

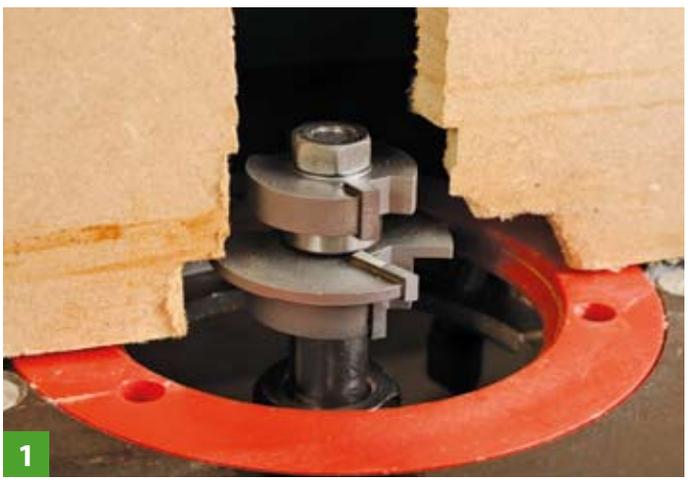


Glue joint cutters

Keen to prove he's not really stuck up, **The Editor** gets to grips with the perfect way to bond wood together using a router and glue

Glue joint cutters take the business of timber jointing to a much more sophisticated level than the standard butt joint. They are designed to create unbreakable, reliable joints such as used for kitchen worktops, large table surfaces or boxes and frames and panels, and there are various ways that routed glue joints can be made. There are a number of designs available and I have included others that I think belong in the category of glue joint because they create interlocking joints and rely on glue to complete the joint even though they are not specifically glue joint cutters.

TYPICAL USES



1 A through fence supports scribe cuts properly

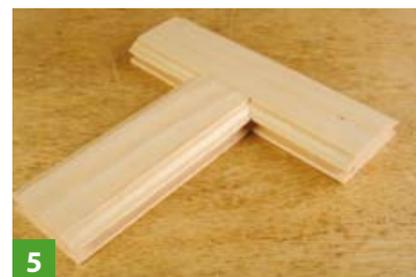
1 The term glue joint is generally taken to mean joining boards edge to edge. The F-joint or similar is the standard cutter for this work. It will accommodate some variety in stock thickness and although the cut profile may vary, they all do the same job. Usually one cutter will create both the joint halves by reversing the matching sections to be joined.





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This more complex cutter gives an unbreakable joint



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The Editor's favourite jointing method for frame and panel work

2 There are more sophisticated glue joint cutters which feature an arbor on which is mounted a series of cutters, spacers and shims with a 'lead' cutter that avoids a fluffy featheredge at the board surface when the joint is made. As with the simpler version above, one of the boards is turned over in order for it to 'plug in' to the other one.

3 Some designs are superior for floorboarding where a lot of stresses are involved in use. However, if they are glued, shrinkage across a large area is a factor which is why many modern wood floors are 'engineered', meaning they are created with a mixture of natural wood on top with other substrates beneath and all accurately bonded, machined and quick to lay.

4 The tongue and groove cutter set gives a more straightforward fit that has the advantage of being able to create a panel slot in the frame you are jointing together.



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Lock mitre joints need care in setting up but are reliable

5 The profile and scribe cutter set enables fast easy frame construction for fitting a panel in the middle and at the same time showing a decorative moulding on the inner frame edge which interlocks with a matching scribe profile on the ends of the top and bottom rails.

6 It isn't just flat boards that need jointing. Drawer boxes can be assembled in a number of ways but the impressive lock mitre cutter adds a plug-in joint with an extended glue line. This is what glue joint cutters attempt to do; create as many interfacing surfaces as possible with glue added for greater strength.

7 Glue joint cutters that allow a perpendicular joint facilitate constructions such as hollow square legs with a discreet, almost invisible, joint line that gives an impression of solidity.



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Modern clip-together flooring doesn't need glue



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Tongue and groove framing can look contemporary or traditional



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'Boxed up' construction makes components look much more substantial

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TOP TIPS

1 With all glue joint cutters it is imperative that the stock is accurately thicknessed, so when one part of the joint is turned over the surfaces can be flush on both sides. Joint test cuts are essential of course in order to achieve this result.

It is traditional good practice that each board lies with its annual rings the opposite way up to the adjoining boards to help keep the assembled surfaces as flat and bow-free as possible. This needs to be taken into account before machining of course, with the edges marked so you know which way up to machine each joint.

2 The humble biscuit can be used in an improved way as a glue joint cutter simply by having a double row of biscuits joining components together. This increases the joint strength considerably as it is effectively unbreakable.

3 As with any cutter purchases, a specialised cutter either has to effectively pay for itself in the course of just one job if there is big advantage in terms of speed, accuracy and metres run, or you can buy a type that could have future uses, if the first job doesn't quite justify the expense.

4 The larger cutters may only be usable with static – table – setups. However, as a general rule glue joint machining should only be done in a router table, because the accuracy is considerably increased. The use of pressure fingers is a good idea but they need to be forward of the fence so the joint edge isn't pushed down



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too hard. Good even hand pressure in the middle of a board is often better.

5 Because it can be difficult to obtain truly flush surfaces all the way along a joint line, especially with a reversed – i.e. turned over – joint match, some degree of belt sanding is usually required before orbital sanding to level the surfaces properly, but care is required to do this.



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ISSUE 73 WOODWORKING PLANS & PROJECTS 15



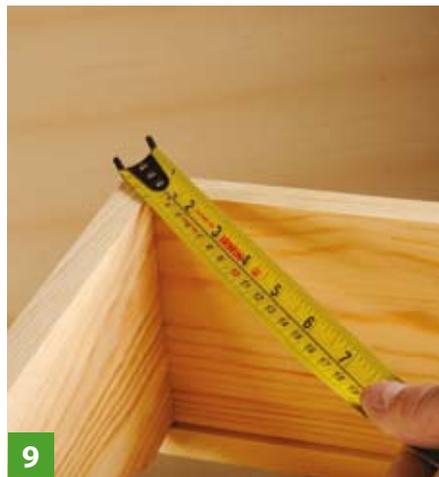
6 The cutting action of a joint made with a fine finger cutter creates a lot of fine fibre strands on the edges of the fingers. In order to assemble the joint so it closes properly, it is necessary to dust and de-fluff the fingers using a medium abrasive rubbed along the edge of the joint halves, then blow away the dust.



7 Following on from that the gluing technique is important. If you dispense glue straight from the nozzle it will overload the joint with glue and the joint will not close properly, however much clamping pressure you apply. Instead use a brush and apply glue lightly to the tips of the fingers on both halves. Once the joint closes the glue will spread sufficiently to create a good bond. Do not delay assembly so the glue remains wet.



8 Clamping glue jointed boards together has to be done correctly so the boards remain flat. The best clamps are T-bar clamps which are heavy and more expensive than sash clamps. However, you can make supports to hold sash clamps upright on the bench. Place paper over the bars to prevent glue wetting the bars and causing rusting and iron marks on the timber. Use more clamps on top facing downwards to improve the flatness of the assembled boards.



9 When assembling a drawerbox or any other perpendicular glue joint; ensure the clamping pressure is applied correctly so the joint isn't distorted and forced open and the box remains square without the sides bowing. Measure from corner to corner to ensure it is truly square and adjust the clamp positions if necessary.

10 When machining joints on board ends, good support is vital. Note how this lock mitre cutter is being used with a beakthrough fence and the smallest insert ring has been fitted, so the drawer component can slide across without falling into the cutter opening. A push block is used to keep the component perpendicular while machining. ■



Manufacturers & suppliers

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