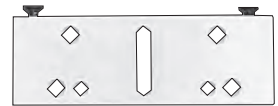
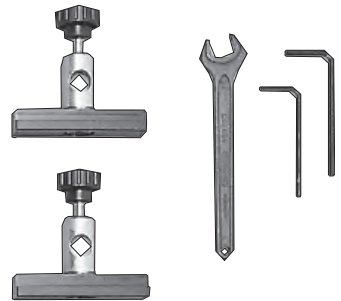
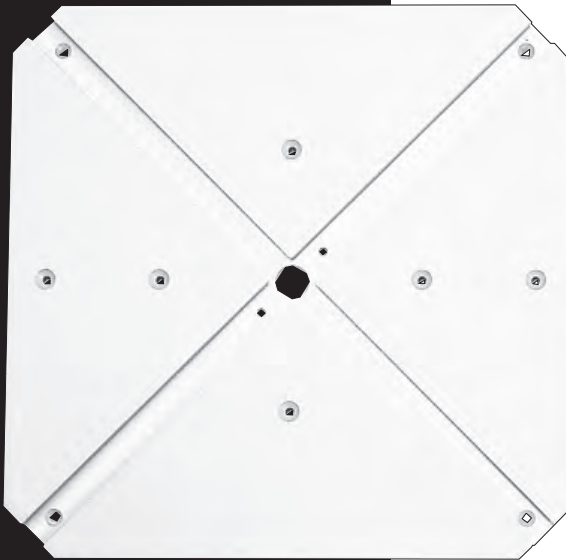




# ELLIPSE JIG



**trend**<sup>®</sup>  
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

Ellipse size:	max.	1800mm x 1400mm
	min.	700mm x 580mm
Circle size:	max.	1800mm
	min.	580mm
Weight		3.2kg

The following symbols are used throughout this manual:



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 router fitted with a suitable router cutter to rout ellipses and circles in timber and manmade boards.



If you require further safety advice, technical information or spare parts, please call Trend Technical Support or visit [www.trend-uk.com](http://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. 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 plunge 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.

**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<sup>®</sup>. 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.
9. Cutter shanks should be inserted into the collet all the way to the line indicated on the shank. This ensures that at least 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 overtighten 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.
15. 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.

**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 back fence.
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.

**Useful Advice When Routing**

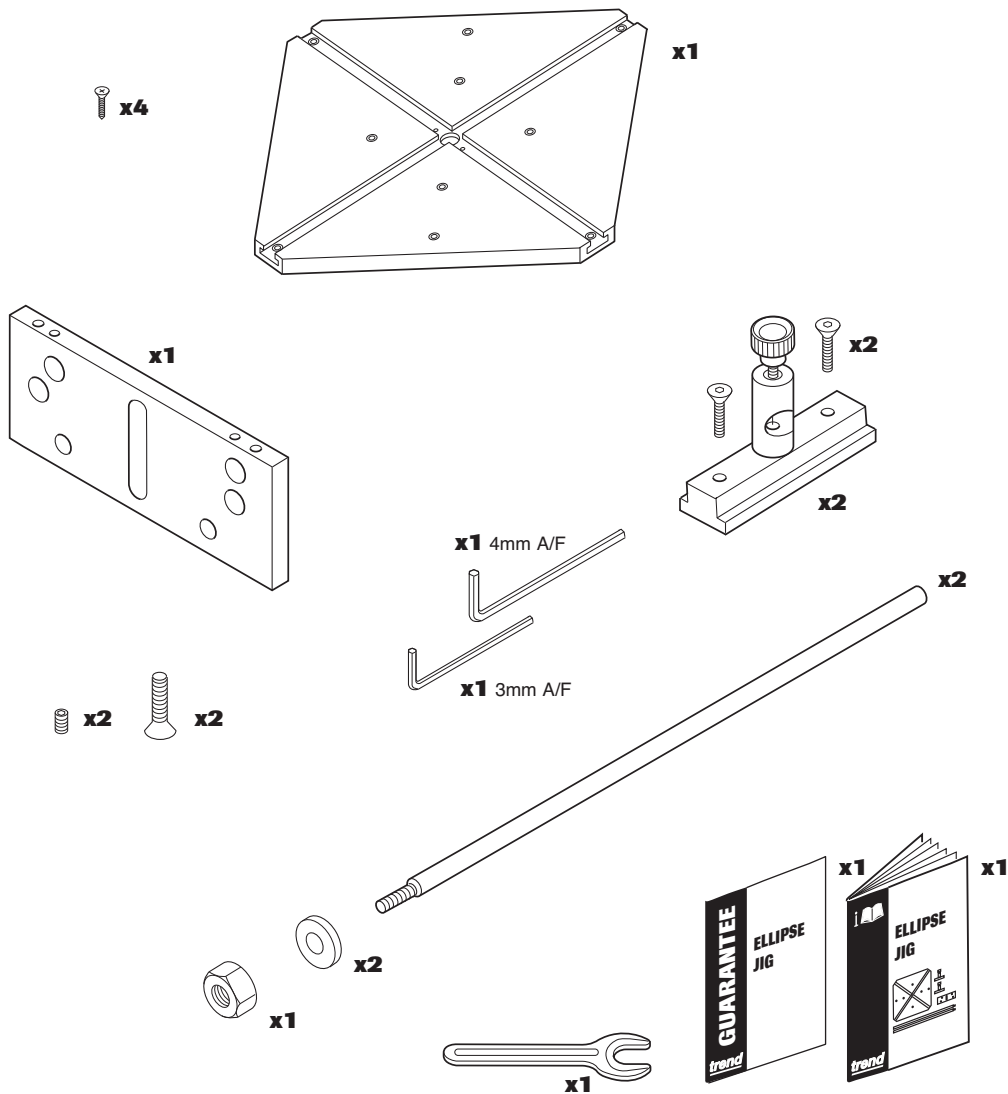
1. Judge your feed rate by the sound of the motor. Feed the router at a constant feed rate. Too slow a feed rate will result in burning.
2. Trial cuts should be made on waste material before starting any project.
3. When using some attachments e.g. a router table or dovetail jig, a fine height adjuster 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.
3. 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.
4. 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.
5. Tolerances which ensure correct clamping shall be maintained.
6. Care shall be taken that grinding of the cutting edge will not cause weakening of the body and the connection of the cutting edge to the body.

Version 7.1 06/2006

**ITEMS ENCLOSED**



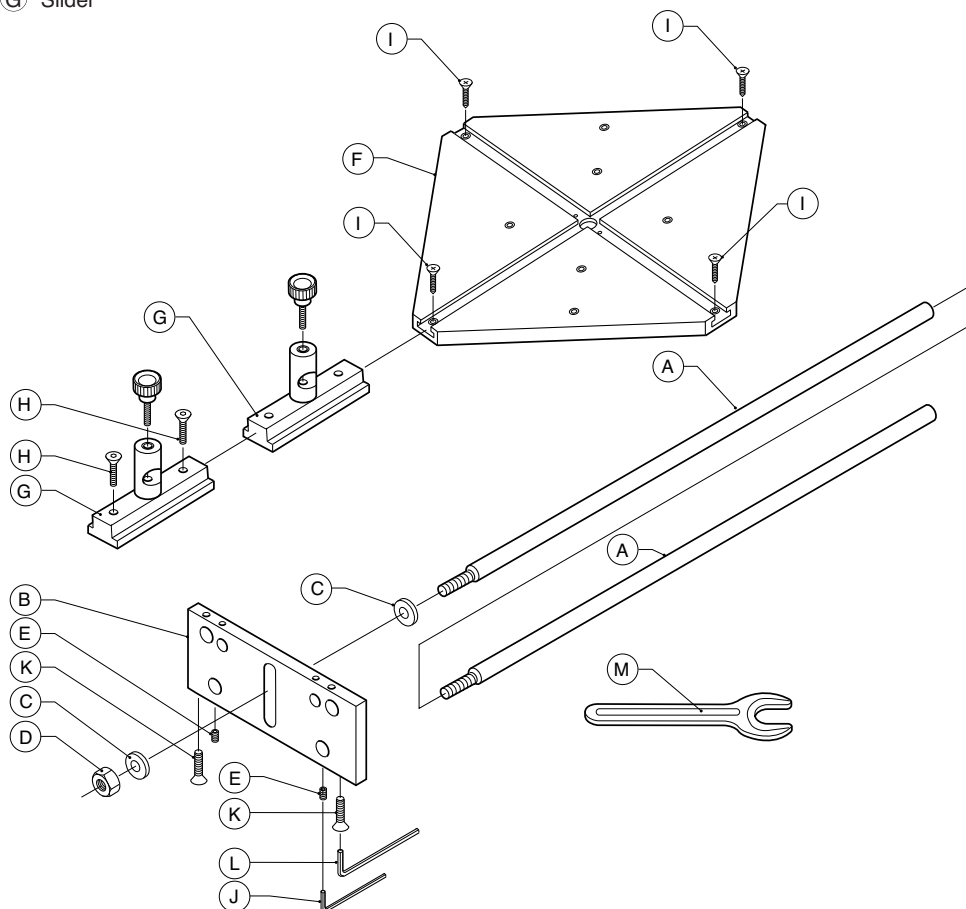
**ITEMS REQUIRED**

- Router.
- Hand Tools.
- Suitable Router Cutter.

**DESCRIPTION OF PARTS & ASSEMBLY**

Use the diagram below as a guide to assembling the jig.

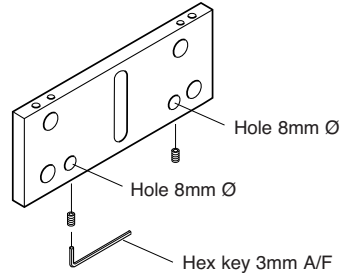
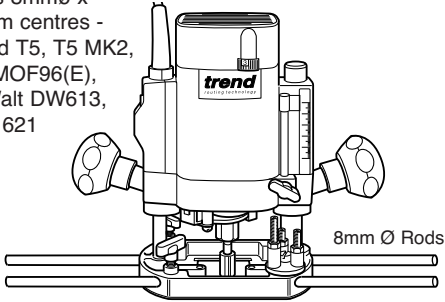
- |                          |  |
|--------------------------|--|
| (A) Trammel bar          | (H) Circle cutting fixing screws M5 x 20mm   |
| (B) Connector plate      | (I) Mounting screws                          |
| (C) Washer               | (J) Hex key 3mm A/F                          |
| (D) Nut M8               | (K) False base plate fixing screws M6 x 20mm |
| (E) Grub screw M6 x 5mm  | (L) Hex key 4mm A/F                          |
| (F) T-slotted main plate | (M) Spanner 13m A/F                          |
| (G) Slider               |  |



**Mounting Router** 

The Ellipse Jig will fit Trend, Elu and DeWalt routers directly. For other makes of router an accessory base plate is required.

Rods 8mmø x  
84mm centres -  
Trend T5, T5 MK2,  
Elu MOF96(E),  
DeWalt DW613,  
620, 621

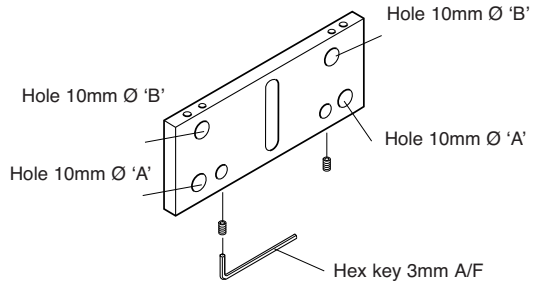
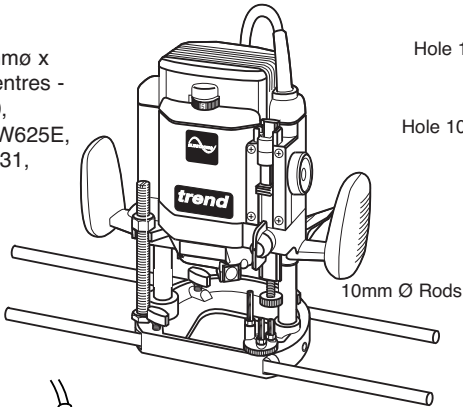


**Hole 'A'**

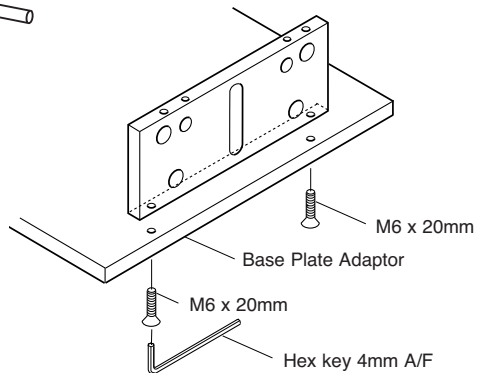
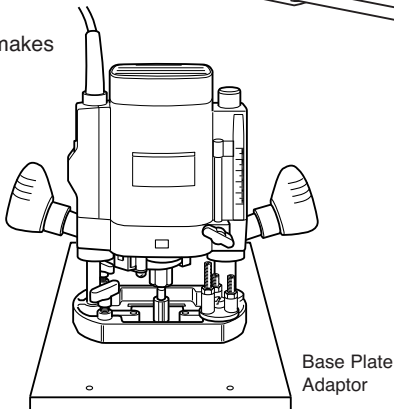
Rods 10mmø x 110mm centres - Trend T9, T11

**Hole 'B'**

Rods 10mmø x  
100mm centres -  
Trend T10,  
DeWalt DW625E,  
Elu MOF131,  
177(E),

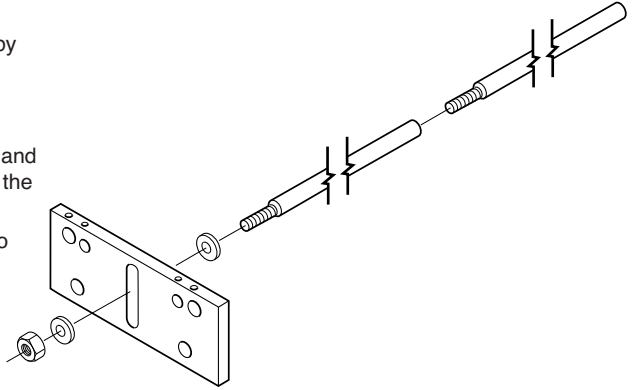


**Other makes**



## Trammel Bar Assembly

- Fit the two trammel bars together by threading the male thread into the female hole.
- Put the washer onto the threaded section of the joined trammel bars and pass the threaded section through the slot in the connector plate.
- Fit the second washer and nut onto the thread and hand tighten.

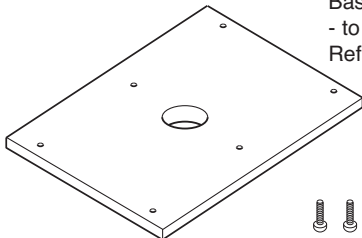


## Ellipse & Circle Sizes

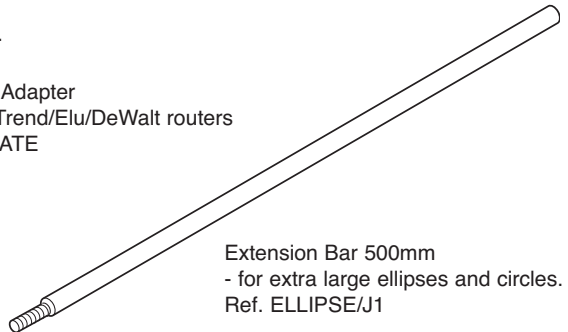
Ellipse Major Axis	Ellipse Minor Axis	
	Max.	Min.
1800mm	1650mm	1400mm
1500mm	1350mm	1100mm
1200mm	1050mm	800mm
900mm	760mm	580mm
800mm	650mm	580mm
700mm	580mm	580mm
Circle Dia. Min.	580mm	
Circle Dia. Max.	1800mm	

## ACCESSORIES

Please use only Trend original accessories.



Base Plate Adapter  
- to fit non Trend/Elu/DeWalt routers  
Ref. GB/PLATE



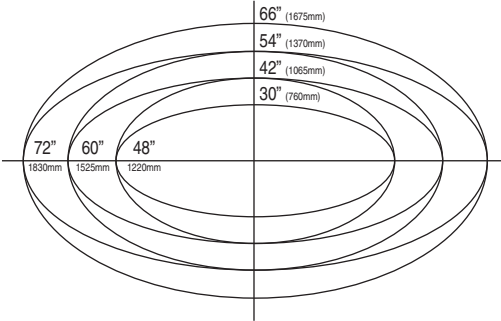
Extension Bar 500mm  
- for extra large ellipses and circles.  
Ref. ELLIPSE/J1



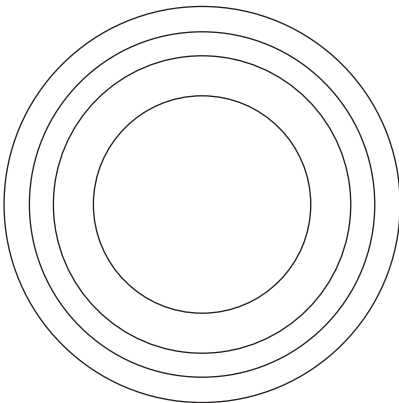
**Ellipse & Circle Look-up Chart**

This shows three major lengths of ellipses with the maximum and minimum widths.

Any variation between these sizes can also be produced with this jig.



With circle cutting attachments, diameters of 1850mm or more can be cut, routed or moulded



Minor Axis		Major Axis
Min	Max	
2700	2940	3090
1700	1930	2100
1620	1850	2000
1570	1800	1950
1500	1750	1900
1450	1700	1850
1400	1650	1800
1350	1600	1750
1300	1550	1700
1250	1500	1650
1200	1450	1600
1150	1400	1550
1100	1350	1500
1050	1300	1450
950	1250	1400
950	1200	1350
900	1150	1300
850	1100	1250
800	1050	1200
750	1000	1150
710	950	1100
660	900	1050
610	850	1000
580	800	900
580	760	900
580	700	850
580	650	800
580	610	750
580	580	690

Maximum possible with the addition of one extension bar



Maximum possible with standard 100mm trammel bar



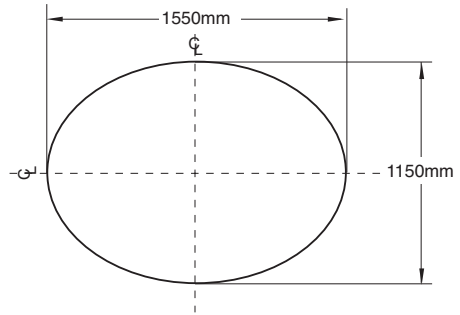
**OPERATION**



**Basic Setting Up Procedure**

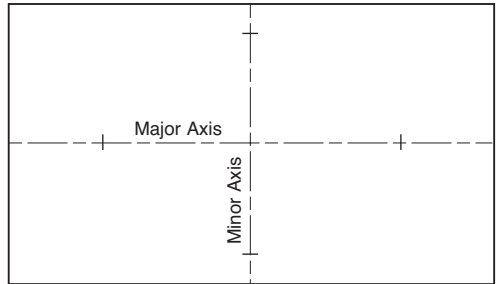
for an Ellipse 1550mm x 1150mm.

Illustrations are symbolic and not to scale.



**Marking Out**

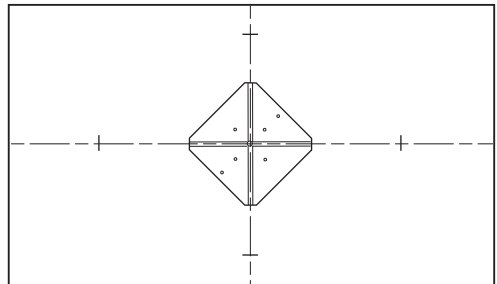
- Determine size of workpiece required.
- Ensure chosen workpiece is sufficiently larger to accommodate the ellipse and support the jig.
- On the underside of the workpiece mark the centre lines for the major and minor axis.
- Mark overall dimensions of ellipse onto centre lines.



**Fixing Main Plate**



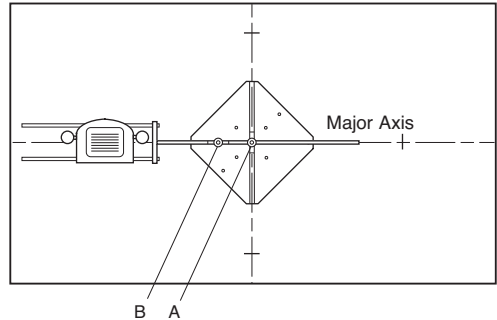
- Position main plate using the four sighting holes on the perimeter of the main plate.
- Drill four 3.2mm (1/8") diameter holes through the holes of the main plate into the workpiece.
- Using the four mounting screws, fix the main plate to the workpiece.



**Ensure working position is comfortable and work bench is at a suitable height.**

### Setting Major Axis

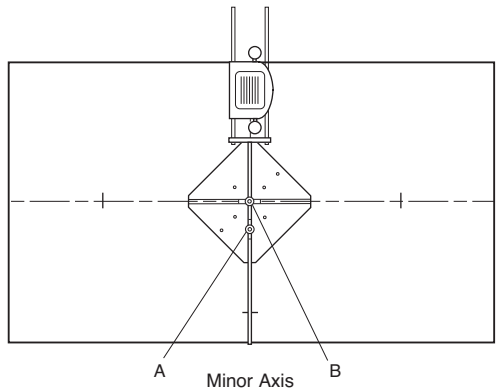
- Slide the two sliders into each slot on the main plate at 90° to each other.
- Loosen both knobs, A and B.
- Slide the trammel bar assembly with router fitted through the holes in the sliders. Level adjuster plate so that router base is flat on the material. Tighten nut on trammel bar, using the spanner.
- Position the router over major axis mark. Slide trammel bar assembly until cutter is positioned over mark, then lock knob 'A'.



### Setting Minor Axis

- Position router cutter over minor axis mark, slide trammel bar assembly until cutter is positioned over mark, then lock knob 'B'.

Setting up of the Ellipse Jig is now complete.



### Fixing Methods



The workpiece should be fixed onto a false or waste piece to stop you damaging your work bench.

There are many methods depending on the application as follows:

1. 'G' clamps should be positioned outside the swing area of the jig.
2. Cam clamps are ideal as they will not obstruct the jig. An adjustable camclamp jig can be made for various sizes of ellipses.
3. Double-sided tape (Ref. DS/TAPE) can be used and rolled off easily after operation.
4. Spot gluing with a hot melt glue gun will allow the workpiece to be prized off with minimal surface damage.
5. Panel pins are a quick and easy method providing the small holes are acceptable.



**Trial runs should be made on scrap material when first using this Jig.**

## Routing Operation

- Fit cutter, switch router on, plunge in and make repeat sweeps with the router at 3-6mm steps.
- When routing ensure power cable does not get twisted.



**Note that when cutting or central panelling, one can reverse direction of feed to stop the electric cable becoming twisted. However, when edge moulding and cutting, feed direction must be opposite to that of the cutter.**



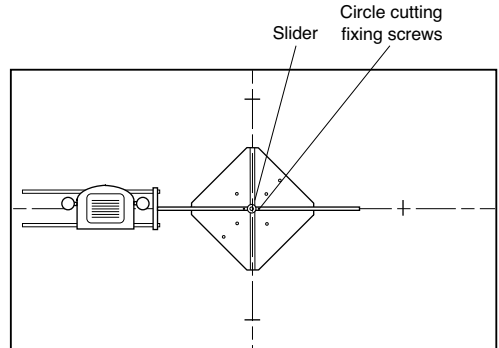
**Care should be taken on the last cut prior to break through, as the resultant ellipse or circular plaque or ring can possibly move. Double sided tape can be used to eliminate any danger of this occurring.**

- After cut is complete, release router plunge and switch off router.

## Circle Cutting

- Fit only one slider in the centre of the main plate using the two M5 x 20 countersink machine screws supplied.
- Fit main plate to workpiece. The screws are fitted from the underside and can be tightened using the 3mm hex key.
- Fit trammel bar assembly.
- Adjust length of trammel bar as required for cutting circles from 550mm to 1800mm in diameter.
- Fit cutter and rout out the circle.
- After cut is complete, release router plunge and switch off router.

After use remove router from jig, remove trammel bars from slider sets and disassemble bars, store jig carefully.



## MAINTENANCE

Please only use Trend original spares and accessories.

This 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

- Keep the grooves on the main board clear of sawdust.
- Regularly clean the jig with a soft cloth.

### Lubrication

- Your jig requires no additional lubrication.

### Storage

- After use store jig in its packaging or place in a cupboard.

## 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 its life should be sorted for environmentally friendly recycling.

## GUARANTEE

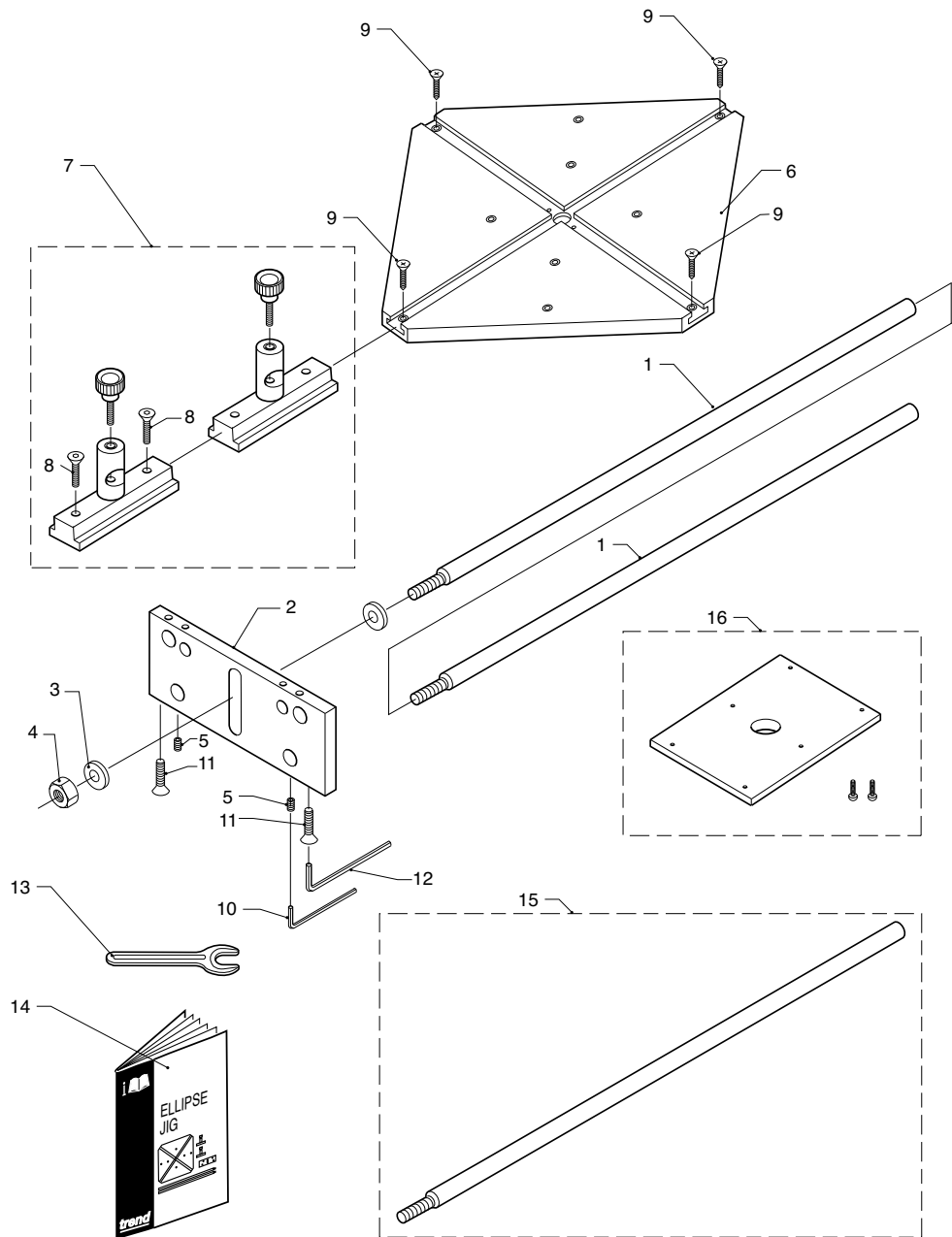
The jig carries a manufacturers guarantee in accordance with the conditions on the enclosed guarantee card.

Please use only Trend original spare parts.

<b>ELLIPSE JIG - SPARE PARTS LIST</b>			<b>v7.0 05/2012</b>
<b>No.</b>	<b>Qty.</b>	<b>Desc.</b>	<b>Ref.</b>
1	1	Trammel Bar 500mm x 13mm dia. (pair)	WP-EJ/01
2	1	Connector Plate	WP-EJ/02
3	2	Washer M8 Form A	WP-WASH/15
4	1	Nut Hex M8	WP-NUT/08
5	1	Grub Screw M6 x 5mm (pair)	WP-EJ/05
6	1	T-slotted Main Board	WP-EJ/06
7	1	Slider Set (pair)	WP-EJ/07
8	1	Set Bolt Csk M4 x 25mm Slot	WP-EJ/08
9	4	Screw Wood No.8 x 32mm Pozi	WP-SCW/107
10	1	Hex Key 3mm A/F	WP-AP/03
11	2	Machine Screw Csk M6 x 20mm Skt (pair)	WP-SCW/70
12	1	Hex Key 4mm A/F	WP-AP/04
13	1	Spanner 13mm OE	SPAN/13
14	1	Manual	MANU/LEJ
15	0	Extension Bar 500mm x 13mm dia.	ELLIPSEJ/1
16	0	Base Plate Adapter	GB/PLATE

**ELLIPSE JIG - SPARE PARTS DIAGRAM**

v7.0 05/2012



MANU/LEJ V7.1



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