

No. 310



Copying polygons using the circular saw

A

Description

Sanding edges and curves is one of the key work steps after the cut. Above all else it depends on edges sanded at an absolute right angle, which is as good as impossible using a hand-guided tool. The stationary belt sander BS 120, which is also transportable, is a solution to this work. With this tool infill panels, panels, curved shapes, angles and mitres of any type can be sanded with extreme precision.



310/01



B

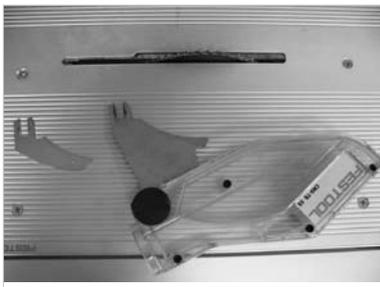
Tools/Accessories

Designation	Order No.
Bench saw CMS-TS 55 Set	561274
Extraction set CS 70 AB	488292
Mobile dust extractor CTM 26	583848
Lever clamp, 2 pcs.	491594



C

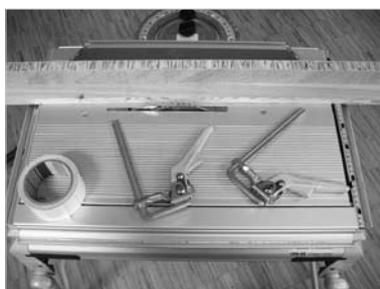
Preparation/Set-up



310/02

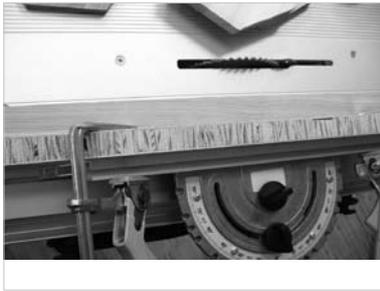
Carry out the following preparations on the circular saw and accessories:

- First remove the spacer wedge with extraction hood and replace this with a spacer wedge without extraction hood. Never saw without a spacer wedge!
- Then make an angle trim with side lengths 40 x 60 mm. Tip: Use a leftover piece of wood from an old door panel, approx. 80 cm long, as an angle trim.



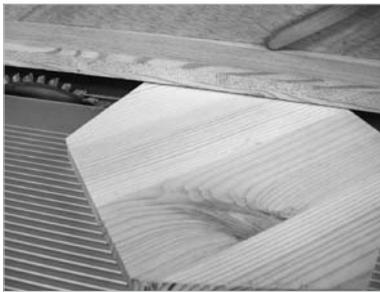
310/03

- Secure the angle trim using two lever clamps at the angle stop of the bench saw. There should be approx. 3 mm play between the angle trim and workpiece.



310/04

- Adjust the height of the saw blade to just below the angle trim. The saw blade should not touch the trim or damage it.
- To obtain exact 1:1 copies, the edge of the angle trim must agree exactly or be aligned with the saw blade. For this the angle trim is moved over the saw blade using an angle stop so that it cuts precisely with the saw teeth of the saw blade. It is also possible to create smaller or larger copies than the template by moving the parallel stop. Smaller or larger copies of the workpieces can be created very quickly this way. Try out different distances on a leftover piece of wood first.



310/05

D

Procedure



310/06

First make a precise template of your desired polygon (e.g. MDF plates with a thickness of 12-16 mm).

The boards that you want to copy using this template should be larger than approx. 10-20 mm. These boards can be "roughly" cut using the jigsaw.

Then secure the template on the workpiece using double-sided adhesive.

Take strips that are not too big, and above all strips that are not coated too heavily with adhesive, so that you can comfortably separate the parts again at a later stage.

TIP: Screws can also be used as an alternative to the adhesive for securing the template.

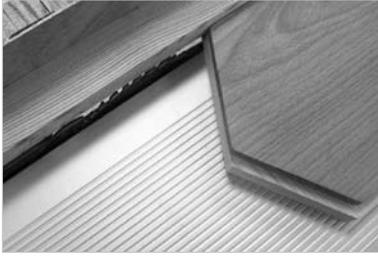


310/07

The principle of copying is simple and brilliant: While the template is guided along the angle trim, the saw blade underneath cuts the excess of the board precisely to the size of the template. All types of straight external corners can be copied perfectly without having to mark every board each time.

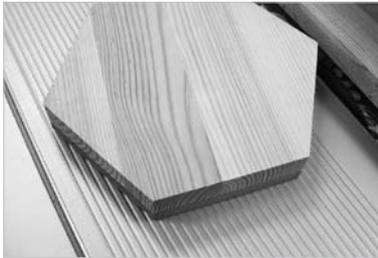
Internal corners and curved edges cannot be copied using this method.

The router must be used for such work.



310/08

It is essential the template is guided along the angle trim with precision and pressure applied to the side so that no inaccuracies occur at the edges of the workpiece. If, however, it is not as precise as you like, guide it along the angle trim one more time. As long as the template is secured to the workpiece this process can be repeated as often as you like.



310/09

Only when you are fully satisfied with the result, should you remove the template from the workpiece. This image shows the precise 1:1 copy of the template of an octagon. If you have just created the template for your shape you only need two minutes to saw an exact copy. It goes without saying that every other board is also an exact copy of the template. This leads to precise results which cannot be achieved in such a short space of time using any other method.



310/10

To create smaller workpieces than the template you only have to move the parallel stop together with the angle trim away from the saw blade. The distance between the angle trim and outer side of the saw blade determines the value of the smaller piece.

If you turn over the workpiece together with the template you see the difference between a template and smaller workpiece. Here the template is scored slightly on the bottom by the saw blade, which has no impact on the use of the template for other purposes (e.g. for a 1:1 copy or a large workpiece). As long as the template edge is not damaged it can continue to be used as a guide for the angle trim.



310/11

For an enlargement of the workpiece the angle trim is simply moved out further over the saw blade. Enlargements or reductions up to approx. 6 cm can be created this way without having to make additional templates.

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