



Mitre Lock 10/97 & C189 10/99 & C188



INST/10/99 v6.0

trend[®]
routing technology

Please read carefully before use

MITRE LOCK

REF. 10/97 & C189, 10/99 & C188

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

These instructions can be used in conjunction with the two sizes of mitre lock offered by Trend.

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 2006/42/EC (identified by the CE marking on the power tool).

INTENDED USE

The small mitre lock cutters reference 10/97X1/4TC and C189X1/4TC can be used with material of minimum thickness of 8mm and up to a maximum material thickness of 12mm.

The larger mitre lock cutters reference 10/99X1/2TC and C188X1/2TC can be used with material of minimum thickness of 15mm and up to a maximum work piece thickness of 25mm. Due to the large diameter of these tools the spindle speed should be reduced to 16,000 rpm.

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.

Attention should be made to the HSE's Safe Use of Vertical Spindle Moulding machines Information Sheet No. 18 and any revisions. Please keep children away from tools and work area.

All power tools will have a residual risk, so must therefore be operated with caution.

ITEMS REQUIRED

- Router with suitable collet fitted.
- Router table or overhead router stand.
- Hand tools.
- Jig making equipment & materials.
- Workholder.



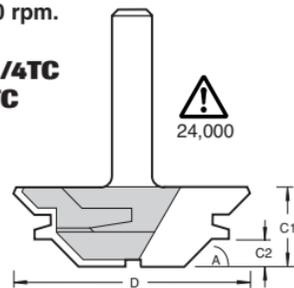
Mitre lock cutters must only be used in a router table.



Recommended speed for 10/97 & C189 is 24,000 rpm. Recommended speed for 10/99 & C188 is 16,000 rpm.

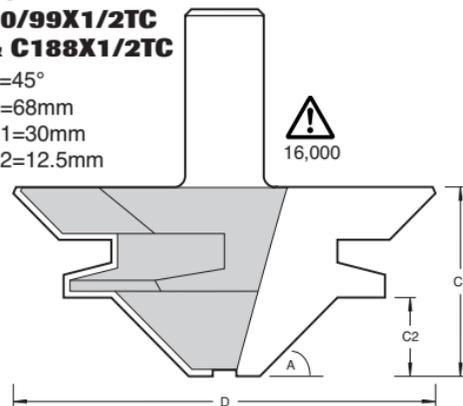
Ref. 10/97X1/4TC & C189X1/4TC

A=45°
D=38.1mm
C1=12.7mm
C2=4.0mm



Ref. 10/99X1/2TC & C188X1/2TC

A=45°
D=68mm
C1=30mm
C2=12.5mm



It is not advisable to re-sharpen this tool as this will result in a change in tool dimension and will therefore affect the joint cut. The tool should be cleaned regularly and honed only on a diamond whetstone.

Mitre Lock Joint

A mitre lock joint is a corner joint where two pieces of the material meet at 90°. This very strong corner joint is ideal to produce speaker cabinets, boxes, frames, columns and posts. The cutters can be used on Medium Density Fibreboard (MDF), certain plastics and on natural timbers.

The cutter is designed with a tapered tongue which self-locks against the groove in the opposing piece. This allows for easier assembly and gluing up as the joint self-tightens when pushed together.

Extra care must be taken with the resulting tongue cut on the joint as this can be broken off due to sudden impact or poor clamping when gluing up. This is particularly so when using the smaller mitre lock cutter on MDF.

The mitre lock cutters can also be used to glue joint pieces of material to make a wider board. The mitre lock cutters should only be used in a stationary mode with the router held inverted in a router table. A fine height adjuster fitted to the router is strongly recommended.

Ensure the back fence and hole size in the table is suitable for the cutter diameter. The hole should be about 4mm larger in diameter than the cutter. If the table aperture is too small it may be possible to enlarge the hole by fitting a false table top onto the table surface. This false table top has a larger hole cut into it and it is secured to the table top. The cutter is then fitted into the router from the top.

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

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RECYCLABLE



PTO

It is strongly advisable that work holding jigs are made to hold the timber whilst routing as this prevents the fine edge created by the jointing cutter becoming damaged. It is advisable that trial cuts on waste pieces of material machined to the same thickness as the work piece should be carried out first, to check the fit of the joint. Once the joint is made, use the waste pieces to set the cutter for the cuts on the work piece.

If cutting across the grain it is advisable that the grain or veneer is scribed beforehand to reduce break out. A cutting gauge or knife can be used for this purpose.



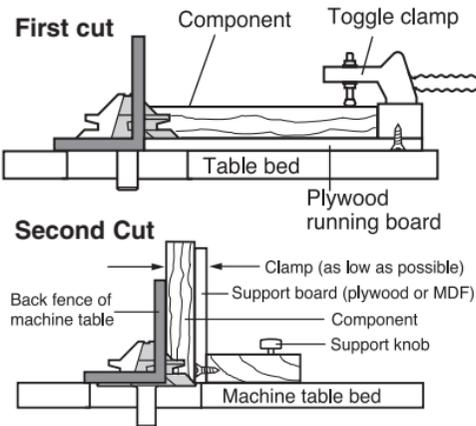
Consider working environment before using tools. Ensure working position is comfortable and component is clamped securely.

Work Holding Jigs

The jig for the first cut with the workpiece face down comprises of a plywood running board with a batten fitted to one end. The batten can be fitted with toggle clamps to secure the workpiece. The running board and batten should be the same length as the workpiece. The plywood running board edge runs against the router table back fence and prevents the fine edge of the workpiece from being damaged.

The second part of the joint requires the workpiece to be held on its edge. To hold the workpiece a second work holding jig is needed. This jig will have a right angled

plywood support board and block fitted which supports the workpiece upright. A G-cramp can be used to hold the workpiece against the support board. Again, the board should be the same length as the workpiece to prevent damage to the edge of the jointed workpiece.



OPERATION

Carefully remove the protective wax from the cutter and dispose of carefully.

Insert the cutter shank into the collet at least all the way to the marked line indicated on the shank. This ensures at least 3/4 of the shank length is held in the collet.

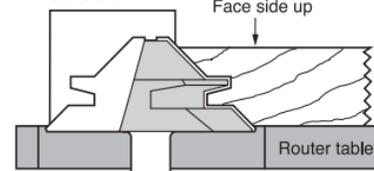
Corner Joint Method

Making trial cuts first, set the cutter height so that the centre of the cutter is centred on the middle of the material thickness. The back fence can then be adjusted to ensure the correct depth into the material is routed.

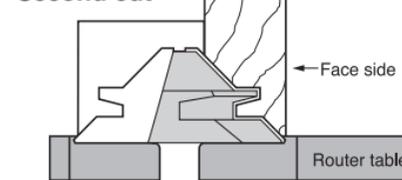
Once set correctly the workpiece can be routed. Rout one piece flat on the work table with the face side uppermost, and ensure a constant feed speed is maintained. Top pressure guards should be used to ensure down pressure is applied.

The opposite face of the joint (material on its side) is routed with the face side facing away from the back fence. Set the cutter height and back fence in position to match the previous joint. A high back fence will reduce the likelihood of the workpiece tilting. If a work holding jig is not used, a side pressure guard should be fitted to maintain side pressure and prevent the bottom edge from sliding away from the cutter. Cut this joint on a waste piece of wood, check the fit of the joint and adjust if necessary. Once set correctly the workpiece can then be routed.

First cut

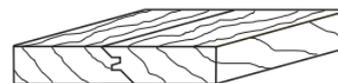


Second cut

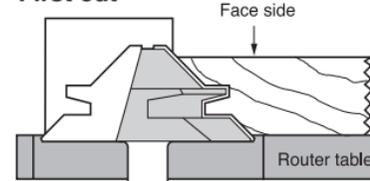


Glue Joint Method

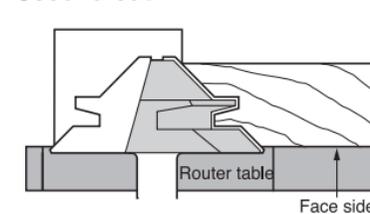
For perfectly matched glue joints, rout both pieces with the panel held flat against the work table. One part of the joint must be routed face side uppermost, the other part with the face side down. Cut the joints on waste pieces first, then check the fit of the joint. Once the joint is obtained on the waste piece rout the joint on the workpiece.



First cut



Second cut



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.
- Apply a rust protector to shanks. Do not use rust protector on ball bearing guides

Lubrication

- Use a PTFE dry lubricant spray on tool.

Storage

- Return cutter to its packaging after use.

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 and 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.
13. Do not take deep cuts in one pass, take shallow passes to reduce the side load applied to the cutter.

Please see www.trend-uk.com/safety for more safety advice.



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