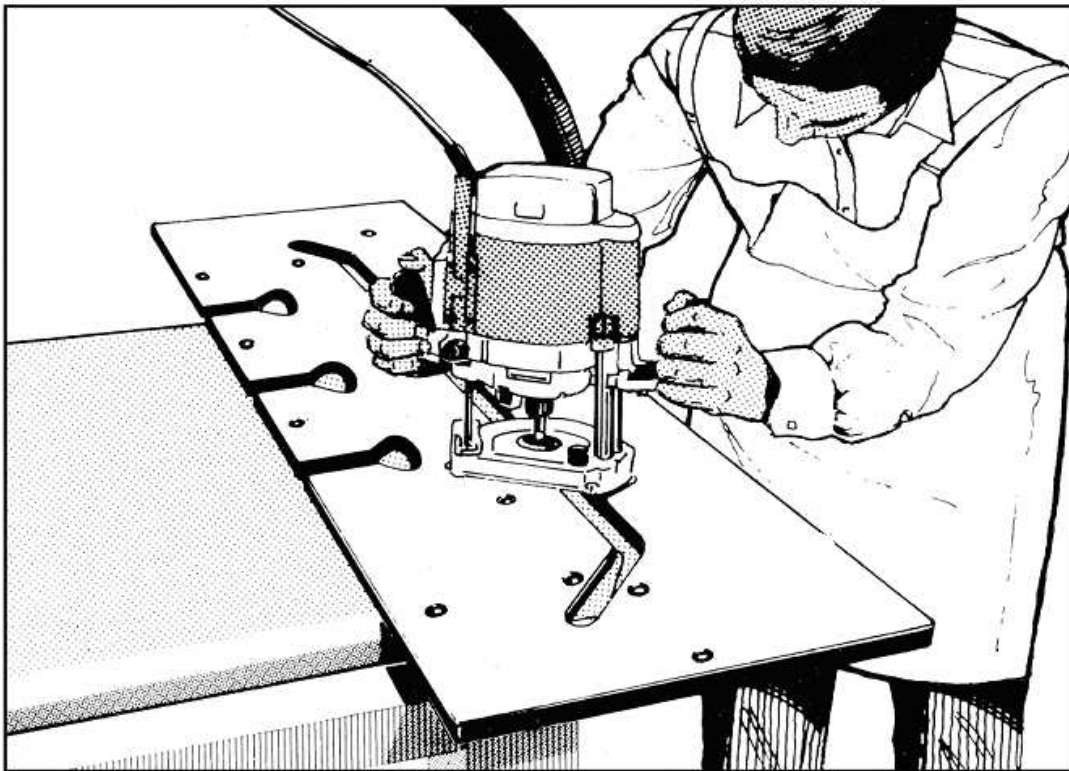




# HOWDENS JOINERY CO.



## CONTRACT JIG



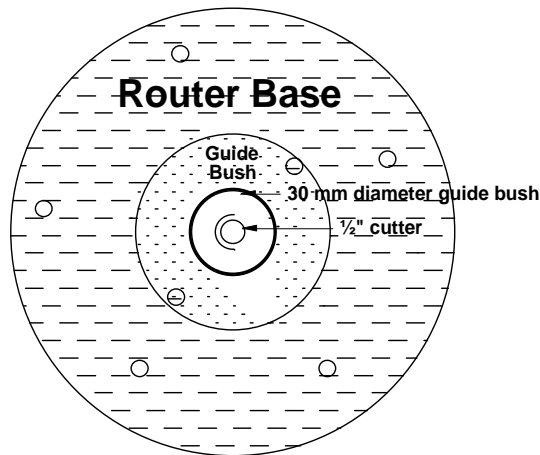
## Section 1.

1.01 Jigs are used in quality installation of kitchen, bedroom and bathroom furniture. This jig is manufactured from a composite material to the highest tolerance on CNC machinery to ensure a perfect finish. This material will withstand water, solvents, adhesives and cleaning agents often used in the installation of kitchens.

Before starting please take some time to read through these instructions carefully. The jig has been designed to be as easy as possible to use, however we recommend that, if you are inexperienced, you practice on off-cuts prior to the first installation. Please observe all relevant safety requirements for the use of routers.

The jig can be used to fit 90° and 45° corners for worktops of widths 500, 600, 616 and 650 mm. By using shims other worktop widths can be accommodated.

This jig will work with most hand routers including Dewalt, Bosch and Makita. A **30 mm guide bush** and a **1/2" (12.7mm) tungsten tipped cutter** are required. *No other combination will work satisfactorily.*



### SAFETY FIRST

1. Make sure all cables are clear of the router.
2. Make sure the work piece is correctly supported.
3. Always use protective goggles when using the router.
4. A dust mask should be worn when performing cuts.
5. Do not switch router on with blade touching the work.
6. Never remove the router when it is switched on and moving.
7. Make sure there are no obstructions to the path of the router.
8. READ INSTRUCTIONS CAREFULLY BEFORE STARTING THE WORK.

## 1.02 CONVENTIONS and IMPORTANT POINTS

It is important that you work the router from left to right.

Working from right to left is *with* the cutter's direction. This might cause lack of control resulting in damage to the jig or even injury. Don't plunge more than 10 mm at a time or use blunt tools

Ensure the guide bush is firmly attached to the router base plate.

Make sure the pegs are well seated and are not proud of the surface of the jig.

When working with the centre slot, *always* use the side *nearest* to you *first* for the waste removal, followed by the side *furthest* from you for the finished edge.

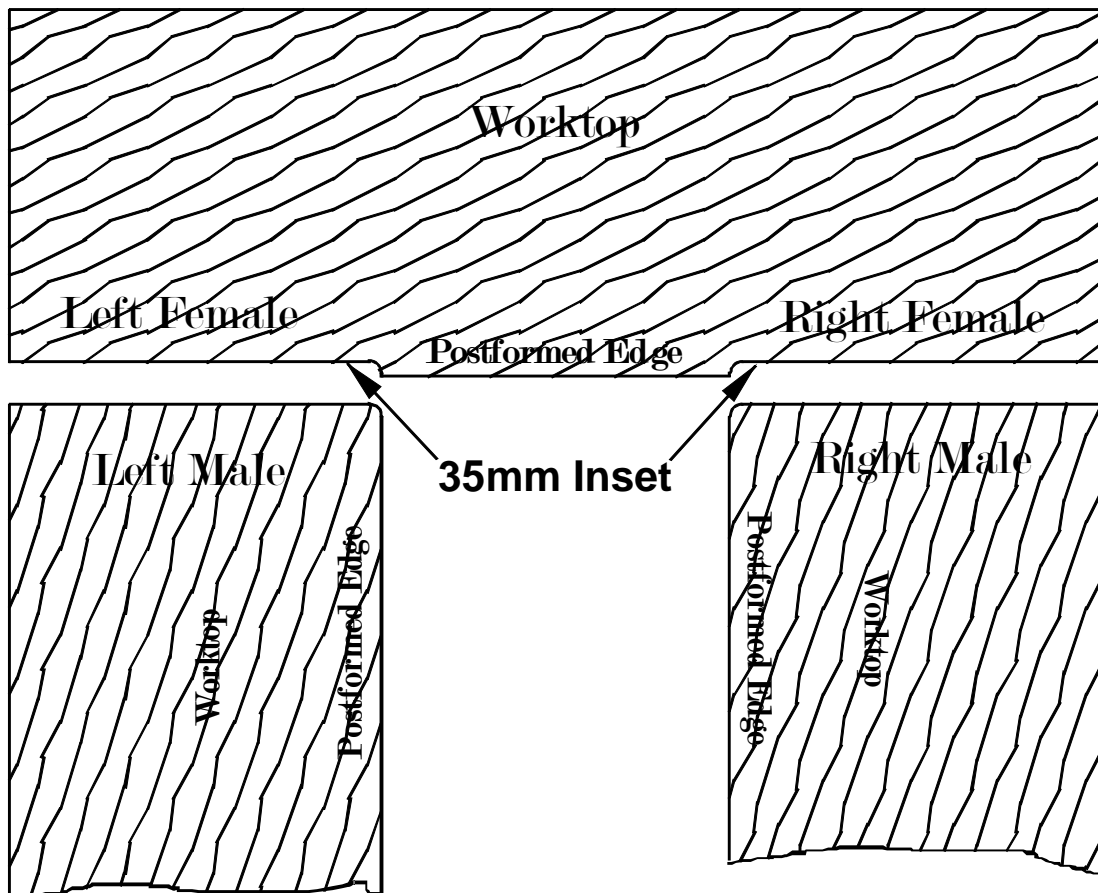
When clamping the jig in position check the pegs are still in contact with the worktop. Certain types of clamp, if over tightened, can cause the jig to creep out of position.

Ensure the router cutter remains perpendicular when performing all cuts; this is particularly important when performing cuts with the worktop face down.

When making some male cuts you may find it more convenient to remove larger pieces of waste with a jigsaw prior to making the router cuts.

### SECTION 2.0 90° CORNER

The drawing below shows a typical kitchen lay-out with the terms used in these instructions superimposed.



## 2.01 Female Joints

Fig. 1 Right hand female set up

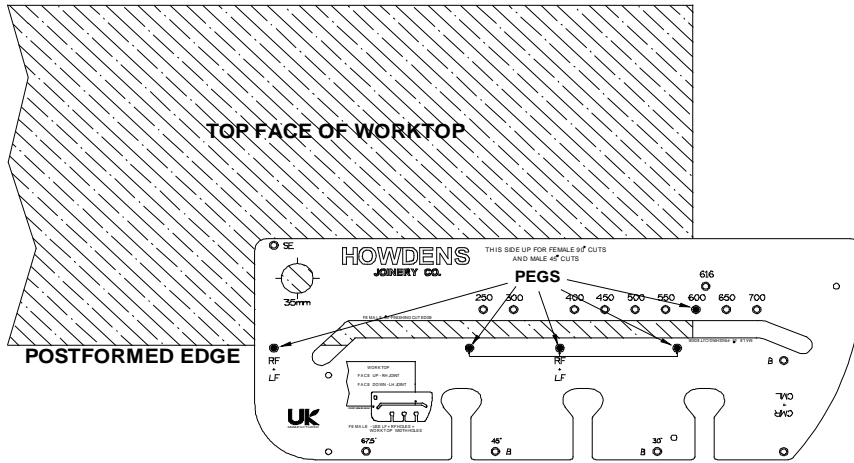


Fig. 2 Left hand female set up

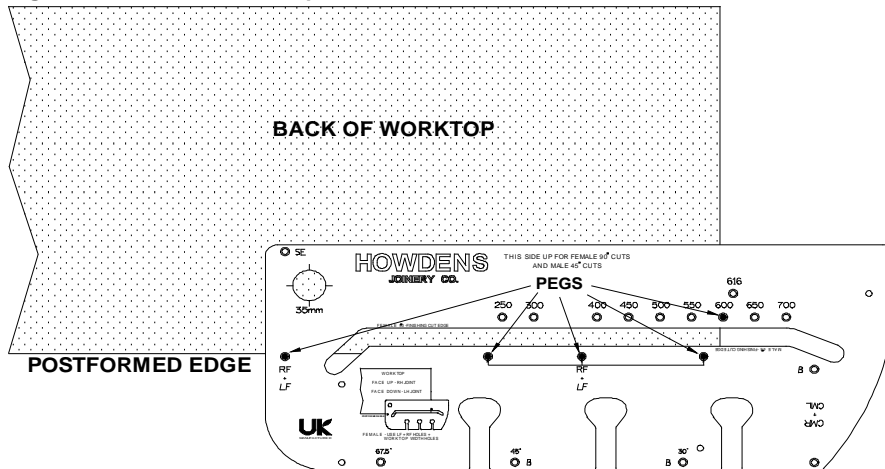


Fig. 1 and Fig. 2 show the jig set up to cut female sections of a 600mm wide worktop. For worktops of different widths it will be necessary to relocate the peg shown in the 600 width hole to one of the other worktop width holes. Set the jig on the worktop as shown. Clamp firmly with G-clamps. Position the router in extreme bottom left-hand point of the centre slot. Set the cutting depth to 10 mm. Start the router and pass the router steadily along the centre slot using the side of the slot *nearest* you to guide the router.

Repeat this process increasing the depth of cut by 10 mm for each pass until the post-form edge has been removed.

With the cutter set to maximum depth, use the side of the slot *furthest* from you to guide the router and make one pass to remove approximately 1mm of worktop leaving a perfect cut edge. **Switch off the router at the end of each pass and do not remove the router from the jig until you are sure that the router has stopped. Avoid contact between tool and jig.**

## 2.02 Male Joint

Fig. 3 Right hand male set up

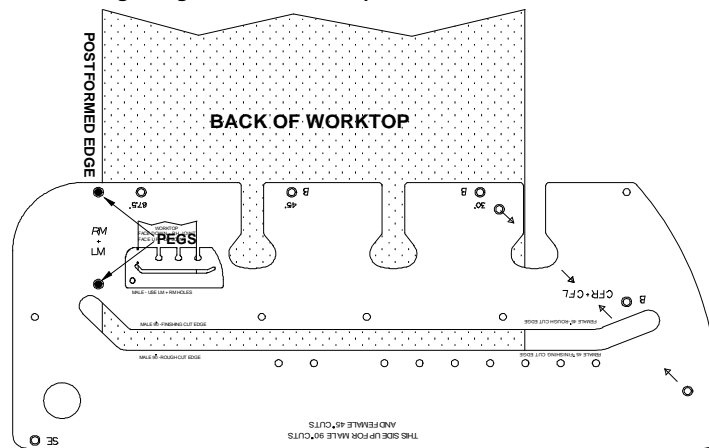
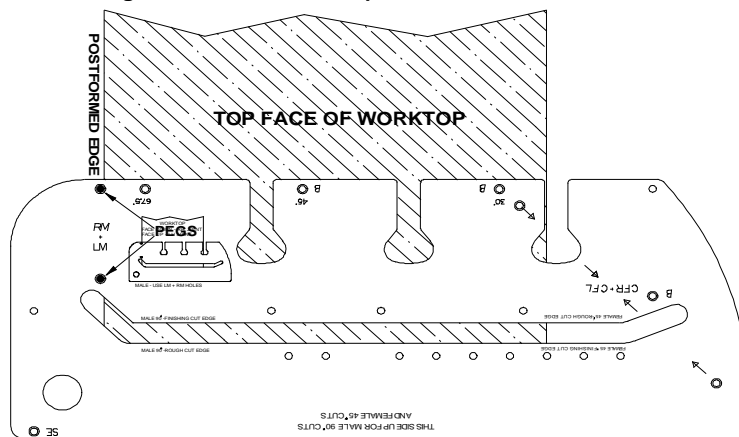


Fig. 4 Left hand male set up

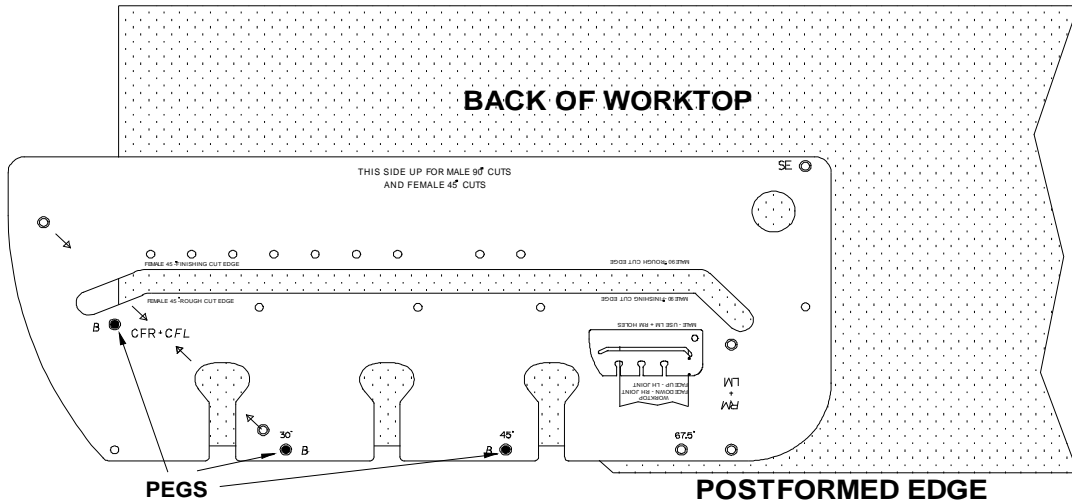


Set the jig on the worktop as shown in Fig. 3 and 4 (depending on whether the cut is a left or right). Clamp firmly with G-clamps. Position the router in extreme left-hand point of the centre slot and proceed as described above for the female joints.

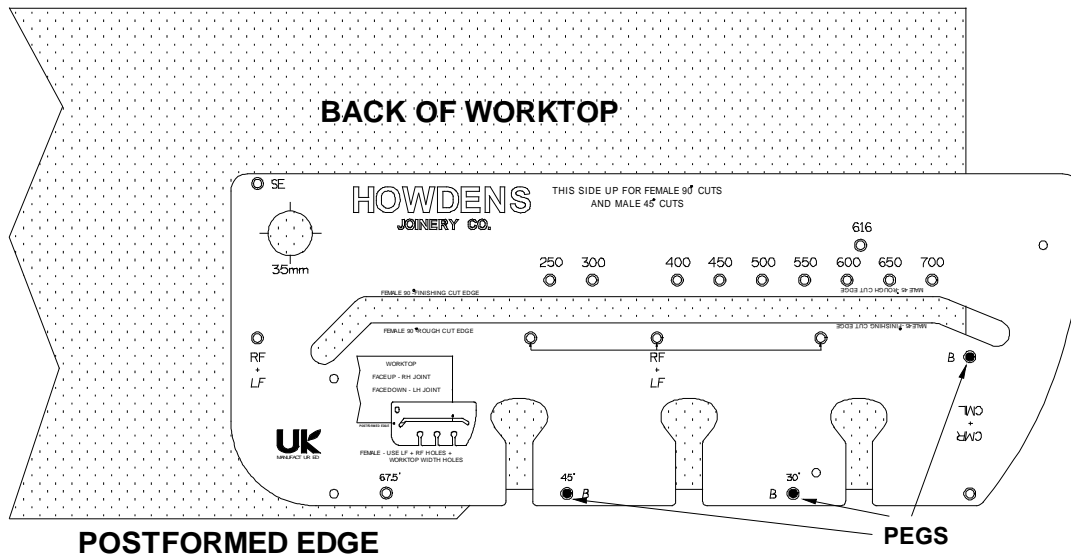
*Note* These instructions set up the jig to cut 90° corners. If you wish to allow for slightly out of square walls the method for this is described later in the instructions.

## 2.03 Bolt Slots

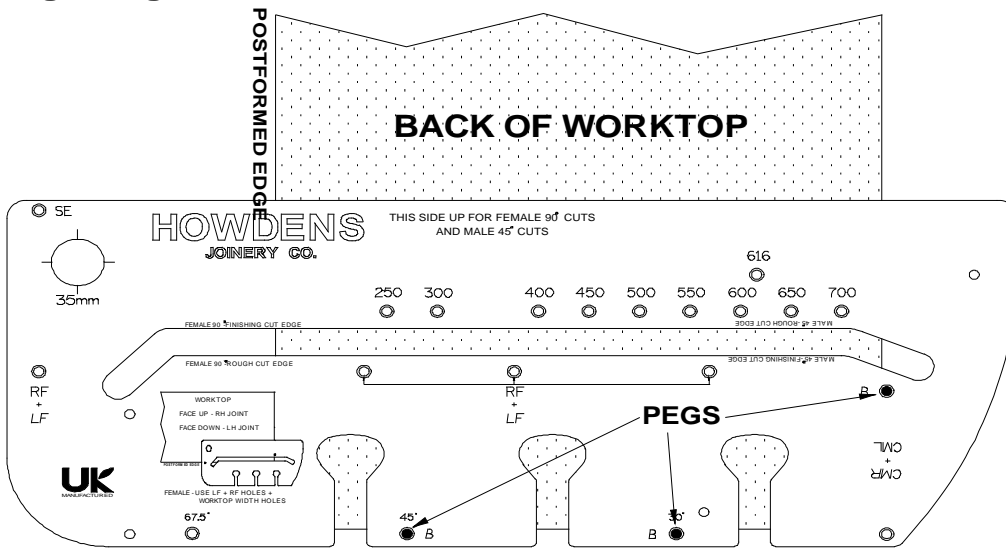
**Fig. 5 Female Right hand Bolt slots**



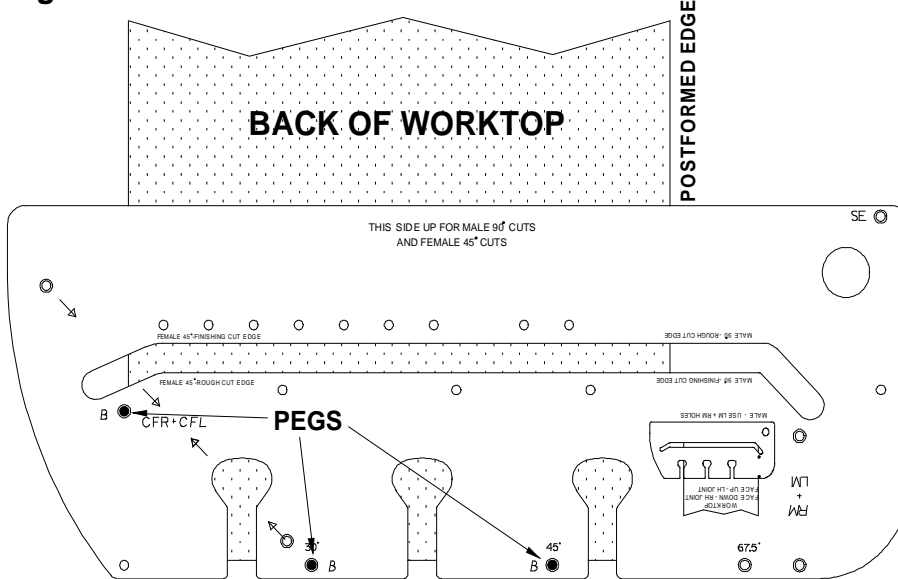
**Fig. 6 Female Left hand Bolt slots**



**Fig. 7 Right hand Male Bolt Slots**



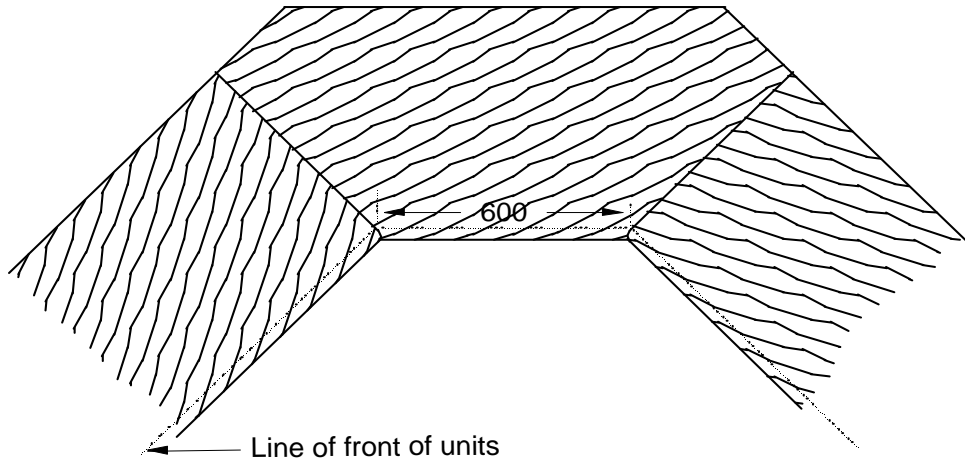
**Fig. 8 Left hand Male Bolt Slots**



Place pegs in the holes marked **B** then clamp the jig in position with G clamps as shown in the figures above.

For bolt holes the plunging depth should be set to about 20mm. Ensure this is sufficient to accommodate your joining bolt you are using. Work clockwise around each mushroom shaped slot and remove all the waste. Depending on the worktop width only 2 slots may be needed.

## SECTION 3.0 45° CORNER JOINTS

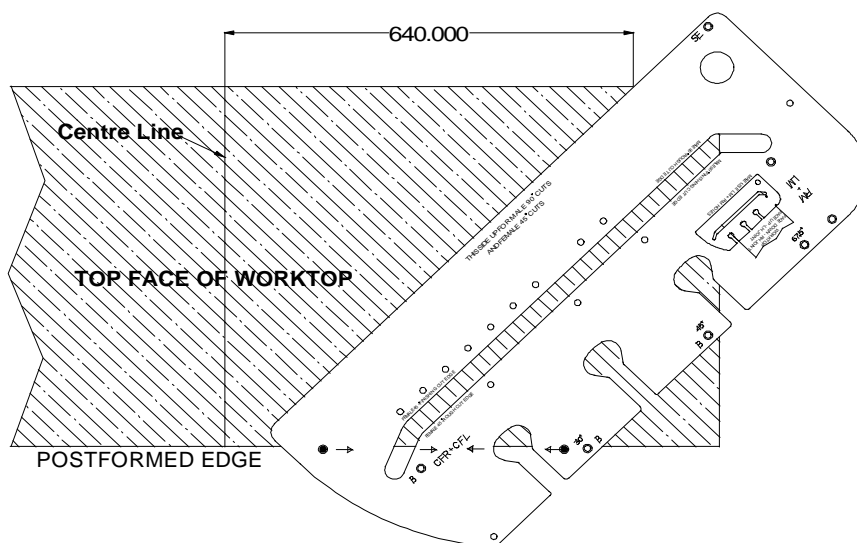


The dimensions shown in the drawings below are based on a 600 mm worktop width and will produce corner section suitable for a 600 mm unit. The minimum length of worktop required for a corner section is 1600 mm.

### 3.01 Female Joints

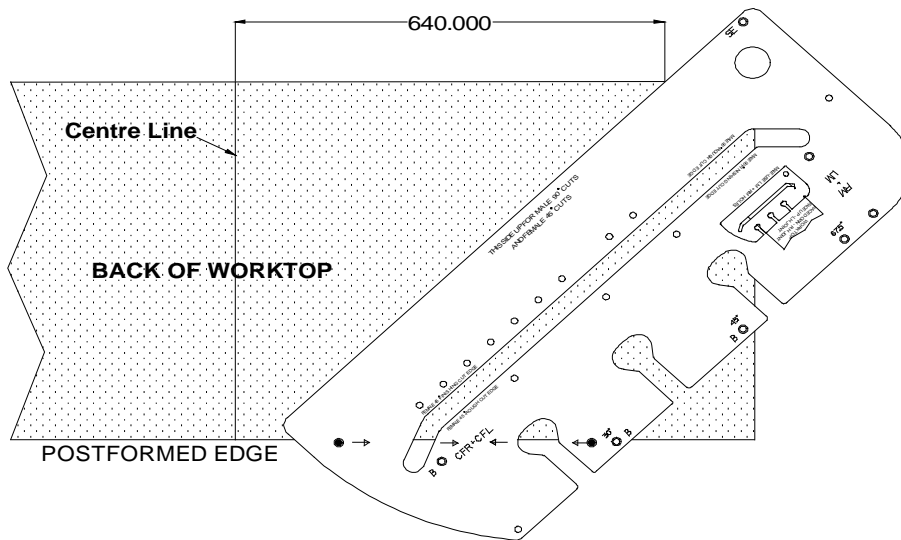
Place the worktop corner piece face-up and mark a centre line. If using a 600mm deep worktop, mark two lines 640 mm either side of the centre line on the back edge of the worktop and the same on the face. For a 616 mm deep worktop these lines should be 656mm from the centre line and 690 mm for a 650 mm deep worktop.

Fig. 9 Right hand Corner Female



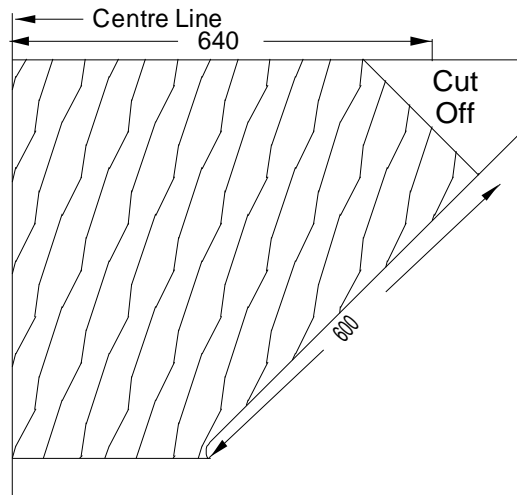


**Fig. 10 Left hand Corner Female**



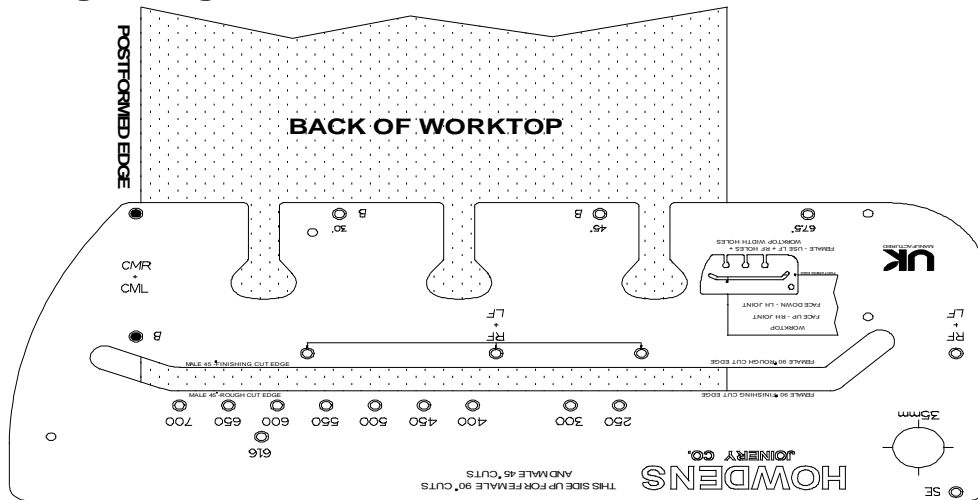
The jig, used as a straight edge, can help with marking out on this type of corner. With the jig face side down, place pegs in the 2 holes joined by engraved arrows labeled CFR+CFL. Offer the jig up against the post-form edge and align the top edge of the jig with the right-hand 640mm mark. Clamp in position and check again for correct alignment. Cut the 45° corner in a like way to that used for the 90° corner. To finish the corner, offer the male section to the cut edge and mark the position of the back edge on the centre section. Accurately remove with a saw, the “Cut Off” end, as shown in Fig. 11 below

**Fig. 11**

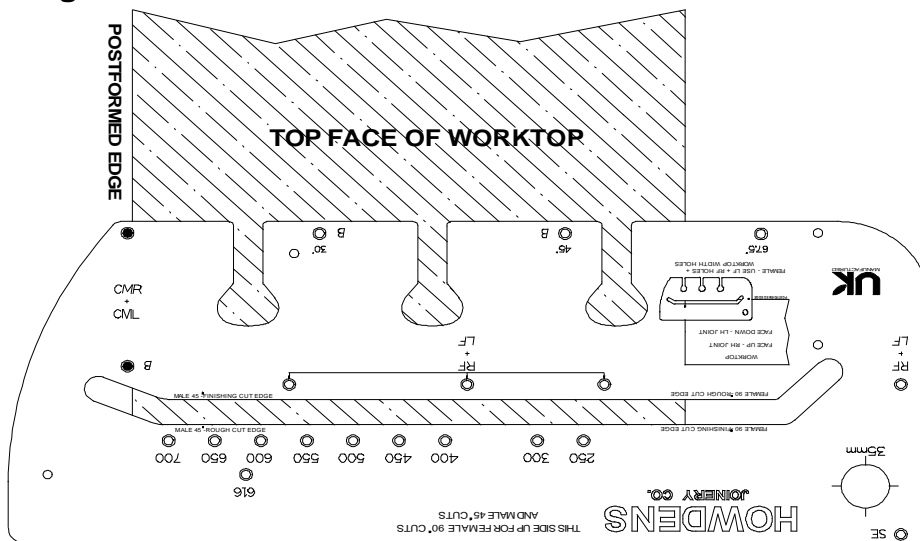


### 3.02 Male Joints

**Fig. 12 Right hand Corner Male**



**Fig. 13 Left hand Corner Male**



Place pegs in the holes labeled “CMR + CML” with the jig face up, and offer them firmly against the post-formed edge. Clamp in position and check again to ensure all pegs are in contact with the post-form edge and the jig is in position. Route worktop as described above.

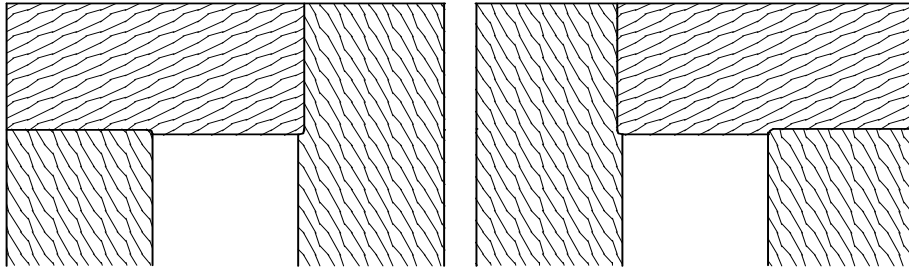
### 3.03 Bolt Slots

See Fig. 5, 6, 7 and 8 above.

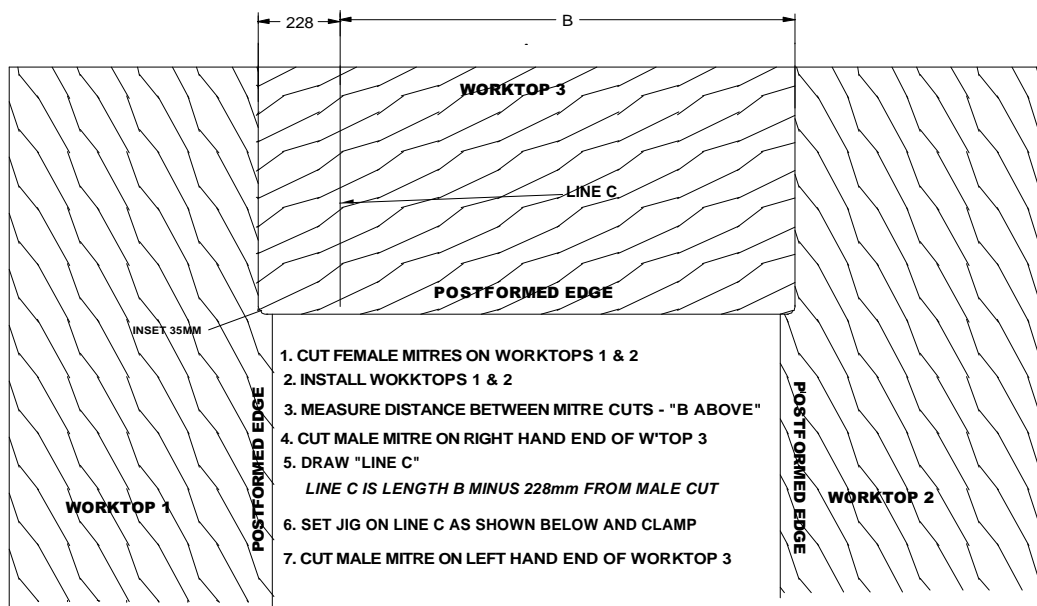
## Section 4.0 Addenda

### 4.01 Other U Shape Lay-outs

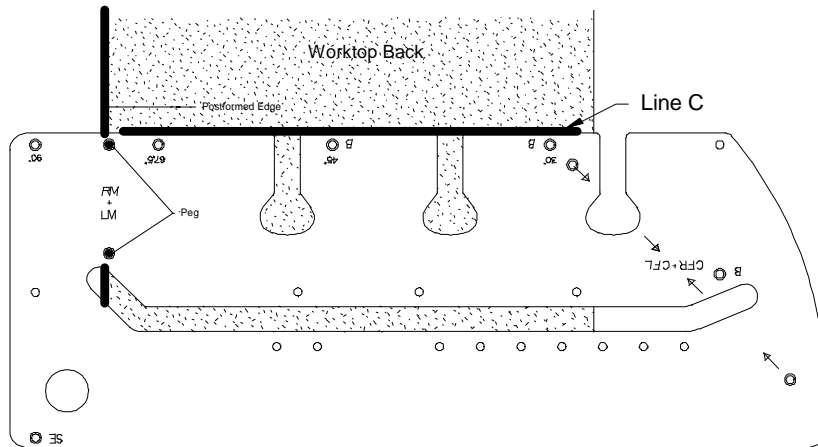
The "Typical Lay-out" on page 3 is the best method of constructing a U shaped layout. There are however other formats which may be used for example the two lay-outs below. These may be necessary depending on worktop length available, location of sink, hob etc.



The layouts above are preferable to that below. If however it is necessary to use this construction, careful measurement is required to ensure a good fit.



For the set up above, the cut on the left hand edge of worktop 3 is lined as shown below:



**“Out of Square” Walls.**

In some situations it may be necessary to adjust the angle of the male cut in order to overcome walls that are not of 90°.

To accomplish this it is recommended that you first cut and fit the female joint of the worktop, whether this be right or left. Next, identify which side up you are going to need the worktop when cutting the male, i.e. face up for a left hand male or face down for a right hand male.

Depending on which one it is, you must then either overlay or underlay the male worktop on or below the already fitted female worktop, with the back edge of the male worktop flat against the wall it is to be fitted to (see Fig. 14).

**Fig. 14 out of square male line up**

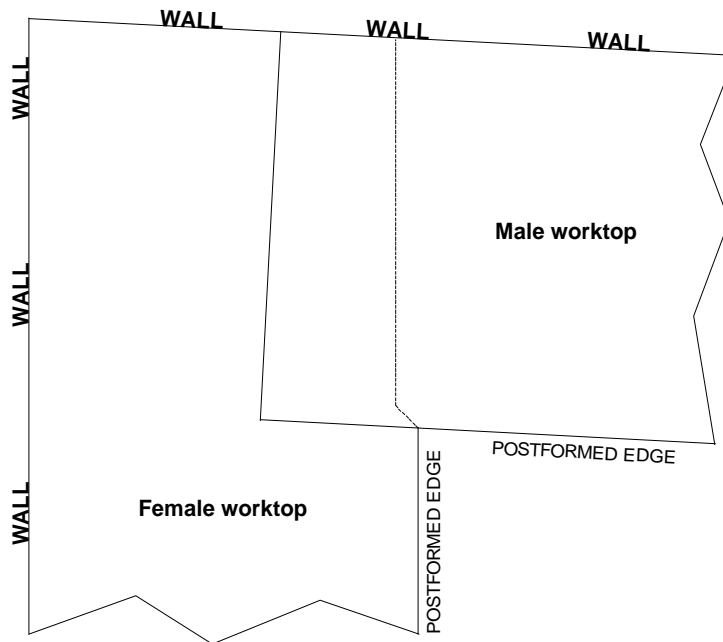
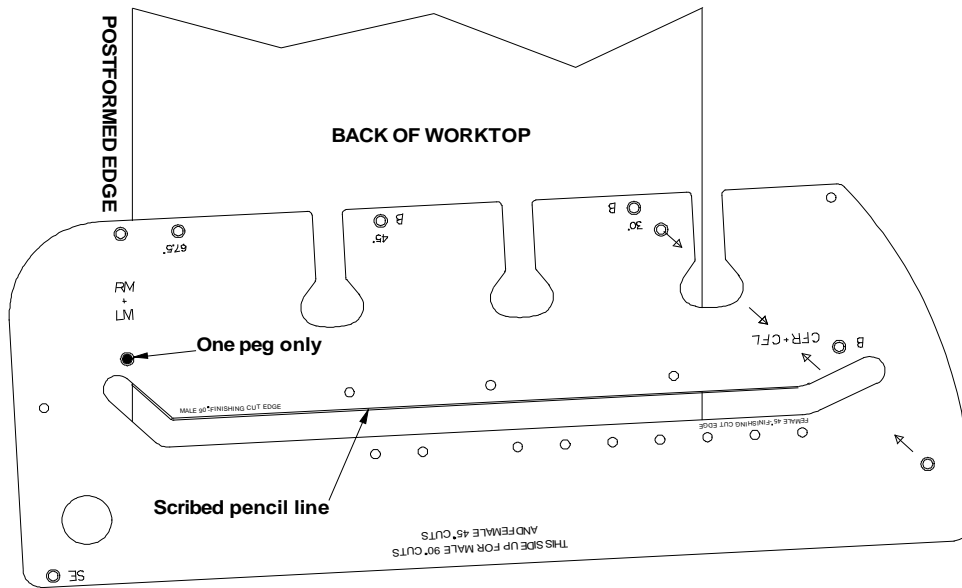


Fig. 14 shows the male worktop overlaying the female worktop for a right hand corner. Where the worktop will face down when it is cut. A pencil should be used to scribe along the cut edge of the female worktop onto the back face of the worktop that is to be the male cut.

Fig. 15 shows how the jig should be lined up against the pencil mark using only one of the pegs in the male cut holes.

**Fig. 15 Jig line up out of square**



The above procedure can be successfully executed only if the angle of the out of square is no more than 3° either way. More than this and the joint will not match up adequately. However, 3° over the length of a 3m worktop is equivalent to approximately 160mm out from one end to the other. Therefore walls would have to be considerably out of square to require more than this angle.

## Troubleshooting Guide

Problem	Probable Cause	Remedy
Poor finish on male/female joint faces	Incomplete routing process.	Ensure final stroke against <i>far</i> edge of centre slot is performed.
Sharp angle near post-form edge on male/female	Incomplete routing process	Ensure final stroke against <i>far</i> edge is performed.
Good finish but male & female don't match up	Incorrect size of cutter and/or guide bush.	Ensure 12.7mm cutter and 30mm guide bush - <b><i>nothing else is suitable.</i></b>
Inconsistent results -wandering edges.	Loose guide bush.	Ensure guide bush is firmly attached to the router base
Irregular gaps on RH male and/or LH female face.	Poor router control	Ensure the cutter remains absolutely perpendicular on these cuts.
Poor/chipped cut edges	Blunt or poor quality router blades	Ensure only sharp, premium quality router bits are used.