

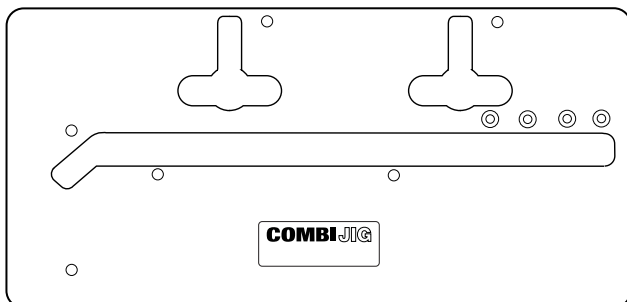


COMBI 650



trend[®]
routing technology

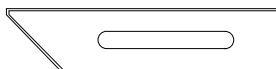
ITEMS ENCLOSED



1 x Solid laminate template



2 x Location bushes



1 x Length setting stop



1 x Manual



1 x Machine screw csk



1 x Washer



1 x Guarantee card



1 x Knob

Specification

Length	=	760mm
Width	=	360mm
Thickness	=	13mm
Weight	=	4.2kg

SAFETY PRECAUTIONS

- Always switch off the power and unplug the router when changing cutters or when making adjustments.
- Always wear protective goggles when routing.
- Wear sound protective ear muffs when routing for long periods of time.
- Always wear a dust mask or respirator. Use dust extraction equipment whenever possible.
- Do not wear loose clothing. Make sure baggy sleeves are rolled up and ties are removed.
- Always remove spanners and hex keys from the workpiece before switching router on.
- Keep hands well clear of the router cutter when routing.
- Avoid accidental starting of the router. Make sure the power switch is in the 'Off' position before plugging in and connecting to the electrical supply.
- Never leave the router unattended when running. Always wait until the router comes to a complete stop before making any adjustments.
- Do not switch the router on with the cutter touching the workpiece.
- Mount the workpiece securely to a work bench or to a workboard fitted to a suitable surface.
- Periodically check all nuts and bolts to make sure they are tight and secure.

Cutter Care

- Do not drop cutters or knock them against hard objects.
- Cutters should be kept clean. Resin build-up should be removed at regular intervals with Resin Cleaner[®]. The use of a dry lubricant will act as a preventative such as Trendicote[®] PTFE spray.
- Cutter shanks should be inserted into the collet at least $\frac{3}{4}$ of shank length to prevent distortion. A distorted collet should be discarded, as it can cause vibration and damage the shank.

- Do not over-tighten collet as this will score the shank and create a weakness there.
- It is also advisable to periodically check the router collet nut for wear.

Useful Advice

- Judge your feed rate by the sound of the motor. In time, the operator will acquire a 'feel' for the router, and a feed speed relative to the work will come naturally. Too slow a feed will result in burning.
- Apply the normal precautions as with any electric power tool.
- The main abuse of routing machines is the inclination for operators to overload them. The motto is 'Keep the revs up'. The drop in revolutions should not exceed, if possible, more than 20% of full running speed.
- The motor of a router is susceptible to the accumulation of sawdust and wood chips, and should be blown out, or 'vacuumed', frequently to prevent interference with normal motor ventilation.
- Refer to the Instruction Manual supplied with your router for full details of its features and safety information.
- Trial cuts should be made on waste material before starting any project.

ACCESSORIES

Recommended Cutters

A 12.7mm (1/2") diameter cutter must be used, which has a 50mm cutting reach and plunge cut facility.

Router must be plunged in stages of maximum 8mm in one pass.

Order Ref. C153, TR17D, TR17, 3/83D, 3/83M



Order Ref. RT/11, RT/11M



Description	Order Ref.
Craft Range Cutter	C153x1/2TC
As above with TC centre tip	C153Dx1/2TC
Trade Range Cutter	TR17x1/2TC
As above with TC centre tip	TR17Dx1/2TC
Professional Range Cutter	3/83x1/2TC
As above with TC centre tip	3/83Dx1/2TC
As per 3/83 but with shorter shank for Makita, Ryobi & Hitachi routers	3/83Mx1/2TC
Replaceable tip cutter	RT/11x1/2TC*
Above cutter (with shorter shank) for Makita, Ryobi & Hitachi routers	RT/11Mx1/2TC*
Replacement blade (1 off)	RB/A
Replacement blade (10 off)	RB/A/10

*This cutter has a 30mm tip length but will cut to a maximum depth of 50mm.

Sub-base Sets

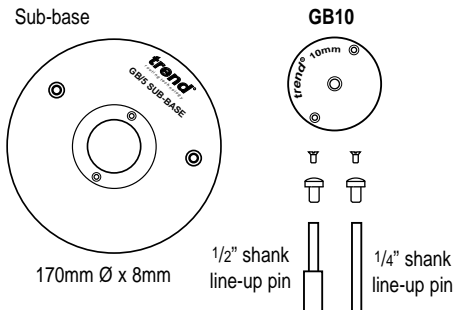
To obtain a perfect accurate close fitting joint, a 30mm guide bush must be used. The guide bush must always be fitted concentric with the cutter. This can be achieved using Trend sub-bases and 30mm outside diameter guide bush ref. GB30.

Trend sub-bases have a central recess to allow fitting of the Trend guide bush to most makes of routers and are available ready to fit the most popular makes.

Two types are offered GB/5 and UNIBASE.

All sub-bases contain screws, a line-up bush and two line-up pins. The line-up pins and bush ensure exact alignment of sub-base with router spindle, when fitted with the relevant collet.

GB/5 Set comprises the following

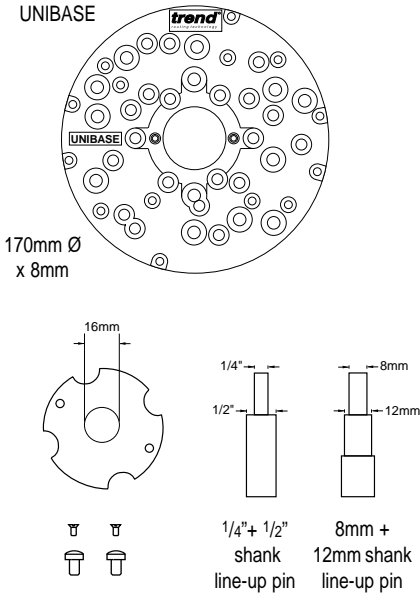


Fits following Router Models

Description	Order Ref.
Elu MOF31,77,98,131,177(E), Bosch GOF1600A & 1700ACE DeWalt DW625EK Felisatti R346EC	GB/5
Makita 3612BR & 3600B Ryobi RE600N & R600N, RE601	GB/5/A
Hitachi M12V, M12SA & TR12	GB/5/D
Makita 3612C & 3612	GB/5/J
Bosch 1300ACE	GB/5/K
Freud FT2000E AEG OFSE2000 Casals FT2000VCE	GB/5/L
Flex OFT3121VV, Portercable 7539, 7519	GB/5/M
Felisatti TP246(E), Festo OF2000E, Kinzo 25C46, Mafell L065E, Metabo OF1612 & OFE1812, Performance PRO1250, Ryobi R500 & R502, Skil 1875U1, Triton TRB001, Wadkin R500	GB/5/S*

*Please state model when ordering.

UNIBASE comprises the following



Fits following Router Models

- Atlas Copco OFSE2000
- Bosch GOF 1300ACE, 1600A, 1700ACE
- Casals FT2000VCE
- DeWalt DW625EK, 629
- Draper R1900V
- Elu MOF 31, 77, 98, 131, 177(E)
- Faithful FPPR2000E
- Felisatti TP246(E), R346EC
- Festo OF2000E
- Freud FT2000E
- Hitachi MI12V, M12SA, TR12
- Metabo OF1612, OFE1812
- Ryobi RE600N, R600N, RE601, R500, R502
- Skil 1875U1
- Wadkin R500

Description	Order Ref.
Universal sub-base	UNIBASE

GB30 30mm Guide Bush



Description	Order Ref.
30mm guide bush to fit sub-bases	GB30

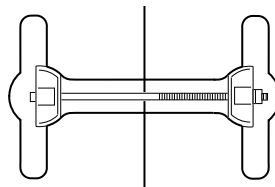
General instructions for fitting sub-bases to Router

1. Fit line-up guide bush onto sub-base, with screws supplied.
2. Fit 12.7mm (1/2") shank line-up pin into collet of router. Plunge router until pin projects through base and lock plunge.
3. Locate guide bush and sub-base assembly over protruding pin.
4. Line up fixing holes and fit screws.
5. Now tighten up screws.
6. Remove line-up bush and line-up pin. Alignment should now be correct. Fit 30mm guide bush and cutter.
7. Periodically check the sub-base is concentric to the spindle of the router.

Panel Butt Connectors

Panel butt connectors are essential for connecting worktops. They fit into the recess on the underside of the worktop and are tightened with a 10mm spanner. The jig has integral bolt recess slots to allow the bolt recess to be cut in the underside of the worktop, using the cutter. The recess is elongated to allow easy access for the spanner. Two types are offered, plastic ended or metal ended. Plastic ended offer better grip.

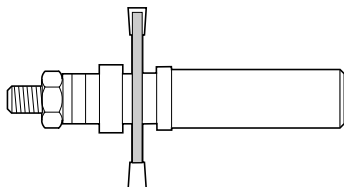
See the latest Trend Routing Catalogue for details.



Description	Order Ref.
Panel Butt Connectors plastic ends (pack of 10)	PC/10
(pack of 50)	PC/50
(pack of 100)	PC/100
(pack of 1000)	PC/1000
Panel Butt Connectors metal ends (pack of 10)	PC/10/M
(pack of 50)	PC/50/M
(pack of 100)	PC/100/M
(pack of 1000)	PC/1000/M

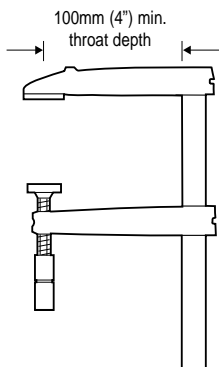
Biscuit Jointer for the Router

Worktops with inadequate support below them need additional stability by biscuit jointing the edges. The Trend biscuit jointing set for the router together with the No.20 biscuits will ensure worktops do not sag or warp in time, see the latest Trend Routing Catalogue for details.



Description	Order Ref.
Craft Range Biscuit Jointer Set	C152x1/2TC
Trade Range Biscuit Jointer Set	TR35x1/2TC
Professional Range Biscuit Jointer Set	342x1/2TC
No.20 Biscuits – Quantity 100	BSC/20/100
1000	BSC/20/1000

Gripper Clamp



Description	Order Ref.
Gripper Clamps	6003010 (Two off required)



IMPORTANT!

Two heavy duty quick action or gripper clamps with throats of at least 100mm (4") are required to secure the jig to the worktop. Whenever fast action clamps are used, ensure they do not foul the router path and that they are securely tightened.

Carry Case

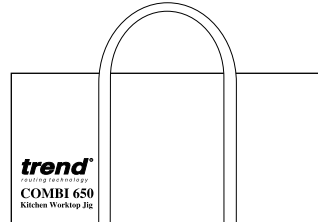
Hard wearing carry case to protect and allow ease of carrying of the COMBI650 Jig.

Description

Carry Case for COMBI650

Order Ref.

CASE/650



Fill and Seal

A solvent and silicone free coloured bonding sealant used to seal worktop joints to prevent moisture reaching the core material. Available in nine colours, Fill and Seal can be intermixed to match all laminate colour variations. Sufficient to join four 700mm worktops, it is supplied in 100ml flexible tubes, allowing it to be squeezed into the joint prior to closing the joint faces. Low odour and mould resistant the sealant has a fast curing time of around 20 minutes.

Description

- Black Ash
- China Blue
- Champagne
- Deep Buff
- Empire Green
- Oyster White
- Pastel Grey
- Polar White
- Terracotta

Order Ref.

- FS/100/BA**
- FS/100/CB**
- FS/100/CH**
- FS/100/DB**
- FS/100/EG**
- FS/100/OW**
- FS/100/PG**
- FS/100/PW**
- FS/100/TE**
- FS/100/PACK**

Pack of 9 colours

ASSEMBLY

Location Bush Identification

Two location bushes are used in different holes in the jig to align the correct template aperture for the application.

The holes are colour coded for easy identification with dots as follows:

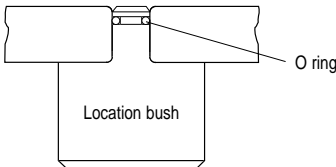
Green dot – Female Joint

Red dot – Male Joint

Yellow dot – Connector Recess

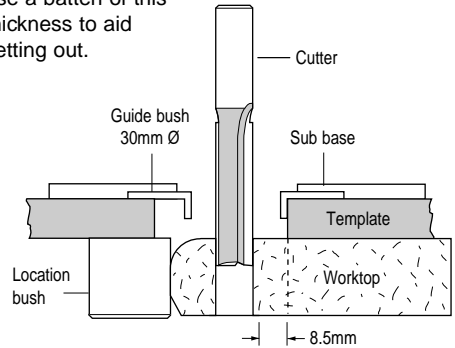
The jig has a colour coded key on its label for quick reference.

Location bushes are held in position by 'O' rings. Insert the smallest end of the bush into the hole by lightly pushing and turning at the same time. If the bushes are tight use a lubricant on the 'O' ring. Ensure bushes are fully home before use. When using jig ensure location bushes do not foul workbench.



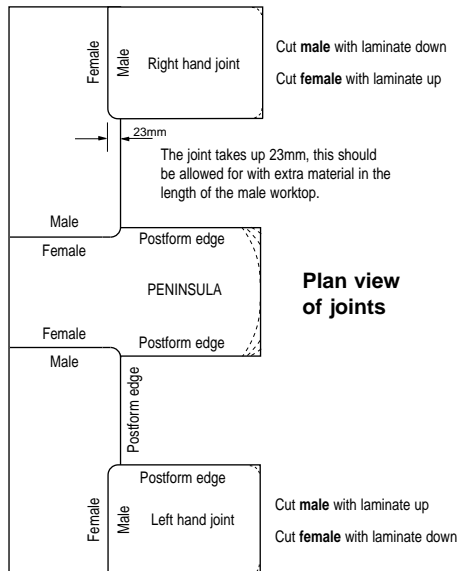
Margin Distance

Allow 8.5mm when cutting joints. Measure or use a batten of this thickness to aid setting out.



Setting out the Joints

When cutting a joint ensure location bushes contact the postformed edge of the worktop. For certain joints the worktop will need to be inverted so that all cuts are made into the postformed edge, never out through it. When routing worktop the balancing paper on the underside may feather edge – this feather edge should be removed with abrasive paper.



IMPORTANT!

In order to prevent breakout of the laminate, rotation of the cutter and feed direction must always be into the postform edge of the worktop.

OPERATION

Setting the Length Stop for the Female Joint

Carry out the setting operation first:

- Fit bushes into **Red** dot location holes and offer the jig to the worktop as shown. The **Green** dot location holes will be uppermost.
- Position the jig across the width of the worktop. Loosely fit the length stop.
- Fasten length stop to template so that it traps the template across the worktop between the **Red** dot location bushes and the stop. Tighten up the knob.
- Remove the bushes from **Red** dot location hole. The template is now set to cut the correct length of joint.

Female Joint

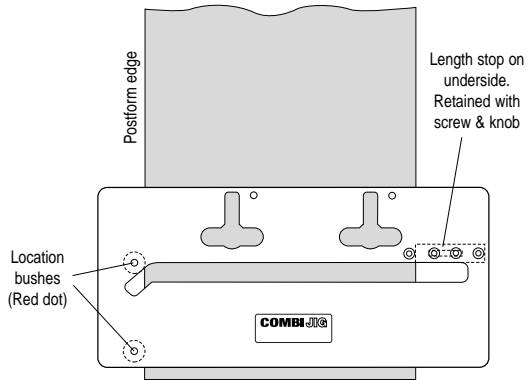
- Fit two location bushes in **Green** dot holes. (The **Green** dots must be uppermost.) Leave the length stop bush in position.
- Place the template onto the worktop to be cut, ensuring the location bushes are touching the worktop. Now clamp securely in position using two quick action clamps ensuring they will not foul the router path.
- Set cutter depth.
- Plunge router and cut joint in a series of passes, feeding left to right.



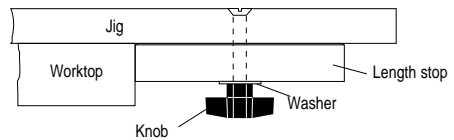
IMPORTANT!

When cutting a joint, hold the router guide bush hard against the template and cut from left to right. It is recommended that the depth stops of the router are used to set the depths of cut. Several shallow passes of the router should be made and it is not necessary to lean heavily on the router or the jig. Allow the weight of the router to rest on the part of the template which is resting on the worktop. Ensure router remains parallel and upright at all times.

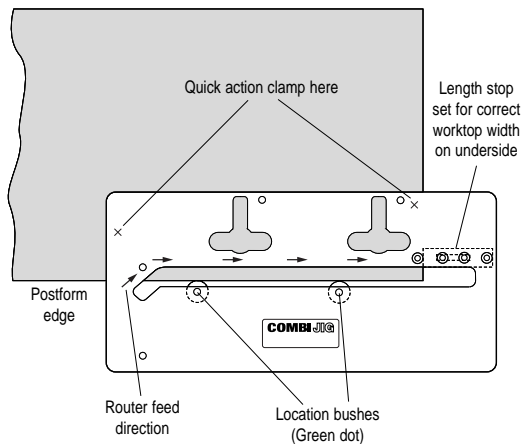
Setting the Length Stop



Length Stop Arrangement



Routing the female part of the Joint



Male Joint

Depending on accessibility lay female worktop into position on units. Lay male worktop on top and support other end. Using a pencil draw round the female cut onto the male. If inaccessible lay female onto male. Depending on a right or left hand joint, the pencil line may need to be transferred on to the other side. Due to the difference between the cutter and the guide bush diameters, the cutter path will be 8.5mm over from the edge of the template, therefore either measure 8.5mm or use a packing piece of this size to offset the template by this amount to ensure the cutter cuts along the pencil line.

The postformed edge of the worktop must always be in contact with the location bushes, this means that to cut a male right hand joint, the worktop must be inverted. Remembering to cut into the postformed edge.

- Insert two location bushes into holes marked **Red dot**. Face marked **Red dot** must be uppermost.
- Place template across the width of the worktop. Clamp jig securely to worktop.
- Cut the male joint before finally cutting the worktop to length. All cuts must be fed left to right.

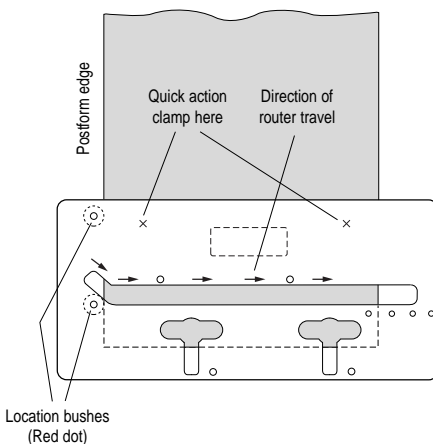
Out of square Joints (max. 3°)*

It may not be possible to position all joints at 90°, in this case it is the male part of the joint that has to be adjusted.

The length stop has a mitred end which is used to set up for an out-of-square joint up to 3°.

To mark out an out-of square joint, first lay the female worktop on the cupboard carcass in its correct position. Next lay the male section of the worktop on the carcass and on top of the female section of the worktop. Support the other end of the male worktop. Using a pencil and from underneath the worktop mark around the female joint onto the male section of the worktop, if access is difficult lay the female worktop onto the male worktop, support other end and mark with pencil from above. This drawn line is the male cut line.

Routing the male part of the Joint



IMPORTANT!

Test fit the joints together, abrasive paper may be required to clean up the chipboard core.

*Please Note:

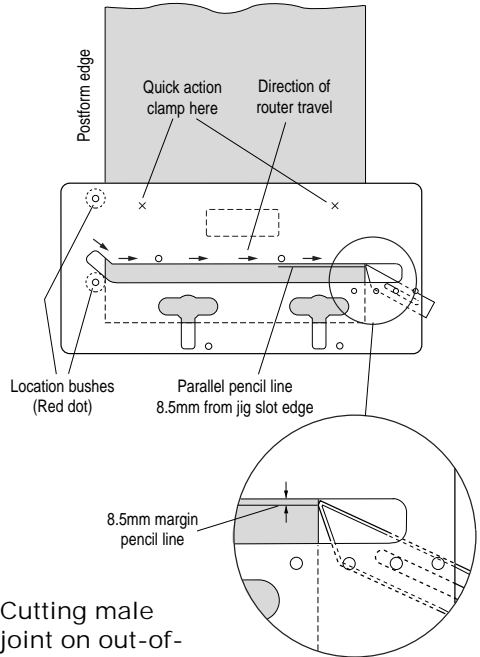
Out-of-square joints are possible, but the finished joint will not be as good as a 90° joint.

- Insert both location bushes into **Red** dot holes. **Red** dot face uppermost.
- Lay jig across the worktop, ensure the location bushes touch the postform edge. Clamp jig in position with quick action clamps. Draw a line 8.5mm away from the jig slot edge.
- With the mitred end of the length stop facing towards the back of the worktop, as shown. Fit the length stop onto underside of jig by using the countersunk bolt, washer and knob into one of the holes in the jig. The bolt should be put into the jig from above, do not tighten. Carefully position the point of the length stop so that it lines up with the 8.5mm margin pencil line. When the correct position has been obtained tighten bolt and knob sufficiently to prevent length stop from moving.
- Remove location bushes.
- Lay jig with length stop set onto male work top that is to be cut. Allowing for the 8.5mm margin and using the length stop as a pivot point (pivot point on cut line), position the jig so the jig slot edge is parallel to the drawn pencil line. Re-check positioning.
- Clamp jig to worktop securely using quick action clamps.
- Remove length stop and bolt assembly as these are for setting up only and are not required when routing.
- Set cutter depth.
- Plunge router and cut the male joint, feeding left to right in a series of shallow passes, feeding left to right.

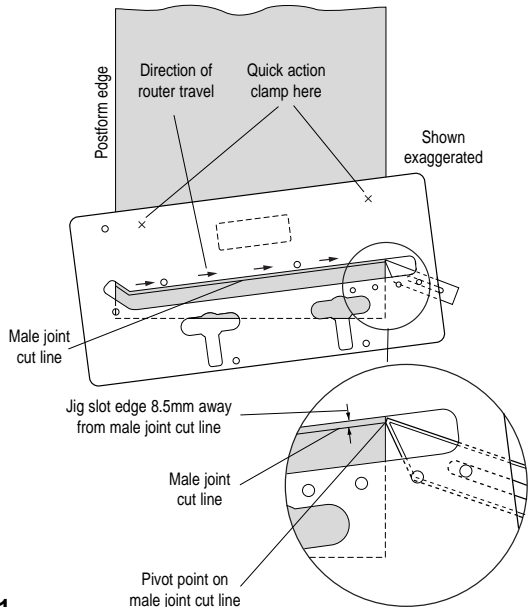


IMPORTANT!
After setting for out-of-square joint the length stop must be removed or it could come in contact with the router cutter.

Setting up length stop for out-of-square joints



Cutting male joint on out-of-square joints

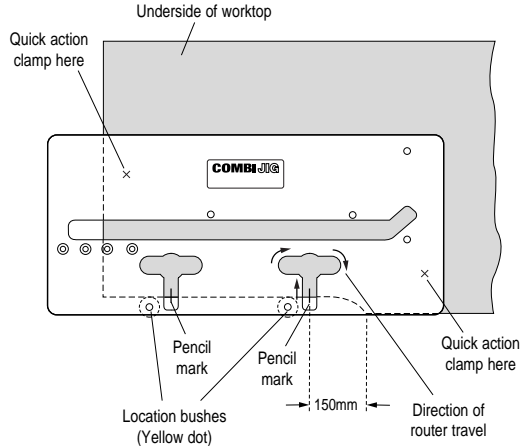


Cutting the Bolt Recesses

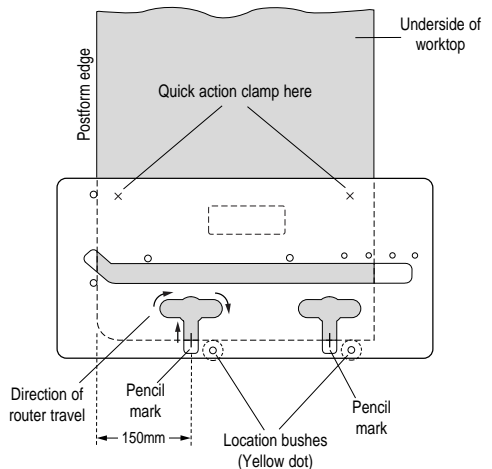
When the joint has been tested, proceed as follows to cut the recess for panel butt connectors on the underside of the worktop. The same cutter and guide bush are retained and used with the integral bolt recess slots in the jig to produce the recesses for the panel butt connectors. The bolt recess position can be gauged approximately 150mm from the edge of the postform edge, or where access is possible with kitchen units. Mark with pencil both positions on the underside of the worktop. Insert the location bushes into the **Yellow** dot holes as shown.

- The template may need to be inverted when cutting some bolt recesses.
- Securely clamp jig to worktop.
- The bolt recesses should be approximately 20mm deep although this will depend upon the thickness of worktop.
- Once one bolt recess is cut move jig over to the remaining pencil lines and repeat.
- Repeat the procedure for the male joint.

Routing the bolt recess in the female part of the joint



Routing the bolt recess in the male part of the joint



IMPORTANT!

Best results are achieved when the centre line of the bolt corresponds to the centre line of the worktop. Clamp jig securely to worktop.

Strengthening the Joint

If the joint between the worktops is not supported underneath, after some time the joint may 'sag' and become misaligned; to reduce this the joint should be reinforced with a loose tongue or biscuit dowels. The biscuit jointing cutter set Trend Ref. 342 can be used with a portable router. The size of biscuit used should be No. 20.

Ref. BSC/20/100 (100 biscuits)

Ref. BSC/20/1000 (1000 biscuits)

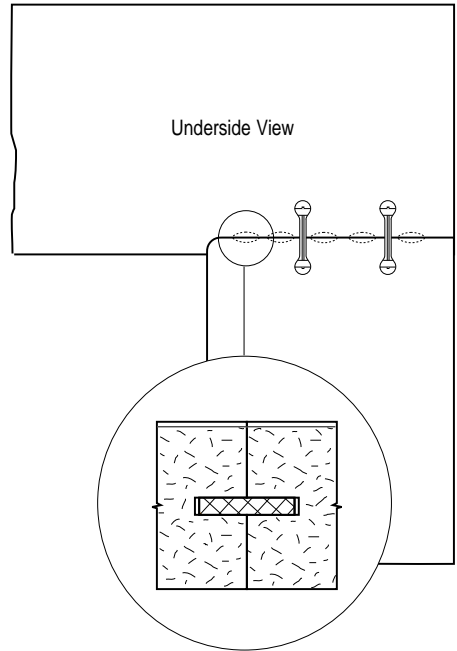
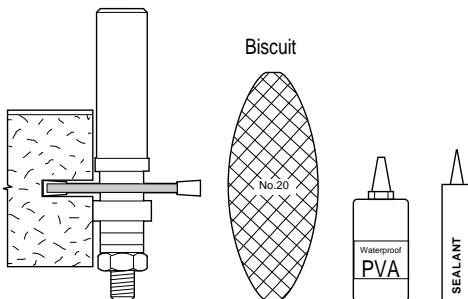
A 650mm worktop should have at least 5 biscuits.

Sealing the Joint

The cut edges of the joint should be coated with a water-resistant adhesive, or sealant before assembly, to prevent moisture seeping into the core of the worktops, which would swell and disfigure the worktop.

Use a fine grit abrasive paper to clean up the torn wood chips of both mating surfaces. Lightly run the abrasive paper along the edges to de-nib the cut chipboard edge. This will ensure a tidy joint is achieved.

Cutter Ref. 342



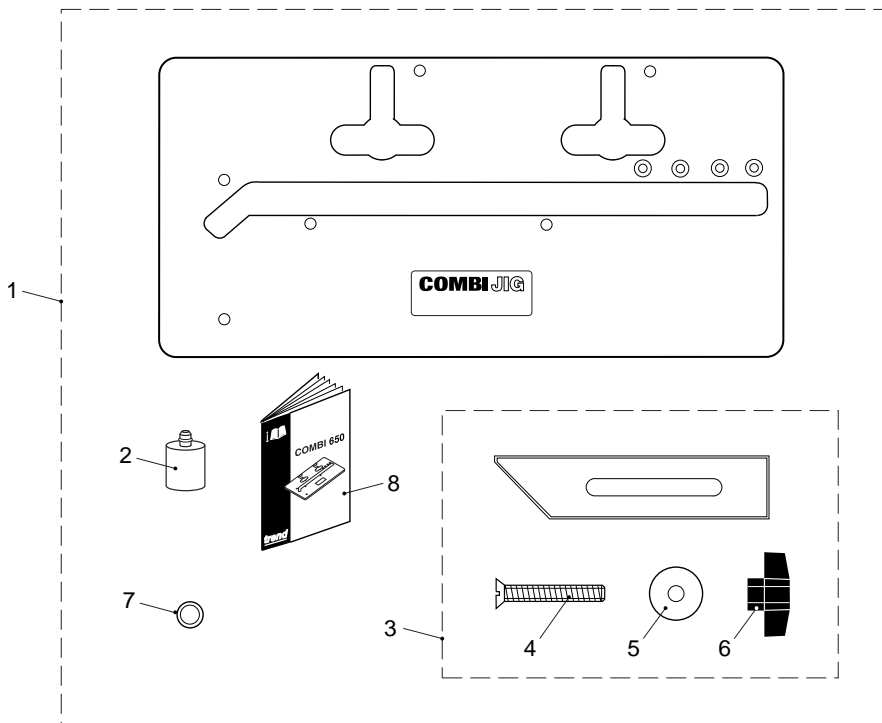
Guarantee

- The jig carries a manufacturers guarantee in accordance with the conditions on the enclosed guarantee registration card.

Recycling

- Jig, accessories and packaging should be sorted for environmentally friendly recycling.

COMBI 650
SPARE PARTS DIAGRAM



COMBI 650 - SPARE PARTS LIST			v1.0 10/1999
Item	Qty	Description	Ref.
1	1	Combi 650 Jig	COMBI/650
2	2	Alloy Bush	BUSH/650
3	1	Length Setting Stop	CJ/LSK
4	0	Machine Screw Csk M8 x 50mm Slot	WP-SCW/41
5	0	Washer 8.5mm x 32mm x 1.0mm	WP-WASH/17
6	0	Knob M8	WP-KNOB/10
7	0	Combi Jig 'O' Ring Pack for Bushes (pack of 5)	CJ/ORS
8	1	Manual	MANU/650

TROUBLE SHOOTING

Fault	Cause	Remedy
<p>■ Joint does not fit correctly at the radius.</p>	<p>Cutter or guide bush is the incorrect diameter or location bushes are not against worktop edge.</p>	<p>Check concentricity of cutter with guide bush. Cutter 12.7mm diameter with 30mm diameter guide bush. Ensure location bushes touch worktop.</p>
<p>■ The back edge of the joint does not line up.</p>	<p>Either the length stop or template was in the incorrect position, or the worktop has not pushed up against the length stop when the joint was cut.</p>	<p>Check position of length stop and re-cut joints.</p>
<p>■ When clamped together the joint has irregular gaps.</p>	<p>The guide bush has drifted away from the edge of the template whilst cutting either part of the joint, or wood chips in particle board have torn slightly.</p>	<p>Check with a straight edge which part of the joint is uneven and re-cut (this can only be done on the male cut) ensuring that the guide bush is kept against the template by machining from left to right. Use abrasive paper to remove torn wood chips.</p>
<p>■ Chipped laminate</p>	<p>Can be caused by a blunt cutter or removing too much material at one pass or exiting out of postform edge.</p>	<p>Always use sharp cutters and when cutting through the laminate cut 3–4mm of material. Maintain correct feed direction, to ensure cutter enters postform edge.</p>
<p>■ Jig slipping on material</p>	<p>Clamps not secure or too deep a cut being made or cutter is blunt.</p>	<p>Check clamps for wear. Clamp securely, take shallow passes, use a sharp cutter.</p>
<p>■ Cut joints not square</p>	<p>Router has tilted or operator has leaned heavily on router causing jig flex.</p>	<p>Ensure jig is supported and do not push hard on router taking shallow passes. Ensure weight of router is on supported part of jig and that the router is upright.</p>
<p>■ Assembled joint not flush or bowed</p>	<p>Worktop different thickness or worktop not flat (cupped).</p>	<p>Ensure worktop is same thickness and flat.</p>

MANU/650 v6.0



RECYCLABLE

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