







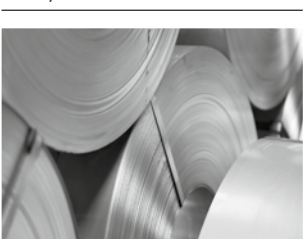



**VSM CERAMICS Plus**  
**VSM CERAMICS**

**Self-sharpening  
ceramic grain abrasives  
for high stock removal**

# Our products



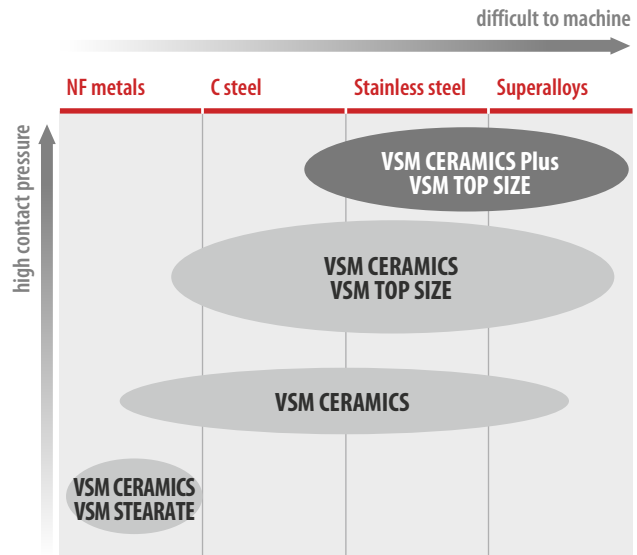
## Your application

Turbine blades	Tools	Tubes	Plants and containers
			
Coils, sheet metal	Sanitary fittings	Castings and forged parts	Medical instruments
			

# VSM CERAMICS for maximum productivity

## Your advantages at a glance

- > With **VSM CERAMICS** and **VSM CERAMICS Plus** VSM provides two **innovative grain technologies** suitable for specific applications
- > A proven track record of up to **40 % increase** in **stock removal** and **service life** as compared to conventional ceramic grain abrasives
- > Cool grinding processes and enhanced service lives thanks to **additional grinding inducing layers** of **VSM TOP SIZE** and **VSM STEARATE** abrasives
- > VSM can be relied on to always deliver premium quality **made in Germany**



## Premium quality thanks to preliminary products from our own production

Our high vertical integration enables us to achieve a consistently high quality of our abrasives. VSM develops and produces all the main preliminary products such as backing fabrics, resinoid

bonds and abrasive grains itself at the Hanover site. This is how we can make a grain which is perfectly tailored to your requirements.

## Producing our own preliminary products in-house is a special feature of VSM's abrasives production

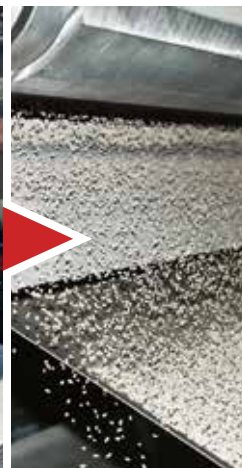
Finishing of the backing materials



Resin production



Production of abrasive grain



Coating and spreading



Basic goods



# Case studies

## Centreless grinding



### VSM CERAMICS XK760X

<b>Workpiece</b>	Tubes Outer diameter 104 mm
<b>Material</b>	Chromium nickel steel (1.4301)
<b>Contact wheel</b>	<ul style="list-style-type: none"> <li>&gt; 450 mm diameter</li> <li>&gt; Hardness: 60° Shore A</li> <li>&gt; Serration: 2:1</li> </ul>
<b>Cutting speed</b>	25 m / sec
<b>Axial feed rate</b>	2.5 m / min
<b>Belt dimensions</b>	150 x 3,500 mm
<b>Grit size</b>	40
<b>Lubricant</b>	Emulsion
<b>Outcome</b>	<ul style="list-style-type: none"> <li>&gt; Increase in cutting performance per abrasive belt from 600 to 900 parts.</li> <li>&gt; Reduction in set-up costs.</li> </ul>

## Grinding of dished ends



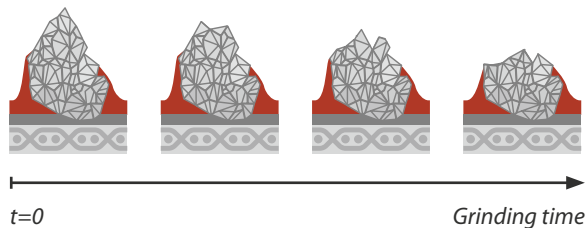
### VSM CERAMICS Plus XK885Y

<b>Workpiece</b>	Tank bottoms
<b>Material</b>	Chromium nickel steel (1.4301)
<b>Contact wheel</b>	<ul style="list-style-type: none"> <li>&gt; 390 mm diameter</li> <li>&gt; Hardness: 80° Shore A</li> <li>&gt; Serration: 10:8</li> </ul>
<b>Cutting speed</b>	29.5 m / sec
<b>Rotation speed</b>	manual
<b>Belt dimensions</b>	60 x 2,175 mm
<b>Grit size</b>	20
<b>Lubricant</b>	none
<b>Outcome</b>	<ul style="list-style-type: none"> <li>&gt; 100 % increase in the number of machined workpieces.</li> </ul>

# VSM CERAMICS abrasives for demanding grinding tasks

NEW

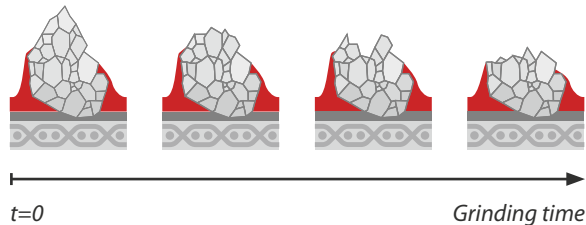
## VSM CERAMICS Plus (CER Plus)



**VSM CERAMICS Plus** grains feature an improved self-sharpening effect when machining high-alloyed steels and super alloys, which are materials that require high contact pressure.

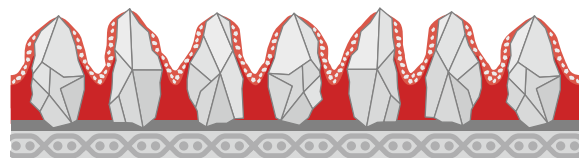
The unique structure of **VSM CERAMICS Plus** microcrystals enables a much more subtle breaking down of the grain and produces much sharper edges. This in turn leads to lower temperatures in the contact area and an extended service life.

## VSM CERAMICS (CER)

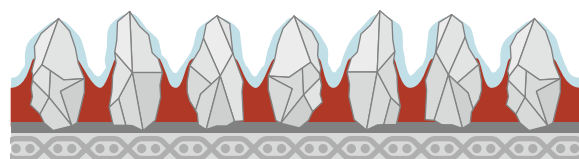


**VSM CERAMICS** grains achieve optimum stock removal. They are the top products for a large number of stationary and mobile grinding applications. **VSM CERAMICS** also have an excellent price-performance ratio.

## VSM additional grinding-active layers



VSM TOP SIZE



VSM STEARATE

**VSM TOP SIZE** is recommended for dry machining of stainless and heat-resistant steels and non-ferrous metals. The additional layer with grinding additives improves the cutting performance while the temperature in the grinding area is reduced. The service life of the abrasive is enhanced considerably.

**VSM STEARATE** optimizes the cutting performance of wrought alloys (NF metals) by preventing adhesion of the material to the abrasive.



# VSM CERAMICS



Stock removal ← → Surface

Rolls (max. width)	Wide Belts	Narrow Belts	Discs	Backings	Grain type	Features	20	24	36	40	50	60	80	100	120	150	180	240	320	400	VSM series	
1480	●	●		Cloth	VSM CERAMICS Plus	TOP SIZE, ♠	■	■	■	■	■	■	■	■	■						XK885Y	
1480	●	●		Cloth	VSM CERAMICS Plus	TOP SIZE, ♠	■	■	■	■	■	■	■	■	■							XK880Y
1480		●		Cloth	VSM CERAMICS Plus	TOP SIZE			■	■	■	■	■	■	■							XK885T
1480	●	●		Cloth	VSM CERAMICS	TOP SIZE, ♠	■	■														XK888Z
1480/1380	●	●		Cloth	VSM CERAMICS	TOP SIZE, ♠	■	■	■	■	■	■	■	■	■							XK877Z
1480	●			Cloth	VSM CERAMICS	TOP SIZE, ♠			■	■												XK870Y
1480	●	●		Cloth	VSM CERAMICS	TOP SIZE, ♠			■	■	■	■	■	■	■							XK875X
1480	●	●		Cloth	VSM CERAMICS	TOP SIZE, ♠	■	■	■	■	■	■	■	■	■							XK870X
1480			⊙	Cloth	VSM CERAMICS	TOP SIZE, velour-backed					■	■	■	■	■							XK870K
1480	●			Cloth	VSM CERAMICS	TOP SIZE, ♠			■													XK850Y
1480	●	●		Cloth	VSM CERAMICS	TOP SIZE, ♠			■	■	■	■	■	■	■							XK850X
1480		⊙		Cloth	VSM CERAMICS	TOP SIZE			■	■	■	■	■	■	■							XK870T
1480	●	⊙		Cloth	VSM CERAMICS	TOP SIZE, ♠				■	■	■	■	■	■							XK870J
1480/1050		○		Cloth	VSM CERAMICS	TOP SIZE					■	■	■	■	■	■	■	■	■	■	■	XK870F
1480			⊙	Cloth	VSM CERAMICS	TOP SIZE, velour-backed					■	■	■	■	■	■	■	■	■	■	■	XL870F
1480		●		Cloth	VSM CERAMICS	STEARATE, ♠			■	■	■	■	■	■	■							XK733X
1480	●	●		Cloth	VSM CERAMICS	♠	■	■	■	■	■	■	■	■	■							XK760Y
1480	●	●		Cloth	VSM CERAMICS	♠	■	■	■	■	■	■	■	■	■							XK760X
1480			○	Cloth	VSM CERAMICS	velour-backed			■	■												XK760K
1470			●	Fibre	VSM CERAMICS Plus	TOP SIZE	■	■	■	■	■	■	■	■	■							XF885
1470			●	Fibre	VSM CERAMICS	TOP SIZE	■	■	■	■	■	■	■	■	■							XF870
1470			●	Fibre	VSM CERAMICS	TOP SIZE			■	■	■	■	■	■	■							XF850
1470			●	Fibre	VSM CERAMICS		■	■	■	■	■	■	■	■	■							XF760
1450	⊙	⊙		Paper	VSM CERAMICS Plus						■	■	■	■								XP780

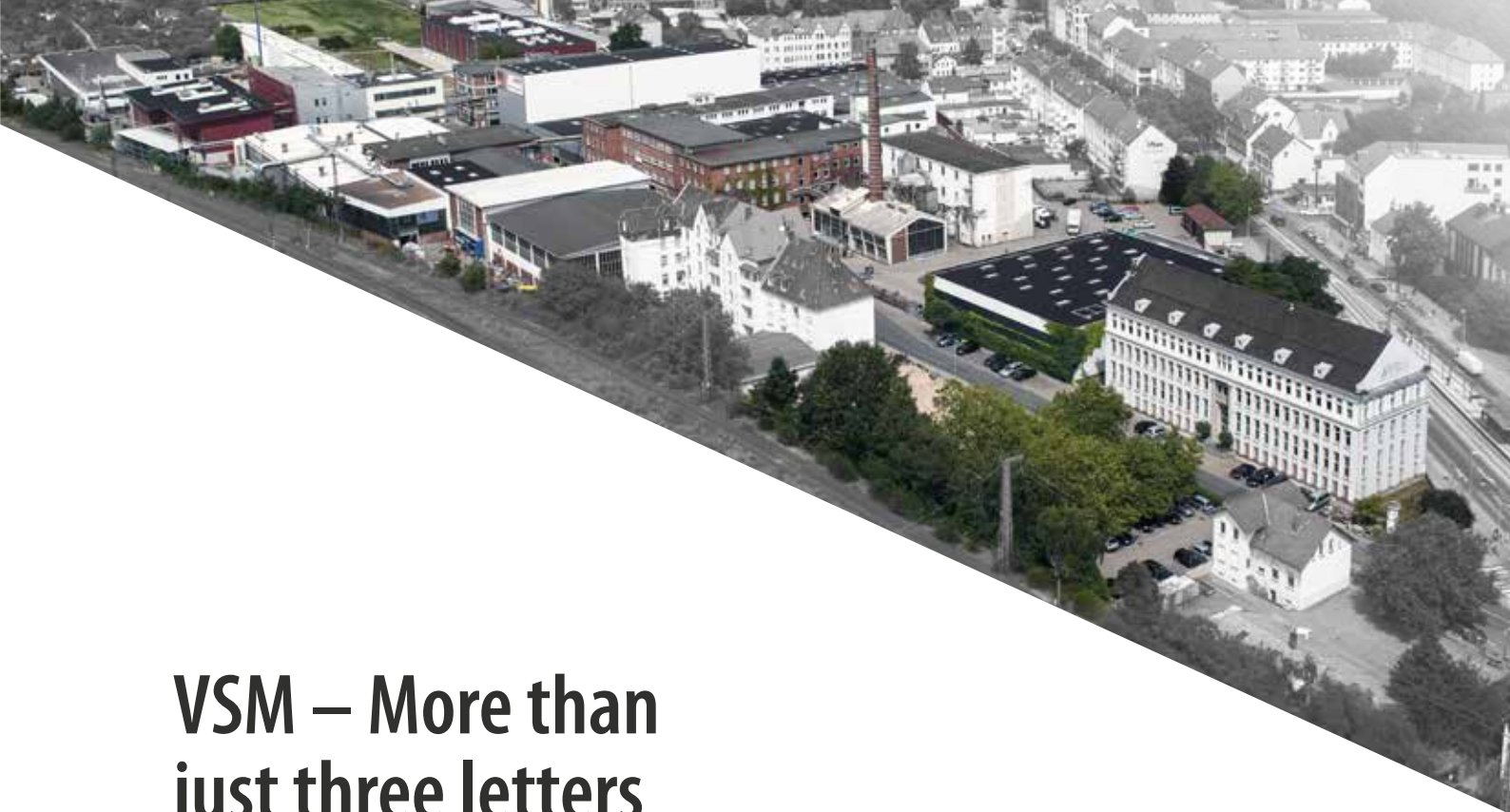
**Legend:**

- for low to medium contact pressure
- ⊙ for medium contact pressure
- for medium to high contact pressure
- ♠ suitable for wet applications

- F** highly flexible
- J** flexible
- T** robust and flexible
- X** robust
- Y** very robust
- Z** extremely robust

- TOP SIZE** additional grinding-active layer
- STEARATE** separating layer, prevents clogging

Last revised: 10/2016



# 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 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).



# A worldwide leader in abrasives.



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