_GENENTECH

Your Best Solution for **Grinding Wheels**

DIAMOND & CBN GRINDING WHEELS

BASIC INFORMATION OF DIAMOND & CBN WHEELS

DIAMOND GRINDING WHEEL

For grinding non-ferrous material

Diamond grinding wheel is consist of diamond which is most hardest material in the earth. Usually diamond grinding wheel is used for non-ferrous material such as carbide, ceramics and cermet, etc.

DIA WHEEL WORK MATERIAL
NON FERROUS MATERIAL
TUNGSTEN CARBIDE
CERMET
CERAMIC
GLASS
QUARTS
FERRITE
SEMI CONDUCTOR MATERIAL

CBN GRINDING WHEEL

For grinding ferrous material (mainly steel)

CBN grinding wheel is consist of CBN (Cubic Boron Nitride) which is the second hardest material in the earth.
Usually CBN grinding wheel is used for steel (ferrous material) grinding.

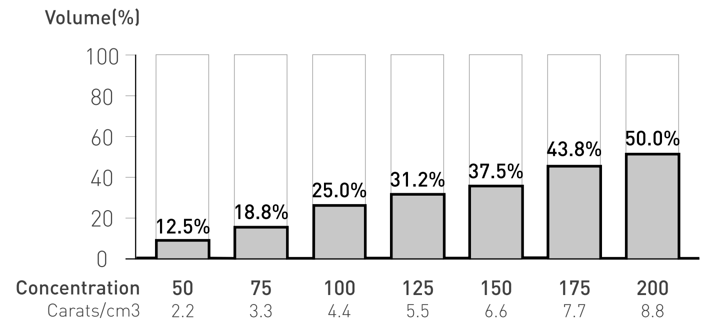
CBN WHEELS WORK MATERIAL
FERROUS MATERIAL
HARDENED STEEL
STEEL
BEARING STEEL
CAST IRON
SINTERED METAL (WITH FE)
SUPER ALLOY

BOND HARDNESS

A ... J K L M N O P Q R ... Z

SOFT NORMAL HARD

CONCENTRATION



GRIT SIZE

Abrasive grit that takes role of cutting edge while grinding process is most important factor to grind effectively for the precision tool and a suitable grit size bring excellent grinding result.

Genentech Grit Size		FEPA Designation		AN SI Grit size	US Grit Number	JIS Size
Mesh	Size(㎛)	Diamond	CBN			
#60	251	D251	B251	60/80	60	
#80	181	D181	B181	80/100	100	80
#100	151	D151	B151	100/120	120	100
#120	126	D126	B126	120/140	150	120
#140	107	D107	B107	140/170	180	140
#170	91	D91	B91	170/200	220	170
#200	76	D76	B76	200/230	240	200
#230	64	D64	B64	230/270	280	230
#270	54	D54	B54	270/325	320	270
#325	46	D46	B46	325/400	400	325
#400	40					
#500	35					
#600	30					
#800	20					
#1000	15					
#1500	10					

RESIN WHEELS

PHENOL RESIN

Characteristic
HIGH STABILITY IN DRY & WET GRINDING CONDITION.

Application
GENERAL GRINDING OF TUNGSTEN-CARBIDE, HSS, FERROUS & NON-FERROUS METALS.

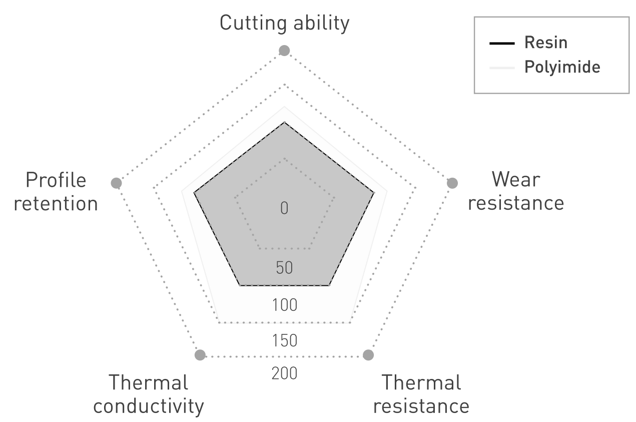
Phenolic resin bond is one of the most representative bond type of super-abrasive grinding wheel. In general, it shows an excellent result to find roughness and minimal chipping. It's mainly used for carbide, hss, ceramic cutting tool grinding application
(Genentech **GB** series)

POLYIMIDE

Characteristic
BETTER HEAT RESISTANCE THAN PHEONOL.

Application
CREEP FEED GRINDING OF TUNGSTEN-CARBIDE AND HSS.

Polyimide resin bond has distinguished feature at heat and wear resistance. It's superior mechanical property in high temperature makes excellent result at creep feed grinding. (GENENTECH **GP** series)

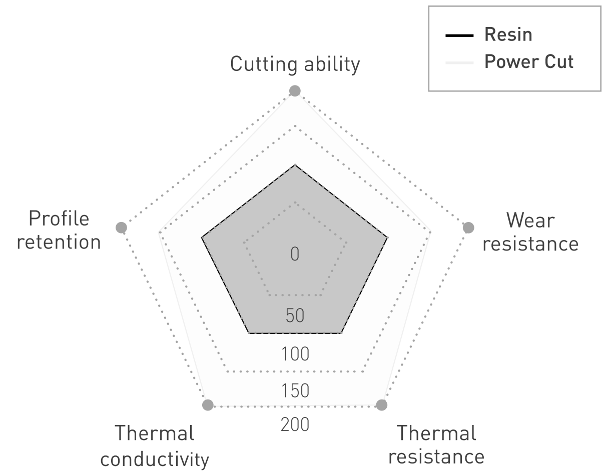


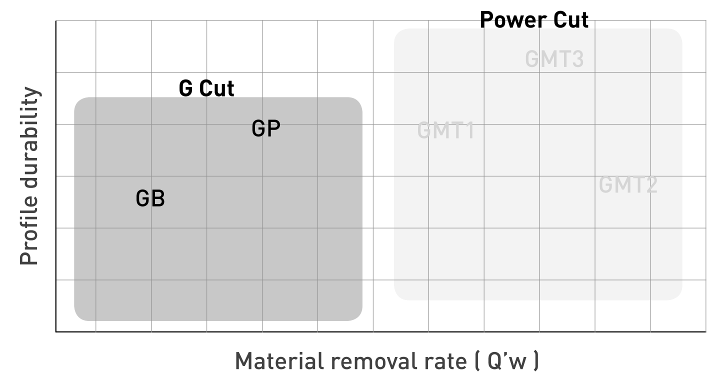
POWER CUT

Characteristic
HAS METAL AND RESIN CHARACTERISTIC. EXCELLENT GRINDING ABILITY WITH LONG LIFE AND FORM HOLDING.

Application
ROUGH GRINDING OF TUNGSTEN-CARBIDE AND HSS.

Power cut is combined with metal and resin bond. This mixture has excellent grinding abilities with heat & wear resistance. In particular, it has excellent machining ability at carbide and HSS tool.
(Genentech GMT series)





VITRIFIED WHEELS

Characteristic

TOOL LIFE IS VERY LONG DUE TO HIGH CONCENTRATION. EXCELLENT GRINDING ABILITY DUE TO MANY PORES.

Application

GRINDING OF FERROUS METAL & CERAMIC FOR AUTOMOTIVE PARTS, GRINDING OF PCD & PCBN.

Vitrified bond has porosity and it's high retention force. This bonds are good at Free-cutting due to porosity. While the grinding porosity allows coolant and prevent loading. By this you can get excellent grinding performance to various materials. (Genentech GV series)

METAL WHEELS

Characteristic

THE WEAR RESISTANCE IS VERY HIGH, THE FORM HOLDING ABILITY IS EXCELLENT.

Application

GRINDING OF GLASS, FERROUS METAL, PROCESSING OF SHAPE PROFILE, HONING.

Metallic bonds are most based on bronze and compound of various metal powders such as Copper, Cobalt, Tungsten, etc. This metal bond has good form holding ability especially sharp edge profile grinding. (Genentech GM series)