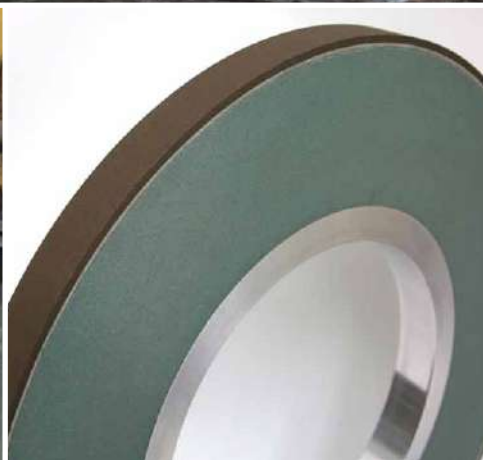


SUPERABRASIVE **GRINDING WHEELS** **FOR STEEL ROLL**



- Resinoid Bond CBN Wheel
- Metal Bond CBN Wheel
- Vitrified Bond CBN Wheel



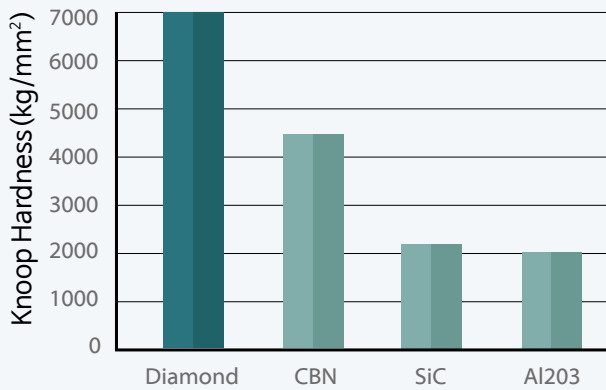
DIPROTEX Superabrasive CBN

- Suitable for grinding difficult-to-cut materials
- Cycle time reduction : High grinding efficiency compared to conventional abrasive wheels
- Longer Tool Life : Around 5-10 times longer than conventional abrasive wheels
- Superior surface finish : Consistent grinding ability and shape retention for a long period of time
- High production efficiency by longer tool life and shorter cycle time : Production automation
- Eco-friendly grinding : Almost free of scraps and wastes

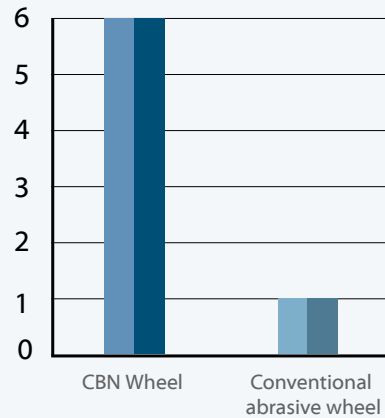


Superabrasive CBN Characteristics

Hardness Comparison

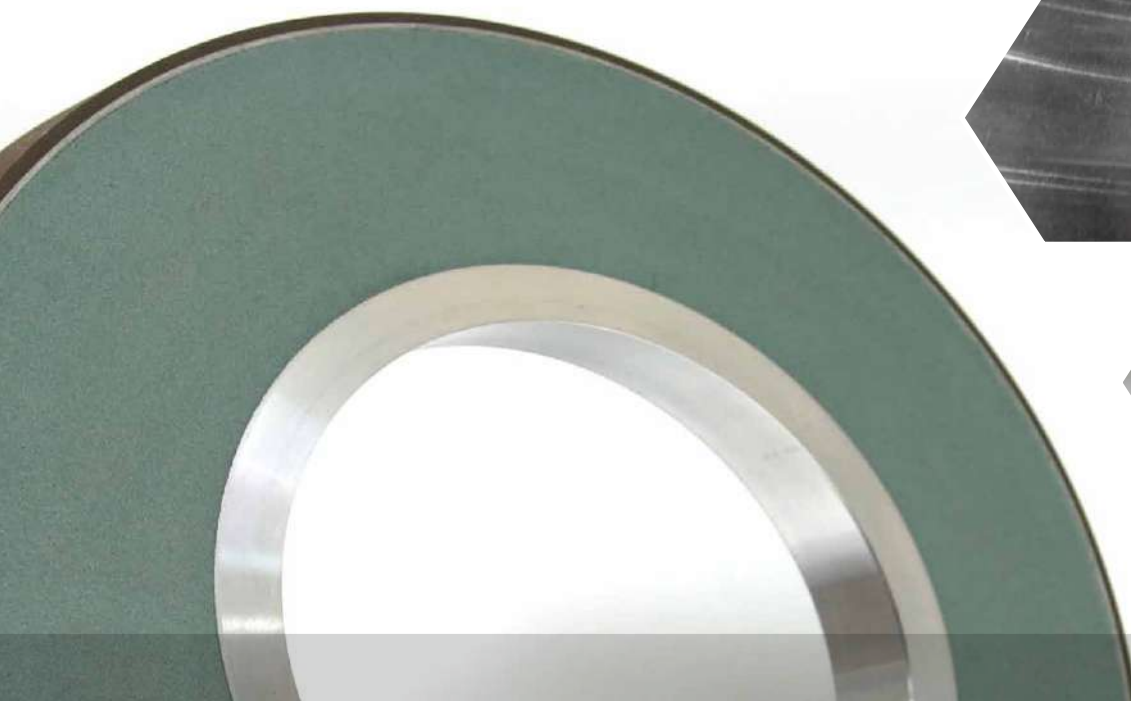


Tool Life

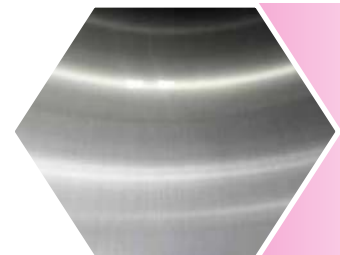
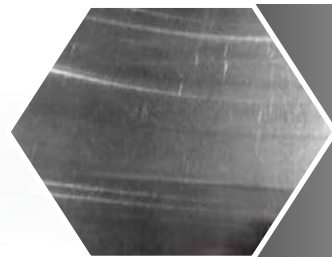


DIPROTEX Superabrasive CBN

Surface finish after grinding



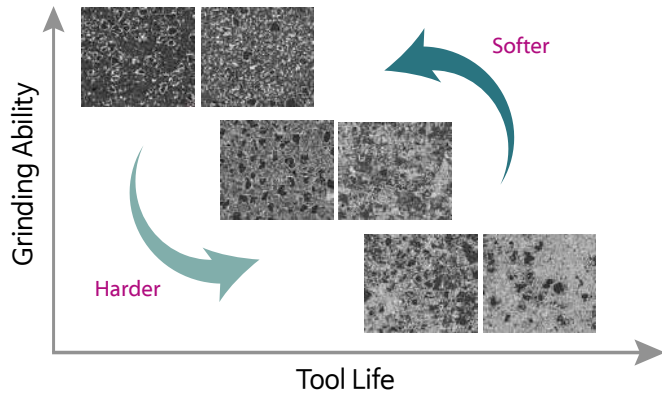
Conventional abrasive wheel



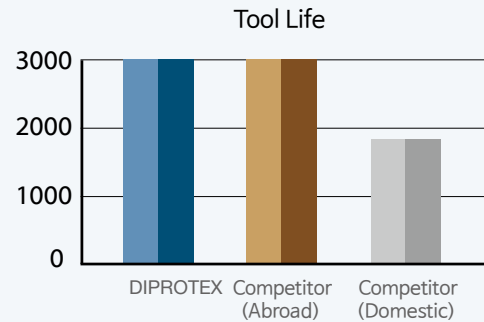
CBN wheel

DIPROTEX Resinoid Bond CBN Wheel Characteristics

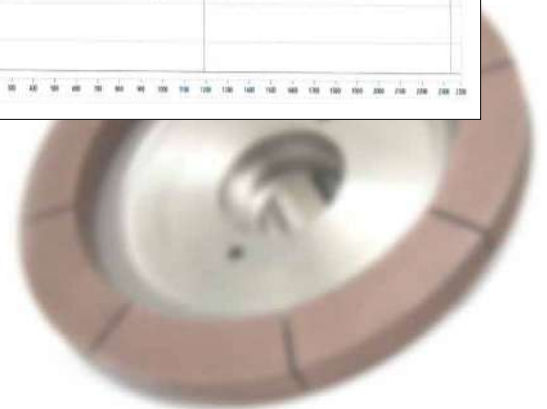
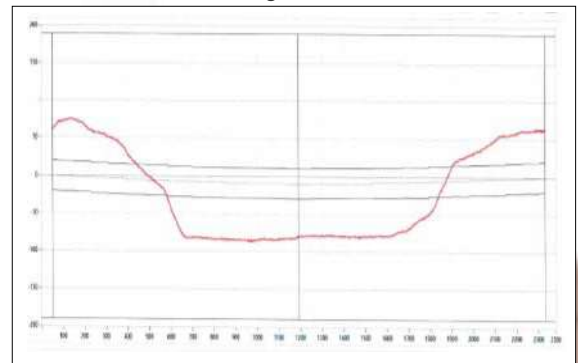
Resin bonded wheels are composed of thermosetting resin such as phenolic resin and polyimide. By using various fillers, it is able to design the wheels with different adhesion. It is widely used due to easier truing and dressing than other bonds. Also, its excellent grinding ability allows to obtain good surface finish.



Wheel Size	RB-6A2, 212D-84T-24W
Wheel Specification	B120R100B
Workpiece	Finishing Mill
Material	HSS (High Speed Steel)
Machine	On-Line RSM
MPM	1000
Pressure	45-53kgf / cm ²



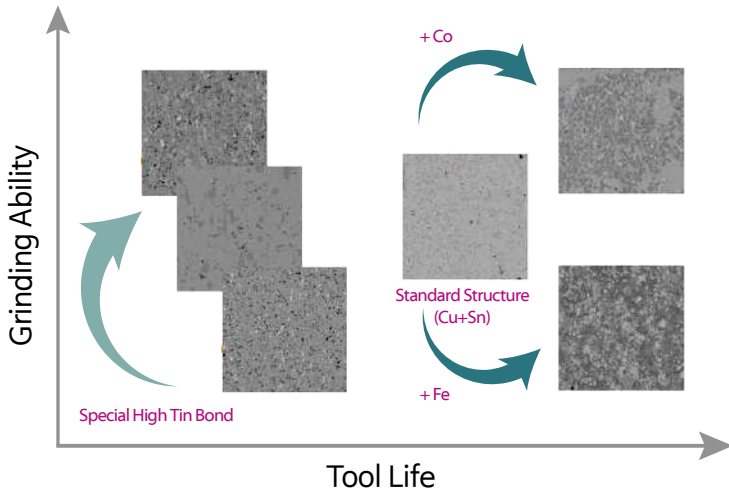
Roll Grinding Deviation < 5μm



DIPROTEX Metal Bond CBN Wheel Characteristics



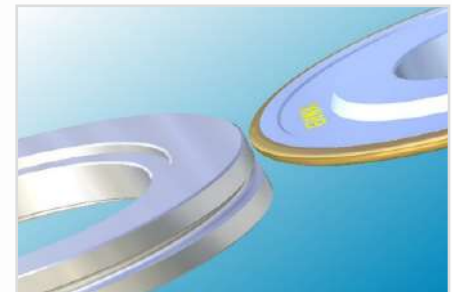
Metal bonded wheels use metallic powders as a binder. It is excellent in form maintenance and wear resistance. Mainly based on Cu and Sn, Diprotex has various metallic powders to design the optimal wheel for each application. Metal bonded wheels can be designed in complicated profile for high precision grinding. Also, it shows good performance in grinding steel rolls for rolling and other processes.



Wheel Size	MD-14FF1, 200D-20T-15U-9R-3X-127H
Wheel Specification	D120L100MA
Workpiece	Carbide Roll
Material	Tungsten Carbide



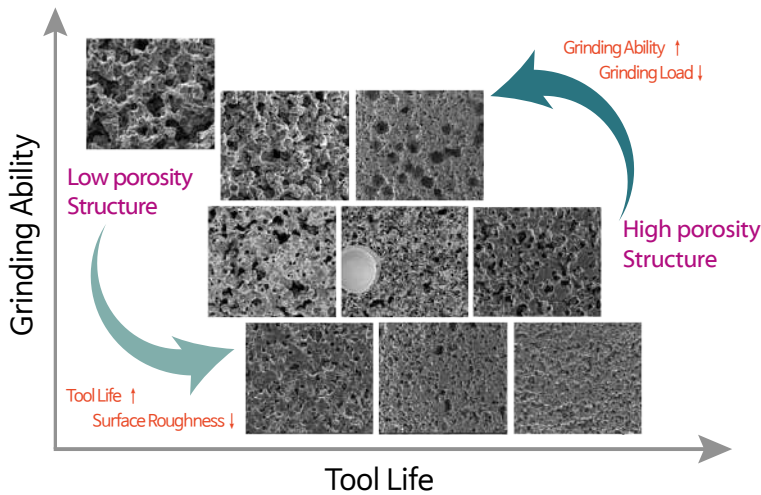
WORKPIECE (Tungsten Carbide Roll)



DIPROTEX Vitrified Bond CBN Wheel

Characteristics

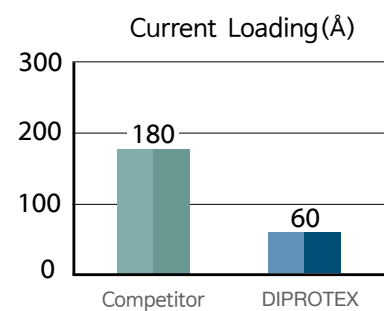
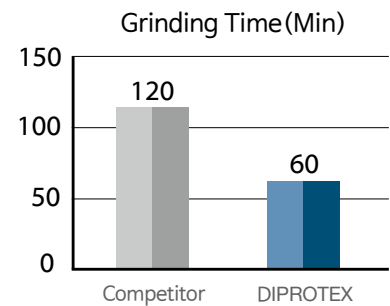
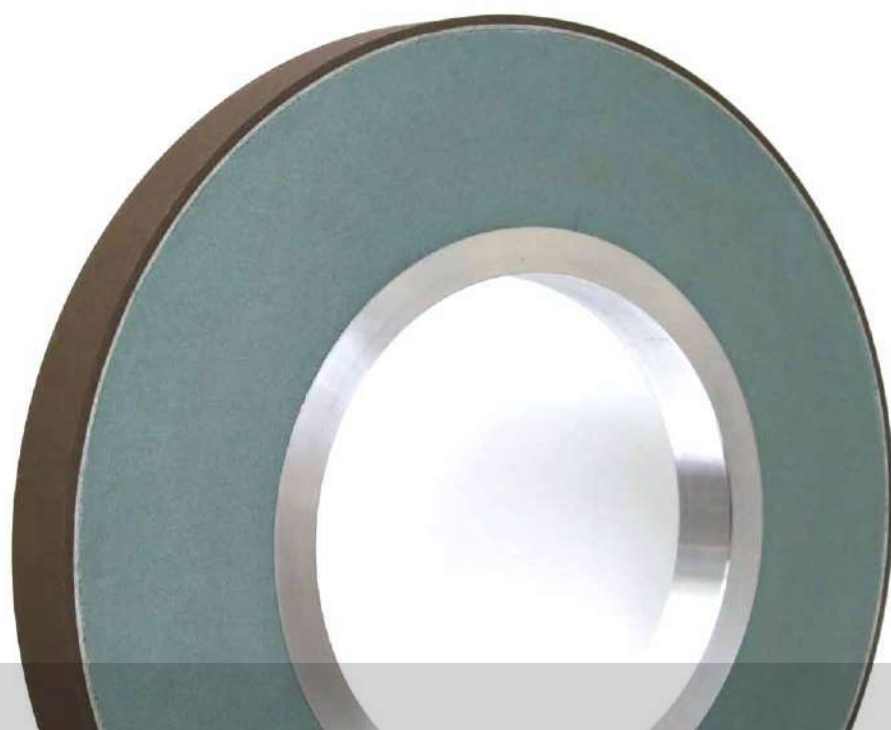
Vitrified bond, also called ceramic bond, has high bonding strength, hardness and rigidity. Vitrified bonded wheels have pores that allow the wheels to have good grinding ability. Diprotex designs the most suitable wheel for each application by adjusting pores and bond structure.



Wheel Size	VB-1A1 , 910D-100T-5X-304.5H
Wheel Specification	B170L160VESI
Workpiece	Finishing Mill
Material	HSS (High Speed Steel)
Machine	WALDRICH SIEGEN

Grinding Condition

Stock Removal	0.45~0.60mm
Vs (Wheel Speed)	30~36 m/s
Vw (Work)	25~30 rpm
Table Feed	2300~2800 mm/min
Distance Infeed	10~20 μ



DIPROTEX CBN Wheel Specification



Wheel type
 Ex) RB-6A2,

Size
212D-84T-25W,

Specification
B120R100BC

Grit type/size Bonding strength Concentration Bond name

Resin bond for Roll grinding

SOFTER ← Bonding strength → HARDER
 BA – BG – BC

LOWER ← Concentration → HIGHER
 75 – 100 – 125

	Characteristics	Grinding Ability	Tool Life
BA	Good surface	★★★★	★★
BG	General	★★★★	★★★
BC	High tool life	★★	★★★★★

Metal bond for Roll grinding

SOFTER ← Bonding strength → HARDER
 J – K – L – M – N – P – Q – R – S – X

LOWER ← Concentration → HIGHER
 75-100 – 125 – 150 – 180

	Characteristics	Grinding Ability	Tool Life
MA	General	★★★★	★★★
MB2	General	★★★★★	★★★
MG	High tool life	★★★	★★★★★

Vitri bond for Roll grinding

SOFTER ← Bonding strength → HARDER
 J – K – L – M – N – P – Q – R – S – X

LOWER ← Concentration → HIGHER
 100 – 125 – 150 – 180 – 200

	Characteristics	Grinding Ability	Tool Life
VB	General	★★★★	★★★★
VBT	High federate	★★★★★	★★
VE	High tool life	★★★	★★★★★



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