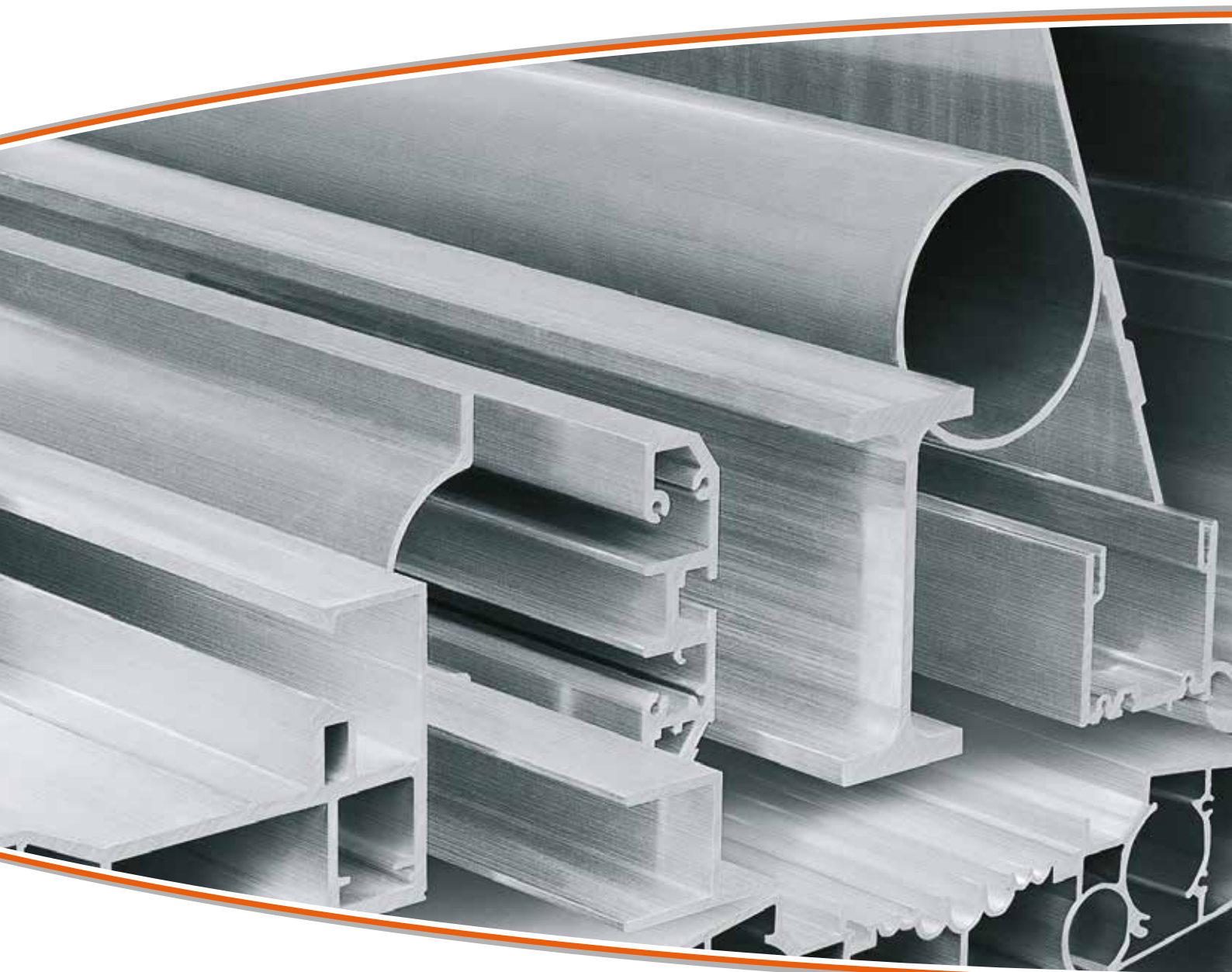


elumatec



Complete aluminium industry catalogue

The perfect solution for every requirement.

Perfect profile machining - since 1928.



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1 | A company with a tradition dating back to 1928

elumatec was established at the main location in Mühlacker near Stuttgart in 1928. In the beginning, elumatec produced 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 our subsidiaries, branches and dealers in over 50 countries, we are always just around the corner from you. The results of our many years of work are characterised by impressive references, numerous patents and inventions, over 28,000 customers and more than 5000 profile machining centres manufactured.

Only quality produces quality – Machines made by elumatec

As the leading premium supplier, our focus is not simply on sales figures, but on the even more important aspect of maintaining a leading position in terms of quality. Our machines are only rated “market ready” once they meet our high standards in terms of reliability, efficiency, and accuracy. Our guaranteed supply of spare parts for ten or more years ensures a high level of production reliability.

Our quality concept is based on our proximity to you as well as on the know-how and dependability present at all levels of our company – from development and design to manufacturing and on to sales and after-sales service. With commitment and passion we develop the best-possible solution for you, seeing ourselves both as a service provider and a dependable partner.

Our know-how is your advantage

We operate in an environment characterised by very dynamic customers – in the most diverse industry sectors with completely different requirements – and must react to changing requirements and needs in an instant. And we do, all the time, with our short response times, close proximity the world over and the highest level of commitment. Consequently, we assess our capabilities continuously and know that this requires ongoing learning and unceasing development of our competencies. This enables us to initiate and shape change processes.

Lean & Green

The broad spectrum of machines and solutions that we offer has made us rely on flexible and lean production processes. The key concept of “Lean & Green” is applied consistently in our production process: We pay careful attention to the conservation of material and energy resources in all of our processes – from vendors on to the finished product.

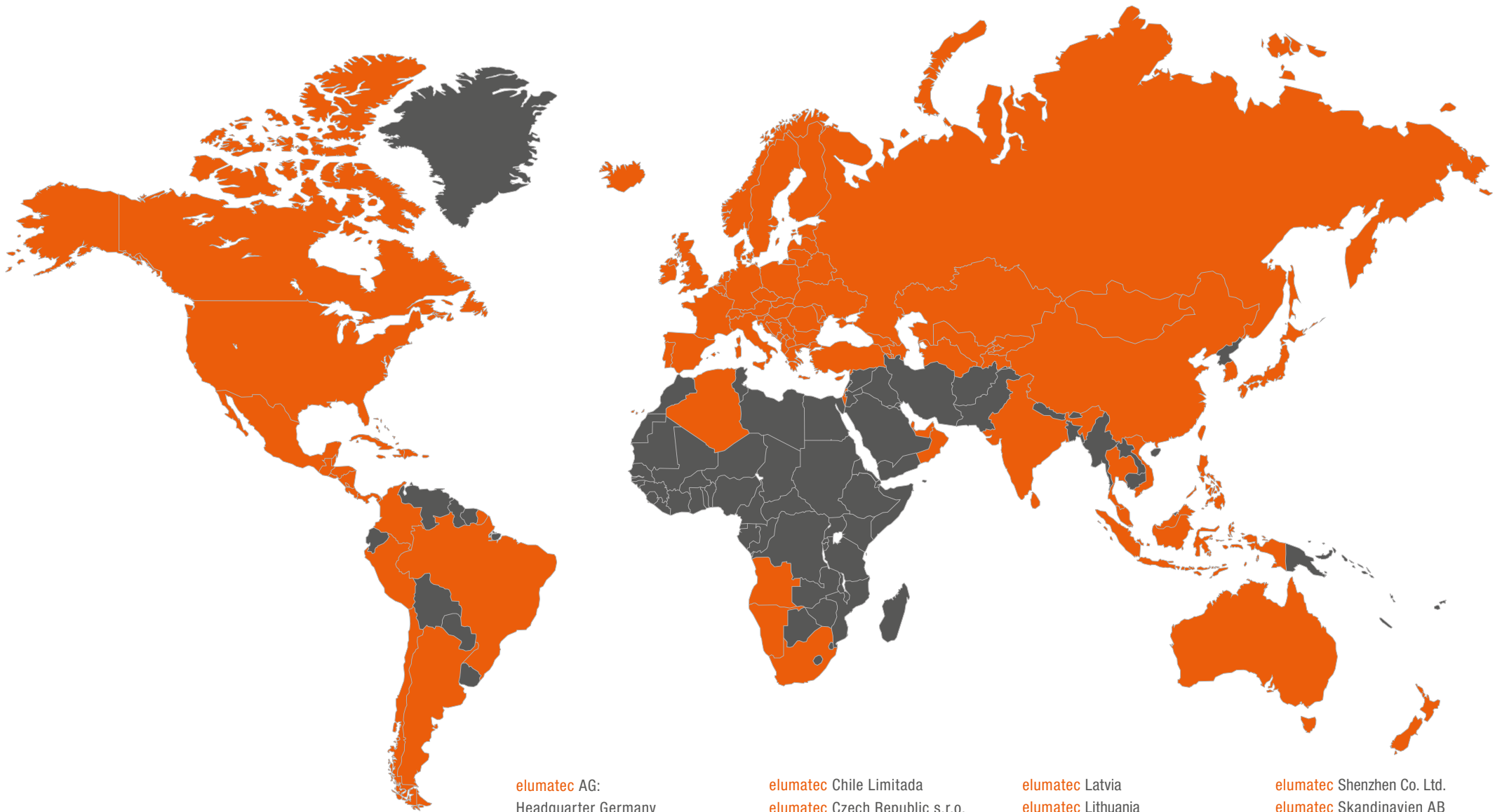


2 | Available locally all around the world – Our contribution to your success

We are there for you on site – worldwide

With our subsidiaries, branches and dealers in over 50 countries and cooperation partners in many more, we are available locally around the world. Because we are represented globally, yet locally, 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 customised service agreements that are tailored to precisely suit your needs.



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Please find your local contact at: <http://www.elumatec.com/the-company/locations>

3 | The perfect solution for every requirement

We offer you our expertise in finding the perfect solution

We think things through. With our extensive portfolio of processes, methods and products, we can find the exact solution you need for your special requirements. We cover the whole spectrum from craftsman's enterprises to industrial profile machining operations.

Our range includes basic, manual-operation machines as well as complex, state-of-the-art profile machining centres with CNC control. Moreover, we offer all of the other components you need for setting up efficient, safe and ergonomic production lines, including assembly equipment, roller conveyors, transport trolleys, glazing units and tools. Our machines and operating equipment have a modular design and all components are compatible with each other. This gives you the flexibility you need to adapt your production equipment at any time to suit the growing demands of your enterprise – all from a single source.

We also offer assistance in the planning of your production. We draw on our experience which goes back generations, and always keep the practical issues in mind. All of our products are "made by elumatec", which stands for our promise of quality with exceptional precision, durability and stability.





4 | Saws

We offer a great variety of saws and equipment variants for nearly every requirement including precision cutting of lengths and angles. Our range of saws includes saw blade diameters from 280 mm to 650 mm. With our double mitre saws, cuts are made using the outer dimension, which means that profile tolerances are automatically excluded from the cutting length. You can use the optional PC controller to conveniently import the required cutting data from common spreadsheet programs via a network or a USB port.

When developing our saws, we placed a special emphasis on a low-vibration design and very high precision as well as exceptional robustness and guaranteed durability. Planning for long-term, economical production must always take the people involved into account. This is why ergonomic workstation design is one of our top priorities. This is also one of the top features of our saws, as their unique ergonomic design is unparalleled on the market. All of our saws can be loaded and unloaded ergonomically and operated without fatigue. The process of continuous optimisation combined with our many years of experience form the basis of our expertise.

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4.1 | Double mitre saws

Double mitre saw **DG 244**

The reliable elumatec principle “Cutting from below”:

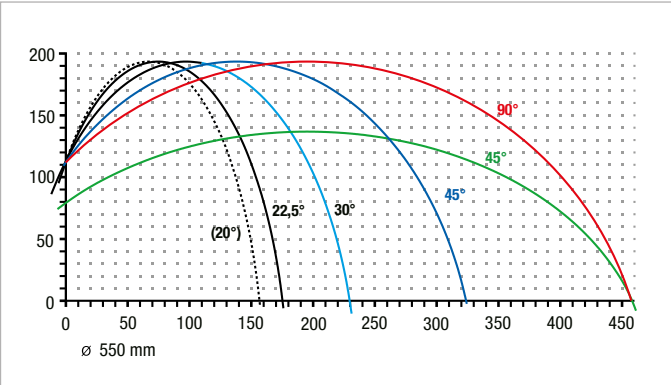
- Provides unhindered access to support table
- A large saw blade diameter and optimal use of the saw blade offer an ideal cutting capacity for all cutting variations
- Standard for elumatec: External dimension cuts at all angle positions. This means no length calculations are necessary when cutting profiles of different heights. This is a big advantage when cutting special angles
- The universal pivoting and tilting of both saw units allows cutting of high and wide profiles as well as every type of compound mitre. Consequently, many profiles can be cut without support blocks
- Safety hoods
- Equipped with saw blades as standard
- Pulsed coolant system

Technical specifications

- Minimum cutting length at 90° 375 mm
- Minimum cutting length tilted at 45° 375 mm
- Pivoting range inwards, pneumatically, 90° – 45° (manually up to 22.5° inwards and up to 140° outwards with digital display)
- Tilting range inwards, pneumatically, 90° – 45° (intermediate angles manually adjustable with digital read-out display and turret stop)
- For cutting range, see cutting diagram
- Saw blade diameter 550 mm
- Saw blade speed 2,250 rpm
- Power supply 230/400 V, 3~, 50 Hz
- Power output per motor 4 kW
- Compressed air supply 7 bar
- Air consumption per working cycle 40 l without spraying, 64 l with spraying

Cutting length variants

- 4,500 mm
- 6,000 mm
- 7,500 mm



Options

- DG 244 M machine bed made of steel sheet
- Hydro-pneumatic saw feed
- Saw feed - minimum cutting length 400 mm
- Profile lifting bars
- Additional software for E 580: Optimisation program, Software module for chop and oversize length cuts
- Mobile or automatically retractable workpiece supports
- Material clamping units
- Transom stop and lead-cut stop
- Label printer
- Exhaust connectors, extraction system
- Clock system
- Roller conveyor
- Saw blades
- High performance cutting fluid

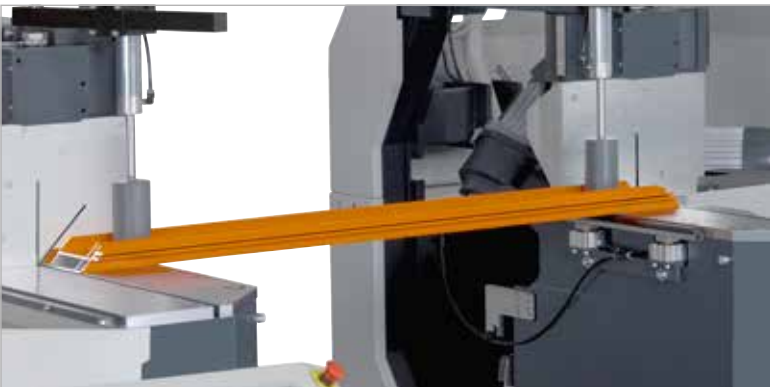


Controller variants

Positioning control **E 355**

PC Control **E 580**

See page 40



DG 244 + E 580 + Special accessories

4.1 | Double mitre saws

Double mitre saw **DG 104**

- The optimal double mitre saw for series production as well as for special applications
- The universal pivoting and tilting of both saw units allows cutting of high and wide profiles as well as every type of compound mitre. Consequently, many profiles can be cut without support blocks
- External-dimension cuts possible for all cutting variants. Consequently, no complicated length calculations are necessary. This is a big advantage when cutting special angles
- Pivoting range with digital angle display
- Safety hoods
- Equipped with saw blades as standard
- Equipped with digital display E 111 as standard
- Pulsed coolant system

Technical specifications

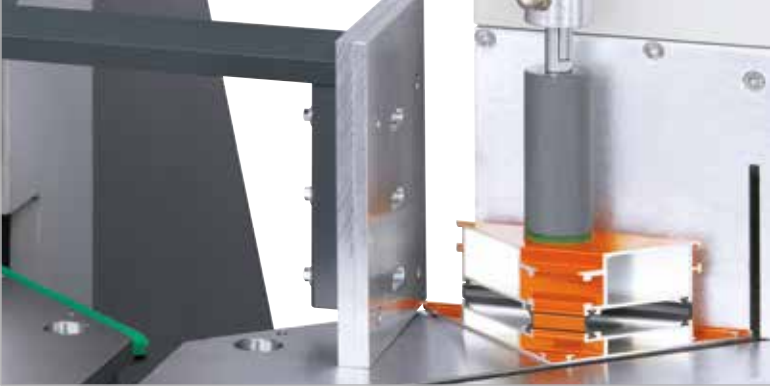
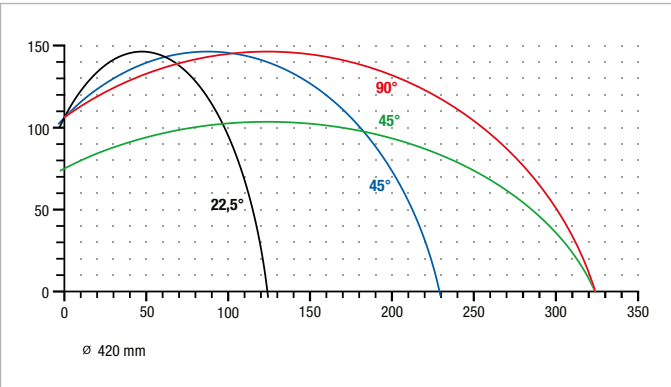
- Minimum cutting length at 90° 350 mm
- Minimum cutting length tilted at 45° 350 mm
- Pivoting range inwards 90° - 45° (up to 22.5° manual with digital display)
- Tilting range inwards pneumatically 90° - 45°
- For cutting range, see cutting diagram
- Saw blade diameter 420 mm
- Saw blade speed 2,800 rpm
- Power supply 230/400 V, 3~, 50 Hz
- Power output per motor 4 kW
- Compressed air supply 7 bar
- Air consumption per working cycle 40 l without spraying, 64 l with spraying

Cutting length variants

- 3,000 mm
- 4,500 mm
- 6,000 mm

Options

- DG 104 M machine bed made of steel sheet (cutting length 4,500 mm, 6,000 mm)
- Profile lifting bars
- Software for E 580: Software module for chop and oversize length cuts
- Mobile or automatically retractable workpiece supports
- Material clamping units
- Transom stop and lead-cut stop
- Label printer for variants with E 355 and E 580
- Exhaust connectors, extraction system
- Clock system
- Roller conveyors
- Saw blades
- High performance cutting fluid



Controller variants

Manual cutting length adjustment with digital display **E 111**

Positioning control **E 355**

PC Control **E 580**

See Page 40



DG 104 + E 580 + Special accessories

4.1 | Double mitre saws

Double mitre saw **DG 142**

- External-dimension cuts possible for all cutting variants
- Ideal machine for high-volume series production when cutting at 90° and 45°
- Equipped with saw blades as standard
- Equipped with digital display E 111 as standard
- Vertical pneumatic material clamping unit
- Safety hoods

Technical specifications

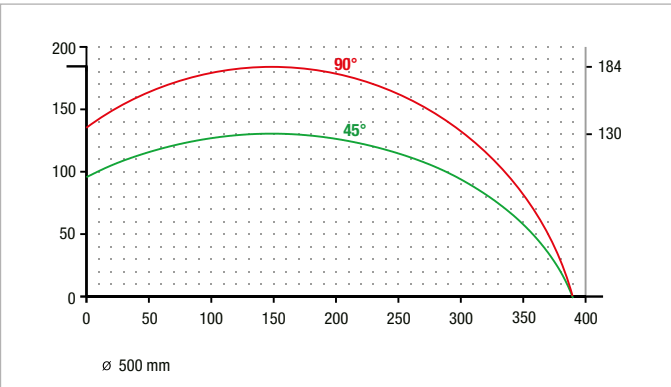
- Minimum cutting length at 90° 370 mm
- Minimum cutting length tilted at 45° 370 mm
- Tilting range inwards 90° – 45°
- For cutting range, see cutting diagram
- Saw blade diameter 500 mm
- Saw blade speed 2,800 rpm
- Power supply 230/400 V, 3~, 50 Hz
- Power output per motor 4 kW
- Compressed air supply 7 bar
- Air consumption per working cycle 40 l without spraying, 64 l with spraying
- Intermediate angles of 90° – 45° optional

Cutting length variants

- 3,000 mm
- 4,500 mm
- 6,000 mm

Options

- DG 142 M machine bed made of steel sheet (only at cutting length of 4,500 mm)
- Intermediate angle setting by hand wheel and digital display E 111
- Additional software for E 580: Optimisation program, Software module for chop and oversize length cuts
- Label printer for variants with E 355 and E 580
- Mobile or automatically retractable workpiece supports
- Material clamping units
- Transom stop and lead-cut stop
- Extraction system
- Roller conveyor
- Saw blades
- High performance cutting fluid
- Pulsed coolant system



Controller variants

Manual cutting length adjustment with digital display **E 111**

Positioning control **E 355**

PC Control **E 580**

See Page 40



DG 142 + E 580 + Special accessories

4.1 | Double mitre saws

Double mitre saw **DG 79**

- The solid cast construction with integrated turn table ensures optimal profile support for cutting to length with angular accuracy
- Continuous pivoting range adjustment of the saw heads from 0° to 45° to the left and right. This makes external and internal dimension cuts possible
- Vertical and horizontal pneumatic material clamping units ensures optimal profile fixation
- Equipped with saw blades as standard
- Equipped with digital display E 111 as standard
- Pulsed coolant system

Technical specifications

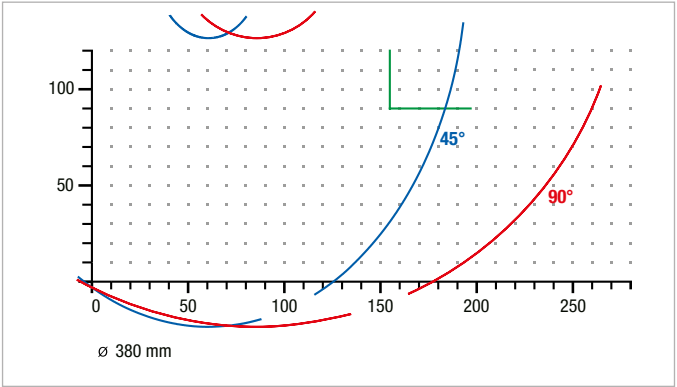
- Minimum cutting length at 90° 520 mm
- Minimum cutting length pivoted at 45° 520 mm
- Positive location points at 15°, 30°, and 45°
- Pivoting range from 0° to 45° continuously adjustable
- Hydro-pneumatic saw feed
- For cutting range, see cutting diagram
- Saw blade diameter 380 mm
- Saw blade speed 2,800 rpm
- Power supply 230/400 V, 3~, 50 Hz
- Power output per motor 3 kW
- Compressed air supply 7 bar

Cutting length variants

- 3,000 mm
- 4,500 mm
- 6,000 mm

Options

- DG 79 M machine bed made of steel sheet (cutting length 3,000 mm, 4,500 mm)
- Workpiece supports
- Transom stop
- Extraction system
- Material clamping units
- Roller conveyors
- Saw blades
- High performance cutting fluid



Controller variants

Manual cutting length adjustment with digital display **E 111**

Positioning control **E 355**

See Page 40



DG 79 + E 111

4.2 | Mitre saws

Mitre saw **MGS 245/00**

The universal saw for special applications

- The reliable elumatec principle "Sawing from below":
- Free access to the table surface for optimal loading and unloading of profiles
- The patented saw arm suspension creates a cutting pressure towards the back fence which ensures safe clamping of the workpiece
- Safety hood opens automatically
- Pulsed coolant system
- Standard equipped with saw blade
- Pivoting range of 22.5° to the left and right manually with digital angle display
- Tilting range pneumatic 90° - 45° (intermediate angles by means of turret stop and digital display)

Technical specifications

- Pivoting range, manually, 22.5° to the left and right with digital display E111
- Tilting range pneumatically from 90° to 45° with digital display
- For cutting range, see cutting diagram
- Saw blade diameter 550 mm
- Saw blade speed 2,250 rpm
- Power supply 230/400 V, 3~, 50 Hz
- Power output 4 kW
- Compressed air supply 7 bar
- Air consumption per working cycle 20 l without spraying, 32 l with spraying
- Length 1,900 mm, depth 1,550 mm, height 2,100 mm, weight 1,150 kg

Mitre saw **MGS 245/31**

See **MGS 245/00**, however:

- 3-axis PC control, E 580, for electronic pivoting and tilting
- Electronically controlled length adjustment of the length stop and measuring system
- 10.4" colour touch display
- Network connection RJ45, 10/100 Mbit
- Length adjustment 6,000 mm

Mitre saw **MGS 245/30**

See **MGS 245/31**, however:

- Length adjustment 4,500 mm

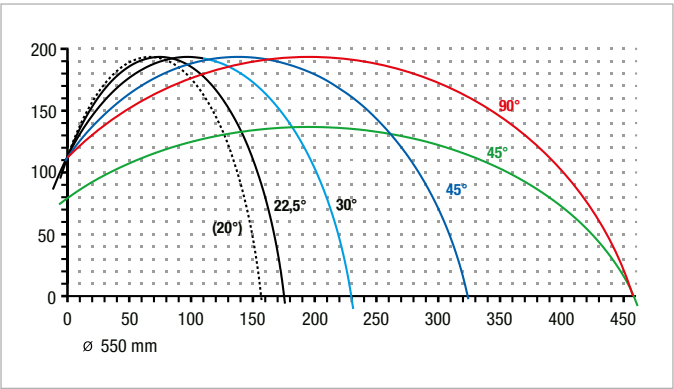
Mitre saw **MGS 245/32**

See **MGS 245 /31**, however:

- Length adjustment 7,500 mm

Options

- Hydro-pneumatic saw feed
- Extraction system
- Saw blades
- High performance cutting fluid



MGS 245/00 +Special accessories

4.2 | Mitre saws

Mitre saw **MGS 105**

The universal saw for special applications

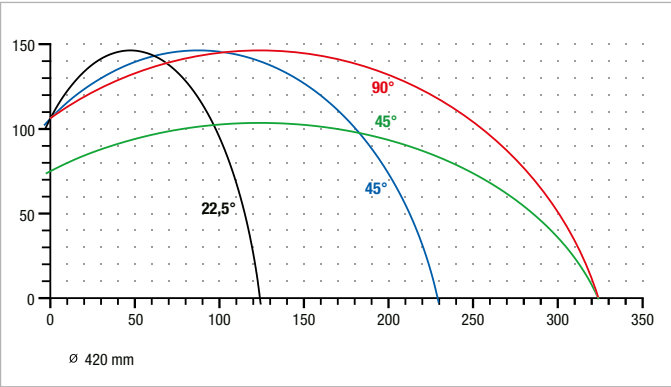
- The reliable elumatec principle “Cutting from below”:
- Free access to the table surface for optimal loading and unloading of profiles
- The patented saw arm suspension creates a cutting pressure towards the back fence which ensures safe clamping of the workpiece
- Safety hood opens automatically
- Pulsed coolant system
- Equipped with saw blade as standard

Technical specifications

- Pivoting range manually 22.5° to the left and right with digital display E111
- Tilting range pneumatically from 90° - 45°
- For cutting range, see cutting diagram
- Saw blade diameter 420 mm
- Saw blade speed 2,800 rpm
- Power supply 230/400 V, 3~, 50 Hz
- Power output 4 kW
- Compressed air supply 7 bar
- Air consumption per working cycle 20 l without spraying, 32 l with spraying
- Length 1,400 mm, depth 1,500 mm, height 1,880 mm, weight 750 kg

Options

- Extraction system
- Length stop and measuring systems see page 43
- Roller conveyors
- Saw blades
- High performance cutting fluid



4.2 | Mitre saws

Mitre saw MGS 142/11

- The ideal mitre saw for industrial series production
- Safety hood opens automatically
- Equipped with exhaust connectors on the workpiece back fences as standard
- Pulsed coolant system
- Profile feed from the left and material stop on the right
- Equipped with saw blade as standard

Technical specifications

- Tilting range pneumatically from 90° - 45° (optional)
- For cutting range, see cutting diagram
- Saw blade diameter 500 mm
- Saw blade speed 2,800 rpm
- Power supply 230/400 V, 3~, 50 Hz
- Power output 4 kW
- Compressed air supply 7 bar
- Air consumption per working cycle 20 l without spraying, 32 l with spraying
- Length 910 mm, depth 1,335 mm, height 1,840 mm, weight 580 kg

Options

- Hydro-pneumatic saw feed
- Horizontal material clamping units
- Extraction system
- Length stop and measuring systems
- Intermediate angle setting by hand wheel and digital display E 111 (not for MGS 142/31)
- Roller conveyors
- Saw blades
- High performance cutting fluid
- Motor with 5.5 kW power output
- High performance cutting fluid
- Motor with 5.5 kW power output

Mitre saw MGS 142/21

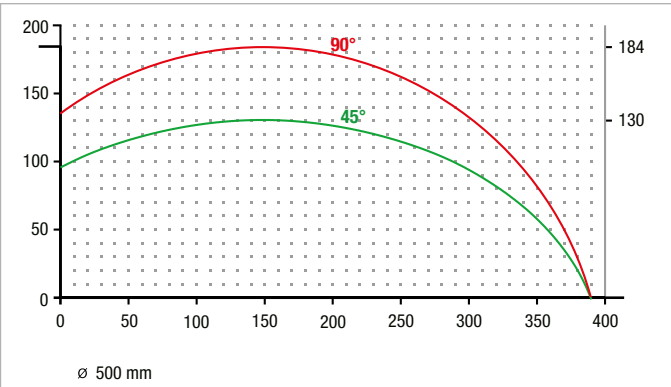
See MGS 142/11, however:

- Profile feed from the right and stop on the left

Mitre saw MGS 142/31

See MGS 142/21, however:

- With kerf spreading to achieve the very best cutting quality. No re-cutting by the saw blade
- Tilting range, fixed at 90°
- Length 910 mm, depth 1,335 mm, height 1,840 mm, weight 580 kg



MGS 142/11 + MMS 100 + Roller conveyor

4.2 | Mitre saws

Mitre saw **MGS 72/30**

- Stable, ground, continuous support table with turn table on precision bearings
- Wear-resistant and quiet multi-V belt drive
- Manual saw feed
- Equipped with saw blade as standard
- Table-top unit

Technical specifications

- Pivoting range from 0° - 45°, continuously adjustable to the left and to the right
- Positive location points at 15°, 30°, and 45°
- For cutting range, see cutting diagram
- Saw blade diameter 380 mm
- Saw blade speed 2,800 rpm
- Power supply 230/400 V, 3~, 50 Hz
- Power output 3 kW
- Length 780 mm, depth 900 mm, height 815 mm, weight 120 kg

Options

- Machine base
- Pneumatic material clamping unit
- Quick-acting clamping device
- Length stop and measuring systems see page 43
- Roller conveyors
- Saw blades
- Pulsed coolant system
- High performance cutting fluid

Mitre saw **MGS 72/10**

- See **MGS 72/30** however:
- Machine base
 - Pneumatic material clamping units: 2x horizontal, 1x vertical
 - Pulsed coolant system

Technical specifications

- Length 780 mm, depth 900 mm, height 1,600 mm, weight 210 kg

Mitre saw **MGS 73/33**

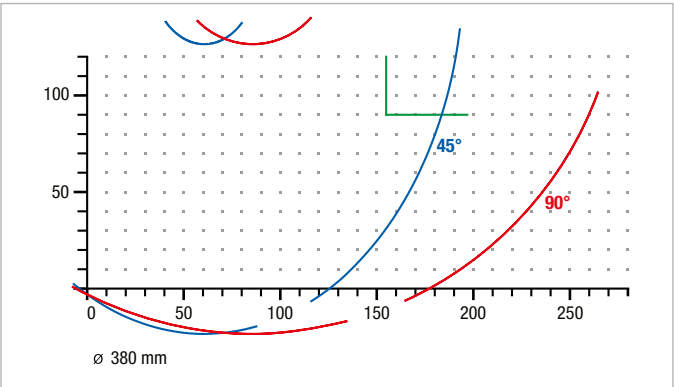
- See **MGS 72/10** however:
- Hydro-pneumatic saw feed
 - 2-hand operation

Technical specifications

- Compressed air supply 7 bar
- Length 850 mm, depth 900 mm, height 1,450 mm, weight 220 kg

Options

- Extraction system
- Length stop and measuring systems see page 43
- Roller conveyors
- Saw blades
- High performance cutting fluid



4.3 | Table saws

Table saw **TS 161/00**

- Accuracy is achieved by cutting from below
- Wide pivoting range of up to 0° to the right and up to 45° to the left
- The special pivoting mechanism with integrated turn table enables working from the front at any angle position
- The workpiece stop is adjustable to allow optimal use of the saw blade capacity for wide and flat profiles
- Manual saw feed
- Manual material clamping unit (vertical)
- Equipped with saw blade as standard
- Table-top unit

Technical specifications

- For cutting range, see cutting diagram
- Saw blade diameter 280 mm
- Saw blade speed 3,200 rpm
- Power supply 230/400 V, 3~, 50 Hz
- Power output 1.05 kW
- Length 650 mm, depth 750 mm, height 1,300 mm, weight 130 kg

Table saw **TS 161/21**

See **TS 161/00**, however:

- With machine base
- Pneumatic material clamping unit (vertical)
- Pulsed coolant system
- Maintenance unit

Options

- Digital display for pivoting angles
- Manual safety hood
- Extraction system
- Length stop and measuring systems see page 43
- Roller conveyors
- Saw blades
- High performance cutting fluid

Table saw **TS 161/22**

- Accuracy is achieved by cutting from below
- Wide pivoting range of up to 0° to the right and up to 45° to the left
- The special pivoting mechanism with integrated turn table enables working from the front at any angle position
- The workpiece stop is adjustable to allow optimal use of the saw blade capacity for wide and flat profiles
- With machine base
- Pneumatic material clamping unit
- Digital display for pivoting E111

Technical specifications:

- For cutting range, see cutting diagram
- Power supply 230/400 V, 3~, 50 Hz
- Power output 1,1 kW / 1.0 HP
- Saw blade diameter 280 mm
- Saw blade speed 3,200 rpm
- Compressed air supply 7 bar
- Air consumption per working cycle with spraying: 10 l

Included accessories:

- One hard metal saw blade for aluminium and PVC, 280 mm diameter, 88 teeth
- Machine base
- Pneumatic material clamping unit (vertical)
- Pulsed coolant system

Table saw **TS 161/30**

Siehe **TS 161/21**, however:

- Pneumatic saw feed
- Manual safety hood
- Length 650 mm, depth 750 mm, height 1,300 mm, weight 170 kg

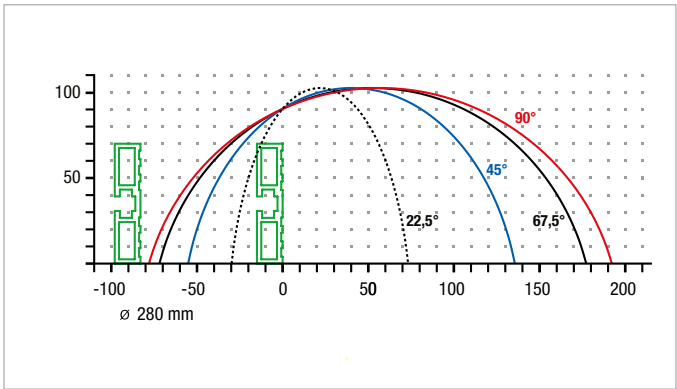
Table saw **TS 161/31**

See **TS 161/22**, however:

- Pneumatic saw feed
- Safety hood
- 2-hand operating
- Digital display for pivoting E111

Technical specifications

- Air consumption per working cycle, with spraying: 15 l



TS 161/21



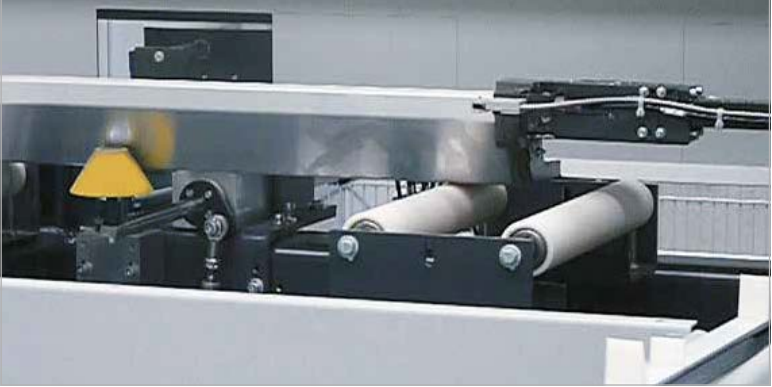
TS 161/30

4.4 | Automatic saws

Pusher automatic saw SAP 629/10

- Sawing centre with 3.5 m pusher
- Automatic sawing of aluminium profiles of various lengths
 - Pusher carriage with precision drive on linear guides with integrated drive gear rack
 - Pneumatic gripper jaw for a secure grip on the profile (parallel jaws)
 - Horizontal and vertical material clamping of the workpiece during the sawing operation
 - Saw blade diameter 550 mm (optional, 650 mm)
 - Servo-controlled movement of the saw axis (Z-axis)
 - Saw feed with profile cross-section optimisation
 - Saw motor, 11 kW / S6
 - Outfeed via mini-roller conveyor
 - Lighted soundproof enclosure
 - Dual or multiple-bar processing possible with special accessories (optional)
 - Gripper jaw, profile support blocks and clamping units must be adjusted to suit different profile types. (Optional)
 - Safety fence at the back left and right (optional)
 - Light barrier for the front
 - 15" touchscreen control panel with one USB port and integrated Ethernet adapter, 10/100 Mbit, RJ 45
 - Windows operating system

Technical specifications
• Maximum profile bar section length 3,500 mm • Saw blade diameter 550 mm (optional, 600 mm) • Saw blade bore, 30 mm • Saw cuts, 90° (angle cuts on request) • Power supply 230/400 V, 3~, 50 Hz • Power output 11 kW / S6 • Saw blade speed 2,800 rpm • Compressed air supply 7 bar • Air consumption per working cycle 50 l without spraying, 64 l with spraying • Feed distance variable • Pusher carriage feed rate of max. 90 m/min. • Positioning accuracy +/- 0.1 mm
Options
• Roller conveyors • Saw blades • High performance cutting fluid



Pusher automatic saw SAP 629/12

See SAP 629/10, however:
Sawing centre with 7.5 m pusher

Technical specifications
• Maximum profile bar section length 7,500 mm

Pusher automatic saw SAP 629/17

See SAP 629/10, however:
Sawing centre with 7.5 m pusher and loading magazine for five bars



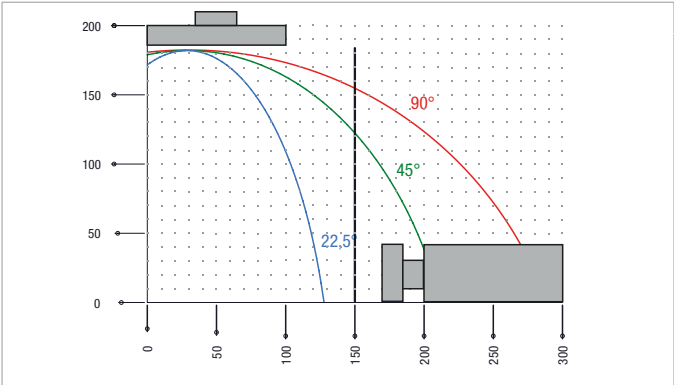
SAP 629/10

4.4 | Automatic saws

Cut-to-length centre **SBZ 616/02**

- Automatic saw for aluminium profiles
- Loading magazine for up to nine profiles
 - Lifting function for cycling the magazine compartments
 - In- and outfeed gripper with motorised, continuously adjustable gripper jaw
 - Rubberised gripper jaws prevent profile damage
 - Hydro-pneumatic saw feed
 - Pulsed coolant system
 - Outfeed for parts using a belt conveyor, plus lifting function for outfeed of the finished profiles with no impact on the automatic process

Technical specifications
• Large saw blade with a diameter of 550 mm • For cutting range, see cutting diagram • Saw motor 4 kW • Continuously adjustable pivoting range with servo drive from -22.5° to +22.5°
Option
• Label printer



4.4 | Automatic saws

Automatic saw **SAS 142/44**

- Powerful automatic saw with 2-axis controller and large-dimensioned saw blade for efficient large-scale cutting of aluminium profiles
- Reliable elumatec principle of „sawing from below“ for optimal accessibility and the best possible utilisation of the saw blade
- Kerf spreading ensures the highest possible surface quality of the cut faces only for 90° saw cuts
- Material infeed (cycling) protects the surface of the workpiece through a profile lifting system at the bearing and locating face
- Large cutting range for wide profiles
- Automatic shutoff when the end of the profile has been reached
- Material infeed controlled via servo axis for transport speed and part length
- Saw feed controlled via servo axis for saw speed and saw height
- Input of the profile parameters into the profile database

Technical specifications

- Feed length 5 - 780 mm (for 90° cuts)
- Maximum cutting range, see cutting diagram
- Saw blade speed 2800 rpm
- 5.5 kW of power at 400 V / 50 Hz
- Compressed air supply 7 bar
- Air consumption 50 l per working cycle, 64 l with minimum-volume lubrication system

Included accessories

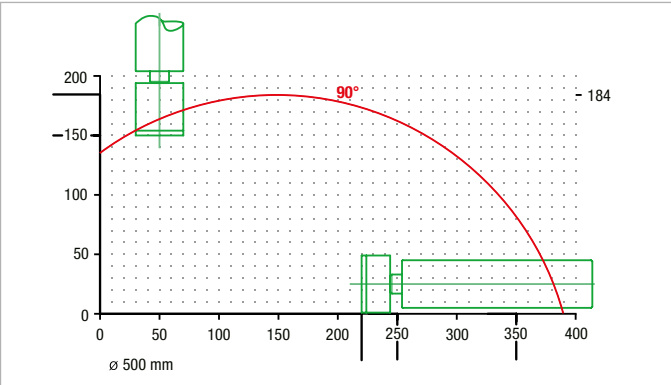
- Hard-metal saw blade for aluminium with a diameter of 500 mm and 120 teeth
- One vertical and one horizontal clamp each to the left and right of the saw blade
- High performance cutting fluid 500 ml

Automatic saw **SAS 142/43**

- See **SAS 142/44**, however:
- Set the cutting angle using the hand wheel and digital display

Technical specifications

- Feed length 5 - 695 mm (for 90° cuts)
- Tilted cutting angle 90° - 45°



SAS 142/44

4.4 | Automatic saws

Automatic saw SA 142/35

- Suitable for high-volume cutting of aluminium profiles for window manufacturing and industrial applications
- Material infeed (cycling) protects the surface of the workpiece through a profile lifting system at the bearing and locating face
- One, two or three-stroke feed can be selected using a selector switch
- Angled cuts of up to 45° are possible by tilting the saw unit (option)
- Large cutting range for wide profiles
- Equipped with saw blade as standard

Technical specifications

- Pivoting range from 90° - 45° continuously adjustable (optional)
- For cutting range, see cutting diagram
- Saw blade diameter 500 mm
- Saw blade speed 2,800 rpm
- Power supply 230/400 V, 3~, 50 Hz
- Power output 4 kW
- Compressed air supply 7 bar
- Air consumption per working cycle 50 l without spraying, 64 l with spraying
- Length 2,850 mm, depth 1,400 mm, height 1,580 mm, weight 770 kg
- Feed distance per cycle 5 – 600 mm (up to three cycles possible)

Options

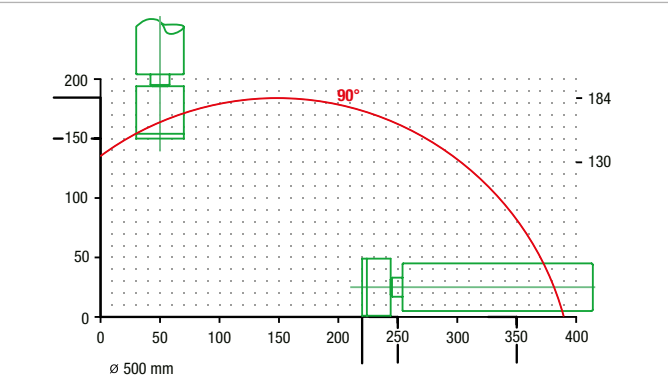
- Manual cutting length adjustment with digital display E 111
- Hydro-pneumatic saw feed
- Extraction unit
- Roller conveyors
- Saw blades
- High performance cutting fluid
- Intermediate angle setting by hand wheel and digital display E 111
- Clamping method for multi-part clamping
- Clamping method for parts smaller than 5 mm

Automatic saw SA 142/37

See SA 142/35 however:

Technical specifications

- Power output 5,5 kW



Automatic saw SA 142/38

See SA 142/35, however:

- With kerf spreading (only for 90° cuts)
- For cutting range, see cutting diagram



SA 142

4.5 | Vee-notch and notching saws

Vee-notch and notching saw **KS 101/30**

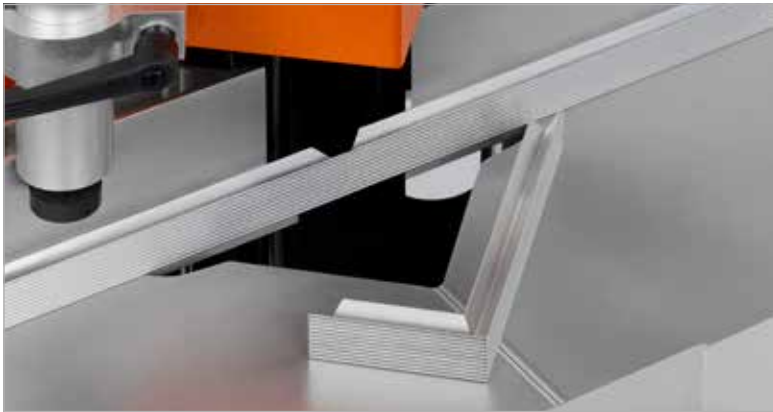
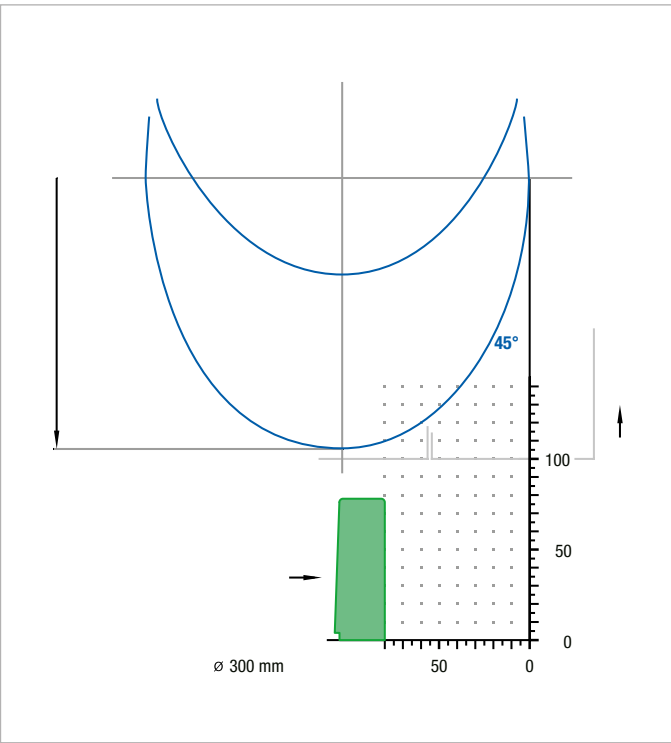
- Precision Vee-cuts in aluminium profiles
- Pneumatic continuously adjustable saw blade feed for fast and precise sawing with rapid return
- Simple setting of cutting depth
- Equipped with connection for swarf extraction hose and swarf container as standard
- Equipped with saw blades as standard
- Equipped with pulsed coolant system as standard

Technical specifications

- Cutting range for Vee-cuts: cutting depth 80 mm, profile height 100 mm
- Saw blade diameter 300 mm
- Saw blade speed 2,800 rpm
- Power supply 230/400 V, 3~, 50 Hz
- Power output per motor 0.9 kW
- Compressed air supply 7 bar
- Air consumption per working cycle 20 l without spraying, 44 l with spraying
- Length 980 mm, depth 800 mm, height 1,650 mm, weight 240 kg

Options

- Material clamping units
- Length stop and measuring systems page 43
- Roller conveyor
- Saw blades
- High performance cutting fluid



KS 101/30

4.6 | Controller variants

Manual cutting length adjustment with digital display E 111 [01]

- Accurate dimension adjustment using digital display
- Switching from absolute dimensions to chain dimensions
- Actual values of the display are stored when mains is switched off
- Quick read-out from the digital display. Resolution 0.1 mm
- Switching between mm/inches
- Input of any desired reference value by means of front keypad

Positioning control E 355 [02]

- Measuring system is independent of drive
- Positioning accuracy +/- 0.1 mm per metre
- Pneumatic locking at position
- 5.7" matrix display with membrane keyboard and hand wheel for navigation through the operation menus
- Memory for 1,000 data records. Correction values for profiles
- The block number, length dimension, profile number, angular position and quantity can be saved in the memory
- Language selection
- Switching between mm/inches
- RS 232 interface
- USB port on the front

Option

- Label printer

PC Control E 580 [03]

- Machine configurations with one, three or five axes
- Length measurement using an absolute measuring system independent of drive
- Pneumatic locking at position
- Robust, low-wear direct drive for moving saw unit
- Ergonomic location of the control unit
- PC with Windows OS for operating the machine
- Four USB ports
- 12" touchscreen
- One serial RS 232 interface
- Two network ports, RJ45, 10/100 Mbit
- Ports for connecting additional keyboard and mouse

Option

- Label printer



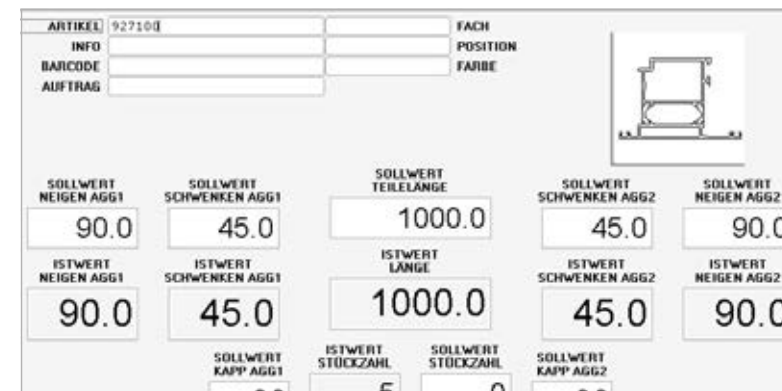
01



02



03





5 | Length stop and measuring systems

We offer a broad spectrum of high-quality manual or automatic length stop and measuring systems as well as a wide variety of options – such as centring units, various length stop systems or roller conveyors – for almost any need and requirement. Moreover, use our optional PC controller to conveniently transfer all of the data you need from common calculation programs via the network or a USB port.

Product overview	Product	Page
Length stop and measuring system	AMS 200 + E 355	44
Length stop and measuring system	AMS 200 + E 580	45
Length stop and measuring system	MMS 200 + E 111	45
Length stop and measuring system	MMS 100	45

5.1 | Length stop and measuring systems

Length stop and measuring system **AMS 200, MMS 200, MMS 100**

- For cutting aluminium profiles to length accurately
- For mounting on all single-head saws (right-hand side)
- Stop carriage can be folded back for positioning of profiles
- Automatic retraction unit: No re-cutting by the saw blade (option)
- Patented rail and carriage system

Length variants **AMS 200, MMS 200, MMS 100**

- 1,500 mm (only for MMS 100)
- 3,000 mm
- 4,500 mm
- 6,000 mm
- Special lengths on request
- Variant for left-hand attachment on request

Controller variants

Length stop and measuring system **AMS 200 with E 355**

- Length stop and measuring system with automatic cutting-length adjustment and E 355 positioning control

Technical specifications

- Measuring system is independent of drive
- Positioning accuracy +/- 0.1 mm per metre
- Power supply 230 V, 1~, 50/60 Hz
- Pneumatic locking at position
- 5.7" matrix display with membrane keyboard and hand wheel for navigation through the operation menus
- Memory for 1,000 data records. Correction values for profiles
- The block number, length dimension, profile number, angular position and quantity can be saved in the memory
- USB port on the front

Option

- Label printer



AMS 200 with E 355

Length stop and measuring system **AMS 200 with E 580**

- Length stop and measuring system with 1-axis control for cutting-length positioning

Technical specifications

- Machine configurations with one, three or five axes
- Length measurement using an absolute measuring system independent of drive
- Pneumatic locking at position
- Robust, low-wear direct drive for moving saw unit
- Ergonomic location of the control unit
- PC with Windows OS for operating the machine
- Four USB ports
- 12" touchscreen
- One serial RS 232 interface
- Two network ports, RJ45, 10/100 Mbit
- Ports for connecting additional keyboard and mouse

Option

- Label printer



MMS 200 + E 111

Versions with hand wheel drive

Length stop and measuring system **MMS 200 with E 111**

- Length stop and measuring system with sliding stop and difference scale for quick and accurate adjustment
- Digital display E 111

Technical specifications

- Accurate dimension adjustment using digital display
- Switching from absolute dimensions to chain dimensions
- Actual values of the display are stored when mains is switched off
- Quick read-out from the digital display. Resolution 0.1 mm
- Power supply 230 V, 1~, 50/60 Hz
- Switching between mm/inches
- Input of any desired reference value by means of front keypad

Versions with manual adjustment

Length stop and measuring system **MMS 100 with manual adjustment**

- Adjustment on stop carriage
- Manual clamping



6 | Profile machining centres

With their robust and compact design, our profile machining centres are used in the most diverse aluminium, PVC and steel profile machining applications, especially in the manufacturing of windows, doors, and curtain walls.

An optional shuttle operation mode with alternating loading of the work areas – with doors, for example – increases productivity by up to 30 percent since the machine can be prepared for the next part while the previous part is still being machined.

Profile surfaces are optimally protected: All operations, such as routing, drilling and tapping, are performed while the profile bar is stationary (SBZ 151 to SBZ 122).

Robust, low-wear direct drives on all axes allow rapid home positioning of the machining assembly at speeds of up to 150 m/min.

Profile machining centres with eluCam offer easy programming right on the machine. Alternatively, programming can also be done in the office using the comprehensive eluCad software.

Further product highlights:

- Automatic clamping adjustment
- Automatic length measurement of the profile stock, including a wireless barcode scanner
- eluCad – the user-friendly office software for production management
- Fully loaded with standard equipment features

Pass-through systems:

- Pass-through systems can be configured as a fast automatic saw or a flexible machining centre
- Transportation on rollers is easy on profile surfaces
- Profile loading and unloading magazine
- Continuous machining of window and door profiles as well as simple curtain wall parts

Product overview	Product	Page
5-axis profile machining centre	SBZ 151 Edition 90	48
5-axis profile machining centre	SBZ 150 eluCam	50
5-axis profile machining centre	SBZ 122/75	64
4-axis profile machining centre	SBZ 140 eluCam	52
4-axis profile machining centre	SBZ 122/73	62
4-axis profile machining centre	SBZ 122/74	63
3-axis profile machining centre	SBZ 131 eluCam	54
3-axis profile machining centre	SBZ 130 eluCam	56
3-axis profile machining centre	SBZ 122/70	58
3-axis profile machining centre	SBZ 122/71	60
Profile machining centre, Pass-through system	SBZ 628	68
Profile machining centre, Pass-through system	SBZ 630	70
Profile machining centre, Pass-through system	SBZ 631	70

6 | Profile machining centres

Profile machining centre **SBZ 151 Edition 90**

- 5-axis profile machining centre
- Designed for flexible and efficient machining of aluminium and thin-walled steel profiles
- All operations, such as routing, drilling, tapping, thread milling, notching and sawing, are performed while the profile bar is stationary to protect the profile surfaces
- Fast positioning of the machining unit with up to 66 m/min thanks to dynamic servo drives
- New generation of computers as well as new control and regulator technology
- 6-sided machining. From below with an angle head (option)
- The on-board tool magazines ensure that tool changing times are kept short, thereby optimising machining cycles
- One magazine can be equipped with 13 standard tools and seven special tools (angle routing head and special cutters). An additional magazine for the saw blade, diameter 400 mm or 500 mm
- Autonomous clamp positioning with absolute measurement system
- Two separate working zones enable machining in shuttle operation. Secure access with safety fences and light barriers
- 5-axis CNC control with independent CNC for 3D machining, notching and cutting
- The absolute rotary encoder system means no axis homing is required
- Certified, drive-integrated safety functions
 - STO = Safe Torque Off
 - SS2 = Safe Stop 2
 - SLS = Safely Limited Speed
- Network connection and USB port
- Operating panel with Windows operating system and 15" flat screen display
- Remote maintenance via TCP/IP using existing Internet connection
- eluCloud ready

Technical specifications

- Traverse path X-axis 6,000 mm, 7,300 mm, 9,000 mm, 10,300 mm, 12,000 mm, 13,300 mm, 15,000 mm, 16,300 mm, Vmax. 66 m/min.
- Traverse path Y-axis 1,150 mm, Vmax. 40 m/min.
- Traverse path Z-axis 715 mm, Vmax. 40 m/min.
- Pivoting angle A-axis: for saw blade with diameter of 500 mm +/- 100° (for saw blade with diameter of 400 mm +/- 110°)
- C-axis pivoting angle: +/- 182°
- Positioning accuracy
 - X-/Y-/Z-Achse +/- 0,1 mm/m
 - A-/C-Achse +/- 0,1°

- Max. spindle speed 24,000 rpm
- Spindle power output 20 kW S1
- Right tool changer, 20 tool positions
- Left tool changer, one saw blade with a diameter of 500 mm (400 mm optional)
- Cutting tool diameter max. 100 mm
- Tool holder HSK-63F
- Compressed air supply 7 bar
- Power supply 400 V, 3~, 50 Hz, 50 A
- Air consumption per minute approx. 265 l with spraying

Machining lengths

SBZ 151 Edition 90 – 6.0 m

- Max. machining length with profile end machining, 5,680 mm
- Max. machining length without profile end machining, 6,000 mm

SBZ 151 Edition 90 – 7.3 m

- Max. machining length with profile end machining, 6,980 mm
- Max. machining length without profile end machining, 7,300 mm

SBZ 151 Edition 90 – 9.0 m

- Max. machining length with profile end machining, 8,680 mm
- Max. machining length without profile end machining, 9,000 mm

SBZ 151 Edition 90 – 10.3 m

- Max. machining length with profile end machining, 9,980 mm
- Max. machining length without profile end machining, 10,300 mm

SBZ 151 Edition 90 – 12.0 m

- Max. machining length with profile end machining, 11,680 mm
- Max. machining length without profile end machining, 12,000 mm

SBZ 151 Edition 90 – 13.3 m

- Max. machining length with profile end machining, 12,980 mm
- Max. machining length without profile end machining, 13,300 mm

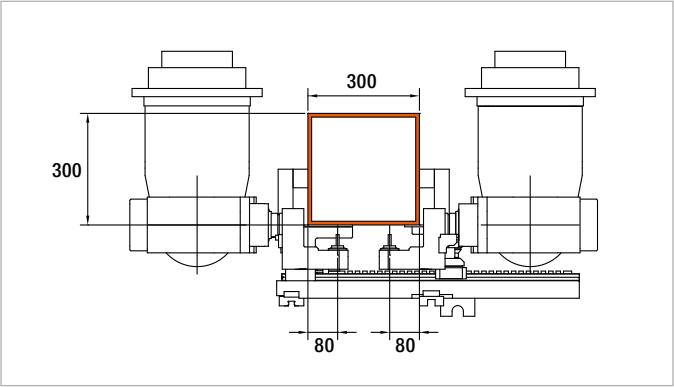
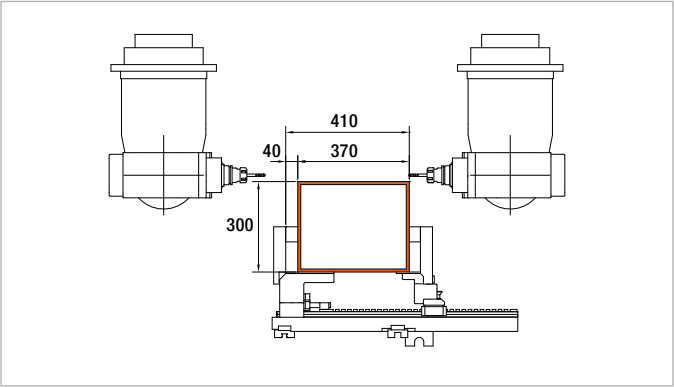
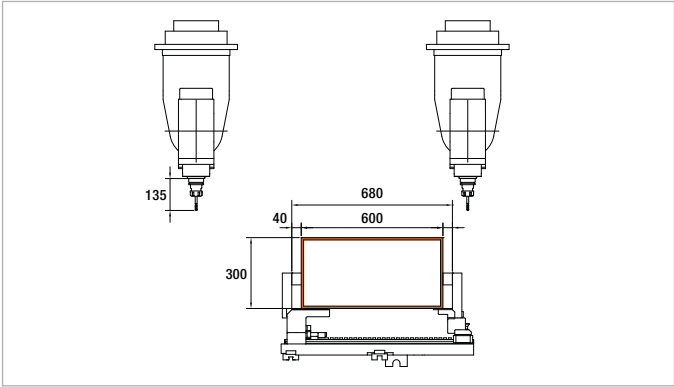
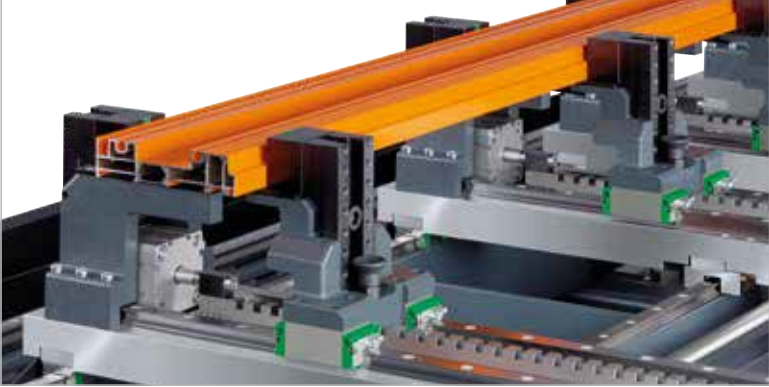
SBZ 151 Edition 90 – 15.0 m

- Max. machining length with profile end machining, 14,680 mm
- Max. machining length without profile end machining, 15,000 mm

SBZ 151 Edition 90 – 16.3 m

- Max. machining length with profile end machining, 15,980 mm
- Max. machining length without profile end machining, 16,300 mm

Longer versions available upon request



Options

- Automatic length measurement
- Automatic length measurement with Z travel
- Tool length measurement
- Tapping
- Clock system
- Measurement sensors
- Tools
- Tool holders
- Collet chucks
- Collets
- Angle routing heads for machining from below
- Saw blades
- Chips conveyor belt
- Vapour extractor
- Label printer
- Barcode scanner
- eluCad (office software package for optimised production management)



SBZ 151 Edition 90 + Special accessories

6 | Profile machining centres

Profile machining centre **SBZ 150 eluCam**

- 5-axis profile machining centre
- Designed for economical and efficient machining of aluminium and thin-walled steel profiles
- All operations, such as routing, drilling, tapping, thread milling, notching and sawing, are performed while the profile bar is stationary to protect the profile surfaces
- 6-sided machining. From below with an angle head (option)
- Operator software with graphic 3D display of workpieces
- The magazine can be equipped with nine standard tools, five special tools (angle routing head and and special cutters) and one saw blade
- Robust, low-wear direct drives on all axes allow rapid home positioning of the machining assembly
- Automatic clamp recognition and clamp positioning
- 5-axis controller for 3D machining, 15" colour display, USB ports, and network connection
- Windows operating system
- eluCam

Technical specifications

- X-axis traverse path, 6,500 mm, 7,800 mm, 9,500 mm, 10,800 mm, 12,500 mm (additional lengths on request) Vmax. 70 m/min.
- Y-axis traverse path 1,000 mm, Vmax. 40 m/min.
- Z-axis traverse path 630 mm, Vmax. 40 m/min.
- A-axis pivoting angle: +/-110°, user programmable in 1/10° steps
- C-axis pivoting angle: +/-182°, user programmable in 1/10° steps
- Max. spindle speed 24,000 rpm
- Spindle power output 15 kW S1
- Cutting tool diameter 100 mm max.
- Disc milling cutter diameter of max. 100 mm
- Saw blade diameter up to 400 mm max.
- Tool holder HSK-63F
- Compressed air supply 7 bar
- Power supply 400 V, 3~, 50 Hz, 50 A
- Air consumption per minute, 200 l with spraying

Machining lengths

SBZ 150 – 6.0 m

- Max. machining length with profile end machining, 5,900 mm
- Max. machining length without profile end machining, 6,220 mm

SBZ 150 – 7.3 m

- Max. machining length with profile end machining, 7,200 mm
- Max. machining length without profile end machining, 7,520 mm

SBZ 150 – 9.0 m

- Max. machining length with profile end machining, 8,900 mm
- Max. machining length without profile end machining, 9,220 mm

SBZ 150 – 10.3 m

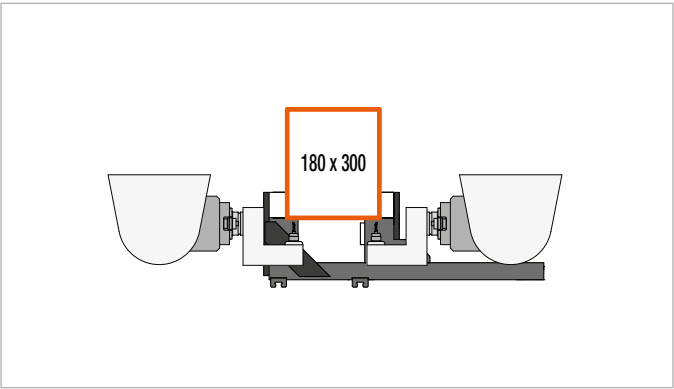
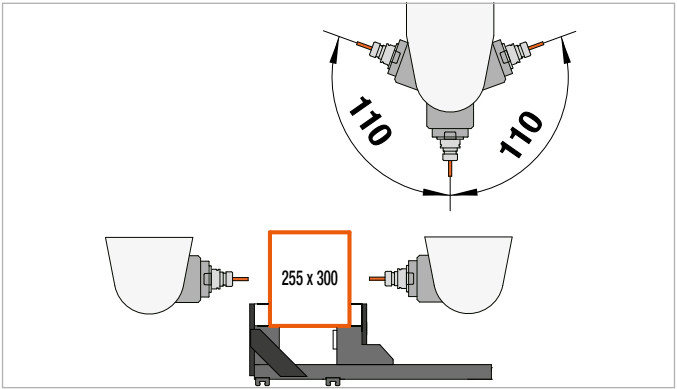
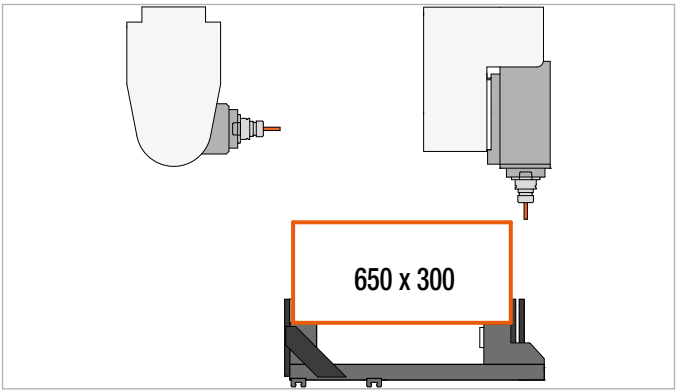
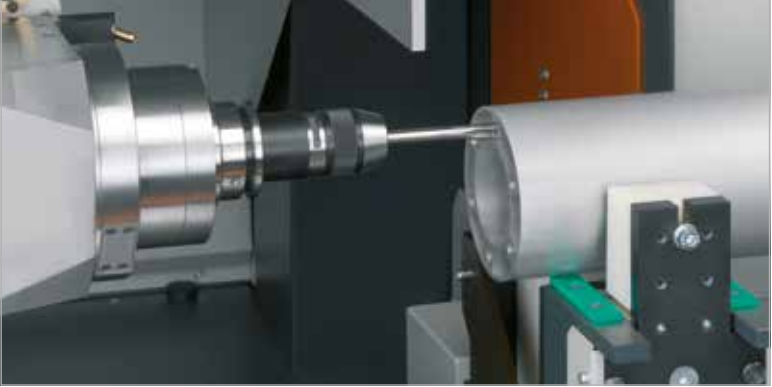
- Max. machining length with profile end machining, 10,200 mm
- Max. machining length without profile end machining, 10,520 mm

SBZ 150 – 12.0 m

- Max. machining length with profile end machining, 11,900 mm
- Max. machining length without profile end machining, 12,220 mm

Options

- Shuttle operation for working on two sides
- Angle routing head for machining from below
- Automatic length measurement
- Chips conveyor belt
- Barcode scanner
- Label printer
- Clock system
- Tool holders
- Collet chuck
- Collets
- Saw blades
- Tools
- eluCad (office software package for optimized production management)



SBZ 150 + Special accessories

6 | Profile machining centres

Profile machining centre **SBZ 140 eluCam**

- 4-axis profile machining centre
- Designed for economical and efficient machining of aluminium and thin-walled steel profiles
- All operations, such as routing, drilling and tapping are performed while the profile bar is stationary to protect the profile surfaces
- Machining with all tools at angles continuously adjustable from 0° - 180°
- The on-board tool magazine ensures that tool changing times are kept short, thereby optimising machining cycles
- The magazine can be equipped with eight tools
- A rotating angle head with two different tools is available for double-bar and end machining (0° – 90° – 180° – 270°) (option)
- Two separate working zones enable machining in shuttle operation (option)
- 4-axis controller
- 15" colour display, USB ports and network connection
- Windows operating system
- eluCam

Technical specifications

- X-axis traverse path, 4,200 mm, 6,400 mm, 7,600 mm, 9,700 mm (additional lengths on request) Vmax. 65 m/min.
- Y-axis traverse path, 850 mm, Vmax. 60 m/min.
- Z-axis traverse path, 650 mm, Vmax. 60 m/min.
- A-axis traverse path, 0° – 180°; freely programmable in 1/10° steps
- Max. spindle speed 24,000 rpm
- Spindle power output 11 kW S1
- Tool changer for eight tools, additional tool positions on request
- Compressed air supply 7 bar
- Power supply 400 V, 3~, 50 Hz, 63 A
- Air consumption per minute 180 l with spraying

Machining lengths

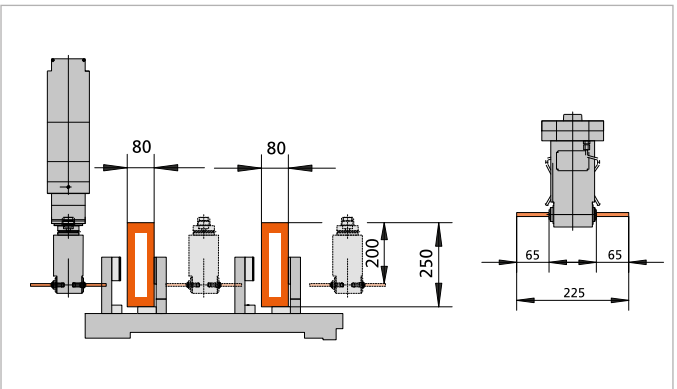
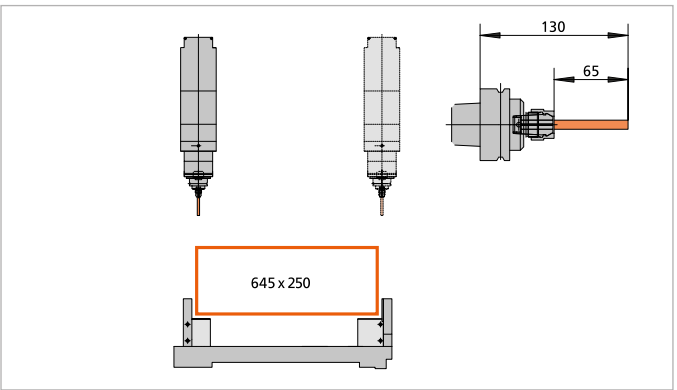
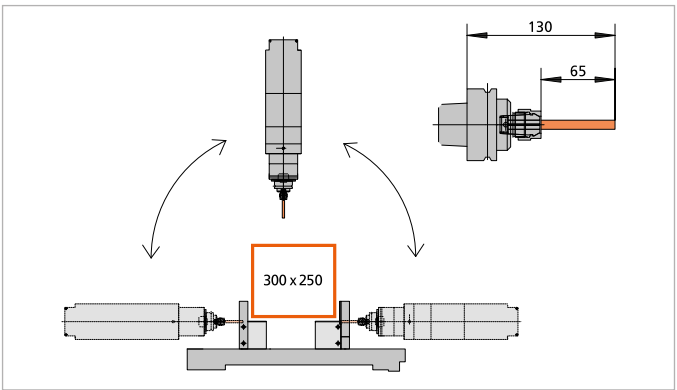
- SBZ 140 – 4.2 m**
- Max. machining length with profile end machining, 4,080 mm
 - Max. machining length without profile end machining, 4,200 mm
- SBZ 140 – 6.4 m**
- Max. machining length with profile end machining, 6,280 mm
 - Max. machining length without profile end machining, 6,400 mm

- SBZ 140 – 7.6 m**
- Max. machining length with profile end machining, 7,480 mm
 - Max. machining length without profile end machining, 7,600 mm

- SBZ 140 – 9.7 m**
- Max. machining length with profile end machining, 9,580 mm
 - Max. machining length without profile end machining, 9,700 mm

Options

- Automatic length measurement
- Clamping unit accommodates double profile machining
- Chips conveyor belt
- Barcode scanner
- Stationary tool magazine
- Angle routing heads
- Tool holders
- Collet chucks
- Collets
- Tools
- eluCad (office software package for optimized production management)



SBZ 140 + Special accessories

6 | Profile machining centres

Profile machining centre **SBZ 131 eluCam**

- 3-axis profile machining centre
- Designed for economical and efficient machining of aluminium, steel and stainless steel profiles
- All operations, such as routing, drilling and tapping are performed while the profile bar is stationary to protect the profile surfaces
- The on-board turret head ensures that tool changing times are kept very short, thereby optimising machining cycles
- The turret head can be equipped with eight tools or angle routing heads
- Autonomous clamp positioning enables clamp arrangement during secondary time
- 3-axis controller
- The tool spindle is designed as an additional axis
- 15" colour display, USB ports and network connection
- Windows operating system
- eluCam

Technical specifications

- Traverse path X-axis, 4,200 mm, 7,200 mm, 8,500 mm, 10,200 mm, 11,500 mm (additional lengths on request) Vmax. 60 m/min.
- Traverse path Y-axis, 485 mm, Vmax. 60 m/min.
- Traverse path Z-axis, 340 mm, Vmax. 60 m/min.
- Max. spindle speed 6,000 rpm, 18,000 rpm with high-speed spindle
- Autonomous clamp positioning with 700 mm of travel
- Spindle power output 5.5 kW
- Tool changer for eight tools on a turret head
- Compressed air supply 7 bar
- Power supply 400 V, 3~, 50 Hz, 35 A
- Air consumption per minute 100 l with spraying

Machining lengths

SBZ 131 – 4.2 m

- Max. machining length with profile end machining, 4,080 mm
- Max. machining length without profile end machining, 4,200 mm

SBZ 131 – 7.2 m

- Max. machining length with profile end machining, 7,080 mm
- Max. machining length without profile end machining, 7,200 mm

SBZ 131 – 8.5 m

- Max. machining length with profile end machining, 8,380 mm
- Max. machining length without profile end machining, 8,500 mm

SBZ 131 – 10.2 m

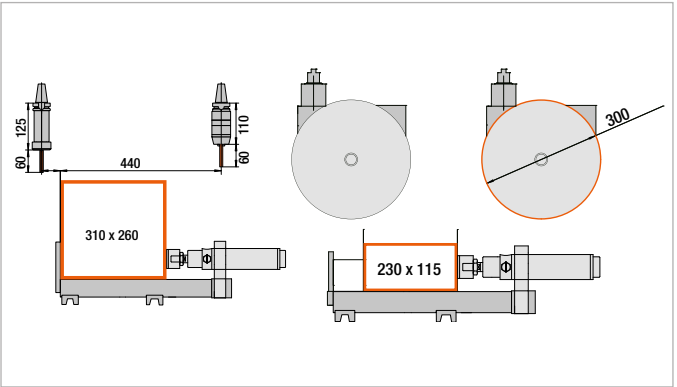
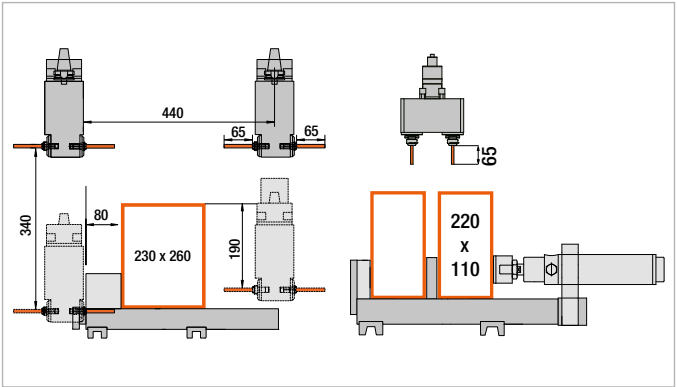
- Max. machining length with profile end machining, 10,080 mm
- Max. machining length without profile end machining, 10,200 mm

SBZ 131 – 11.5 m

- Max. machining length with profile end machining, 11,380 mm
- Max. machining length without profile end machining, 11,500 mm

Options

- Shuttle operation for working on two sides
- Cycling program with special clamping device
- Automatic length measurement
- Angle routing heads
- High-speed spindle
- Slow spindle
- Clamping unit accommodates double profile machining
- Barcode scanner
- Tool holders
- Collet chucks
- Collets
- Tools
- eluCad (office software package for optimized production management)



SBZ 131 + Special accessories

6 | Profile machining centres

Profile machining centre **SBZ 130 eluCam**

- 3-axis profile machining centre
- Designed for economical and efficient machining of aluminium, steel and stainless steel profiles
- All operations, such as routing, drilling and tapping are performed while the profile bar is stationary to protect the profile surfaces
- The on-board turret head ensures that tool changing times are kept very short, thereby optimising machining cycles
- The turret head can be equipped with eight tools or angle routing heads
- Automatic clamping adjustment enables the machine to position the material clamps
- 3-axis controller
- The tool spindle is designed as an additional axis
- 15" colour display, USB ports and network connection
- Windows operating system
- eluCam

Technical specifications

- X-axis traverse path, 4,200 mm, 7,200 mm, 8,500 mm, 10,200 mm, 11,500 mm (additional lengths on request) Vmax. 60 m/min.
- Y-axis traverse path, 485 mm, Vmax. 30 m/min.
- Z-axis traverse path, 340 mm, Vmax. 30 m/min.
- Max. spindle speed 6,000 rpm, 18,000 rpm with high-speed spindle
- Spindle power output 5.5 kW
- Tool changer for eight tools on a turret head
- Compressed air supply 7 bar
- Power supply 400 V, 3~, 50 Hz, 35 A
- Air consumption per minute 100 l with spraying

Machining lengths

SBZ 130 – 4.2 m

- Max. machining length with profile end machining, 4,080 mm
- Max. machining length without profile end machining, 4,200 mm

SBZ 130 – 7.2 m

- Max. machining length with profile end machining, 7,080 mm
- Max. machining length without profile end machining, 7,200 mm

SBZ 130 – 8.5 m

- Max. machining length with profile end machining, 8,380 mm
- Max. machining length without profile end machining, 8,500 mm

SBZ 130 – 10.2 m

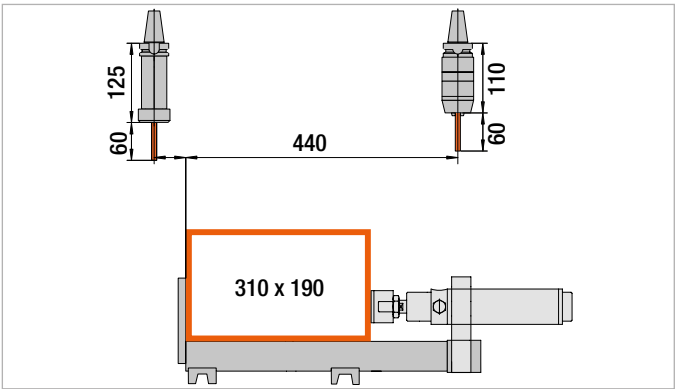
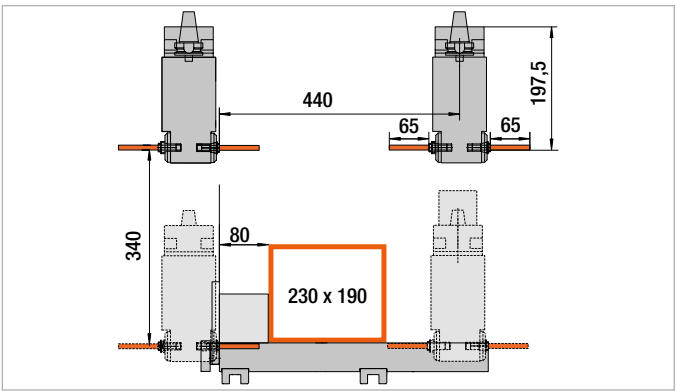
- Max. machining length with profile end machining, 10,080 mm
- Max. machining length without profile end machining, 10,200 mm

SBZ 130 – 11.5 m

- Max. machining length with profile end machining, 11,380 mm
- Max. machining length without profile end machining, 11,500 mm

Options

- Shuttle operation for working on two sides
- Automatic length measurement
- Angle routing heads
- High-speed spindle
- Slow spindle
- Clamping unit accommodates double profile machining
- Barcode scanner
- Collet chucks
- Collets
- Tools
- eluCad (office software package for optimized production management)



SBZ 130 + Special accessories

6 | Profile machining centres

Profile machining centre **SBZ 122/70**

- Designed for economical and efficient machining of aluminium, PVC and steel profiles
- All operations such as routing and drilling are performed while the profile bar is stationary to protect the profile surfaces
- Fast positioning of the machining unit with up to 80 m/min thanks to dynamic servo drives
- Tapping with compensation chuck
- Manual tool changing, pneumatic ejection
- Manual clamp positioning
- Ergonomic operation thanks to the modern inclined bed
- Increased work safety thanks to remote-controlled clamp activation and protective enclosure
- Modern 3-axis controller
- The absolute rotary encoder system means no axis homing is required
- Automatic clamp recognition prevents collisions
- Low power consumption thanks to the intelligent control technology
- DC link coupling in the axis drives for greater energy efficiency
- Windows operating system
- 15" flat screen display, USB ports and network connection
- Simple, stress-free program entry with eluCam on the operating panel, even during operation
- Remote maintenance via TCP/IP using existing Internet connection

Technical specifications

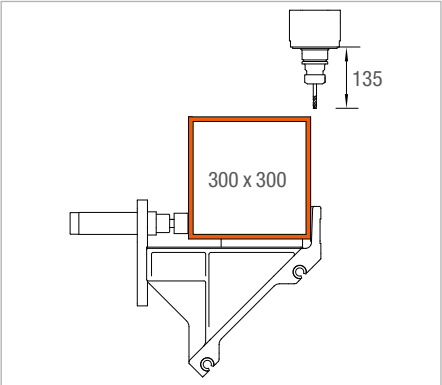
- See page 66

Machine configuration

- Air-cooled 3.8 kW, S1 routing spindle
- Enclosure to protect the operator
- Four horizontal, pneumatic material clamping units
- A material stop on the left
- Tool holder HSK-F63
- Minimum-volume lubrication system
- High performance cutting fluid
- Hand-held operator terminal
- Depth gauge

Options

- Uninterruptible power supply (UPS)
- Tools
- Tool holders
- Green Line cooling unit for the control cabinet with reduced energy consumption
- Barcode scanner
- Protective enclosure can optionally completely enclose the machine on all sides, with additional sound insulation
- Easy and intuitive operation thanks to the modern elumatec Customer Interface (ECI)
- Stationary tool magazine
- Four clamps as standard. Up to eight clamps can be equipped as an option
- Material reference stop (right) for positioning workpieces with overlength machining
- Additional stop for overlength machining (left)
- Length measurement on both sides
- Double clamping and other accessories on request



Machining area, Y and Z-axes
Profile machining from above



SBZ 122/70

6 | Profile machining centres

Profile machining centre **SBZ 122/71**

- Designed for economical and efficient machining of aluminium, PVC and steel profiles
- All operations, such as routing, drilling and tapping are performed while the profile bar is stationary to protect the profile surfaces
- A rotation unit (rotating mechanism) integrated into the spindle makes it possible to adjust the rotating angle head to 0°, -90°, -180° and -270°
- Better machining results thanks to the intelligent control technology
- Fast positioning of the machining unit with up to 120 m/min thanks to dynamic servo drives
- Tapping without compensation chuck
- Automatic clamp recognition and clamp positioning
- Automatic tool changer with four tool tray positions (without tools)
- Automatic tool changer for an angle head
- Modern 3-axis controller
- The absolute rotary encoder system means no axis homing is required
- Automatic clamp recognition and positioning prevents collisions
- Power torque routing motor with enclosed speed control for short spindle start-up and braking times.
- Certified, drive-integrated safety functions
- Low power consumption thanks to the intelligent control technology
- DC link coupling in the axis drives for greater energy efficiency
- Windows operating system
- 15" flat screen display, USB ports and network connection
- Simple, stress-free program entry with eluCam on the operating panel, even during operation
- Remote maintenance via TCP/IP using existing Internet connection

Technical specifications

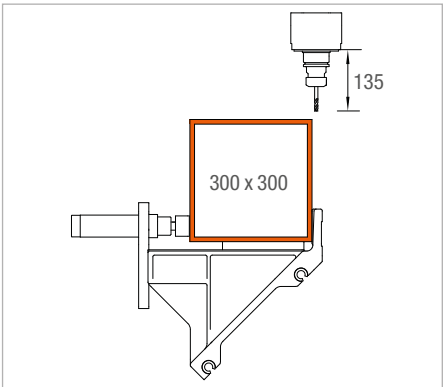
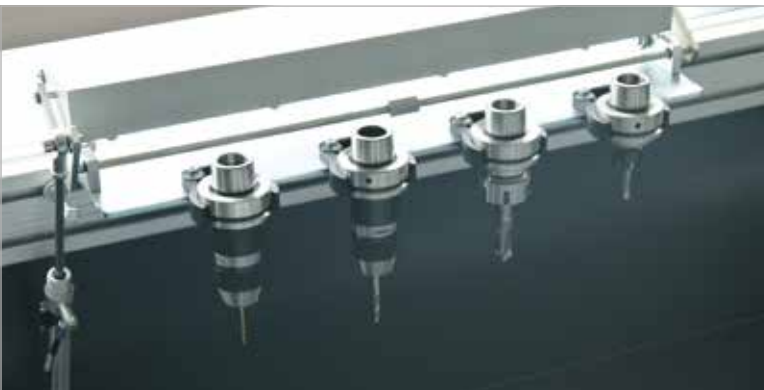
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Machine configuration

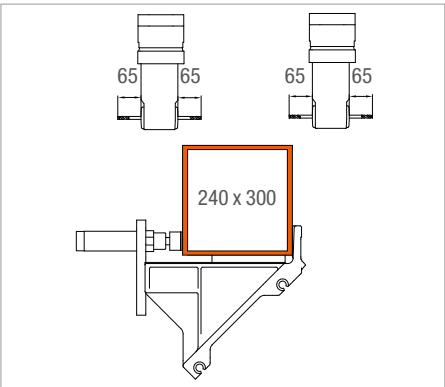
- Air-cooled 8 kW, S1 routing spindle
- Enclosure to protect the operator
- Four horizontal, pneumatic material clamping units
- A material stop on the left
- Tool holder HSK-F63
- Routing spindle with integrated rotation unit (0°, -90°, -180° and -270°) for angle head
- HSK-F63 rotating angle head for two tools
- Swarf trays for swarf removal
- Minimum-volume lubrication system
- High performance cutting fluid
- Hand-held operator terminal
- Depth gauge

Options

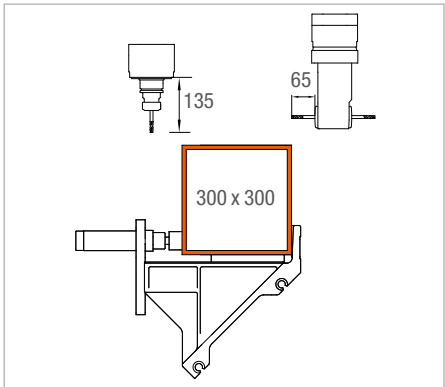
- Uninterruptible power supply (UPS)
- Tools
- Tool holders
- Automatic tool changer for max. four standard tools
- Automatic tool changer for angle head
- Length measurement on both sides
- Additional stop for overlength machining (left)
- Green Line cooling unit for the control cabinet with reduced energy consumption
- Barcode scanner
- Protective enclosure can optionally completely enclose the machine on all sides, with additional sound insulation
- Easy and intuitive operation thanks to the modern elumatec Customer Interface (ECI)
- Four clamps as standard. Up to eight clamps can be equipped as an option
- Material reference stop (right) for positioning workpieces with overlength machining
- Double clamping and other accessories on request



Machining area, Y and Z-axes
Profile machining from above



Machining area, Y and Z-axes
Profile machining from the front and from behind



Machining area, Y and Z-axes
Profile machining from above and from behind



SBZ 122/71

6 | Profile machining centres

Profile machining centre **SBZ 122/73**

- Designed for economical and efficient machining of aluminium, PVC and steel profiles
- All operations, such as routing, drilling and tapping are performed while the profile bar is stationary to protect the profile surfaces
- A-axis continuously adjustable from -120° to +120°
- Round guides for clamp positioning
- Better machining results thanks to the intelligent control technology
- Fast positioning of the machining unit with up to 120 m/min thanks to dynamic servo drives
- Tapping without compensation chuck
- Automatic tool changer with twelve tool tray positions (without tools)
- Modern 4-axis controller
- The absolute rotary encoder system means no main axis homing is required
- Automatic clamp recognition and positioning prevents collisions
- Power torque routing motor with enclosed speed control for short spindle start-up and braking times.
- Certified, drive-integrated safety functions
- Low power consumption thanks to the intelligent control technology
- DC link coupling in the axis drives for greater energy efficiency
- Windows operating system
- 15" flat screen display, USB ports and network connection
- Simple, stress-free program entry with eluCam on the operating panel, even during operation
- Remote maintenance via TCP/IP using existing Internet connection

Technical specifications

- See page 66

Machine configuration

- Water-cooled 7 kW, S1 routing spindle
- Enclosure to protect the operator
- Four horizontal, pneumatic material clamping units
- A material stop on the left
- Tool holder HSK-F63
- Swarf trays for swarf removal
- Minimum-volume lubrication system
- High performance cutting fluid
- Hand-held operator terminal
- Depth gauge

Options

- Uninterruptible power supply (UPS)
- Tools
- Tool holders
- Additional stop for overlength machining (left)
- Material reference stop (right) for positioning workpieces with overlength machining and second clamping disc
- Green Line cooling unit for the control cabinet with reduced energy consumption
- Barcode scanner
- Protective enclosure can optionally completely enclose the machine on all sides, with additional sound insulation
- Easy and intuitive operation thanks to the modern elumatec Customer Interface (ECI)
- Four clamps as standard. Up to eight clamps can be equipped as an option
- Double clamping and other accessories on request

Profile machining centre **SBZ 122/74**

See **SBZ 122/73** however:

Machine configuration

- Autonomous clamp positioning
- Automatic clamp recognition

Option

- Length measurement on both sides



SBZ 122/74

6 | Profile machining centres

Profile machining centre **SBZ 122/75**

- Designed for economical and efficient machining of aluminium, PVC and steel profiles
- All operations, such as routing, drilling and tapping are performed while the profile bar is stationary to protect the profile surfaces
- A-axis continuously adjustable from -120° to +120°
- C-axis continuously adjustable from -220° to +220°
- All five axes can move simultaneously with RTCP (Rotation Tool Centrepoint)
- Moreover, the additional C-axis makes it possible to machine the face of profiles from the left and right
- Linear guides for autonomous clamp positioning
- Better machining results thanks to the intelligent control technology
- Fast positioning of the machining unit with up to 120 m/min thanks to dynamic servo drives
- Tapping without compensation chuck
- The 2-axis add-on unit with the A-axis and C-axis can also accommodate a saw blade with a diameter of 180 mm
- Automatic clamp recognition and clamp positioning
- Automatic tool changer with twelve tool tray positions (without tools)
- Modern 5-axis controller
- The absolute rotary encoder system means no main axis homing is required
- Automatic clamp recognition and positioning prevents collisions
- Power torque routing motor with enclosed speed control for short spindle start-up and braking times.
- Certified, drive-integrated safety functions
- Low power consumption thanks to the intelligent control technology
- DC link coupling in the axis drives for greater energy efficiency
- Windows operating system
- 15" flat screen display, USB ports and network connection
- Simple, stress-free program entry with eluCam on the operating panel, even during operation
- Remote maintenance via TCP/IP using existing Internet connection

Technical specifications

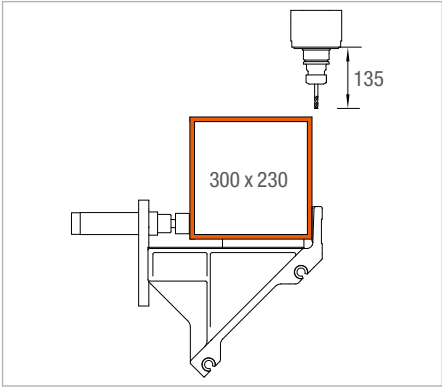
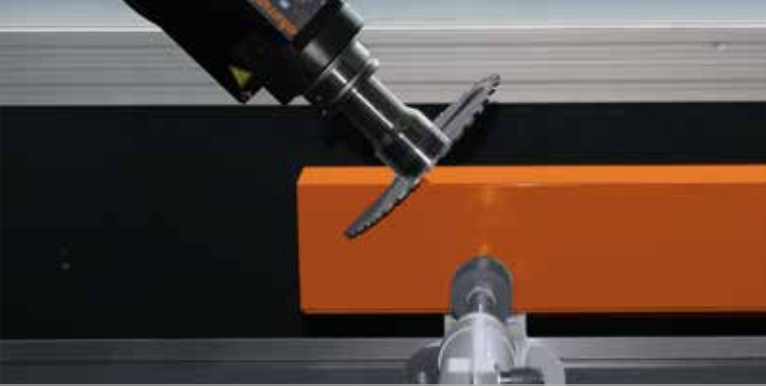
- See page 66

Machine configuration

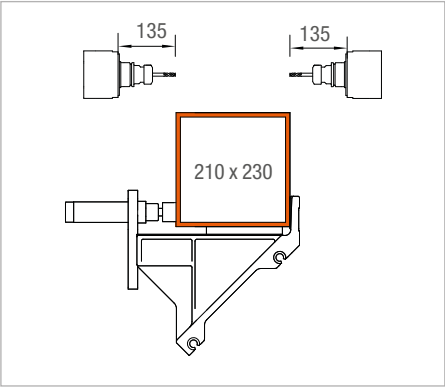
- Water-cooled 7 kW, S1 routing spindle
- Autonomous clamp positioning
- Automatic clamp recognition
- Enclosure to protect the operator
- Four horizontal, pneumatic material clamping units
- A material stop on the left
- Tool holder HSK-F63
- Swarf trays for swarf removal
- Minimum-volume lubrication system
- High performance cutting fluid
- Hand-held operator terminal
- Depth gauge

Options

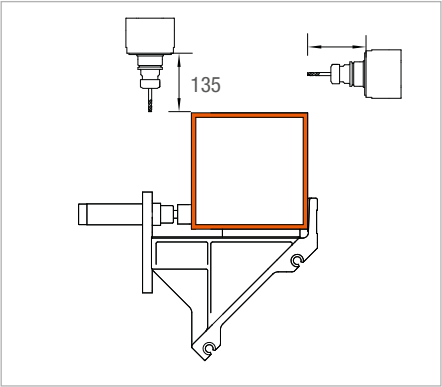
- Uninterruptible power supply (UPS)
- Tools
- Tool holders
- Saw blade, 180 mm
- Length measurement on both sides
- Additional stop for overlength machining (left)
- Material reference stop (right) for positioning workpieces with overlength machining
- Green Line cooling unit for the control cabinet with reduced energy consumption
- Barcode scanner
- Protective enclosure can optionally completely enclose the machine on all sides, with additional sound insulation
- Easy and intuitive operation thanks to the modern elumatec Customer Interface (ECI)
- Four clamps as standard. Up to eight clamps can be equipped as an option
- Double clamping and other accessories on request



Machining area, Y and Z-axes
Profile machining from above



Machining area, Y and Z-axes
Profile machining from the front and from behind



Machining area, Y and Z-axes
Profile machining from above and from behind



SBZ 122/75

6 | Technical specifications - Profile machining centre SBZ 122/7x

Technical specifications	SBZ 122/70	SBZ 122/71
Max. machining length without profile end machining	4,150 mm	4,150 mm
Max. machining length with profile end machining	-	4,000 mm
Traverse path X-axis	4,295 mm, V _{max.} 80 m/min	4,295 mm, V _{max.} 120 m/min
Traverse path Y-axis	910 mm, V _{max.} 50 m/min	910 mm, V _{max.} 60 m/min
Traverse path Z-axis	475 mm, V _{max.} 50 m/min	475 mm, V _{max.} 60 m/min
Direction of machining	1 (above)	5 (above, behind, front, left, right)
Positioning accuracy	+/- 0.1 mm	+/- 0.1 mm
Routing spindle speed	max. 18,000 rpm	max. 24,000 rpm
Routing spindle power	3.8 kW, S1 (air-cooled)	8 kW, S1 with feedback (air-cooled)
Tool holder	HSK-F63	HSK-F63
Tool changing	manual, pneumatic ejection	automatic
Tool tray positions in the automatic magazine	-	4 (max. 16)
Angle head	No	Yes
Disc milling cutter diameter	100 mm	120 mm
Saw blade diameter	-	-
Tool length (from extent of taper)	max. 150 mm	max. 150 mm
Clamp positioning	manual	automatic
Clamps	Basic (with round guides)	Basic (with round guides)
Software	eluCam	eluCam
Compressed air supply	> 7 bar	> 7 bar
Power supply	400 V, 3~, 50 Hz, 25 A	400 V, 3~, 50 Hz, 25 A
Air consumption per minute	approx. 185 l with spraying	approx. 185 l with spraying
Total length	6,739 mm	6,739 mm
Depth	2,180 mm	2,180 mm
Height	2,810 mm	2,810 mm
Weight	approx. 2,900 kg	approx. 2,900 kg
Order no.	122 00 22 70	122 00 22 71

SBZ 122/73	SBZ 122/74	SBZ 122/75
4,050 mm	4,050 mm	3,851 mm
-	-	3,525 mm
4,176 mm, V _{max.} 120 m/min	4,176 mm, V _{max.} 120 m/min	4,176 mm, V _{max.} 120 m/min
1,040 mm, V _{max.} 60 m/min	1,040 mm, V _{max.} 60 m/min	1,040 mm, V _{max.} 60 m/min
540 mm, V _{max.} 30 m/min	540 mm, V _{max.} 30 m/min	540 mm, V _{max.} 30 m/min
3 (above, behind, front)	3 (above, behind, front)	5 (above, behind, front, left, right)
+/- 0.1 mm	+/- 0.1 mm	+/- 0.1 mm
max. 20,000 rpm	max. 20,000 rpm	max. 20,000 rpm
7 kW, S1 (water-cooled)	7 kW, S1 (water-cooled)	7 kW, S1 (water-cooled)
HSK-F63	HSK-F63	HSK-F63
automatic	automatic	automatic
12	12	12
No	No	No
120 mm	120 mm	120 mm
-	-	180 mm
max. 150 mm	max. 150 mm	max. 150 mm
automatic	autonomous	autonomous
Basic (with round guides)	Premium (with linear guides)	Premium (with linear guides)
eluCam	eluCam	eluCam
> 7 bar	> 7 bar	> 7 bar
400 V, 3~, 50 Hz, 25 A	400 V, 3~, 50 Hz, 25 A	400 V, 3~, 50 Hz, 25 A
approx. 185 l with spraying	approx. 185 l with spraying	approx. 185 l with spraying
6,280 mm	7,534 mm	7,534 mm
2,180 mm	2,180 mm	2,180 mm
2,810 mm	2,810 mm	2,810 mm
approx. 3,365 kg	approx. 3,800 kg	approx. 3,800 kg
122 00 22 73	122 00 22 74	122 00 22 75

6 | Profile machining centres

Profile machining centre **SBZ 628**

Profile machining centre with loading and outfeed magazine

- Left or right loading magazine for automatic production processes
- It is possible to employ up to eight different tools in a single pass thanks to a rotation module
- The patented motorised gripper system, which can be rotated and adjusted vertically and horizontally, moves complex profile cross-sections into position for machining with precision and speed
- The router spindle, which can be rotated up to 360°, and the continuously adjustable saw blade allow profiles to be machined in a wide variety of clamping situations
- The generously dimensioned noise abatement enclosure and the easy-access controls and maintenance elements simplify operation.
- During outfeed, the unloading magazine is used to place machined profiles gently onto the outfeed conveyor
- Machining is performed either "on the fly" using a pusher axis, or while stationary

Technical specifications

- Profile bar length 1,500 - 7,500 mm
- Loading magazine for five or ten profiles (depending on the profile cross-section)
- 4-axis machining module with four router spindles
- Spindle power output 6.0 kW S1 with HSK-C 40 tool holder
- Saw blade, 550 mm
- 4-axis saw unit:
 - Power output 5.5 kW
 - Travelling range 1,050 x 720 x 400 mm
 - Continuously adjustable pivoted cuts between 0° - 360°C

Options

- Two or four additional router spindles
- Horizontal cutting unit with tilting axis
- Saw blade 650 mm
- Replacement roller set
- Residual piece processing from 1,500 mm
- Automatic residual piece measurement
- Label printer
- Cycling mode for machining and cutting short parts
- eluCad (office software package for optimised production management)



SBZ 628

6 | Profile machining centres

Profile machining centre **SBZ 630**

- Profile machining centre with loading and outfeed magazine
- Due to its modular design, the **SBZ 630** can be set up either as a dedicated automatic saw, **SBZ 630/01**, or as a complete profile machining centre, **SBZ 630/11**, depending on the requirements
- When set up as a profile machining centre for aluminium, the machining tasks are carried out in one machining station with the possibility of up to 30 machining units
- Cutting to length is then subsequently performed with the 7-axis sawing station
- The work sequence can be set up to run from left to right or from right to left

Technical specifications

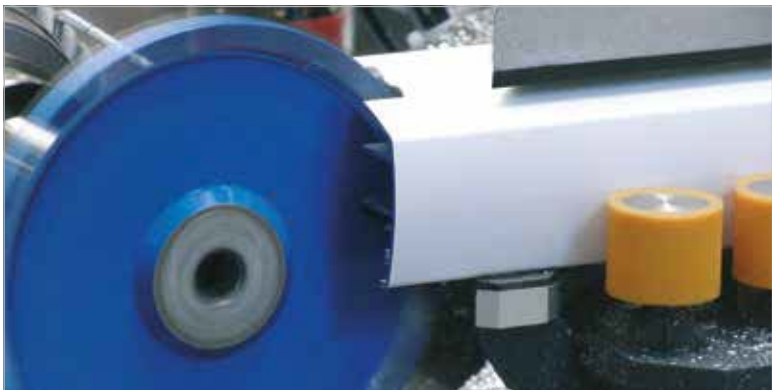
- Profile lengths and residual pieces from 500 – 7,500 mm
- Loading magazine for seven profile bars with profile widths of up to 250 mm
- Automatic height, side and rotational axes (350°) of the gripper arm
- Automatic horizontal setting of the vertical clamps (5 – 70 mm)
- Machining module for up to 30 routing units
- 1-blade saw 7 kW for variable saw cuts at 45° – 135° tilted or pivoted
- Profile outfeed via outfeed conveyor

Options

- Label printer
- Barcode scanner
- Loading magazine for ten profile bars with profile widths of up to 130 mm
- eluCad (office software package for optimised production management)

Profile machining centre **SBZ 631**

- See **SBZ 630**, however:
- With notching module AM 631
 - SBZ 630/11/L + special accessories



SBZ 630/11/L + Special accessories

7 | eluCad software from elusoft



elusoft GmbH – Solutions for intelligent and economical profile machining

elusoft GmbH develops software solutions which allow you to create machining programs for elumatec profile machining centres quickly and easily. Among these is “eluCad”, a software package for profile machining that has proven itself in practice and is used worldwide in many different industry sectors. The range of services elusoft offers includes support, seminars and production consulting. elusoft GmbH is a subsidiary of elumatec AG.

eluCad makes it easy to program profile machining centres. This user-friendly software is designed so that the user does not have to program using ISO code directly – all that is required is the entry of the data in a logically structured graphic user interface. Operating the program is intuitive, can be customised and is characterised by practical functionality. A 3D view provides a clear overview by displaying the designed parts realistically on the screen. The profile machining software can take data from various different design programs and process them further. eluCad generates the machining program and optimises the tools and machining paths for the selected profile machining centre. A collision check prevents expensive machine crashes and associated down times. New tools can be created quickly and easily in the software.

Recognise and program machining tasks automatically

The greatest benefit you gain from being our customer comes from the know-how of the team that stands behind the products: It consists of experienced practitioners who use their creativity, know-how and passion to develop our targeted solutions. These characteristics have enabled the team to take and maintain a leading role in what they do best. The constantly changing variety of products our customers offer requires continuous innovation and adaptability on the part of elusoft.

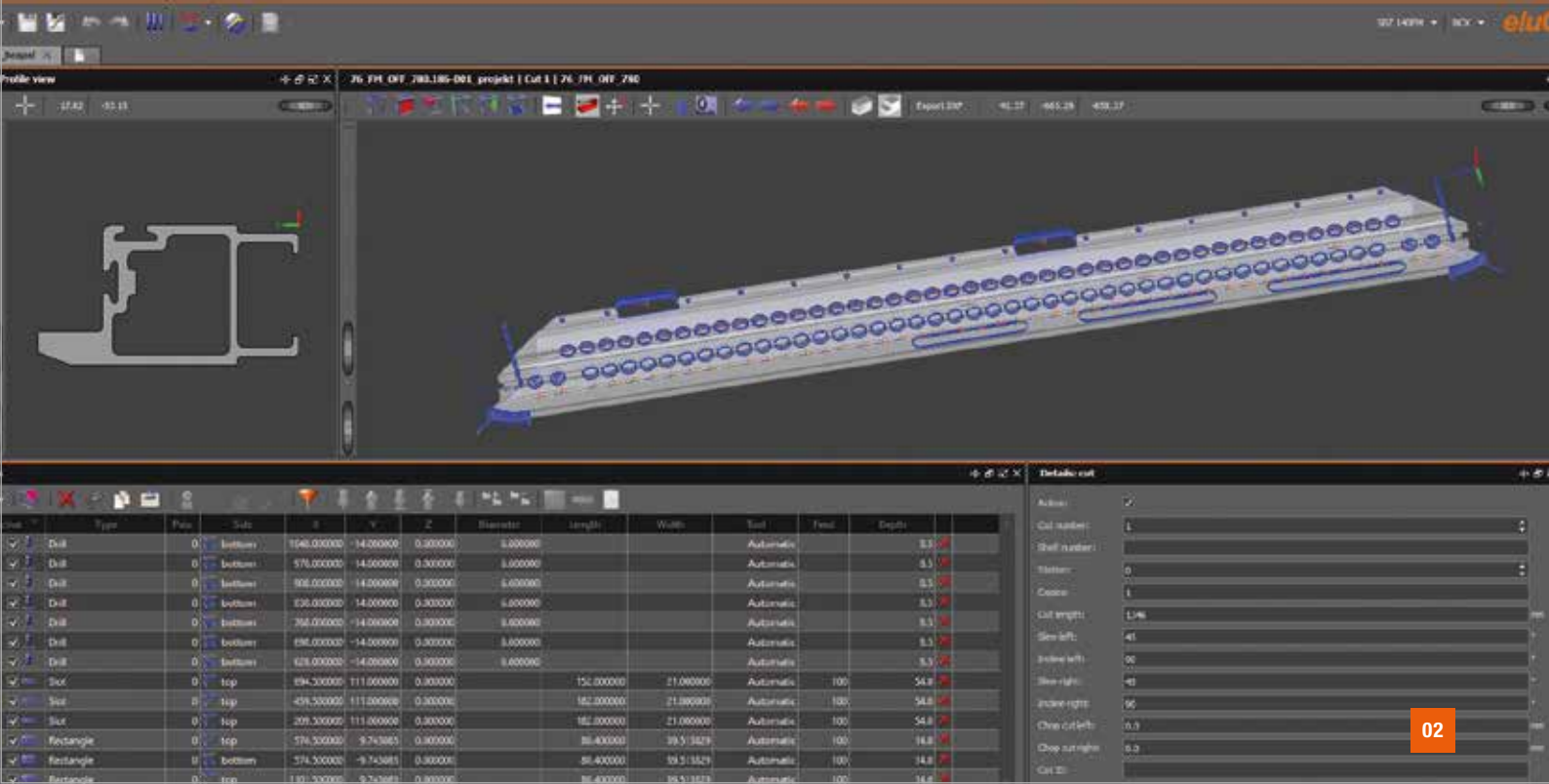


The team is both ready and able to meet this challenge. Among the highlights is a 3D converter which in mere seconds recognises and programs the information about the profile length, profile cross-section and machining tasks that is contained in a 3D model. This automatic conversion eliminates the need to enter the data by hand. Create your machining programs quickly and transfer them to the machine easily. The converter arranges profiles in the correct clamping configuration right away based on database information. For example, curtain wall elements with multiple profile parts can be imported as a complete assembly.

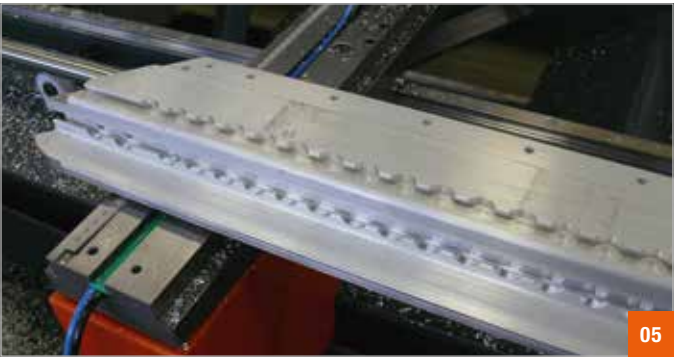
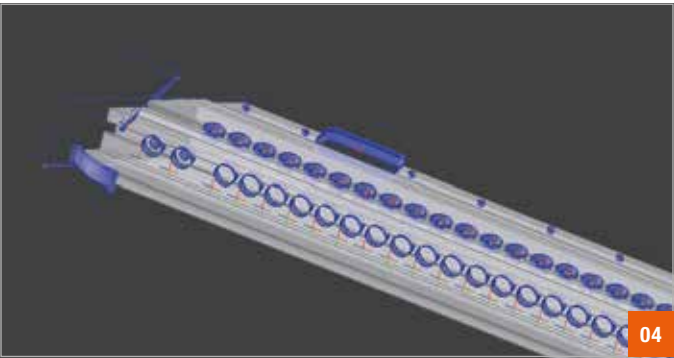
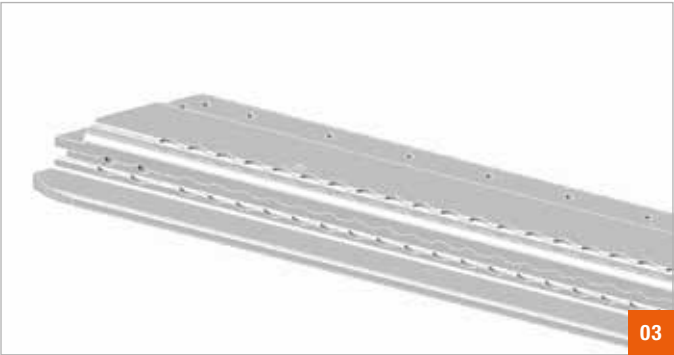
Elusoft’s range includes software products such as Bar Optimisation, Bar Machining, Clamp Management, Cycle Machining (for fast production of small parts) and CSV interfaces as well as other interfaces. The spectrum of services includes: Support by experienced application engineers, seminars on the eluCad profile machining software and the supplementary modules, product consulting on the customer’s premises, the development of specialised production software or special solutions, the integration of optional features on the machine, support with problematic jobs, ISO-code training, start-up of programs and monitoring the quality of the milling and routing results. For more information, please visit our homepage www.elusoft.de

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www.elusoft.de



- 01 The elusoft headquarters are in Dettenhausen near Stuttgart.
- 02 Intuitive operation, clear presentation, customisable to your needs. Machining programs can be created quickly and easily with eluCad.
- 03 3D model of a 2,400 mm long profile on which 261 machining tasks must be programmed. 3D models that are available as a step file, sat file or Parasolid file can be programmed automatically using the 3D Converter.
- 04 The result after using the 3D Converter: The Converter recognised the cross-section of the profile as well as all of the machining tasks which were then programmed automatically. And all that only took a few seconds.
- 05 The ncw file delivered by the 3D Converter can now be used to control the profile machining centre. This approach provides programming in seconds and efficient operations.



7 | eluCloud



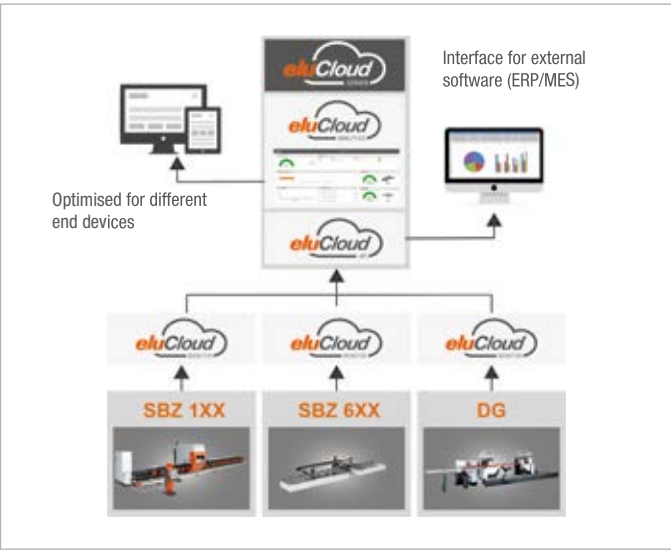
eluCloud – processing machine data to obtain decision-relevant information

eluCloud is the joint “Industry 4.0” solution from elumatec and elusoft for the digitalisation and analysis of machine and production data. Analysis of this data helps optimise production processes and proactively plan maintenance tasks. This allows cost reductions, increased machine availability and improved productivity.

eluCloud captures machine and production data while systems are in operation. The data is provided in real time, meaning that what is currently taking place in production and what has already been accomplished can be viewed at any time from anywhere. In this way, eluCloud enables deviations from the desired production flow to be recognised quickly. The live display of the current machine status and real-time calculation of current machine efficiency are among the most useful features; problems in production become apparent very quickly as a result, and the data collected helps with structured troubleshooting and analysis. eluCloud also offers an overview of currently running jobs and detailed information on the parts produced, and this data provides the basis for exact analysis of production times and individual optimisations. The eluCloud product group helps send a clear message to potential clients: “We are a reliable and technologically advanced partner.”

The eluCloud product group

The eluCloud product group modules allow machine and product data to be collected and analysed. Standardised analysis of this data can then be carried out directly in eluCloud, and the data can also be used for individual analyses, for example in order to process data in individual ERP systems.



eluCloud Monitor

The eluCloud Monitor compiles the machine and product data collected from the local machines, which makes it the key component in the overall eluCloud solution. As the name suggests, its purpose is to monitor the captured data, and modern elumatec machine controllers can capture a wide variety of data types in real time for this purpose. This can include, for instance, information about the quantities of parts produced, error messages or detailed time protocols concerning tool use or spindle run times. One example of how this exact time information helps is in recognising required maintenance intervals in advance, which means they can be planned more efficiently.



PROGRESS THROUGH KNOWLEDGE
Using data analysis to guarantee success



ANALYSIS



IOT



EFFICIENCY



CLOUD



4.0



MONITORING

eluCloud Server

The eluCloud Server collects all data from the connected machines. It stores all status messages and makes them available for analysis and utilisation. The eluCloud server was specially developed to be integrated into a company’s existing IT infrastructure, meaning that, provided that the company has server hardware capacity available, the eluCloud Server can be installed on existing systems with ease. The eluCloud Monitor module and the eluCloud Server form the basic equipment for customers who wish to use eluCloud.

eluCloud Analytics

eluCloud Analytics is an additional module for subsequent analysis of product and machine data. It enables detailed analysis of areas such as production utilisation, progress of job processing, processing times for jobs, analysis of individual machines, analysis of the entire machine pool and processing times for individual parts, to name just some. With the processed information and its user-friendly filter options, eluCloud Analytics also supports the optimisation of production times: through the capture and analysis of non-productive times such as clamp positioning operations, tool changes or part orientation changes, the techniques employed in production can be refined and the times can be reduced sustainably. The module also helps with troubleshooting and product costing analysis. Using filter functions allows exact determination of the required production times for a job or a part, knowledge which also serves as a very good basis for costing future jobs. In addition, using this information as a basis allows questions such as “When did which downtimes occur?” and “What was the reason for this?” to be answered easily after the event.

eluCloud API

A core characteristic of every “Industry 4.0” solution is seamless communication between individual machines or between the machine and the software, which is often referred to as the “Internet of Things”. This can be implemented with the help of eluCloud API. The term “API” refers to an interface with which eluCloud can be integrated into existing solutions and linked to other software solutions. The machine data and analysis results which are compiled in eluCloud can be accessed and further processed for this purpose by external programs, such as cost accounting programs and ERP or MES systems.

7 | PUMA® software from CAMäleon



CAMäleon – technical software for complex demands and unusual solutions

The CAMäleon Produktionsautomatisierungs-GmbH company has worldwide operations as a specialist for technical software for the environment of complex, multi-axis CNC production equipment. Their know-how finds successful application in the most diverse sectors – especially in areas where off-the-shelf solutions are inadequate. The creation, management and the transfer of NC data are their main focus. Their portfolio includes the PUMA-System® which is used most commonly in the areas of aviation, automotive applications, public transportation and in the demanding field of curtain wall manufacturing.

The PUMA-System® is a CAM solution for extruded aluminium profiles. It makes it possible for manufacturing engineers to implement their targeted, customised specifications on the machine. The scope of performance goes far beyond dialog-guided programming systems. Functions such as automatic depth tables, clamp management, zero-point management, bar optimisation, cycles (rapid production of small parts), CSV interfaces as well as 3D volume interfaces for SAT and STEP, CatiaV4/V5, Inventor or Pro/Engineer are only a few examples of the possibilities for the efficient production for parts from extruded aluminium.

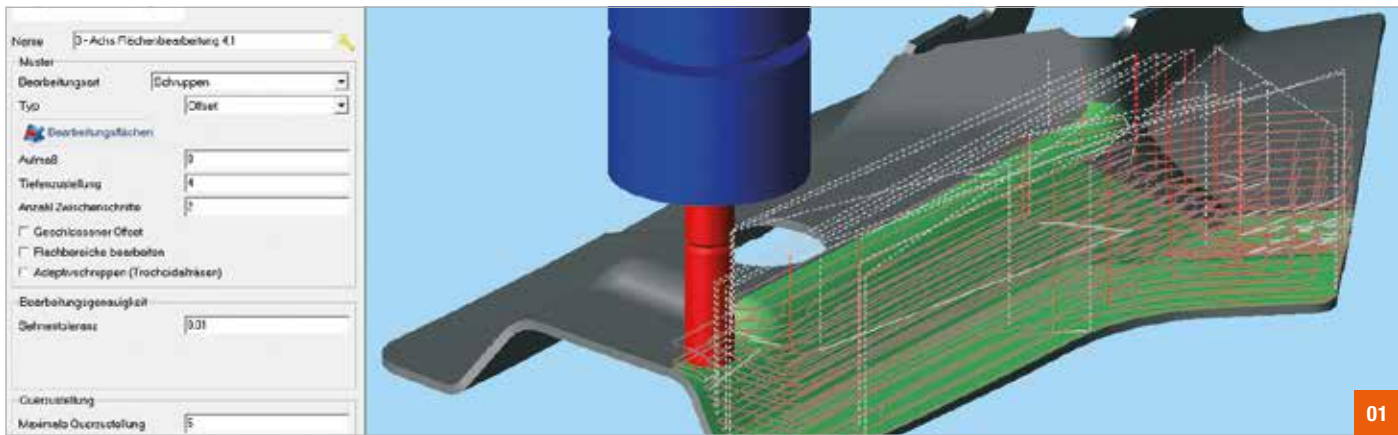
In addition to the numerous software options, we also offer a comprehensiverange of services. They span spectrum from support by experienced application engineers to seminars on the Puma-System® profile machining software and the supplementary modules, product consulting on the customer's premises, the development of production-specific software or special solutions, the integration of optional features on the machine, support with problematic jobs, ISO-code training,

start-up of programs and monitoring the quality of the milling and routing results and on to job programming of special parts on site and the transfer of specific know-how for the processing of wagon bodies made of aluminium in the railway sector.

For more information, please visit the website www.puma-system.com

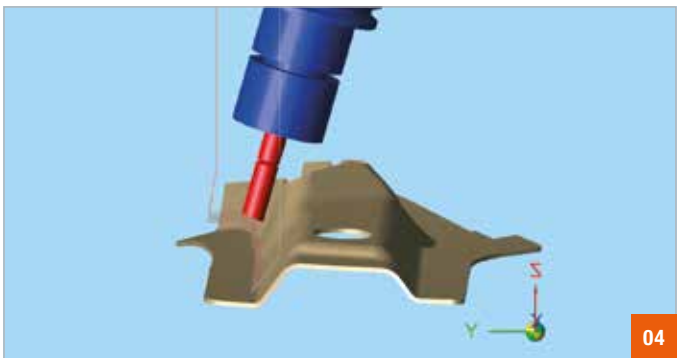
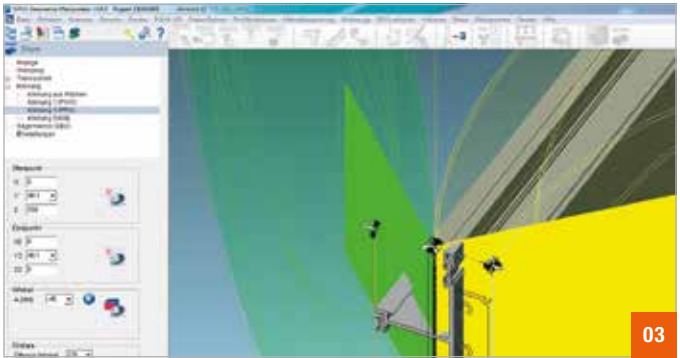
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Requirements for which the PUMA-System® offers the ideal solution:

- For curved parts with or without clamping
- For unmachined part tolerances which require measuring so that machining tasks can correctly reference edges or have the proper depth
- For profiles with welded-on or screwed-on elements which do not have the same cross-section at all points
- Routing tasks which require a Z-path or for which the A and C-axis must be offset during processing (i.e. 4 or 5-axis machining tasks)
- Machining tasks which require working with angled tools due to space restrictions (axis pivoted in and not orthogonal relative to the working face)
- Elaborate curtain walls with numerous end machining tasks
- Multipass milling or peripheral milling along curved surfaces
- 5-axis simultaneous routing tasks such as with Solidworks, MasterCAM, esprit, etc.
- 3D models that are not recognised fully and must be reworked by obtaining dimensions from the model
- Complex machining tasks for which the customer wishes to specify the exact sequence
- When simulation with unmachined part extrapolation is required to define the work sequence
- Editing and creating 3D models Deleting faces, merging faces, creating curvatures and chamfers, which requires a full 3D core



01 Multipass milling with Modulworks

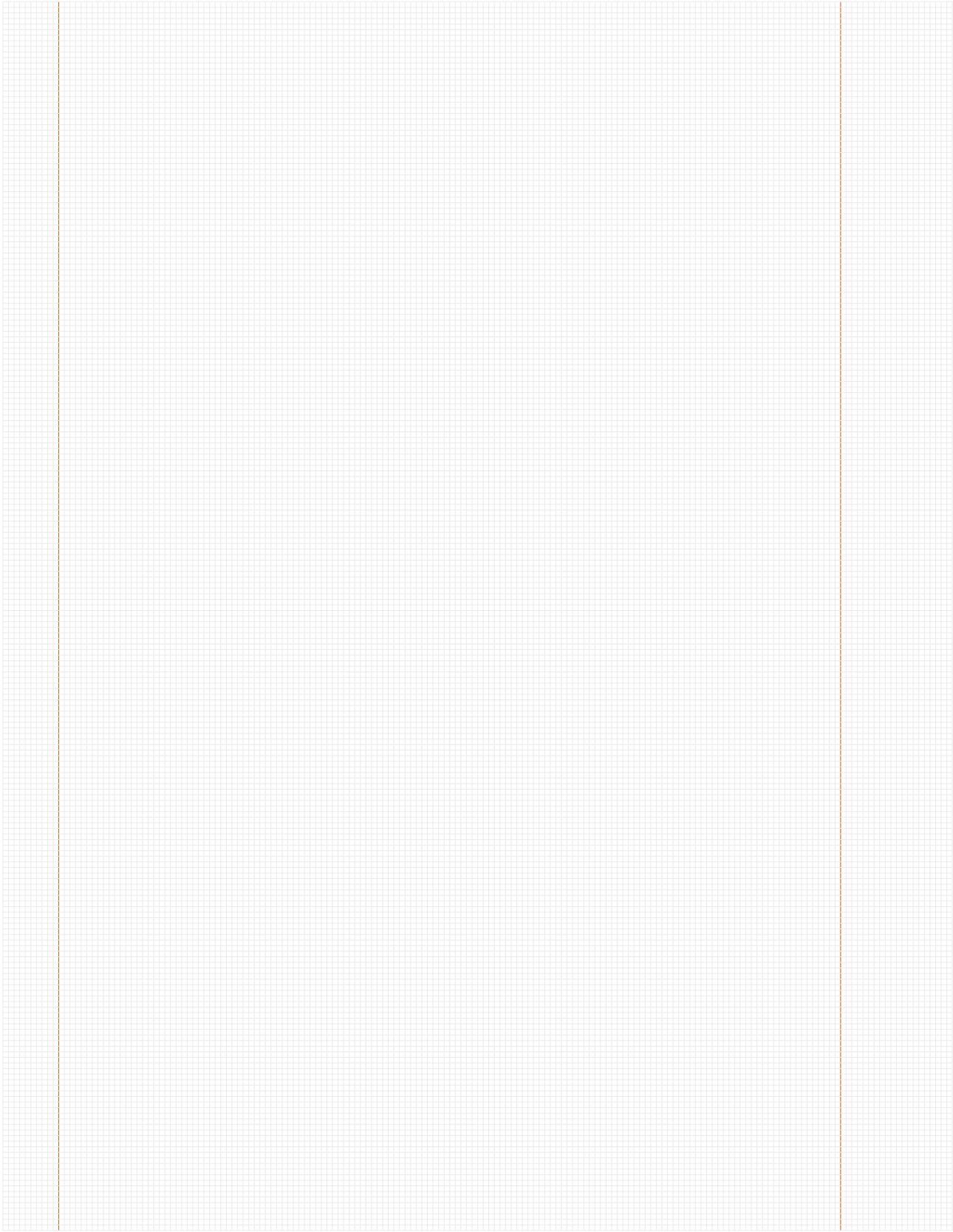
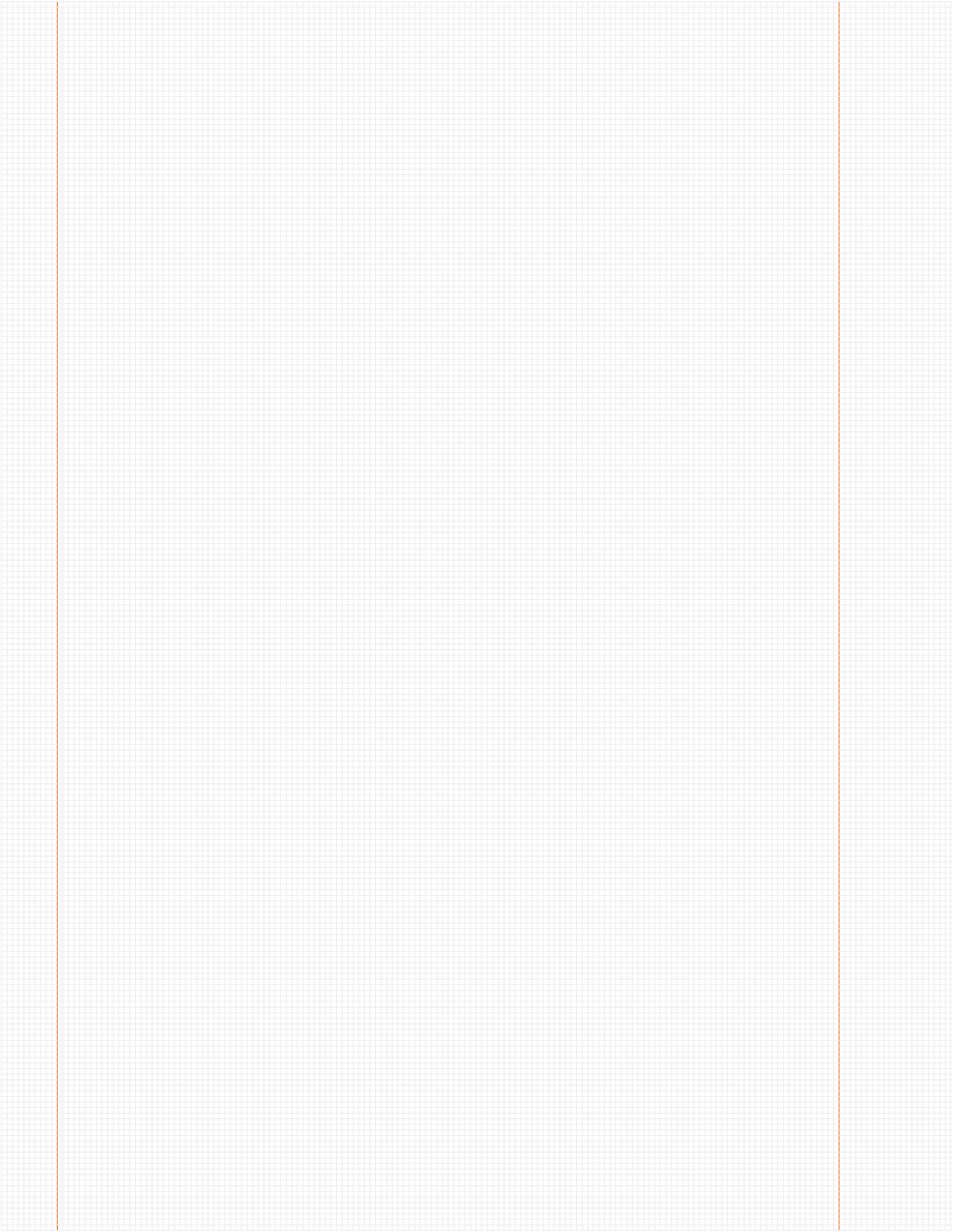
02 Large profiles and special tools

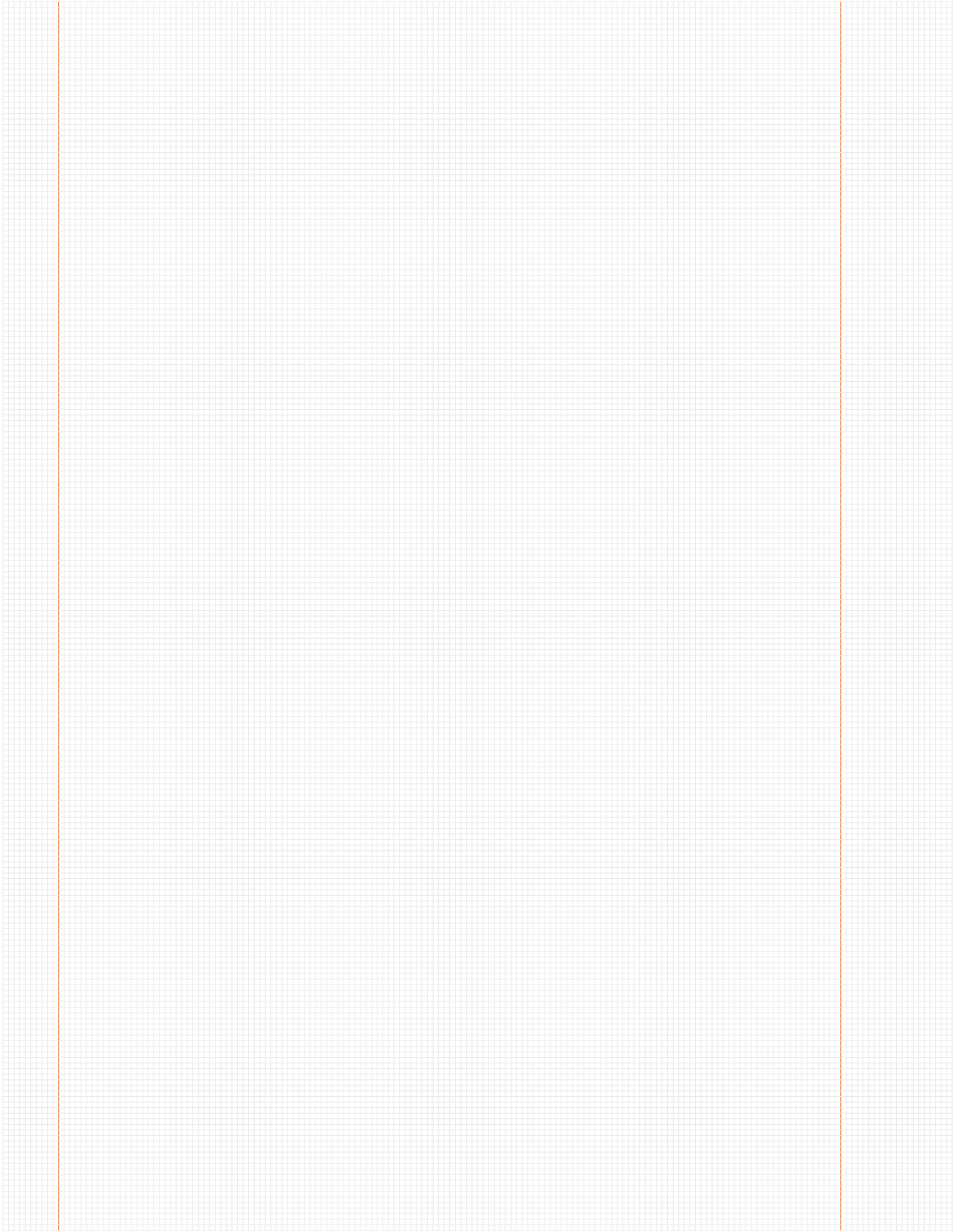
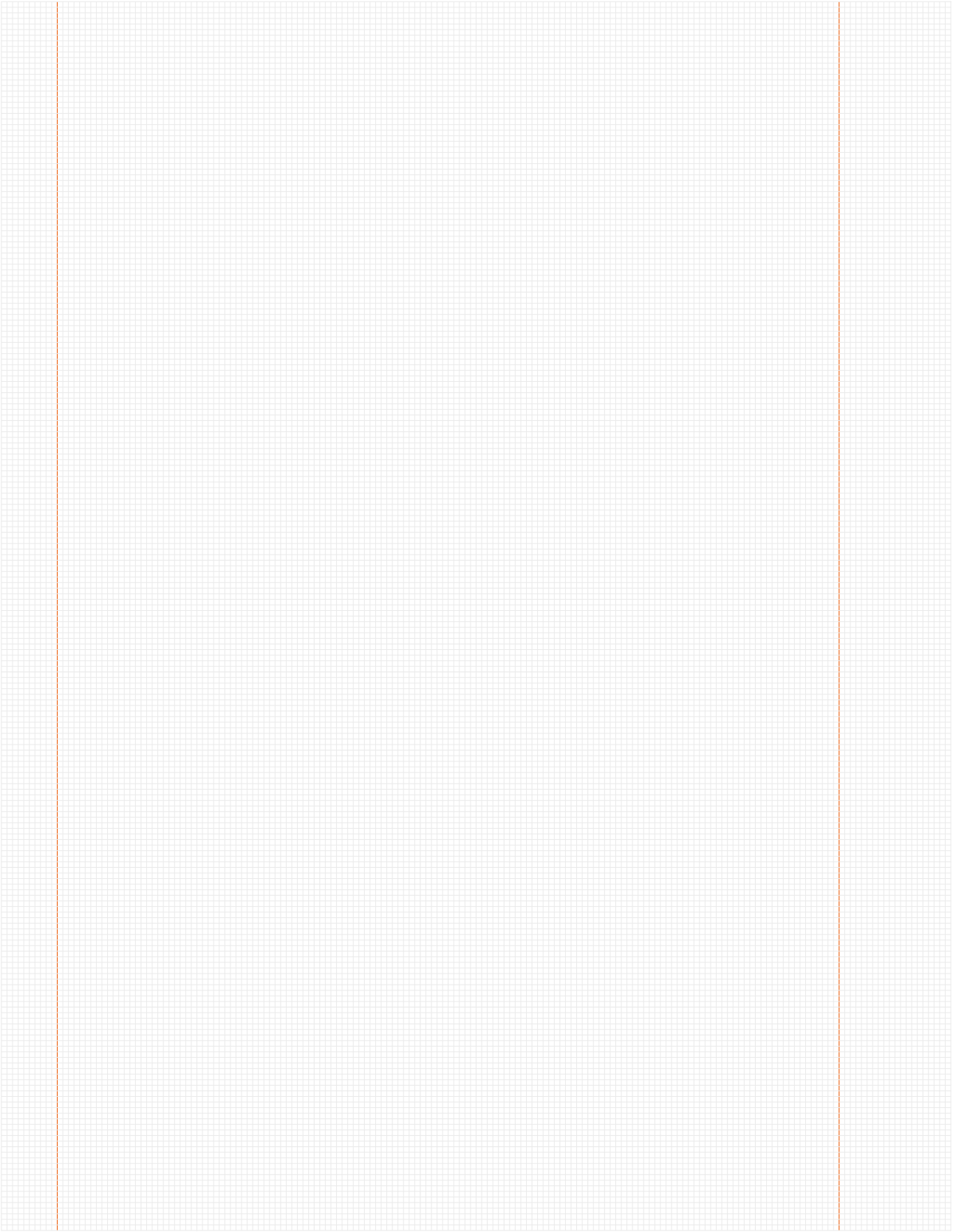
03 Visualisation of saw cut faces in Puma-System V19.5

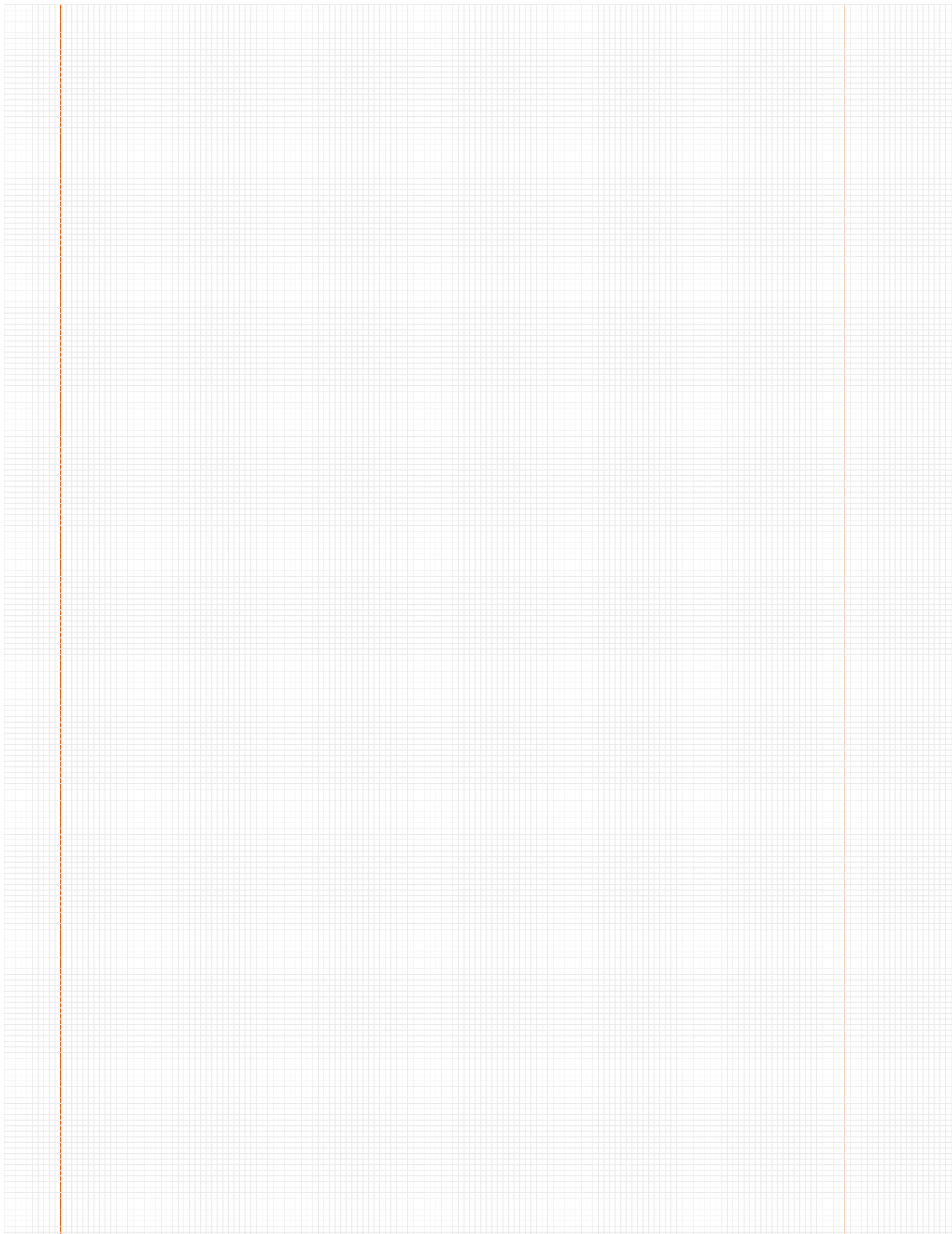
04 Peripheral milling with 5-axes simultaneously from the Modulworks option

05 Measurements during the work process using the wireless measurement sensor

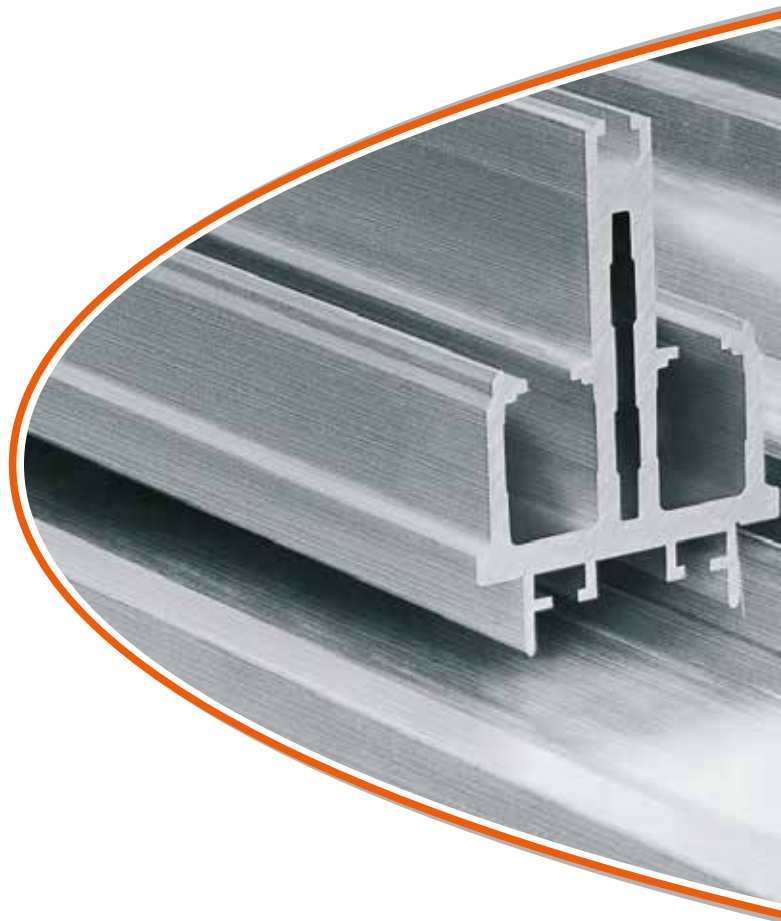








Perfect profile machining - since 1928.



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