

Weinig

Mosaic Parquet Units



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Nature provides a great variety of woods with different appearances and technical qualities. One third of the earth's surface is covered by forests which are the source of natural wealth.

Parquet

is wood flooring that lives and is available in a wide variety of structures. It has all those easy-to-care-for qualities, absorbs noise and is so hard wearing that it will outlive generations. Years ago it was only to be found in the homes of the gentry, today it is a status symbol reflecting a high standard of living.

Over the years an efficient parquet industry developed in Europe, an industry supported by a continual growing demand which made rational production methods essential even for wood of inferior quality.

Only one type of parquet could meet the demand, i.e. the mosaic parquet made up of wood slats assembled in chess board pattern and glued together as single tiles. Today, anyone can afford this mosaic parquet. It underlines good taste and hints at extravagance. At present it is the most popular of the wood floors to be laid in private and public buildings, offices and restaurants, etc.

The demand for "unusual" woods has opened up new marketing perspectives in Europe. However, the production of mosaic parquet in exotic woods has proved to be an expensive business for the market countries and this is why wood exporting countries have set up production shops right in the forests in Asia, Africa and Latin America as foundation stones of a healthy wood working industry. Nevertheless, the available capacity can by no means meet the steadily rising demand.

The production of mosaic parquet depends entirely on the unit employed.

Only technically perfect, robust machines will stand up to extreme climatic conditions and permit productivity at such a high level, both qualitatively and quantitatively.

Units

have been on the market for some considerable time. Sophisticated, progressive installations which also provide troublefree production even with those rare woods known to be critical to machinery. We are talking, of course, about Weinig mosaic parquet machines. Units that can be built up stage by stage on the modular element principle, depend on actual requirements and financial resources. These are plants which will produce anything from a few hundred to a few thousand square feet of mosaic parquet per shift.

The world-wide success over very many years is sufficient proof that the Weinig conception is right.



Michael Weinig KG

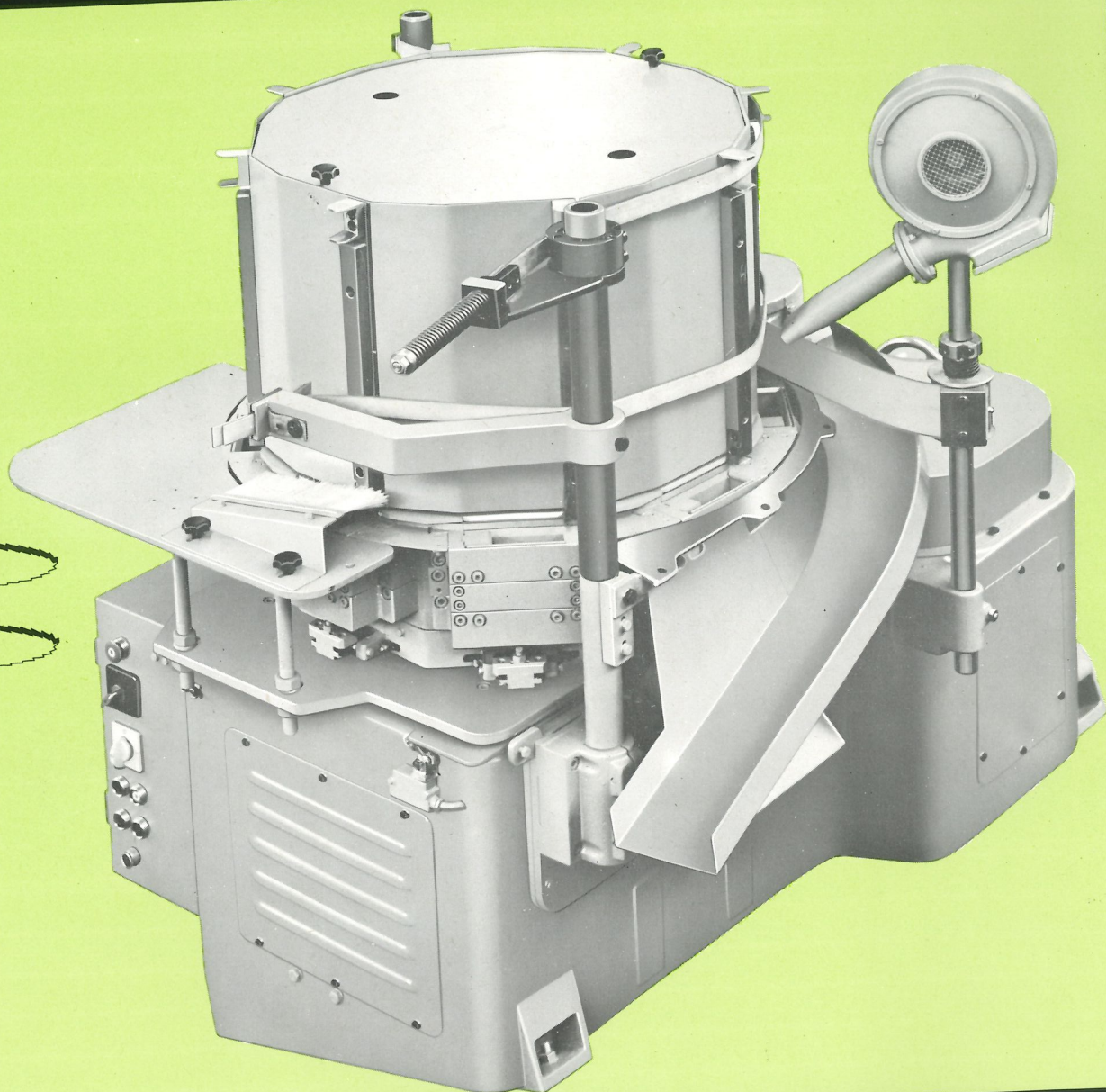
Manufacturers of Special Woodworking Machinery
D-6972 Tauberbischofsheim, P.O. Box 1440
Fed. Rep. Germany
Phone: 9341/651 · Telex: 6-89511

Cut-Off Saw

P 150

The horizontally rotating drum is loaded with roughcut battens. Clamping straps ensure absolute square cutting of the blocks from the battens. The cut battens move automatically down the shaft so

that the respective shaft only needs to be refilled when the batten has been used up completely. The cut surfaces of the block are the reference edges for the subsequent machining operations.

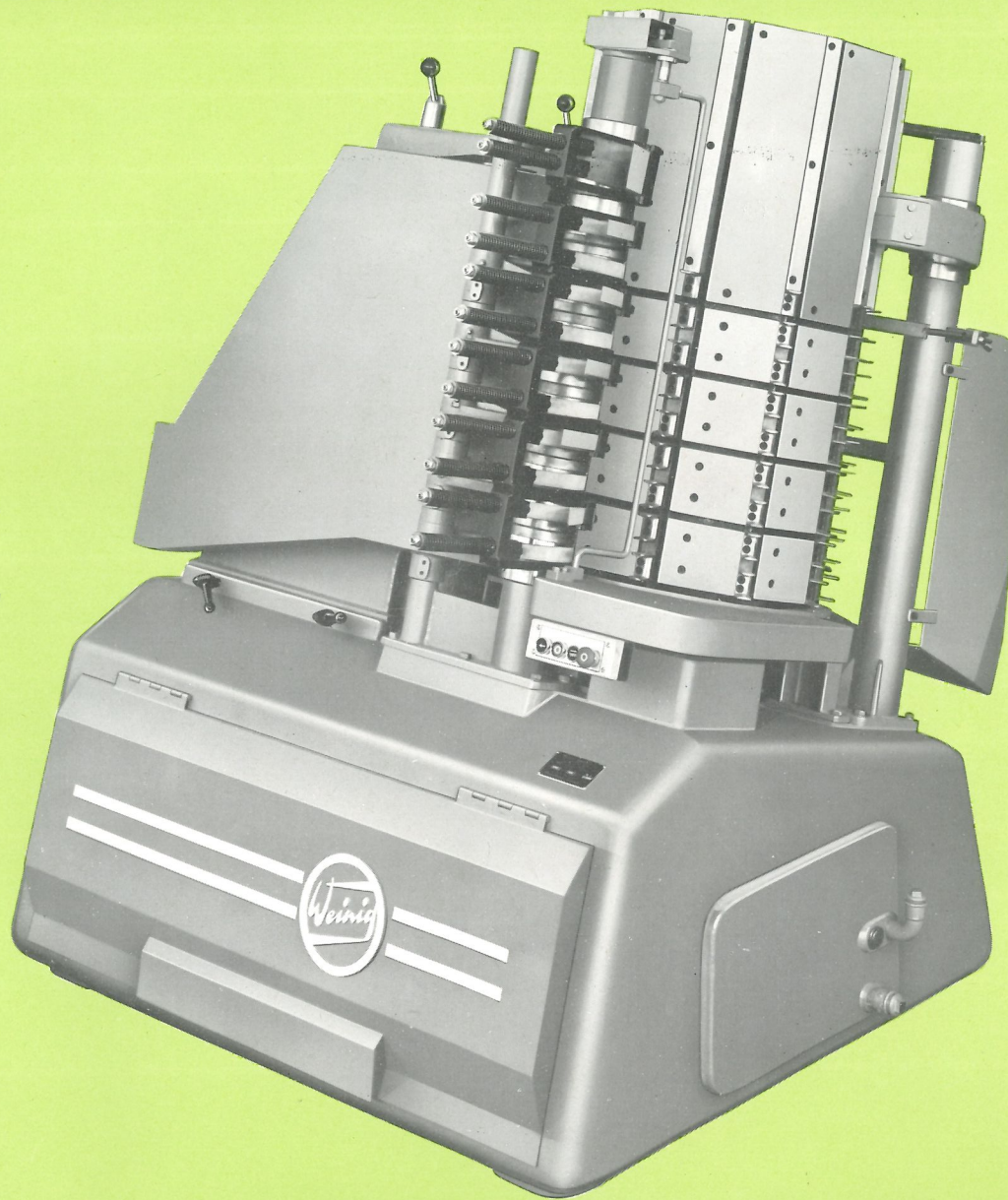
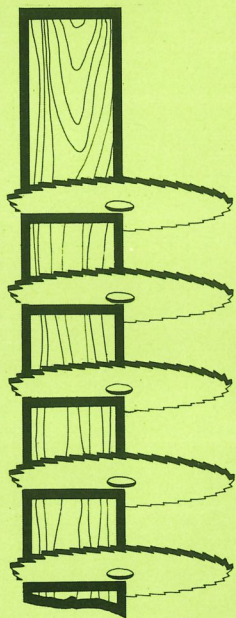


Multiple Cut-Off Saw

P 160

The horizontally rotating drum is loaded with roughcut battens. Clamping straps ensure absolutely square cutting of maximum 4 blocks from the batten. The first sawing unit scores the wood, the

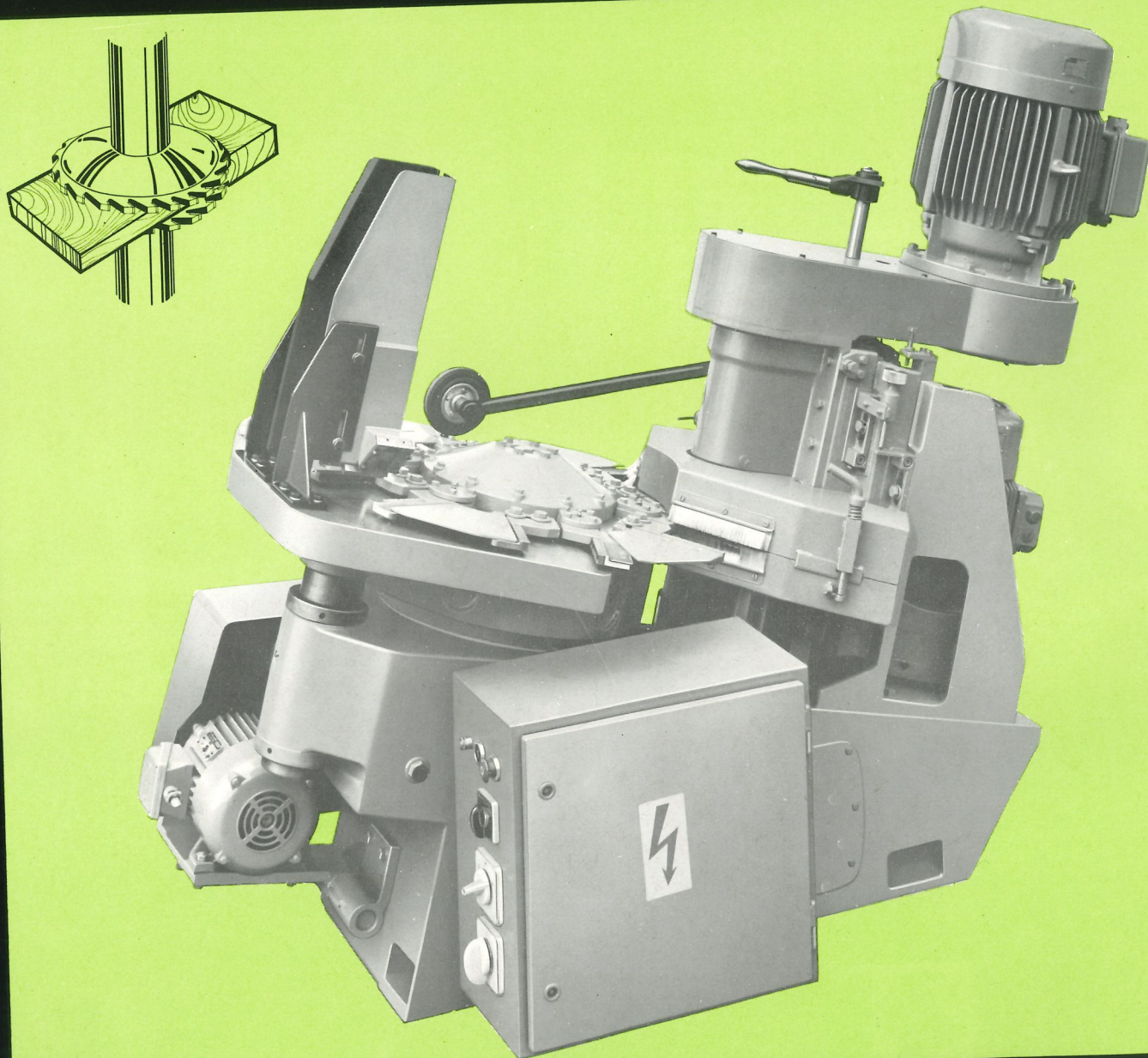
second performing the actual cutting operation. The cut surfaces of the block are the reference edges for the subsequent machining operations.



Dual Surface Planing Machine P 151

The blocks stacked in the magazine are taken up by the clamping jaws and carried through the surface planing unit. The cutters

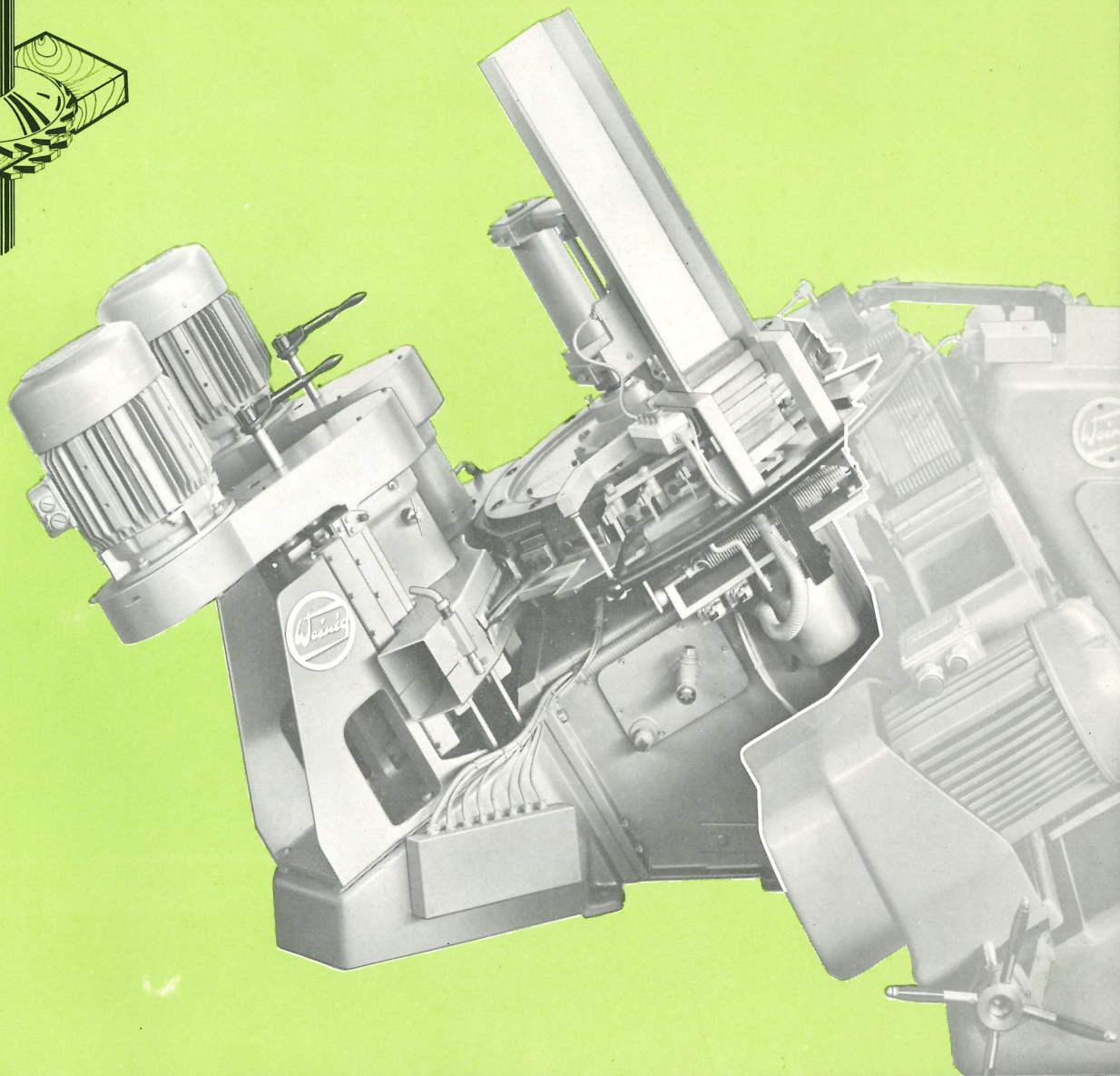
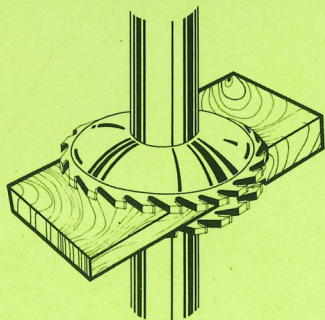
machine these blocks from both sides to give them their exact thickness which is the subsequent width of the slats.



Dual Surface Planing Machine P 161

The blocks stacked in the magazine are taken up by the clamping jaws and carried through the two surface planing units. The first

cutter trims the blocks to approximate size, the exact thickness — the width of the slats — being determined by the finish planing unit.

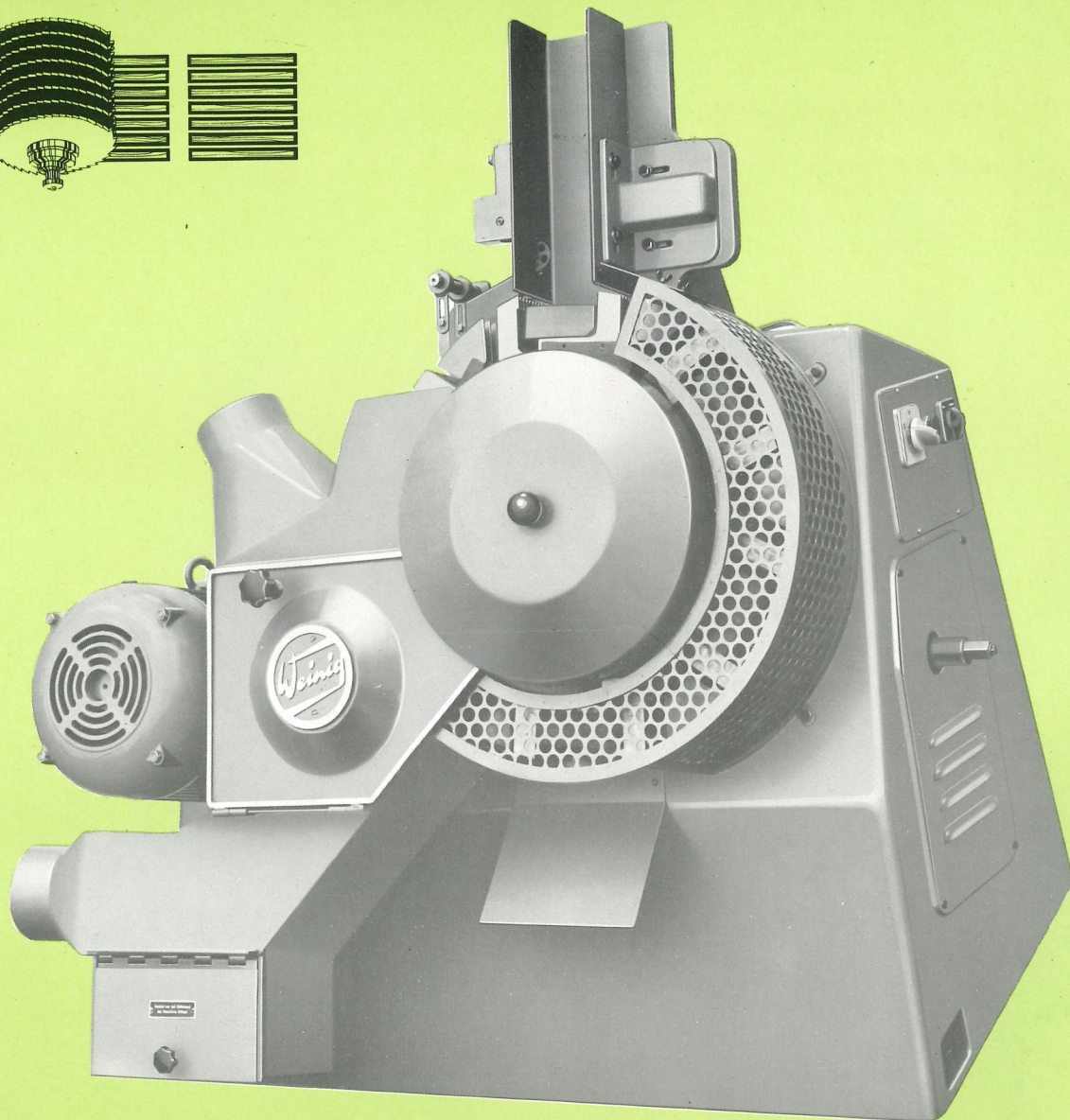
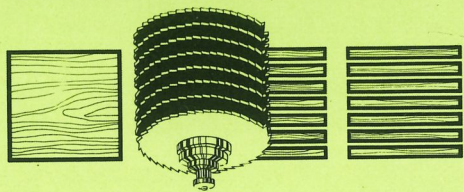


Multiple Slat Saw

P 152

Clamping stations take over the machined blocks from the magazine and transport them

through a multiple saw assembly which cuts them into slats.

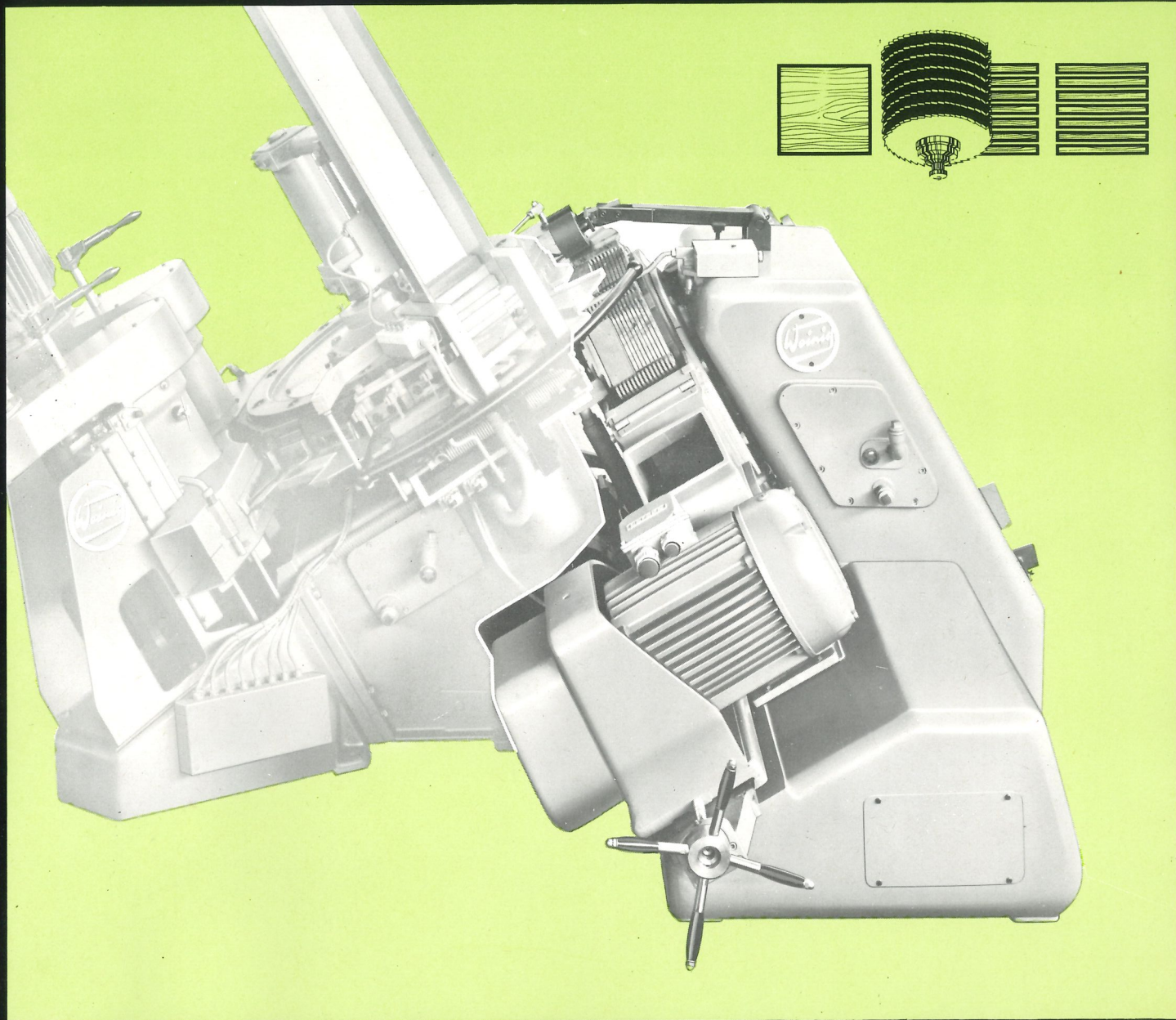


Multiple Slat Saw

P 162

Clamping stations take over the machined blocks from the dual surface planing machine, Type

P 161, and transport them through the multiple saw assembly which cuts them into slats.



Slat Grading Machine

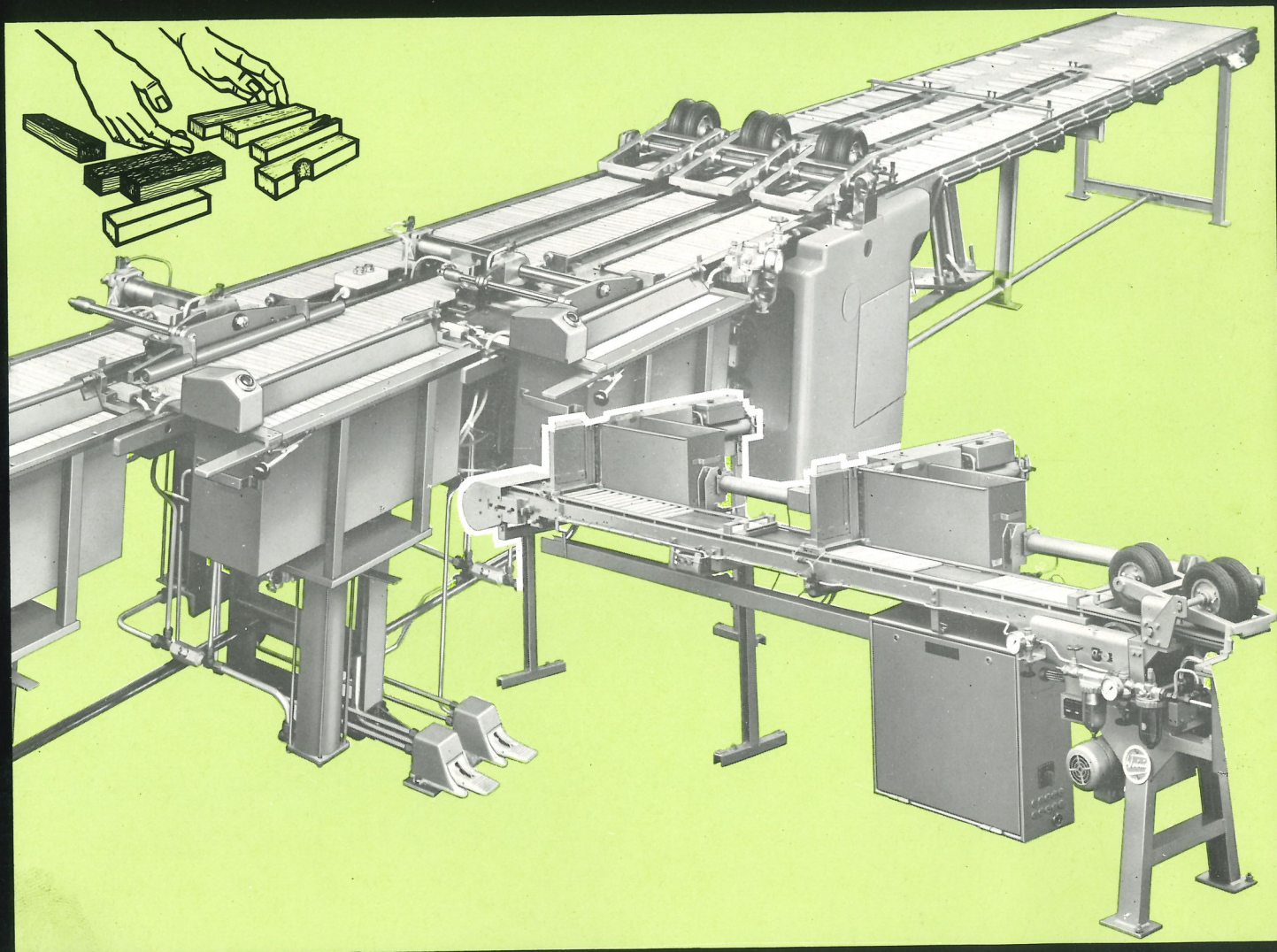
Automatic Slat Mixer

P175

The slats are sorted by hand into three grading channels according to their quality, colour, tone and grain. Automatic stacking in the box magazines takes place at the end of the machine.

P179

The slats stacked in the box magazines are pushed out layer-wise and mixed at the delivery end of the machine before being restacked in the box magazines.



Automatic Assembling and Glueing Machine

The slat shafts of the magazine tower are arranged corresponding to the mosaic pattern. The bottommost layer of slats is conveyed past a viewing station to the glueing station in a strict work cycle.

P 176

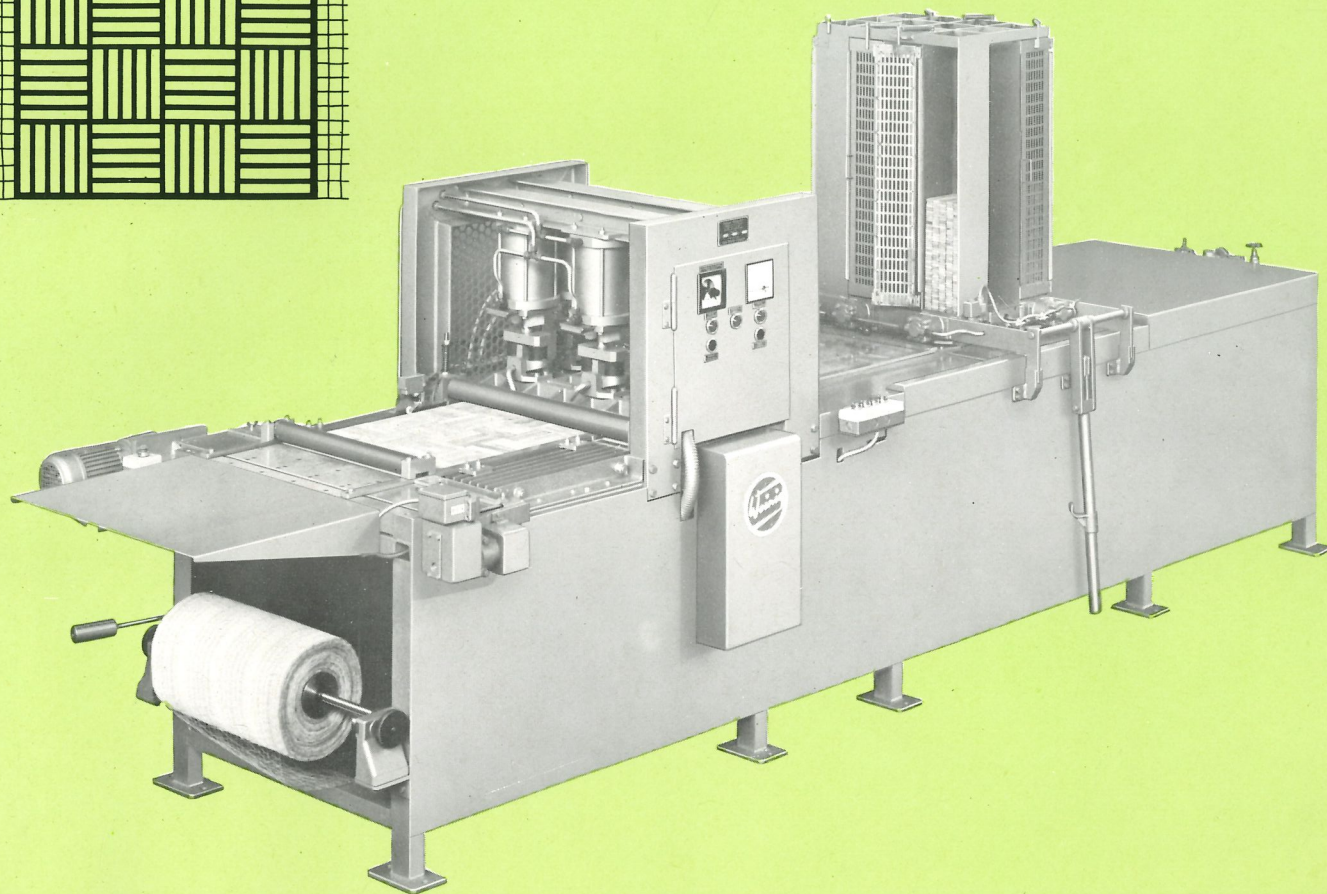
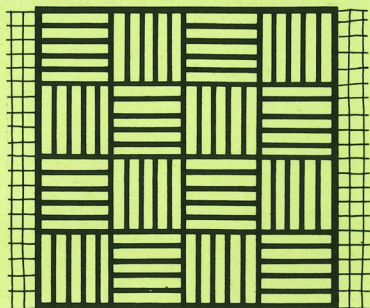
(not illustrated). Gummed paper, automatically moistened, is fixed on to the top of the string of parquet tiles and dried by hot air.

P 177

The thermoplastic adhesive webbing is introduced between the underside of the slats and a hot plate near the pressing station. The adhesive in the webbing is

A knife cutting across the web separates the endless string into individual tiles.

released through the applied heat to join the slats together. A knife cutting across the web separates the endless web into individual tiles.



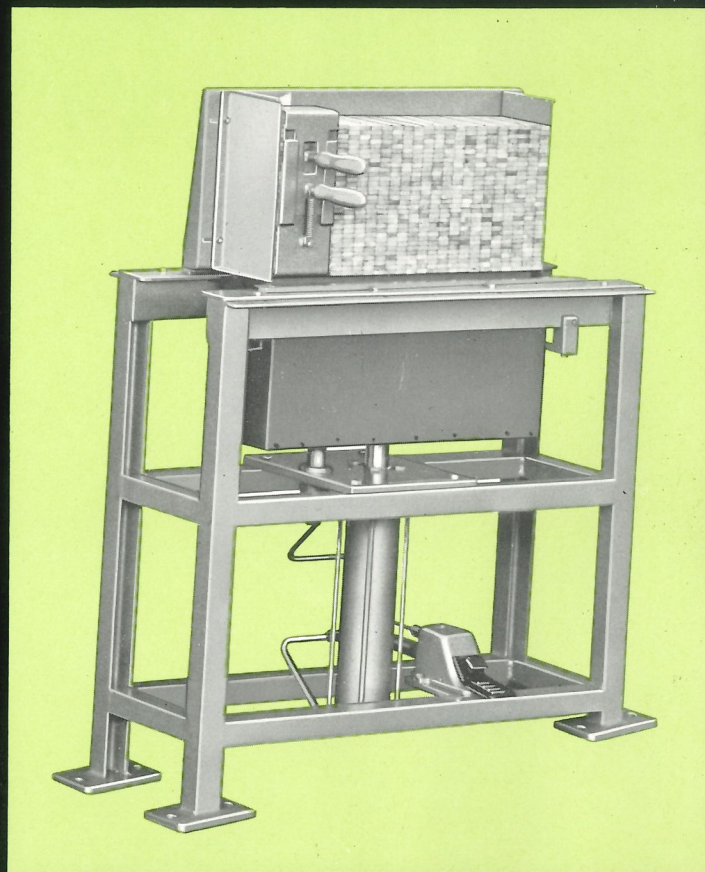
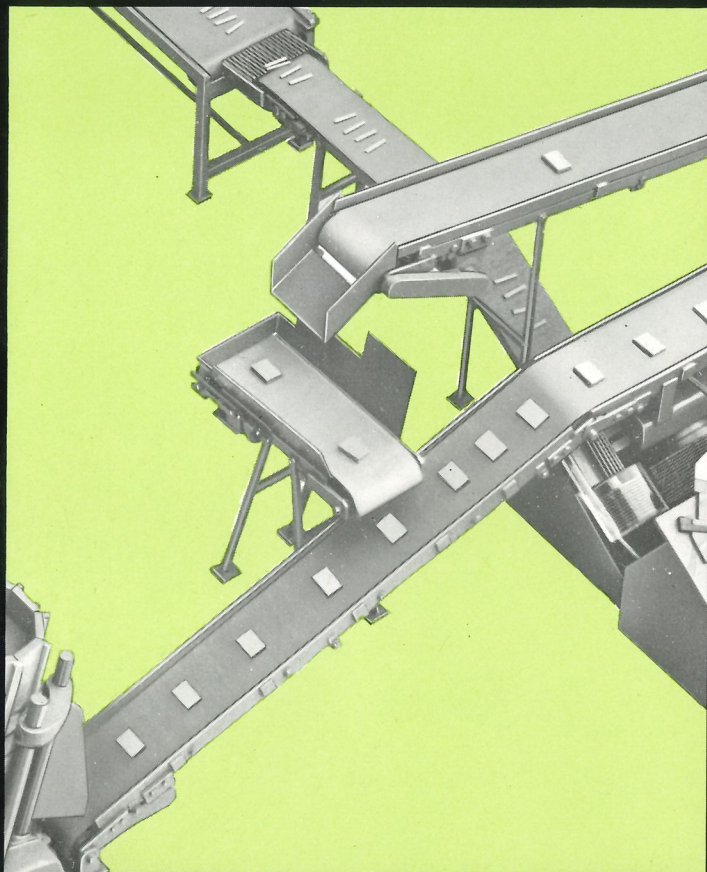
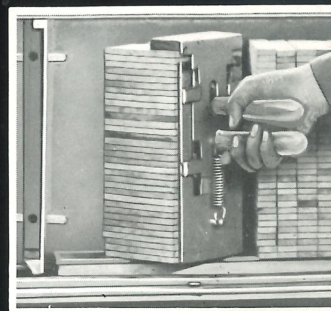
Linking elements are required between the different machines to make up modern production units.

Conveyor Belts

- P 155** link up P 150 – P 151 – P 152 – P 175
- P 165** link up P 162 – P 175
- P 166** link up P 160 – P 161/P 162 or P 160 – P 151
- P 167** The return conveyor belt running parallel to P 166
- P 168** link up P 166 – P 167

Ejector Stand and Slat Clamp

Troublefree clearing of the slats from the containers is ensured by this stand. The magazine tower of the automatic assembling and glueing machines can be filled expediently and effectively with the special clamp.



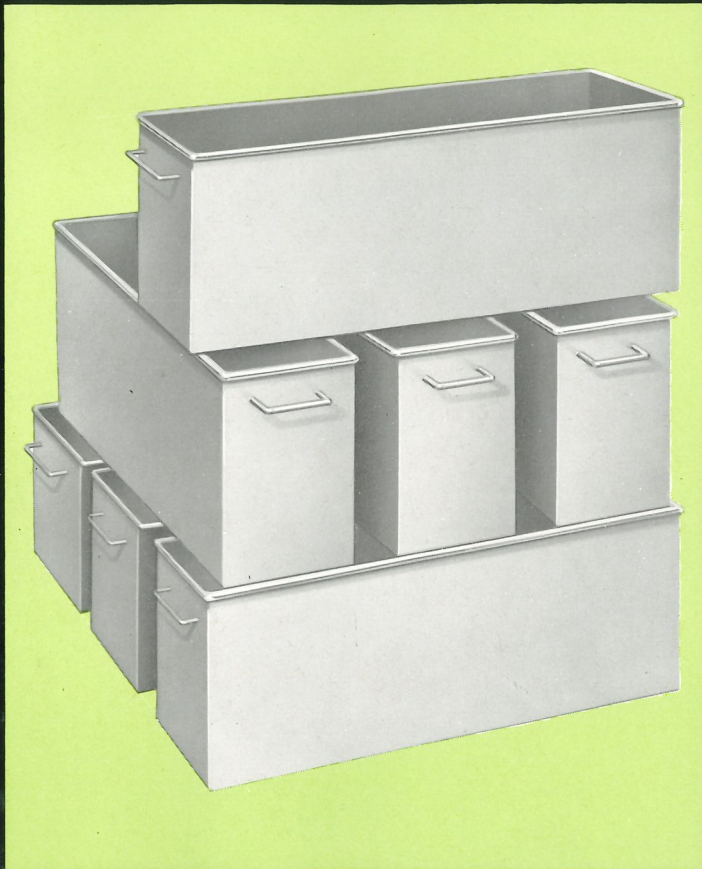
Hand Assembling Frames

P184

The slats are laid by hand in the required mosaic pattern in these frames and the top surface covered with gummed paper. Capacity: 5 layers one on top of the other.

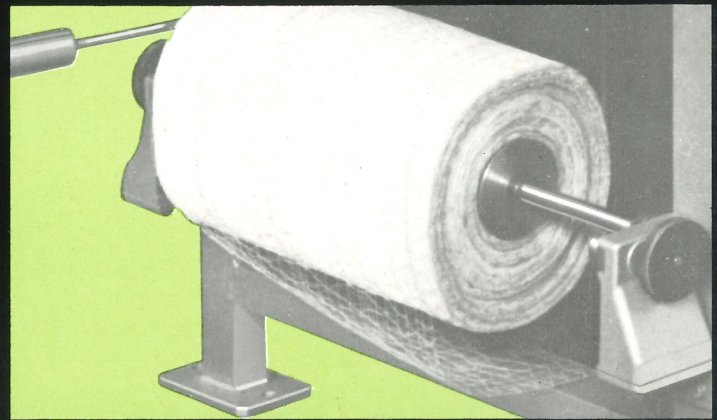
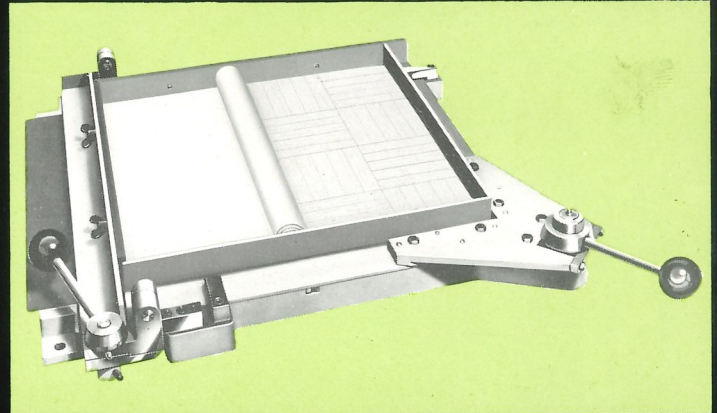
Containers

These are the containers for stacking and storing the sorted slats before they are assembled and glued.



Thermoplastic Adhesive Webbing

Rolls of webbing for glueing the undersides of the tiles on the automatic assembling and glueing machine, Type P 177.

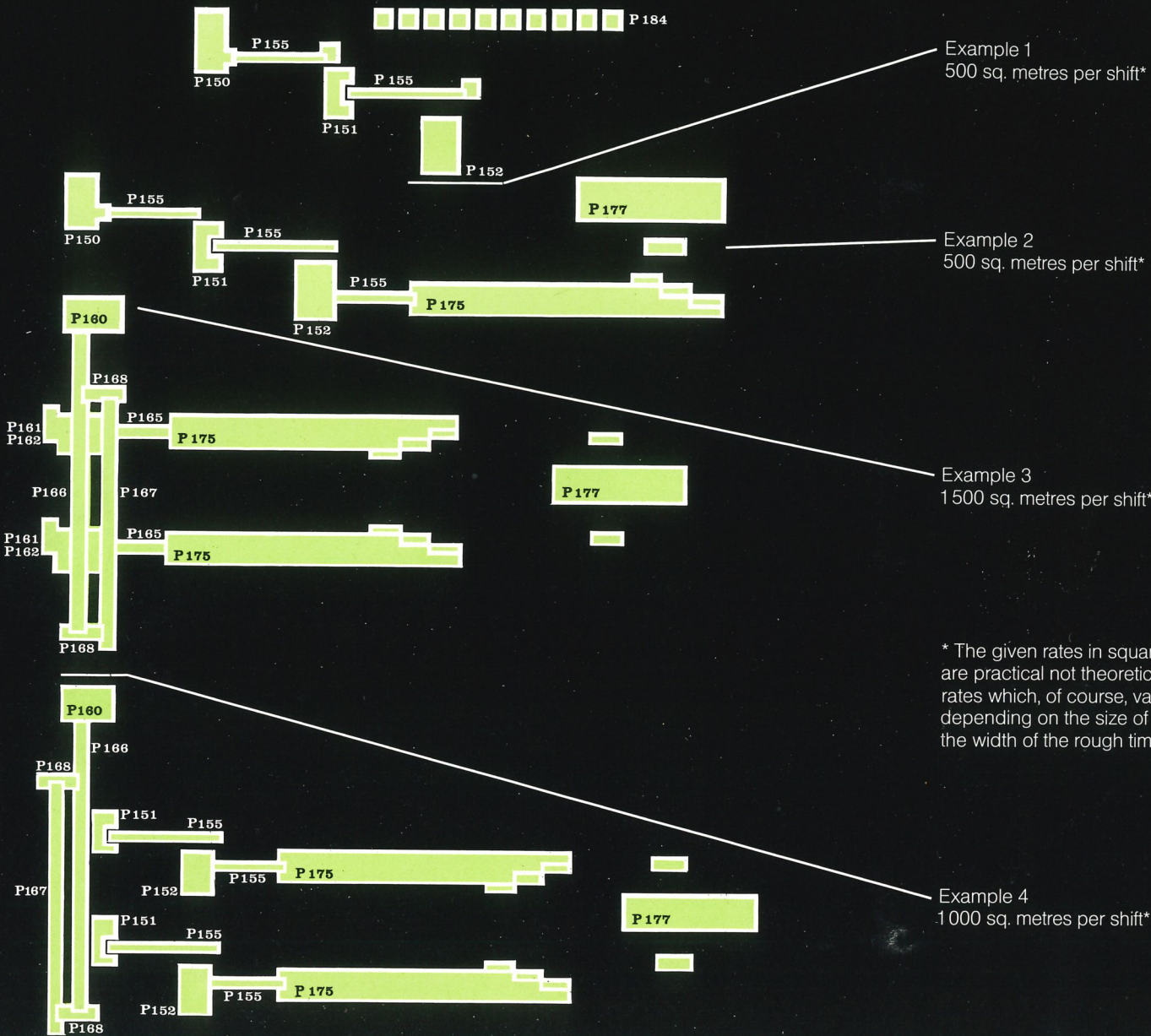


The Weinig Modular Element Principle

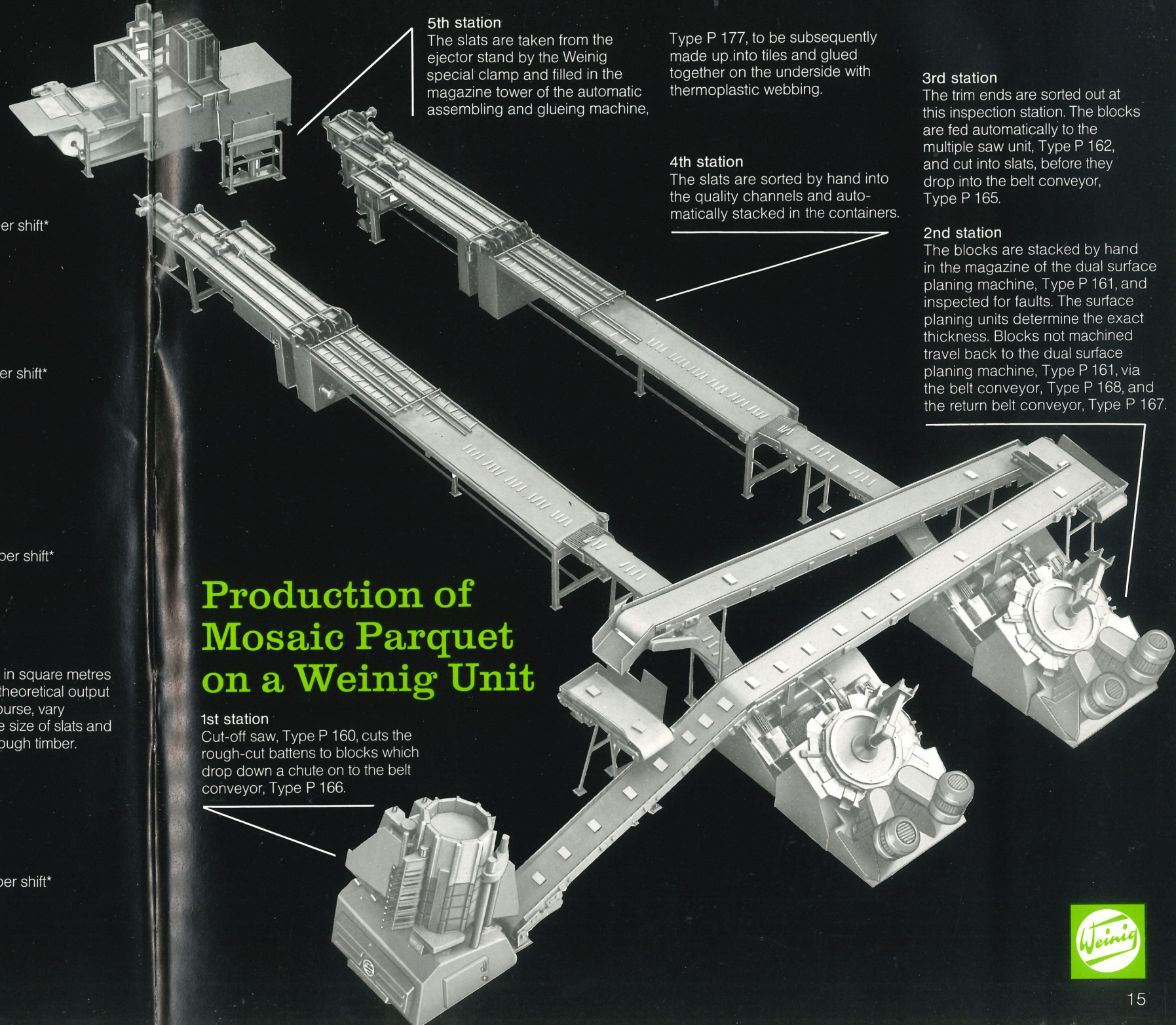
Weinig parquet units incorporate an advanced conception combined with technical perfection — that is what the Weinig parquet plant has to offer. This flexible modular element

system permits the various machines to be combined to form complete plants of varying size, beginning with the smallest unit with a production volume of 400 sq.

metres per shift to the heavy duty units with any required capacity. Here are some examples:



* The given rates in square metres are practical not theoretical output rates which, of course, vary depending on the size of slats and the width of the rough timber.



5th station
The slats are taken from the ejector stand by the Weinig special clamp and filled in the magazine tower of the automatic assembling and glueing machine,

Type P 177, to be subsequently made up into tiles and glued together on the underside with thermoplastic webbing.

4th station
The slats are sorted by hand into the quality channels and automatically stacked in the containers.

3rd station
The trim ends are sorted out at this inspection station. The blocks are fed automatically to the multiple saw unit, Type P 162, and cut into slats, before they drop into the belt conveyor, Type P 165.

2nd station
The blocks are stacked by hand in the magazine of the dual surface planing machine, Type P 161, and inspected for faults. The surface planing units determine the exact thickness. Blocks not machined travel back to the dual surface planing machine, Type P 161, via the belt conveyor, Type P 168, and the return belt conveyor, Type P 167.

Production of Mosaic Parquet on a Weinig Unit

1st station
Cut-off saw, Type P 160, cuts the rough-cut battens to blocks which drop down a chute on to the belt conveyor, Type P 166.



Technical data

Subject to revision

Size in mm

Machine Type	Number of clamping stations	Capacity in blocks per minute*	Operator	Spindle speed per minute	Power requirement of the machines in DIN h.p.			Tools					Dimensions of packing crate			Shipping space requirement in cu.metres		Machine weight in kilogram (gross)	
					Feed	Standard	Uprated	Quantity	Diameter	Setting	Bore	Quality****	Length	Width	Height	Land	Sea		
Cut-off saw P 150	8	60 or 75	1	4600	2.05	7.5 +0.12(supercharged engine)	10 +0.12(supercharged engine)	1	250	2/3.2	80	CT	2000	1360	1600	4.4	900	1100	
Cut-off saw P 160	10 x 4	148 to 220	1	3000	3	2 x 10	2 x 13.6	4	250	6/8	80	CT	2400	1900	2350	10.7	2500	2900	
Dual surface planing machine P 151	6	52 or 60	1	6000	1	top 20.5		1	300	3.5/5	120								
						bottom 15													45
Dual surface planing machine P 161	Slat length 100 to 140 mm 12 140 to 160 mm 10	72 or 84 60 or 72	2**	6000	4	top 2 x 20		1	204/200	Upper surface cutter	45								
						bottom 15						45							
Multiple slat saw P 152 S	6	52 or 60	1	6000	1	30	35	10	200	1.8/2.6	60		CV	2055	1330	1400	3.8	1200	1400
Multiple slat saw P 152												Slat length 100 to 140 mm 12 140 to 160 mm 10							
Multiple slat saw P 162 S	140 to 160 mm 10	60 or 72	—	6000	1	47.5 + 3 (Clearing saws)	15	250	1.6/2.2	75									
Multiple slat saw P 162											Clearing saw 3000		—	6000	1	65 + 3 (Clearing saws)	1	250	2.5/3.1
												Clearing saws							
												16	220	2.5/3.0	60	CV			

* The selected rate depends on the type of wood

** The second operator is only necessary when trim cuts are to be sorted out.

*** The figures state the essential quantity of the compressor in 1 minute for every 1 atm.
compressed volume = $\frac{\text{essential quantity}}{\text{working pressure}}$

**** CT = Saw blade, carbide tipped
CV = Saw blade, chromium-vanadium

Machine Type	Output in square metres per hour	Belt speed in metres per minute	Operator	Air requirement in litres per minute	Required compressor rate in atm.	Motor rating in h.p.	Dimensions of packing crate			Shipping space in cu.metres	Machine weight in kilogram (gross)	
							length	width	height		Land	Sea
Slat grading machine P 175	70 to 90	Step switching 7.5 - 21	5	250	6	1	5400	1400	1500	11.4	1500	1900
Automatic slat mixing machine P 179	75	45.5	1	350	6	0.35	4000	1200	1300	6.3	700	1000
Automatic assembling and glueing machine P 176	100 to 250	Cycle switching 15 17 20	2	700	6	2.2	3900	1500	1500	8.8	1700	2300
			3									
Automatic assembling and glueing machine P 177	100 to 250	Cycle switching 15 17 20	2 to 3	700	6	12.5	4400	1560	1580	10.8	1700	2300
Belt conveyor P 155	—	22.5	—	—	—	0.35	For two conveyors 2200 600 500			0.7	280	400
P 165	—	22.5	—	—	—	0.5	Conveyor crate containing 2 conveyors P 165, 1 conveyor P 166 1 conveyor P 167, 2 conveyors P 168					
P 166	—	20.5	—	—	—	2.0						
P 167	—	21	—	—	—	1.0						
P 168	—	28.5	—	—	—	0.35						4500

Dust exhaust system

Maschine Type	Air requirement in cubic metres per hour	Air speed in metres per second	Number of exhaust intakes	Size or diameter of exhaust intakes		Required connection pipe diameter		Chip or waste chutes
P 150	1900 ... 2300	25 ... 30	1	140 x 150		160 dia.		1
P 160	5000 ... 6000	25 ... 30	2	180 x 150	250 x 115	180 dia.	180 dia.	2
P 151	2000 ... 2400	25 ... 30	1	155 x 140		160 dia.		
P 161	3900 ... 4700	25 ... 30	2	140 x 155		160 dia.		
P 152	3200 ... 3800	25 ... 30	2	150 dia.	150 dia.	150 dia.	150 dia.	1 waste box
P 162	7800 ... 9300	25 ... 30	2	220 x 155	270 x 155	200 dia.	250 dia.	

Calculating the production rate

How the example is calculated:

Given data:

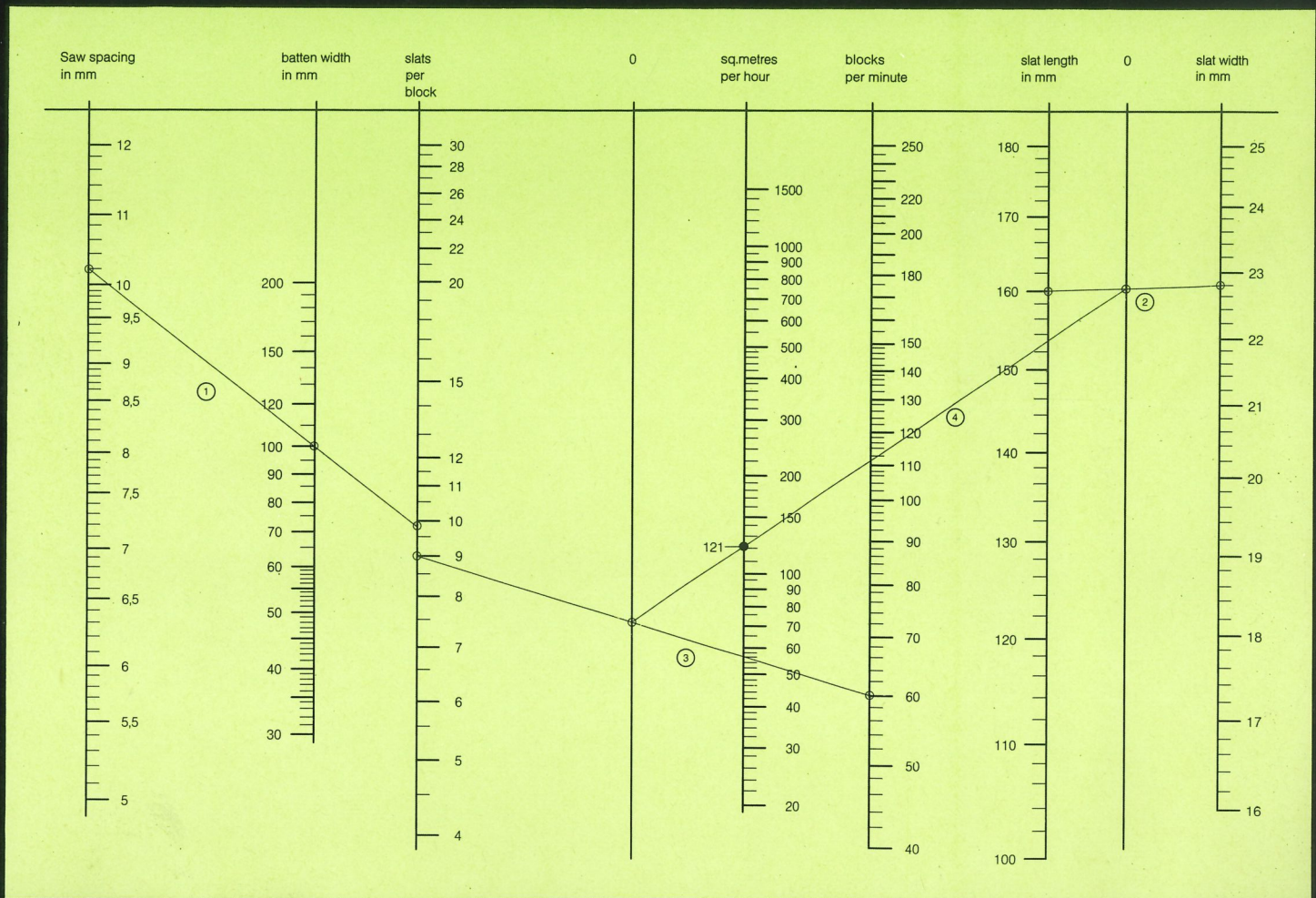
Saw spacing 10.2 mm
(thickness of slat 8 mm plus
width of saw cut 2.2 mm)

Multiple slat saw, Type P 152
60 blocks per minute

Rough-cut batten width 100 mm
(dried)

Slat length: 160 mm

Slat width: 22.85 mm



Production capacity path

- ① Draw a line from the **saw spacing** (10.2 mm) over the **batten width** (100 mm) to the line showing **slats per block** (9.8 pieces).
- ② Connect up **slat width** (22.85 mm) to **slat length** (160 mm).
- ③ Draw a line from **slats per block** (9 pieces – the half slat is waste) to the line showing **blocks per minute** (60 pieces).
- ④ Connect the points of intersection of the two **reference lines**. The point where the lines cross on the scale shows the number of **square metres per hour**:
121 sq. metres per hour.



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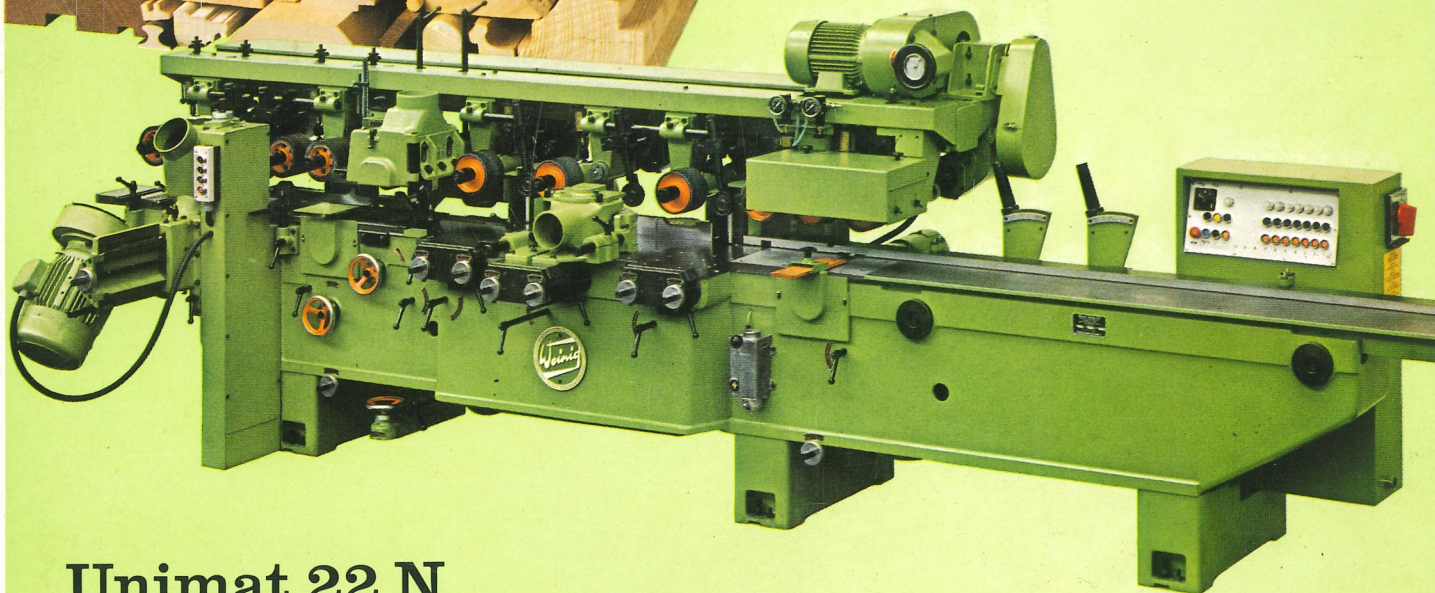
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Weinig is the World's largest Manufacturer of Moulders



The profiles shown here are just a few examples taken from daily routine work mastered by our moulders. Satisfied customers throughout the world appreciate our consultancy service, the smooth way in which we complete orders and, last but not least, our reliable customer service which has enjoyed an excellent reputation over very many years.



Unimat 22 N