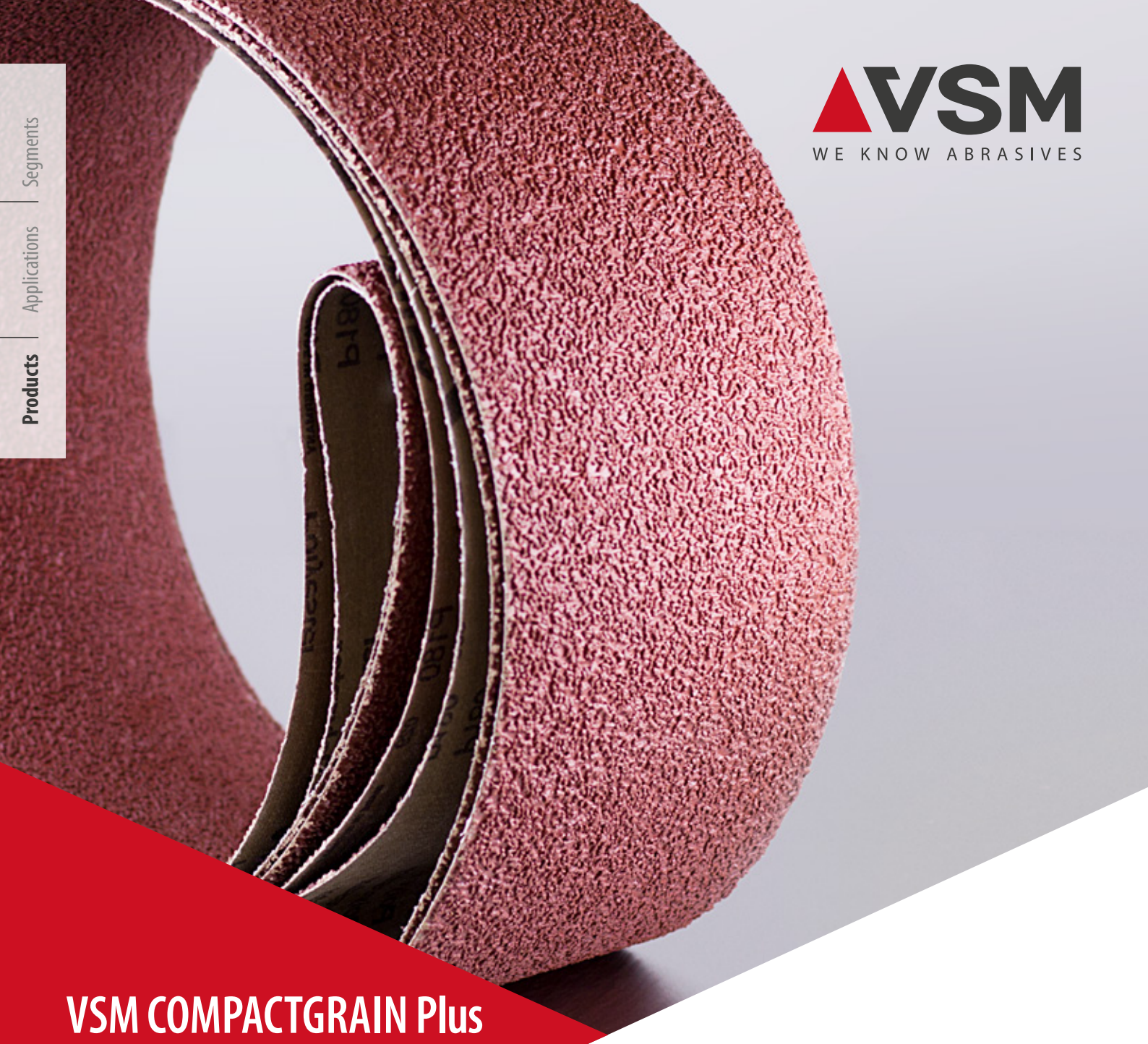
VSM
WE KNOW ABRASIVES



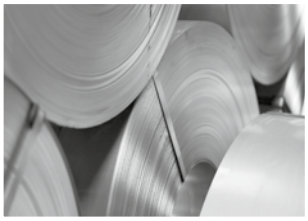
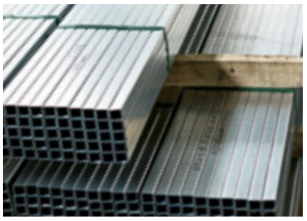
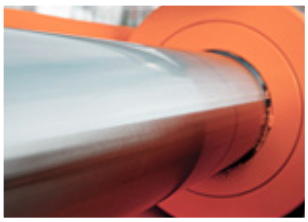
VSM COMPACTGRAIN Plus
VSM COMPACTGRAIN

Self-sharpening long-term abrasive for consistent and reproducible surfaces

Our products

VSM COMPACTGRAIN
THE ORIGINAL

Your workpiece

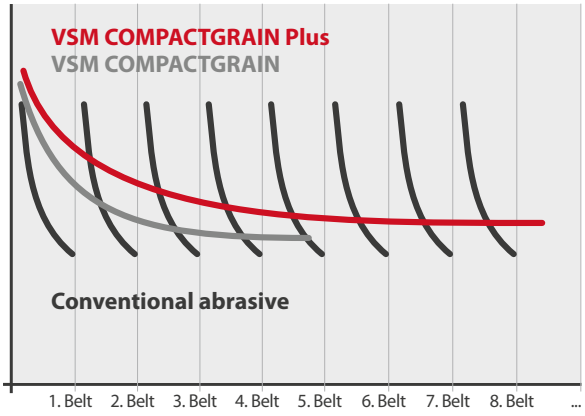
Coils	Sheets	Square steel	Tubes
			
Piston rods and cylinders	**Tank and plant construction**	**Medical instruments**	**Large-scale catering facilities**
			

VSM COMPACTGRAIN: Long-term abrasive for perfectly finished surfaces

Impressive from start to finish

> Optimum **self-sharpening effect** and **consistent, reproducible surface values**
> Extremely long service life for a uniform scratch pattern with **constant roughness and stable gloss values**
> VSM can be relied on to always deliver premium quality **made in Germany**

Roughness

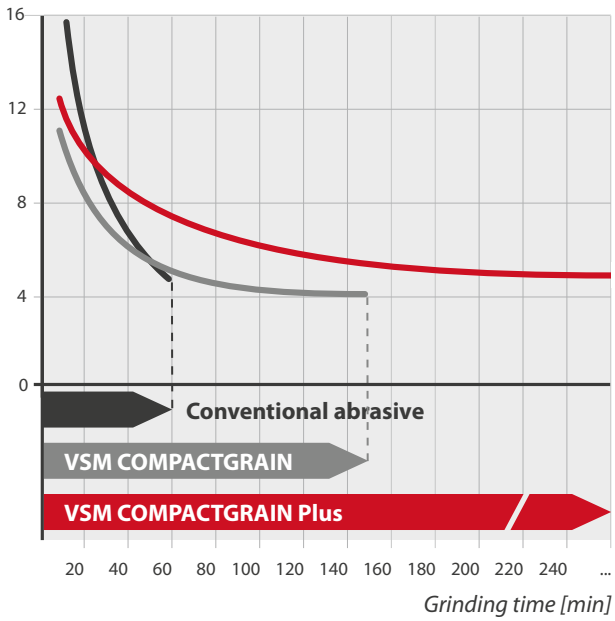


Grinding time

The new VSM COMPACTGRAIN Plus

> **A substantial increase in service life** compared to conventional abrasives translates into fewer tool changes
> **A more uniform surface finish** and a **more consistent scratch pattern**
> **Constant stock removal**, thanks to a **more even wear pattern**, guarantees a higher process stability

Stock removal rate [g/min]



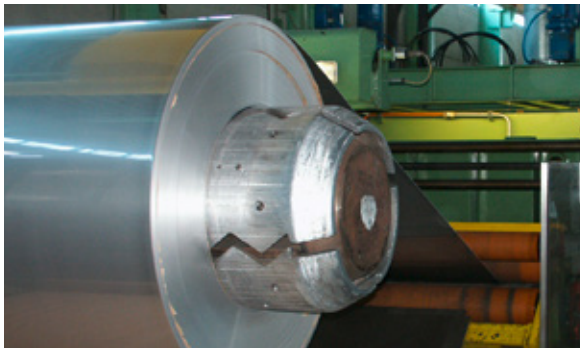
Grinding time [min]

VSM – The expert for long-term abrasives

> VSM offers the largest range in the marketplace with more than 30 compact grain series, in order to meet almost any customer requirement.
> You may rely on a consistently high quality of our long-term abrasives:
VSM COMPACTGRAIN – known to be **the original** – for more than forty years.

Case studies

Grinding of stainless steel coils



NEW

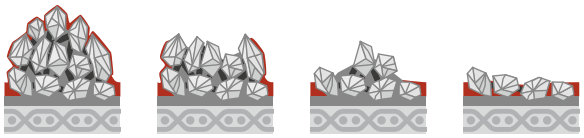
VSM COMPACTGRAIN Plus	KK790Y
Workpiece	Coil 1,200 m in length
Material	Stainless steel
Contact element	> Rubberised roll > Hardness: 80° Shore A
Cutting speed	25 m / sec
Feed rate	37 m / min
Grit size	180
Lubricant	Oil
Outcome	> Two-fold increase in service life: Grinding of two coils with one belt (2,400 m) > Reduction of set-up costs / downtimes > Reduction of the costs of belts disposals

Grinding of tubes

VSM COMPACTGRAIN	CK748X
Workpiece	Tube with weld
Material	Stainless steel
Contact element	> Hardness: 70° Shore A > Serration: 1:1,5
Cutting speed	35 m / sec
Feed rate	6 – 8 m / min
Grit size	180, 240, 400, 600
Lubricant	Oil
Outcome	> It was possible to produce a customized finish > Increase in service life from 130 minutes (competition) to 400 minutes

Uniform stock removal producing consistent surface values

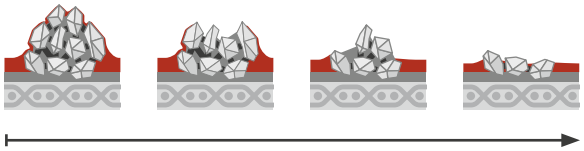
NEW VSM COMPACTGRAIN Plus



t=0 *Grinding time*

Thanks to an optimized grain reserve in conjunction with improved bonding properties, **VSM COMPACTGRAIN Plus** series feature a more uniform wear pattern. This means that all of the granulate is used down to the substrate. This added benefit translates into an a prolonged service life and a uniform surface finish.

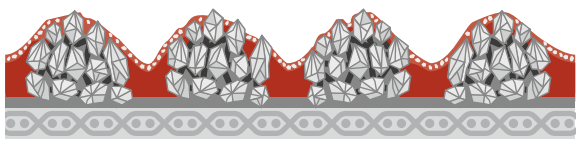
VSM COMPACTGRAIN



t=0 *Grinding time*

All established **VSM COMPACTGRAIN** series benefit from the self-sharpening effect of the VSM abrasive grain. The long-term abrasive are completely made of granules with scores of abrasive grains. Once used, grains are broken out of the granulate by the grinding forces exposing new and sharp grain tips.

VSM additional grinding-active layers



VSM TOP SIZE

TOP SIZE **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 COMPACTGRAIN Products

	Rolls (max. width)	Wide Belts	Narrow Belts	Discs	Backing	Grain type	Features	Stock removal → Surface 40	60	80	120	180	240	320	400	600	800	1000	1200	VSM Series
NEW	1090	⊙	⊙		Cloth	VSM COMPACTGRAIN Plus (AO)	◊					■	■	■	■	■	■			KK791Y
	1090	●	●		Cloth	VSM COMPACTGRAIN Plus (AO)	◊		■	■	■	■	■	■	■					KK790Y
	1480	●	●		Cloth	VSM COMPACTGRAIN (CER)	◊		■	■										XK789X
	1480	⊙	⊙		Cloth	VSM COMPACTGRAIN (CER)	◊		■	■	■									XK786X
	1480	●	●		Cloth	VSM COMPACTGRAIN (AO)	◊			■	■	■	■	■	■	■				LK719X
	1090	⊙	⊙		Cloth	VSM COMPACTGRAIN (AO)	◊		■	■	■	■	■	■	■	■				KK718X
	1090	⊙	⊙		Cloth	VSM COMPACTGRAIN (AO)	◥ TOP SIZE, ◊			■	■	■	■							KK834X
	1480	⊙	⊙		Cloth	VSM COMPACTGRAIN (AO)	◊					■	■	■	■	■				KK712Y
	1480/1090	⊙	⊙		Cloth	VSM COMPACTGRAIN (AO)	◊			■	■	■	■	■	■	■				KK712X
	1090		⊙		Cloth	VSM COMPACTGRAIN (AO)				■	■	■	■	■	■					KK712J
	1090	○	○		Cloth	VSM COMPACTGRAIN (AO)					■	■								KK731X
	1090			○	Cloth	VSM COMPACTGRAIN (AO)					■	■								KK731K
	1090	○	○		Cloth	VSM COMPACTGRAIN (AO)	◊			■	■	■	■	■	■	■	■			KK772X
	1090			○	Cloth	VSM COMPACTGRAIN (AO)				■	■	■	■	■	■	■	■	■	■	KK772K
	1090	○	○		Cloth	VSM COMPACTGRAIN (AO)	◊			■	■	■	■	■	■	■	■	■	■	KK772J
	1050		○		Cloth	VSM COMPACTGRAIN (AO)					■	■	■	■	■	■		■		KK712F
	1090		○		Cloth	VSM COMPACTGRAIN (AO)	◊				■	■	■	■	■	■	■	■	■	KK770J
	1090	⊙	⊙		Cloth	VSM COMPACTGRAIN (SIC)	◊			■	■	■	■	■	■					CK748X
	1090	○	○		Cloth	VSM COMPACTGRAIN (SIC)	◊						■	■	■	■	■	■	■	CK918X
	1090	○	○		Cloth	VSM COMPACTGRAIN (SIC)	◊			■	■	■	■	■	■	■	■	■	■	CK772T
	1090		⊙		Cloth	VSM COMPACTGRAIN (SIC)				■	■	■		■						CK742J
	1470			⊙	Fibre	VSM COMPACTGRAIN (AO)						■								KF712
	1470			⊙	Fibre	VSM COMPACTGRAIN (AO)					■	■								KF736
	1450	○	○		Paper	VSM COMPACTGRAIN (AO)					■	■	■	■	■	■	■			KP712
	1450	○	○		Paper	VSM COMPACTGRAIN (SIC)							■	■						CP772

Other dimensions and grit sizes upon request.

Legend:

CER = CERAMICS
AO = ALUMINIUM OXIDE
SIC = SILICON CARBIDE

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

◥ **TOP SIZE**
Grinding-active additional layer reduces the temperature in the grinding zone

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

Last revised: 10/2018

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.

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-VITEX Magyarország Kereskedelmi Kft.
Nagytétényi út 72
1222 Budapest
T +36 1 424 06 87
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

USA

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

Asia

China

VSM AG · Shanghai Representative Office
Rm. 5I, Zhao Feng Univ. Bldg.
No. 1800, Zhong Shan Xi Rd.
Shanghai 200235
T +86 21 6270 2642
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

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