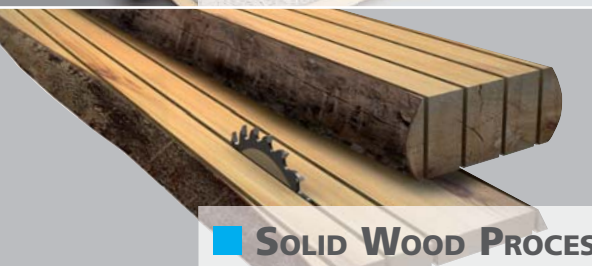


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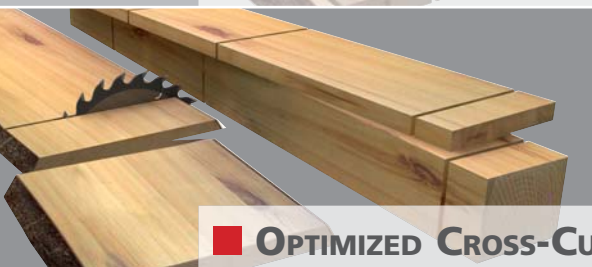
 **Paul** 
Maschinenfabrik GmbH & Co. KG



 **PANEL PROCESSING**



 **SOLID WOOD PROCESSING**



 **OPTIMIZED CROSS-CUTTING**












 **HANDLING SYSTEMS**

Circular Sawing Technology



- + Tradition and experience since 1925**
- + Competent staff and extensive know-how**
- + Worldwide service and free telephone support**
- + Customer orientation and long-term partnership**
- + Worldwide cooperation**
- + Worldwide references**
- + Quality and reliability**
- + Consistent return on investment for years**
- + High level of in-house production and high availability of spare parts**
- + User friendliness and in-house software development**

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First company building and logo

Founded in 1925, PAUL has gained many years of extensive experience in the design and production of woodworking machinery.

Machinery with an international reputation

In 1948 PAUL introduced the first double sided edger. The use of a welded steel frame construction as the foundation of our machines was a key element of our success. More than 8000 machines of edger model KME have been delivered worldwide.

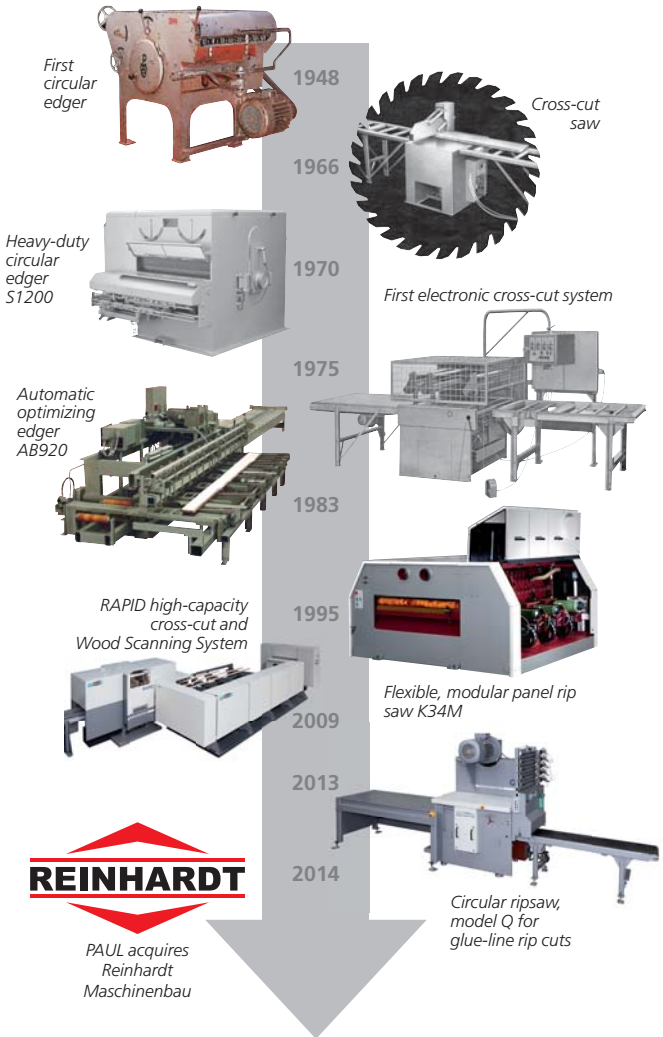


Historical letterhead of Max Paul

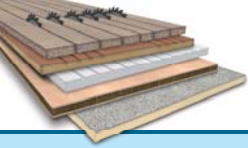
The range of machinery has been expanded and extended over the years and today PAUL is able to offer machinery and systems for both ripping and cross-cutting of solid wood and panels.



At the PAUL factory in Dürmentingen/Germany, on an area of 37000 square meters, machines are constructed and assembled and Sales, Administration and Training facilities for some 50 apprentices are located. The total PAUL area covers over 120 000 square meters.



The machines and systems we manufacture today are of high-quality, extremely robust and comply with the current state of the art. We put a very high priority on producing components in-house. In this way we keep the greatest possible control over the complete production process and ensure a high availability of spare parts.



RIPPING OF PANELS



The **M34**, **K34** and **SK** series multiprip saws impress with greatest flexibility and versatility. The numerous models with an opening width of up to 3000 mm, equipped with one or two tool shafts with fixed or movable set-ups are designed for a wide range of applications. They are perfectly suitable for ripping, grooving and profiling panels of a great variety of materials. The spectrum ranges from soft material such as mineral wool to hard CFRP or fiber cement.



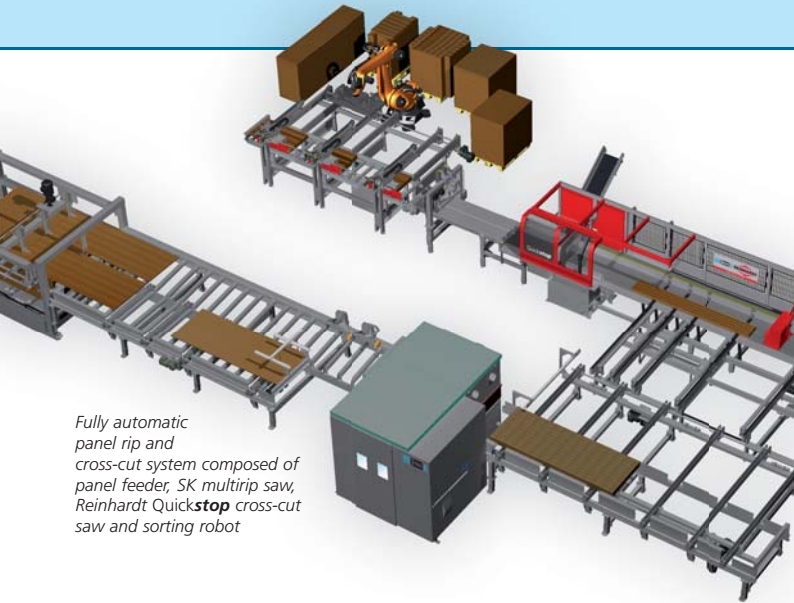
Model M34G/1500

These machines are not only used in sawmills and in the furniture industry, for the production of flooring elements, pallets, kitchen front panels, profile strips, glued up panels, door skins, but also in other industries, such as the plastics or packaging industry.

Panel ripping



Grooving and profiling



Fully automatic panel rip and cross-cut system composed of panel feeder, SK multirip saw, Reinhardt Quickstop cross-cut saw and sorting robot

The ability to implement unusual customer requirements is becoming an ever more important aspect of modern manufacture. This is a requirement which can no longer be met using an "off-the-peg machine". To enhance productivity and competitiveness, special panel processing solutions are often called for. Machines for the production of curved bed slats, for ripping panels with surfaces interrupted at right angles to the feed direction, and for processing panels up to 150 mm in thickness supplement the application range of the PAUL multirip saws.

PAUL not only supplies multirip saws as stand-alone machines, but also engineers complete custom-tailored high-performance systems with maximum uptime for ripping and cross-cutting panels and solid wood. The degree of automation is suited to the application concerned, ranging from partial automation through to fully automated high-end solutions.



K34G-OUR for ripping and profiling bed slats in a single pass



EDGING & RIPPING

For edging and multi-ripping, PAUL offers the right machine for every application, from the compact double edger to the heavy-duty high-capacity edging and multi-ripping system.



KME2-750 Circular Edger, manually loaded, operating in a sawmill

The "classic" machines for the manual edging of boards and planks, and for producing battens, are the circular edgers of the **KME2** and **KME3** series.

Drive motors up to 90 kW provide the necessary power to process workpieces up to 160 mm in thickness and 1000 mm in width. Equipped with up to four moving saw bushes and two independently moving splitting wedges these machines are extremely versatile.

KME2-750 Circular Edger with optional accessories





KME3-1016, manually loaded, with slab extractor and offcut separator

Manually, semi or fully automatically loaded, the **KME2 / KME3** machines meet almost all customer requirements. Combined with destacking systems, pinch rollers, slab extractors, offcut separators, sawdust shakers or other accessories they turn into an automatic edging and multi-ripping system for maximum efficiency.



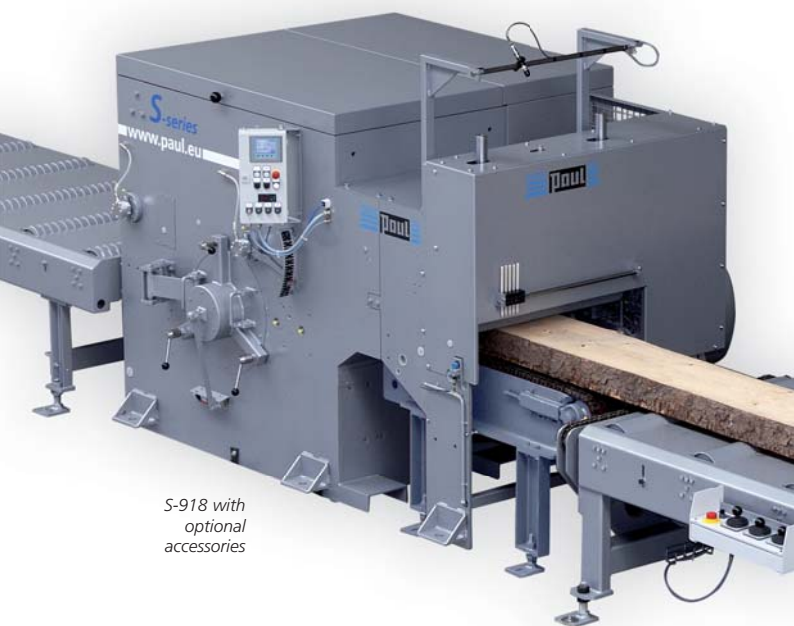
Edged and ripped boards

By integrating further handling components, such as chain conveyors or roller tables PAUL offers intelligent system solutions and complete production lines to the solid wood processing and sawmilling industries.



RESAWING

Resawing on the circular saw results in a higher output, a better surface roughness and a very high dimensional accuracy compared to ripping on the frame saw or band saw. For the optimum capacity utilization in the sawmill an efficient circular resaw therefore plays a key role.



*S-918 with
optional
accessories*

The machines of the PAUL **S** and **SGL** series are designed for heavy-duty applications, as a pure resaw or a combined edging and multirip saw for both cants and boards. They are robust, heavy and powerful. A cutting height of up to 225 mm and opening widths up to 1500 mm offer the right machine size for every requirement. Drive motors up to 250 kW provide the necessary power for maximum productivity.



Climb-cutting machine of the SGL series

The climb-cutting machines of the **SGL** series offer maximum working safety, high yield, smooth waste and edgings removal and guarantee an optimum guidance of the saw blade. Thanks to the improved workpiece support in the sawing area a high dimensional accuracy is achieved.

Both machine series can be equipped with a wide range of accessories to provide greatest flexibility.



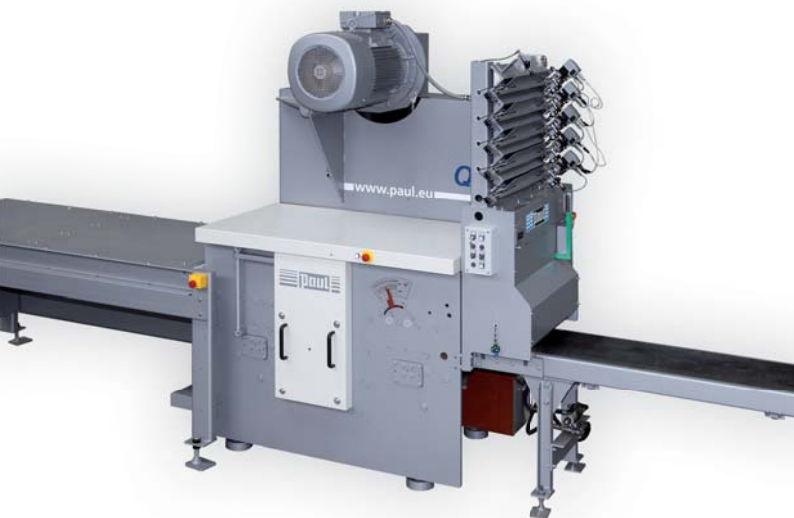
SGL-1222 in operation



SAB Semi-automatic infeed system

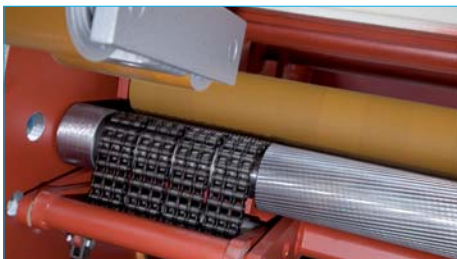


HIGH-PRECISION RIP CUT



The multirip saws of the **Q** series have been specifically developed for processing dried hardwoods. Depending on the requirements concerned, these machines are available with a saw shaft rotating against the feed or with the feed as a climb-cutting version, combining the benefits of feed rollers (robust, low maintenance, cost-effective) and chain bed (highly accurate workpiece guidance) for highest cutting quality. The products leaving the machine are ready for gluing. A specific optimization program increases timber yield and productivity.

The **Q** series can be equipped with a drive motor of up to 90 kW and up to 4 independently moving saw bushes for processing workpieces of up to 100 mm in thickness and 750 mm in width.



The feed system, a combination of feed rollers and chain bed



WIDTH OPTIMIZATION



AB920-XL fully automatic infeed system combined with an SGL-1518 for processing large and heavy workpieces

Maximum output and timber yield on circular edgers and re-saws is achieved through optimum measurement, optimization and alignment of the workpieces. The **POWER_RIP** series feeding systems not only center the individual workpieces, but also skew them taking into account their crook and taper – manually or fully automatically. Highest edging and ripping accuracy as well as maximum timber recovery are ensured.

Due to their modular design, the feeding systems **AB920** (fully automatic), **AB-MA** (manual alignment and automatic optimization) and **AB-MA_EXT** (fully automatic or with manual alignment) can be combined with different rip-saw models. Perfect coordination of the **POWER_RIP** components via an intelligent control ensures maximum yield optimization.

AB-MA_EXT infeed system combined with a KME3-1012 and an automatic offcut separator





CROSS-CUTTING

As a cost-effective starting solution, PAUL offers the **Basicline** of the Reinhardt brand. With numerous models, the cross-cut range is very diverse. They are available in cutting heights up to 225 mm and cutting widths up to 1000 mm in pneumatic or hydraulic design.

These **cross-cut saws** are suitable for use in joinery and carpentry companies, sawmills, furniture factories, etc. Whether they are used in the production of cases, battens or pallets, for pre-cross-cutting in solid wood processing lines or cutting extremely heavy planks or round wood, the PAUL cross-cut saws leave nothing to be desired.

The **Basicline** is available with a wide range of optional accessories to suit individual requirements.

- Manual, pneumatic or hydraulic length stops
- Electronically controlled stops and push-feed systems
- Roller tables with pendulum drive
- Protection devices
- etc.



Basicline with two-handed safety control, automatic clamping hood and mechanical stop



OPTIMIZED CROSS-CUTTING

*Slim**line** Optimizing cross-cut system of the Reinhardt brand*



Push-feed system with clamping device (option)

The Slim**line** with automatic push-feed system convinces with flexibility, efficiency and high accuracy. Minimal changeover and set-

up times for different kinds of workpieces and materials and varying dimensions enhance the efficiency of production.

The workpiece length and any crayon marks are detected during the return stroke of the push-feed system. Positioning of the pusher is effected at a very high speed. In addition, the push-feed system operates without the need for maintenance. To make optimum use of the cutting range, it is also possible to cut several pieces at once.

Joiners, packaging and pallet manufacturers, window producers and other users work considerably more efficiently, safely and comfortably with a Slim**line**.

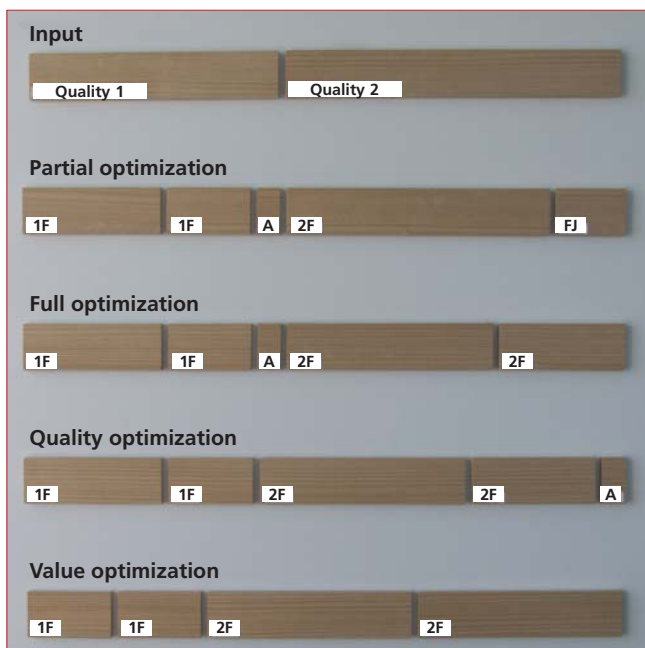


OPTIMIZED CROSS-CUTTING

CNC cross-cut systems will significantly improve the efficiency of production. A considerably increased timber yield, shorter throughput times and less manpower result in a higher increase in value, less expenses and therefore more profit.

The identification of wood characteristics plays an important part in optimized cross-cutting. PAUL builds optimizing cross-cut systems with simple crayon mark readers, with separate measuring stations, with scanners of renowned manufacturers or with a PAUL **Wood Scanning System** offering a solid and cost-effective start into the scanner technology.

Optimizing strategies



A = waste
FJ = finger joint length

1F = first grade component length
2F = second grade component length



*Model C11_KE CNC
cross-cut system*

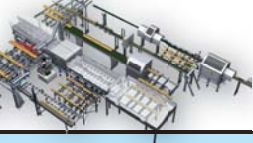
The PAUL optimizing cross-cut range comprises models for different timber cross sections and throughput capacities. The compact **C11** is particularly suited to small and medium-sized timber sections and the heavy-duty **C14_II** is ideal for large timber sections. The **RAPID** series is designed for high-performance cross-cutting.

The series **18** and **24** models are suitable for cutting waney-edged and heavy timbers. Defects are marked either with crayon lines or by laser. As in all cross-cut systems, the workpieces are optimized by the **MAXI 7** control.

Numerous accessories, such as destacking, stacking, handling, sorting, scanning systems, etc. provide further operator convenience and efficiency.



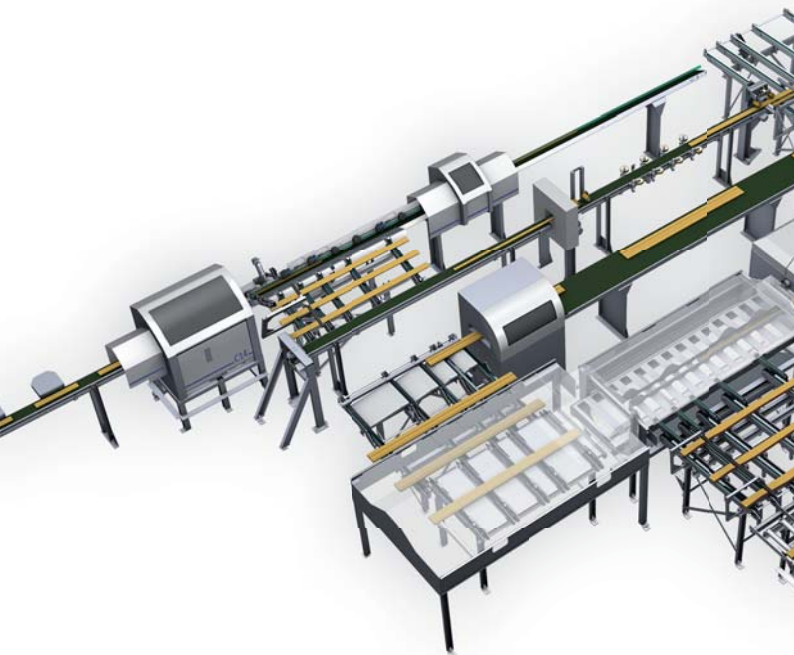
*RAPID CNC Cross-Cut System
with wood scanning system
and buffer station*



HANDLING SYSTEMS

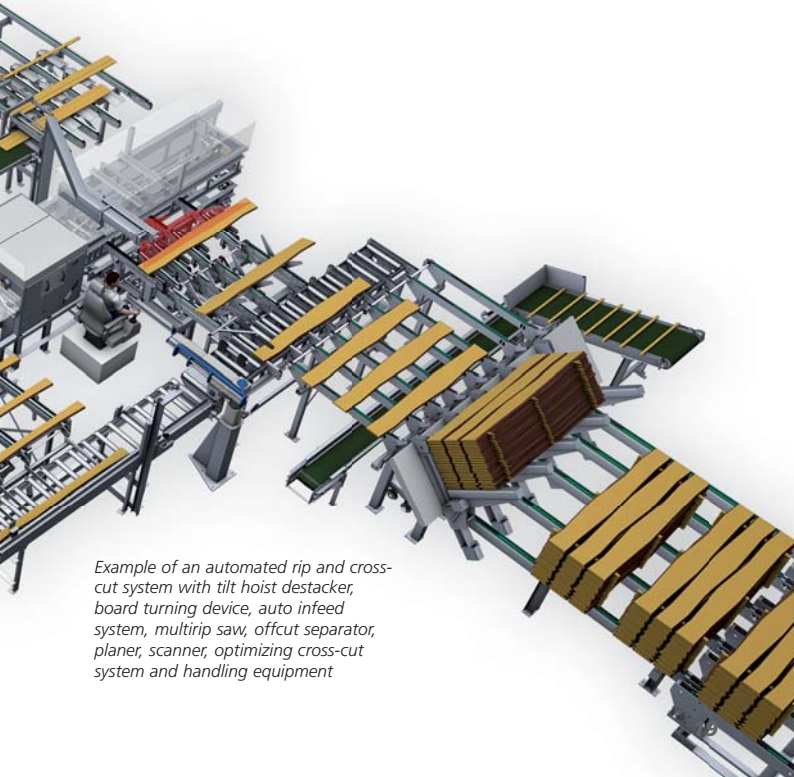
Customized complete solutions are implemented through interlinking of automated handling equipment, cross-cut systems and rip saws. Higher feed rates, interlinked processing steps, accurate workpiece guidance and automatic work flows lead to a significant improvement in productivity. Operator workload is reduced and the standard of security increased.

We design and develop customized automatically linked processing lines and are able to advise you from the planning stage up to commissioning. Where components are required that are not included in our product range we work with renowned manufacturers to complete the system.









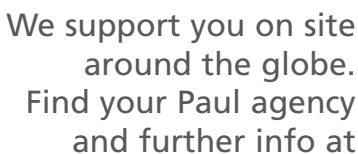
Dual cross-cut system with vacuum destacker, moulder, scanner, two cross-cut stations, length sorting system and handling equipment



Example of an automated rip and cross-cut system with tilt hoist destacker, board turning device, auto infeed system, multirip saw, offcut separator, planer, scanner, optimizing cross-cut system and handling equipment



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