



**Polycrystalline
Diamond Router
Cutters
PCD**



INST/PCD v6.0

trend[®]
routing technology

Please
read carefully
before use

**POLYCRYSTALLINE DIAMOND
ROUTER CUTTERS**

**REF. PCD/01, 10, 11, 20, 21, 22, 30,
31 & 32**

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

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 machine).

INTENDED USE

This cutter is intended to be used in a fixed head auto-feed, CNC or NC routing machine to rout wood and wood based material.

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. Please keep children and visitors away from tools and work area. All tools have a residual risk, so must therefore be handled with caution.

ITEMS REQUIRED

- Fixed head with auto-feed, CNC or NC router with suitable collet fitted.



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



For fixed head with auto-feed, CNC or NC use only.



Not for use in any type of hand/portable router.



Recommended speed 18,000 rpm, with approximate feed rate of 3 metres per minute.



Our Technical Support Department will be pleased to provide further assistance.

OPERATION



PCD tooling offers state of the art cutting performance and tool life. To obtain the best possible performance from this tool, please follow the instructions below:

1. PCD is a delicate crystalline material that when knocked with a foreign object, e.g. a spanner or vernier, will be prone to fracture. Great care must be taken at all times when handling your PCD tool.
2. Trend PCD tooling is supplied in a protective box. This box should be used to protect the tool at all times when not in use.
3. When fitting the tool or removing to from the routing machine, it is advisable to protect the tool in some way. For example a wooden block could be used. The block is bored out to slip over the tool head leaving only the shank of the tool exposed. This block is then removed only when the tool is ready for use.
4. The tool shank should be inserted at least 3/4 of its length into the collet of the routing machine to prevent distortion or stress. Ensure the web between the shank and the head of the cutter is not contacting the collet.
5. Careful setting up and trial cuts with the tool on waste pieces of material should be made first for familiarity with its cutting characteristics before any production run is attempted.
6. Ensure the correct spindle speed (RPM) and feed rate of the machine is set for the particular size and design of tool being used. This will extend tool life and give a better quality of cut on the material.
7. Do not over-tighten the collet nut as this will score the shank and create a weakness.
8. Check the routing machine collet and collet nut regularly for signs of wear and replace if necessary. A distorted collet should be discarded as it can damage the shank of the tool.
9. The tool will periodically need cleaning to remove build up of resin etc. PCD tooling should only be cleaned with a cellulose thinner or other solvent cleaners e.g. Resin Cleaner. Wire brushes and scrapers must not be used. The use of dry lubricant will prevent resin build up. We recommend Trendicote PTFE spray for this purpose.
10. Cover the steel bed of the machine when removing the tool so that if the tool is dropped the possibility of damage is minimised.
11. If you have any further questions about this product, our Technical Support Department will be pleased to help you.

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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DISPOSABLE PCD FOR MDF

- Single flute with TC plunge tip.
- For MDF, hardboard and solid laminate.
- Single flute prevents edge lines.
- High wear resistance.
- Longer tool life and therefore reduced downtime.
- Cannot be re-sharpened.



SERVICEABLE PCD FOR MDF

- Single flute with TC plunge tip.
- For MDF, hardboard and solid laminate.
- Single flute prevents edge lines.
- Can be re-sharpened for extended life.
- High wear resistance.



SERVICEABLE PCD FOR CHIPBOARD

- Segmented tip with TC plunge tip.
- For laminated/veneered chipboard and plywood.
- Up-cut and down-cut shear to prevent breakout for veneers and laminates.
- Can be re-sharpened for extended life.
- High wear resistance.



SERVICEABLE T-SLOT

- Segmented tip for MDF.
- High wear resistance.
- Slat wall cutter to accept a plastic extrusion.
- Can be serviced for extended life.



CUSTOM DESIGNED PCD TOOLING

We offer a design and manufacture facility for custom made PCD tooling, using the latest CAD/CAM techniques, with a cost effective price and a fast turnaround. Please specify:

1. Serviceable or Disposable

Although PCD tooling will outlast TC tooling by many times, the life of the tool can be extended further by using a tool that can be serviced (re-sharpened). The tool can be returned to our works for this. Disposable PCD tooling has a thinner edge of PCD on the cutting edge and subsequently cannot be re-sharpened.

2. Shank size

Shank sizes to suit all makes of CNC machines from 12mm to 25mm diameter can be quoted for.

3. Rotation

The standard cutters are right hand rotation, left hand tools are available to special order.

4. Material being cut

5. RPM of machine

6. Feed rate of machine

MAINTENANCE 

Please use only Trend original spare parts and accessories.

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.

Lubrication

- Use a PTFE dry lubricant spray on tool.
- Apply a rust protector to shanks.

Storage

- Always 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 (rmax) 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.



Our policy of continuous improvements mean that specifications may change without notice. Trend Machinery & Cutting Tools Ltd. cannot be held liable for any material rendered unusable, or for any form of consequential loss.