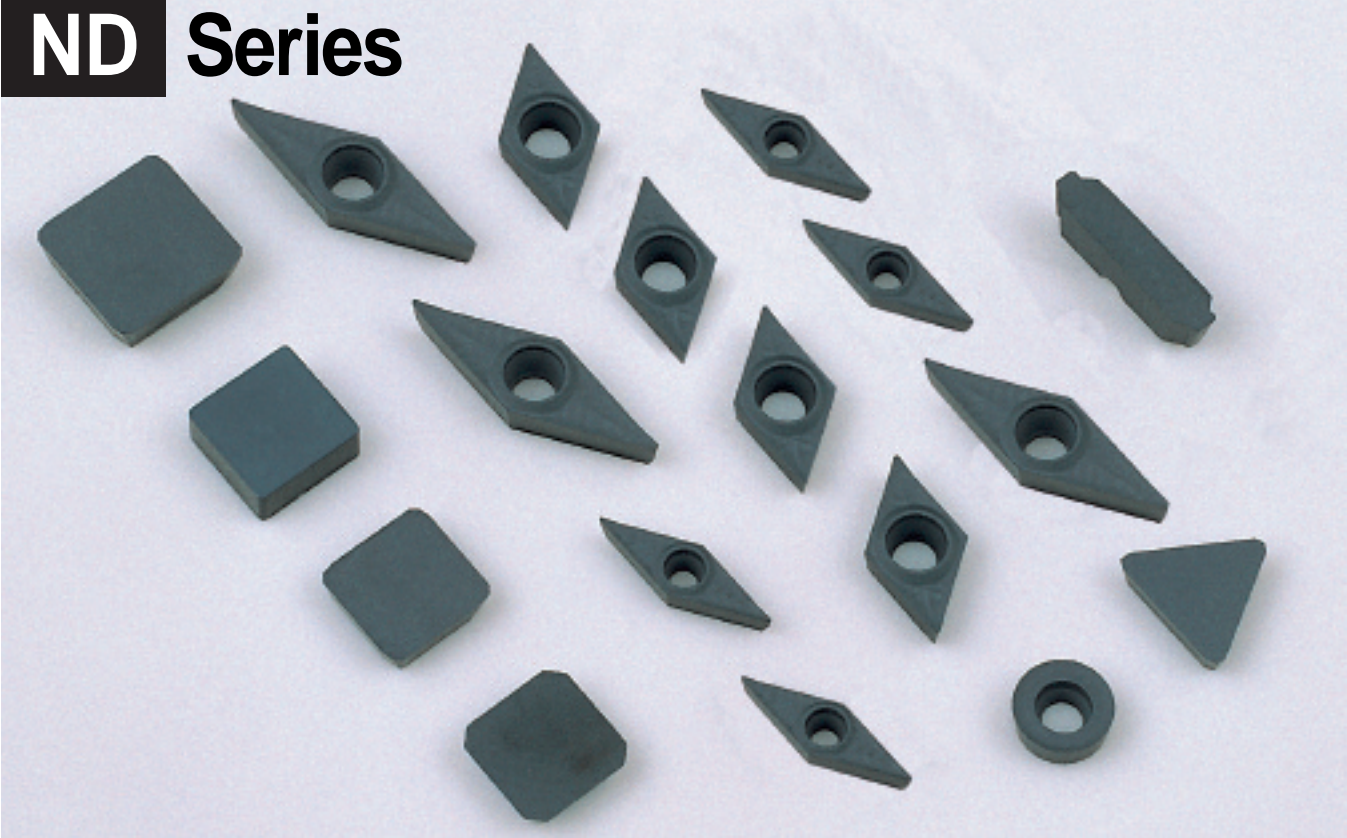


SOWA Diamond Coated Inserts

ND Series

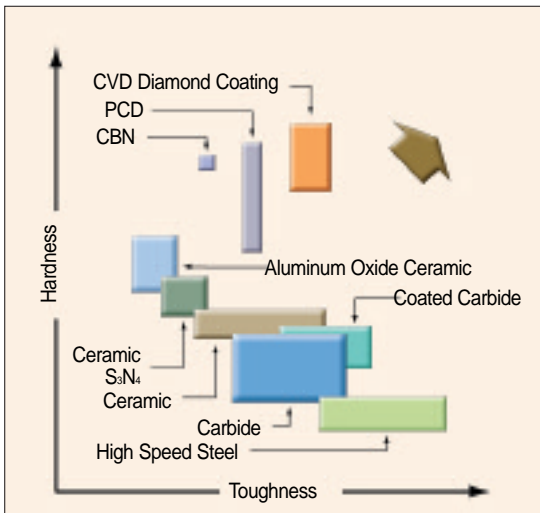


Special Features

1. Exceptional performance with non-ferrous material cutting
2. 10 times better tool life than carbide when cutting non-ferrous material.
3. Longer tool life than carbide can be acquired at the 2~3 times higher cutting speed
4. High quality surface finish of work piece can be acquired through prevent of build-up-edge.

Grades & Chipbreakers

● **Application Range**



Diamond coated grades offer an ideal combination of toughness and hardness for cutting tool applications.

● **The advantages of ND series compare with PCD**

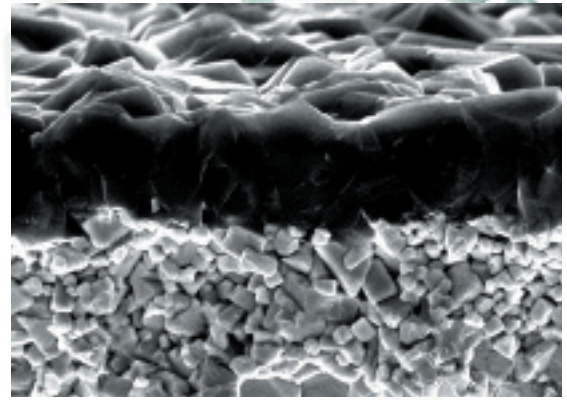
- ND series can use every cutting edge. Economical
- ND series can adopt chip breaker
- ND series have superior wear resistance than PCD

● **ND series grades**

- ND 100 - For Turning
- ND 200 - For Milling
- ND 300 - For Drilling & Endmilling

Advantages

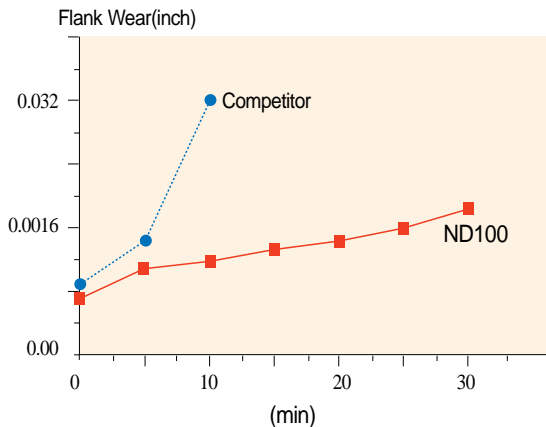
ND series of SOWA diamond coating grades have pure diamond coating layer on carbide substrate. Diamond coating grades are most ideal tool for machining of non-ferrous material.



Recommended Cutting Condition

Work piece	Grade	Cutting Condition	Cutting Speed(sfm)	Feed(ipt or ipt)	Depth(inch)	
Aluminum alloy	ND100	Turning	Finishing	2300 - 8200	0.002 - 0.020	0.002 - 0.004
			Roughing	1650 - 6575	0.004 - 0.079	0.004 - 0.2
	ND200	Milling	1650 - 9850	0.004 - 0.079	0.02 - 0.2	
High Si Aluminum alloy (Over Si 12%)	ND100	Turning	Finishing	1325 - 3275	0.002 - 0.020	0.002 - 0.004
			Roughing	9275 - 2300	0.004 - 0.079	0.02 - 0.2
Copper alloy (Bronze, Brass)	ND100	Turning	Finishing	1325 - 3950	0.002 - 0.020	0.002 - 0.004
			Roughing	95 - 3275	0.004 - 0.020	0.02 - 0.2
	ND200	Milling	1650 - 4925	0.004 - 0.079	0.004 - 0.2	
Wood	ND200	Milling	1650 - 6575	0.004 - 0.079	0.004 - 0.08	
Carbon fiber FRP	ND100	Turning	500 - 1975	0.004 - 0.016	0.004 - 0.1	
	ND300	Drilling	500 - 1975	0.001 - 0.016	-	
Cemented carbide (Semi-Sintered)	ND100	Turning	325 - 1650	0.002 - 0.020	0.002 - 0.12	

Wear Resistance Test



condition : V=975sfm, F=0.006ipr, d=0.004inch
 Insert : CCGT431-AK ND100
 Work piece : Brass (BsC3)

Raman Spectrum Spectroscopy

