

**MAXCESS**

MAGPOWR



TIDLAND

## ***TIDLAND SLITTING SOLUTIONS***

Knifeholders and Slitter Positioning for Web Handling

**MAXCESS**

Versatility in a slitting operation is no longer simply an advantage, it's a requirement. Jobs and capacities can change quickly in today's market, and Tidland's slitting systems can meet any application, from a single knifeholder to a fully-automatic system. In addition, Tidland remains at the forefront of slitting technology, offering the most effective innovations in the industry.



### Safety Through Technology

To experience Tidland's commitment to industry-leading technology, look no further than the e-Knifeholder, the industry's first fully-

electronic knifeholder providing full control over blade overlap and side force. The e-Knifeholder received the **2009 Technology of the Year** award from industry group AIMCAL thanks to its innovative programmable features and reduction of downtime while increasing precision.

### Reliable Service

Hand-in-hand with its industry-leading technology is Tidland's excellent service. Tidland prides itself on knowledgeable support and impeccable service that begins with the internal sales staff and continues beyond installation. Factory-trained in various service disciplines, including applications analysis, design and engineering, Tidland's reliable service team is dedicated to providing solutions specifically designed for your applications.

### Cutting-Edge Education

Education is paramount to industry growth, and Tidland takes a leadership role in this area, providing online training programs that cover everything from web handling theory to real-world implementation of web handling techniques and technology.

As part of Maxcess, Tidland can offer the most comprehensive array of accessories and periphery equipment in the industry, thanks to its partner brands MAGPOWR (Tension Control) and Fife (Web Guiding & Inspection). Maxcess provides a global reach, with operations in North America, South America, Europe, and Asia.



Tidland offers a wide range of blades supporting any Tidland slitting method for all applications. From simple stocked standard designs for our Knifeholders and bottom blades through special blade materials as ASP, Tungsten carbide or ceramic and splitted or multi slit bottom rings up to special customer required prototypes.

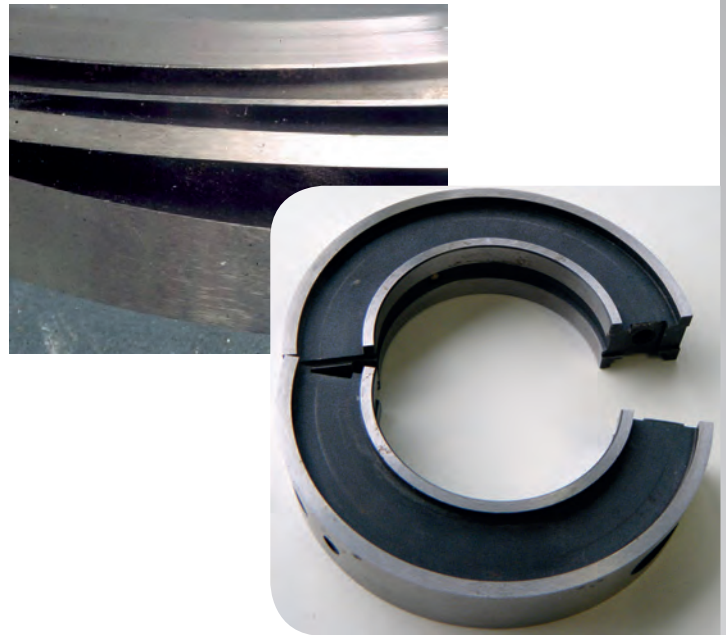
Thanks to our testing facilities in Ahaus, Germany, we can perform custom tests on difficult to slit materials to provide our Customers with the best slitting parameters and blades for their applications, improving the performance of their slitting operations.

As the blade life does not end with the best choice to be made on the design and material of the blade, Tidland offers a full blade life cycle support from grinding till final replacement.

Following this “best customer support” idea Tidland now offers a special Blade Sharpening System for selected applications.

### In-house sharpening in 90 seconds

Reduce blade sharpening costs and improve operator safety with Tidland’s new Blade Sharpening System. This self-enclosed unit quickly sharpens blades from Performance Series, e-Knifeholders or



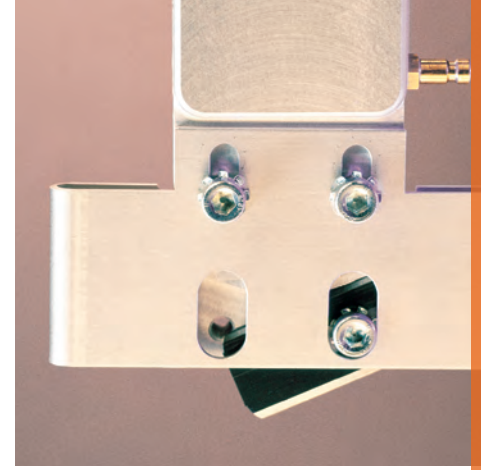
Series ‘C’ swing cartridge automatic and manual model knifeholders. Get a freshly sharpened blade in 90 seconds, without removing the blade from the cartridge or sending the blades out to be reground.

Because it’s a Tidland product, the Blade Sharpening System is easy to use. Simply remove the lower knife cartridge from the Knifeholder and place it directly into the Blade Sharpening System. Push a button, wait 90 seconds, and you have a freshly sharpened blade.



### Key Benefits

- No more sending out blades for re-grind
- No need to remove the blades from the cartridge, saving time and improving operator safety
- Reduced need for backup blades
- Improved slit quality. Removes the temptation to run slightly dull blades to save re-grinding costs
- Reduced run-out of blades because you never remove the blade from the cartridge for sharpening
- Easy online ordering of replacement blades

*Shear**Crush**Razor*

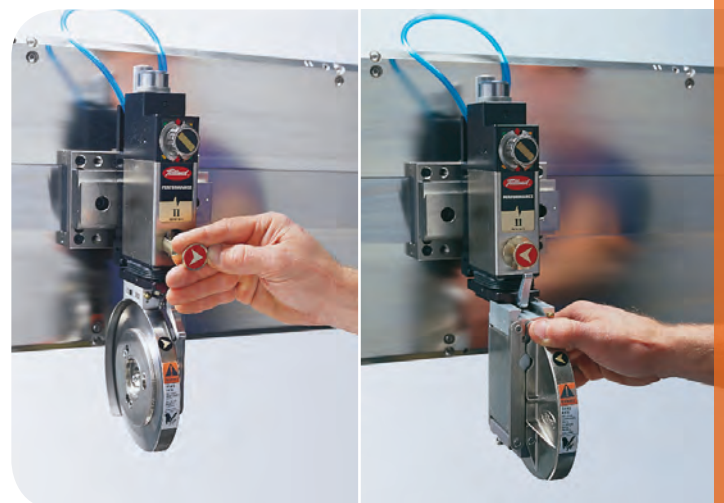
### Performance Series Knifeholder

Faster setup times, remarkably increased productivity, and unrivaled finished roll quality. Tidland's Performance Series Knifeholder delivers reliability and performance to any slitting operation – from light converting to mill-duty operations.

Available in three sizes, these innovative knifeholders can accommodate shear, crush or razor slitting of just about any material. Automatic and Manual models also feature a unique 180° reversible blade cartridge, allowing use of both sides of the anvil ring and extending blade life.

### Key Benefits

- Operator-friendly setup features for increased productivity and reduced downtime
- Modular mounting options for easy retrofit to any machine
- Reliable robust construction to withstand harsh industrial environments
- Precise process controls for improved roll quality
- Optional safety equipment (full 360° pneumatic blade guard, cartridge side cover, etc. ...) reduce risk of injury
- Various features for customization (automatic or manual model, pneumatic or manual brake, etc. ...) deliver you the perfect slitting partner with only the features required

*Manual**Automatic**Removable and reversible blade cartridge.*



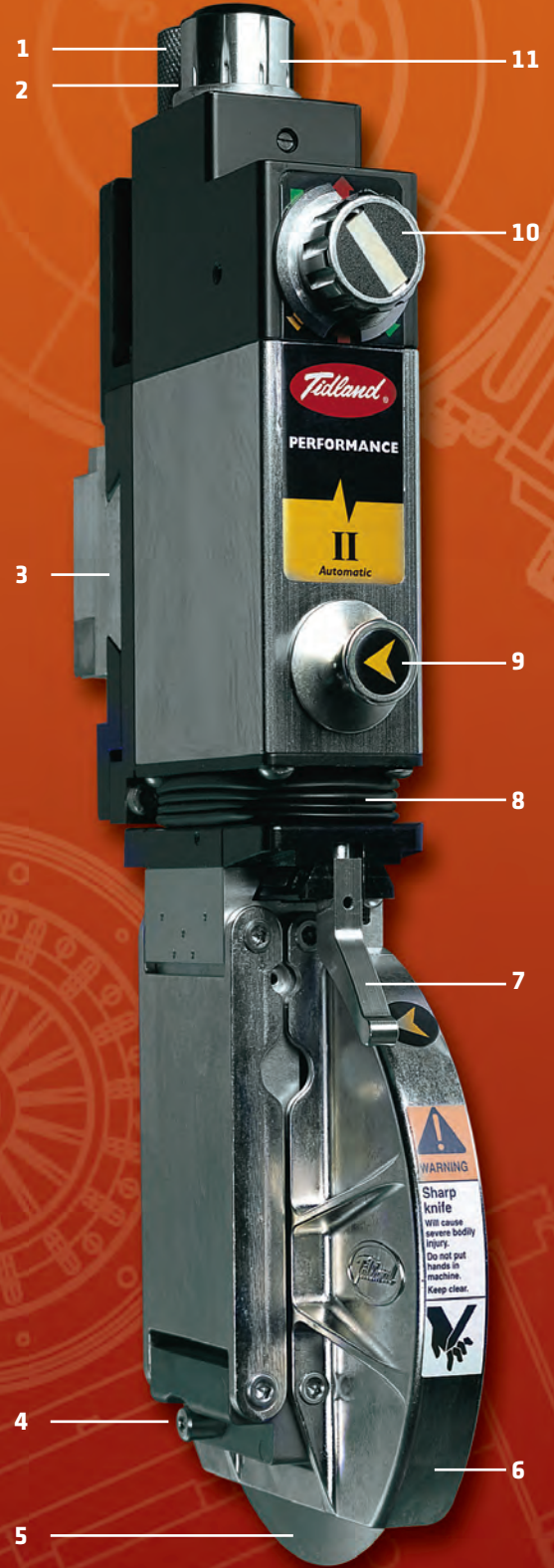
Class I



Class II



Class III



**Specifications**

Class I	Class II	Class III
Light Converting, Flexible Packaging, Finished Product Converters	Mainstream Converting	Mills
<b>Typical Materials</b> Paper, films, coated papers, foil-covered papers, film-paper laminates, co-extruded films, polypropylenes	<b>Typical Materials</b> Paper, coated papers, foils, fine printing papers, chrome-coated, poly-coated, paperboard, non-wovens, all films	<b>Typical Materials</b> Coated & non-coated papers, tissues, newsprint, kraft papers, chipboard, roofing felt, floor covering fiberglass
<b>Type of Slitting</b> Shear Crush/Score Razor	<b>Type of Slitting</b> Shear Crush/Score Razor	<b>Type of Slitting</b> Shear Crush/Score
<b>Cartridge Type</b> Swing Crush/Score Razor	<b>Cartridge Type</b> Swing Crush/Score Razor	<b>Cartridge Type</b> Swing/Rigid Crush/Score
<b>Minimum Slit Width*</b> 25,4 mm (1.0 inch)	<b>Minimum Slit Width*</b> 50.8 mm (2.0 inches)	<b>Minimum Slit Width*</b> 76.2 mm (3.0 inches)
<b>Blade Diameter</b> 90 mm (3.54 inches)	<b>Blade Diameter</b> 150 mm (5.91 inches)	<b>Blade Diameter</b> 200 mm (7.87 inches)
<b>Maximum Speed**</b> 1,000 mpm 3,500 fpm	<b>Maximum Speed**</b> 1,700 mpm 5,500 fpm	<b>Maximum Speed**</b> 3,000 mpm 10,000 fpm

\* For typical knife sequence. \*\* Dependent upon material and application.

**KNIFEHOLDER MOUNT**

- 1. Traverse knob/Pneumatic lock
- 2. Quick disconnect fitting
- 3. Dovetail guidebar mount

**BLADE CARTRIDGE**

- 4. Blade lock
- 5. Knife blade
- 6. Blade guard

**CONTROL BODY**

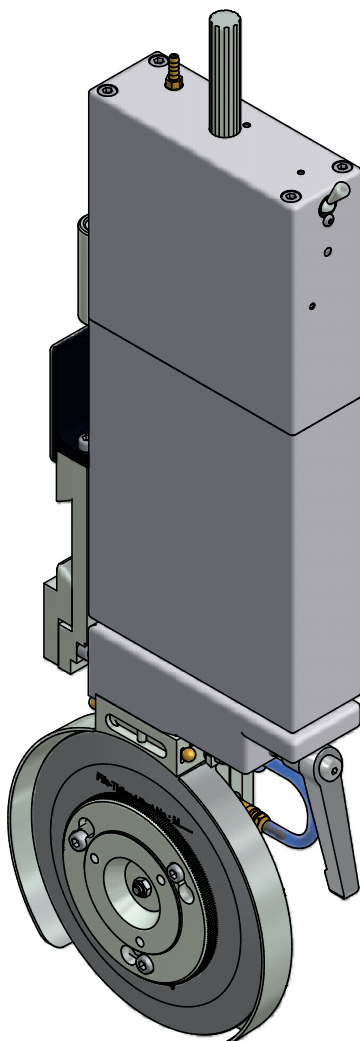
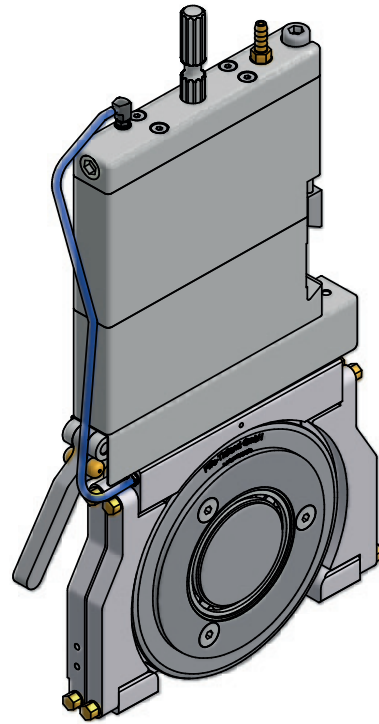
- 7. Cartridge release lever
- 8. Bellows
- 9. Cant angle key
- 10. Setup knob
- 11. Depth adjustment knob

Tidland's W-Series, our specialists for non standard requirements.

### W-19 – best quality with narrow slits.

The Tidland W-19 knifeholder combines all the advantages of the Tidland swing cartridge with a rigid and robust design thanks to its special double-rod construction.

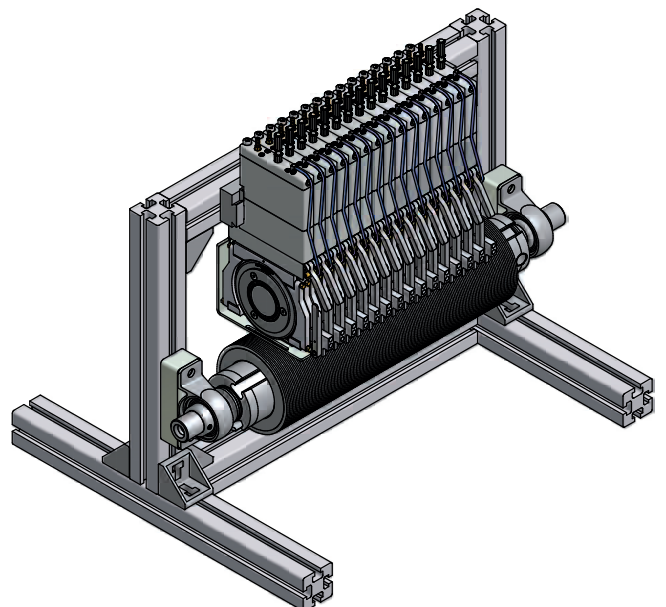
The W-19 is designed to achieve a minimum slit width of only 19 mm, while delivering best slit quality. Tidland's W-19 is fully compatible with our standard class 1 knifeholders and supports the same well known features Tidland knifeholder features as 180° reversible cartridge, tool-free cartridge removal and more.



### W-50 & W-50/50 best quality and extended down stroke.

The W-50 knifeholders are designed with special robust double-rod design including easy to clear feature due to a special "brick" design. The W-50 knifeholders are fully compatible to our Performance series.

The W-50/50 supports a special extended down stroke for up to 50 mm allowing a maximum freedom during the web threading and reducing the risk of injuries for the operator.



## Repeatable set-ups regardless of shift

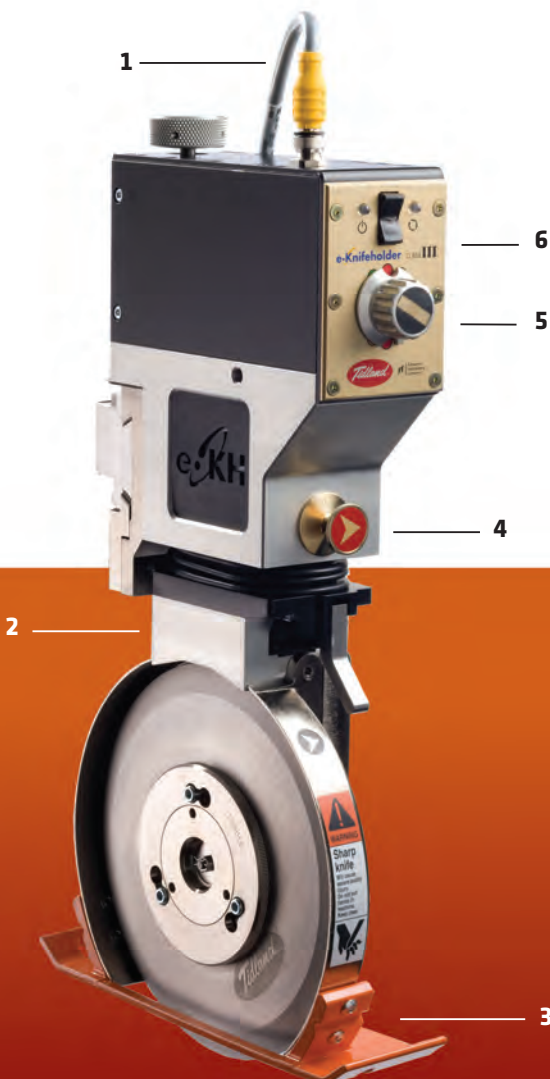
Regardless of converting material, overspeed preference, or blade profile, sharpness and geometry, Tidland's new electronic knifeholder delivers the highest quality roll slit possible. Consistent results are achieved by minimizing operator input through the use of advanced 'Smart' functions, even providing self-calibration of the often difficult to assess but extremely important setup functions of overlap and side force.

The e-Knifeholder is not only easy to use, it's very easy to learn. In fact, an operator can be trained and up and running in 90 seconds.



### Key Benefits

- Improved consistency and reliability in slit quality
- Self-calibrates overlap and side force to minimize the potential for operator error
- Proper settings reduce blade wear, contributing to less downtime and lower operating costs
- Electronic operation eliminates dust and grime commonly associated with pneumatic operations
- Operators can be fully trained in 90 seconds
- Two models available: Class II for standard application and Class III for mill-duty



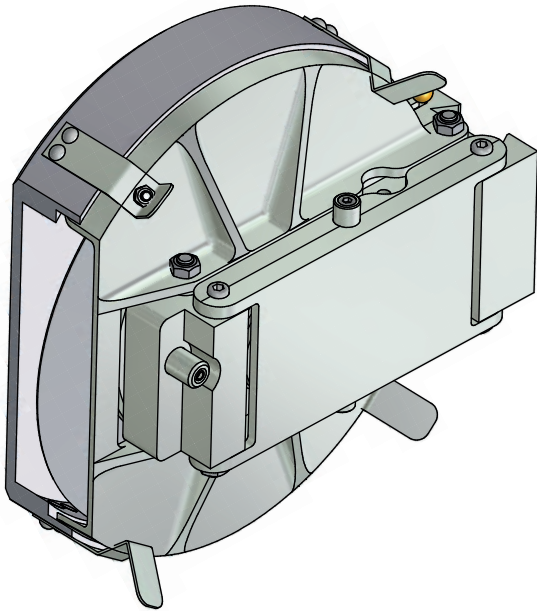
### FEATURES

1. Single Power and Communications Cable
2. Removable and Reversible Cartridge
3. Optional Safety Blade Guard Attachment
4. Cant Angle Key
5. Setup Knob
6. Incremental Downstroke Adjustment

Tidland offers a wide range of optional Safety equipment to fulfill your needs.

### Fully 360° pneumatic blade guard

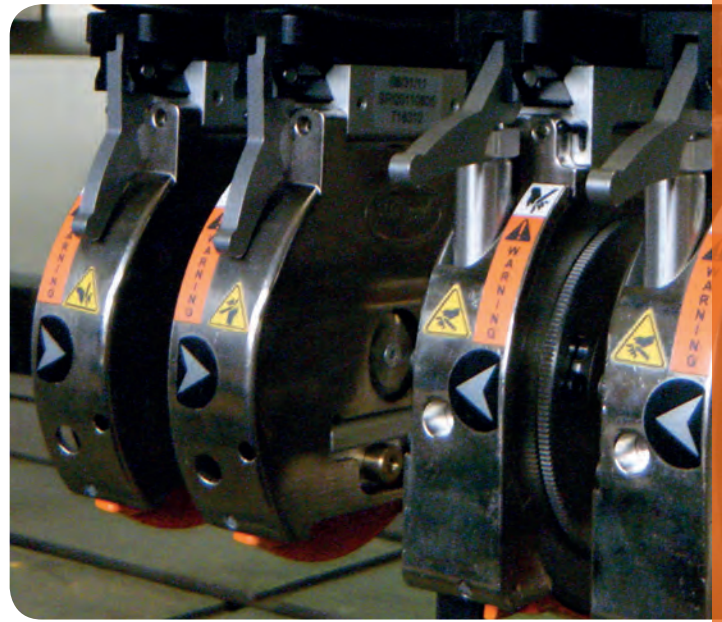
For the safest blade handling possible – thanks to its integrated 360° pneumatic operated guard the slitting blade is kept protected during all operator handling from cartridge release to blade removal from the cartridge for grinding service.



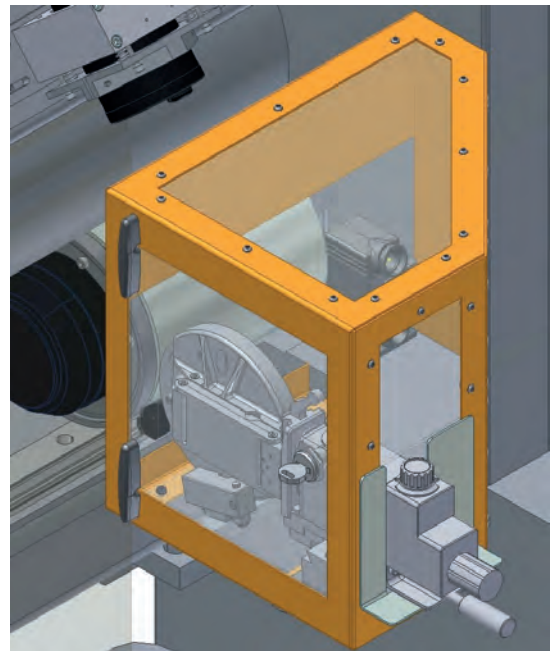
A special threading guard “ski-attachment” to protect the operator during web handling when guiding the web through the slitting section.

Why not think about a full slit section covering – Tidland can help here as well with special section guards.

Safe slitting component handling ensures a maximum operator safety and handling as well as a maximum productivity support. Tidland specially designs its components with easy to use features like 180°



Special knifeholder cartridge side cover to prevent the operator from uncontrolled blade contact during operation without disturbing the slitting process itself.



cartridge reversibility, fast blades change, slit parameter control (correct cant angle orientation or overlap & side force control when using the unique Tidland e-Knifeholder).



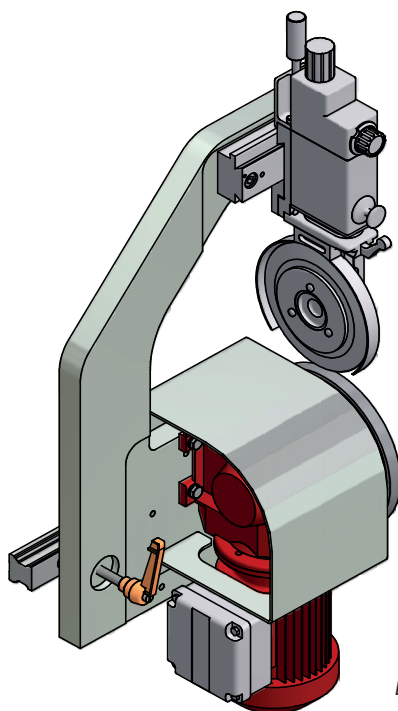
## Edge-Trim

This self-contained shear slitting system is designed specifically for trimming the edges of a continuously moving flexible web. Built for reliable operation in any environment, Tidland's Edge-Trim system will help you greatly reduce repositioning time and ensure trimming accuracy.

Instead of expensive cross-web hardware, Edge-Trim has both upper slitter and driven anvil ring mounted on a common C-frame on linear rails. Setup time is reduced or eliminated because the blade-to-anvil geometric relationship is never disturbed during slitting repositioning.

### Key Benefits

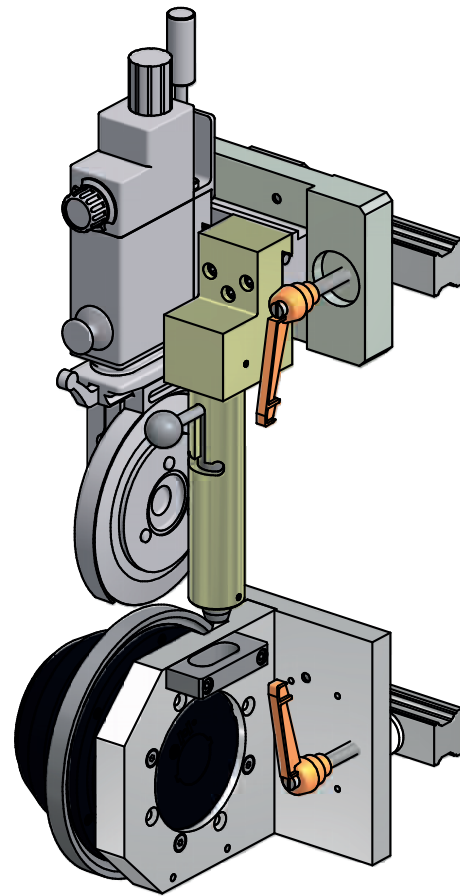
- Robust design for all applications (converting, mill duty heavy duty, ...)
- Quick setup
- Modular and flexible for a wide range of operations
- Easy & fast positioning
- Various options for customization available
- Easily integrated with other Fife-Tidland components into unique complex slitting systems (e.g. automatic edge chasing, centre slit, ...)



Edge-Trim

## Hitchiker

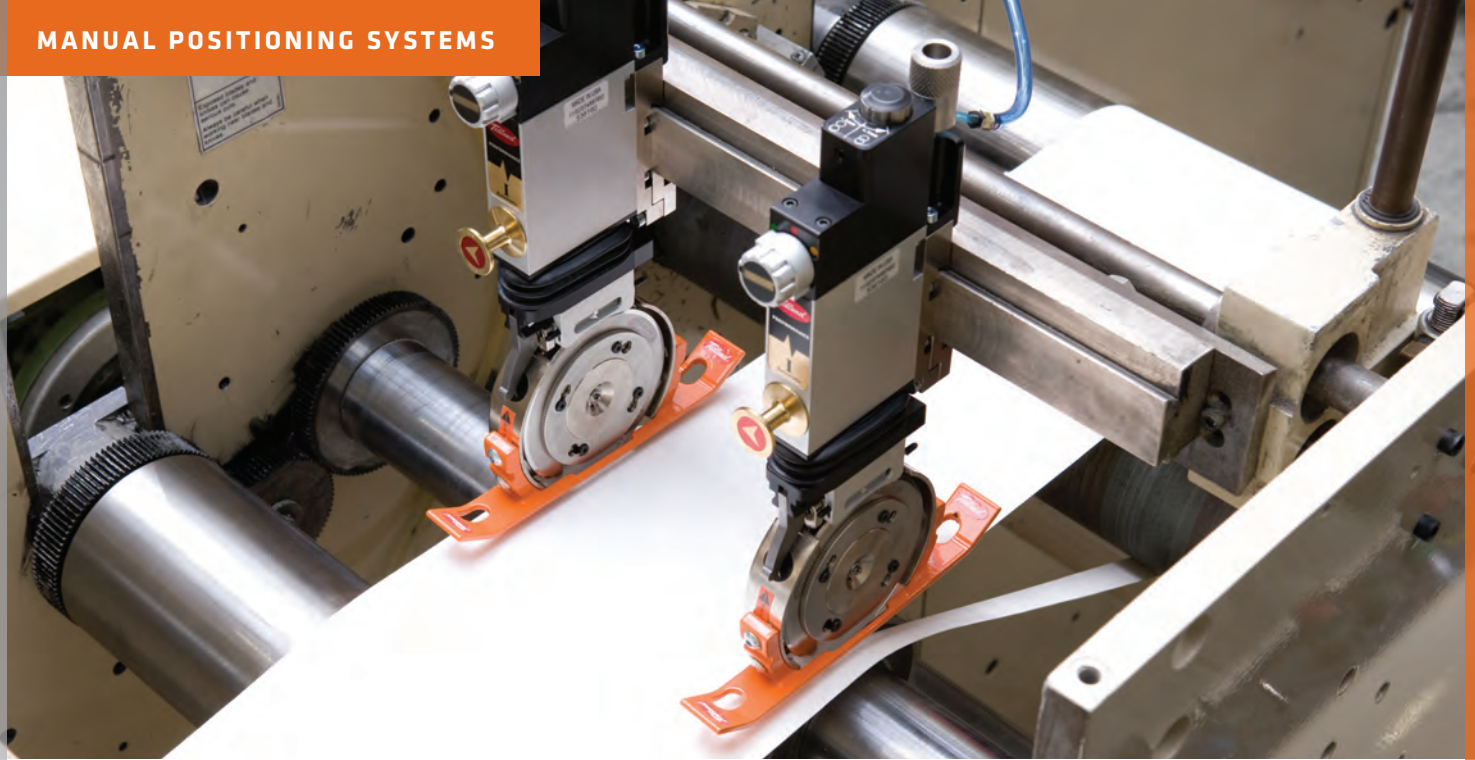
For applications involving multiple slits, Tidland's Hitchiker is a durable and reliable solution for reducing web-out slitter setup time and improving slit quality. This mechanically linked slitter system allows repositioning of knifeholders and anvil rings simultaneously, maintaining the critical blade-to-anvil relationship.



Hitchiker

### Key Benefits

- Applicable for a wide range of applications from easy converting to mill duty
- Increased slitter setup accuracy and repeatability
- Faster format changes
- Ease of maintenance
- Easy retrofit
- Various options for customization
- Automatic or manual positioning
- Combine with other Fife-Tidland products for complex slitting solutions



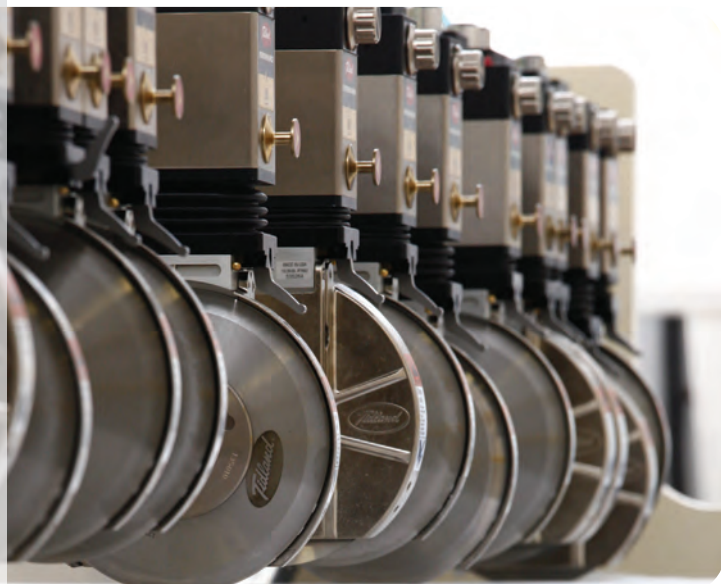
Tidland's MSP Modular Slitter Positioning is more than just a slitter, it's an approach. A methodology that gives you an advanced, tailored, manual slitting system using modular pre-engineered components. That way, if you don't need the feature, you don't pay for the feature.

By its very nature, an MSP slitting system is practical for just about any converting application. Start with a manual slitter that combines upper knives, lower knives, and knife mounting options to suit your

operation, and keep your options open for future expansion with easy and affordable upgrades to create an automatic system.

### Key Benefits

- Modular design allows customization of slitter with only the features required
- Unmatched slit edge quality
- Increased production capabilities
- Fast, precise slitter setup
- Reduced operator error and downtime
- Reliability and durability
- Flexibility for expansion
- Options available to increase accuracy and efficiency
- Supports all Tidland's slitting methods
- Slitter shaft or single driven bottom blade designs available
- Compact "Drop In" units for easiest slitting section retrofit and machine integration



MSP systems provide the performance you need now, with the flexibility to upgrade in the future. Upgrades provide the high quality output you would expect from an MSP system, and more. Enhancements like digital measurement (DMS-2), Cable management and Easy Glider linear positioning further reduce setup times and increase consistency.

### Digital Measurement System

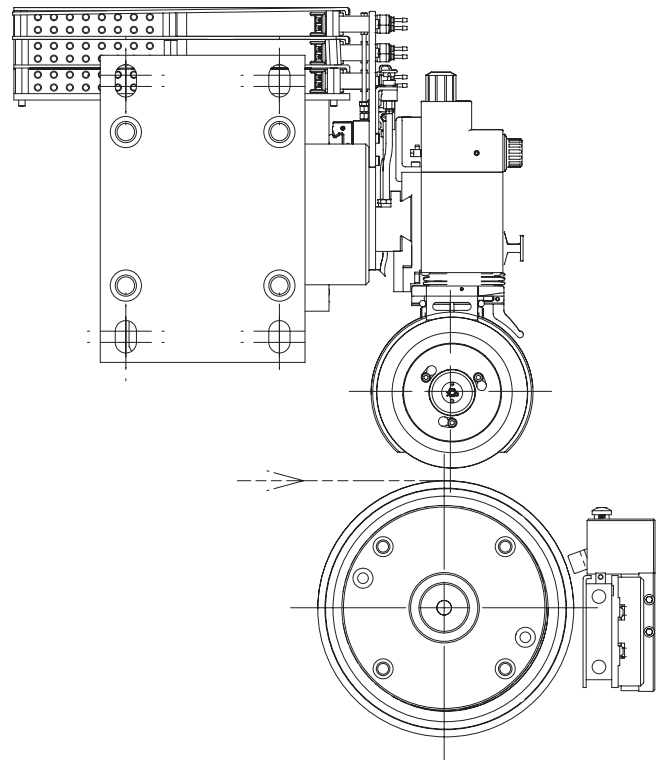
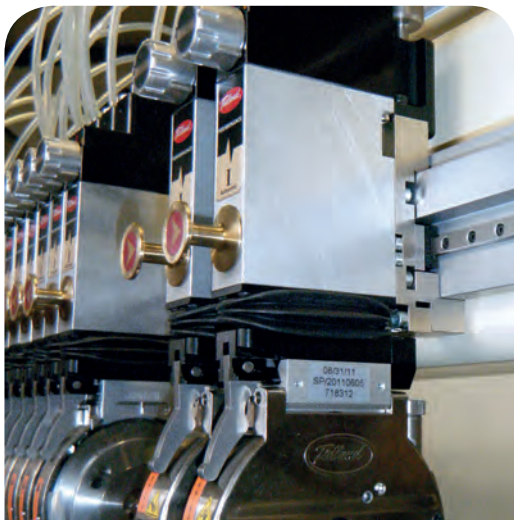
Measures knife placement to  $\pm 0.3\text{mm}$  (0.012 inch) accuracy. Reduces operator error and speeds up repositioning times. LED displays read-out in metric or inch units.



Digital Measurement System (DMS)

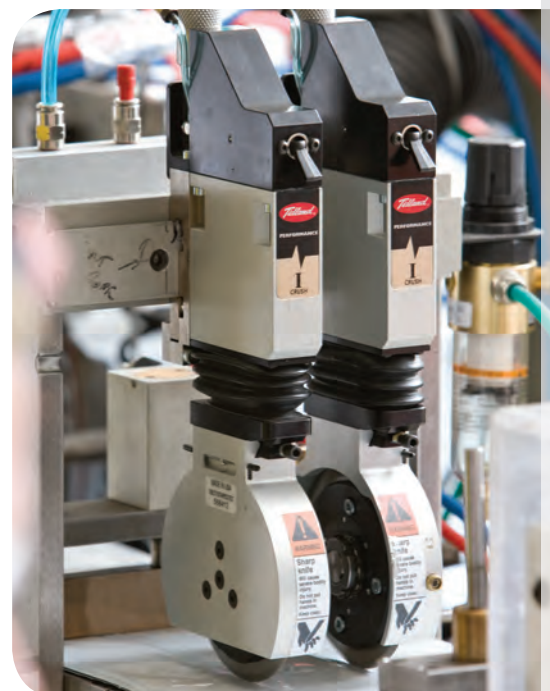
### Easy Glider Linear Positioning

Provides faster, smoother movement of knifeholders. Also enables addition of automatic positioning.

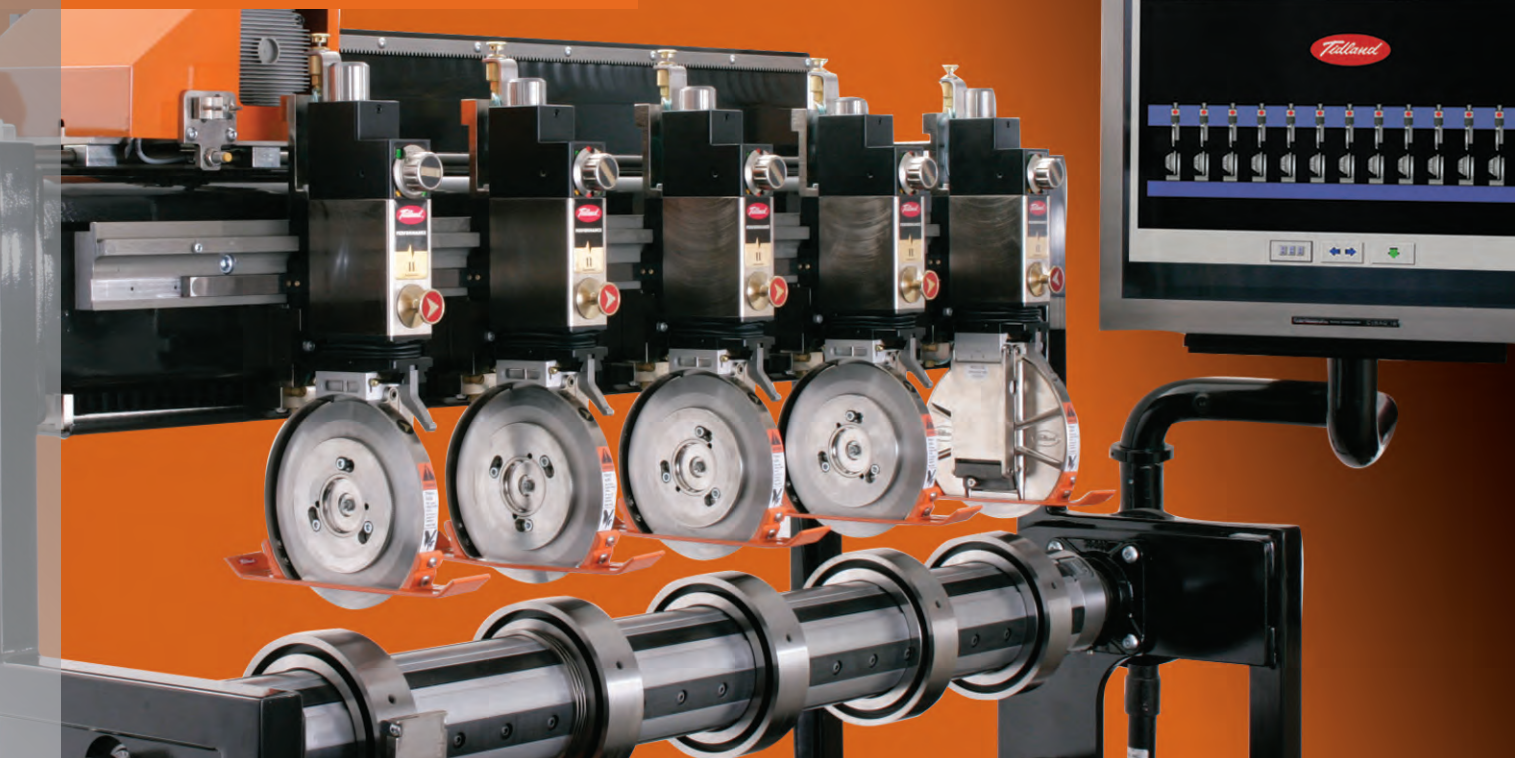


### Key Benefits

- Consistent, accurate slitte positioning
- Reduced operator error
- Faster setup times



Manual positioning system with crush knifeholders



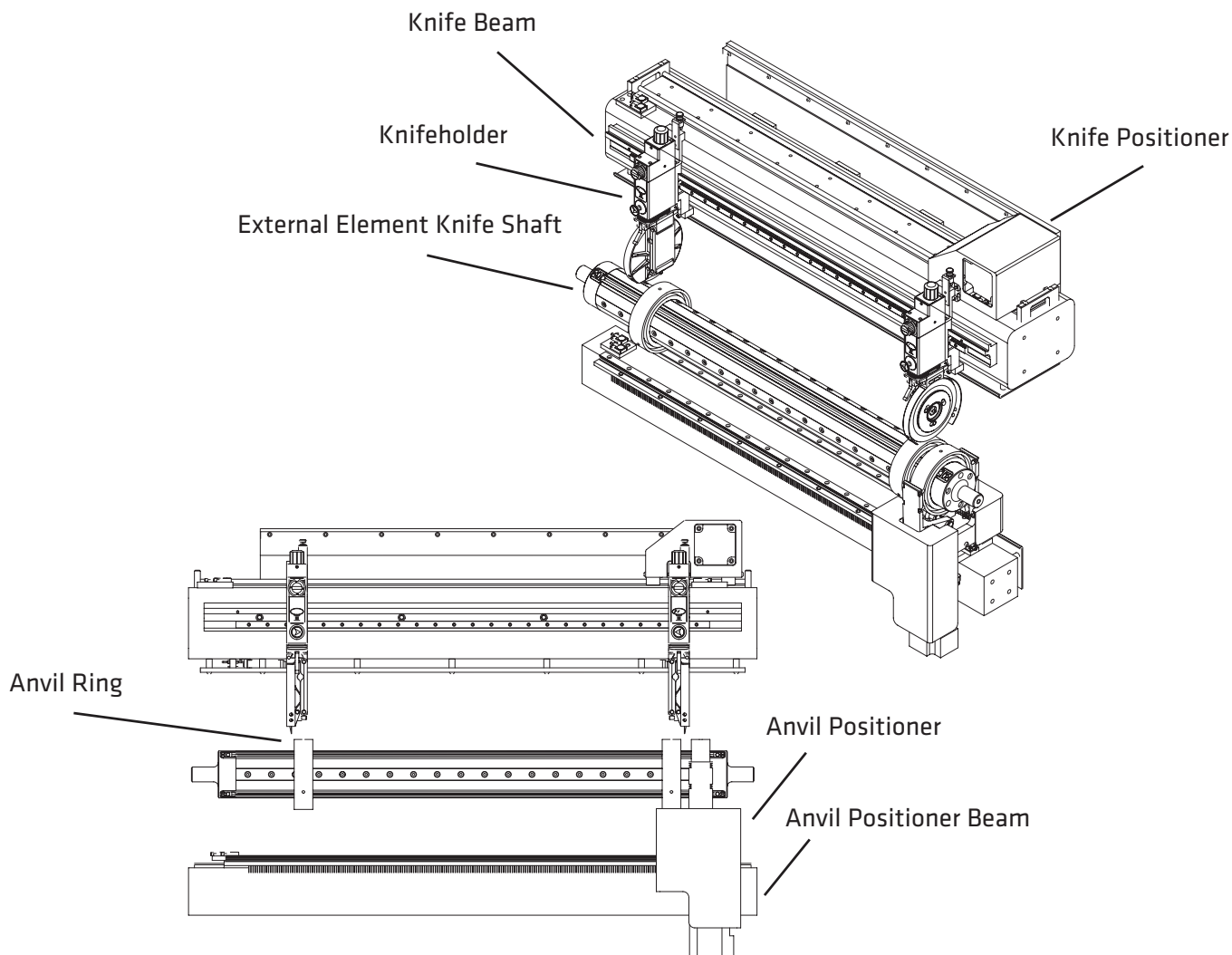
Automated Positioning Systems combine the latest technology and proven components to increase the speed and accuracy of knife positioning, minimize the frequency and complexity of maintenance, and reduce the risk

of operator error. Customizable options like lower knives, slitter shafts, and drive mechanisms ensure a perfect fit for your operation.



### Key Benefits

- Customizable base system adapts to your operations
- Highly accurate, consistent operation
- Minimal blade contact decreases setup time and increases operator safety
- Improves blade life, delivering higher quality edges and noticeable dust reduction
- Fewer moving parts reduces the frequency and complexity of maintenance
- Easy-to-use interface via TouchPanel or integration in existing HMI concept



### Tidland Slitter Model MSP-A

Tidland's newest automated positioning system is the best mix of new technology and proven performance. The Model MSP-A is a drop-in slitter designed to improve your profitability and production efficiency by increasing positioning speed, accuracy, and consistency. Choose from two options for lower knives to ensure the best slit quality and consistency for your application.

### Slitter Shaft

Tidland offers a wide range of slitter shafts with a 25 mm (1 inch) minimum slit width. For shear applications, a pneumatic shaft instantly locks knife rings in place, saving time and money. Anvil shafts are also available for crush applications.

### Motor

Individually motor driven anvils are best suited for wide webs and high speeds. Minimum 150 mm slit width.

Or special size optimized NarrowDriveSolutions "NDS" for minimum slit width requirements below common available 150 mm.



With durable steel construction and enclosed channels, Tidland's MSP-E - Modular Slitter Positioning system delivers reliable, trouble-free slitting in large-scale finishing operations and standard converting operations. The MSP-E is capable of repositioning all slits in less than 30 sec. (for typical re-winder format change) due to its synchronous positioning technology. The achieved positioning precision is within  $\pm 0.1\text{mm}$  with a repeatability of  $\pm 0.05\text{mm}$ .

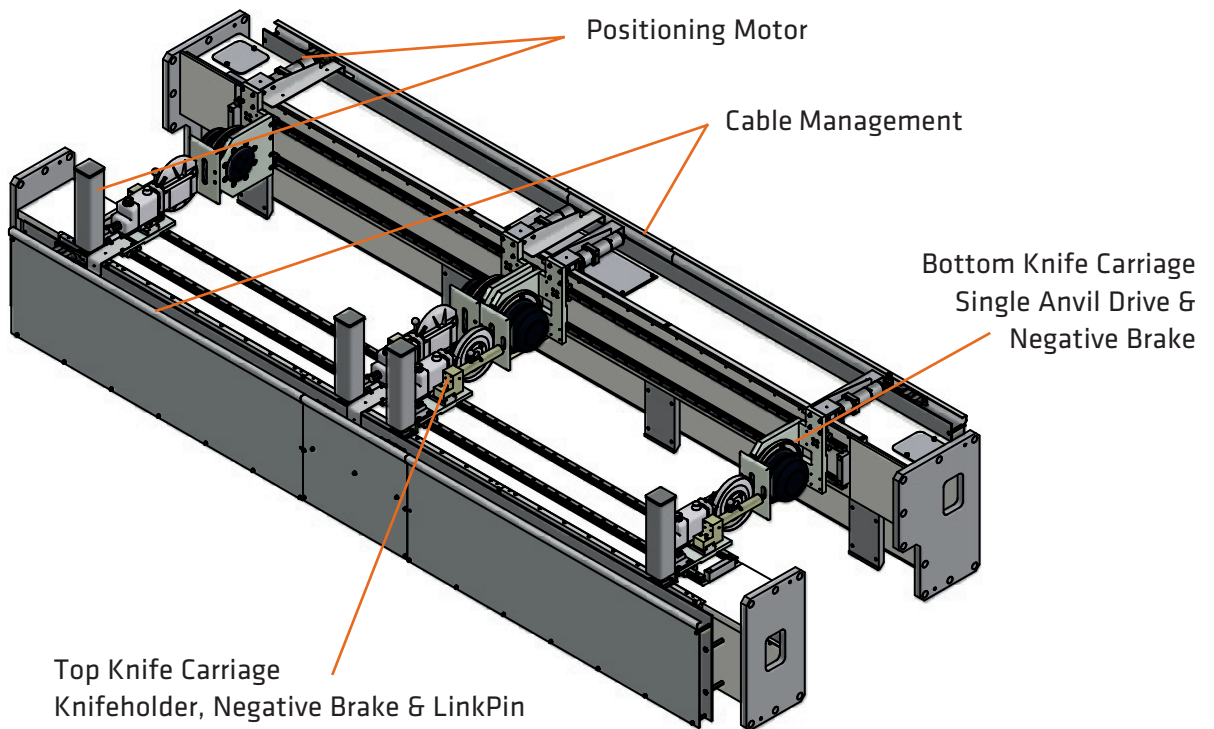
Thanks to its laser based auto-calibration the operator dependency in precision is reduced to a minimum.

Fully electronic positioning reduces operator

error and increased safety additionally. This custom-engineered MSP-E system is sure to increase production capacity and drastically reduce downtime. The MSP-E modular design allows for easy retrofit to most mill winders or converting applications and can be mounted at any angle for vertical or horizontal web paths.

Due to its flexible modular and latest technology based design - not even being limited to any mounting orientation - the system is perfect for new designed machines as well as for retrofits. The MSP-E enables your machine to become a safe and reliable partner in your modern production.





### Key Benefits

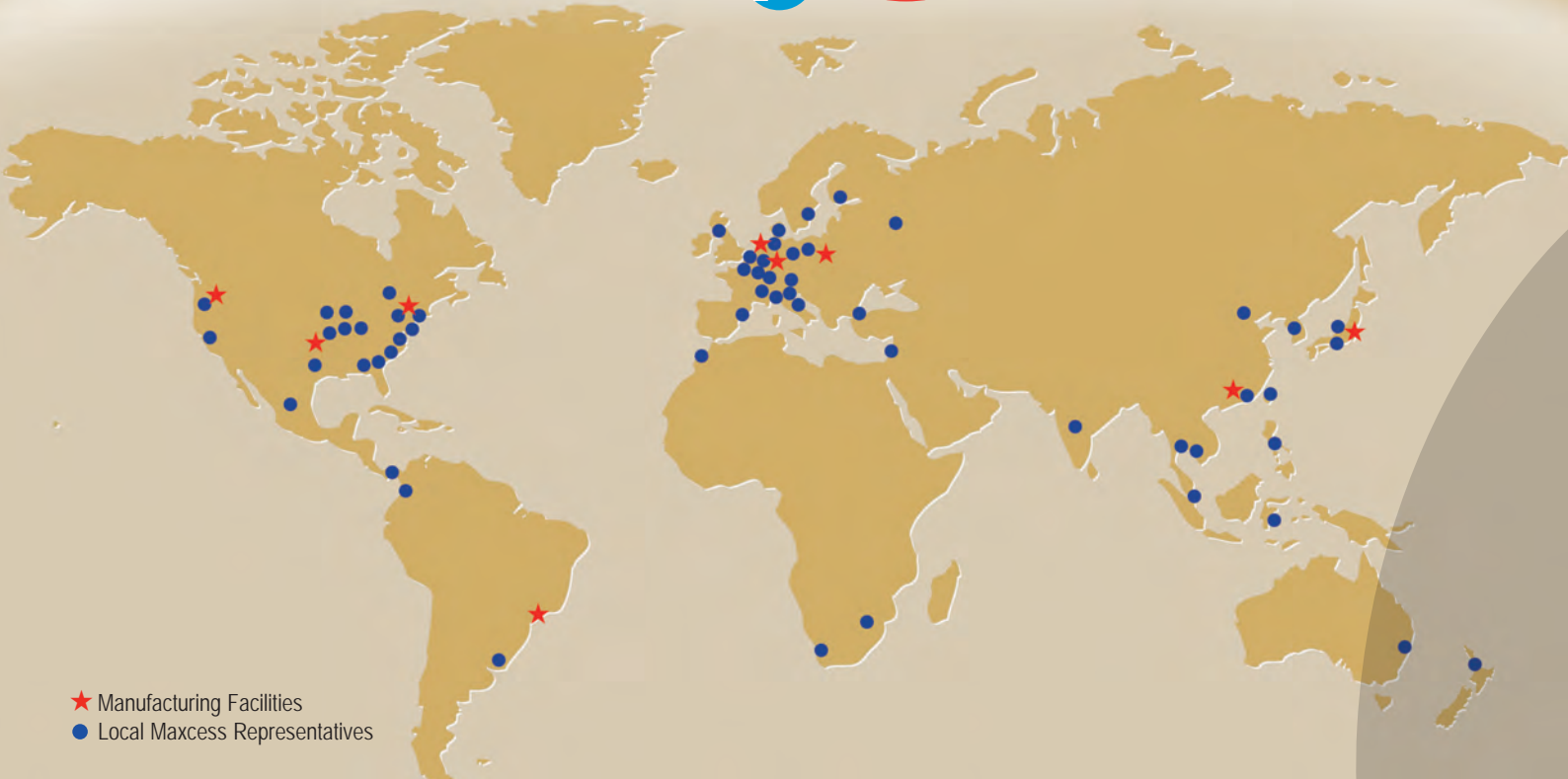
- Custom-engineered to your specific needs from stand alone to fully integrated solutions
- Adapts easily to center wind, center surface or bi-wind machines
- Designed for demanding environments, providing low maintenance requirements for continuous operations
- Reposition upper and lower knives simultaneously in either direction with the web in place
- Knives are repositioned without homing, even after a power outage occurs
- Multiple software options available to interface with mill computer systems
- Stored or customer PLC provided slit pattern can be quickly re-called to speed up changeover
- Affordable installations typically require no more than 48 hours working time
- Upgrade from manual to fully automatic systems
- PLC & field bus based positioning technology

# MAXCESS

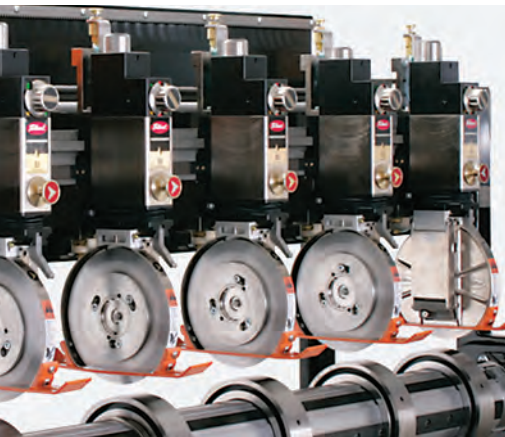
MAGPOWR



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