(someco)

a voilàp company

SBZ SF2

THROUGH FEED MILLING CENTERS



The SBZ SF2 automatic machining centre for drilling and screwing of metal frames consists of a horizontal screwing centre with 2 screwing units, a triple drilling unit, a single-tool unit for drilling hinges and horizontal units for assembly drilling on all Z- and L-type frames. As an option, it can be equipped with a multi-tool unit for drilling hinges. The SBZ SF2 consists of an automatic magazine with a through-feed system for profiles up to 3500 mm, complete with gripper movement to clamp the profile containing already an aluminium or iron metal support. Thanks to the synchronised movement of the gripper and bar magazine, the feeder returns to the start position allowing the loader to prepare the next profile at the same time. A pneumatic double horizontal screwing unit is located in the central part and can be automatically adjusted both vertically and horizontally via software. The unit fixes the metal support with self-tapping screws that automatically reach the machine from a loader, a triple drilling unit for drilling holes for cremone bolts and 2 drilling units for frame mounting holes. The unit consists of a transversal belt magazine for the unloading of machined workpieces long up to 3500 mm. The machining unit is equipped with a soundproofed cabin in the central operating part which, in addition to protecting the operator, also reduces the environmental noise impact. The SBZ SF2 can be connected to the SBZ SM machining centre to achieve a continuous process and optimise system productivity. The machine is supplied with an intuitive operator interface for machining list management connected to the production programming software. Industry 4.0 ready.

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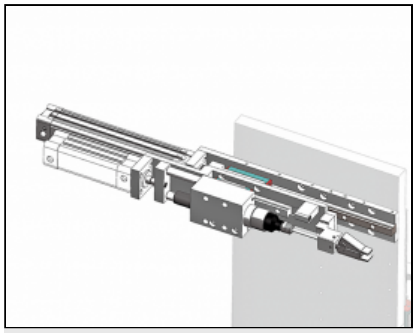
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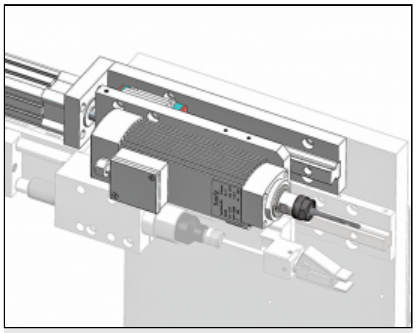
Automatic loading and unloading

The transverse belt loading and unloading table enables handling PVC profiles safely, easily and ergonomically. The table is equipped with an automatic transport system by means of an extraction gripper that deposits the machined profiles on the unloading table.



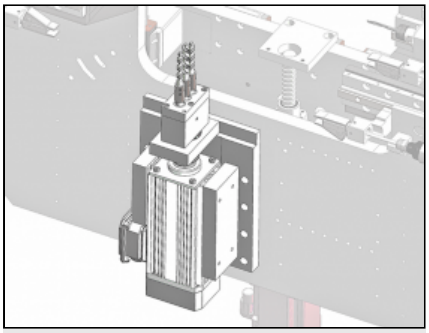
Screwing unit

The machine is equipped with 2 pneumatic screwing units with automatic feeding, fitted on a rotary base with automatic movements on 2 NC axes. One unit is dedicated to screwing the reinforcement into profiles for sashes, the other machines profiles for frames.



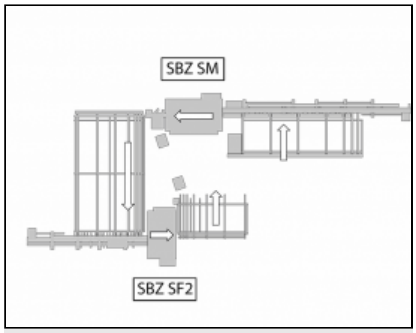
Drilling unit for wall mounting

Two drilling units, which are parallel to the screwing units, are used to perform machining operations intended for wall mounting of frames.



Unit with three drill bits for Cremone bolt drilling

The drilling for mounting the handle is carried out by a unit with three drill bits located in the lower part of the rotary base dedicated to machining operations.



Installation in line with the SBZ SM machining centre

The maximum potential of this screwing centre is expressed by its perfect compatibility when installed in line with the SBZ SM machining centre. The wide range of machining processes of the machining centre, including profile preparation to allow Seamless welding, are completed with the screwing centre, in a balanced and efficient line.

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SBZ SF2 / THROUGH FEED MILLING CENTERS

MACHINE SPECIFICATIONS

Number of controlled axes	5
Dowel drilling units no.	2
Triple drilling unit	●
Single-tool unit for drilling hinges	●
Multi-tool unit for drilling hinges	○
Screwing units	2
Maximum no. of screwing units	4
Bar positioning speed (m/min)	50
Operating pressure (bar)	6 ÷ 8
Air consumption (Nl/min)	320
Installed power (kW)	10
Provision for installation in-line with SBZ SM machining centre	●
Programmable digital adjustment of the clamp pressure	●

WORK AREA

Frame locking system with pneumatic vices	●
Minimum profile height (mm)	45
Minimum profile width (mm)	40
Maximum profile height (mm)	160
Maximum width of the profile (mm)	130
Maximum reinforce thickness (mm)	3

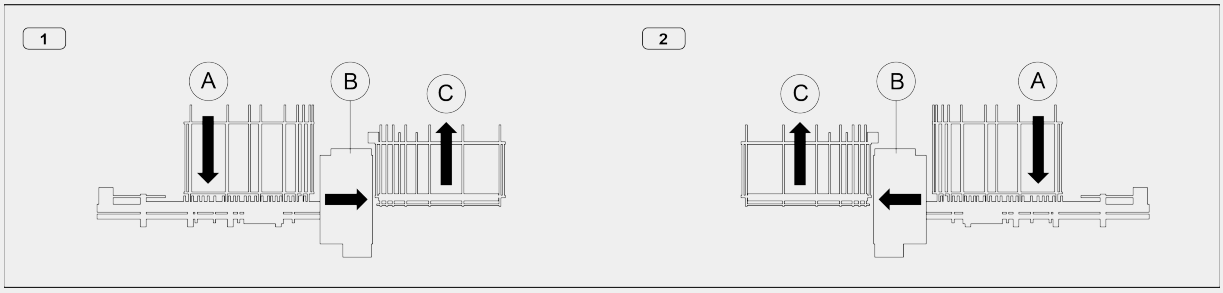
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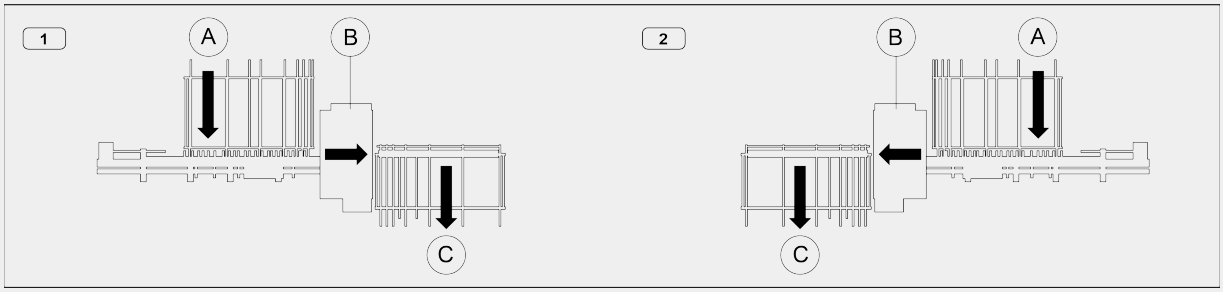
LAYOUT

"C" configuration (loading and unloading on the same side)



1 - Right feed 2 - Left feed

"S" configuration (loading and unloading on opposite sides)



1 - Right feed 2 - Left feed

A – Loading magazine
B – Drilling and screwing unit
C – Unloading magazine

LOADING UNIT: PROFILE POSITIONING

Loading feeder with 2 controlled axes gripper	●
Maximum loadable length (mm)	3.500
Minimum loadable length (mm)	450
Profile loading in concurrent operation time	●
Maximum machinable profile section - W x H (mm)	130 x 160
Minimum machinable profile section - W x H (mm)	40 x 45
Profile length dimensional check	●
Metal reinforcement detector	○

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DOWEL DRILLING UNITS

Maximum power in S1 (kW)	1,1
Maximum speed (rpm)	6.000
Toolholder	ER 25
Tool diameter (mm)	6 / 8

TRIPLE DRILLING UNIT

Triple tips unit	●
Tools diameter (mm)	10 / 12 / 10
Maximum power in S1 (kW)	1,5
Maximum speed (rpm)	900

FRAME HINGES DRILLING UNIT

Drilling unit	●
Tools diameter (mm)	5 / 6
Maximum power in S1 (kW)	1,1
Maximum speed (rpm)	6.000
Toolholder	ER 25

SCREWING UNIT

Number of screwing units	2
Minimum profile length with screwing of reinforcement (mm)	400
Screw minimum length (mm)	16
Screw maximum length (mm)	20
Screw head diameter (mm)	6,5 ÷ 7,5
Screw diameter (mm)	3,9 ÷ 4,2
Discharging time of screw from loader (s)	0,1
Remote control on operator interface for screw ejection and feeding	●

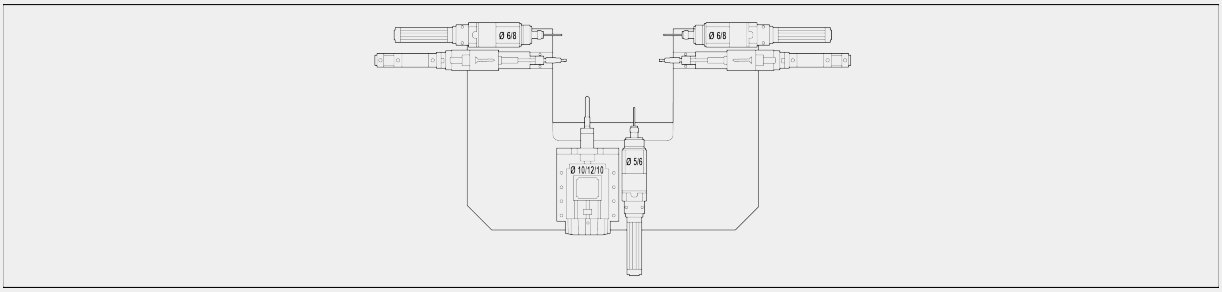
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DRILLING AND SCREWING UNITS WORKING CAPACITY

Electrospindle and screwing units configuration



Loading side view

UNLOADING UNIT

Belt unloading magazine for workpieces of up to 3.500 mm	●
Belt magazine unloading depth (mm)	1.800
Extraction NC clamp	●
Fast profile unloading system	●

Included ● Available ○

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