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Aerial photograph of our factory in Tauberbischofsheim
(publication approved by Reg. Präs. No. 9/54 571)



Large-batch manufacture on a production line

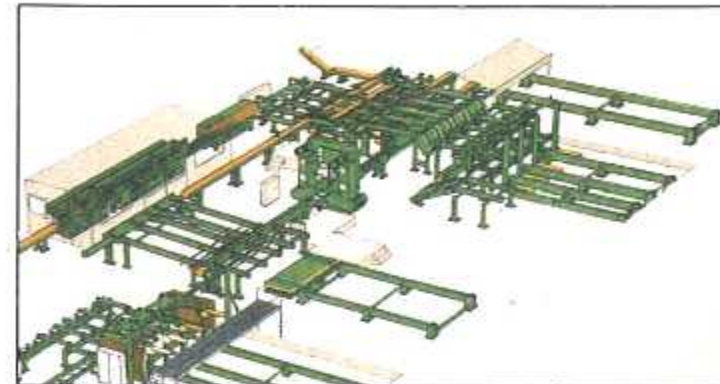
Subject to technical alterations.



Unimat



Hydromat



Material handling equipment

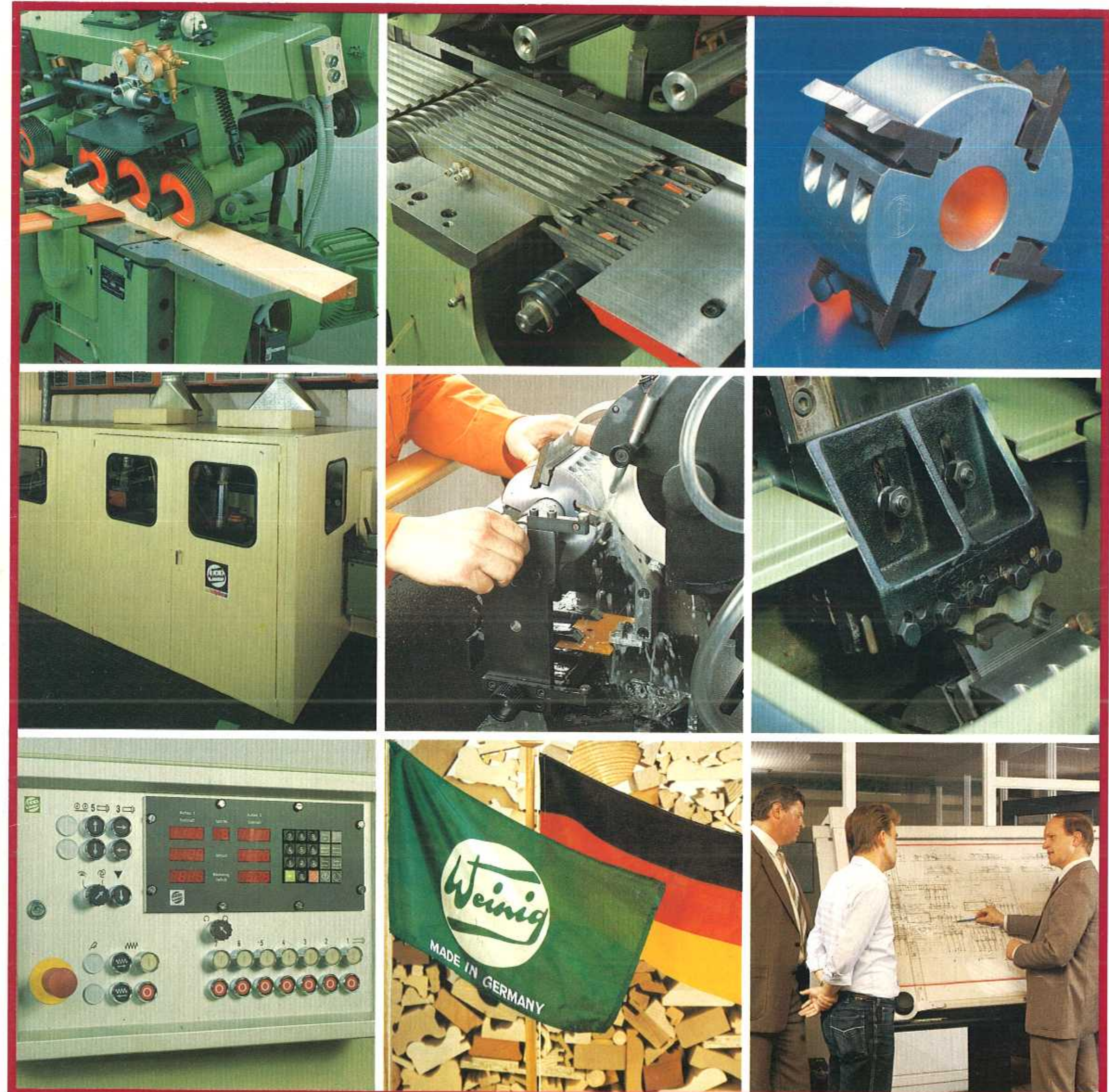


Knife grinder Rondamat 931 and
Original Weinig tooling

Extras



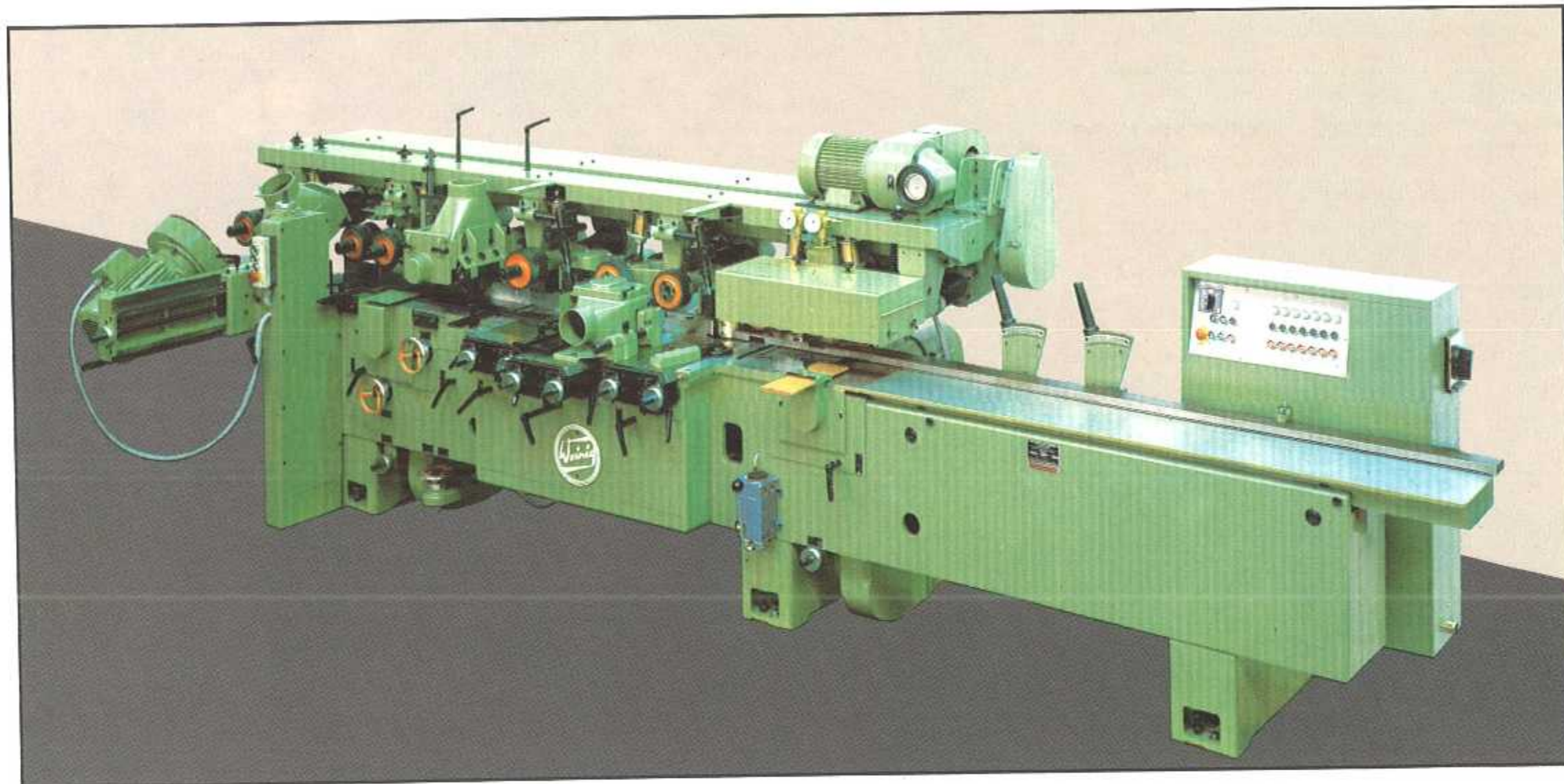
for Weinig automatic moulders



Even the standard versions of Weinig moulders and grinders are complete machines in their own right. They can tackle most machining operations at the drop of a hat before they become problems.

But if that's not enough: the machines can be converted or extended for special operations, customized production and individual requirements. They become tailor-made machines for those companies wanting to exploit their machines.

This leaflet will give you an idea of most extras, attachments and special equipment available.



Weinig – the best-selling moulder in the world.



Weinig offer more

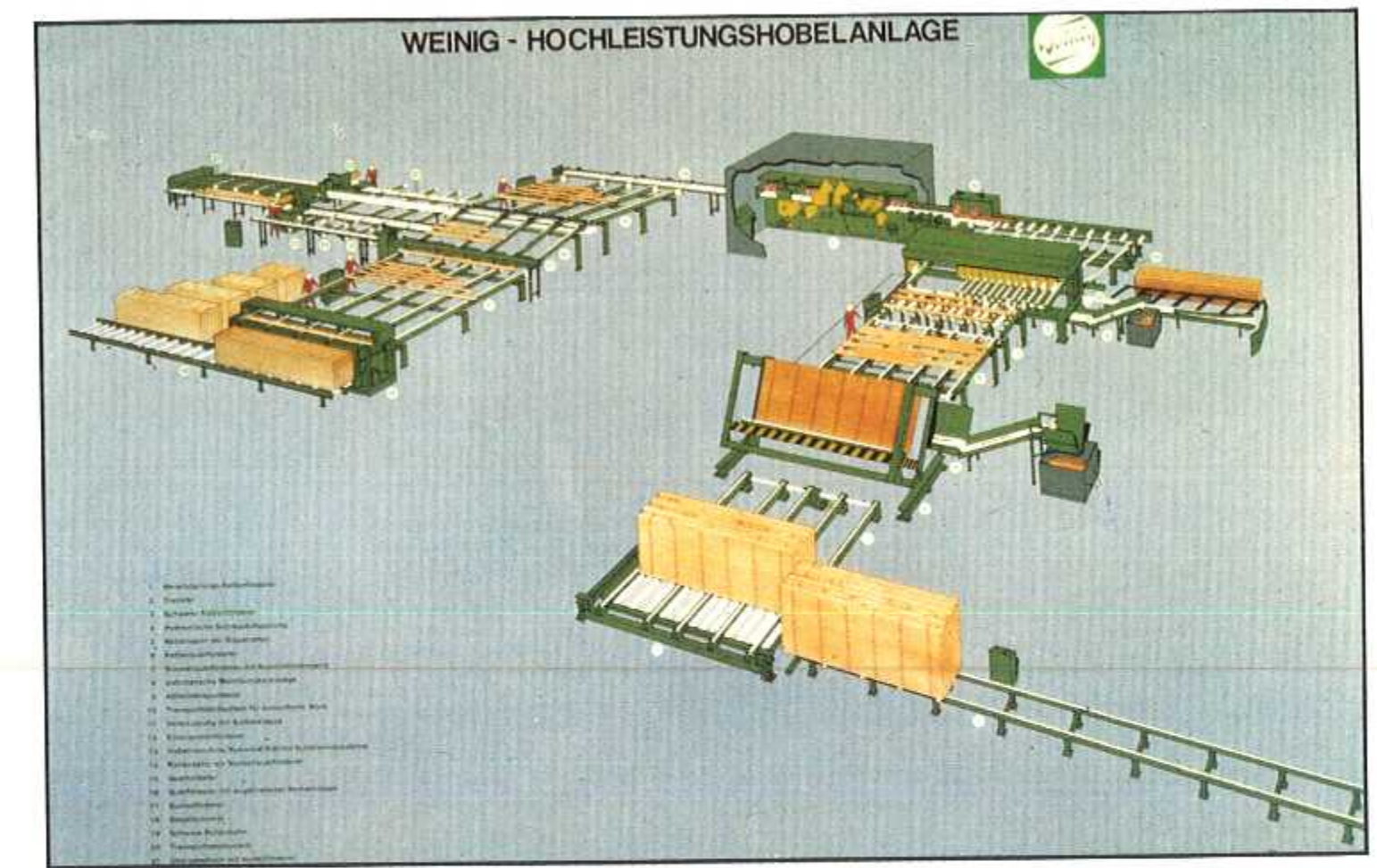
Mechanical handling

The fluctuation in the economy over the last few years and the rise in labour and material costs have shown the woodworking industry that such difficulties cannot be overcome with conventional production methods. Because of the variety of products requested by the market it is more important than ever to increase capacities and quality without increasing labour costs.

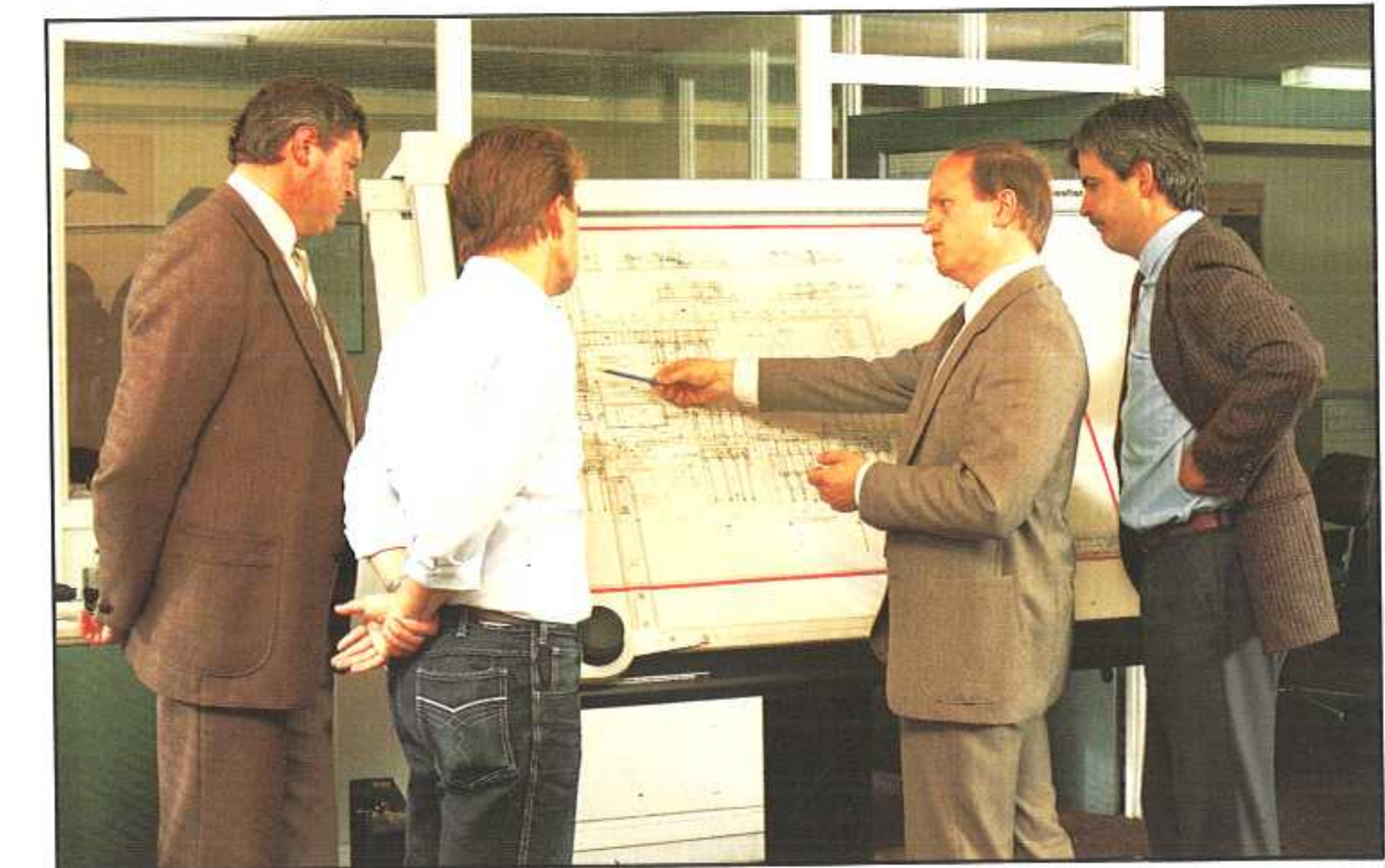
As far as machinery is concerned the consequences can be easily seen: Continuous performance and production, full exploitation and combining, i.e., linking and mechanization of previously separate operations. Avoidance of transportation and non-productive time and cutting down on labour.

Modern mechanization must fulfil the following conditions:

Keep expensive high speed machines in continuous operation without breakdowns. Reduce labour costs through automation. Reduce space costs by decreasing the size of warehouses. Enable constant continuous production. Replacing of monotonous, accident-prone and health-endangering work areas. General relief of staff. Optimize different and previously separate operations to an internally organized material flow. Make for constant and optimal surface quality and control. Replace highly skilled staff by specially trained workers. Reduce raw material costs. Weinig undertakes the execution and overall responsibility for such production lines and guarantees their functioning.



▲ 111 A modern **planing mill**, planning, production and turnkey installation, all from one company.



▲ 112 Intensive **consultation** by our project engineers. We will solve your specific production problem.

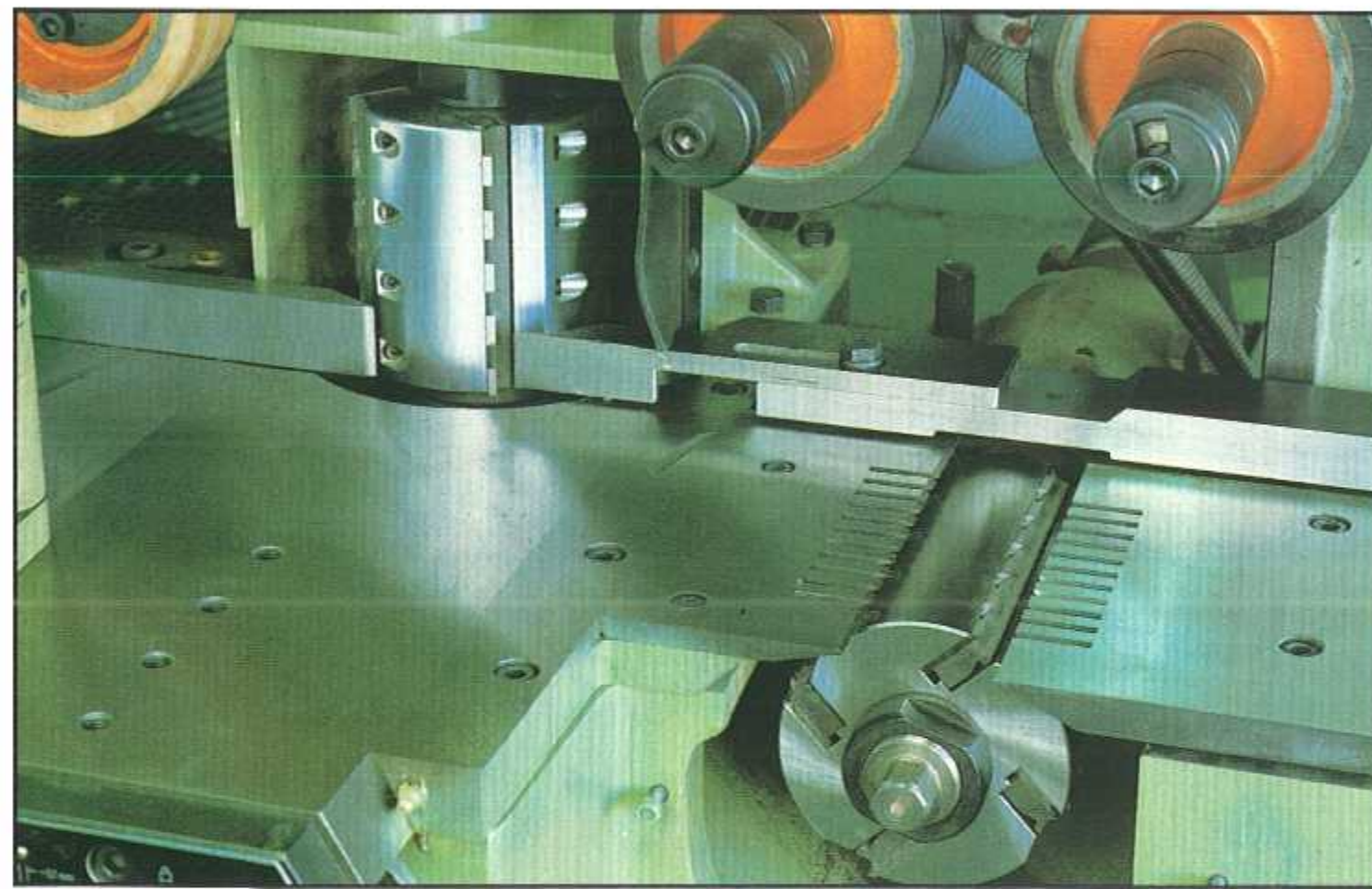
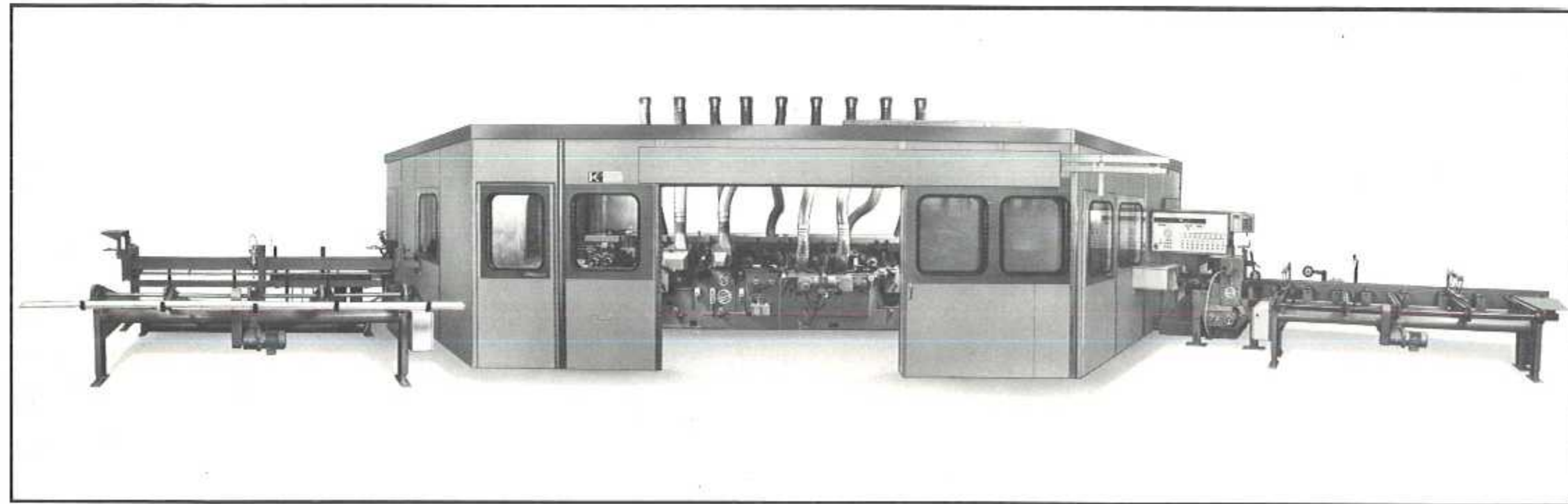


▲ 113 The large number of **awards** from all over the world are a reflection of pioneering work, high efficiency and recognition.

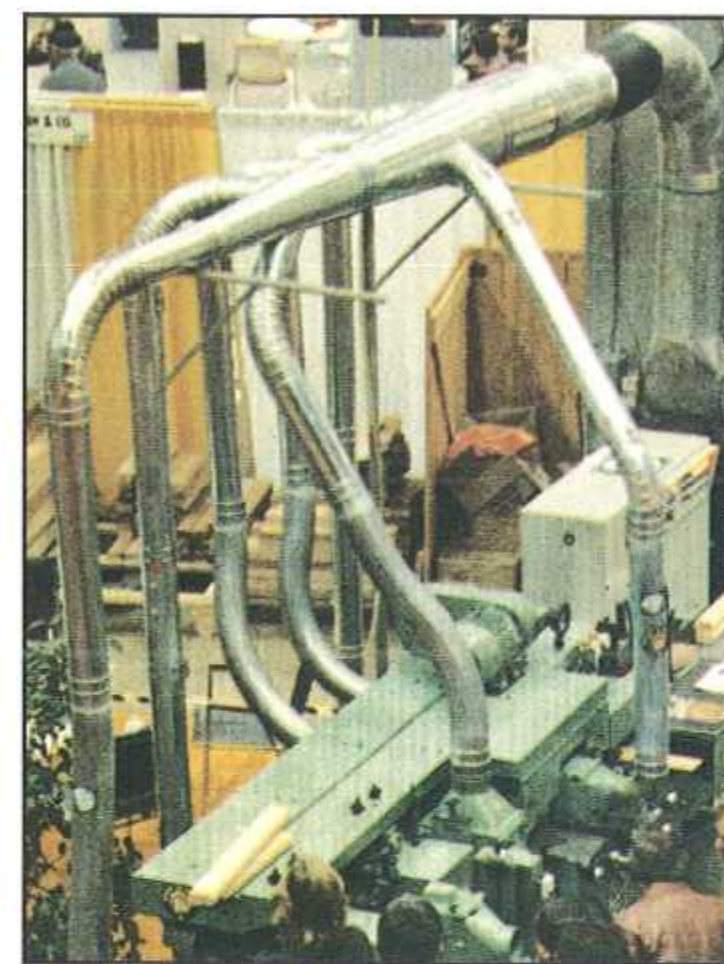
► **107 Miniphon 200**, the elegant solution. The enclosure is fitted tight around the machine to save space. The hinged doors at the front open upwards with pneumatic cylinders.



▼ **108** The walk-in **Miniphon 300** for use primarily with large moulders and high speed machines.



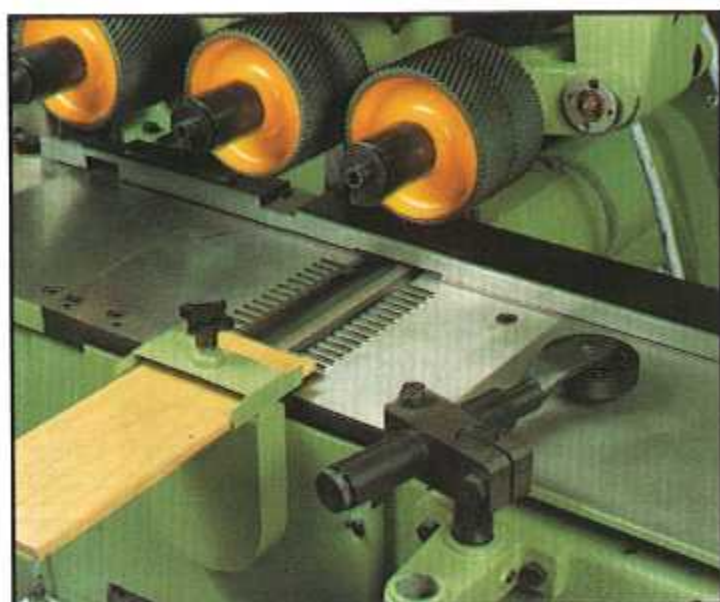
▲ **109** High speed planer heads and table plates close to each other are the main causes of high noise levels. Slotted table plates as illustrated here and combed knives both help to reduce noise. The latter is particularly suitable for pre-planing.



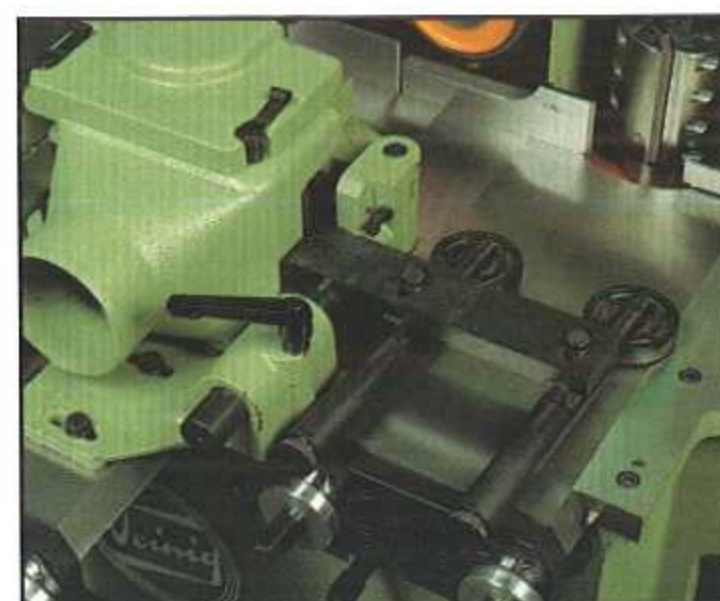
▲ **110** A well functioning dust extraction, adjusted to the moulder, guarantees a troublefree disposal of the chips. The spyder is available in several versions and can be supplied by Weinig.

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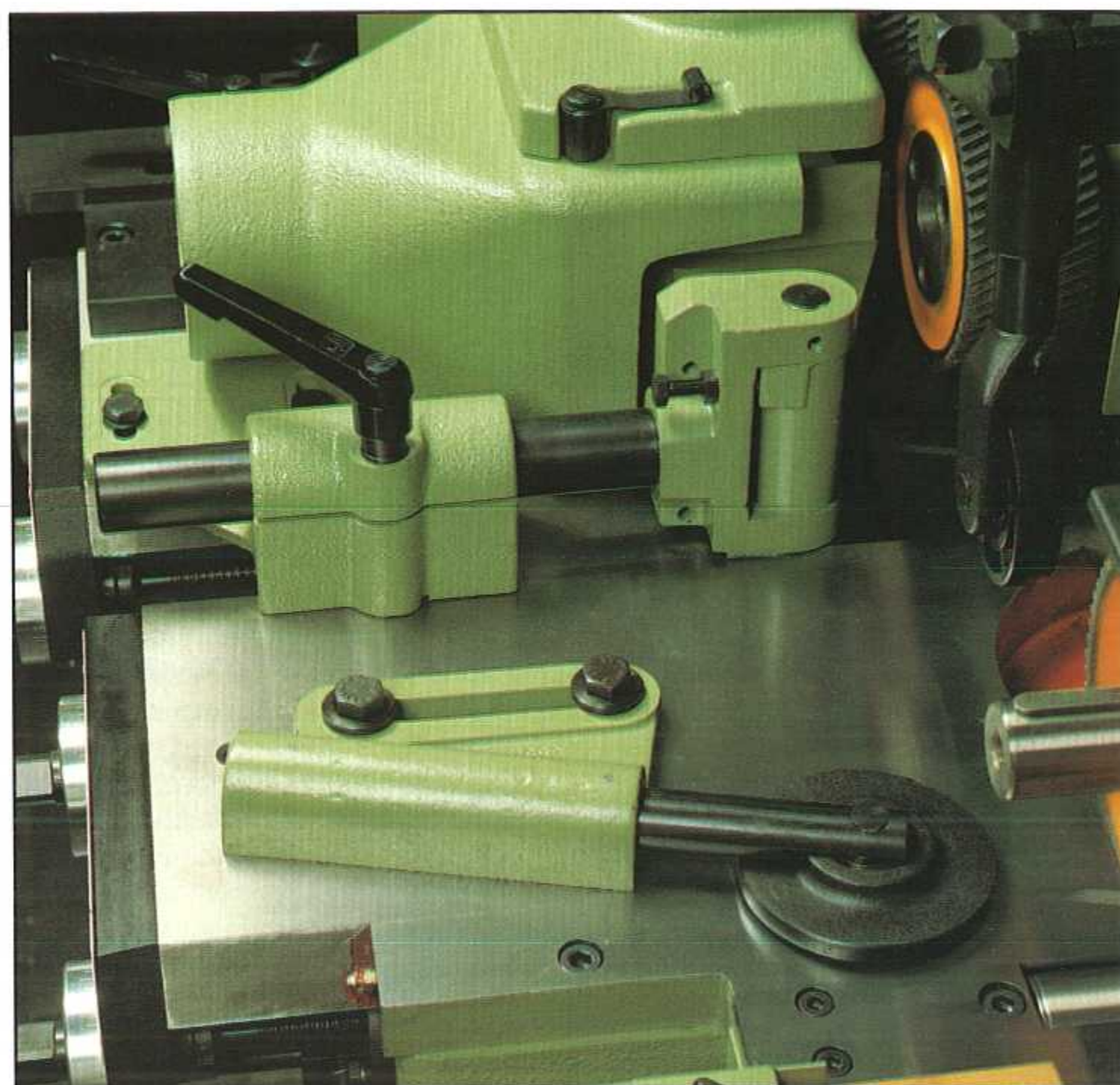


▲ 1 The lateral pressure roller before the machine infeed ensures that when feeding the moulder manually the workpieces are up tight against the right-hand fence before passing underneath the first feed roller. This is of particular advantage for long workpieces with a small cross-section.

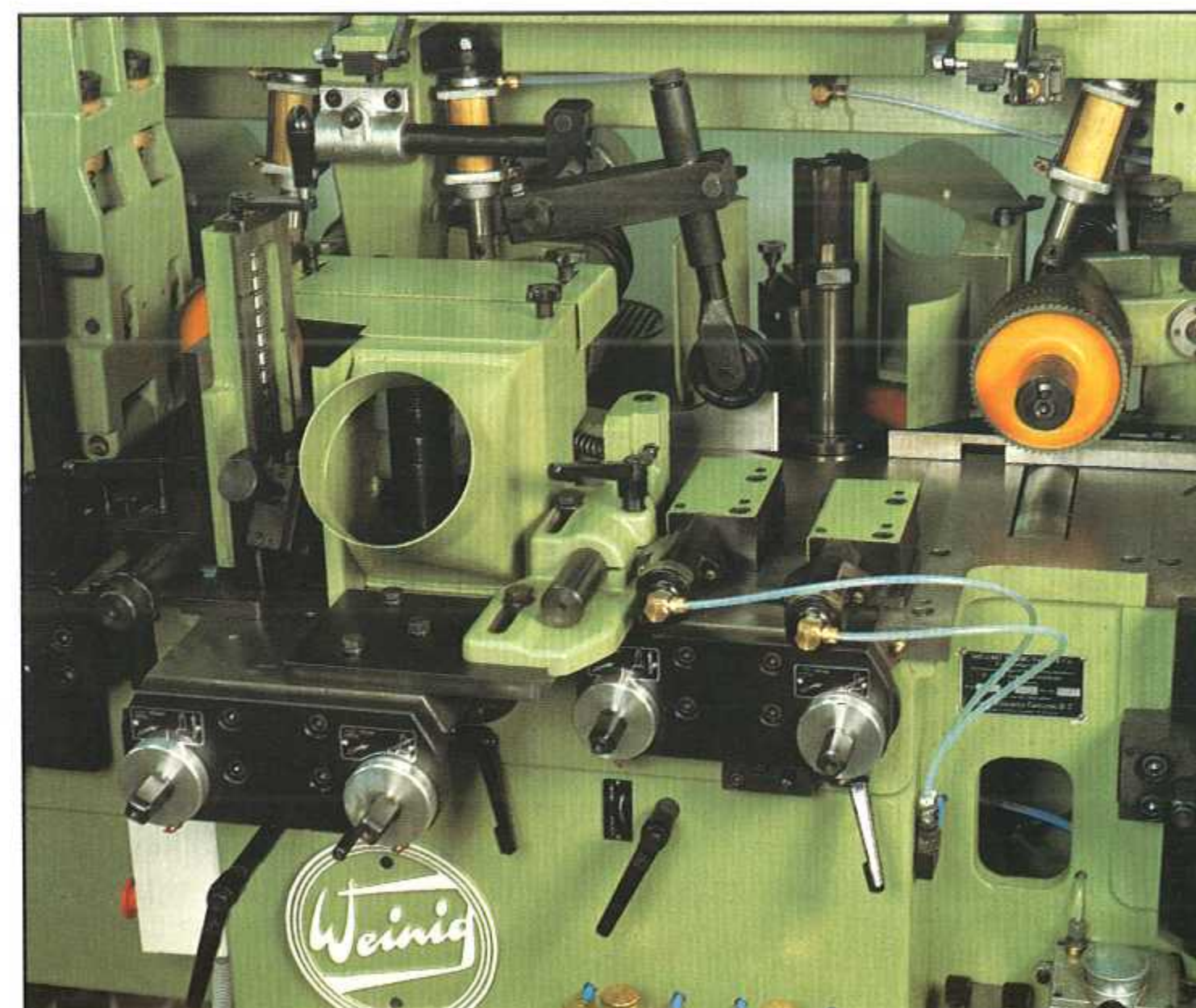


▲ 3 This reinforced version of the lateral pressure roller reduces down times. The rollers are connected to the left-hand spindle and travel in and out with it.

▶ 4 The lateral pneumatic pressure rollers are recommended particularly for heavy timber and high-speed productions.



▲ 2 The lateral pressure roller opposite the first right-hand spindle is required especially when the workpieces are short and have a small cross-section or are strongly distorted. It ensures that the wood remains against the fence in the area of the right-hand spindle.



Miniphon sound enclosures

It is no longer necessary to work under intolerably noisy conditions. The most effective way of reducing machine noise is to enclose entire machines and lines completely. We have developed three systems based on the modular element principle, the advantages of which are obvious.

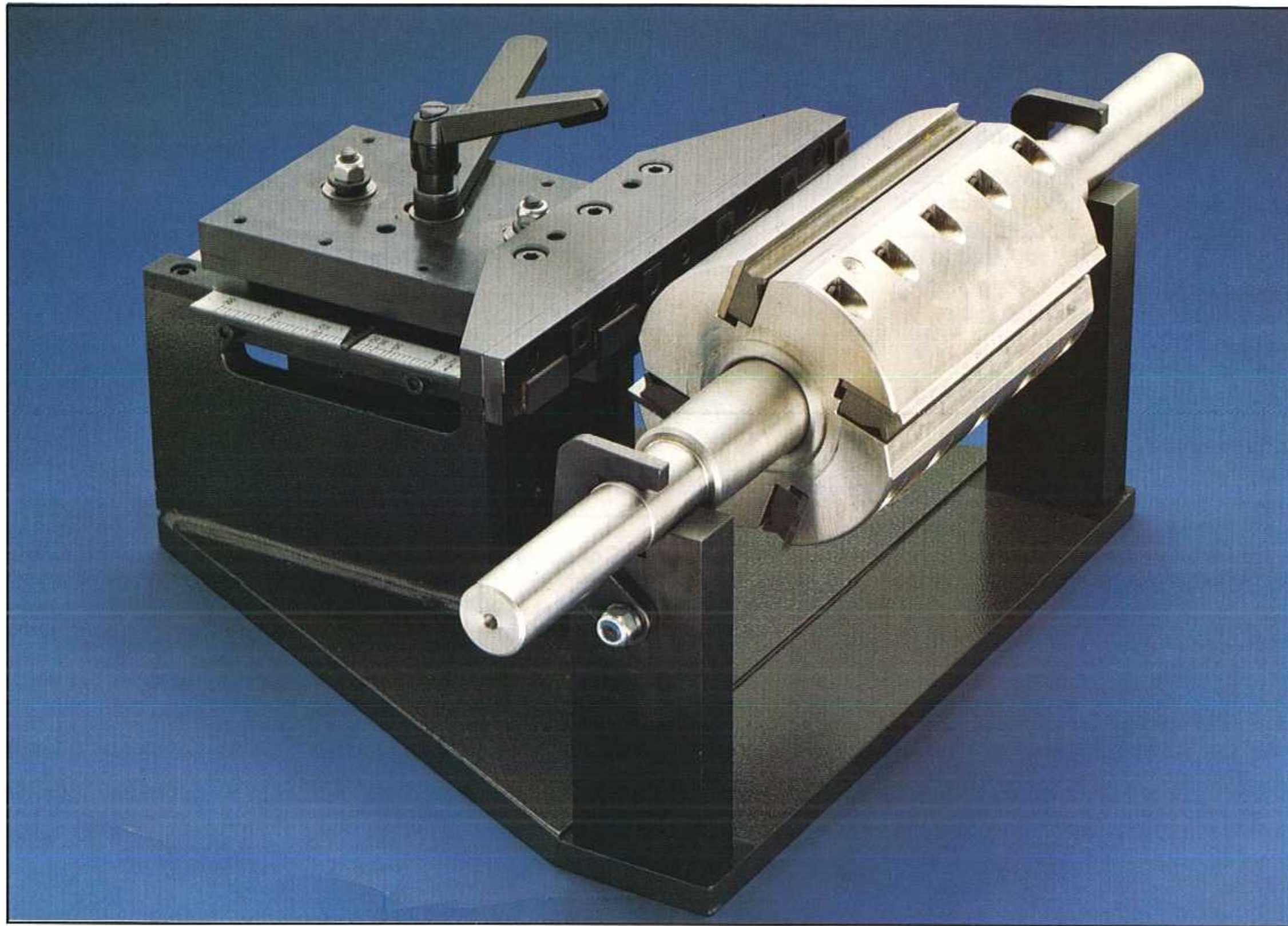
- Moulders and noise protection from one source
- Maximum noise reduction for maintenance of statutory noise levels
- High level of noise insulation through robust, acoustically effective enclosure construction
- Low noise levels through compact construction, comfortable working conditions at machine infeed and outfeed with good communication
- Simple installation



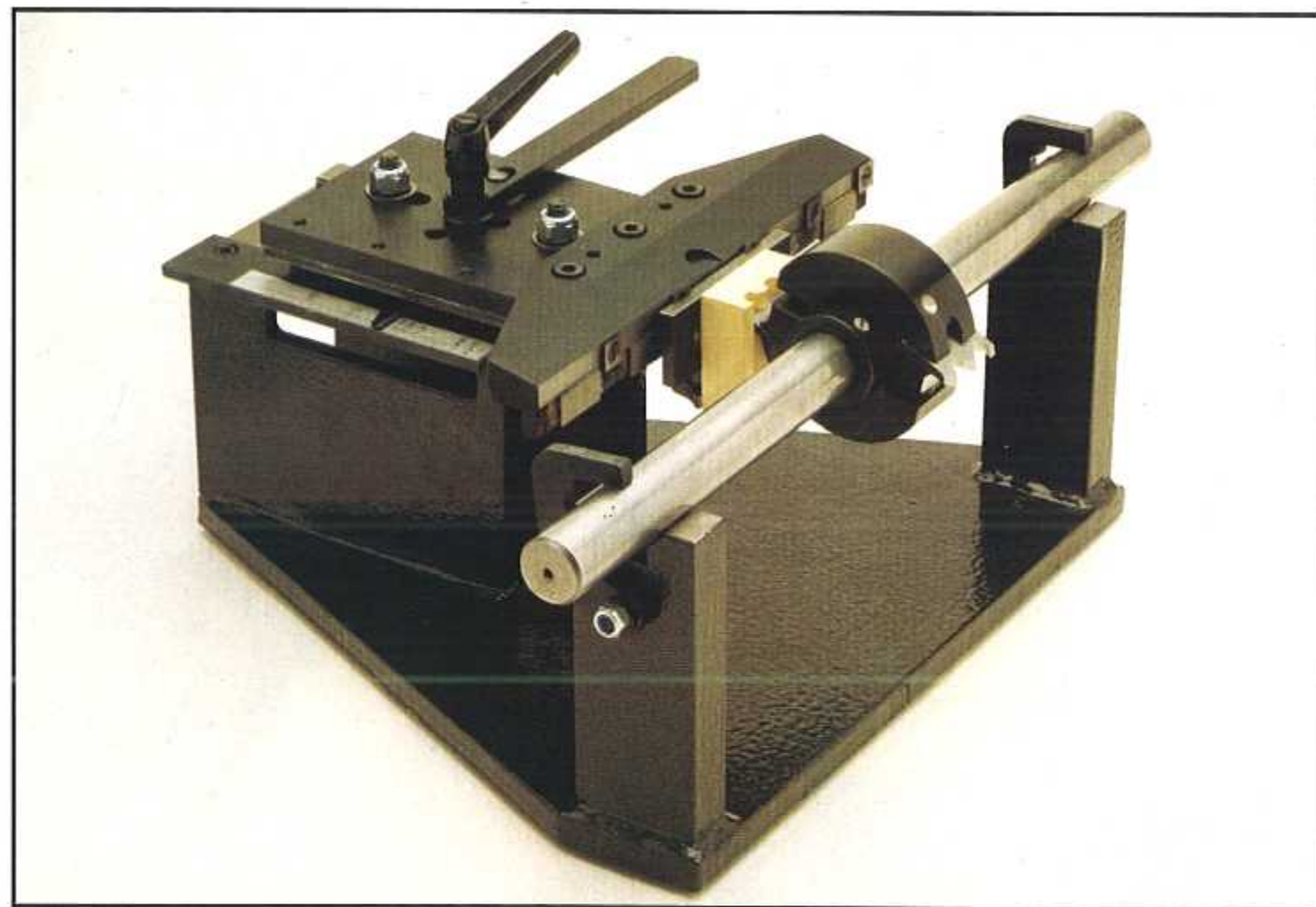
▲ 105 The Miniphon 100 enclosure is the lowest priced and most popular version in our range. Tailor-made from standard elements. Installation by you according to supplied instructions. Can be extended for modified or new machines. Simple machine operation through large doors. Easy accessibility for maintenance and repair work.



◀ 106 Installation is really "child's play". Within a few hours your Miniphon 100 is installed.

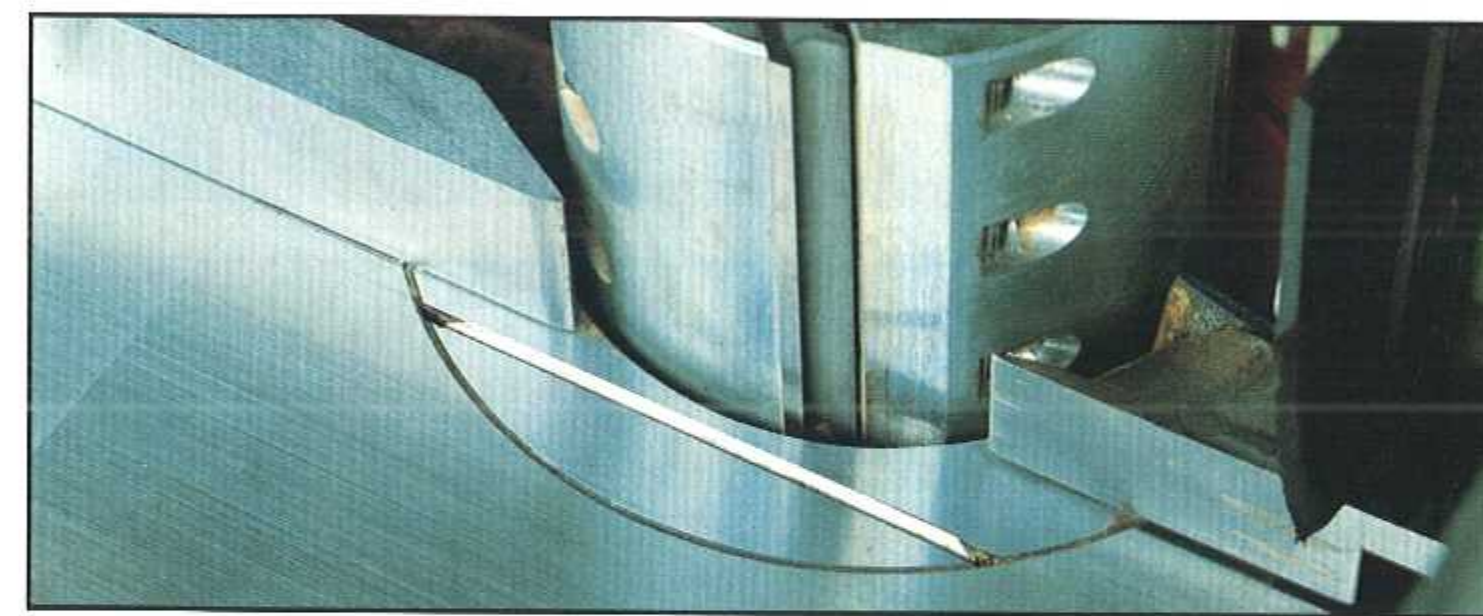
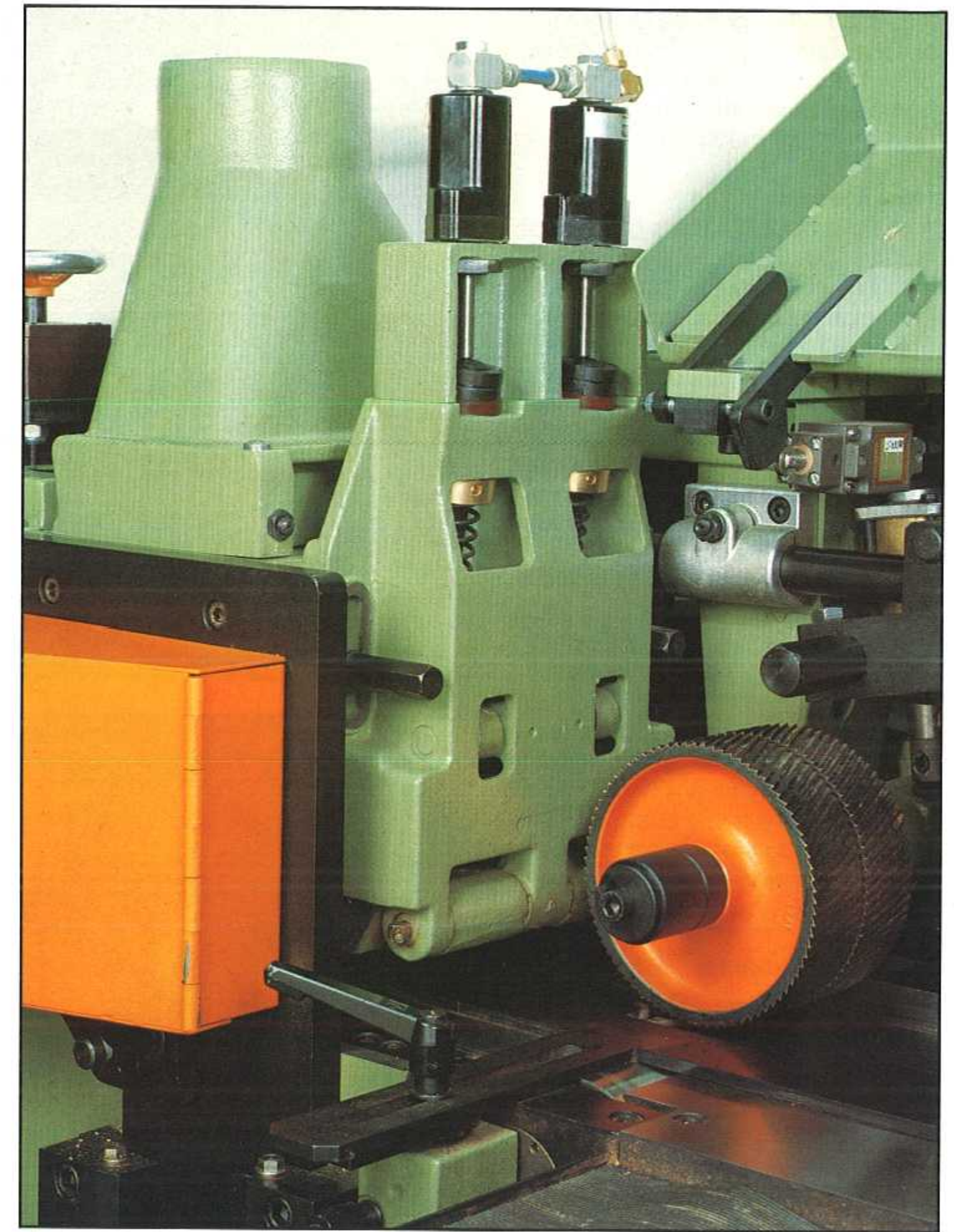


▲ 103 The **precision setting stand** for high accuracy. Some of the main features of this latest Weinig development: High setting precision. Easy and reliable handling. Tooling diameter and length set according to scales. For left and right-handers. Carbide-tipped for zero wear. Settable for cutting circles of 80 to 300 mm (3 1/8 to 12 in.). Settable for tooling lengths of 60 to 310 mm (2 1/4 to 12 1/4 in.). Arbours in all diameters available. Suitable for Weinig **cutter-heads** 500 and Hydro heads 501 and 502.

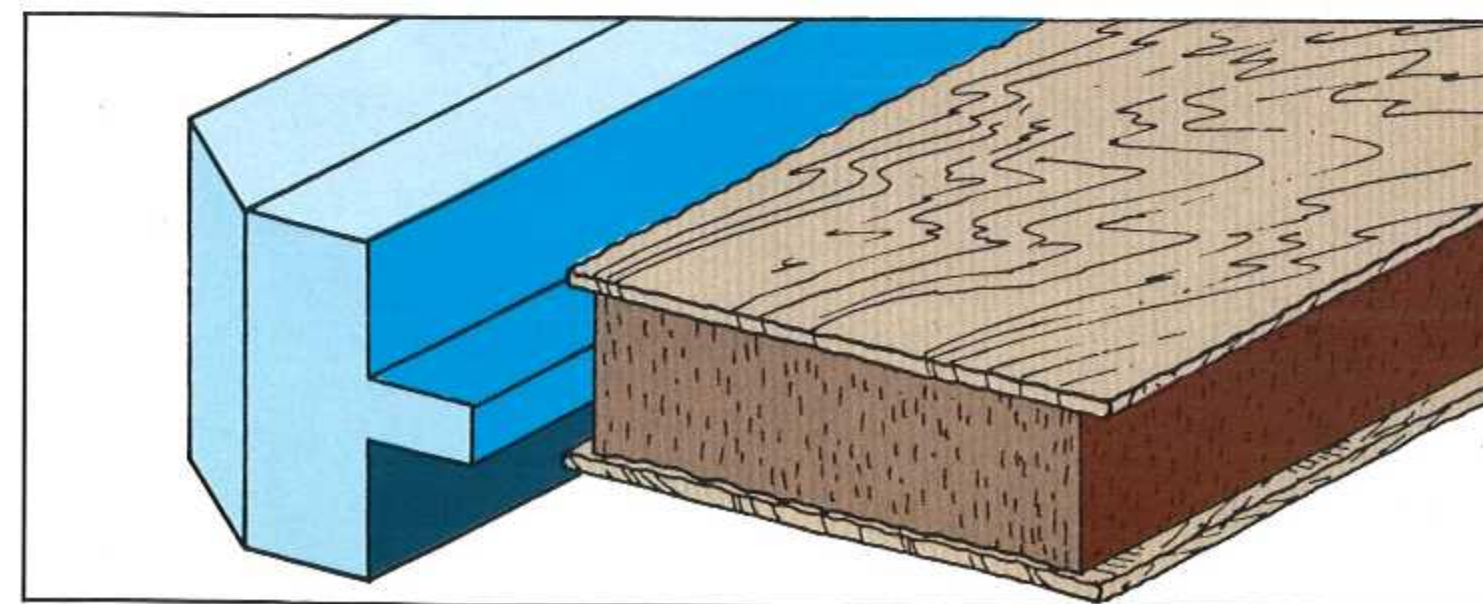


▲ 104 Our **precision setting stand** is designed so that **profile knives** without corrugated back can be set exactly to a wooden profile.

► 5 In front of the top head the timber must be pressed down firmly on the machine table. The **pneumatic pressure bar before the top spindle** is recommended where workpieces are machined at high speed and the stock varies considerably in thickness.



◀ 6 The **guiding knife in the insert section** on the left or right-hand spindle ensures that particularly short workpieces are guided precisely in the area of the vertical heads. A bottom spindle at the machine outfeed is required to plane off the small groove.



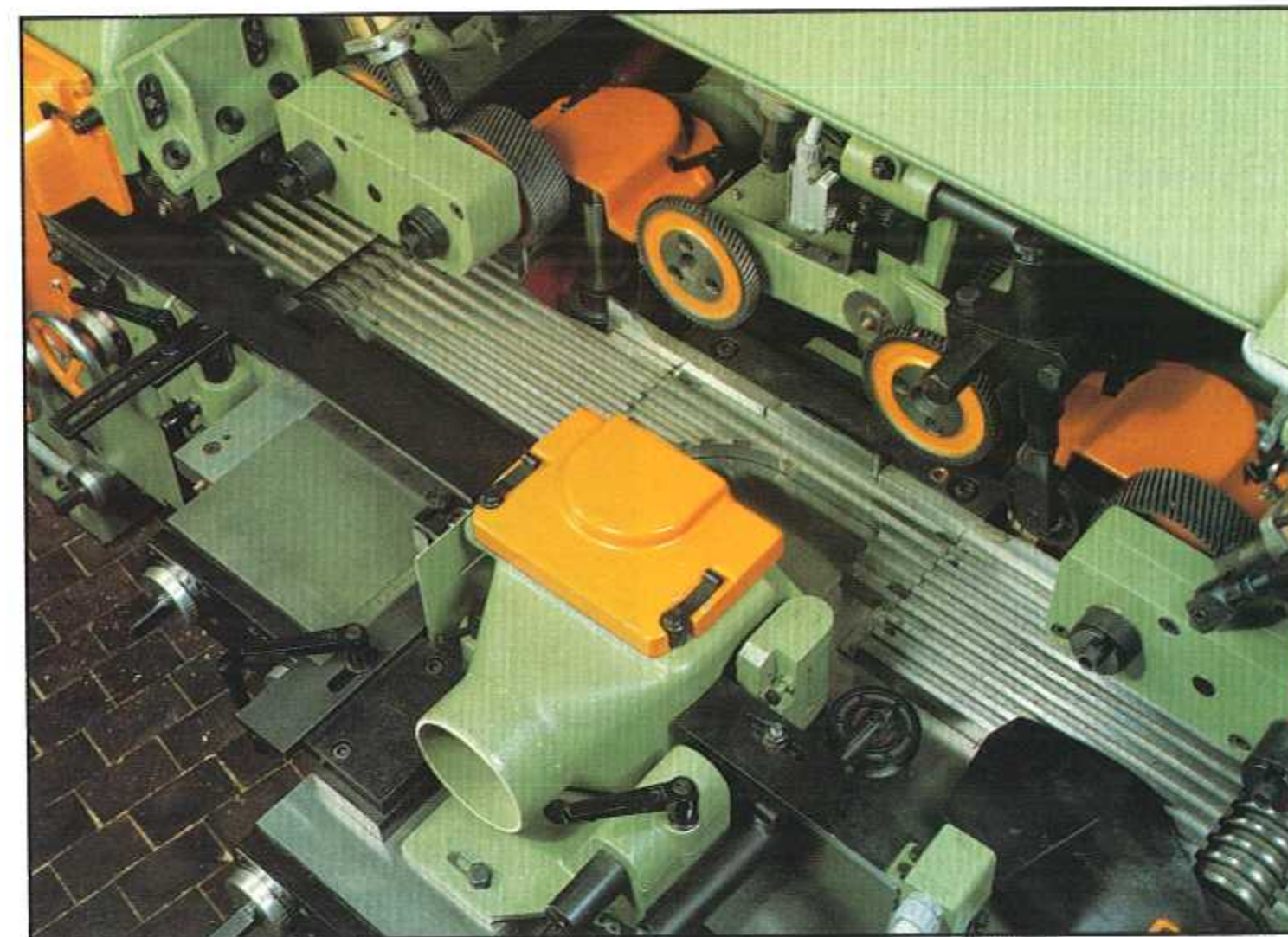
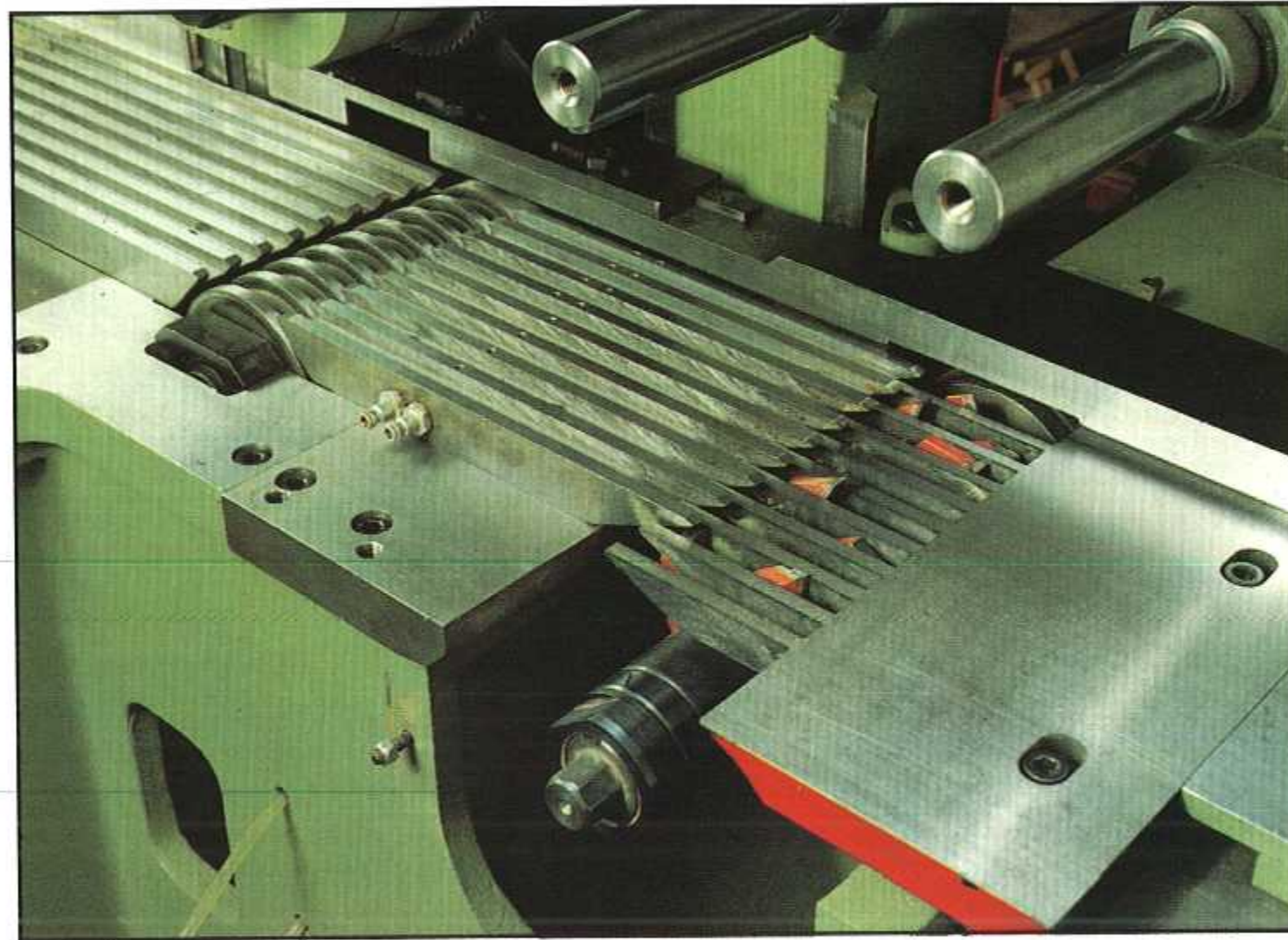
◀ 7 A **special right-hand fence** is required to prevent the projecting veneer from being torn off before it reaches the right spindle.

► **8, 9, 10** The **groove guide** for short, twisted and untrimmed stock prevents such material moving away from the fence and, as a result, ensures exact machining.

How it works:

A set of grooving cutters on the first bottom spindle cut guiding grooves into the workpieces over the full width. These grooves guide the workpiece precisely through the machine. An interchangeable finger table plate is located in the straightening table with cutters operating between the fingers. In this way the wood is held down on the table while the grooves are being cut. The workpiece then passes on to the outfeed table. Thus there is no danger of the workpiece riding up against the table plates. The outside bridge on the right-hand side is the main guiding element and corresponds exactly to the width of the cut groove. The rest of the bridges are kept slightly narrower than the grooves and prevent any feed jam-up. The workpieces are transmitted to the other cutter spindles supported by grooves and bridges. The last bottom spindle removes the grooves from below.

Please note: there is no more waste than with other conventional manufacturing methods.



(DOWN) TIME IS MONEY

Reduce down time with tooling with repeatable constant cutting circle

The cutting circle of a conventional tool is altered when ground, which means that when re-setting or re-tooling all the spindles on a moulder have to be adjusted. Table plates, side fences, profile guides, pressure bars, etc., have to be adapted every time to the new cutting circle.

The new **Weinig Constant tooling** reduces these operations to an absolute minimum as the tool always arrives at the machine with the same minimum cutting circle. This timesaving factor is of particular importance at the right and bottom spindles, because neither the spindle nor the table plates or right-hand fences have to be altered in any way. Only the tooling has to be exchanged.

With left and top spindles the infeed pressure bars and profile guides very often do not need to be changed. Only the width and thickness have to be adjusted.

The Weinig Constant tooling covers the entire solid woodworking industry since it is based on profile knives. The best-selling knife-grinder, Rondamat 931, is the ideal supplement whether for high-speed steel, stellite or carbide-tipped material. New profile knives can be made or existing knives be modified in a matter of minutes.



▲ **100** The **Weinig Constant tooling**, one of the most significant developments of the last few years.

▼ **101** The **setting stand for Constant tooling**. Planer and profile knives can be set in this stand to the determined minimum cutting circle in a matter of minutes.



◀ **102** The **standard setting stand for planer heads** – a low priced, reliable and accurate instrument.





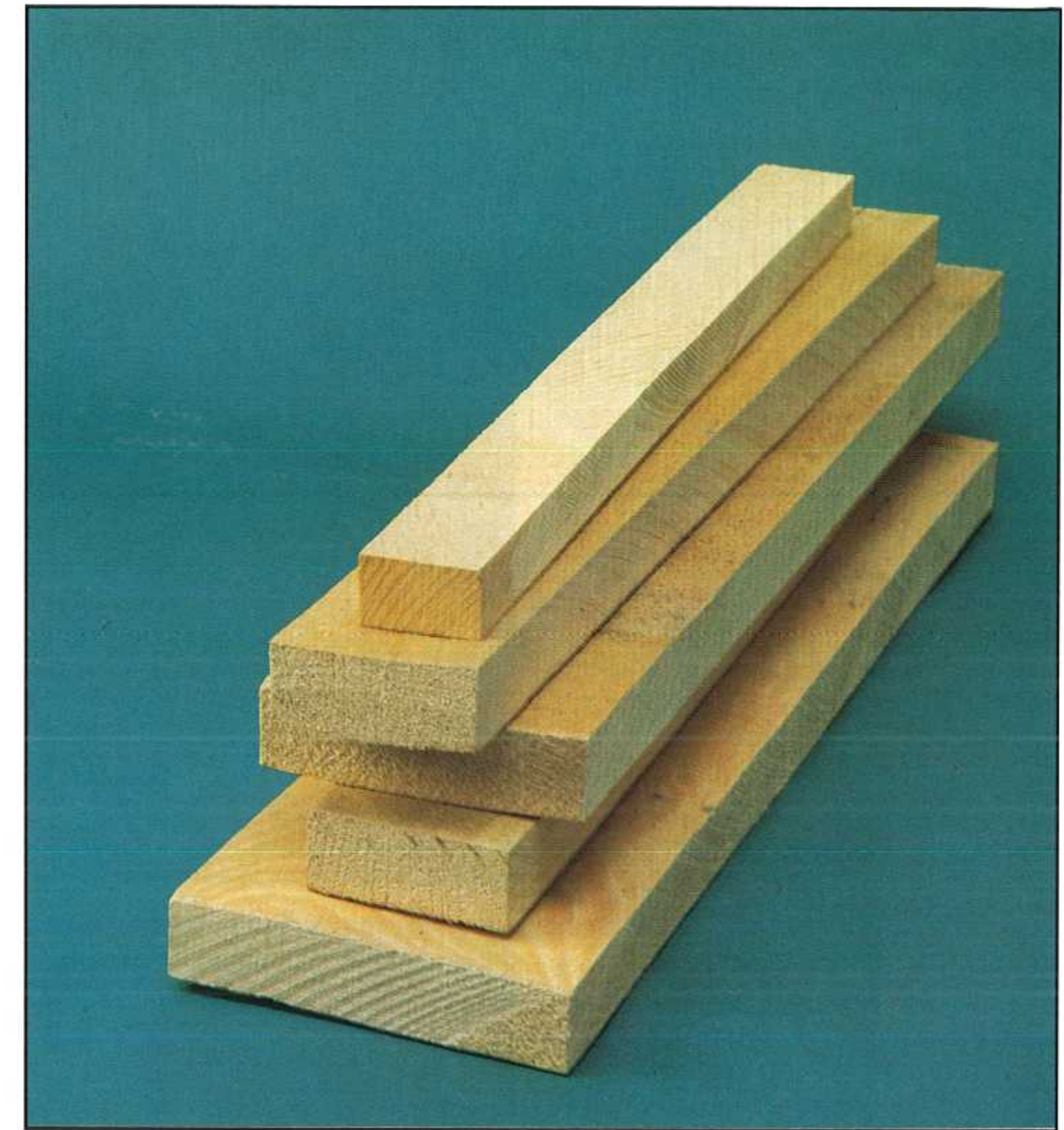
◀ 96 Fully automatic grinding with the **Rondamat 912**. A programme-controlled universal tool grinder for planer heads and solid profile cutters. Just enter the program and the machine will do the rest.



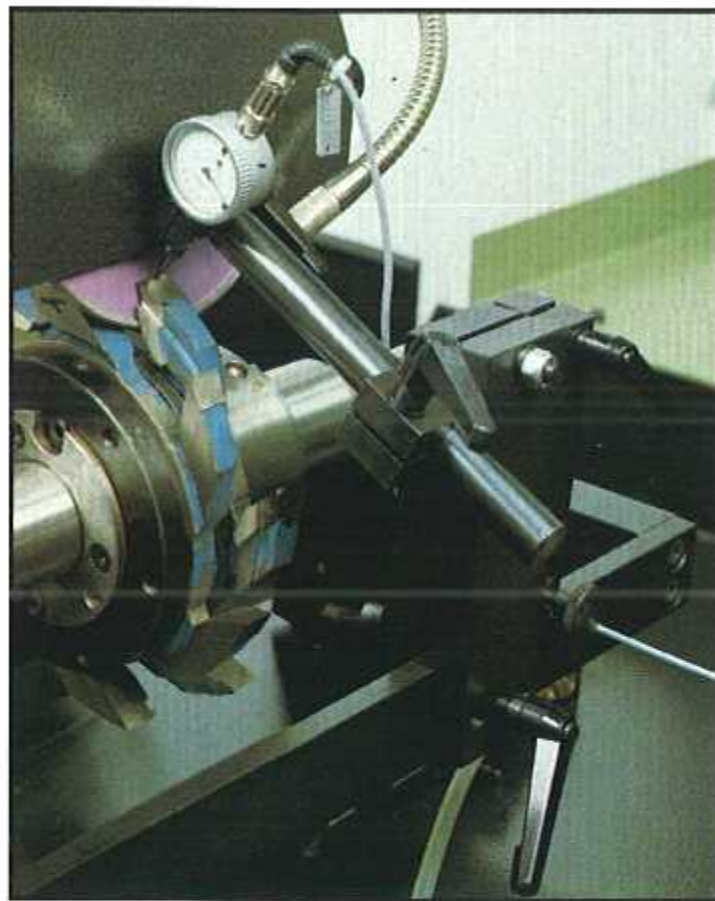
▲ 97 The quality of your products depends principally on the quality of your tooling and tool grinders.

▼ 98 The **Rondamat 912** grinds your cutterheads to a concentric running accuracy of less than 0.005 mm (0.0002 in.). This makes it possible to re-joint the planer knives in the moulder many times giving you long tool life, top surface quality, and minimum down times.

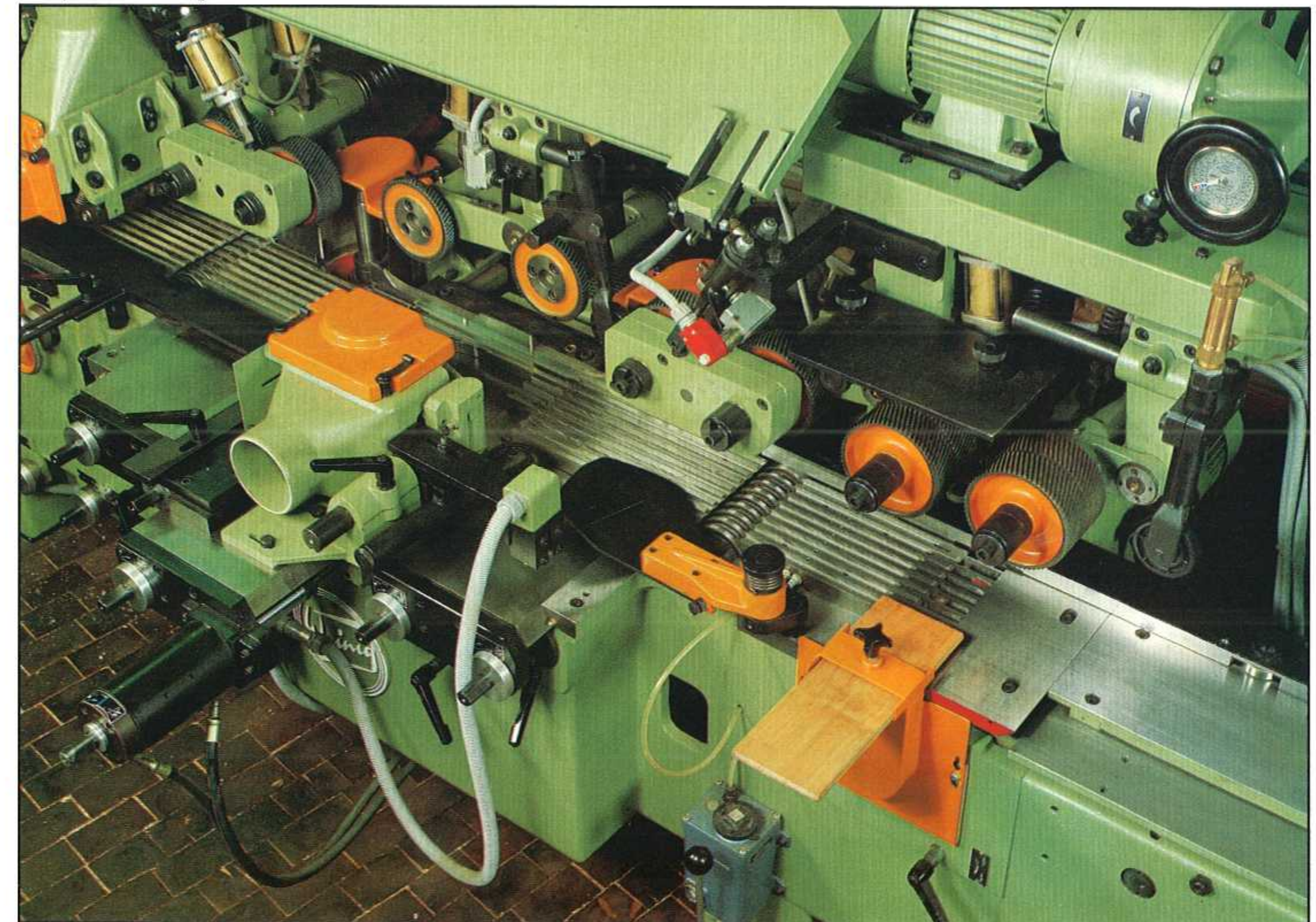
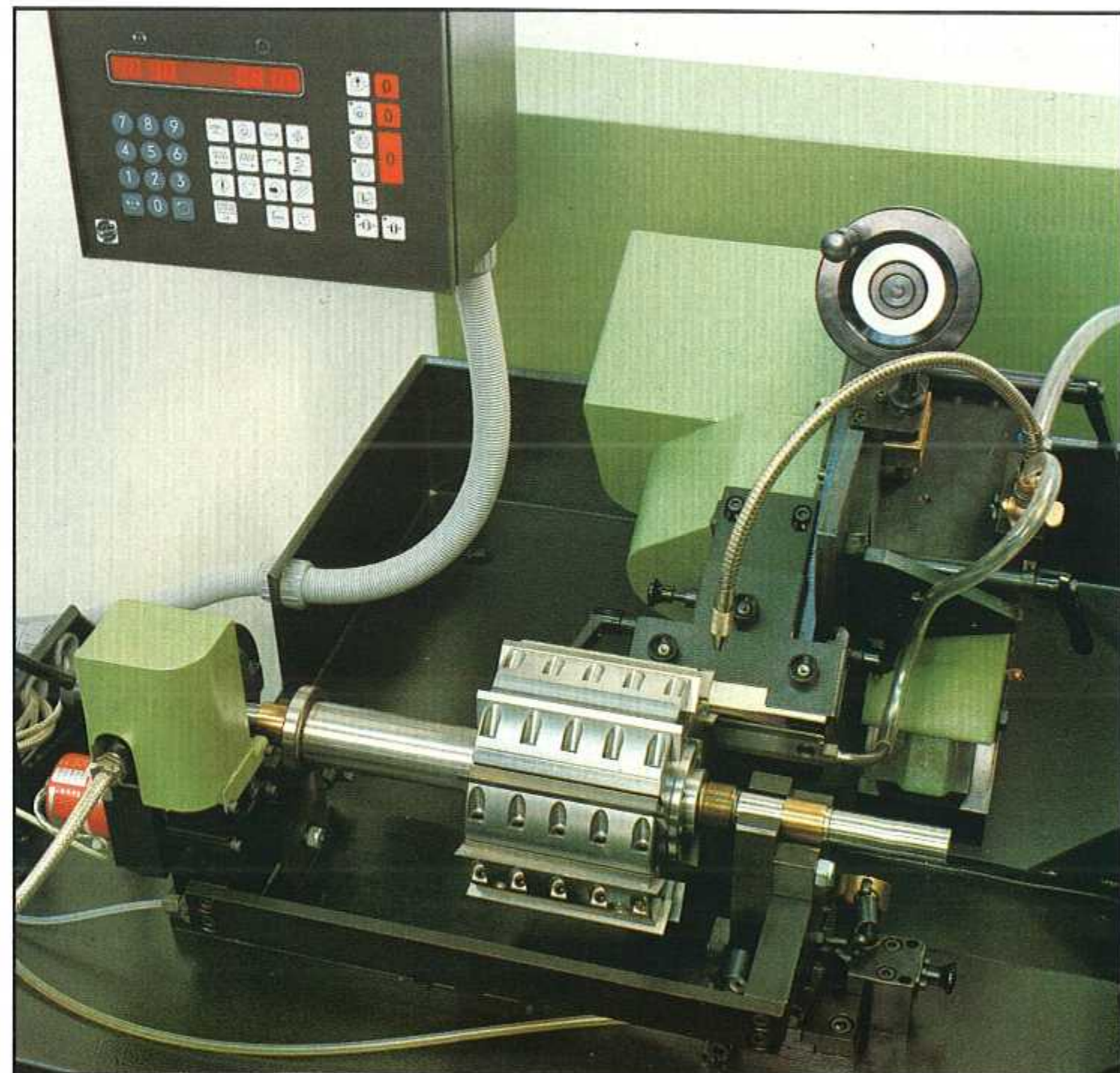
▶ 11 **Workpieces of random widths** often occur in the furniture industry. With the mobile spindle continuous four-sided machining is possible without pre-sorting.



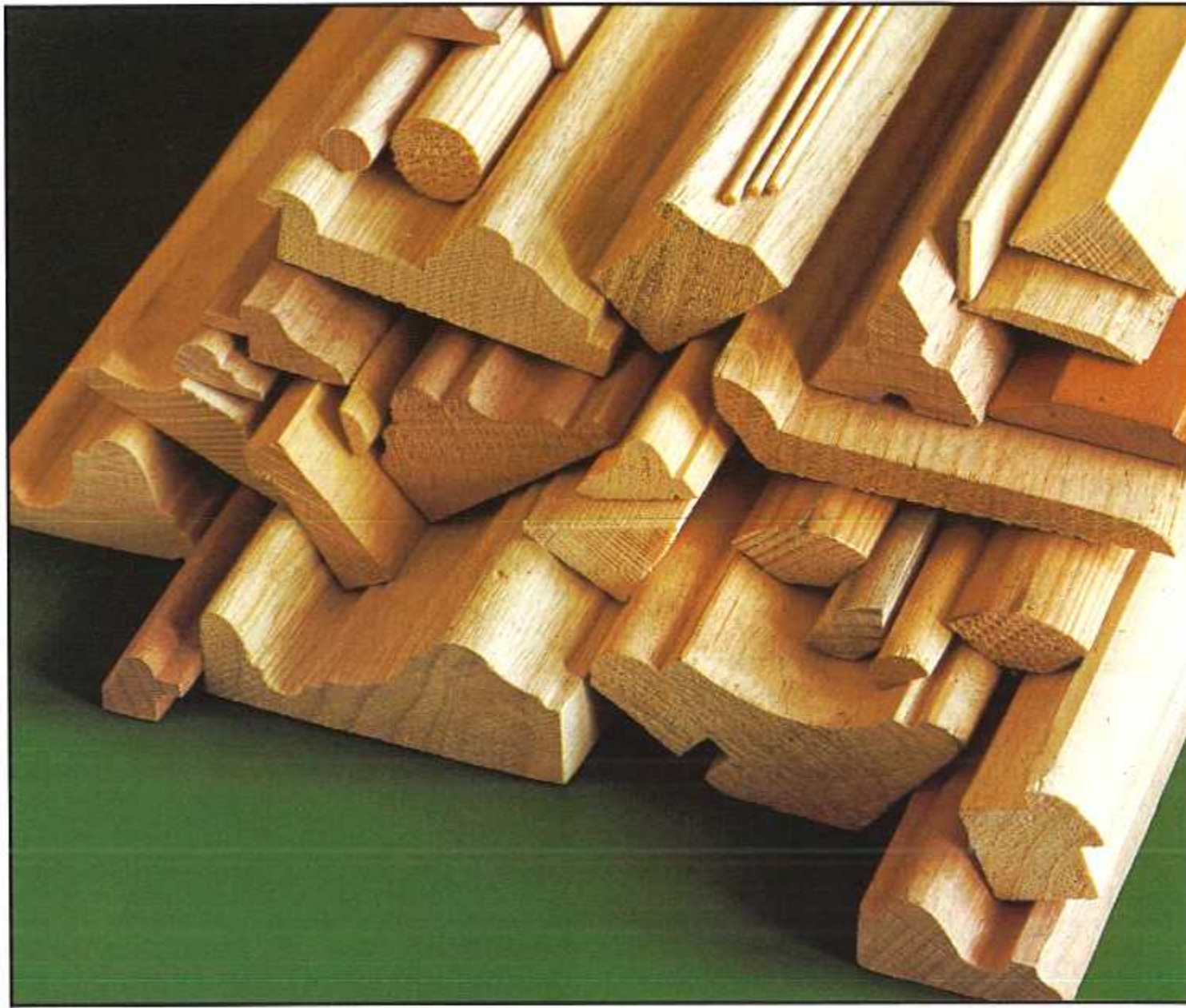
▼ 12 The **hydraulic mobile spindle** ensures high precision machining of workpieces of random width. It has a maximum width tolerance of 100 mm (4 in.). The **electric mobile spindle** which is suitable for many production operations can accommodate widths from a minimum of 20 mm (3/4 in.) to the maximum working width of the moulder. For perfect guidance of these random width pieces (mostly short workpieces) the **groove guide** and **reduced distance between feed rollers** is used. The **powered table rollers** integrated in the groove guide ensure continuous transportation of the pieces through the machine.



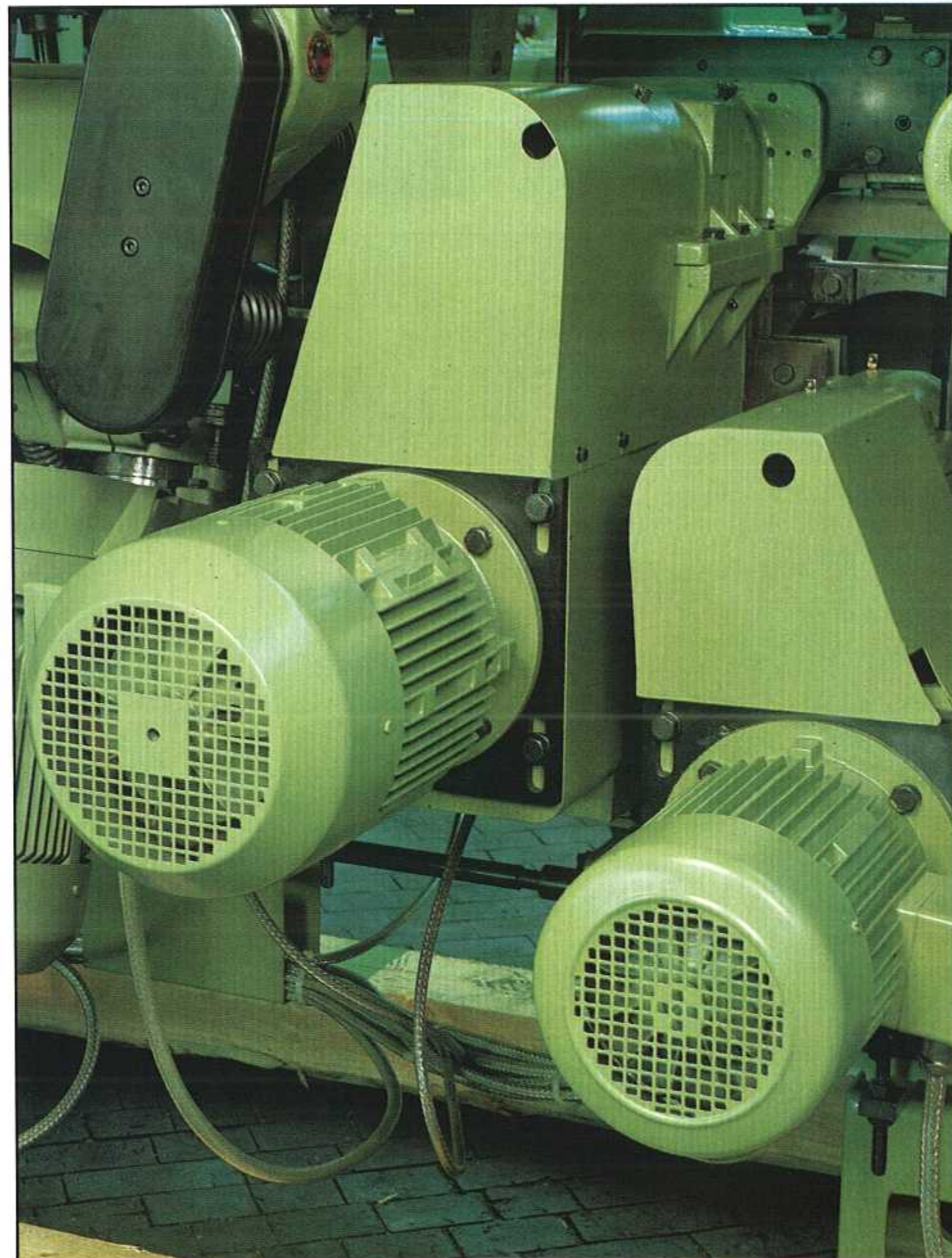
▲ 99 Face grinding of a Hydro cutter on the **Rondamat 912**.



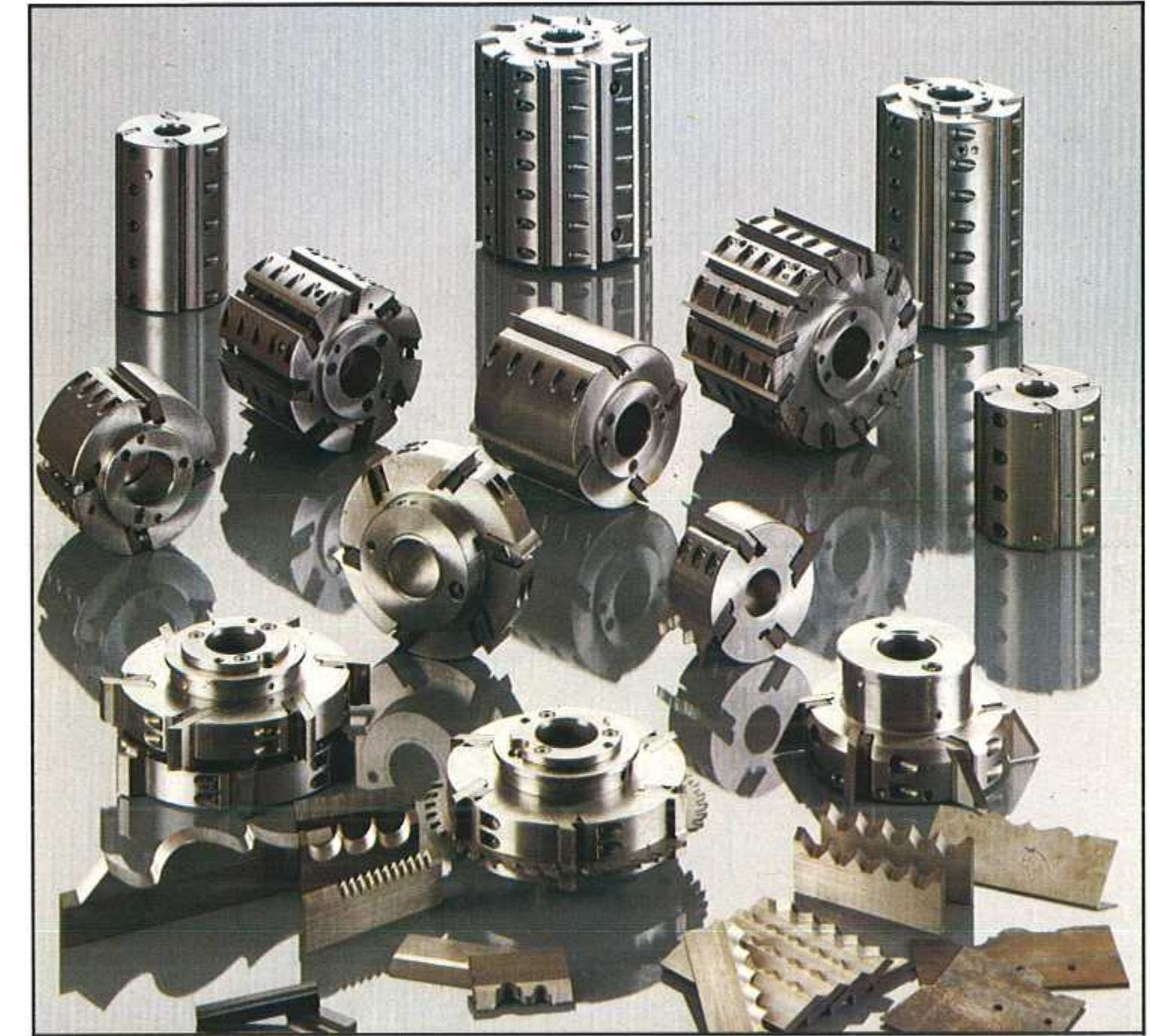
► 13 Manufacture of mouldings calls for machines which can assure highest product quality.



► 14 The **high capacity spindle**, standard on the Weinig Hydromat, and an extra on the other machines, differs from the standard spindle in that it is mounted together with the motor support directly on the heavy machine stand so that motor vibrations are not transferred to the spindle. Heavy duty ball bearings are further assurance of highest quality. All horizontal spindles on a moulder should be equipped in this way. High capacity vertical spindles are equipped with the same ball bearings.



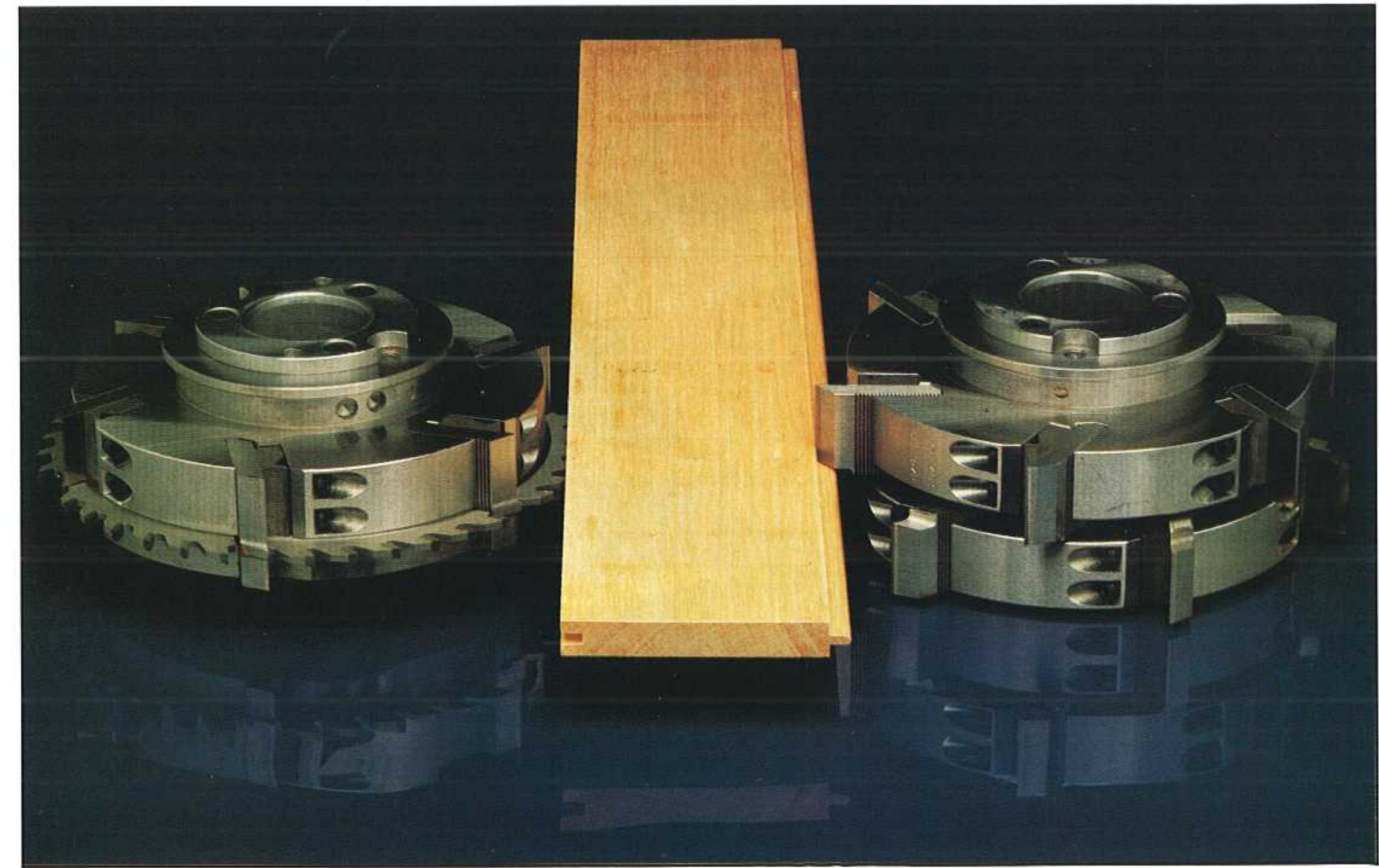
▲ 93 The preciser the template the more accurate the end product. We supply complete **tool kits** including a hardening oven for **making profile templates**. Here is a selection from our range.



▼ 95 Special tooling from Weinig, the Hydro tongue and groove cutter set, is a must for every modern planing mill. The stellite-tipped profile knife can be ground on the Rondamat 931. Customers report that up to 300,000 linear metres (980,000 linear feet) can be planed without re-grinding the tooling.

▲ 94 In Switzerland where precision is almost proverbial we produce **original Weinig cutterheads**. Not only traditional planer heads, but also profile cutterheads for back-corrugated knives, the patented Weinig Hydro head for high speed

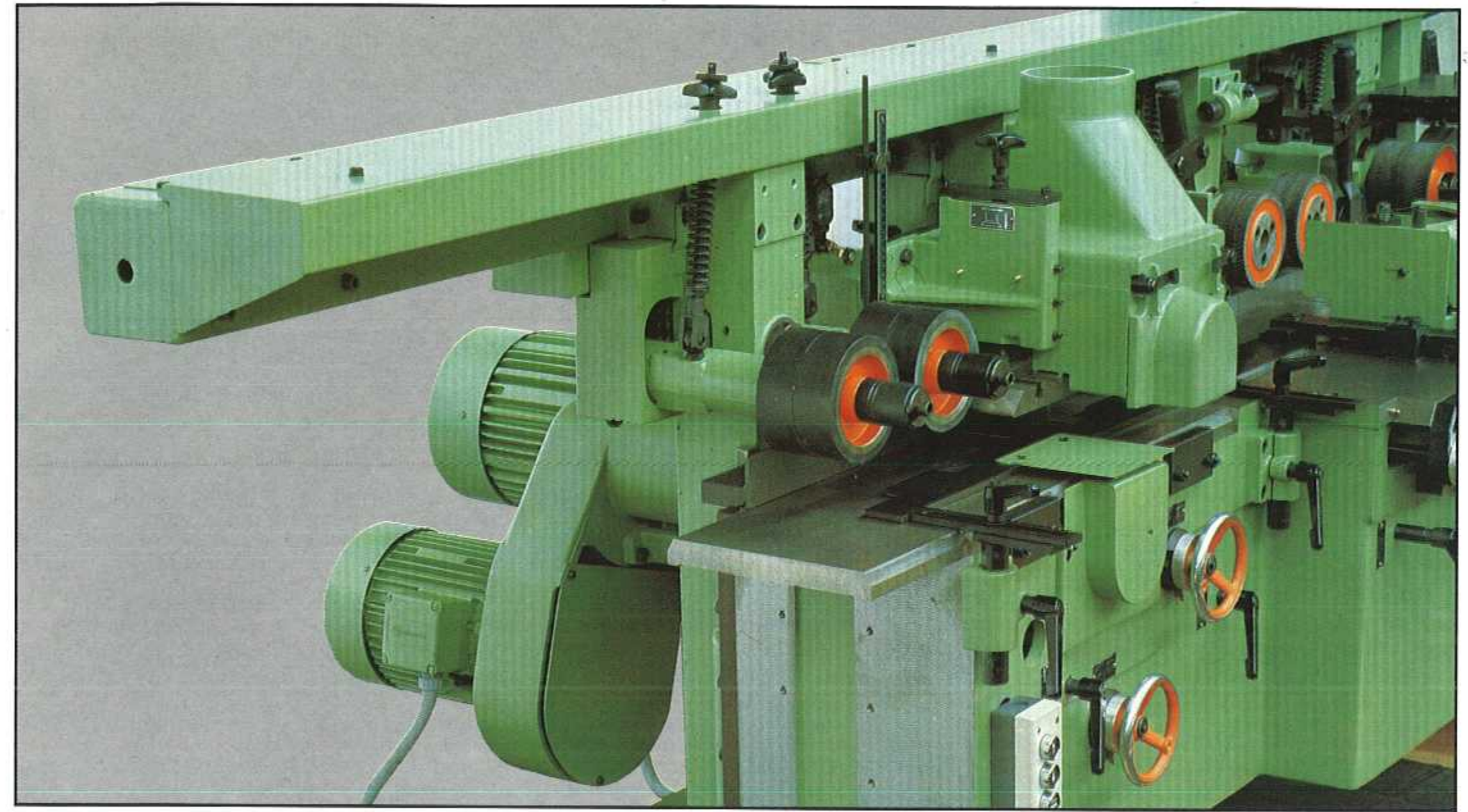
moulders and the modern Weinig Constant tooling. These are reasonably priced, high precision products available for quick delivery.





◀ 91 Once in possession of a **Rondamat 931** you can almost do without a tool supplier. This most popular profile grinder produces profile knives in the cutterhead within a few minutes according to templates made by yourself. And these are exactly in conformity with the profiles you want to make. As the template is also used for resharpening the knives you can be assured of continuous profiling accuracy from your tools.

▼ 92 The **Rondamat 931** guarantees 100% profile accuracy without any possibility of changes in profile.

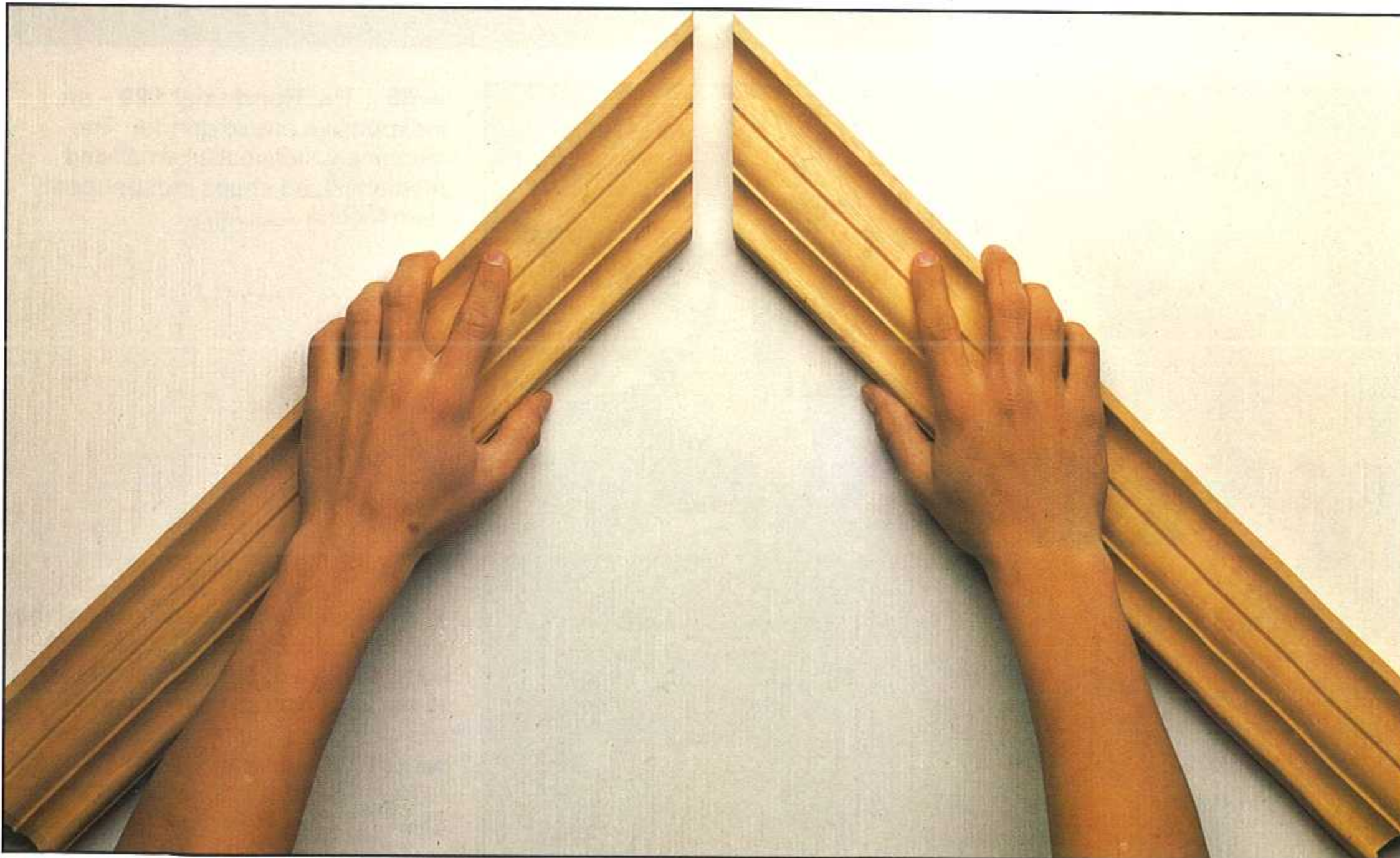


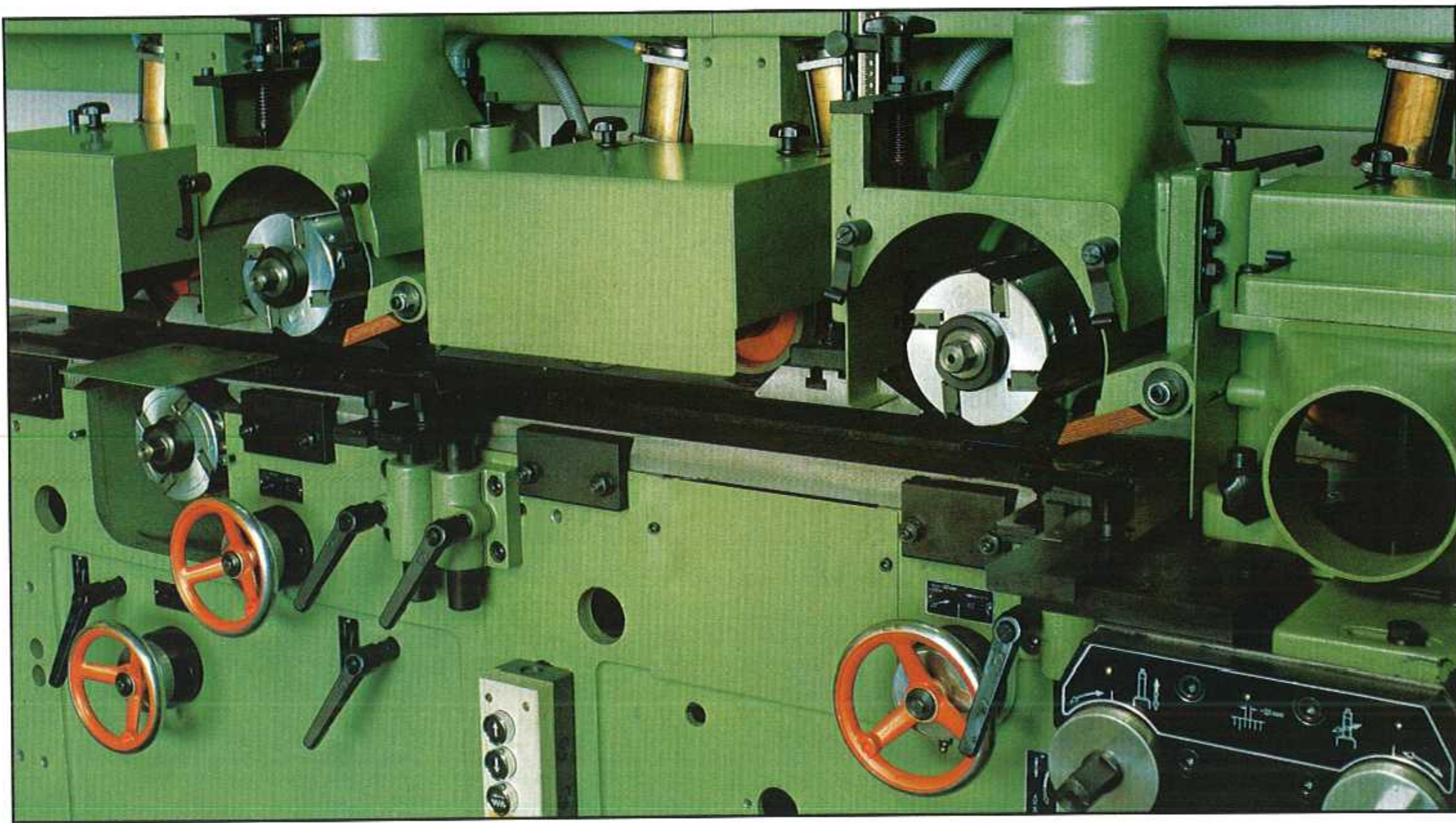
▲ 15 Modern moulders are often modified for retrofitting of additional spindles. The illustration shows the Unimat, **modified for retrofitting of a universal spindle**. Equipment of this type makes your machine more flexible for adaption at any time to different production requirements, not to mention the increased resale value of your Weinig moulder. Our machines can be modified for retrofitting of top and bottom spindles,

universal spindles and vertical spindles.

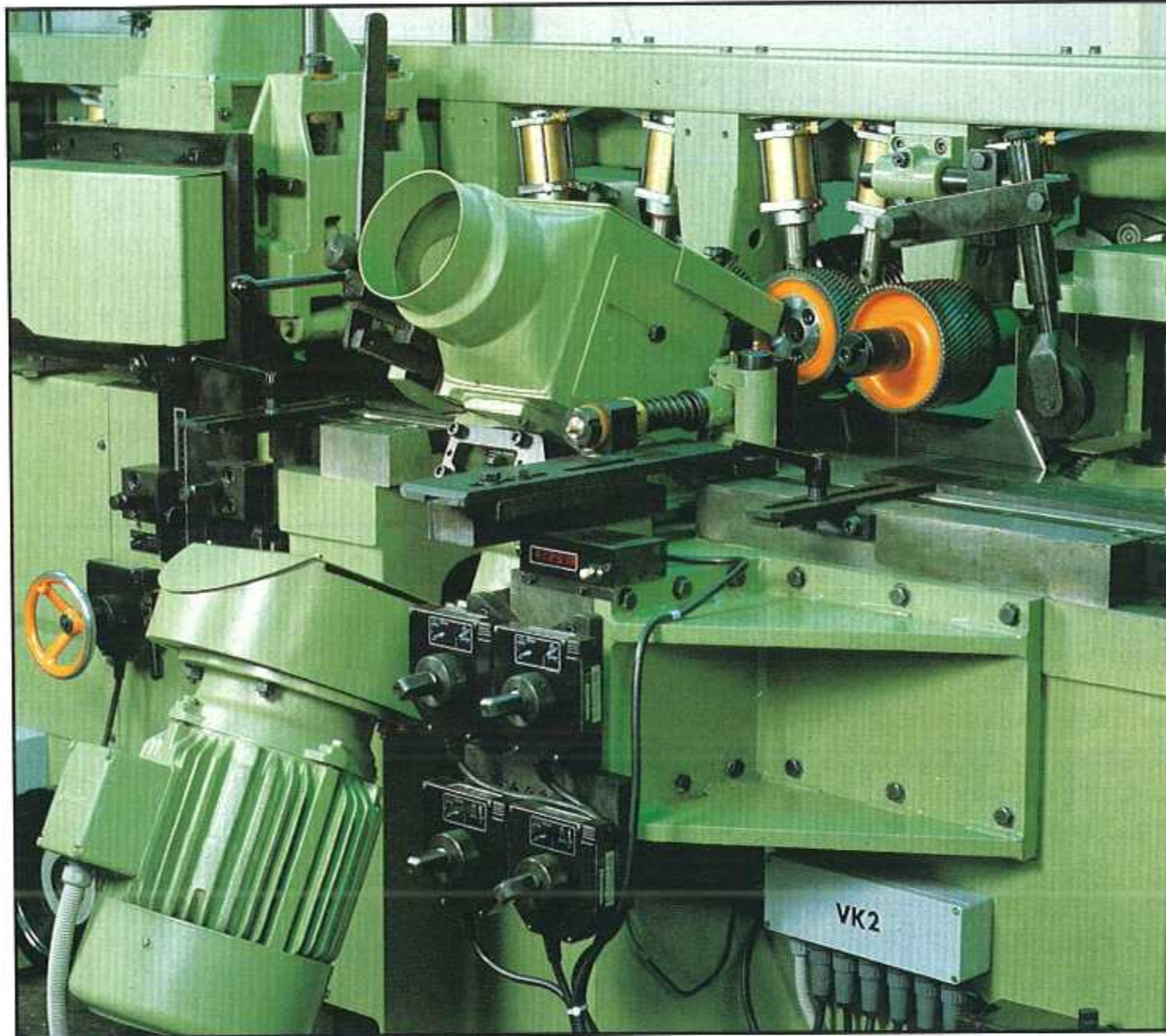
▲ 16 The universal spindle is mainly used for splitting or separating of workpieces, grooving and the like. For certain profiles, however, it is recommended to apply **pressure bars** mounted on **the hood of the universal head** so that the workpieces are pressed firmly onto the machine table or against the right-hand fence.

▶ 17 A typical example of clever manufacture using the universal spindle. **Two different profiles are made from one workpiece** and separated at the outfeed by a sawblade mounted on the universal spindle.

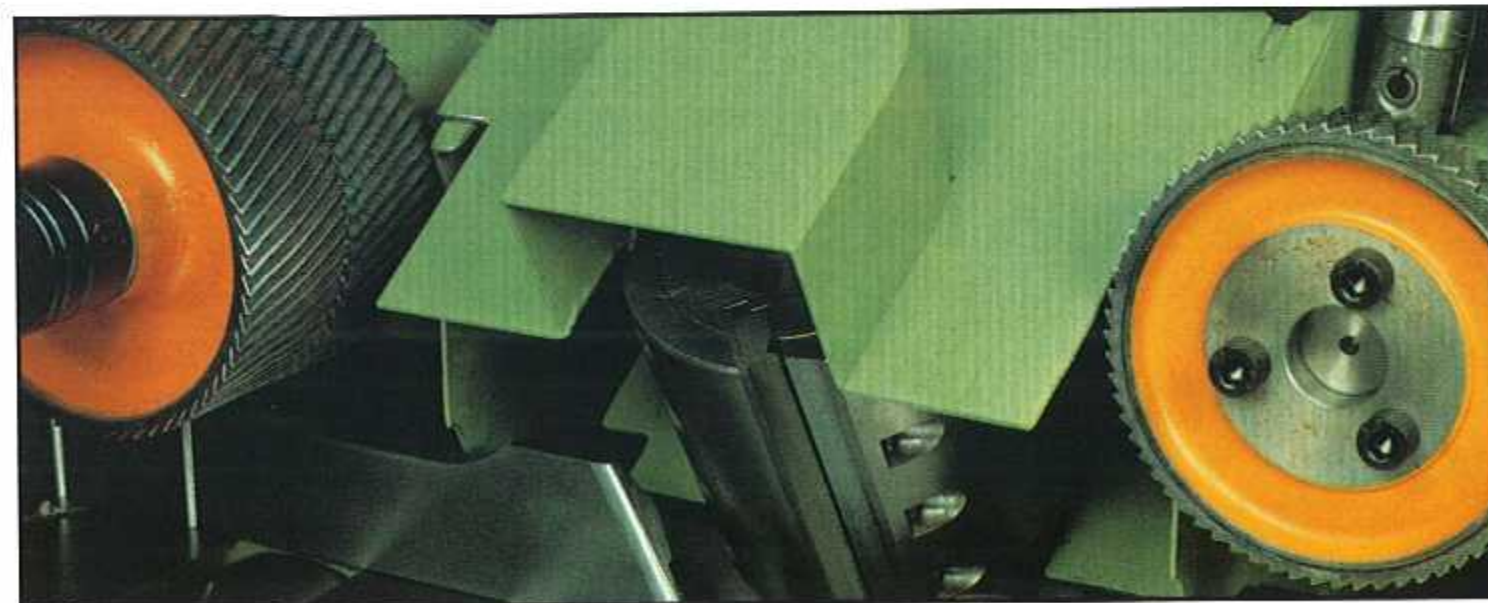




▲ 18 Additional top or bottom spindles (for pre-planing and finish profiling) are advisable particularly when the stock varies greatly in size, when particularly difficult profiles have to be cut and cause a large amount of chips (for spreading the cutting operations over several spindles) or for pre and finish moulding when first-class quality is demanded.



▼ 20 On almost all models the 2nd right-hand spindle can be supplied as a tiltable working spindle.



▲ 19 Tilttable vertical spindles enable complicated profiles to be made and reduce the cutting circle of your tool to a minimum. Illustrated here is a tiltable left spindle.

Weinig is not only the world's largest supplier of moulders. Even with the best moulder a quality product can only be produced if the correct **tooling** is used and accurately ground on modern **tool grinders**. We make **material handling equipment** to save on people, time and space. Our Miniphon **sound enclosures** ensure that you do not disturb your neighbour and that your employees are subjected to as little noise as possible.



▲ 89 The **Rondamat 929** – an inexpensive profile grinder. The machine which makes small and medium sized shops independent from tooling suppliers.

◀ 90 Simple operation is one of the special features of the **Rondamat 931**. Within a few minutes you can make your own profile knife in the Weinig cutterhead so that you can take the tool directly from the grinder to the moulder and produce top quality items at low cost.

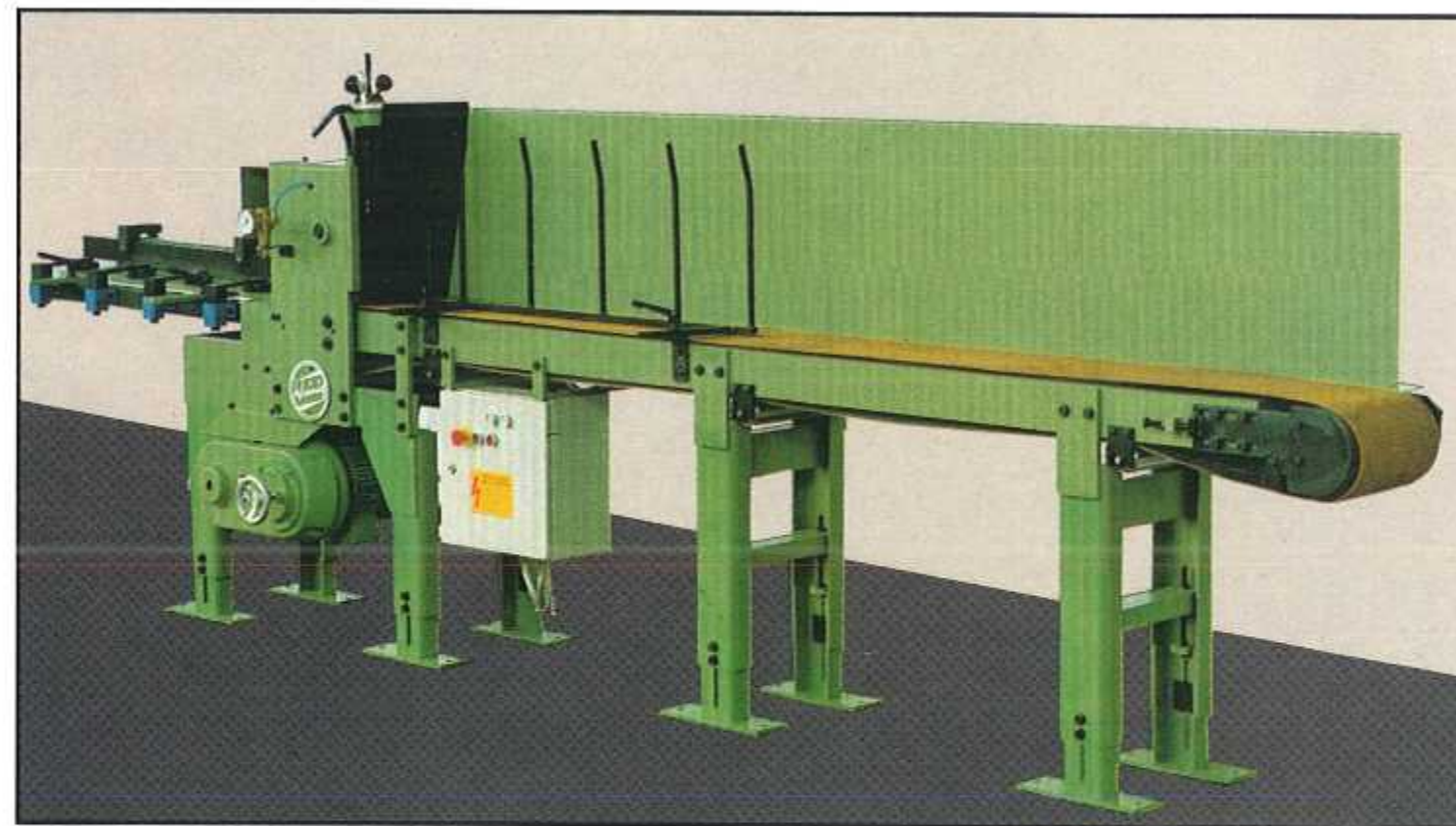


▲ 87 The EM 4 feed magazine ensures continuous production on your Weinig moulder. It prevents unnecessary transportation and non-productive time, saves space and relieves the operators. The magazine is suitable for workpieces of uniform or random lengths and is fitted on the straightening table of the moulder.

Technical data:

Working width	20 to 200 mm (3/4 to 73/4 in.)
Working height	from 10 mm (3/8 in.)
Workpiece length	300 to 3000 mm (113/4 to 118 in.)
Workpiece thickness	10 to 50 mm (3/4 to 2 in.)
Feed, pneumatic	0 to 35 m/min., (0 to 115 ft/min.) depending on workpiece length
Air pressure	6 bar (85 p.s.i.)
Cycles	100
Feed power	1500 N at 6 bar (85 p.s.i.)

► 88 For high speed moulders the belt magazine 809 is used. It is suitable for workpieces of uniform or random lengths. The high grade conveyor belt with excellent friction ensures continuous transportation. On the outfeed side there are powered rollers above and below the table. The magazine is particularly suitable for moulders with short infeed table.

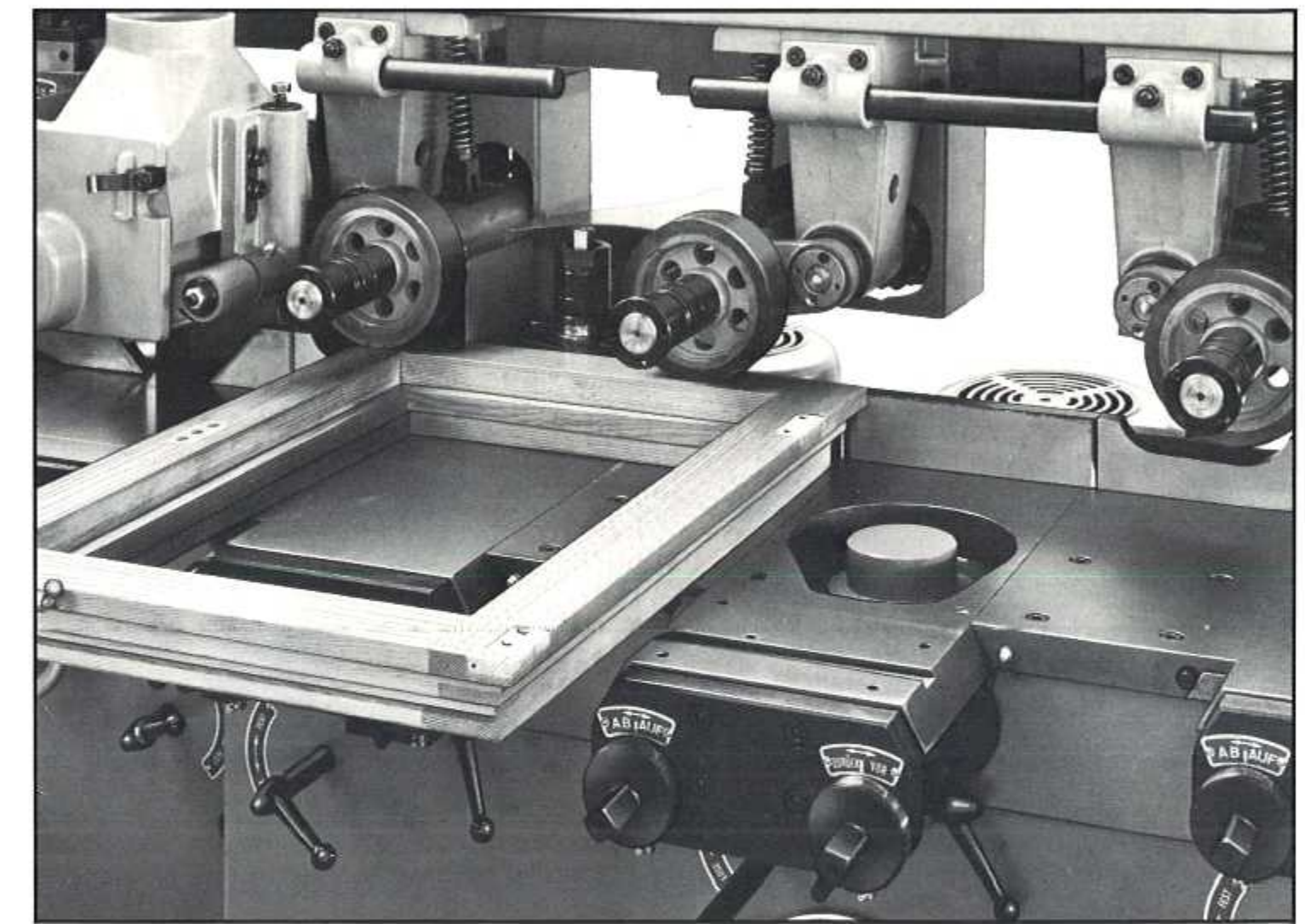


Technical data:

Length	3300 mm (130 in.)
Belt length	2000 mm (78 in.)
Belt width	270 mm (10 1/2 in.)
Belt height	850 mm, (33 1/2 in.), fine height adjustment of the base
Feed speed	variable from 24-120 m/min. (78 to 400 ft./min.)
Drive	3 kw (4 hp) variable speed gearing
Drive chain	3/4" roller chain to DIN 8187
(other dimensions on request)	



▲ 21 A modern window made on Weinig moulders and tenoners.



▲ 22 A package including a submerging left-hand spindle enables window sections to be sash profiled.

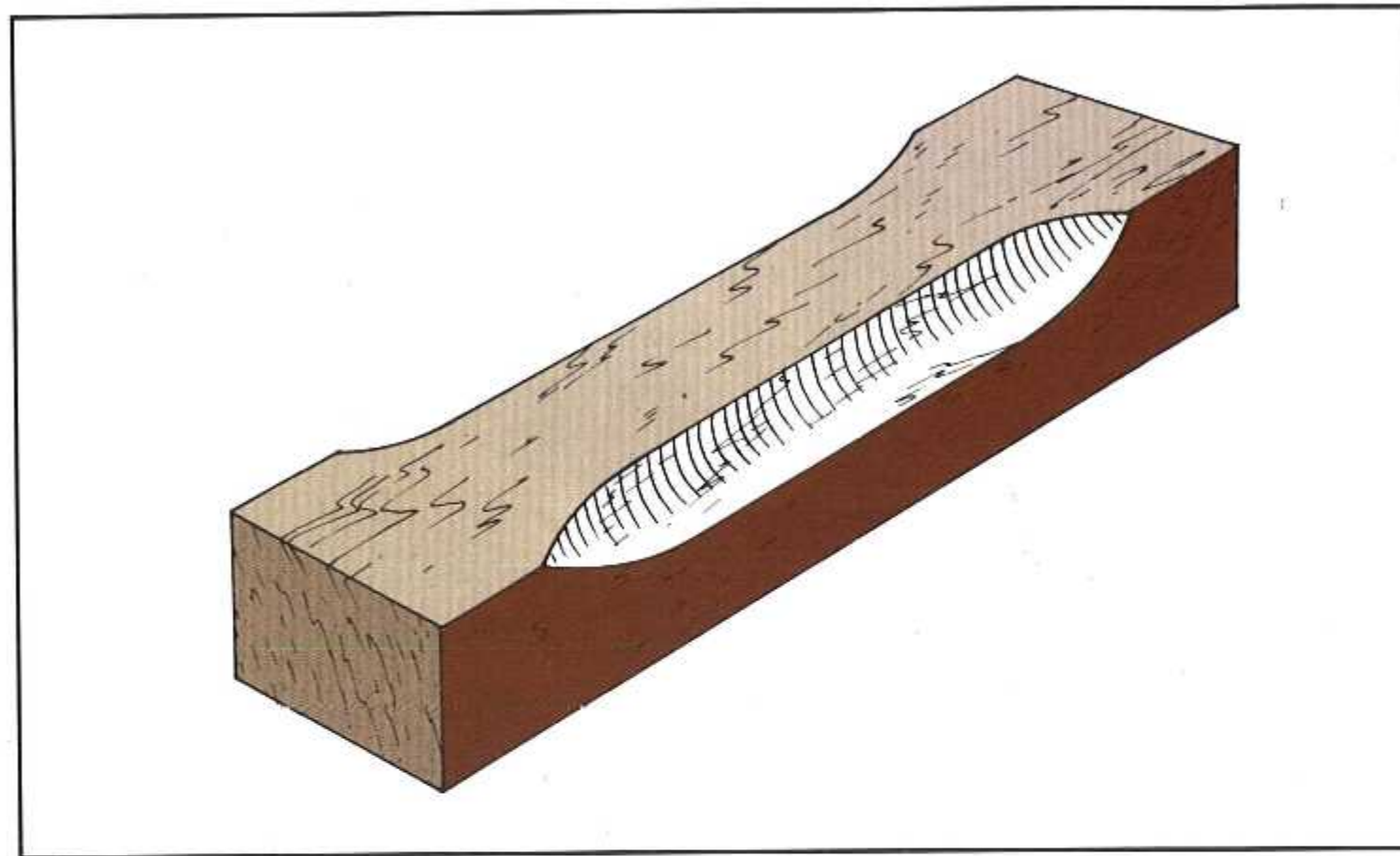


◀ 23 Jumping, i.e. non-continuous profiling, can be performed fully automatically on the moulder for various kinds of productions.

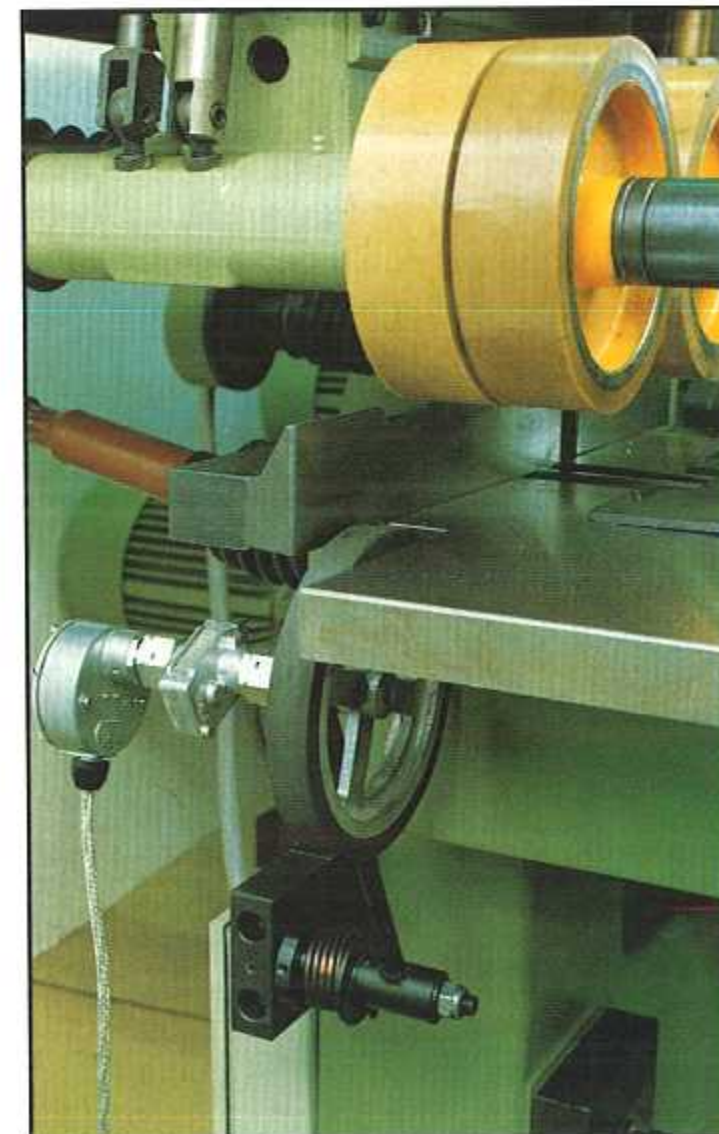
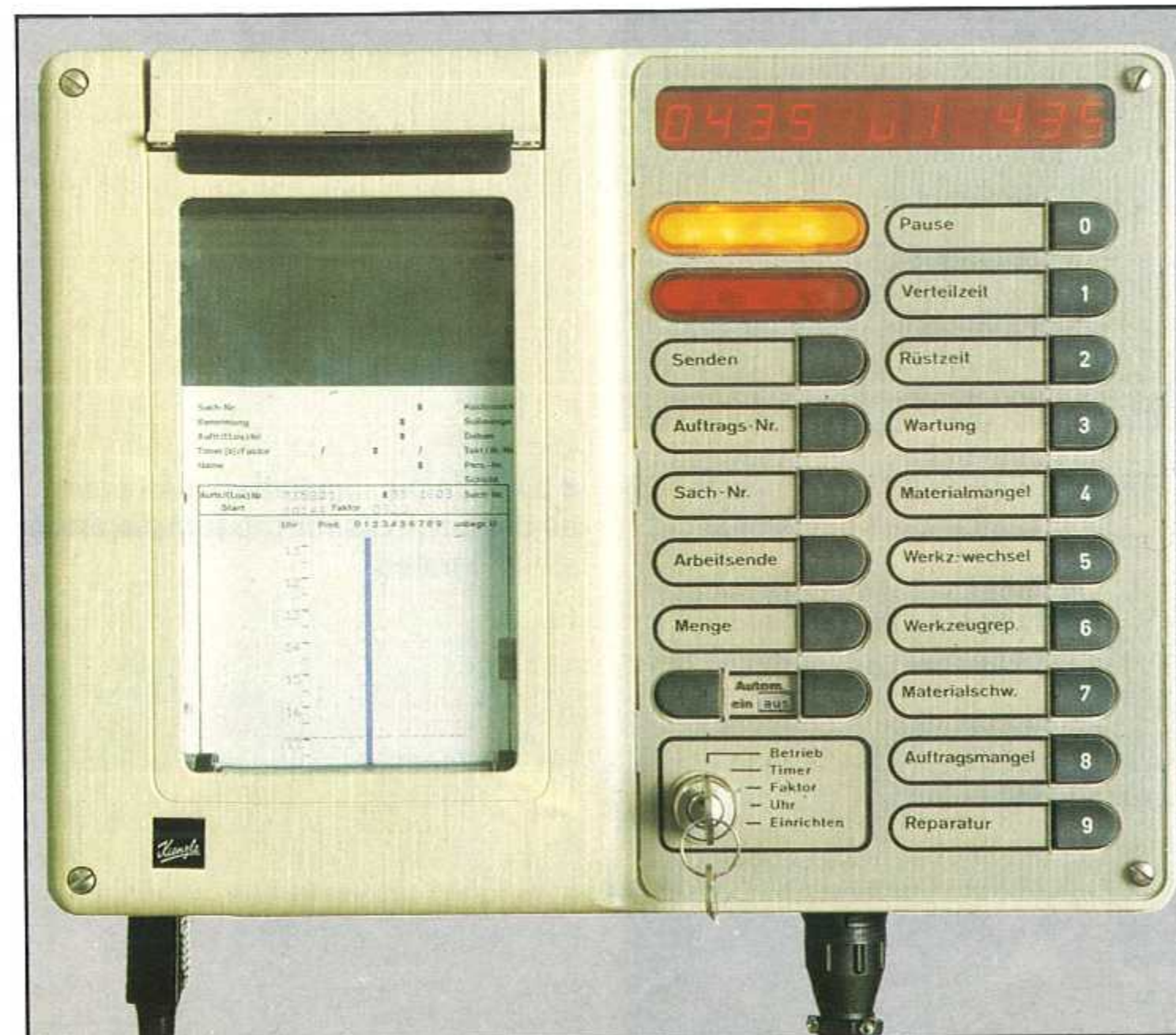
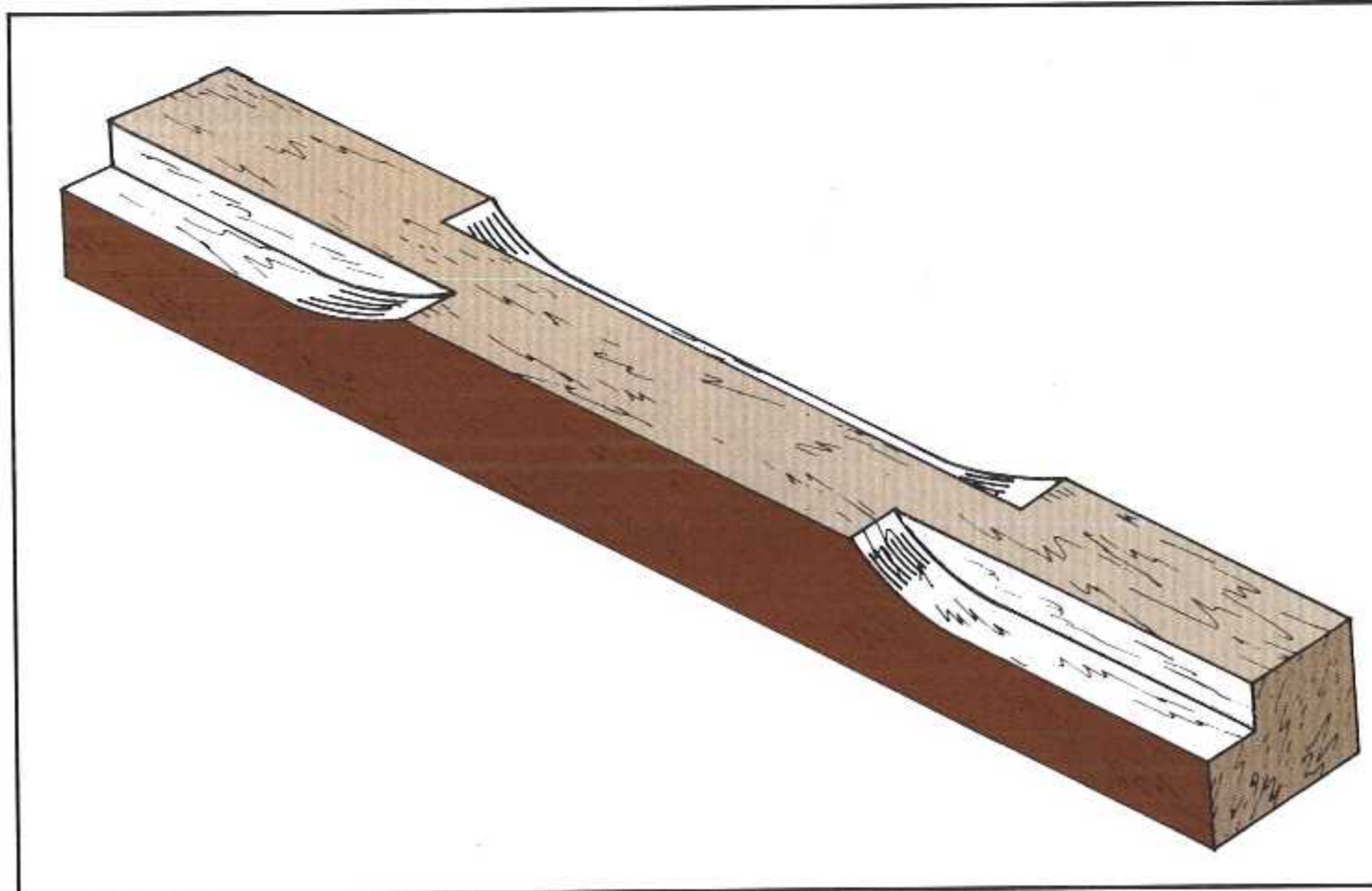


◀ 24 On the moulder control panel all the controls for the jump spindle are integrated.

► **25 Pallet manufacture** is a good example of the way the top **jump spindle** is used for cutting both chamfers.

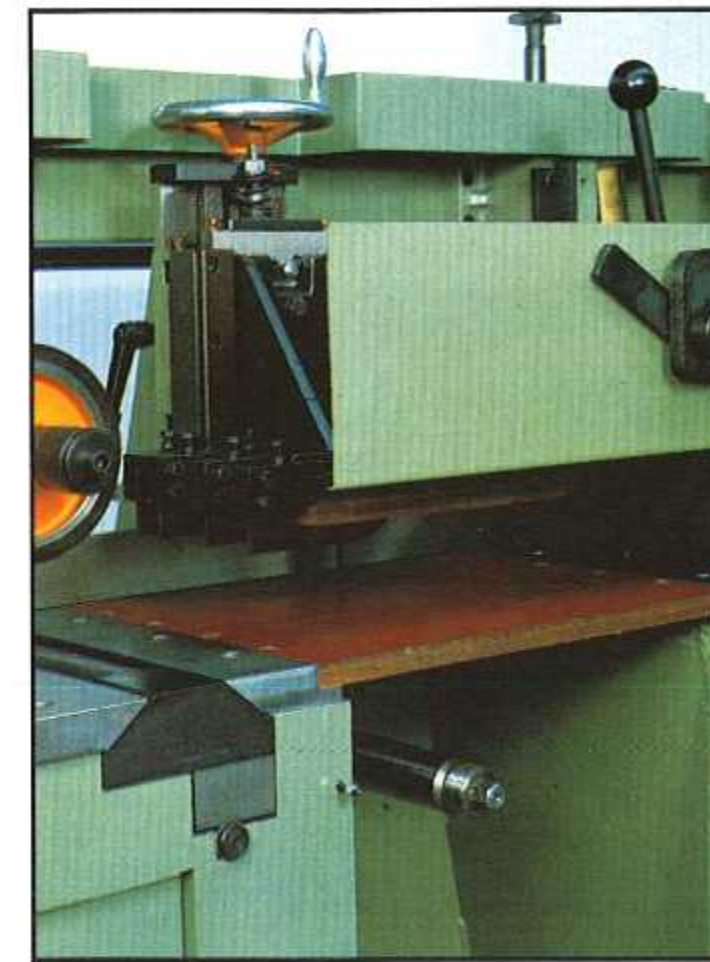


▼ **26** In window production, for example, grooves are produced with **jump spindles**. In the illustrated example two individually controlled top jump heads are required.

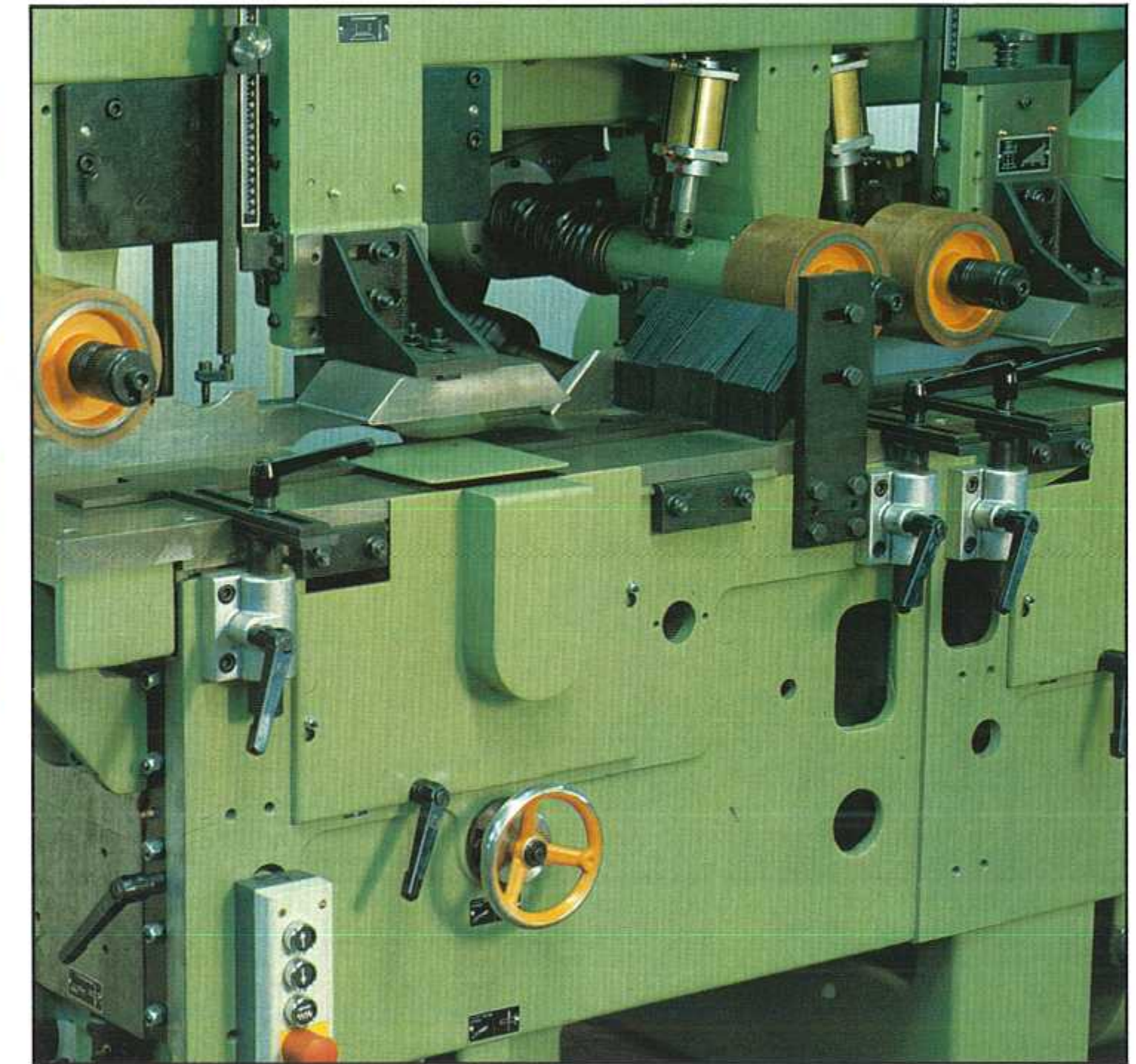


▲ **28** The **linear metre counter**, integrated in the machine outfeed table and connected to the autonomous machine terminal.

◄ **27** The **autonomous machine terminal** displays automatically and to the very moment, the production time and the quantity produced. At the push of a button you also know how many linear metres were produced during setting up or starting. If you want to see the nature of production interruptions that have occurred up to the present and how long each of them lasted, the terminal can also tell you this by pressing the various down-time pushbuttons. If required all the stored data can be totalled and printed out.

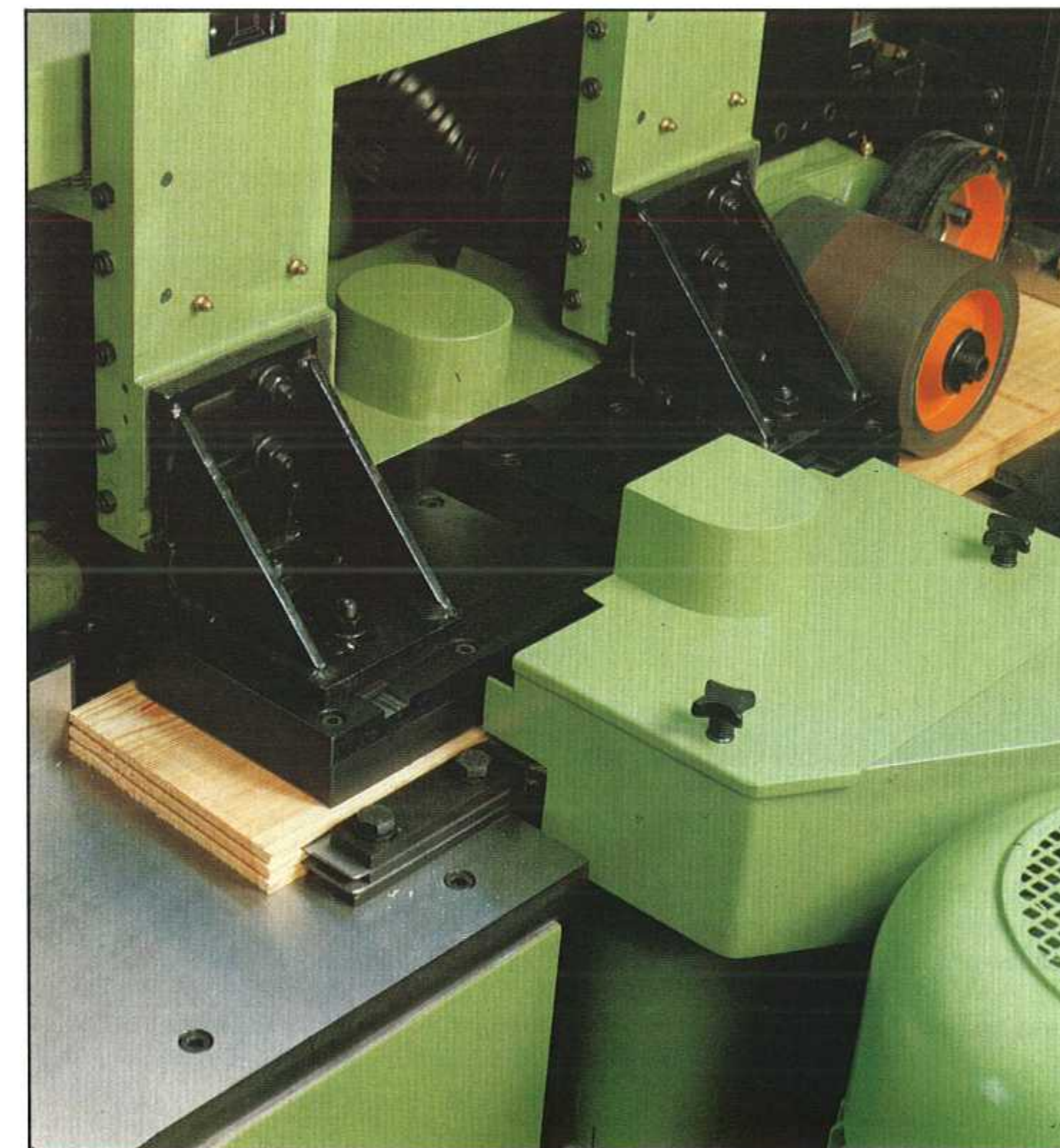


▲ **84** Splitting wedge guides prevent bottom sawn workpieces from moving out of position. The splitting wedge guide ensures perfect guidance of the cut ware.

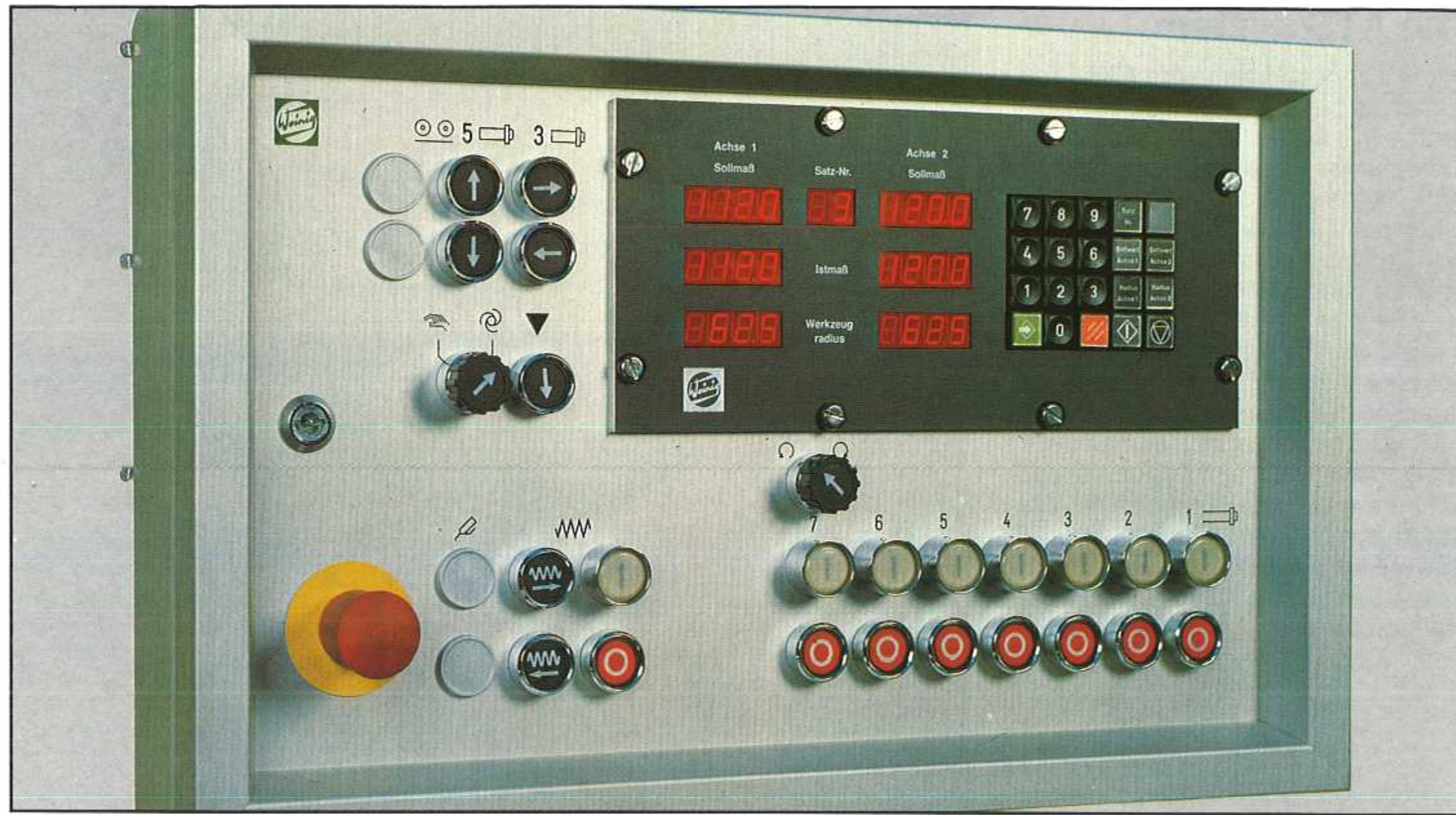


▲ **85** The backlash protection is a "must" when sawing. It prevents in-

jury to the machine operator.



◄ **86** For **splitting work from right and left** we have developed a special element by which the two vertical spindles, extremely close to one another, ensure high precision cutting of the workpiece. Special guides and splitting wedges make certain that the product is cut exactly to size.

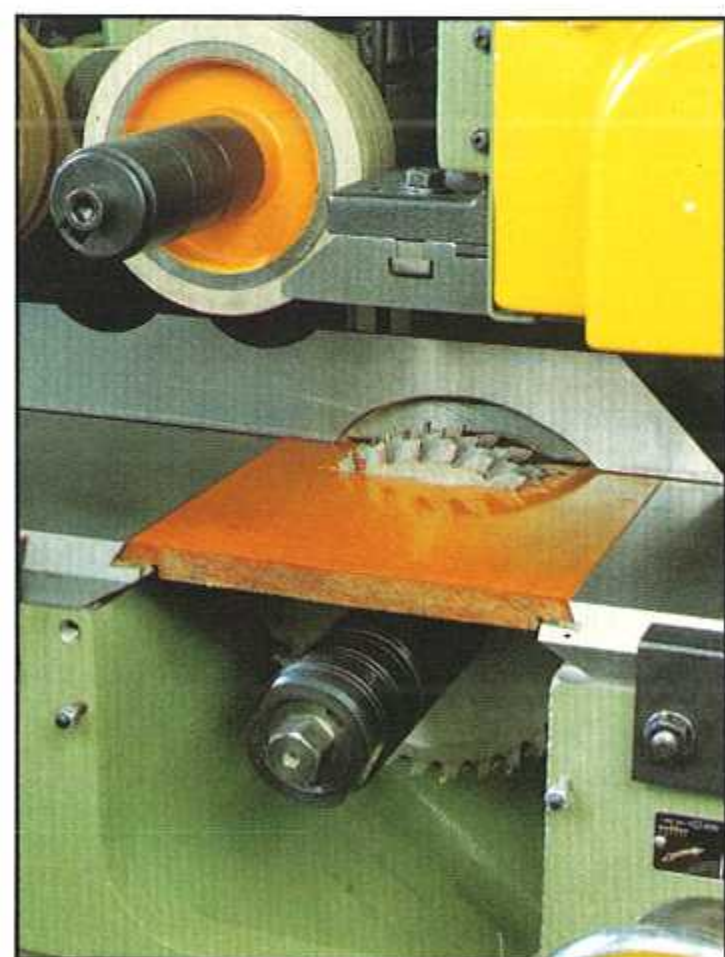


▲ 80 The control panel of the ATS system, integrated in the switch cabinet of the moulder.

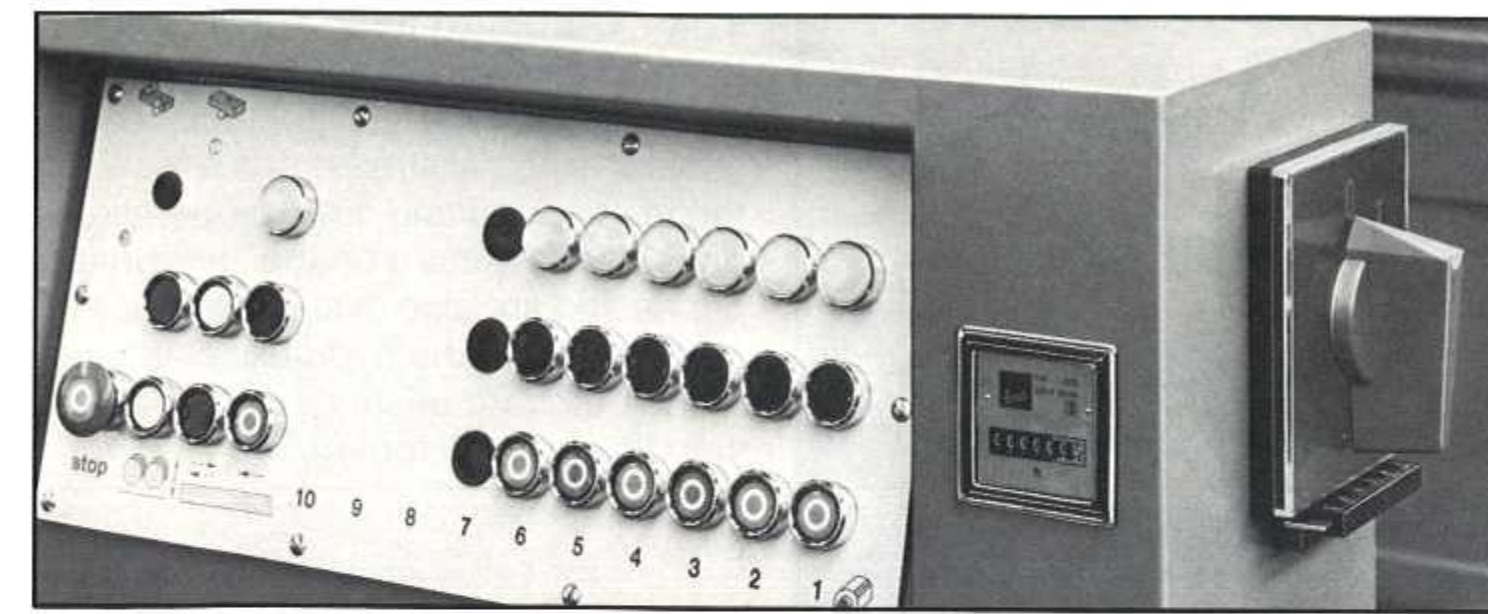


► 81 The ATS system adjusts not only the top spindle in connection with the feed at the touch of a button but also the left-hand spindle which is positioned automatically according to the pre-set values.

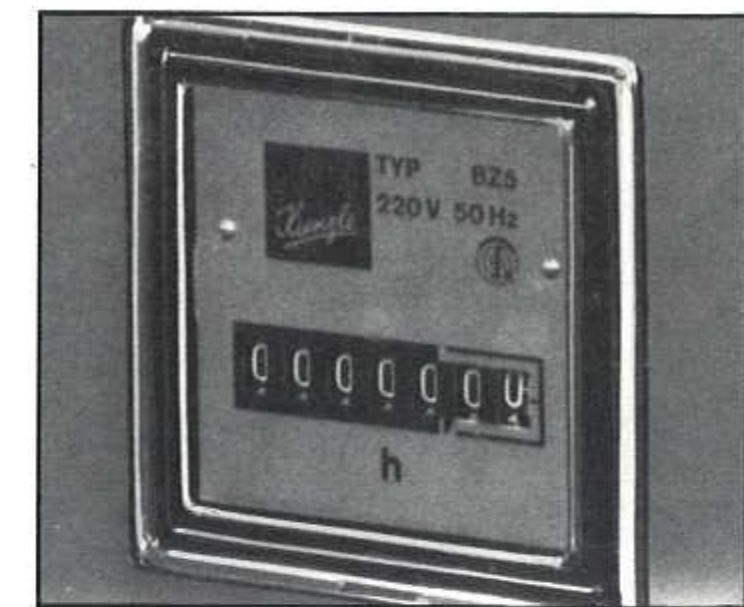
◀ 82 Precision workpiece dimension is also required when sawing. The use of a special table plate for wood inserts produces a closed table surface so that the workpieces can be split with high accuracy.



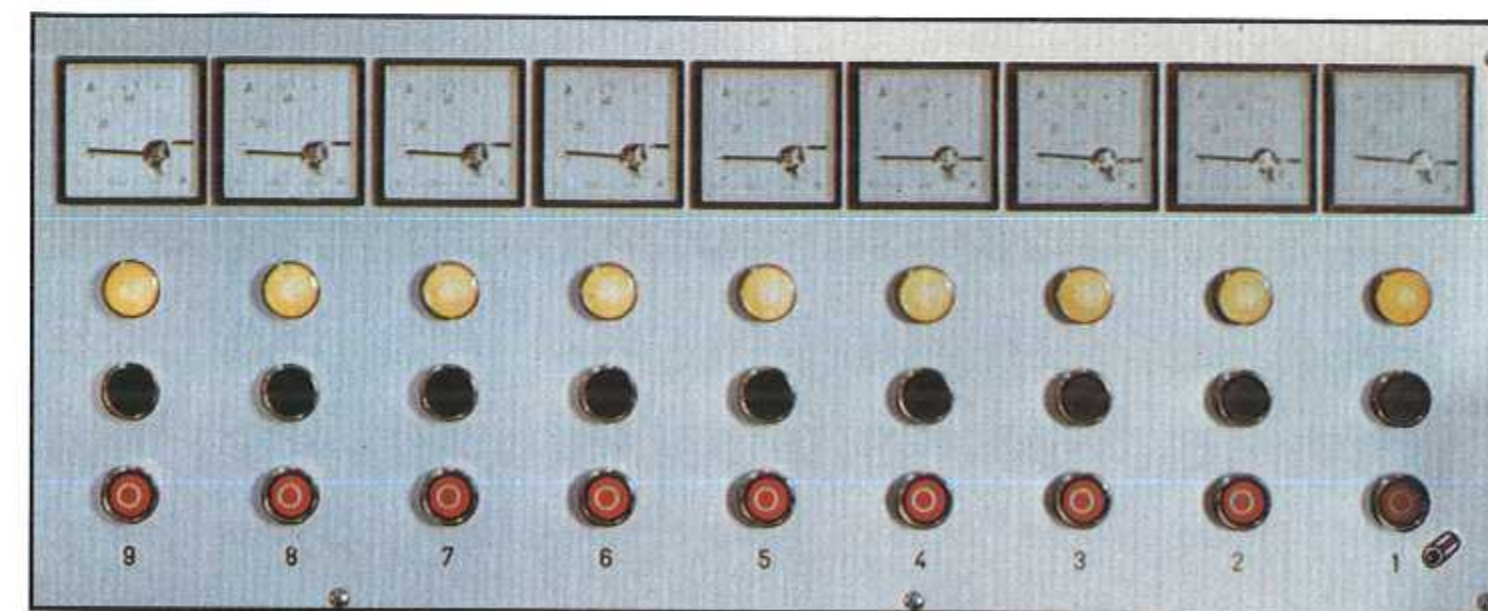
► 83 Here is a 37.5 kw (50 hp) motor to drive a splitting spindle. This means that sawing is also possible at high feed speeds and with several saw blades and large workpiece dimensions.



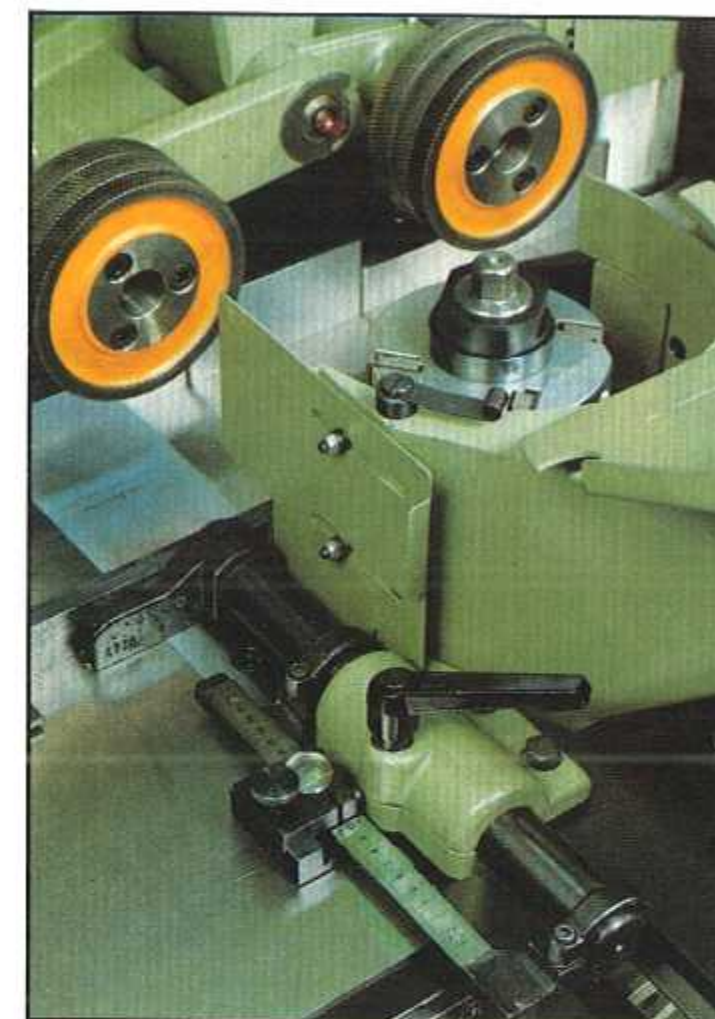
▲ 29 The working hour counter, integrated in the machine control panel is used for determining standstill and effective machine running times.



▲ 30 Working hour counter



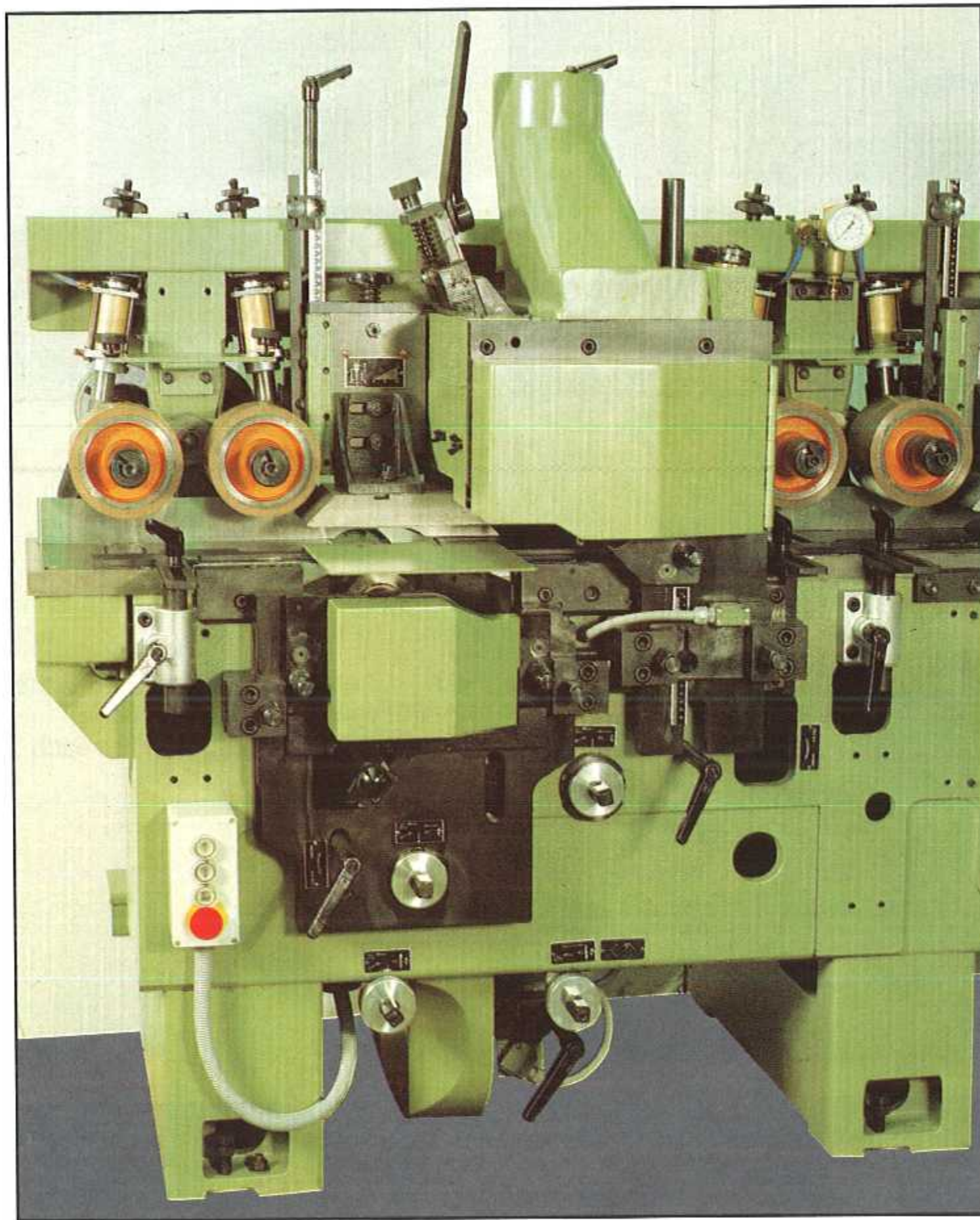
◀ 31 The ammeter integrated in the control panel ensures a constant check on the load under which each motor is running.



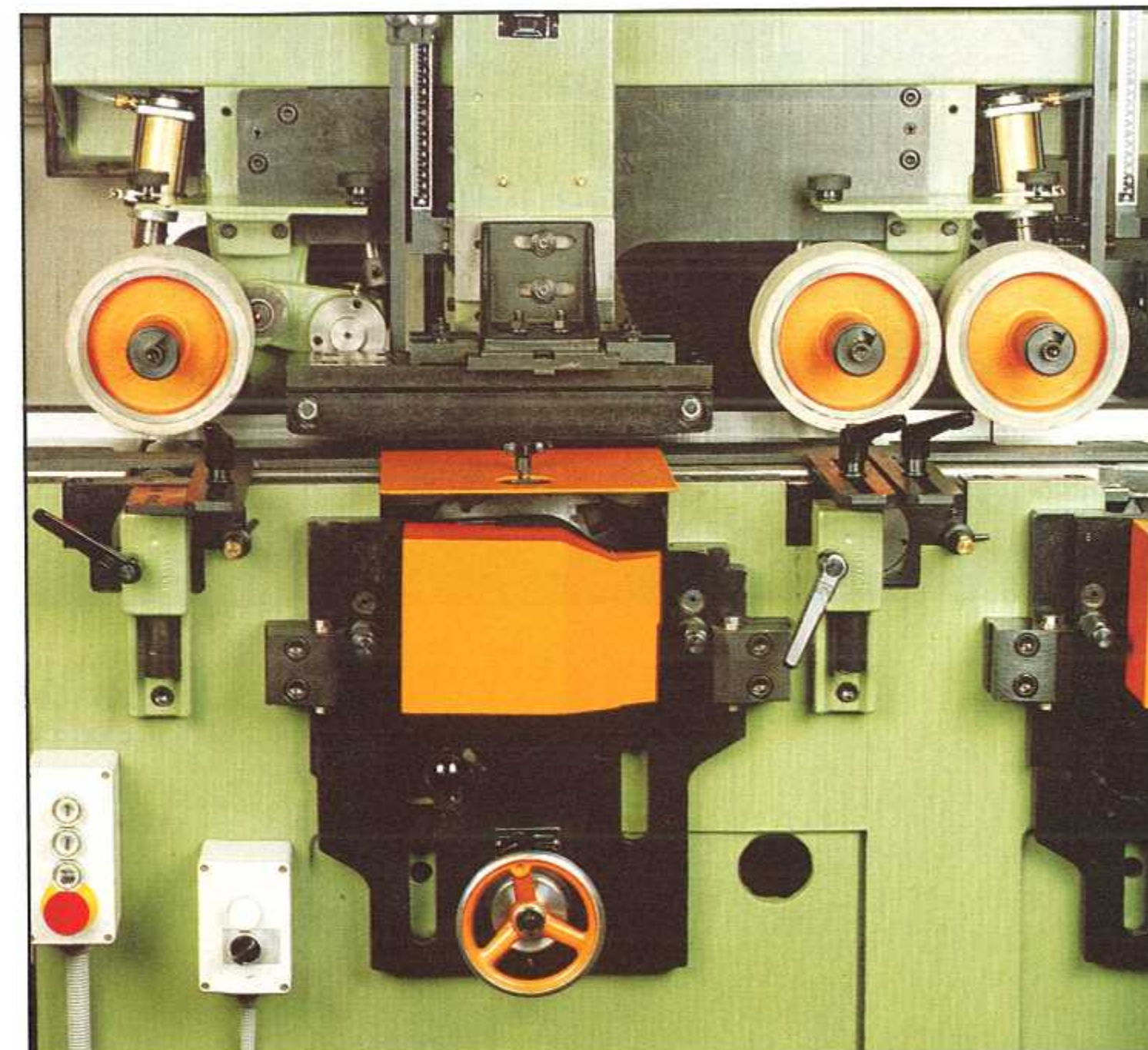
▲ 32 When moulding large profiles normal hood diameters are often insufficient. On some of our machines the hoods can be enlarged to provide for tools up to a maximum of 250 mm (10 in.) in diameter. Illustrated here is the left-hand vertical spindle with this hood diameter.



▲ 33 Weinig moulders can solve practically all production problems be it profiles with minimum cross-section or large cutting jobs.



◀ 34 **Outboard bearings** are often fitted on **horizontal spindles** particularly in the case of wide machines subject to heavy stresses as a result of the feed speed and cutting operation. These are standard on the Hydromat series and are also available for some other models. The hydraulic clamping of the outboard bearings prevents the spindles from distorting.



◀ 35 Machines with outboard bearings also have to be retooled quickly. Instead of using nuts the **outboard bearing plate** can be provided with **hydraulic clamping facility**. The plate can be released or clamped by flipping a switch (with signal light).

The ATS system

Within a very short time the ATS system became a bestseller. What is this system offering you? The operator programmes the required width and thickness. By push of a button the left spindle and top head including feed beam move to the required dimension within seconds. The radius of the tooling had been entered into the system beforehand. Because of the built-in memory you also have the option to programme up to 15 different dimension combinations (timber width and thickness) and call them in by code number. The ATS system is mainly used for very short runs or four-side planing because manual positioning of the spindles is totally eliminated.

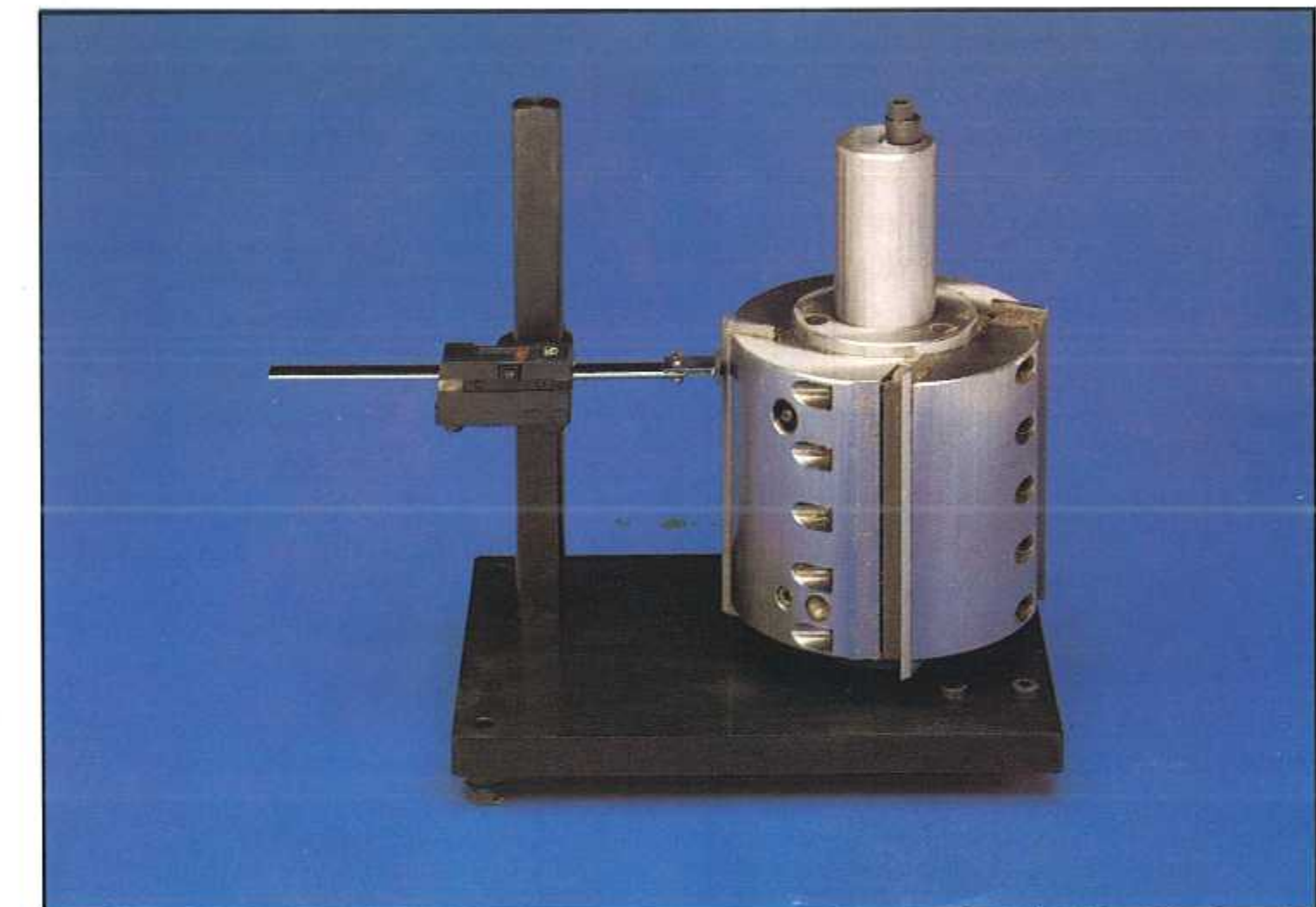


▲ 79 Very many products call for small batch production in differing widths and thicknesses. Weinig moulders with ATS solve this problem at the touch of a button.



▲ 78 Measuring stand for tooling radius and height

In measuring profile knives you have the possibility to equip the measuring stand in such a way to allow you to determine not only the radius but also the tooling height.



▲ 77 Measuring stand for tooling radius

The more accurate you measure your tooling after it has been ground, the faster your moulder can be changed over. The measuring stand has a

digital readout for the radius. This information is needed for the ATS system for instance.

The EMA system

Electronic measuring and indicating system for Weinig moulders

Setting time means machine standstill. Every time the tools are changed they have to be re-set and this means that valuable production time is held up. With the EMA system down time is kept to a minimum. There is no need for a trial run and your moulder can start production immediately after setting. This is a very welcome saving considering the cost of wood.

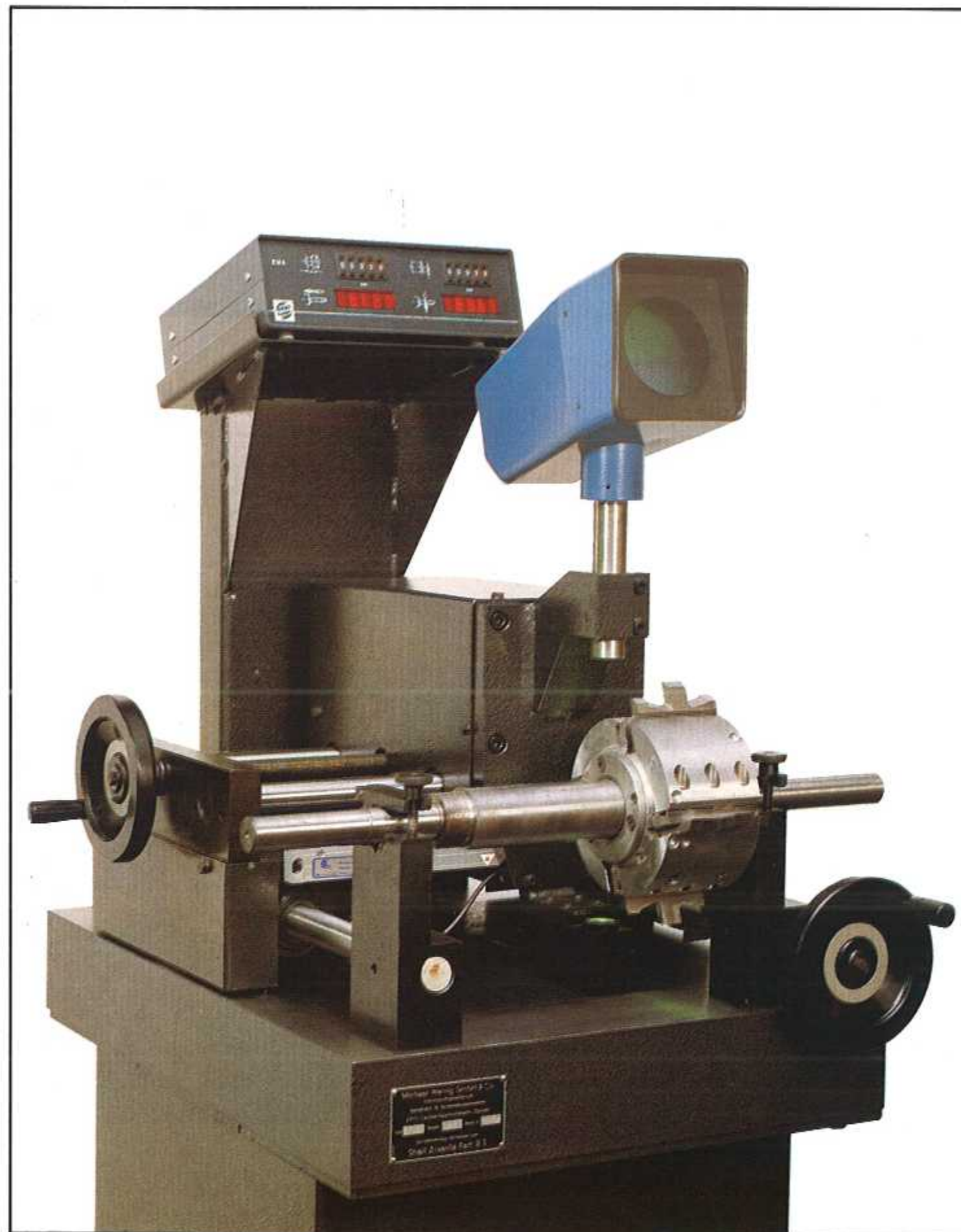
How it works

After grinding the tool you measure the radius of the cutting circle and the height of the profile on the EMA measuring stand. Preferably the radius of the smallest cutting circle is taken but other reference points can be used. These two measurements are entered on a card which fixes these two references for a specific profile. The card and the ground and measured cutterhead are then taken to the moulder. The spindle is fitted with

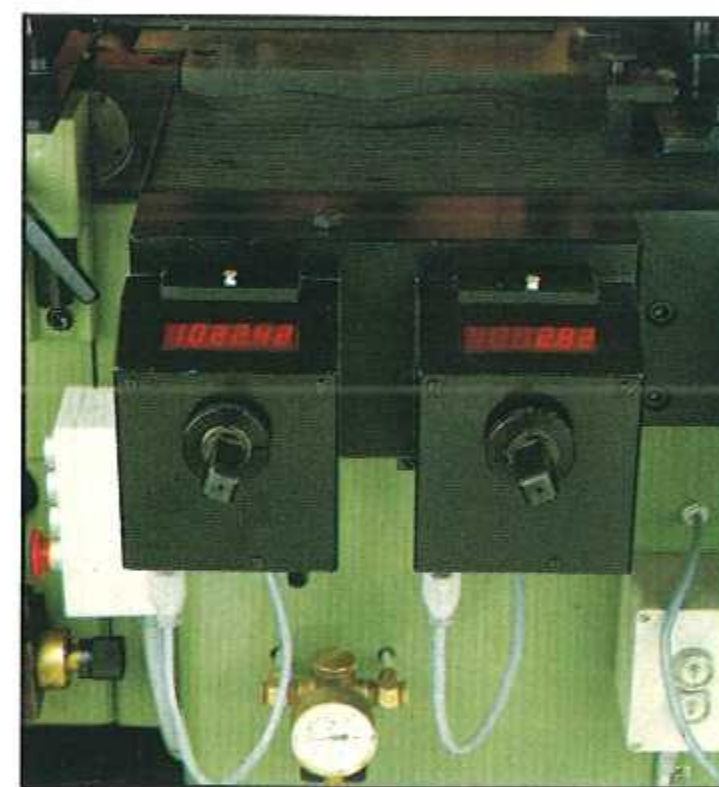
two EMA calculators, one for back and forward travel the other for up and down. These electronic display devices give a constant reading on the position of each spindle to the reference point (for example distance of left-hand spindle from right-hand fence).

The cutterhead is now attached to the spindle. The values determined on the EMA measuring stand are entered into the display unit which then gives you the dimension you would obtain if the spindle were not adjusted. The spindle is then moved in both directions until the measurements shown on the display conform with those on the job card.

All remaining spindles fitted with EMA instruments are set in the same way within a few minutes. Customers using the EMA system report cuts in down times of up to 50%. Moreover, the very first workpiece to leave the moulder is perfect in dimensions.



▲ 75 The EMA calculators with electronic display systems are located directly on the setting spindle.



▲ 76 Both axes, i.e., vertical and horizontal, have their own instrument.

◀ 74 A Weinig Hydro cutterhead being measured on the EMA stand.

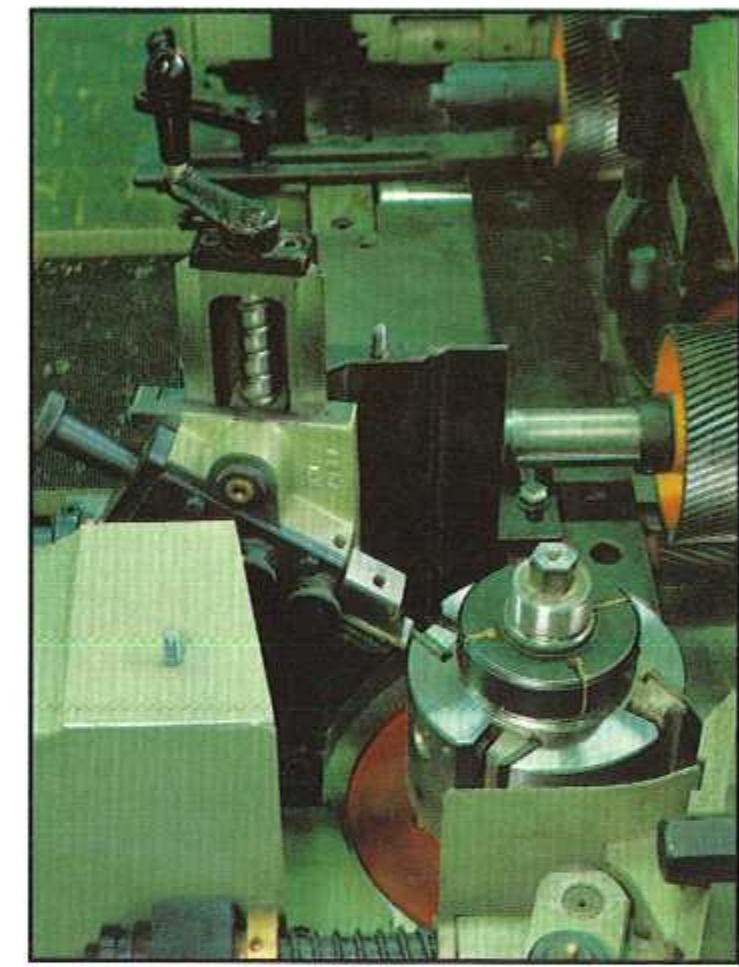
The Weinig jointing system

Jointing is the only way of ensuring that all cutters are surface determining. By traditional methods only one knife determines the surface quality because certain tool and spindle tolerances can not be overcome. Unlike this the jointing system ensures that all knives play their part. Basic requirements are a heavy and sturdily built machine, high capacity spindles to reduce the tolerances to a minimum and Weinig Hydro tooling which eliminates any play between the spindle and the tool bore. To prevent great differences in concentricity, the cutterheads are ground on Weinig Rondamat tool grinders. The use of all these components together enable the Weinig jointing system to be exploited to the fullest. At top spindle speed (up to 6000 rpm) the knives in the cutterhead are dressed by specially developed and extra-soft jointing stones. This applies both to straight planer knives and profile knives.

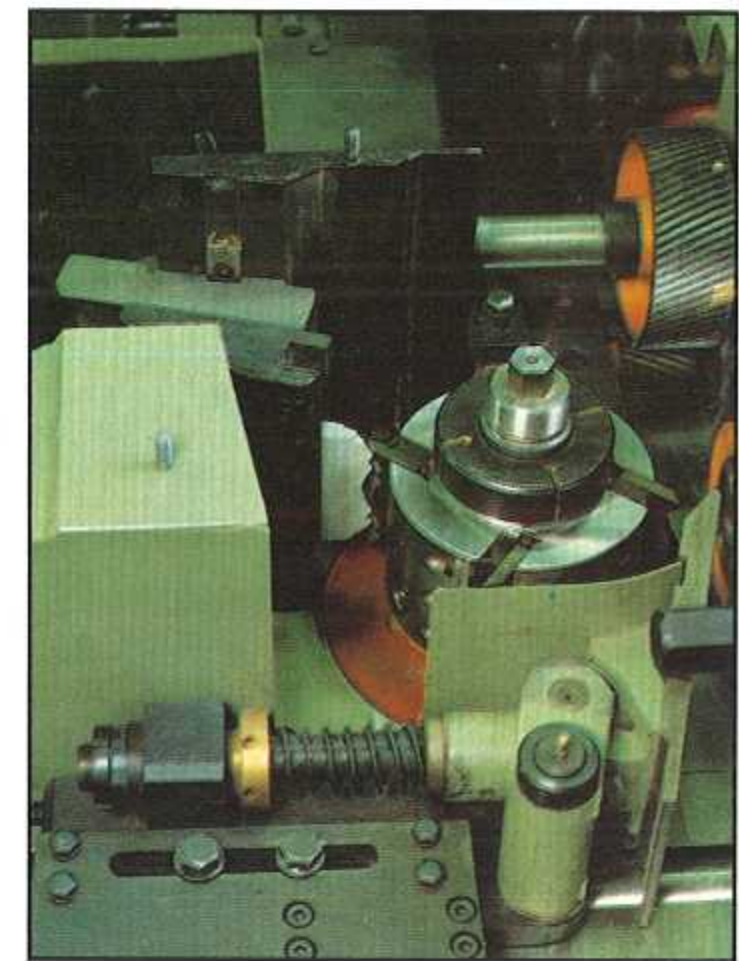
Surface quality is measured by the distance between the so-called cuttermarks and/or the number of knife marks per inch (kpi). A distance of 1.5 to 2 mm (12 to 17 kpi) is considered good. If the distance is less than 1.5 mm and/or 17 kpi are exceeded the knife life deteriorates accordingly.

The advantages of the jointing system can best be illustrated by an example.

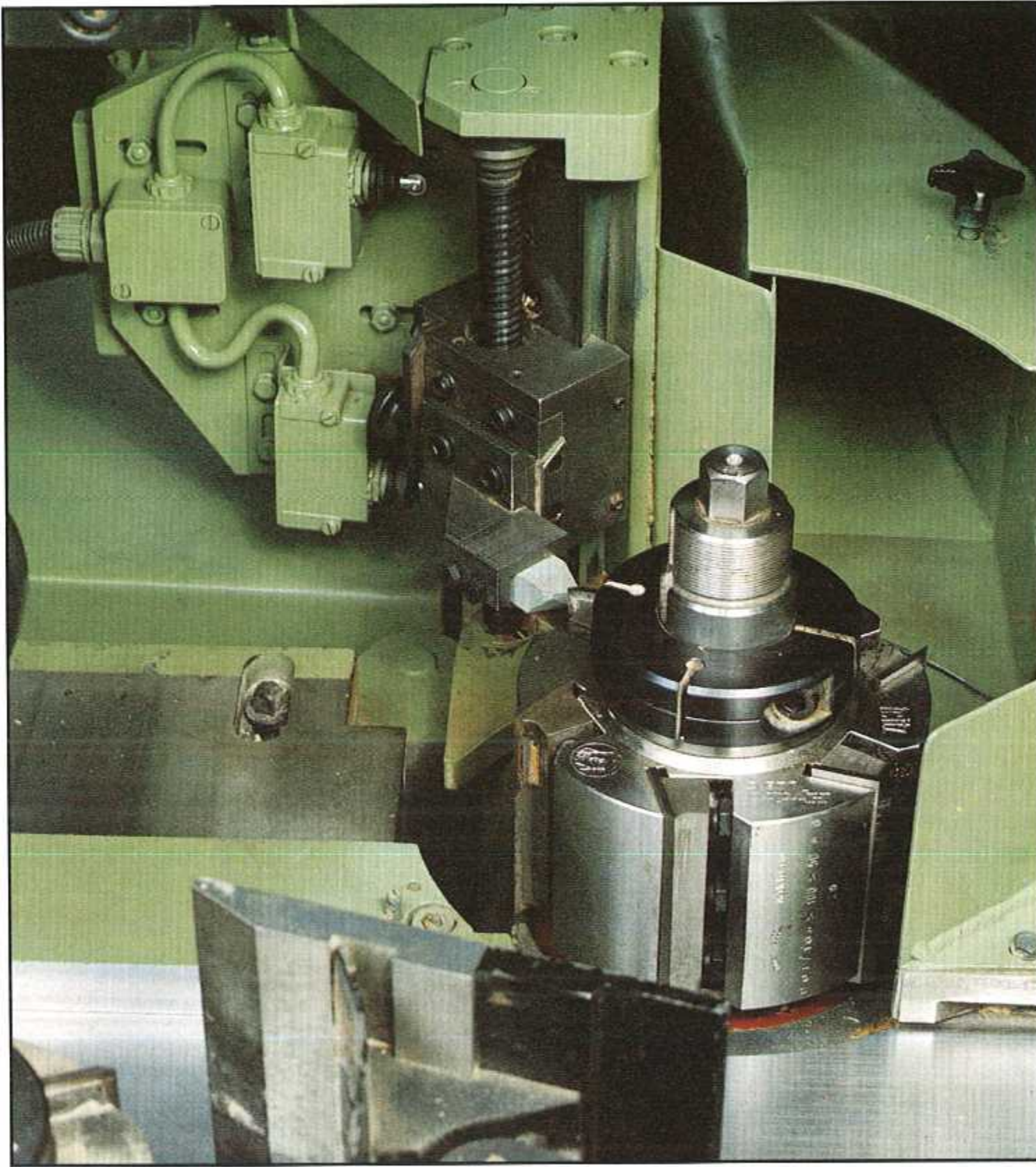
1. You are machining by the traditional method with 1 knife determining the surface quality. At a feed speed of 20 m/min. (60 ft./min.) and a spindle speed of 6000 r.p.m. the distance between cuttermarks is slightly more than 3 mm (8,5 knife marks per inch).
2. With the Weinig jointing system using cutterheads with 2 knives and 6000 r.p.m. a distance between cuttermarks of 1.67 mm (15 kpi) is obtained at the same feed speed. Only this system allows planers and moulders to be run at speeds in excess of 100 m/min. or 300 ft./min. (with the appropriate increase on the number of knives employed). The jointing system is being used more and more especially for large batch productions.



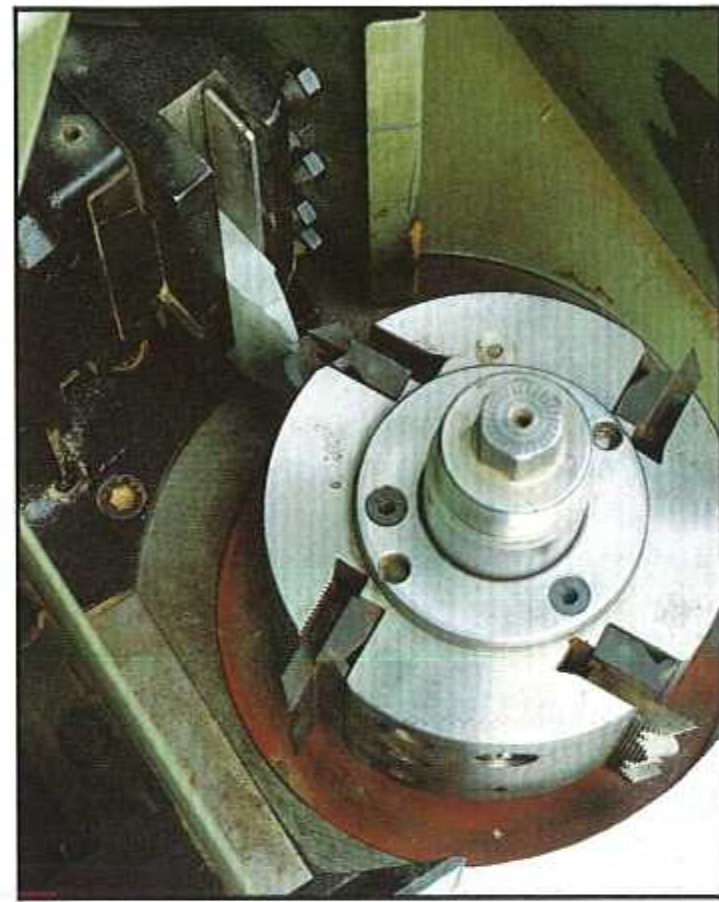
▲ 36 Left-hand vertical spindle with straight knife jointer.



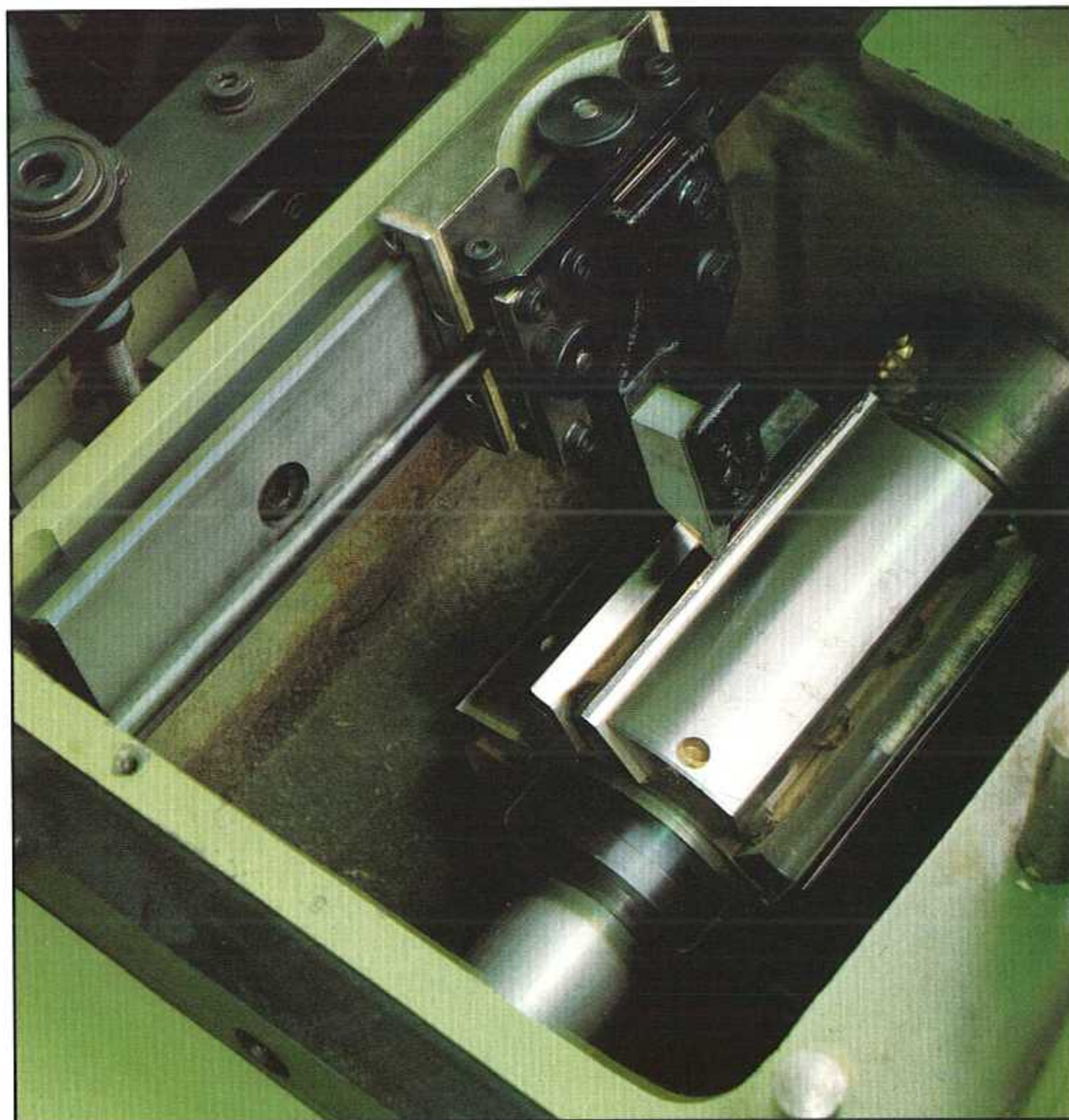
▲ 37 Left-hand spindle with profile jointer.



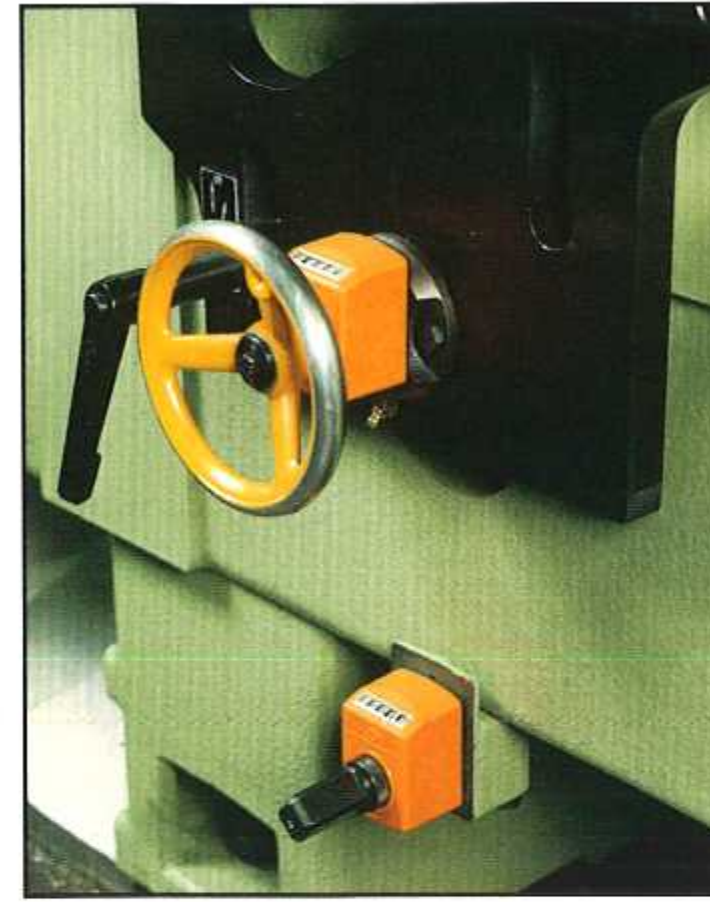
▲ 38 Right-hand spindle with straight knife jointer (with remote control).



▲ 39 Right-hand spindle with profile jointer (with remote control).



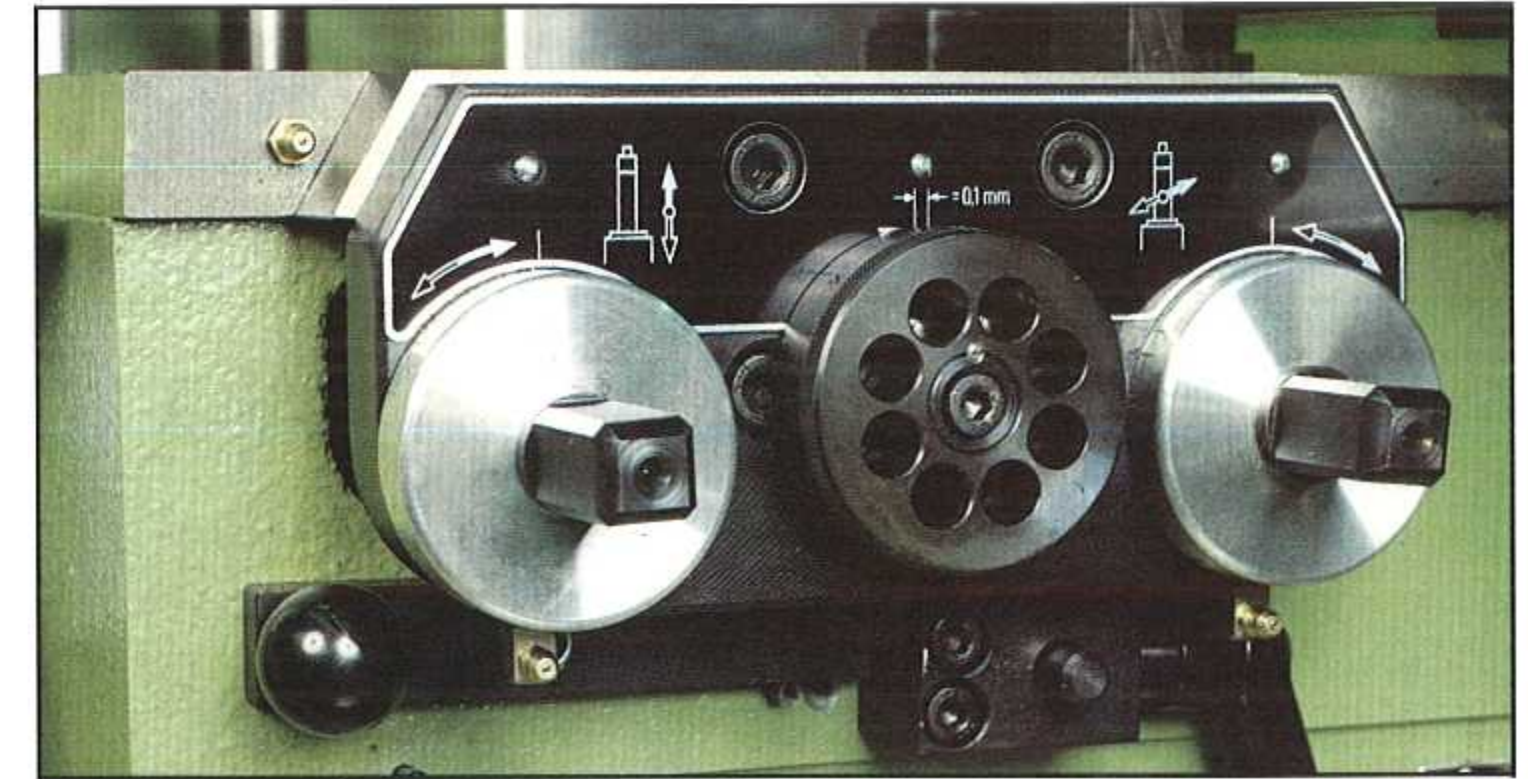
▶ 40 Top spindle with straight knife jointer.



▲ 70 Economic production also includes keeping the down times on your moulder to a minimum. The exact measurements can be determined within seconds by means of the **mechanical digital indicator**.



▲ 71 The **electronic digital display** is even more accurate and quicker.



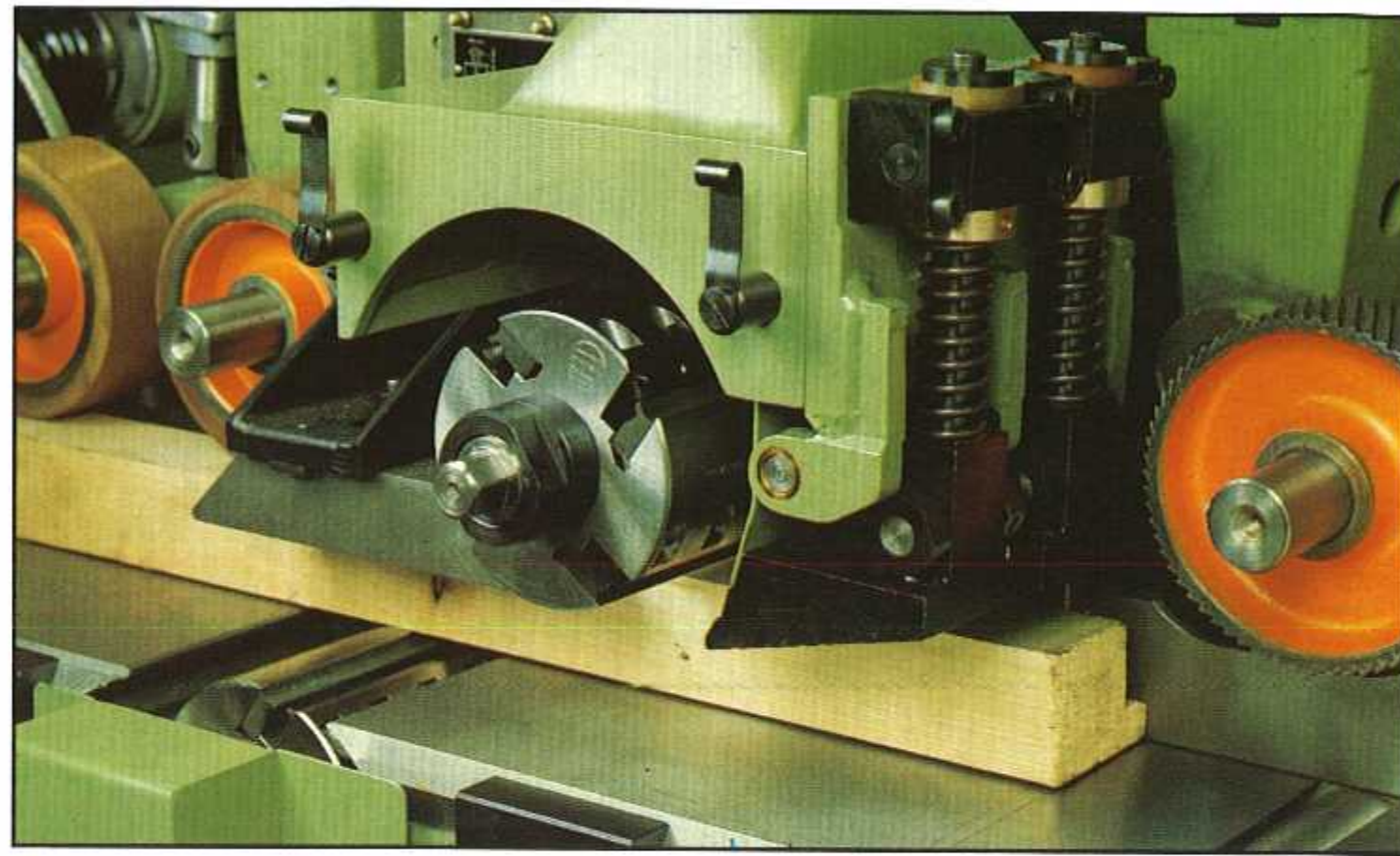
▶ 72 The **turret head** permits you to pre-set up to eight measurements and allows them to be "selected" quickly and precisely by simply turning the turret head.



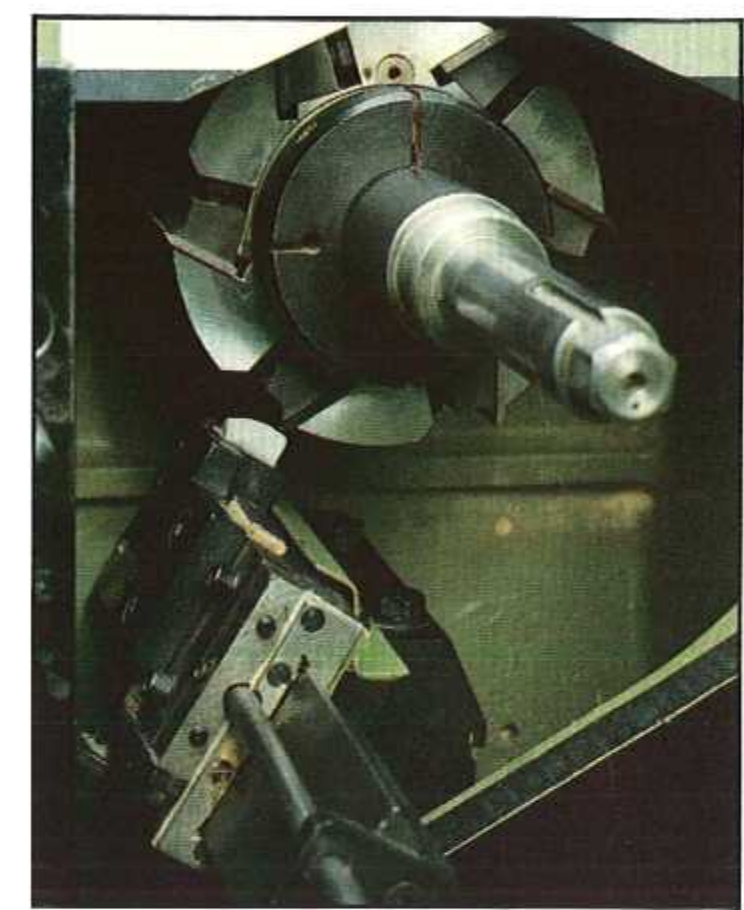
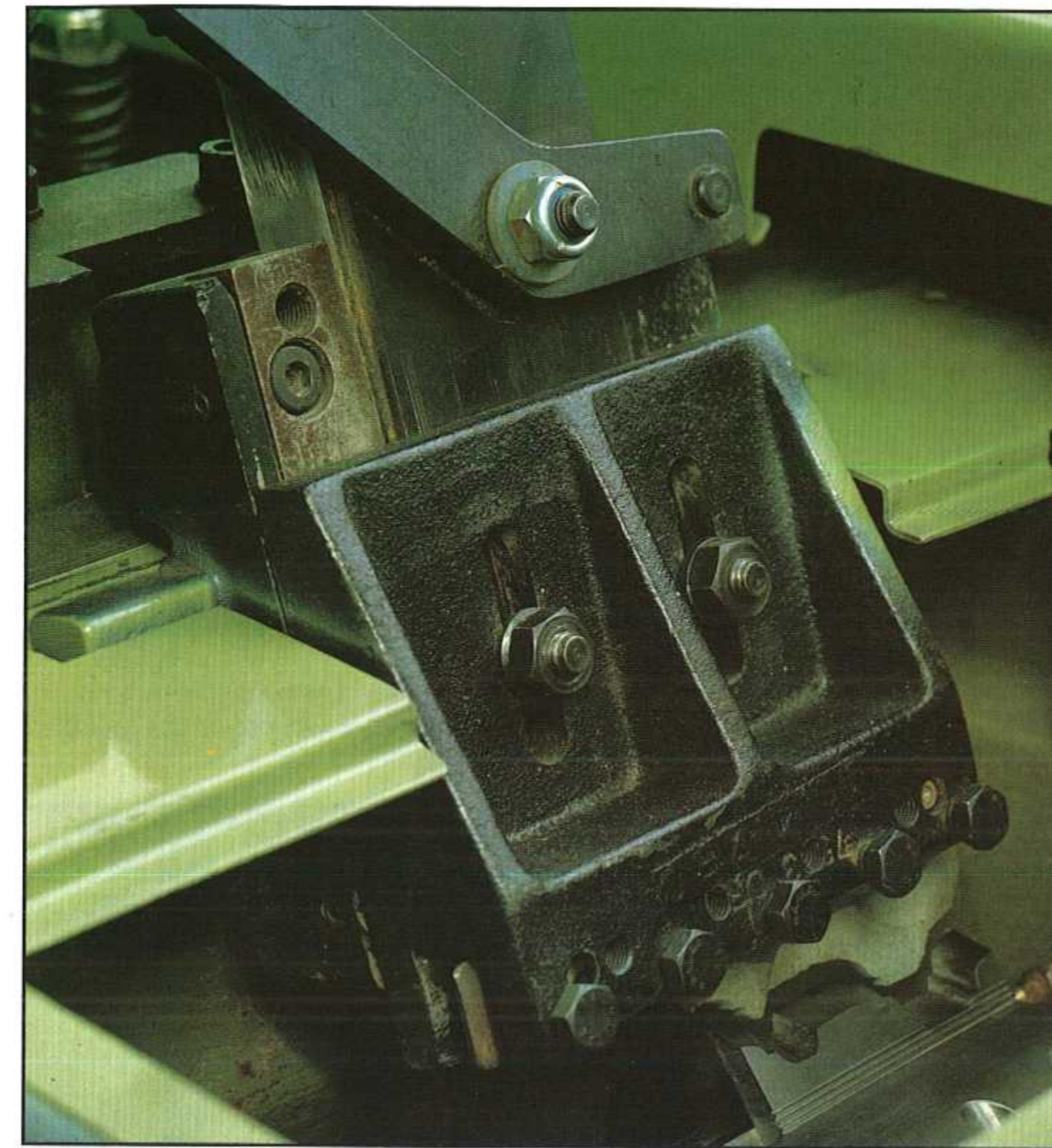
▲ 73 Bring us your problem profile and we will work out a technical solution for you.



▲ 66 Insert sections on vertical spindles provide a closed table surface which is particularly important when producing extremely narrow profiles.

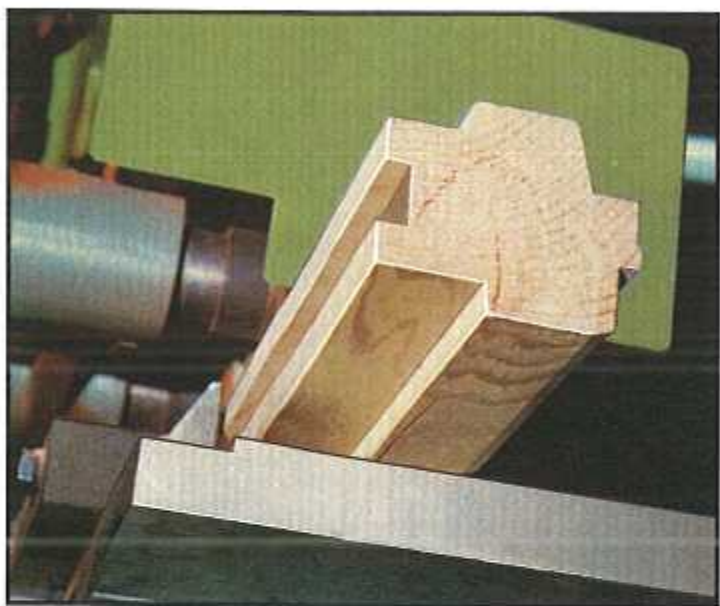


▲ 67 When machining workpieces varying greatly in thickness the pressure bar in front of the top spindle makes an extreme upwards movement. This results in the risk of coming into contact with the rotating tool. The receding chipbreaker prevents this from happening.

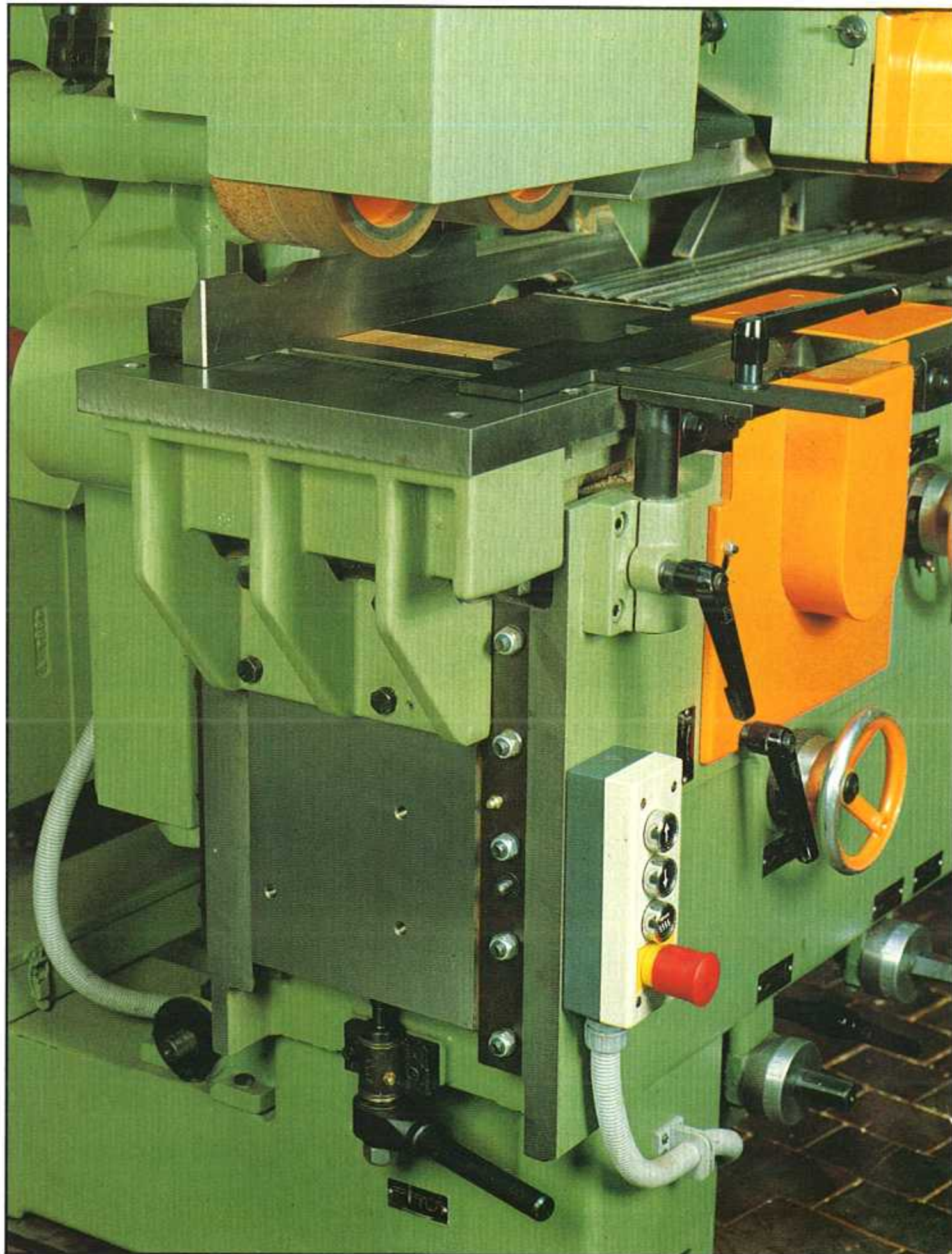


▲ 42 Bottom spindle with straight knife jointer.

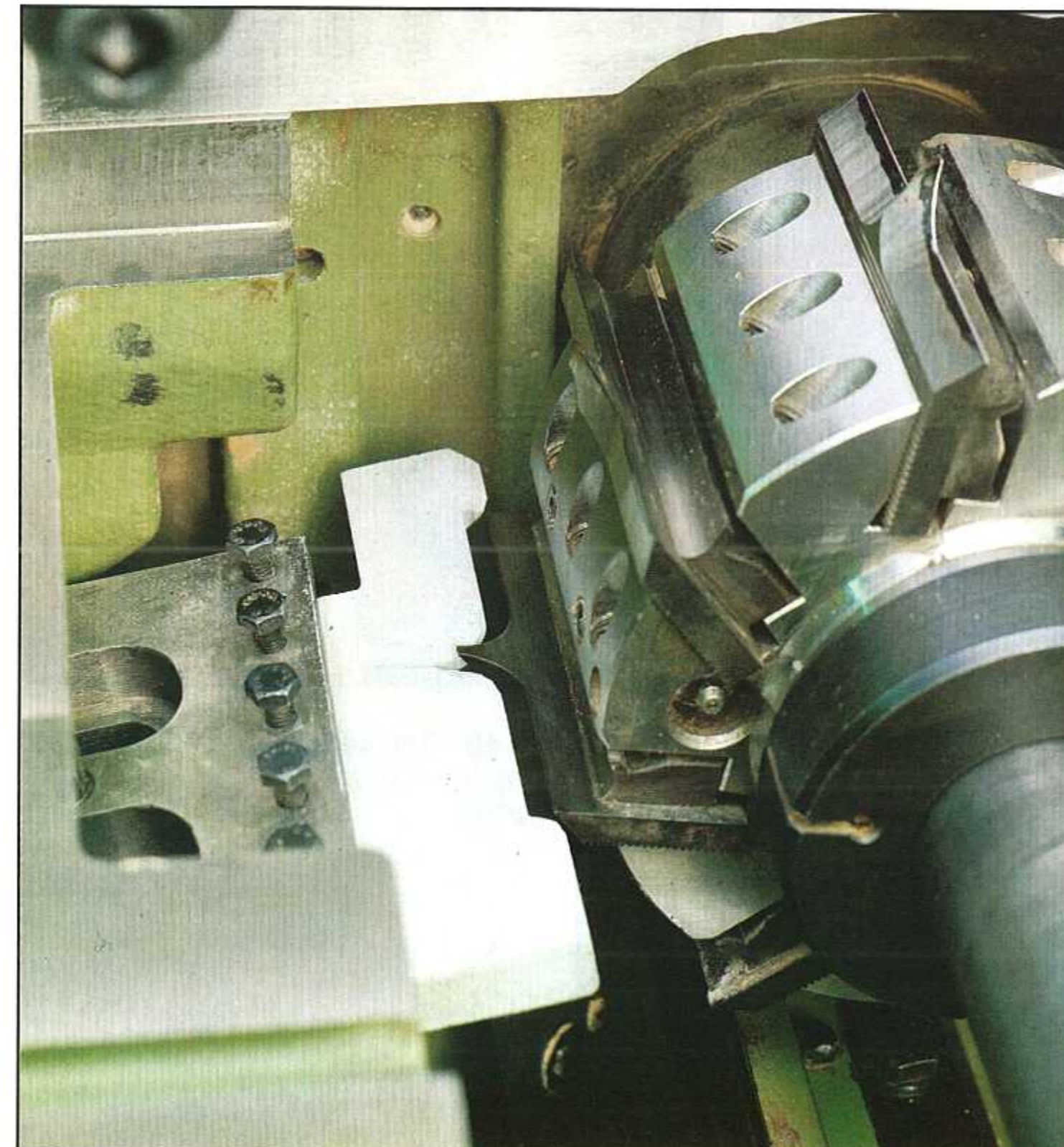
◀ 41 Top spindle with profile jointer.



▲ 68 A window profile at the machine outfeed.

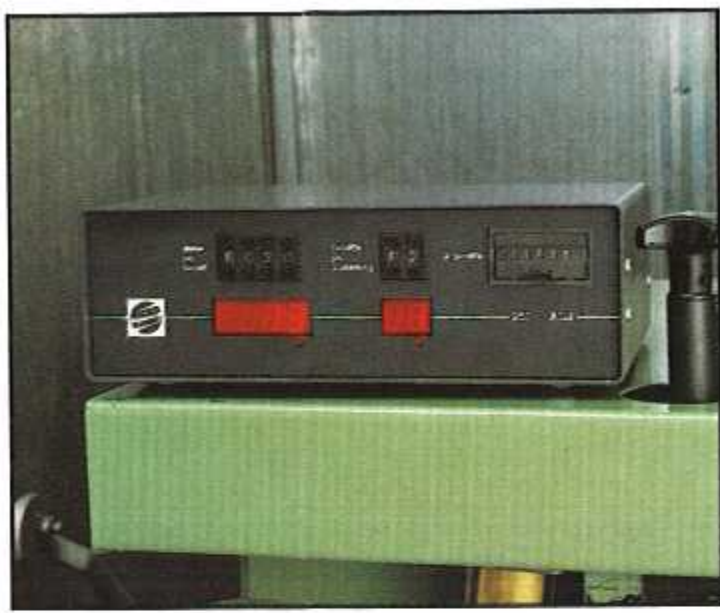


▶ 69 The outfeed table with height adjustment makes it possible for you to precisely determine the amount of stock removed by the bottom spindle.



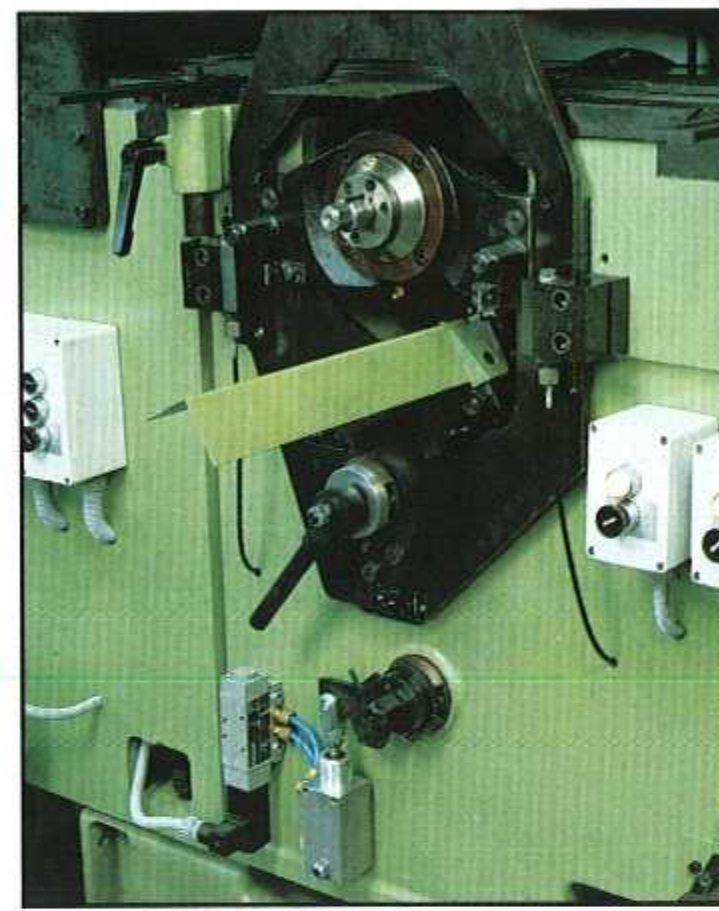
▲ 44 In planing and moulding mills thin and wide material is machined very often. For this purpose we use a special top guide, i.e. opposite to the bottom Rotaplan spindle.

◀ 43 Bottom spindle with profile jointer (with remote control).

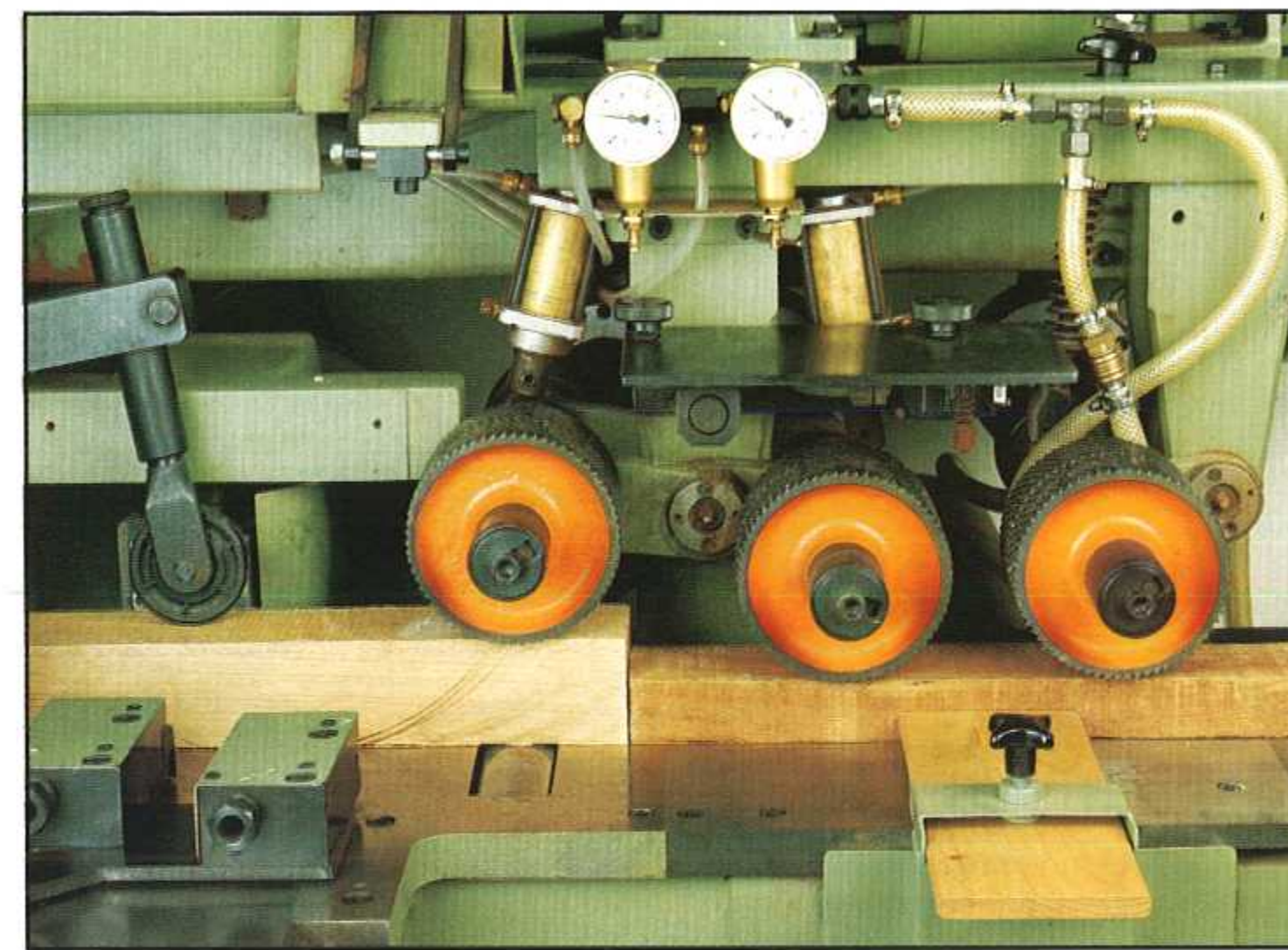


for the bottom Rotaplan spindle. By entering the desired functions in the **programming unit** the jointer is automatically activated and can be programmed for linear metres. As the cutting circle of the Rotaplan cutterhead decreases with frequent re-jointing the Rotaplan spindle can also be programmed for automatic resetting. The result is a constant quality surface finish, minimum quality control and extremely long tool life.

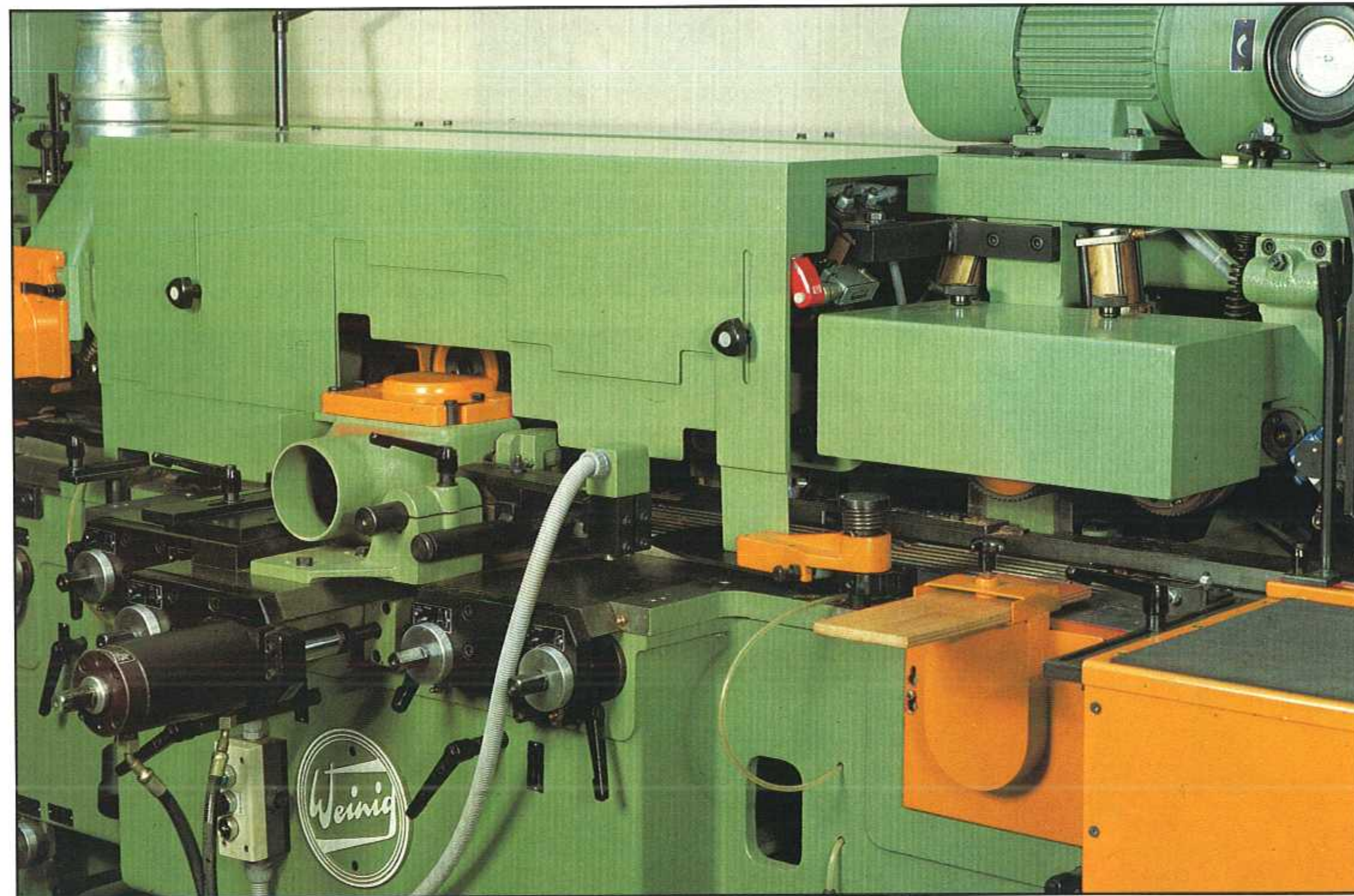
▲ 45 The Rotaplan spindle in the planer/moulder, usually the last head in the given spindle sequence, finally determines the surface quality of the tongue and groove product. It is necessary to re-joint the Rotaplan head often to ensure the constant quality of the product. This job is now carried out by the **automatic jointer**



▲ 46 The automatic jointer with **automatic re-setting** of the spindle.



◀ 63 **Pneumatically controlled feed rollers** are used for transporting workpieces varying greatly in thickness without any readjustment of the feed system. The pneumatic control ensures that constant pressure is maintained irrespective of the position of the feed roller.



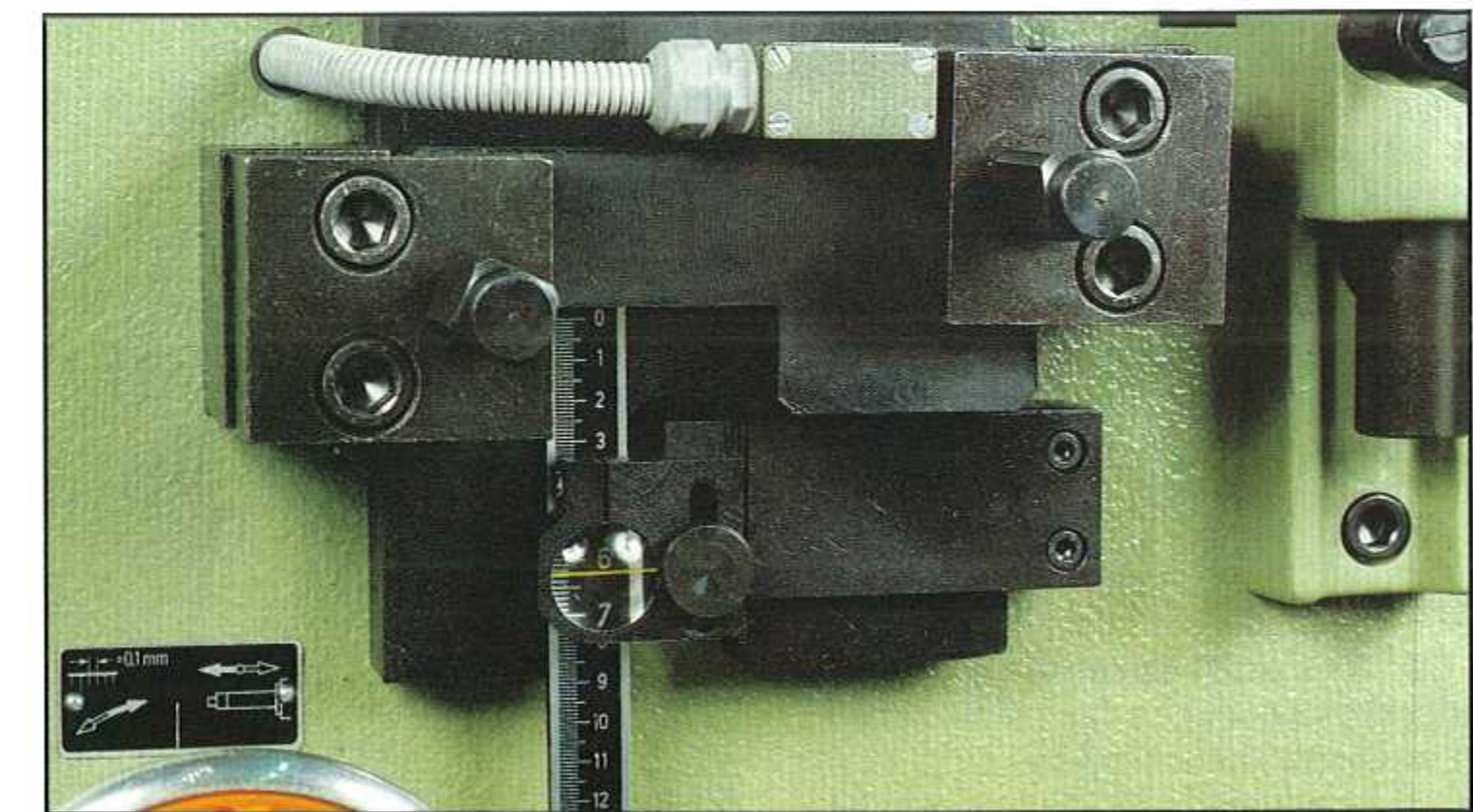
▲ 47 Safety is the major consideration. Apart from the standard safety covers for the infeed rollers we also supply different types of **roller guards** to ensure operator safety.



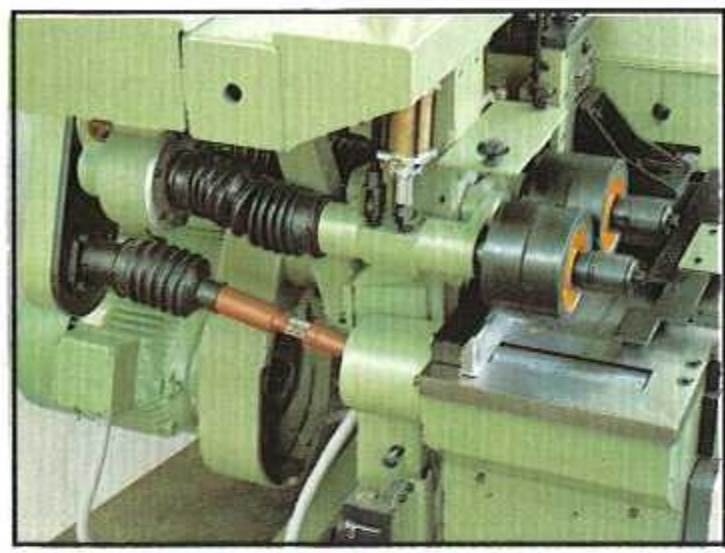
◀ 48 The **safety cover** can be **tilted up** for easy access to all functional parts.



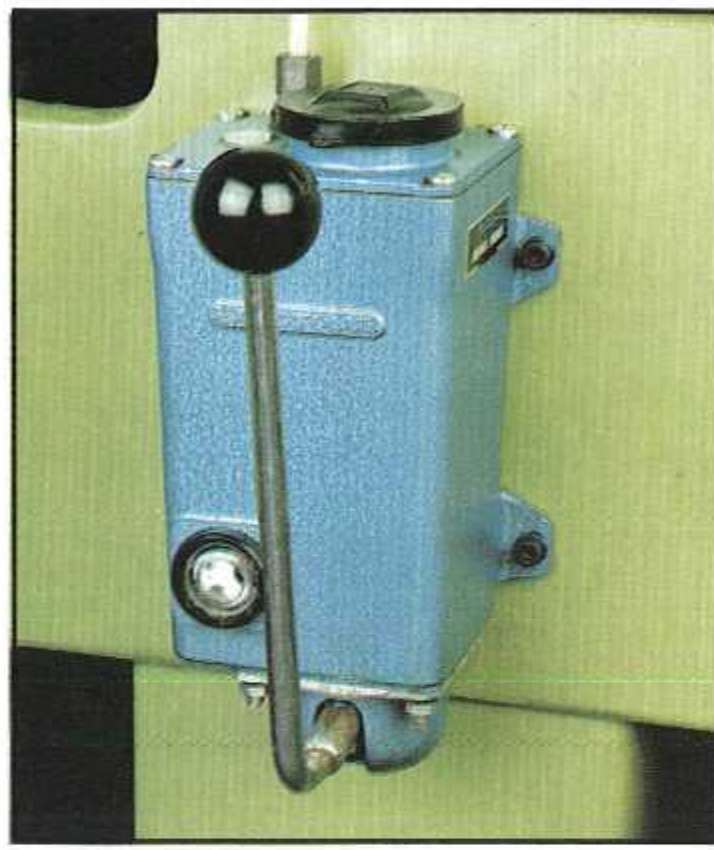
◀ 64 Versatile, i.e., „intelligent”, moulders can also solve this problem. Why simply “blow” the deep rebate into the exhaust hood when you can use it to make small mouldings in the same or a separate operation?



▶ 65 **Electric interlocking of the upper outboard bearings** prevents the top spindle to be moved before the outboard bearing plate has been released from the machine bed.



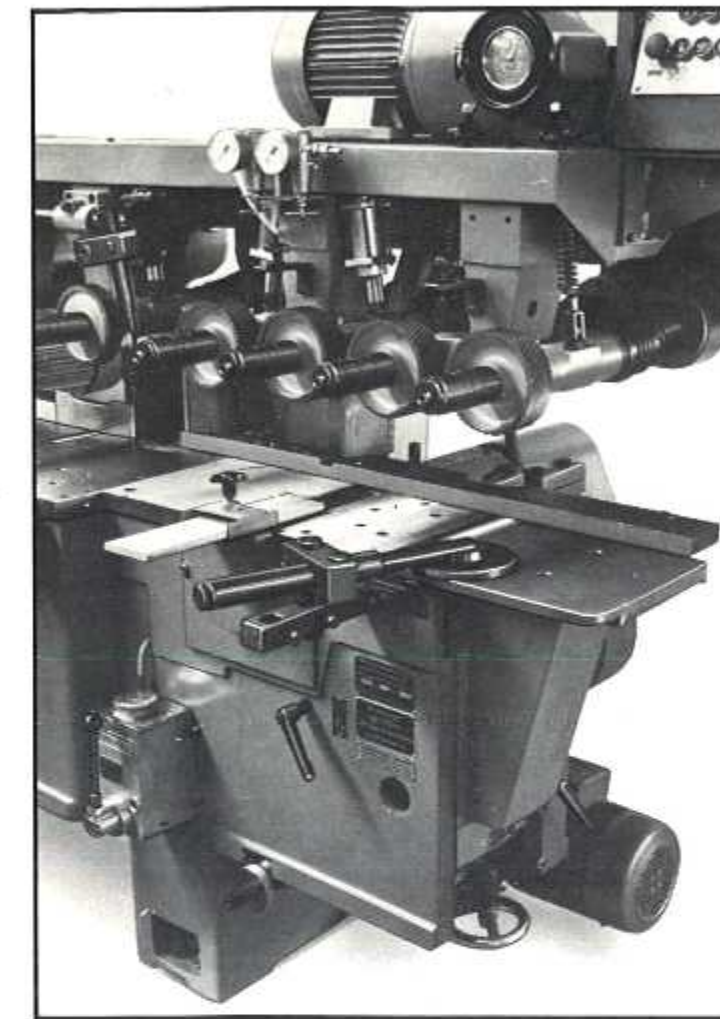
▲ 59 The heavy duty version of the Cardan feed system including **powered table rollers**. This ensures troublefree machining of wet, heavy and hard stock.



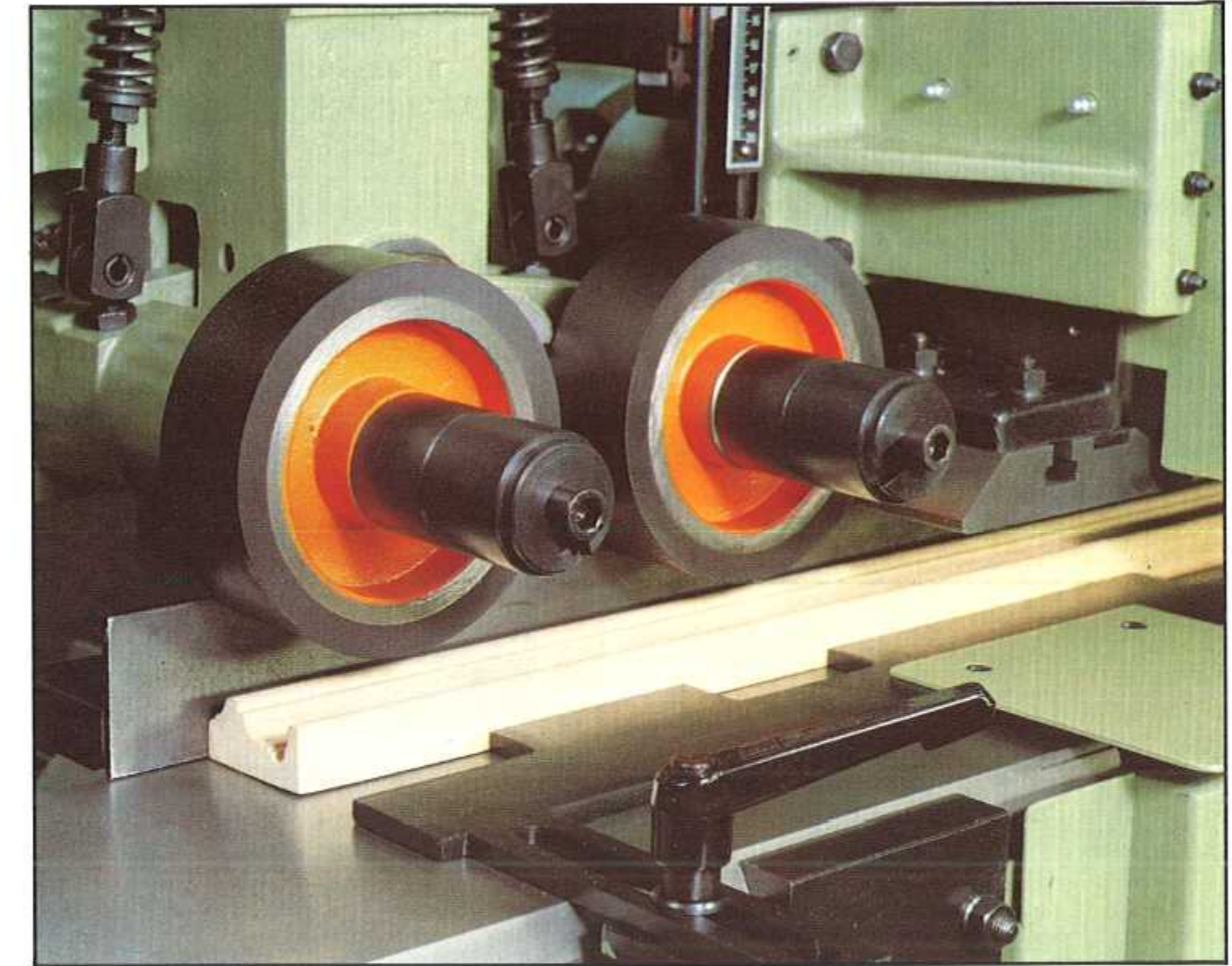
▲ 60 The **manual lubricant pump** provides the machine table with a film of oil. The stock can thus be transported through the machine more easily without resin building up on the machine table. The lubricant pump also automatically cleans the machine table in this way.



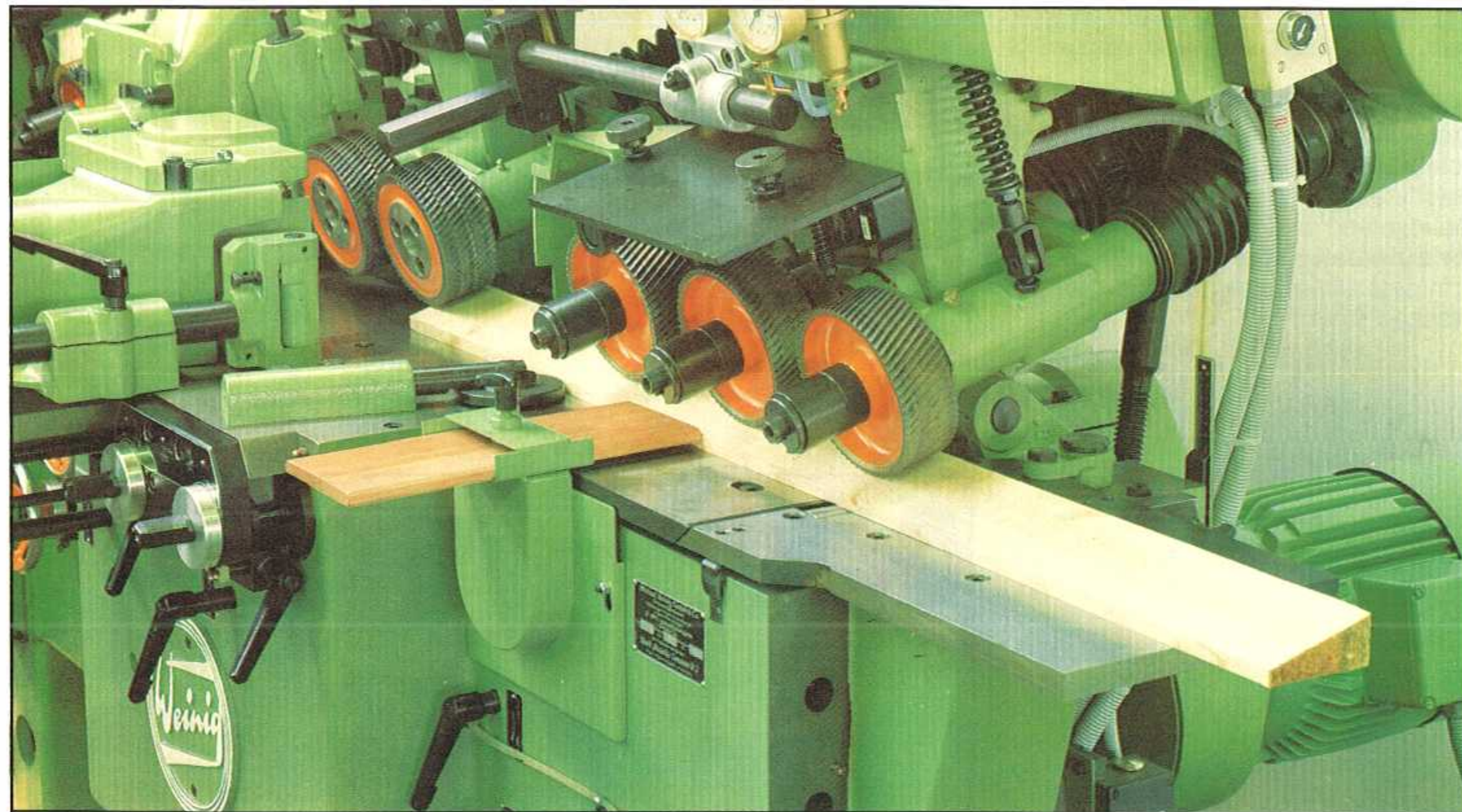
▲ 61 High speed machines are usually equipped with an **automatic lubricant pump**. The pumping intervals are determined by an adjustable time relay in the switch cabinet.



▲ 49 A **short infeed table** is given preference over the straightening table, particularly when producing mouldings. In this version we supply two infeed rollers before the 1st spindle and an idle roller in the machine table.

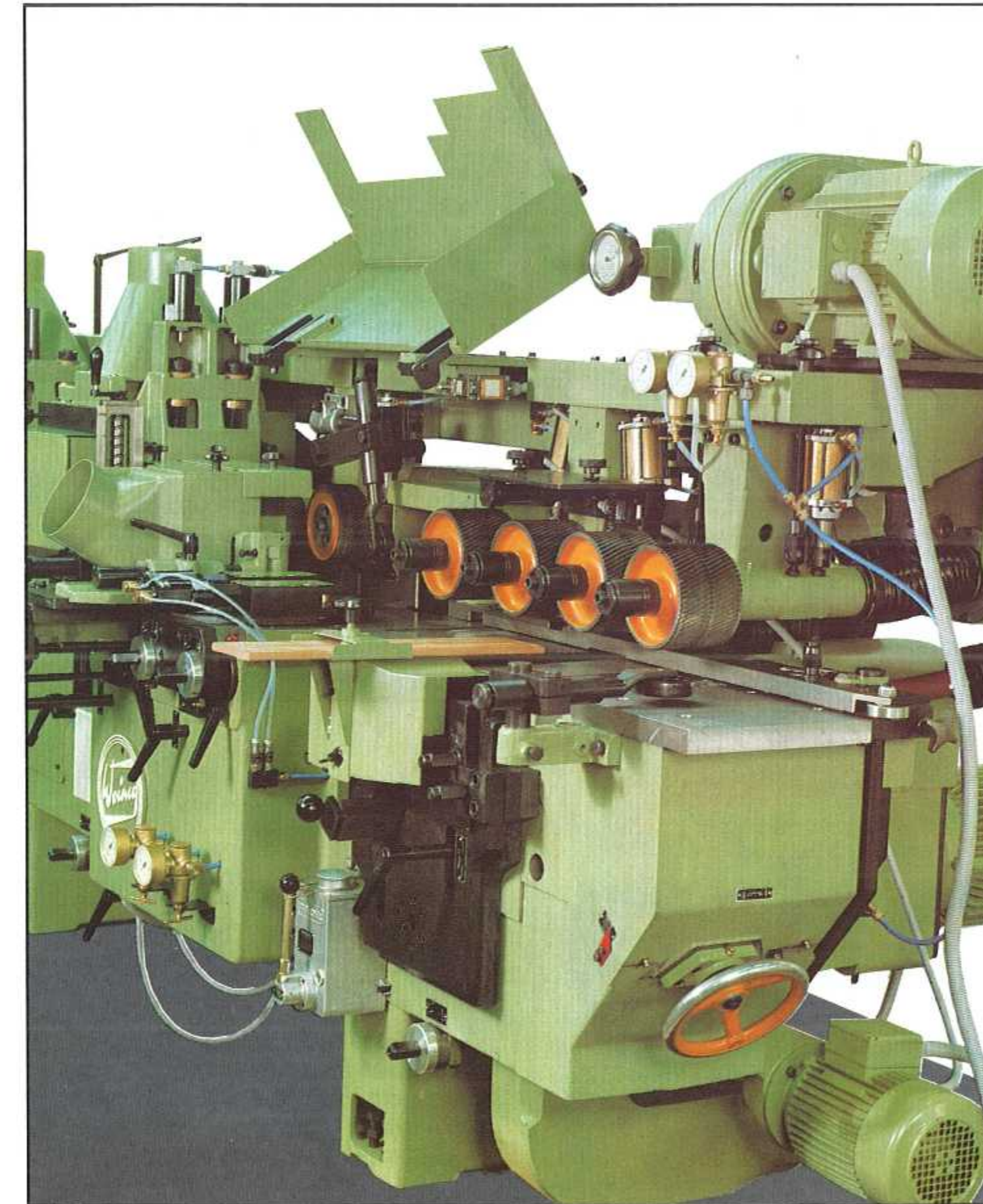


▲ 50 A moulding coming off the machine.



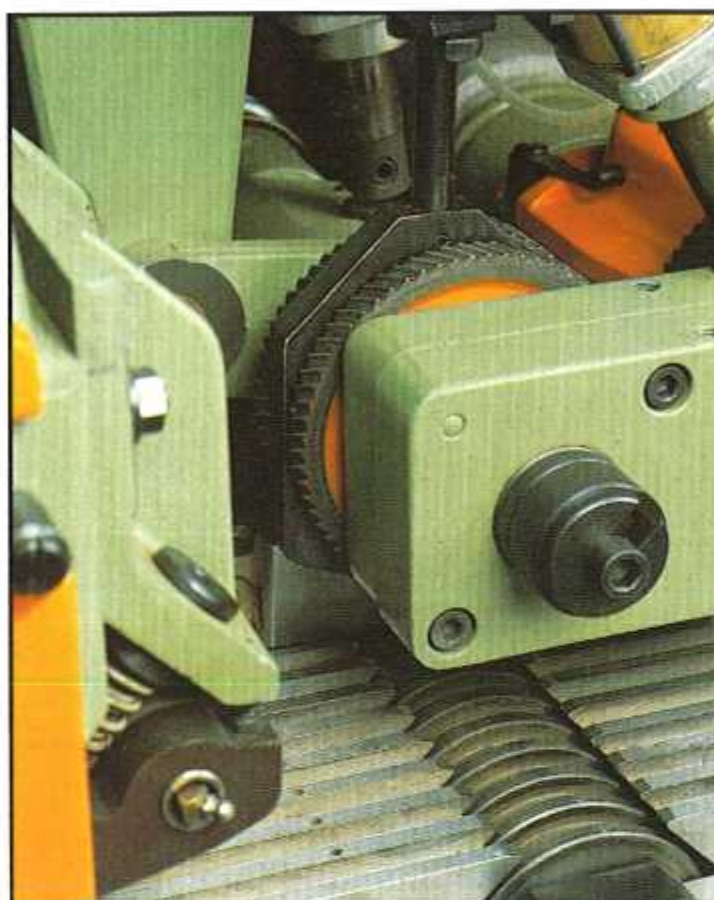
▲ 62 Wood is becoming increasingly expensive and losses can only be kept down by intelligent preparation of the raw material. In the builder and furniture mouldings production in particular, material can be saved if the shape of the raw stock is already adapted to its future profile when sawing. The Weinig moulder with **tiltable feed** also solves this problem.

At the touch of a button the entire feed system can be tilted to the desired angle.



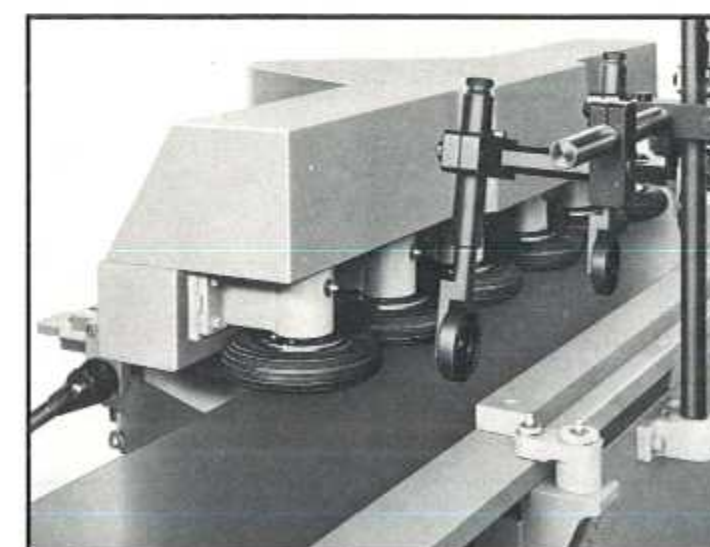
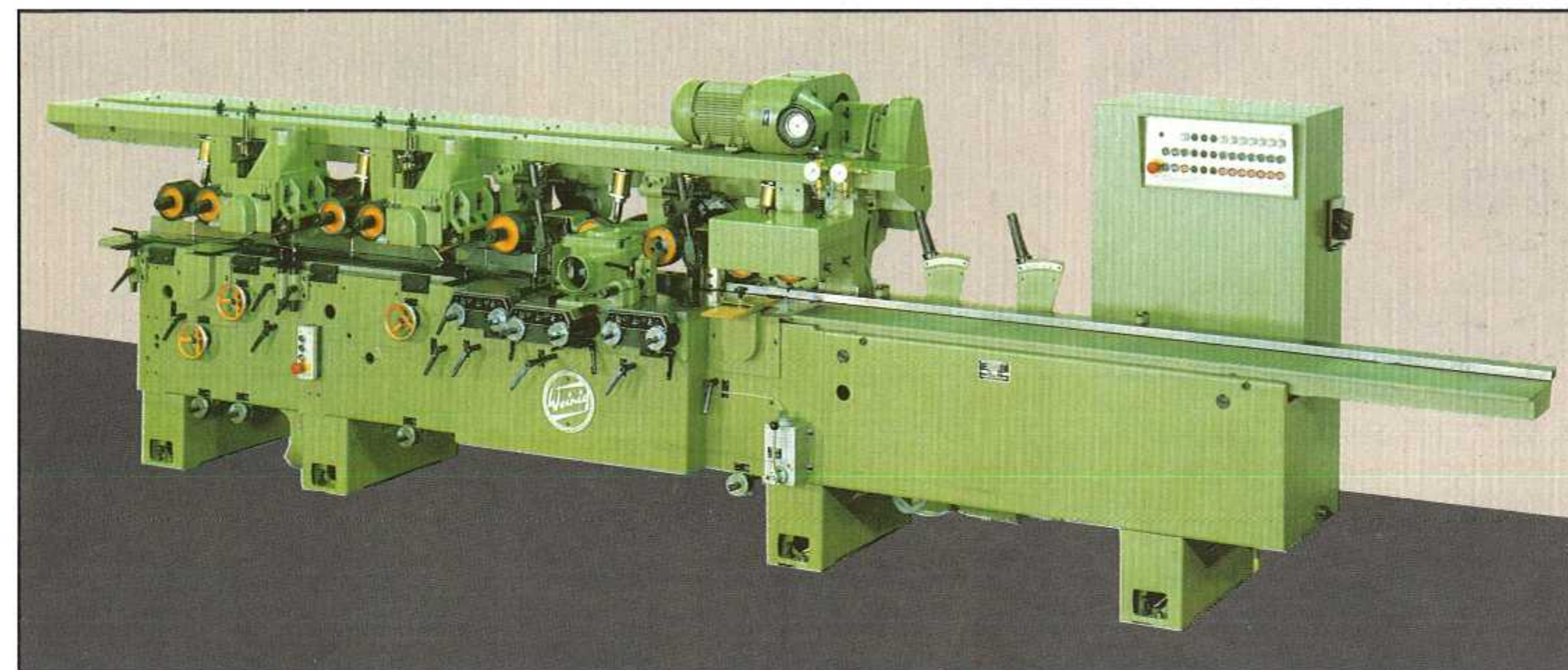
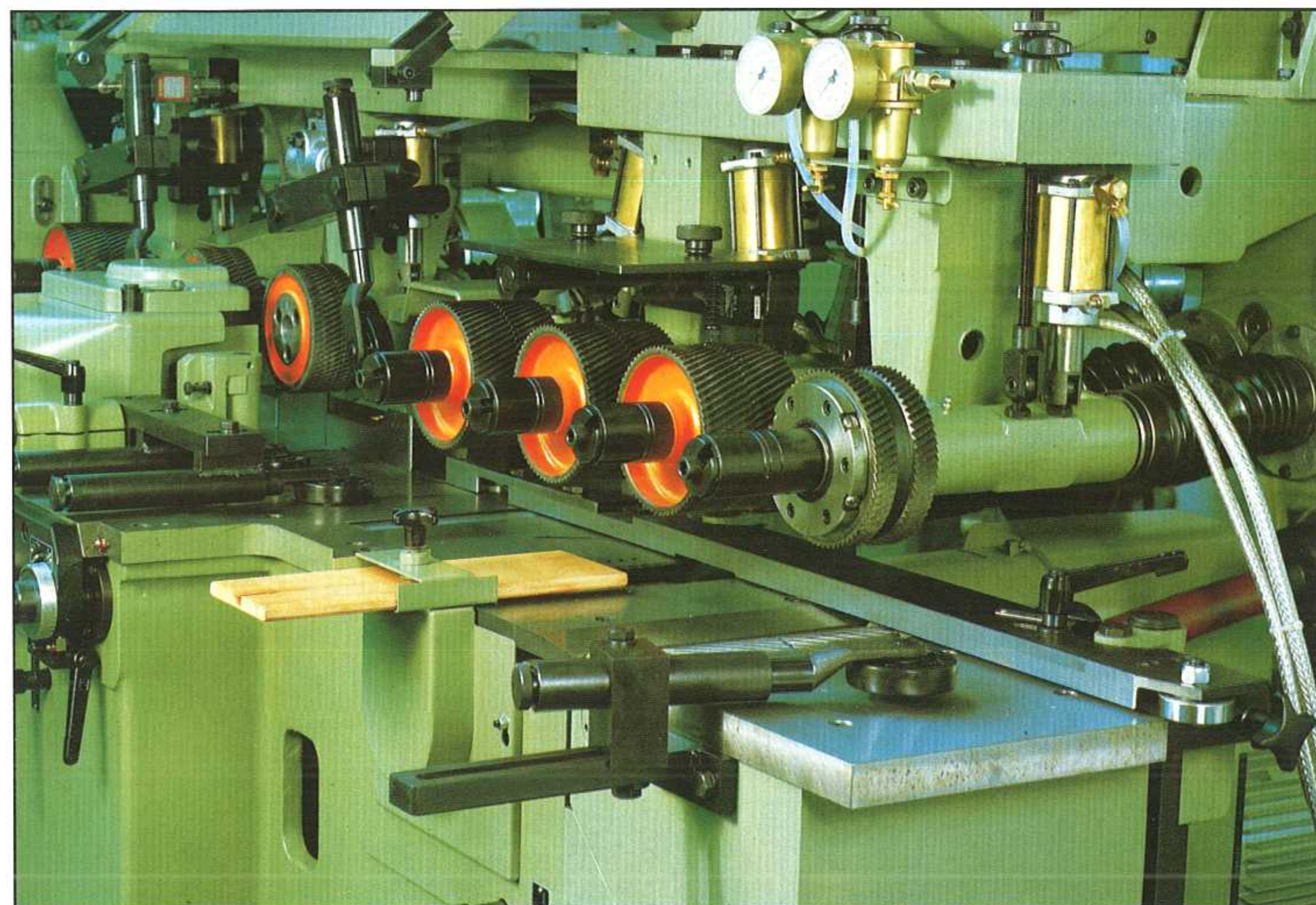
◀ 51 On the larger models the **short infeed table** incorporates two powered feed rollers above the table and at least one roller in the table with the option being idle or powered.

► **52** When manually feeding extremely short workpieces, butt-feeding is very difficult. There is a risk in this case that the feed roller in front of the top spindle will tear-up the workpiece. The **tear-up protection** illustrated here prevents this. The same applies when machining thin stock.

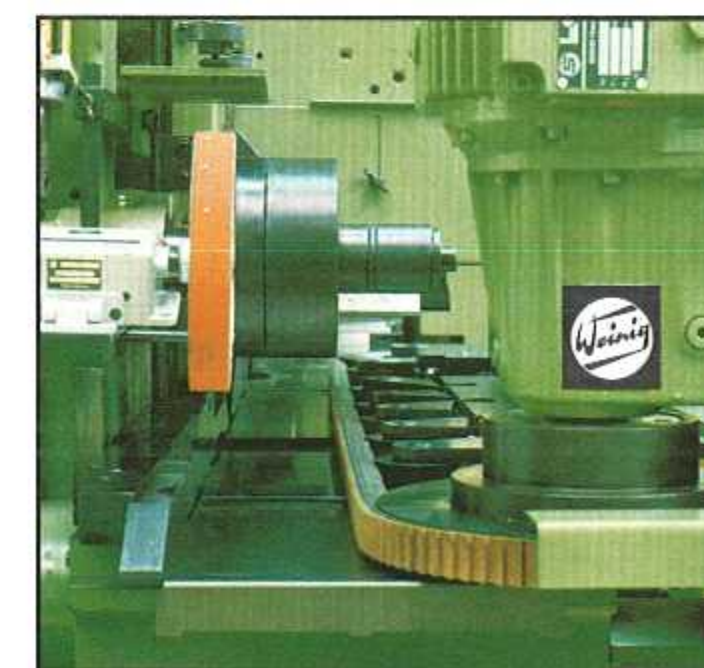


The **powered table rollers**, also available in the groove guide, guarantee a continuous feeding of the workpieces without any jam-ups.

▼ **53** The infeed roller with free-wheel gear is fitted with a clutch. This is particularly important when feeding moulders automatically by means of magazines or conveyor systems.

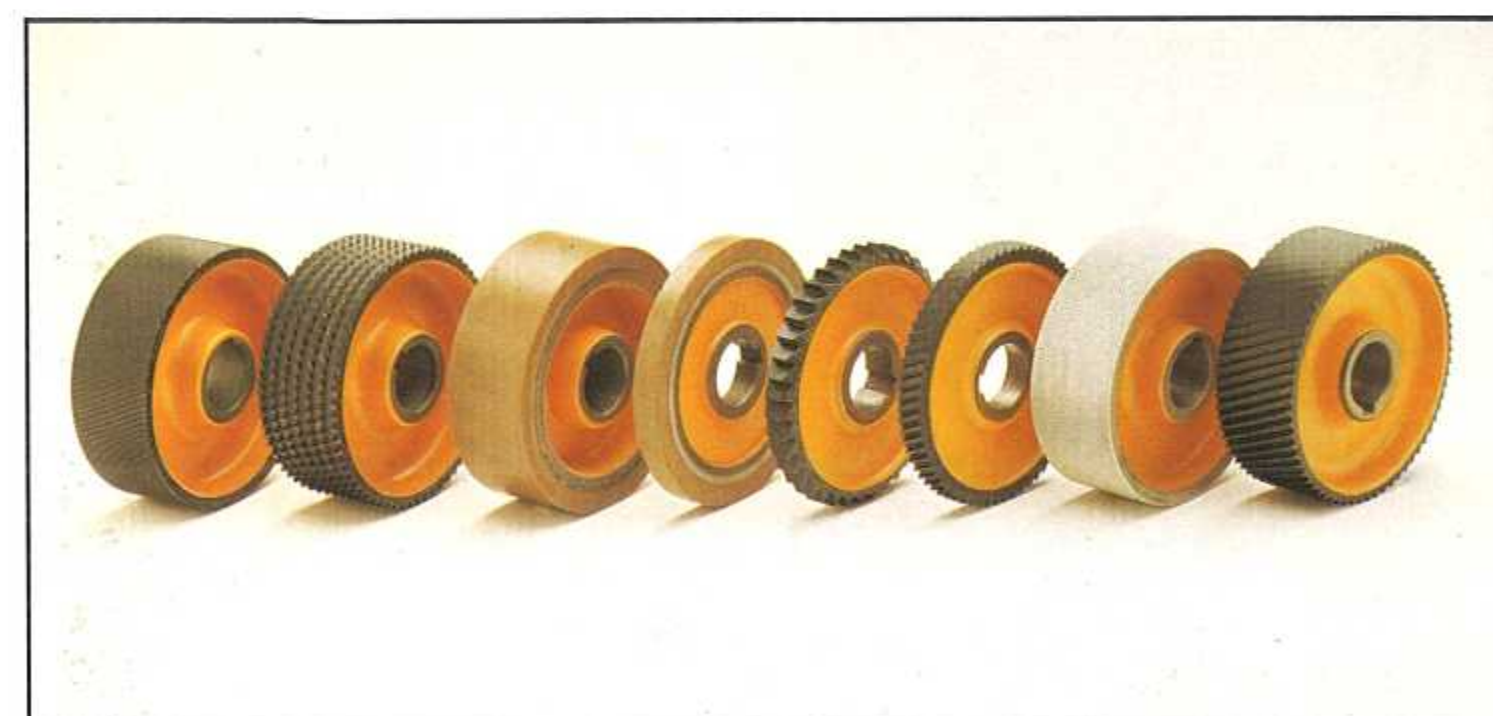


▲ **56** For perfect straightening moulders have to be fed manually. To achieve this effect on high speed machines which are linked to an automatic infeed system, the **lateral feed for automatic straightening** prevents the workpieces from being pressed down.



▲ **57** Workpieces which are shorter in length than the distance between the feed rollers in the area of the top spindle are transported without difficulty out of the machine by the **lateral feed system**.

▲ **55** The longer the workpiece to be straightened the longer the **straightening table** on the moulder. The standard 2-metre (78 in.) table is suitable for most customer requirements and our illustration shows a Unimat with a 2.5 metre (98 in.) table. **3 and 3.5 metre (118 and 135 in.)** tables are also available.



◀ **54** A large range of **feed rollers** is available and we would be glad to help you choose the right roller for the different species and workpiece dimensions.

► **58** All of our heavy duty machines are fitted with a **no maintenance Cardan feed system**. Now it is possible to have this drive system fitted on standard machines for heavy duty work. The individual gears running in an oil bath are connected by a Cardan shaft linked with the feed roller through a universal drive protected by rubber sleeves.

