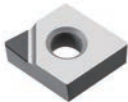


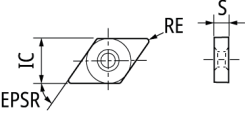
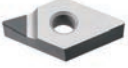
CN.. series/Inserts PCD / Diamond Coating

CNM.

							Steel				
							Stainless Steel				
							Cast Iron				
							Non-Ferrous Material		●	●	●
							Heat Resistant Alloy				
							Hardened Material				
							Others (non-metallic)				●
Shape	Item Number (ISO)	CECC	EPSR °	IC mm	S mm	AN °	RE mm	No. of edge	PCD		Diamond Coating UC1
	CNMG120404FNZP	Up-sharp edge	80	12.7	4.76	–	0.4	4			●
	CNMG120408FNZP	Up-sharp edge	80	12.7	4.76	–	0.8	4			●
	CNMX120404PF	Up-sharp edge	80	12.7	4.76	–	0.4	1		●	
	CNMX120408PF	Up-sharp edge	80	12.7	4.76	–	0.8	1		●	

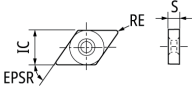
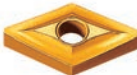
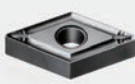
DN.. series/Inserts PCD / Diamond Coating

DNMX

											Steel
											Stainless Steel
											Cast Iron
											Non-Ferrous Material
											Heat Resistant Alloy
											Hardened Material
											Others (non-metallic)
	Shape	Item Number	CECC	EPSR	IC	S	AN	RE	No. of edge	PCD	Diamond Coating
		(ISO)		°	mm	mm	°	mm		PD1 PD2	UC1
	DNMX150404PF	Up-sharp edge	55	12.7	4.76	-	0.4	1		●	
	DNMX150408PF	Up-sharp edge	55	12.7	4.76	-	0.8	1		●	

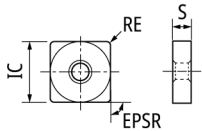
DN.. series/Inserts Carbide

DN..

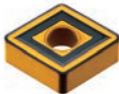
										Steel	○	●	●	●	●	●	●	●	
										Stainless Steel	●	○	○	○	●	○	●		●
										Cast Iron								●	
										Non-Ferrous Material					○		○		●
										Heat Resistant Alloy		●		○	○				
										Hardened Material		○		○	○				
										Others (non-metallic)									●
Shape	Item Number	CECC	EPSR	IC	S	AN	RE	BS	Carbide										
	PVD								PVD	PVD	PVD	PVD	PVD	PVD	PVD	PVD	PVD	PVD	Uncoated
	(ISO)		°	mm	mm	°	mm	mm	ST4	DM4	DT4	QM3	TM4	VM1	ZM3	CP1	CP7	KM1	
	DNMG150404FNZP	Up-sharp edge	55	12.7	4.76	-	0.4	-		●		●			●				
	DNMG150408FNZP	Up-sharp edge	55	12.7	4.76	-	0.8	-		●		●			●				
	DNMG150408T00525Z5	T00525	55	12.7	4.76	-	0.8	-		●		●							
	DNMG150404TNG	T01025	55	12.7	4.76	-	0.4	-				●							
	DNMG150404G	-	55	12.7	4.76	-	0.4	-									●		
	DNMG150408G	-	55	12.7	4.76	-	0.8	-									●		
	DNMG150412G	-	55	12.7	4.76	-	1.2	-									●		

SN.. series/Inserts Carbide

SNMG

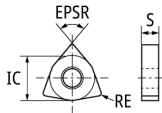


Steel	○	●	●	●	●	●	●	●
Stainless Steel	●	○	○	○	●	○	●	●
Cast Iron							●	
Non-Ferrous Material					○		○	●
Heat Resistant Alloy		●	○	○				
Hardened Material		○	○	○				
Others (non-metallic)								●

Shape	Item Number	CECC	EPSR	IC	S	AN	RE	BS	Carbide											CVD	CVD	Uncoated
									PVD	PVD	PVD	PVD	PVD	PVD	PVD	PVD	PVD	PVD	PVD			
									ST4	DM4	DT4	QM3	TM4	VM1	ZM3	CP1	CP7	KM1				
(ISO)	°	mm	mm	°	mm	mm																
	SNMG120408T00525Z5	T00525	90	12.7	4.76	-	0.8	-		●		●										
	SNMG120408G	-	90	12.7	4.76	-	0.8	-										●				
	SNMG120412G	-	90	12.7	4.76	-	1.2	-										●				
	SNMG120416G	-	90	12.7	4.76	-	1.6	-										●				

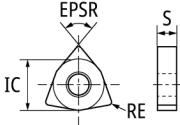
WN.. series/Inserts BIDE MICS / Ceramics / NTK CeramiX

WNGA

	Steel																																			
	Stainless Steel																																			
	Cast Iron														●	●	●	●	○	○	○	○	●	●	○	○										
	Non-Ferrous Material																																			
	Heat Resistant Alloy				●	●	●	●															●	●	●	●	●				●	●				
	Hardened Material														●					○	●	●				●										
	Others (non-metallic)																																			
Shape	Item Number	CECC	EPSR	IC	S	AN	RE	D1	D2	INSL	S1	W1	BIDEMICS				NTK CeramiX	Alumina Ceramics							Silicon Nitride Ceramics				Whisker Ceramics							
													PVD	PVD	JX1	JX3		HC1	HW2	HC2	HC4	HC6	HC7	ZC7	SX3	SX5	SX7	SX9	SX6	SP9 CVD	WA1	WA5				
(ISO)	°	mm	mm	°	mm	mm	mm	mm	mm	mm	mm	mm	120	JP2	JP2	JX1	JX3	450	HC1	HW2	HC2	HC4	HC6	HC7	ZC7	SX3	SX5	SX7	SX9	SX6	SP9	WA1	WA5			
	WNGA080408T00520	T00520	80	12.7	4.76	-	0.8	-	-	-	-	-																						●		
	WNGA080408T01020	T01020	80	12.7	4.76	-	0.8	-	-	-	-	-																					●			
	WNGA080408T02020	T02020	80	12.7	4.76	-	0.8	-	-	-	-	-																								
	WNGA080412T00520	T00520	80	12.7	4.76	-	1.2	-	-	-	-	-																						●		
	WNGA080412T01020	T01020	80	12.7	4.76	-	1.2	-	-	-	-	-																						●		
	WNGA080412T02020	T02020	80	12.7	4.76	-	1.2	-	-	-	-	-																						●		
	WNGA080416T02020	T02020	80	12.7	4.76	-	1.6	-	-	-	-	-																						●		

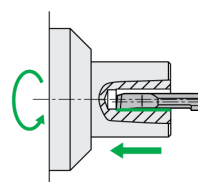
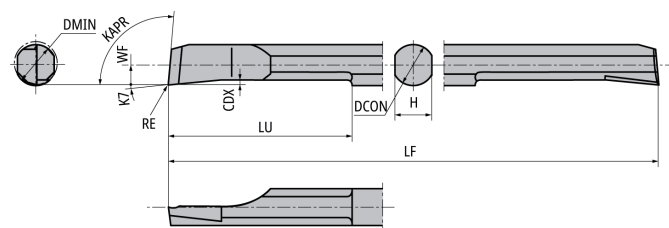
WN.. series/Inserts Carbide

WN..

			Steel										☐	☒	☒	☒	☒	☒	☒	☒	☒	☒	
			Stainless Steel										☒	☐	☐	☐	☒	☐	☒	☐	☒	☒	
			Cast Iron																		☒	☒	
			Non-Ferrous Material														☐		☐			☒	
			Heat Resistant Alloy											☒	☐	☐							
			Hardened Material											☐	☐	☐							
			Others (non-metallic)																			☒	
Shape	Item Number	CECC	EPSR	IC	S	AN	RE	BS	Carbide														
									PVD	PVD	PVD	PVD	PVD	PVD	PVD	PVD	PVD	PVD	PVD	PVD	PVD	PVD	Uncoated
	(ISO)	°	mm	mm	°	mm	mm	ST4	DM4	DT4	QM3	TM4	VM1	ZM3	CP1	CP7	KM1						
	WNGG080404FNUL	Up-sharp edge	80	12.7	4.76	-	0.4	-		☒		☒	☒										
	WNGG080408FNUL	Up-sharp edge	80	12.7	4.76	-	0.8	-		☒		☒	☒										
	WNGG080404FNZP	Up-sharp edge	80	12.7	4.76	-	0.4	-		☒		☒				☒							
	WNGG080408FNZP	Up-sharp edge	80	12.7	4.76	-	0.8	-		☒		☒				☒							
	WNMG080408T00525Z5	T00525	80	12.7	4.76	-	0.8	-		☒		☒											
	WNMG080412T00525Z5	T00525	80	12.7	4.76	-	1.2	-		☒		☒											
	WNMG080408G	-	80	12.7	4.76	-	0.8	-											☒				
	WNMG080412G	-	80	12.7	4.76	-	1.2	-											☒				

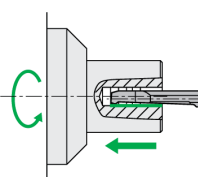
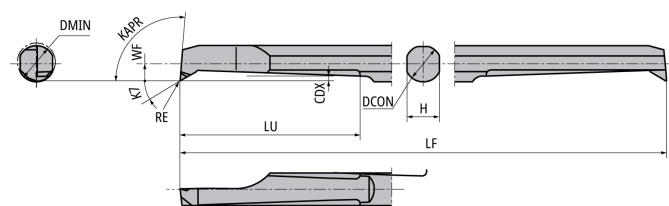
SB.. series/Insert bar Carbide

SBFS-S Sharp cutting edge



Item Number	Hand	Chip-breaker	DMIN	CDX	DCON	H	K7	KAPR	LF	LU	RE	WF	Carbide PVD	
			mm	mm	mm	mm	°	°	mm	mm	mm	mm	DT4	ZM3
SBFS020R005S	R	Yes	2.2	0.25	2	1.8	5	95	50	10	0.05	0.9	●	●
SBFS025R005S	R	Yes	2.7	0.3	2.5	2.3	5	95	50	12.5	0.05	1.15	●	●
SBFS025R015S	R	Yes	2.7	0.3	2.5	2.3	5	95	50	12.5	0.15	1.15	●	●
SBFS030R005S	R	Yes	3.2	0.4	3	2.7	5	95	50	15	0.05	1.4	●	●
SBFS030R015S	R	Yes	3.2	0.4	3	2.7	5	95	50	15	0.15	1.4	●	●
SBFS035R005S	R	Yes	3.7	0.4	3.5	3.2	5	95	60	17.5	0.05	1.65	●	●
SBFS035R015S	R	Yes	3.7	0.4	3.5	3.2	5	95	60	17.5	0.15	1.65	●	●
SBFS040R005S	R	Yes	4.2	0.45	4	3.6	5	95	60	20	0.05	1.9	●	●
SBFS040R015S	R	Yes	4.2	0.45	4	3.6	5	95	60	20	0.15	1.9	●	●
SBFS050R005S	R	Yes	5.2	0.5	5	4.5	5	95	70	25	0.05	2.4	●	●
SBFS050R015S	R	Yes	5.2	0.5	5	4.5	5	95	70	25	0.15	2.4	●	●
SBFS060R005S	R	Yes	6.2	0.6	6	5.4	5	95	80	30	0.05	2.9	●	●
SBFS060R015S	R	Yes	6.2	0.6	6	5.4	5	95	80	30	0.15	2.9	●	●

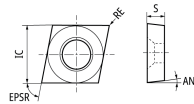
SBFB-F Evacuates chips BACKWARD



Item Number	Hand	Chip-breaker	DMIN	CDX	DCON	H	K7	KAPR	LF	LU	RE	WF	Carbide PVD	
			mm	mm	mm	mm	°	°	mm	mm	mm	mm	DT4	ZM3
SBFB020R005F	R	Yes	2.2	0.25	2	1.8	30	95	50	8	0.05	0.95	●	●
SBFB025R005F	R	Yes	2.7	0.3	2.5	2.3	30	95	50	12.5	0.05	1.2	●	●
SBFB025R015F	R	Yes	2.7	0.3	2.5	2.3	30	95	50	12.5	0.15	1.2	●	●
SBFB030R005F	R	Yes	3.2	0.45	3	2.7	30	95	50	15	0.05	1.4	●	●
SBFB030R015F	R	Yes	3.2	0.45	3	2.7	30	95	50	15	0.15	1.4	●	●
SBFB035R005F	R	Yes	3.7	0.5	3.5	3.2	30	95	60	17.5	0.05	1.65	●	●
SBFB035R015F	R	Yes	3.7	0.5	3.5	3.2	30	95	60	17.5	0.15	1.65	●	●
SBFB040R005F	R	Yes	4.2	0.5	4	3.6	30	95	60	20	0.05	1.9	●	●
SBFB040R015F	R	Yes	4.2	0.5	4	3.6	30	95	60	20	0.15	1.9	●	●
SBFB050R005F	R	Yes	5.2	0.7	5	4.5	30	95	70	25	0.05	2.4	●	●
SBFB050R015F	R	Yes	5.2	0.7	5	4.5	30	95	70	25	0.15	2.4	●	●
SBFB060R005F	R	Yes	6.2	0.9	6	5.4	30	95	80	30	0.05	2.9	●	●
SBFB060R015F	R	Yes	6.2	0.9	6	5.4	30	95	80	30	0.15	2.9	●	●

CC.. series/Inserts Carbide

CC..

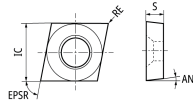


Steel	○	●	●	●	●	●	●	●	●
Stainless Steel	●	○	○	○	●	○	●	●	●
Cast Iron								●	
Non-Ferrous Material						○	○		●
Heat Resistant Alloy	●	○	○						
Hardened Material	○	○	○						
Others (non-metallic)									●

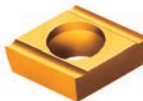
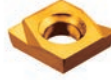
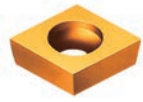
Shape	Item Number	CECC	Carbide																	Uncoated
			EPSR	IC	S	AN	RE	BS	PVD	PVD	PVD	PVD	PVD	PVD	PVD	PVD	CVD	CVD		
	(ISO)	°	mm	mm	°	mm	mm	ST4	DM4	DT4	QM3	TM4	VM1	ZM3	CP1	CP7	KM1			
	CCGT09T300YL	Up-sharp edge	80	9.525	3.97	7	0.03	-			●		●							
	CCGT09T301MYL	Up-sharp edge	80	9.525	3.97	7	0.08	-	●	●	●	●	●							
	CCGT09T302MYL	Up-sharp edge	80	9.525	3.97	7	0.18	-	●	●	●	●	●							
	CCGT09T304MYL	Up-sharp edge	80	9.525	3.97	7	0.38	-	●	●	●	●	●							
	CCGT09T308MYL	Up-sharp edge	80	9.525	3.97	7	0.78	-	●	●	●	●	●							
	CCGT060201MCL	Up-sharp edge	80	6.35	2.38	7	0.08	-	●	●	●	●	●							
	CCGT060202MCL	Up-sharp edge	80	6.35	2.38	7	0.18	-	●	●	●	●	●							
	CCGT09T300CL	Up-sharp edge	80	9.525	3.97	7	0.03	-			●		●							
	CCGT09T301MCL	Up-sharp edge	80	9.525	3.97	7	0.08	-	●	●	●	●	●							
	CCGT09T302MCL	Up-sharp edge	80	9.525	3.97	7	0.18	-	●	●	●	●	●							
	CCGT09T304MCL	Up-sharp edge	80	9.525	3.97	7	0.38	-	●	●	●	●	●							
	CCGT060200FNAM3	Up-sharp edge	80	6.35	2.38	7	0.03	-			●		●	●						
	CCGT060201MFNAM3	Up-sharp edge	80	6.35	2.38	7	0.08	-	●		●	●	●							
	CCGT060202FNAM3	Up-sharp edge	80	6.35	2.38	7	0.2	-						●	●					
	CCGT060202MFNAM3	Up-sharp edge	80	6.35	2.38	7	0.18	-	●		●	●	●							
	CCGT060204FNAM3	Up-sharp edge	80	6.35	2.38	7	0.4	-							●					
	CCGT060204MFNAM3	Up-sharp edge	80	6.35	2.38	7	0.38	-	●		●	●	●							
	CCGT09T300FNAM3	Up-sharp edge	80	9.525	3.97	7	0.03	-			●		●	●						
	CCGT09T301MFNAM3	Up-sharp edge	80	9.525	3.97	7	0.08	-	●		●	●	●	●	●					
	CCGT09T302FNAM3	Up-sharp edge	80	9.525	3.97	7	0.2	-				●		●						
	CCGT09T302MFNAM3	Up-sharp edge	80	9.525	3.97	7	0.18	-	●		●	●	●	●	●					
	CCGT09T304FNAM3	Up-sharp edge	80	9.525	3.97	7	0.4	-				●		●						
	CCGT09T304MFNAM3	Up-sharp edge	80	9.525	3.97	7	0.38	-	●		●	●	●	●	●					
	CCMT060202FNAM3	Up-sharp edge	80	6.35	2.38	7	0.2	-		●										
	CCMT060204FNAM3	Up-sharp edge	80	6.35	2.38	7	0.4	-			●									
	CCMT09T302FNAM3	Up-sharp edge	80	9.525	3.97	7	0.2	-				●								
	CCMT09T304FNAM3	Up-sharp edge	80	9.525	3.97	7	0.4	-				●								
CCMT09T308FNAM3	Up-sharp edge	80	9.525	3.97	7	0.8	-			●										
	CCGT060200AZ7	Up-sharp edge	80	6.35	2.38	7	0.03	-				●								
	CCGT060201MAZ7	Up-sharp edge	80	6.35	2.38	7	0.08	-				●								
	CCGT060202MAZ7	Up-sharp edge	80	6.35	2.38	7	0.18	-				●								
	CCGT09T300AZ7	Up-sharp edge	80	9.525	3.97	7	0.03	-				●	●	●		●				
	CCGT09T301MAZ7	Up-sharp edge	80	9.525	3.97	7	0.08	-				●	●	●		●				
	CCGT09T302MAZ7	Up-sharp edge	80	9.525	3.97	7	0.18	-				●	●	●		●				
	CCGT09T304MAZ7	Up-sharp edge	80	9.525	3.97	7	0.38	-				●	●	●		●				
	CCMT060202E002AZ8	E002	80	6.35	2.38	7	0.2	-									●			
	CCMT060204E004AZ8	E004	80	6.35	2.38	7	0.4	-									●			
	CCMT060208E004AZ8	E004	80	6.35	2.38	7	0.8	-									●			
	CCMT09T302E002AZ8	E002	80	6.35	2.38	7	0.2	-									●			
	CCMT09T304E004AZ8	E004	80	6.35	2.38	7	0.4	-									●			
	CCMT09T308E004AZ8	E004	80	6.35	2.38	7	0.8	-									●			
	CCGT060200RS	Up-sharp edge	80	6.35	2.38	7	0.03	-			●			●	●					
	CCGT060201MRS	Up-sharp edge	80	6.35	2.38	7	0.08	-			●	●								
	CCGT060202MRS	Up-sharp edge	80	6.35	2.38	7	0.18	-			●	●								
	CCGT09T300RS	Up-sharp edge	80	9.525	3.97	7	0.03	-			●		●	●	●					
	CCGT09T301MRS	Up-sharp edge	80	9.525	3.97	7	0.08	-			●	●	●							
	CCGT09T301RS	Up-sharp edge	80	9.525	3.97	7	0.1	-				●		●	●					
	CCGT09T302MRS	Up-sharp edge	80	9.525	3.97	7	0.18	-			●	●	●							
	CCGT09T302RS	Up-sharp edge	80	9.525	3.97	7	0.2	-				●		●	●					
	CCGT09T304MRS	Up-sharp edge	80	9.525	3.97	7	0.38	-			●	●	●							
	CCGT09T304RS	Up-sharp edge	80	9.525	3.97	7	0.4	-				●								

ID Tooling

V



Steel	○	●	●	●	●	●	●	●	●
Stainless Steel	●	○	○	○	●	○	●	●	●
Cast Iron								●	
Non-Ferrous Material						○	○		●
Heat Resistant Alloy		●	○	○					
Hardened Material		○	○	○					
Others (non-metallic)									●

Shape	Item Number	CECC	EPSR	IC	S	AN	RE	BS	Carbide											Uncoated
									PVD	PVD	PVD	PVD	PVD	PVD	PVD	PVD	PVD	PVD	PVD	
									ST4	DM4	DT4	QM3	TM4	VM1	ZM3	CP1	CP7	KM1		
(ISO)	°	mm	mm	°	mm	mm														
	CCGT060200RU	Up-sharp edge	80	6.35	2.38	7	0.03	-				●					●			
	CCGT060201RU	Up-sharp edge	80	6.35	2.38	7	0.1	-				●					●			
	CCGT060202RU	Up-sharp edge	80	6.35	2.38	7	0.2	-				●					●			
	CCGT09T300RU1	Up-sharp edge	80	9.525	3.97	7	0.03	-				●			●		●			
	CCGT09T301RU1	Up-sharp edge	80	9.525	3.97	7	0.1	-				●			●		●			
	CCGT09T302RU1	Up-sharp edge	80	9.525	3.97	7	0.2	-				●			●		●			
	CCGT09T304RU1	Up-sharp edge	80	9.525	3.97	7	0.4	-				●			●		●			
	CCGT060201LU	Up-sharp edge	80	6.35	2.38	7	0.1	-									●			
	CCGT060202LU	Up-sharp edge	80	6.35	2.38	7	0.2	-									●			
	CCGT09T300LU1	Up-sharp edge	80	9.525	3.97	7	0.03	-									●			
	CCGT09T301LU1	Up-sharp edge	80	9.525	3.97	7	0.1	-									●			
	CCGT09T302LU1	Up-sharp edge	80	9.525	3.97	7	0.2	-									●			
CCGT09T304LU1	Up-sharp edge	80	9.525	3.97	7	0.4	-									●				
	CCET09T3005RKHG	Up-sharp edge	80	9.525	3.97	7	0.05	-						●		●				
	CCET09T3008RKHG	Up-sharp edge	80	9.525	3.97	7	0.08	-						●		●				
	CCET09T3018RKHG	Up-sharp edge	80	9.525	3.97	7	0.18	-						●		●				
	CCET09T302RKHG	Up-sharp edge	80	9.525	3.97	7	0.2	-						●		●				
	CCGT060201FRF1	Up-sharp edge	80	6.35	2.38	7	0.1	-	●				●	●						
	CCGT060202FRF1	Up-sharp edge	80	6.35	2.38	7	0.2	-	●				●	●						
	CCGT060204FRF1	Up-sharp edge	80	6.35	2.38	7	0.4	-	●				●	●						
	CCGT09T302FRF1	Up-sharp edge	80	6.35	2.38	7	0.2	-	●				●	●						
	CCGT09T304FRF1	Up-sharp edge	80	6.35	2.38	7	0.4	-	●				●	●						
	CCGW060200FN	Up-sharp edge	80	6.35	2.38	7	0.03	-									●			
	CCGW060200H	Up-sharp edge	80	6.35	2.38	7	0.03	-											●	
	CCGW060201FN	Up-sharp edge	80	6.35	2.38	7	0.1	-									●			
	CCGW060201H	Up-sharp edge	80	6.35	2.38	7	0.1	-											●	
	CCGW060202H	Up-sharp edge	80	6.35	2.38	7	0.2	-											●	
	CCGW09T300FN	Up-sharp edge	80	9.525	3.97	7	0.03	-									●			
	CCGW09T300H	Up-sharp edge	80	9.525	3.97	7	0.03	-											●	
	CCGW09T301FN	Up-sharp edge	80	9.525	3.97	7	0.1	-									●			
	CCGW09T301H	Up-sharp edge	80	9.525	3.97	7	0.1	-											●	
	CCGW09T302H	Up-sharp edge	80	9.525	3.97	7	0.2	-											●	
	CCGW09T302MP	Up-sharp edge	80	9.525	3.97	7	0.18	-				●								