Complete automatic consumer and professional tissue lines
The MTORRES GROUP was founded in 1975. Nowadays this company has more than 800 employees and its products are present in over 70 different countries with more than 650 customers.

It is a pioneering multidisciplinary company specialized in innovation, production and marketing of automated systems for industrial processes within the sectors of:

- **Paper Converting** - Complete tissue converting lines and equipment for converting applications.
- **Aeronautics** - Special machine tools for the manufacturing of aerospace components, as well as tooling systems and assembly lines.
- **Wind energy** - Construction of experimental wind farms.
- Experts in composites for many applications.

www.mtorres.com

We are manufacturers of complete automatic consumer and professional tissue lines.

MTorres Tissue is located in Lucca, Italy, the centre of the tissue industry in Europe. The main activity of our Tissue Division is the design, manufacturing and service of complete automatic tissue lines.

Our equipment includes unwinders, embossers, rewinders, printers, tail sealers, log saws, corewinders and ply bonding systems, and is mainly addressed to the converting of rolled tissue products.
Complete Automatic Consumer and Professional Tissue Lines

TECHNICAL DATA

- Production speed from 450 mpm (1475 fpm) up to 700 mpm (2300 fpm).
- Total flexibility for consumer and professional.
- Diameter of finished products from 90 (3.5") to 350 mm (13.8").
- Up to 60 logs per minute.
- Roll diameter from 90 (3.5") to 350 mm (13.8") for the whole line.
- Engraved Embossing Rolls (up to 5 different patterns).
- Product specifications completely set from HMI including sheet count, log and core diameter.
NSS Unwinder

**DESCRIPTION**
The NSS is a center-driven unwinder that allows automatic splicing during reel changes with no down time, and guarantees a low and constant web tension immediately after the unwinding section. Instead of a conventional belted solution we use an innovative center-driven system that maintains sheet caliper and reduces dust. Because of its modular design, it is capable of working with one or more plies. Reel loading is achieved by an overhead crane. The **NSS** is a perfect solution for installations with limited machine direction space.

**OPTIONS**
- Extra Ply
- Automatic Web Alignment
- Carbon Fiber Rolls
- Higher Splice Speed (up to line speed)
- Core Handling System
- Device for quick chuck diameter change

**STANDARD TECHNICAL DATA SHEET**

<table>
<thead>
<tr>
<th></th>
<th>Standard</th>
<th>Optional</th>
</tr>
</thead>
<tbody>
<tr>
<td>Splice Speed</td>
<td>Up to 100 mpm (330 fpm)</td>
<td>~</td>
</tr>
<tr>
<td>Production Speed</td>
<td>Up to 760 mpm (2500 fpm)</td>
<td>Up to 1060 mpm (3480 fpm)</td>
</tr>
<tr>
<td>Paper Width</td>
<td>Up to 2750 mm (110”)</td>
<td>Up to 2850 mm (112”)</td>
</tr>
<tr>
<td>Reel Diameter</td>
<td>Up to 2500 mm (98”)</td>
<td>~</td>
</tr>
</tbody>
</table>

UTS Unwinder

**DESCRIPTION**
The **UTS** model is a center-driven unwinder, with automatic splice capability, which guarantees a low and constant web tension at the exit of the unwinding unit. It is based on a cart system that incorporates the unwinder unit and the auto splicer. It uses two carts per ply and can be manufactured to work with one or more plies. A precise web tension control (a unique combination of load cells and servo driven dancer rolls) guarantees the reel unwinding with a low and practically constant web tension even during the splicing cycle. Due to this feature the **UTS** is capable of improving the output of any converting line, whether it is a new line or it is retrofitted to an existing line.

**OPTIONS**
- Automatic Loading
- Extra Ply
- Automatic Web Alignment
- Web Width Measurement
- Platform
- Motorized rollers
- Higher Splice Speed (up to line speed)

**STANDARD TECHNICAL DATA SHEET**

<table>
<thead>
<tr>
<th></th>
<th>Standard</th>
<th>Optional</th>
</tr>
</thead>
<tbody>
<tr>
<td>Splice Speed</td>
<td>150 mpm (500 fpm)</td>
<td>Up to 350 mpm (1150 fpm)</td>
</tr>
<tr>
<td>Production Speed</td>
<td>760 mpm (2500 fpm)</td>
<td>Up to 1060 mpm (3480 fpm)</td>
</tr>
<tr>
<td>Paper Width</td>
<td>2850 mm (112”)</td>
<td>Up to 3200 mm (126”)</td>
</tr>
<tr>
<td>Reel Diameter</td>
<td>2500 mm (98”)</td>
<td>Up to 3605 mm (142”)</td>
</tr>
</tbody>
</table>
**DESCRIPTION**

The **MULTIFUNCTIONAL** embosser is the innovative solution for making P/P and Nested product with tool-less changeover in 20 minutes. The embosser is equipped with independent motors for each of the main rolls enabling speed variation of the steel rolls and of the gluing unit, according to the amount of glue to be applied to the paper. The pressure and nip adjustments are controlled from the HMI. The laminating system incorporates a carbon fiber doctor blade with an extremely lightweight and compact design to facilitate maintenance. The marrying roll and the upper steel roll have an automatic cleaning system that consists of a rotating brush and lubrication. Composed by two rubber to steel nips, a gluing unit, a marrying roll, plus an additional nip for P/P rolls, it can be equipped with the automatic change of the steel rolls option with a changeover in only 10 minutes, where a roll storage is positioned behind the embosser being accessible for operators.

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**STANDARD TECHNICAL DATA SHEET**

<table>
<thead>
<tr>
<th></th>
<th>MF450</th>
<th>MF600</th>
<th>MF700</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Speed</strong></td>
<td>450 mpm (1475 fpm)</td>
<td>600 mpm (2000 fpm)</td>
<td>700 mpm (2300 fpm)</td>
</tr>
<tr>
<td><strong>Steel Roll Diameter</strong></td>
<td>350 mm (13.8”)</td>
<td>445 mm (17.5”)</td>
<td>500 mm (19.7”)</td>
</tr>
<tr>
<td><strong>Flexless Rubber Rolls</strong></td>
<td>Optional</td>
<td>Optional</td>
<td>Included</td>
</tr>
<tr>
<td><strong>Automatic Timing of Steel Rolls</strong></td>
<td>Included</td>
<td>Included</td>
<td>Included</td>
</tr>
</tbody>
</table>

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The **Flexible and Unitech** rewinders are capable of making both consumer and professional rolls. They are equipped with up to ten servo motors, have a very precise paper tension system and use a revolutionary transfer principle which makes the passage of cores between winding rolls very fluid. A dual rotating perforation roll is used to facilitate perforation length changes between toilet paper and kitchen towel. Easy adjustment of all parameters through the control panel with no need of changing parts.

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**STANDARD TECHNICAL DATA SHEET**

<table>
<thead>
<tr>
<th></th>
<th>Flexible 450</th>
<th>Flexible 600</th>
<th>Unitech 700</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Speed</strong></td>
<td>450 mpm (1475 fpm)</td>
<td>600 mpm (2000 fpm)</td>
<td>700 mpm (2300 fpm)</td>
</tr>
<tr>
<td><strong>Log Diameter</strong></td>
<td>90-350 mm (3.5”-13.8”)</td>
<td>90-350 mm (3.5”-13.8”)</td>
<td>90-220 mm (3.5”-8.7”)</td>
</tr>
<tr>
<td><strong>Core Diameter</strong></td>
<td>25-90 mm (0.9”-3.5”)</td>
<td>25-90 mm (0.9”-3.5”)</td>
<td>35-55 mm (1.4”-2.2”)</td>
</tr>
<tr>
<td><strong>Logs/Min.</strong></td>
<td>Up to 35</td>
<td>Up to 45</td>
<td>Up to 60</td>
</tr>
<tr>
<td><strong>Product Change</strong></td>
<td>Automatic</td>
<td>Automatic</td>
<td>Automatic</td>
</tr>
</tbody>
</table>
**TAILTECH**

**Tail Sealers**

**DESCRIPTION**

The **TAILTECH15 PRO** tail sealer is specifically designed for professional products, and applies a line of glue on logs with a diameter range of 120 mm (4.7”) to 350 mm (13.8”), and a maximum of 15 logs/min. The patented system is comprised of a shaft with rotating arms that positions the log in the gluing station. No mechanical adjustment is required to change log diameters. Sealing of the log is accomplished by a glue gun. All main movements of the tail sealer are controlled by servo motors.

The **TAILTECH60 CON** tail sealer applies a line of glue on open tissue logs. It is dedicated to consumer products with a diameter range of 90 mm (3.5”) to 200 mm (7.9”) and can reach the speed of 60 logs/min.

The **TAILTECH50 SWING** can be used for both consumer and professional products, with an extended range of 90 mm (3.5”) to 350 mm (13.8”). This version can reach the speed of 50 logs/min. The tail is opened by means of two rolls. Two belts (upper and lower) transport the open log to the gluing area. When the log reaches the slot on the glue tank, a blade is activated and applies glue to the entire log. Two sealing rolls generate pressure on the log, thus closing the tail. The log is then pushed towards the accumulator through speed differential of the rolls. By varying the speed of the rolls it is possible to position the glued tail so that no contamination is generated on the accumulator buckets.

**STANDARD TECHNICAL DATA SHEET**

<table>
<thead>
<tr>
<th>TAILTECH15 PRO</th>
<th>TAILTECH60 CON</th>
<th>TAILTECH50 SWING</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Speed</strong></td>
<td>Up to 15 logs/min</td>
<td>Up to 60 logs/min</td>
</tr>
<tr>
<td><strong>Log Diameter</strong></td>
<td>120-350 mm (4.7”-13.8”)</td>
<td>90-200 mm (3.5”-7.9”)</td>
</tr>
</tbody>
</table>

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**PROTECH SAWTECH**

**Log Saws**

**DESCRIPTION**

The **PROTECH120** log saw is a new cutting concept for industrial rolls with a vertical arm movement driven by dual transmission belts. It is capable of cutting industrial rolls with diameter up to 350 mm (13.8”) and with a density up to 320 kg/m³ (20 lbs/ft³). An innovative clamping system enables change of diameter from the panel, and the independent drive for both the arm and blade complete the **PROTECH120** log saw, which can achieve a speed up to 120 cuts/min.

For consumer rolls, the log saw **SAWTECH230** is provided with a servo driven log guide system that allows for excellent control of the log as it is being cut, so there is no risk of short or long rolls. The new trim elimination system, which combines vacuum belts on the top and a support belt on the bottom, allows the customer to produce either soft or hard rolls.

**STANDARD TECHNICAL DATA SHEET**

<table>
<thead>
<tr>
<th>PROTECH120</th>
<th>SAWTECH230</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Speed</strong></td>
<td>Up to 120 cuts/min</td>
</tr>
<tr>
<td><strong>Log Diameter</strong></td>
<td>120-350 mm (4.7”-13.8”)</td>
</tr>
<tr>
<td><strong>Clamps</strong></td>
<td>Universal</td>
</tr>
<tr>
<td><strong>NR. of Lanes</strong></td>
<td>1</td>
</tr>
<tr>
<td><strong>Rolls Density</strong></td>
<td>Up to 320 kg/m³ (20 lbs/ft³)</td>
</tr>
</tbody>
</table>
DESCRIPTION

The CORETECH140 corewinder is equipped with a single servo driven toothed blade and inclination of the forming belt from panel. It can produce consumer and away-from-home cores. By changing the value of penetration of the blade in the cores, it is possible to cut from 1 to 6 plies. Core formation is handled by a separate motor (in the high speed version, each forming pulley is driven by separate motors as well as the toothed blade) and it can be equipped with water cooling system for the mandrel. Unwinders to be selected according to the type of production.

STANDARD TECHNICAL DATA SHEET

<table>
<thead>
<tr>
<th>CORETECH140</th>
<th></th>
</tr>
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<tbody>
<tr>
<td>Speed</td>
<td>Up to 140 mpm (460 fpm)</td>
</tr>
<tr>
<td>Core Diameter</td>
<td>25-90 mm (0.98”-3.5”)</td>
</tr>
<tr>
<td>Number of Plies</td>
<td>1-3 for Consumer/ 3-6 for Professional</td>
</tr>
</tbody>
</table>

DESCRIPTION

Our innovative ply bonding system consists of flat wheels and an engraved counter roll. Thanks to the axial movement of the wheels, the effect on the paper is less visible and more uniform.

Our Services

WE HELP TO ACHIEVE THE HIGHEST EFFICIENCY

MTorres provides a wide variety of services to help their customers achieve the highest efficiency in their processes:

- Maintenance of the equipment to keep it in optimal conditions
- Operation and maintenance training
- Spare parts management
- Continual improvements and retrofits to existing machines and systems

Our Services:

- Installation and Start-Up
- Spare Parts
- Preventive Maintenance
- Corrective Maintenance
- Training
- Audits/Retrofits
- Teleservice
INNOVATION
Innovation is part of MTorres’ DNA. Innovation supports our way of thinking and guides the behavior of its professionals in a creative and innovative way, ultimately to the customer’s advantage. We take on new technological challenges with a sense of urgency to achieve positive results quickly.

COMMITMENT
MTorres employees always act with professional excellence, in a framework of integrity and customer focus that leads them to fulfill their engagements with added value and surpassing customers’ expectations.

TEAM
MTorres employees work as a team, sharing their knowledge, skills and experiences, and they work together to develop their talent in order to attain common objectives.

At MTorres, we strive for excellence to become a global technological leader in automating the manufacturing process, meeting customers’ ever changing needs, penetrating new markets, and achieving a strong and sustainable growth.

STRONG INVESTMENT IN RESEARCH AND DEVELOPMENT
The MTorres Group places a high emphasis on growth and expansion, as proven by the fact that a significant amount of capital has been re-invested into the company.

NEW TALENT
At MTorres we have pledged our firm commitment on technical and scientific training of our employees' children. With this action, we are demonstrating that we are wagering on our children’s future. Furthermore, the company decided to participate with its own teams in the First Lego League® challenge winning both domestic and international events. In 2013 we constructed a 486 m² Lego building at our facilities for the specific purpose of training the engineers of tomorrow.

Our Values

Global Technology Leader

 Boys and girls of our FLL teams respond to this company’s initiative becoming winners of several national and international competitions.

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