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BY RON FOX

# Beyond the basics 2: Multi-shape cutters

**The finishing touches to many furniture projects – the visible touches that can make or break them – are usually applied by using a moulding cutter in the router. This is today’s equivalent of the battery of moulding planes, each with its dedicated profile, which formed a major part of the traditional cabinetmaker’s toolkit**

The problem, however, is that you frequently find that you haven’t got quite the right shape or exactly the right size of cutter you need. Sod’s Law states that if you have the right shape it’s the wrong size, and vice versa.

### Multi-purpose solution

One way to beat this situation, without having to buy every cutter in the catalogue,

is to acquire one or two multi-shaping cutters. These are found in the cutter catalogues under names such as multi-profile, classical multi-profile, multi-mould, bold classical bit and the like. Many of them are large and come on 1/2in shanks. This means that they have to be used in a router table with a variable-speed motor to run them at their correct speed. However, there are also several available on 1/4in or 8mm

shanks for medium-power routers and hand-held use, **photo 1**.

These cutters enable a vast range of mouldings and profiles to be produced on the edges of panels, cabinet doors, skirting boards, architraves and the like, and cater for a wide range of material thickness. The various shapes are created by varying the height of cut and the position of the fence, and/or by making repeated passes on the workpiece.

### Classical multi-profile

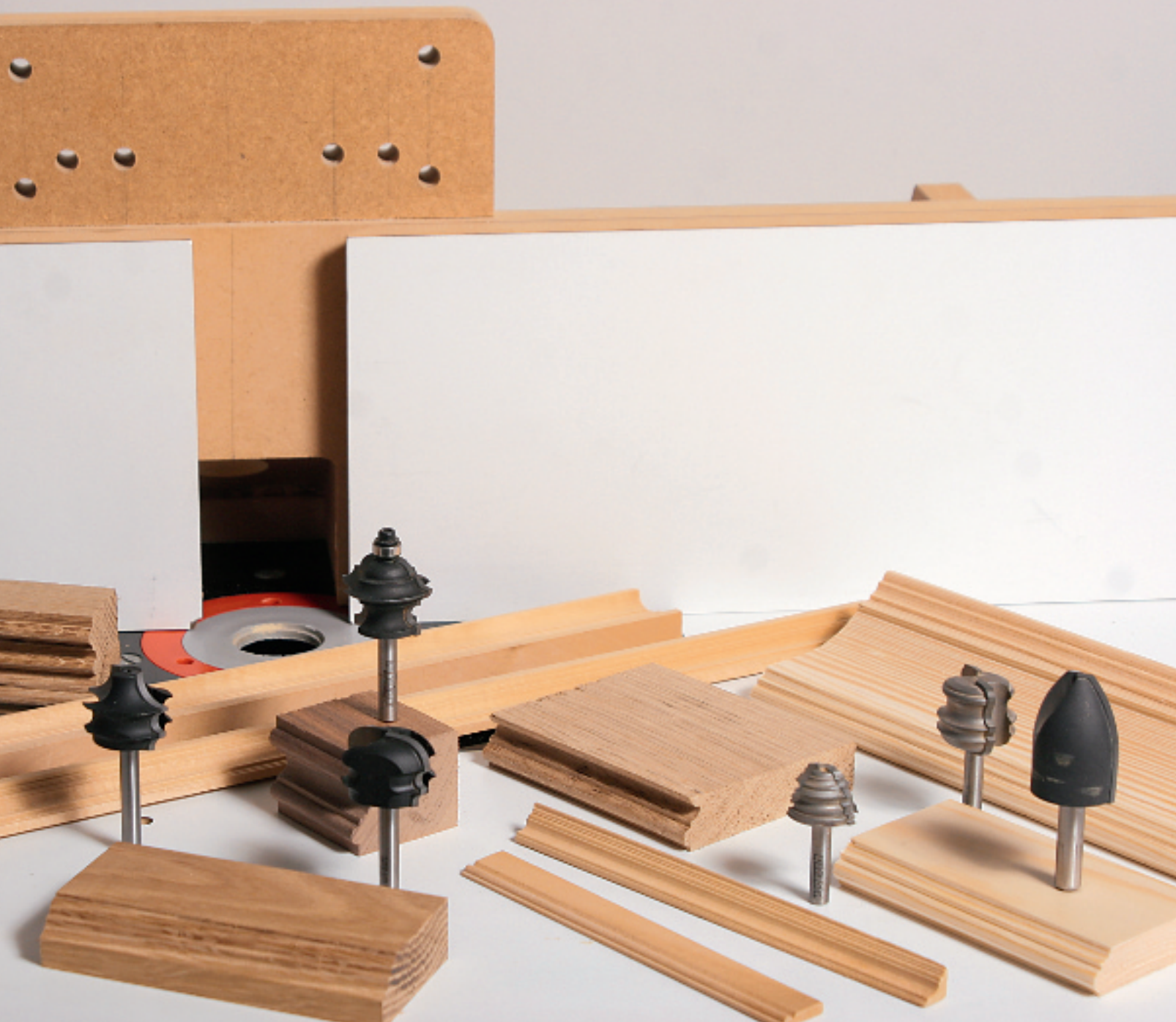
This is a very versatile two-flute bearing-guided cutter offered by several suppliers. It has a complicated shape that allows many different decorative effects to be produced by selecting different parts of the cutter profile. The full profile is less likely to be used than the many part profiles, **photo 2**.

The actual cutter shown here is the **Wealden T2940**. This is the smaller of two



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A selection of multi-shape cutters showing the wide range of individual profiles available



such cutters offered by Wealden, and comes on a 1/4in shank. The other one is much larger, on a 1/2in shank, and is intended for table use only at a maximum speed of 12,000 rpm. With both of them several light passes should be taken, especially if moulding to the full depth of the cutter.

The multi-profile cutter comes in to its own when using parts of its profile. The twists and turns in the edges of the blades enable various shapes to be applied to board edges of different thicknesses. Some of them look particularly attractive on the edges of small circular or elliptical tables, **photo 3**.

#### Losing the edge

With a lot of these mouldings, the full depth of the board edge is shaved on the final pass and the board comes off the cutter slightly narrower than it went in. To preserve a straight steady cut, a shim of 1-2mm is

placed behind the outfeed fence to bring it forward by the amount that is being removed from the edge of the board. I use shims made from Formica or thin plastic. Some commercial tables have adjustable infeed or outfeed fences to cater for this type of edge moulding.

#### Built-up mouldings

Apart from applying decorative edges to individual boards and panels, and creating deeper mouldings such as cornices and clock hoods, the multi-profile cutter is very useful for making built-up mouldings such as deep picture frames and mouldings for dressers. An example of this is shown in **photo 4**. This built-up moulding is assembled from three separate pieces. The central curved part was cut with a vertical cove panel raiser (Wealden T5214 1/2), and the two edging pieces and the back with part of **the Classical Multi-profile cutter**.



### KEEPING A RECORD

Whenever you get an attractive result from trying different cuts with multi-profile cutters, keep an example and label it with the identities of the cutters used. Better still, keep a specimen of each of the separate cuts so that you can use these as setting pieces the next time you want to make more of that moulding.

This is a particularly creative area of routing; you'll never run out of new variations when designing your own mouldings.

#### Miniature work

Multi-profile cutters are not confined to standard cabinet work. Several suppliers offer



versions for miniature and model making work. Most of them can accurately produce the 1/2th scale skirting boards, architraves, pilasters, cornices and so on that dolls' house builders require, **photo 5**.

## Multi-profile sets

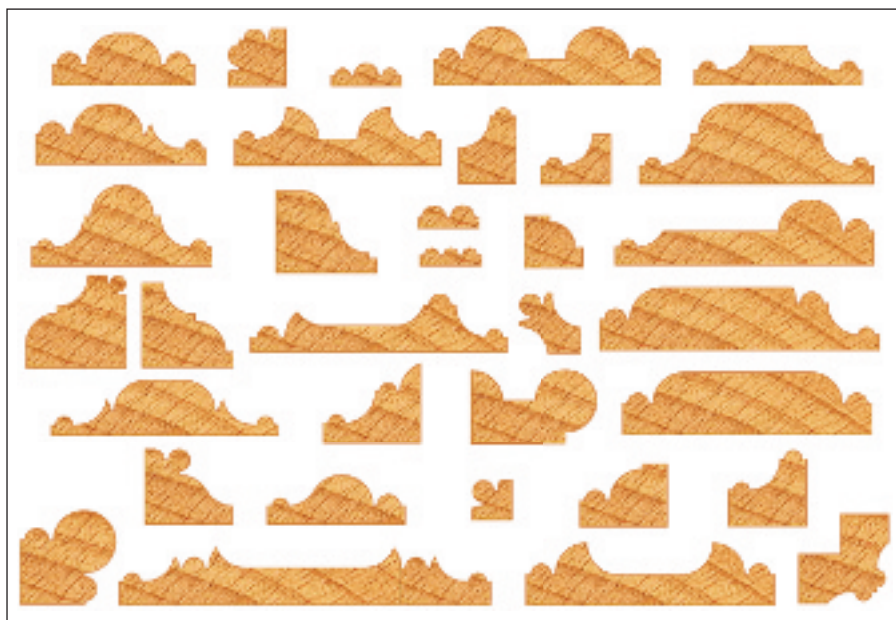
Other less complicated versions of multi-profile cutters are available, often offered as paired sets, **photo 6**.

These are plain cutters without bearings, and they're best suited to router table work using the table fence to position and support the cut. They may be used either singly or in pairs to give a vast range of mouldings and profiles. For most of the more intricate mouldings, several passes will need to be taken at different depth and fence settings.

With these, as with any multi-shape cutters, there are so many possible variations obtainable from different parts of the cutter that you need to play with them on different thicknesses of material to see what can be produced. Cutter suppliers help by providing illustrations of some of the many possibilities, as shown here.

## Don't forget the basics.

The types of cutter described above are invaluable for creating appropriate edges, crown mouldings, cornices and the like on material of different thickness and cross-section. However, that doesn't mean you



This illustration taken from the Wealden cutter catalogue shows some of the many different shapes that can be produced with **the multi-profile set of cutters**

have to completely ignore the possibilities of your starter set. You can often create an attractive profile by using two or more of your basic cutters in succession. Don't be afraid to experiment...

For example, two cutters commonly found in boxed sets are the cove and the roundover cutters. The combination of these two simple cuts gives an attractive edge to a table top. The cove is used first, with the

board held vertically to the table fence, followed by the roundover cut made with the board flat on the table. In both cases the bearing is removed from the cutter, **photo 7**.

## FURTHER INFORMATION

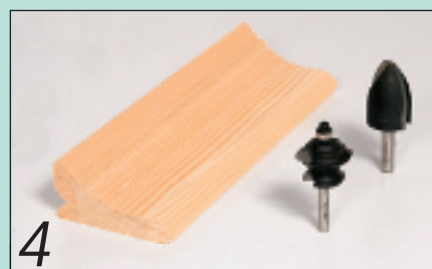
- Wealden Tool Company
- 0800 328 4183
- [www.wealdentool.com](http://www.wealdentool.com)



**2** This is the full profile formed with **the Wealden T2940 Classical Multi-profile cutter**



**3** All these profiles in boards of different thicknesses were made with the **T2940 cutter**



**4** You can combine two or more mouldings to make up components such as this deep picture frame



**5** **Miniature multi-profile cutters** can create a huge range of profiles. Note the 50p piece for scale



**6** **The multi-profile cutters on the right are from Wealden.** The Trend cutter (left) has a 1/2in shank



**7** This decorative table edge is formed in stages with two basic cutters - the cove and **the roundover**