

METAL

**Abrasives for
perfect surfaces**



The surest way to a perfect surface

The ability to professionally grind work pieces with high-quality surface finishes is an essential feature for reliable parts. To achieve high-quality production, it is important to choose the appropriate coated abrasive.


VSM AG has been producing these types of coated abrasives for over 150 years, based on a wealth of experience and knowledge of its customers' needs and requirements.

We strongly focus on partnership-based collaborations between abrasive users, machinery manufacturers and ourselves because further development activities for abrasives and process technologies are closely interlinked. Coupled with our research and development operations, this practical way of doing business guarantees application-specific expertise, product development in tune with market requirements and the very highest levels of product quality backed by value added products.

The result is you can place your trust in the expert advice of our applications engineers and VSM consultants and in our comprehensive range of products, no matter what technical challenges are involved.

Our global sales and marketing network with a large number of subsidiaries and competent partners ensures close proximity to our customers, wherever they are.









Whatever the grinding application – especially in the area of metalworking – we can provide the appropriate grinding tools on cloth, paper and vulcanized fibre backings in a virtually unlimited range of forms and dimensions.



The tables on the following pages will help you to find the right abrasive for your specific application.

And please don't hesitate to contact us for advice on complex and demanding applications. VSM field engineers and dealers will be only too pleased to help you.

Product overview

								
Material	Backstand	Wide belt	Flat grinding	Centerless grinding	Robotic Grinding	Slack of belt	Angle grinding	Disc sanding
								●
				●	●			
								●
				●	●			
				●	●			
				●	●			
								●
				●	●			
							●	
	●		●	●	●			
								○
		●						
								○
								○
	●	●	●	●	●			
	⊙	⊙	⊙	⊙	⊙			
	●		●					
	●	●	●	●	●			
	●	●	●	●	●			
	●	●	●	●	●			
	●	●	●	●	●			
	●	●	●	●	●			⊙
	⊙				⊙	⊙		
	⊙				⊙	⊙		
	●	●	●	●	●			
							●	
							●	
		●	●					
	●	●	●	●	●			
							●	
		○	○					
		●		●				
		●	●					
							●	
							●	



Legend:









- Alloyed steel
- Unalloyed steel
- Non-ferrous metals

- For low to medium contact pressure
- ⊙ For medium contact pressure
- For medium to high contact pressure
- ◆ Suitable for wet applications

- TOP SIZE** Additional layer for cooler grinding
- DA** Diamond
- BA** Cubic Bornitrid (CBN)
- CER** CERAMICS

Dynafile	Manual grinding	Grit size	Grain type	Feature	VSM series	
		120, 180, 240, 320, 400, 500	DA	Velcro	DA920K	VSM Diamond abrasives
●		120, 180, 240, 320, 400, 500	DA		DA920Y	
		60, 80, 120, 180, 240, 320, 400	DA	Velcro	DA930K	
●		40, 60, 80, 120, 180, 240, 320, 400	DA		DA930X	
●		60, 80, 120, 180, 240, 320, 400	DA		DA931X	
●		120, 180, 240, 320, 400	BA		BA960Y	VSM CBN abrasives
		60, 80, 120, 180, 240, 320, 400	BA	Velcro	BA970K	
●		60, 80, 120, 180, 240, 320, 400	BA		BA970X	
		20, 24, 36, 40, 50, 60, 80, 100, 120	CER	CERAMICS+, TOP SIZE	XF885	VSM CERAMICS
⊙		36, 40, 60, 80	CER	CERAMICS+, STEARAT	XK733X	
		40, 60, 80	CER	CERAMICS+, klettiert	XK760K	
		50	CER	CERAMICS+, TOP SIZE	XK850Y	
		60, 80, 100, 120	CER	CERAMICS+, TOP SIZE, Velcro	XK870K	
		60, 80, 100, 120, 180, 240, 320	CER	CERAMICS+, TOP SIZE, Velcro	XL870F	
		20, 24, 36, 40, 50, 60, 80, 100, 120	CER	CERAMICS+, TOP SIZE	XK885Y	
		20, 24, 36, 40, 50, 60, 80, 100, 120	CER	CERAMICS+, TOP SIZE	XK880Y	
		24, 36	CER	TOP SIZE	XK888Z	
		20, 24, 36, 40, 50, 60	CER	TOP SIZE	XK877Z	
		24, 36, 40, 50, 60, 80, 100, 120	CER	TOP SIZE	XK880Y	
		40, 60	CER	TOP SIZE	XK870Y	
⊙		24, 36, 40, 50, 60, 80, 100, 120	CER	TOP SIZE	XK870X	
⊙		36, 40, 60, 80, 120	CER	TOP SIZE	XK870T	
⊙		50, 60, 80, 100, 120	CER	TOP SIZE	XK870J	
⊙		60, 80, 100, 120, 150, 180, 240, 320, 400	CER	TOP SIZE	XK870F	
⊙		36, 40, 50, 60, 80, 100, 120	CER	TOP SIZE	XK850X	
		24, 36, 40, 50, 60, 80, 100, 120	CER	TOP SIZE	XF870	
		36, 40, 50, 60, 80	CER	TOP SIZE	XF850	
		20, 24, 36, 60, 80, 100, 120	CER		XK760Y	
⊙		24, 36, 40, 50, 60, 80, 100, 120	CER		XK760X	
		24, 36, 40, 50, 60, 80, 120	CER		XF760	
		60, 80, 100, 120	CER		XP760	
		40, 60, 80	COM-CER		XK789X	VSM COMPACTGRAIN
		60, 80, 120	COM-CER		XK786X	
		180	COM		KF712	
		120, 180	COM		KF736	

Product overview

								
Material	Backstand	Wide belt	Flat grinding	Centerless grinding	Robotic grinding	Slack of belt	Angle grinding	Disc sanding
Material 1								○
Material 2								○
Material 3		○	○					
Material 4								○
Material 5								○
Material 6		● ●	● ●	● ●				
Material 7		⊙	⊙	⊙	⊙			
Material 8		⊙ ●	⊙ ●	⊙ ●				
Material 9		⊙ ●	⊙ ●	⊙ ●				
Material 10		⊙ ●	⊙ ●	⊙ ●	⊙ ●			⊙
Material 11			○	○	○	○		○
Material 12		⊙ ●	⊙ ●	⊙ ●	⊙ ●			
Material 13	○				○	○		○
Material 14	○				○	○		
Material 15	○				○	○		
Material 16	⊙				⊙			
Material 17	○				○	○		
Material 18					⊙	⊙		
Material 19		⊙ ●	⊙ ●	⊙ ●				
Material 20		○ ●	○ ●	○ ●	○ ●	○ ●		
Material 21		⊙ ●	⊙ ●	⊙ ●				
Material 22		⊙ ●	⊙ ●	⊙ ●				
Material 23	⊙				⊙	⊙		
Material 24								○
Material 25	●	● ●	● ●	● ●	● ●			
Material 26	●	●	●	●				
Material 27	●	●	●	●	●			
Material 28	●	● ●	● ●	● ●	● ●			
Material 29	●	● ●	● ●	● ●	● ●			
Material 30	⊙	⊙ ●	⊙ ●		⊙ ●			
Material 31	⊙		⊙			⊙	⊙	
Material 32								●
Material 33								●
Material 34								●
Material 35								●



Legend:

- Alloyed steel
- Unalloyed steel
- Non-ferrous metals

- For low to medium contact pressure
- For medium contact pressure
- For medium to high contact pressure
- ♣ Suitable for wet applications


- TOP SIZE** Additional layer for cooler grinding
- COM-AO** Compactgrain Aluminium Oxide
- COM-SIC** Compactgrain Silicon Carbide
- ZA** Zirconia Alumina

Dynaflex	Manual grinding	Grit size	Grain type	Feature	VSM series
		120, 180	COM-AO	Velcro	KK731K
		80, 120, 180, 240, 320, 400, 600, 800, 1000, 1200	COM-AO	Velcro	KK772K
		120, 180, 240, 320, 400, 600	COM-AO		KP712
		120, 180	COM-AO	Velcro	KP712K
		120	COM-AO	Velcro	KP712J
		180, 240, 320, 400, 600	COM-AO		KK779X
		80, 120, 180, 240	COM-AO	TOP SIZE	KK834X
		80, 120, 180, 240, 320, 400, 600	COM-AO		LK719X
		60, 80, 120, 180, 240, 320, 400, 600	COM-AO		KK718X
		180, 240, 320, 400, 600	COM-AO		KK712Y
○		80, 120, 180, 240, 320, 400, 600	COM-AO		KK712X
		120, 180, 600	COM-AO		KK731X
○		80, 120, 180, 240, 320, 400, 600, 800	COM-AO		KK772X
○		80, 120, 180, 240, 320, 400, 600, 800, 1000, 1200	COM-AO		KK772J
○		80, 120, 180, 240, 320, 400, 600, 800, 1000, 1200	COM-AO		KK770J
○		80, 120, 180, 240, 320, 400, 600	COM-AO		KK770F
○		80, 120, 180, 240, 320, 400	COM-AO		KK712J
○		120, 180, 240, 320, 400, 600, 800, 1200	COM-AO		KK712F
		180	COM-SIC		CK743J
		120, 180, 240	COM-SIC		MK748X
○		80, 120, 180, 240, 320, 400, 600, 800, 1000, 1200	COM-SIC		CK772T
		240, 320, 400, 600, 800, 1000, 1200	COM-SIC		CK918X
		80, 120, 180, 240, 320, 400	COM-SIC		CK748X
		80, 120, 180, 240, 320	COM-SIC		CK742J
		24, 36, 40, 50, 60, 80, 100	ZA	Velcro	ZK713K
		24, 36, 40, 50, 60	ZA		KK716
		36, 40, 50, 60, 80, 100	ZA	TOP SIZE	KK815Y
○		36, 40, 50, 60, 80	ZA	TOP SIZE	ZK744X
○		24, 36, 40, 50, 60, 80	ZA		KK715X
		36, 40, 50, 60, 80	ZA		ZK745X
○		24, 36, 40, 50, 60, 80, 100, 120, 150, 180, 220, 240, 320	ZA		ZK713X
○		36, 40, 50, 60, 80, 120	ZA		ZK713T
		36, 40, 60, 80	ZA	TOP SIZE	ZF844
		36, 40, 50, 60, 80	ZA		ZF745
		36, 40, 50, 60, 80, 120	ZA		ZF714
		36, 40, 50, 60, 80, 120	ZA		ZF713

VSM COMPACTGRAIN

Zirconia Alumina

Product overview



Material	Backstand	Wide belt	Flat grinding	Centerless grinding	Robotic grinding	Slack of belt	Angle grinding	Disc sanding
■ ■ ■								○
■ ■ ■	⊙							
■ ■ ■	⊙	⊙						
■ ■ ■	○	○ ●	○ ●	○ ●				
■ ■ ■	○	⊙	○	○	○			
■ ■ ■	○				○	○		
■ ■ ■	○				○	○		
■ ■ ■	○				○	○		
■ ■ ■	○				○	○		
■ ■ ■	○				○	○		
■ ■ ■	○				○	○		
■ ■ ■	○				○	○		
■ ■ ■		○					○	
■ ■ ■							○	
■ ■ ■		○ ●	○ ●					
■ ■ ■	○	○ ●	○ ●					
■ ■ ■	○	○ ●	○ ●	○ ●	○ ●			
■ ■ ■	○				○	○		
■ ■ ■							○	
■ ■ ■								○
■ ■ ■			○					○
■ ■ ■								○
■ ■ ■	○		○	○				
■ ■ ■	○	○	○	○	○			
■ ■ ■	○		○	○	○			
■ ■ ■								
■ ■ ■								



Legend:

- Alloyed steel
- Unalloyed steel
- Non-ferrous metals

- For low to medium contact pressure
- For medium contact pressure
- For medium to high contact pressure
- ◆ Suitable for wet applications

- TOP SIZE** Additional layer for cooler grinding
- STEARAT** Anti-adhesive effect
- AO** Aluminium oxide
- SIC** Silicon carbide

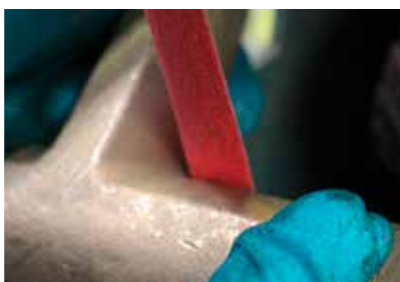
Dynaflex	Manual grinding	Grit size	Grain type	Feature	VSM series	
		40, 60, 80, 100, 120	AO	Velcro	KK711K	Aluminium oxide
		24, 36, 40, 50	AO	STEARAT	KK732X	
○		40, 60, 80, 100, 120	AO	TOP SIZE	KK813X	
		36, 40, 50, 60, 80, 100, 120, 150, 180, 220, 240, 280, 320, 400, 500	AO		KK711Y	
○		36, 40, 50, 60, 80, 100, 120, 150, 180	AO		KK812X	
○		20, 24, 36, 40, 50, 60, 80, 100, 120, 150, 180, 220, 240, 280, 320, 400	AO		KK711X	
○		50, 60, 80, 100, 120, 150, 180, 220, 240, 280, 320, 400, 500	AO		KK711T	
○		60, 80, 100, 120, 150, 180, 220, 240, 280, 320, 360, 400, 500	AO		KK511J	
○		60, 80, 100, 120, 150, 180, 220, 240, 320, 400	AO	TOP SIZE	KK841F	
		80, 100, 120, 150, 180, 220, 240, 320, 400, 600	AO	STEARAT	KK532F	
○		60, 80, 100, 120, 150, 180, 220, 240, 280, 320, 360, 400, 500, 600, 800	AO		KK511F	
		60, 80, 100, 120, 150, 180, 220, 240, 320, 360, 400, 500	AO		KK711E	
	○	40, 50, 60, 80, 100, 120, 150, 180, 220, 240, 280, 320, 360, 400	AO		KK114F	
		36, 40, 60, 80, 100, 120, 150, 180, 220, 240, 320	AO		KP709	
		36, 50, 60, 80, 100, 120, 150, 180, 220	AO	TOP SIZE	KF808	
		16, 24, 30, 36, 40, 50, 60, 80, 100, 120, 150	AO		KF708	
		36, 40, 50, 60, 80, 100, 120	SIC		CK727Y	Silicon carbide
		24, 36, 40, 50, 60, 80, 100, 120, 180	SIC		CK722Y	
		24, 36, 40, 50, 60, 80, 100, 120, 150, 180, 220, 240, 320, 400, 600	SIC		CK721X	
○		80, 100, 150, 180, 220, 240, 280, 320	SIC		CK721J	
○		16, 24, 36, 50, 60, 80, 120	SIC		SF08	
	○	coarse 100, medium 180, fine 280	AO-non-woven		KV301	VSM non-woven
	○	coarse 100, medium 180, fine 280	AO-non-woven		KV701	
		coarse 100, medium 180, fine 280	AO-non-woven		KV701K	
		medium 180	AO-non-woven		KV701X	
		coarse 100, medium 180	AO-non-woven		KV707	
		coarse 100, medium 180, fine 240	AO-non-woven		KV707K	
○		coarse 100, medium 180, fine 240	AO-non-woven		KV707T	
		coarse 100, medium 180, fine 240, very fine 400 SiC	AO-non-woven		KV707X	
		medium 180	AO-non-woven		KV707Y	
	○	very fine 400, ultra fine 1000	SIC-non-woven		CV301	
	○	fine 280, very fine 400, ultra fine 1000	SIC-non-woven		CV701	

Your application

VSM abrasives are suited for a wide range of metal applications.



Container



Fittings



Cast parts and forgings



Special products



Tools



Vehicles and car bodies



Tubes



Steel sheets



Wire



Pistons and cylinders



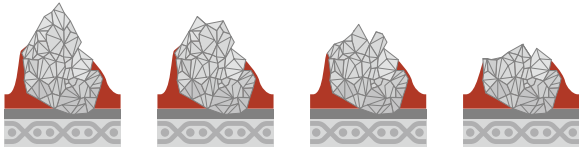
Rollers



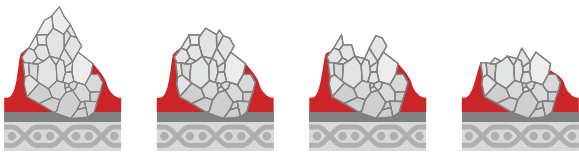
Turbines

The concept of self-sharpening

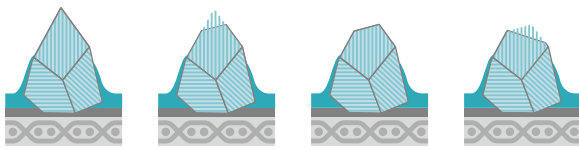
NEW! VSM CERAMICS Plus (CER Plus)



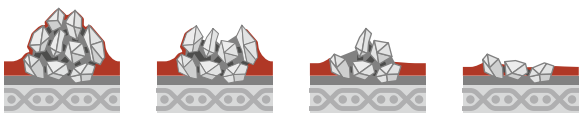
VSM CERAMICS (CER)



VSM ZIRCONIA ALUMINA (ZA)



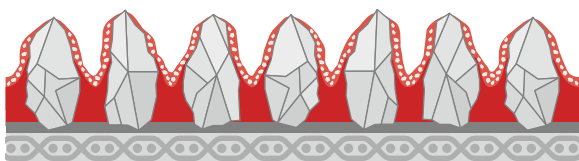
VSM COMPACTGRAIN (COM)



t=0 Grinding time

Fine aluminium oxide particles (Al₂O₃) in the form of crystalline are compacted by sintering. The forces inherent in the abrasion process break down the structure of the crystalline. The breaking down of the grain continuously produces new and sharp edges.

Additional layer for cooler grinding (TOP SIZE)



For high stock removal

Products based on VSM CERAMICS Plus, VSM CERAMICS and zirconia alumina are ideal solutions where a more aggressive cut is needed. These products ensure an extremely high stock removal rate and a very long service life thanks to their continuous self-sharpening process. VSM CERAMICS products impress with their cool grinding characteristics, which in turn makes for extended cutting performance and prevents surface discoloration. VSM CERAMICS exhibit a high level of hardness, and this makes them ideal for machining extremely hard surfaces.

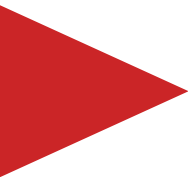
For fine surface finishing

VSM COMPACTGRAIN abrasives consist of granules. Each individual grain is a compact unit which consists of numerous abrasive grains. It is in machine grinding that compact grain products really come into their own and are most impressive in terms of a long service life and short set-up times. Their stock removal rate is uniform with a consistent roughness across the entire life of the tools.

VSM non-wovens perfectly follow the shape of a workpiece. This produces premium surface qualities which can easily be reproduced.

Top-level quality

For applications involving the dry machining of stainless and high-temperature steels we recommend using **TOP SIZE** products. An additional maker coat with a grinding-active layer increases the cutting performance significantly. The workpiece temperature in the contact area is reduced considerably without causing any structural changes in the material of the workpiece.



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und Maschinen-Fabriken AG**

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