elumatec

a voilàp company

SBZ 155

PORTAL MACHINING CENTERS



5-axis profile machining to meet the highest requirements, for the first time in a gantry design. The SBZ 155 profile machining centre is a new top-of-the-range elumatec model that combines previously unattained performance with a pioneering design. The faster, more compact and more flexible SBZ 155 raises the bar in automated CNC machining of aluminium and thin-walled steel profiles thanks to optional 6-sided machining, a compact gantry that reduces the footprint despite having one of the largest working ranges in its class.

Industrial and metal construction users benefit from the SBZ 155's short tool changing times that guarantee optimum machining cycles and enormous flexibility. The large on-board magazine can be equipped with 16 standard tools, and depending on the individual configuration, up to ten special tools (Seat for one 200mm and one 550 mm diameter saw blade, max. 4 angle heads). A gantry design and a machining area divided into two zones allow profiles with cross-sections of up to 1,000 x 370 mm to be picked up and passed through, as well as flexible working in shuttle mode. The SBZ 155 can be configured to suit the individual requirements of elumatec customers with a wide range of optional equipment: from automatic length measurement on both sides to a barcode scanner, every need can be met. And the all-rounder is eluCloud ready in order to meet the requirements of Industry 4.0.

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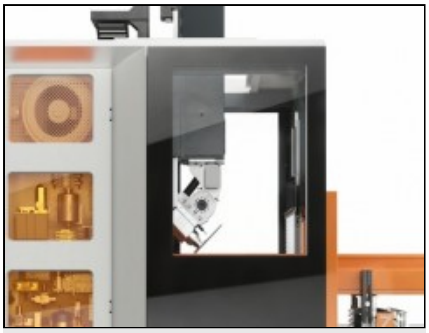

Process monitoring

The large, well laid-out machining area is clearly visible through a generously sized window.



Machining area with tool changer / dish changer

The tool magazine accommodates saw blades, routing and drilling tools, and additional machining units. The rotary tool changer at the top of the gantry reduces on-board changeover times, makes them safe to carry out in the on-board gantry, and also enables tool changes while the X-axis is moving.



Clamp insertion position with quick adjustment

The adaptive clamping technology offers locking positions for quick adjustment to different profile widths. The stop is positioned in a convenient place on the front.



Gantry design for machining large profiles

The arm is guided over the gantry at the front and back, allowing large-volume profiles of up to 1,000 x 380 mm to be machined. The SBZ 155 can handle a high machining volume and has the necessary stability to meet industrial requirements.



Lasers to protect the machining area

In shuttle operation, individual parts can be machined in two separate clamping zones, and a state-of-the-art safety system makes the machining areas easily accessible. The areas are divided into three zones, and the intelligent laser system – which is always active – reacts to protect the active zone. This ensures maximum safety and means fewer manual acknowledgements are required.

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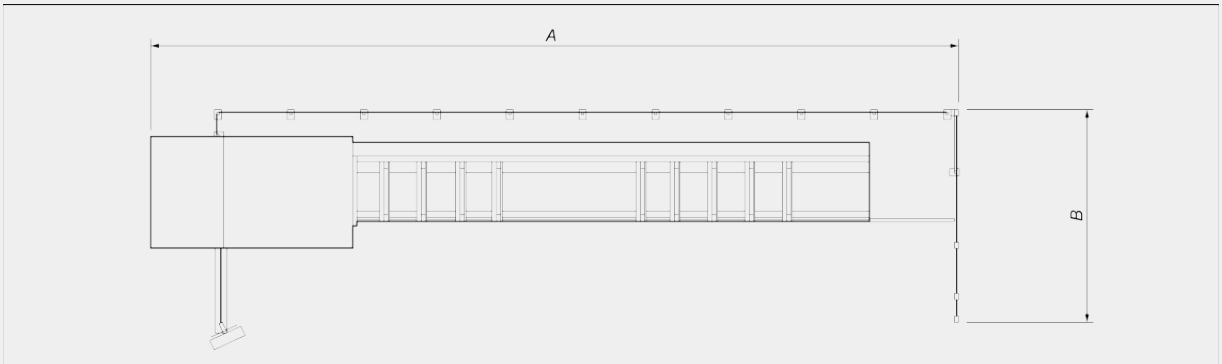
SBZ 155 / PORTAL MACHINING CENTERS

LAYOUT



SBZ 155	**8,1 m**	**11,7 m**
Total length (A) (mm)	13.620	17.230
Depth (B) (mm)	4.510	4.510
Height (mm)	3.500	3.500
Weight (with 12 clamps) (kg)	~ 9.810	~ 11.705

The overall dimensions and the weight may vary depending on the product configuration

AXIS STROKES

X AXIS (mm)	8.100; 11.700
Y AXIS (mm)	1.150
Z AXIS (mm)	715
A AXIS	-2° /+95°
C AXIS	-275° / +95°

POSITIONING ACCURACY

X AXIS (mm)	+/- 0,1
Y AXIS (mm)	+/- 0,1
Z AXIS (mm)	+/- 0,1
A AXIS	+/- 0,1°
C AXIS	+/- 0,1°

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POSITIONING SPEED

X AXIS (m/min)	100
Z AXIS (m/min)	60
Y AXIS (m/min)	60
C AXIS (°/s)	80
A AXIS (°/s)	84

AXIS ACCELERATION

X AXIS (m/s²)	2,0
Y AXIS (m/s²)	2,0
Z AXIS (m/s²)	4,0

ELECTROSPINDLE

Maximum power in S1 (kW)	20
Maximum speed (rpm)	24.000
Maximum torque (Nm)	17.8
Toolholder cone	HSK 63F
Water cooling	●

OPERATING MODE

Pendular mode with 2 lefthand materialstops	●
Cut and separation from the bar	●
Absolute encoder positioning	●
Tool length measurement and breakage detection	○

SAFETY DEVICES AND PROTECTION

Access protection frontside (Light curtain / laser)	●
Side access guard (fence / protective panel)	●
Protective device rear side (fence)	○

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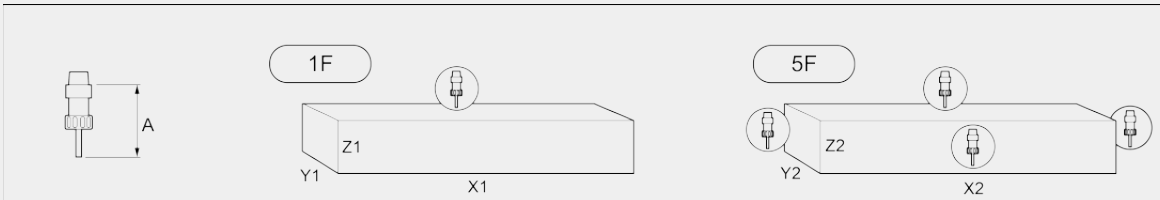
MACHINING FACES

With direct tool (front/top/back, ends)	3 + 2
With angular head (bottom)	1

WORK AREA

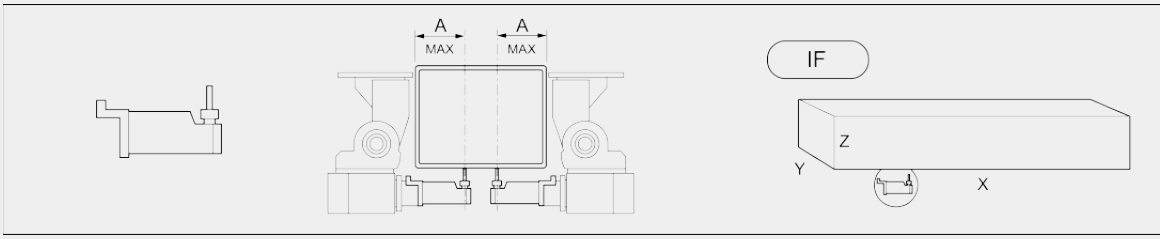
1F = 1 face machining **5F = 5 faces machining**



		A	X1	Y1	Z1	X2	Y2	Z2
SBZ 155 - 8,1 m	single mode	135	7.789	1000	370	7.789	550	370
	double mode	135	2.850	1000	370	2.850	550	370
SBZ 155 - 11,7 m	single mode	135	11.340	1000	370	11.340	550	370
	double mode	135	4.620	1000	370	4.620	550	370

Dimensions in mm

1F = Bottom face machining



		A	X	Y	Z
SBZ 155 - 8,1 m	single mode	180	7.789	500	370
	double mode	180	2.850	500	370
SBZ 155 - 11,7 m	single mode	180	11.340	500	370
	double mode	180	4.620	500	370

Dimensions in mm

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AUTOMATIC TOOL MAGAZINE

Tool magazine traveling along	●
Magazin Type: disc tool changer	●
Maximum number of magazine tools	26
Number of places standard tools up to D=63 mm max.	16
Special tool 1: blade D=550 mm	○
Number of places for special tools D=100 mm max. (optional)	4 - 8
Number of places special tools	10
Special tool 2: blade D=200 mm	○
Angle head	○
Maximum number of places for angle heads (optional)	4
Maximum disk cutter (mm) (optional) (instead of angular head 3/4)	250
Tool holder set HSK63 + collets	○
Maximum tool length (from taper) (mm)	250
Maximum tool weight with tool holder (kg)	10

WORKPIECE LOCKING

Autonomous clamp positioning	●
8.100 mm versions; standard number of clamps (max. travel)	8
8.100 mm versions; max. number of additional clamps with max. travel	4
11.700 mm versions; standard number of clamps (max. travel)	10
11.700 mm versions; max. number of additional clamps with max. travel	2
Further clamps with limited travel capacity	○

SWARF AND WASTE CONVEYOR

Chip conveyor integrated in machine bed	○
Shavings kink conveyor	○

SUCTION

Fume extraction	○

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PNEUMATIC CONNECTION

Pressure (bar)	6 - 7
Max. air consumption (at 6 bar) (l/min)	500
Max. air consumption (at 7 bar) (l/min)	750

CONTROL UNIT

Microsoft® Windows® 10 Embedded	●
Panel-PC 21,6” Processor i7	●
Hand control	●
USB ports and network connection	●
Label printer	○
Barcode reader	○
Online Assistance	●
USV for safe shutdown of the machine	●

SOFTWARE

eluCam 2d/3d Cad module	●

Included ● Available ○

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