

The inclined workpiece table and ring module offer numerous advantages Compact machine for versatile profile machining

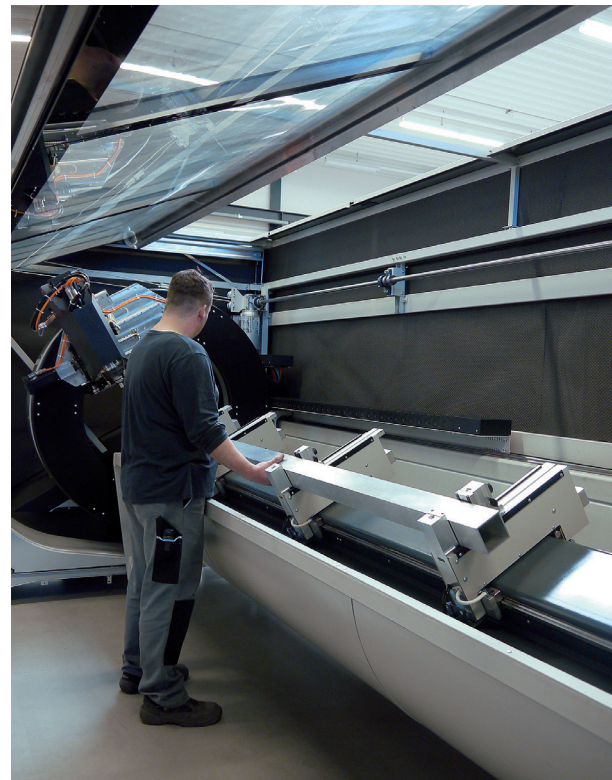
A premiere for a ground-breaking solution: elumatec to unveil its compact SBZ 137 profile machining centre for aluminium and plastic profiles. The SBZ 137 is notable for its innovative, patented machine concept, featuring a workpiece table that is inclined toward the operator and an extremely fast ring module with a powerful spindle.

The workpiece table, which is tilted 30 degrees, enables the operator to work in an optimally ergonomic fashion: he can load the machine while standing upright, thus avoiding back strain. Another advantage of the SBZ 137's ergonomic design is that all cleaning and maintenance tasks are very simple to carry out. Chips automatically fall off the SBZ 137's inclined workpiece table, and a chip conveyor is available for the machine as well. Another advantage of the inclined workpiece table is that it affords the operator a very clear view of the four-axis machine in all machining positions.

Profile machining at Formula 1 speeds: the ring module runs at up to 150 m/minute on the machine bed, thereby shortening machining times. All other axes also reach their maximum speed very rapidly. The desired effect: optimally short machining times. The spindle can move around the profile rapidly while its various surfaces are being machined yet it requires only a very small safety gap.

The workpiece table inclined at 30 degrees allows ergonomic operation: the operator can load the machine while standing upright, thus avoiding back strain.

The workpiece table being inclined towards the operator is an integral part of the patented machine design. In addition to ergonomic advantages, this solution also provides a good view of the spindle in every machining position. Moreover, the chips quickly fall from the tilted table.



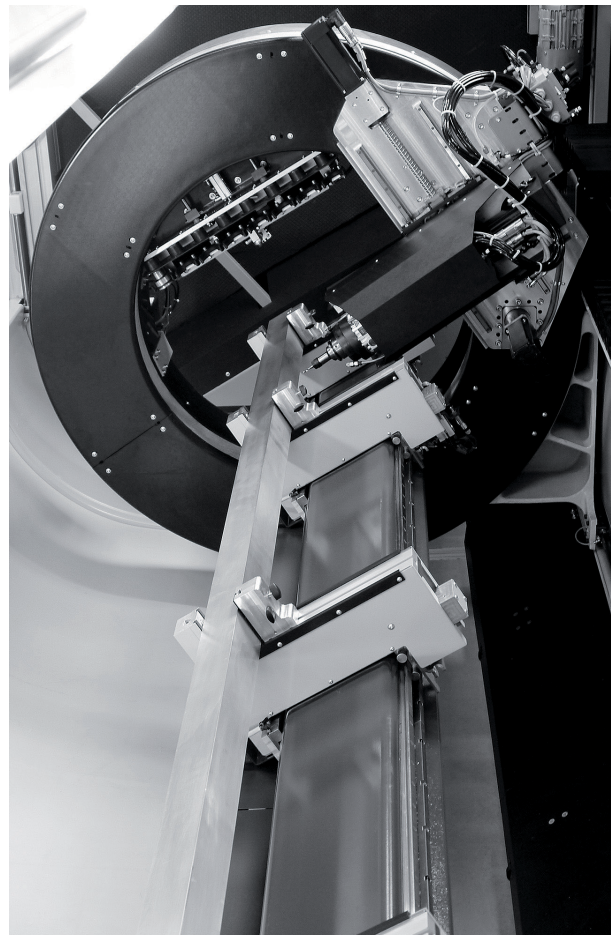
Even one-off pieces can be produced quickly

The SBZ 137 has been conceived for the sectors of metal construction, industry, furniture making and all other enterprises that must regularly process one-off pieces as well. Machine setup is fast and support blocks can be placed on the clamps without the use of tools. "Our target groups often have profiles up to 3,000 mm in length that only require machining at the centre and at the ends. The ring module is able to reach such distant machining positions very quickly," points out Volker Schmidt, head of Research and Development at elumatec, underscoring the high speeds at which all axes travel.

On the ring module's A-axis, the machining spindle can travel about the profile in a semicircular path allowing continuously adjustable machining of profiles at any position from 0-180 degrees. In addition to profile machining from above, the front and the back, end machining is also possible. "With a tool length of 175 mm, the workpiece can be 300 mm wide, 250 mm high and 4,000 mm long," says Volker Schmidt, providing an example. If the tool selected is shorter, the profile positioned for machining can have correspondingly larger dimensions.

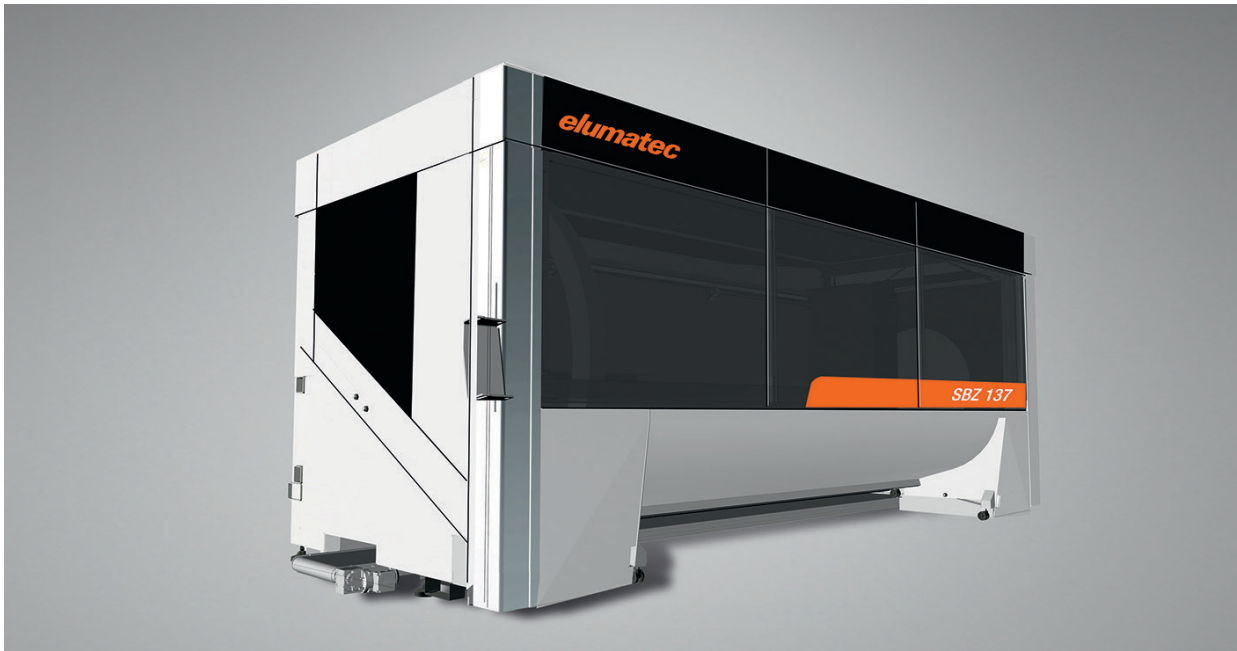
Thanks to retractable stops at both ends of the workpiece table, over-length profiles with a length of 8 m, for example, can also be processed on the SBZ 137. In push-through mode, the operator uses the left stop for machining the left half of the profile and the right stop for machining the remaining 4 metres.

The ring module runs at up to 150 m/minute on the machine bed. The on-board tool magazine supports short tool-changing times.



Operational readiness in no time

The SBZ 137 has a compact and space-saving design. The machine can be placed directly against a wall in tight quarters. This compact design also reduces setup time. "We set up the machine completely in the factory and there is no need to dismantle it for transportation via HGV or container. At the destination, the technician levels the machine, connects the power and the SBZ 137 is immediately ready for profile machining," explains Volker Schmidt.

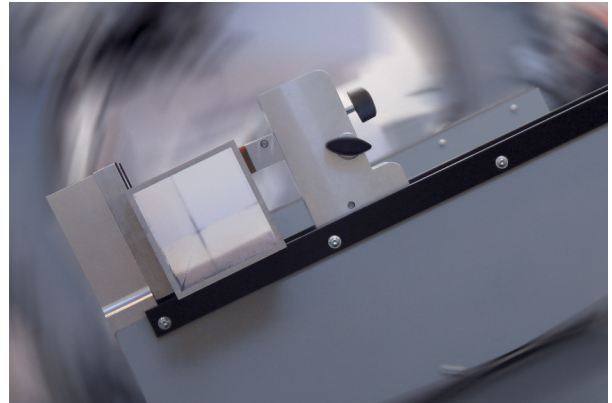


Ergonomic concept, small footprint, fast setup, flexible and rapid profile machining, energy-efficient motors: weighty reasons that speak for the patented, lightweight design innovation from elumatec, the SBZ 137.

Autonomous clamp positioning also possible

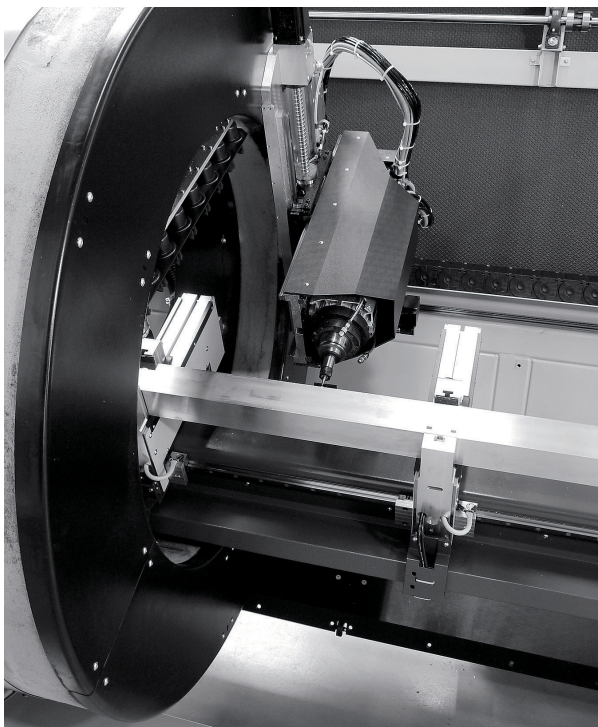
The SBZ 137 is equipped with four clamps as standard so that two parts can be positioned and machined next to each other. With the motorised version of the clamps, the clamps open in all directions thereby eliminating all contact points with the profile. This is gentle on the profile surfaces and helps prevent scratches on visible surfaces.

elumatec offers two equipment configurations for the clamps: There are clamps with their own motor for autonomous clamp positioning, while the standard equipment version uses index clamps that are pulled into position by the ring module.



The motorised clamps open in both directions. This effectively protects even the most sensitive profile surfaces against scratching.

The on-board tool magazine supports short machining cycles. It accommodates 5 or 8 tools, depending on the equipment configuration chosen. A saw blade with a diameter of 200 mm can be installed at one of the tool positions, allowing for extremely versatile operation. Additional positions for angle heads or other tools are provided at the end of the machine bed.



Powerful, accurate profile machining. The spindle can move about the profile in a semicircular motion, performing continuously adjustable machining from 0-180 degrees.

An energy-efficient machine

Machining tasks such as routing, boring, notching, sawing, tapping or thread milling are performed while the profile is stationary in order to protect the profile surfaces. As standard, the machine is equipped for tapping using a compensation chuck and as an option, elumatec offers tapping without a compensation chuck. The spindle with right and left-hand rotation has ample power to turn the tap back out again.

Linear motors and servomotors with intelligent control deliver high acceleration and support outstanding cycle speeds. In spite of their power, the motors have small dimensions and their operation is very energy efficient, which is further supported by the high-performance controller.

Collision monitoring for continuous operation is provided by the eluCad software for profile machining. This software offers numerous options for optimisation that can be used to create machining programs quickly and process jobs efficiently.

With the SBZ 137, elumatec meets customer demands for a profile machining centre that delivers a small footprint, ergonomic design, fast setup, rapid and flexible profile machining, easy maintenance and energy efficiency. Profile machining with the SBZ 137 is a well-rounded affair – not least thanks to the ring module.