



RA-1



RA-2



Tool for surface hardening and roller burnishing of cylindrical parts made of regular and hard-to-machine materials (titanium, nickel alloys, inconel). Shank size 20x20, 25x25, Ø 32, Ø 40
Hardness of the processed workpiece up to 40 HRC
Improvement of part surface layer Ra
Strengthening of surface layer
Increase of corrosion resistance
Longer life of the part
Stress relief of surface layer
Surface roughness Ra 0,1 um

HRC<40

RA3-01



RA3-02



Tool for roller burnish of straight and angular external surfaces, radii, fillets with pressed steel rollers and carbide rollers. The tool is installed in the turret of a CNC turning center or a tool stand on a universal lathe.

The workpiece surfaces are machined to an accuracy of Ra 0.1 um using speeds appropriate for finishing methods. The RA3-02 roller burnisher has damping system and does not change the dimension or tolerance obtained in the previous operation. The machining is done only at the roughness level. The tool is available in two versions

RA3-02R right-hand version RA3-02L left-hand version

RA-4



RA-5



RA-5 one-roller universal roller burnishing tool for machining external surfaces, faces and holes. Minimal machining hole size Ø 34 mm. Shank Ø 35 mm. Maximal machining depth L 200 mm. Workpiece hardness up to 40 HRC.

RA-4 Cylindrical workpiece surface hardening and roller burnishing tool. Shank size 25x25. Improvement of the surface layer of the workpiece. Strengthening of the surface layer. Increase of fatigue resistance.

Increase of corrosion resistance. Increase of corrosion resistance. resistance. Reduction of machining time and roughness to Ra 0,1 um

RA-8



INNER DIAMETER MULTI-ROLLER BURNISHING TOOLS

The multi-roller burnishing tool uses the plastic deformation of metal at normal temperature to make the surface of the workpiece smooth, changing the surface structure, mechanical properties, shape and size. A certain amount of pressure is applied to the surface of the workpiece by a roller burnishing tool, so that plastic flow occurs in the surface layer of the metal. It fills the existing hollows and reduces the surface roughness of the workpiece. Due to the plastic deformation of the metal surface, the surface microstructure is hardened, the grain is refined to form a compact fibrous structure, and a compressive stress layer is formed. Hardness and strength are improved as well as wear resistance, corrosion resistance and surface stability of the workpiece. The method can be used for both surface finishing and hardening that cannot be achieved by grinding and turning. Hardness and strength are improved as well as wear resistance, corrosion resistance and surface stability of the workpiece. The method can be used for both surface finishing and hardening that cannot be achieved by grinding and turning.

WIW

Multi roller Tools
WIW type for rolling of cold drawn, hot rolled or drilled bores. The machining is carried out by rotating the workpiece or rotating a multi-roller tool.

To meet the needs of our customers precision machining, the tools can be easily adjusted in the micron range.

Two types of tools are available for ordering

- multi-roller tool for blind holes
- multi-roller tools for through holes.



RAGA-T

SKIVVING AND BURNISHING TOOLS



Two-stage combined skivving and rolling tools with the movable head. These tools are used for internal finishing of cylinders and tubes.

The tool rolls out any irregularities such as waviness which can occur in the production of hydraulic cylinders.

Also during the roller-burnishing process the tool provides the perfect surface roughness. The RAGA-T combination processes diameters Ø 40 to Ø 250 mm in lengths up to 12 meters.

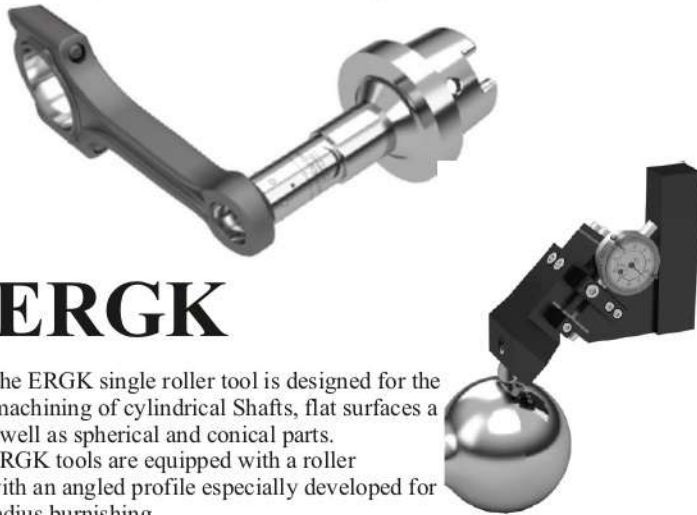
For larger diameters the tool is developed on request. Replacing inserts is quick and easy. The RAGA-T is equipped with 4 boring blade inserts. Cutting capacity of the tool RAGA-T up to 3 mm in diameter. Suitable for deep hole drilling.

The coolant or oil is pressurized through tool.

WHS

WHS hydrostatic tools are used for precision machining of holes or shafts. The coolant is used to push (press) one or more small rollers into the surface of the workpiece. During the machining process, the surface is smoothed and residual compressive stresses occur. These knurling tools can be used to machine workpieces with hardnesses up to 65 HRC. The tool is thus fundamentally different from conventional roller burnishing tools.

The machining process requires sufficient pressure in the coolant system, which can be supplied via the spindle (internal coolant supply) or by an external pump. The WHS tools can be used on universal machines and on CNC milling and turning centers. For minimum machining diameters, pressures up to 400 bar = 40 MPa are required.



ERGK

The ERGK single roller tool is designed for the machining of cylindrical shafts, flat surfaces as well as spherical and conical parts. ERGK tools are equipped with a roller with an angled profile especially developed for radius burnishing.

The angle of the roller can be 45° or 90° and allows the whole radius of the workpiece to be machined.

Indicator with a circular scale allows to see the value of the burnishing force. Holders 16x16, 20x20, 25x25, 32x32.

WIK/WAK/WPF

Rolling tools type WIK, WAK, WPF are used for rolling internal and external tapered, flat and face surfaces. The tool body is equipped with a special system of springs, which ensure that the surface pressure adjustment of each individual workpiece is corrected.

The set of springs is individually matched to each tool; in this way we can guarantee a perfect surface finish. In addition, the spring system prevents overloading of the tool and the machine, ensuring an even and constant load on each part.



WAM-1 WAM-2

The machines of the WAM series are used for roller burnishing of stepped shafts and normal shafts. In addition to superfine roughness, the machine provides surface toughness and a slight calibration of the part. Machining time is reduced due to high productivity and high speed. Thanks to these advantages, machine is perfectly suited for the batch production.

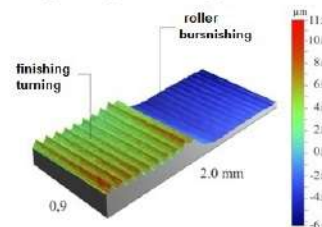


The WAM - 1 roller burnishing machine is the ideal choice for the machining of all kinds of workpieces in medium- and high volume production parts with high surface quality demands. Possible applications: plunger rods, shafts, pins, keys, and all types of blanks and finished parts. The machine not only provides an excellent external surface finish. It also has a high machining speed and precision. Centerless. You can achieve surface roughness to $RA = 0.02 \mu m$ reliably and quickly. Our roller burnishing machines can machine all types of metal with yield strengths up to 1400 N/mm² and a max. hardness of 45 HRC.

WPS WPB

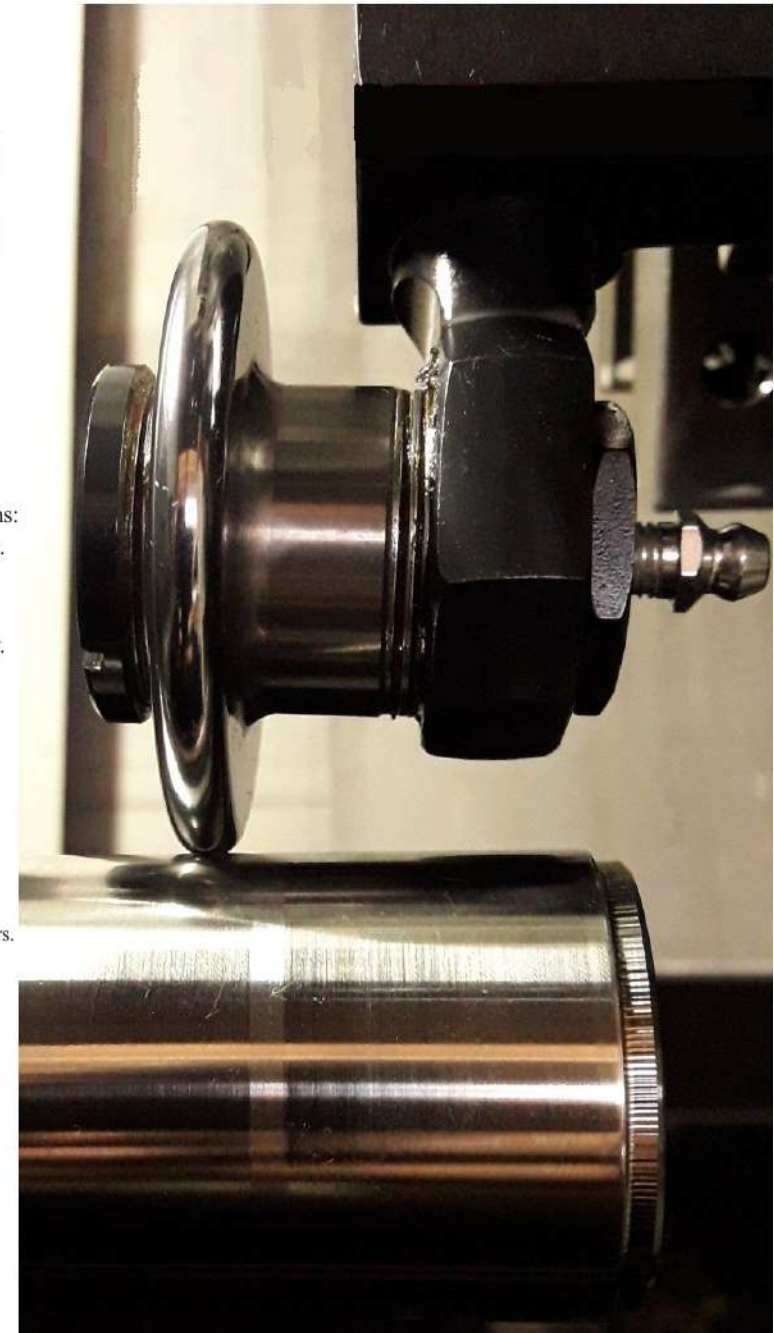


The combined Wenaroll Polaris (WPS) handles Ø 40 . Ø 250 mm in lengths up to 12 meters. Boring head: Equipped with 3 Viper inserts and 3 boring blade inserts. Rolling head: Carbide rollers in a housing around the circumference of the tool are inserted into the inner wall of the cylinder smoothing the surface of the pipe. Environmentally friendly machining in a single installation reduces costs. The roller-rolling process increases surface hardness and increases wear resistance and fatigue resistance of the surface with respect to dynamic loading. Reduced machining time by up to 90% compared to honing. High dimensional and geometric accuracy. Large cutting depths. Easy to handle. Lubrication: Machine oil is fed through an axial channel and holes in the tool. Interchangeable PTFE inserts: allows evenly positioned tools. Maximum hardness of the tool: HRC 45 Medium machining speed: 200 m/min Machine type: deep hole drilling machine



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ROLLER BURNISHING TOOLS

DIAMOND STRENGTH OF METAL