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on site demonstrations available

Carpentry Machines

WARRANTY 3 THREE YEARS

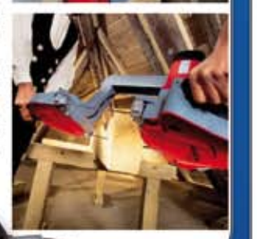
Wide selection of carpentry machines only available from Mafell.

Z5Ec

PORTABLE BANDSAW

Features

- Large cutting area.
- Tiltable band side.
- Ideal working weight at only 13.7 kg.
- The roller covers can be removed without the need for tools – therefore easy clamping/release of the saw band.
- Saw band with front and rear cutting teeth – for reversing in the saw cut without any problems.
- Unusual, versatile cuts – which are otherwise only possible by hand, for example ascending cut lines.
- With CUprex, the new high performance powerful motor.

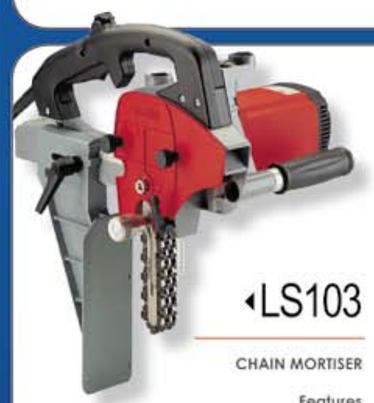


PSS3100SE

PORTABLE PANEL SAW SYSTEM
(with scoring attachment)

Features

- Cuts of up to 130cm can be executed with one section of the guide rail.
- Saw feed motor consistently clean cuts.
- Convenient one-man operation.
- No trailing cable or vacuum hose.
- 3100mm cutting length with max.
- 45mm cutting depth.
- Follow-on fence for longer panel formats.
- At only 17kgs, the world's lightest panel saw.
- With Mafell Flippkeil riving knife for plunge cuts.



ZH320Ec

BEAM PLANER

Features

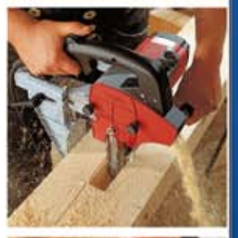
- 320mm planing width.
- Up to 3mm stock removal in one pass.
- 2700w Powerful high performance motor.
- Excellent chip ejection.
- High quality standard means lower machine costs and longer service life.
- With guide rollers – for maximum utilisation of the planing width.
- Lightweight at only 14 Kg.

LS103

CHAIN MORTISER

Features

- With new CUprex high-performance powerful motor.
- Low machine weight - ideal for use on construction site.
- Extremely powerful motor - for high efficiency and considerable time saving.
- Ergonomic handle and switch arrangement - for safe, efficient, energy saving work.
- Fast chain replacement.
- At only 9 Kg extremely lightweight and easy to use.
- Ergonomic machine construction.



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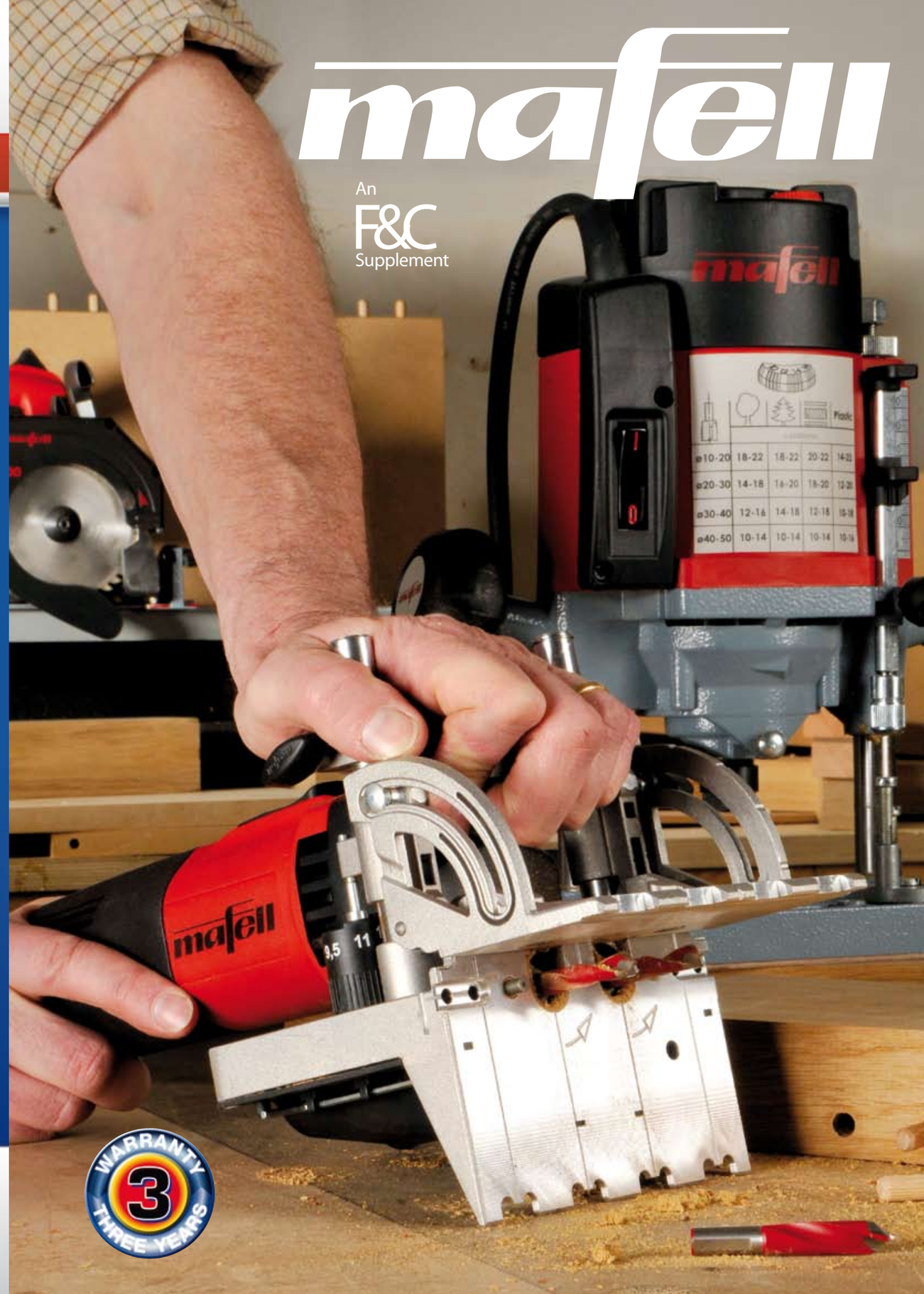


Quality made in Germany

Mafell's only production facility is in Oberndorf am Neckar - right in the heart of the major industrial region around Stuttgart and rubbing shoulders with other renowned global players and medium-size enterprises that play a leading role on the world tool and machine market.

Against this backdrop, Mafell deliver quality made in Germany, making as much as 85% of its components using the company's own tool-making operation to produce tools not in a large-scale operation but by high-tech manufacturing in small series.

Mafell can look back on 100 years of machine building and have many decades of experience in the woodworking sector, in 1926 making the world's first portable carpentry machine.

The company base their success on a philosophy of providing uncompromising quality in the manufacture of machines for the woodworking trades, in so doing consistently originating innovative solutions in response to specific challenges, as you will discover on the following pages.

Here, with the help of the guys from NMA Agencies, our workshop team of Anthony Bailey, Mark Baker and Michael Huntley showcase some of the latest tools and machines to be developed, a duo doweller, a large router, saw and guide rail combos and a plunge saw, all of which promise the absolute precision, powerful and reliable motor performance and extreme longevity that Mafell users have come to expect.

Read on to find out how they can be used to lighten workshop tasks or allow new and improved working methods and you'll see what we mean.

Contact details

NMA Agencies Ltd
Tel:01484 400 488
web: www.nmatools.co.uk

This router does it all

Mafell did their homework when they came up with this large but all-purpose machine

The LO65EC really is a router for all functions. It has a powerful 2,600W motor and comes with a 12.7mm collet, can be used in a table and is truly versatile as our photo sequences demonstrate.

Key features

- High-performance CUprex motor
- 65mm plunge depth
- Router guide device for cuttings housings in staircase strings as optional accessory

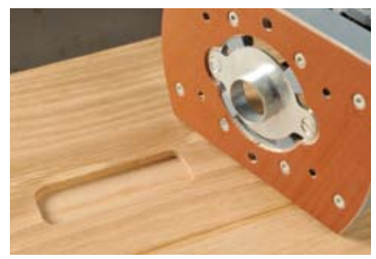
For template guide operations use thin MDF or ply. If it is thinner than the projection of the template guide stick some packers underneath with double-sided tape to get the right clearance

Using template guides

You can make your own jigs to use with template guides utilising MDF and the router with the straight fence and straight cutter. Apart from the standard one Mafell make a variety of other sizes. What you need to take into account when setting out the jig is the difference between the cutter size and the template guide size. A jig can be machined using the straight fence then cleaned up with a rasp or file.

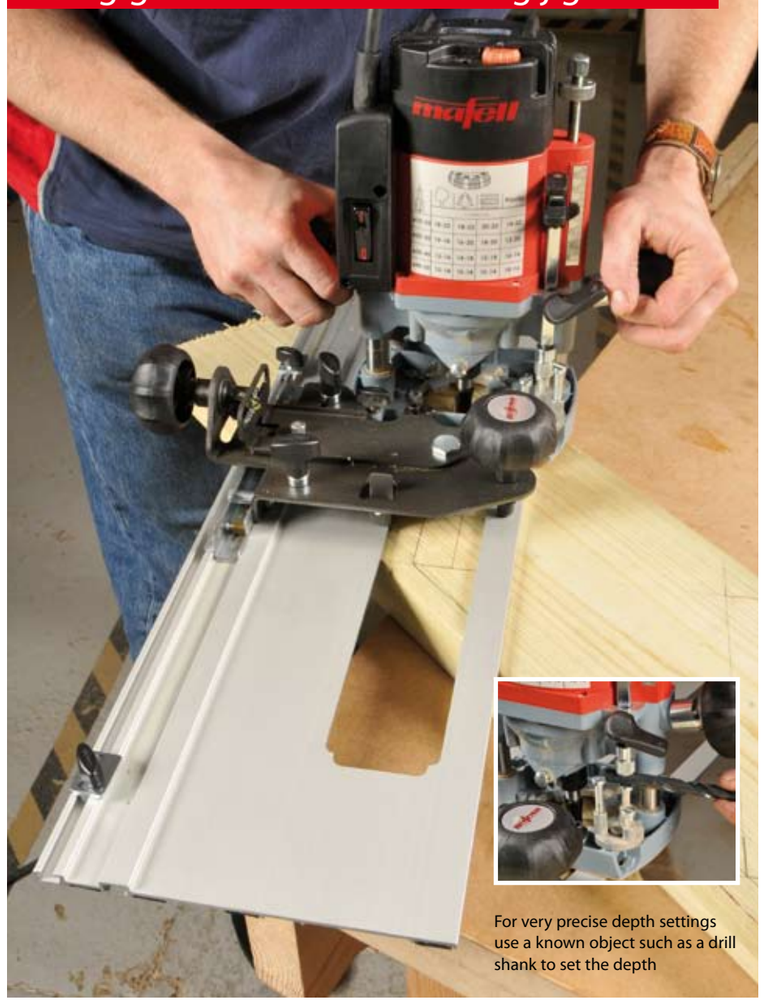
Machining a recess to take a sunk-in drawer pull

If the depth setting isn't quite right the LO65EC's fine adjuster makes minute changes incredibly easy to do



The finished recess very accurately machined thanks to the precisely engineered fit between the guide bush and the router base

Using guide rail and stair string jig



For very precise depth settings use a known object such as a drill shank to set the depth

Setting the limit of the housing using the front lock knob. There is also a rear knob position

Machining a housing for a cupboard carcass. The fine adjustment makes it easy to increase the cut width

Mafell make a router guide rail and also a stair string jig. This allows the accurate machining of staircase strings if necessary on site as well as in the workshop.

Mafell have devised a very useful accessory guide that allows machining of stair strings where the treads are 'open'. Marking out is simple to do before you start

The two-stage depth setting is easy: rest the cutter on the job, press the top of the depth rod down until the rod touches the turret stop, then move the lower indicator to zero. Lastly, lift up the rod until the indicator is opposite the correct measurement on the scale, unplunge and you are ready to plunge cut to that depth

Mortise box

To machine mortises you need to make a U-shaped ply or MDF mortise box for the router to sit on. The box is fixed to your bench and the workpiece is supported on pads so it is close to the top and clamped to the side, allowing maximum cutter projection. You need two fences to prevent the cutter wandering off course.

Use the longest cutters possible as mortises are usually quite deep. You can even machine shaped components like chair back legs if they are correctly supported.

To increase mortise width start by having the cutter set slightly off to one side then turn the machine round for the second pass or simply unlock the router and slide it across, relocking it on the fence rods. The fence fine adjuster allows accurate setting and a sliding fit on the box walls. Have extraction fitted or remove the router between passes to clear the chippings out using an extraction hose.

With two side fences mortises can be machined with a homemade mortise box, the router can be moved sideways and re-clamped in order to widen the mortise; note the length stops to limit the length of the mortise

The finished mortise held firmly in place with an F-clamp; note the small stop block in the bottom for the location of each leg, allowing repetition accuracy

All about table-mounting mode

The LO65EC is a natural for table mounting due to its power and its speed control mechanism.

Use the mounting holes in the baseplate with countersunk machine screws fitted through holes drilled in your router table or table insert plate. The switch is a normal on-off type; note, however, the safety feature that means it cannot be used with an NVR switch as it has to detect a live current before it will operate.

The height adjustment can be altered quickly and easily if you make up a socket spanner with a nut fitted in the end. To facilitate table use remove the base plate from the router bottom where guidebushes fit, to give the maximum cutter opening. Always select the correct speed for the cutter diameter in use.

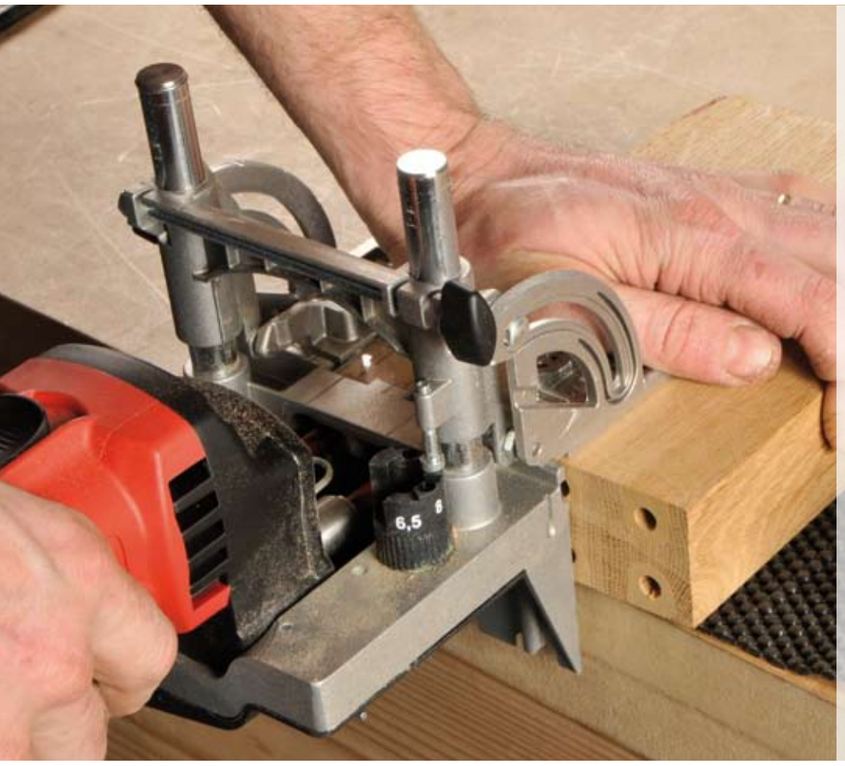
Use hold-downs and push blocks for safe working. Extraction becomes even more essential than when working freehand because the cutter area can get clogged up and chipping can fall into the motor housing, damaging the windings inside the case.

Specifications

Models LO65EC MaxiMAX
LO65EC MidiMAX
Cutting depth 0-65mm
Normal input 2600W/3.3hp
Weight 5.7kg
Nominal no-load speed 10,000-22,000rpm

Duo-doweller is simply the best

Dowelling has been maligned as a jointing method, but Anthony Bailey says this system has a real place in cabinet making



There are a number of portable jointing systems on the market but this has to be the best there is. Why? It is extremely precise with very little chance of errors provided you take care with setting out and operation.

It turns the cheap and readily available fluted dowel from an often sloppy and under-appreciated jointing method into a high-precision, high-strength and versatile means of holding components together.

The relatively high initial cost is quickly recouped once you start using it for all your joinery and cabinet jointing work. The speed and precision of the Duo-Dowel System is what sells it to everyone who gets their hands on it.

Key features

- Easy to use
- Additional stop pins
- Powerful 700W motor

Model comparison

The Duo Dowel System seems complex because of the unusual fence/faceplate configuration and the various controls but the build quality of this machine is self-evident.

The DD40G is the smaller version with less motor power and a maximum drilling depth of 37mm x 12mm diameter whereas the DD40P has a bigger motor and a maximum drilling depth of 40mm x 16mm diameter for larger work. I think the DD40G is more of a cabinet shop tool while the DD40P would suit joiners better.

The cutter-release tool is inserted and turned to release each cutter in turn before a different size is fitted

The material thickness is set using this turret; the measurement shown equals half the material thickness, thus 9.5mm equals 19mm stock

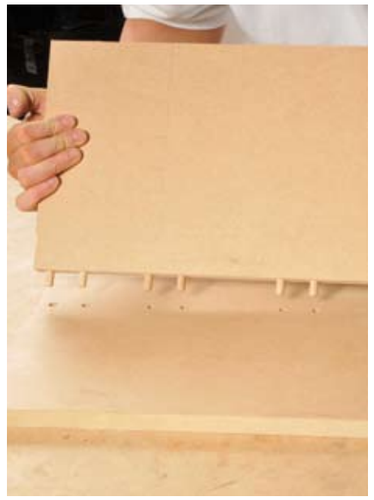
The dowel depth is set using the side scale; again it shows half the dowel length

Dowel-drilling template

The 800mm Mafell dowel drilling template is intended for large panel work; note the pencil marks added on top to indicate which positions are actually going to be used

A dowel-drilling template is available and pretty much essential for furniture makers because most of us have to make wide carcasses which is precisely what it is intended to do.

The technique for holding the Doweller against the jig

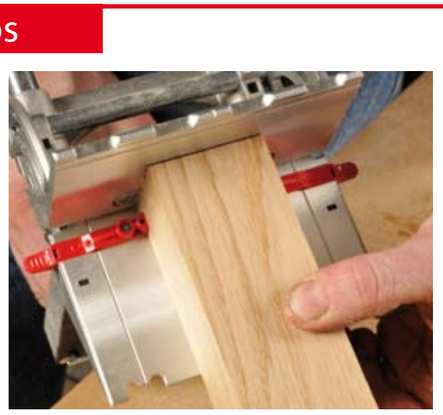


The resultant panel joint, precise and quick to do

Auxiliary stops

The red auxiliary stops are very useful because if you are working with narrow timber which is a standard size, say 50mm wide, the workpieces can be located accurately and safely when drilling.

Two pieces of anti-slip mat are included in the kit case. These make conventional clamping more or less unnecessary.

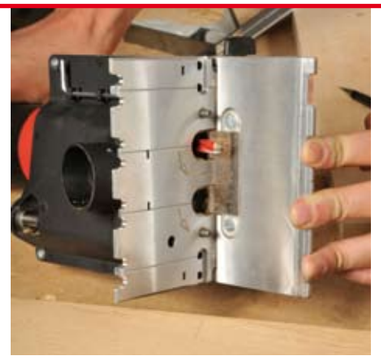


Use a pair of auxiliary stops for machining the ends of narrow components

Holding the workpiece while drilling

Narrow work

Even narrow window components can be dowelled together, note how it has been clamped to a larger block to facilitate machining



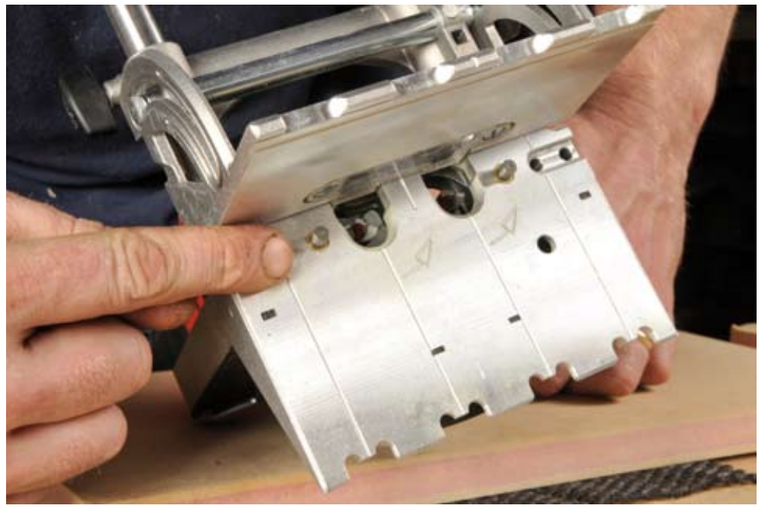
To machine narrow components remove one dowel cutter to drill, then turn the workpiece over to do the second slot

The finished joint is very strong and accurate

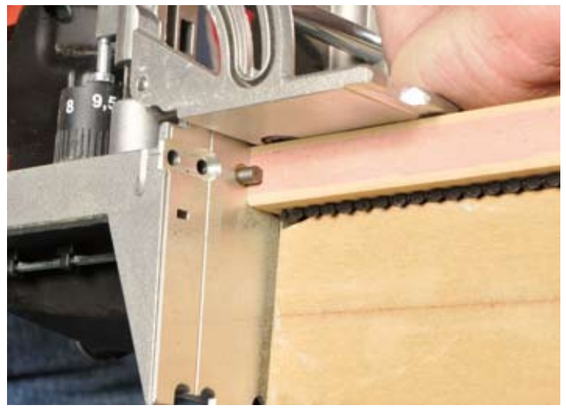
Dowelling techniques

Just like working with different biscuit jointers you soon learn various tips, tricks and shortcuts that speed things up and make for a more accurate job.

The sprung stop pin is a key item because it can be used to offset the dowel holes from the side of a component or be placed in an existing hole to locate the next drillings. You do need to be sure you have it pressed against the correct side of the hole each time, though.



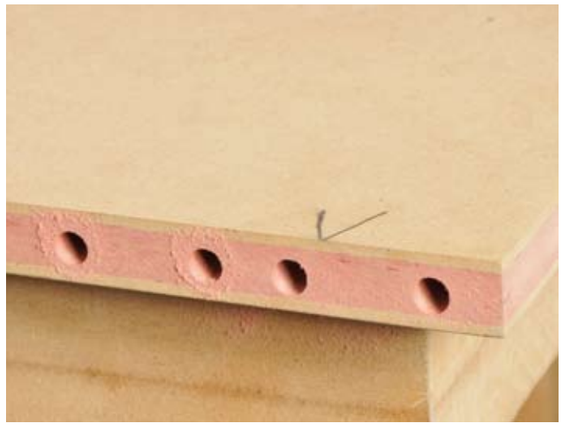
A vital feature is the sprung stop pins. These are used to locate the machine precisely against the edge of components but they retract when placed against a flat surface for intermediate dowel drilling



The stop pin is resting against the edge of 18mm MDF to give an absolutely precise offset

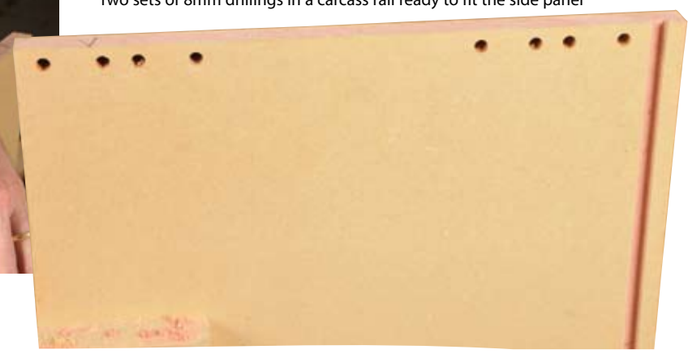
The resultant twin holes produced with 8mm cutters

Machining the holes at the other end of the board to accept a narrow rail



By locating one spring pin in an existing dowel hole you set the exact position for the next set of holes; obviously the spacing between two sets is slightly closer that the machine's cutters

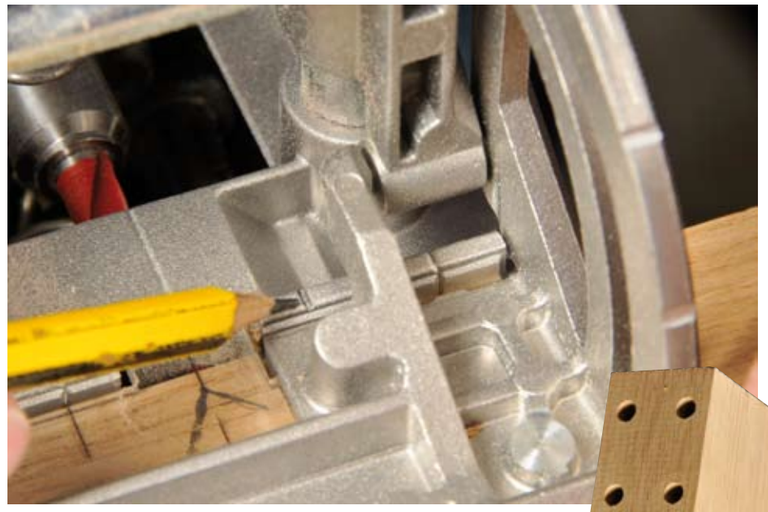
Face drilling using hand pressure to keep the fence located squarely on the workpiece. Safety note: take care to set the drill depth correctly just in case they come right through where your fingers are!



Two sets of 8mm drillings in a carcass rail ready to fit the side panel

The two components being offered up for a trial fit

Note how flush the mating surfaces are

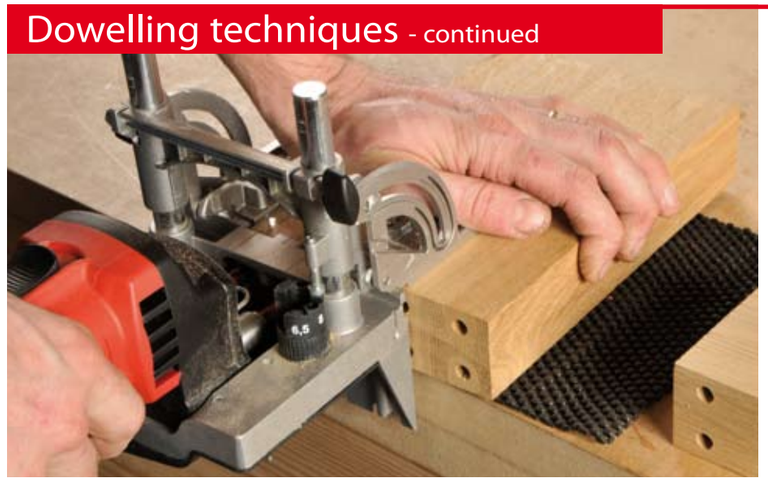


Where you want to do a corner or T- joint this detent is used for lining up with a pencil line made with a square. It is in line with the inside edge of the sprung stop pin

These holes have been machined from one face. There is just enough tolerance to allow a joint in equal-thicknessed timber to mate properly; however both sets of holes can be done from both faces if you wish

Lining up the detent with the pencil line ready to drill

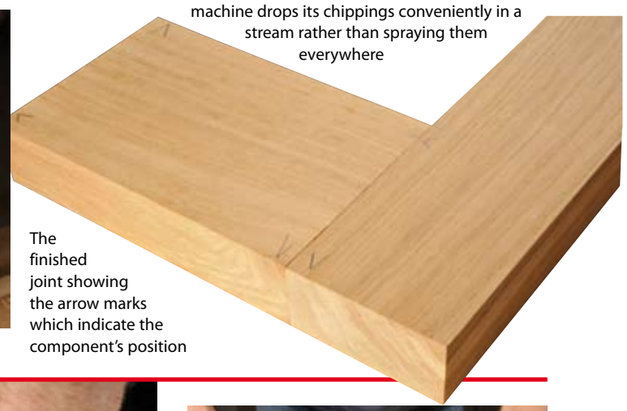
Dowelling techniques - continued



Making a trial joint in a rail to fit

For picture clarity, we have not connected the extraction port to a vacuum unit. But note the machine drops its chippings conveniently in a stream rather than spraying them everywhere

Pushing the dowels home



The finished joint showing the arrow marks which indicate the component's position

Mitring with the doweller

Dowel-drilling a 15° mitre by tilting the fence

Another accurate and strong joint completed...

... and offset joints where one component is narrower than another, such as a table skirt, are also easy to achieve

Mitring at almost any angle is possible dependent on the thickness of the stock. A shallow angle can be mitred in thinner board while a more acute angle needs thicker timber. The height of the slots can be altered to optimise the position and strength in the joint

Specifications

Model DD40G
Drilling depth 0-37mm
Drill spacing 32mm
Tilt range 0-90°
Nominal no-load speed 18,500rpm
Nominal input 700W/0.9hp
Weight 2.8kg

Crosscutting system

The KSS 300 and 400 offer much, much more than our headline suggests...

The KSS 300 saw can operate in no less than five modes, all with great accuracy and ease. The system provides you with a crosscut saw, a plunge cut, shadow gap saw or portable saw, all used with or without the guide rail system.

Key features

- Compact and practical design
- Ideal for sawing panels
- Quick and easy bevel cuts

The KSS 300 operates perfectly as a crosscut saw using the short rail with its special sprung 'pullback' action when the cut is finished

KSS 300: All about the guide rail

The saw is contained in a Systainer case already mounted on a short rigid guide rail that is perfect for crosscutting not just wide manmade board but narrow solid sections too. No clamping is required for the guide rail.

The underside of the guide rail showing the special pivot point and the adjustable angle guide

Underneath is a pivot and a locking angle stop system so you can set the guide to cut any angle and reset it again easily. A cable clip protects the cable from the edge of the track and keeps it out of the user's way.

Locking the angle guide at 90°

Making an angle cut: the scale can be reset time after time and still achieve accuracy

The convenient angle-setting scale and pointer

Saw blades

The 40-tooth TCT blade is perfect for manmade faced boards but will tackle solids too, down to a depth of 40mm (42mm without the guide rail). At maximum 45° bevel setting this reduces to 27mm. If you do a 'same side' scoring cut first, a spelch-free finish can be achieved that has to be seen to be believed. Other blades are available too.

KSS 300: Plunge cutting

Whether plunging or trenching, depth setting is easy and accurate. This avoids cutting too far, for instance to avoid pipes or wiring under floorboards

For plunge cutting you can easily raise the saw body and then lower it safely into the work, this is perfect for removing sections of floorboards for gaining access but can be useful elsewhere. It has a sprung riving knife which simply retracts on plunging.

Trenching

Another trick up its sleeve is trenching, In the past it could be done on a tablesaw but legislation now prevents this. The KSS 300 however, can be locked easily at a given height and mounted on the guide rail allows repeated passes to any chosen trench width in safety.

Portable sawing

When dismounted from the guide rail the KSS 300 is about the lightest most usable portable saw around weighing in at a modest 2.2kg without any hint of flimsiness being very of robust solid contruction. Easy to heft in your toolbag when you're going on site.

Shadow sawing

The blade housing on this machine is flat and there are no projecting parts, even the movable blade guard can be lifted safely from on top, not from the side. This mode of sawing may not seem instantly useful but consider being able to run the saw on floorboards to remove the bottom of skirtings leaving an 11mm gap suitable for installing laminate flooring so it slips right under or as a 'carpet gap' for a neat room edge.

Making an 11mm high shadow cut with the saw running on its smooth flat side, extraction hose removed for photographic clarity, hence the dust!

Just move the guide rail across slightly after each pass, to make a trench of the desired width

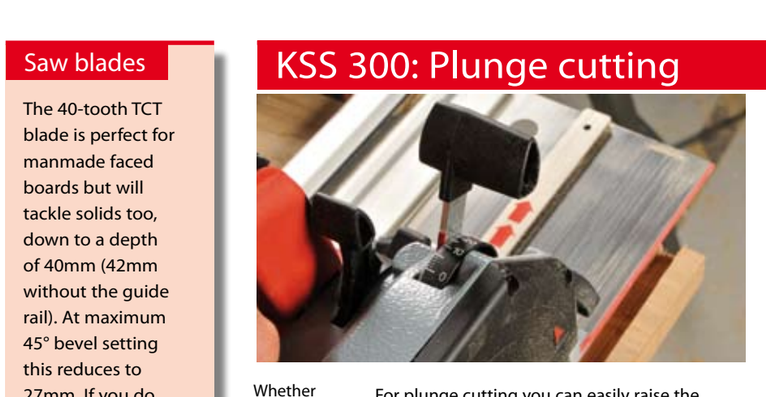
It's a doddle to pack this baby saw with its big capacity and all its extras back into its case

Specifications

KSS 300	KSS 400
Cutting depth 0-40mm	Cutting depth 0°- 22.5° with guide track 0-49.5mm
Tilt range 0-45°	Cutting depth 0°-45° with track 0-40mm
Cutting length 337mm	Cutting depth 0°- 22.5° without guide 0-40mm
Nominal no-load speed 8,800rpm	Cutting length 400mm
Nominal input 900W	Tilt range 0-45°
Weight 3.2kg	Nominal input 1100W
Universal motor 30V/50Hz	Weight 5.2kg
Cutting depth at 45° 0-27mm	Universal motor 30V/50Hz
Cutting depth off rail 0-42mm	
Angle cuts 45° to -60°	
Dimension incl. rail 550 x 200 x 200mm	
with guide track at 0-22.5° 49.5mm	

KSS 300: Using saw with Flexi-Guide

In order to use the saw freehand or use the amazing 1.4m Flexi-Guide, just unlock and lift the body as you would before plunge cutting and lift a clip to free the saw from the track, then slide it straight onto the Flexi-Guide which rolls up for storage when not in use. Alternatively use it freehand using the side fence supplied.



Lifting the clip that releases the saw from the guide rail

Simply pull the saw off the rail to detach it

Using the 1.4m Flexi-Guide; it rolls up and clips together for storage in the case

The saw is kept running true thanks to ingenious pressed guide pips

KSS 400

This trimming cut is being done without any clamping thanks to the rubberised grip surface underneath the guide rail

Setting the width for the next cut

Performing a compound mitre cut: the F-clamps are not visible as they slip neatly into the underside of the track for extra security

Making a bevel cut is quick and easy

The KSS 400 is larger in every respect than the KSS 300. When mounted on the guide rail it will cut 49.5mm deep and 55mm without a guide rail making it suitable for sawing standard 50mm carcassing softwood. Bevel cutting is possible down to 40mm deep.

The kit comes in a heavy-duty steel case with a short crosscut system rail which is a larger section than the KSS 300's. It has an auto return feature like its smaller brother.

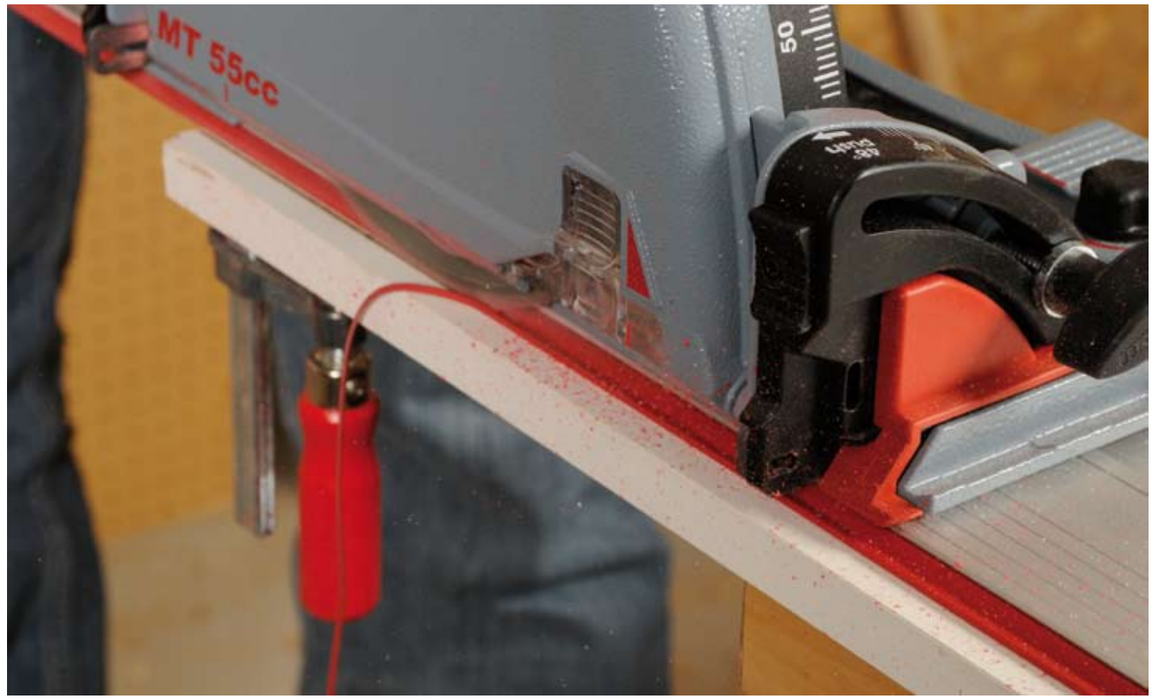
In addition longer guide rail sections are available so you can even rip down an 8 x 4ft sheet with ease.

The guide rails feature a red rubber pattern underneath for non-slip grip but there are F-clamps available as well.

The saw can be detached from the guide for use with a standard fence which is provided in the case.

There are saw blades for various purposes available from ripping to finer work such as sheet material.

Plunge saw marvel



This new plunge saw exemplifies the way in which Mafell offer innovative design which works

The ability to use a saw for normal cutting of material or plunge cutting drawer openings, letter boxes, slot-cut boards, panels and so on is invaluable to any joiner and cabinetmaker. The next questions concern how easy it is to use and what benefits if offers, and this one scores highly on both counts.

Key features

- Scoring function
- High speed
- Fine adjustment
- Compatibility with other track systems
- World's fastest and most innovative blade change

How to change blades

Press the side button and lift the orange lever to release the blade cover which then drops down. Then it is simply a case of undoing the machine screw holding the blade in place, fitting the new one, re-fixing the machine screw, locking the side shield and away you go. Very simple and very effective.

Scoring facility

The toggle switch to the right of the blade is the UNIQUE scoring function, when engaged it does two things. Firstly it limits the depth of cut to 2mm when used on the guide track, so you only cut the melamine, and secondly it offsets the blade by 0.2mm, which means when you do your second cut at full depth the up coming teeth of the blade are 0.2mm away from the face edge so it can't chip.

How to set blade angle of tilt

This too is simple, lock the knob and away you go. To set the angle, release the knob, but by pulling back the spring catch, an angle of -1° can be achived to allow a glue pocket.

The tilt mechanism does not alter the cut position just the angle, so you can use it with the guide rails and still have the same cut line you had when the blade was set at 90°. The blade can be tilted up to 48°.

Guide rails

The guide rail system comes in five basic lengths 0.8m, 1.1m, 1.6m, 2.1m and 3.1metre sections. In addition there is a joining piece and an angle fence. A handy way to use it is to buy the guide rail and bag set which gives a maximum length of 3.2 metres (10.4 feet) enough to accurately cut the longest of manmade boards without resorting to a big expensive fixed panel saw. Looked at in this way it is a very economical way to acquire precision, repetition board machining. If you already have a compatible guide system you can save on this cost too. The saw comes as standard with one length of guide rail and a parallel fence.

How to plunge cut

Plunge cutting can be problematic if you don't know where the start and the finish of the blade are.

This saw comes with an attachment for the side guard which you can adjust to the depth of cut chosen, although there are preset positions of 10, 12.5, 25 & 50mm depth of cut settings which show the outer edge limit of the blade at those set positions.

All you have to do is line up the edge of the red button on the guide, plunge cut and move the saw between the marked points on your work. Notice the guide rail being used to allow controlled cuts in a predetermined course. Freehand cutting is not as accurate so do explore the use of guide rails. Mafell make theirs in various lengths, but this saw can also utilise rails made by other manufacturers. Unusually Mafell have taken the step of removing the riving knife altogether. Omitting the knife means there is no need to remove it for plunging or having a sprung mechanism.

Specification

Model	MT 55CC plunge saw
Motor input	1400W
No-load speed	3,600-6,250rpm
Blade dia	162mm
Max cut depth	57mm
Cut depth 45°	40.5mm
Tilt range	-1°-48°
Weight	4.7kg