



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

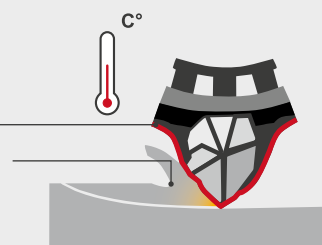
VSM COMPACTGRAIN · (COM)



- > **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

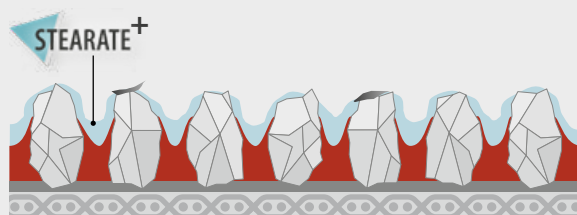
VSM TOP SIZE
Less heat generated in the grinding zone ("cool grinding")



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.

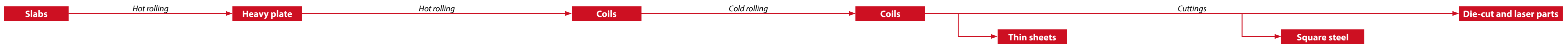
VSM STEARATE Plus and **VSM STEARATE** significantly reduce chip adhesion when processing non-ferrous metals and thus also reduce clogging of the abrasive. The service life is assured and extended so dramatically that excellent stock removal is achieved even after longer periods of use.

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
XK870Y	CER	40, 60	ZK713X	ZA/AO	24-60
XK760X	CER	40, 60	XP780	CER Plus	60, 80, 100, 120
ZK713X	ZA/AO	24-60	KP709	AO	36-120
CK727Y	SIC	36-60	CP501	SIC	40-120
XP780	CER Plus	60, 80, 100, 120			
KP709	AO	36-60			

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	XK870Y	CER	40, 60
XK870Y	CER	40, 60	XK870X	CER	24-60
XK870X	CER	24-60	ZK713X	ZA/AO	24-60
XK760X	CER	24-120	KK711Y	AO	36-60
ZK713X	ZA/AO	24-60	CK727Y	SIC	36-60
XP780	CER Plus	60, 80, 100, 120			
KP709	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	XK870Y	CER	40, 60
XK870Y	CER	40, 60	XK870X	CER	24-120
XK870X	CER	24-60	ZK713X	ZA/AO	24-320
XK760X	CER	24-120	KK712Y	COM (AO)	180-600
ZK713X	ZA/AO	24-60	KK712X	COM (AO)	80-600
XP780	CER Plus	60, 80, 100, 120	KP712	COM (AO)	120-800
KP709	AO	36-60	CP772	COM (SIC)	240, 320
			KK711Y	AO	36-500
			CK721X	SIC	24-600

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

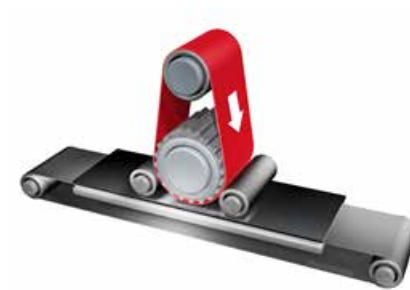
Wide belt grinding



Product recommendations for coils

VSM Series	Grain type	Grit size	VSM Series	Grain type	Grit size
XK870Y	CER	40, 60	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	KK712X	COM (AO)	80-600
KK712X	COM (AO)	80-600	KP712	COM (AO)	120-800
KP712	COM (AO)	120-800	CP772	COM (SIC)	240, 320
CP772	COM (SIC)	240, 320	KK711Y	AO	36-500
KK711Y	AO	36-500	CK721X	SIC	24-600
CK721X	SIC	24-600			

Belt grinding with belt conveyor



Product recommendations for fine sheet metal

VSM Series	Grain type	Grit size	VSM Series	Grain type	Grit size
XK870X	CER	24-120	XK870Y	CER	24-120
XK760Y	CER	24-120	XK786X	COM (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	KK772Y	COM (AO)	80-800
KK772Y	COM (AO)	80-800	CK772T	COM (SIC)	80-1200
CK772T	COM (SIC)	80-1200	KP712	COM (AO)	120-800
KP712	COM (AO)	120-800	CP772	COM (SIC)	240, 320
CP772	COM (SIC)	240, 320			

Stroke sanding machine with upper belt

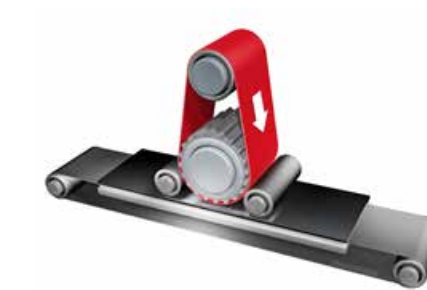


Product recommendations for fine sheet metal

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
KK772Y	COM (AO)	80-800	ZK713X	ZA/AO	24-320
CK772T	COM (SIC)	80-1200	KK772X	COM (AO)	80-800
XP780	CER Plus	60, 80, 100, 120	KK772Y	COM (AO)	80-800
KP712	COM (AO)	120-800	CK772T	COM (SIC)	80-1200
CP772	COM (SIC)	180, 320	XP780	CER Plus	60, 80, 100, 120
KP709	AO	36-320	KP712	COM (AO)	120-800
			CP772	COM (SIC)	180, 320
			KV707X	Non-woven (AO)	coarse-fine
			KV707X	Non-woven (SIC)	very 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	XK885Y	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
KK772Y	COM (AO)	80-800	CK772T	COM (SIC)	80-1200
CK772T	COM (SIC)	80-1200	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)	240, 320
CP772	COM (SIC)	240, 320	KP709	AO	240, 320
KV707X	Non-woven (AO)	coarse-fine			
KV707X	Non-woven (SIC)	very fine			

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	XK880Y	CER Plus	20-120
XK870X	CER	24-120	XK870Y	CER	40, 60
XK760X	CER	60, 80, 120	XK870X	CER	24-60
ZK713X	ZA/AO	24-320	ZK713X	ZA/AO	24-320
KK772X	COM (AO)	80-800	KK772Y	COM (AO)	80-800
KK712X	COM (AO)	80-600	CK772T	COM (SIC)	80-1200
CK772T	COM (SIC)	80-1200	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)	240, 320
CP772	COM (SIC)	240, 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

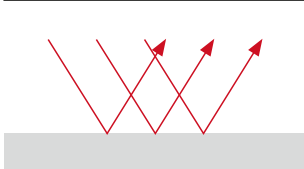
VSM abrasives are characterised by consistent and reproducible surface finishes. Gloss is one important parameter to describe the visual appearance of an object. It is an optical property which indicates how well a surface reflects light in a mirror-like direction. The intensity of the reflection can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



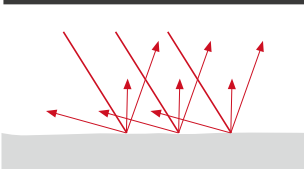

Scratch patterns in 1G, 2G or with a fine hairline finish can be achieved using VSM abrasives.

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.pferdvsm.pl

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
Radiovägen 3B
18155 Lidingö
T +46 8 5647 2300
www.pferd-vsm.se

Switzerland

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

Turkey

**STARCKE VSM VITEX Zimpara
Teknolojisi Sanayi ve Dis
Ticaret Ltd. Sti.**
Yan Sanayi Sitesi
Nubuk Cad. No: 8, Kat 1 – 4
34953 Istanbul/Tuzla
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 AG · Thailand
Representative Office**
444 Olympia Thai Tower, 13th 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