Clarke®

Universal Dowelling Jig Set

Model No: CDJ-2

Part No: 6462124

USER INSTRUCTIONS

GC09/12

INTRODUCTION

Thank you for purchasing this CLARKE Dowel Jig Set.

Please read and follow the instructions carefully. In doing so you will ensure the safety of yourself and others around you, and you can look forward to the product giving you long & satisfactory service.

Please keep these instructions in a safe place for future reference

GUARANTEE

This product is guaranteed against faulty manufacture for a period of 12 months from the date of purchase. Please keep your receipt which will be required as proof of purchase.

This guarantee is invalid if the product is found to have been abused or tampered with in any way, or not used for its intended purpose. Faulty goods should be returned to their place of purchase. No product can be returned to us without prior permission.

This guarantee does not effect your statutory rights.

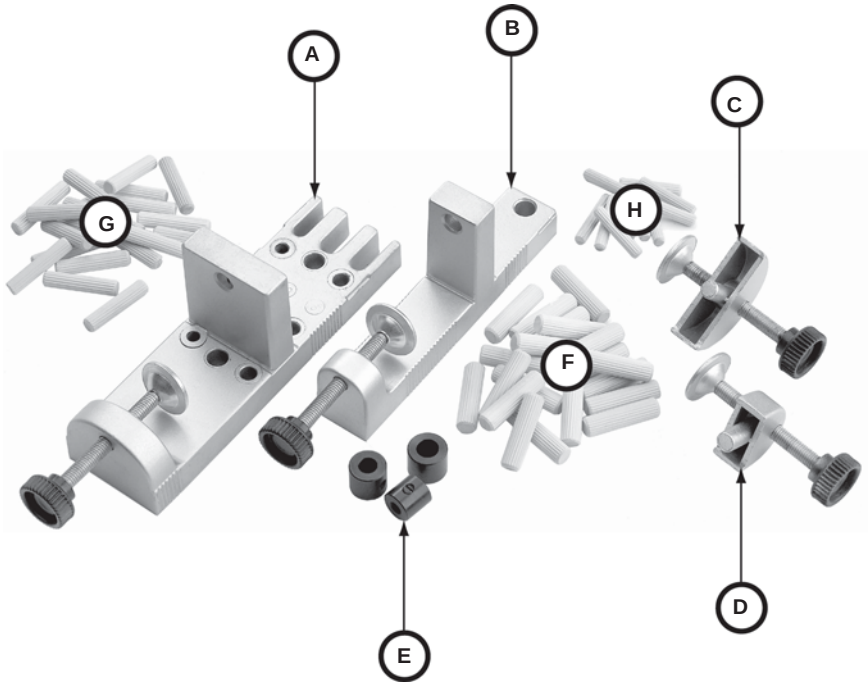
INVENTORY

Your dowelling jig set should include the following items:

A. Dowel Jig
B. Clamp Block
C. Large Clamp
D. Small Clamp
E. Depth Stop Collars (6, 8 & 10mm)
F. 10mm Dowels
G. 8mm Dowels
H. 6mm Dowels

Other equipment required but not supplied:

Drill with bits (brad point), clamps (at least two) and wood glue.



SAFETY PRECAUTIONS

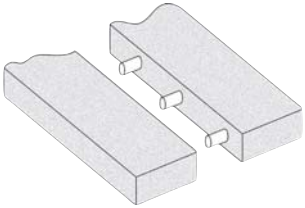
1. **ALWAYS** learn the equipment's applications, limitations and the specific potential hazards peculiar to it. Read and become familiar with the entire operating manual.
2. **ALWAYS** use a face or dust mask if operation is particularly dusty.
3. **ALWAYS** check for damage. Before using tools and equipment, any damaged part, should be checked to ensure that it will properly perform its intended function. Check for alignment of parts, breakage of parts, mountings and any other condition that may affect the tools operation. Any damage should be properly repaired or the part replaced. If in doubt, **DO NOT** use the tool. Consult your local dealer.
4. **ALWAYS** keep work area clean. Cluttered areas and benches invite accidents.
5. **ALWAYS** ensure that adequate lighting is available. A minimum intensity of 300 lux should be provided. Ensure that lighting is placed so that you will not be working in your own shadow.
6. **ALWAYS** keep children away. All visitors should be kept a safe distance from the work area, especially whilst operating the equipment.
7. **ALWAYS** maintain tools in top condition. Keep tools/machines clean for the best and safest performance. Follow maintenance instructions.
8. **ALWAYS** concentrate on the job in hand, no matter how trivial it may seem. Be aware that accidents are caused by carelessness due to familiarity.
9. **ALWAYS** keep your proper footing and balance at all times - don't overreach. For best footing, wear rubber soled footwear. Keep floor clear of oil, scrap wood, etc

OPERATION

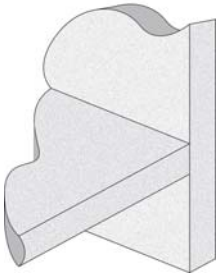
Please note, these instructions are guidelines only and not a definitive tutorial for the construction of all joints possible using the dowel jig. However with a little imagination and experience this jig will be found very versatile.

The three most common uses are:

1. Edge to edge joints.



2. Edge to face joints.



3. Edge to corner joints

METHOD 1 (EDGE TO EDGE)

NOTE: figures in brackets refer to contents on page 3.

1. Lay the first board on the work bench (Fig 1), secure in position with dowel jig (`A´) and clamp block (`B´). Ensure the board hangs over the edge of the work bench sufficiently so that the board edge is tight against the jig and clamp block.

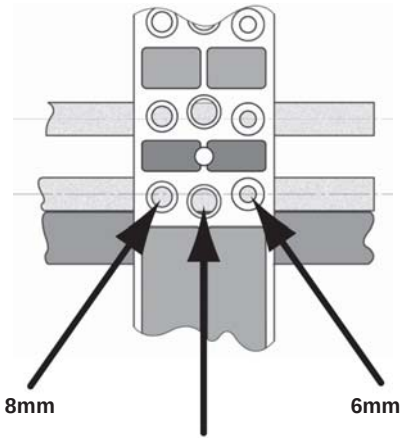
FIG 1

FIG 2

Place second board onto jig (Fig. 2), ensure as before, the board edge is tight against the jig and clamp block, also line up the ends and secure with upper clamps.

DO NOT over-tighten clamps.

FIG 3



The next step is to choose the dowel size.

The size of dowels to be used is mainly dependant on the board thickness. Determine which of the three holes lines up closest to the centre of the board (example Fig. 3 shows a 6mm dowel is required). *NOTE:* diagram is for illustrative purposes only.

When the dowel size is decided (in this example 8mm), slide the 8mm depth stop onto the equivalent drill.

The position of the stop is determined by the type of joint and the length of the dowel used. in this example, edge to edge, the dowels will be required to be inserted equally into both pieces to be joined. Measure the length of the dowel (average = 37mm), divide by 2, = 18.5.

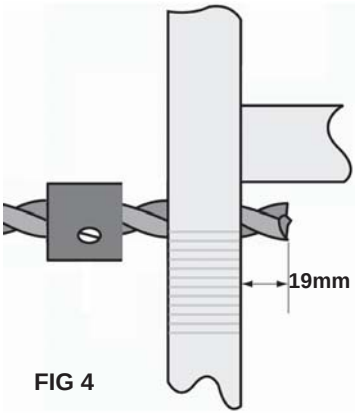


FIG 4

Insert the drill into the 8mm guide so that 19mm protrudes through the jig. (Fig. 4), this ensures the dowels will not bottom and prevent the boards from meeting when joining together.

Slide the depth stop up to the jig body without moving the drill, lock in position, check the drill still protrudes 19mm, if not re-adjust.

Fit the drill assy into the drill chuck and tighten securely. Select a suitable speed for the material being drilled.

Switch ON, and carefully offer the drill into the 8mm guide bush, proceeding to drill the dowel hole.

To prevent the drill from binding in the hole and enlarging the diameter, thus making a loose fitting dowel, repeatedly withdraw the drill sufficiently to clear away the swarf.

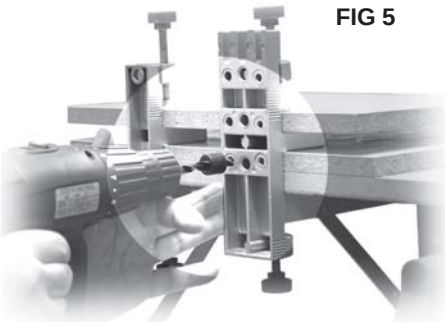


FIG 5

Repeat the above procedure for the other board through the corresponding guide bush.

Further holes will need to be drilled along the full length of boards to be fitted, the distance between hole centres will need to be calculated and marked off on one board only.

A simple method of spacing the holes can be carried out using an off-cut of wood or similar as a spacer. This can be carried out as follows.

1. Loosen the upper and lower clamps on the jig, slide the jig along the boards.
2. Push a dowel into one of the drilled holes.
3. Place the spacer against the dowel and slide the jig back against the other side of the spacer.
4. Secure the jig with the upper and lower clamps. Remove the spacer.
5. Drill both holes as before.
6. Repeat steps 1 - 5 until all holes are drilled.

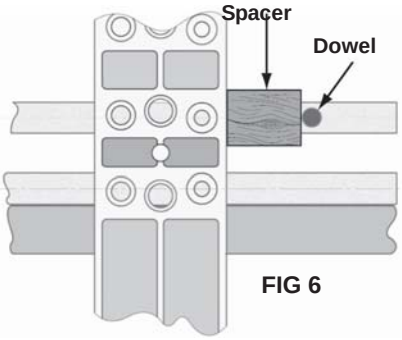


FIG 6

Alternatively, once the hole positions have been marked, loosen the top and bottom clamps on the jig, do not loosen the clamps on the clamp block.

Slide the jig along to the next position, secure in place with the upper and lower clamps.

Proceed to drill both holes as before.

Continue until all holes are drilled.

IMPORTANT When moving the jig position, at all times, one set of clamps must be holding the boards together to prevent movement and misalignment of the dowels.

METHOD 2 (EDGE TO CORNER)

The procedure for this joint is very similar to the edge to edge joint.

The first board is clamped to the workbench in exactly the same way (**Fig. 1**).

The second board is stood on its edge as in Fig 7 with the upper clamps from behind, see Fig 8.

FIG 7

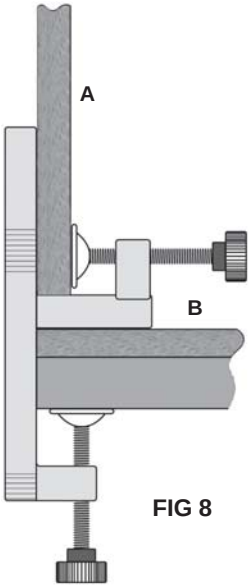


FIG 8

Two hole depths are required when drilling dowel holes in edge to corner joints. The depth stop positions are determined by the board thickness as follows:

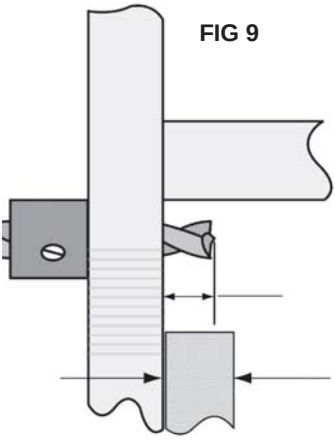


FIG 9

Board thickness (15mm in this example)

<u>The vertical board (**Fig. 8 'A'**)</u>

1. Measure the board thickness (15mm), calculate two thirds = 10mm, this is the depth of hole to be drilled in the board surface.
2. Slide the depth stop onto the relevant drill bit and adjust as before (**Fig. 4**), this time only 10mm protrudes through the jig.

<u>The horizontal board (**Fig. 8 'B'**)</u>

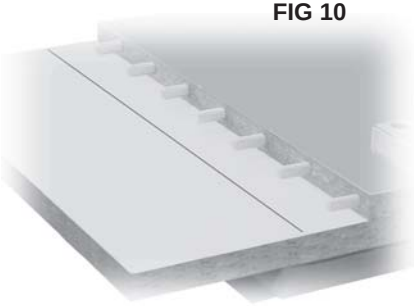
Based on the dowels being 37mm in length, the holes need to be 27mm + 1mm deep to ensure the dowels do not bottom, thus preventing the boards meeting properly.

Adjust the depth stop so that the drill protrudes 28mm through the jig.

1. Drill all holes in the horizontal board, withdrawing it regularly to clear any swarf.
2. Re-adjust the depth stop to 10mm and drill all holes in the vertical board.

METHOD 3 (EDGE TO SURFACE)

FIG 10



The procedure for this joint is very similar to the edge to corner joint.

The first board is clamped to the workbench in exactly the same way (**Fig. 1**). The drilling depths are calculated as above.

1. Adjust the depth stop to 28mm, drill all holes in horizontal board.
2. Re-adjust the depth stop to 10mm, put safely to one side.
3. Mark a centre line on the second board where the boards are to be joined.
4. Lay the first board on top of the second board (**Fig 10**) and loosely clamp in position.
5. Place jig on one end of the second board (**Fig 11**), adjust the position of the first board until the centre line can be viewed in the dead centre of the relevant guide bush.

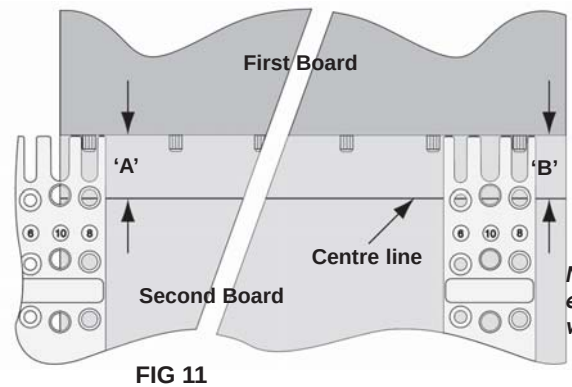
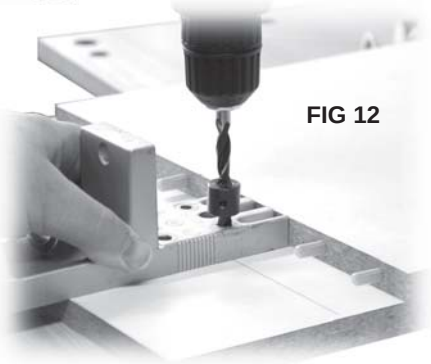


FIG 11

6. Move the jig to other end and line up as above, keep repeating steps 5 and 6 until **'A'** equals **'B'.** Carefully secure in position with 'G' clamps or similar, recheck 'A' and 'B' are still equal, if not, re-adjust before starting.

NOTE: keep the jig sqaure to the edge of the first board at all times when using in this mode.

FIG 12



7. Check drill is still set to 10mm (step 2). Locate the jig on protruding dowels using the corresponding slot to the guidebush being used for drilling (8mm) see Fig 12. Drill all holes in second board ensuring the jig is held square and firmly against the edge of the first board.

NOTES

NOTES

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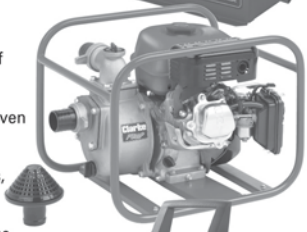

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