooling solutions are designed to meet any heat and moisture resistance specifications.

Devoted partnership Partnership with Finbow doesn't end with placing a service order or delivering a roll.

"We want to provide our customers support and training throughout the entire lifespan of a roll. It is important to us that our customers get the best possible performance out of our products. Thanks to our large storage capacities, we always have parts available and have been able to provide premium service even during recent global crises," Kalle Kylkilahti says.

Converting your production line to produce another product doesn't necessarily mean purchasing entirely new spreader rolls. Finbow's own design department has a long and varied experience in modernizing existing spreader rolls to match new specifications. An upgrade from rubber sleeve rolls to rolls with steel spools is often recommended. The maintenance cost of a steel roll considerably lower and service intervals are two to three times longer when compared to rubber rolls.

"One of our European customers had ordered a spreader roll from a competitor, and the roll's Teflon coating had worn out quickly. We coated the roll with our specially designed non-stick coating that enables the customer to run the roll two to three times longer without cleaning. Additionally, the cleaning of the roll is now significantly easier," Kylkilahti illustrates. ■

Export Director Egor Nikolaev (left) and CEO Arttu Laitinen believe that preventive maintenance is a key aspect of shaping a more sustainable industry.

Towards a sustainable industrial future

We are working towards becoming a carbon-neutral company by 2030 and halving our current emission levels by 2025.

TEXT UNFAIR | **IMAGE** LOGISTIC TKT SYSTEMS

SUSTAINABILITY AND responsibility are not just pretty words, bold percentages, and fancy pie charts on a company website. Finbow's spreader roll experts are continuously looking for new ways to make our operations environmentally sustainable and completely carbon-neutral by 2030.

"We measure the effect of our actions with tools designed by the Finnish Environment Institute and make everyday choices that generate a positive environmental impact. We are committed to the EU climate policy that aims to make the European Union carbon-neutral by 2050," says Finbow's CEO **Arttu Laitinen**.

Partnerships rooted in similar values

With over 90 percent of Finbow's direct emissions coming from electricity, we are already in the process of converting all our facilities to using ecological EPD certified energy. Sustainability is also illustrated in Finbow's policy to primarily partner with companies that share the company's sustainable values.

"Finbow favors suppliers that operate with similar principles as us. Machines sourced from Europe are more sustainable as they do not require long deliveries across oceans to Finland. Of course, we also deliver and source equipment globally, and minimize environmental impact by using low-emission cargo options and combining deliveries," Arttu Laitinen illustrates.

More performance from old equipment

Getting more performance out of old parts and spreader rolls instead of replacing them with new machinery is vital in creating a sustainable industrial landscape. To support this goal, Finbow chooses only raw materials that are fully recyclable and reusable.

"Preventive maintenance enables cost-effective and environmentally sustainable operations for our customers. A product does not have to be broken to receive service that ensures premium performance also in the future," Laitinen says.

Finbow wants to provide customers with energy-efficient and high-performance maintenance options. If a spreader roll is nearing the end of its lifecycle, maintenance can be a lengthy process – in these cases, manufacturing a new spreader roll might be a more time-efficient solution.

"We want to work together with our customers. We are always open about the projected lifespan of a spreader roll and will inform customers when it is time to invest in a new one – overall performance is key," Laitinen sums up. ■

Quality is born from a love for the trade

TEXT UNFAIR | **IMAGES** RIKU KOMI AND FINBOW

Seasoned professionals Petri Nieminen and Aulis Silvala make spreader rolls that endure the test of time.

Finbow has shipped thousands of spreader rolls worldwide, so it's no wonder that not every roll leaves a lasting memory for its maker. However, a while ago our service department received a roll that immediately grabbed **Petri Nieminen's** attention.

"I started working at Finbow in 1992 as a young mechanic, and that roll was one of the first that I've ever assembled. It has been in operation at our client's location in Eastern Europe for over 30 years without any significant issues, the bearings and greasing were still in great shape."

A 30-year-old spreader roll is still no rarity, as Finbow products are known for their durability and reliable operation. There are many veteran Finbow spreader rolls in production around the world that have been assembled by Finbow's veteran experts.

Work teaches its doer

Finbow started its operations in 1985. Designing and assembling spreader rolls was not taught in any school at the time – and still isn't. This is why Finbow's seasoned professionals have learned the art of roll manufacturing through practice.

"The work has truly taught its doer. Our crew has always been united by a will to study and continuously improve our own processes. It is a matter of professional honor to provide a good product, and this is why we always dig deep to find the cause of every malfunction. I always do my work with love and passion," Petri says.

Foreman **Aulis Silvala** arrived at Finbow in 1995. Since then, the pulp and paper industry has evolved, but the fundamental work has remained the same.

"We've learned so much over the years. At the same time, spreader roll sizes and driving speeds have increased, and the production pace has accelerated. However, we have been able to devise technical solutions early on that also meet the requirements of today's fast machines," Aulis illustrates.

Digital technology has opened new possibilities especially for spreader roll diagnostics. Even the smallest anomalies in spool shapes and bearing housings can be detected precisely through 3D measuring. In addition, Finbow also tests every roll's performance as close to running conditions as possible.

Passing on the BowHow

The secret to Finbow spreader rolls' longevity lies in the Genuine BowHow accumulated over the decades. We have also gained broad experience working with spreader rolls by different manufacturers – Finbow has serviced rolls by virtually every roll brand in the world.

"We have an incredibly close-knit crew, with a combined work experience likely totaling hundreds of years. It's also great that we attract new young talents who want to learn the tricks of the trade and are willing to listen to the old folks' stories and ramblings," Aulis says.

To wrap things up, a riddle: What do a spreader roll mechanic and a professional NHL hockey player have in common?"

"Of course, the fact that both have turned their beloved hobby into a job for which they also get paid!" Petri Nieminen laughs. ■

Petri and Aulis engaging in a game of Finbow Ball, our very own company sport, in the 1990s.

Modular thinking guides our product development

How can the best become even better? This is something our R&D department is tirelessly trying to find out.

TEXT UNFAIR | **IMAGES** LOGISTIC TKT SYSTEMS AND ARTTU RANTAKÄRKKÄ

FOR THE LAST four decades, our mission has been to provide solutions for improving our customers' production. The secret to our success is continuous product development that is firmly rooted in our experience of different operating environments. A part of our service model is performing detailed analysis on damaged rolls to learn how similar issues could be prevented in the future.

Here are some of the things we are currently working on to ensure that our rolls provide premium performance also in the future.

Bearings

Bearings are the most critical component in any spreader roll structure. Providing reliable performance requires a bearing design that meets the requirements of the roll's operating environment.

"We have extensive experience in designing bearing solutions that stand the test of time and different conditions. We are still continuously improving our designs by analyzing 3D measurement data on bearing wear and finding new greasing solutions for different environments," Finbow's lead development engineer **Jesse Laakso** says.

Our innovative SmartBow (see also page 3) is also being continuously developed. We are currently researching solutions that enable the SmartBow to be used in hot environments of up to 140° Celsius, new sensors for real-time analysis of the bow's position, and solutions for remote reading and interference protection.

Couplings & Roll Ends

Moisture control is key in ensuring long service life for spreader rolls. Finbow rolls feature patented sealed couplings that are completely dirt and moisture proof and enable the roll to be used in wet positions. Our moisture control system eliminates the moisture inside the roll, which increases the lifecycle of the roll and ensures reliability.

We are also developing new sealing options and automatic greasing solutions to ensure that moisture cannot enter the roll from the ends of the shell.

Modular Design

Our latest spreader roll innovation is a new modular base design that makes customizing each spreader roll more straightforward. A multi-use basic roll design can be easily altered according to customer specifications with different threading/drive pulleys and mounting solutions.

"Modular design thinking enables mass tailoring, generates cost savings, and speeds up delivery times. A uniform design also makes spare part deliveries considerably faster," Jesse Laakso illustrates.

Vibration control

Vibration control is essential in all rolls, but its importance is especially highlighted in rolls with high operating speeds. We are currently developing new tools for measuring and specifying vibrations already in the design phase. This way we can predict how the roll will behave in real production conditions and prevent possible malfunctions and unnecessary shutdowns even better. ■

> "Modular design thinking enables mass tailoring, generates cost savings, and speeds up delivery times. A uniform design also makes spare part deliveries considerably faster."

Spreader Rolls for Every Position

WET END

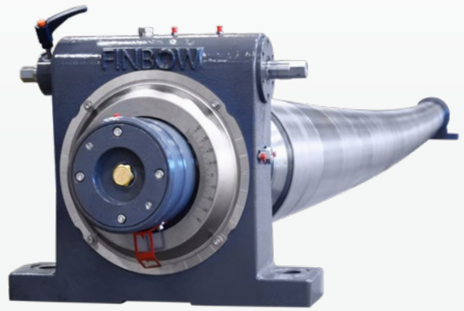
W Series

The W Series products are designed for felt and wire spreading in the most demanding wet end applications.

TECHNICAL INFORMATION

Target roll types and applications	Felt and wire spreader rolls
Material	AISI 316
Diameter	up to 450 mm | 17.7 in
Max. length	13,000 mm | 512 in
Max. speed	2,000 m/min | 6500 FPM

Premium water resistance with multiphase sealing system and Finbow couplings. High-precision stainless steel segments together with special hard chrome coating for **superior wear resistance**.



OPTIONAL FEATURES

- Finbow designed moisture removal system
- SmartBow for proactive maintenance
- Stainless steel brackets for extremely harsh conditions
- Ceramic ball bearings
- Automatic lubrication units to ensure end sealing grease application

DRY END

DN Series

The DN Series products are designed for moist or dry applications. In addition, we offer spreader roll solutions that can withstand high temperatures and protect from stickies.

TECHNICAL INFORMATION

Target roll types and applications	For finishing applications: coater, sizer, calender, reel
Material	Carbon steel
Surface	Micro-Venta or spiral groove
Coating	Chrome plated or non-stick coatings
Diameter	150–450 mm | 5.9–17.7 in
Max. length	13,000 mm | 512 in
Max. speed	2,000 m/min | 6500 FPM

OPTIONAL FEATURE: HSD DRIVE

- Energy efficient, maintenance-free
- Easy and reliable
- No need for belt drive
- Permanent magnet electrical motor
- Max. speed 3000 m/min \| 9800 FPM
- Precise speed
- Bearingless motor, no lubrication needed

PULP DRYING

PDM Series

The PDM Series products are designed for felt and web spreading applications in pulp drying process where protection against chemicals and water is critical to ensure reliable operation.

TECHNICAL INFORMATION

Material	AISI 316
Felt spreading	No drive
PDM-DD	Spreader roll with direct drive for web spreading
Diameter	190–450 mm | 7.5–17.7 in
Max. length	13,000 mm | 512 in

Premium water resistance with multiphase sealing system and Finbow couplings. High-precision stainless steel segments together with special hard chrome coating for **superior wear resistance**.

OPTIONAL FEATURES

- Finbow designed moisture removal system
- SmartBow for preventive maintenance
- Stainless steel brackets for extremely harsh conditions
- Ceramic ball bearings

SUPERCALENDER

SC Fly roll / Take-out roll

For all supercalenders.

TECHNICAL INFORMATION

Material	Steel shell
Surface	Grooved
Coatings	Available
Diameter	240, 314, 360 mm | 9.5, 12.4, 14.2 in Other diameters on request

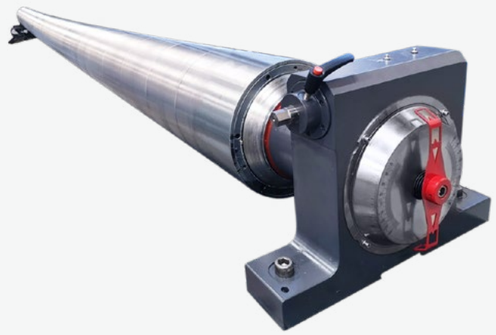
WINDER

SL Series

For slitter winder applications. Finbow spreader rolls reduce winder broke and improve separation of reels after slitting. Wide range of sizes and speeds. Spreader rolls for dual bowed spreading.

TECHNICAL INFORMATION

Material	Carbon steel
Surface	Micro-Venta or spiral groove
Diameter	150–415 mm | 5.9–16.3 in
Max. length	13,000 mm | 512 in
Coatings	Chrome plated, wolfram carbide
Max. speed	3,000 m/min | 9800 FPM



Finbow NonStick T

Durable coating for demanding use, premium non-stick properties & excellent wear resistance

A COMBINATION of Wolfram carbide and Teflon, the Finbow NonStick T coating is specially designed for spreader rolls in abrasive conditions. The double-layer coating provides excellent wear resistance and premium non-stick properties.

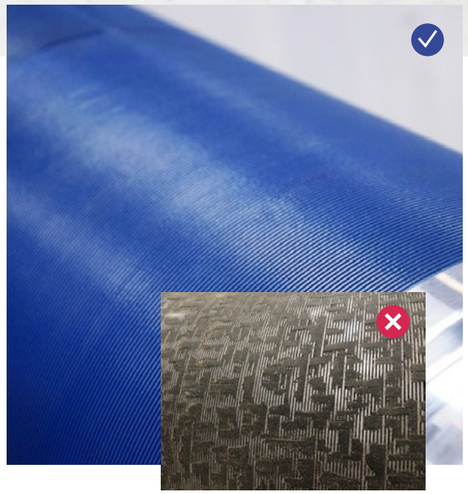
TARGET ROLL TYPES AND APPLICATION

Coater and sizer area spreader rolls

All positions where stickies cause problems

TECHNICAL INFORMATION

Materials	Wolfram carbide and Teflon
Colors	Grey, black, blue, green
Hardness	1200 HV
Coating thickness	100–200 µm
Max. operating temperature	260 °C | 500 °F (continuous)
Friction	0,10–0,25



KEY BENEFITS

- Cleaner rolls, less breaks
- Easier cleaning and maintenance
- Longer running life
- Premium resistance for wear

HOW CAN WE HELP YOU?

Contact us

Egor Nikolaev

Export Director
+358 (0)40 514 1667
egor.nikolaev@finbow.fi

International customers

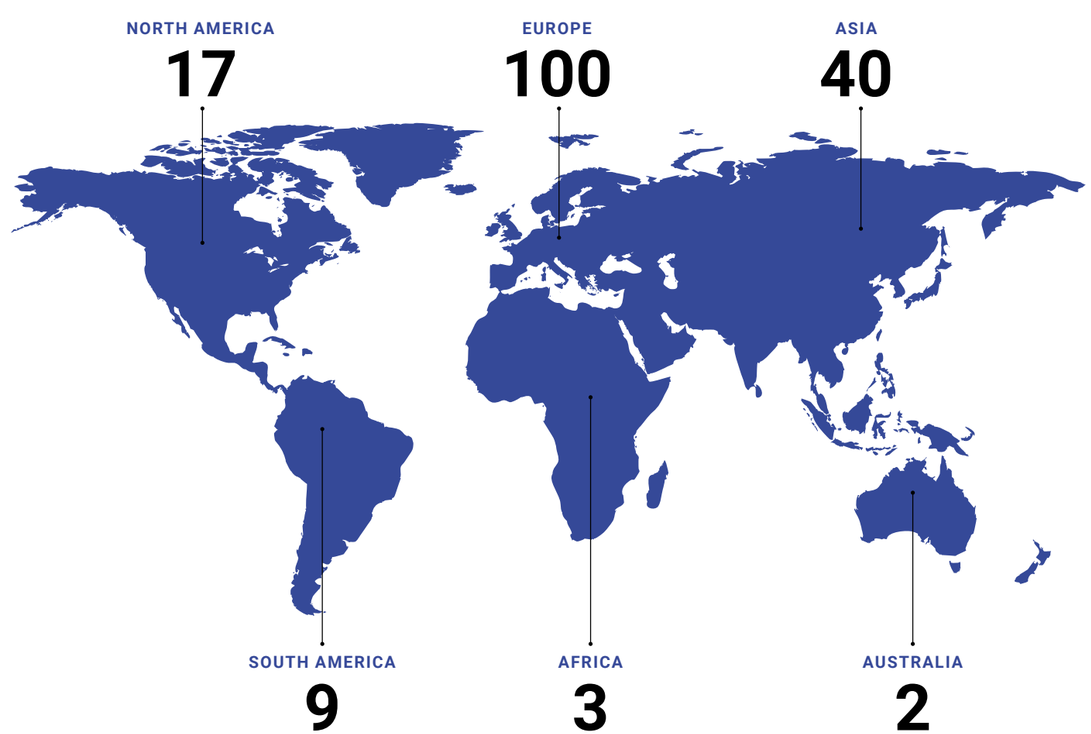
Antti Kovero

Sales Manager
+358 (0)40 7323 592
antti.kovero@finbow.fi

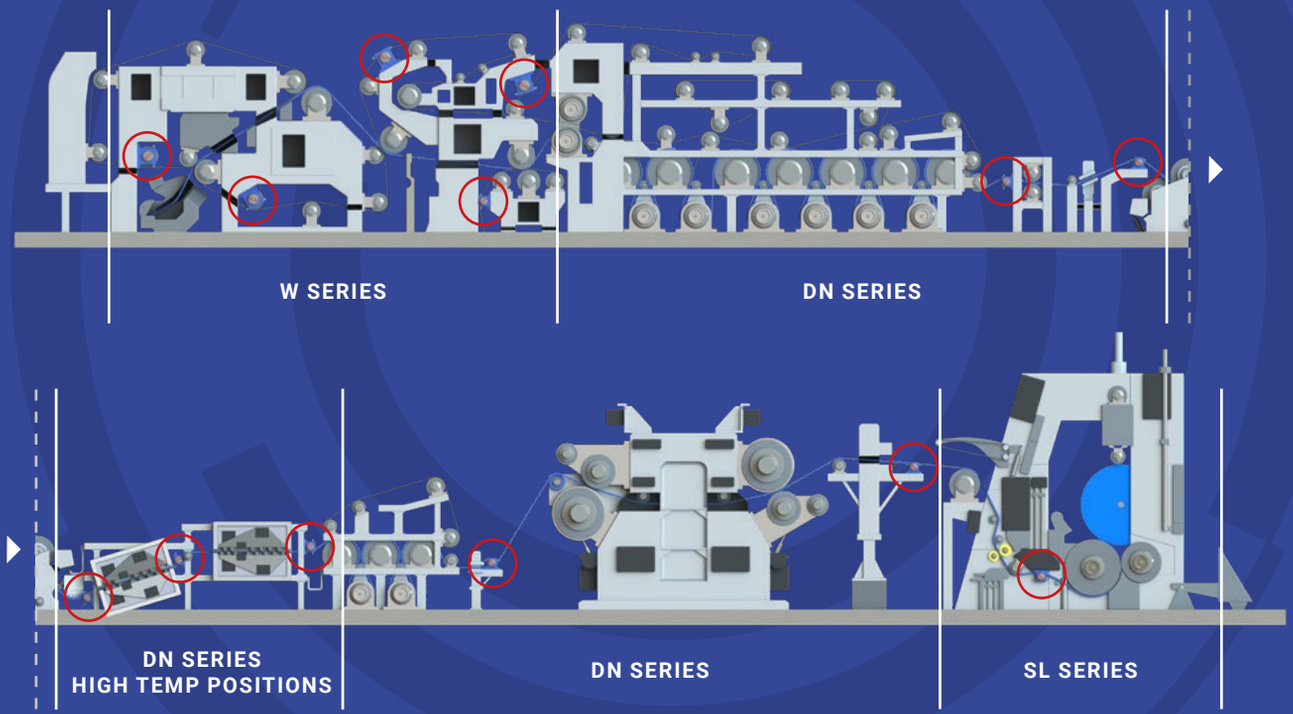
Finnish customers

MILLS IN OPERATION

Finbow around the world



FINBOW | GENUINE BOWHOW



FINBOW

Spreader Rolls for Every Position

WET END

W Series

The W Series products are designed for felt and wire spreading in the most demanding wet end applications.

DRY END

DN Series

Our DN Series products are designed for moist or dry applications. We also offer spreader roll solutions that can withstand high temperatures and protect from stickies.

SLITTER WINDER

SL Series

Finbow rolls reduce winder broke and improve reel separation after slitting. We provide a wide range of sizes and speeds plus spreader rolls for dual bowed spreading.

SUPERCALENDER

SC Fly roll / Take-out roll

For all supercalenders and other multinip calenders, regardless of the calender manufacturer.

PULP DRYING

PDM Series

Our PDM Series products are designed for felt and web spreading applications in the pulp drying process where protection against chemicals and water is critical to ensure reliable operation.

HOW CAN WE HELP YOU?

Give us a call and ask for more details.

Egor Nikolaev, Export Director
+358 (0)40 514 1667
egor.nikolaev@finbow.fi

www.finbow.fi