



**ALU-X**

**THE X-PERTS  
FOR ALUMINUM**



A man wearing safety glasses and work clothes is operating a lathe machine in a workshop. He is focused on his work, and the machine is in the foreground. The background is a dark, textured wall.

**X** FOR  
**-TREME**  
PERFORMANCE.



## From X-PERTS for X-PERTS

**ALU-X is the new series of abrasives developed by VSM to meet the specific requirements of grinding non-ferrous metals.**

Here, the proven **VSM CERAMICS** grain technology with continuous self-sharpening is complemented by the additional grinding-active layer **VSM ALU-X**. The result: Improved chip removal, fewer tool changes, more workpieces per shift, more stock removal and a grease-free workplace.

# X-TREME performance -

**ALU-X**

The additional layer ALU-X significantly reduces chip adhesion during grinding of non-ferrous metals

Developed for:



Aluminum



Non-ferrous metal



Unalloyed Steel



## Your grinding task



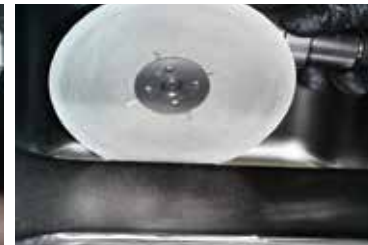
Grinding of cast parts



Deburring



Removing welded seams



Preparing welded seams

# - reduced chip adhesion

## Your advantages at a glance

- > Specially developed for grinding **aluminum and non-ferrous metals**
- > **VSM ALU-X significantly reduces chip adhesion and clogging of the abrasive**; which reduces the number of **tool changes**
- > **Increased performance** enables **faster workpiece grinding** and lowers the process costs
- > **Grease-free and oil-free grinding** keeps the **workplace clean**.
- > **VSM** always delivers premium **made-in-Germany** quality



Reduced chip adhesion means fewer tool changes



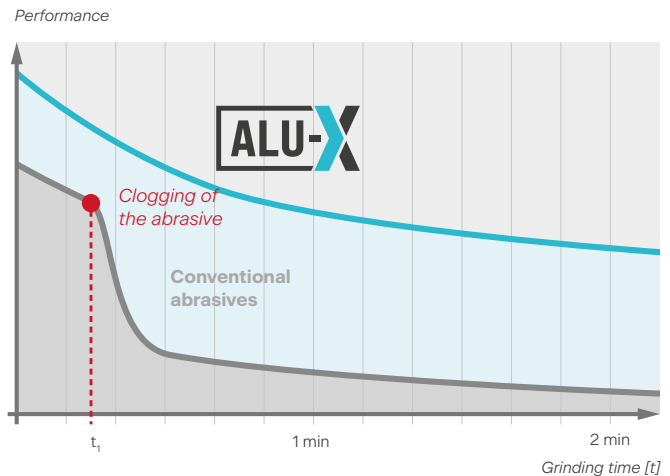
High stock removal rate and a longer service life



Reduced tool costs per workpiece



Grease-free and oil-free grinding



Grinding aluminum alloy bars ( $\varnothing$  30 mm, AISi12Cu) using fiber discs with grit size 24.



Beveling



Cleaning



Removing imperfections



Technical surface quality

# Five X-PERTS for aluminum grinding

Whether preparing or removing weld seams, deburring, grinding sprues, grinding out flaws as part of repair grinding, or achieving the desired technical surface quality: virtually all grinding work with non-ferrous workpieces can be carried out with the ALU-X series from VSM.

VSM CERAMICS with ALU-X is ideal for rough grinding applications. VSM ALUMINIUM OXIDE abrasive belts are true all-rounders. The abrasive grain produces a matte scratch pattern and is particularly recommended for working on contours.

## Product overview



Rolls (max. width inches)	Wide belts	Narrow belts	Resin discs	Backing	Grain technology	Features	24	36	40	50	60	80	100	120	150	180	220	240	320	400	600	VSM Series	
			○	Fiber	VSM CERAMICS	ALU-X																	XF733
58 in	⊙	⊙		Cloth	VSM CERAMICS	ALU-X ◊																	XK733X
58 in	⊙	⊙		Cloth	VSM ALUMINIUM OXIDE	ALU-X ◊																	KK732X
41 in	○	○		Cloth	VSM ALUMINIUM OXIDE	ALU-X																	KK532F
57 in	○	○		Paper	VSM ALUMINIUM OXIDE	ALU-X																	KP532E

Last updated: 02/2024. Other dimensions and grit sizes on request.

### Features

○ for low to medium contact pressure   ⊙ for medium contact pressure   ● for medium to high contact pressure   ◊ also suitable for wet grinding

### Backing flexibility (last letter of series name):

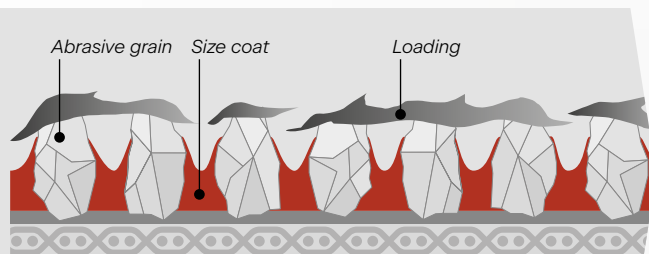
**E (paper)** stiff   **F** very flexible   **X** sturdy



# Ideal grinding of non-ferrous metals

Non-ferrous metals such as aluminum, bronze and copper are demanding materials that can easily clog the abrasive. This means, instead of being removed, the chips stick to the tips of the abrasives grain which causes loading. This prevents the abrasive grain from functioning and it

becomes unusable. The new **VSM ALU-X** additional layer reduces chip adhesion and minimizing clogging of the abrasive. The extended service life offers excellent stock removal even after longer periods of use.



Conventional abrasives: Chips stick to the grain tips and the abrasive becomes clogged.



Fiber disc clogged with aluminum chips

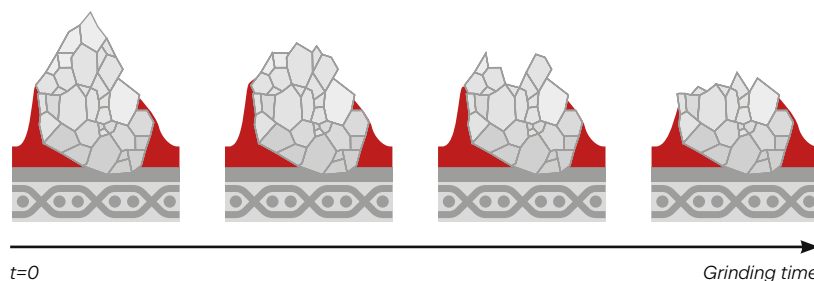


The VSM ALU-X additional layer significantly reduces adhesion; the abrasive can be used for longer.



VSM ALU-X: It is clear to see that significantly fewer chips stick.

## VSM CERAMICS for maximum stock removal



**VSM CERAMICS** abrasives are known for their aggressive cut and long service life. Continuous self-sharpening of the grain guarantees long-lasting high performance.

As top products for a large number of stationary and mobile grinding applications, **VSM CERAMICS** also have an excellent price-performance ratio.



# Case studies

## Cleaning structural parts



<b>Workpiece</b>	Automotive bodywork
<b>Material</b>	Aluminum alloy
<b>Cutting speed</b>	8,600 RPM
<b>Feed rate</b>	Manual
<b>Series</b>	<b>XF733</b>
<b>Disc dimensions</b>	7 x 7/8"
<b>Grit size</b>	36

> **Result:** Twice the stock removal compared to the previous leading abrasive

## Welded seam levelling



<b>Workpiece</b>	Window frames
<b>Material</b>	Aluminum alloy
<b>Cutting speed</b>	9,630 RPM
<b>Feed rate</b>	Manual
<b>Series</b>	<b>XF733</b>
<b>Disc dimensions</b>	5 x 7/8"
<b>Grit size</b>	36, 60, 80

> **Result:** 90% longer service life compared to conventional abrasives

## Removing sprues



<b>Workpiece</b>	Cast parts
<b>Material</b>	Aluminum alloy
<b>Cutting speed</b>	5,500 RPM
<b>Feed rate</b>	Manual
<b>Series</b>	<b>XK733X</b>
<b>Contact element</b>	3", 90° Shore A
<b>Grit size</b>	36

> **Result:** 35% longer service life compared to the competing product

# From X-PERTS for X-PERTS



Would you like to find out more about grinding non-ferrous metals, or request samples?

Call us at:  
**800 737 0176**

Or send us an email:  
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We impart expert knowledge and give comprehensive practical tips in our **webinars** and **seminars**:



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# 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 analyze 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**

VSM develops and produces all the main components such as backing fabrics, resin bonds and abrasive grains at its Hanover site. By doing so, we fulfill our high, self-imposed requirements in industrial, the commercial and trade sectors. 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 all grinding processes of our customers as the 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.

## **We make our expertise available for you**

The VSM Technical Center (TC) 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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