

FAQs deburring tools

As standard, all tool versions are equipped with a cylindrical Weldon shank of 20 mm. In principle, however, all tools can also be supplied with integrated tool holders such as HSK etc., some of which are even available from stock.

What does the adjustment of the knurled nut cause?

Only the pressure with which the milling cutter is pressed against the workpiece is affected by this adjustment.

The maximum deflection measurement is not affected by it.

Does the milling cutter position change with an adjustment in pressure?

No, the position of the router bit remains unchanged with the adjustment of the lateral contact pressure.

Are the spindles flexible deflectable in a radial and axial direction?

Because both deflection directions would mutually influence each other, these are not combined in a single tool.

We offer the two deflection processes in different tool versions: the EC- version with radial deflection principle and the LC- version with the axial spring-preloaded spindle.

How does the contact pressure change with the deflection?

The lateral pressure force remains practically unchanged over the entire scope of spindle deflection, no matter whether it is deflected by 5 or 1 mm only.

What are the decision criteria for radial or axial spindle deflection?

There are various parameters such as workpiece contour, material, burr formation etc. which have an influence on the tool selection. This means that a lot of practical experience is required, which is why every new application is clarified by our application technicians by telephone.

What materials can the tools be used for?

The engraflexx deburring tools can be used for practically all machined materials. However, it should be noted that different router bits must be used depending on the material of the workpiece.

Depending on the materials to be processed and the deburring requirements, a wide variety of grindig bits can be used in the tools.

What type of deburring cutter makes the most sense?

As a standard we use conical router bits with a point angle of 90° with our tools.

Depending on the task, however, routers with a wide variety of contours are also used.

Which milling cutter diameters should one process with?

This depends essentially on the desired results.

As a basic rule, with larger milling cutter diameters the abrasion performance (deburring thickness) increases.

Does a secondary burr arise when deburring with conical bits?

Whether a secondary burr arises and how thick it is normally depend on the deburring cutter that is used as well as on the various adjustment parameters.

When processing aluminium as well as various other materials the use of coolant reduces the formation of secondary burrs.

If there is a requirement for absolutely burr-free edges, we offer appropriate tool solutions with an integrated brush, whereby the deburring and smoothing of any secondary burr take place in a single working process.

Our workpieces require deburring of precisely 0.5 x 45°. Is this possible with engraflexx?

The milling of precisely defined chamfers is possible, although this requires special milling cutters with an integrated side stop.

Appropriate special milling cutters can be acquired from us ex stores.

Can the tools also be used to produce smooth run-out radii?

The milling of smooth run-out radii is possible, although this requires special milling cutters with an integrated side stop.

Appropriate special milling cutters can be acquired from us ex stores.

What is it necessary to consider when selecting the milling cutter?

It is essential to note that router bits are always inserted in the tools, in the same way as these are used in hand-held grinders.

Router bits in standard versions can be used for many applications. However, this does not always produce the desired result. Depending on the deburring quality required or the respective machining material, it may be expedient to use reworked or specially produced router bits.

We shall be happy to assist you with the requisite information, please get in touch with us.

How great is the wear of the router bits?

Experience shows that the wear on the burrs is almost negligible.

Even when used in three-shift operation, they usually only need to be replaced after several weeks.

Is periodic maintenance work required on the engraflexx?

No, the operation of all deburring tools we produce is completely maintenance-free.

However, it is necessary to ensure that the maximum permissible spindle deflection is not exceeded.

The dimension of the deburring is uneven

This can have various causes, which can be remedied as follows:

- 1. The lateral distance position was not correctly adjusted*
- 2. The programmed feed speed is not reliably adhered to by the machine with major changes in direction*
- 3. Feed speed is generally too slow*

This can usually be rectified with ease by optimising the machine parameters.

Please get in touch with us if you require technical support!

The dimension of the deburring is even, but too small

This can be rectified as follows:

1. *Increase lateral contact pressure (knurled nut on engraflexx)*
2. *Reduce feed speed*

Both measures do not lead to the desired results?

Please get in touch with us if you require technical support!

The dimension of the deburring is even, but too large

This can be rectified as follows:

3. *Increase feed speed*
1. *Reduce lateral contact pressure (knurled nut on engraflexx)*
4. *Reduce spindle speed*

None of the measures led to the desired result?

Please get in touch with us if you require technical support!

The deburring is regular, but the aesthetic quality is inadequate

The following always applies: in particular with engraflexx EC tool types with lateral deflection, it is not possible to achieve the same visual surface quality as with securely clamped deburring millers.

This is due to the characteristics of the deflecting spindle. However, due to the often very small deburring thickness, these visual quality defects are insignificant in the majority of cases.

If you require higher deburring quality then this is possible with a range of measures.

Please get in touch with us if you require technical support!

The deburring is highly unsatisfactory and exhibits intermittent milling grooves

This phenomenon can arise in particular with the use of engraflexx EC- tool types and can be caused by the following:

- *the spindle has met with the deflection boundary*
- *the deburring mass is too great*
- *the router bit used is not optimally tailored to the material*

Please get in touch with us if you require technical support!

When is the version with radial spindle deflection, or the version with axial spring-mounted spindle used?

This decision depends on a wide range of criteria and is not always simple. That is why we always have an initial discussion on the telephone with every new interested party. Due to our many years of experience, we are then able to recommend the optimum respective tool type for the customer.

Please get in touch with us if you require technical support!