

CASE STUDY

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An all-round success: expert deburring and honing of rotors and stators

Sometimes a sintered part appears to be finished - but you are not satisfied with the result. Something is missing. The final touch so to speak. We have the solution for perfect deburring and honing of the edges, so that your sintered part gets rounded off.

Introductory remarks

Burrs are considered to be an annoying accessory when punching, precision cutting and machining. In practice, there are various processes to remove them, but which is the right one for you? - electro-mechanical deburring, high-pressure water-jet deburring, mechanical deburring with deburring millers, drag finishing, thermal deburring, barrel finishing and brush deburring. René Gerber AG is quite clearly in favour of the latter and finds brush deburring a truly exciting process. Thus the company aims to advance the development of this technology in order to constantly offer an even better solution to its customers.

Solution

The Gerber brushing, polishing and deburring machines are used when it is necessary to deburr workpieces with indentations or pockets with high precision and to round them off in a defined narrow tolerance range. At the same time, the surface roughness is quite significantly improved by the process. This technology is incorporated in a large number of precision components where absolute absence of burrs and

an undamaged surface are a must. In this process, a brush, which is coated with an abrasive or which consists of bristles with incorporated abrasive grit, is allowed to slide over a sharp-edged workpiece. The result of this is an edge rounding. Since no secondary burrs arise during honing / deburring with brushes, the rounding is absolutely reproducible through the setting parameters.

Brush deburring of milled, turned, sintered and punched parts with the BS Power

The high performance BS Power transfer brush deburring system has one of two planetary brush heads and can simultaneously deburr and polish workpieces reliably and uniformly up to a diameter of 400 mm or also on both sides up to 180 mm. Neither heavy burrs nor the smallest contours constitute a barrier. The planetary brush heads were developed by Gerber and each have three large disc brushes with a diameter of 260 mm, forming a rotational circle of 570 mm. The machine is universally applicable. Higher parts such as rotors, planetary gears and housings etc. can be reliably de-

RENÉ GERBER AG

Engineering

As technology leader in the process development of brush deburring and edge honing equipment, René Gerber AG has been providing solutions in the sector of deburring and reproducible edge honing for its customers for over 60 years.

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burred with this technology The BS Power is designed for high performance, so that heavily burrs resulting from punching, laser cutting, milling or turning are rapidly and reliably removed.



Its smaller sister, the BS Eco fills the gap as an efficient and cost-effective solution for smaller quantities with a diameter of up to 250 mm. The system is compact and reliable and optimally combines three work steps, selective deburring, edge rounding and surface polishing in one process.



During deburring, spikes on the surface are smoothed out without significantly affecting the thickness of the workpieces. This means that during edge rounding the surface is polished at the same time.

- Reduces roughness by polishing
- Optical surface improvement
- Dimension are not affected

Marc Schori CEO, René Gerber AG

Process

Part designation:

Rotor and stator for a hydraulic lamella pump (Ø40x32 / Ø56x32 mm)

Material:

Sintered steel

Industry:

Automobile supplier

Task formulation:

Deburring and honing of the sinter burrs

Brushes:

3x Tynex Ø250 interspersed with silicon carbide

Workpiece handling:

Transport belt and pull-down permanent magnet

Processing time:

90 seconds

Output:

325 pieces / hour

Processing is carried out as a continuous process. The grit is flushed out of the machine room.

