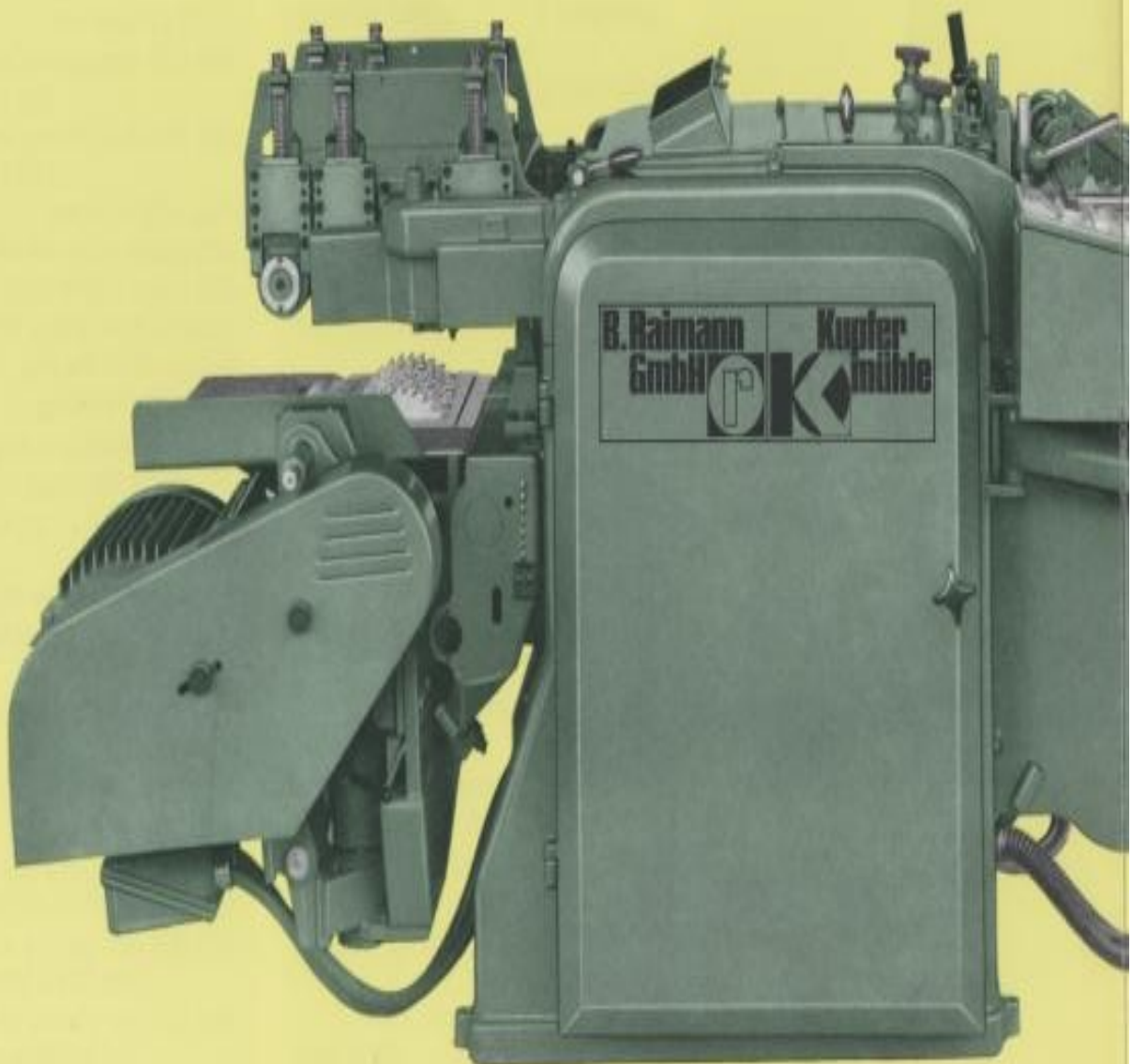
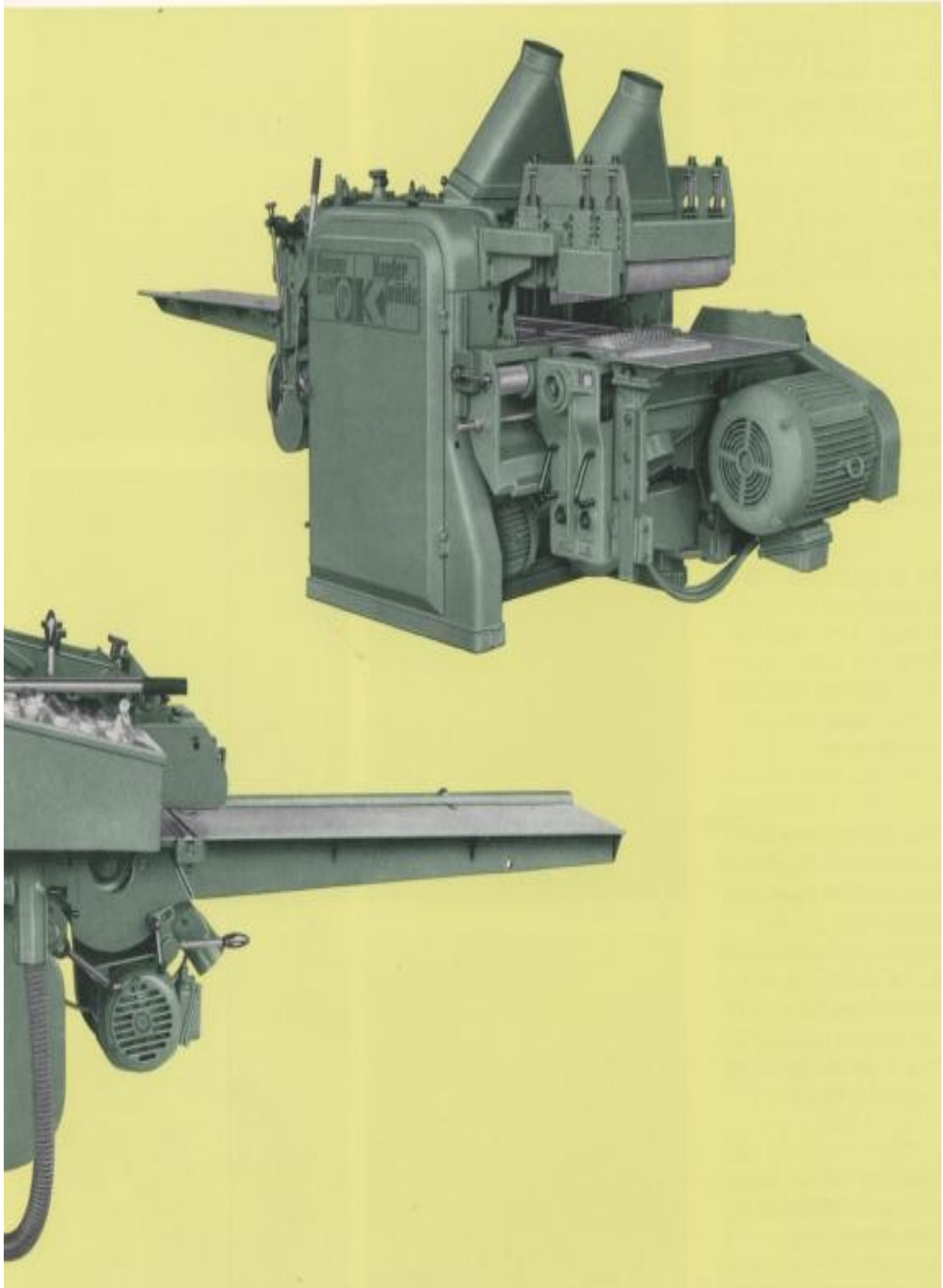


# DK14

High Production  
Universal Planing  
and Sawing Combination



# Economical combination of two functions in one machine



# DK 14 High Production Combination for universal uses, enhances quality, cuts costs

The K 14 Saw Unit, manufactured by B. Raimann GmbH, is provided with triple splinter catchers.

Mounting, working width of the saw sleeve and operational standard of the 250 and 300 mm dia. blade variants are identical with the Raimann K 12 High Production Machine.

For utilizing the planing knives in their full lengths, the planer table mounted saw unit is adjustable sideways to suit the working width.

For alignment to center or side fence it can pivot by a small amount limited by stops.

Plastics coated rollers convey work pieces finished at all sides.

The diagrammatic sketch shows: Sawing follows immediately planing. This results in salient plus features:

1. Angular accuracy and neatness of the cuts due to the cutting stock being accurately supported during sawing.

2. Power requirement reduced due to the wood thickness being reduced by planing and due to the use of a spray attachment for cooling and deresinifying of the saw blades.

3. Saw life increased due to surface roughness being eliminated by planing.

4. Kick-back risk reduced due to saws operating below the table.

5. Wastage reduced due to the use of thin saw blades.

6. Machining of extremely short work pieces is feasible due to the close sequence of the ten feed rollers conveying safely any stock.

The planing unit, the multi-sided universal planing machine DOIN, manufactured by Maschinenbau Kupfermühle KG, combines not only the functions surfacing, jointing, thickening, and moulding, but also chip saving procedures:

1. Calibrating - symmetrical chip removal of excess thicknesses, warped cross sections being flat-pressed to maximum extent.

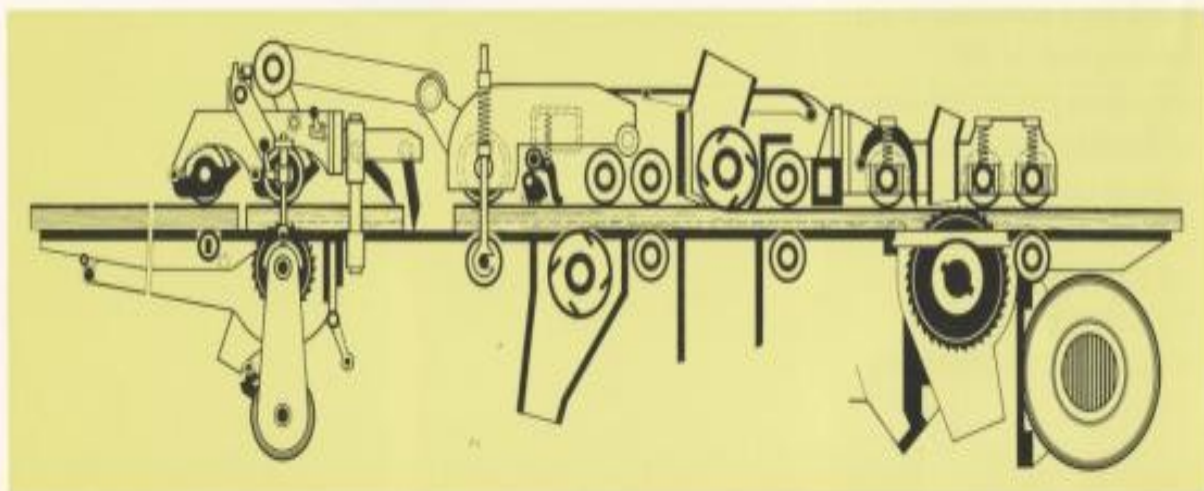
2. Scoring and double-sided equalizing result in a high yield of wood, in the case of unedged stock (soft-textured wood), and in perfectly straight guidance.

3. Deep scoring in the heart or center and surface planing with thickening.

Since a K 14 saw blade of suitable thickness is accurately aligned to the center fence, methods 2 and 3 lead to maximum output increase: wide raw cut offs supply directly many long finished parts.

Among others, work cycle 3 reduces the mechanical preparation of any straight upholstery rack parts to dimension cutting of the beech planks and passing of the custom-tailored parts through the planer saw combination unit.

This machine refutes some prejudices maintaining e.g. that beech surfacing over the full plank width was impossible due to considerable warpage in length and width or that equalizing planing of the core stock entailed cost increase due to chip loss. As a matter of fact, quality is enhanced. The work requirements being the same or less. The use of the high production combination is economical in any case where there is a need for flat surfaced, accurately cut stock, but also where the versatile planing or sawing unit performs separately in its particular functions.





## Technical data

### Multiple-rip-saw

cutting height – multi-blade	max. 50 mm
cutting height – single-blade	max. 50 mm
saw-blade ø multi-blade	max. 250 mm
saw-blade ø single-blade	max. 250 mm
saw-blade ø	min. 160 mm
with cutting height	max. 5 mm
saw-blade bore (double key-way)	70 mm
key-way dimensions each	20,5 x 4,25 mm
spacer ø	min. 100 mm
clamping width of saw sleeve	max. 407 mm
saw spindle speed	4500 rpm
width of feed rollers	610/770 mm
rip-saw-motor mounted on support at the main frame (side-ways and height adjustable support mounted on floor on request)	from 40 – 60 hp
speed of rip-saw-motor with 50 cycles	3000 rpm

### Planing machine

planing width	605, 760 mm
working thickness	max. 200 mm
working thickness on request	min. 3 mm
diameter of cutter block cutting circle with 605 mm planing width	126 mm
with 760 mm planing width	145 mm
speed of cutter blocks with 605 mm planing width	6000 rpm
with 760 mm planing width	5300 rpm
cutter dimensions with 605 mm planing width	610 x 35 x 3 mm
with 760 mm planing width	770 x 35 x 3 mm
max. chip removal with upper cutter block	20 mm
with lower cutter block	12 mm
shortest work piece length independent feeding	420 mm
end to end feeding	250 mm
height of table above ground with wood thickness of 25 mm	approx. 890 mm
feed rates	7-9-11,5-14-18-23 m/min.
other series, also stepless on request	
crate dimensions of machine DK 14 with 605 mm planing width	2500 x 1850 x 1500 mm
with 760 mm planing width	2500 x 2000 x 1500 mm
weight of machine DK 14 with 605 mm planing width	net 2950, gross 3350 kg
with 760 mm planing width	net 3550, gross 3950 kg

Multiple saw planer lines and machines arranged in reverse order have been used in some cases to satisfy low-cost production of cross-banded lumber veneered boards of high level quality. That is expensive, occupies a large space, setting and adjusting being slow and the operational possibilities peculiar to the individual machines being narrowed, even if their machining capacities are fully available for other duties and can be matched to each other. As to planing and sawing, the requirements for accuracy, output, and material-saving operation had been met in a long-time development and materialized in top ranking makes.

Incorporating these results into a work combination not handicapped by the drawbacks mentioned was an imperative need and opened up application in a great number of work cycles not available so far. This is the task we have solved in cooperation with DK 14.