

SBZ 628

FAMILY OF MODELS

PROFILE MACHINING CENTRES

PERFECT ALL-ROUNDERS FOR METAL CONSTRUCTION AND INDUSTRIAL APPLICATIONS. **FLEXIBLE. FAST. VERSATILE.**



Technical specifications	SBZ 628 S	SBZ 628 XL	SBZ 628 XXL
Max. profile cross-section (WxH)	200x160 / 160x200 mm	320x160 / 160x320 mm	320x160 / 160x320 mm
Min. profile cross-section (depending on gripper position)	30x10 mm	30x10 mm	30x10 mm
Blank bar length	7,600 mm	7,600 mm	7,600 mm
Finished part length	350-4,600 mm	350-7,600 mm	350-7,600 mm
Short parts (50-150 / 150-350)	-	Optional	Optional
Feed magazine			
Shortest blank bar length	3,000 mm	1,500 mm	1,500 mm
Number of swing arms	5 (option for 9)	5 (option for 9)	5 (option for 9)
Mounting positions	10 (above 120 mm 5)	10 (above 120 mm 5)	10 (above 120 mm 3-5)
Infeed			
Servo drive	linear	linear	linear
Motorised gripper adjustment	Y/Z	Y/Z	Y/Z
Gripper rotation	Optional	Standard	Standard
Residual piece measurement	-	Optional	Optional
Residual piece processing	manual feeding < 3,000	fully automatic	fully automatic
Machining station			
Axes	4	5	5
Router spindles	4 (servo-assisted)	4-8 (servo-assisted)	4-8 (servo-assisted)
Saw			
Axes	2	3	3+3
Saw blades (diameter)	1 (650 mm)	1 (550 mm), optional 650 mm	2 (550 mm), optional 650 + 550 mm
Sawing angles	45°-135° (pivoting)	22.5°-157.5° (pivoting)	22.5°-157.5° (pivoting) 45°-135° (tilting)
Notching	-	Standard (from above)	Standard (above and behind)
Outfeed clamping carriages			
Axes	0	1	1
Cycle operation (short parts)	-	Optional	Optional
Outfeed conveyor			
Lifting station	Yes	Yes	Yes
Number of swing arms	8	8	8
Outfeed conveyor width (options)	4,000 mm	4,000 mm (can be extended)	4,000 mm (can be extended)

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THE SBZ 628 FAMILY OF PROFILE MACHINING CENTRES

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 patented innovations such as combination clamping systems, travelling clamps and pivoting grippers.

The different models allow users to configure and select the machine that perfectly fits their requirements:

- **SBZ 628 S: Pass-through system for windows, doors and curtain walls**
 - Four spindles for routing or drilling
 - Separating cuts from -45° to 90° (lead cut), from 90° to 45° (lead cut) continuously adjustable
- **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.
- **SBZ 628 XXL: 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° (pivoting)
 - Additional saw unit from 45° to 135° (tilting)
 - Combined notching
 - 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 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

Options

- Bar lengths up to 10,500 mm
- Expansion options for outfeed of up to 6,000 mm/8,000 mm
- "Full bar" outfeed (only XL/XXL)
- Outfeed of short parts >150 mm (only XL/XXL)
- Cycling (single bar mode) short parts >50 mm <150 mm (only XL/XXL)
- Round tube machining (XL/XXL only)
- Additional arms in the infeed
- Rotary gripper (for SBZ 628 S)
- Label printer
- Vapour extractor
- Air conditioner, control cabinet for ambient temperature <35 °C
- Tools
- Saw blades



01



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01 | Infeed loading magazine

The loading magazine of the SBZ 628 S can be loaded with five to ten profiles with a length of 3,000-7,600 mm, depending on the profile cross-section. For the SBZ 628 XL/XXL, 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 S is equipped as standard with five support swing arms and five rollers (eight for the SBZ 628 XL/XXL). For all models, up to nine support swing arms and lifting rollers are available. For the SBZ 628 S, residual pieces are processed by feeding them manually into the lifting station, and for the SBZ 628 XL/XXL they are processed fully automatically using the loading magazine and residual piece measurement (optional).

02 | Gripper system

The patented 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 S and the SBZ 628 XL/XXL, the motorized gripper system can be automatically adjusted both vertically and horizontally using the profile-specific parameters. The SBZ 628 XL/XXL also offers continuously adjustable 360° rotation.

03 | 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.

04 | SBZ 628 S machining module

The four spindles for flexible application on the profile cross-section allow machining of profiles at any desired combination of angles between 0° and 360°. The versatile clamping positions allow perfect routing results to be obtained no matter what the profile requirements. The machining area is easily accessible and, in combination with the HSK-C 40 tool holder, allows the machine to be converted quickly when required.



05



06



07



08

05 | SBZ 628 XL and SBZ 628 XXL 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 and, in combination with the HSK-C 40 tool holder, allows the machine to be converted quickly when required.

06 | SBZ 628 S cutting unit

The 2-axis saw unit with a drive power of 5.5 kW has a travelling range which enables profile cross-sections of 200 x 160 or 160 x 200 mm to be cut and allows separating cuts between 45 and 135°. The plate clamps secure the workpiece with absolute reliability for these purposes. The table plates can be lowered to ensure trouble-free profile transportation.

07 | SBZ 628 XL 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 transportation.

08 | SBZ 628 XXL cutting unit

An additional saw unit expands the machine's capability and enables separating tilted cuts between 45° and 135° and other horizontal cutting strategies.

09 | 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.



09



SBZ 628 S



SBZ 628 XL