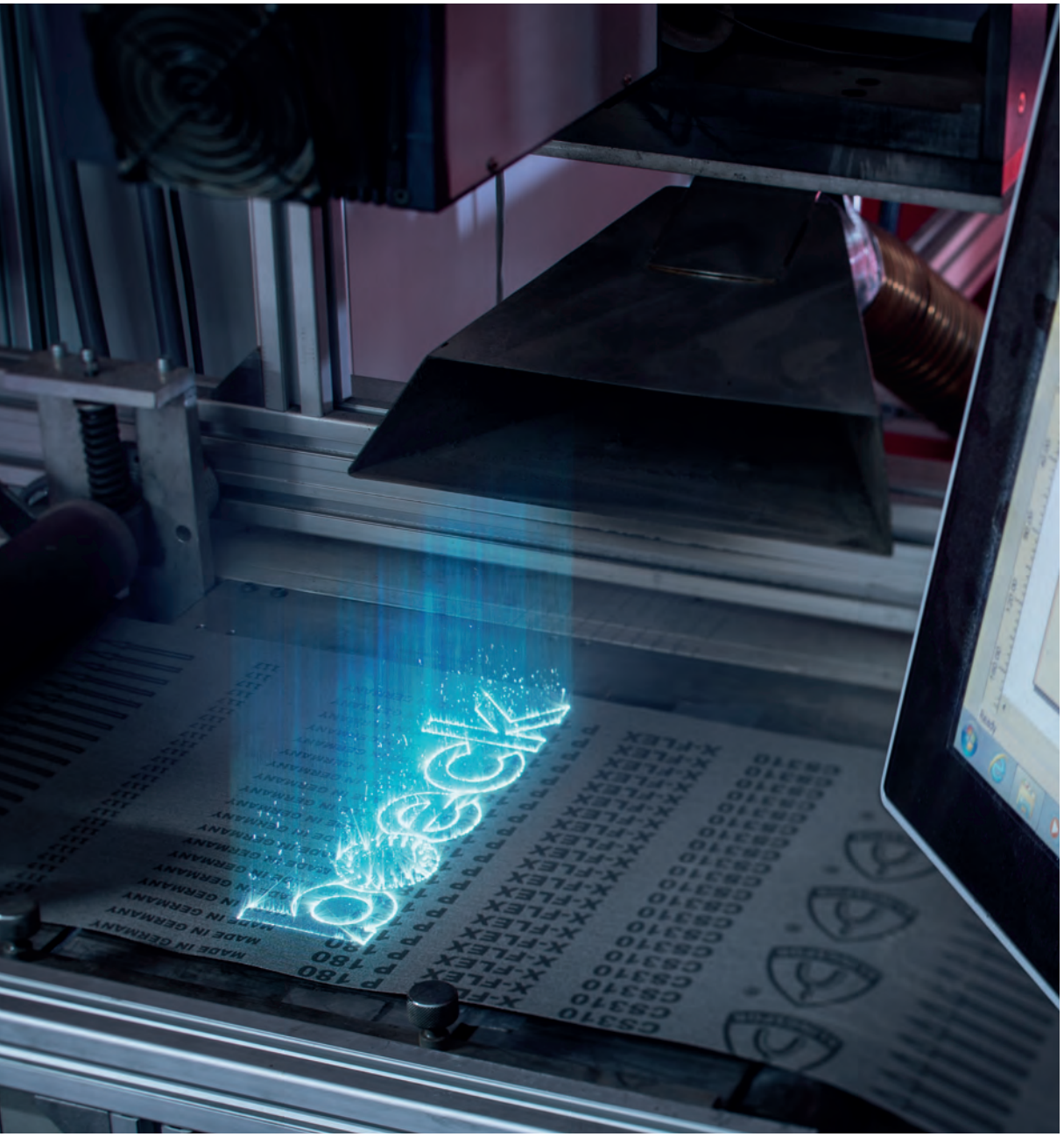
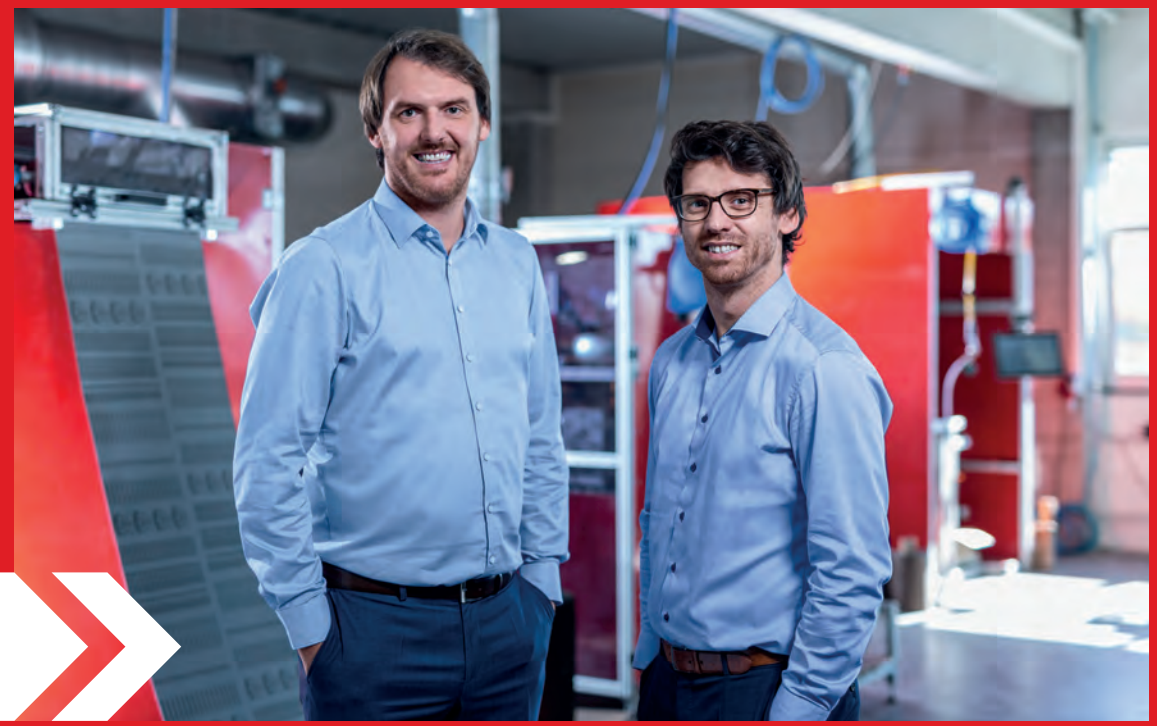
ENTHUSIASTS IN TECHNOLOGY

Worldwide unique tools for
deslagging • pre-grinding • deburring
edge-rounding • oxide removal • finish-grinding

English





BOECK – ENTHUSIASTS IN TECHNOLOGY

Anyone who has had experience of the two entrepreneurs knows that the engineers Marc and Jochen Böck are certainly no normal „manufacturers“. Rather, in the Bavarian-Swabian town of Leipheim, something unique happens. For this is where the brothers and their specialist team devote themselves, body and soul, to the development and production of tools – predominantly for sheet metal deburring. This is founded upon an extraordinarily profound understanding of application technology. In addition, they bring to their work state-of-the-art, personally constructed manufacturing technology that is at the limits of what is technically possible, as well as optimally coordinated high-performance processes.

That just leaves the most important ingredient: a burning passion for perfection! All this comes together to give „Made by boeck“ tool solutions that are both convincing and surprising. And this is precisely what creates genuine enthusiasm, time and again, from customers all over the world, as well as from their own employees!

WE MAKE OUR MARK!

OUR TRADEMARK:
Innovative solutions for sustainable competitiveness.
Our customers profit from our highly developed consulting and application expertise. This know-how guarantees maximum competitiveness through high-performance processes in every production.

THE MARK OF QUALITY:
We manufacture „Made in Germany“ quality.
With high-level automation and state-of-the-art, self-developed production technology, we produce quality tools for you. That‘s how „Made in Germany“ works.

SIGNS OF THE TIMES:
We set standards in terms of speed.
Almost all of our tools are dispatched the same day they are ordered. Because standstills are not an option.

A VALUABLE ASSET:
Our success formula for your profitability.
Consistent full automation plus intelligently structured processes equals maximum profitability.

OUR BRAND:
We are perfecting the future.
That crucial added value for our customers is the focus of our thoughts and actions. That‘s why we are always working, with perfectionist standards, at the limits of technology – and making a splash as we go!

OUR HISTORY IS STILL A SHORT STORY

But we continue to write it with the greatest of enthusiasm. You may well be curious. And we are already looking forward to the next chapter.

APRIL 2017
Doubling of the production area

21 OCTOBER 2016
First patent application

MARCH 2015
Further product development to multi-row deburring tools

OCTOBER 2014
Launch of a new generation of deburring wheels & Development of quick-release systems

14 OCTOBER 2013
Sale of the first product – the QUICK 115 deburring disc

JULY 2013
Founding of boeck GmbH

High-performance processes = enthusiasm x technology²

01 DESLAGGING

During plasma or gas cutting, strong melting often occurs, with the molten metal sagging on the beam-exit side. This so-called slag occurs both on the inner and outer contours of the workpiece and must be removed for economical further processing.

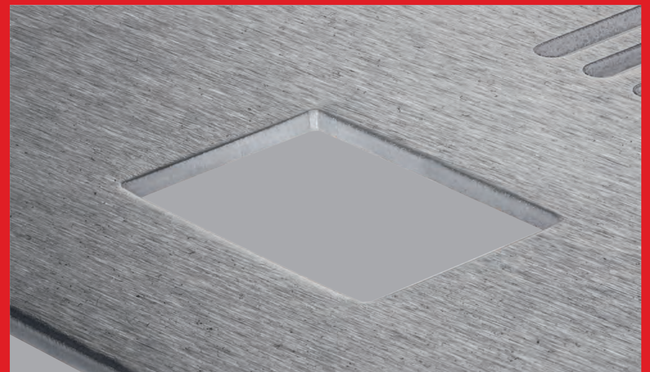
01

02

02 PRE-GRINDING & DEBURRING

Burr formation on laser-, plasma- and gas-cut, or stamped, sheet metal parts often cannot be avoided. The burr respectively primary burr is a material formation on the cut edge of workpieces that protrudes beyond the original workpiece edges and surfaces. Other deviations from the target state include, e.g., spatters on the workpiece surface caused by laser cutting, unevenness, or scaling of the surface. A by-product of removing primary burr is the so-called secondary burr. This spreads out in the direction of the workpiece surface and forms due to insufficient removal and simultaneous recasting of the residue material.

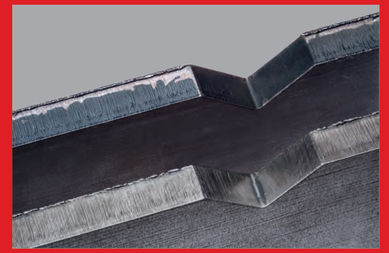
03



03 DEBURRING & EDGE-ROUNDING

At this stage of the process, the primary and secondary burrs are removed and the edges rounded off. In order to lay the foundations for subsequent process steps (powder coating, wet painting, galvanisation, anodisation, bonding, etc.) and rule out any risk of injury due to sharp edges, the removal of the primary respectively secondary burr is often combined with the so-called edge-rounding. The edge rounding range from a few decimillimetres to radii of 2mm or even greater. These radii are now stipulated by standards such as e.g. DIN EN 1090.

04



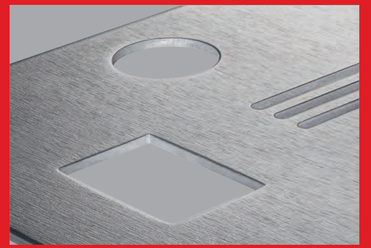
04 OXIDE REMOVAL

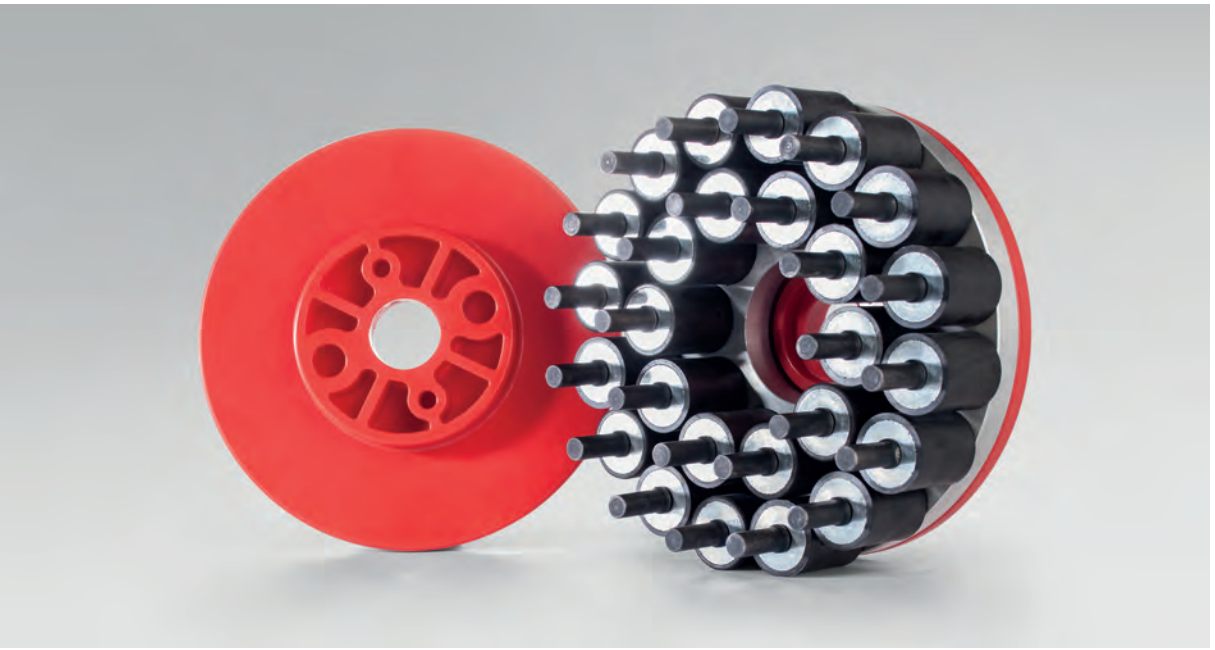
Oxygen-cut workpieces have oxide layers on the cut edges. These „dark layers" pose a risk for subsequent processes and can lead for example to chipping of the coating. For that reason they must be removed.

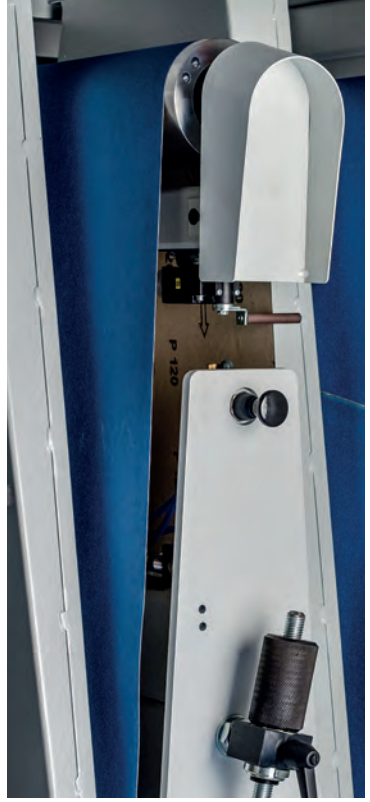
05

05 FINISH-GRINDING

The purpose of this process step is to grind out scratch marks and create a decorative surface. Specific grinding patterns right up to a high-gloss mirror finish can be achieved on the sheet metal surfaces.





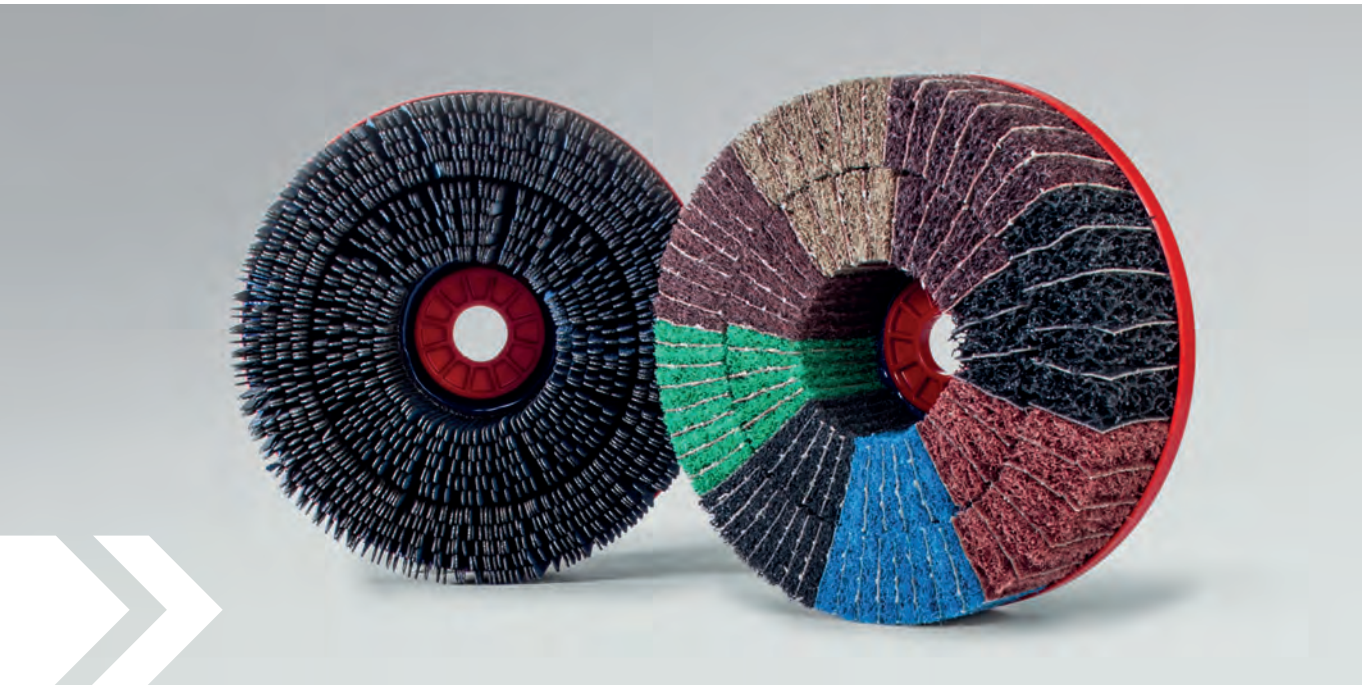


01 DESLAGGING

Common manual methods for deslagging include chipping it away using a hammer and chisel, or grinding using an angle grinder. In terms of mechanical processes, excess accumulations of material can be removed by grinding with a soft contact roller. Another industrial method is knocking it off using a slag hammer brush made up of multiple flexibly mounted pins.

02 PRE-GRINDING & DEBURRING

Primary burrs, spatters, unevenness and/or scale layers are normally removed by grinding. When removing primary burrs, the focus is on minimising the formation of a secondary burr. In order to remove these undesired secondary attributes from the sheet without leaving a residue, special support units are required for grinding belts, -discs or -sheets.

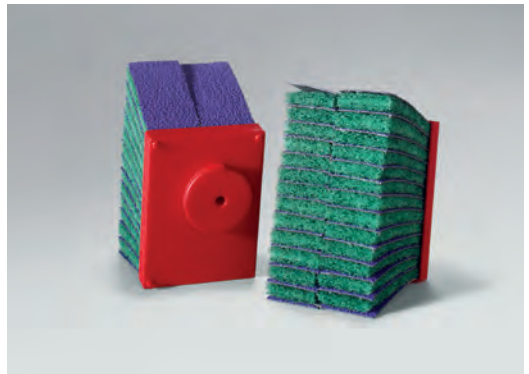


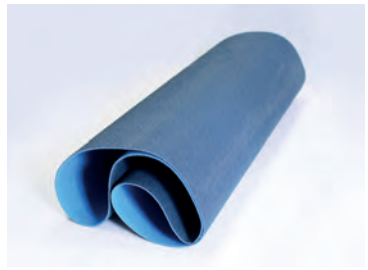
04 OXIDE REMOVAL

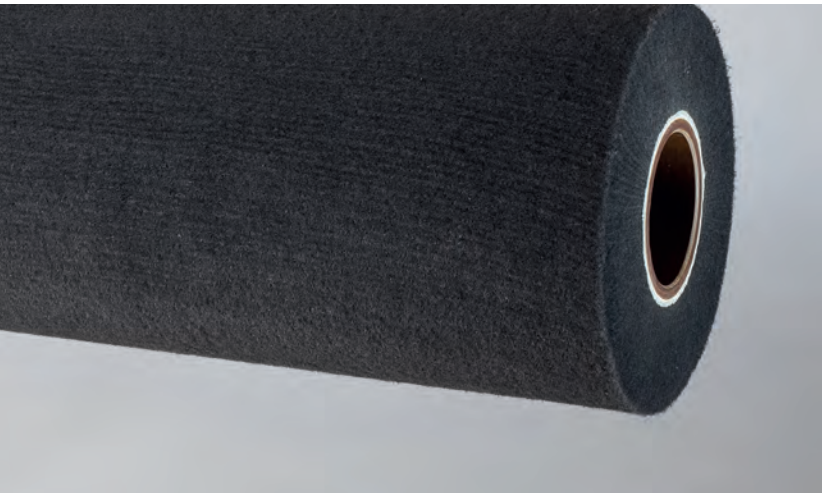
Mechanical removal of the oxide layer is achieved by grinding or brushing. Both processing options can be implemented for manual processing procedures. In terms of mechanical processing, it is mostly brushes that are used, which, thanks to a specially developed wire fill in an innovative multi-row arrangement, flexibly follow the contours of the workpiece and achieve blank metallic edge surfaces.

03 DEBURRING & EDGE-ROUNDING

The deburring and edge-rounding is carried out using flexible, abrasive tools with high adaptability to internal and external contours such as radii, bore-holes and cut-outs. The corresponding deburring discs, deburring wheels, deburring blocks and deburring brushes are used on portable machines as well as grinding and deburring machines. The last mentioned machines have, for example, planetary head systems or oscillating units for uniform processing of the edges.







05 FINISH-GRINDING

During the last processing step, it is primarily abrasive cloth, nonwoven abrasive, and felting tools that are used, as a continuous belt or roller. With manual processing techniques, the results, and their reproducibility, depend heavily on the operator. For mechanical finishing, the machine must have appropriate setting options.

boeck is a very good partner for us, because, like us, they always have a customised solution to hand. When something seems impossible, that's when things really get going here! «

Torsten Klimmer, Executive Partner, Ernst Klimmer GmbH, www.klimmer-gmbh.de

boeck
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Phone +49 • 8221 • 20 03 961
Fax +49 • 8221 • 20 03 963
Mail info@boeck-technology.de

boeck GmbH • Ludwigstraße 8
89340 Leipheim • Germany
www.boeck-technology.de

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