Burnishing Tools

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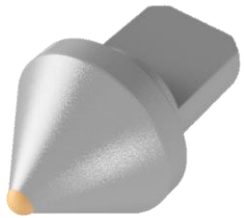
Added values

- Highest quality surface finishes (Rz <1)
- Simple handling and ease of operation
- No additional equipment required
- Compact design for machines with limited work space
- Adjustable counter-pressure (depending on the material being worked on)
- Tolerance compensation from suspension
- Easy to change the diamond tip, without changing the tool's basic settings
- Integrated centre height (top edge of the shaft)
- Cost effective
- Suitable for all common machine types (swiss type autolathes, CNC and conventional turning lathes)
- Possible to process hardened and high-strength materials

Your benefits

- Fast, efficient and cost-effective burnishing
- Suitable for hardened steels and high-strength materials
- Also suitable for small geometrics
- One tool can be used for different burnishing applications
- Ideal for all series sizes, including for prototypes
- Adaptable to different shaft sizes (delivered as a set)
- Standard program of burnishing tips to choose from



SET-GW510-10/16U

Features

- Fixed tool head
- Can be adjusted up to ±10° with the integrated setting options (screws) in the shank
- To burnish cylindrical surfaces – limited cones and radii

Recommendations

- Burnishing speed up to 200 m/min
- Feed rate up to 0.2 mm/U
- Workpiece measurement of 0.01 mm (~Rz 10) and 0.02 mm (~Rz 20)
- It is recommended to use a cooling lubricant

- **Finishing speed parameters are always good as burnishing parameters**

SET-GW520-10R/L/16U

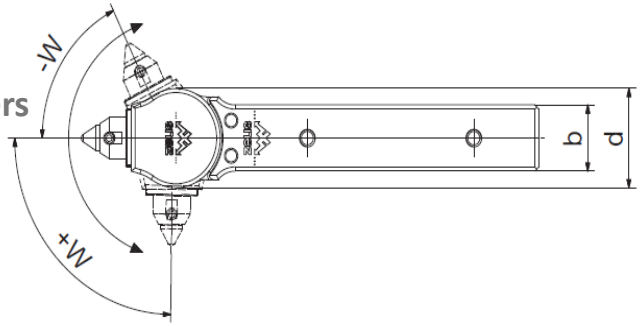
Features

- Tool head is variably adjustable
- Tool with universal application
- Swivel range ±90°
- Thanks to the adjustability of the tool head, it is possible to burnish plane surfaces, conical, convex and concave geometries
- Application up to a shoulder

Recommendations

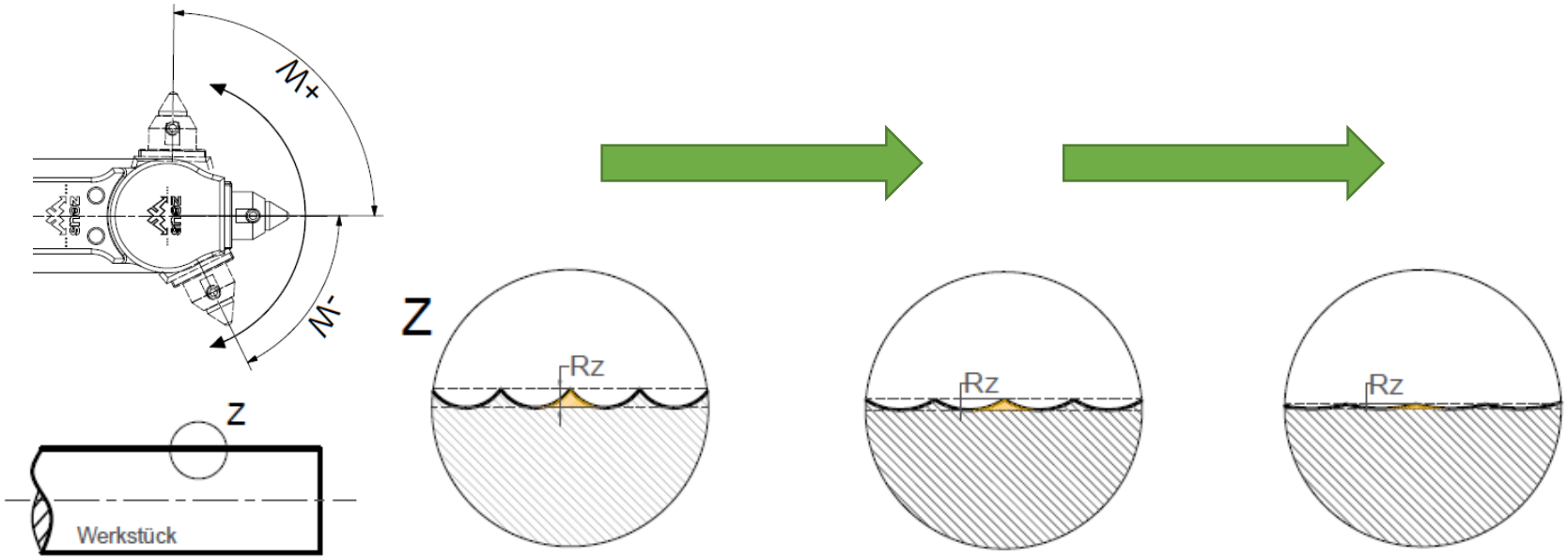
- Burnishing speed up to 200 m/min
- Feed rate up to 0.2 mm/U
- Workpiece measurement of 0.01 mm (~Rz 10) and 0.02 mm (~Rz 20)
- It is recommended to use a cooling lubricant

- **Finishing speed parameters are always good as burnishing parameters**



Burnishing Process

- Smooth rolling process
- A diamond glides over the workpiece and shapes the existing roughness profile
- The existing rough peaks flow into adjacent recesses this produces a smooth and resistant surface



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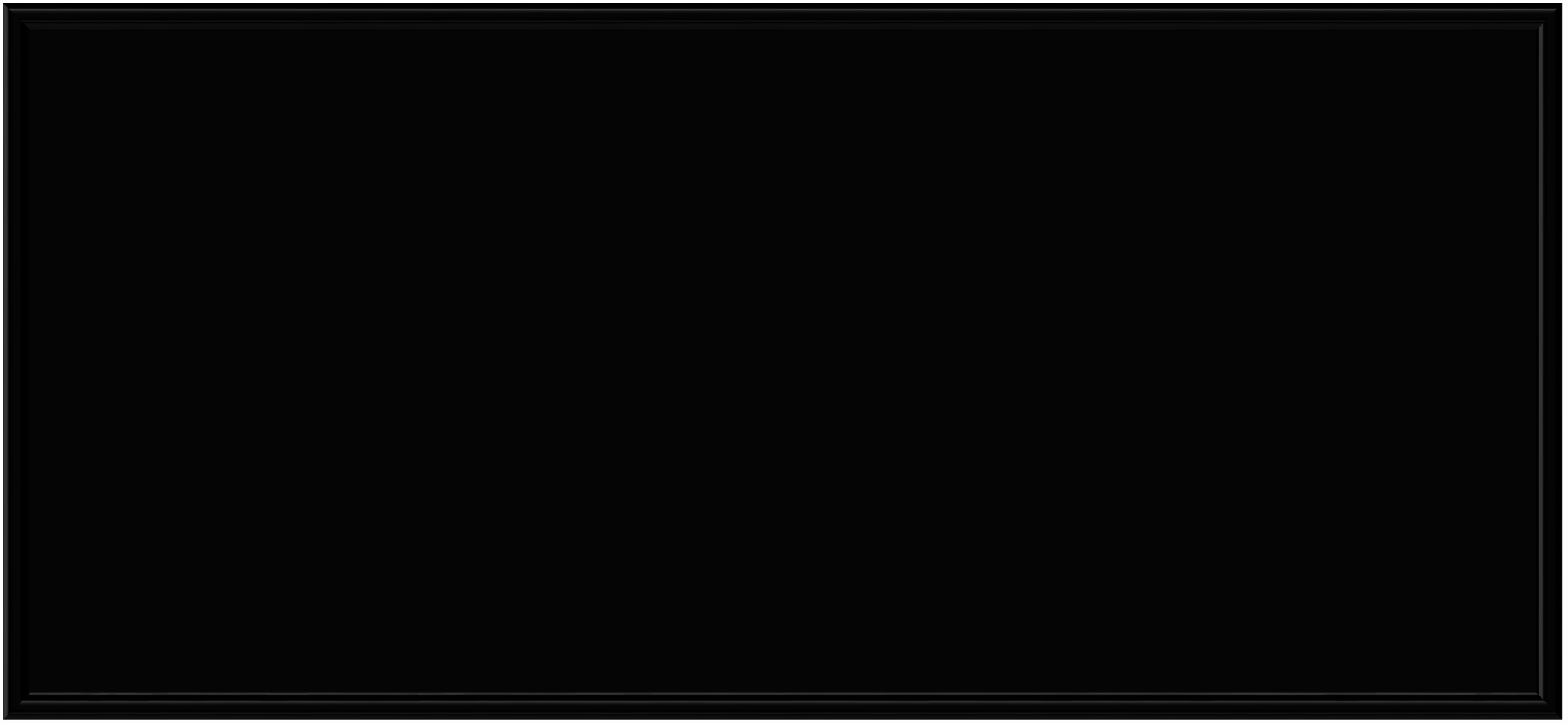
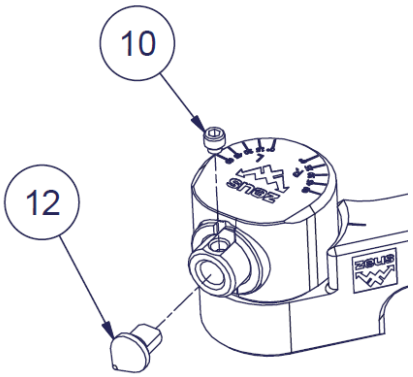


Assembling and turning the diamond tip

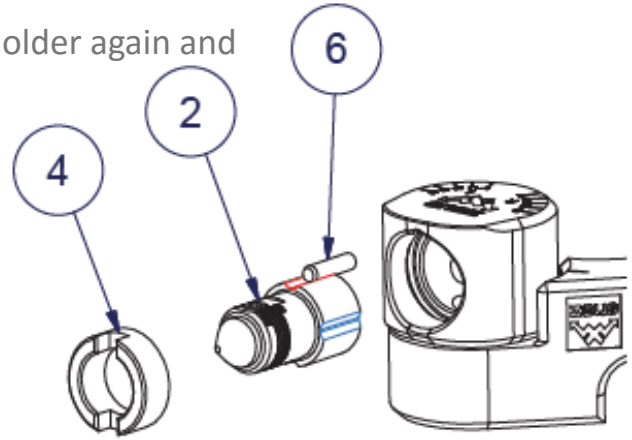
Assembling the diamond tip



- The threaded pin / screw (10) must be released
- Change / assemble the tip (12)
- Make sure that the diamond tip is clamped on the clamping surface

Important for signs of wear on the diamond tip

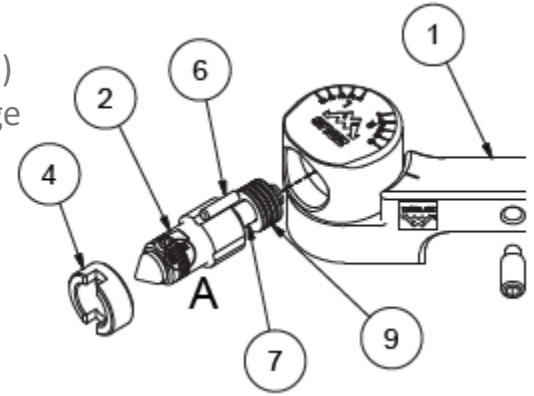
- The complete guide axis (2) can be turned up to three times
- The adjusting screw (4) must be completely unscrewed
- Rotate the guide axis (2) 90°
- Ensure that the notch of the guide axis is guided through the upper cylinder pin (6)
- Then the adjusting screw (4) can be screwed into the base holder again and the system can be clamped



Changing and adjustment of the spring package

Changing

- Adjusting screw (4) must be unscrewed completely
- Remove the diamond tip (2), cylinder pin (7) and the plate spring package (9)
- Push the cylinder pin (7) into the guide axis (2) and thread the spring package (9) on it
- Push the complete package into the base holder (1)
- Ensure that the notch of the guide axis is guided through the upper cylinder pin (6)
- Then the adjusting screw (4) can be screwed into the base holder again and the system can be clamped



Adjustment

- The tool is in the “zero” position when delivered (no pretension on the spring package)
- For rough adjustment of the pretension, turn the adjusting screw (4) clockwise (CW)
- The adjusted force can be read on the scale of the guide axis (2)
- Scale: 30N (Swiss-type version) / 100N (CNC-lathe version) per line
- This pre-setting is recommended if the spring stroke / infeed is bigger than 1 mm

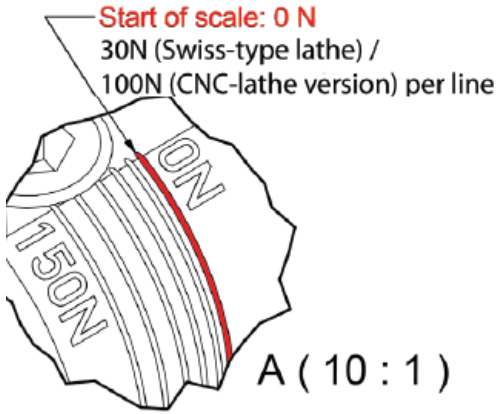


Figure 10: Adjustment of the spring pressure

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