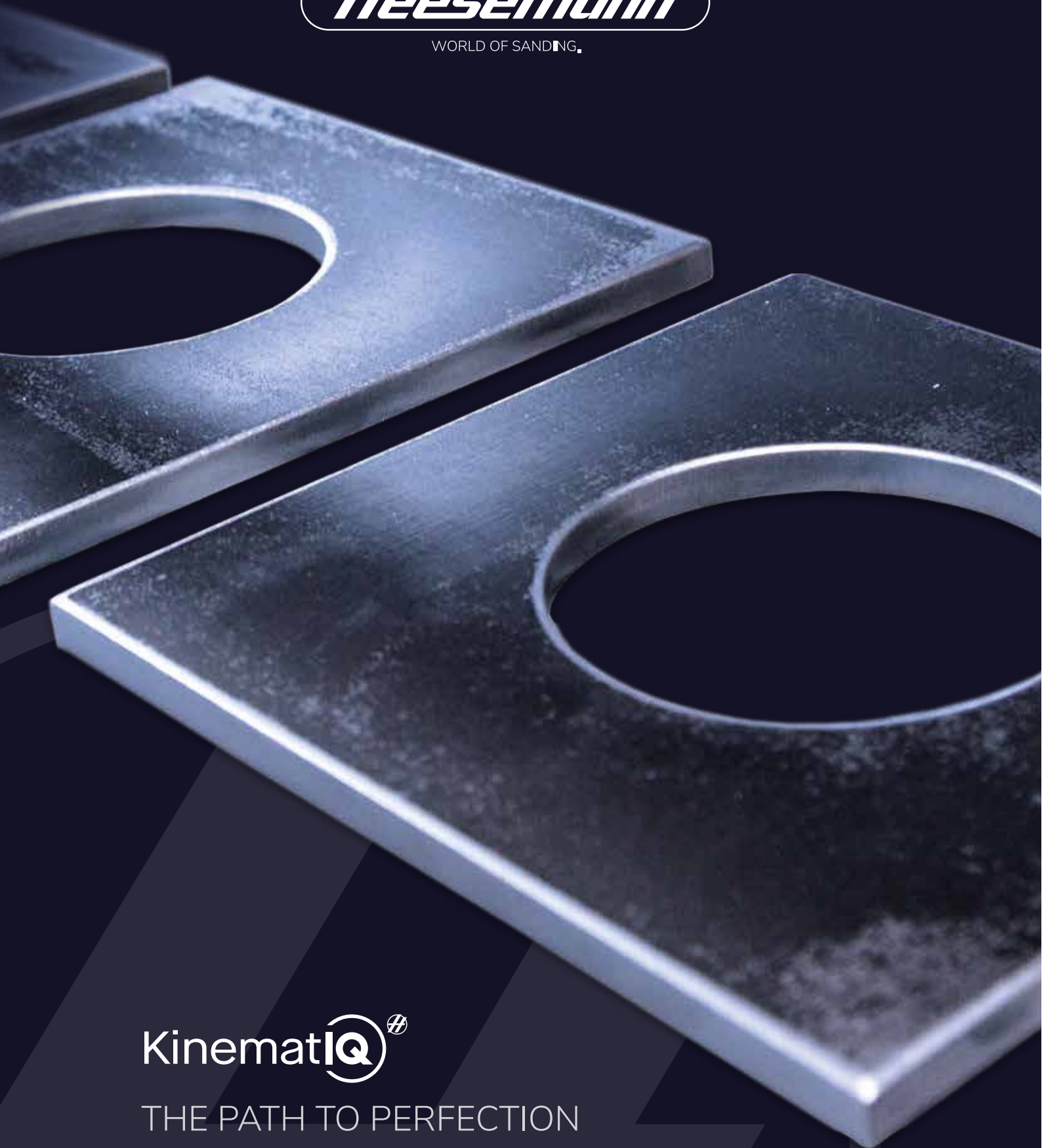




WORLD OF SANDING.



KinematIQ[®]

THE PATH TO PERFECTION

THANKS TO A REVOLUTIONARY CALCULATION PROCESS,
THE NEW GENERATION HEESEMANN UNITS ROUND WITH
UNMATCHED UNIFORMITY AND INTENSITY.

HEESEMANN KINEMATIQ

SCIENTIFIC CALCULATION ENABLES PERFECT ROUNDING

The uniformity and intensity of edge rounding are two key quality characteristics of deburring machines. With many common processes, the edge rounding varies depending on where the workpiece passes through the machine. The only way to achieve 100% uniform edge rounding on every workpiece edge is with perfectly designed kinematics.

To safeguard the technology leadership of our deburring machines, we have developed a computer-supported process capable of calculating and predicting the uniformity and intensity of the results: Heesemann KinematIQ.

The underlying principle itself is simple: If the machine's kinematics and the tool are known, mathematical calculations can precisely predict whether the rounding will be uniform or not.

Standardized testing procedures have already validated these calculations. In the process, every machine concept available on the market has been precisely analyzed and the Heesemann units optimized down to the last detail.

This now delivers unmatched intensive and uniform rounding in combination with homogeneous tool wear.



KinematIQ®

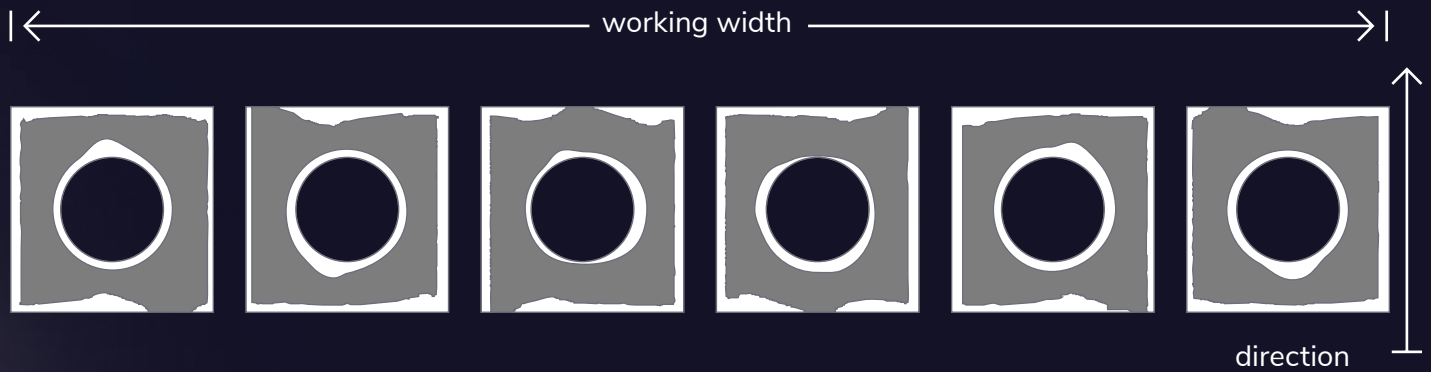
HOW KINEMATIQ REVOLUTIONIZES SANDING

Under real conditions, this process provide an enormous competitive advantage - both when developing new units and when optimizing existing systems. KinematIQ was used for the first time as part of the RUT technology upgrade.

To visualize the results, the roundings are highlighted in the following illustrations. The white areas

do not represent the actual amount of material removed but show a greatly magnified view of the non-uniform rounding. For example, the sanding results delivered by a conventional planetary head unit with two disc brushes per head look like this:

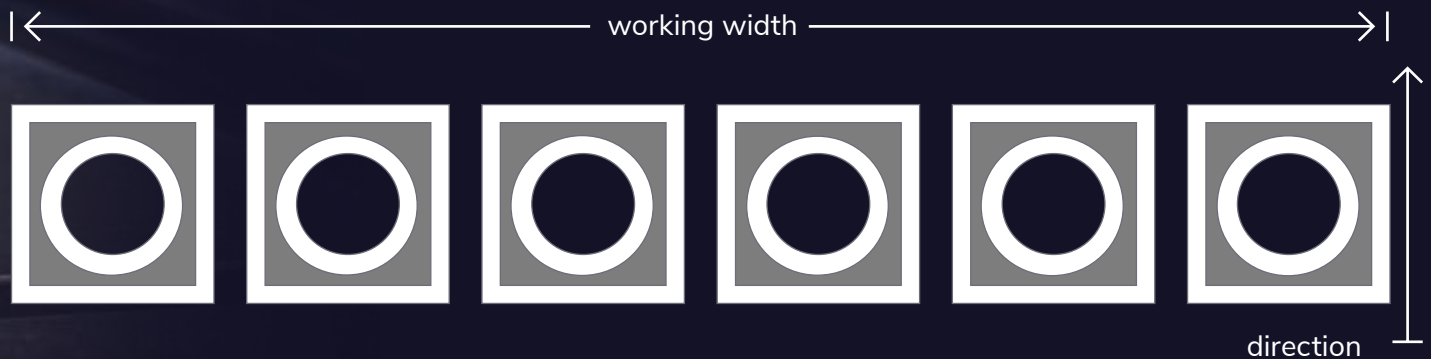
PLANETARY HEAD UNIT WITH 10 DISC BRUSHES (5 ROTATING HEADS WITH 2 BRUSHES EACH)



Uneven rounding results influenced by the position and direction as well as low feed rates.

The illustration clearly shows the non-uniformity generated by this process.

HEESEMANN RUT AND RUL UNITS



The RUT and RUL units move strictly in accordance with the parameters calculated in the simulation in order to deliver the very best results: Uniform and high material removal across the entire width

of the machine together with homogeneous tool wear. The machine is now better than ever and works faster, more evenly and with less resource consumption.

ROUNDING NEW INVENTED: RUT & RUL UNITS

INTENSIVE PROCESSING WITH MAXIMUM UNIFORMITY

The KinematIQ process has perfected Heese-mann's RUT disc brush unit and the newly developed RUL lamella brush unit. These systems now deliver optimized kinematics for 100% uniform edge rounding.

A total of 18 disc brushes ($\varnothing 180$ mm) rotate around their own axis while simultaneously moving in a revolving path around the unit.

The RUL unit adds rotation around the horizontal axis. Users can continuously adjust the speed of

the rotation, the circulation and the feed. The system utilizes 6 lamella rollers - each one with a diameter of 350 mm and 365 mm wide!

Extensive use of abrasive tools ensures that the RUT and RUL achieve both uniformity and also high material removal to deliver outstanding rounding performance.



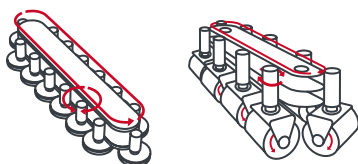
360° rounding

All workpiece edges are machined uniformly



100% uniformity

Regardless of the position on the conveyor



Intensive machining

18 disc brushes with 180mm diameter
resp. 6 abrasive lamella rollers with
350mm diameter & 365mm width



High throughput

Significant increase in productivity

profiRounder[®]

by **Heesemann**



reddot award 2017
winner



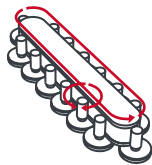
PROFIROUNDER MACHINES FOR EXCELLENT RESULTS

Standard units



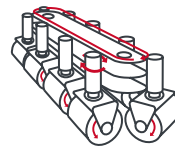
Contact roller

Deburring
Surface finishing



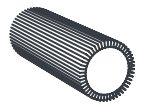
RUT

Deslagging
Oxide removal
Edge rounding



RUL

Edge rounding
• very small radii
• also suitable for foil and
galvanized materials



Brush roller

Surface finishing

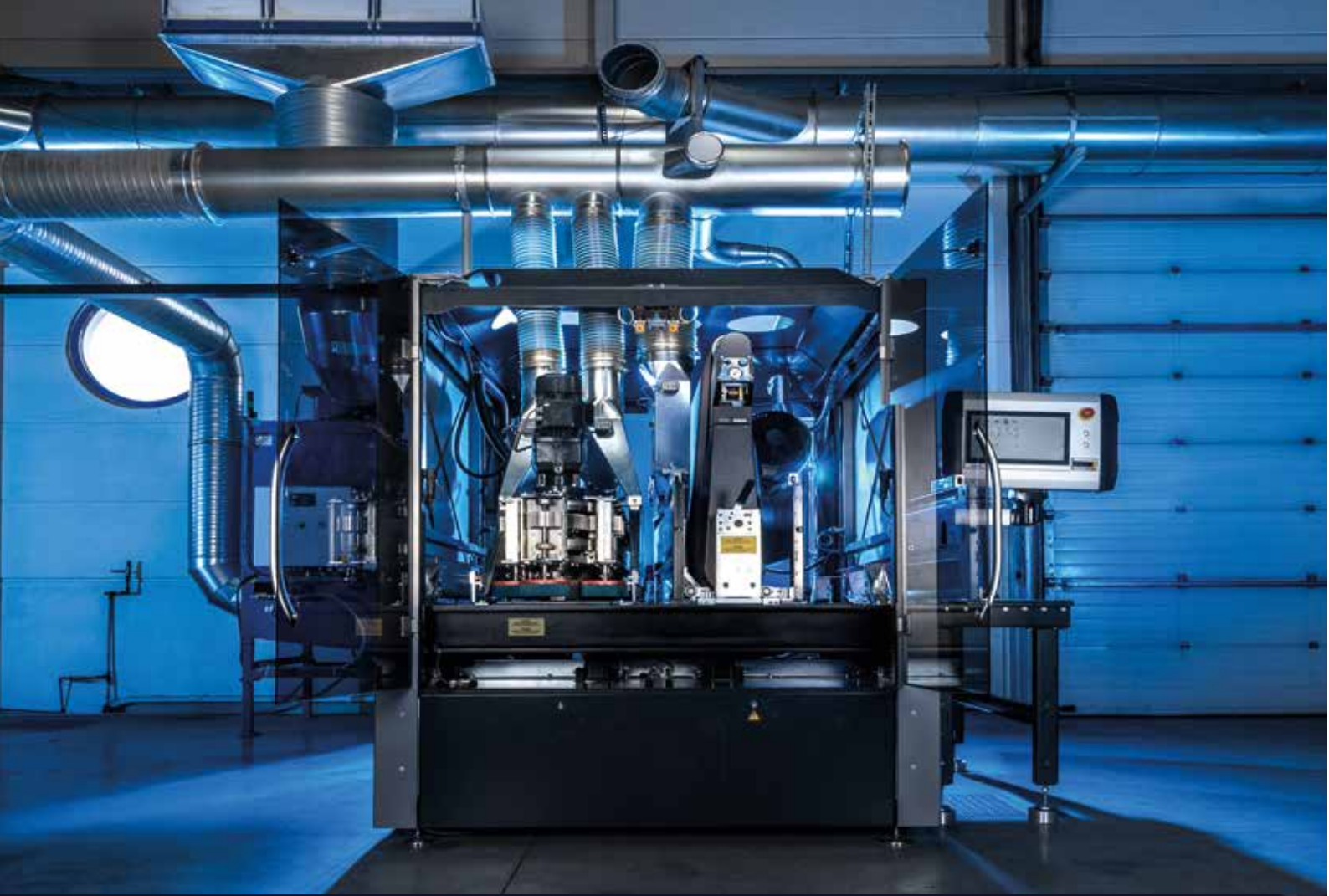


1 - 6 units possible



0,5 - 5 m/min

Feed rate



SURFACE PROCESSING WITH THE HIGHEST PRECISION.

For over 80 years, Karl Heesemann Maschinenfabrik GmbH & Co. KG has been producing sanding machines for the industry and trades. Throughout its long history, the company has developed ground-breaking and trend-setting innovations that the industry continues to use to this day.

Whether wood, metal or other materials, Heesemann offers high-end surface finishing.

Convince yourself of the precision and uniformity of our rounding capabilities!



Karl Heesemann Maschinenfabrik GmbH & Co. KG

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