

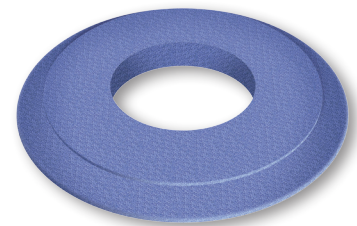


# 3M Precision Grinding and Finishing Solutions

Now, 3M offers you today's most innovative portfolio of advanced abrasive technologies to help you achieve the next level of manufacturing precision and productivity.

3M brings you a broad range of solutions designed to meet today's tough processing challenges. From grinding-to-dimension all the way to superfinishing, 3M has the tools you need to achieve stringent geometry tolerances and finish specs, part after part. Together with the former Winterthur Technologies Group, which is now part of 3M and one of the world's top manufacturers of bonded abrasives for industrial use, we provide the automotive, aerospace, oil and gas, cutting tool, primary metal, glass and other industries with innovative abrasive solutions.

3M, Winterthur, Wendt and SlipNaxos are brands recognized and trusted worldwide for reliable quality and precision abrasive products used in industries that manufacture precision parts and components for automotive engines and transmissions, oil and gas drilling, cutting tools, aircraft and land based turbines and many others.

**CUBITRON™ II**

## 3M Abrasive Systems Division

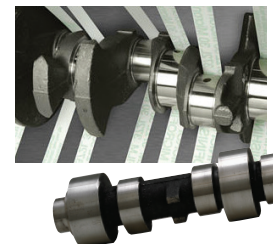
For more than 100 years, 3M has been a world leader in developing advanced abrasives. Our technologies have helped customers in virtually every industrial sector improve productivity, cut cost and achieve the consistent high quality finishes they need to compete in a world marketplace.

## Brand Histories

**Winterthur:** The Winterthur brand has a long tradition of vitrified precision grinding wheels. These products are designed and manufactured to incorporate technology reflective of the most recent machine and grinding developments in the industry.

**Wendt:** The Wendt brand provides leading superabrasive wheels for tool and cutter grinding of hard materials such as PCD, ceramics and tungsten carbide.

**SlipNaxos:** SlipNaxos products include hot-pressed grinding wheels for the steel industry for grinding slabs and billets. The product range also consists of roll grinding and centerless grinding wheels for the steel industry as well as large diameter precision grinding wheels for cam and crankshaft grinding and superabrasive wheels for cutting tool applications.

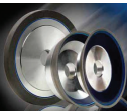


# 3M Precision Grinding Solutions

## SUPERABRASIVE WHEELS



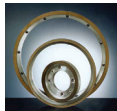
Resin, Poly and Hybrid



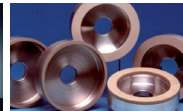
Vitrified CBN



Vitrified Diamond



Electroplated  
CBN and Diamond



Metal Bond for Glass



Brazed CBN and Diamond

## CONVENTIONAL WHEELS



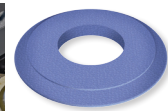
Vitrified Bond



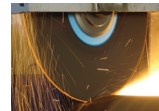
Gear Grinding: Threaded, Bevel, Single Rib



Resin Bond



Large Diameter  
Cut-Off



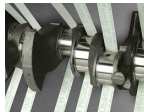
## FLEXIBLES



Flex Diamond



Compounds



Microfinishing Film

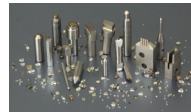
## DRESSING



Rotary Dressers



Stationary Dressers



Dressing Equipment



## 3M Product, Application and Market Matrix

	SUPERABRASIVE WHEELS						CONVENTIONAL WHEELS			FLEXIBLES			DRESSING			OTHER		
	Resin, Poly and Hybrid	Vitrified CBN	Vitrified Diamond	Electroplated CBN and Diamond	Metal Bond	Brazed CBN and Diamond	Vitrified Bond	Resin Bond	Large Diameter Cut-Off	Flex Diamond	Compounds	Microfinishing Film	Rotary Dressers	Stationary Dressers	Dressing Equipment	Coated Abrasives	Surface Conditioning	Portable Bonded
CUTTING TOOL APPLICATIONS																		
Indexable Insert Grinding	■	■	■		■								■					
Round Tools	■			■									■					
PRIMARY MATERIALS																		
Roll Grinding and Superfinishing	■						■	■		■	■	■		■		■	■	■
Slab and Plate Conditioning								■						■		■	■	■
Cut-Off						■			■							■	■	■
INVESTMENT CASTING																		
Turbine Blades/Vanes		■		■			■		■	■	■		■	■	■	■	■	■
Orthopedic Implants		■		■		■	■		■				■	■	■	■	■	■
POWERTRAIN BEARINGS & GEARS																		
Gear Grinding		■		■			■					■	■		■			
Bearing Grinding		■					■	■				■	■	■	■	■	■	
Powertrain Grinding and Finishing		■		■			■		■			■	■	■	■			
OIL & GAS																		
PCD Cutters and Drilling Bits	■		■								■							
Thermal Spray — Wear Surfaces	■							■		■	■			■		■		■
ADVANCED APPLICATIONS																		
Technical Ceramics	■			■	■	■				■	■			■				
Glass Applications				■	■					■	■					■	■	
Metallography — Sample Prep										■	■	■				■	■	



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