

Constant Surface Results



What is CR-Finishing®?

CR-Finishing® is a new concept for an efficient process which produces functional surfaces first time.

CR-Finishing® stands for Constant Result finishing and means that required surface results are achieved consistently and precisely.

Constant result

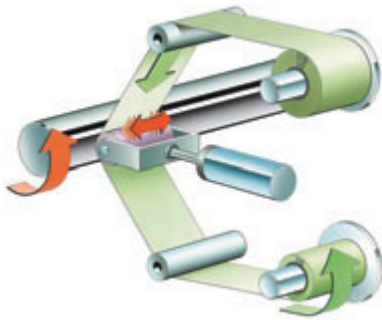
With the specific CR-Finishing® process new sanding material is always used, guaranteeing a uniform, reproducible finishing action and, as a consequence, a constant finishing result.

Specific process

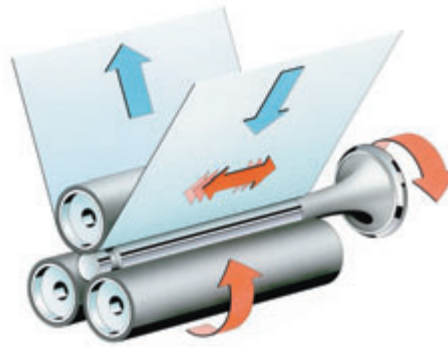
With CR-Finishing® every sanding task is considered part of the entire finishing process, and the products are specifically designed for the machine tools, workpieces and materials.

Reliable quality

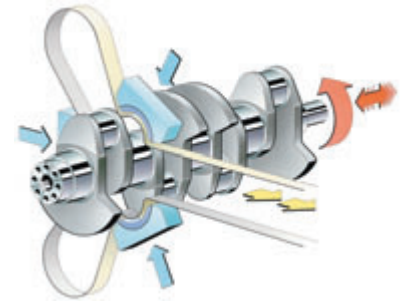
With CR-Finishing® both the selection of raw materials and the manufacturing of the products are carried out following rigorous quality guidelines (ISO 9001 and 14001); based on the specific product design, the required surface results are reliably achieved.



CR-Finishing® with contact roller



CR-Finishing® with the centerless method



CR-Finishing® with formed pressure shoe

What are the advantages of CR-Finishing®?

Despite costly manufacturing processes on the lathe and smart tool technologies for sanding, the achieved surface results are not always satisfactory. The innovation of CR-Finishing® lies in the finishing process and is a further development of traditional finishing methods. What is special about CR-Finishing® is the detailed analysis and the consideration of the process chain of the workpiece. In general, finishing becomes ever more important in the manufacturing

process. This as a result of constantly increasing requirements of technology. Thus, finishing is no longer anymore the preserve of specialists, but is the concern of the entire industry. Therefore the needs regarding surface quality must be achieved with process-reliability and within a short time.

CR-Finishing® – a clearly defined surface structure: sanded and finished (cross finishing)

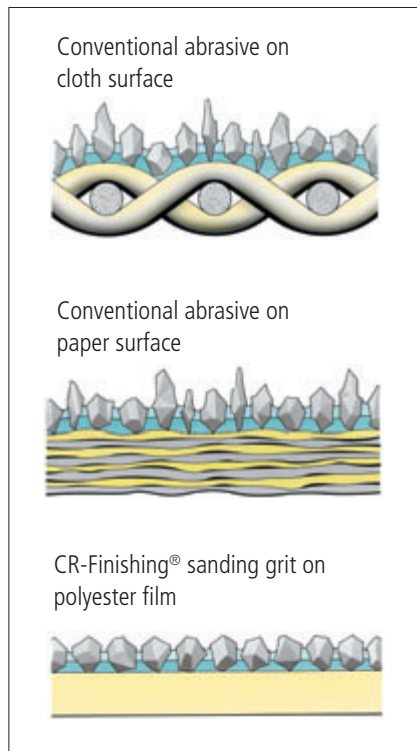


**1
finished**

**2
sanded**

What makes CR-Finishing® unique?

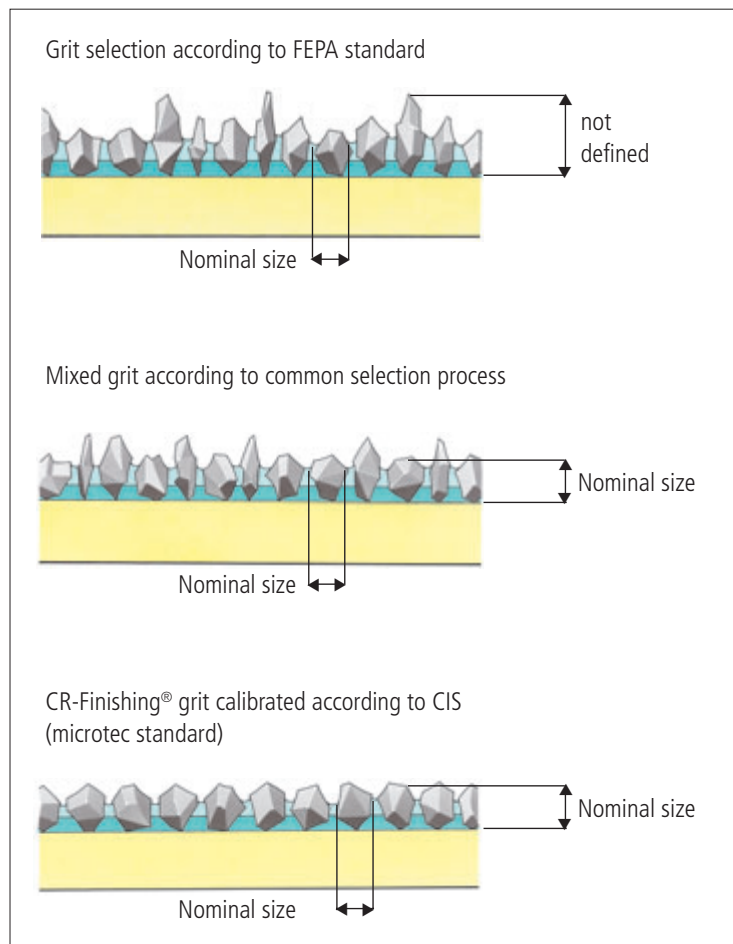
Finishing films are characterized by high strength together with temperature and humidity resistance. Special manufacturing techniques and careful choice of raw materials according to particularly stringent criteria guarantee their high precision.



The backing

Due to their precision and consistency. Polyester films are especially suited as a backing material for a precisely working finishing tool. Because normal grinding belts made of cloth or paper are compressible, they cannot ensure constant processing action; this leads to undesirable and inaccurate scratch depth values.

CIS compared with common calibration



The grit

A specially developed, complex grit selection process after CIS (Calibration for Industrial Standards) guarantees uniform, reproducible machining process. The standard determined by sia Abrasives (microtec standard) is more precise than the FEPA P standard. The CR-Finishing® grit therefore guarantees a constant, first-class surface structure conforming to defined requirements.

The binder

is a lot cleaner, more environmentally friendly and more economical. A binder system based on synthetic resin bonds the grit precisely onto the backing material. This ensures constant finishing performance while also permitting the use of modern cooling lubricants, such as emulsions or water (also spray cooling).

Where is CR-Finishing® used?



Sheets/Rolls/Belts/Discs/Strips

A wide range of CR-Finishing® products to guarantee well-defined surface structures with constant and reproducible quality.

Grit range: 100 µm-0.1 µm

Dimensions: Sheets: 230 mm x 280 mm

Rolls: 10-200 mm x 50-400mm

Discs: Ø 50-320 mm

Belts: 50/100 mm x 1000/1500 mm

Versions: Aluminium oxide, silicon carbide, ceramic and diamond, levigated or electrostatically scattered, on special polyester film, for dry and wet sanding, plain or self-adhesive

Areas of application	5900	5902	5903	5702	5200 diamond	5910	5710	Forms
Examples								
Automobile and vehicle								narrow rolls
Camshafts								
Crankshafts								
Steering wheels								
Shock absorbers								
Valves								
Steering racks								
Roller industry								standard rolls narrow rolls
Copper rollers								
Chromium rollers								
Hardened rollers								
Plasma-coated rollers								
Rubberised rollers								
Hydraulic components								
Pneumatic components								
Ball-bearings								
Optical industry								florets discs
Spectacle glasses								
Lenses								
Glass fibre industry								discs
Glass fibre plug								
Watch and clock industry								discs and belts
Watch and clock components								
Metallurgy								discs
Test object								
Miscellaneous								rolls and discs
Wafer								

Sign explanation

■ Shaded areas = recommended series for the application examples

The CR-Finishing® range

Serie	Grit (µ)	FEPA P	Color	Thickness of backing	Special	Type of grain	max. Width	Forms
5200 SIMTEC	60	240	silver	75 µm	elutriated	Diamant	330 mm	Rolls Sheets Sheets SAF Discs Discs SAF Belts
	45	320	green					
	30	500	light green					
	15	1200	orange					
	9	2000	blue					
	6	2500	gray					
	3	3000	pink					
	1	5000	violet					
	0.5	6000	white					
0.1	8000	white						
5910 SIMTEC	60	240	silver	75 µm	elutriated	ALOX	470 mm	Rolls Sheets Sheets SAF Discs Discs SAF Belts Florets
	40	360	dark blue					
	30	500	green					
	12	1500	yellow					
	9	2000	blue					
	5	2700	brown					
	3	3000	pink					
	1	5000	violet					
	0.5	6000	white					
0.1	8000	white						
5710 SIMTEC	60	240	gray	75 µm	elutriated	SiC	470 mm	Rolls Sheets Sheets SAF Discs Discs SAF Florets
	40	360	gray					
	30	500	green-gray					
	12	1500	dark grey					
	9	2000	black					
	5	2700	gray					
3	3000	gray						
5900 SIMTEC	100	150		75 µm	electro- statically spread	ALOX	640 mm	Rolls Belts
	80	180						
	60	240						
	50	280						
	40	360						
	30	500						
	20	800						
	15	1200						
9	2000							
5902 SIMTEC	100	150		125 µm	electro- statically spread	ALOX	640 mm	Rolls Sheets Sheets SAF Discs Discs SAF Belts
	80	180						
	60	240						
	50	280						
	40	360						
	30	500						
	20	800						
	15	1200						
9	2000							
5903 SIMTEC	50	280		75 µm	electro- statically spread	ALOX	640 mm	Rolls Sheets Sheets SAF Discs Discs SAF
	40	360						
	30	500						
	20	800						
	15	1200						
5702 SIMTEC	60	240		125 µm	electro- statically spread	SiC	640 mm	Rolls Sheets Sheets SAF Discs Discs SAF
	40	360						
	30	500						
	15	1200						

SAF = self-adhesive film



Our sia metal grinding system enables you to achieve absolutely perfect results on every type of surface.

sia Abrasives products are hall-marked by Swiss quality at every stage of production from the raw materials through to final conversion and by absolute precision both in manufacture and end-use. Our state-of-the-art production technologies guarantee an optimum level of quality consistency.

sia Abrasives stands for Swiss efficiency, reliability and delivery capacity, together with loyalty to all our partners.

sia coated abrasives give metalworking specialists the benefits of the 125 years of experience that sia Abrasives has gained in the realm of surface treatment, coupled with cutting-edge grinding solutions and on-going development of innovative new products.

At every stage in the creation of the sia metal grinding system, from initial development, through purchase of raw materials, to manufacture and conversion, sia Abrasives is fully committed to the well-being of people and the environment and to conserving natural resources.

sia Abrasives has been certified in accordance with the ISO 14001 Environmental Management System since January 2004.

sia Abrasives – Your Key to a Perfect Surface

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The sia Group is represented in more than 80 countries.

