

# USPS AND BENEFITS OF ZELTWANGER FIN MILL

Process	USPs and Benefits
Double-head decoiler	<ul style="list-style-type: none"> <li>+ Exact calculation of inline coil diameters without additional sensors -&gt; Maximum utilization of raw materials</li> <li>+ Speed-dependent residual cycle time calculation -&gt; Optimized capacity and process planning</li> <li>+ Tool-less strip width adjustment -&gt; Setup times reduced by 50%</li> <li>+ Pneumatic tensioning -&gt; Maximum functional reliability and optimized tensioning force for all materials</li> <li>+ Barcode scanner -&gt; Comparison of materials and tools for maximum setup reliability</li> <li>+ Label printer -&gt; Recording of residual quantity and material feedback for constant transparency in the warehouse</li> </ul>
Tension controller	<ul style="list-style-type: none"> <li>+ Slip-free control -&gt; For uniform corrugated fin height</li> <li>+ Visualization of effective force -&gt; Detailed, reproducible system information</li> <li>+ Digital interface to the core builder as control loop -&gt; For fully automatic adjustment at the core builder</li> </ul>
Web edge control	<ul style="list-style-type: none"> <li>+ Angle compensation of up to <math>\pm 5^\circ</math> -&gt; Maximum flexibility</li> <li>+ Web edge control in tolerance range of <math>\pm 0.05</math> mm at 6.5 m/s -&gt; Maximum performance with extremely high accuracy</li> <li>+ No type-specific setup parts -&gt; Setup is omitted completely</li> </ul>



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## Oiling

- + Oiling based on speed and fin width via one-time configuration on the HMI -> Potential errors reduced to a minimum
- + Pressure reservoir-free oiling -> No mist formation and no suction necessary
- + Automatic oil quantity & spray width adjustment via type selection -> Always the right oil quantity on the conveyor
- + Individual filling options -> Maximum flexibility

## Slitting Unit

- + No change parts -> Setup is omitted completely
- + Double-sided carbide disk -> Doubles the service life

## Fin form roll

- + Type-dependent RFID tool query -> Potential errors reduced to a minimum
- + Comparison of material with the coil used via a barcode scanner system -> Potential errors reduced to a minimum
- + Quick tensioning system -> Setup times reduced by 80%
- + Quick coupling system -> Setup times of just a few seconds
- + Universal form roller head stand adaption as standard -> Maximum flexibility for tool selection
- + Wrap-around protection -> Highest safety requirements for type-specific tools
- + Connection for pneumatic cleaning system -> For maximum tool service life

## Gathering roll

- + Independently driven gathering roller and forming roller -> Compensation of different numbers of teeth and speeds possible
- + Wrap-around protection and safety enclosure -> Highest safety requirements for workers and type-specific tools
- + Type change via gathering disk pack -> Reduces setup times to a minimum

## Pullout station

- + Position adjustment and infeed via HMI -> No need to intervene in running process
- + Individually driven pullout wheels -> Individual speeds possible to compensate for curvatures
- + Drawing wheel change without tools -> Setup times reduced to a minimum
- + 2-step drawing system -> For maximum quality assurance

## Force sensor brake

- + Position and force control via HMI in running process -> No need to intervene in running process
- + Reproducible setting via type-specific force values (recipe data) -> Self-adjusting process



## Cutting unit

- + Horizontal flying cut -> No start/stop, no variations in length, increased process reliability, no loop formation
- + Exact cutting position in the valley possible even with maximum corrugated fin density -> Maximum quality assurance
- + Highly dynamic cutting unit -> 180 cuts/min single-track
- + Uniform speed of the feed fin scroll -> No need for dynamic acceleration & deceleration
- + Guillotine and anvil made of special material -> For longer service lives
- + Anvil can be used 4x and is regrindable -> Increases the service life 4-fold

## HMI

- + Card reader -> Various user levels possible
- + Direct operator intervention no longer necessary -> All process settings can be made via the HMI
- + No manual intervention for pressure sensor brakes and drawing level setting -> Maximum worker safety
- + Intuitive operator guidance -> Reduces malfunctions and downtimes
- + Mobile panel -> Maximum flexibility
- + Linking of several systems possible

## General system

- + Compact design with integrated control cabinet -> Stand-alone system, requires 50% less space
- + Throughput possible from both sides -> Maximum flexibility
- + Flat band speed max. 6.5 m/s -> Lower manufacturing costs through increased performance
- + Integrated louver angle measurement -> Maximum quality assurance
- + Inline fin height and density measurement -> Maximum quality assurance
- + RFID tool coding -> Eliminates potential for false setup
- + Digital system information -> Setup instructions, machine documentation, system information, etc.
- + Universal interface for third-party systems -> Simple integration in existing heat exchanger lines

