elumatec

a voilàp company

SBZ 628 XL

THROUGH FEED PROCESSING CENTERS



The SBZ 628 series offers ultimate flexibility in both machining and length cutting of aluminium profiles for metal construction and industrial applications. Its production reliability, speed, cost-effectiveness and impressive versatility make the flexible profile machining centre the perfect all-rounder. It allows fully automatic machining of various profile types, such as for windows, doors and curtain walls, using up to eight routing units that can operate freely on the profile cross-section in coordination with innovations such as combination clamping systems, travelling clamps and pivoting grippers.

SBZ 628 XL: pass-through system for windows, doors and curtain walls

- Up to eight spindles for routing or drilling
- Different separating cut strategies from 22.5° to 157.5° and notching (pivoting)
- Quick-change systems for tension rollers and clamping plates for atypical profiles
- Mode for manual insertion and clamping of non-stationary profiles.

Machine configuration

- Left loading magazine for automatic production processes
- The routing spindles can be positioned continuously over 360° on the profile bar, and the cutting angle can be adjusted continuously over 360° for machining profiles in various clamping situations
- A generously dimensioned noise abatement enclosure and the easy-access controls and maintenance elements simplify operation
- Machined profiles are placed gently onto the unloading magazine
- Versions customised to meet specific customer requirements can be designed upon request

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The right to make technical alterations is reserved.

Options

- Bar lengths up to 10,500 mm
- Expansion options for outfeed of up to 6,000 mm/8,000 mm
- “Full bar" outfeed
- Outfeed of short parts >150 mm
- Cycling short parts (in single bar mode) >50 mm >150 mm
- Round tube machining
- Additional arms in the infeed
- Label printer
- Vapour extractor
- Air conditioner, control cabinet for ambient temperature <35 °C
- Tools
- Saw blades

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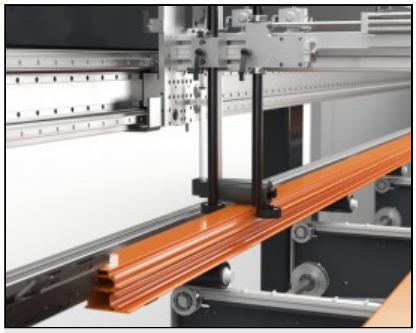
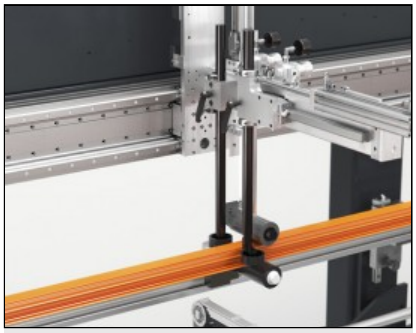
Infeed loading magazine

For the SBZ 628 XL, five to ten profiles with a length of 1,500-7,600 mm can be loaded depending on the profile cross-section. The SBZ 628 XL is equipped as standard with five support swing arms and eight rollers. For all models, up to nine support swing arms and lifting rollers are available. For the SBZ 628 XL, residual pieces are processed fully automatically using the loading magazine and residual piece measurement (optional).



Gripper system

The gripper system moves even complex profile cross-sections into position for machining with precision and speed using a linear servo drive. For the SBZ 628 XL, the motorized gripper system can be automatically adjusted both vertically and horizontally using the profile-specific parameters. The SBZ 628 XL also offers continuously adjustable 360° rotation.



Profile clamping

The roller tensioners secure the profile reliably and fully automatically. They can be moved over the entire length of the profile and can even be adjusted during the machining cycle. This allows them to compensate for profile tolerances and to ensure that a wide range of profiles are clamped exactly as required, including those with challenging geometries.

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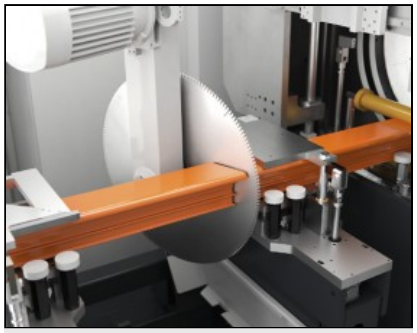
Machining module

The eight spindles for flexible application on the profile cross-section allow machining of profiles at any desired combination of angles between 0° and 360°. Generous dimensioning of the opening and the servo drive travelling ranges also allow larger cross-sections to be machined. Machining is performed either “on the fly” using a pusher X axis, or while stationary with a second X axis, for example with thicker profile walls. In this case, the profile is positioned using the pusher X axis and is secured using the plate clamps in the combination clamping system. The roller tensioner reduces the clamp spacing to achieve perfect routing results. The machining area is easily accessible from the front



Cutting unit

The 4-axis saw unit with a drive power of 5.5 kW has a travelling range of 1,050 x 720 x 400 mm and enables separating cuts between 22.5 and 127.5°. Continuously adjustable pivoted cuts between 0° and 360° can then be made. This flexibility means that various notching and separating cut strategies can be implemented on the profile from three sides. The plate clamps secure the workpiece with absolute reliability for these purposes. Their narrow design allows the clamping spacing to be decreased dramatically, and they are infinitely adjustable by means of a servo drive. The table plates can be lowered to ensure trouble-free profile



Profile outfeed with unloading magazine

For all models, an external gripper places the machined profiles gently onto the outfeed conveyor. The clamping system, which moves the external gripper into position during length cutting, ensures controlled transfer and a defined withdrawal of the good parts, even with very short lengths. If needed, profile guide rollers and clamping plates can be adapted quickly by means of a quick-change system to accommodate special profile shapes. In manual insertion mode, even profiles which are more complex can be machined and cut to length using customized automation.

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