

ujk



DOVETAIL JIG FINE PITCH COMB

Code: 111813

INTRODUCTION

A fine comb kit for cutting 6mm half blind dovetails or box joints. For use with the UJK Universal Dovetail Jig, the comb is ideal for making small boxes and drawers.

Supplied complete with a CNC machined anodised comb, US style guide bush, set gauge, side stops, two premium Axcaliber cutters.

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PARTS FOR DOVETAIL JIG FINE PITCH COMB

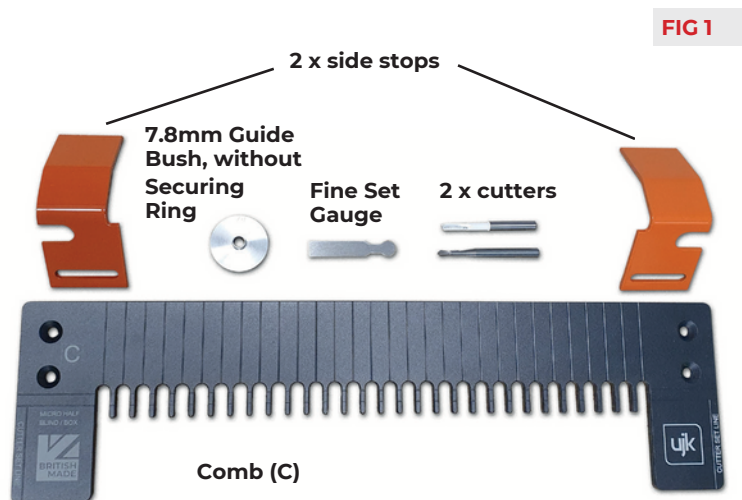


FIG 1

**WARNING! KEEP TOOLS AND EQUIPMENT
OUT OF REACH OF YOUNG CHILDREN
KEEP WORK AREA AS UNCLUTTERED AS IS PRACTICAL**



CENTRING GUIDE BUSH TO THE CUTTER

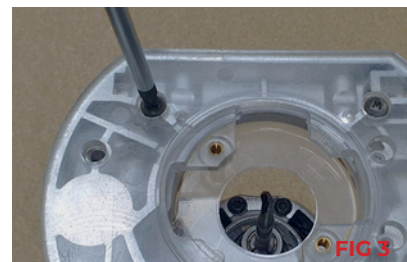
To obtain the best fitting joints, it is best practice to centre the cutter to the guide bush.

Follow steps below...

1. Insert the dovetail cutter only a third of the shank length into the collet then tighten lightly. **FIG 2**



2. Loosen all guide bush adaptor screws and plastic base screws if fitted to the plastic base and not a metal router base. **FIG 3**



3. Fit the 7.8mm guide bush to the guide bush adaptor but not the base. **FIG 4**



4. With the router upside down, plunge the router fully to allow the cutter to fully protrude through the base of the router. **FIG 5**



5. Slide the 7.8mm guide bush with adaptor over the cutter, taking care not to damage the cutting edge. **FIG 6**



6. With the cutter now protruding through the guide bush, tighten all base and guide bush adaptor screws, this will help centralise cutter to guide bush. **FIG 7**



IMPORTANT

Once the centring is complete, insert the cutter into the collet up to the K line or $\frac{3}{4}$ length of the shank

NB: It is highly recommended to test cut on practice boards cut to the same dimensions

HALF BLIND JOINTS



FIG 8

Min timber thickness - 9mm
Max timber thickness - 14mm
Max timber width - 305mm

Cutter Specification –
6mm Dia x 7.5° solid carbide. (666266)

Working with timber widths at 11mm increments is recommended.

Parts needed

Fine pitch comb (C) 6mm dovetail cutter
7.8mm guide bush 2 x Side stops

NB: Both parts of this joint are cut at the same time (single pass)
Ensure that the smaller orange side stops are fitted in place of the originally supplied black side stops.



FIG 9

FIG 10



1. Attach the fine pitch comb with the fingers at the front of the jig. **FIG 9** Use the horizontal board to be cut to level the comb. Please note: a support board with equal thickness to the cut board may be required to support the comb when using narrow boards. **FIG 10**



FIG 11



FIG 12

2. Before loading in the opposing vertical board, use the cutter set line mark on the right of the comb and a sharp pencil to mark a line at the top of the board. **FIGS 11 - 12**

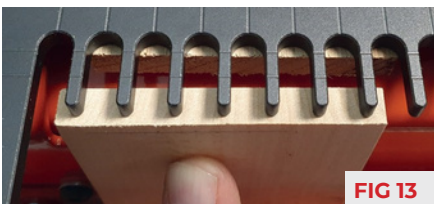


FIG 13



FIG 14

3. Load in vertically the first board on the left of the jig, pushing up to the underside of the comb, centralising to the fingers then clamp in place. **FIG 13**
Slide the side stop towards the right to contact the side of the material and lock it in place. **FIG 14**

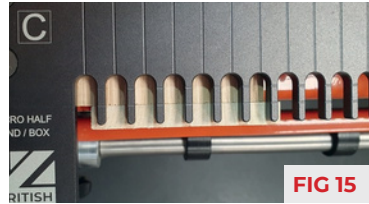


FIG 15

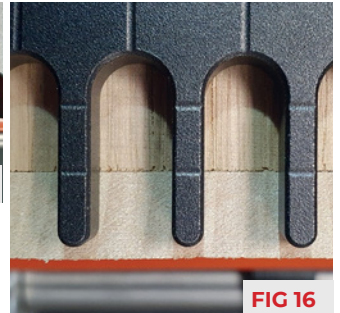


FIG 16

4. Slide the horizontal board forward to meet the vertical board, slide to the left to contact the side stop. Next, undo the comb lock knob. Use the comb adjuster knobs to ensure that the front finger guideline on the comb is in line with the point where both boards meet. **FIGS 15 - 16**

Double check that the comb is sat flat on top of the horizontal board. Ensure that both boards are level, and all is locked and clamped in place. **FIG 17**



FIG 17

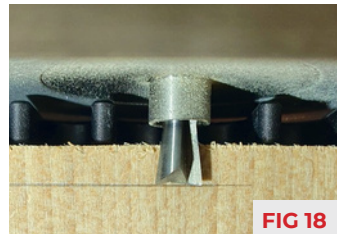


FIG 18



FIG 19

5. Plunge the cutter down through the fingers in front of the material so that the tip of the cutter just meets the cutter set line. **FIG 18**

Slide or reattach the magnetic extraction nozzle. **FIG 19**



FIG 20

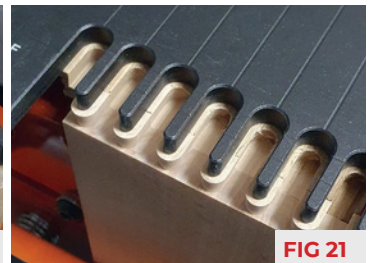


FIG 21

6. Power up the router then make a light scribe cut on the front of the board working from right to left. **FIG 20**

Next, starting at the left-hand side of the comb, follow the fingers to make the dovetail cut working from left to right. Ensure that the router always stays flat on the comb. **FIGS 21 - 22**

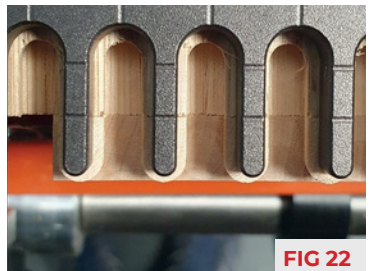


FIG 22

Use the guidelines to help find the fingers. **FIG 23**

IMPORTANT: Do not lift the router whilst it is running!



FIG 23

7. Check that all material has been removed. Check that timber cut follows the same profile shape as the fingers, and nothing has been missed.

Remove both boards and try for fit. If the joint is too tight and won't fit together with a light tap, raise the cutter very slightly (approx. 0.5mm) and recut new boards. If the joint is too loose, lower the cutter 0.5mm then recut new boards.

HALF BLIND JOINTS TROUBLESHOOTING & TIPS

• Joint too tight?

Raise the cutter very slightly (approx. 0.5mm) and recut new boards.

• Joint too loose?

Lower the cutter very slightly (approx. 0.5mm) and recut new boards.

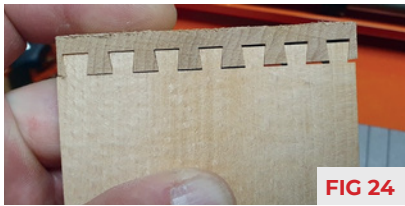


FIG 24



FIG 25

• Gaps at one end of the joint?

Timber isn't square or the comb is not sat flat on timber. **FIG 24**

• Gaps in the middle of the joint?

The board is cupped.

• Box sides not in line?

The timber is not centralised or the timber is not cut equally. **FIG 25**

• Too much overhang? **FIG 26**

Use the comb adjuster knobs to slightly move the comb forwards.

• Excessive breakout?

You may have a blunt cutter or have been overfeeding.

Tips

- Ensure that the cutter is centralised to the guide bush. If your router has no base or guide bush adjustment, a UJK Universal Sub-Base (210118, 110223) can be purchased to overcome this.
- Set the routers depth stop once you have set the cutter depth. If the plunge lock is accidentally released, you will have the correct depth set to return the plunge down to.
- Always use plenty of glue along all timber joint lines. Clean up all internal glue lines with a damp rag whilst the glue is wet.



FIG 26

BOX / FINGER JOINTS

Min timber thickness - 6mm

Max timber thickness - 14mm

Max timber width - 305mm

Cutter Specification – 5.4mm Dia x 16mm LOC TCT. (666267)

Parts needed -

- Fine pitch comb (C)
- 5.4mm Dia straight cutter
- 7.8mm guide bush
- Fine set gauge

NB: It is highly recommended to test cut on practice boards cut to the same dimensions.

All boards are cut vertically.

Ensure that the smaller orange side stops are fitted.



FIG 27

1. Attach the fine pitch comb with the fingers at the front of the jig. **FIG 27**

Level the comb by placing a 9-15mm thick, 150mm – 200mm wide x 300mm long flat board underneath the comb, locking the comb in place using the comb lock knobs. **FIG 28**



FIG 28



FIG 29

2. Remove the magnetic extraction nozzle then use the 4mm hex key to move the side stop to the left. Load in vertically the first board on the left of the jig, pushing up to the underside of the comb and centralising to the fingers. **FIG 29**

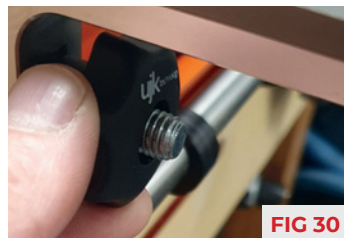


FIG 30

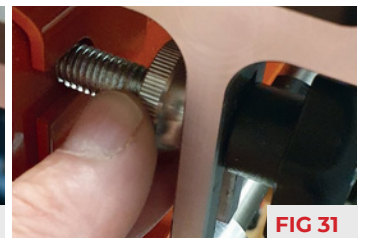


FIG 31

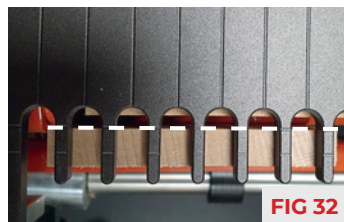


FIG 32



FIG 33

3. Undo the comb lock knobs. Use the comb adjuster knobs to ensure that the box finger line is in line with the far edge of the board and looks equal along the length. Check this at both ends of the comb. **FIGS 30 - 33**

4. Slide the side stop to the right to contact the side of the board and lock it in place. **FIG 34**



FIG 34



FIG 35

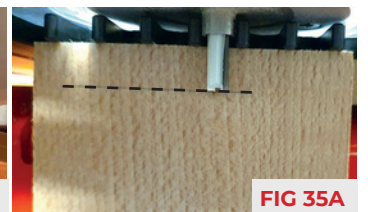


FIG 35A

5. Use the opposing board to mark a cutter depth set line on the material. Plunge the cutter down through the fingers in front of the material so that the tip of the cutter just meets the marked line. **FIGS 35 - 35A**

BOX / FINGER JOINTS CONTINUED



FIG 36

6. Slide or reattach the extraction nozzle and begin the cut, working from left to right. Ensure that the router always stays flat on the comb. **FIG 36**

7. Use the guidelines to help find the fingers. **FIG 37**



FIG 37



IMPORTANT:
Do not lift the router whilst it is running!

NB: If working with very hard wood or boards thicker than 8mm, a two-stage half depth cut is recommended. **FIG 38**



FIG 38



FIG 39

8. The opposing cut is done on the right-hand side of the jig and uses the fingers just cut to set up. Firstly, undo the side stop and slide it fully to the right. Next, push the pre-cut fingers fully up through the comb. Centralise using the smaller part of the fine set gauge provided, then clamp the board in place. **FIGS 39 - 40**

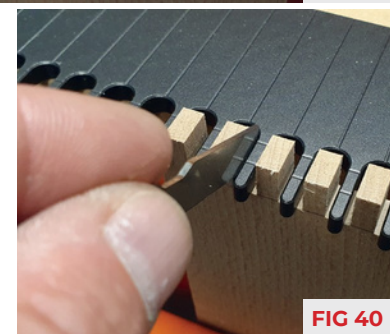


FIG 40

9. Slide the side stop to the left to contact the board and lock it in place. Remove the set-up board and replace it with the board to be cut. Slide it in against the side stop and up against the underside of fingers. **FIG 41**



FIG 41

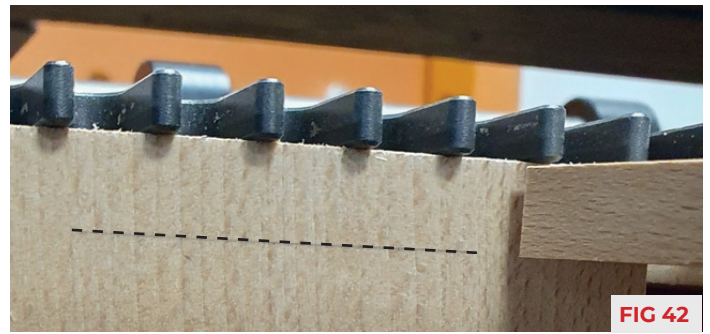


FIG 42

10. As before, use the opposing board to mark a cutter depth set line on the material. Plunge the cutter down through the fingers in front of the material so that the tip of the cutter just meets the marked line. **FIG 42**

NB: If using different thickness boards the cutter depth will need to be reset, if the board thickness is the same then the cutter depth remains the same as the previous cut board.



FIG 43

11. Cut from left to right at a slow steady pace and check for fit. **FIG 43**

BOX / FINGER JOINTS TROUBLESHOOTING & TIPS

• Box sides not in line?

The timber is not centralised or the timber is not cut equally. **FIG 44**



FIG 44

• Gaps one end of the joint?

Timber isn't square, the comb is not sat flat and level to the base, or the timber is not pushed up to the underside of the fingers. **FIG 45**



FIG 45



FIG 46

• Top of the cut fingers not coming all the way through the opposing board?

The cutter is not deep enough. **FIG 46**

• Splintering at the back of the cut?

Slow down the feed rate, add in sacrificial backing board, and ensure the cutter is sharp. **FIG 47**

Tips

- If working in hard wood, a half depth cut is advisable. **FIG 38**
- Always use plenty of glue along all timber joint lines. Clean up all internal glue lines with a damp rag whilst the glue is wet.



FIG 47



Please dispose of packaging for the product in a responsible manner. It is suitable for recycling. Help to protect the environment, take the packaging to the local recycling centre and place into the appropriate recycling bin.

UJK, Axminster Devon EX13 5PH

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