



ROTOCONTROL



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EMT ROTOCONTROL is recognized as a world leader in engineering and manufacturing superior quality finishing equipment, web transport solutions and accessories, serving OEM and converting customers in the paper, document processing, packaging, label and printing industries.

EMT has the design and development expertise to create highly customized, application-driven solutions in offset, flexo, and digital inkjet technologies.

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CORE HOLDING, TOOLING, CONSUMABLES

Shafts

Chucks/Adapters

Quick Set Bars

Slitter Holders

Punch Tooling & Consumables

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## CORE HOLDING PRODUCTS

EMT's lineup of customizable core holding products offers everything you need to meet your application requirements. Air shafts, mechanical shafts and air chucks are used in paper and converting winding, unwinding and rolling operation. These shafts and chucks expand to hold a roll core tightly, and then contract so that the shaft or chuck can be easily removed from the core.

Air shafts and chucks use a pneumatic bladder which expands under pressure, forcing lugs or leaves outward to grip the core. Deflating the bladder causes the leaves or lugs to retract.

Mechanical shafts use a rotating screw to axially move same with keyed ramps forward to force the lugs outward into the core. When the screw's rotation is reversed, the lugs retract.

EMT custom-designed core holding products are available to replace nearly any competitive shaft.



### Features:

- Journals precision machined to tight tolerances
- Replacement cartridge
- One-year parts/workmanship warranty
- Customer drawing pre-approval
- Ease of assembly/disassembly for field repair
- Fast, easy bladder replacement-lugs stay in place when bladder is removed
- Fast response, no hassle repair or replacement
- Shaft fits properly the first time

### Applications:

- Unwind and rewind stands
- Rewind stands
- Reels
- Slitter reels/stands
- Sheeters
- Roll winders
- Tissue and towel winders
- Center wind winders
- Packaging equipment
- Printing splicers
- Paper machine winders

## LUG STYLE AIR SHAFTS

EMT offers Lug Style Air Shafts with unique design features.

The lugs are free-floating, there are no clips or springs to jam or break, nothing to pinch or cut the bladder, one of the major causes of air shaft failure.

The lugs are positioned in six (6) rows evenly spaced around the shaft's circumference for better gripping and better support.

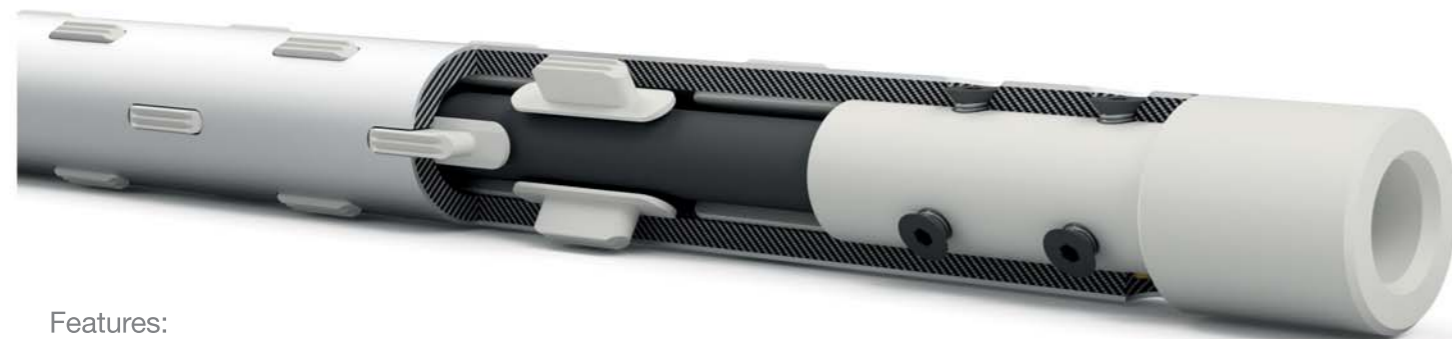
The longitudinal rows of lugs are staggered to provide continuous contact along the entire length of the shaft and to avoid uneven stress patterns when machining the shaft's body.

Sizes available are 1/2 inch through 12 inch diameters

Lugs are available in both steel and aluminum with serrated surfaces and in polyurethane for use in steel and PVC cores.

Bladders are of a specially formulated rubber compound with proven superior wear and durability properties. They are under constant testing and must meet our demanding specifications to be certified.

Inevitably all bladders need replacement and that is when our exclusive "inner assembly" makes bladder replacement quick and easy. In fact, it is possible to have our shaft back in service in a matter of minutes.



### Features:

- Precision straight-fit journals
- Free-floating lugs
- Polyurethane lugs with flat surface
- Exclusive inner assembly design
- Heavy duty seamless bladders
- Easier to assemble/disassemble than shafts with tapered journals
- No springs to break and puncture the bladder or jam the lugs inside the shaft body
- Allows greater penetration of paper/fiber cores
- Increases contact area with steel and PVC cores
- Allows quick and easy bladder replacement
- Long service life

### Applications:

- Unwind and rewind stands
- Reels
- Slitter reels/stands
- Sheeters
- Roll winders
- Tissue and towel winders
- Center wind winders
- Packaging equipment
- Printing splicers
- Paper machine winders

## MULTI-BLADDER PNEUMATIC SHAFTS MB SERIES



The EMT MB Series Multi-Bladder Shaft is equipped with individual full-length lugs positioned symmetrically around the shaft body. Each lug has an expandable bladder underneath it and when the bladder is inflated, the lugs extend out of the shaft body and grip the core. An air valve is located at the end of the shaft in an axial or radial position, depending upon application. As an option, the shaft can be equipped with an EMT Rotating Union for continuous air supply. Each shaft is custom manufactured per application requirement with a range of core diameters.

### Features:

- Lightweight, ergonomic solution
- Handle higher loads due to extruded aluminum body
- Easy to repair, no removing journals to replace bladders
- Full body length lugs prevent core slippage
- Replaces heavy leaf and lug style shafts

### Applications:

- Utilized in both unwind and rewind applications
- Ideal replacement for 5" and 6" core shafts to reduce shaft weights, ergonomic solutions
- Multiple core applications
- Slitter and turret rewind applications
- Can be used for either cardboard or plastic cores

### Options:

EMT offers a lateral adjust core shaft with its MB-Series Multi-Bladder Shaft for cantilevered installations in narrow web applications. Lateral adjust air shafts are available in 3" to 12" standard diameters. MB Series Multi-Bladder Shafts with built in lateral adjust allow machine operators to easily and quickly make changes on the fly. While the core shaft is rotating, an operator simply holds the adjusting knob with one hand and turns the adjusting screw with the other hand. This unique feature allows the machine to continue running without the need to shut down the line for adjustments in the axial position of web. Additionally, lateral adjust shafts are easily cleaned and are designed for the use in the food-grade operations. These shafts are designed for use with label presses, packaging machines and laminating machines. The MB Series Multi-Bladder Shaft is equipped with individual full-length lugs positioned symmetrically around the shaft body. Each lug has an expandable bladder underneath it. When the bladder is inflated, the lug extends out of the shaft body and grips the core. An air valve is located at the end of the shaft in an axial or radial position, depending upon application. As an option, the shaft can be equipped with an EMT Rotating Union for continuous air supply. Each shaft is custom manufactured per application.

### Technical Specifications of Standard Shafts

Operating pressure = 80 to 95 psi

Maximum speed:

Operating temperature

### Shaft Diameters

|               |             |              |         |
|---------------|-------------|--------------|---------|
| Core          | 3" (76.2mm) | 6" (152.4mm) | 150mm   |
| Body, O.D.    | 2.9" (76mm) | 5.9" (150mm) | 148mm   |
| Max Expansion | 3.1" (79mm) | 6.1" (156mm) | 156mm   |
| No. of Lugs   | 3 or 6      | 6 or 10      | 5 or 10 |

\*Other core diameters upon customer's request.

## LITE SERIES CARBON FIBER SHAFTS

The EMT LITE Series air shafts and mandrels represent a new generation in carbon fiber construction. Custom designed to fit your special needs, our LITE air shafts and mandrels are roll-wrapped with precision ribbons of prepreg, a highly controlled process that assures uniformity of resin-to-fiber content, while eliminating strength-robbing voids common in conventional shafts that are wet wound.

While other brands of shafts have interspersed layers of fiberglass—a cost-cutting practice that significantly lowers strength and rigidity, only EMT gives you the weight-saving advantage of a composite body without compromise, plus EMT’s quality and exclusive design features.



### Features:

- Straight-fit journals are precision ground for close tolerance concentric fit.
- Special socket head screws hold body seated securely against the shouldered journals.
- EMT’s exclusive inner core makes bladder replacement quick and easy. Keeps shaft in service so you don’t need as many
- Free-floating lugs have no springs or clips to break or jam. There is nothing to damage the bladder or body. Lugs are available in polyurethane, forged aluminum, and hardened steel, depending on type of core

### Applications:

- Unwind and rewind stands
- Reels
- Slitter reels/stands
- Sheeters
- Tissue and towel winders
- Center wind winders
- Packaging equipment
- Printing splicers
- Paper machine winders

## LATERAL ADJUST CORE SHAFTS



EMT offers a lateral adjust option with its MB-Series Multi-Bladder Shaft for cantilevered installations in narrow web applications. Lateral adjust air shafts are available in 3” to 12” standard diameters.

MB Series Multi-Bladder Shafts with built in lateral adjust allow machine operators to easily and quickly make changes on the fly. While core shaft is rotating, an operator simply holds the adjusting knob with one hand and turns the adjusting screw with the other hand. This unique feature allows the machine to continue running without the need to shut down the line for adjustments in the axial position of web.

Additionally, lateral adjust shafts are easily cleaned and are designed for the use in the food-grade operations.

These shafts are designed for use with label presses, packaging machines and laminating machines.

The MB Series Multi-Bladder Shaft is equipped with individual full length lugs positioned symmetrically around the shaft body. Each lug has an expandable bladder underneath it. When the bladder is inflated, the lug extends out of the shaft body and grips the core.

An air valve is located at the end of the shaft in an axial or radial position, depending upon application. As an option, the shaft can be equipped with an EMT Rotating Union for continuous air supply. Each shaft is custom manufactured per application.

## LUG CHUCKS

Lug-style chucks contain lugs evenly spaced throughout the body. They are ideal for adapting a single shaft to run multiple core sizes.

The EMT lug-style chuck is activated by supplying air through a fill valve on the end or side of the chuck. Air feeds through the journal end and inflates the bladder assembly. The expansion of the bladder forces out individual lugs to grip the core and provide the necessary torque. Releasing the air pressure allows the “free-floating” lugs to retract for core removal.



### Available in sizes:

- 3” diameter standard, custom sizes available
- Length: 5” and 12”
- Maximum bore: 1-1/2” diameter

### Options:

- 4” to 10” diameter with customer specified bore diameter and length
- Flanged end
- Core stops

### Features:

- Precision straight-fit journals
- Free-floating lugs
- Polyurethane lugs with flat surface
- Exclusive inner assembly design
- Heavy duty seamless bladders
- Easier to assemble/disassemble than shafts with tapered journals
- No springs to break and puncture the bladder or jam the lugs inside the shaft body
- Allows greater penetration of paper/fiber cores
- Increases contact area with steel and PVC cores
- Allows quick and easy bladder replacement
- Long service life

### Applications:

- Narrow web unwinds
- Narrow web rewinds

## MULTI-BLADDER AIR CHUCKS

The design of the EMT multi-bladder air chucks makes them exceptionally light and very strong. The air chucks are fixed to the carrier shaft and have separate expansion elements. They may be fitted with fixed or expanding centralizing elements.

The multi-bladder air chuck is positioned on the carrier shaft to suit the individual reel width and is held in place by tightening the screws in the clamp ring to prevent twisting or axial shifting. Compressed air is fed into the bladder through an air valve, which is in a radial or axial position in the chuck. The inflating of the bladders activates the expansion components, allowing for quick clamping of the cores. When the winding process is completed, the compressed air is released and the expansion components return to their original position, making the air chuck very easy to remove from the core.



### Features:

- Replaces core plugs and non-expanding mandrels
- Reduces weight
- Reduces core damage
- Greatly increases operator safety
- Reduces setup times
- Increases product quality and productivity

### Applications:

- Large core diameters of 8” and up
- Heavy loads
- Moderate to low running speeds
- Moderate runout acceptable
- Moderate to low torque
- Centering not required
- Tissue unwinders
- Paper unwinders
- Film unwinders
- Surface driven unwinders

## LEAF-TYPE AIR CHUCKS



EMT leaf-type chucks are based on our leaf-type shaft. Unlike conventional air chucks that use their inflated bladder to grip the core, the EMT leaf-type air chuck only uses the expanded bladder to exert pressure on serrated aluminum leaves, so there is no wear and tear on the bladder during hard starts and stops. In addition to the heavy-duty bladder, there is a protective sleeve between the actual bladder and the aluminum leaves. This feature eliminates all direct contact between expanding and gripping elements.

This design overcomes the major problems of the traditional tube or tire-type air chuck when deflated. Our leaf-type chuck will always have a 1/8" clearance with the core inside diameter. This consistently ensures continued ease in loading and unloading the cores when compared to the tube-type chuck which take a "set" to a larger diameter after a relatively short time in service. In addition, the serrated aluminum leaves grip the fiber/paper cores common in the field today and will not polish as is typical with exposed rubber.

EMT leaf-type chucks are available for 5" and 6" cores and can be mounted on air or mechanical shafts, round mandrels or square shafts. They are a lightweight, economical, and efficient way to handle larger diameter cores for continuous or part-time use.

## PNEUMATIC MECHANICAL CHUCKS WITH ADAPTERS

A pneumatic mechanical chuck provides high torque and high-speed core holding capacity for shaftless splicers, unwinders and rewinders.

The EMT pneumatic mechanical chuck operates by pressurizing the sealed chamber behind the moveable piston/cam assembly. Angled ramps under the lugs are forced outward by the forward motion of the piston/cam assembly, extending the lugs to grip the core. Release of the air pressure allows the return springs to force the piston/cam assembly back, retracting the lugs.



### Features:

- Low maintenance design
- Manual release port
- Close tolerance fits
- Large gripping area
  - 5 lugs – 3", 4" 5" core i.d.
  - 6 lugs – 6", 8" core i.d.
- No plastic bushings to wear or stick
- Easier lug replacements
- Designed to eliminate body and cam wear
- Allows forced release of damaged cores
- Prevents dirt and particle intrusion, further lowering maintenance requirements
- Increases torque capacity
- Lowers core stress
- Reduces dependence on core quality and/or material

### Options:

- Core extractors for automatic operation
- Adapters for quick changeover to different core diameters

### Mounting configurations:

- Flange or spindle mounted
- Lug/Leaf configuration

### Applications:

- High speed splicers
- Zero speed splicers
- Rewind and unwind stands
- Other shaftless applications

## QUICK SET BAR™ QUICK CHANGE CROSS PERF BAR

EMT quick change cross perf bar enables the operator to change rule in less than a minute. Its simple, effective design allows for easy adjustment, while increasing perf rule and anvil life. EMT's robust steel construction, built in the USA, adds reliability and is field proven. With no external moving parts, there is no maintenance required. Because of its simple design, its installation is quick and easy. Overall, customers can expect a quick return on their investment.

### Features:

- Compression Springs. Compression springs provide force for locking blade.
- Quick Set cushion pads for initial height settings and improved performance.
- Bar design allows for cushioned strike of blade against anvil.
- O-ring. EMT's bar as an O-ring to prevent the side shift of the rule.
- Steel lip. Rule rests on steel lip for added durability and life span.
- Accepts all conventional rules. The Quick Set Bar™ accepts all standard blade heights. Blade thickness variations are not a problem either.
- Compression Tool. Operator simply uses compression tool to change rule.



## COMPLETE LINE OF SLITTER HOLDERS

EMT International has the most unique variety of slitting and perforating holders available. We have designed and manufactured over 200 different styles to fit most printing presses, slitter/rewinders and a wide variety of other equipment. We will also design holders to meet your special needs. Units are available in a variety of sizes and configurations for score, shear and razor cut. Whether your application requires heavy or light cuts, high or low speed or large or small diameter slitter or perforator blades/wheels, we have a holder to fit the application. EMT International holders are designed and built to ensure durability, accurate cuts and long blade/wheel life.

### Holder features include:

- Lateral adjust feature. An axle housing allows lateral screw adjustment of the blade/wheel position after the holder is mounted to the mounting bar.
- Double bearing axle system. Supports the axle and blade/wheel with two bearings in a cantilever design.
- Screw depth adjustment. A screw and lock system adjusts the blade depth setting and rigidly locks the slitting arm.
- Rugged construction. Standard on all holders.
- Cantilevered design. Mounts the blade/wheel outside the framework of the holder.
- Air loaded holders. Feature standard heavy-duty air cylinders.
- Quick-change wheel system. Allows the operator to change the blade/wheel without the use of tools.
- Toolless design. Allows the operator to adjust position and change the blade/wheel without the use of tools.
- Blade side shift. Engages the blade in a sideward motion by means of air actuation.
- Linear bearing slides. Provided on many of our air holders.

### Shear Holder benefits:

- Quality cut. Double bearing axle system holds the blade steady to reduce blade "wobble" allowing for a much cleaner cut with less dust.
- Controlled pressure settings. The lateral adjust feature allows the operator to adjust the pressure of the blade against the remail shear anvil.
- Long blade life. The optimal cutting pressure attained with the lateral adjustment ensures the longest possible blade life. Since the blade is not allowed to "wobble", its life as well as the life of the female shear anvil is increased.
- No tools required. Faster set ups are achieved with toolless depth settings and blade pressure adjustments.
- Less maintenance. The double bearing axle system and cantilever design eliminate dirt and dust buildup between the frame and the blade.

### Crush/Score Holder benefits:

- Accurate cut widths and sizes. Our slitter holders give you a more accurate cut size. The lateral adjustment feature allows cut sizes to be adjusted to +/- 1/64" after the holder is secured to the bar.
- Quality cut. The unique double-bearing wheel support system eliminates wheel wobble and ensures that the wheel runs perpendicular to the backing roll. The wheel will maintain its original position and will not wander to wobble during the run. You get a more accurate, cleaner cut.
- Quicker setups. The lateral adjustment also makes setups quicker and easier. It is no longer necessary to clamp and unclamp the holder to position the wheel correctly. Your operators will save time, energy and money because repeat adjustments will no longer be necessary.
- Longer wheel life. The double-bearing feature prevents premature wheel wear caused by wobble or misalignment. There is no drag on the wheel against the housing or framework of the slitter holder. That means absolutely no side wear and no heat on the wheel.
- Less maintenance. The elimination of wheel drag and dirt and dirt buildup between the wheel and the housing eliminates wear and tear on the slitter body during use.
- Easy wheel changes. The double bearing axle system eliminates the need for a bearing in each wheel. The wheel is also exposed to an open side allowing for quick and easy wheel changes while the holder is still in the machine.
- No tools required. No tools are required to change position or for wheel changes with our optional toolless holder or quick-change wheel system.

### Applications:

- Business forms
- Tag and label
- Sheeting
- Paper film and foil converting
- Corrugated
- Coating and laminating
- Nonwoven
- Web printing
- Paper making
- Tapes



## PUNCH TOOLING & CONSUMABLES

EMT International has earned the reputation as a reliable source for durable punch tooling for line holes, challenging patterns and shapes and multiple patterns.

An integral part of the Chameleon finishing product line, our rings, cylinders and punch units are supported for all domestic and foreign-made printing presses in any repeat size. With a drawing or a sample of your product, our technical experts can help to optimize the performance of your equipment.

### Features and Benefits of EMT Punches:

- Line holes
  - Sizes for all repeats to fill any printing press
- Extended life
  - Hardened punches and dies greatly improve punch life and quality, improving run time
- Rapid ring
  - A quick-change punch system with a full set of punches that can be replaced in less than 2 minutes, allowing for increased press run time. Available in all sizes to fit all presses.
- File holes
  - A full line of file hole tooling including standard or special patterns engineered to fit unique punching applications.
- Punch cylinders
  - Used for special and unique patterns that involve across the web punching or for combining standard patterns. Cylinders are available for patterns such as datacard, tags, index patterns, etc.
- Special shapes
  - Tooling for any special shapes such as window, corner, notching and specialty shapes.
- Adjustable file hold and register skip perf
  - Allows for all printing presses in any repeat length. Can be used on conventional imprinting and numbering stations
- Optional accessories
  - Vacuum chad removal systems, backlash and timing gearing, and punches and dies.



## SERVICE, UPGRADES, RETROFITS, REFURBISH

EMT technicians have decades of experience and have our engineering team available in the same building for top tier, immediate support. Along with their extensive experience, they have access to the original equipment drawings for resourcing information about parts on your machine!



### Service Programs

To help with your maintenance requirements, EMT offers customizable service plans to fit your needs. These service plans are designed using preventive maintenance to keep your downtime to a minimal. Our Service plans include an experienced onsite technician to do a mechanical inspection and check of the machine, verify belt tensions, check endplay, use thermal imaging on bearings, and more. We will also customize a preventive maintenance schedule for your machine as well as verify spares levels to our recommended spares. These programs help to keep your line running optimally.

### Upgrades, Retrofits, Refurbish

As your machines age and parts reach end-of-life status or become obsolete, or when you need to upgrade to accommodate changing production parameters, EMT has solutions for your specific needs. We can also research your aging components to determine which ones are no longer available and provide solutions to replace them with new ones.

Listed below are just a few of the types of upgrades, retrofits and modifications we offer:

#### Upgrades:

- Speed upgrades
- Modular upgrades – we have different perf shaft lengths and can provide upgrades from our typical 16" length which covers half the web to full length, 22", perf shaft that covers the entire length of the web.
- Perf spacing – our dynamic perf machine comes standard at 2.75" min. perf spacing. We can upgrade to get down to 2".

#### Retrofits:

- Added punch modules and cross ironing modules
- Additional cameras – machines typically come with one, but two or more may be needed in order to read both sides of the web.

#### Modifications:

- Software updates

#### Refurbishments:

- Individual customization of machines through refurbishment to meet specific customer requirements
- Customized retrofit solutions to ensure optimal fit for refurbished machines
- Integration of modern components and technologies in the refurb process to enhance functionality and efficiency
- Refurb to a like-new condition for extended lifespan and improved performance