

COMBI 65

For 600mm, 640mm &
650mm Worktops



trend[®]
routing technology

Dear Customer

Thank you for purchasing this Trend product.

The Combi 65 is designed to be used with most heavy duty plunge routers. The router should be fitted with a 30mm outside diameter guide bush and a 12.7mm (1/2") diameter Tungsten Carbide Tipped (TCT) cutter. Two 100mm throat quick action or gripper clamps will also be required.

Once the jig has been mastered a typical postform or butt and scribe joint, can be made within 15 minutes including setting-up time. Recommended maximum depth of cut is 8mm in one pass. The jig is designed to cut worktop widths at 600mm, 640mm and 650mm. Other widths upto 650mm will require marking out or redrilling of location holes.

If after reading these instructions you have any problems please contact our Technical Support Department. For accessories and a copy of the latest Trend Routing Catalogue please contact your nearest Trend stockist.

We hope you enjoy many years of productive use of this product.

Please remember to return your guarantee card within 14 days of purchase.



Please read the operating instructions carefully and keep them together with your jig.

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The following symbol is used throughout this manual:



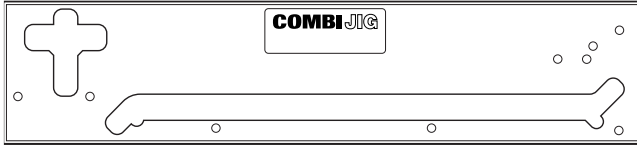
IMPORTANT!

Please take note of comments.



If you require further technical information or spare parts for the Combi, please call our technical support department on 01923 224681.

ITEMS ENCLOSED



1 x Solid laminate template



3 x Location bushes



1 x Manual



1 x Guarantee Card

Specification

Length	=	905mm
Width	=	215mm
Thickness	=	13mm
Weight	=	2.7kg

SAFETY PRECAUTIONS

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

Cutter Care

- n Do not drop cutters or knock them against hard objects.
- n 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.
- n 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.

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

Useful Advice

- n 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.
- n Apply the normal precautions as with any electric power tool.
- n 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.
- n 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.
- n Refer to the Instruction Manual supplied with your router for full details of its features and safety information.
- n 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

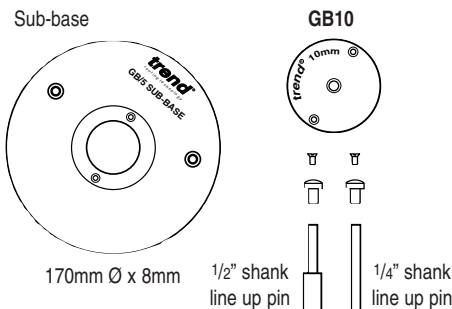
To obtain a perfect accurate close fitting joint, a 30mm guide bush must be used. The guide bush must always be fitted concentric with the cutter. This can be achieved using Trend sub-bases and 30mm outside diameter guide bush ref. GB30.

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

GB/5 Set comprises the following

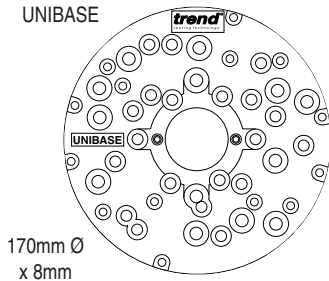


Fits following Router Models

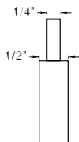
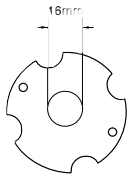
Description	Order Ref.
Elu MOF31,77,98,131,177(E), Bosch GOF1600A & 1700ACE DeWalt DW625EK Felisatti R346EC	GB/5
Makita 3612BR & 3600B Ryobi RE600N & R600N, RE601	GB/5/A
Hitachi M12V, M12SA & TR12	GB/5/D
Makita 3612C & 3612	GB/5/J
Bosch 1300ACE	GB/5/K
Freud FT2000E AEG OFSE2000 Casals FT2000VCE	GB/5/L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

*Please state model when ordering.

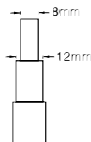
UNIBASE comprises the following



170mm Ø
x 8mm



1/4" + 1/2"
shank
line up pin



8mm +
12mm shank
line up pin

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)
- 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

Universal sub-base

Order Ref.

UNIBASE

GB30 30mm Guide Bush



Description

30mm guide bush to fit sub-bases

Order Ref.

GB30

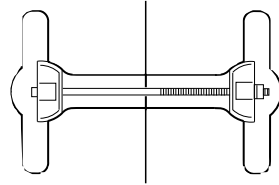
General instructions for fitting Sub-bases to Router

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 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.

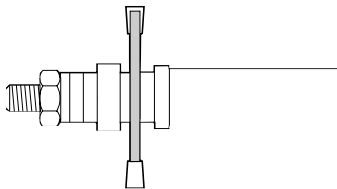
See the latest Trend Routing Catalogue for details.



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

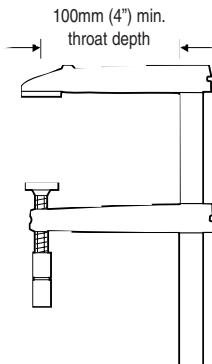
Biscuit Jointer for the Router

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)



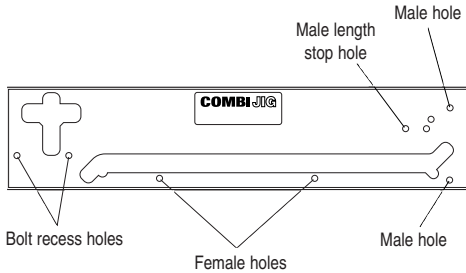
IMPORTANT!

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.

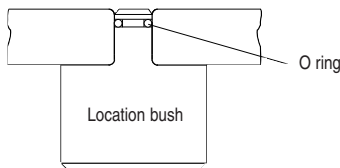
ASSEMBLY

Location Bush Identification

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

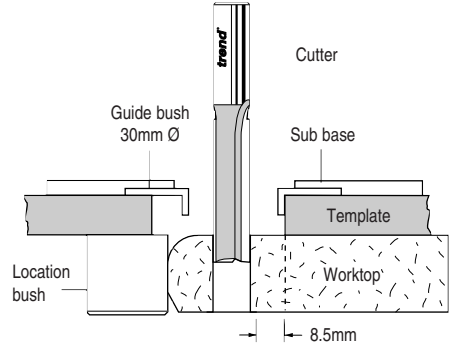


Location bushes are held in position by 'O' rings. Insert the smallest end of the bush into the hole by lightly pushing and turning at the same time. If the bushes are tight use a lubricant on the 'O' ring. Ensure bushes are fully home before use. When using jig ensure location bushes do not foul workbench.



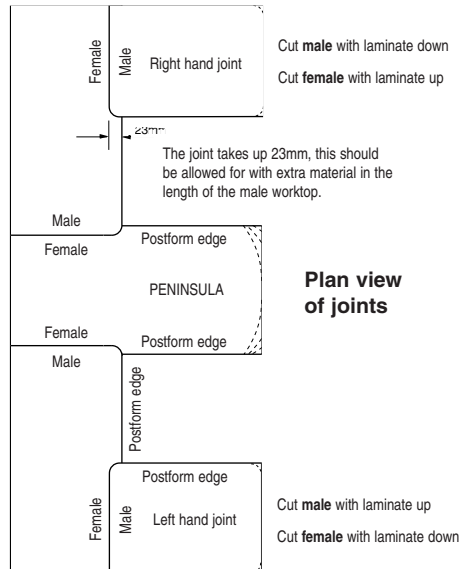
Margin Distance

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!

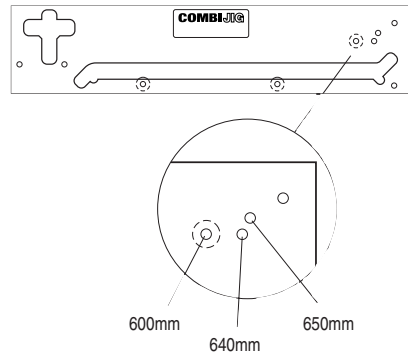
In order to prevent breakout of the laminate, rotation of the cutter and feed direction must always be into the postform edge of the worktop.

OPERATION

Setting the Length Stop for the Female Cut

Carry out the setting operation first:

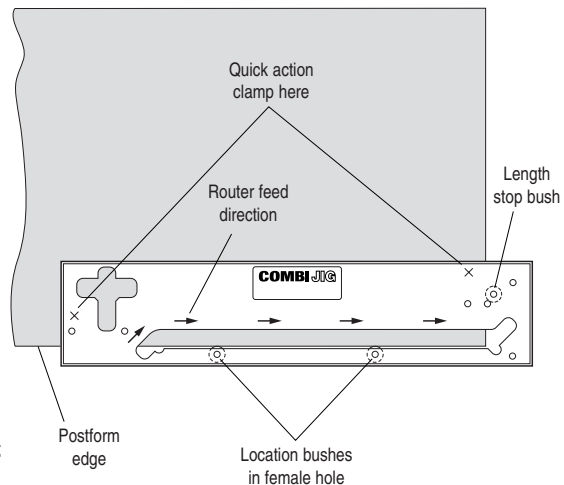
- n With the label side uppermost fit the length stop bush in one of the three holes depending on width of worktop. If worktop is not 600mm, 640mm or 650mm, a packing piece, or a new hole to correct position will suffice.



Female Joint

- n Fit two location bushes in female holes as shown. (The label must be uppermost.) Leave the length stop bush in position.
- n 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.
- n Set cutter depth.
- n Plunge router and cut joint in a series of passes, feeding left to right.

Routing the female part of the Joint



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.



IMPORTANT!

The edge of the jig slot that is not used is notched to act as a visual guide.

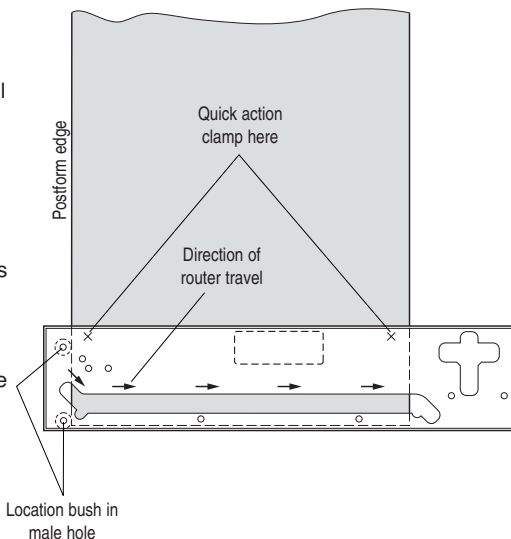
Male Joint

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 from underside. 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.

- n Insert two location bushes into male holes as shown, label facing down.
- n Place template across the width of the worktop and clamp securely to worktop.
- n Set cutter depth. Plunge router and cut the male joint before finally cutting the work-top to length. A series of passes should be made feeding from left to right.

Routing the male part of the Joint



IMPORTANT!

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

Out-of-square Joints

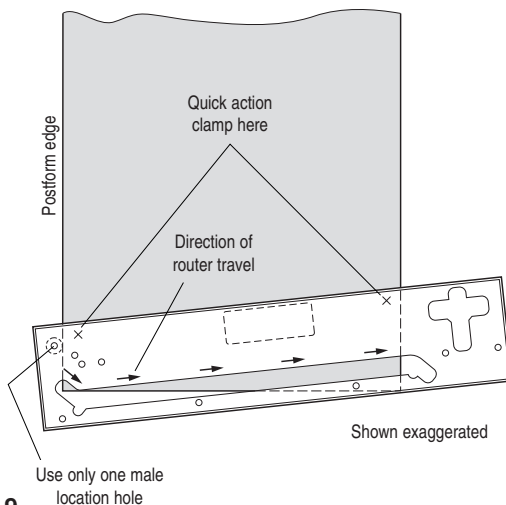
Only the male cut needs to be adjusted if an out-of-square joint is required. On out-of-square joints there is a possibility of the chipboard core of the worktop becoming exposed which will need to be hidden with sealant.

Depending on accessibility mark out an out-of-square joint, first lay the female board on the cupboard carcass in position. Next lay the male section of board on to the carcass and on top of the female section of the board. Support other end. Mark around the female joint onto the male section of board.

If inaccessible lay female onto male.

- n Use only the one location bush in the male hole indicated.
- n Swing the template to suit the angle required and clamp down.
- n Remember to allow an 8.5mm gap between

Cutting out-of-square male joint



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 bolt recess holes as shown.

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

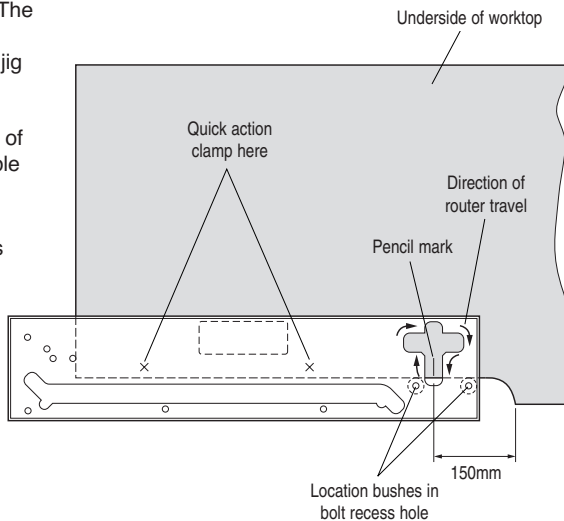
Worktop Thickness	Depth Recess
30	22mm
40	28mm



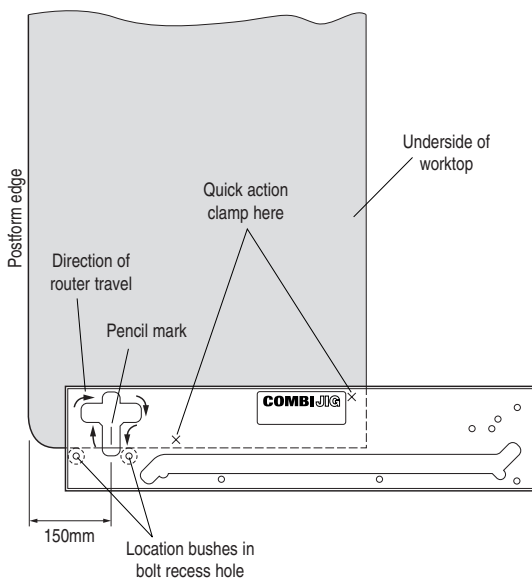
IMPORTANT!

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

Routing the bolt recess in the female part of the joint



Routing the bolt recess in the male part of the joint



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, C152 or TR35 can be used with a portable router. The size of biscuit used should be No. 20.

Ref. BSC/20/100 (100 biscuits)

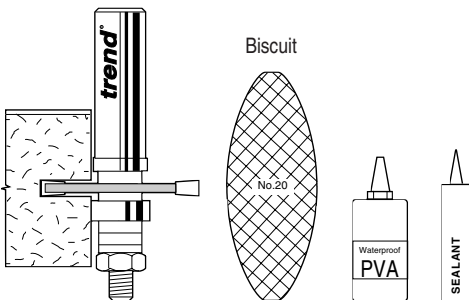
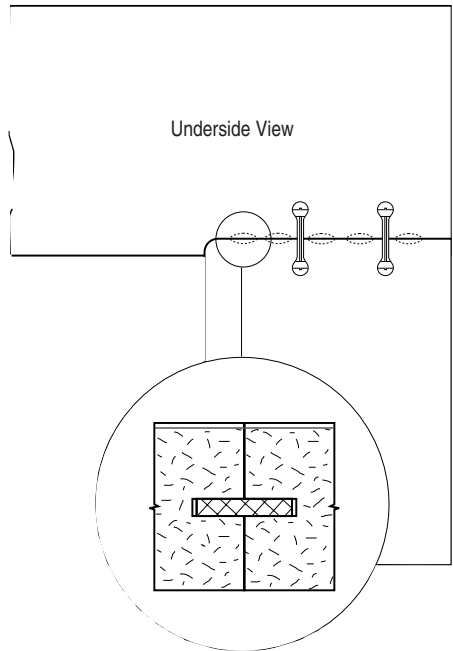
Ref. BSC/20/1000 (1000 biscuits)

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

Cutter Ref. 342 shown



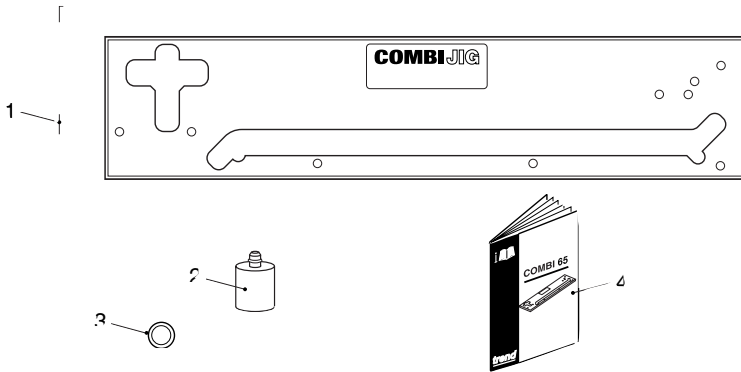
Guarantee

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

Recycling

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

**COMBI 65
SPARE PARTS DIAGRAM**



COMBI 65 - SPARE PARTS LIST			v2.0 11/2000
Item	Qty	Description	Ref.
1	0	Combi 65 Jig	COMBI/65
2	3	Alloy Bush	BUSH/650
3	0	Combi Jig 'O' Ring Pack for Bushes (pack of 5)	CJ/ORS
4	1	Manual	MANU/65

TROUBLE SHOOTING

Fault	Cause	Remedy
n Joint does not fit correctly at the radius.	Cutter or guide bush is the incorrect diameter or location bushes are not against worktop edge.	Check concentricity of cutter with guide bush. Cutter 12.7mm diameter with 30mm diameter guide bush. Ensure location bushes touch worktop.
n The back edge of the joint does not line up.	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.	Check position of length stop and re-cut joints.
n When clamped together the joint has irregular gaps.	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.	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.
n Chipped laminate	Can be caused by a blunt cutter or removing too much material at one pass or exiting out of postform edge.	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.
n Jig slipping on material	Clamps not secure or too deep a cut being made or cutter is blunt.	Check clamps for wear. Clamp securely, take shallow passes, use a sharp cutter.
n Cut joints not square	Router has tilted or operator has leaned heavily on router causing jig flex.	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.
n Assembled joint not flush or bowed	Worktop different thickness or worktop not flat (cupped).	Ensure worktop is same thickness and flat.

MANU/65 v3.0



RECYCLABLE

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