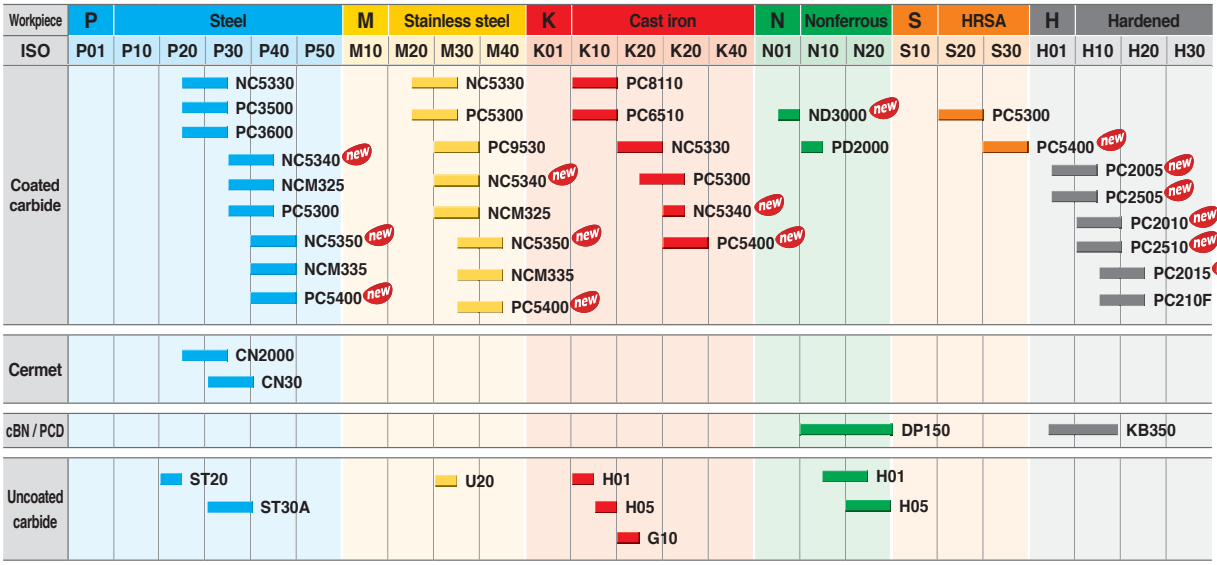
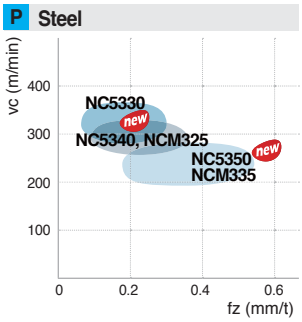
Milling grade selections

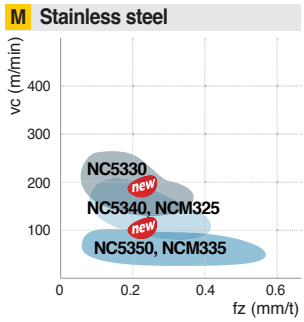
Selection system

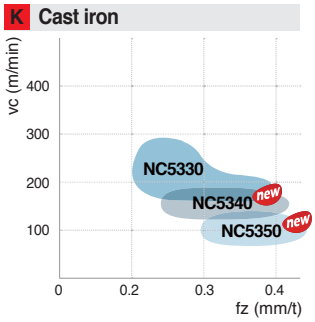


Application range of milling grades

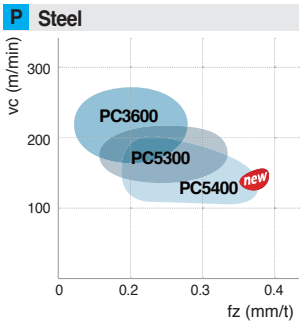
CVD

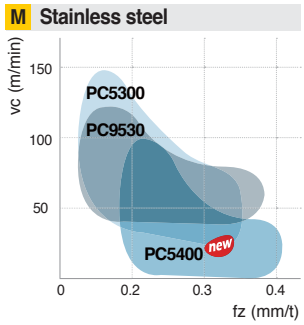


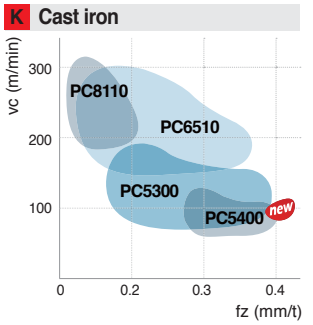


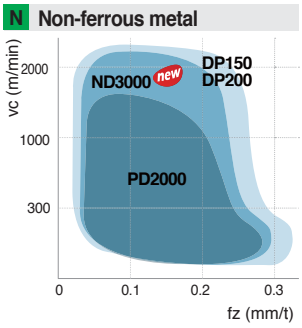


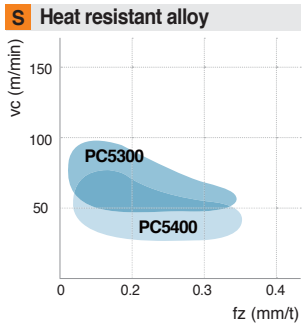
PVD

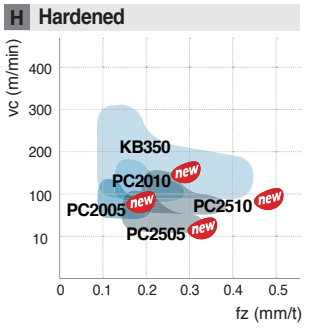












CVD coated grades

Universal Line up of CVD-coated grades

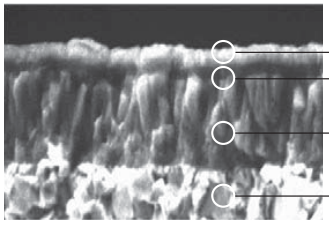
NC5330

- Excellent quality and a universal grade applicable to P, M, and K materials
- High toughness substrate and coating layer with excellent surface roughness and welding resistance

NC5340 new / NC5350 new

- Milling grades applicable to P, M, K
- Stable tool life due to its tough substrate and chipping-resistant coatings

Coating structure



- Lubricative coating with excellent surface finish and welding resistance
- Alumina coating with strong oxidation resistance
- Titanium coating with superb toughness and wear resistance
- High-tough substrate specialized for the coating films

Selection system of CVD coated grades

Workpiece		Machining types	Recommended grade	Recommended cutting speed (m/min)	ISO	Application range
P	Steel	Continuous cutting	NC5330	200 (180 ~ 230)	P20	NC5330
					P25	
		Continuous cutting	NC5340 new NCM325	180 (150 ~ 200)	P30	NC5340 new, NCM325
					P35	
		Interrupted cutting	NC5350 new NCM335	150 (130 ~ 180)	P40	NC5350 new, NCM335
					P45	
M	Stainless steel	Continuous cutting	NC5330	150 (120 ~ 180)	M10	
					M20	
		Continuous cutting	NC5340 new NCM325	130 (100 ~ 150)	M25	NC5330, NC5340 new, NCM325
					M30	
		Interrupted cutting	NC5350 new NCM335	110 (90 ~ 130)	M35	NC5350 new, NCM335
					M40	
K	Cast iron	Continuous cutting	NC5330	190 (110~270)	K10	
					K20	NC5330
			NC5340 new	150 (80~250)	K30	NC5340 new

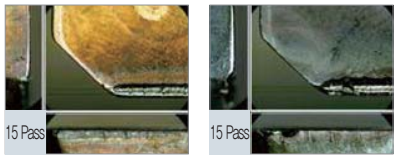
The features of CVD milling grades

CVD Coated grades	ISO	Features
NC5330	P20~P30 M20~M30 K15~K25	• For high speed milling of steel and stainless steel • Superior wear resistance and chipping resistance grade for steel and stainless steel • MT-TiCN + Al_2O_3 + TiN
NC5340 new NCM325	P30~P40 M25~M35 K25~K30	• For high speed milling of steel and stainless steel • Optimized grade for steel & stainless steel by employing proper substrate and hard coating • MT-TiCN + Al_2O_3 + TiN
NC5350 new NCM335	P35~P45 M30~M40	• For interrupted and rough milling of steel and stainless steel • Toughest substrate with hard coating provides stable cutting and tool life for severe interrupted cutting • MT-TiCN + Al_2O_3 + TiN

Application examples (NC5330/NC5340)

P Alloy steel (SCM440)

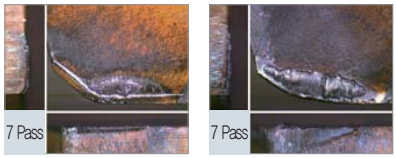
- **Cutting condition** vc (m/min) = 250, fz (mm/t) = 0.30
  ap (mm) = 2.0, dry
- **Designation** **Insert** : SDKN1504AESN-SU (NC5330)
  Cutter : ADNM5125R
- **Test result**



NC5330 Competitor A

P Alloy steel (SCM440)

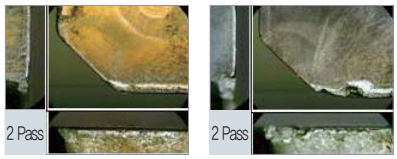
- **Cutting condition** vc (m/min) = 300, fz (mm/t) = 0.30
  ap (mm) = 2.0, wet
- **Designation** **Insert** : SPCN1203EDR (NC5340)
  Cutter : EPN4125R
- **Test result**



NC5340 Competitor A

M Stainless steel (STS304)

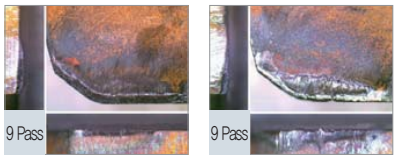
- **Cutting condition** vc (m/min) = 150, fz (mm/t) = 0.25
  ap (mm) = 2.0, dry
- **Designation** **Insert** : SDKN1504AESN-SU (NC5330)
  Cutter : ADNM5125R
- **Test result**



NC5330 Competitor A

P Carbon steel (S45C)

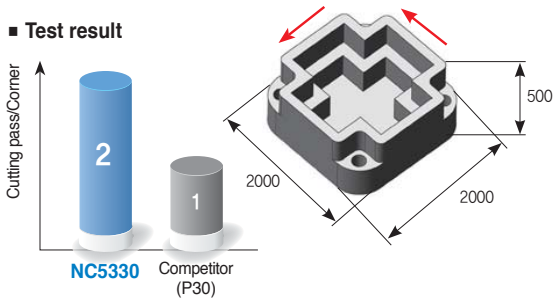
- **Cutting condition** vc (m/min) = 350, fz (mm/t) = 0.35
  ap (mm) = 2.0, wet
- **Designation** **Insert** : SPCN1203EDR (NC5340)
  Cutter : EPN4125R
- **Test result**



NC5340 Competitor A

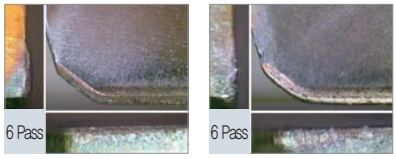
K Ductile cast iron (FCD500)

- **Cutting condition** vc (m/min) = 200, fz (mm/t) = 0.20
  ap (mm) = 5.0, dry
- **Designation** **Insert** : SDKN1504AESN-SU (NC5330)
  Cutter : ADNM5100R
- **Test result**



K Gray cast iron (FC250)

- **Cutting condition** vc (m/min) = 400, fz (mm/t) = 0.20
  ap (mm) = 3.0, wet
- **Designation** **Insert** : SPCN1203EDR (NC5340)
  Cutter : EPN4100R
- **Test result**



NC5340 Competitor A

PVD coated grades

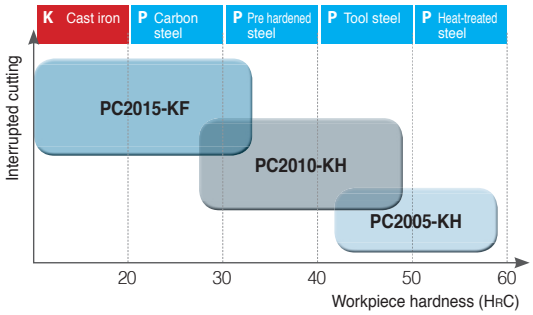
PVD coated grades for finishing high hardened steel

PC2005 new / PC2010 new / PC2015 new

- Finishing grade lineup for tool steel and plastic die steel
- PC2005 with extremely hard substrate and coatings
- PC2010 with high hardened cutting edges, ideally suited for pre-hardened steel and interrupted cutting
- PC2015 for carbon steel and casting machining, demonstrating excellent performance in hard-to-cut materials

Application guideline per workpiece

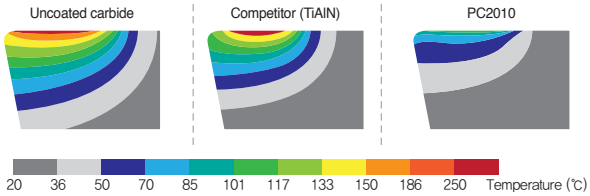
Recommended grade and chip breaker



Features

Wear comparison

Result of heat conductivity



- Heat shield coating was applied to prevent thermal crack.
- Ultra fine WC was combined with high contents cobalt to be optimized for machining pre hardened steel.

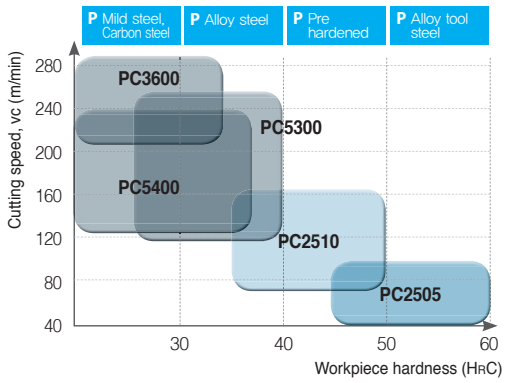
PVD coated grades for roughing high hardened steel

PC2505 new / PC2510 new

- Roughing grade series for high hardened steel
- PC2505 with excellent wear resistance, ideal for machining die steel and high hardened steels over HRC50
- PC2510 with stabilized toughness, ideal for interrupted cutting of high hardened steel and wet cutting accompanied by massive thermal shock

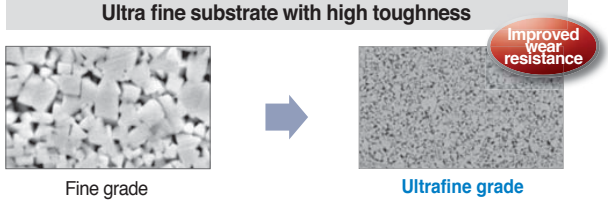
Application guideline per workpiece

Recommended grade and chip breaker

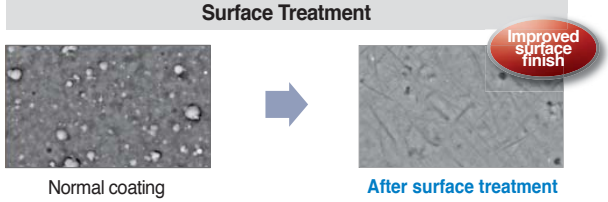


Features

Ultra fine substrate with high toughness



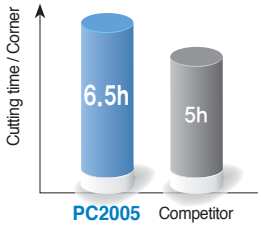
Surface Treatment



Application examples (PC2005/PC2010/PC2015)

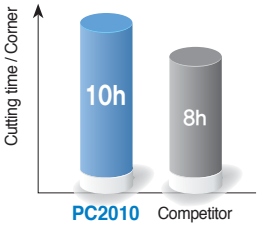
H Alloy tool steel (SKD11, heat treated)

- **Workpiece** Automobile press mold
- **Cutting condition** vc (m/min) = 377, fz (mm/t) = 0.5
  ap (mm) = 0.5, ae (mm) = 0.2, dry
- **Designation** **Insert** : LBH250-KH (PC2005)
  Holder: LBE250140S-S25C
- **Test result**



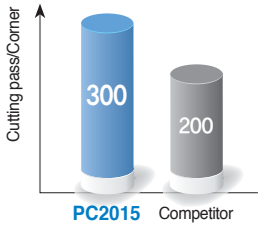
P Mold steel (KP4M)

- **Workpiece** Automobile press mold
- **Cutting condition** vc (m/min) = 200, fz (mm/t) = 0.1
  ap (mm) = 0.1~0.5, ae (mm) = 0.1~0.5, wet
- **Designation** **Insert** : LBH160-KH (PC2010)
  Holder : LBE160100S-S16C
- **Test result**



P Carbon steel (SM53C)

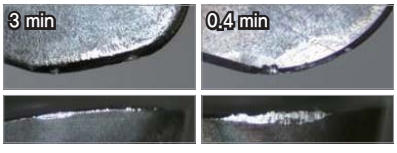
- **Workpiece** CV Joint
- **Cutting condition** vc (m/min) = 200, fz (mm/t) = 0.25
  ap (mm) = 0.5~2.0, ae (mm) = 0.5~1.0, dry
- **Designation** **Insert** : LBH230-KF (PC2015)
  Holder: LBE230-HSKC63
- **Test result**



Application examples (PC2505/PC2510)

H Alloy tool steel (SKD11, heat treated)

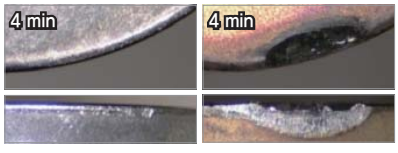
- **Cutting condition** vc (m/min) = 80, fz (mm/t) = 0.5
  ap (mm) = 0.3, ae (mm) = 10, dry
- **Designation** **Insert** : LPEW040210R-C (PC2505)
  Holder : HFMS1010HR-2S10
- **Test result**



PC2505 Competitor H05

H Alloy tool steel (SKD11, heat treated)

- **Cutting condition** vc (m/min) = 30, fz (mm/t) = 0.4
  ap (mm) = 0.7, ae (mm) = 40, dry
- **Designation** **Insert** : RPMW1204M0S1 (PC2510)
  Holder : FMRPS4050HRP-4M40
- **Test result**



PC2510 Competitor H10

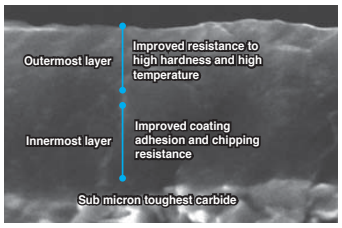
PVD coated grades

Universal PVD grade

PC5300

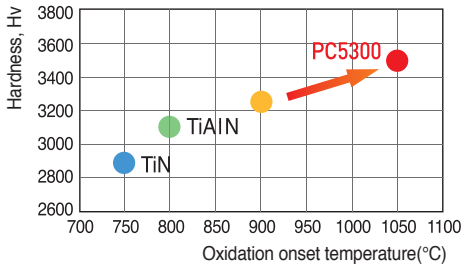
- Advanced PVD coating with high hardness and high temp stability
- High tough substrate and coating films produce excellent surface finish
- Universal tooling capability covering P, M, K, S with this single grade, PC5300
- Stable machining resulting from excellent edge hardness and chipping resistance

Features



- Latest PVD coating technology developed by KORLOY
- New concept of coating equipped with high temperature oxidation resistance and high hardness

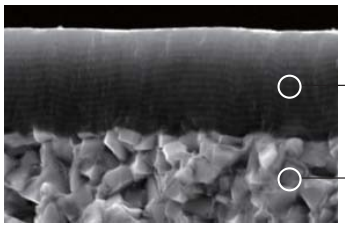
High temp properties



PC5400 new

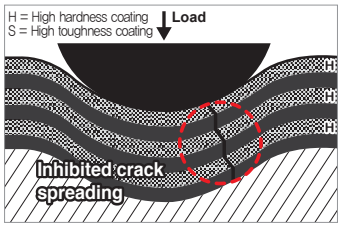
- New PVD coating layer with high toughness and lubrication
- High adhesive strength and toughness between the substrate and coating layer
- Excellent cutting edge strength and chipping resistance ensure stable machinability for P, M, K, S.

Features



Improved lubrication
High toughness and strong adhesion

Ultrafine substrate of high toughness



Crack creation on the coating surface after leaving an indentation by 60kg

Normal coating

High toughness coating

Selection system of PVD coated grades

Workpiece		Machining types	Recommended grade	Recommended cutting speed (m/min)	ISO	Application range
P	Steel	Continuous cutting	PC3600	235 (180~290)	P20	PC3600
			PC3500	235 (180~290)	P30	PC3500
		Interrupted cutting	PC5300	195 (150~240)	P40	PC5300
			PC5400 new	145 (80~210)		PC5400 new
M	Stainless steel	Continuous cutting	PC5300	130 (100~160)	M20	PC5300
			PC9530	125 (80~150)	M30	PC9530
		Interrupted cutting	PC5400 new	110 (80~140)	M40	PC5400 new
K	Cast iron	Continuous cutting	PC8110	180 (140~230)	K05	PC8110
			PC6510	180 (140~230)	K10	PC6510
		Interrupted cutting	PC5300	145 (110~180)	K20	PC5300
			PC5400 new	125 (85~160)	K30	PC5400 new
S	HRSA	Continuous cutting	PC5300	55 (40~70)	S10	
					S20	PC5300
		Interrupted cutting	PC5400 new	40 (30~50)	S30	PC5400 new
H	High hardness steel	Continuous cutting	PC2005 new	60 (40~80)	H01	PC2005 new
			PC2010 new	55 (40~70)	H10	PC2505 new, PC2010 new, PC2510 new
			PC2015 new	50 (35~65)	H20	PC2015 new, PC210F
			PC210F	50 (35~65)	H30	

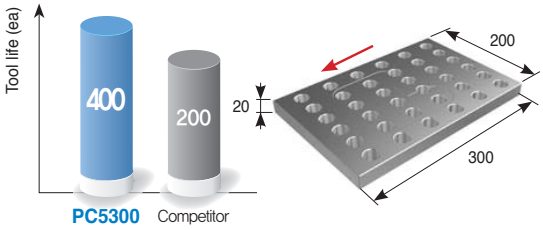
The features of PVD coated grades

PVD Coated grades	ISO	Features
PC3600	P20~P30	• Milling grade for medium and roughing of steel • New coating layer with superior wear resistance and oxidation resistance with high toughness substrate
PC3500	P25~P35	• Medium and rough milling for steel • K-Gold coating
PC5300	P30~P40 K20~K30 M20~M30 S15~S25	• Superior universal grade for steel, cast iron, hard to cut material, stainless steel • New coating and ultra fine grain provide wear resistance and oxidation resistance • TiAlN Series new coating
PC5400 new	P35~P45 K25~K35 M30~M40 S25~S35	• Universal grade for interrupted machining of steel, cast iron, hard-to-cut materials and stainless steel with stable machinability • New coating layer with high toughness and lubrication on ultra fine grain substrate with high toughness • AlCiN series new coating
PC8110	K05~K15	• Excellent wear resistance in cast iron milling finish applications • Superior wear resistance for finishing cast iron • New coating and ultra fine grain provide wear resistance and oxidation resistance • TiAlN Series new coating
PC6510	K05~K15	• High speed milling grade for cast iron and aluminum • K-Gold coating
PC9530	M25~M35	• Medium to rough cutting of hard to cut materials such as stainless steel, Cr-Ni steel, etc. • The toughest sub-micron substrate provides excellent cutting performance at high feed • TiAlN coating
PC2005 new	H01~H10	• Exclusive for Laser Mill in milling of high hardness workpieces and press mold steel • Utmost wear resistance due to high hardness substrate and coating • Ultra high hardness K-Brown coating
PC2010 new	H05~H15	• Exclusive for Laser Mill in milling of pre hardened steel and plastic mold steel • High hardness enhanced cutting edges due to ultra fine WC and high contents binder for expanding application range to high hardness steel and pre hardened steel • Ultra high hardness K-Brown coating
PC2015 new	H10~H20	• Exclusive for Laser Mill in milling of carbon steel and cast • Highly lubricative K-SILVER coating • Lubricative coating layer and high contents substrate for machining mild steel and hard-to-cut cast materials
PC210F	H10~H20 P25~P35 K15~K25 M15~M25 S10~S20	• High speed milling grade for hardened steel, cast iron, and stainless steel(Laser Mill) • New coating and ultra fine grain provide wear resistance and oxidation resistance • TiAlN Series new coating
PC2505 new	H01~H10	• Roughing grade for high hardened steel and pressed die steel • Excellent wear resistance ideal for machining die steel and high hardened steel over HRC50
PC2510 new	H05~H15	• Roughing grade for pre-hardened steel and plastic die steel • Stabilized toughness ideal for interrupted cutting of high hardened steel and wet cutting accompanied by massive thermal shock

Application examples (PC5300)

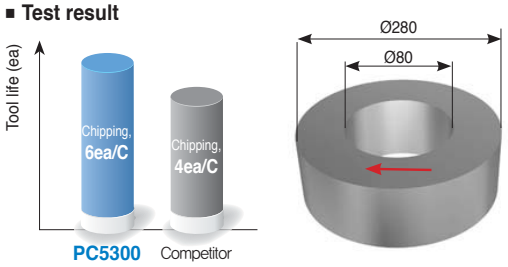
P Mold steel (KP4M)

- **Cutting condition** vc (m/min) = 250, fz (mm/t) = 1.0
  ap (mm) = 1.0, dry
- **Designation** **Insert** : WNMX130520ZNN-MM (PC5300)
  Cutter : HRMDCM13050HR-3
- **Test result**



M Stainless steel (STS316)

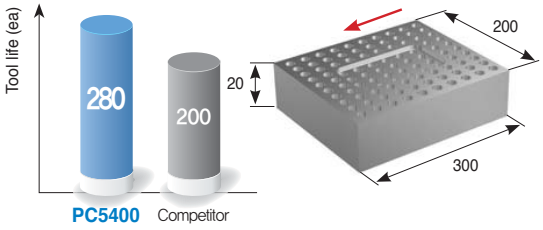
- **Cutting condition** vc (m/min) = 65, fz (mm/t) = 0.14
  ap (mm) = 3.0, wet
- **Designation** **Insert** : SEET14M4AGSN-MM (PC5300)
  Cutter : FMACM4100HR
- **Test result**



Application examples (PC5400)

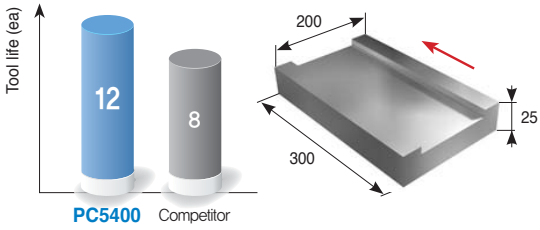
P Carbon steel (SM45C)

- **Cutting condition** vc (m/min) = 250, fz(mm/t) = 1.2
  ap (mm) = 1.0, dry
- **Designation** **Insert** : WNMX130520ZNN-MM (PC5400)
  Cutter : HRMDCM13050HR-4
- **Test result**



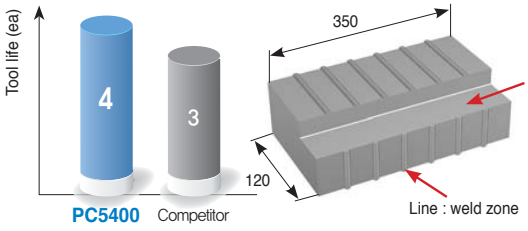
P Alloy steel (SCR440)

- **Cutting condition** vc (m/min) = 180, fz (mm/t) = 0.2
  ap (mm) = 2.0, dry
- **Designation** **Insert** : PDKT1605M0-MM (PC5400)
  Cutter : FMRC5063HRD-H
- **Test result**



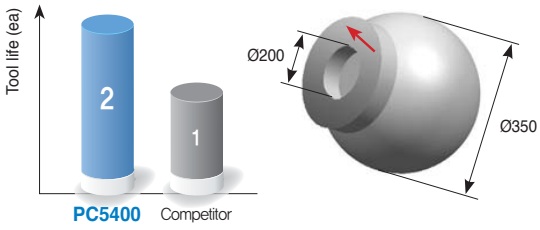
M Stainless steel (STS316)

- **Cutting condition** vc (m/min) = 50, fz (mm/t) = 0.1
  ap (mm) = 4.0, ae (mm) = 15.0, dry
- **Designation** **Insert** : APMT1604PDSR-MM (PC5400)
  Cutter : AMC3063HS
- **Test result**



S Heat-resistant alloy (Inconel 718)

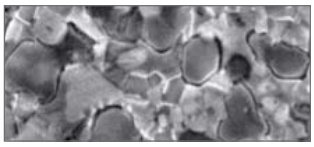
- **Cutting condition** vc (m/min) = 60, fz (mm/t) = 0.1
  ap (mm) = 2.5, wet
- **Designation** **Insert** : SNMX1206ANN-MM (PC5400)
  Cutter : RM8AC4080HR
- **Test result**

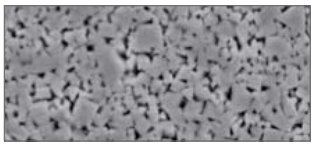


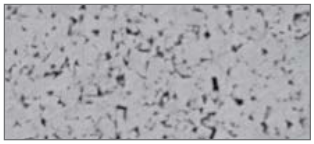
Uncoated carbide grades

Features

- Due to KORLOY's advanced sintering technology, our uncoated carbide grades have a fine alloy structure which is necessary to get superior quality from a uncoated cutting tool


P type


M type


K type

Advantages

- Consist of P,M,K carbide grades and can be used in all kinds of workpiece
- Excellent quality at machining with coolant, due to the superior thermal crack resistance of the carbide
- Due to the special design of carbides, it has fine micro structure and low affinity with workpiece
- It has excellent toughness and produces lower cutting loads

Selection system of uncoated carbide grade

Workpiece		Grade	Recommended cutting speed (m/min)	ISO	Application range
P	Steel	ST30A	80 (60~100)	P30	ST30A
M	Stainless steel	U20	90 (70~110)	M20	U20
				M30	
K	Cast iron	H01, H05	150 (110~190)	K10	H01, H05
		G10	120 (90~150)	K20	G10
N	Aluminum alloy	H01	600 (450~750)	N10	H01
	Copper alloys	H05	425 (320~530)	N20	H05

Main composition and application range

Workpiece	Composition	Features	Workpiece
P	WC-TiC-TaC-Co	Excellent thermal shock resistance and plastic deformation resistance	Carbon steel, Alloy steel, Stainless steel
M	WC-TiC-TaC-Co	General grades with thermal shock resistance and hardness	Carbon steel, Alloy steel, Stainless steel, Cast steel
K	WC-Co	High hardness and superior wear resistance	Cast iron, Non-ferrous metal, Non metal

The physical properties of uncoated carbide grades

Workpiece	Grade	Hardness (HRA)	TRS (kgf/mm^2)	Young's modulus (10^3kgf/mm^2)	Thermal expansion coefficient(10^{-6}/°C)	Thermal conductivity (cal/cm·sec·°C)
P	ST10	92.1	175	48	6.2	25
	ST20	91.9	200	56	5.2	45
	ST30A	91.3	230	53	5.2	-
M	U20	91.1	210	-	-	88
K	H01	92.9	210	66	4.7	109
	G10E	90.9	250	63	-	105

1KPa = 102kgf/m^2, 1w/mk = 2.39×10^{-3}cal/cm·sec·°C

Cermet grades

Features

- High hardness substrate ensures long tool life in high speed milling
- High toughness cutting edge ensures long tool life even in high impact machining
- Chemically stable substrate provides excellent surface finish of the workpiece

Selection system of cermet grades

Workpiece		Machining types	Grade	Recommended cutting speed (m/min)	ISO	Application range
P	Steel	Continuous cutting	CN2000	250 (200~300)	P20	CN2000
		Interrupted cutting	CN30	150 (100~200)	P30	CN30

The features of cermet grades

Cermet Grade	ISO	Features
CN2000	P20~P30	• Universal grade from finishing to roughing of steel • Functionally Gradient Material
CN30	P25~P35	• For milling of steel • Cermet with high toughness

The physical properties of cermet grades

Workpiece	Grade	Hardness(Hv)	TRS(kgf/mm^2)	SG(g·cm^{-3})
P	CN2000	< 1800	210 <	6.8~7.0
	CN30	< 1500	240 <	7.0~7.3

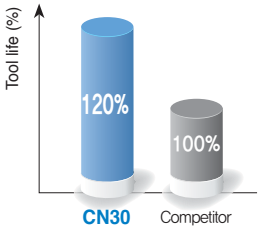
Application examples (CN30)

P Carbon steel (SM45C)

■ **Cutting condition** vc (m/min) = 120~150, fz (mm/t) = 0.07~0.13
ap (mm) = 2.0, dry

■ **Designation** **Insert** : SDCN42MT (CN30)
Cutter : ADN4315R

■ **Test result**

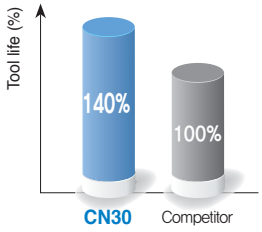


P Mold steel (KP4M)

■ **Cutting condition** vc (m/min) = 230, fz (mm/t) = 0.1~0.15
ap (mm) = 1.0, dry

■ **Designation** **Insert** : SDCN42MT (CN30)
Cutter : ADN4315R

■ **Test result**



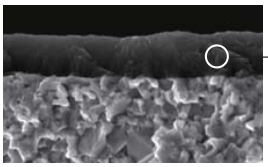
Solid endmills grade selection

Grades for H Endmill

PC303S new / PC310U new

- Ultrafine substrate & high hardness coatings for excellent wear resistance
- Special surface treatment provides higher chipping resistance

Features



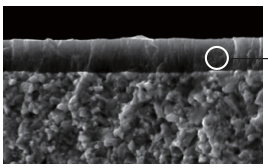
Exceptional wear resistance resulting from extremely hard coating layers

Grades for Z Endmill

PC315E new

- Fine substrate & lubricative coatings for stable machinability

Features



Lubricative coatings for excellent machinability

Selection system

Workpiece		Grade	ISO	Application range
P	Steel	PC303S new	P01	
		PC310U new	P10	PC303S new, PC203F
		PC315F new	P20	PC310U new
		PC320 new	P30	PC315E new, PC320 new, PC215F
			P40	
M	Stainless steel	PC303S new	M01	
		PC310U new	M10	PC303S new, PC203F
		PC320S new	M20	PC310U new, PC320S new
		PC315E new	M30	PC315F new, PC320, PC215F
K	Cast iron	PC303S new	K01	
		PC310U new	K10	PC303S new, PC203F
		PC315F new	K20	PC310U new
		PC320 new	K30	PC315E new, PC320 new, PC215F, PC220, FA2
			K40	
N	Nonferrous	ND3000 new	N01	ND3000 new
		ND2100 new	N05	ND2100 new, PD3000, H01, H05S
		PD3000	N10	PC210C
		H01	N20	
S	HRSA	PC210	S10	
		PC320S new	S20	PC210, PC320S new, PC315E new, PC320, PC215F, PC220, FA2
		PC315E new	S30	
H	High hardness steel	PC303S new	H01	
		PC203F	H10	PC303S new, PC203F
		PC310U new	H20	PC310U new

Solid endmills grade selection

Grade information for each product

Item	Grade	
	Coated	Uncoated
H Endmill new	PC303S, PC310U	-
V Endmill	PC215F	-
Z Endmill new	PC315E	-
F Endmill	PC203F	-
T Endmill new	PC2510, ND3000	-
I+ Endmill	PC320	-
Z+ Endmill new	PC320U	-
S+ Endmill	PC320S	-

Item	Grade	
	Coated	Uncoated
R+ Endmill new	HN30T, HC10T, HC20T, HC30T, PC10T, PC20T, PC30T, PC40T	FN30T
Aluminum solid endmill new	PD3000	H01
A+ Endmill	-	H05S
C-Max	PC210C	-
D Endmill new	ND3000	-
Composite Router Endmill new	ND2100	-
Brazed endmill	PC221F	FCC

The features of PVD coated grades

Workpiece	ISO	Features
PC303S new	P05~P15 M05~M15 K05~K15	• Excellent wear/chipping resistance in high speed machining due to the combination of ultra fine substrate and PVD coating • For high speed machining of high hardness steel • New film applied with excellent oxidation resistance and hardness at high temperature
PC310U new	P10~P20 M10~M20 K10~K20	• Excellent wear/chipping resistance in high speed machining due to the combination of ultra fine substrate and PVD coating • For high speed machining of high hardness steel • New film applied with excellent oxidation resistance and hardness at high temperature
PC315E new PC320 new	P20~P35/M20~M30 K20~K35/S20~S30	• Excellent wear/welding resistance in high speed machining due to the combination of ultra fine substrate and PVD coating • For low/medium speed machining of general steel • New film applied with excellent chipping/wear resistance
PC320S new	M15~M25 S15~S25	• Low to medium speed cutting of stainless steel and heat resistant alloys • Advanced coating layers with increased resistance to built-up edge and oxidation • Excellent resistance to wear and built-up edge at high speeds due to the ultrafine substrate and dedicated coating layers
PC210C	N10~N20	• Medium to high speed cutting of copper and copper electrode • Medium to high speed cutting of acrylic materials • K-Silver coating with excellent lubrication and wear and chipping resistant substrate
ND3000 new	N01~N05	• For electrode machining of graphite at medium to high speeds • Dia. coating layer with high wear resistance and lubrication
ND2100 new	N05~N10	• For composite materials • Diamond-coated layers with excellent adhesion
PD3000	N05~N10	• For Non-ferrous metals(Aluminum alloy) machining • DLC(Diamond Like Carbon) coating layer with high wear resistance and lubrication

Features of KORLOY endmills

Index	Features
H Endmill (Endmill for high hardness steel)	• Negative cutting edges proper to machine high hardness heat-treated workpiece under HRC70 • Longer tool life with the use of ultra fine substrate and high hardness film
Z Endmill/I+ Endmill (Endmill for general cutting)	• Excellent in machining various workpieces such as carbon steel, alloy steel, cast iron, pre hardened steel, etc. under HRC45 • Longer tool life with the use of ultra fine substrate and new coating technology
T Endmill (For dental purpose)	• Endmill for dental prostheses made of zirconia, titanium, Co-Cr, wax, PMMA, and glass ceramic • Custom-made tools for each type of milling machines for dental purpose
Z+ Endmill	• Universal endmill applicable to a variety of workpiece materials under HRC47 • Roughing and finishing availability • Improved tool life thanks to the new substrate and the most advanced coating • Inhibited chipping and longer cutting time due to the optimized blade design
SSEA/A+ Endmill (Endmill for aluminum)	• Suitable for high speed machining in aluminum and other Non-ferrous materials • Can accomplish excellent surface finishing, superior chip removal in high feed rate
S+ Endmill (Endmill for hard-to-cut materials)	• Sharp cutting edge and high rake angle with streamline chip pocket shows good cutting performance in stainless steel machining where work hardening is a problem
R+ Endmill	• High efficient roughing endmill for medium to rough cutting • Excellent machining efficiency thanks to the high efficient roughing edge design • Reduced cutting force thanks to specifically designed corners, and irregular flute spacing and lead angle
D Endmill	• Diamond-coated endmill for graphite and ceramic • Excellent wear resistance thanks to the diamond coating of high hardness and high purity • Optimized for high speed and heavy duty cutting thanks to the strong grip of coating • Excellent cutting performance and finish thanks to the optimized blade design of high rake
Composite Router Endmill	• Router endmill for machining composite materials (CFRP & GFRP) • Minimized machining defects thanks to its design to prevent flaking, peeling off and burrs • Excellent resistance to wear and flaking thanks to the nano-crystalline diamond coating of high hardness and high purity
C-Max	• Ideally suited for machining copper, brass, bronze, and Non-ferrous materials thanks to the optimized combination between K-Silver coating with excellent lubrication and resistance to wear and chipping, and the dedicated substrate