

Application notes for spindle tooling:

General instructions

Cutters in this catalogue are designed for machining wood and man-made wood products.

Handle the tool carefully: cutting edges are sharp and can cause serious injury. Do not allow cutting edges to come into contact with hard surfaces, as this can cause damage, particularly to TCT knives. Before starting the machine ensure that the spindle nut is tight and that the cutter is able to rotate freely.

Before using any cutter for the first time, check that all screws and fixings are tightened correctly. Check and re-tighten screws after several minutes' work and periodically thereafter. When fitting cutters onto machines ensure that the recommended RPM marked on the cutter matches the speed of your machine and that the cutter is rotating in the correct direction, as indicated by the arrow.

Keep the cutter as clean as possible. A clean cutter will improve chip flow and the finish. Check the knives regularly for sharpness. Dull knives produce poor work and can damage the tooling and machinery. When changing or replacing profile knives ensure that the knife and limiter seats are clean.

Tooling should not be altered or modified. This can cause the tooling to be unsafe and invalidate the guarantee.

Working with spindle tooling

Please make sure you read and fully understand the machine instructions before working with any cutters.

Use the correct type of tooling for either Manual or Mechanical feed. See the notes on page 1 for more information.

Always make trial cuts in scrap material before starting work on any project.

Suitable eye, mouth and ear protection should always be worn whenever working with woodworking machinery. All machinery should be connected to suitable dust extraction equipment, as specified by the machine manufacturer.

If the cutter hits a foreign object during use stop the machine and check the cutter for damage. Remove the knives and check the knife seating area for damage before fitting new knives. Any damage to the seating area will decrease the clamping force on the knife and may cause the cutter to be dangerous.

General tooling maintenance

Do not use gauges and keys from other tooling: use only those supplied with the cutter. When replacing knives do not use any undue force: overtightening will damage the screws and clamping wedges.

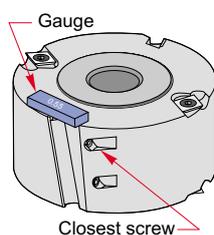
When replacing the knives, always work in a clean environment and remove dust or chips from the knife seatings. Position knives for the correct rotation: all knives face the direction of rotation, whilst limiters face backwards. Push the knife into the seating area when tightening the fixing screws.

Do not clean tooling with strong solvents or acidic cleaning compounds as this will damage the coating.

Product application details

Shear rebate blocks

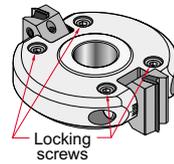
This rebate cutter requires special attention when replacing the main cutting knife. Use the supplied 0.55mm gauge to accurately set the knife. It is important that the gauge is placed on the side of the cutter closest to one of the two clamping screws. Make sure that the clamping screws are securely tightened before using the cutter.



Adjustable chamfer blocks F260113 & F260120

This cutter can be adjusted to an accuracy of 1°. For convenience, you can also use the built-in notched scale which enables fast adjustment in steps of 7.5°

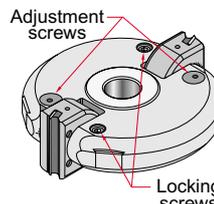
Adjust the cutter to the desired angle as follows: release the locking screws using the hex key supplied, then use the vernier scale etched onto the cutter to adjust to the required angle. Re-tighten the locking screws before using the cutter. To change the knives, use the hex key supplied.



Adjustable chamfer blocks F261160 - F261170

This cutter can be adjusted from +90° to -90° in steps of 1°.

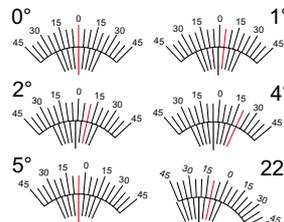
Adjust the cutter to the desired angle as follows: release the locking screws marked Pos.1 (see drawing). Then use the hex key supplied in the adjustment screw marked Pos. 2 to adjust the cutter to the required angle. Re-tighten the safety screws marked No. 1 before using the cutter.



IMPORTANT: Do not try to rotate Pos.2 adjustment screws before releasing the Pos.1 screws.

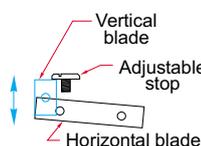
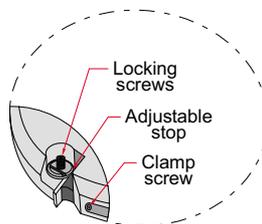
Setting angles using vernier scales

Vernier scales allow the angle of the cutter to be set in 1° increments. The illustration shows the settings for various angles. For 1° set the first line after 0 on the adjustable head in line with the first line after the zero line (longest) on the body. For 4° align the 4th lines etc. To get a 22° angle put the longer zero line on the cutter body between the 20° and 25° angle then adjust the second notch on the lower scale to the second notch after the zero line on the top scale.



Panel raising taper block F268200

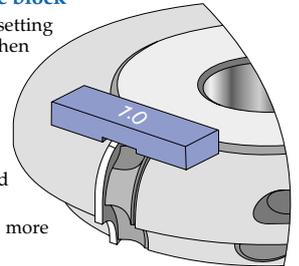
This cutter block uses two pairs of knives to form the panel raise. When knives wear or are replaced it is sometimes necessary to adjust the alignment of the knives so that a clean corner cut is produced. First set the horizontal knife: slacken the clamp screws and hold the setting block supplied into the recess machined in the body, then slide the knife out until it is touching the setting block and tighten the clamp screws. The adjustable stop for the vertical knife can be altered as follows: remove the vertical blade. With a 2mm hex key release the locking screw which is located in the middle of the adjuster and with a screwdriver turn the stop to correct the mis-alignment. Retighten the locking screw, refit the blade against the stop and tighten the clamp screw.



Corner round/cove block

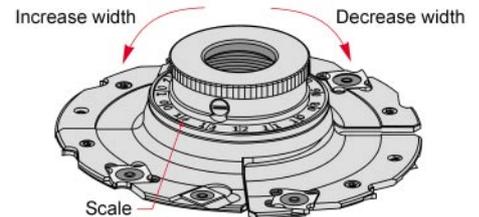
Use the 1.0mm setting gauge as shown when replacing the knives. It is possible to use this cutter with a 100mm bearing guide ring for perfect rounding over and cove joints.

See page 46 for more details.



Micro adjustable grooving cutter

In order to adjust the cutter the spindle retaining nut must first be slackened. The groove width is adjusted by rotating the ring nut on top of the cutter, anti-clockwise increasing and clockwise decreasing the cutting width.



The scale on top of the cutter enables accurate adjustment. The scale is marked in 15 steps of 0.1mm, with one complete rotation of the ring nut altering the groove width by 1.5mm.

To set a particular groove width, subtract the minimum width (4mm) from the width required. For example, if a width of 6mm is required, the increase from the minimum setting would be 6 - 4 = 2mm. This is 20 divisions on the scale or one complete rotation plus 5 scale steps. Fine adjustment can be made by slightly rotating the ring nut between the scale markings.

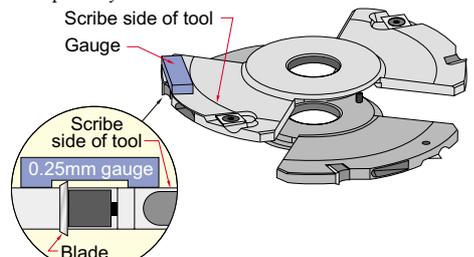
IMPORTANT: Do not forget to re-tighten the spindle retaining nut after adjusting the cutter.

Adjustable grooving cutters

These cutters are either 2 or 3 part sets. The 3 part sets may be used without the centre cutter for narrower width grooves. The cutting width is adjusted by adding or removing the spacer rings supplied. When fitting spacer rings to three part groovers it is important that they are spread as equally as possible above and below the middle cutter.

To set the cutter to the required groove width, the height of the spacers required needs to be determined. The total spacer thickness is the difference between the minimal width (without spacers) and the groove width required.

For example, to produce a 13mm wide groove when the minimal width is 8mm, subtract the minimal width of the groover from the width of groove required. The width of the spacers you must use is 13 - 8 = 5mm.



On the F431200 & F431250 cutters it is important that the blades in the middle cutter are kept with 0.25mm protruding above the top of the cutter body by using the gauge supplied.

On the F431300 & F431350 cutters, when replacing the blades, the gauge should be used on the scribe side of the body to set the blade protrusion to 0.25mm.