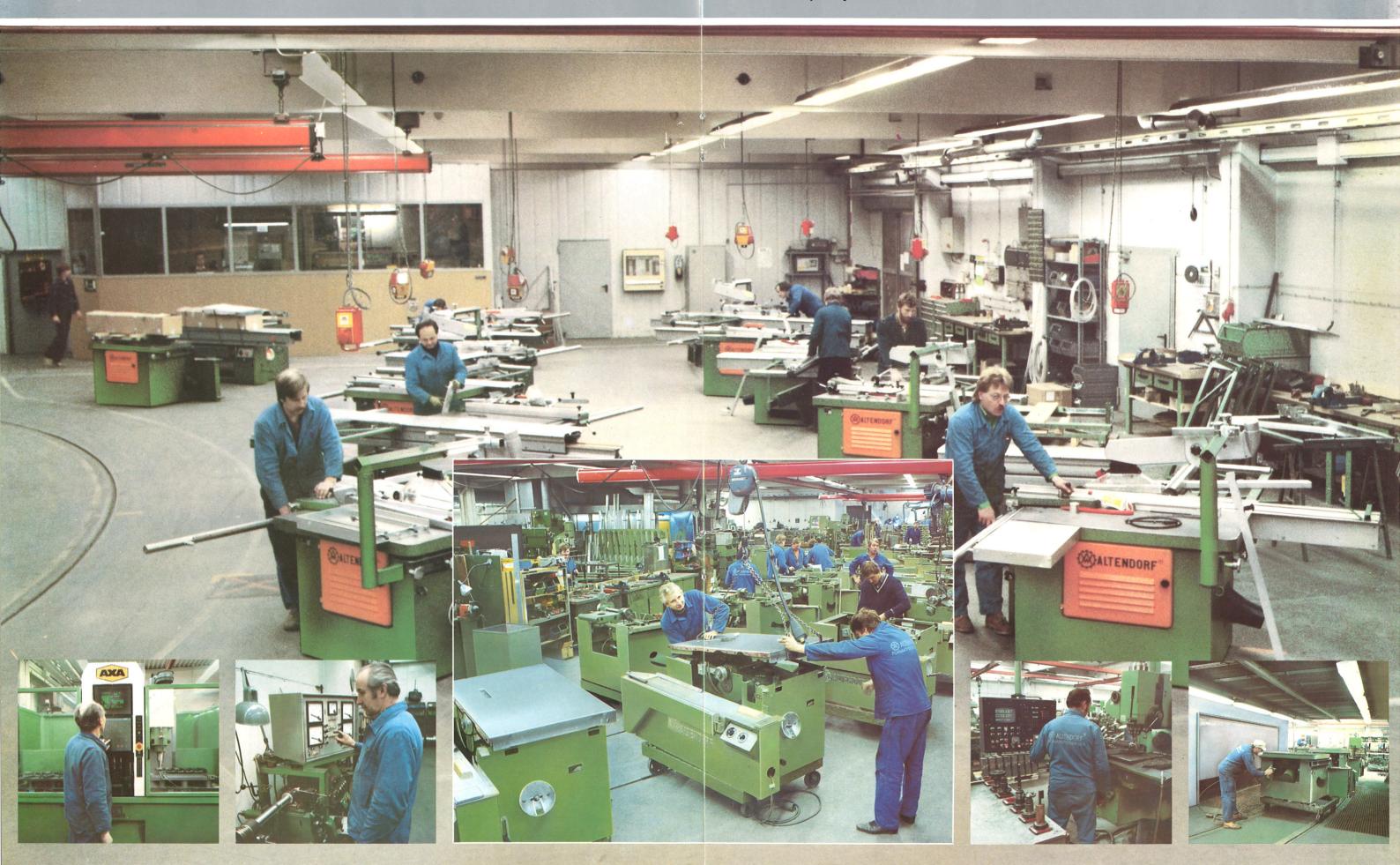
The ALTENDORF factory

The latest computer controlled machines, a workforce highly trained and specialised in only one product, and a company whose research and development is also entirely devoted to one product, mean that Altendorf can offer the highest quality machine at a price you can afford.

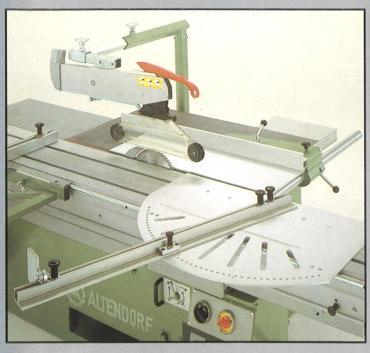


The roller carriage can be blocked in its middle position so that, with cross slide detached, the machines can be used as simple circular sawbenches.

To complete the range, ALTENDORF does, in fact, produce a simple circular sawbench, the type TK (either 90 or 45). For details see page 17 under the heading "Automatic feed unit".

ALTENDORF TKR 45

with tilt arbor



Index mitre fence

The index mitre fence for precision mitre cutting in increments of 2.5 degrees is particularly useful where frequent different cutting angles are required. A fixing pin locating in a semicircle of precisely machined holes guarantees accuracy of plus/minus 2/10 of a degree. No test cuts are required.

The anodised aluminium base plate is fixed securely in the groove of the double roller carriage and on the round bar which runs along it. A second aluminium plate attached to the round bar of the rip fence brings the machine table up to the same level. The device can be retrofitted to existing machines.



Digital rip fence display

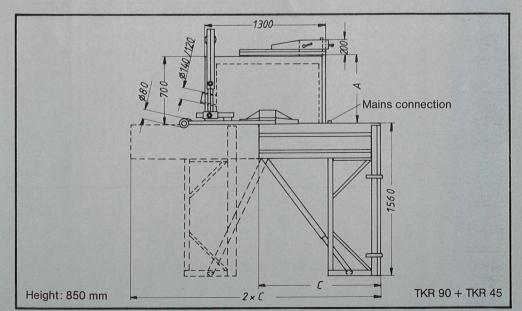
The digital rip fence display guarantees not only absolute, repeatable accuracy in increments of 0,1 mm, but means it is no longer necessary for the operator to walk round to the right hand side of the machine to reset the rip fence.

A reader located in the upper rip fence casting reads an electronic tape without actually touching it. The system is thus impervious to dust and chips. The LED display is mounted on the arm which supports the parallel safety hood. The system can be rezeroed for different sawblade kerf and high or flat position of rip fence.



optionally 1" or 11/8"				
350 0 – 105	400 50 – 130	450 75 – 155		
0 - 74	35 – 90	53 – 110		

The safety hood shown here is standard equipment in the Federal Republic of Germany only.



ALTENDORF TKR 90

If lack of space is a problem, the ALTENDORF minidimension saws types TKR 90 and TKR 45 could be the answer. In all major design features, these machines are identical to the F types, except for the fact that the carriage is shorter and the cross slide is fitted the other way around – fence towards the operator.

with fixed arbor



Technical Data:					
	Standard version				
Length of cut = carriage length (C)	1350 mm	Not possible to convert to 'F' type later			
Sizing cuts	1350x1350 mm				
Stops and rules left of blade to:	2800 mm				
Cutting width (A)	800 mm	optionally 1000 or 1250 mm			
Main motor	5,5 HP for up to 40 mm depth of cut	optionally 7.5 HP for up to approx. 70/80 mm optionally 10 HP for material over 80 mm optionally 15 HP for material over 100 mm			
Sawshaft speeds	3000, 4000 5000, 6000 RPM at 50 Hz	3600, 4800, 6000, 7200 RPM at 60 Hz 3000, 5000 (at 50 Hz) for machines from 10 HP with twin belt drive			

Sawblade bore	30 mmø	4
20.0		
Blade diameter	250	300
Vertical depth of cut	0 – 55	0 – 80
Depth of cut at 45° (TKR 45 only)	0 – 38	0 – 56
Net weight in kilos	870 910	TKR 90 TKR 45

Special equipment: Scoring Unit

Motor: 1 HP, blade \emptyset 120 mm, bore \emptyset 22 mm Speed 9000 RPM at 50 Hz NB: When scorer in use, length of cut approx. 100 mm shorter. Max. main blade \emptyset 350 mm

Laser

A laser shadow line approx 3 mm wide shows exactly where the sawblade will cut in advance, thus allowing optimisation of material usage.

The laser can either be mounted on a special extension of the parallel safety hood support arm or on the workshop ceiling.

The device can be retrofitted to existing machines.

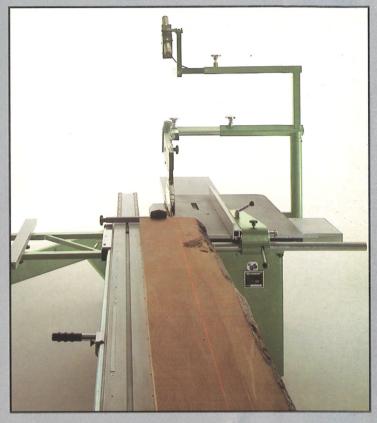
Automatic star delta starting with integrated RPM display

The advantage of automatic star delta starting is the increased reliability due to the absence of moving parts which in the case of manual star delta starting can eventually wear out.

Also the motor cannot be overloaded through the operator forgetting to switch through from star to delta.

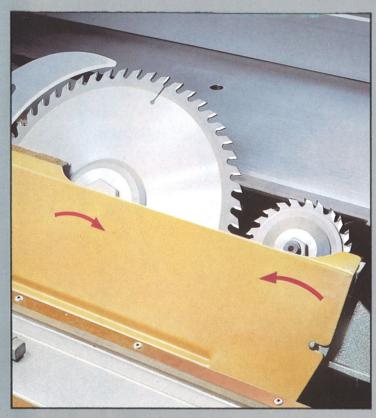
The starter includes an emergency stop button as standard which can be easily activated with the knee as well as pressed normally.

The integrated RPM display has figures 13.5 mm high and has the advantage that each time the machine is switched on the operator automatically checks the shaft speed.

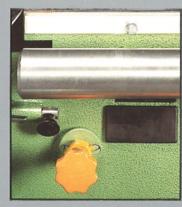




Optional Equipment







Scoring Unit

A scoring unit can be fitted to any Altendorf model. The unit has its own independent 1 HP 3 phase 2880 RPM motor, mounted on a rigid cast iron support bracket. The sawshaft, like all other rotating parts, is electronically balanced, runs in high performance enclosed ball bearings and is thus vibration-free. Drive is by endless flat belt.

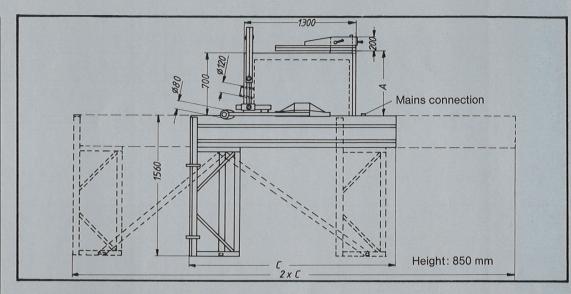
The design is thought out to the last detail to ensure that panels faced with laminate on both sides can be cut with no chipping-out of the underside laminate. Without a scoring unit this occurs because of the too small exit angle of the main sawblade.

Sawshaft speed at 50 Hz is 9000 RPM and the sawblade runs in the opposite direction to that of the main blade. This means that the teeth cut on entering the material from underneath – when the laminate is backed by the material above it – and not on leaving the material, when the laminate could chip out as it is not supported underneath.

Sawblade diameter is 120 mm, bore 22 mm. We recommend the use of sawblades consisting of two blades separated by shims for width adjustment. Unlike conical scoring blades, twin blades maintain the same width of cut whatever the cutting depth. With conical blades, the depth determines the width of cut. As no panel is absolutely flat, there is often a gap between panel and table, which with a conical blade reduces the depth of cut – and thus the width – causing chipping out.

As the two halves of the twin scoring blades are of necessity very thin, we provide a flange with a diameter of 80 mm, which is very large relative to that of the sawblade and thus ensures that the blade cannot flutter or wander.

Height and lateral adjustment of the Altendorf scoring unit is easily carried out from the operator position. When not is use the scoring saw can be switched off and dropped away below table level.



Technical	Data:					
	Standard version					
Length of cut = carriage length (C)	2500 mm	2800	3200	3800	4300	5000 mm
Sizing cuts	2500x2500	2800x2800	3200x3200	3200x3200	3200x3200	3200x3200
as Execution II	2500x2500	2800x2800	3200x3200	3800x3800	4300x3800	5000x3800
Stops and rules left of blade to:	2800 mm	2800	3800	3800	3800	3800 mm
Cutting width (A)	800 mm	optionally 1000 or 1250 mm				
Main motor	5.5 HP for up to 40 mm depth of cut	optionally 7.5 HP for up to approx. 70/80 mm optionally 10 HP for material over 80 mm optionally 15 HP for material over 100 mm				
Sawshaft speeds	3000, 4000 5000, 6000 RPM at 50 Hz	3600, 4800, 6000, 7200 RPM at 60 Hz 3000, 5000 (at 50 Hz) for machines from 10 HP with twin belt drive.				
Sawblade bore	30 mmø	optionally 1" or 11/8"				
Blade diameter	250	300	350	400	450	
Vertical depth of cut	0 – 55	0 – 80	0 – 105	50 – 130	0 75 – 15	55
Depth of cut at 45°	0 – 38	0 – 56	0 – 74	35 – 90	53 – 11	10
Net weight in kilos	1015	1025	1040	1060	1090	1115
Special equipment:		Motor 1 HP, blade Ø 120 mm, bore Ø 22 mm Speed 9000 RPM at 50 Hz				

Max. main blade Ø 350 mm

NB: When scorer in use, length of cut approx. 100 mm shorter.



ALTENDORF F 45

with tilt arbor



Executions I and II

For working with large or heavy panels, a second cross slide converts the Altendorf into a very reasonably priced alternative to a beam saw.

Dimensions of panels up to the length of carriage can be cut with the same accuracy and precision as smaller workpieces. The cross cut fence sections on both cross slides are easily removed giving an unrestricted work area. Large panels are cut using the drop away stops on the sunk cross cut fence on the second cross slide.

Two configurations are offered with double cross slide:

Execution I

In addition to the normal cross slide mounted on the swinging arm, this version has a second cross slide incorporating a fixed roller support running on a floor rail. This version is recommended for cutting lengths up to a maximum of 3200 mm and panels weighing not more than 250 kg.

Execution II

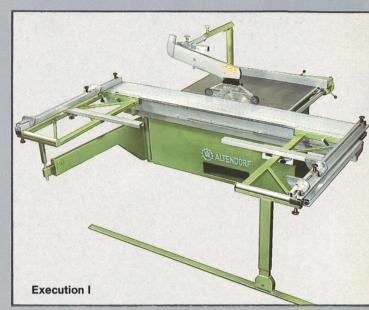
As above, but with a detachable roller support for the cross slide normally mounted on the swinging arm and a longer floor rail. In this version, both cross slides run on the floor rail. This configuration is necessary for cutting lengths greater than 3200 mm and for panels weighing more than 250 kg.

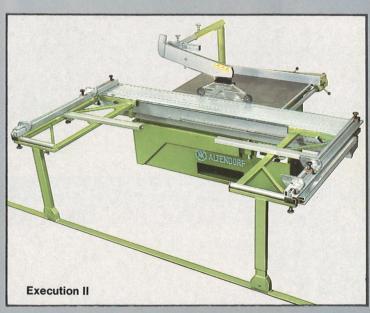
Execution II can be easily stripped back to Execution I by replacing the normal cross slide on the swinging arm. This in turn can be reconverted to the normal Altendorf by simply releasing the rapid action clamp and removing the second cross slide. Operational flexibility thus remains unimpeded.

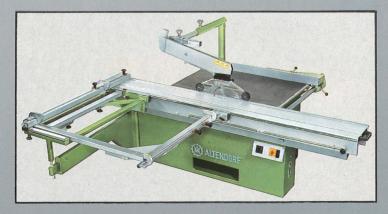
Crate making cross slide

For making crate lids and bottoms from boards which have not been edged parallel, this device consists of a second cross cut fence section below working level provided with a drop away stop. It is supported by the normal cross slide and is fixed to the roller carriage by rapid action excenter clamp.

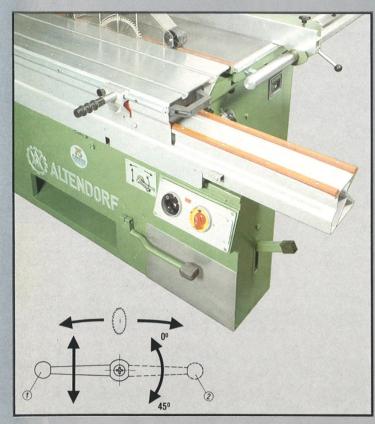
The drop away stop and the throwover stop on the cross slide are set to the same measurement and the individual boards are loaded from left to right and the last board cut parallel to the first.







Optional Equipment



Hydraulics

In place of the standard adjustment of cutting height and angle by handwheel and spindle, hydraulic rise and fall and tilt mechanisms offer easy to operate foot pedal control of these functions with the added advantage that the system is totally enclosed and thus impervious to dust.

The hydraulic pump is particularly robust and can lift the saw unit from its lowest to its highest position or from 45° to 90° in a matter of a few strokes. Fine adjustment is easily achieved using short strokes of the pedal at the top of its travel. To drop the unit down or tilt to 45°, the pedal is simply lifted using the tip of the foot, then the weight of the saw unit itself does the work.

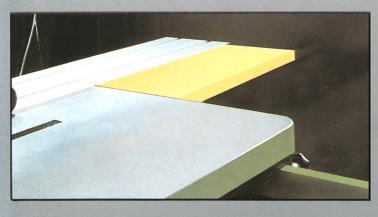
Tilt or height adjustment is set by turning the lever (see picture left) to the corresponding position. Hydraulics are not available for types TK 90 and TK 45.



Roller carriage lock

When pulled back to its end position in front of the sawblade, the carriage automatically locks. This allows large panels to be pushed against the cross cut fence or long boards to be pushed under the clamping shoe, without the easy running roller carriage setting in motion prematurely.

Releasing the lock is simply a matter of pulling the knob at the end of the carriage.

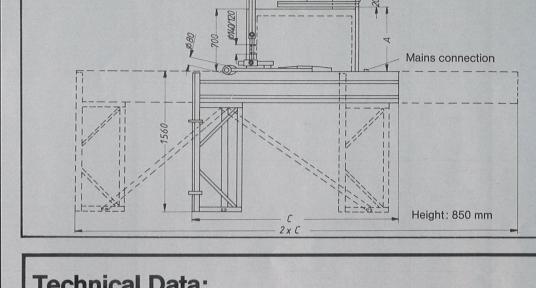


Main table extension

This extension is fitted to the end of the cast iron table behind the sawblade and prevents workpieces from tipping over the end of the table, thereby improving operational ease and safety.

Consisting of an extruded aluminium section approximately 400 mm wide screwed to the end of the cast iron table, it is available in various lengths.

Longer versions have an additional independent support.





Technical	Data:					
	Standard version					
Length of cut = carriage length (C)	2500 mm	2800	3200	3800	4300	5000 mm
Sizing cuts	2500x2500	2800x2800	3200x3200	3200x3200	3200x3200	3200x3200
as Execution II	2500x2500	2800x2800	3200x3200	3800x3800	4300x3800	5000x3800
Stops and rules left of blade to:	2800 mm	2800	3800	3800	3800	3800 mm
Cutting width (A)	800 mm	optionally 1000 or 1250 mm				
Main motor	5.5 HP for up to 40 mm depth of cut	optionally 7.5 HP for up to approx. 70/80 mm optionally 10 HP for material over 80 mm optionally 15 HP for material over 100 mm				
Sawshaft speeds	3000, 4000 5000, 6000 RPM at 50 Hz	3600, 4800, 6000, 7200 RPM at 60 Hz 3000, 5000 (at 50 Hz) for machines from 10 HP with twin belt drive.				
Sawblade bore	30 mmø	optionally 1" or 11/6"				
Blade diameter Vertical depth of cut	250 0 – 55	300 0 – 80	350 0 – 105	400 50 - 130	450) 75 – 1	55
Net weight in kilos	960	970	985	995	1055	1080
Special equipment: Motor 1 HP, blade Ø 120 mm, bore Ø 22 mm Speed 90000 RPM at 50 Hz NB: When scorer in use, length of cut approx, 100 mm sho				mm shorter		

NB: When scorer in use, length of cut approx. 100 mm shorter. Max. main blade ϕ 350 mm

ALTENDORF F 90

with fixed arbor



Pressure beams

For cutting packs of veneers or thin plastics two types of pressure beam are available, either manual or pneumatic depending on application and/or frequency of need. Both are fitted in the grooves of the roller carriage and are quick and easy to put on or take off. They are designed with a gap for the crosscut fence so squaring off and cross cutting work can still be carried out with the beams in place.

Carriage length (mm)	Clamping length (mm) pneumatic manual			
2500	2260	2390		
2800	2560	2690		
3200	2960	3090		
3800	3100	3100		
4300	3100	3100		
5000	3100	3100		

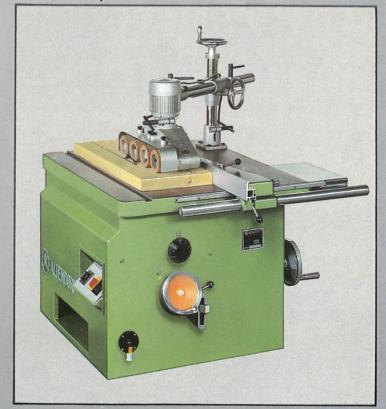
Manual clamp

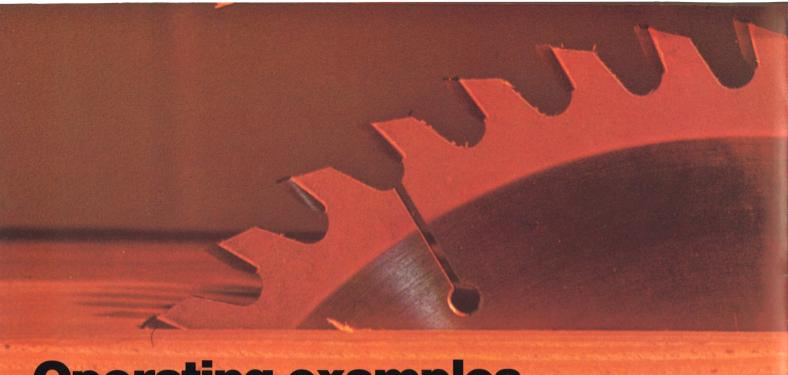
Pneumatic clamp

Automatic feed unit

An automatic feed unit can be used on all ALTENDORF models, but is particularly suited for use with the model TK Circular Sawbenches-type TK 90 with fixed arbor and type TK 45 with 0 – 45° tilt arbor. Both are built to exactly the same standards of precision and reliability as the F and TKR types and share all main design features, except, of course, for roller carriage, cross slide and swinging arm. Naturally, TK models can also be equipped with a scoring unit.

Experience shows that a major application for TK models is to provide clean and accurate splitting of narrow workpieces between two larger machines in a production line (for example between double end tenoner and edgebander.)





Operating examples



Edging

The workpiece is pushed under the clamping shoe of the double roller carriage and prevented from sideways movement by light hand pressure at the opposite end. Heavy materials can be held by a special clamping device. The cut is so clean and smooth that materials can be glued without further preparation.

Accuracy is guaranteed to plus or minus one tenth of a millimetre on one metre length of cut.



Cutting parallel

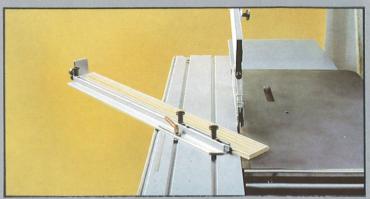
To cut parallel strips, the rip fence is set to the required measurement and the side already edged lined up along it. The piece is then fed through the sawblade using the double roller carriage.

The rip fence is easy to adjust using first the rapid action release + set lever and then the fine adjustment knob.

have kept to a minimum. Tests carried out by the Technical University of Stuttgart established that even when the machine is cutting, the ambient noise lies well below 85 decibels.

Mitre fence

The ALTENDORF mitre fence can be extremely precisely set. The distance between pivot point and scale is very large resulting in widely spaced degree markings. The degree scale, like all scales on the machine is made of one metal piece. The fence is provided with a throwover stop for cutting equal lengths up to 2100 mm.

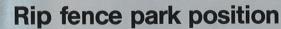


Rip fence

The rip (parallel) fence was designed with ease of operation uppermost in mind. Built-in nylon covered bearing rollers make sideways movement child's play. A special rapid action excenter clamp fixes the fence securely in the desired position – lever up to move, down to clamp. Final precision setting is achieved by turning the fine adjustment knob (right).

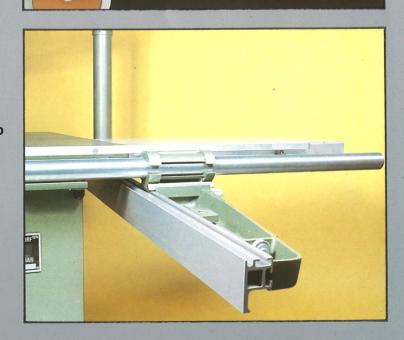
The 1200 mm fence section is adjustable lengthways and can be flipped over from its normal 90 mm high position to a low position 15 mm high for work close to the sawblade. The section is fixed and released by a second rapid action excenter clamp.

No magnifying glasses are employed as these would also need to be reset when the fence is flipped over from high to low position. This is known to lead to expensive mistakes due to operator forgetfulness where such a system is used. Fence and scale are so flush together that there is no possibility of inaccuracy. This scale is also adjustable for different tooth kerf.



If the rip fence would get in the way when dividing up large panels or long workpieces, it can be stowed away under table level as shown in the picture.





ALTENDORF Design in detail

Easy on the environment Easy to operate

We have always been concerned to make working with an Altendorf as safe and easy as possible for the operator. Naturally all safety regulations are rigorously adhered to. Noise is another health hazard which we



Cross slide

In spite of its very stable, torsion-free design, the cross slide remains lightweight and narrow. The operator is thus constantly close to the workpiece. For larger pieces the multidirectional aluminium bar on the cross slide provides the required support. One person alone can easily put on or take off the cross slide, which can be attached anywhere along the length of the roller carriage by a quick action excenter clamp acting on a rustproof guide bar. Long lasting squaring accuracy is guaranteed by the wear proof prismatic attachment piece on the cross slide.

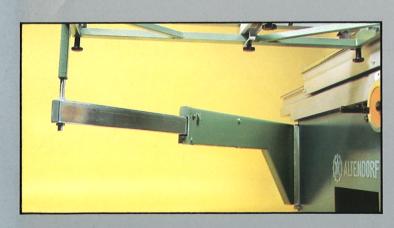
An anodised transport roller on the outer end of the cross slide facilitates loading and avoids damage to sensitive material.



Squaring off accuracy

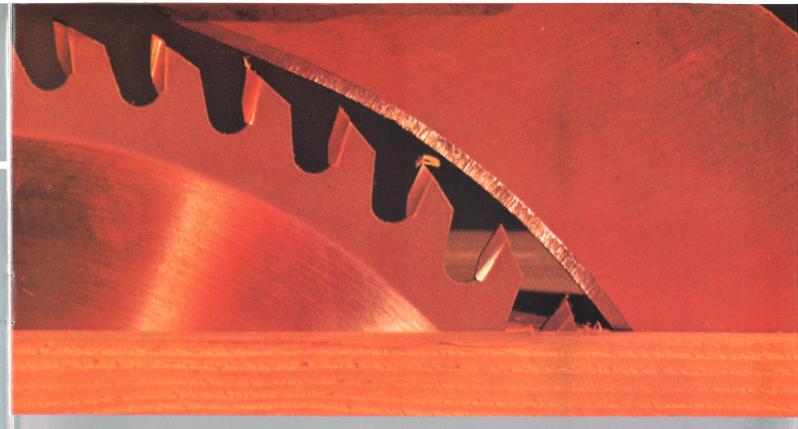
In contrast to other systems on the market ALTENDORF uses an accurately machined aluminium fence section against which the workpiece is laid. This has the advantage that when crosscutting using the rip fence, there is no need to continually reposition a stop as the workpiece gets shorter, since there is always a perfectly straight surface to lay it up against.

The two moveable throwover stops are particularly solidly built and combined with planed guideways in the extruded aluminium fence section ensure reliable 90 degree cuts. The stops are designed for very heavy duty, having especially tough alloy bushes to hold the axles and are maintenance free. Non-reflective unbreakable magnifying glasses allow measurements to be set with the highest accuracy. The rules are one piece, not assembled, made of metal, and are adjustable according to different thicknesses of sawblade or different tooth kerf.



Swinging arm

The swinging arm is designed to support weights far greater than those normally demanded of it, through wide spacing of the supports where it is hinged to the machine frame. Durability and quiet operation are provided by nylon covered ball bearing rollers. At the pivot end, the telescopic part never leaves the protection of the housing and is thus never exposed to the danger of dust and chips getting into it from the nearby dust extraction outlet. The support bolt carrying the cross slide is vertically adjustable, stable and firmly attached to the swinging arm and therefore cannot get lost (compare other systems).



Squaring off and crosscutting

The straight edge achieved by a first edging cut is laid up against the cross cut fence and the material cut off at a precise right angle.

To cross cut to a specific length, the material is turned round after the first squaring off cut and the cut edge is laid up against the throwover stop.

Squaring accuracy is plus or minus two tenths of a millimetre on one metre edge length.

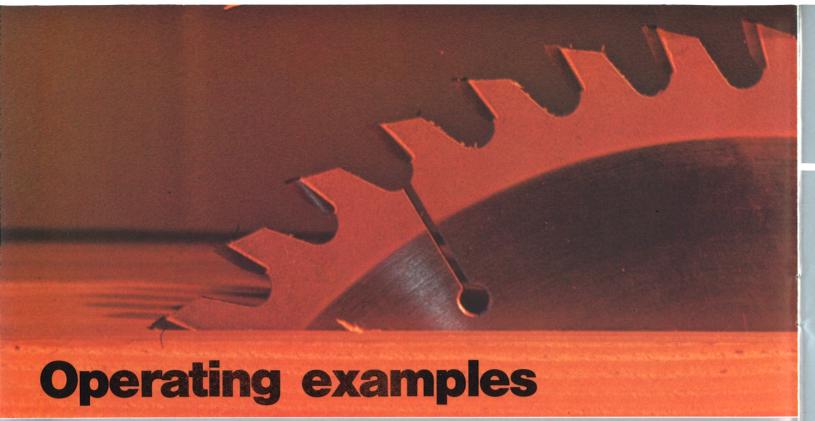


Cross cutting with the rip fence

The material is laid up against the cross cut fence. The aluminium rip fence section is released and pulled back in front of the sawblade and reclamped using the rapid action lever. The rip fence is set to the required measurement and the material is pushed against it. When being cut it is held against the cross cut fence and transported by the double roller carriage.

With the rip fence in this pulled back position the workpiece cannot get jammed between sawblade and fence.







Mitre cutting

Angles from 35° to 135° can be cut using the mitre fence which is quick and easy to fix on the double roller carriage.

With the cross cut fence removed, the cross slide can be used to support larger workpieces.



Mitre cutting in two planes

With types 45, mitre cutting can naturally be done simultaneously in two planes, which is of benefit in the manufacture of square cones, coffins and rafters for example.

offer anodisation of all aluminium parts which prevents the grey of the aluminium from rubbing off and causing discolouration of sensitive materials.

Quality Control

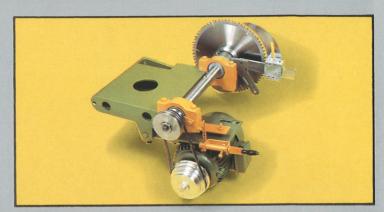
Every machine is assembled and tested before it leaves our factory to guarantee that it is worthy of the

name ALTENDORF. All functions such as squaring off accuracy, precision running of the double roller carriage, free cut etc. are comprehensively checked and a test certificate is issued which is then sent out with the machine.

To ensure that this quality can be maintained practically indefinitely, our spare parts department can, and often does, deliver parts for machines over 20 years old with no difficulty whatsoever.

Saw Unit

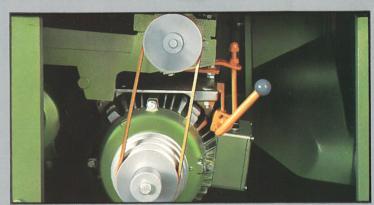
The complete saw unit, whose base is a rigid cast iron block, is assembled separately, comprehensively bench tested and only then installed in the machine. All rotating parts are individually electronically balanced. Pre-stressed precision ball bearings in special protective sleeves ensure vibration-free running of the saw shaft. No maintenance is required - the assembly is lubricated for life.



Speed changes

The machine offers 4 operating speeds: 3000/4000/5000/6000 RPM at 50 Hz, 3600/4800/6000/7200 RPM at 60 Hz.

Speeds are easily changed manually by simply moving over a special V-belt. At the same time the RPM display is also changed. One lever, easily accessible through the wide machine door, releases the belt. Belt tension is automatically provided by the weight of the motor.

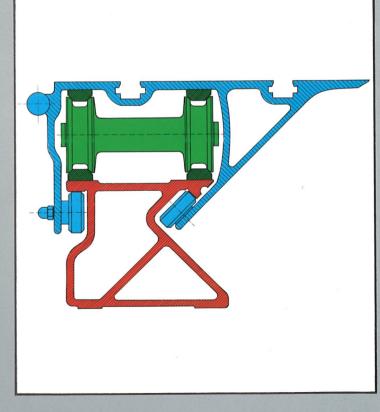


Double roller carriage

ALTENDORF was the first manufacturer in the world to construct the sliding table out of a specially hardened, extruded aluminium section. This was in 1956, but even today, the long lasting easy running and precision of the Altendorf double roller carriage remains unmatched. The guidance system guarantees accuracy of 1/20 mm on one metre's length of carriage.

The design of the double roller carriage combines extreme rigidity with minimum weight and thus offers absolute accuracy with a minimum of effort. Large rollers are guided between two sets of extremely wear resistant phenolic prism rails, guaranteeing that ease of operation and precision remain unaltered by many years of operation, even in the presence of large amounts of sawdust and chips.

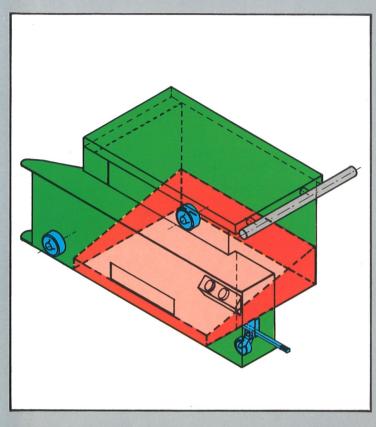
The patented design of the double roller carriage of types 45 (see picture right) offers an unparalleled resistance to bending and twisting. This special extruded section has enabled Altendorf to become the only company in the world capable of building carriages up to 5 metres long. Users of type 45 benefit from the fact that the carriage is only fractionally wider than that of fixed arbor Altendorfs.



ALTENDORF Design in detail

Long term protection

We'd like your ALTENDORF to still look good after the many years of hard work of which it is capable. We therefore use special primers and finish the machine with a particularly tough hammerblow green paint. All parts which would be liable to rust are either hardchromed or galvanized. As an optional extra, we



Machine frame

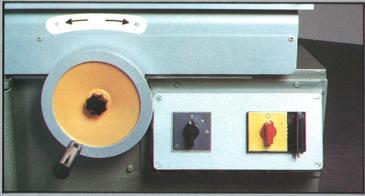
The body of the machine is constructed of welded steel which in load bearing parts is 10mm thick. The base is a floor of reinforced concrete, guaranteeing extreme rigidity, covered with sheet steel. Mobility rollers (one of which is retractable) are standard equipment.

A large opening in the front of the frame allows easy internal cleaning as the floor inclines towards it.

No foundations are required. The low centre of gravity ensures that the machine is absolutely stable even with very heavy workpieces loaded on the cross slide with the roller carriage fully extended.

The combination of steel and concrete absorbs vibrations, thus reducing noise to a minimum.

The large mobility rollers mean that the machine can be easily relocated by one person without special equipment.



Starter

In standard execution the starter consists of a main switch (which can be locked with a padlock), star delta switch, overload protection and low volt release. After the operation of the safety relays, the machine will not restart unless both switches are first returned to zero position.

An automatic brake can be incorporated into the starter as an optional extra. This ensures that the sawshaft stops in under ten seconds after the machine has been switched off.



RPM Display

Easy to see from the operator's position, the RPM display window also shows the machine serial number which is an essential reference for spare part orders. The picture, left, is of a tilt arbor machine and the large tilt degree disc, also easily readable, is visible to the left of the RPM window.

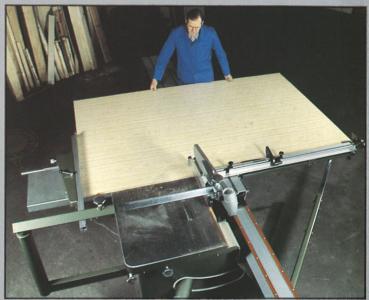


Sizing cuts in large panels.

Measurements can be set using either the rip fence or the throwover stops on the cross slide.

To divide a large panel into smaller pieces all of the same size, parallel strips are first made using the rip fence and these are then cross cut to the required final dimension.

If the final size exceeds the distance between sawblade and rip fence (max. available 1250 mm), the measurement is set using the rules and stops on the cross cut fence.



Crate making cross slide (optional equipment)

Stops on the normal crosscut fence and the additional fence are set to the same measurement. Individual boards are loaded from left to right and the last board cut parallel to the first.

The remainder of the last board can then be used as the first board for the next batch, thus avoiding wastage.



Safety hoods



Altendorf machines are adapted to comply with the prevailing safety regulations in each country. In countries where they correspond to safety



requirements, the riving knife mounted hoods shown above are delivered as standard equipment at no extra cost.



In West Germany, a safety hood totally covering the blade and operated by a parallelogram linkage system is compulsory. This concept has been developed, perfected and patented by Altendorf in the version shown above.

The support arm of rigid steel tubing is extendable above and below to correspond with the various cutting widths available. It securely clamps in position unerringly in line with the sawblade.

The parallelogram linkage system is constructed as a channel to provide overhead dust extraction. This

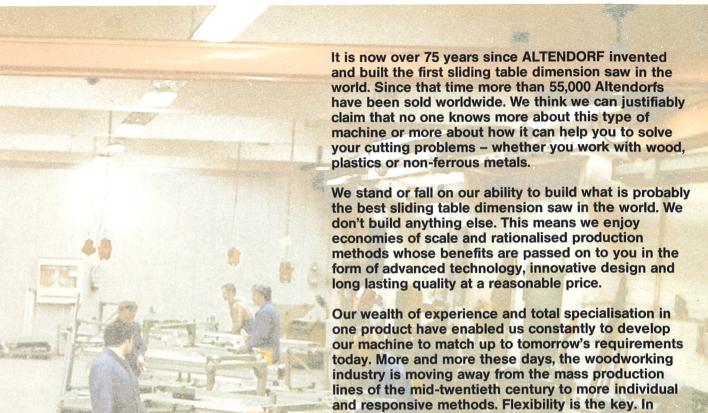
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has the advantage that tubing for overhead extraction is not in the way of the operator.

The transparent safety hoods - narrow for types 90, narrow and wide for types 45 - are made of the almost unbreakable plastic MAKROLON® and serve as suction cones for the overhead extraction.

The hood is equipped with two pressure rollers. The one at the front automatically raises the hood to the required height as the material is fed in. The two rollers together can be set to provide sufficient pressure to prevent thin materials from fluttering.



today's market, a manufacturer must be able to react quickly to the changing demands of a customer whose taste is becoming ever more individualistic and who, in the current state of the world economy, can insist on top quality finish and rapid delivery at tightly calculated prices. This is where the ALTENDORF comes into its own. Versatile, accurate, easy to set up, quick to readjust - and, above all, reliable - it can make downtime a thing of the past.

ALTENDORF - it's said we're a cut above the rest.

