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Profile machining centre SBZ 122: Redesigned modular family of models for fast and precise profile machining with lower operating costs

- **Machining area up to 300 x 300 mm**
- **Minimized footprint thanks to machine's protective enclosure**
- **Low power consumption thanks to the intelligent control technology**
- **High process reliability due to RPM-regulated spindles**
- **Short machining cycles thanks to the servo axes' high rate of travel**
- **Machine installation within a very short period of time**

With its intelligent control technology and powerful, energy-efficient servo motors, the utility of the newest generation SBZ 122 reaches a new level for aluminium, PVC and steel profile machining. Customer feedback, market trends and user requests have all informed this complete redesign to further increase the level of benefit of this extremely successful series with an installed base of more than 1000 units. Thanks to its modular design, the SBZ 122 family of models can be precisely tailored to meet various requirements. The following variants are currently available:

- **SBZ 122/70:** Low-priced base model with 3 axes
includes manual clamp positioning, tapping with a compensation chuck, large machining area
- **SBZ 122/71:** 3-axis model for metal construction applications
includes automatic clamping positioning, tapping without a compensation chuck, 5-sided machining with rotating angle head
- **SBZ 122/74 (October 2016):** 4-axis model for metal construction and industrial applications
includes autonomous clamp positioning, clamps with linear guides, A-axis for continuously variable angle adjustment, tapping without a compensation chuck

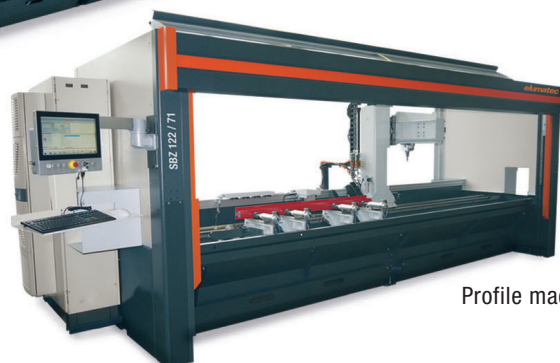
High precision and process reliability on a larger machining area

The new SBZ 122 series is designed for high rates of travel. The low number of compact and robust components minimize the vibration behaviour and ensure excellent stability. The travelling column moves on a machine bed that is executed as a modern inclined bed. The new, smaller clamps leave more room for machining and also have improved stiffness. "By completely redesigning the machine, we were able to significantly increase the machining precision and process reliability," explains Dieter Grau, Team Leader for Mechanical Design. Thanks to the 45° incline, the operator can step very close to the machine table when positioning profiles, providing an ergonomic working position.

The machining area measures up to 300 x 300 mm, providing ample space for large-volume profiles. The overall footprint has been reduced at the same time, making it easier to install for customers with limited space. Work safety is now ensured by the new protective enclosure, replacing the light barrier and chip protection on the routing unit. In keeping with the modular design, the protective enclosure is completely enclosed, with additional sound insulation as required.



Profile machining centre SBZ122/71



Profile machining centre SBZ122/74

Faster machining with lower energy consumption

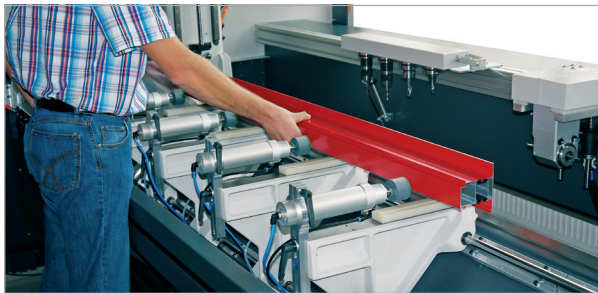
Without the light barrier and chip protection, the routing unit is lighter and can travel faster. "Machining times are 20% shorter. The new drive technology and the more powerful motors also contribute to this increase in speed," explains Achim Schaller, who is responsible for Software Development. The servo axes now operate at twice the speed. The X-axis achieves speeds of up to 120 m/min and the other two reach up to 60 m/min. The increased clock rate allows the controller to react with even more sensitivity. This enables faster positioning of the spindle. So-called E°DARC servo controllers ensure quiet, smooth running and high precision, enabling productive and efficient operation of the spindle. Only the energy that is required for the machining task is supplied to the spindle, regardless of its rated power.

Intelligent control technology for optimal results

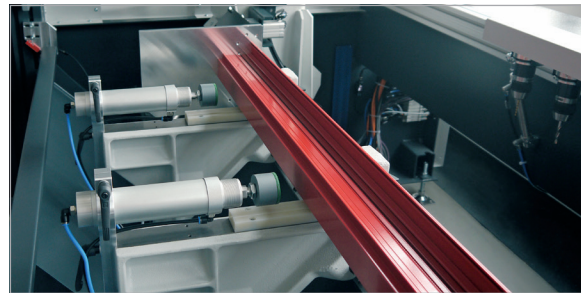
Since the machine is not running at maximum power all the time, less energy is consumed. In addition, the braking energy from one axis can be used to drive another axis. "The RPM-regulated operation provides energy savings of up to 30%. Furthermore, the intelligent control technology ensures an extremely high degree of consistency in speed, which in turn produces very good machining quality, even with quickly changing loading," says Grau. Depending on the requirements, the regulator retrieves the optimal parameter set for every tool, such as drill, disk cutter or router, to achieve the best machining result. As is the case with all elumatec systems, the SBZ 122 is controlled via the intuitively and easily understandable eci2 (elumatec – customer – interface) graphic interface with its convenient touch functions.

Additional advantages of the new SBZ 122 family of models

- Tool breakage monitoring
- Ergonomic operation thanks to the modern inclined bed, uncovered spindle and height-adjustable control unit
- Increased work safety thanks to remote-controlled clamp activation and protective enclosure
- Tailored operator guidance - from fully-automatic, assistant-guided input to manual and special input all the way to additional options such as "forced collisions"



Machine bed that is executed as a modern inclined bed



The new, smaller clamps leave more room for machining and also have improved stiffness.

Technical specifications and configuration options:

- Aluminium, PVC and steel profiles up to 3 mm wall thickness
- Machining length up to 4,000 mm (SBZ 122/74) or 4,170 mm (SBZ 122/70, 122/71)
- Stationary tool magazine with four positions, optional flexible expansion to include additional tool magazines for a total of up to 20 positions
- Four clamps as standard. Expandable to up to eight clamps on machines with a machining length of 4 m.
- Optional material reference stop (right)

About elumatec AG

elumatec AG is an international leader in the manufacturing of machines for processing aluminium, PVC and steel profiles. With its extensive product range, the company covers the entire spectrum of applications from small craftsman's businesses to industrial profile processors. Custom-designed and modular machinery concepts provide flexible and individualized industry solutions for all groups of customers. The company, founded in 1928 with headquarters in the Swabian town of Mühlacker in Germany, has subsidiaries and dealers in more than 50 countries and, with over 700 employees worldwide, most recently achieved consolidated sales of about 120 million euros.

Pictures and other information about the enterprise are available from the News area of the elumatec AG website at www.elumatec.com.

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