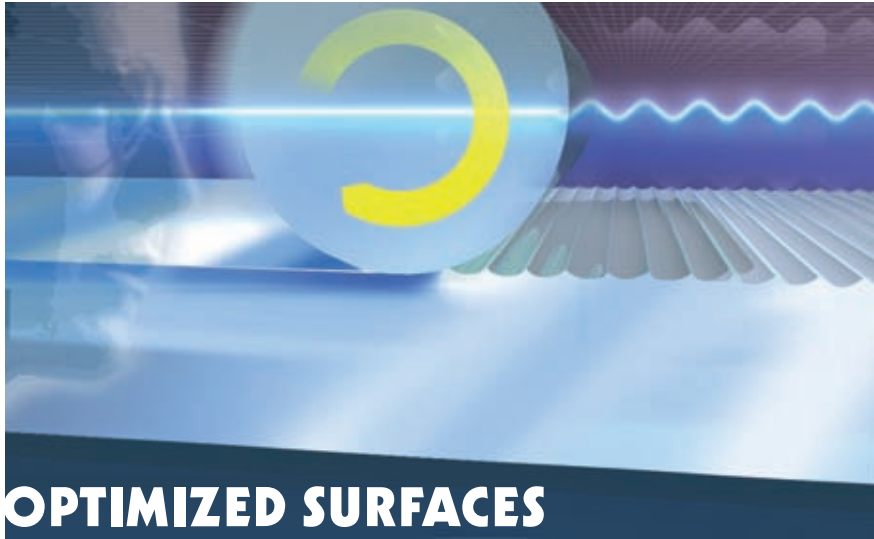


**THERE ARE MANY POSSIBILITIES  
TO IMPROVE THE QUALITY OF  
YOUR PRODUCTS.**

**THIS IS ONE OF THE MOST  
ECONOMICAL ONES.**

**BAUBLIES ROLLIER-TECHNOLOGIE**



**OPTIMIZED SURFACES  
BY ROLLER BURNISHING**

**AHB**

**TOOLING & MACHINERY**

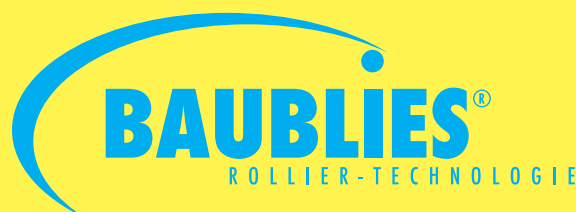
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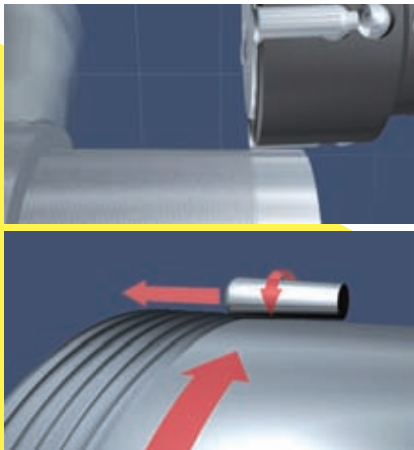
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How roller burnishing improves the quality of your products.

Roller burnishing is the economical, easy-to-use and reliable creation of maximum surface quality. During this process the fatigue strength and the hardness of the workpiece is increased. During this non cutting process metal workpieces are smoothed and strain-hardened by rolling elements.



Relative movement of workpiece and rolling element during the roller burnishing process

## The advantages

- surfaces of low roughness (<math><1\ \mu\text{m}</math>) and high material ratio
- decreased risk of crack formation caused by micro grooves
- greater surface resistance to wearing and corrosion due to higher material ratio
- shifting of the material fatigue limits due to internal compressive stress and strain hardening

# THE BEST ROLLER BURNISHING TOOL



## Multi roller burnishing tools

**Extremely smooth surfaces in just seconds**

Surface roughnesses of under  $Rz\ 1\ \mu\text{m}$ , short cycle times and low investments with fast amortization make chipless multi-roller burnishing a high-quality, cost effective alternative to any cutting process.

Baublies multi-roller burnishing tools are available as standard tools for an extremely broad range of interior and exterior applications. An unlimited number of special solutions optimally round off the product line and open up roller burnishing for an increasing number of new applications.



## Single roller burnishing tools

**Powerful compression and smooth surfaces**

With single-roller burnishing, a hardened roller flattens the surface of the workpiece by contacting it at one single point: In this area of contact the steplessly adjustable roller pressure reaches the yield point of the material. The microscopic profile peaks on the workpiece surface flow into the adjacent recesses.



Variable single-roller burnishing tools for external and internal machining; for example, roller burnishing and deep rolling radii, cylindrical outside diameters, cones, flat surfaces, grooves, undercuts etc.

The modular single-roller tool system for lathe machines is an innovative solution for virtually all roller burnishing and roller compression tasks. A basic element is used to mount the interchangeable system components or rolling units. As a result, the tool can be converted in an extremely short time. This enables special machining tasks to be carried out quickly.

# OL FOR YOUR INDIVIDUAL TASK



## Diamond roller burnishing tools

Smoothing and work-hardening even in small diameter areas

Diamond roller burnishing tools are a special feature of the Baublies product portfolio. They expand the range of applications of roller burnishing technology, as even hardened materials up to approximately 60 HRC can be roller burnished.

In the process a high-precision, micro-polished diamond glides over the surface. As soon as the yield point of the material is exceeded, the profile peaks of the workpiece surface flow into the adjacent recesses in the  $\mu\text{m}$  range. Compared to the machining by means of rollers the contact area between the workpiece and the diamond is much smaller. Therefore plastic cold working with a reduced influence of force can take place.

The new Baublies combination tool makes turning, smoothing and strain

hardening possible with just one clamping. Setup times are completely eliminated.



## Tailor made tools

Solutions for individual applications

With our broad range of standard products most applications can be covered. Sometimes, however, there are very specific requirements.



In some cases pre-existing components can be modified and combined to create new and economical tooling solutions. An unlimited number of special solutions optimally round off the product line and open up roller burnishing for an increasing number of new applications. Our employees are looking forward to commit to your individual needs because our know how in the special field of roller burnishing technology shall be made fully available to you.

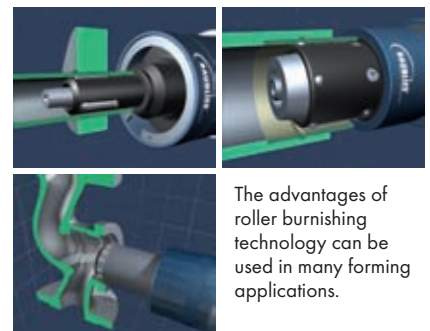


## Forming tools

Flanging, creasing and expanding components

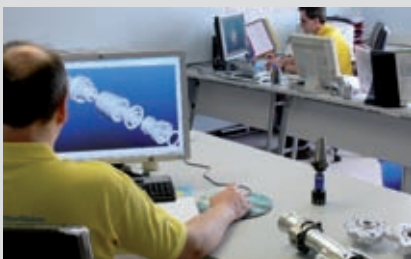
Creasing, joining, flanging, flaring and expanding – forming tools from Baublies for use in an extremely broad range of industries have a special place in our product portfolio.

Whether as a standard model or as a special solution – Baublies AG continuously proves the versatility of its forming tools: For example, with an ingenious mechanism for the spring excursion and force the tools can be optimally adapted to the respective machining task or to the special machine tool.



The advantages of roller burnishing technology can be used in many forming applications.

**BAUBLIES** was founded in 1968. The company's headquarters are located in Renningen, Germany. Baublies is one of the few companies worldwide that is concerned exclusively with the development, manufacturing and sale of roller burnishing tools.



Over the years, this special orientation has resulted in a unique competence and the repeated development of new and improved tools. This has meanwhile led to a broad acceptance of roller burnishing technology.



Our catalogue helps you to easily find information about our extensive range of services. In addition to detailed technical data it contains information about our company. You can also find useful tips for applying and handling Baublies tools.

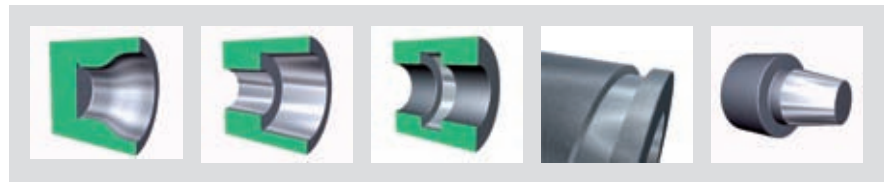
**Baublies AG** · Brunnenfeldstraße 42  
71272 Renningen (Germany)  
Phone +49 7159 9287-0  
Fax +49 7159 9287-25  
info@baublies.com · www.baublies.com

### Infinite range of uses

Roller burnishing can be used on the external and internal surfaces of virtually all rotationally symmetrical workpieces.



Through hole as from  $\varnothing$  4 mm    Blind hole as from  $\varnothing$  5 mm    Tapered hole as from  $\varnothing$  0,1 mm    Face    Hole with radius



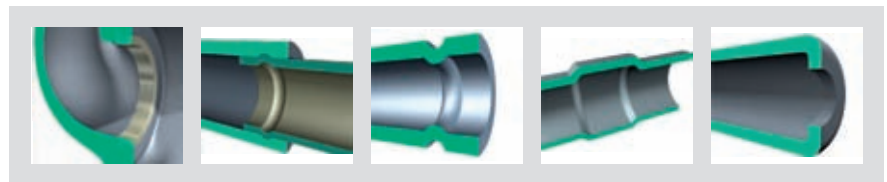
Internal free formed surface    Stepped hole    Internal groove    External groove    External taper



External diameter as from  $\varnothing$  1 mm    External free formed surface    Ball pin    Thin walled work piece    External radius



Axial groove    Shaft in through feed method    Diamond burnishing



Rolling of seat rings    Internal flaring    External flaring    Expanding    Flanging