

THROUGH DOVETAILS



- Max timber width - 300mm
- Min timber thickness - 10mm
- Max timber thickness - 19mm (pin board)
25mm (tail board)

Parts needed -

- Template A (through / box)
- 10.39mm Straight cutter (pins)
- 13.55mm Dovetail cutter (dovetails)
- 5/8" (15.9mm) Guide bush (pins)
- 3/4" (19mm) Guide bush (dovetails)

All boards are cut vertically

Cut dovetails first - dovetail cutter, 3/4" guide bush used

1) Attach comb A with the straight fingers (tails) at the front of the jig, see fig 01 & level the comb by placing a 15-20mm thick x 150mm - 200mm wide x 200mm - 250mm long flat board underneath the comb locking the comb in place using the comb lock knobs, see fig 02.

Fig 01-02



2) Move the magnetic extraction then use the hex key provided to move the side stop to the left, see fig 03-04-05. Load in vertically the first board on the left of the jig pushing up to the underside of the comb & centralising to the fingers, see fig 06-07.

Fig 03-04-05

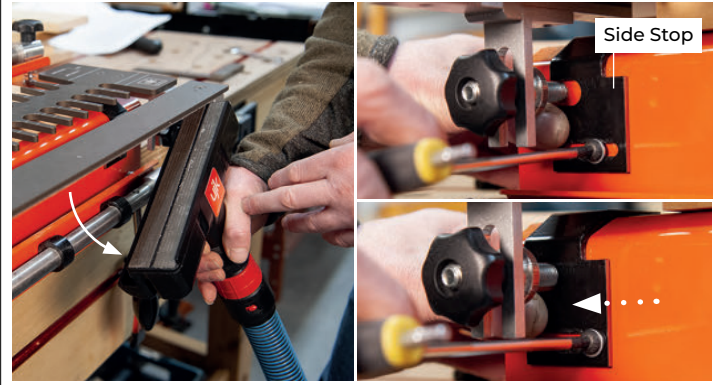
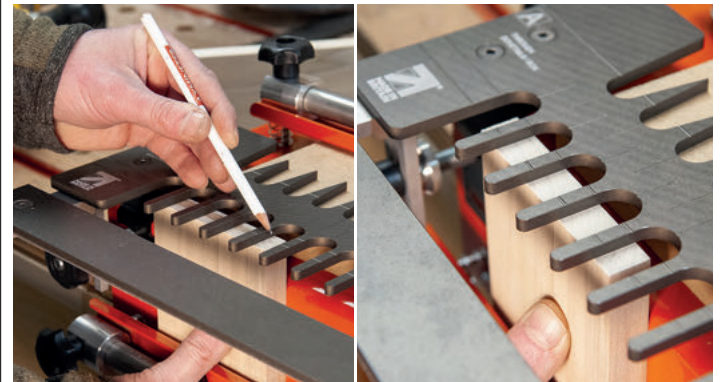
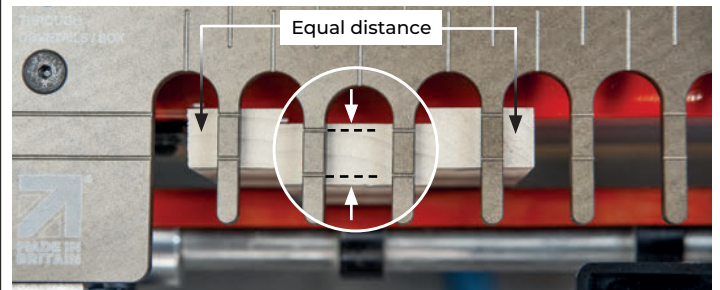


Fig 06-07



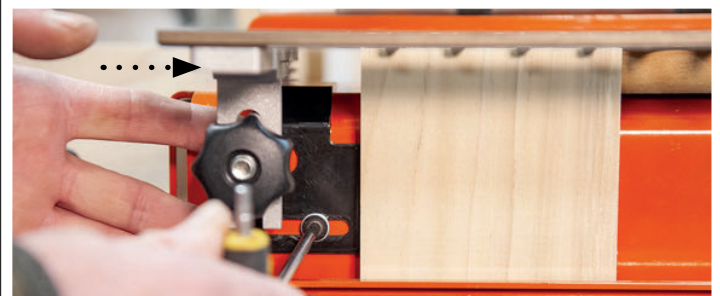
3) Ensure that the material markers on the comb are centralised to the top of the board & look equal along the length, see fig 08.

Fig 08



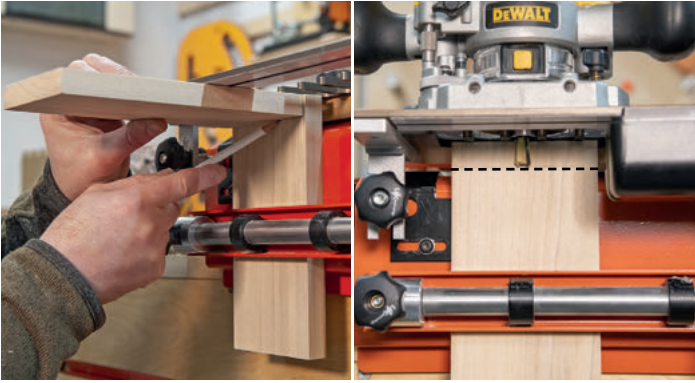
4) Slide the side stop towards the right to make contact with the side of the board, see fig 09 & lock in place.

Fig 09



5) Use the opposing board to mark a cutter depth set line on the material, see fig 10 then plunge the dovetail cutter down through the fingers in front of the board so that the tip of the cutter just meets the marked line, see fig 11.

Fig 10-11



6) Slide or reattach the extraction, see fig 12 on the right & begin the cut working from left to right ensuring that the router stays flat on the comb at all time, see fig 13. Use the guide lines to help find the fingers, see fig 14 **DO NOT LIFT THE ROUTER WHILST IT IS RUNNING!**

Fig 12-13-14



Cutting pins - 10.39mm straight cutter, 5/8" guide bush used

1) Undo the 4 countersunk hex screws & turn the comb around so that the V shape fingers are at the front of the jig (pins), see fig 15-16-17-18. Load in vertically the pin board against the left hand side stop & up against the underside of the comb, see fig 19-20. Undo the comb lock knobs & use the comb adjuster knob to align the finger line to the edge of the board, see fig 21-22.

Fig 15-16-17-18

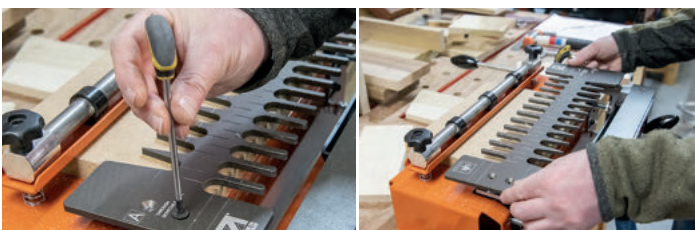


Fig 19-20

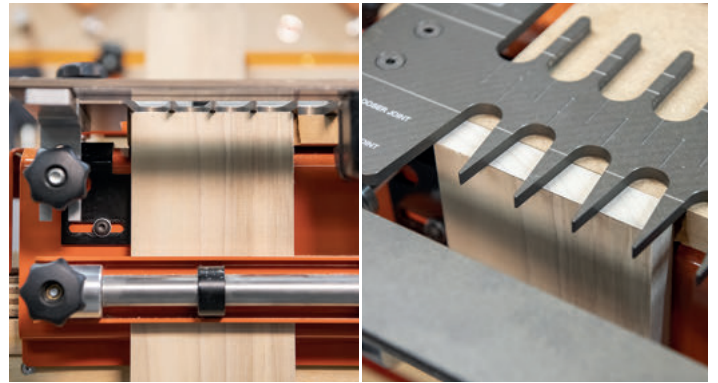
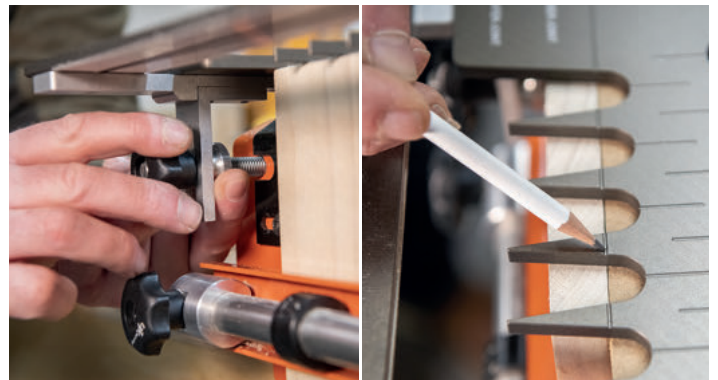
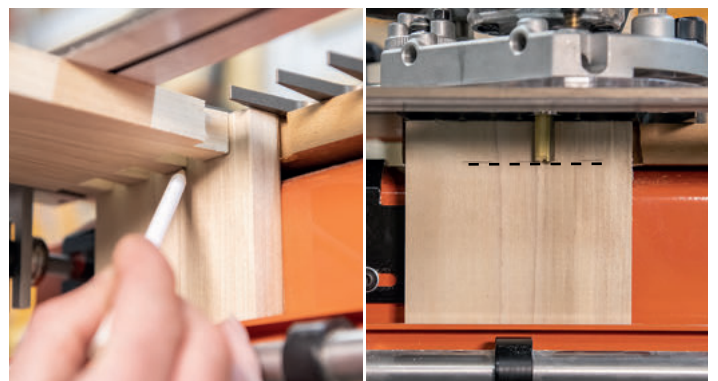


Fig 21-22



2) Use the opposing board to mark a cutter depth set line on the material, see fig 23 then plunge the straight cutter down through the fingers in front of the board so that the tip of the cutter just meets the marked line, see fig 24.

Fig 23-24



3) Reposition the magnetic extraction, see fig 25 on the left & begin the cut working from left to right, see fig 26-27. **DO NOT LIFT THE ROUTER WHILST IT IS RUNNING!**

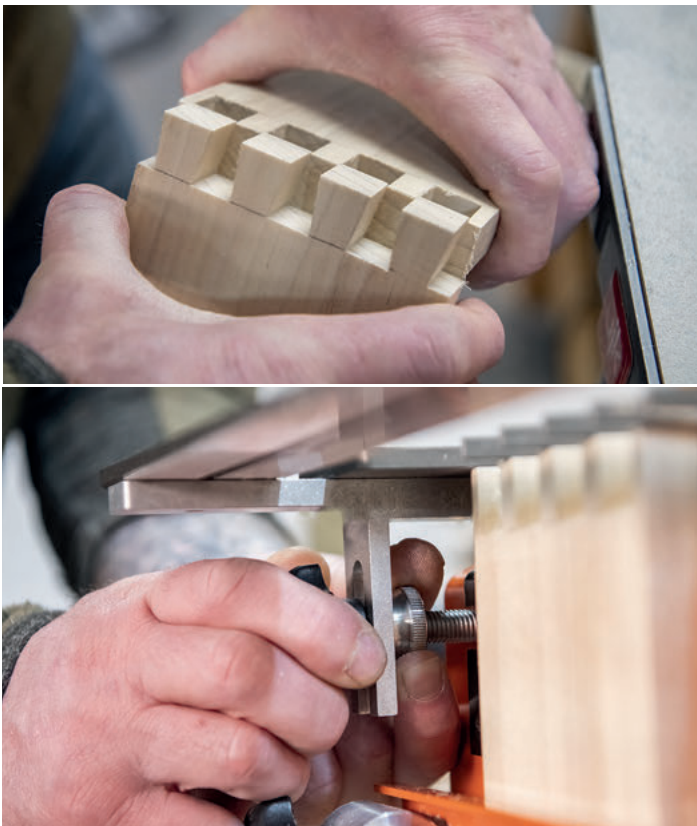
THROUGH DOVETAILS

Fig 25-26-27



4) Remove the now cut pin board & try for fit, see fig 28. If the pins are too tight & won't slide into the dovetails they can be recut to ensure a good fit. Simply load the board back into the jig in exactly the same position, undo the comb lock knobs & move the comb backwards by turning the adjuster knobs clockwise, see fig 29. Try half a turn to start with. Recut taking a very light skim & try for fit again - repeat if still too tight, see fig 30.

Fig 28-29-30



Trouble shooting -

- **Joint too tight** - move comb backwards & recut
- **Joint too loose** - move fingers forward & recut new board
- **Gaps at one end of the joint** - timber not square, comb not sat flat on timber, see fig 31
- **Excessive break out at the back of the cut** - add a sacrificial breakout board behind the cut, see fig 32-33
- **Box sides not in line** - timber not centralised or timber not cut equally, see fig 34

Fig 31-32-33-34





- Max timber width - 300mm
- Min timber thickness - 6mm
- Max timber thickness - 25mm

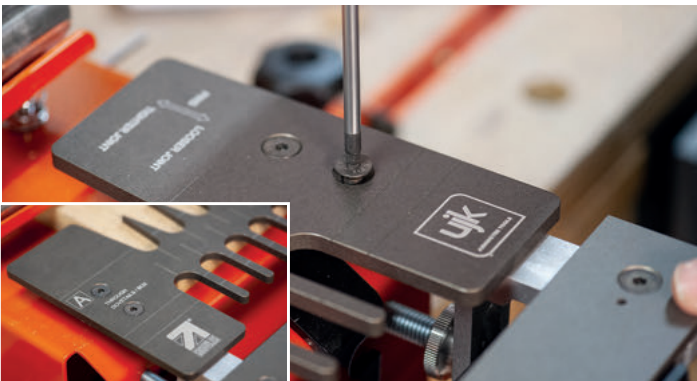
Parts needed -

- Template A (through / box)
- 12.5mm Straight cutter
- 3/4" (19mm) Guide bush

All boards are cut vertically

1) Attach comb A with the straight fingers at the front of the jig, see fig 01 & level the comb by placing a 15-20mm thick, 150mm - 200mm x 200mm - 250mm flat board underneath the comb locking the comb in place using the comb lock knobs, see fig 02.

Fig 01-02



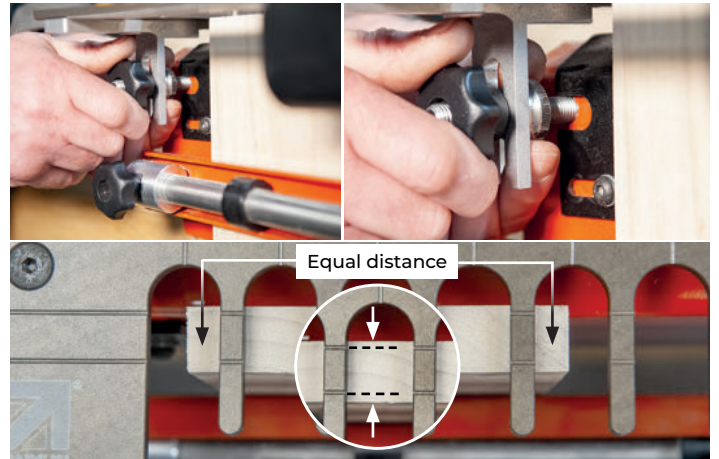
2) Remove the magnetic extraction then use the hex key provided to move the side stop to the left. Load in vertically the first board on the left of the jig pushing up to the underside of the comb & centralised to the fingers, see fig 03-04-05-06.

Fig 03-04-05-06



3) Undo the comb lock knobs & use the comb adjuster knobs to ensure that the two finger lines on the comb are centralized to the top of the board & look equal along the length, see fig 07-08-09.

Fig 07-08-09



4) Slide the side stop to the right to make contact with the side of the material, see fig 10 & lock in place.

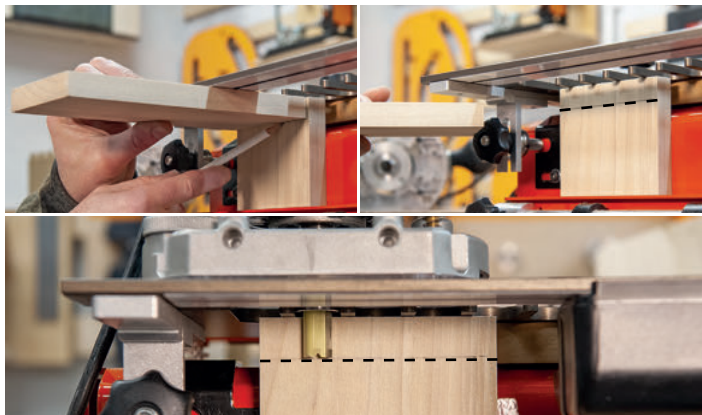
Fig 10



5) Use the opposing board to mark a cutter depth set line on the material then plunge the cutter down through the fingers in front of the material so that the tip of the cutter just meets the marked line, see fig 11-12-13.

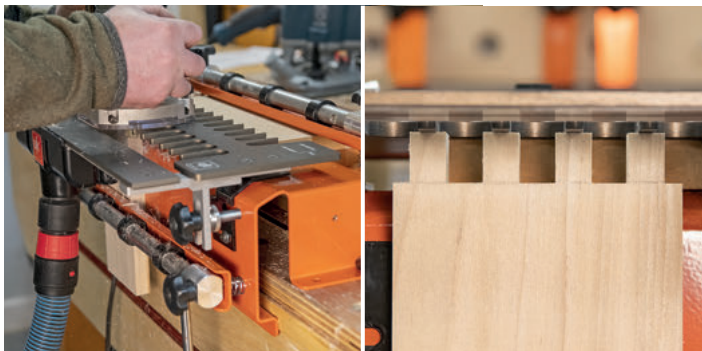
BOX / FINGER JOINTS

Fig 11-12-13



6) Slide or reattach the extraction & begin the cut working from left to right ensuring that the router stays flat on the comb at all times, see fig 14. Use the guide comb lines to help find the fingers, see fig 15. **DO NOT LIFT THE ROUTER WHILST IT IS RUNNING!**

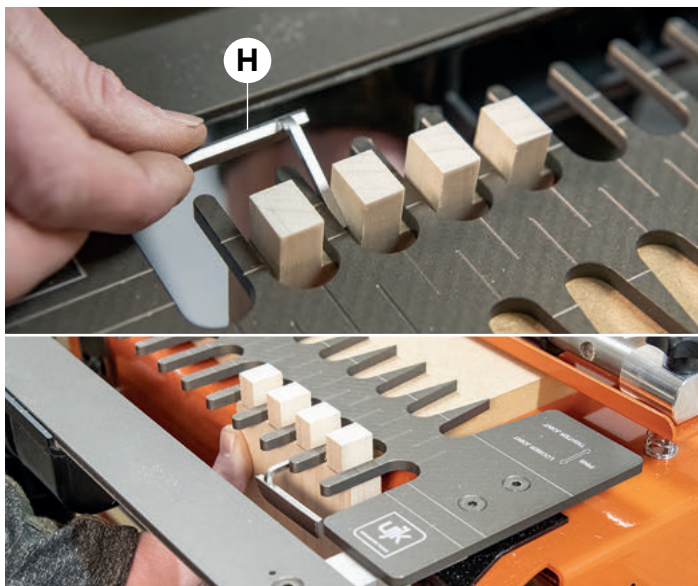
Fig 14-15



NB If working in very hard wood a half depth cut may be required.

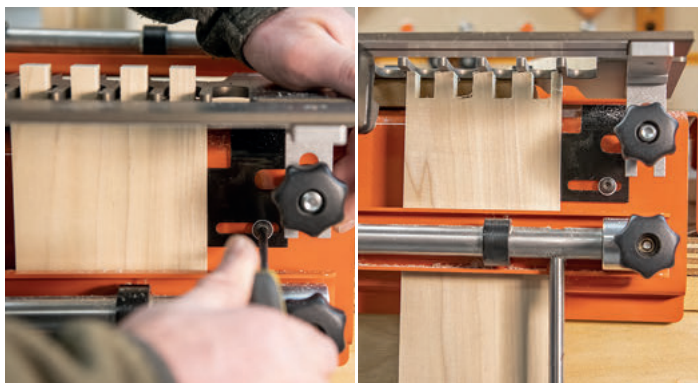
7) The opposing cut is done on the right hand side of the jig & uses the fingers just cut to set up. Firstly undo the side stop & slide it to the right. Then push the precut fingers fully up through the comb & centralise using the smaller part of the set gauge (H) provided and lock in place, see fig 16-17-18-19-20.

Fig 16-17-18-19-20



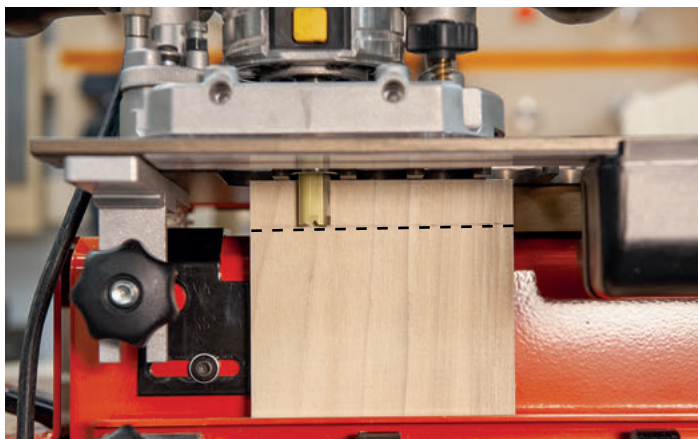
8) Slide side stop to the left to make contact with the board & lock in place. Remove the set up board & replace with the board to be cut, sliding it in against the side stop & up against the underside of the fingers, see fig 21-22.

Fig 21-22



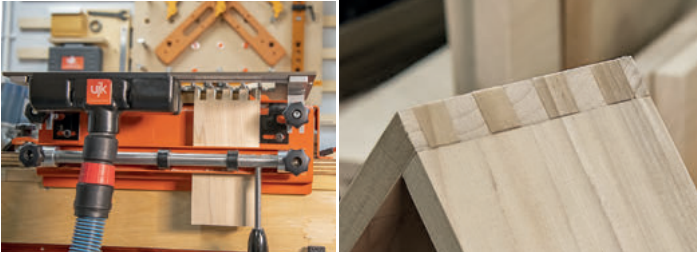
9) As before, use the opposing board to mark a cutter depth set line on the material then plunge the cutter down through the fingers in front of the material so that the tip of the cutter just meets the marked line, see fig 23. **NB** If using different thickness boards the cutter depth will need to be reset, if the board thickness is the same then the cutter depth remains the same as the previous cut board.

Fig 23



10) Cut from left to right at a slow steady pace & check for fit, see fig 24

Fig 24



Trouble shooting -

- **Box sides not in line** - timber not centralised or timber not cut equally, see fig 25.
- **Gaps one end of the joint** - timber not cut square, comb not flat & level to the base, timber not pushed up to the underside of the fingers, see fig 26.
- **Top of the cut fingers not coming all the way through the opposing board** - cutter not deep enough, see fig 27.
- **Splintering at the back of the cut** - slow down the cut rate, add in sacrificial backing board, see fig 28.

Fig 25



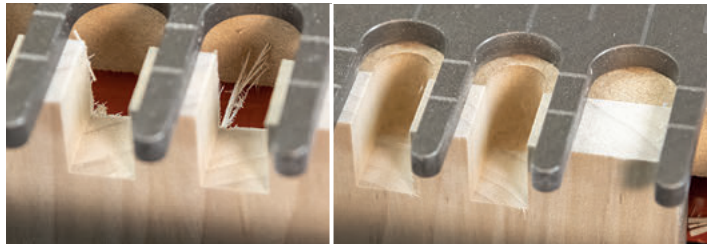
Fig 26



Fig 27



Fig 28



CORNER DOVETAIL REBATES



Max timber width - 290mm
Min timber thickness - 12mm
Max timber thickness - 25mm

Parts needed -

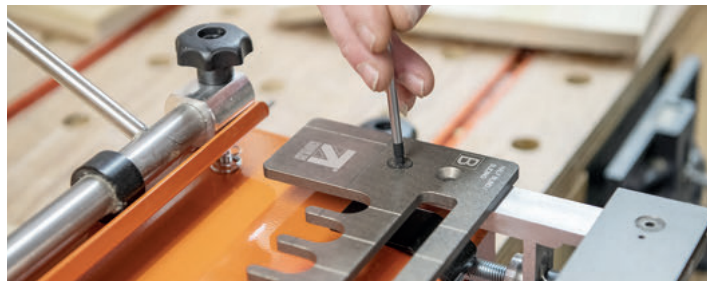
- Template B (sliding / half blind)
- 13.55mm Dovetail cutter
- 3/4" (19mm) or 5/8" (15.9mm) Guide bush

For good corner edge alignment using 12mm & 15mm thick boards both parts of this joint can be cut at the same time, (single pass). It is recommended that other board thicknesses are cut in 2 passes.

Single pass 12mm board thickness, 3/4" guide bush -

1) Attach comb B with the long groove slot at the front of the jig, see fig 01, move both side stops to a central position & lock in place, see fig 02.

Fig 01-02



2) Load in the horizontal board. Against the left hand side stop ensuring that the comb is sat flat on the board, a support board with equal thickness to the cut board may be required to support the comb when using narrow boards, see fig 03-04.

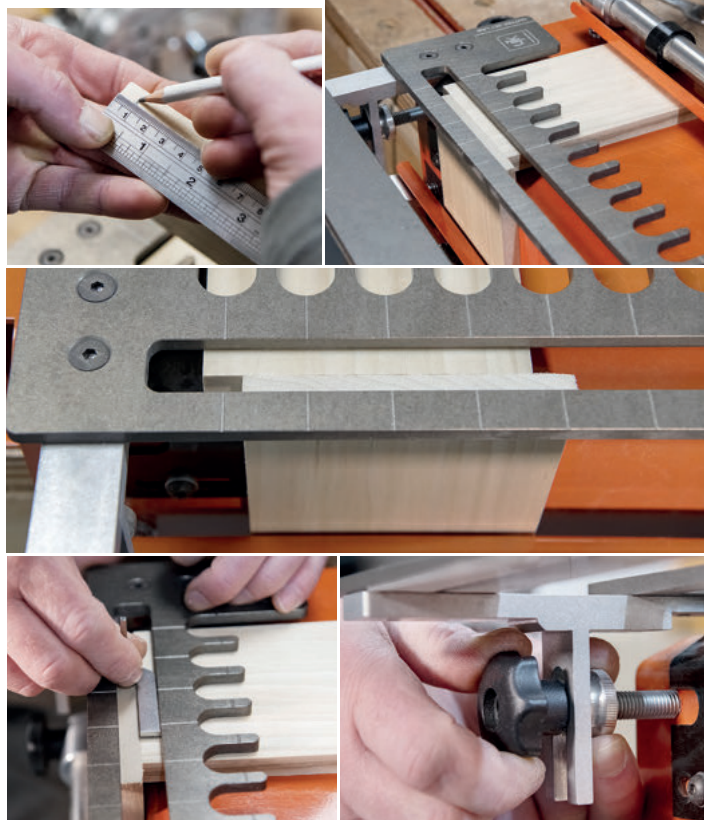
CORNER DOVETAIL REBATES

Fig 03-04



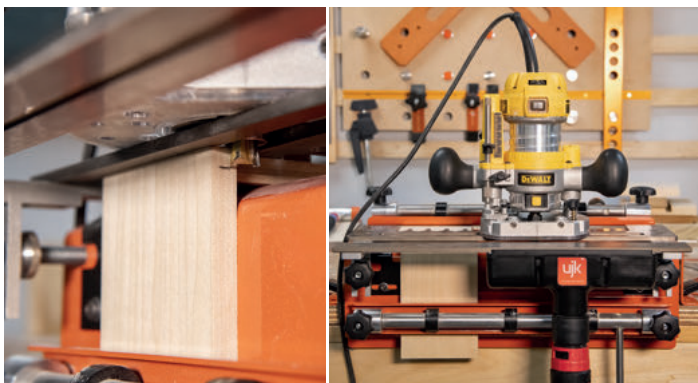
3) Mark an 8mm line from the top edge on the side of the vertical board, see fig 05 then load in the vertical up against the left hand side stop and up against the underside of the comb to meet the edge of the horizontal board, see fig 06-07. Use the wider part of the magnetic set gauge to ensure that the joint line is central to the comb slot, see fig 08. Use the comb adjuster knobs to align & adjust, see fig 08.

Fig 05-06-07-08



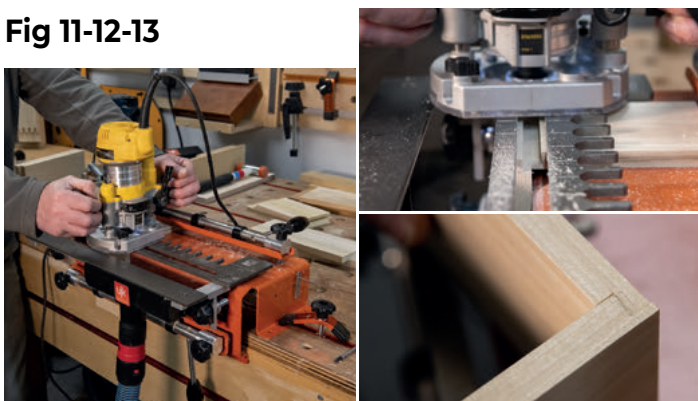
4) Plunge the cutter down through the comb slot so that the tip of the cutter just meets the marked line, see fig 09. Attach the magnetic extraction at the right hand end of the support bar, see fig 10.

Fig 09-10



5) Start the cut at the right hand side of the jig moving the router from right to left in a slow, steady, continuous motion, see fig 11 **DO NOT LIFT THE ROUTER AT ANY TIME DURING A CUT**, see fig 12-13.

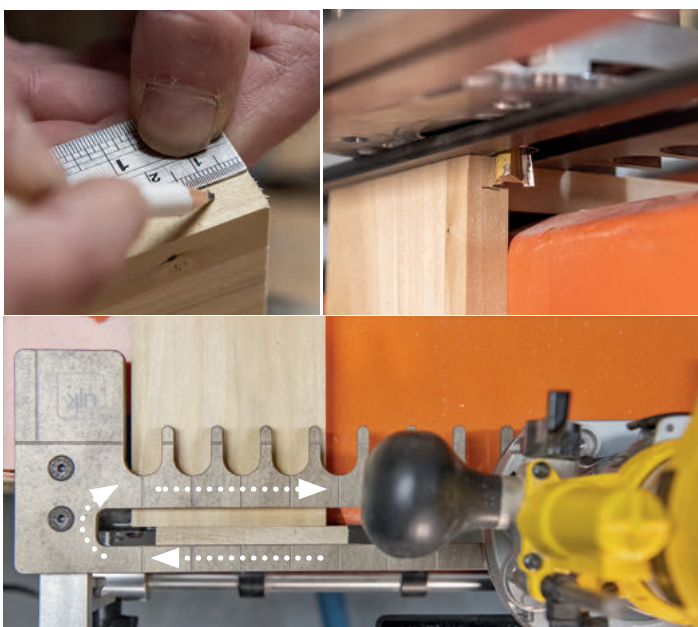
Fig 11-12-13



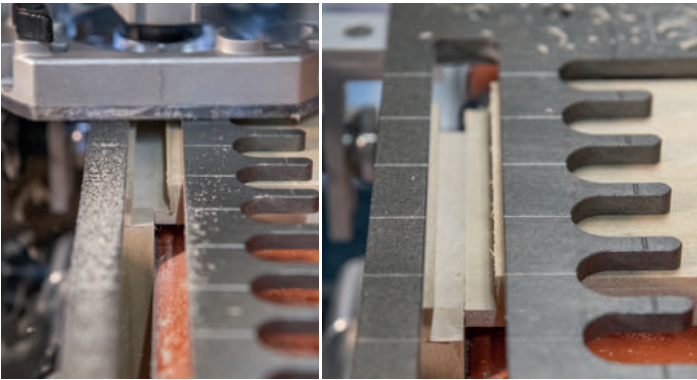
Single pass 15mm board thickness, 5/8" guide bush -

The process to achieve a good corner edge alignment on a 15mm board is as previously described in steps 1 to 5 apart from the use of the 5/8"(15.9mm) guide bush & the direction of travel with the router, 14-15-16-17-18.

Fig 14-15-16-17-18

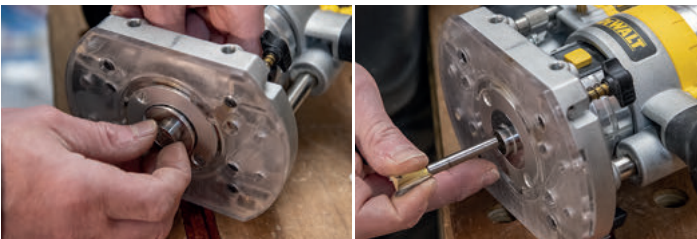


Direction of travel - **clockwise**



NB - The cutter will need to be loaded in through the base of the router with the $\frac{5}{8}$ " guide bush already in position, 19-20. **DO NOT RELEASE THE PLUNGE FULLY WHEN CUTTER IS FITTED**, the cutter will be damaged as it passes through the inner guide bush.

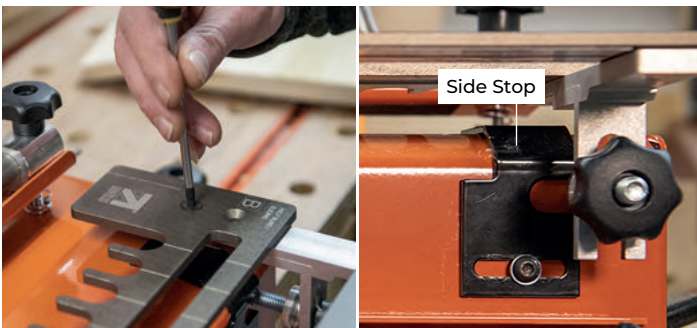
Fig 19-20



A corner dovetail rebate joint can be achieved in any board thickness above 12mm in 2 passes using the $\frac{3}{4}$ " guide bush & dovetail cutter -

1) Attach comb B with the long groove slot at the front of the jig, see fig 21 move both side stops to a central position & lock in place, see fig 22.

Fig21-22



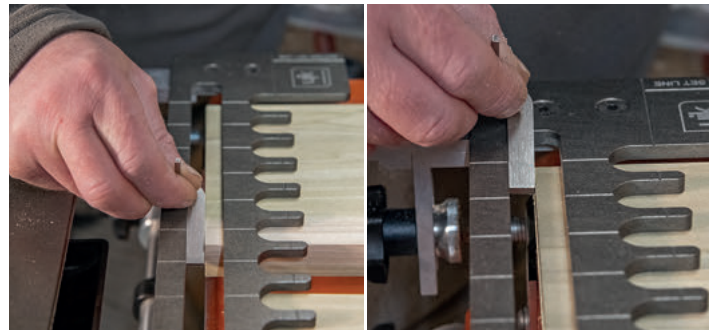
2) Mark a line $\frac{2}{3}$ thickness of the board, see fig 23 & load in the horizontal board. Support board against the left hand side stop ensuring that the comb is sat flat on the board, a support board with equal thickness to the cut board may be required to support the comb when using narrow boards, see fig 24.

Fig 23-24



3) Use the wider part of the set gauge to position board edge to the centre of the comb slot, see fig 25-26.

Fig 25-26



4) Plunge the cutter down through the comb slot to set the cutter depth to the marked pencil line, see fig 27. Attach the magnetic extraction at the right hand end of the support bar, see fig 28 or on a larger width board attach the right hand side stop to the right hand end of the jig to support the magnetic extraction. Alternatively the router's in built extraction nozzle can be used, see fig 29-30.

Fig 27-28

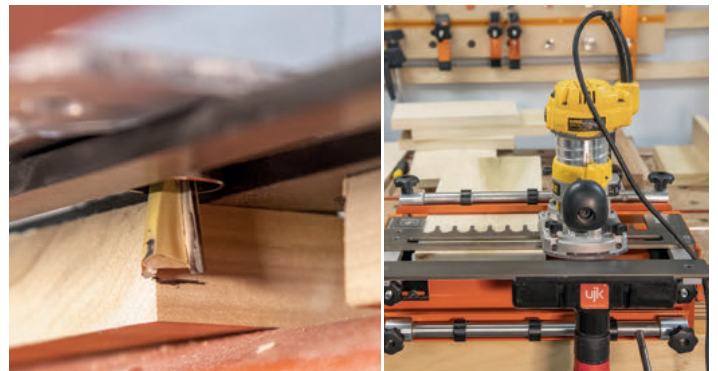


Fig 29-30



CORNER DOVETAIL REBATES

Fig 31-32

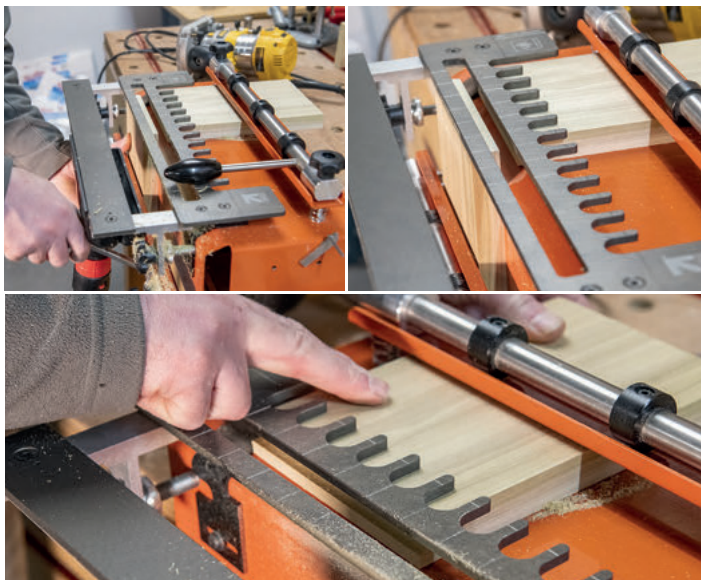


5) Start the cut at the right hand side of the jig moving the router from right to left in a slow steady continuous motion **DO NOT LIFT THE ROUTER AT ANY TIME DURING A CUT**, see fig 31-32.

Opposing board - Vertical cut

1) With the comb in the same position load in & clamp the tenon board into the jig in the vertical position ensuring that the board is against the side stop on the left & the board is up against the underside of the comb, see fig 33-34. **NB** To support the comb leave the horizontal board under the comb but slide it back slightly out of the cutting area, see fig 35.

Fig 33-34-35



2) Use the wider part of the set gauge to position board edge to the centre of the comb slot, see fig 36. **NB** The cutter depth should remain the same as the previous horizontal board cut.

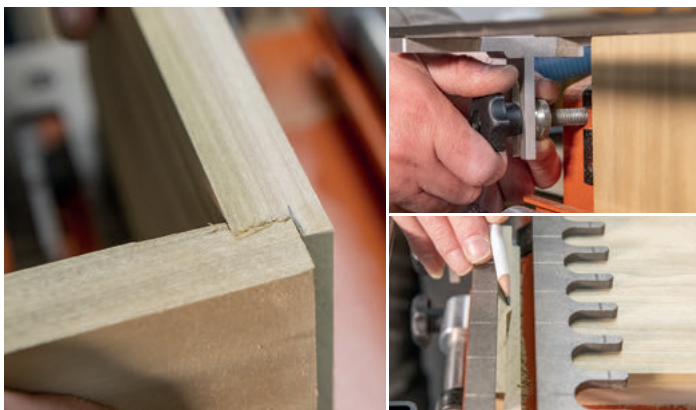
3) Start the cut at the right hand side of the jig moving the router from right to left in a slow steady continuous motion **DO NOT LIFT THE ROUTER AT ANY TIME DURING A CUT**, see fig 37.

Fig 36-37



4) Try the fit, see fig 38. If more material needs to be removed to achieve perfect corner edge alignment then simply use the comb adjuster knobs to move the comb towards you & recut the board - **NB** Ensure that both comb adjuster knobs are moved the same amount to ensure that the comb stays parallel to the board edge, see 39-40.

Fig 38-39-40



Trouble shooting

Gap at one end of the joint - board not cut square, not pushed up to the underside of the fingers, see fig 41.

Gap along the length of the joint on the inside - cutter depth altered between cuts, board not pushed up to the underside of the fingers, see fig 42.

Fig 41-42

