



MFT/JIG



trend[®]
routing technology



Please read these instructions before use.

Dear Customer

Thank you for purchasing this Trend product, we hope you enjoy many years of creative and productive use.

Please remember to return your guarantee card within 28 days of purchase.

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TECHNICAL DATA

Jig thickness	12mm
Cutter diameter	20mm
Guide bush diameter	30mm
Pin size (for edge margin)	10mm
Edge margin width	71mm edge to hole centre
Hole centre to centre	96mm
Edge profiles	R50, R100 45 degree
Weight	3 kg

The following symbols are used throughout:



Denotes risk of personal injury, loss of life or damage to the tool in case of non-observance of the instructions in this manual.



Refer to the instruction manual of your power tool.

This unit must not be put into service until it has been established that the power tool to be connected to this unit is in compliance with 2006/42/EC (identified by the CE marking on the power tool).

INTENDED USE

This jig is intended for use with a ½” plunge router with a suitable guide bush and cutter to create a grid of 20mm diameter holes in timber-based sheet material. The grid can be used as a multi-functioning table top, allowing a range of clamping and fixing devices to be used to assist with sawing, routing and sanding applications.

Once the first set of holes have been machined, the jig can be repositioned using the index pins, to allow more holes to be machined to form a larger grid.

Important

Some guide bushes are not perfectly centred and may be slightly smaller or larger than 30mm. Please check your guide bush. Any guide bush that isn't the correct size and not centred will not deliver the best cut.

When using a jig there will be a cumulative error that cannot be avoided when indexing the jig on existing holes.



If you require further safety advice, technical information or spare parts, please call Trend Technical Support or visit www.trend-uk.com

SAFETY



WARNING:

Observe the safety regulations in the instruction manual of the power tool to be used. Please read the following instructions carefully. Failure to do so could lead to serious injury. When using electric tools, basic safety precautions, including the following should always be followed to reduce the risk of fire, electric shock and personal injury. Also observe any applicable additional safety rules. Read the following safety instructions before attempting to operate this product.

PLEASE KEEP THESE INSTRUCTIONS IN A SAFE PLACE.

The attention of UK users is drawn to The Provision and Use of Work Equipment Regulations 1998, and any subsequent amendments.

Users should also read the HSE/HSC Safe Use of Woodworking Machinery Approved Code of Practice and Guidance Document and any amendments.

Users must be competent with woodworking equipment before using our products.

IMPORTANT NOTE:

Residual Risk. Although the safety instructions and operating manuals for our tools contain extensive instructions on safe working with power tools, every power tool involves a certain residual risk which cannot be completely excluded by safety mechanisms. Power tools must therefore always be operated with caution!

General

1. Disconnect power tool and attachment from power supply when not in use, before servicing, when making adjustments and when changing accessories such as cutters. Ensure switch is in "off" position. Always ensure cutter has stopped rotating.
2. Always mount the power tool, accessory or attachment in conformity with the instructions. Only use attachment and accessories specified in the power tool manual. The tool or attachment should not be modified or used for any application other than that for which it was designed. Do not force tool.
3. Keep children and visitors away. Do not let children or visitors touch the tool, accessory or attachment. Keep children and visitors away from work area. Make the workshop child proof with padlock and master switch.
4. Dress properly. Do not wear loose clothing or jewellery, they can be caught in moving parts. Rubber gloves and non-skid footwear is recommended when working outdoors. Wear protective hair covering to contain long hair.

5. Consider working environment. Do not use the product in the rain or in a damp environment. Keep work area well lit. Do not use power tools near gasoline or flammable liquids. Keep workshop at a comfortable temperature so your hands are not cold. Connect machines that are used in the open via a residual current device (RCD) with an actuation current of 30 mA maximum. Use only extension cables that are approved for outdoor use.
6. The accessory or attachment must be kept level and stable at all times.
7. Keep work area clean. Cluttered workshops and benches can cause injuries. Ensure there is sufficient room to work safely.
8. Secure idle tools. When not in use, tools should be stored in a dry and high or locked up place, out of reach of children.
9. For best control and safety use both hands on the power tool and attachment. Keep both hands away from cutting area. Always wait for the spindle and cutter to stop rotating before making any adjustments.
10. Always keep guards in place and in good working order.
11. Remove any nails, staples and other metal parts from the workpiece.
12. Maintain tools and cutters with care. Keep cutters sharp and clean for better and safer performance. Do not use damaged cutters. Follow instructions for lubricating and changing accessories. Keep handles dry, clean and free from oil and grease.
13. Maintain accessories. Do not use damaged accessories. Only use accessories recommended by the manufacturer.
14. Check damaged parts. Before operation inspect the attachment, the power tool, the cable, extension cable and the plug carefully for signs of damage. Check for alignment of moving parts, binding, breakage, mounting and any other conditions that may effect its operation. Have any damage repaired by an Authorised Service Agent before using the tool or accessory. Protect tools from impact and shock.
15. Do not use tool if switch does not turn it on or off. Have defective switches replaced by an Authorised Service Agent.
16. Don't over reach. Keep proper footing and balance at all times. Do not use awkward or uncomfortable hand positions.
17. Don't abuse the cable. Never carry power tool or accessory by cord or pull it to disconnect from the socket.

Keep cord from heat, oil and sharp edges. Always trail the power cord away from the work area.

18. Connect dust extraction equipment. If devices are provided for the connection of dust extraction and collection facilities, ensure these are connected and properly used.
 19. Check all fixing and fastening nuts, bolts and screws on power tool, attachment and cutting tools before use to ensure they are tight and secure. Periodically check when machining over long periods.
 20. Stay alert. Watch what you are doing. Use common sense. Do not operate tools when you are tired, under the influence of drugs or alcohol.
 21. Personal Protective Equipment (PPE) for eye, ear and respiratory protection must be worn. All PPE must meet current UK and EU legislation.
 22. Do not leave tools running unattended. Do not leave tool until it comes to a complete stop.
 23. Always clamp workpiece being machined securely.
 24. Only use cutting tools for woodworking that meet EN847-1/2 safety standards, and any subsequent amendments.
 25. Vibration levels. Hand held power tools produce different vibration levels. You should always refer to the specifications and relevant Health & Safety Guide.
- Routing Safety**
1. Read and understand instructions supplied with power tool, attachment and cutter.
 2. Keep hands, hair and clothing clear of the cutter.
 3. Remove adjusting keys and spanners. Check to see that keys and adjusting spanners are removed from the router tool, cutter and attachment before turning router on. Make sure cutter can rotate freely.
 4. Noise. Take appropriate measures for the protection of hearing if the sound pressure of 85dB(A) is exceeded. Routing sound pressure may exceed 85dB(A), so ear protection must be worn.
 5. Eye protection. Always wear eye protection in the form of safety goggles, spectacles or visors to protect the eyes.
 6. Respiratory protection. Always wear a face or dust mask, or powered respirator. Dust masks/filters should be changed regularly.
 7. Do not switch router on with the cutter touching the workpiece. At the end of the cut, release the router plunger and allow spindle to stop rotating. Never use the spindle lock as a brake.

8. The direction of routing must always be opposite to the cutter's direction of rotation. Do not back-cut or climb-cut.
9. Check before cutting that there are no obstructions in the path of the router. Ensure there are no obstacles beneath workpiece when cutting full thickness, and that a sacrificial work surface is used.
10. Hold power tool by insulated gripping surfaces, because the cutter may contact its own cord. Cutting the "live" wire may make exposed metal parts of the powertool "live" and shock the operator.
11. Use clamps or another practical way to secure and support the workpiece to a stable platform. Holding the work by your hand or against the body leaves it unstable and may lead to loss of control.
9. Cutter shanks should be inserted into the collet all the way to the line indicated on the shank. This ensures that at least $\frac{3}{4}$ of the shank length is held in the collet. Ensure clamping surfaces are cleaned to remove dirt, grease, oil and water.
10. Observe the correct assembly and fitting instructions in the router instruction manual for fitting the collet, nut and cutter.
11. Tool and tool bodies shall be clamped in such a way that they will not become loose during operation. Care shall be taken when mounting cutting tools to ensure that the clamping is by the shank of the cutting tool and that the cutting edges are not in contact with each other or with the clamping elements.
12. It is advisable to periodically check the collet and collet nut. A damaged, worn or distorted collet and nut can cause vibration and shank damage. Do not over-tighten the collet nut.
13. Do not take deep cuts in one pass; take several shallow or light passes to reduce the side load applied to the cutter and router. Too deep a cut in one pass can stall the router.
14. In case of excessive vibrations whilst using the router stop immediately and have the eccentricity of the router, router cutter and clamping system checked by competent personnel.
15. All fastening screws and nuts should be tightened using the appropriate spanner or key and to the torque value provided by the manufacturer.
16. Extension of the spanner or tightening using hammer blows shall not be permitted.
17. Clamping screws shall be tightened according to instructions provided by the manufacture. Where instructions are not provided, clamping screws shall be tightened in sequence from the centre outwards.
18. Do not touch the cutter immediately after operation; it may be extremely hot and could burn your skin.
5. Whenever possible use a work holding device or jig to secure component being machined. Ensure any attachment is securely fitted to the workbench, with table surface at approximately hip height.
6. Use a No-Volt Release Switch. Ensure it is fixed securely, easily accessible and used correctly.
7. In router table (inverted) mode, stand to the front right of the table. The cutter will rotate anti-clockwise when viewed from top so the feed direction is from the right (against the rotation of the cutter). In overhead mode, stand to the front left of the machine table and the feed direction is from the left.
8. Do not reach underneath table or put your hands or fingers at any time in the cutting path while tool is connected to a power supply.
9. Never thickness timber between the back of the cutter and the backfence.

Router Cutter Safety

1. Cutting tools are sharp. Care should be taken when handling them. Do not drop cutters or knock them against hard objects. Handle very small diameter cutters with extra care. Always return cutter to its packaging after use.
2. Always use cutters with a shank diameter corresponding to the size of the collet installed in your tool.
3. The maximum speed (n.max) marked on the tool, or in instructions or on packaging shall not be exceeded. Where stated the speed range shall be adhered to. Recommended speeds are shown in the Trend Routing Catalogue and/or website.
4. Always use router cutters in a router. Drill and boring bits must not be used in a router. Router cutters must only be used for the material cutting application for which they are designed. Do not use on metal or masonry.
5. Never use cutters with a diameter exceeding the maximum diameter indicated in the technical data of the powertool or attachment used.
6. Before each use check that the cutting tool is sharp and free from damage. Do not use the cutting tool if it is dull, broken or cracked or if in any other damage is noticeable or suspected.
7. Cutters should be kept clean. Resin build up should be removed at regular intervals with Resin Cleaner. The use of a PTFE dry lubricant will reduce resin build up. Do not use PTFE spray on plastic parts.
8. When using stacked tooling (multi-blade, block and groover etc.) on a spindle arbor, ensure that the cutting edges are staggered to each other to reduce the cutting impact.

12. It is advisable to periodically check the collet and collet nut. A damaged, worn or distorted collet and nut can cause vibration and shank damage. Do not over-tighten the collet nut.
13. Do not take deep cuts in one pass; take several shallow or light passes to reduce the side load applied to the cutter and router. Too deep a cut in one pass can stall the router.
14. In case of excessive vibrations whilst using the router stop immediately and have the eccentricity of the router, router cutter and clamping system checked by competent personnel.
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16. Extension of the spanner or tightening using hammer blows shall not be permitted.
17. Clamping screws shall be tightened according to instructions provided by the manufacture. Where instructions are not provided, clamping screws shall be tightened in sequence from the centre outwards.
18. Do not touch the cutter immediately after operation; it may be extremely hot and could burn your skin.

Using Routers In A Fixed Position

1. Attention should be made to the HSE's Safe Use of Vertical Spindle Moulding Machines Information Sheet No.18 and any revisions.
2. After work, release the router plunge to protect the cutter.
3. Always use a push-stick or push-block when making any cut less than 300mm in length or when feeding the last 300mm of the cut.
4. The opening around the cutter should be reduced to a minimum using suitably sized insert rings in the table and closing the back fence cheeks or fitting a false fence on the backfence.

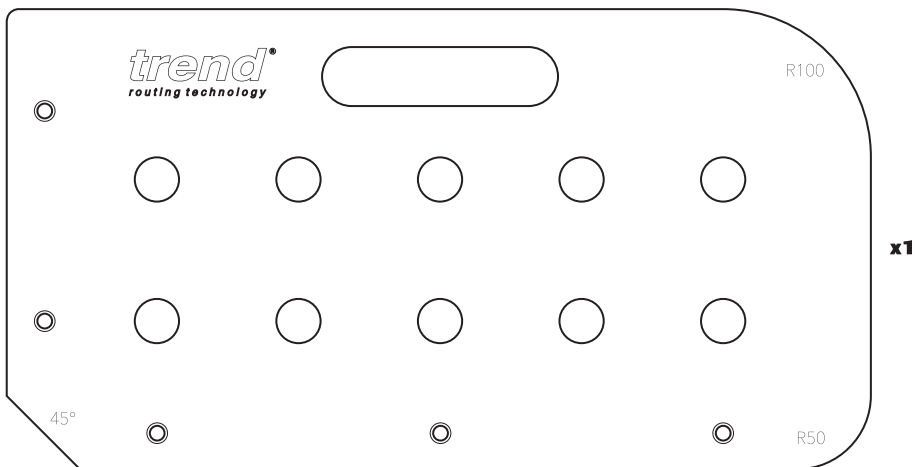
Useful Advice When Routing

1. Judge your feed rate by the sound of the motor. Feed the router at a constant feed rate. Too slow a feed rate will result in burning.
2. Trial cuts should be made on waste material before starting any project.
3. When using some attachments e.g. a router table or dovetail jig, a fine height adjuster is recommended.
4. When using a template guide bush, ensure there is sufficient clearance between cutter tip and inside edge of bush and that it cannot come into contact with collet and nut. Ensure cutter and guide bush are concentric.

Router Cutter Repair/Maintenance

1. Repair of tools is only allowed in accordance with the manufacturers instructions.
2. The design of composite (tipped) tools shall not be changed in process of repair. Composite tools shall be repaired by a competent person i.e. a person of training and experience, who has knowledge of the design requirements and understands the levels of safety to be achieved.
3. Repair shall therefore include, e.g. the use of spare parts which are in accordance with the specification of the original parts provided by the manufacturer.
4. Tolerances which ensure correct clamping shall be maintained.
5. Care shall be taken that regrinding of the cutting edge will not cause weakening of the body and the connection of the cutting edge to the body.

ITEMS ENCLOSED



x1



x1



x3



x4

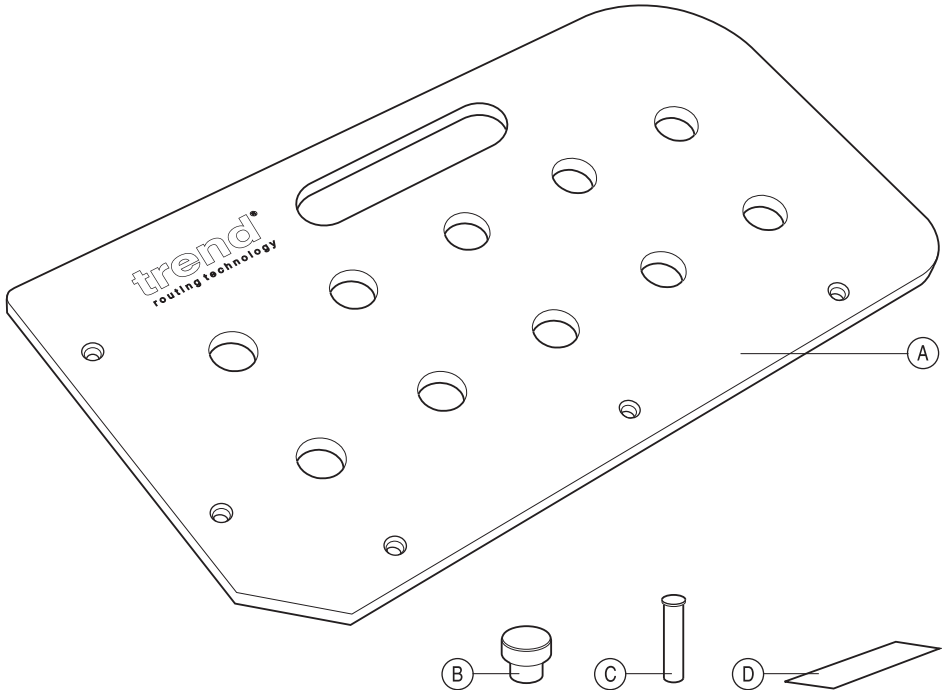


x1

ITEMS REQUIRED

- 1/2" collet plunge router
- 30mm guide bush
- A suitable 20mm diameter cutter (recommended Trend ref. C030DX1/2TC)
- Clamps
- Hand tools
- Workbench or trestles

DESCRIPTION OF PARTS



- (A) Top plate
- (B) Index pin
- (C) 10mm Diameter plastic pin
- (D) Self-adhesive backed foil tape 200mm x 50mm



A strip of self-adhesive backed foil tape is included with this jig. It can be applied to the guide bush outer wall in the event the guide bush is slightly undersize or applied to the bench dog 20mm body.

ACCESSORIES

Please use only Trend original accessories.

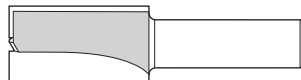
Router Cutters

Ref. C030DX1/2TC

20mm diameter x 37mm cut with plunge tip for MFT holes.

Ref. C166X1/2TC

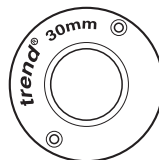
19.1mm diameter bearing guided 90° template profiler for edge profiles.



30mm Guide Bush

Ref. GB30/A

Should the correct guide bush not be available to suit your router's base, you will need to use the Trend UNIBASE in conjunction with a 30mm guide bush, Ref. GB30/A.



Universal Sub-base

Ref. UNIBASE

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

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

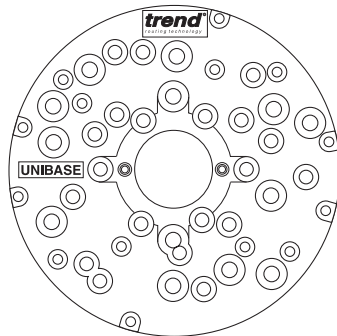
Festo OF2000E Freud FT2000E Hitachi MI12V, M12SA, TR12

Makita 3612BR, 3612(C) Metabo OF1612, OFE1812

Performance Pro CLM1250R >11/2003, CLM2050R

Ryobi RE600N, R600N, RE601, R500, R502

Skil 1875U1 T-TECH TT/R127 Wadkin R500

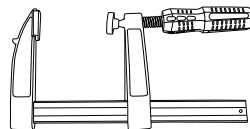


If there is any doubt about the concentricity of cutter relevant to the guide bush, then a sub-base should be used in order to ensure an accurate fit of face-plate.

Clamps

Ref. FC/200 (recommended)

Four heavy duty quick action or gripper clamps are required to secure the jig to the workpiece, and the workpiece to the workbench.



Whenever clamps are used, ensure they do not foul the router path and that they are securely tightened.

Short Bench Dogs

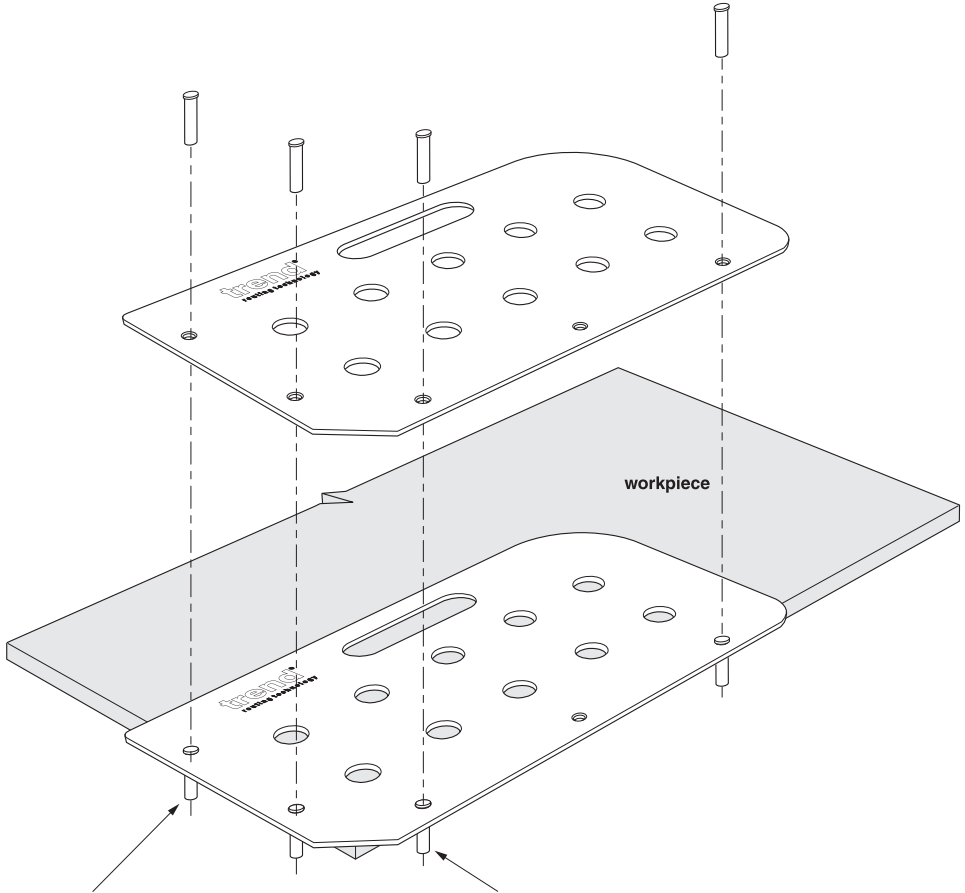
Ref. MFT/BD/SR/2PK Bench dog short round pair.

Ref. MFT/BD/SR/4PK Bench dog short round two pairs.



ASSEMBLY

The jig requires the 10mm edge pins to locate in first routing position on workpiece.



**Ensure working position is comfortable.
Keep proper footing at all times.**



Ensure workpiece is held securely and that the jig is clamped securely to the workpiece and placed at a comfortable height.

OPERATION



Workpiece Preparation

It is recommended that the workpiece is made from timber-based sheet material with a thickness of 18 - 25mm, e.g. Medium Density Fibreboard (MDF).

Diagram below shows an example of workpiece layout. The jig can create a grid of holes with 96mm centre to centre distance between holes and a 71mm margin from edge of workpiece to centre of first hole, with the 10mm edge pins fitted.

Therefore to create a workpiece with 71mm margin around grid, the calculation in each direction would be:
71mm margin x 2, plus a multiple of 96mm.

Example:

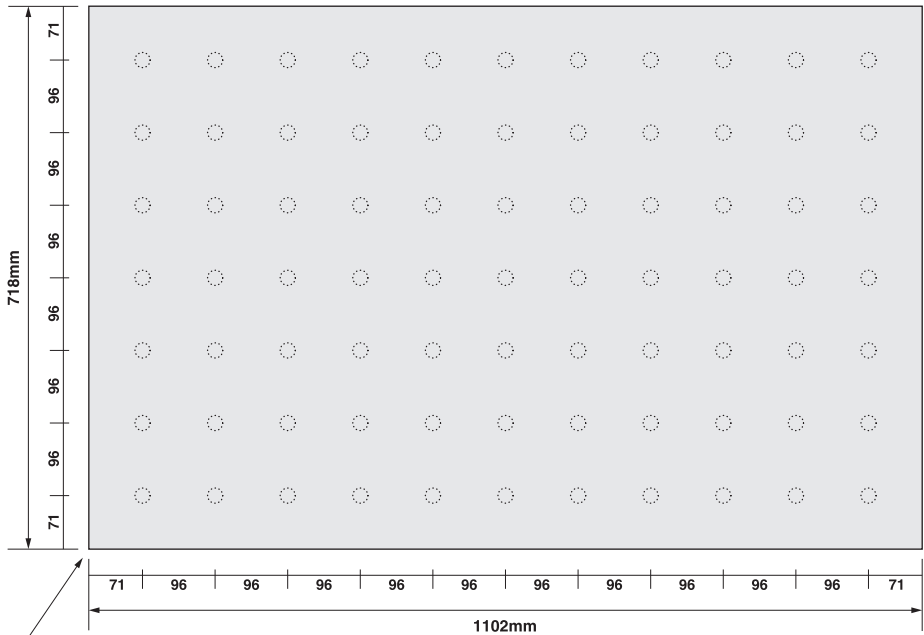
Calculation for workpiece size with a grid of seven holes x eleven holes.

Length:
71mm margin + 960mm (96 x 10 units)
+ 71mm margin=1102mm.

Width:
71mm margin + 576mm (96 x 6 units)
+71mm margin=718mm.

A pocket for storing small accessories can be routed part-depth into the workpiece using the jig handle template. A 20mm hole would be excluded from this location.

Cut the workpiece to the finished size, ensuring corners are square.



Workpiece cut square

Suggested Set-up 

Diagram A shows workpiece on a workbench. Insert a sacrificial board under workpiece to prevent router cutter plunging into workbench. Alternatively, lay workpiece on trestles, as shown in **Diagram B**, and ensure holes being routed avoid colliding with trestles by re-positioning if required.

Insert the four edge stop pins to the jig and offer up the jig to corner of workpiece. Clamp the jig in place in two locations, ensuring the edge stop pins are mated up to the edge of workpiece. Clamp workpiece to workbench ensuring the workpiece is adequately supported and cannot tip over.

Fit a Trend GB30/A guide bush to the router. A sub-base may be needed for some non-Trend routers. Please check the router compatibility chart on our website www.trend-uk.com for further details.

Fit a suitable 20mm diameter cutter into the router.

Offer router with 30mm guide bush into one of the circular jig apertures. Ensure depth stop is set correctly so that the cutter depth will reach a short amount beyond workpiece depth when plunged and will not damage workbench or trestles below.

Diagram A

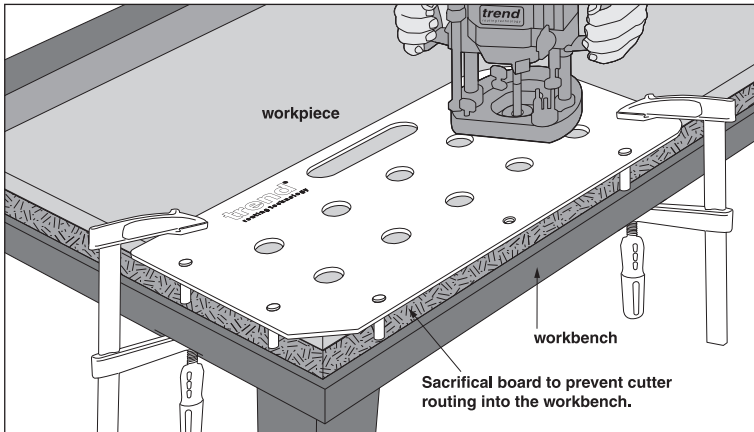
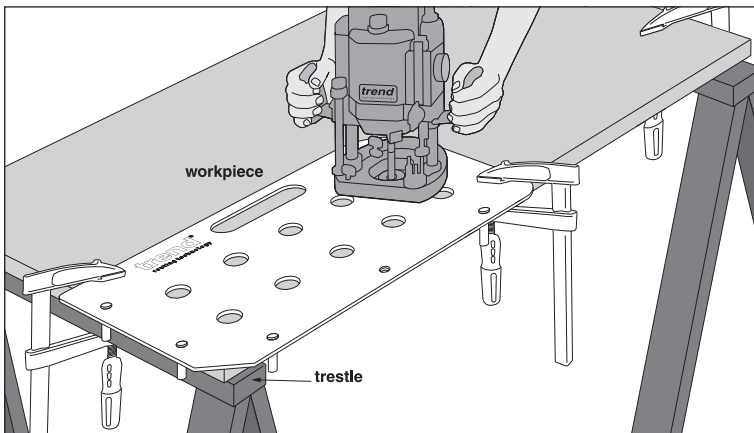


Diagram B



Routing Sequence



When using a jig there will be a cumulative error that cannot be avoided when indexing the jig on existing holes.

To reduce the error we advise that a certain sequence is used when indexing.

It is advisable to reduce the speed of the cutter as well.

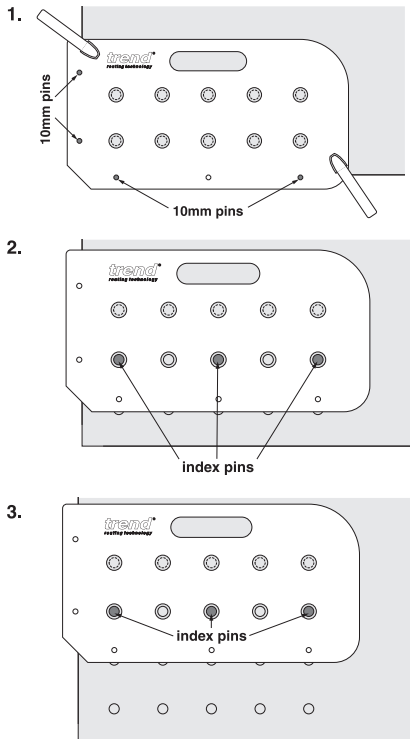
Routing the Holes



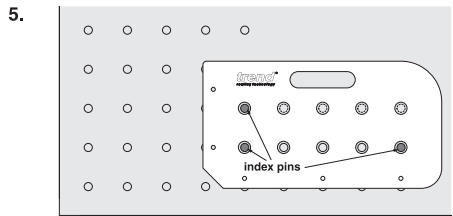
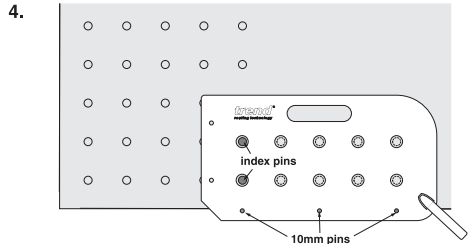
Turn on machine, prepare to plunge router cutter. Set router at a slower speed of about 18000 rpm. For best results, a pecking method should be used, where the cutter is plunged part depth the retracted. This allows waste material to escape.

Repeat until full depth reached. Take care not to apply excessive downward pressure, so that the cutter routs a clean exit through the board.

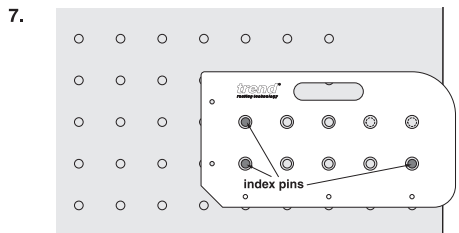
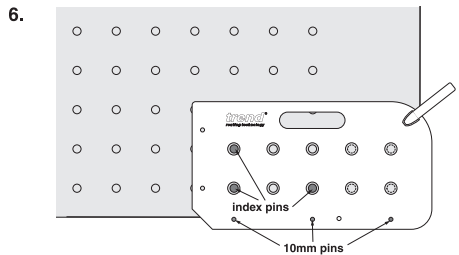
Repeat using the sequence shown.



Repeat step 3 at next position up.
Repeat as required. Move across to step 4.



Repeat step 5 at next position up.
Repeat as required. Move across to step 6.



Repeat step 7 at next position up.
Repeat as required.

Routing Accessory Pocket

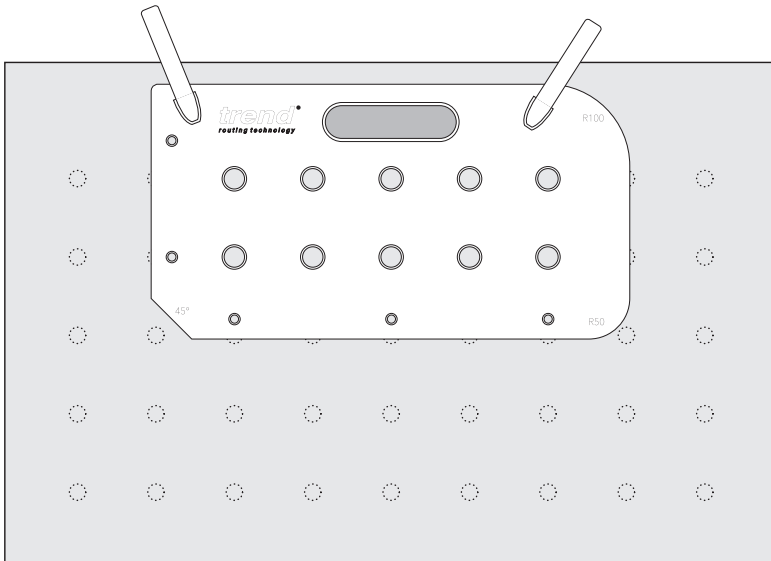
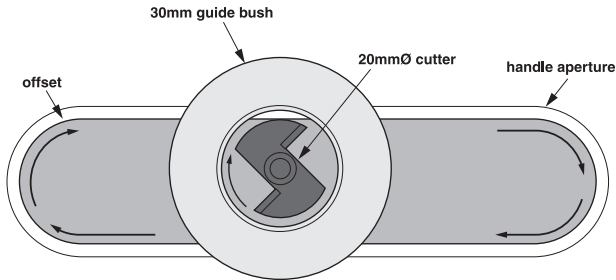
Mark out handle position required.

Lay jig handle aperture over marking, spacing equally and clamp jig in place, parallel with edge of workpiece.

Set cutter to required pocket depth.

Use the 20mm cutter with a 30mm guide bush to create a pocket.

Rout pocket, taking light passes, until required depth is reached.



If the accessory bench dog body is too tight to fit hole, use a piece of wire wool to gently adjust the 20mm body diameter.



The self-adhesive backed foil can be carefully applied to the 20mm body of the bench dogs if they are a loose fit in the 20mm holes.

Radius & Chamfer Corner Profiles



The external profile corners on the jig can be used to create either a radius or a 45 degree chamfer corner on the worktop.

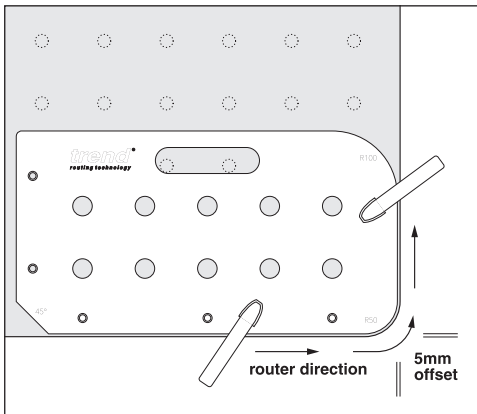
The 20mm cutter and 30mm guide bush can be used in conjunction, creating a 5mm offset. For a radius profile corner, select one of the corner radius profiles on the jig, and set 5mm back from the corner edges of the worktop. Clamp jig in place. Rout in several passes travelling from left to right direction until full depth is reached.

For a 45 degree corner, set the chamfer corner profile on the jig 5mm back from the finish line required. Clamp jig in place. Rout in several passes travelling from left to right direction until full depth is reached.

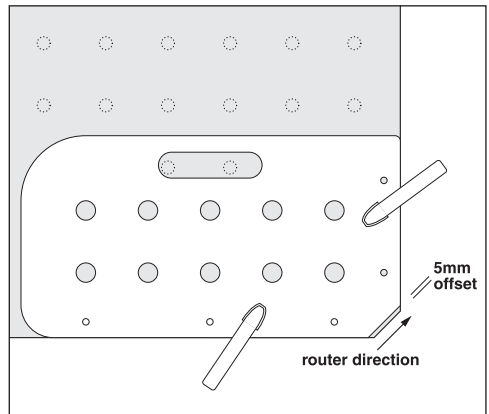
If using a different size guide bush and cutter for the chamfer or radius corners, adjust 5mm offset accordingly.

Alternatively, the profile corners of the jig could be positioned flush with the worktop and the corner trims back flush with the jig, using a bearing guided profile trimmer e.g. C166X1/2TC, however the excess would need to be cut off first so that the router cutter only takes a light trim.

After use store the jig carefully.



Radius Profile Corner



45° Chamfer Corner

MAINTENANCE



The jig has been designed to operate over a long period of time with a minimum of maintenance. Continual satisfactory operation depends upon proper tool care and regular cleaning.

Cleaning

- Regularly clean the jig with a soft cloth.

Lubrication

- Your jig requires no additional lubrication.

Storage

- After use, store jig in its packaging or it can be hung on a wall hook.

ENVIRONMENTAL PROTECTION

Recycle raw materials instead of disposing as waste.

Packaging should be sorted for environmental friendly recycling.

The product and its accessories at the end of their life should be sorted for environmental friendly recycling.

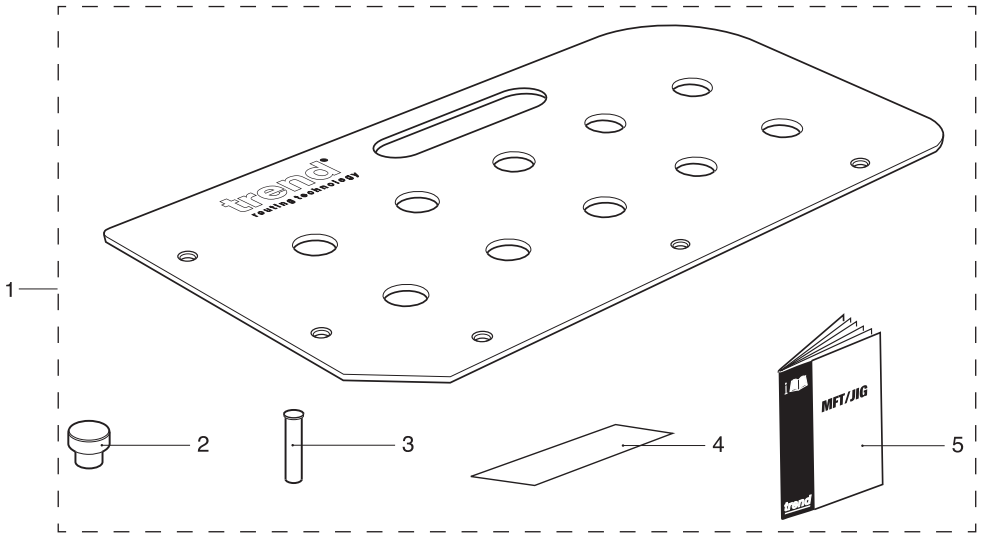
GUARANTEE

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

MFT/JIG SPARE PARTS DIAGRAM

v1.0 04/2019

Please use only Trend original spare parts and accessories.



MFT/JIG - SPARE PARTS LIST			v1.0 04/2019
No.	Qty.	Description	Ref.
1	1	Top Plate	MFT/JIG
2	3	Index Pin	WP-MFT/01
3	1	Pin 10mm (Pack of Four)	KWJ/PIN/4
4	1	Self Adhesive Foil Tape 50mm x 200mm	WP-MFT/02
5	1	Manual	MANU/MFT/JIG

TROUBLE SHOOTING

Fault	Cause	Remedy
■ Cutter burning workpiece	Cutter has resin build-up. Cutter blunt. Wrong cutter.	Clean cutter. Replace cutter. Use correct cutter.
■ Edge pins out when re-positioned	Board out of square.	Re-cut board square.
■ Holes too big	Wrong size cutter. Wrong size guide bush. Bench dogs too small. RPM too fast on router. Cutter not inserted far enough into the collet.	Use correct size cutter. Use correct size guide bush. Apply foil shim to guide bush if required. Use Trend Bench dogs which have a 20mm diameter neck. Reduce RPM on router. Insert sufficiently to K mark on shank of Trend cutter.

MANU/MFT V1



Trend Machinery & Cutting Tools Ltd.
Odhams Trading Estate St Albans Road
Watford WD24 7TR England
Tel: 0044(0)1923 249911
technical@trendm.co.uk
www.trend-uk.com