

elumatec



SBZ 122

Profile Machining Centers

Revised October 2014



A PLACE FOR BOTH TRADITION AND NEW IDEAS – SINCE 1928

elumatec was established at the main location in Mühlacker near Stuttgart in 1928 and began producing light-metal sand-cast parts. Today, we are the leading premium supplier in the segment of profile machining for a vast array of different requirements and materials.

With 720 employees as well as subsidiaries, branches and dealers in over 50 countries worldwide, we are always just around the corner from you. The results of our many years of work are characterized by impressive references, numerous patents and inventions, over 28,000 customers and more than 5,000 profile machining centers manufactured.

CONTINUOUS DEVELOPMENT

We are a cosmopolitan, internationally active corporation operating in an environment characterized by very dynamic customers. In the most diverse industry sectors with completely different requirements, we are able to react to changing requirements and needs in an instant. Short response times, close proximity the world over and the highest level of commitment are a matter of course for us.

All this has been made possible by a unique combination: tradition, down-to-earthness and respectability on the one hand, and innovative strength, a dynamic attitude and a pioneering spirit on the other. This is what forms the foundation for our success.

Today we are not only a permanent player in the market, but also an initiator of new developments and a synonym for high quality, technological leadership and service. To ensure that this remains so in the future, we are constantly working on improving our products in every way possible. We assess our capabilities continuously and know that this requires ongoing learning and unceasing development of our competencies. Therefore we keep investing in our staff and equipment as well as in R&D. This enables us to initiate and actively shape important change processes.

SBZ 122 Profile Machining Centers



The SBZ 122 series of Profile Machining Centers represents an economical first step into automatically processing aluminum, PVC, and steel profiles. With a robust and compact design, these machines can be used for many applications in the architectural and industrial markets.

The extremely stable profile clamping system allows safe processing from three or five sides of the profile, depending on the model. When machining from above, profiles up to 230 x 220 mm (9.05 x 8.66 in.) can be clamped. A generous Z-axis travel makes it possible to machine profiles up to 180 mm (7.08 in.) high from the front and rear. Long profile bars can be moved to the left, allowing working lengths up to 6.8 m (22.3 ft.).

Damage to the profile is minimized, as all machining is done with the profile stationary. The electronically controlled HSC spindle reaches speeds up to 24,000 rpm for a neat, burr-free surface.

Robust and low-wearing direct drives on each axis allow rapid positioning of the machining unit, with travel speeds up to 60 m/min (196 ft./min).

These machines are equipped with an electronic three-axis industrial PC control, a 15" color monitor, and an RJ 45 10/100 MBit network connection for data transfer and remote maintenance. eluCam software is used for data processing inputs on the machine and eluSoft software is used for machine programming on remote PCs. A mobile operator terminal with start/stop and axis travel speed control allows new programs to be safely tested on the machine.

Standard features include a two-point pulsed spray mist tool lubrication system, an automatic central lubrication system for all linear bearings, a machining spindle cooling device for increased spindle life, light curtain operator protection, air conditioned electrical enclosure, and automatic clamp position recognition and movement. The standard chip disposal system with a receptacle trolley helps keep the work area clean.

Available optional accessories include an additional tool changer for five tools and an angle head or eight tools, automatic profile length measuring, and a wireless barcode scanner.



eluCam Machining Software

eluCam software is included with the SBZ 122 and offers a flexible and user-friendly platform for programming your work right on the machine.

Advantages:

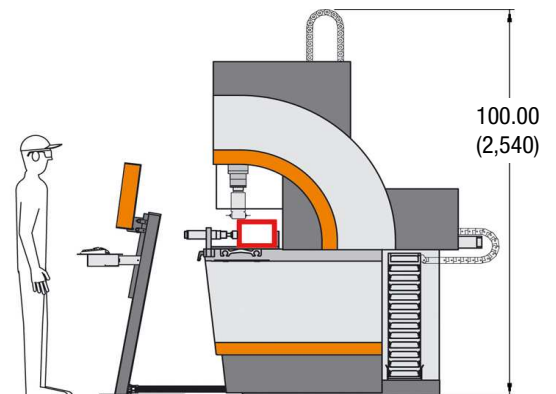
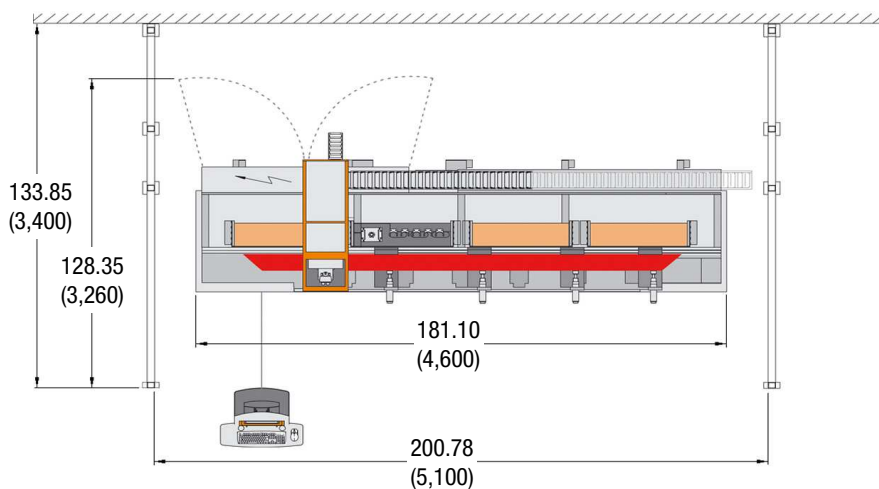
- The software includes graphical 3-D display of the work pieces and assistants for creating machining operations in three steps.
- Programming steps are optimized to meet industrial requirements.
- A pre-defined tool database is included with a large selection of tools for machining aluminum, steel, and PVC profiles.
- Programs can be edited while the jobs are being processed.
- Advanced security features are programmed in to prevent collisions
- Programming is done in the familiar Windows® environment. This includes all networking features as well as remote support with TeamViewer.
- The status bar allows the operator to see the full operating status of the machine.

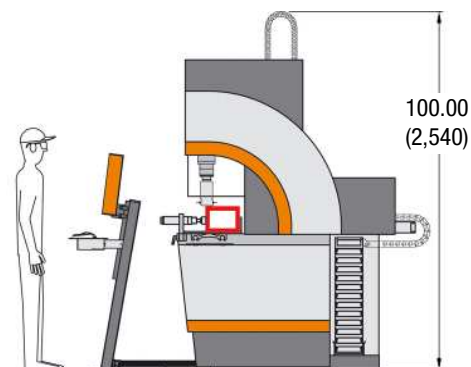
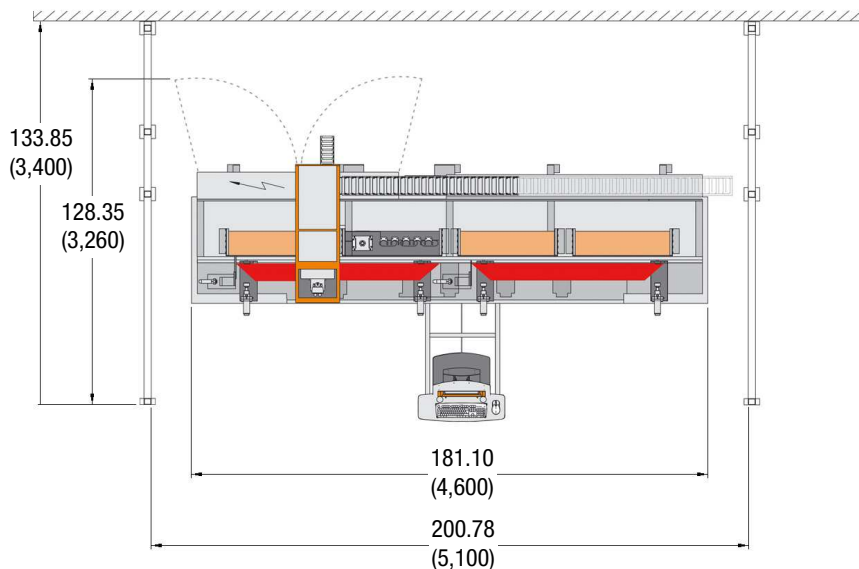


Models SBZ 122/33 and SBZ 122/34

This is a powerful solution for machining five sides of a profile. The turning device for the rotating angle head is built into the spindle, which reduces the tool changing time to a minimum. The rotating angle head can be rotated to 0°, 90°, 180°, and 270°. This allows machining the profile from the front, rear, and both ends with two different tools. The power torque cutting spindle automatically increases rotational speed and torque once the nominal rotation speed drops. This provides more power in the lower rpm ranges, for example when tapping. The spindle is optimized for thick-walled profile as well as for the tapping of steel profiles.

The SBZ 122/33 features one long working zone. The SBZ 122/34 is designed with two working zones for machining short profiles. Machine productivity can be increased up to 30% since you can load/unload one work zone while machining is done in the other zone.





Standard Features: Models SBZ 122/33 and SBZ 122/34

- Rotating angle head for two (2) tools
- Tool changer for the rotating angle head (0°/90°/180°/270°) and storage for five (5) additional tools (additional tools are available separately)
- Light barrier and safety fences for operator protection
- Four (4) pneumatic material clamps
- Automatic clamp position recognition and movement
- Pneumatic retractable stop (one (1) on SBZ 122/33, two (2) on SBZ 122/34)
- Hand-held mobile control console with start and stop switches
- Three (3)-axis industrial PC control (Windows XP)
- 2-D Interpolation
- 15" Color monitor
- Two (2) USB ports for program import
- Serial and parallel interfaces for online connection, barcode scanner, modem, and label printer (barcode scanner and label printer available separately)
- Machining spindle cooling unit
- Air-conditioned electrical enclosure
- Chip collection chute with collection tray
- Safety cover around the machining spindle
- Safety fencing
- Pulse mist tool lubricating system
- Incoming air filter-regulator
- Operating, Maintenance, and Programming Manuals
- Tool and Accessory Kit
- eluCam® machining software

Technical Data: Models SBZ 122/33 and SBZ 122/34

Processing Capacities:	SBZ 122/33 and SBZ 122/34	Y-axis: 350 mm (13.78 in.) Z-axis: 280 mm (11.02 in.)
	SBZ 122/33 and SBZ 122/34 (1-station)	X-axis (Top-side machining): 3,850 mm (151.6 in.) X-axis (3-sided machining): 3,850 mm (151.6 in.) X-axis (5-sided machining): 3,650 mm (143.7 in.)
	SBZ 122/34 (2-station)	X-axis (Station 1) (Top-side machining): 1,800 mm (70.8 in.) (3-sided machining): 1,800 mm (70.8 in.) (5-sided machining): 1,700 mm (66.9 in.) X-axis (Station 2) (Top-side machining): 1,700 mm (66.9 in.) (3-sided machining): 1,700 mm (66.9 in.) (5-sided machining): 1,600 mm (62.9 in.)
Maximum Axis Travel Speed:		X-axis: 60 m/min (196 ft./min) Y- and Z-axis: 30 m/min (98 ft./min)
Positioning Accuracy:		± 0.1 mm (0.004 in.)
Spindle Speed:		24,000 rpm
Max. Spindle Power Output (S1-Continuous):		7 kW (9.3 hp)
Max. Spindle Torque (S1-Continuous):		5.58 Nm (4.1 pound feet)
Tool Chuck:		HSK-F63
Tool Storage Holders:		6 Standard (up to 30 available)
Maximum Cutter Diameter:		63 mm (2.48 in.)
Maximum Disk Cutter Diameter:		92 mm (3.62 in.) using the automatic tool changer (200 mm (7.87 in.) max. if manually loaded)
Maximum length of tooling from basic cone dimensions:		150 mm (5.90 in.)

SBZ 122/33 and SBZ 122/34 Electrical/Air Specifications

Full Load Amp Draw	Max. Fuse Size	Air Required Per Minute
208V, 60 Hz, 3 phase: 28.6 A	40 A	75 liters (2.6 cubic feet) Operating pressure: 7 bar (100 psi)
240V, 60 Hz, 3 phase: 24.8 A	35 A	
480V, 60 Hz, 3 phase: 12.4 A	17 ½ A	
575V, 60 Hz, 3 phase: 9.9 A	15 A	

SBZ 122/33 and SBZ 122/34 Dimensions

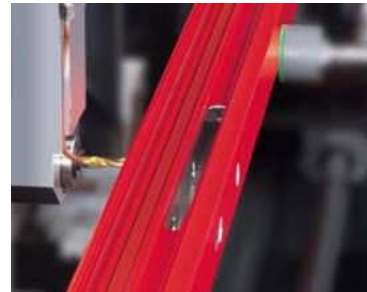
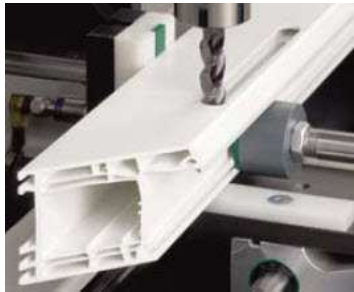
Height: 2,540 mm (100.0 in.)

Depth: 3,400 mm (133.9 in.)

Width: 5,100 mm (200.8 in.)

Weight (SBZ 122/33): 1,940 kg (4,280 lb.)

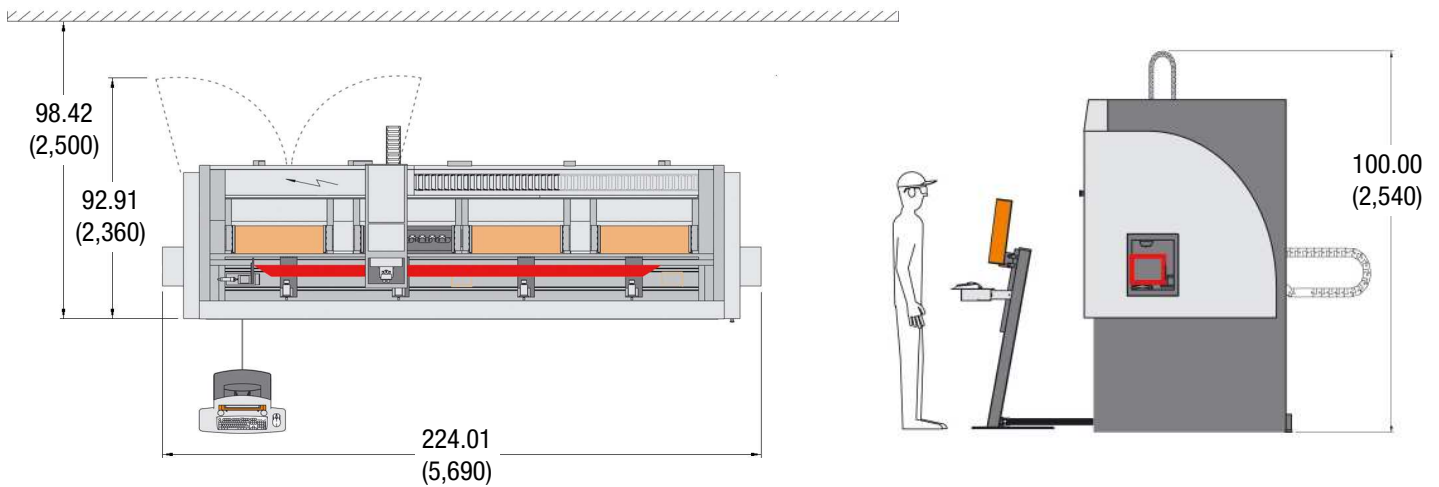
Weight (SBZ 122/34): 1,980 kg (4,365 lb.)





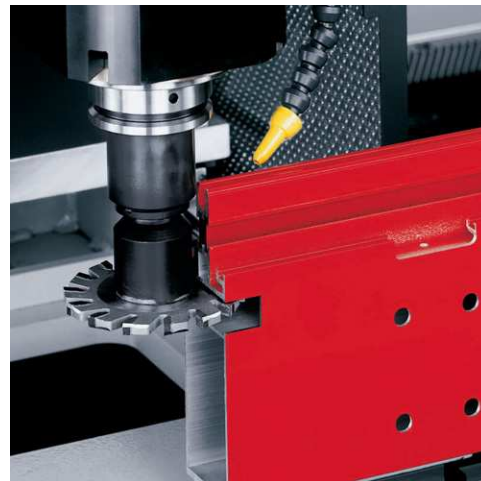
Model SBZ 122/35

The SBZ 122/35 has all the features of the SBZ 122/33 plus an enclosure for operator protection. The enclosure not only reduces dirt and noise emission but also reduces space, since the light curtain barrier is not required. The inspection window operates automatically and provides easy access to the work piece for loading and unloading. The automatic clamp position movement is standard on the SBZ 122/35, saving working time when frequently changing profile lengths.



Standard Features: Model SBZ 122/35

- Rotating angle head for two (2) tools
- Tool changer for the rotating angle head (0°/90°/180°/270°) and storage for five (5) additional tools (additional tools are available separately)
- Machine enclosure for operator protection
- Four (4) pneumatic material clamps
- Automatic clamp position recognition
- Automatic clamp positioning
- Pneumatic retractable stop
- Hand-held mobile control console with start and stop switches
- Three (3)-axis industrial PC control (Windows XP)
- 2-D Interpolation
- 15" Color monitor
- Two (2) USB ports for program import
- Serial and parallel interfaces for online connection, barcode scanner, modem, and label printer (barcode scanner and label printer available separately)
- Machining spindle cooling unit
- Air-conditioned electrical enclosure
- Chip collection chute with collection tray
- Pulse mist tool lubricating system
- Incoming air filter-regulator
- Operating, Maintenance, and Programming Manuals
- Tool and accessory Kit
- eluCam® machining software



Technical Data: Model SBZ 122/35

Processing Capacities:	Y-axis: 350 mm (13.78 in.)
	X-axis (Top-side machining): 3,850 mm (151.57 in.)
	X-axis (3-sided machining): 3,800 mm (149.6 in.)
	X-axis (5-sided machining): 3,700 mm (145.6 in.)
Maximum Axis Travel Speed:	X-axis: 60 m/min (196 ft./min)
Positioning Accuracy:	± 0.1 mm (0.004 in.)
Spindle Speed:	24,000 rpm
Spindle Power Output:	7 kW (9.3 hp)
Tool Chuck:	HSK-F63
Tool Storage Holders:	6 Standard (up to 30 available)
Maximum Cutter Diameter:	63 mm (2.48 in.)
Maximum Disk Cutter Diameter:	92 mm (3.62 in.)
Maximum length of tooling from basic	150 mm (5.90 in.)

SBZ 122/35 Electrical/Air Specifications

Full Load Amp Draw	Max. Fuse Size	Air Required Per Minute
208V, 60 Hz, 3 phase: 28.6 A	40 A	90 liters (3.2 cubic feet) Operating pressure: 7 bar (100 psi)
240V, 60 Hz, 3 phase: 24.8 A	35 A	
480V, 60 Hz, 3 phase: 12.4 A	17 ½ A	
575V, 60 Hz, 3 phase: 9.9 A	15 A	

SBZ 122/35 Dimensions

Height: 2,540 mm (100.0 in.)

Depth: 2,360 mm (92.9 in.)

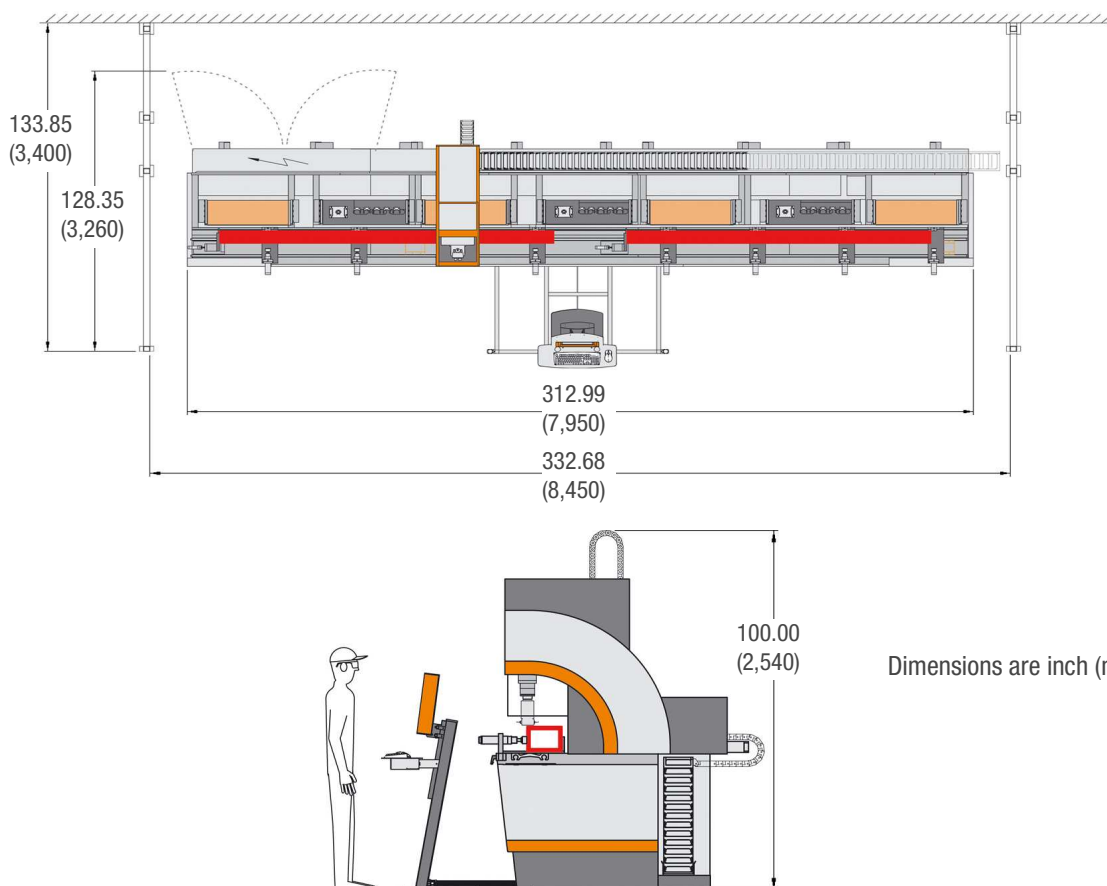
Width: 5,690 mm (224.1 in.)

Weight: 2,230 kg (4,920 lb.)



Model SBZ 122/64

The SBZ 122/64 has all the features of the SBZ 122/34, with an extended base for machining profiles up to 6.7 m (21.9 ft.)



Standard Features: Model SBZ 122/64

- Rotating angle head for two (2) tools
- Tool changer for the rotating angle head (0°/90°/180°/270°) and storage for five (5) additional tools (additional tools are available separately)
- Light barrier and safety fences for operator protection
- Eight (8) pneumatic material clamps
- Automatic clamp position recognition and movement
- Two (2) pneumatic retractable stops
- Hand-held mobile control console with start and stop switches
- Three (3)-axis industrial PC control (Windows XP)
- 2-D Interpolation
- 15" Color monitor
- Two (2) USB ports for program import
- Serial and parallel interfaces for online connection, barcode scanner, modem, and label printer (barcode scanner and label printer available separately)
- Machining spindle cooling unit
- Air-conditioned electrical enclosure
- Chip collection chute with collection tray
- Safety cover around the machining spindle
- Pulse mist tool lubricating system
- Incoming air filter-regulator
- Operating, Maintenance, and Programming Manuals
- Tool and accessory Kit
- eluCam® machining software



Technical Data: Model SBZ 122/64

Processing Capacities:		Y-axis: 350 mm (13.78 in.)
	SBZ 122/64 (1-station)	X-axis (Top-side machining): 6,700 mm (263.7 in.) X-axis (3-sided machining): 6,700 mm (263.7 in.) X-axis (5-sided machining): 6,500 mm (255.9 in.)
	SBZ 122/64 (2-station)	X-axis (Station 1) (Top-side machining): 3,650 mm (143.7 in.) (3-sided machining): 3,650 mm (143.7 in.) (5-sided machining): 3,570 mm (140.5 in.) X-axis (Station 2) (Top-side machining): 3,100 mm (122.0 in.) (3-sided machining): 3,100 mm (122.0 in.)
Maximum Axis Travel Speed:		X-axis: 60 m/min (196 ft./min)
Positioning Accuracy:		± 0.1 mm (0.004 in.)
Spindle Speed:		24,000 rpm
Spindle Power Output:		7 kW (9.3 hp)
Tool Chuck:		HSK-F63
Tool Storage Holders:		6 Standard (up to 50 available)
Maximum Cutter Diameter:		63 mm (2.48 in.)
Maximum Disk Cutter Diameter:		92 mm (3.62 in.)
Maximum length of tooling from basic		150 mm (5.90 in.)

SBZ 122/64 Electrical/Air Specifications

Full Load Amp Draw	Max. Fuse Size	Air Required Per Minute
208V, 60 Hz, 3 phase: 28.6 A	40 A	80 liters (2.8 cubic feet) Operating pressure: 7 bar (100 psi)
240V, 60 Hz, 3 phase: 24.8 A	35 A	
480V, 60 Hz, 3 phase: 12.4 A	17 ½ A	
575V, 60 Hz, 3 phase: 9.9 A	15 A	

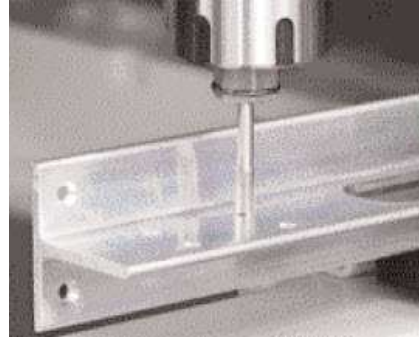
SBZ 122/64 Dimensions

Height: 2,540 mm (100.0 in.)

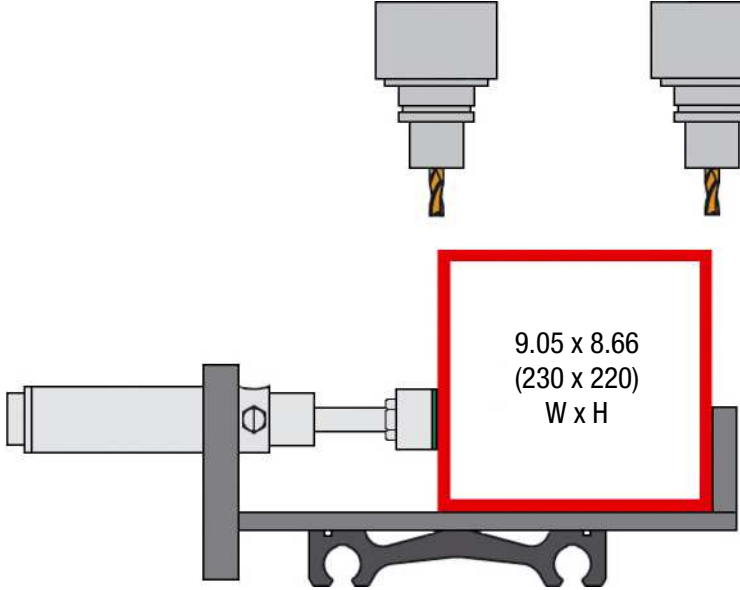
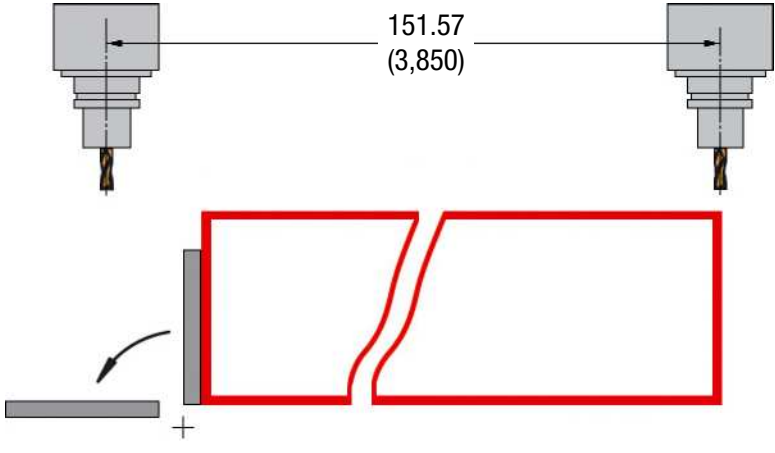
Depth: 3,400 mm (133.8 in.)

Width: 8,450 mm (332.7 in.)

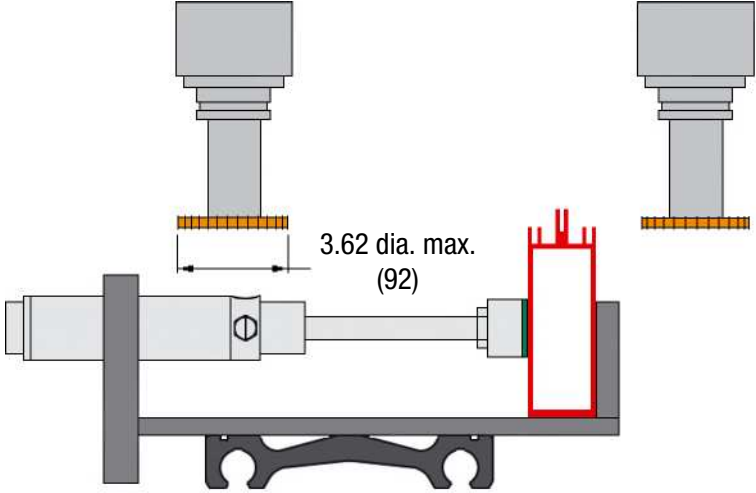
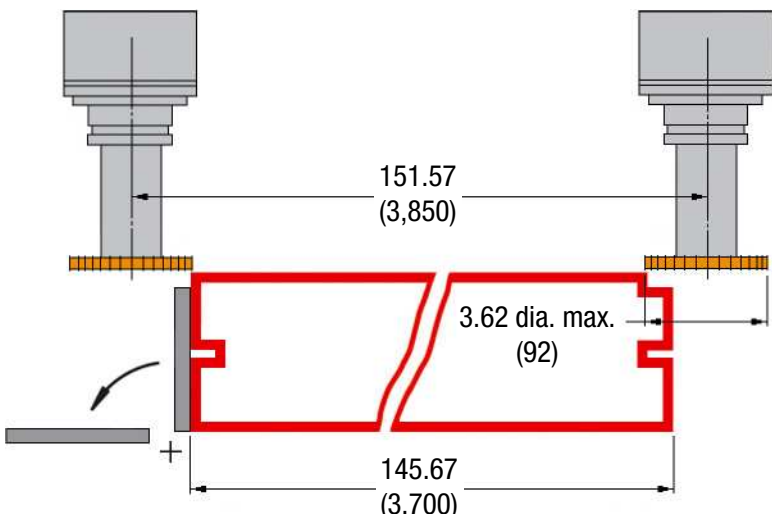
Weight: 3,400 kg (7,495 lb.)



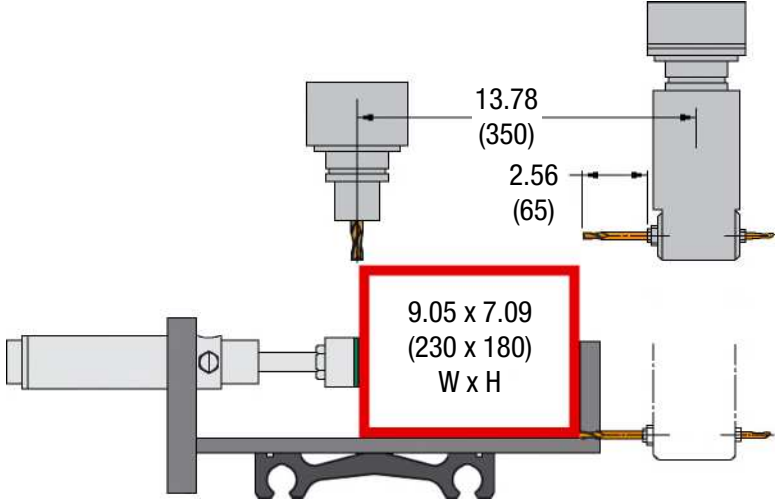
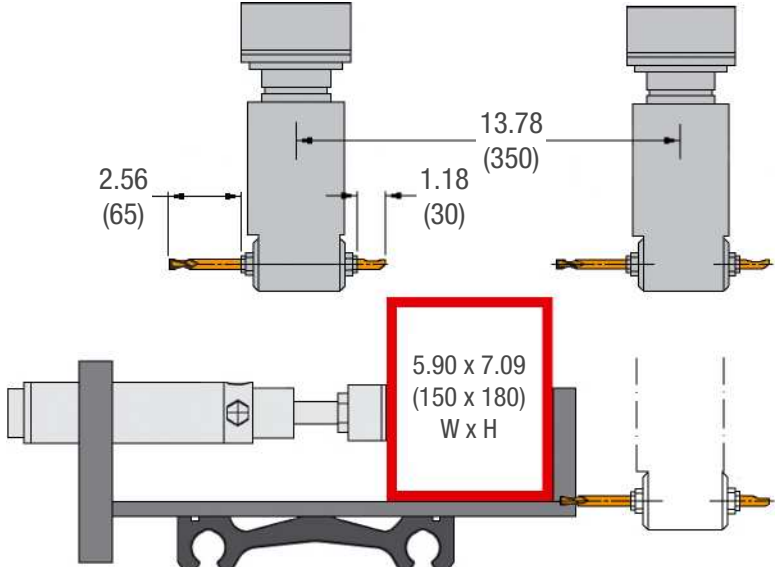
SBZ 122 Machining Limits (dimensions shown as inch (mm))

 <p>9.05 x 8.66 (230 x 220) W x H</p>	<p>SBZ 122/XX</p> <p>Machining from the top (Y- and Z- axes)</p>
 <p>151.57 (3,850)</p>	<p>SBZ 122/33, SBZ 122/34, SBZ 122/35</p> <p>Single station machining from the top (X- axis)</p>

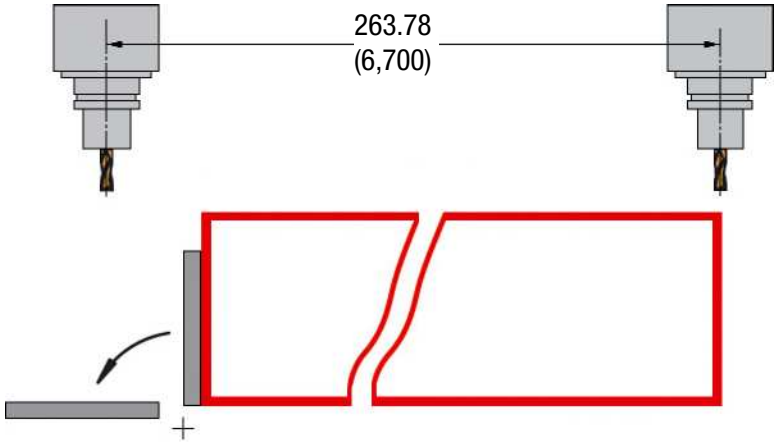
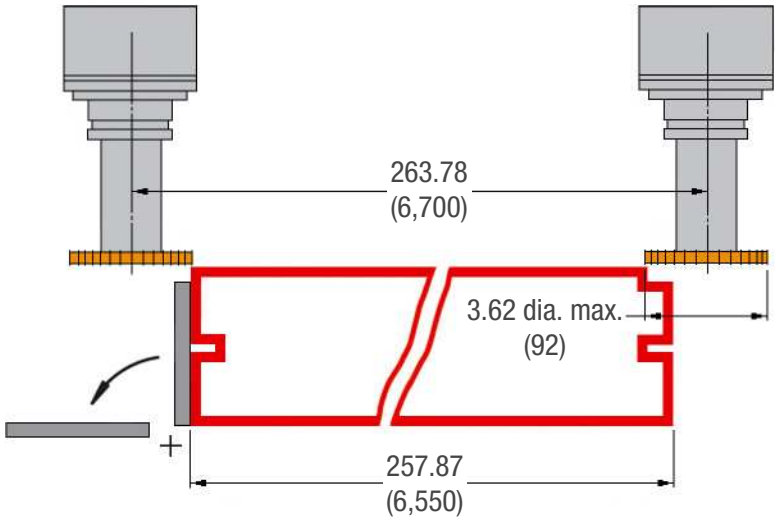
SBZ 122 Machining Limits (continued) (dimensions shown as inch (mm))

 <p>The diagram shows a side view of a machining setup. A workpiece is mounted on a lathe bed. A disk cutter is positioned to machine the face of the workpiece. A dimension line indicates a maximum diameter of 3.62 inches (92 mm) for the machined face.</p>	<p>SBZ 122/XX Machining on the face side with a disk cutter</p>
 <p>The diagram shows a side view of a machining setup for a longer workpiece. The workpiece is mounted on a lathe bed. A disk cutter is positioned to machine the ends of the workpiece. Dimensions are provided for the total length of the workpiece (151.57 inches / 3,850 mm) and the length of the machined section (145.67 inches / 3,700 mm). A dimension line also indicates a maximum diameter of 3.62 inches (92 mm) for the machined ends.</p>	<p>SBZ 122/33, SBZ 122/34, SBZ 122/35 Single station machining on the ends with a disk cutter</p>

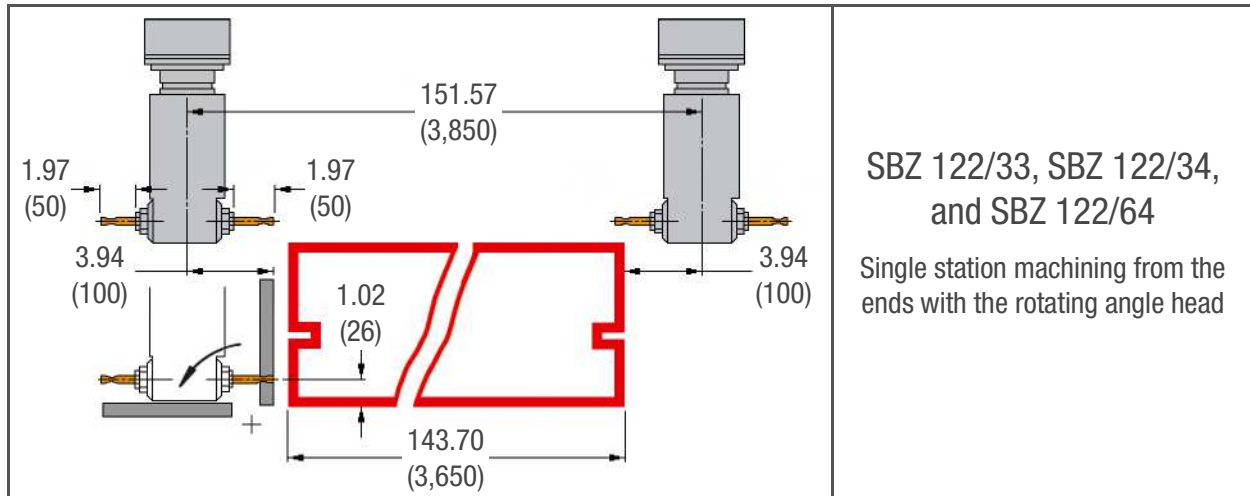
SBZ 122 Machining Limits (continued) (dimensions shown as inch (mm))

 <p>13.78 (350)</p> <p>2.56 (65)</p> <p>9.05 x 7.09 (230 x 180) W x H</p>	<p>SBZ 122/XX</p> <p>Machining from the top and rear</p>
 <p>13.78 (350)</p> <p>2.56 (65)</p> <p>1.18 (30)</p> <p>5.90 x 7.09 (150 x 180) W x H</p>	<p>SBZ 122/XX</p> <p>Machining from the front and rear with the rotating angle head</p>





SBZ 122 Machining Limits (continued) (dimensions shown as inch (mm))

	<p>SBZ 122/64</p> <p>Single station machining from the top (X-axis)</p>
	<p>SBZ 122/64</p> <p>Single station machining on the ends with a disk cutter</p>

Machining Limits (continued) (dimensions shown as inch (mm))



Available Optional Accessories for the SBZ 122

Description	Part Number
	<p>Automatic tool changer located on the right side of the machine for five (5) tools and (1) rotating angle head (0°/90°/180°/270°) (Angle head and tools not included)</p> <p>122206334</p>
	<p>Automatic tool changer located on the right side of the machine for five (5) tools and one (1) special tool (tools not included)</p> <p>122206335</p>
	<p>Automatic tool changer located on the right side of the machine for eight (8) tools (tools not included)</p> <p>122206336</p>
	<p>Adjustable router head for processing from the back or front (HSK-F63, ER 16 collets) - (Requires # 122 20 63 35)</p> <p>122205636</p>
	<p>Angle router head for processing from four sides with turning device (0°-90°-180°-270°), HSK-F63, ER 16 collets</p> <p>122205637</p>
	<p>Angle router head for processing from four sides with turning device (0°-90°-180°-270°), HSK-F63, ER 20 collets, 1,500 rpm</p> <p>140205606</p>



Available Optional Accessories for all SBZ 122 machines

Description	Part Number
	<p>Length measuring system for profile sections</p> <p>122206315</p>
	<p>Additional pneumatic clamp for automatic clamping - complete except for profile support fixtures</p> <p>122206338 (SBZ 122/33, SBZ 122/34, and SBZ 122/35)</p> <p>122206345 (SBZ 122/64)</p>
	<p>Roller conveyor (3.0 m/118.1 in.) mounted on the left side of the machine with a stop and clamp</p> <p>122209701</p>
	<p>Remote bar code scanner w/o cable (radio transmission)</p> <p>122206006</p>
	<p>Safety fence for the rear of the machine (Required if the machine is not installed against a wall or partition)</p> <p>122200802 (SBZ 122/33 and SBZ 122/34)</p> <p>122200807 (SBZ 122/64)</p>

Available Tool Holders and Tools for all SBZ 122 machines

Description		Part Number
	Collet holder for 2-20 mm (0.078-0.787 in.) ER 32 collets, HSK-F-63	136350817
	Collet Holder for 3-13 mm (0.118-0.512 in.) '077' Collets, HSK-F-63 (62 mm long)	136350813
	Collet Holder for 3-13 mm (0.118-0.512 in.) '077' Collets, HSK-F-63 (97 mm long)	136350818
	Quick change chuck for 1-10 mm (0.004-0.394 in.) diameter tools, HSK-F-63	136350800
	Side Milling Cutter, 92 mm (3.62 in.) diameter x 6 mm (0.236 in.), 14 tooth, ID=16 mm (0.63 in.), Carbide Teeth (aluminum cutting only)	150379500
	Seat for Side Milling Cutter, HSK-63-F, d=16 mm (0.63 in.)	136350823
	ER 16 Collet, 9-10 mm (0.354-0.394 in.) --	122351000
	ER 16 Collet, 4-5 mm (0.157-0.197 in.) --	122351050
	ER 16 Collet, 5-6 mm (0.197-0.236 in.) --	122351060
	ER 16 Collet, 7-8 mm (0.276-0.315 in.) --	122351080
	ER 16 Collet, 8-9 mm (0.315-0.354 in.) --	122351090
	Other collet sizes available	Consult elumatec

More Available Tool Holders and Tools for all SBZ 122 machines

Description		Part Number
	ER 32 Collet: 7-8 mm (0.276-0.315 in.) -- Double Slotted	130351000
	ER 32 Collet: 9-10 mm (0.354-0.394 in.) --	130351001
	ER 32 Collet: 19-20 mm (0.748-0.787 in.) --	130351004
	Other collet sizes available	Consult elumatec
	'077' Collet: 8.0 mm (0.315 in.)	077351080
	'077' Collet, 10.0 mm (0.394 in.)	077351100
	Other collet sizes available	Consult elumatec



eluCad is software that simplifies programming of elumatec profile machining centers. This user-friendly software is designed to allow the user to avoid programming their own ISO code – the user must simply use the program and enter data.

eluCad is characterized, among other things, by the largest possible flexibility, operator-friendliness, and practice-oriented functionality. Profile processing means to remove material from the profile bar where the customer would not like material to be. eluCad simplifies this process. Profile views can be uploaded from a profile database; new profiles can be simply loaded into the program. Machining processes such as holes, circular pockets, slotted holes, or grooves can be called up by pushing a button. For these standard processes, the program asks for data such as length, width, diameter, or immersion depth in transparent input fields. The machining can be quickly and precisely placed with data for axis positioning.

eluCad Software Options

Description	Part Number
eluCad "Base" Software, 4/5 Axis Module, Telephone Support and Software Updates (One Year)- Includes Installation and Training	100000102
DGX Module: Generates .dgc files for use by elumatec saws with the E 355 or E 555 controllers	140206103
Additional Licenses (each) for eluCad Software	140206115
Additional Variables-Quantity 10	140206121
NCX Converter-NCX Format and 3D Import	100000105
Extended Software Support (one year)	SWPFLV

WE ARE THERE FOR YOU ON SITE – WORLDWIDE

With subsidiaries, branches and dealers in over 50 countries as well as cooperation partners in many more, we are available locally all over the world – you can always reach us. From implementation to maintenance and repairs, you can quickly and easily benefit from our service.

We even go one step further: We will gladly help you set up your machines, provide your employees with valuable, practical knowledge and perform important servicing and maintenance work. Together, we can work out customized service agree-



elumatec AG (Headquarters in Germany)

elumatec de América Latina S.A.

elumatec Asia pte Ltd.

elumatec Australia Pty. Ltd.

elumatec Austria GmbH

elumatec Baltic

elumatec Beijing Co. Ltd.

elumatec Benelux B.V.

elumatec Bosnia Herzegovina d.o.o.

elumatec Brazil

elumatec Bulgaria EOOD

elumatec Chile Ltd.

elumatec Croatia d.o.o

elumatec Czech Republic s.r.o.

elumatec Finland

elumatec France S.A.S.

elumatec Greece

elumatec India Private Limited

elumatec Italia S.r.l.

elumatec Israel

elumatec Japan

elumatec Cape Town

elumatec Kazakhstan

elumatec Columbia

elumatec Korea Co. Ltd.

elumatec Kosovo sh.p.k

elumatec Malaysia SDN BHD

elumatec Macedonia

elumatec Middle East LLC

elumatec Montenegro

elumatec New Zealand

elumatec Norge AS

elumatec North America, Inc.

elumatec Polska Sp. Z o. o.

elumatec Portugal

elumatec România srl.

elumatec Russia OOO

elumatec Serbia d.o.o.

elumatec Shanghai Co. Ltd.

elumatec Scandinavia AB

elumatec Slovenia

elumatec Slovakia

elumatec South Africa (Pty) Ltd.

elumatec Spain

elumatec Swiss AG

elumatec Thailand

elumatec Türkiye Makina Tic.

elumatec Ukraine

elumatec Hungary

elumatec United Kingdom Ltd.

elumatec North America

elumatec customers benefit from over 85 years of manufacturing experience and the continual development, planning, and designing of *elumatec* machinery and components.

It is *elumatec* AG's policy to manufacture only high quality products which meet customer requirements. A team of highly skilled engineers is working constantly to incorporate the latest techniques and innovations with the required quality and reliability synonymous with the *elumatec* name.

This wide range of technically advanced machines, coupled with a variety of accessories and options, has given *elumatec* its status as a "household name" throughout the aluminum and PVC/vinyl profile fabrication industry. The versatility, reliability, and efficiency of *elumatec* machinery is well-known and respected by users who recognize the virtually un-paralleled range and quality for cutting, milling, routing, or drilling.

elumatec North America is based in South Bend, IN. We provide assistance with sales, technical service, parts distribution, machine training and applications, engineering, and administration.

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