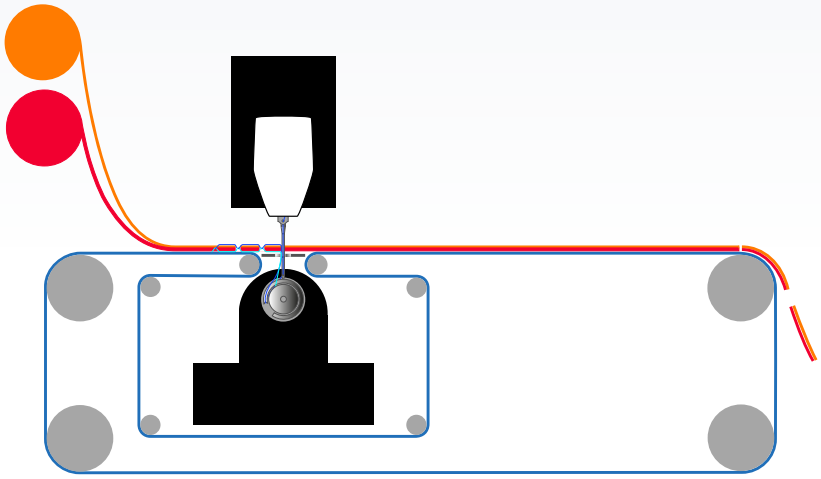
FASTSEWN
PATENTED / PATENTS PENDING

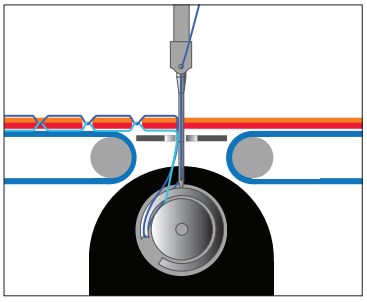
MOVING CAVITY TECHNOLOGY (MCT)

THE ALL-NEW, GAME CHANGING PATENTED INVENTION OPENS OPPORTUNITIES FOR MANY NEW DIGITAL CNC FLATBED PROCESSING APPLICATIONS, BASED ON ITS SIMULTANEOUS TOP AND BOTTOM TOOLING ACCESS



With its dual sided tooling access from the top and below, materials can now be automatically roll-fed and conveyed whereas in the past this required manual handling to load and off-load. This results in significant cost savings by eliminating manual handling.

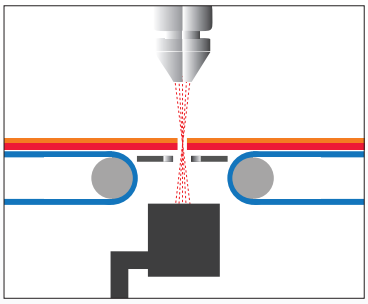
LICENSING OPPORTUNITIES ARE OFFERED TO MACHINE DEVELOPERS IN VARIOUS INDUSTRIES.
SEE EXAMPLES OF THE APPLICATION CAPABILITIES IN THE FOLLOWING.



SEWING

With FASTSEWN's patented, dual-sided, Moving Cavity Technology (MCT), true flat-surface sewing is now possible with no frames required. The sewing is combined with knife or laser cutting while the textile is held in a fixed secure position with focused vacuum.

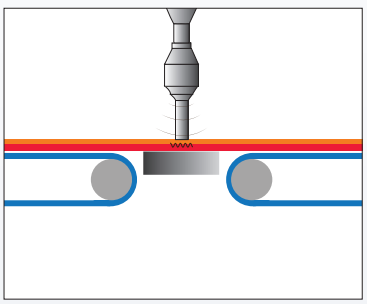
- True roll-feed and conveying of both sewing and cutting
- Fully automated operation for maximum productivity and consistent quality
- Intuitive, user-friendly software control
- Eliminates the need for trained sewers or manual handling
- Optional sewing of SEG keder, Velcro*, and other edge finishes



LASER

As with the sewing, the materials are fixed with focused vacuum. The laser beam only touches the materials and never the conveyer belts. Cumbersome metal grid belts are replaced with regular conveyer belts.

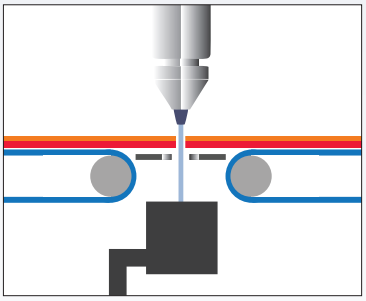
- As the laser beam never touches the belts, they last longer and rarely require cleaning
- Fumes are extracted in moving laser dump below the materials while being cut
- Targeted fume collection provides for lower power consumption and noise cleaner operation
- No backscatter thanks to the dedicated laser dump system which diffuses the laser beam



UTRASONIC WELDING

Ultrasonic welding typically requires a flat metal surface for the sound waves to interact with, which is difficult to accomplish with roll-feeding and conveying. MCT solves this by using a moving metal block beneath the ultrasonic horn while vacuum secures the material. The waves do not interfere with or damage the conveyor belts.

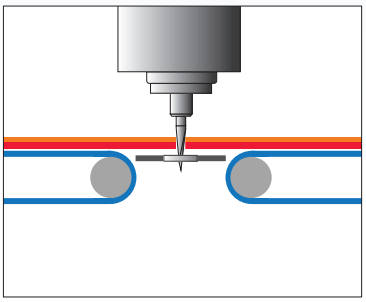
- Fully automated welding of parts longer than the machine bed and directly from rolls.
- Large parts can be produced on machines with much smaller footprint.
- The welding can be combined with cutting in the same process.
- Vacuum hold down during the welding secures highly accurate parts.



WATER JET

Like laser cutting, the clean water jet stream is directed into a small evacuation box beneath the material. The Moving Cavity Technology (MCT) eliminates the need for large wet areas, keeping operations clean and efficient.

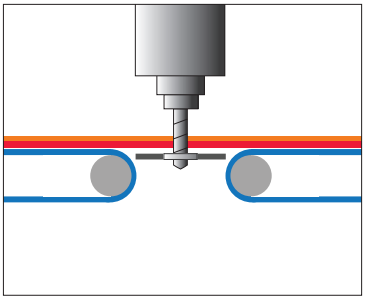
- MCT eliminates the need for large wet area
- Cost-effective automation with roll-feed and conveyor belts
- Ideal for cutting foams and thick technical textiles in rolls
- Long-lasting belts - the water jet never contacts them, minimizing wear and cleaning



BLADE CUTTING

With MCT dual-sided support, long blades - such as oscillating blades used in multi-ply cutting - are held from both the top and below while cutting, greatly reducing blade bending and improving cutting accuracy.

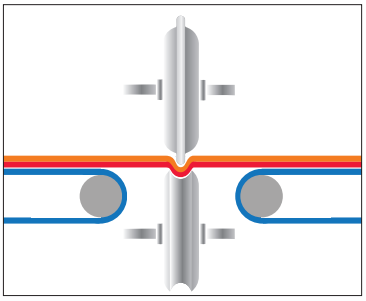
- Longer blades enables higher plies to be cut in one go, with minimal flexing or breakage
- Greater accuracy enables tighter nesting, reducing waste and maximizing material use
- Smaller blades can be used, producing less dust and debris
- Faster cutting speeds with less overrun at contours
- Blade never contacts the conveyor belt, lowering operating costs and maintenance



CNC ROUTING

The MCT provides unique support for bits from below the material, stabilizing the bits at both ends. This enables longer and thinner bits to be used operating at higher speeds without risk of breakage.

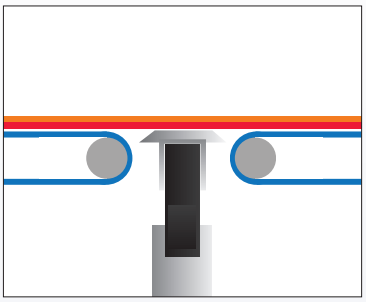
- Use thinner bits for more precise cutting
- Highly accurate contour routing, especially at the lower parts of the materials due to minimal bit flexing
- Faster routing speeds and higher RPM
- Less dust with smaller bits



CREASING

Creating precise and quality creasing lines in folding carton requires both a male and female die, which has been difficult to achieve with digital cutting tables. MCT enables a female creasing wheel to operate beneath the carton, making high-quality creasing possible.

- High-quality creasing by pairing a female wheel directly under the male wheel
- Creasing can be done in any direction with tangentially controlled male and female creasing wheels
- Cost-effective production of digitally printed and finished folding cartons can be achieved without expensive flat dies and tooling



PEN OR INKJET, MARKING FROM BELOW

With MCT, an inkjet head, pen plotter, or airbrush marker can be positioned beneath the material to mark parts on the backside immediately after laser cutting, blade cutting, sewing, or other processes.

- On-the-fly marking as parts are being processed
- Eliminates the need for separate labeling station

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