

# JSI

MILL SOLUTIONS

Made in the USA

WE ARE THE *PAPER MILL* PEOPLE

[jsimillsolutions.com](http://jsimillsolutions.com)

# Winding Solutions

for longer life & more productivity

Winders and their associated slitters operate under heavy stress due to continuous acceleration and deceleration cycles, not to mention the high speed of the operation.

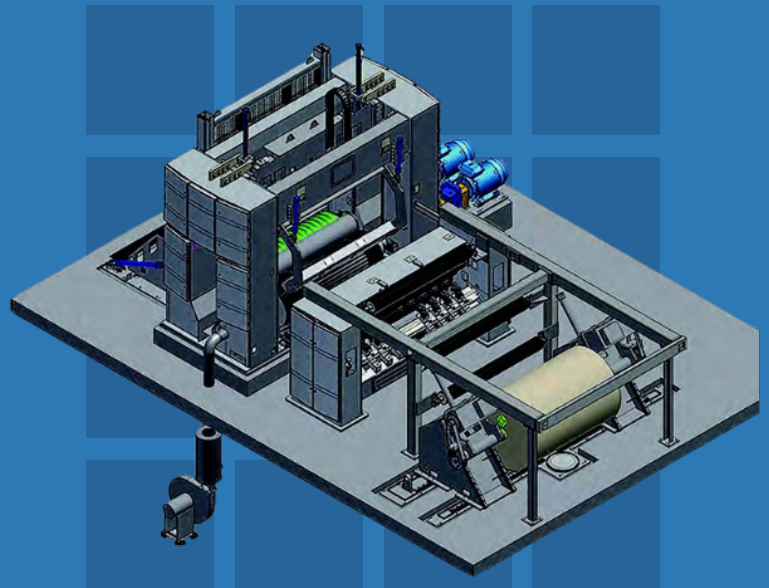
As winding equipment ages, there can be inherent issues such as mechanical play, wear and tear of parts, and leaks in the hydraulic system. It can also be difficult to find replacement parts, especially for older and vintage machines built overseas.

JSI offers a host of solutions, including winder audits, optimization services, and machine maintenance, that ensure equipment stays in tip-top shape. These services significantly extend the safety and equipment usability saving cost and increasing productivity for years to come.

## WINDER PRODUCTS

JSI supplies a wide array of spare parts, equipment, and customized solutions:

- Back Stands
- Rider rolls
- Sectional rolls
- Core Chucks
- Tail Threaders
- Splice Guard
- Spreader rolls and guide rolls
- Winding heads and spare parts
- Roll cradle
- Nip Guards
- Brake systems
- Hydraulics
- Pneumatics
- Electrical



# Optimizing Performance

## INCREASE SERVICE LIFE

JSI solutions for winder upgrades will increase equipment service life and improve performance. A variety of ready-made and custom solutions can be used to maximize the performance of existing equipment.

## SAVE MONEY WITH A REBUILD

To counter the ever-increasing cost of new machinery, JSI offers a winder-rebuilding service that upgrades existing winders to like-new condition for a fraction of the cost of a new winder.

- New controls and a new HMI system
- Control system updates
- Automatic slitter positioning technology
- A dual spreader
- A direct-acting rider roll
- Auto core feeding and end gluing for capacity improvement
- Runnability improvements with new sectional rolls
- A winder safety system upgrade

## IMPROVE WHAT YOU HAVE

Capacity can make all the difference in a mill operation. For those who do not want to purchase new machines with larger capacities, JSI offers improvements to existing winders in lieu of such a large commitment. JSI supplies proven upgrades – an option not selected during the initial purchase or a customized solution – to existing winder setups.

Upgrades can be made to tail threading, core loading sequences, automatic set change functions, and more. Our winder-specific engineered solutions provide a reliable and cost-effective approach to winders of all varieties.

## REACH YOUR FULL POTENTIAL

JSI provides engineered control systems and software solutions for the paper industry. Automation services from JSI offer performance optimization, products and troubleshooting projects to ensure safety and maximum efficiency of equipment and processes. Winder cycle time reductions are a cost effective way to increase throughput, using existing winder equipment to its full potential.

Existing automated sequences can be fine-tuned with a methodical approach that combines the PLC controls, hydraulic and pneumatic controls, and the process conditions. Cycle time reductions of even seconds in individual movements and actions within a sequence can yield a significant improvement in winder throughput in a 24-hour period.

## IDENTIFY & ADDRESS ISSUES

Troubleshooting old and new winder controls and several generations of control technology can be challenging. At times, existing functions and automation are no longer used due to reliability issues, faulty equipment, or faulty sensor technology. Identifying the root cause of these problems and addressing them can return the lost functionality back to operation and increase the overall productivity of the winder.

## GET IT RIGHT WITH SIMULATIONS

Process and equipment changes may require program changes for the winder to operate efficiently and safely.

Program simulation prior to actual changes provides a solid understanding of the effects of the changes and may be used to reduce the commissioning time of new functions, thus reducing the machine downtime.

## CUSTOM SOLUTIONS

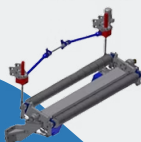
Whether the answer is to replace a part or to rebuild a machine entirely, JSI's in-house engineering team designs and manufactures custom solutions that are tailor-made for any operation of any size or budget.

JSI is committed to supplying equal or superior quality spare parts to customers. If the required part is no longer available, JSI's engineering and production team can reverse engineer the part and manufacture the replacement.

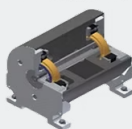
Modernization Controls Upgrade



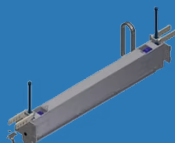
Web Spreading



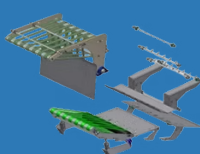
Sectional Rolls



Rider Roll Rebuild



Tail Threading



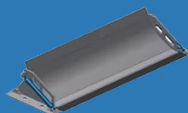
Nip Guard



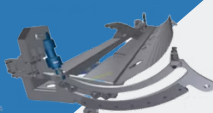
Core Lock



Roll Cradle



Cutter/Splice Guard



Core Loading Systems



# New Winder Solutions

## New Winders

JSI is a proud Sales Agent of **Windmaster - by Raumaster Paper**. Windmaster is Raumaster's 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 dimensions, roll widths, paper grades, and the desired degree of automation and equipment. Thanks to a stable and robust design, the operation is smooth with little vibration producing excellent roll quality.

The higher the level of automation, the higher the capacity and level of safety. Windmaster customer-preferred features are, amongst others:

- Control system according to EN 1034-3
- Automatic splicing
- Automatic core loading with start & end gluing
- Automatic spool cleaning & returning system
- Automatic slitter positioning
- Integrated dust extraction at the slitter station
- Winding drum surface selectable according to product
- Machine reel storages
- Slabbing station

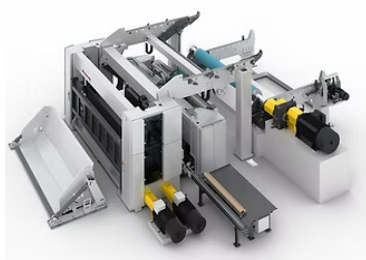


### Maximum Quality and Capacity

At its best, this winder system is fully automated and highly equipped thus operating at extremely high operating speed. Short set-change and zero-speed -time as well as a quick machine reel change system with automatic splicing add to safety and exceptional process speed.

Optimal roll quality is reached by a roll hardness control system, which adjusts rider roll load and drum winding force under recipe control. Machine reel storage stations can be equipped with reel rotation drives to prevent roll deformation.

## Winder Spare Parts



Whether the answer is to replace a part or to rebuild a machine entirely, JSI's in-house engineering team designs and manufactures custom solutions that are tailor-made for any operation of any size or budget. If the part you need is no longer available JSI's engineering team can reverse engineer the part for you right here in the U.S.!

- Back Stands
- Rider rolls
- Sectional rolls
- Core Chucks
- Tail Threaders
- Splice Guard
- Spreader rolls and guide rolls
- Winding heads and spare parts
- Roll cradle
- Nip Guards
- Brake systems
- Hydraulics
- Pneumatics
- Electrical





## Accu-Slit L (Linear)

### For when time & accuracy matter

Accu-Slit L by JSI is an innovative automatic slitter positioning system that sets in five seconds or less, making it the best choice when minimum positioning time and maximum positioning accuracy are required.

The system uses individual brushless linear servo motors on each slitter carriage. Carriages are positioned with linear motors that offer high speed, zero backlash, and maintenance-free, noncontact operation. The linear motor has zero internal moving parts, reducing the chance of breakage or malfunction.

Carriage positions are tracked with non-contact magnetic encoders, eliminating the need for homing after a power loss because the absolute position encoders provide instantaneous feedback for each carriage, saving precious time and money.

The non-contact feature of the components ensures no degradation in performance over time, in contrast to gear and belt-driven systems that wear out with heavy use.

**Speed:** All slitting positions set-up in under 5 seconds!

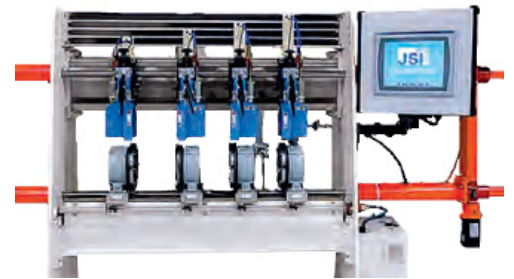
**Linear Motors:** Located at all positions, moving all positions simultaneously.

**Accuracy:** Highest accuracy in the industry with  $\pm 0.005"$  at all positions.

**Technology:** Uses JSI Accu-set Holder for easy, SET IT and FORGET IT, blade set-up.

**Low Maintenance:** Extended service life due to no moving screws or belts.

**Sealed:** Pressurized chamber keeps all components free of dust and debris.



## Accu-Slit R (Rod)

### For simple & effective automation

Transfer rod positioning systems are the solution when simple and effective automatic slitter positioning is needed. This traditional slitter positioning system uses a single servo motor with linear transfer rods for top and bottom slitter carriages. These carriages then clamp on to the rods for movement and transfer to the fixed rails during slitter operation. An absolute encoder continually monitors the position of each slitter carriage.

**Fast:** Rod-style servo motion, moving up to 4 positions at one time. Most set-ups achieved in under 1 minute.

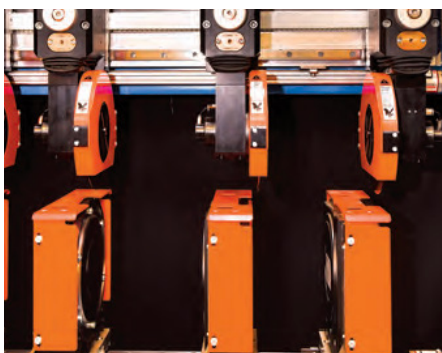
**Accurate:** Absolute magnetic encoders at each position  $\pm 0.015"$  accuracy.

**Controls System:** Industry leading Rockwell Automation control system.

**Technology:** Uses JSI Accu-set Holder for easy, SET IT and FORGET IT, blade set-up.

**Easy:** Upgrade to existing systems.

**Cost Effective:** Lowest cost option to upgrade to Auto-positioning.



## Accu-Slit B (Belt)

### Cost effective belt system

**Fast:** Servo belt set-up system. Most set-ups achieved in under 1 minute.

**Accurate:** Absolute magnetic encoders at each position  $\pm 0.015"$  accuracy

**Compact:** Enclosed design. Both Sealed and unsealed units available.

**Technology:** Uses JSI Accu-set Holder for easy, SET IT and FORGET IT, blade set-up.

**Cost Effective:** Low-cost option to upgrade to auto positioning.

**Easy to Operate:** Control system patterns can be downloaded or entered at the HMI.

# Slitter Systems

"The biggest improvement with the Accu-Slit System is the consistent roll width. The slit edge quality on our rolls have seen a significant improvement as well."

- Client in the Northwest, Assistant Superintendent



## Double Trim Slitter Units

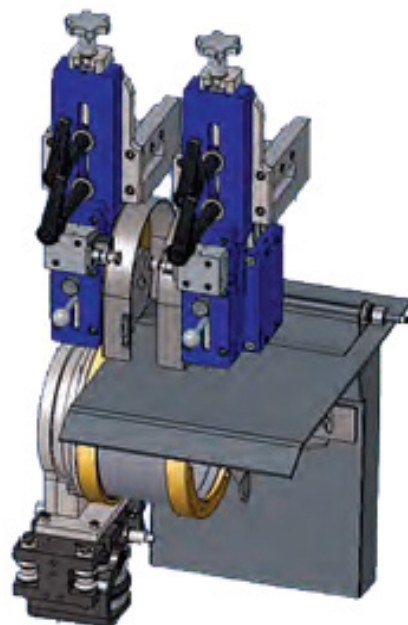
### Eliminate Butt Rolls

Double trim slitter units are a safer and more effective way to eliminate butt rolls while reducing paper jams in the trim chute, resulting in a faster winder. Splitting the trim allows the continuous feed to crosshatch into the trim chute system, minimizing the binding effects of wide trim. Double trim slitter units are equipped with our patent-pending Quick Cap design for quick, safe, and easy top knife changes, a cost-effective way to improve production times.

## Pre-Trim Slitter Units

### Quick, easy adjustments

Pre-trim slitter units are structurally rigid, easy to set up, and effective on any PM or Converting application. Self-contained pre-trim units are a continuously moving web with quick and easy width and depth adjustment. Pre-trim slitter units are equipped with our patent-pending Quick Cap design for quick, safe, and easy top knife changes and a bottom-driven anvil on a completely independent trim assembly. These ergonomically designed, operator-friendly units are durable, safe, and can exceed 7,000 FPM.



# Slitter Systems

## Knife Holders



### Safety Features & Benefits

- Reduces operator contact with a sharp blade
- Safe and fast tool-free slitter blade removal
- Easy operator training for quick set-up
- Increased productivity and reduced downtime

## Accu-set Holders by JSI

Accu-Set Series II - Direct replacement for OEM Holder

Accu-set Series V - Modular mounting options provide easy retrofit to most OEM Knife Holders\*



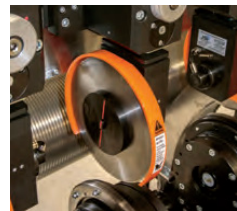
### Read it:

JSI Mill Solutions regional service centers will circle the diameter of the blade after sharpening.



### Set it:

At installation, the operator reads the circled diameter and sets the Accu-Set depth dial to the corresponding value.



### Forget it:

The holder is set to the correct depth for the bottom band location the FIRST TIME, EVERY TIME!



## Quick Change Holder by JSI

The Quick Change Series Holder provides a safer and more efficient blade exchange process, a revolutionary approach to slitter section maintenance. The Quick Change Series Holder allows the user to exchange slitter blades in less than nine seconds without the use of tools. The blade is changed in seconds with the push of a button, guarding employee safety and ensuring a smoother production process.

### Reduce Injury, Replace Blades in Less Than 9 Seconds, and Decrease Maintenance Costs:

This revolutionary design mechanically holds the blades in place and releases them when pneumatic pressure is applied, preserving holder integrity if air pressure drops or is lost during the operation of the slitter machine. This state-of-the-art design incorporates a custom-made pneumatic valve and bypass valve, preventing the slitter release feature from engaging while the slitter is engaged in position.

- Greatly reduces the operator's contact, reducing risk of injury
- No tools required to change the blade
- One-step blade removal process
- Change the blade in less than nine seconds
- Blades removed only under pressure
- Decreased maintenance costs and increased reliability
- Increased depth adjustments for extended blade life
- Enclosed and sealed cartridge design eliminates dust buildup
- Available immediately for stock

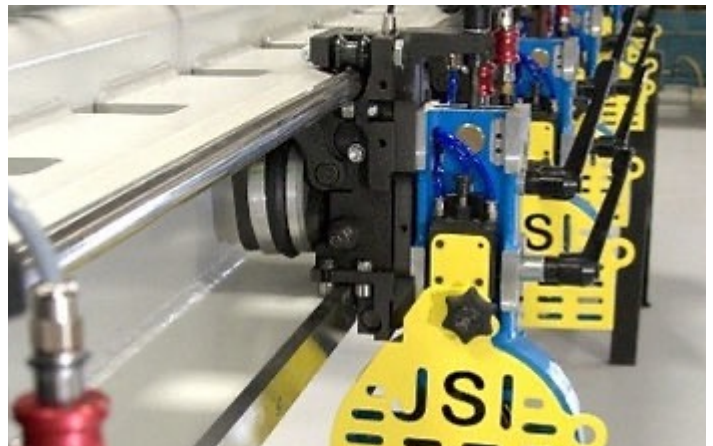


# Slitter Parts

## Slitter Section Spare Parts

JSI is committed to supplying superior quality spare parts to our customers. JSI has the answer for the part in question, whether that part is a specialty cable, a metric size part, or even a part that is no longer manufactured; we can reverse-engineer those parts at our manufacturing plant in Tyrone, GA.

- Linear Rails
- Linear Bearings/Pillow blocks
- Carriage
- Interlocks
- Airline headers
- Quick Disconnect Air Hoses
- Digital Measuring Systems
- Sectional Rolls
- Bowed Rolls
- Core Chuck



## JSI Slitter Station Cabinet

JSI's Slitter Station Cabinet is a specially designed solution to organize slitter blades. These cabinets provide space to separate dull blades from sharp ones, all while providing easy access for mill operators. These cabinets can be installed on a tabletop or left free-standing.

## Circular Blades & Bands

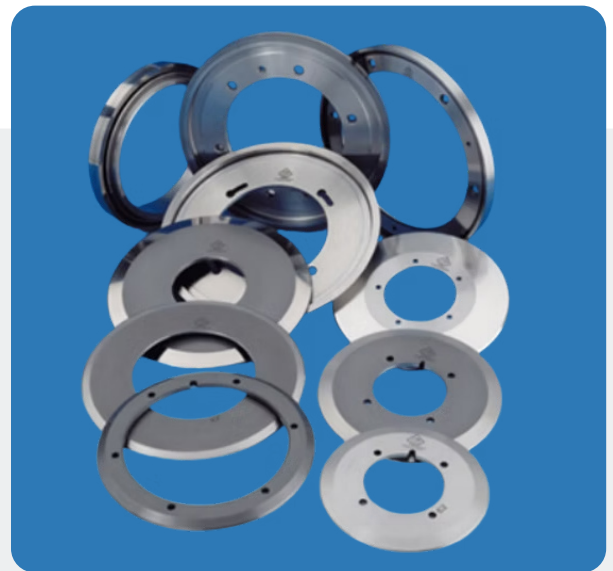
JSI offers high-precision slitter knives made from the highest-quality steel to provide optimum performance. Our "super finished" cutting edge will dramatically improve cut quality, extend blade life, and reduce maintenance costs.

With a variety of steel available, JSI expertly guides decisions and applications to achieve optimum cut quality, along with longer blade and band life.

JSI also provides custom-made knives to match existing machine specifications. All knives are manufactured to meet or exceed OEM specifications. All blades are packaged with a protective coating for safe handling.

### High-Precision Slitter Blades & Bands to Meet Your Needs:

- Carbon Tool Steel - 52100, A2 (1.2363), S7, L3 (1.2067)
- Chromium Molybdenum Steel - A8 (1.2345), A8 Modified (K329 / 1.2345.7)
- High-carbon High Chrome Steel - D2 (1.2379), D6 (1.2436)
- High-speed Steel - M2 (1.3343), M3 (1.3344), M42 (1.3247)
- Powdered HSS - CPM10V, CPM15V, CPMM4, ASP2023, ASP2053, VANADIS 10
- Tungsten Carbide - super-fine and super-micro-fine grain grades available



These OEM knives are available immediately:

- Valmet, Metso, Wartsila
- E.C.H. Will
- Beloit
- Bielomatik
- Jagenberg
- Cameron
- Tidland
- Voith
- GL&V
- Dienes
- Mario Cotta
- Black Clawson



## JSI Safety

JSI offers risk assessment audits for existing winders, formulated to identify existing safety hazards. In cooperation with the customer's own safety and risk management guidelines and practices, JSI creates a clear picture of the situation on the mill floor and offers solutions to minimize risk and solve problems before they begin.

### Initial Assessment

- Detailed on-site visit, report based off certified standards
- Production line Safety Zones identified
- Identified Risks and Severity

### Design & Implementation

- Mechanical Guarding
- Electrical Safety Equipment
- Safety Programming

### Validation

- Onsite Start-up
- Testing of Implemented Safety



## Winder Safety Systems

JSI has many options to mitigate risks on your winder. Options include mechanical or electrical solutions or a combination of both to reduce or eliminate your machine risks for your employees. Mechanical, machine-specific solutions include perimeter safety fencing, safety doors and latches, custom fabricated guarding, automatic threading devices, and manual lock out devices. Control-PLC solutions may include Safety PLCs, Cat 3 switches and relays, safety contactors, laser scanners, and light curtains. After the solutions are implemented, a safety validation is then performed to assure everything is working as planned. JSI has the knowledge and expertise to complete any safety upgrade, large and small.

### Validation

- Part of a complete safety system or individual component purchase
- Ultra Duty Safety Fencing
- 3D area scanning
- Full 3D review of proposed solution
- Custom designed to meet your demanding application
- Custom manufactured guards for hard to fit spaces
- Safety PLC's, HMI's Sensors along with custom programming
- Hydraulic safety valves and controls
- Operator training and detailed documentation
- Turn Key custom solutions

## Ultra-Duty Safety Fencing

### BY JSI SOLUTIONS

- Manufactured from heavy gage steel
- Integrated wire tray
- All wiring connection done inside of fence no loose or zip tied wiring
- Heavy Duty sliding doors and closing mechanisms
- Durable powder coat finish



# Winder Services



## JSI Winder Solution Program - WSP

Our services can be performed on demand or as a comprehensive Winder Service Agreement. Whether it's safety, reliability, or overall performance, JSI has you covered!

### Winder Audits

JSI's Mechanical Winder Audits consist of a thorough examination of the winder performed by one of our winder specialists. Our Mechanical Audits provide detailed information on the condition of the electrical, hydraulic, pneumatic, and mechanical components. Once the audit is complete, the client receives a baseline condition report, along with JSI's recommendations to improve winder capacity, reliability, and operational preventive maintenance.

- [Winder Audits](#)
- [Winder Alignment](#)
- [Winder Maintenance Program](#)
- [Winder Troubleshooting](#)
- [TNTS Training](#)
- [Slitter Solutions Program](#)
- [Maintenance Shutdowns](#)
- [Other Services](#)





## Winder Alignment

JSI's winder alignment service is a winder-specific alignment visit that addresses the need for installation configuration on rebuild projects. Corrective measures can be included in the package, or the alignment check can be conducted in cooperation with the mill assets for corrective work.

Winder-specific Alignments Include:

- Develop a coordinate system for alignment and adjustments.
- Provide assistance during equipment adjustments as needed.
- Provide an as found and as left report of all equipment measured and the adjustments made.
- Use a state-of-the-art Precision Laser tracking station for accurate data measuring.

## Winder Maintenance Service Program

JSI's maintenance service agreements are part of a customized preventive maintenance program. Under our maintenance agreements, each client is assigned a dedicated winder specialist who serves as the service contact point for the mill. This winder specialist conducts inspections, identifies winder problem areas, and follows up with a fully developed action plan through JSI's Maintenance Planning Table. This action plan reduces unscheduled shutdowns by correcting problem areas in their early stages.

Maintenance Agreements Provide:

- A program "customized" to the mill that focuses on most-needed services.
- A single-source, fully dedicated winder specialist.
- Pre-set service visits throughout the life of the contract, to include phone and email support.
- Assistance with preventive maintenance and maintenance planning for shutdowns.



# Winder Services

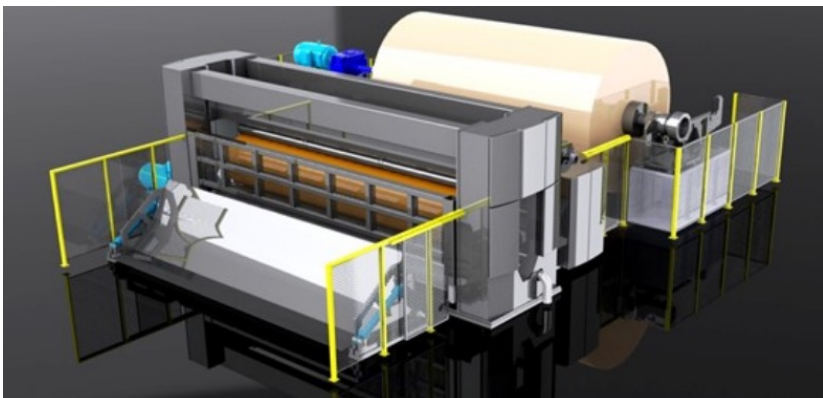
## Winder Maintenance Training

(TNTS - Torque, Nip, Tension & Speed)

Torque, Nip, Tension and Speed are all controllable attributes for successful roll building. This training was developed for winder operators with the aim of generating better customer rolls, increasing winder runnability and reducing waste product. TNTS training can also be useful for maintenance and management in understanding the challenges and opportunities on the winder.

Our experienced winder specialist conducts the training session in a classroom setting and focuses on mill-specific equipment.

Who should attend? This class is designed for mill maintenance and operation personnel. Also, this is an ideal opportunity for anyone needing to increase his or her knowledge on TNTS.



## Onsite & Virtual Winder Support

Troubleshooting old and new winder controls and several generations of control technology can be challenging. At times, existing functions and automation are no longer used due to reliability issues, faulty equipment, or faulty sensor technology. Identifying the root cause of these problems and addressing them can return the lost functionality back to operation and increase the overall productivity of the winder.

Whether you're in need of a second pair of eyes or hands, JSI winder specialists are available for onsite trouble shooting calls and will work, hands on, with operators to solve and

fix the problem that is occurring within the winder.

Not interested in a full Winder Maintenance Program or budget constraints prevent from having our specialists on site? Consider our Winder Virtual Troubleshooting Program. For a low monthly cost, you will have access to our winder specialists through our Help Desk, Zoom, Team Meetings, email, and phone support. We will commit an allotted number of hours "virtually" to your plant. Our specialist will follow-up with a written report, with recommendations.

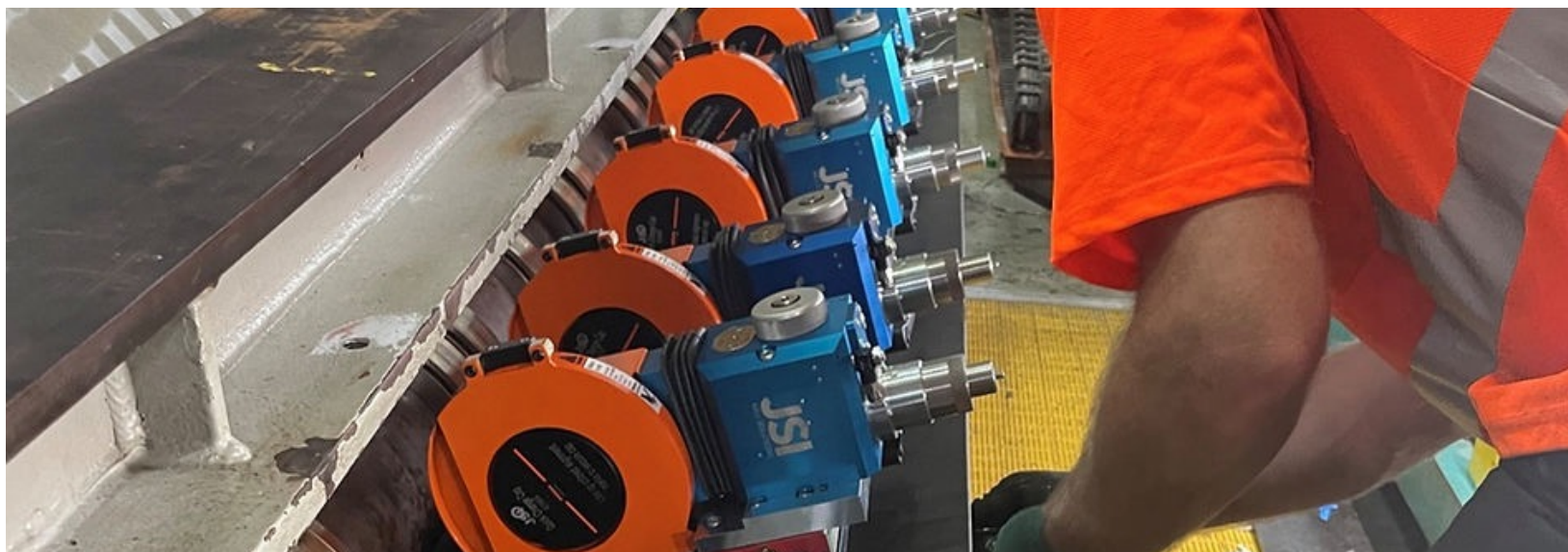


## Maintenance Shutdown Services

JSI offers a full range of on-site services, from machine installation to on-site rebuilds or working with your maintenance team, during the annual or daily outages.

- **Maintenance Shutdowns**
- **Machine Rebuilds**
- **Equipment Installation**
- **Preventive Maintenance**
- **Annual Shutdowns**





## JSI Slitter Solutions Program (SSP)

### The Problem:

Ensuring optimal slitting performance is a combination of several factors:

- The condition of slitter equipment
- Blade and band quality
- Operator skill
- Sharpening quality

If any factors are not functioning properly, it can result in a shortened slitter life and excessive downtime for slitter changes and return roll due to dusting and rough edges. Managing this process can be costly and time consuming.

### The Solution:

The Slitter Solution Program (SSP) is a comprehensive solution configured specifically for your slitter section needs. The SSP will help your mill control the slitting process, extending blade life and band change intervals while improving roll quality. Implementing SSP by JSI will help decrease maintenance costs and increase efficiency.

- **Slitter Section Audits**
- **Technical Operator Training**
- **Precision Grinding**
  - Super finishing creates the sharpest edge available in the industry on new and sharpened top slitters and bottom bands. All have OEM specification or customer supplied specifications.
- **Inventory Management:**
  - Replace blades and bands of the highest-quality tungsten carbide and powdered metal once the existing blades reach the end of their useful life

### Support Services

- + JSI's experienced team provides ongoing consulting of the slitting process to improve cut quality and blade life. As your partner, JSI will continuously evaluate operating conditions, procedures, and maintenance practices to help decrease maintenance cost and increase efficiency.
- + 24/7 telephone support.
- + Operations and maintenance support.
- + Emergency onsite visit by a JSI Technical Field Service Rep within 24 hours of the initial call.
- + One price "all inclusive" monthly package invoicing.

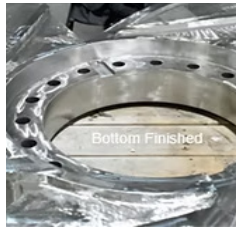
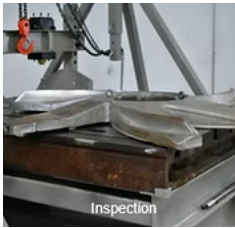
- Superior cut quality and improved roll quality
- Increased blade and band life and minimal slitter dusting
- Safety coating for edge protection and worker safety
- Bi-weekly pick-up and delivery service from one of our six service center locations throughout the United States

# Fiber Solutions

JSI offers Fiber Equipment repair and replacement including rotor repair, extraction plate repair and replacement, and disc sector repair and replacement.

## Rotor Repair

- Inspect and straighten if needed
- 309 or 316 weld wire to replace worn metal and repair cracks
- STOODY hard facing & wear resistant weld applied to high wear areas
- Diamond wheel profile & grind, polish
- Blanchard grind bottom



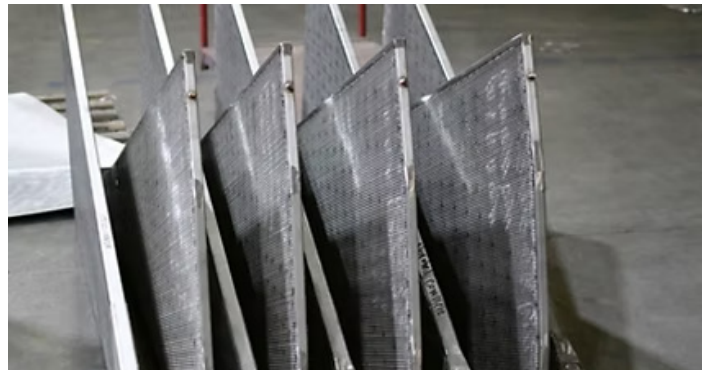
## Extraction Plates

- Repair localized damage
- Replacement
- Reverse engineer
- Manufacture
- Straighten



## Disk Filters

- Inspection of disk sectors
- Manufacture: Reverse engineer and custom manufacture replacement disc filters tailored to your system requirements.
- Repair, re-screen or re-bag



# Turn Up Tape Solutions

## JSI Automatic Turn-Up Tape System

Discover JSI's innovative turn-up tape systems solutions, engineered for reliability, safety, and efficiency in paper mill operations. Proudly manufactured in the U.S., our automatic and manual systems deliver unmatched performance with operator-friendly designs.

- Automatic system that easily converts to a manual system, in the event of a PLC or power failure
- Patented designs & features that are unique in the industry
- Easy touch screen operation
- Animated on screen color graphics
- Maintenance and parts ordering advice on screen
- Full system diagnostics
- String-up log to help simplify troubleshooting
- Touch Screen Controls
- Manual system that can be upgradable to Automatic
- Minimal training required, with instructions on the unit itself
- No moving parts under the sheet, improving safety and reliability
- Compact size and easy to use
- Easy access panels for service & cleaning
- Virtually maintenance free
- 24 / 7 hour technical support



## Turn-Up Tape Service

Ensure peak performance with JSI's expert turn-up tape service and turn-up tape repair solutions. From routine maintenance and tuning to spare parts replacement, we provide comprehensive support to keep your turn-up equipment running reliably.

- Routine equipment maintenance and inspections will improve your turn-up equipment reliability
- Inspection and overhaul of the turn-up tape machine track
- Replacement of minor worn parts on the turn-up unit
- Spare parts inventory check
- System operation check and tuning
- Maintenance contracts available
- New Automatic and Manual Systems Turn-Up Tape & Systems
- Heavy Duty, Standard Brown & White Tapes- Paper Mills
- Bale Strapping - Pulp Mill



# JSI

## MILL SOLUTIONS

### Proudly manufactured in the USA



JSI's ability to achieve the quickest response time in the industry while still providing the highest quality parts is a direct result of all parts being manufactured in the USA, and all service and support coming from strategically located service centers in the U.S. JSI Parts are manufactured in the USA by our sister company, Spare Parts Specialist, Inc.,

at our 36,000-foot manufacturing plant in Tyrone, GA, just 25 miles southwest of Atlanta.

- Skilled, Dedicated Team Members
- State-of-the-Art Equipment
- USA Quality Assemblies
- Engineering and Project Management Support



#### JSI CORPORATE OFFICE

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Tyrone, GA 30290

☎ 770-632-8575

🖨 770-632-8579

🌐 [jsimillsolutions.com](http://jsimillsolutions.com)

✉ [sales@jsimillsolutions.com](mailto:sales@jsimillsolutions.com)

#### SERVICE CENTERS

- Tyrone, GA
- West Monroe, LA
- Appleton, WI
- Greer, SC
- Kalama, WA
- Columbus, OH

