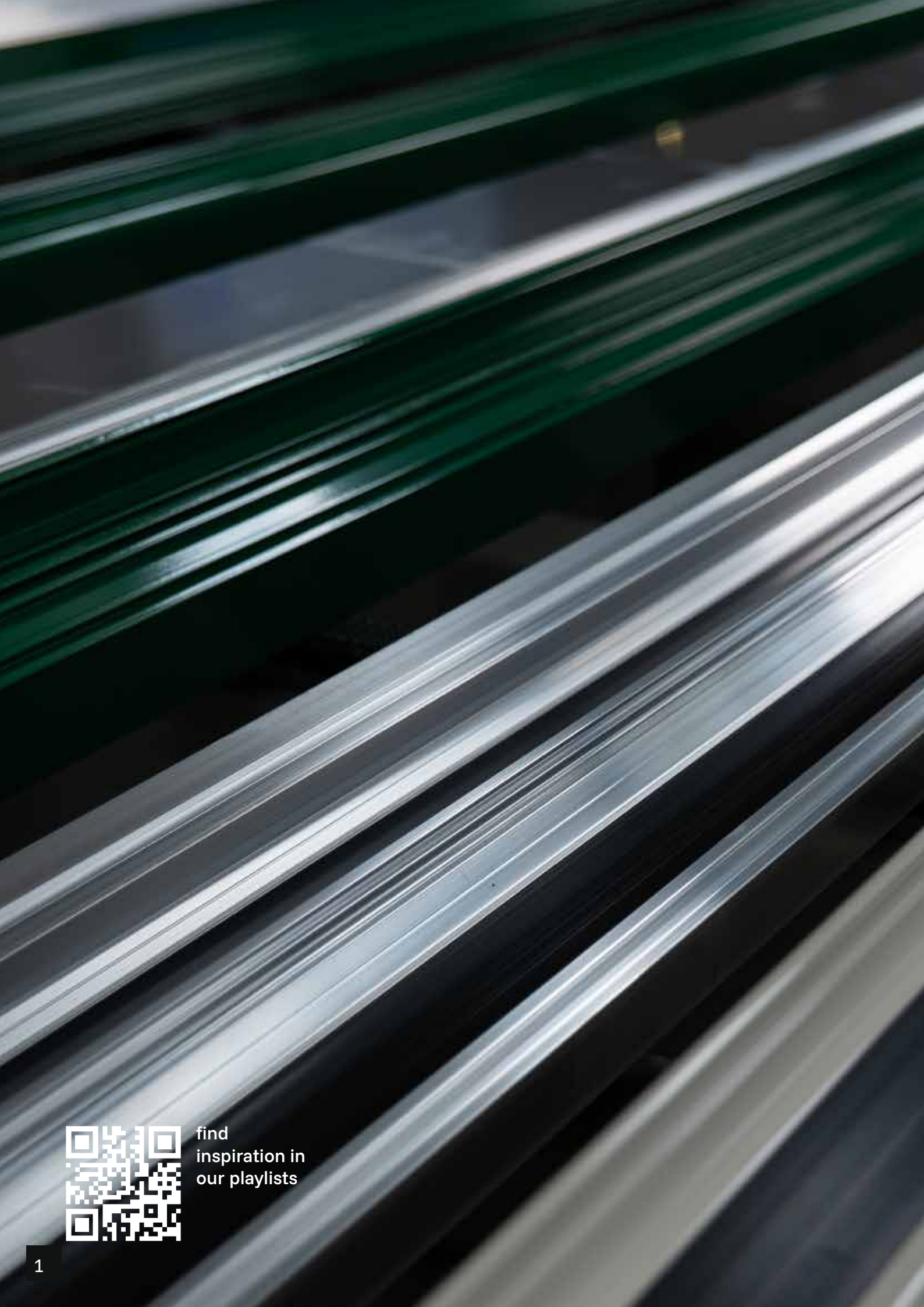




throughfeed machining
and cutting centre

Modulo MCE





find
inspiration in
our playlists



A single, no-com- promise process



Modulo

A single, no-compromise process



Flexibility and automation for customized production



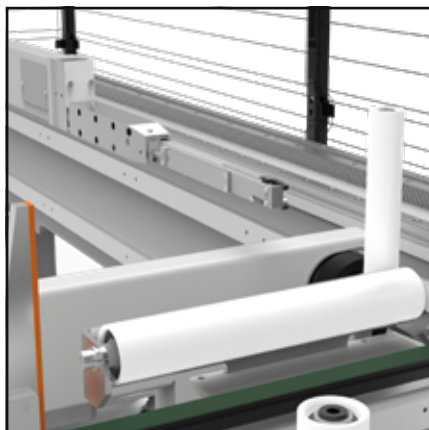
Modulo is a high-productivity throughput machining and cutting centre, to carry out **milling, drilling and tapping operations** on all four profile sides, plus cutting and end-milling functions. **All in a single production process.**

Specially-built bar support, transport and clamping systems, to handle complex profile sections and variable batch sizes in a **fully automated manner.**

Over 25 axes for material handling and movement, and 12 axes for machining.

This higher-level automation means **higher output and greater flexibility.**

Apart from being the ideal solution for curtain walls manufacturer, Modulo is perfect also for aluminium components production for furniture, interior design and architecture, and for the mechanical engineering industry, with a specific focus on frame applications.



Bar loading

Bar loading and storage magazine designed **to maximise efficiency and simplify your work.**

Optimal bar position with the dynamic stack management system. The automatic guides keep the profiles at the right

distance, without the need for space pins, **exploiting all available space**, regardless of the loaded bars width.

With the absolute longitudinal load reference, there is no need to measure the bar length manually: **the actual length is automatically detected before machining begins.**

■ **Greater loading flexibility, better performance**

Miniature gripper

The fully automated profile gripper adapts to the profile being machined in a **smart way**. The system reads the production data directly and automatically adjusts the position, orientation and rotation, **without any manual intervention required.**

The miniaturised gripper **ensures optimal grip even on complex profiles**, and in limited space conditions.

A full-bar presence sensor completes the system, for maximum control over the loading process.

■ **No manual intervention required. Optimum grip at all times**

Perfect profile support

The tilting and support system can handle even the most complex and unstable profiles reliably, ensuring their **correct positioning at every machining stage.**

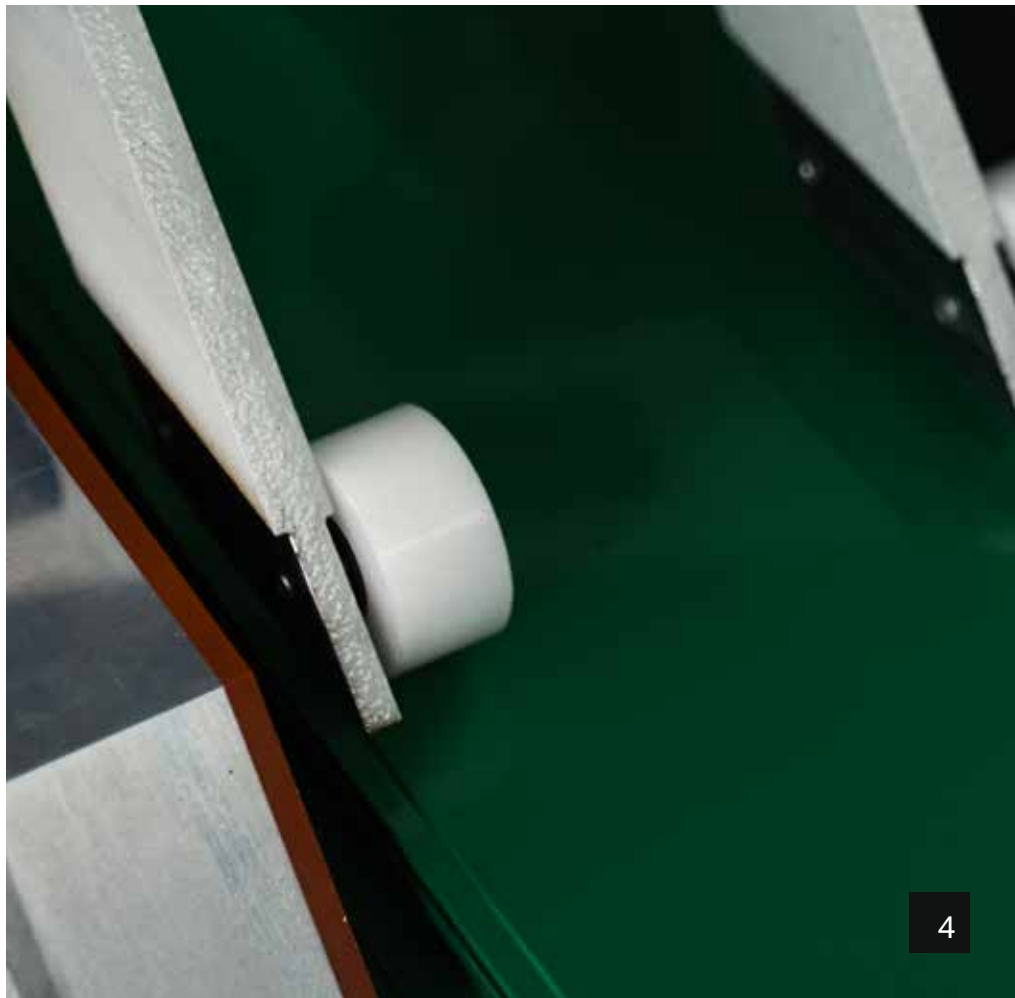
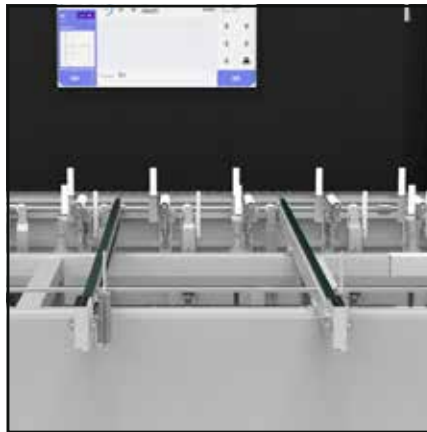
The two-axis control system and the guide mechanisms, coated in **scratch-resistant material**, guide the bar accurately and safely, with controlled



rotation of up to 90-degrees. No specific counter-template and **no manual adjustments required.**

The integrated supports, which are also incorporated into the machining modules, ensure continuity and **stability throughout the entire system, even when handling the very delicate or difficult-to-handle bars.**

■ **Maximum stability, even on the most complex geometries**



One tool for all sides

Modulo Multi-Spindles machines all four profile sides in a single operation, without interruptions and with **minimum cycle times**.

The electric spindles arranged in dedicated groups machine each face of the profile quickly and efficiently, thereby **increasing the overall production capacity**. Six standard configurations, with 8 to 18 electric spindles, to adapt the machine to any production requirement.

The clamps' design minimises the distance between the supports and the tools, reducing overhanging materials and **ensuring more precise and stable machining**.

■ **Maximum productivity, minimum cycle times**

Modulo Sawing Machine

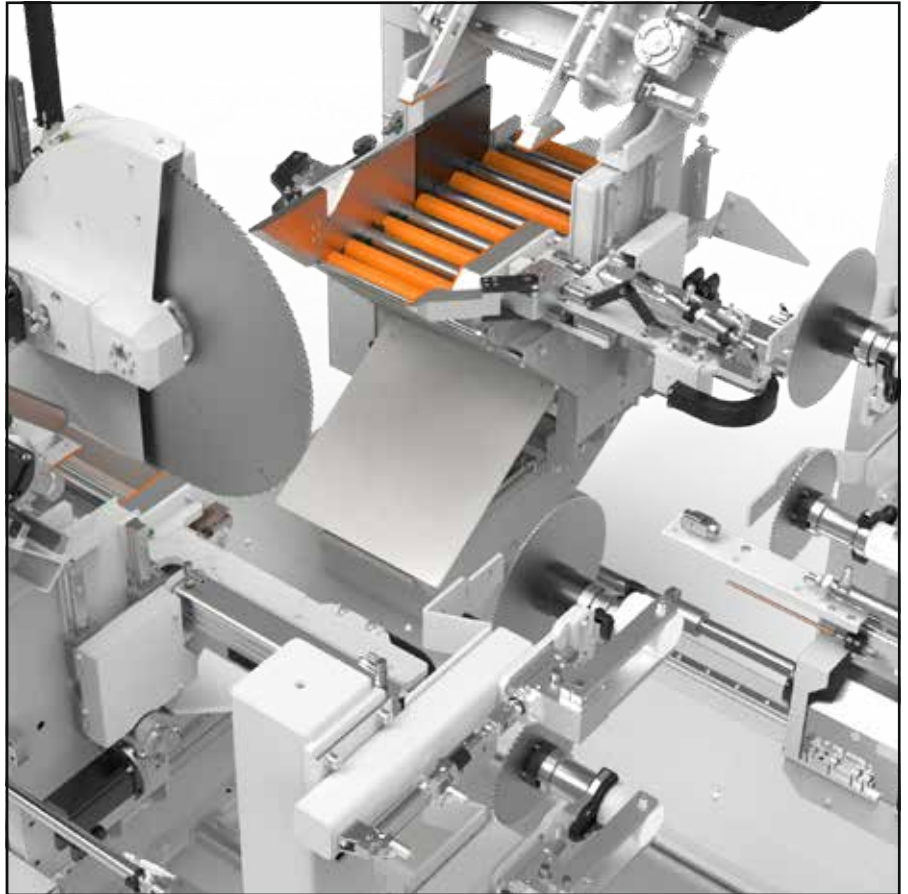
Modulo Sawing Machine ensures a **high cutting yield and flexibility across a wide range of geometries**.

Thanks to the "dynamic Z"

cutting concept, the blade enters the profile with a controlled movement that spans over the entire cutting surface, at any angle, without any unnecessary extra motions. The resulting **cutting diagram is more complete**, and can handle even partial cuts and blade entry paths with complete control.

The clamping system minimises the gap between the pads and the blade, ensuring maximum stability and **reducing vibrations while cutting**.

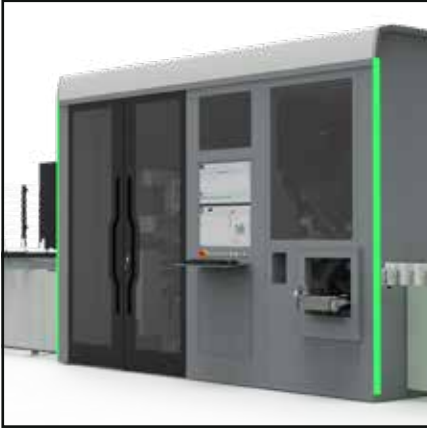
■ **Optimised cutting diagram, fast, accurate and controlled results**



End Milling

The Modulo End Milling Machine can be mounted on the Modulo Sawing Machine, sharing the same base and clamping systems. Immediately after the cut, the system carries out the end milling or trimming operations, **without any intermediate steps or repositioning on other machines required**. Two types of tools available: a trimming blade for profiles





up to Ø 250 mm, and a set of end-milling tools, up to Ø 200 mm and 130 mm of height. 3-axis controlled moving column and dedicated electrospindle, ensuring precision and high versatility, even during interpolated machining operations.

■ **A more comprehensive production cycle, in a single system**

Unloading magazine

The unloading modules with conveyor belts **preserve the workpiece's integrity**, guiding it without bending it to the accumulation point.

The transverse re-compaction function optimises the available space, to handle more items even in confined spaces. An automatic blowing phase removes any residues and chips before setting down the workpiece, ensuring a **consistently flawless surface finish**.

Continuity and efficiency are also ensured while unloading shorter workpieces, through a dedicated driven conveyor belt.

■ **Intact, clean parts, ready for assembly**

Cabin with built-in console

Soundproof cabin made with sound-absorbing structural panels, to **significantly reduce noise and enclose the work area**, creating a safer and more comfortable environment. Access from three sides and internal lighting for easier maintenance operations, and minimised production downtime.

Modulo's new feature is the control console, **directly built into the cabin structure**, eliminating the need for floor-standing equipment and freeing up working space. The large 27-inch touchscreen monitor offers a user-friendly interface, to manage machining operations quickly and reduce set-up times. The cabin's vertical edges are illuminated by a built-in double LED strip that immediately shows the machine's status.

■ **More space, better organisation, greater comfort**



FST Line 5

FST Line5, developed by FST - Fom Group's software division - is one of the crucial features of this system, **designed to maximise production efficiency and simplify the management of the entire process**. The software automatically optimises production cycles and introduces advanced features to make production more flexible and responsive, such as direct data import with automatic machining operations recognition, production figures recalculation directly on the machine, and the recovery and reuse of materials to reduce waste and operating costs. An integrated digital twin supports the operator at every stage, allowing parts and machining operations to be visualised in a 3D CAD environment - greater control, fewer errors and more intuitive management, even for complex machining operations. **The platform is designed to grow in line with customer's needs**: additional software modules and dedicated licences allow the system's functions to be expanded over time, safeguarding the investment.

■ **Software that adapts to your needs**



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