



Maschinenfabrik GmbH & Co. KG



Heavy-Duty  
Circular Edgers /  
Ripsaws



## PROVEN TECHNOLOGY

### ▶ TECHNOLOGY AND TRADITION

Edging is traditionally PAUL's trade. In 1948 the development of the first double edger marked the beginning of woodworking machinery production for the sawmilling and secondary wood processing industries.

Since the production of the model "KME2" in the early 50's, PAUL has established a reputation as a highly competent and efficient woodworking machinery manufacturer. Today over 7500 circular edgers made by PAUL are in use worldwide.

PAUL Maschinenfabrik has not only become a world market leader for edgers and rip saws, but also offers customized solutions for complete production systems to the solid wood processing and sawmilling industries.



Fig. 1 One of the oldest edgers, a Model Ilc built in 1949 and still in working order

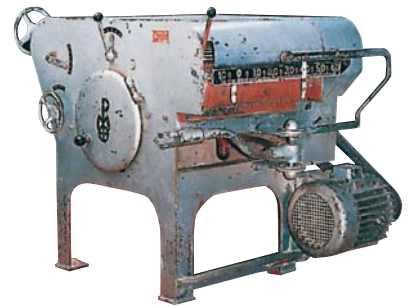


Fig. 2 Edger/Ripsaw of the latest generation: Model KME2I750 with laser guide light



#### The Edgers/Ripsaws in brief:

- Compact, enclosed construction
- Robust, welded steel structure
- Rigid, distortion-free frame
- All parts machined with utmost precision
- Rotating shafts running in encapsulated, dust-proof ball bearings
- Main shaft hard chrome-plated and carried in three bearings
- For motors up to 75 kW
- Free space beneath the shaft and the bottom rollers
- Proven thousands of times

◀ Fig. 3



# THE EDGERS / RIPSAWS

## ▶ THE CLASSIC MODELS

The classic machines for the manual edging of boards and planks, and for multi-ripping, are the circular edgers of the KME2 and BM series.

In mechanical, electric, partial or fully hydraulic configurations, with up to 4 independently movable saw bushes, driving power up to 75 kW and continuously variable feed rate, they are in use in practically every sawmill.



Fig. 4 KME2/750, fully hydraulic version, movable saw bush positioned by an actuating bar



Fig. 5 KME2/1000, saw bushes positioned by a servomotor



Fig. 6 KME2/750 with fixed saws only



EDGING



MULTI-RIPPING



RIPPING



◀ Fig. 7

Fig. 8

## IN DETAIL

### ▶ THE FEED SYSTEM

Five powered feed rollers ensure correct timber feed and best production rates.

All five feed rollers are driven by means of a robust chain to ensure reliable and durable feed.

The feed speed is infinitely variable between 2 – 75 m/min. (optional 2 – 90 m/min.) and can be set to zero.

The feed rollers have a fluted surface.

As standard, drive is provided by a hydraulic variable-speed drive unit. A reinforced, hydraulic-motor driven version is available as an option.

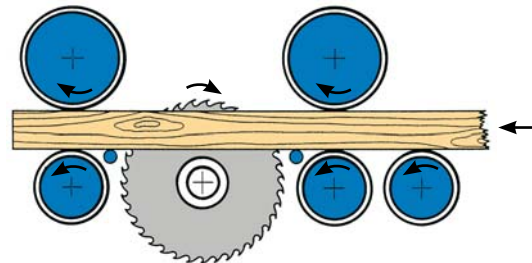


Fig. 9 Scheme of feed roller arrangement

### ▶ SAW BLADE CONFIGURATION: FIXED OR MOVABLE

(all dimensions in mm)		KME2/750	KME2/1000	BM
a	Moving range	40–365	40–615	40–365
MS	Maximum spacing of outermost saws	530	780	530
UCL (standard)	Useful clamping length of saw bushes	55 + 110	55 + 110	55 + 110
FS	Fixed set-up			
	directly on the saw shaft	605	861	605
	on a saw bush	550	810	550

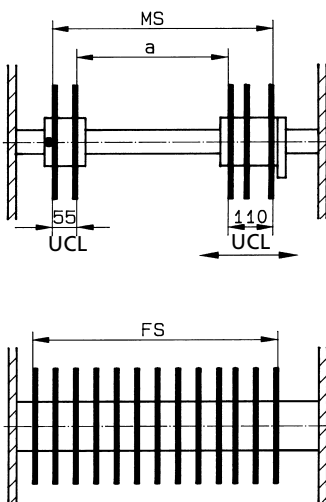


Fig. 10

Standard machines are equipped with:

- one fixed saw bush with a useful clamping length (UCL) of 55 mm
- and
- one movable saw bush with a useful clamping length of 110 mm.

Depending on the application concerned, the edgers/ripsaws can also be equipped with fixed saw blades only (as a multirip saw) or with one fixed and up to four movable saw bushes.

Saw blades with diameters of 250-380 mm (250 – 460 mm on Model BM) can be spaced at virtually any intervals on saw bushes of suitable lengths or as an option, directly on the saw shaft, by using spacer rings.

The saw blade spacings that are possible and the respective dimensions are detailed in the 'Guide to Ripping Patterns' brochure, ref. B110.07/1.

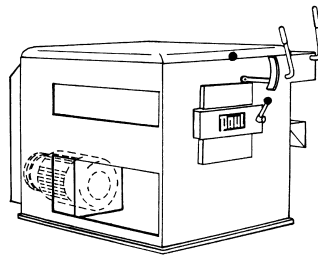




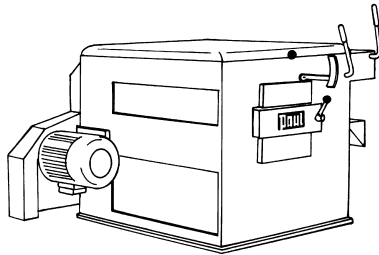
## THE DRIVE SYSTEM

Drive of the saw shaft is provided by V-belts from an electric motor. Depending on the size and configuration of the machine concerned, the motor may be

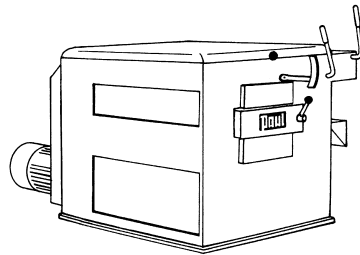
- within the machine frame (A),
- on the outfeed end of the machine (B),
- on the drive side of the machine (C).



A



B



C

Fig. 12



Fig. 11 Back side of machine...



Fig. 13 ...with reinforced feed drive

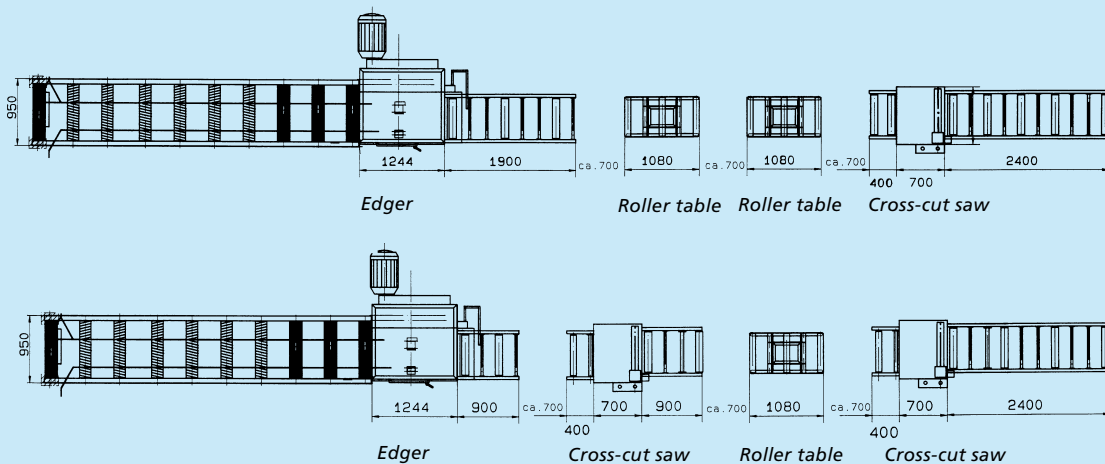


Fig. 14 Edging/Ripping line with cross-cut station on infeed side and automatic offcut separator on outfeed side  
If the material to be edged is alternately delivered with the narrow end and wider end first, then a second cross-cut saw facilitates the operation still further.

# IN DETAIL

## ▶ SAW BLADE AND TOP FEED ROLLER POSITIONING – A MATTER OF SECONDS

Version	Saw positioning	Top roller positioning	Operation
Fully hydraulic	hydraulic (Fig. 16)	hydraulic	actuating bar with 3 levers or electric lever switch (option) (Fig. 17)
Partial hydraulic	hydraulic (Fig. 16)	mechanical, with ball bearing handwheel (Fig. 19)	actuating bar with 3 levers or electric lever switch (option) (Fig. 17)
Mechanical	mechanical	mechanical, with ball bearing handwheel (Fig. 19)	easily moved actuating bar mounted along the infeed roller table
Electric, stepless	electric	hydraulic or mechanical with ball bearing handwheel	<ul style="list-style-type: none"> <li>• electric remote control with the aid of a foot or hand operated switch</li> <li>• only for square edging, i.e. ripping to <u>random</u> widths</li> </ul>
Electronic, servomotor driven	Positioning with <ul style="list-style-type: none"> <li>• millimeter increments</li> <li>• centimeter increments</li> <li>• fixed widths</li> <li>• preset cutting patterns</li> </ul>	hydraulic or mechanical with ball bearing handwheel	<ul style="list-style-type: none"> <li>• NCB-2 control with push buttons or optional joystick (Fig. 20)</li> <li>• Cutting pattern control with industrial PC, monitor and keyboard (Fig. 18)</li> </ul>

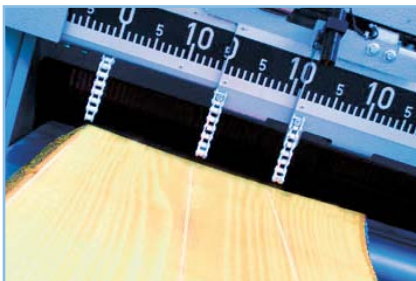


Fig. 15 Positioning with laser guide lights



Fig. 16 Hydraulic saw positioning device



Fig. 17 Electric lever switch



Fig. 18 Cutting pattern control

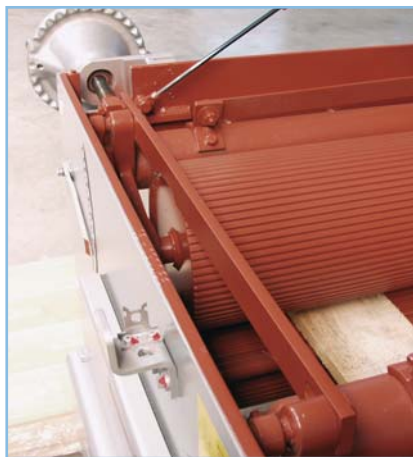


Fig. 19 Mechanical top roller positioning device



Fig. 20 NCB-2 control with joystick (option)



## OPTIONAL ACCESSORIES

The many accessories and attachments offered make it possible to adapt the machines to a variety of applications.

**Roller tables** of various models are available for both the infeed and outfeed side of the machine to facilitate rapid, economical loading and unloading.

**Automatic roller height adjustment** to adapt the height of the top feed rollers to the thickness of the incoming material. This feature is recommended wherever boards constantly vary in thickness by more than 50 mm.

**Automatic feed speed adjustment** to suit the thickness of the material being cut.

A **laser guide light** makes it much easier to align the board and determine the location of the cuts and helps increase yield.

A **sawdust shaker** serves to separate sawdust from chips and splinters. Recommended whenever the machine is connected to a dust extraction system.

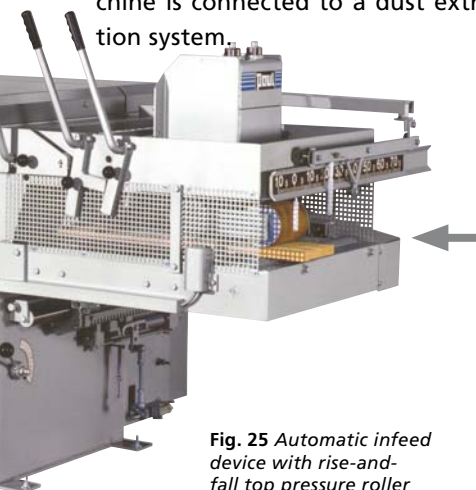


Fig. 25 Automatic infeed device with rise-and-fall top pressure roller



Fig. 21 Laser guide light



Fig. 22 Offcut separator



Fig. 23 Sawdust shaker mounted below the machine

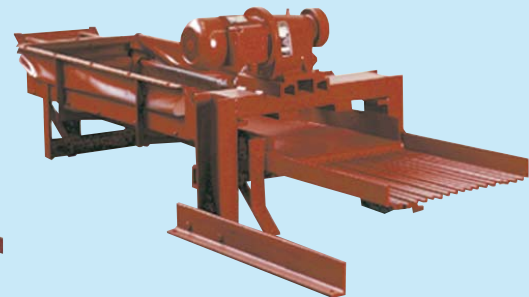


Fig. 24 Floor-mounting sawdust shaker fitted inside the machine

For more detailed information on optional features, please see brochures:

- Guide to Ripping Patterns, B110.07/1
- Roller Tables, B100.07/23
- Offcut Separator, B110.08/1
- Automatic Edging System AB920, B111.11/2

# TECHNICAL DATA

	KME2/750	KME2/1000	BM
Max. cutting height	125 mm	125 mm	160 mm
Opening width	750 mm	1000 mm	750 mm
Opening height	130 mm	130 mm	160 mm
Top roller spacing	600 mm	600 mm	640 mm
Min. workpiece length	appr. 800 mm	appr. 800 mm	appr. 1000 mm
Max. saw blade diameter	380 mm	380 mm	460 mm
Saw blade bore	75 mm	75 mm	75 mm
Keyway width x keyway depth (180° apart)	16.5 x 5.5 mm	16.5 x 5.5 mm	16.5 x 5.5 mm
Saw shaft diameter	60 (75) <sup>1)</sup> mm	60 (75) <sup>1)</sup> mm	60 (75) <sup>1)</sup> mm
Speed of saw shaft, standard	3300 rpm	3300 rpm	3000 rpm
Spacer ring diameter	120 mm	120 mm	120 mm
Cutting height with 250 mm saw blades	60 mm	60 mm	60 mm
Number of powered feed rollers	5	5	5
Top roller diameter	252 mm	252 mm	252 mm
Bottom roller diameter	168 mm	168 mm	168 mm
Max. driving power	55 (75) <sup>2)</sup> kW	55 (75) <sup>2)</sup> kW	55 (75) <sup>2)</sup> kW
Feed speed hydr. infinitely variable (option)	2–75 (90) m/min	2–75 (90) m/min	2–75 (90) m/min
Reinforced feed drive	0–85 m/min	0–85 m/min	0–85 m/min
Weight (net, without motor)	appr. 1350 kg	appr. 1550 kg	appr. 1400 kg

<sup>1)</sup> with saw blades mounted directly to the shaft  
<sup>2)</sup> with reinforced main bearing

All machines are available in right-hand or left-hand design.

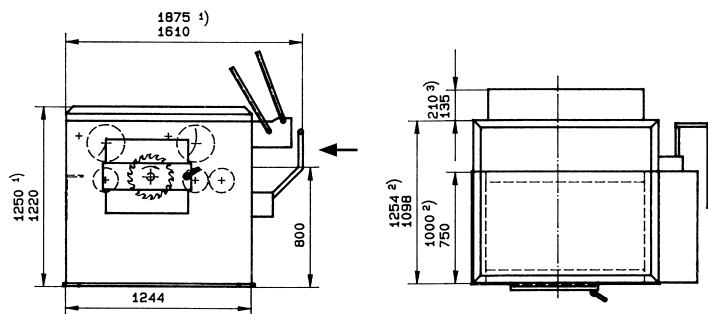


Fig. 26

<sup>1)</sup> different sizes for BM  
<sup>2)</sup> different sizes for KME2/1000  
<sup>3)</sup> depending on motor size

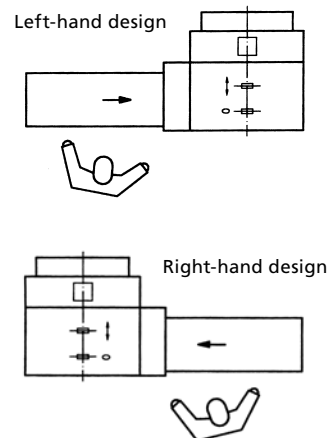


Fig. 27