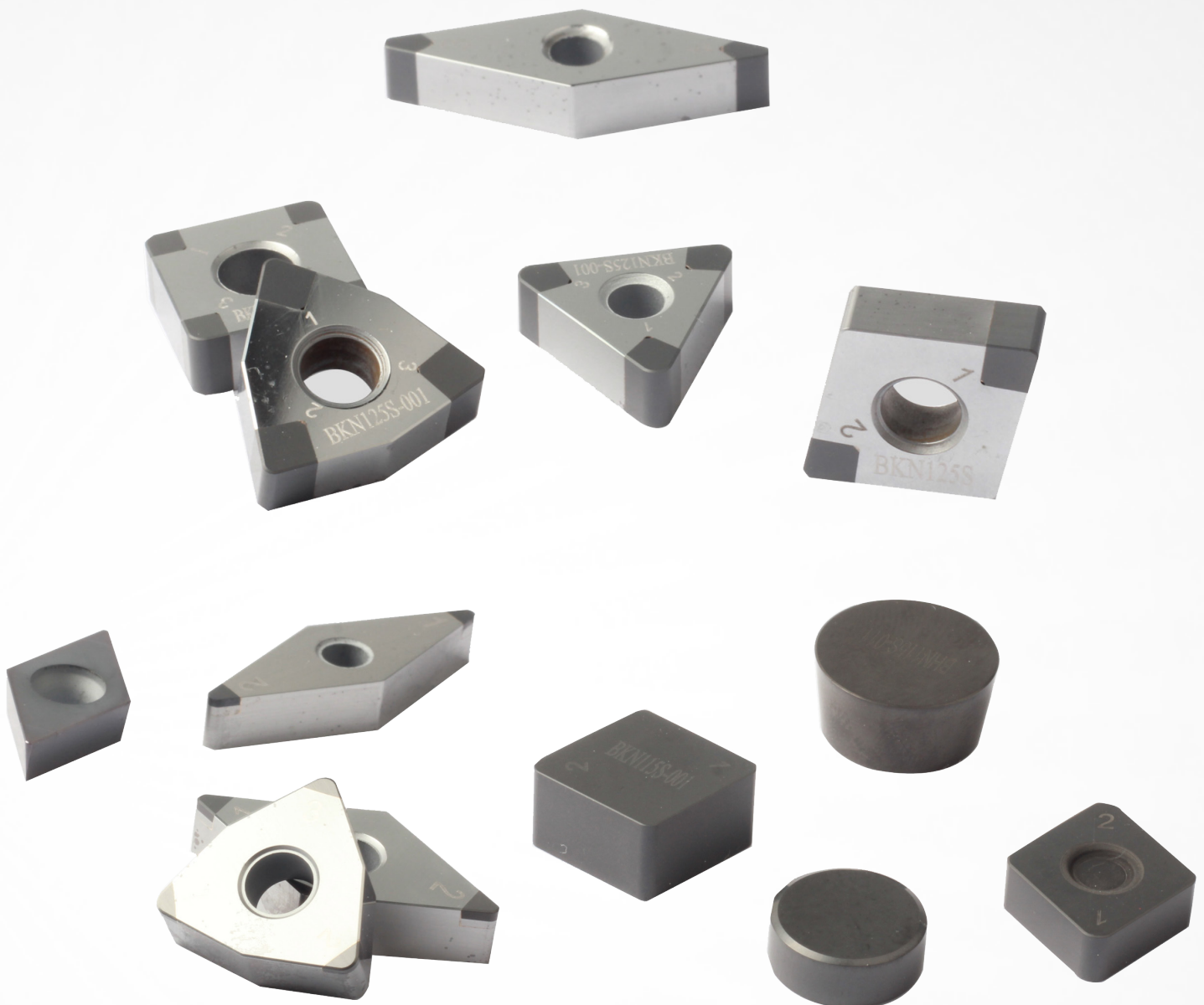


## CBN Products Introduction



# Insert Identification

<b>P</b>	<b>CNGA120408</b>	<b>M</b>	<b>-2</b>	<b>HW</b>	<b>-BHC125P</b>
Cutting tool	Insert ISO Code	Edge Treatment Type	Cutting Edges	Chipbreaker	Grades

Notation	Code Description	Sketch
LF	Sharp Edge Type	
LE	Rounded	
LT	Chamfered	
L	General Type for continuous cutting	
M	Standard Type	
HT	Chamfered for interrupted cutting	
H	Strong Edge Type	
HP	Double Chamfered and Rounded	
LS/MS/HS	Other Types	

<b>P</b>	<b>CNGA120408</b>	<b>M</b>	<b>-2</b>	<b>HW</b>	<b>-BHC125P</b>
Cutting tool	Insert ISO Code	Edge Treatment Type	Cutting Edges	Chipbreaker	Grades

**B      H      C      1      25      P**  
①      ②      ③      ④      ⑤      ⑥

- ① Insert Material  
**B** – PCBN

② Primary Workpiecematerial  
**K** – Cast iron  
**S** – Powder materials  
**H** – Hardened steel

③ Whether there is coated.  
**C** – Coated inserts **New!**  
**N** – Blank
- ④ Future

⑤ Application Range  
**05** – Contious cutting  
**15** – Little interrupted cutting  
**25** – Middle interrupted cutting  
**35** – Heavy interrupted cutting

⑥ Products Series  
**P** – brazed PCBN  
**S** – Solid PCBN

# Products Series / Cutting Datas

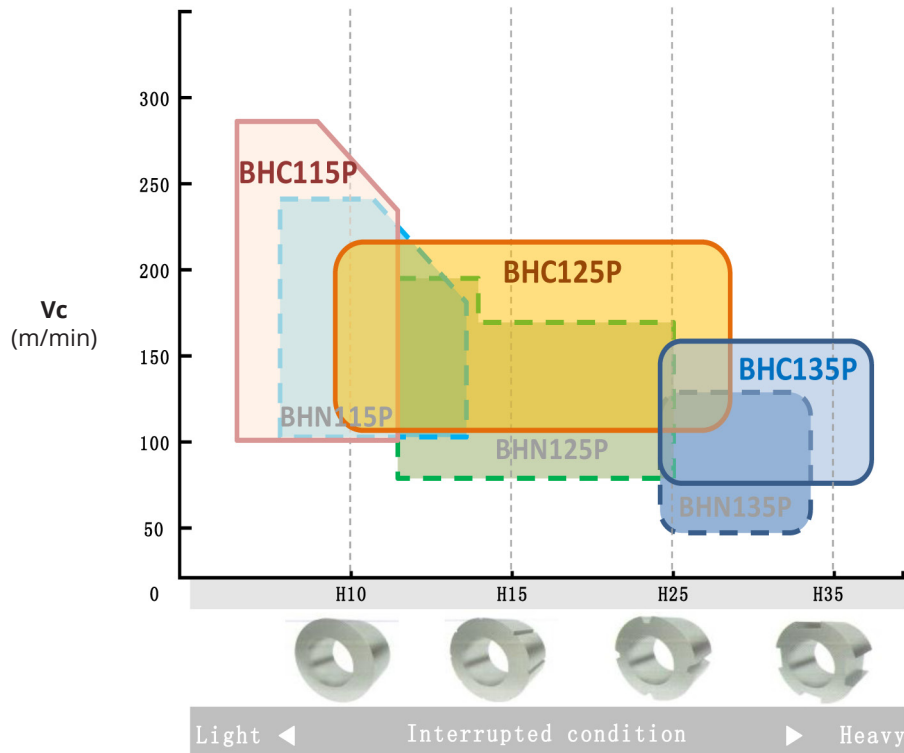
Products Series	Brazed CBN	Solid CBN
Appearance		
ap	< 0.5 mm	0.5~10 mm
Toughness	★★★★★	★★★★★
Wear Resistance	★★★★★	★★★★★

## Recommended Cutting Datas

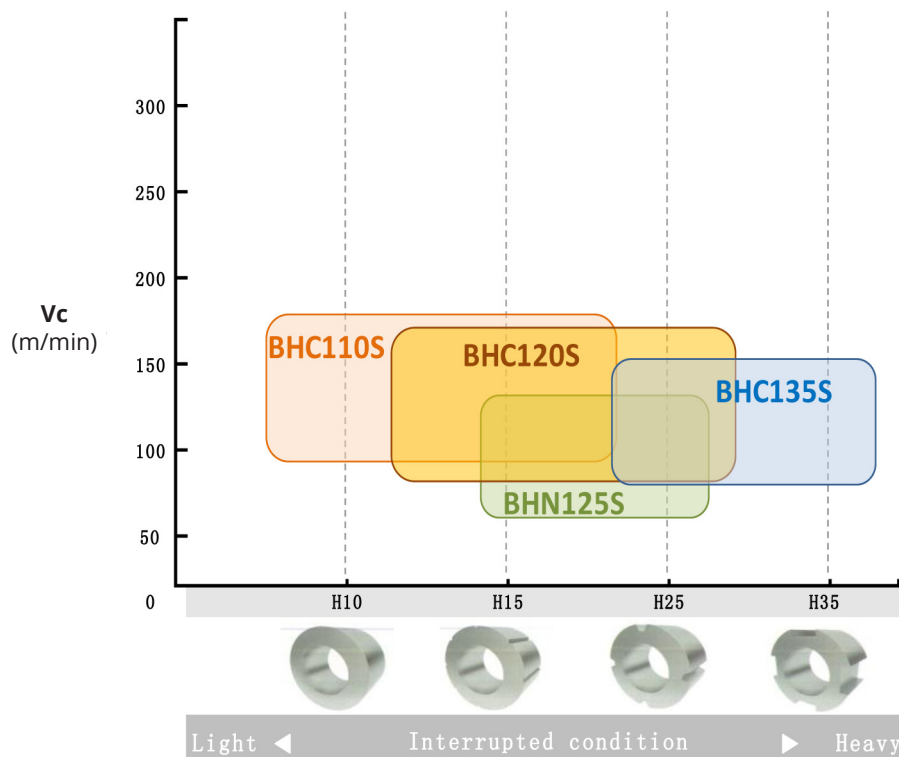
PCBN insert

ISO	Workpiece Material	Hardness	Cutting Range	Appli- cation	Grade	Min-Optimum-Max		
						Vc(m/min)	ap(mm)	f(mm/rev)
<b>K</b>	Gray cast iron	HB200~230	Finishing	General	BKN115P	400-600-1500	0.05-0.20-0.50	0.05-0.20-0.40
	Alloy cast iron	≥HB200	Finishing	General	BKN115P	200-400-800	0.05-0.20-0.50	0.05-0.20-0.40
	Nodular cast iron	QT450~QT700	Finishing	General	BKC120P	150-300-500	0.10-0.20-0.50	0.05-0.12-0.30
<b>H</b>	Hardened Material	≥HRC50	Finishing	Continuous	BHC115P	120-150-220	0.05-0.10-0.20	0.05-0.10-0.20
	Hardened Material	≥HRC50	Finishing-Rounging	General	BHC125P	100-130-180	0.05-0.10-0.50	0.05-0.10-0.20
	Hardened Material	≥HRC50	Finishing-Semi-finishing	interrupt	BHC135P	80-100-150	0.05-0.10-0.40	0.05-0.10-0.20
<b>S</b>	Powder Metallurgy	HRB50~90	Finishing	Continuous	BSN115P	50-150-300	0.05-0.20-0.50	0.05-0.12-0.30

## CBN Grades – H (Hardened steel)

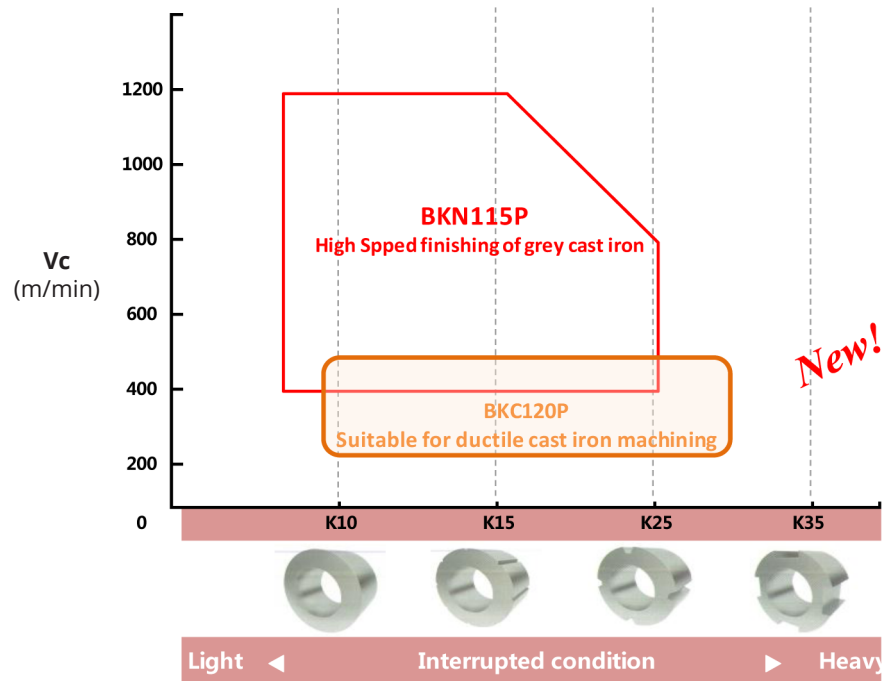


Coated Brazed CBN Grades for Hardened Steel

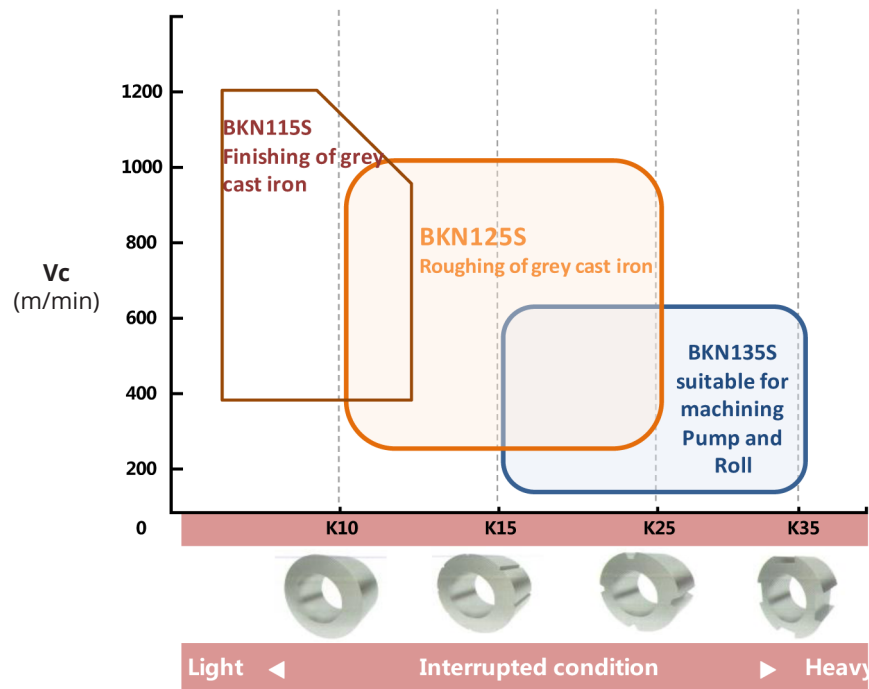


Solid CBN Grades for Hardened Steel

## CBN Grades – K (Cast Iron)

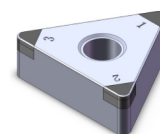
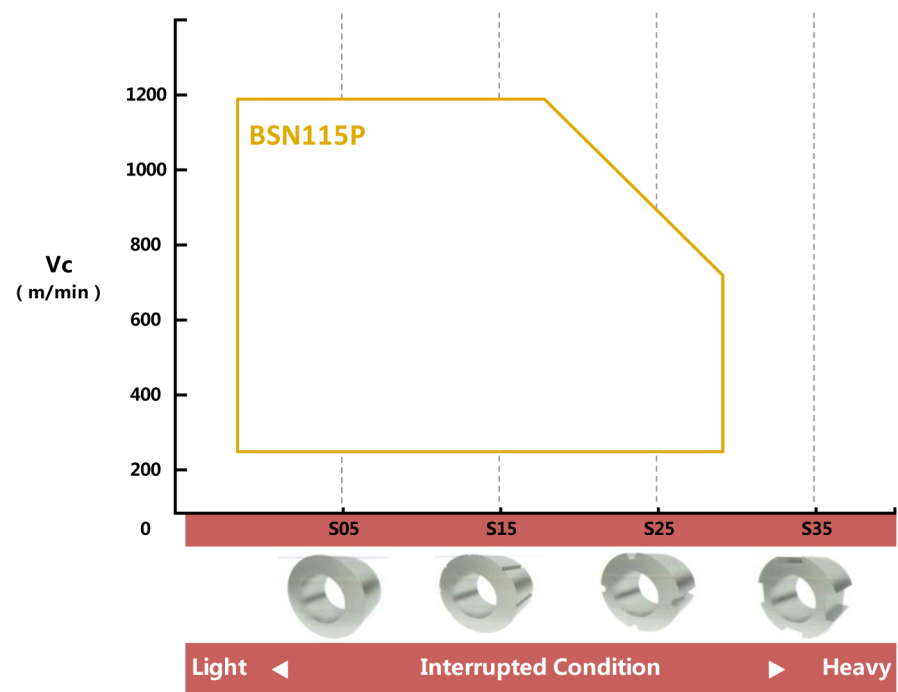


Coated Brazed CBN Grades for Cast iron

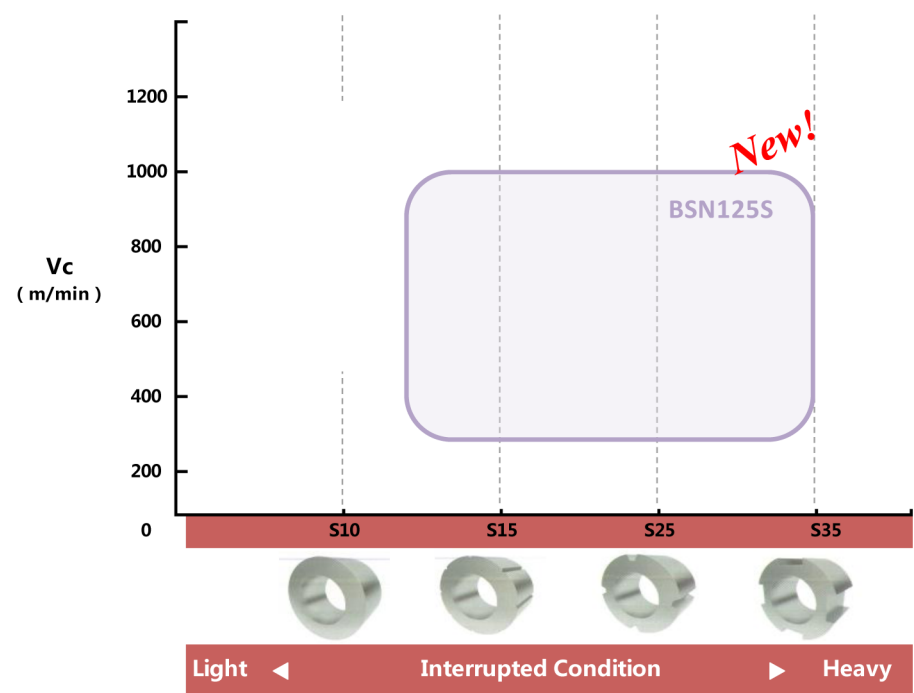


Solid CBN Grades for Cast iron

## CBN Grades – S (Super Alloys)



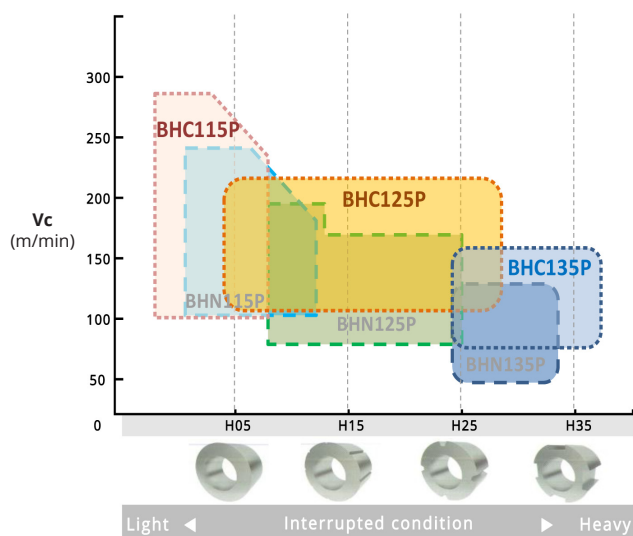
Coated Brazed CBN Grades  
for Super Alloys



Solid CBN Grades for for Super Alloys

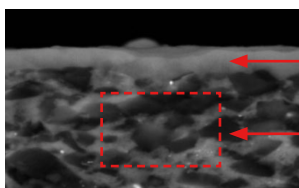
# Products Grades

**HARDENED STEEL**



Application			
Gear	Bearing	Shaft	CVJ

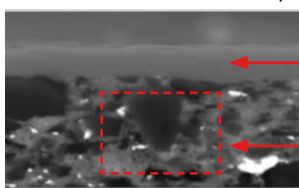
## BHC115P for continuous turning



A latest AlTiN+ layer  
Excellent heat resistance and oxidation resistance

High wear resistant CBN substrate

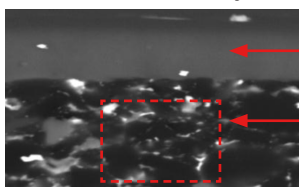
## BHC125P for General-purpose



A latest AlTiN+ layer  
Excellent heat resistance and oxidation resistance

Multi-modal grained CBN substrate  
Superior toughness and greatly improved wear resistance

## BHC135P for heavy turning



A latest AlTiN+ layer  
Excellent heat resistance and oxidation resistance

High-content resistant CBN substrate  
Superior impact resistance and chemical stability

## BHC115P for continuous turning **New!**

### ➤ Application

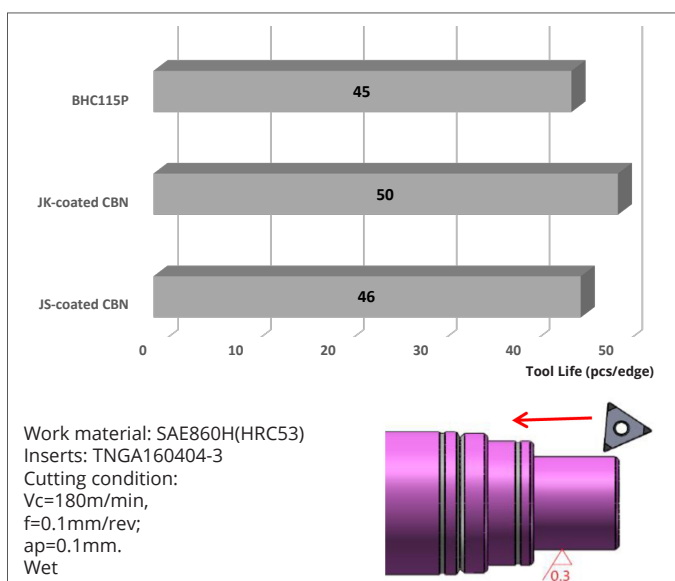
Suitable for continuous to light interrupted cutting of a wide range of hardened steels up to 65 HRC.

### ➤ Improve performance

1.3 times tool life longer than uncoated CBN BHN115P

### ➤ Superior surface machining quality

High-accuracy machining with a required surface roughness of Ra0.3.



Work Material	Cutting Speed Vc (m/min)					f (mm/rev)
Hardened steel (>HRC50)	80	100	200	250	300	0.05~0.2
	BHC115P					

\* Continuous Cutting: Dry or Wet

\* Interrupted Cutting: Dry

### BHC125P for General-purpose **New!**

#### ➤ Application

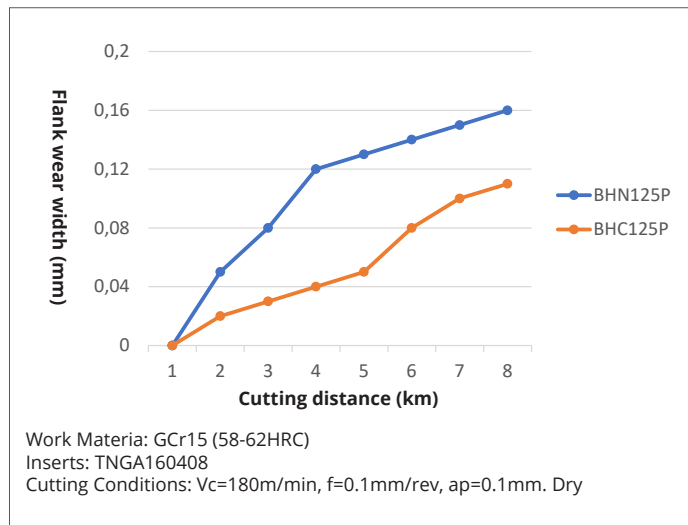
General-purpose grade suitable for typical hardened steel machining applications.

#### ➤ Improve performance

1.3 times tool life longer than uncoated CBN BHN125P.

#### ➤ Good surface machining quality

High-accuracy machining with a required surface roughness of Ra0.6.



Work Material	Cutting Speed Vc (m/min)				f (mm/rev)	Ap (mm)
	80	100	200	250		
Hardened steel (>HRC50)	BHC125P				0.05~0.2	0.05~0.5

\* Continuous Cutting: Dry or Wet    \* Interrupted Cutting: Dry

### BHC135P for heavy turning **New!**

#### ➤ Application

Suitable for heavy interrupted cutting of hardened steel.

#### ➤ Improve performance

1.2 times tool life longer than uncoated CBN BHN135P.

#### ➤ Superior edge toughness

Suitable for mild interrupted cutting application, such as gear machining..



Work Material	Cutting Speed Vc (m/min)				f (mm/rev)	Ap (mm)
	80	100	200	250		
Hardened steel (>HRC50)	BHC135P				0.05~0.2	0.05~0.4

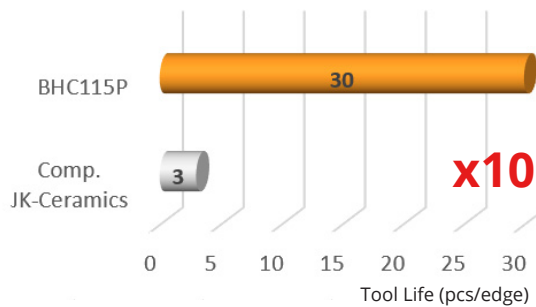
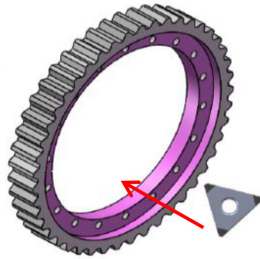
\* Continuous Cutting: Dry or Wet    \* Interrupted Cutting: Dry

# Processing Case for Gear

HARDENED STEEL

## Gear ring

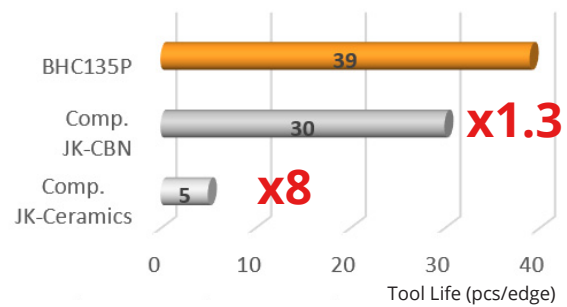
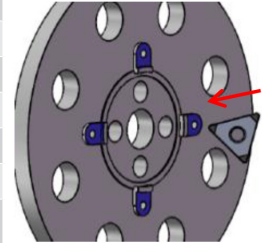
Series	Brazed CBN
Insert	TNGA160408-3
Grade	BHC125P
Material	20CrMnH (HRC60)
Cutting speed	198 m/min
Feed	0.1 mm/rev
Depth	0.4 mm
Cutting Method	internal cylindrical semi-finishing
Coolant	Dry



GESAC inserts achieves 10 times longer tool life than Comp. JK Ceramics from Japan.

## Gear disk

Series	Brazed CBN
Insert	TNGA160408-3
Grade	BHC135P
Material	19CrNi5 (HRC60+)
Cutting speed	159 m/min
Feed	0.1 mm/rev
Depth	0.2 mm
Cutting Method	Face heavy turning
Coolant	Dry



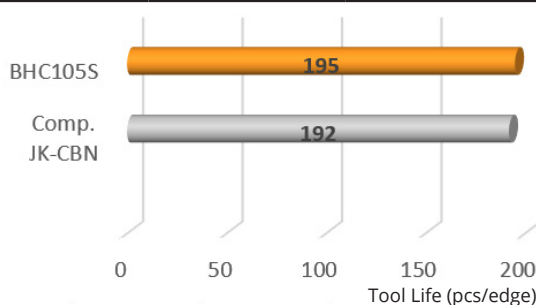
GESAC inserts achieves 1.3 times longer tool life than Comp. JK CBN and 1.3 times longer tool life than Comp. JK Ceramics from Japan.

# Processing Case for Bearing

HARDENED STEEL

## General bearing

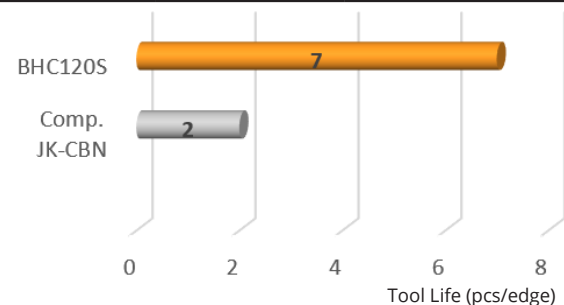
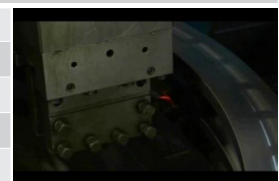
Series	Solid Welding CBN
Insert	CNGA120408-4
Grade	BHC105S
Material	GCr15 (55~61HRC)
Cutting speed	110 m/min
Feed	0.07 mm/rev
Depth	0.12 mm
Cutting Method	internal cylindrical finishing
Coolant	Dry



GESAC inserts achieves equal tool life to Comp. JK from Japan.

## Slewing bearing

Series	Solid CBN
Insert	RCGN160700
Grade	BHC120S
Material	42CrMo (HRC60)
Cutting speed	130 m/min
Feed	0.5 mm/rev
Depth	0.7 mm
Cutting Method	Finishing of ball track
Coolant	Dry



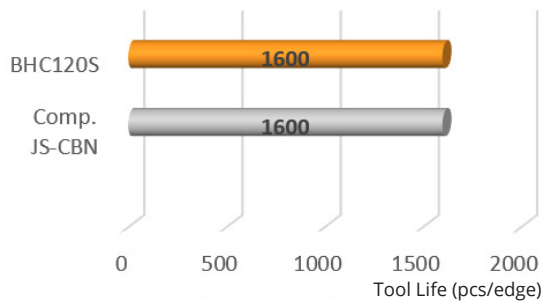
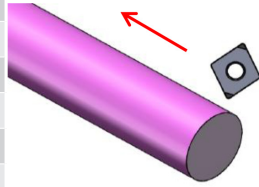
GESAC inserts achieves 3.5 times longer tool life than Comp. JK Ceramics from Japan.

# Processing Case for Shaft

**HARDENED STEEL**

## Eccentric shaft

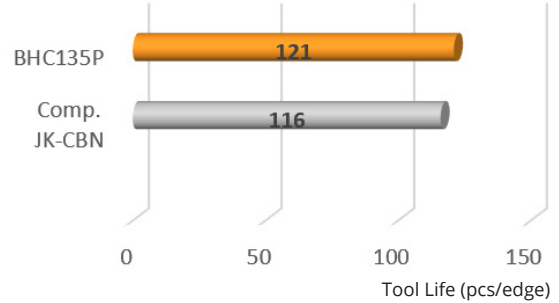
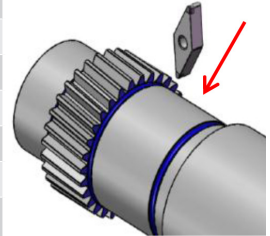
Series	Solid Welding CBN
Insert	CNGA120408-4
Grade	BHC120S
Material	GCr15 (HRC60)
Cutting speed	180 m/min
Feed	0.1 mm/rev
Depth	0.5~0.8 mm
Cutting Method	Cylindrical finishing
Coolant	Dry



GESAC inserts achieves equal tool life to Comp. JS from Japan.

## Gear shaft

Series	Brazed CBN
Insert	VNGA160408-2
Grade	BHC135P
Material	TL4521 (HRC59+)
Cutting speed	98 m/min
Feed	0.08 mm/rev
Depth	0.2 mm
Cutting Method	Cylindrical groove finishing
Coolant	Dry



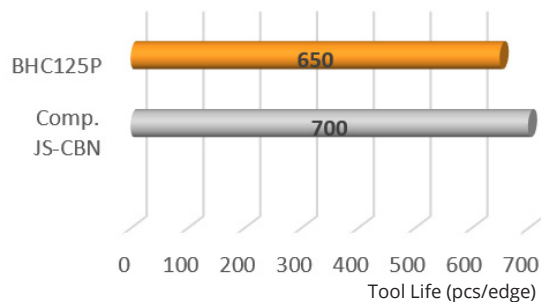
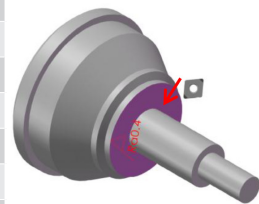
GESAC inserts achieves equal tool life to Comp. JK from Japan.

# Processing Case for CVJ

**HARDENED STEEL**

## CVJ outer race

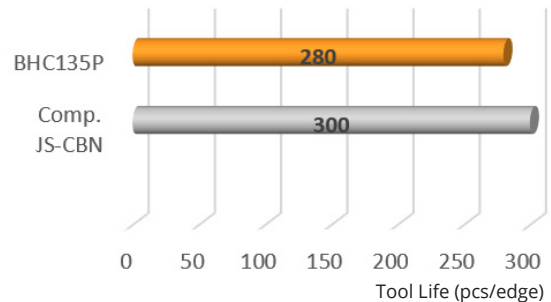
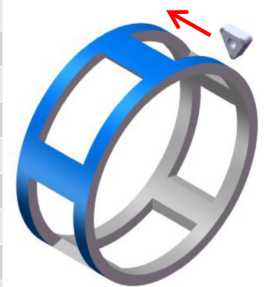
Series	Brazed CBN
Insert	CNGA120412-2
Grade	BHC125P
Material	55# (HRC60)
Cutting speed	180 m/min
Feed	0.1 mm/rev
Depth	0.2 mm
Cutting Method	Face finishing
Coolant	Dry



GESAC inserts achieves equal tool life to Comp. JS from Japan.

## CVJ cage

Series	Brazed CBN
Insert	TNGA160416-2
Grade	BHC135P
Material	20CrMoTi (HRC60)
Cutting speed	140 m/min
Feed	0.1 mm/rev
Depth	0.15 mm
Cutting Method	Cyl. heavy finishing
Coolant	Dry



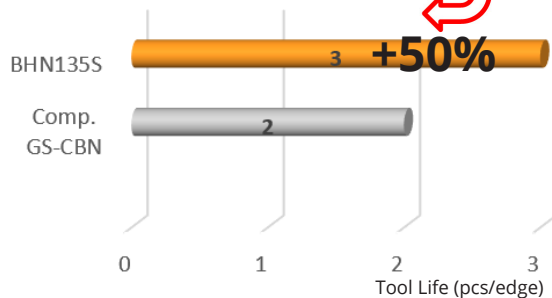
GESAC inserts achieves equal tool life to Comp. JS from Japan.

# Processing Case for Slurry pump

**HARDENED STEEL**

## Slurry pump bush

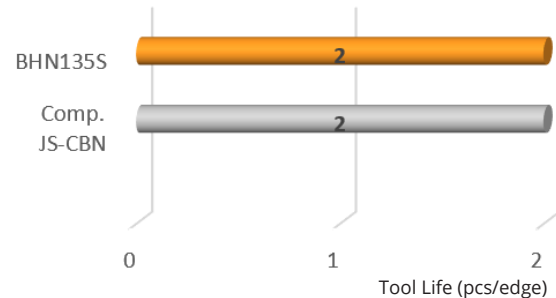
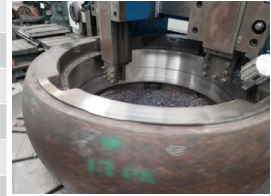
Series	Solid CBN
Insert	RNGN120400
Grade	BHN135S
Material	Cast iron (BHN700)
Cutting speed	67.5 m/min
Feed	0.25 mm/rev
Depth	3.175 mm
Cutting Method	Cylindrical finishing
Coolant	Dry



GESAC inserts achieves 1.5 times longer tool life than Comp. GS CBN from Germany.

## Slurry pump base

Series	Solid CBN
Insert	RNGN120400
Grade	BHN135S
Material	CR2828 (HRC55-60)
Cutting speed	75 m/min
Feed	0.42 mm/rev
Depth	2 mm
Cutting Method	Internal cylindrical roughing
Coolant	Dry



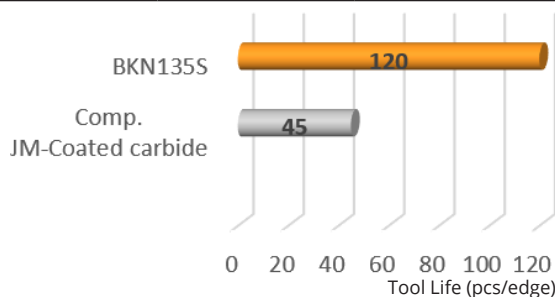
GESAC inserts achieves equal tool life to Comp. JS from Japan.

# Processing Case for Brake disc

**CAST IRON**

## Roughing of brake disc

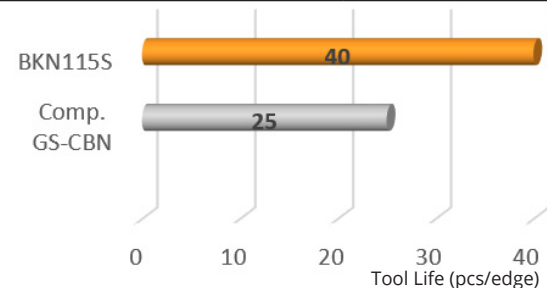
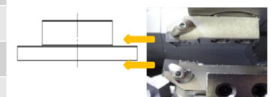
Series	Solid CBN
Insert	CNGN120712-4
Grade	BKN135S
Material	HT250 (HB200)
Cutting speed	600 m/min
Feed	0.35 mm/rev
Depth	1 mm
Cutting Method	External and Face continuous finishing turning of two inserts
Coolant	Dry



Compared to Comp. JM-Coated, processing efficiency increased by 1.5 times, the life increased by 1.67 times and the cost-effective than inserts.

## Finishing of brake disc

Series	Solid CBN
Insert	SCGN090408WH-4
Grade	BKN115S
Material	HT250 (HB200)
Cutting speed	750 m/min
Feed	0.3 mm/rev
Depth	0.4 mm
Cutting Method	Face continuous finishing turning of two inserts
Coolant	Dry



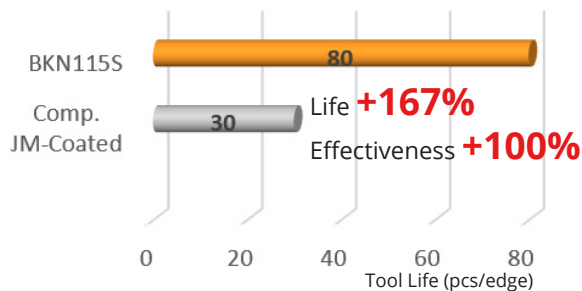
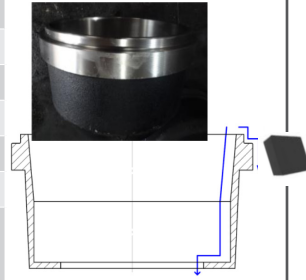
GESAC PCBN compared to Comp. GS CBN in the same of machining action, the life increased by 60%.

# Processing Case for Brake drum

CAST IRON

## Roughing of brake drum

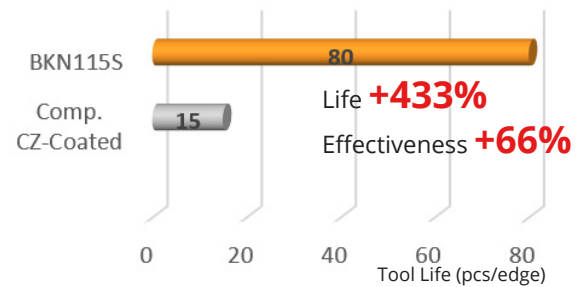
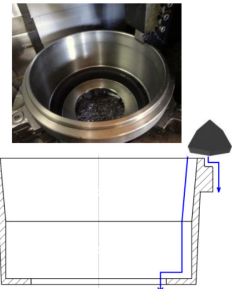
Series	Solid CBN
Insert	CNGN120712-4
Grade	BKN115S
Material	HT250 (HB200)
Cutting speed	392 m/min
Feed	0.6 mm/rev
Depth	1 mm
Cutting Method	Inner, External and Face continuous roughing
Coolant	Dry



Compared to Comp. JM-Coated, BKN115S processing efficiency increased by 1 times, the life increased by 1.67 times and the cost-effective than inserts.

## Finishing of brake drum

Series	Solid CBN
Insert	WNGN080408-6
Grade	BKN115S
Material	HT250 (HB200)
Cutting speed	474 m/min
Feed	0.25 mm/rev
Depth	0.5 mm
Cutting Method	Inner, External and Face continuous finishing turning
Coolant	Dry



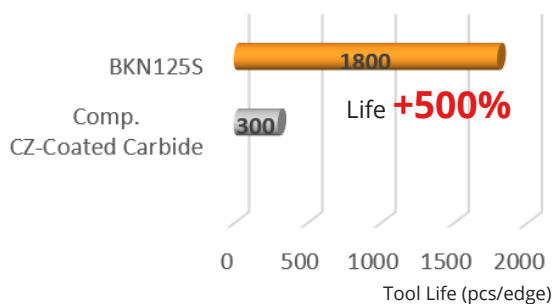
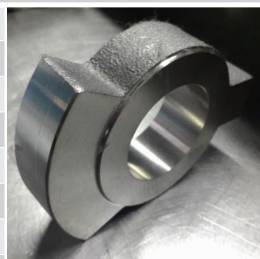
Compared to Comp. CZ-Coated, BKN115S tool life increased by 4.3 times.

# Processing Case for Compressor parts

CAST IRON

## Finishing of compressor cylinder

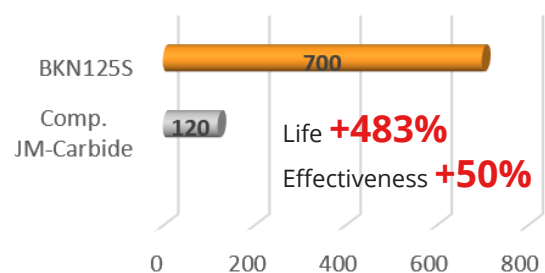
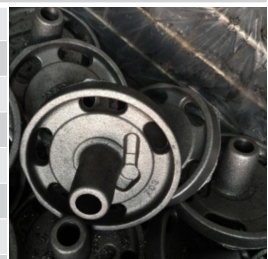
Series	Solid Welding CBN
Insert	WNGA080408-6
Grade	BKN125S
Material	HT250 (HB200)
Cutting speed	412-650 m/min
Feed	0.22-0.28 mm/rev
Depth	0.7-0.9 mm
Cutting Method	External and Face interrupted finishing
Coolant	Wet



Compared to Comp. CZ coated carbide, BKN125S tool life increased by 5 times and the cost-effective than inserts.

## Finishing of Compressor bearing bracket

Series	Solid Welding CBN
Insert	WNGA080412-6
Grade	BKN125S
Material	HT250 (HB220)
Cutting speed	570 m/min
Feed	0.3 mm/rev
Depth	0.5 mm
Cutting Method	Face and External continuous finishing
Coolant	Wet or Dry



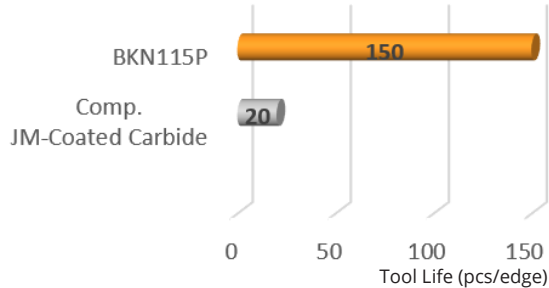
Compared to Comp. JM coated carbide, BKN125S processing efficiency increased by 480%, the life increased by 30%.

# Processing Case for Compressor parts

CAST IRON

## Finishing of Compressor bearing support

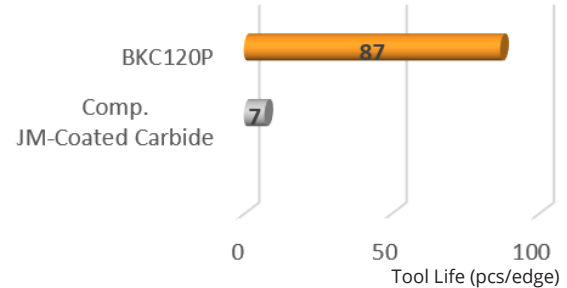
Series	Brazed CBN
Insert	CCGW09T304M-1
Grade	BKN115P
Material	HT250 (HB200)
Cutting speed	88 m/min
Feed	0.035 mm/rev
Depth	0.15 mm
Cutting Method	Inner interrupted finishing turning
Coolant	Wet



Compared to Comp. JM-Coated carbide, BKN115P processing efficiency increased by 300%, the life increased by 750%.

## Finishing of Compressor bearing base

Series	Brazed CBN
Insert	CNGA120408M-2
Grade	BKC120P
Material	QT500
Cutting speed	260~328 m/min
Feed	0.07~0.14 mm/rev
Depth	0.4 mm
Cutting Method	Inner interrupted turning
Coolant	Wet



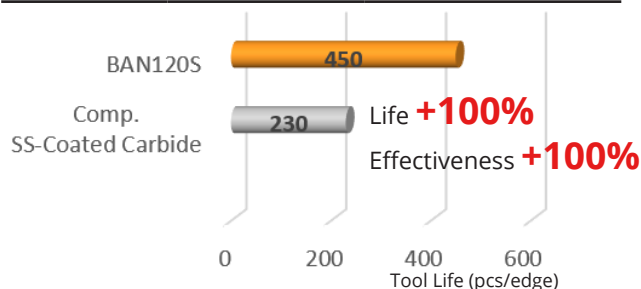
Compared to Comp. JM-Coated, BKC120P tool life increased by 10 times.

# Processing Case for Engine block

CAST IRON

## Semi-finishing milling of engine block

Series	CBN Milling Inserts
Insert	SNEN090412ENS
Grade	BAN120S
Material	HT250 (190~240HB)
Cutting speed	800 m/min
Feed	0.1 mm/z
Depth	2 mm
Cutting Method	Ø100 facing milling
Coolant	Dry



Compared to Comp. SS Coated carbide, BAN120S processing efficiency increased by 100%, the life increased by 100%.

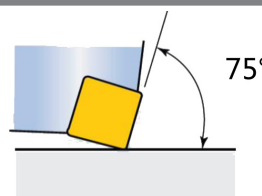


Solid CBN

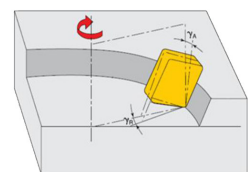


SNEN0904\*\*ENS

Tool cutting edge angle



axial, radial negative rake



- More cutting edge, cost-effective
- High strength, longer tool life
- Vc400-1000, high efficiency

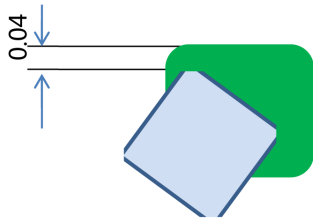
# Processing Case for Engine block

CAST IRON



With Wiper  
SNEX120412ZZ

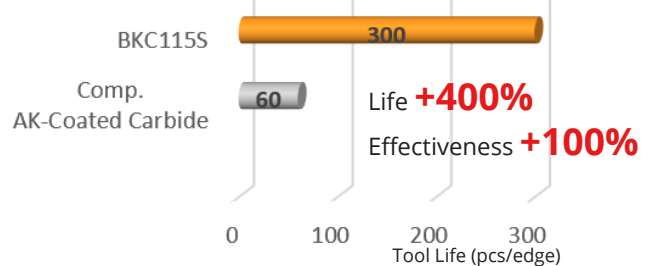
Wiper inserts higher than milling inserts



- Large axial cutting force, so it need high power of cutting machine
- Required good rigidity of workpiece, fixture and machine tool

## Finishing milling of engine block

Series	CBN Milling Inserts
Insert	SNEN090412ENS SNEX120412ZZ
Grade	BKC115S
Material	HT250 (190-240HB)
Cutting speed	800 m/min
Feed	0.05 mm/z
Depth	0.3-0.4 mm
Cutting Method	Ø160 facing milling
Coolant	Dry



Compared to Comp. AK Coated carbide, BAN120S processing efficiency increased by 100%, the life increased by 400%.

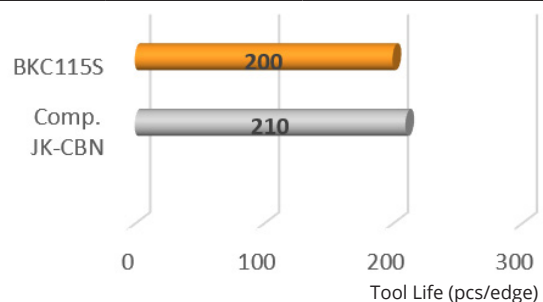
# Processing Case for Engine block

CAST IRON



## Semi-finishing milling of engine block hole

Series	Solid CBN
Insert	SNGN120408
Grade	BKC115S
Material	HT250 (190-240HB)
Cutting speed	300 m/min
Feed	0.5 mm/z
Depth	0.5-1.0 mm
Cutting Method	Boring
Coolant	Wet



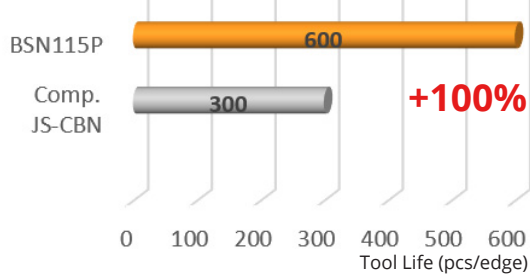
GESAC inserts achieves equal tool life to Comp. JK from Japan.

# Processing Case for Connector and Shaft Sleeve

**SUPER ALLOYS**

## Finishing of Vacuum pump Rotor connector

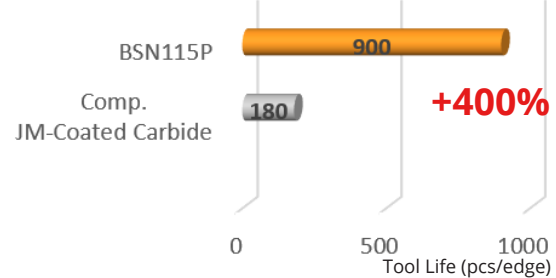
Series	Brazed CBN
Insert	DNGA150408M-2
Grade	BSN115P
Material	Iron-based powder metallurgy(45HRC)
Cutting speed	750 m/min
Feed	0.1 mm/rev
Depth	0.38 mm
Cutting Method	External continuous finishing
Coolant	Wet



GESAC inserts achieves 2 times longer tool life than Comp. JS CBN from Japan.

## Finishing of Shaft Sleeve

Series	Brazed CBN
Insert	TCGW110208L-3
Grade	BSN115P
Material	HT250 (HB220)
Cutting speed	65 m/min
Feed	0.25 mm/rev
Depth	0.3 mm
Cutting Method	Inner continuous finishing
Coolant	Wet



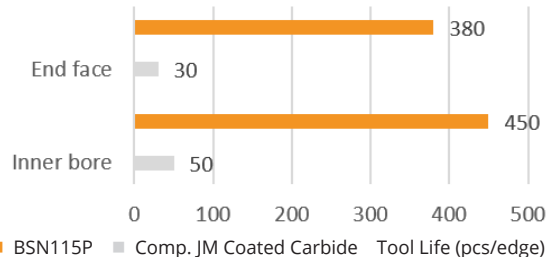
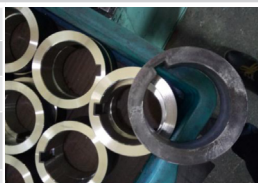
GESAC inserts achieves 5 times longer tool life than Comp. JM coated carbide from Japan.

# Processing Case for Bush and Gear

**SUPER ALLOYS**

## Finishing of Car Spacer Bush

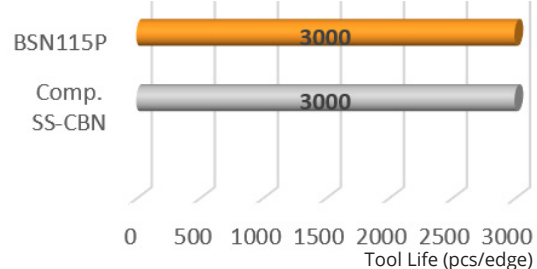
Series	Brazed CBN
Insert	WNGA080408M-3
Grade	BSN115P
Material	Iron-based powder metallurgy (45HRC)
Cutting speed	216 m/min
Feed	0.1 mm/rev
Depth	0.3 mm
Cutting Method	Face and Inner continuous finishing turning
Coolant	Wet



Compared to Comp. JM Coated carbide, the tool life of BSN115P increased by 800%-1000% with a Ra0.8 surface.

## Finishing of steering gear


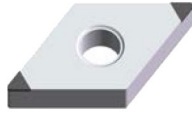


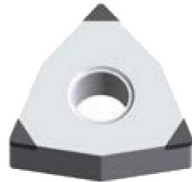

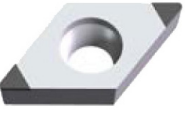


Series	Brazed CBN
Insert	DCGW11T302LS-1
Grade	BSN115P
Material	Iron-based powder metallurgy
Cutting speed	107 m/min
Feed	0.05 mm/z
Depth	0.3 mm
Cutting Method	External continuous finishing turning
Coolant	Wet



The tool life of the BSN115P is same as Comp. SS CBN.

# Kvalitet og ydeevne til attraktive priser

Den bedste produktionsøkonomi er baseret på en kombination af god ydeevne og gode indkøbspriser. Med Gesac's CBN vendeskær til drejning tilbyder vi en kvalitet og ydeevne, der er med til at lede udviklingen sammen med et prisbillede, der mildt sagt kan beskrives som meget gunstigt. Vi vil løbende udvide vores lager ud fra vores kunders behov og præsenterer omkring 100 forskellige skær fra den nye serie i vores e-handel. Nedenfor finder du nogle prøver!

<b>CNGA120404M-2-BHC135P</b>  CBN Belagt skær med to skæreeæg. For let brudt bearbejdning. <b>H</b> <b>374 kr</b>	<b>DNGA150408M-2-BHC125P</b>  CBN Belagt skær med to skæreeæg. For slet til let brudt bearbejdning. <b>H</b> <b>374 kr</b>	<b>TNGA160404M-3-BKC120P</b>  CBN Belagt skær med to skæreeæg. For slet til let brudt bearbejdning i støbejern. <b>K</b> <b>382 kr</b>
<b>VNGA160404LS-2-BHC115P</b>  CBN Belagt skær med to skæreeæg. For stabile forhold. <b>H</b> <b>374 kr</b>	<b>WNGA080408M-3-BKN115P</b>  CBN Belagt skær med tre skæreeæg. For slet til let brudt bearbejdning i støbejern. <b>K</b> <b>382 kr</b>	<b>CCGW060204L-2-BHC125P</b>  CBN Belagt skær med to skæreeæg. For slet til let brudt bearbejdning. <b>H</b> <b>374 kr</b>
<b>DCGW11T304M-2-BSN115P</b>  CBN Belagt skær med to skæreeæg. For slet til let brudt bearbejdning. <b>S</b> <b>312 kr</b>	<b>TPGW110304L-3-BSN115P</b>  CBN Belagt skær med tre skæreeæg. For slet til let brudt bearbejdning. <b>S</b> <b>425 kr</b>	<b>VCGW160408M-2-BHC125P</b>  CBN Belagt skær med to skæreeæg. For slet til let brudt bearbejdning. <b>H</b> <b>374 kr</b>

## EDECO

Mere information og kontaktoplysninger finder du på [www.edeco.dk](http://www.edeco.dk)

*Vi forbeholder os retten til at lave trykfejl*