



Maschinenfabrik GmbH & Co.



# Heavy-Duty Multi-Blade Circular Edgers & Resaws



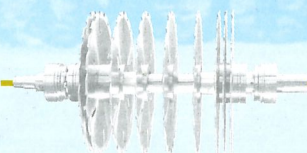
# S - Series



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# S-Series





# Hard workers

The PAUL **S-models** are heavy, robust and powerful machines, designed for extremely heavy duty. Three **basic models** - **S900**, **S1200** and **S1500** - with maximum opening widths of 906, 1206 and 1506 mm, make it possible to meet virtually all requirements.

The arrangement of the climbing top feed rollers and fixed bottom rollers ensures accurate guidance of the material being cut. The pressure applied by the top rollers is reinforced hydraulically. The models in the S series, designed for manual or automatic loading, have an accordingly broad field of application.

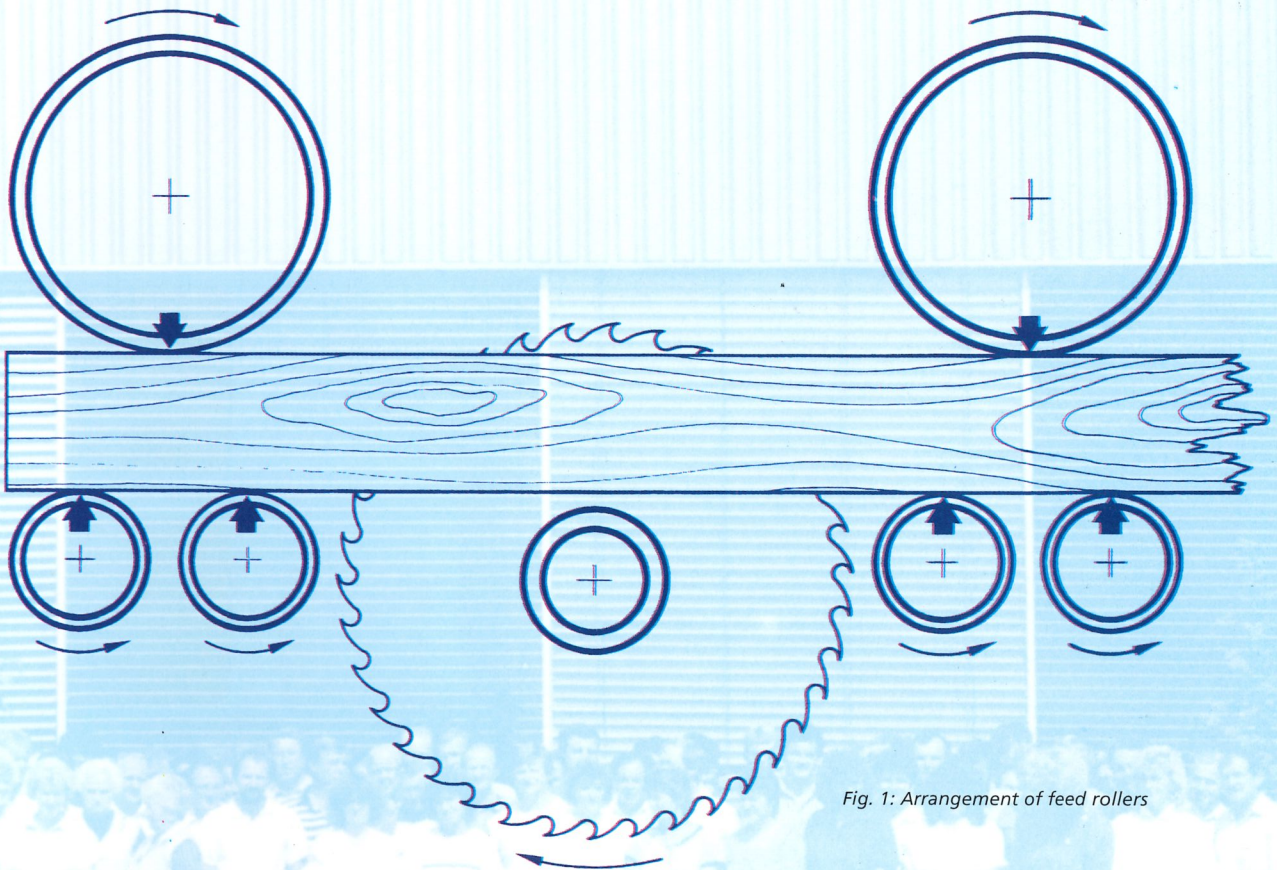


Fig. 1: Arrangement of feed rollers

The PAUL S-models are used:

- as **resaw machines** for cants up to 180 mm (optional 225 mm) thick
- as **edgers or rip saws** for the processing of boards and planks
- as particularly **powerful machines** (up to 250 kW) for the sawing of extremely hard timber
- as **universal machines** for sawing non-timber materials such as mineral wool, etc.
- combined with an **AB920** automatic infeed system for maximum productivity



# Model S 900

The three models S900, S1200 and S1500 (shown in right-hand design) differ visually only in their opening width. The heavy-built machine frame, consisting of welded steel plates, is machined on a machining center with extreme precision.

Three rows of anti-kickback fingers are mounted on the infeed side. Laser guide lights are recommended for optimum timber recovery. For safety reasons the top machine cover and the front bearing door can only be opened when the saw shaft is

at rest. In addition, the hydraulically lifting anti-kickback devices are interlocked until the saw shaft has come to a standstill. The feed drive is provided with a reverse gear.

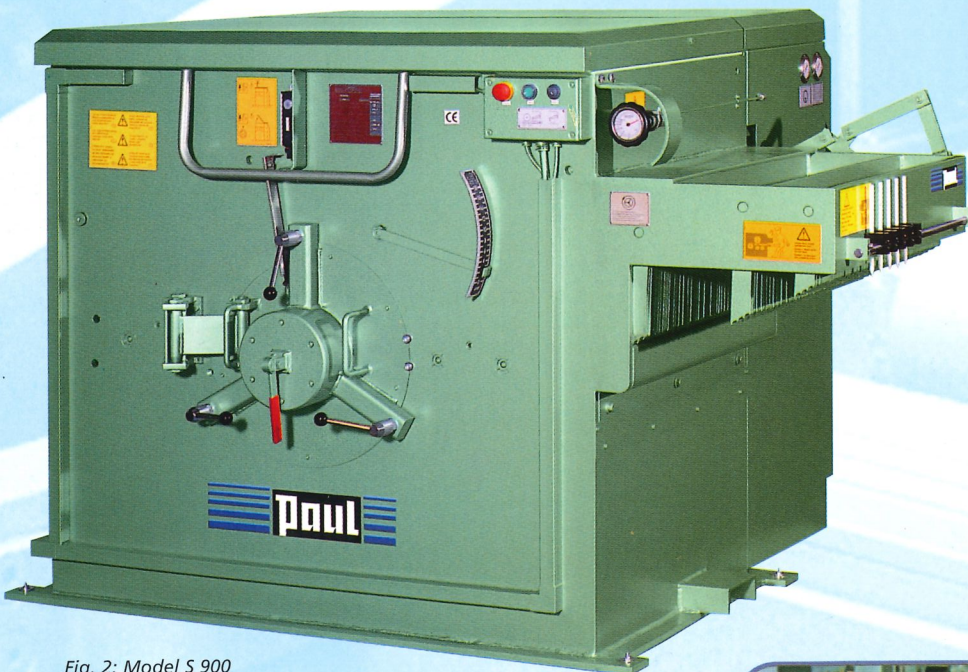


Fig. 2: Model S 900

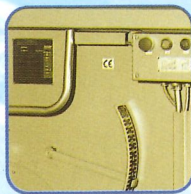
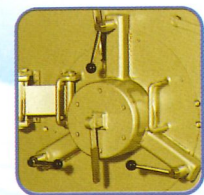
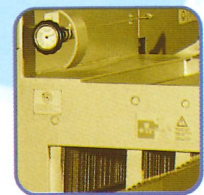
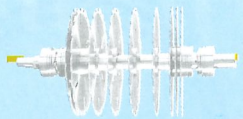


Fig. 3: Model S1200 with powered bottom infeed roller.



# Models S 1200 and S 1500

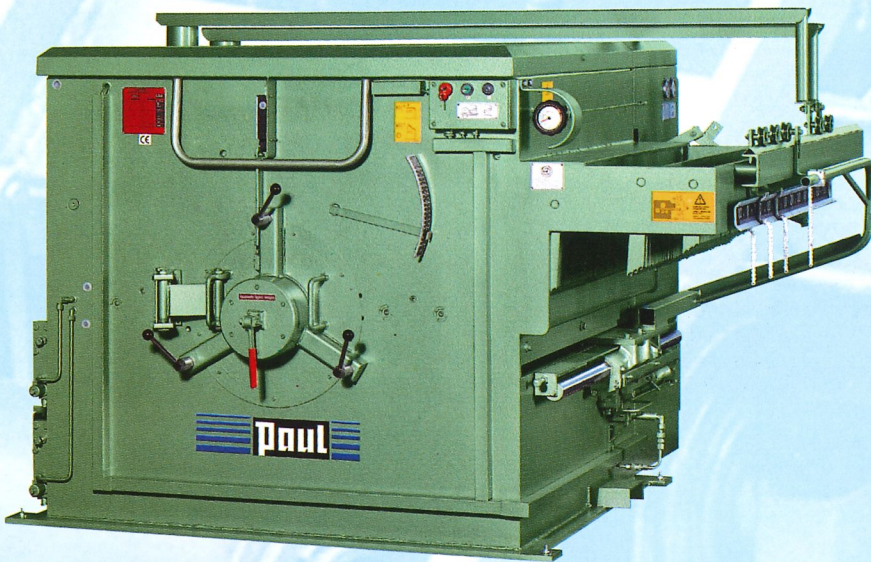


Fig. 4: S 1200

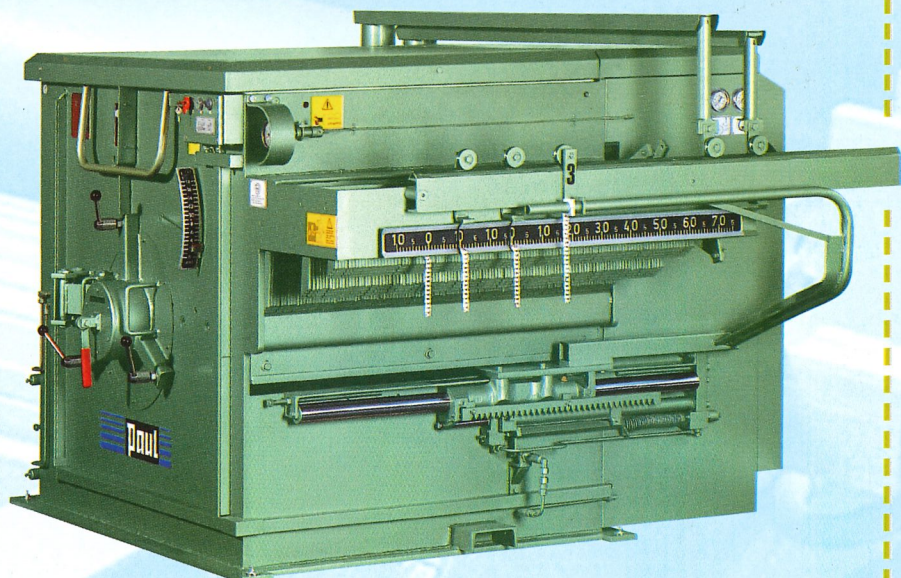
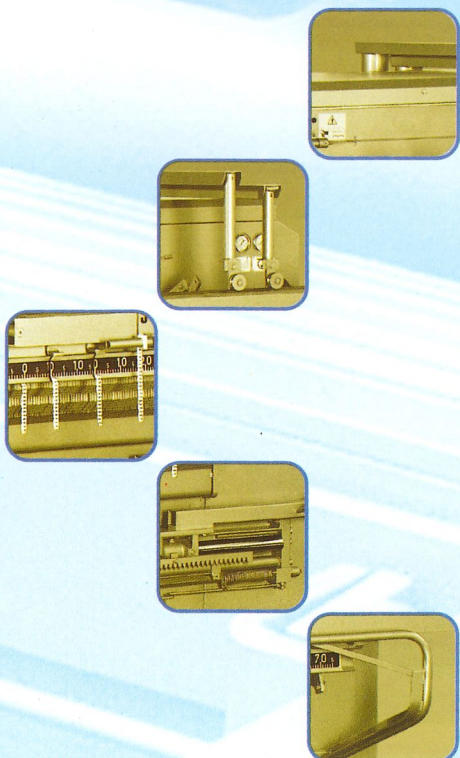
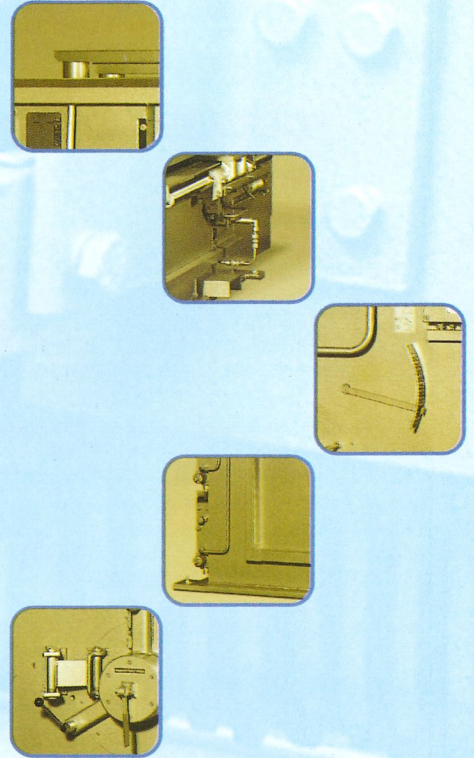


Fig. 5: S 1500



# Special accessories...

... increase productivity  
and make work easier

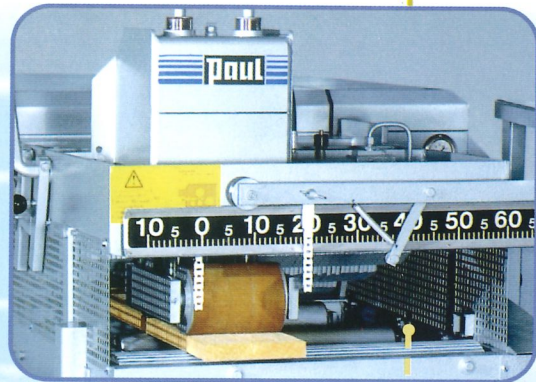


Fig. 6: Powered bottom infeed roller and two top pressure rollers

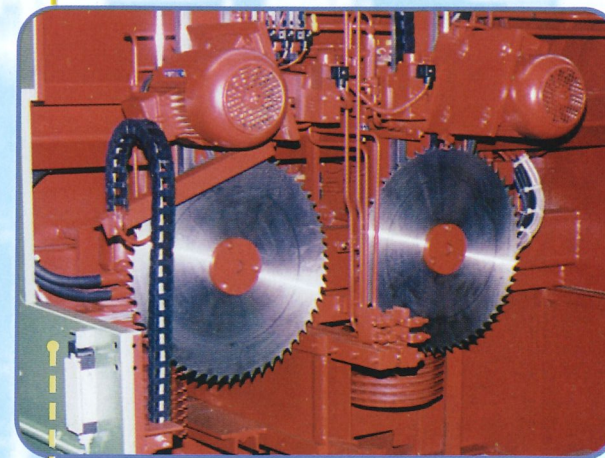
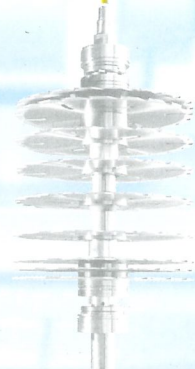


Fig. 9: Slab cross-cut saw

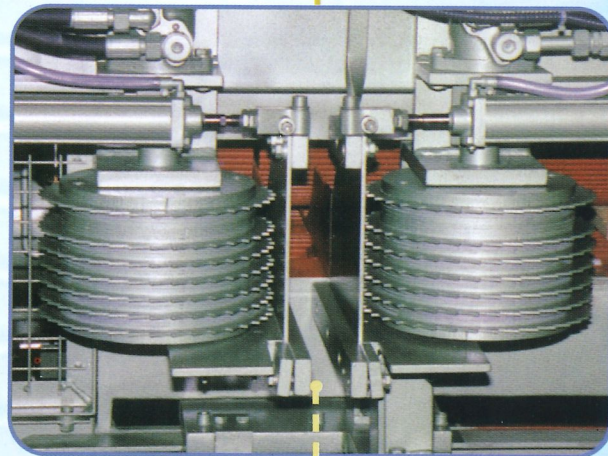


Fig. 8: Slab extractor



Fig. 7: Tilting roller and alignment chain

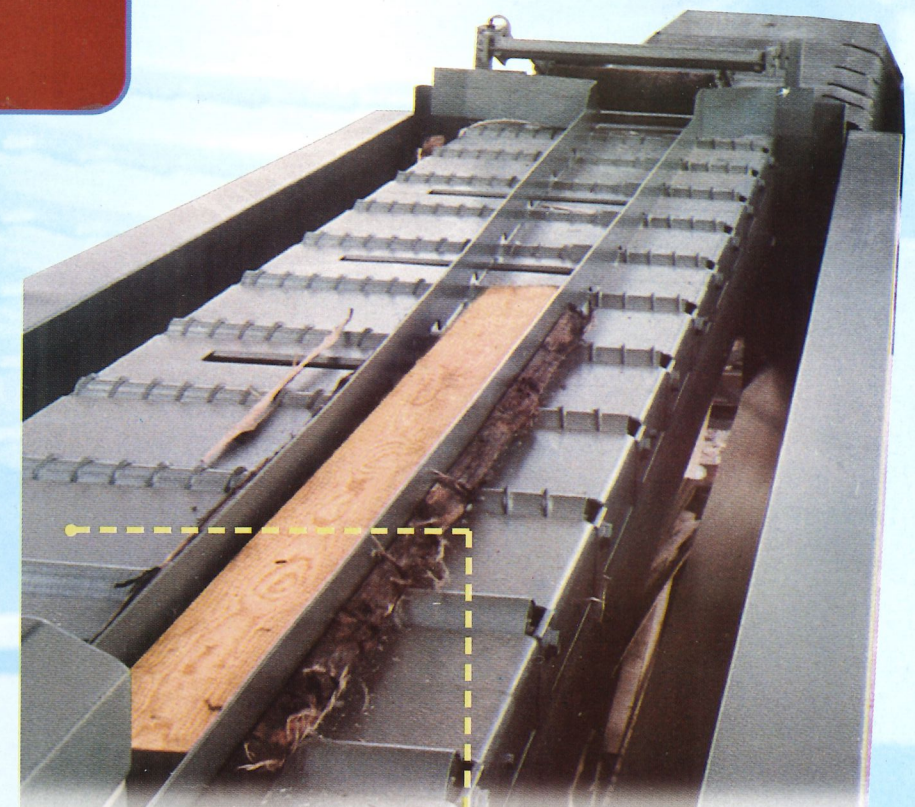
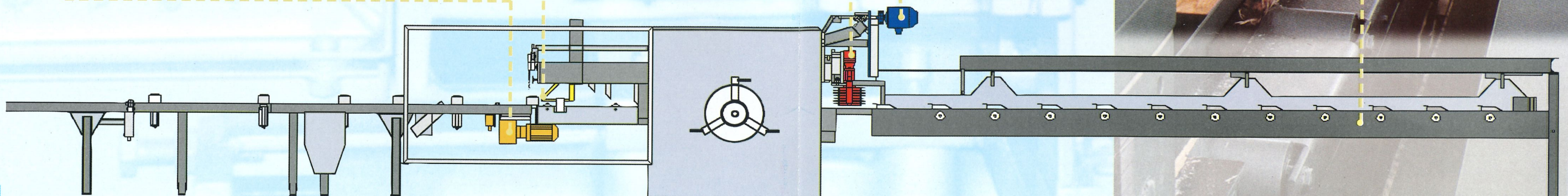


Fig. 10: Offcut separator





# Saw bush positioning

PAUL offers three different systems for positioning the movable saw bushes and can so provide an ideal solution for every application.

The control elements are extremely easy to operate and of robust construction designed for use in sawmills.

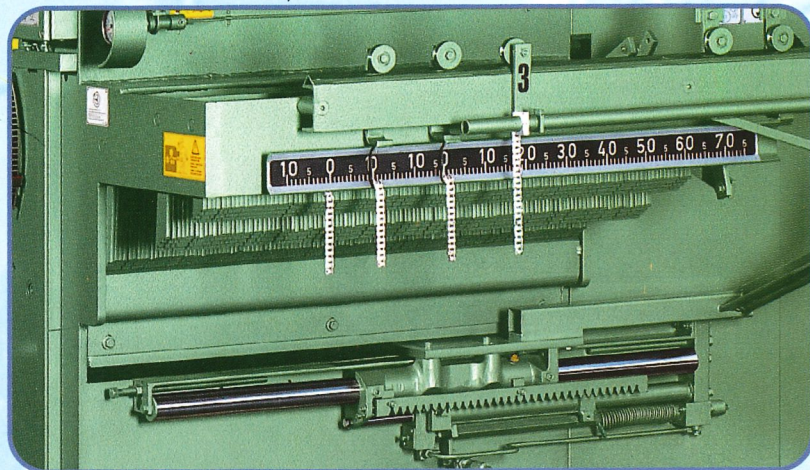


Fig. 11: Hydraulic saw positioning devices

## Hydraulic saw positioning

With this system, the movable saw bushes engage every 1 or 2 centimeters.

Positioning is effected with the aid of either an actuating bar or an electric lever switch.

## Electric saw positioning

In this case, the saw bushes are positioned steplessly by means of electric motors that are operated either by electric lever switches or foot switches.

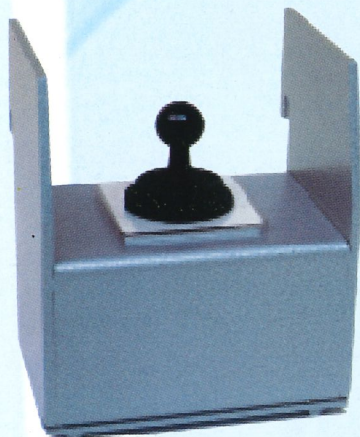


Fig. 12: Electric lever switch

Type of positioning \ Type of control	hydraulic	electric, stepless	servomotor-driven, programmable
Actuating bar	●		
Electric lever switch	●	●	
NCB-2 control			●
NCD control			●

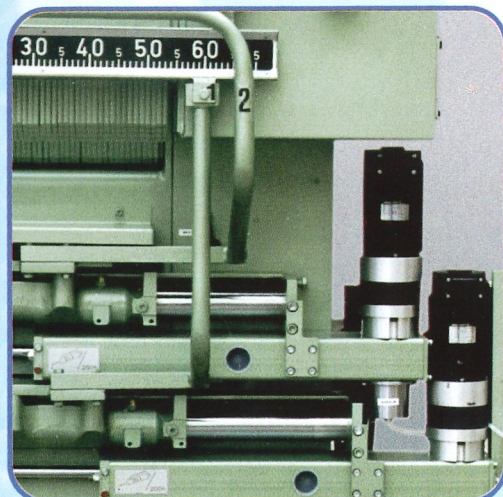


Fig. 13: Servomotor-driven saw positioning system





Fig. 14: NCB-2 control

### Computer-controlled saw positioning

Computer-controlled positioning of saw bushes and splitting wedges by servomotors offers the utmost operating convenience. PAUL offers two alternative CNC controls for this purpose:

The **NCB-2 control** is used for positioning one or two saw bushes. It can store up to 10 cutting lists, each with up to 20 fixed widths, any of which can be selected just by pressing a key. Non-programmed sizes can be set by means of two keys when the movable saw bushes engage at exact centimeter or millimeter sizes.

In the case of machines with more than two movable saw bushes, a so-called NCD cutting-pattern control is used. With this **NCD control**, up to 4 movable saw bushes can be positioned rapidly and accurately on manually or automatically loaded machines. With this system, saw-bush and splitting-wedge positions are displayed on a color monitor.

On machines with an automatic infeed system, the **NCD control** determines the optimum cutting pattern for the workpiece concerned based on the measuring results and then positions the saw bushes accordingly. Graphic display and storage of the optimization results facilitates subsequent checking of yield and daily output.

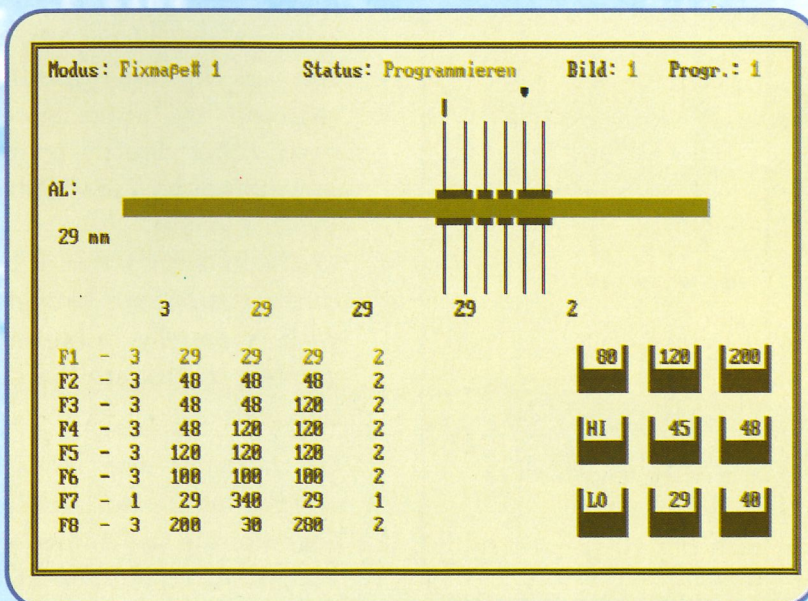


Fig. 15: Display of cutting pattern on NCD control



# Cutting patterns

S-series machines, equipped with one fixed and up to four movable saw bushes, offer the utmost flexibility in everyday work.

Depending on the application concerned, one or several movable saw bushes are needed. A selection of possible cutting patterns are shown below:

The number of saw blades that a saw bush can carry depends on the **useful clamping length (UCL)** of the bush concerned.

Fig. **A** shows a shaft with one fixed and one movable saw bush.

Fig. **B** shows a shaft fitted with one fixed and three movable saw bushes. The bush on the left is the fixed bush. Double arrows indicate the movable bushes.

Fig. **C** shows **telescopic saw bushes**. Up to four independently movable bushes provide an even greater variety of cutting patterns (min. strip width 24 mm).

It is, of course, also possible to work with a **fixed saw blade configuration** as shown in Fig. **D**, in which case the saw blades can be set up in any position required by using spacer rings either directly on the saw shaft or on a saw bush of suitable length.

Machines with a fixed saw configuration are provided with manually adjustable pointers to indicate the cutting lines.

On machines with movable saw bushes the indicators are linked to the saw bushes and are positioned automatically.

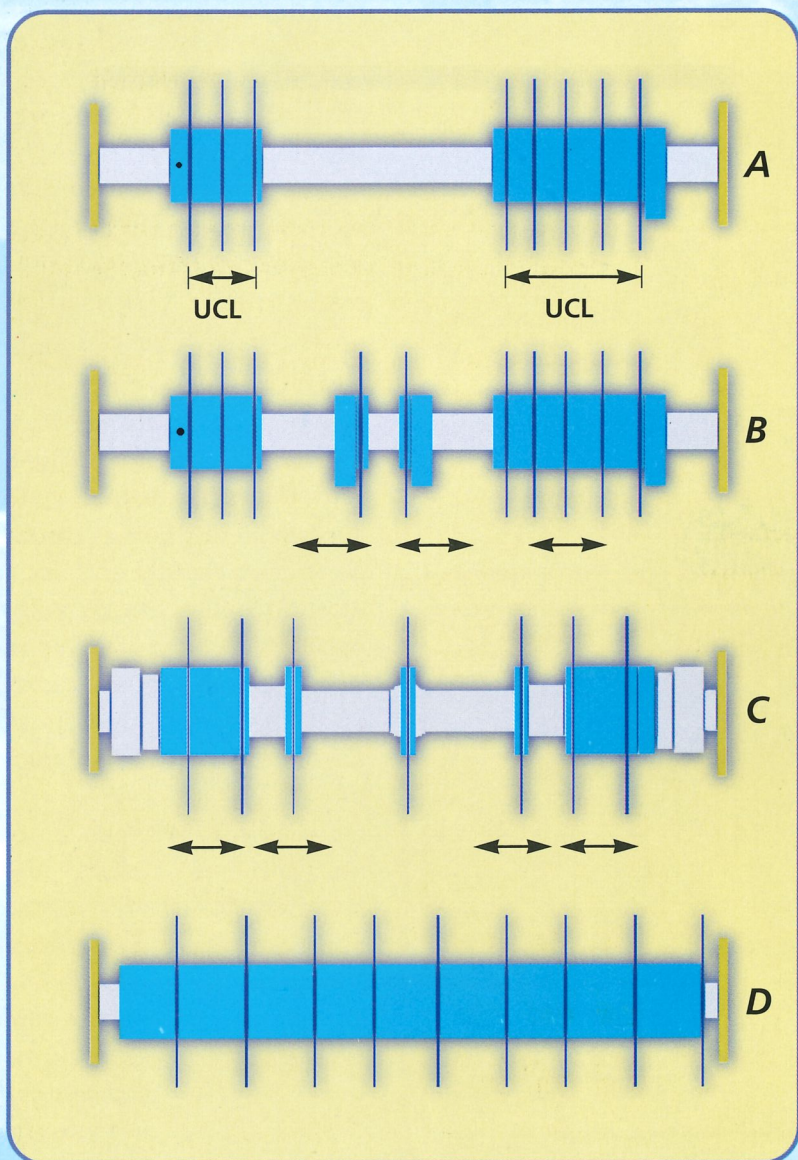
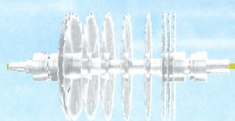
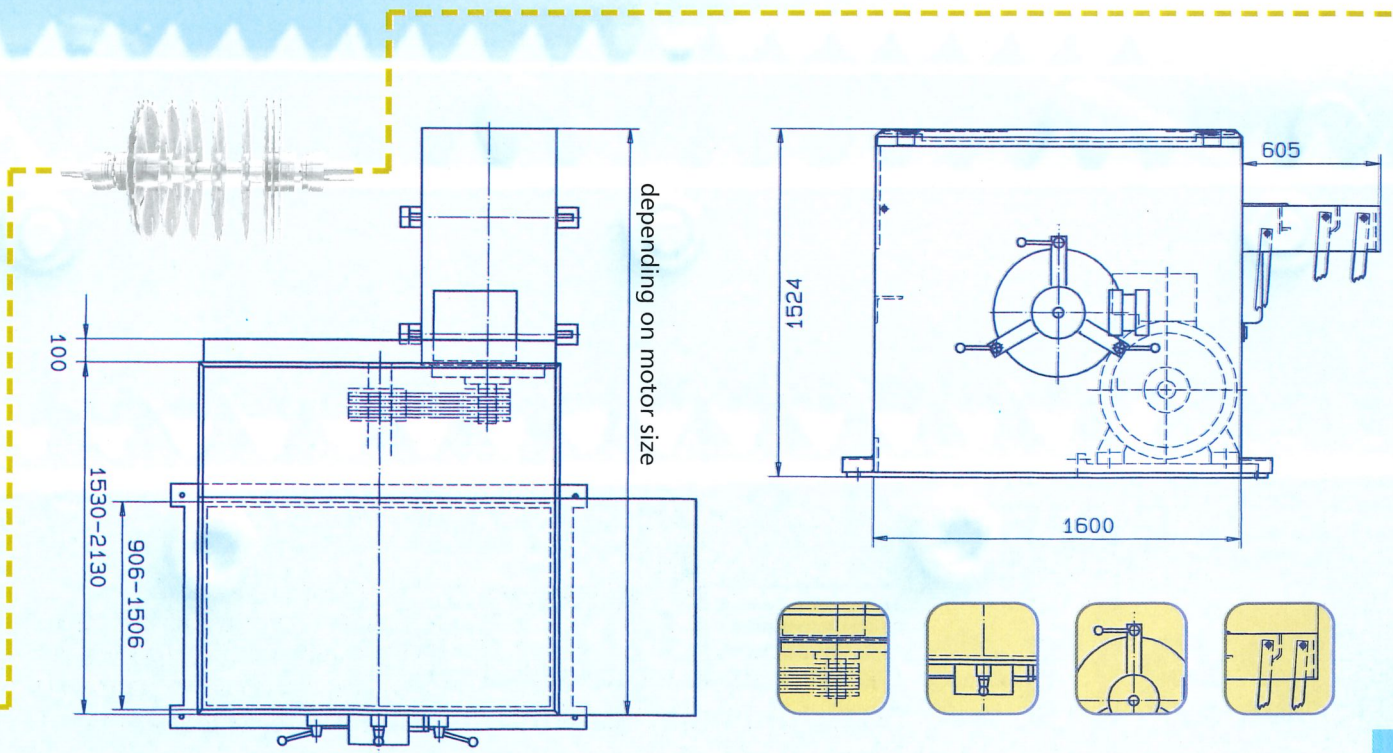


Fig. 16: Selection of possible cutting patterns

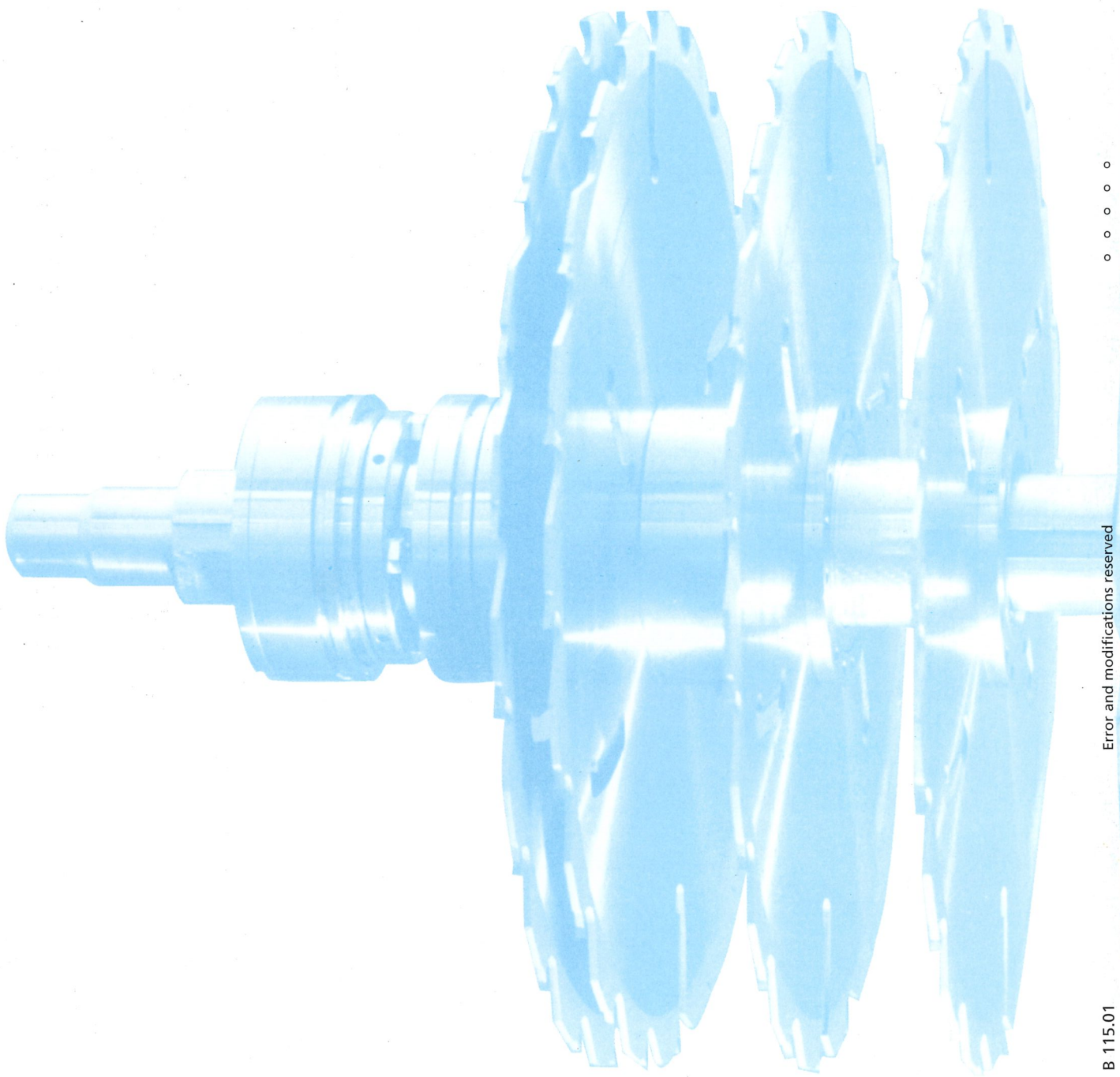


# Technical Data

Technical Data		S 900	S 1200	S 1500	Dim.
Opening width	max.	906	1206	1506	mm
Cutting height, standard (optional)	max.	180 (225)	180 (225)	180 (225)	mm
Workpiece length	min.	905	905	905	mm
Feed speed, infinitely variable		6-77	6-77	6-77	m/min
Drive power, saw shaft		50-250	50-250	50-250	kW
Speed of saw shaft (standard)		2500	2500	2500	rpm
Saw blade diameter	max.	550	550	550	mm
Saw blade bore		110	130	130	mm
Keyway width x keyway depth (180° apart)		16.5 x 8.5	16.5 x 8,5	16.5 x 8.5	mm
Spacer ring diameter		150	170	170	mm
Number of powered feed rollers		6	6	6	
Top roller diameter		337	337	337	mm
Bottom roller diameter		144	144	144	mm
Width of top rollers		810	1110	1410	mm
Width of bottom rollers		860	1160	1460	mm
Weight (without motor)	approx.	2,500	3,300	3,800	kg







  
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