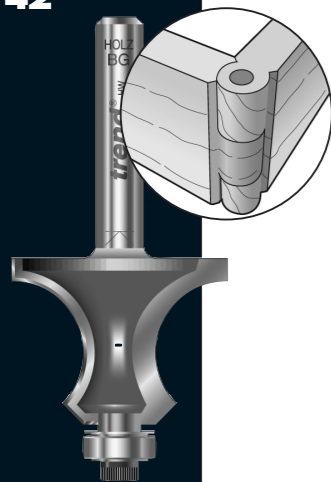




## Knuckle Joint Cutter

# 9/41 9/42



Please read carefully before use

### KNUCKLE JOINT CUTTER

REF. 9/41 & 9/42

Thank you for purchasing this Trend router cutter which should give lasting performance if used in accordance with these instructions.

The cutter is designed to cut a knuckle joint in timber for the support on a drop leg table. The cutter Ref. 9/41 is for use on 14mm thick timber and the cutter Ref. 9/42 is for use on 19mm thick material. The cutters will create part of the knuckle, but some hand tools including a gouge will be required to complete the joint.

The following symbols are used throughout these instructions.



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



Refer to the instruction manual of your power tool.

This cutter 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 98/37/EC (identified by the CE marking on the power tool).

### INTENDED USE

This cutter is intended to be used with a portable plunge router with a suitable size collet fitted into a router table, to cut wood, to create a knuckle joint for a drop leaf table.

### SAFETY

Please read and understand the safety points at the end of this instruction as well as the power tool instructions before use.

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 in using woodworking equipment before using our products.

### ITEMS REQUIRED

- Router with suitable collet
- Router table
- Handtools
- Chisel
- Fretsaw
- Bandsaw
- Drill stand

### OPERATION



Carefully remove the protective wax from the cutter and dispose.

Ensure the two pieces of timber to be used for each knuckle joint are accurately planed to thickness and cut off square at the ends.

Their length and width will obviously depend on the project in hand but in theory a joint of any width could be made providing an accurate hole can be drilled through the completed joint.



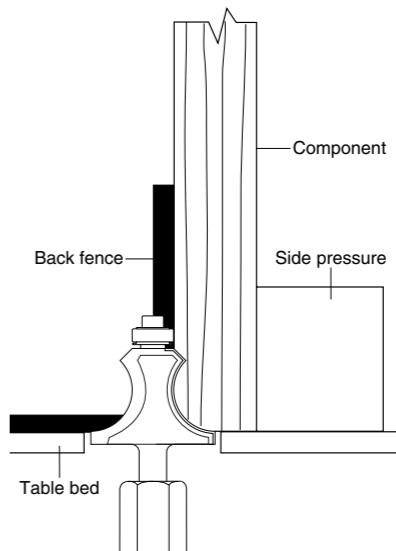
Recommended speed is 24,000rpm

### Moulding the Knuckle

With the timber planed to thickness insert the cutter into the router fitted to a router table with a back fence. Align the bearing on the end of the cutter with the back fence by using a straight edge. Adjust the height of the router so the lower edge of the cutter curve is in line with the table bed. This is easily checked with a simple straight edge.

Fit a side pressure to the table bed to assist in holding the timber against the back fence. Switch the router on and while maintaining an even feed rate, feed the timber from right to left keeping the square end of the timber flat on the table bed. A work holding device will make this operation easier and safer. Check the cut and adjust as necessary.

### First Cut



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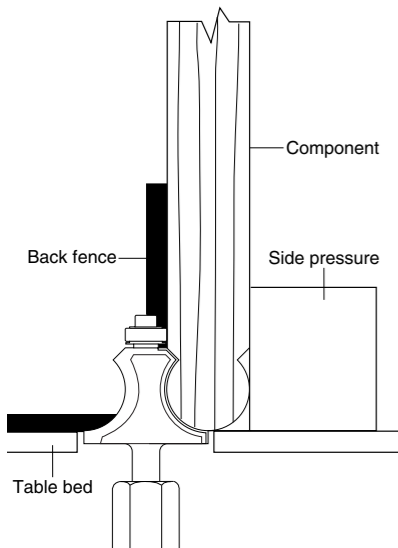
RS 28982  
Stockholding  
& Supply



RECYCLABLE

Remove the timber and turn it over and repeat this operation for the other face of the wood.

## Second Cut

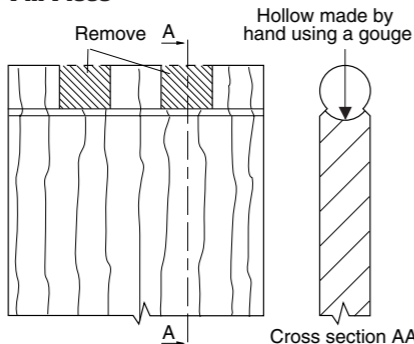


## Cutting the Pins

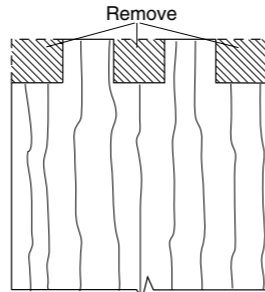
Using a small square accurately mark out the straight lines on the ends where the cuts are to be made to create the box joints and shade in the waste area. A bandsaw can be used to cut this square, but care should be taken to cut only as far as the bottom of the 'V' cut in the side of the wood and cut on the waste side of the pencil line to make a better fit. Use a fretsaw to remove the waste wood by cutting along the 'V' groove. Trim with a chisel until the two timbers can slide into each other.

If you are using the Trend DC400, set the machine to cut the box joints and cut to a depth level with the bottom of the 'V' groove. The resulting cut is quick and accurate.

## Pin Piece



## Mating Pin Piece

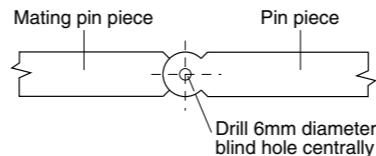


## Hollowing out the bottom of the Pin Slot by hand

Hollowing out the bottom of each pin slot to a curve has to be cut by hand. The hollow will need to match that of the circles at the end of the timbers. Use a sharp chisel with the bevel side down to scoop out the waste wood. A limited amount of timber will need to be removed by hand, but it must be sufficient to enable the two pieces of timber to be fitted together and to enable all the curved faces to line up level with each other.

## Drilling the Hole

The hole must be drilled on a pillar drill or drill stand. The two components should be fitted together so the curves are level with each other. Clamping the two components against a straight piece of timber is helpful. Use a centre punch to mark the exact centre of the circle seen at the edges of the timbers and drill a 6mm diameter blind hole through the joints to suit a metal rod that will act as a pivot pin. Stop the hole about 5mm from the other end as this will prevent the pin from dropping out in future as the joint wears with use.



Before using cutter, please ensure it is correctly assembled and locking screw is fully tightened.

## MAINTENANCE

Continual satisfactory operation depends upon proper tool care and regular cleaning.

### Cleaning

- Ensure clamping surfaces are cleaned to remove dirt, grease, oil and water.
- Remove resin build-up regularly.

### Lubrication

- Use a PTFE dry lubricant spray on tool to increase cutting edge life.

### Storage

- Always return cutter to its packaging after use.

## 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 environmental-friendly recycling.

## GUARANTEE

All Trend products guaranteed against any defects in either workmanship or material, except products that have been damaged due to improper user or maintenance.

## Safety Points

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. Read and understand instructions supplied with power tool, attachment and cutter.
3. Current Personal Protective Equipment (PPE) for eye, ear and respiratory protection must be worn. Keep hands, hair and clothes clear of the cutter.
4. Before each use check cutter is sharp and free from damage. Do not use if cutter is dull, broken or cracked or if any damage is noticeable or suspected.
5. The maximum speed (nmax) marked on tool or in instructions or on packaging shall not be exceeded. Where stated, the speed range should be adhered to.
6. Insert the shank into the router collet at least all the way to the marked line indicated on the shank. This ensures at least 3/4 of shank length is held in collet. Ensure clamping surfaces are clean.
7. Check all fixing and fastening nuts, bolts and screws on power tool, attachment and cutting tools are correctly assembled, tight and to correct torque setting before use.
8. Ensure all visors, guards and dust extraction is fitted.
9. The direction of routing must always be opposite to the cutter's direction of rotation.
10. Do not switch power tool on with the cutter touching the workpiece.
11. Trial cuts should be made in waste material before starting any project.
12. Repair of tools is only allowed according to tool manufacturers instructions.

Please see [www.trend-uk.com/safety](http://www.trend-uk.com/safety) for more safety advice.



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