



CYLINDRICAL GRINDING

Grinding of tubes, pipes and other cylindrical parts

VSM – Your specialist for flat surface grinding

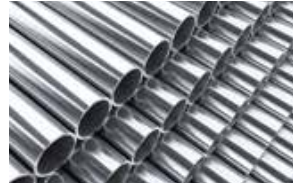
Benefit from VSM's high-performing abrasives:

- > 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 Competence 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



Tubes



Piston rods



Cylinders



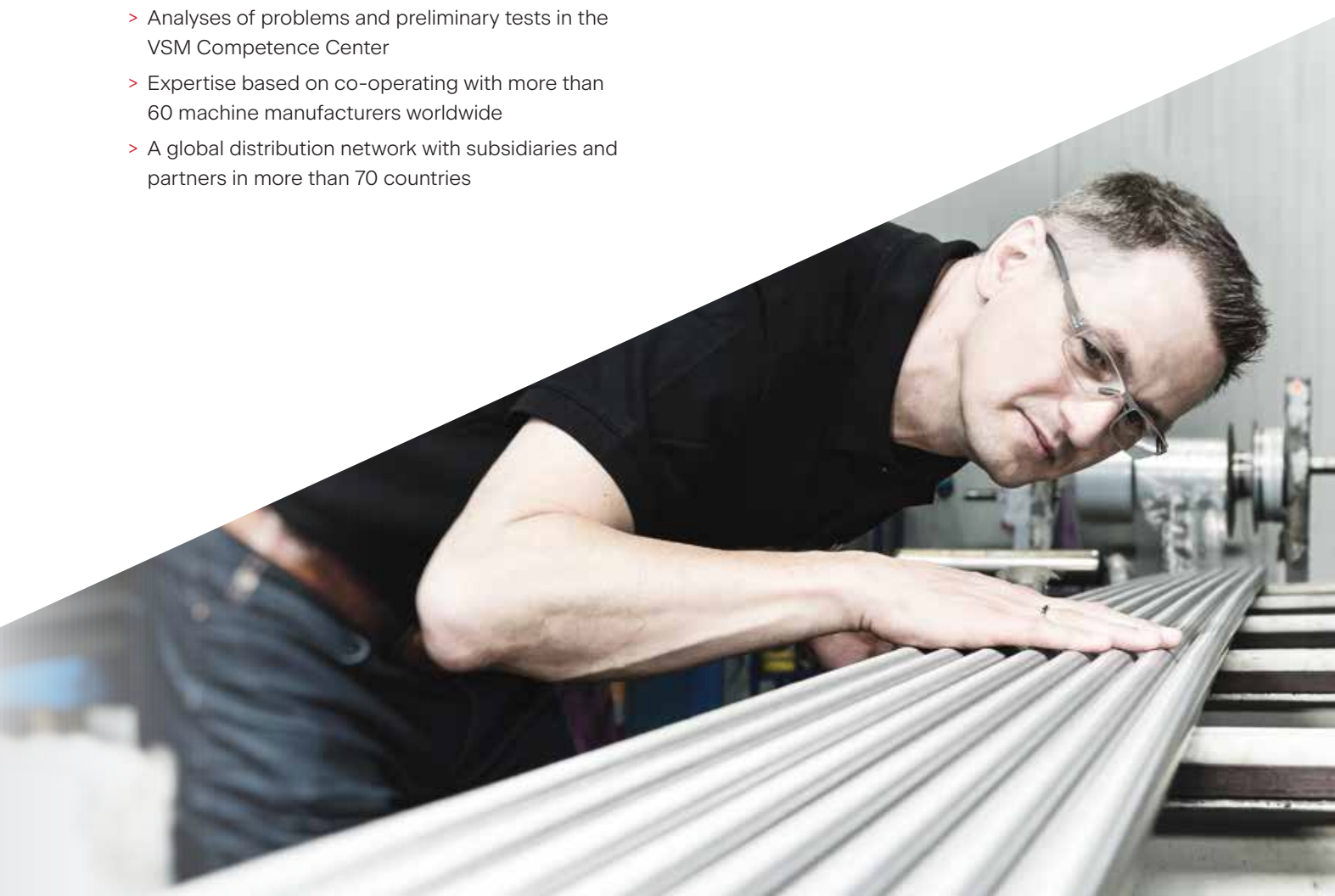
Furniture



Architecture



Containers



VSM grain technologies in the spotlight

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

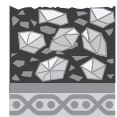
- > **Optimised self-sharpening effect** when processing high-alloyed steels ensures very high stock removal rates
- > Reduced temperature in the contact area
- > Significantly extended service life



VSM CERAMICS

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

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

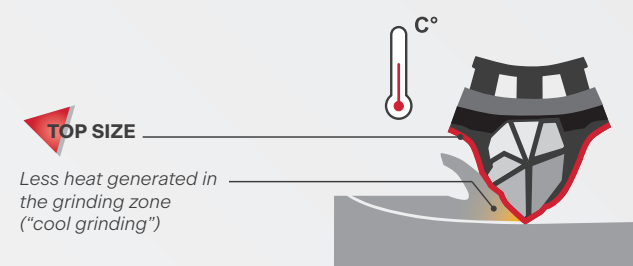
- > **Long-term abrasive** that wears down uniformly to the backing material, achieving a consistent surface finish
- > Optimised reserve grain capacity
- > Improved bonding properties
- > Continuous self-sharpening thanks to the granulate structure



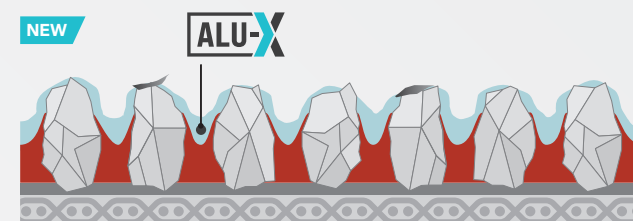
VSM COMPACTGRAIN

- > **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

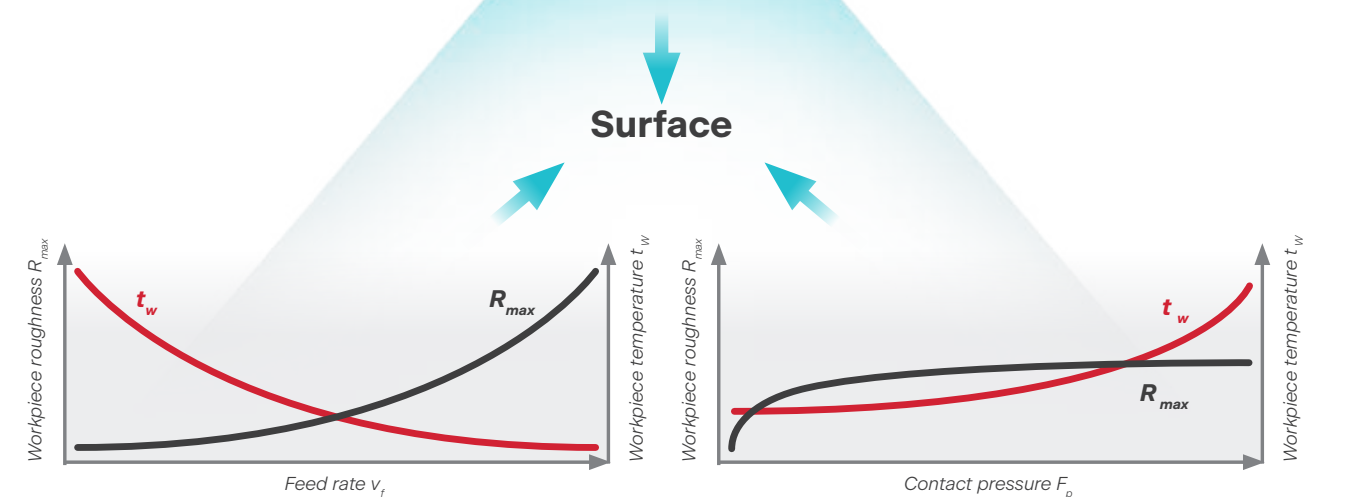
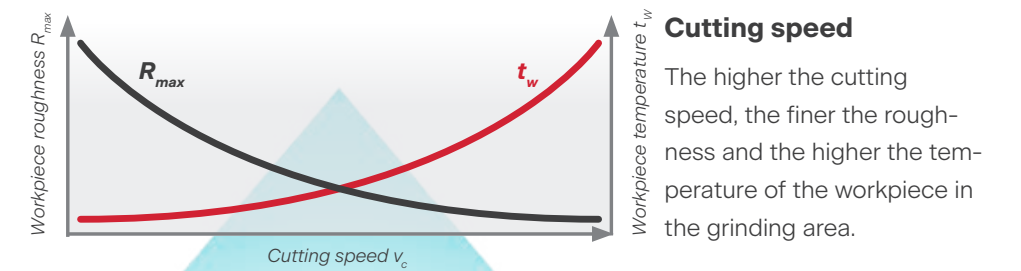


VSM TOP SIZE is recommended for dry machining heat-resistant stainless steels and non-ferrous metals. The grinding-active additional layer improves the cutting performance whilst reducing the temperature in the contact zone. This significantly extends the service life of the abrasive.



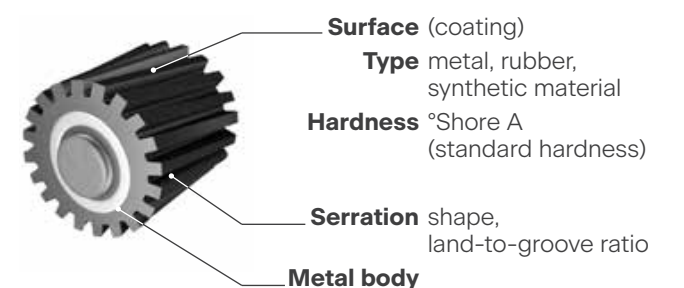
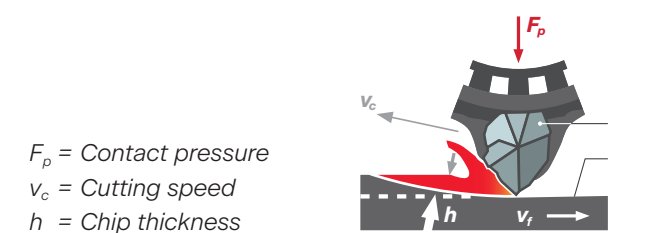
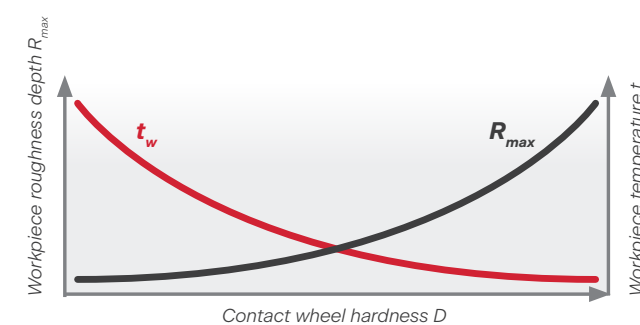
VSM ALU-X significantly reduces chip adhesion when processing non-ferrous metals and thus also reduces clogging of the abrasive. The service life is assured and extended so dramatically that excellent stock removal is achieved even after longer periods of use.

Grinding parameters



Feed rate
The higher the feed rate, the coarser the roughness, and the lower the temperature of the workpiece in the grinding area.

Contact pressure
The higher the contact pressure, the higher the temperature of the workpiece, because the abrasive grains penetrate deeper into the workpiece. There is hardly any change in the roughness of the workpiece.



Grinding of tubes and bars



Grinding of longitudinally welded tubes



Recommended products

VSM series	Grain type	Grit size
XK885Y	CER Plus	20 – 120
XK850X	CER	36 – 80, 120
KK815Y	ZA	36 – 100
ZK713X	ZA/AO	24 – 320
XK789X	COM (CER)	40, 60, 80
KK791Y	COM Plus (AO)	60 – 800
KK718X	COM (AO)	60 – 600
CK748X	COM (SIC)	80 – 400
CK772T	COM (SIC)	120 – 1200



Centerless grinding of tubes and bars



Recommended products

VSM series	Grain type	Grit size
XK880Y	CER Plus	20 – 120
XK785Y	CER Plus	36 – 120
XK760X	CER	24 – 120
ZK713X	ZA/AO	24 – 320
XK786X	COM (CER)	60, 80, 120
KK791Y	COM Plus (AO)	60 – 600
KK718X	COM (AO)	60 – 600
KK712X	COM (AO)	80 – 600
CK748X	COM (SIC)	80 – 400
KK790Y	COM Plus (AO)	60 – 600
CK772T	COM (SIC)	120 – 1200
RK700X	AO	80, 180 – 1200
CK917C	CORK (SIC)	320-800, 1200
KV710X	NV (AO/SIC)	coarse – ultra fine

Legend
 DA = VSM DIAMOND
 CER Plus = VSM CERAMICS Plus
 CER = VSM CERAMICS
 ZA = VSM ZIRCONIA ALUMINA
 COM (CER) = VSM COMPACTGRAIN Ceramics
 COM (AO) = VSM COMPACTGRAIN Aluminium Oxide
 COM (SIC) = VSM COMPACTGRAIN Silicon Carbide
 AO = VSM ALUMINIUM OXIDE
 SIC = VSM SILICON CARBIDE
 NV (AO) = VSM NON-WOVEN Aluminium Oxide
 NV (SIC) = VSM NON-WOVEN Silicon Carbide
 CORK (SIC) = VSM CORK Silicon Carbide



Cylindrical grinding of tubes and bars using hand-held machines



Recommended products

VSM series	Grain type	Grit size
XK885T	CER Plus	36, 40, 60, 80, 120
XK870X	CER	24 – 120
XK850X	CER	36 – 80, 120
XK870F	CER/AO	60 – 400
ZK713X	ZA	24 – 320
KK772J	COM (AO)	80 – 1200
CK772T	COM (SIC)	120 – 1200
KK711T	AO	50 – 500
CK721X	SIC	24 – 600
KV710X	NV (AO/SIC)	coarse – ultra fine

Flexibility of the backing material (last letter of the series name):
 E extremely flexible
 F very flexible
 J flexible
 T semi-sturdy
 X sturdy
 Y very sturdy
 Z extremely sturdy

Wire grinding



Wire descaling



Recommended products

VSM series	Grain type	Grit size
XK885Y	CER Plus	20–120
XK785Y	CER Plus	36–120
XK870X	CER	24–120
XK760X	CER	24–120
KK815Y	ZA	36–100
ZK713X	ZA/AO	24–320
KK790Y	COM Plus (AO)	60–600
KK791Y	COM Plus (AO)	60–600
KK718X	COM (AO)	60–600
KK834X	COM (AO)	80–240
CK748X	COM (SIC)	80–400

Grinding of cylindrically-shaped workpieces



Cylindrical grinding of piston rods and cylinders and grinding between centres



Recommended products

VSM series	Grain type	Grit size
DA930X	DA	46, 64, 91, 126, 251,357 (µm)
XK885Y	CER Plus	20–120
XK785Y	CER Plus	36–120
XK760X	CER	24–120
ZK713X	ZA	24–320
KK790Y	COM Plus (AO)	60–600
KK791Y	COM Plus (AO)	60–600
KK718X	COM (AO)	60–600
KK712X	COM (AO)	80–600
CK748X	COM (SIC)	80–400
CK772T	COM (SIC)	120–1200
RK700X	AO	80, 180 – 1200
KV710X	NV (AO/SIC)	coarse – ultra fine



Cylindrical grinding of rollers during roller pass



Recommended products

VSM series	Grain type	Grit size
DA930X	DA	46, 64, 91, 126, 251,357 (µm)
XK885Y	CER Plus	20–120
XK785Y	CER Plus	36–120
XK850X	CER	36–80, 120
XK760X	CER	24–120
ZK744X	ZA	36–80
XK789X	COM-CER	40, 60, 80
KK790Y	COM Plus (AO)	60–600
KK791Y	COM Plus (AO)	60–600
CK748X	COM-SIC	80–400
CK918X	COM-SIC	240–1200
RK700X	AO	80, 180 – 1200
KV710X	NV (AO/SIC)	coarse – ultra fine

Closer to you



Europe

Germany (Headquarters)

VSM - Vereinigte Schmirgel- und Maschinen-Fabriken AG
Siegmundstraße 17
30165 Hanover, Germany
T +49 511 3526 478
www.vsmabrasives.de

Hungary

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

Switzerland

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

Americas

Canada

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

USA

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

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

Poland

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

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

Latin America

**VSM Abrasivos
Latinoamérica S.A.S.**
Carrera 9 No. 115-06
Edificio Tierra Firme Piso 17
Bogota, Colombia
T +57 601 639 8489
M +57 316 8311705
www.vsmabrasives-latinamerica.com

France

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

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

Asia-Pacific

Singapore

**VSM Abrasives
Asia Pacific Pte. Ltd.**
4 Battery Road #25,
Bank of China Building
Singapore 049908
T +66 2 513 7441
www.vsmabrasives-apac.com

Thailand

**VSM Abrasives
Asia Pacific Pte. Ltd.
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

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

Sweden

VSM Abrasives Sverige AB
Stockholm
Sweden
M +46 73 077 70 32
www.vsmabrasives.se

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

Visit our website:

www.vsmabrasives.com