VSM
WE KNOW ABRASIVES

XELERION

The finest surfaces – right on point

XELERION

Finish grinding, on a whole new level

VSM XELERION sets new standards for finish grinding applications: Thanks to its randomised structure, XELERION makes it possible to achieve a flawless and reproducible scratch pattern while ensuring sustained high stock removal – and even reducing the number of process steps required. Grinding processes are more efficient and the strain on users is significantly reduced.

Finish grinding – right on

Homogeneous surfaces, a reproducible scratch pattern and a sustained high stock removal rate: This is what **the new XELERION series KK670F and KK670J are all about.**

Creates flawless, homogeneous surfaces up to high gloss

High initial aggressiveness and constant stock removal

Cotton backing moulds flexibly to adapt to every contour

Optimal distribution of force and heat reduces discolouration and deformation

Particularly user-friendly due to reduced noise, odour and dust

Your application

Medical instruments

Implants

Plant and tank construction

Kitchen industry

Fittings

Furniture

Automotive

Shipbuilding

point

GERMAN INNOVATION AWARD '25 WINNER

MADE IN GERMANY

XELERION

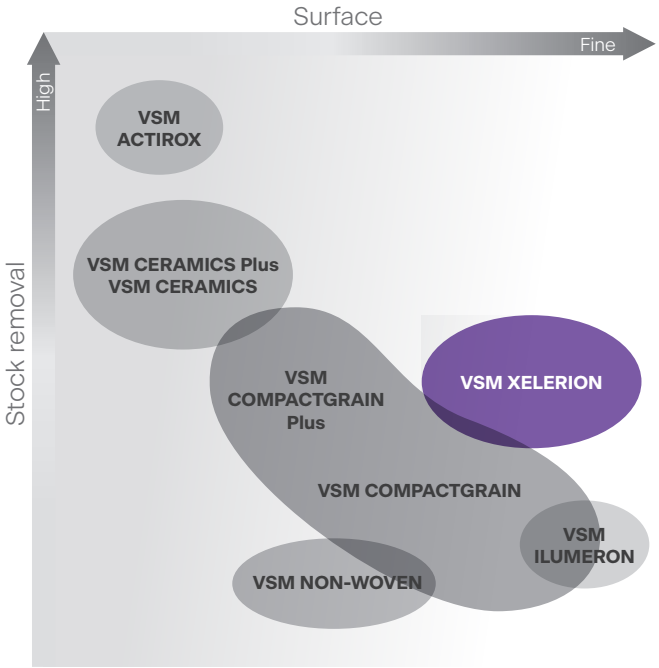
XELERION makes a big impact in applications with low contact pressure, such as backstand grinding or grinding using hand-held tools.

Developed for:

Stainless Steel | Non-ferrous metal

Also suitable for...

Aluminium | Unalloyed Steel | Superalloys



Product overview

VSM range	Rolls (max. width in mm)	Belts	Discs	Backing	Grain technology	120	150	180	220	240	280	320	360	400	500	600	800	1000	1200	1500	2000	2500
KK670F	650	○		Cloth	VSM XELERION (AO)					P		P		P		P			P			P
KK670J	650	○	○	Cloth	VSM XELERION (AO)					P		P		P		P			P			P

Last updated: 10/2024. Other dimensions and grit sizes on request.

Features
○ for low to medium contact pressure

Flexibility of backing material (last letter of series name):
F very flexible
J flexible

P = categorisation according to FEPA standard.
AO = aluminium oxide

Newly developed grain structure: The XELERION dots consist of several layers of many sharp abrasive grains. They ensure sustained high stock removal.

XELERION

For maximum productivity

The improved stock removal performance simplifies the grinding process considerably. Even with fine grit sizes, stock removal is high, which means that **XELERION** can easily grind out coarsely roughed surfaces. And furthermore: Common grit size steps can be skipped to achieve the desired surface finish with just a few grinding passes.

High performance also means fewer process steps and tool changes. Productivity is massively increased.

Case studies

Medical instrument

Material	Martensitic stainless steel
Series	**KK670F**
Grit size order	P240, P600, P1200, P2500
Cutting speed	26 m/s
Roughing	XK870F, #120
Result	> No thermal damage to the workpiece > Low polishing effort required > Service life is doubled

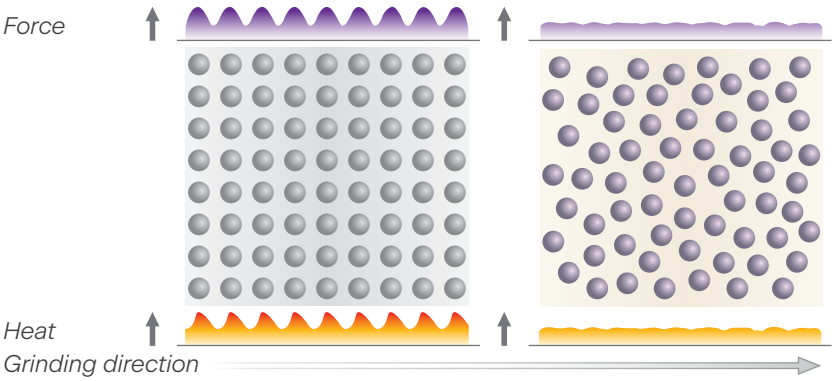
Pharmaceutical container

Material	Austenitic stainless steel
Series	**KK670J**
Grit size order	P600, P1200
Cutting speed	30 m/s
Roughing	XK870X, #80
Result	> Grit size steps can be skipped > Fewer processing steps > High productivity

Further examples of use

Innovations that point the way

Randomised structure



Unlike similar competitor products, the **XELERION dots** are not arranged strictly symmetrically on the backing, but in a deliberately randomised manner.

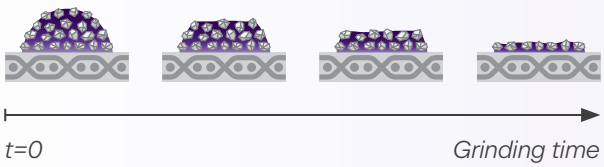
This new, innovative manufacturing process makes a decisive difference on several levels.

The short, irregular grinding interruptions ensure an **optimised distribution of force and heat** – and thus also **cooler grinding,** which helps prevent discolouration and deformation.

This results in a **fine, even surface** without any "random scratches". A perfectly reproducible finish is achieved – right up to a **flawless scratch pattern for high-gloss surfaces.**

In combination with a flexible fabric backing, the completely new dot design results in **outstanding adaptability to the workpiece geometry.** This means that even tight radii and complex contours, such as those of tools or medical instruments, can be processed with pin-point accuracy and precision.

XELERION dots



- **Newly developed grain structure**: The XELERION dots consist **of several layers of many sharp abrasive grains** set in a synthetic resin bond
- Due to the **constant breaking out** of worn abrasive grains, **new, sharp grains** are produced
- This ensures **sustained high stock removal**

Made in Germany

In order to meet the stringent demands of the metal processing industry, VSM always plays it safe:
XELERION was developed and tested in Hanover and is now also produced here. With our in-house expertise, we are able to significantly influence the performance of the abrasives.

MADE IN GERMANY

By experts for experts

Would you like to find out more about metalworking with XELERION or request samples without obligation?

Call us at:
+49 511 3526 479

Or send us an email:
sales@vsmabrasives.com

For expert knowledge and comprehensive tips, check out our **webinars** and **seminars:**

vsmabrasives.com/en/service/webinars

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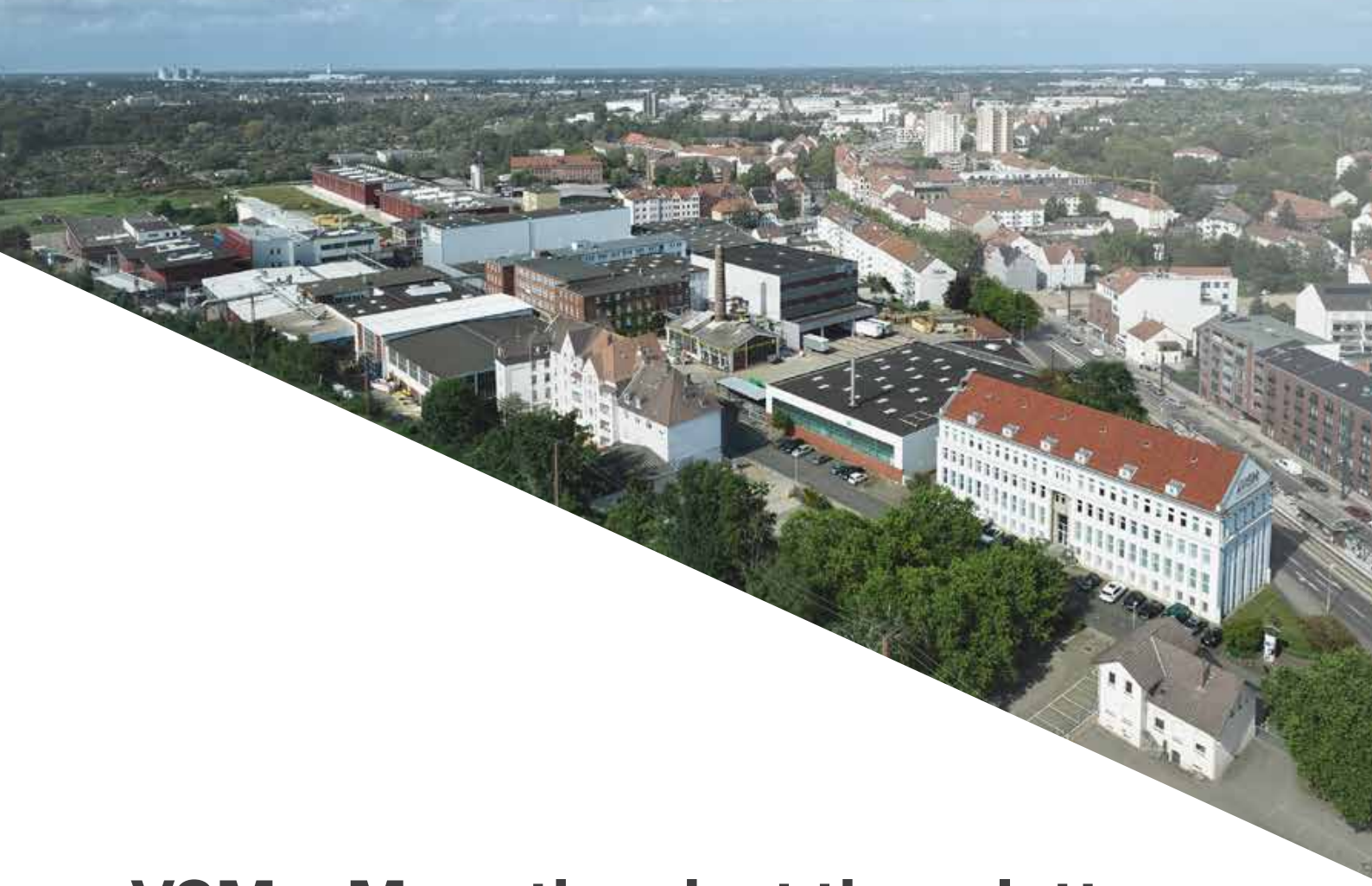
www.vsm-xelerion.com



VSM – More than just three letters

VSM stands for competence, quality and customer orientation.

Very few others understand grinding processes like we do. Not only do we grind every surface to precision, we also analyse the specific grinding applications of our customers so that we can always find the best, long-term solution. Process-related expertise is one of the distinguishing features of VSM.

We know abrasives

Because we understand them. VSM develops and produces all the main preliminary products such as backing fabrics, resinoid bonds and abrasive grains at its Hanover site. By doing so, we fulfil our high, self-imposed requirements in industry, the commercial and trade sector. The continuous development of further grain compositions, their refinement and processing ensures that VSM remains one of the most experienced manufacturers of ceramic grain worldwide.

Application-based expertise

We see the entire grinding processes of our customers as a challenge. A global network of VSM specialists provides expert advice wherever it is needed irrespective of whether your company is large or small. Thanks to our close collaboration with machine manufacturers, cutting fluid experts and research institutes, we ensure that our customers can benefit from technological trends as soon as possible.

We make our expertise available for you

The VSM Competence Center (CC) in Hanover provides an opportunity for product training, seminars and extensive application tests. Customer applications can be adjusted and results reviewed. This service from VSM reduces downtimes and productivity losses for our customers.

Certified and recognized worldwide

VSM has been certified to ISO standard 9001:2008 as its basis for quality assurance for many years. In addition, it is a member of FEPA, oSa and the German Abrasives Association (VDS).

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