



## FLAT SURFACE GRINDING

**Surface grinding  
in metalworking**

# VSM – Your specialist for flat surface grinding

## Benefit from VSM's high-performing abrasives:

- > High stock removal per time unit
- > Extended service life and low set-up costs as a result
- > Consistent and reproducible surface finishes
- > Defined scratch patterns, roughness and gloss value
- > **VSM TOP SIZE** products achieve:
  - > Enhanced machining capacity
  - > A reduced temperature in the grinding area and because of this structural changes are avoided

## With VSM you can rely on receiving:

- > High-performance products made in Germany
- > On-site application-based advice
- > Reliable delivery performance
- > Analyses of problems and preliminary tests in the VSM Technical Center
- > Expertise based on co-operating with more than 60 machine manufacturers worldwide
- > A global distribution network with subsidiaries and partners in more than 70 countries

## Your application

---

Buildings and facades



Shipbuilding



Lifts and elevators



Food containers



Table legs



Large-scale catering facilities



# VSM grain technologies in the spotlight

## Top grain technologies for high stock removal rates

### VSM ACTIROX



- > **Geometrically formed ceramic grain**
- > Maximum stock removal and a faster cut for superalloys and stainless steels
- > Cool grinding extends the service life thanks to VSM TOP SIZE

### VSM CERAMICS Plus · (CER Plus)



- > **Optimised self-sharpening effect** when processing high-alloyed steels ensures very high stock removal rates
- > Reduced temperature in the contact area
- > Significantly extended service life

### VSM CERAMICS · (CER)



- > Top product with **self-sharpening effect** for processing non-alloyed steels and stainless steels
- > High removal rate
- > Cool grinding allows longer contact times

## Top grain technologies for perfect surface finishes

### VSM ILUMERON



- > **Full faced coated long-term abrasive** with special bonding
- > For fine and consistent surfaces with high gloss levels
- > Developed primarily for processing stainless steels, superalloys and non-alloyed steels

### VSM COMPACTGRAIN Plus · (COM Plus)



- > **Long-term abrasive** that wears uniformly down to the backing material and achieves a consistent surface finish
- > Optimised reserve grain capacity
- > Improved bonding properties
- > Continuous self-sharpening thanks to the granulate structure

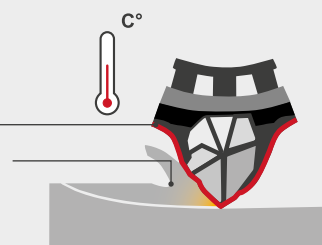
### VSM COMPACTGRAIN · (COM)



- > **Long-term abrasive** achieves reproducible surface finishes and consistent roughness
- > Uniform stock removal
- > Continuous self-sharpening thanks to the granulate structure

## VSM grinding-active additional layers

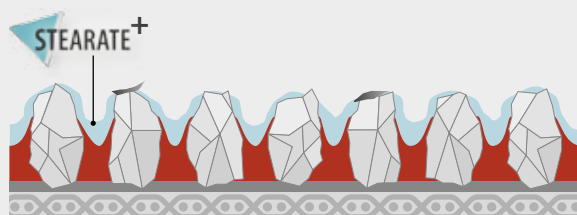
VSM TOP SIZE  
Less heat generated in the grinding zone ("cool grinding")



**VSM TOP SIZE** is recommended for dry machining heat-resistant stainless steels and non-ferrous metals. The grinding-active additional layer improves the cutting performance whilst reducing the temperature in the contact zone. This significantly extends the service life of the abrasive.

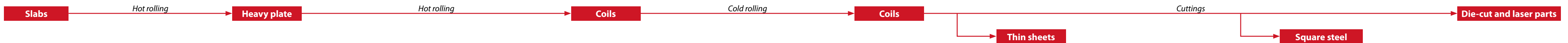
**VSM STEARATE Plus** and **VSM STEARATE** significantly reduce chip adhesion when processing non-ferrous metals and thus also reduce clogging of the abrasive. The service life is assured and extended so dramatically that excellent stock removal is achieved even after longer periods of use.

NEW



VSM STEARATE Plus

# Grinding throughout the whole production process



## Repair grinding of slabs $t \geq 100$ mm

Wide belt grinding with conveyor table



Stroke sanding machine with upper belt



### Product recommendations for slab grinding

VSM Series	Grain type	Grit size	VSM Series	Grain type	Grit size
XK885Y	CER Plus	20–120	XK880Y	CER Plus	20–120
XK880Y	CER Plus	20–120	XK760X	CER	40, 60
XK760X	CER	40, 60	ZK713X	ZA/AO	24–60
ZK713X	ZA	24–60	XP780	CER Plus	60, 80, 100, 120
XP780	CER Plus	60, 80, 100, 120	KP709	AO	36–120
KP709	AO	36–60	CP501	SIC	40–120

## Repair grinding of coils and heavy plates $t \geq 3$ mm

Wide belt grinding with support roller



Stroke sanding machine with upper belt



### Product recommendations for coil grinding

VSM Series	Grain type	Grit size	VSM Series	Grain type	Grit size
XK880Y	CER Plus	20–120	XK880Y	CER Plus	20–120
XK785Y	CER Plus	36–120	XK870X	CER	24–60
XK870X	CER	24–60	ZK713X	ZA	24–60
ZK713X	ZA	24–60	KK711Y	AO	36–60

### Product recommendations for heavy plates

VSM Series	Grain type	Grit size	VSM Series	Grain type	Grit size
XK880Y	CER Plus	20–120	XK880Y	CER Plus	20–120
XK870X	CER	24–60	XK870X	CER	24–120
XK760X	CER	24–120	ZK713X	ZA/AO	24–320
ZK713X	ZA/AO	24–60	KK712Y	COM (AO)	180–600
XP780	CER Plus	60, 80, 100, 120	KP712	COM (AO)	120–800
KP709	AO	36–60	CP772	COM (SIC)	320
			KK711Y	AO	36–500
			CK721X	SIC	24–600

## Customer-specific grinding of coils and sheet metal $t \geq 2.99$ mm

Wide belt grinding



Belt grinding with belt conveyor



### Product recommendations for coils

VSM Series	Grain type	Grit size	VSM Series	Grain type	Grit size
XK880Y	CER Plus	20–120	XK880Y	CER Plus	20–120
XK870X	CER	24–120	XK870X	CER	24–120
ZK713X	ZA/AO	24–320	ZK713X	ZA/AO	24–320
KK712Y	COM (AO)	180–600	KK712Y	COM (AO)	180–600
KP712	COM (AO)	120–800	KK772X	COM (AO)	80–800
CP772	COM (SIC)	320	CK772T	COM (SIC)	120–1200
KK711Y	AO	36–500	XP780	CER Plus	60, 80, 100, 120
CK721X	SIC	24–600	KP712	COM (AO)	120–800
			CP772	COM (SIC)	240, 320

### Product recommendations for fine sheet metal

VSM Series	Grain type	Grit size	VSM Series	Grain type	Grit size
XK870X	CER	24–120	XK870X	CER	24–120
XK760Y	CER	24–120	XK760X	CER	60, 80, 120
XK786X	COM (CER)	60, 80, 120	ZK713X	ZA/AO	24–320
ZK713X	ZA/AO	24–320	KK772X	COM (AO)	80–800
KK772X	COM (AO)	80–800	KK712X	COM (AO)	80–600
CK772T	COM (SIC)	120–1200	CK772T	COM (SIC)	120–1200
KP712	COM (AO)	120–800	XP780	CER Plus	60, 80, 100, 120
CP772	COM (SIC)	240, 320	KP712	COM (AO)	120–800
			CP772	COM (SIC)	320
			KP709	AO	36–320

Stroke sanding machine with upper belt



### Product recommendations for fine sheet metal

VSM Series	Grain type	Grit size	VSM Series	Grain type	Grit size
XK870X	CER	24–120	XK880Y	CER Plus	20–120
XK760X	CER	60, 80, 120	XK870X	CER	24–120
ZK713X	ZA/AO	24–320	XK760X	CER	24–120
KK772X	COM (AO)	80–800	XK786X	COM (CER)	60, 80, 120
KK712X	COM (AO)	80–600	ZK713X	ZA/AO	24–320
CK772T	COM (SIC)	120–1200	KK772X	COM (AO)	80–800
XP780	CER Plus	60, 80, 100, 120	KK790Y	COM Plus (AO)	60–800
KP712	COM (AO)	120–800	KK791Y	COM Plus (AO)	60–800
CP772	COM (SIC)	320	KK712X	COM (AO)	80–600
KP709	AO	36–320	CK772T	COM (SIC)	120–1200
			KK711Y	AO	36–500
			KV710X	Non-woven (AO/SIC)	coarse–ultra fine

## Customer-specific grinding of square, die-cut and laser parts

Belt grinding with belt conveyor



### Product recommendations for square steel, die-cut and laser parts

VSM Series	Grain type	Grit size	VSM Series	Grain type	Grit size
XK880Y	CER Plus	20–120	XK880Y	CER Plus	20–120
XK870X	CER	24–120	XK870X	CER	24–120
XK760X	CER	24–120	XK760X	CER	60, 80, 120
XK786X	COM (CER)	60, 80, 120	ZK713X	ZA/AO	24–320
ZK713X	ZA/AO	24–320	KK772X	COM (AO)	80–800
KK772X	COM (AO)	80–800	KK712X	COM (AO)	80–600
KK790Y	COM Plus (AO)	60–800	CK772T	COM (SIC)	120–1200
KK791Y	COM Plus (AO)	60–800	XP780	CER Plus	60, 80, 100, 120
KK712X	COM (AO)	80–600	KP712	COM (AO)	120–800
CK772T	COM (SIC)	120–1200	CP772	COM (SIC)	320
XP780	CER Plus	60, 80, 100, 120	KP709	AO	240, 320
KP712	COM (AO)	120–800			
CP772	COM (SIC)	320			
KP709	AO	240, 320			

Grinding with drum sander



### Product recommendations for square steel, die-cut and laser parts

VSM Series	Grain type	Grit size	VSM Series	Grain type	Grit size
XK885Y	CER Plus	20–120	XK885Y	CER Plus	20–120
XK870X	CER	24–120	XK870X	CER	24–120
XK760X	CER	60, 80, 120	XK760X	CER	60, 80, 120
ZK713X	ZA/AO	24–320	ZK713X	ZA/AO	24–320
KK772X	COM (AO)	80–800	KK772X	COM (AO)	80–800
KK712X	COM (AO)	80–600	KK712X	COM (AO)	80–600
CK772T	COM (SIC)	120–1200	CK772T	COM (SIC)	120–1200
XP780	CER Plus	60, 80, 100, 120	XP780	CER Plus	60, 80, 100, 120
KP712	COM (AO)	120–800	KP712	COM (AO)	120–800
CP772	COM (SIC)	320	CP772	COM (SIC)	320
KP709	AO	240, 320	KP709	AO	240, 320

### Legend

CER Plus	VSM CERAMICS Plus	COM (CER)	VSM COMPACTGRAIN CERAMICS	AO	VSM ALUMINIUM OXIDE
CER	VSM CERAMICS	COM (AO)	VSM COMPACTGRAIN ALUMINIUM OXIDE	SIC	VSM SILICON CARBIDE
ZA	VSM ZIRCONIA ALUMINA	COM (SIC)	VSM COMPACTGRAIN SILICON CARBIDE	Non-woven	VSM NON-WOVEN

### Flexibility of the backing material (last letter of the series name):

E extremely flexible	J flexible	X sturdy	Z extremely sturdy
F very flexible	T semi-sturdy	Y very sturdy	

# VSM – for flawless surfaces

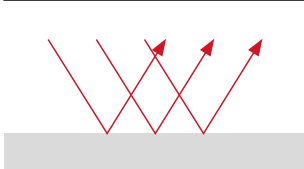

VSM abrasives are characterised by consistent and reproducible surface finishes. Gloss is one important parameter to describe the visual appearance of an object. It is an optical property which indicates how well a surface reflects light in a mirror-like direction. The intensity of the reflection can be technically measured.



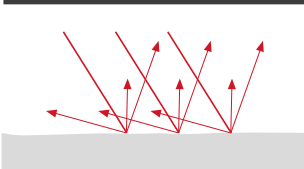

Scratch patterns in 1G, 2G or with a fine hairline finish can be achieved using VSM abrasives.

**VSM's comprehensive range of abrasives produce a large variety of different gloss units and scratch patterns. Please feel free to contact us to find out more!**

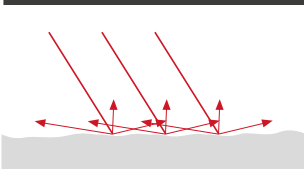

## High-gloss (stainless steel)

Reflection of light	Scratch pattern	VSM series	Gloss Unit (GU)*
		CK772T VSM COMPACTGRAIN (SIC) Grit size 1000	80

## Mid gloss (stainless steel)

Reflection of light	Scratch pattern	VSM series	Gloss Unit (GU)*
		CK772T VSM COMPACTGRAIN (SIC) Grit size 400	40

## Matt (stainless steel)

Reflection of light	Scratch pattern	VSM series	Gloss Unit (GU)*
		XP780 VSM CERAMICS Grit size 80	5

\*) The **measurement scale, Gloss Units (GU)**, is measured using a Gloss Meter also known as a Glossmeter. The defined standard for a perfectly satin finish is equal to 0 gloss units. High-gloss surfaces with a mirror finish achieve readings of more than 70 GU.

# A worldwide leader in abrasives.



## Europe

### Germany (Headquarters)

**VSM · Vereinigte Schmirgel- und Maschinen-Fabriken AG**  
Siegmundstraße 17  
30165 Hannover  
T +49 511 3526 478  
www.vsmabrasives.de

### Czech Republic

**VSM Abrasives s.r.o.**  
River Garden, 5th Floor  
Rohanské nábřeží 678/23  
18600 Praha  
T +420 277 015 300  
www.vsmabrasives.cz

### France

**VSM Impavide S.A.S.**  
52 Avenue Marcel Paul  
93297 Tremblay en France  
T +33 1 4151 0300  
www.vsmabrasives.fr

### Great Britain

**VSM Abrasives Ltd.**  
Unit 5, Joplin Court Sovereign  
Business Park, Crownhill  
Milton Keynes, MK8 0JP  
T +44 19 0831 0207  
www.vsmabrasives.co.uk

### Hungary

**VSM Abrasives Hungary Ltd.**  
Leshegy út 31  
2310 Szigetszentmiklós  
T +36 24 519223  
www.vsmabrasives.hu

### Poland

**PFERD-VSM Sp. z o.o.**  
Ul. Polna 1A  
62-025 Kostrzyn Wielkopolski  
T +48 61 8970 480  
www.pferdvsmlp

### Russia

**VSM AG · Russian Representative Office**  
141006, Moscow region  
c. Mytishchi Volkovskoe  
roadway vl. 5a, str. 1, of. 208  
T +7 499 346 35 27  
www.vsmabrasives.ru

### Spain

**VSM · VITEX ABRASIVOS IBERICA, S.A.U.**  
Ctra. de Molins de Rei,  
79A, Nave 8  
08191 Rubí (Barcelona)  
T +34 93 697 3411  
www.vsmabrasives.es

### Sweden

**PFERD-VSM AB**  
Stockholmsvägen 18, 7 tr  
18150 Lidingö  
T +46 8 5647 2300  
www.pferd-vsm.se

### Switzerland

**PFERD-VSM (Schweiz) AG**  
Zürichstr. 38 B  
8306 Brüttsellen  
T +41 44 805 2828  
www.pferd-vsm.ch

### Turkey

**STARCKE VSM VITEX Zimpara Teknolojisi Sanayi ve Dis Ticaret Ltd. Sti.**  
AYOSB Gazi Bulvari 8.  
Sokak No: 5  
Tuzla Istanbul  
T +90 216 591 06 17  
T +90 216 591 07 01  
www.starckevsm.com

## Americas

### Canada

**VSM Abrasives Canada Inc.**  
2425 Wyecroft Road Unit #1  
Oakville, Ontario  
L6L 6R5  
T +1 905 827 0005  
www.vsmabrasives.ca

### Latin America

**VSM Latinoamérica S.A.S.**  
Carrera 9 No. 115-06  
Edificio Tierra Firme Piso 17  
Bogota, Colombia  
T +57 1 639 8489  
M +57 316 8311705  
www.vsmabrasives-latinamerica.com

## Asia

### China

**VSM Abrasives (China) Co. Ltd.**  
Rooms 203/205, Building C,  
No. 38, Xuxiang Road, Qingpu  
District, Shanghai, P.R. China  
Postal Code: 201702  
T +86 21 5976 2011  
www.vsmabrasives.com.cn

### Thailand

**VSM Abrasives Asia Pacific Pte. Ltd.**  
**Thailand Representative Office**  
444 Olympia Thai Tower, 13<sup>th</sup> FL  
Ratchadaphisek Rd., Samsennok  
Huay Kwang, Bangkok 10310  
T +66 2 513 7441  
www.vsmabrasives-apac.com

### USA

**VSM Abrasives Corp.**  
1012 East Wabash St.  
O'Fallon, Mo. 63366  
T +1 636 272 7432  
us.vsmabrasives.com



Visit our website at  
[www.vsmabrasives.com](http://www.vsmabrasives.com)