

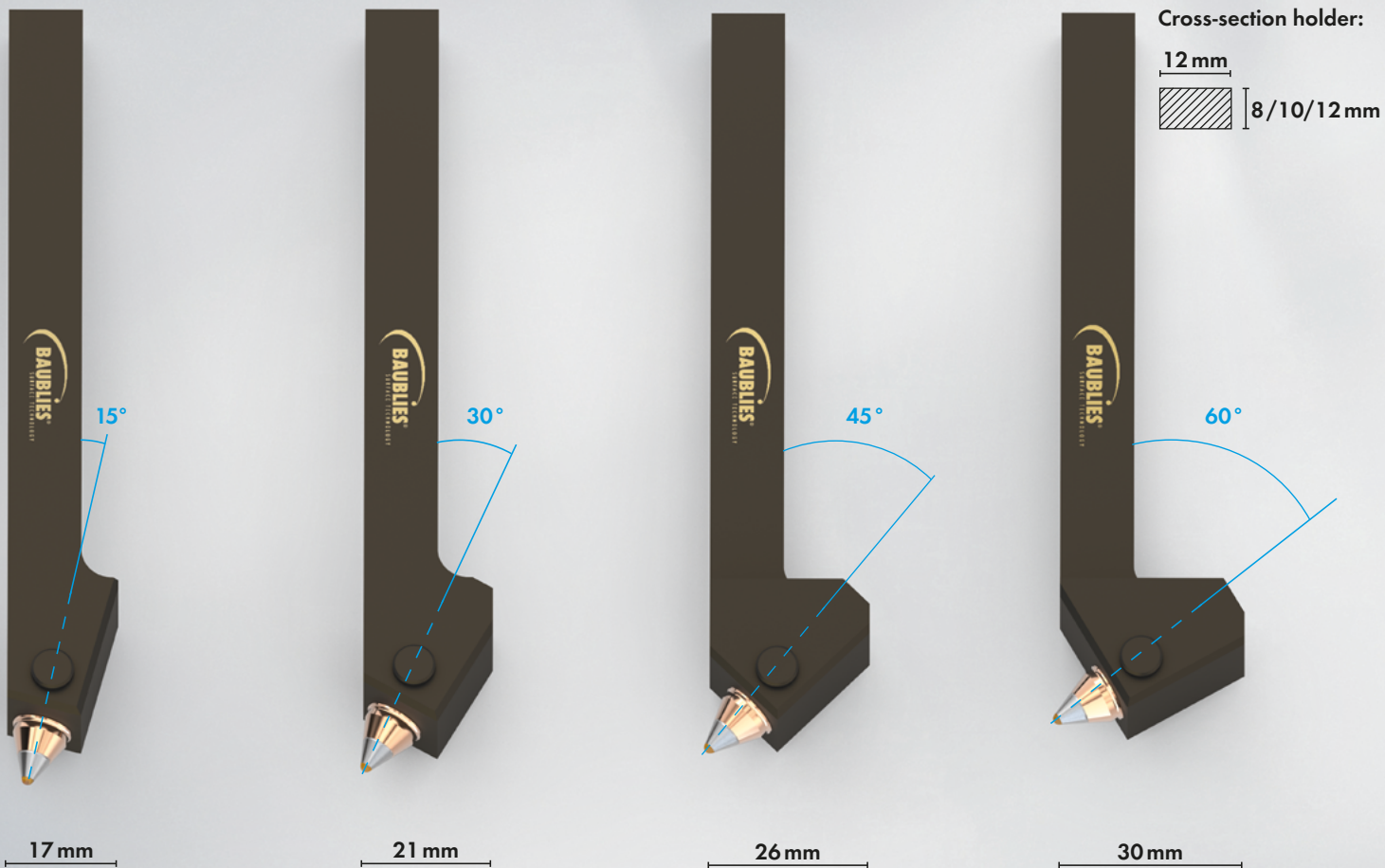
PERFECT FINISH FOR SOPHISTICATED WORKPIECES

Colibri: The new diamond burnishing
tools in compact format



SMALL TOOLS FOR SUPERB SURFACES

Small, fine and in excellent Baublies quality: these are the new burnishing tools that we have developed especially for filigree applications. We have optimized our many years of knowhow in diamond burnishing for the machining of small precision parts and thin-walled workpieces in a compact form.



RANGE OF APPLICATIONS:

Diamond burnishing tools from the Colibri series are always optimally suitable when the peak-to-valley height of filigree workpieces is to be minimized and at the same time the strength is to be increased. Typical application areas are:


- components for medical devices and the optical industry
- connecting elements for aerospace and automotive technology
- as well as other compact precision parts in which surface quality plays a crucial role.

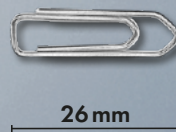


ADVANTAGES:

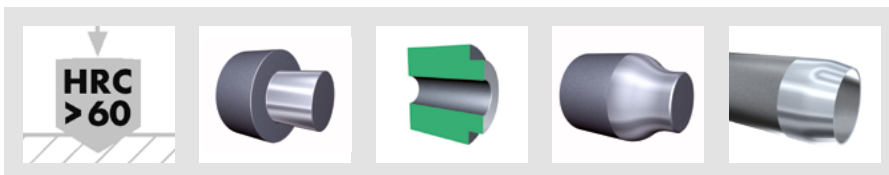
- highest surface quality and hardening
- universally applicable
- simple to use
- ideal for contour machining
- for hard machining and thin-walled workpieces
- compact design available for machines with limited tool space
- tolerance compensation through spring-loaded design
- can be adapted to all materials by means of four spring elements (included in delivery)
- changeable diamond insert
- diamond inserts available in different lengths
- diamond radii from 0.4 - 5 mm available
- diamond indexed for multiple machining
- re-grinding of the diamond is possible
- cost-effective / low investment

Cross-section holder:

 8 x 8 mm
10 x 10 mm
12 x 12 mm

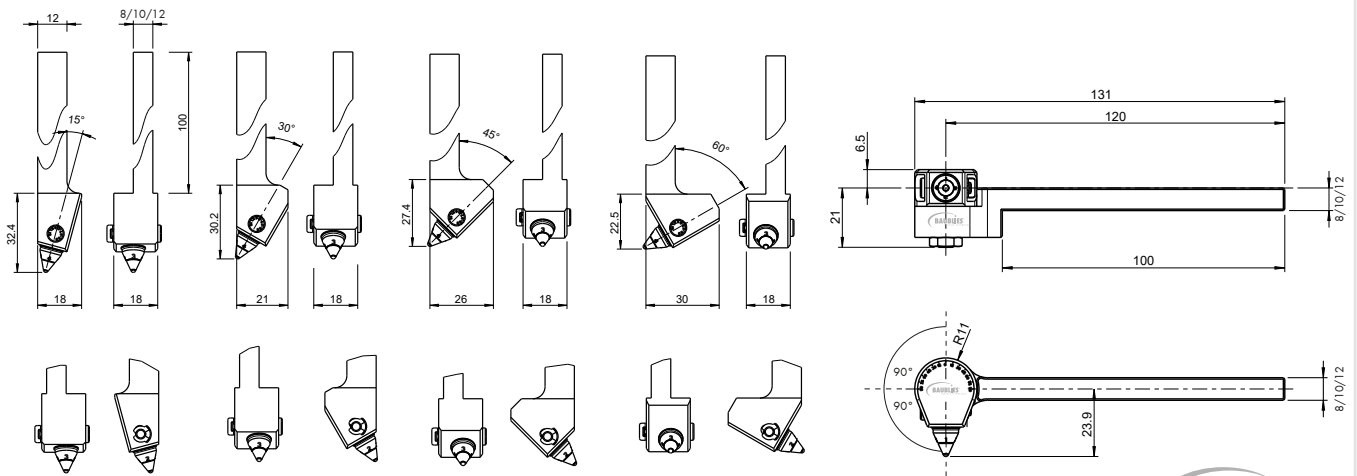


POSSIBLE MACHINING TASKS:



Colibri Diamond Burnishing Tools for External Machining

Technical Data Colibri Diamond Burnishing Tools for External Machining



Please order Diamonds separately

Colibri Diamond Burnishing Tools for External Machining

Machining	external machining of corrugations, contours, flat surfaces
Standard fixture	square shank, left or right holder, cylindrical shank

Optional Tooling

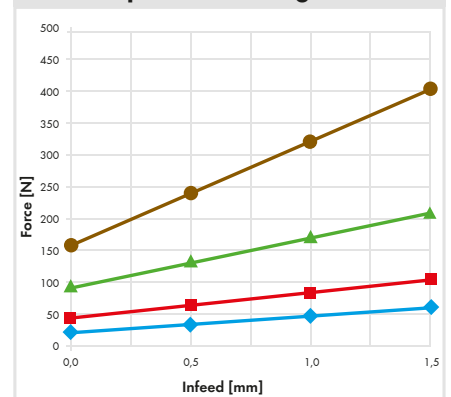
- special holders according to specifications
- diamond with custom geometry
- assembly aid

Operating Parameters

Please note that the data represent guide values which must be adapted to the individual cases.

Smoothing speed	up to 150 m/min
Feed	0.05 to 0.2 mm/rev
Workpiece allowance	up to 0.02 mm
Preload Tool	up to 1 mm
Lubrication	emulsion or oil; one filtration of the lubrication medium (< 40 µm) can improve the surface quality and the service life of the tool
Pre-machining of the workpiece	peak-to-valley height up to R_z 15 µm
Suitable for hard machining	

Force-displacement Assignment



- Brown spring
- Red spring
- Green spring
- Blue spring

Example:

If the red spring is installed, an in-feed at the workpiece of 0.25 mm corresponds to a force of approximately 50 N.

Recommended Applications According to Material Properties

Spring colour	Force	Strength up to
Blue —◆—	25 - 60 N	400 MPa [N/mm ²]
Red —■—	40 - 100 N	1250 MPa [N/mm ²] or HRC 40
Green —▲—	85 - 210 N	HRC 64
Brown —●—	160 - 400 N	Use only in special applications

Depending on the material properties, an appropriate spring should be used. The table opposite is intended as a guide. Usually an in-feed in the range up to 0.5 mm is used. For higher power requirements, a stronger spring should be installed.