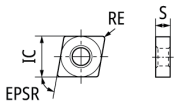


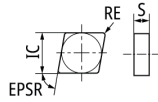
Steel																
Stainless Steel																
Cast Iron																
Non-Ferrous Material																
Heat Resistant Alloy																
Hardened Material																
Others (non-metallic)																

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	J2	J1		J3	PVD	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	JX1	JX3	450	HC1	HW2	HC2	HC4	HC6	HC7	ZC7	SX3	SX5	SX7	SX9	SX6	SP9	WA1	WA5			
	CDH1207P07010	P07010	-	12.7	6.35	6	-	3.18	-	-	-	-																							
	CDH1909P15015	P15015	-	19.05	9.52	6	-	6.35	-	-	-	-																							



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

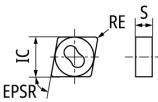
Shape	Item Number	CECC	EPSR	IC	S	AN	RE	D1	D2	INSL	S1	W1	BIDEMICS				NTK CeramiX	Alumina Ceramics							Silicon Nitride Ceramics					Whisker Ceramics					
													PVD	PVD	JP2	JP1		JP3	PVD	HC1	HW2	HC2	HC4	HC6	HC7	ZC7	SX3	SX5	SX7	SX9	SX6	CVD	SP9	WA1	WA5
(ISO)			°	mm	mm	°	mm	mm	mm	mm	mm	mm																							
	CNGA120404BQE004	E004	80	12.7	4.76	-	0.4	-	-	-	-	-																							
	CNGA120404BQT00520	T00520	80	12.7	4.76	-	0.4	-	-	-	-	-																							
	CNGA120404S02025	S02025	80	12.7	4.76	-	0.4	-	-	-	-	-																							
	CNGA120404T01025	T01025	80	12.7	4.76	-	0.4	-	-	-	-	-																							
	CNGA120404X01015	X01015	80	12.7	4.76	-	0.4	-	-	-	-	-																							
	CNGA120404X01015-10	X01015	80	12.7	4.76	-	0.4	-	-	-	-	-																							
	CNGA120404Z02025	Z02025	80	12.7	4.76	-	0.4	-	-	-	-	-																							
	CNGA120408BQE004	E004	80	12.7	4.76	-	0.8	-	-	-	-	-																							
	CNGA120408BQT00520	T00520	80	12.7	4.76	-	0.8	-	-	-	-	-																							
	CNGA120408S02025	S02025	80	12.7	4.76	-	0.8	-	-	-	-	-																							
	CNGA120408T00520	T00520	80	12.7	4.76	-	0.8	-	-	-	-	-																							
	CNGA120408T01020	T01020	80	12.7	4.76	-	0.8	-	-	-	-	-																							
	CNGA120408T01025	T01025	80	12.7	4.76	-	0.8	-	-	-	-	-																							
	CNGA120408T02020	T02020	80	12.7	4.76	-	0.8	-	-	-	-	-																							
	CNGA120408T02025	T02025	80	12.7	4.76	-	0.8	-	-	-	-	-																							
	CNGA120408X01015	X01015	80	12.7	4.76	-	0.8	-	-	-	-	-																							
	CNGA120408X01015-10	X01015	80	12.7	4.76	-	0.8	-	-	-	-	-																							
	CNGA120408Z02025	Z02025	80	12.7	4.76	-	0.8	-	-	-	-	-																							
	CNGA120412BQE004	E004	80	12.7	4.76	-	1.2	-	-	-	-	-																							
	CNGA120412BQT00520	T00520	80	12.7	4.76	-	1.2	-	-	-	-	-																							
	CNGA120412S02025	S02025	80	12.7	4.76	-	1.2	-	-	-	-	-																							
	CNGA120412T00520	T00520	80	12.7	4.76	-	1.2	-	-	-	-	-																							
	CNGA120412T01020	T01020	80	12.7	4.76	-	1.2	-	-	-	-	-																							
	CNGA120412T01025	T01025	80	12.7	4.76	-	1.2	-	-	-	-	-																							
	CNGA120412T02020	T02020	80	12.7	4.76	-	1.2	-	-	-	-	-																							
	CNGA120412T02025	T02025	80	12.7	4.76	-	1.2	-	-	-	-	-																							
	CNGA120412X01015	X01015	80	12.7	4.76	-	1.2	-	-	-	-	-																							
	CNGA120412X01015-10	X01015	80	12.7	4.76	-	1.2	-	-	-	-	-																							
	CNGA120416T00520	T00520	80	12.7	4.76	-	1.6	-	-	-	-	-																							
	CNGA120416T01020	T01020	80	12.7	4.76	-	1.6	-	-	-	-	-																							
	CNGA120416T02020	T02020	80	12.7	4.76	-	1.6	-	-	-	-	-																							
	CNGA120416T02025	T02025	80	12.7	4.76	-	1.6	-	-	-	-	-																							



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

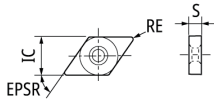
Shape	Item Number	CECC	EPSR	IC	S	AN	RE	D1	D2	INSL	S1	W1	BIDEMICS				NTK CeramiX	Alumina Ceramics							Silicon Nitride Ceramics						Whisker Ceramics				
													PVD	PVD	PVD	PVD		HC1	HW2	HC2	HC4	HC6	HC7	ZC7	SX3	SX5	SX7	SX9	SX6	SP9	CVD	WA1	WA5		
(ISO)	°	mm	mm	°	mm	mm	mm	mm	mm	mm	mm	mm	120	JP2	JP2	JX1	JX3	450	HC1	HW2	HC2	HC4	HC6	HC7	ZC7	SX3	SX5	SX7	SX9	SX6	SP9	CVD	WA1	WA5	
	CNGN120404T01025	T01025	80	12.7	4.76	-	0.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	CNGN120408S02025	S02025	80	12.7	4.76	-	0.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	CNGN120408T00520	T00520	80	12.7	4.76	-	0.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	CNGN120408T00820	T00820	80	12.7	4.76	-	0.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	CNGN120408T01020	T01020	80	12.7	4.76	-	0.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	CNGN120408T01025	T01025	80	12.7	4.76	-	0.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	CNGN120408T02020	T02020	80	12.7	4.76	-	0.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	CNGN120408T02025	T02025	80	12.7	4.76	-	0.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	CNGN120408Z02025	Z02025	80	12.7	4.76	-	0.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	CNGN120412S02025	S02025	80	12.7	4.76	-	1.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	CNGN120412T00520	T00520	80	12.7	4.76	-	1.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	CNGN120412T00820	T00820	80	12.7	4.76	-	1.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	CNGN120412T01020	T01020	80	12.7	4.76	-	1.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	CNGN120412T01025	T01025	80	12.7	4.76	-	1.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	CNGN120412T02020	T02020	80	12.7	4.76	-	1.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	CNGN120412T02025	T02025	80	12.7	4.76	-	1.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	CNGN120412Z02025	Z02025	80	12.7	4.76	-	1.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	CNGN120416T00520	T00520	80	12.7	4.76	-	1.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	CNGN120416T01020	T01020	80	12.7	4.76	-	1.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	CNGN120416T02020	T02020	80	12.7	4.76	-	1.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	CNGN120416T02025	T02025	80	12.7	4.76	-	1.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	CNGN120420T01025	T01025	80	12.7	4.76	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	CNGN120708T00520	T00520	80	12.7	7.94	-	0.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	CNGN120708T02025	T02025	80	12.7	7.94	-	0.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	CNGN120712T02025	T02025	80	12.7	7.94	-	1.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	CNGN160716T00520	T00520	80	15.875	7.94	-	1.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

CNGX



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		
	(ISO)		°	mm	mm	°	mm	mm	mm	mm	mm	mm	mm	PVD	PVD	PVD	PVD		HC1	HW2	HC2	HC4	HC6	HC7	PVD	SX3	SX5	SX7	SX9	SX6	SP9	WA1	WA5
	CNGX120712T02025	T02025	80	12.7	7.94	-	1.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	●	
	CNGX120716T02025	T02025	80	12.7	7.94	-	1.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	●	



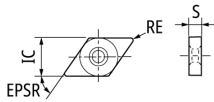
Steel														
Stainless Steel														
Cast Iron														
Non-Ferrous Material														
Heat Resistant Alloy														
Hardened Material														
Others (non-metallic)														

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	JP2			JP1	JP3	PVD	HC1	HW2	HC2	HC4	HC6	HC7	PVD	SX3	SX5	SX7	SX9	SX6	CVD	SP9	WA1	WA5
(ISO)	°	mm	mm	°	mm	mm	mm	mm	mm	mm	mm	120	JP2	JP1	JP3	450	HC1	HW2	HC2	HC4	HC6	HC7	PVD	SX3	SX5	SX7	SX9	SX6	SP9	WA1	WA5					
	DNGA150404BQE004	E004	55	12.7	4.76	-	0.4	-	-	-	-	-	●																							
	DNGA150404BQT00520	T00520	55	12.7	4.76	-	0.4	-	-	-	-	-	●																							
	DNGA150404S02025	S02025	55	12.7	4.76	-	0.4	-	-	-	-	-											●													
	DNGA150404T01025	T01025	55	12.7	4.76	-	0.4	-	-	-	-	-								●		●		●												
	DNGA150404X01015	X01015	55	12.7	4.76	-	0.4	-	-	-	-	-																								
	DNGA150404X01015-10	X01015	55	12.7	4.76	-	0.4	-	-	-	-	-																								
	DNGA150404Z02025	Z02025	55	12.7	4.76	-	0.4	-	-	-	-	-																								
	DNGA150408BQE004	E004	55	12.7	4.76	-	0.8	-	-	-	-	-	-	●																						
	DNGA150408BQT00520	T00520	55	12.7	4.76	-	0.8	-	-	-	-	-	-	●																						
	DNGA150408S02025	S02025	55	12.7	4.76	-	0.8	-	-	-	-	-	-								●				●											
	DNGA150408T00520	T00520	55	12.7	4.76	-	0.8	-	-	-	-	-	-								●															
	DNGA150408T01020	T01020	55	12.7	4.76	-	0.8	-	-	-	-	-	-																							
	DNGA150408T01025	T01025	55	12.7	4.76	-	0.8	-	-	-	-	-	-								●		●		●											
	DNGA150408T02020	T02020	55	12.7	4.76	-	0.8	-	-	-	-	-	-																							
	DNGA150408T02025	T02025	55	12.7	4.76	-	0.8	-	-	-	-	-	-																							
	DNGA150408X01015	X01015	55	12.7	4.76	-	0.8	-	-	-	-	-	-																							
	DNGA150408X01015-10	X01015	55	12.7	4.76	-	0.8	-	-	-	-	-	-																							
	DNGA150408Z02025	Z02025	55	12.7	4.76	-	0.8	-	-	-	-	-	-																							
	DNGA150412BQE004	E004	55	12.7	4.76	-	1.2	-	-	-	-	-	-	●																						
	DNGA150412BQT00520	T00520	55	12.7	4.76	-	1.2	-	-	-	-	-	-	●																						
	DNGA150412S02025	S02025	55	12.7	4.76	-	1.2	-	-	-	-	-	-												●											
	DNGA150412T01020	T01020	55	12.7	4.76	-	1.2	-	-	-	-	-	-																							
	DNGA150412T01025	T01025	55	12.7	4.76	-	1.2	-	-	-	-	-	-												●											
	DNGA150412T02020	T02020	55	12.7	4.76	-	1.2	-	-	-	-	-	-																							
	DNGA150412T02025	T02025	55	12.7	4.76	-	1.2	-	-	-	-	-	-																							
	DNGA150412X01015	X01015	55	12.7	4.76	-	1.2	-	-	-	-	-	-																							
	DNGA150412X01015-10	X01015	55	12.7	4.76	-	1.2	-	-	-	-	-	-																							

Turning Insert

D

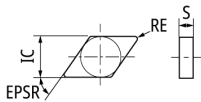
DNGG-AG with chipbreaker



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	JP2	JP1	JX3			PVD	HC1	HW2	HC2	HC4	HC6	HC7	PVD	SX3	SX5	SX7	SX9	SX6	SP9	WA1	WA5
(ISO)	°	mm	mm	°	mm	mm	mm	mm	mm	mm	mm	mm	120	JP2	JP1	JX3	450	HC1	HW2	HC2	HC4	HC6	HC7	ZC7	PVD	SX3	SX5	SX7	SX9	SX6	SP9	WA1	WA5	
	DNGG150408Z01030AG	Z01030	55	12.7	4.76	-	0.8	-	-	-	-	-																						
	DNGG150412Z01030AG	Z01030	55	12.7	4.76	-	1.2	-	-	-	-	-																						

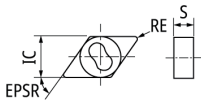
DNGN



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																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
													120 PVD	JP2 PVD	JX1	JX3		450 PVD	HC1	HW2	HC2	HC4	HC6	HC7	ZC7 PVD	SX3	SX5	SX7	SX9	SX6	SP9 CVD	WA1	WA5																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	
(ISO)	°	mm	mm	°	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	

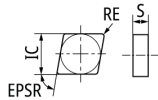
DNGX



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

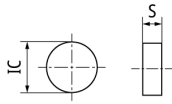
Shape	Item Number	CECC	EPSR	IC	S	AN	RE	D1	D2	INSL	S1	W1	BIDEMICS				NTK CeramIX	Alumina Ceramics							Silicon Nitride Ceramics						Whisker Ceramics																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																								
													PVD	PVD	JX1	JX3		PVD	HC1	HW2	HC2	HC4	HC6	HC7	PVD	SX3	SX5	SX7	SX9	SX6	CVD	WA1	WA5																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
	DNGX150716T02025	T02025	55	12.7	7.94	-	1.6	-	-	-	-	-																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																											

ENGX



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		PVD	HC1	HW2	HC2	HC4	HC6	HC7	PVD	SX3	SX5	SX7	SX9	SX6	CVD	WA1	WA5
	(ISO)		°	mm	mm	°	mm	mm	mm	mm	mm	mm	120	JP2	JX1	JX3	450	HC1	HW2	HC2	HC4	HC6	HC7	ZC7	SX3	SX5	SX7	SX9	SX6	SP9	WA1	WA5	
	ENGX130708T02025	T02025	75	12.7	7.94	-	0.8	-	-	-	-	-																					
	ENGX130712T02025	T02025	75	12.7	7.94	-	1.2	-	-	-	-	-																					



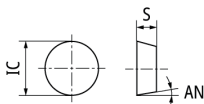
Steel
Stainless Steel
Cast Iron
Non-Ferrous Material
Heat Resistant Alloy
Hardened Material
Others (non-metallic)

Shape	Item Number	EPSR	IC	S	AN	RE	D1	D2	INSL	S1	W1	BIDEMICS	NTK Ceramix	Alumina Ceramics	Silicon Nitride Ceramics	Whisker Ceramics
	CECC															
	(ISO)	°	mm	mm	°	mm	mm	mm	mm	mm	mm	120 PVD	450 PVD	HC1	SX3	SP9
	RNGN120400S02025	S02025	-	12.7	4.76	-	-	-	-	-	-	JP2	450	HC1	SX3	SP9
	RNGN120400T00520	T00520	-	12.7	4.76	-	-	-	-	-	-	JP2	450	HC1	SX3	SP9
	RNGN120400T00525	T00525	-	12.7	4.76	-	-	-	-	-	-	JP2	450	HC1	SX3	SP9
	RNGN120400T00820	T00820	-	12.7	4.76	-	-	-	-	-	-	JP2	450	HC1	SX3	SP9
	RNGN120400T01020	T01020	-	12.7	4.76	-	-	-	-	-	-	JP2	450	HC1	SX3	SP9
	RNGN120400T01025	T01025	-	12.7	4.76	-	-	-	-	-	-	JP2	450	HC1	SX3	SP9
	RNGN120400T02020	T02020	-	12.7	4.76	-	-	-	-	-	-	JP2	450	HC1	SX3	SP9
	RNGN120400T02025	T02025	-	12.7	4.76	-	-	-	-	-	-	JP2	450	HC1	SX3	SP9
	RNGN120400Z02025	Z02025	-	12.7	4.76	-	-	-	-	-	-	JP2	450	HC1	SX3	SP9
	RNGN120700E002	E002	-	12.7	7.94	-	-	-	-	-	-	JP2	450	HC1	SX3	SP9
	RNGN120700E004	E004	-	12.7	7.94	-	-	-	-	-	-	JP2	450	HC1	SX3	SP9
	RNGN120700E007	E007	-	12.7	7.94	-	-	-	-	-	-	JP2	450	HC1	SX3	SP9
	RNGN120700K20015	K20015	-	12.7	7.94	-	-	-	-	-	-	JP2	450	HC1	SX3	SP9
	RNGN120700S02025	S02025	-	12.7	7.94	-	-	-	-	-	-	JP2	450	HC1	SX3	SP9
	RNGN120700T00520	T00520	-	12.7	7.94	-	-	-	-	-	-	JP2	450	HC1	SX3	SP9
	RNGN120700T00525	T00525	-	12.7	7.94	-	-	-	-	-	-	JP2	450	HC1	SX3	SP9
	RNGN120700T00820	T00820	-	12.7	7.94	-	-	-	-	-	-	JP2	450	HC1	SX3	SP9
	RNGN120700T01020	T01020	-	12.7	7.94	-	-	-	-	-	-	JP2	450	HC1	SX3	SP9
	RNGN120700T02025	T02025	-	12.7	7.94	-	-	-	-	-	-	JP2	450	HC1	SX3	SP9
	RNGN120700Z01520	Z01520	-	12.7	7.94	-	-	-	-	-	-	JP2	450	HC1	SX3	SP9
	RNGN120700Z02025	Z02025	-	12.7	7.94	-	-	-	-	-	-	JP2	450	HC1	SX3	SP9
	RNGN150700T00520	T00520	-	15.875	7.94	-	-	-	-	-	-	JP2	450	HC1	SX3	SP9
	RNGN150700T00525	T00525	-	15.875	7.94	-	-	-	-	-	-	JP2	450	HC1	SX3	SP9
	RNGN150700T00820	T00820	-	15.875	7.94	-	-	-	-	-	-	JP2	450	HC1	SX3	SP9
	RNGN190700K20015	K20015	-	19.05	7.94	-	-	-	-	-	-	JP2	450	HC1	SX3	SP9
	RNGN190700T00520	T00520	-	19.05	7.94	-	-	-	-	-	-	JP2	450	HC1	SX3	SP9
	RNGN190700T00525	T00525	-	19.05	7.94	-	-	-	-	-	-	JP2	450	HC1	SX3	SP9
	RNGN190700T00820	T00820	-	19.05	7.94	-	-	-	-	-	-	JP2	450	HC1	SX3	SP9
	RNGN190700T01020	T01020	-	19.05	7.94	-	-	-	-	-	-	JP2	450	HC1	SX3	SP9
	RNGN250700T00520	T00520	-	25.4	7.94	-	-	-	-	-	-	JP2	450	HC1	SX3	SP9
	RNGN250700T00820	T00820	-	25.4	7.94	-	-	-	-	-	-	JP2	450	HC1	SX3	SP9

Turning Insert

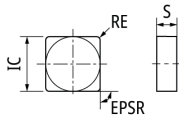
D

RPGN



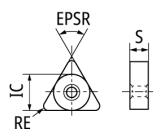
Steel
Stainless Steel
Cast Iron
Non-Ferrous Material
Heat Resistant Alloy
Hardened Material
Others (non-metallic)

Shape	Item Number	EPSR	IC	S	AN	RE	D1	D2	INSL	S1	W1	BIDEMICS	NTK Ceramix	Alumina Ceramics	Silicon Nitride Ceramics	Whisker Ceramics
	CECC															
	(ISO)	°	mm	mm	°	mm	mm	mm	mm	mm	mm	120 PVD	450 PVD	HC1	SX3	SP9
	RPGN060200T00520	T00520	-	6.35	2.38	11	-	-	-	-	-	JP2	450	HC1	SX3	SP9
	RPGN090300T00520	T00520	-	9.525	3.18	11	-	-	-	-	-	JP2	450	HC1	SX3	SP9
	RPGN120400E004	E004	-	12.7	4.76	11	-	-	-	-	-	JP2	450	HC1	SX3	SP9
	RPGN120400EM02X	EM02X	-	12.7	4.76	11	-	-	-	-	-	JP2	450	HC1	SX3	SP9
	RPGN120400T00520	T00520	-	12.7	4.76	11	-	-	-	-	-	JP2	450	HC1	SX3	SP9
	RPGN120400T00525	T00525	-	12.7	4.76	11	-	-	-	-	-	JP2	450	HC1	SX3	SP9
	RPGN120400T00820	T00820	-	12.7	4.76	11	-	-	-	-	-	JP2	450	HC1	SX3	SP9
	RPGN120400T01020	T01020	-	12.7	4.76	11	-	-	-	-	-	JP2	450	HC1	SX3	SP9



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

Shape	Item Number (ISO)	CECC	EPSR	IC	S	AN	RE	D1	D2	INSL	S1	W1	BIDEMICS				NTK CeramiX	Alumina Ceramics							Silicon Nitride Ceramics					Whisker Ceramics			
															PVD	PVD		PVD	HC1	HW2	HC2	HC4	HC6	HC7	PVD	SX3	SX5	SX7	SX9	SX6	SP9	WA1	WA5
			°	mm	mm	°	mm	mm	mm	mm	mm	mm	mm	mm	120	JP2	JX1	JX3	450														
	SNGN090308T01025	T01025	90	9.525	3.18	-	0.8	-	-	-	-	-																					
	SNGN090316T01025	T01025	90	9.525	3.18	-	1.6	-	-	-	-	-																					
	SNGN090408T01025	T01025	90	9.525	4.76	-	0.8	-	-	-	-	-																					
	SNGN120404T01025	T01025	90	12.7	4.76	-	0.4	-	-	-	-	-																					
	SNGN120408S02025	S02025	90	12.7	4.76	-	0.8	-	-	-	-	-																					
	SNGN120408T00520	T00520	90	12.7	4.76	-	0.8	-	-	-	-	-																					
	SNGN120408T00820	T00820	90	12.7	4.76	-	0.8	-	-	-	-	-																					
	SNGN120408T01020	T01020	90	12.7	4.76	-	0.8	-	-	-	-	-																					
	SNGN120408T01025	T01025	90	12.7	4.76	-	0.8	-	-	-	-	-																					
	SNGN120408T02020	T02020	90	12.7	4.76	-	0.8	-	-	-	-	-																					
	SNGN120408T02025	T02025	90	12.7	4.76	-	0.8	-	-	-	-	-																					
	SNGN120408Z02025	Z02025	90	12.7	4.76	-	0.8	-	-	-	-	-																					
	SNGN120412S02025	S02025	90	12.7	4.76	-	1.2	-	-	-	-	-																					
	SNGN120412T00520	T00520	90	12.7	4.76	-	1.2	-	-	-	-	-																					
	SNGN120412T00820	T00820	90	12.7	4.76	-	1.2	-	-	-	-	-																					
	SNGN120412T01020	T01020	90	12.7	4.76	-	1.2	-	-	-	-	-																					
	SNGN120412T01025	T01025	90	12.7	4.76	-	1.2	-	-	-	-	-																					
	SNGN120412T02020	T02020	90	12.7	4.76	-	1.2	-	-	-	-	-																					
	SNGN120412T02025	T02025	90	12.7	4.76	-	1.2	-	-	-	-	-																					
	SNGN120412Z02025	Z02025	90	12.7	4.76	-	1.2	-	-	-	-	-																					
	SNGN120416S02025	S02025	90	12.7	4.76	-	1.6	-	-	-	-	-																					
	SNGN120416T00520	T00520	90	12.7	4.76	-	1.6	-	-	-	-	-																					
	SNGN120416T01020	T01020	90	12.7	4.76	-	1.6	-	-	-	-	-																					
	SNGN120416T01025	T01025	90	12.7	4.76	-	1.6	-	-	-	-	-																					
	SNGN120416T02020	T02020	90	12.7	4.76	-	1.6	-	-	-	-	-																					
	SNGN120416T02025	T02025	90	12.7	4.76	-	1.6	-	-	-	-	-																					
	SNGN120416Z02025	Z02025	90	12.7	4.76	-	1.6	-	-	-	-	-																					
	SNGN120420T01020	T01020	90	12.7	4.76	-	2	-	-	-	-	-																					
	SNGN120420T01025	T01025	90	12.7	4.76	-	2	-	-	-	-	-																					
	SNGN120420T02020	T02020	90	12.7	4.76	-	2	-	-	-	-	-																					
	SNGN120420T02025	T02025	90	12.7	4.76	-	2	-	-	-	-	-																					
	SNGN120424T01025	T01025	90	12.7	4.76	-	2.4	-	-	-	-	-																					
	SNGN120424T02020	T02020	90	12.7	4.76	-	2.4	-	-	-	-	-																					
	SNGN120708T02025	T02025	90	12.7	7.94	-	0.8	-	-	-	-	-																					
	SNGN120712S02025	S02025	90	12.7	7.94	-	1.2	-	-	-	-	-																					
	SNGN120712T02025	T02025	90	12.7	7.94	-	1.2	-	-	-	-	-																					
	SNGN120716T02025	T02025	90	12.7	7.94	-	1.6	-	-	-	-	-																					
	SNGN150716T02025	T02025	90	15.875	7.94	-	1.6	-	-	-	-	-																					
	SNGN190616T00525	T00525	90	19.05	6.35	-	1.6	-	-	-	-	-																					
	SNGN190724T00525	T00525	90	19.05	7.94	-	2.4	-	-	-	-	-																					



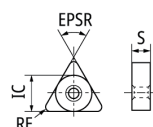
	Steel
Stainless Steel	
Cast Iron	● ● ● ○ ○ ○ ○ ● ● ○ ○
Non-Ferrous Material	
Heat Resistant Alloy	● ● ● ● ● ● ● ● ● ●
Hardened Material	● ○ ● ● ●
Others (non-metallic)	

[illegible]

Turning Insert

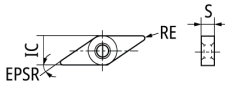
D

■ TNGG-AG with chipbreaker



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

[illegible]

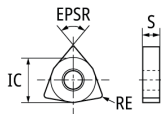


Steel
Stainless Steel
Cast Iron
Non-Ferrous Material
Heat Resistant Alloy
Hardened Material
Others (non-metallic)

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	JP1	JP3			PVD	HC1	HW2	HC2	HC4	HC6	HC7	PVD	SX3	SX5	SX7	SX9	SX6	SP9	CVD	WA1	WA5
(ISO)	°	mm	mm	°	mm	mm	mm	mm	mm	mm	mm	mm	120	JP2	JP1	JP3	450	HC1	HW2	HC2	HC4	HC6	HC7	PVD	SX3	SX5	SX7	SX9	SX6	SP9	CVD	WA1	WA5		
	VNGA160404BQE004	E004	35	9.525	4.76	-	0.4	-	-	-	-	-	●																						
	VNGA160404BQT00520	T00520	35	9.525	4.76	-	0.4	-	-	-	-	-	●																						
	VNGA160404S02025	S02025	35	9.525	4.76	-	0.4	-	-	-	-	-												●											
	VNGA160404T01020	T01020	35	9.525	4.76	-	0.4	-	-	-	-	-																		●					
	VNGA160404T01025	T01025	35	9.525	4.76	-	0.4	-	-	-	-	-								●		●		●											
	VNGA160404X01015	X01015	35	9.525	4.76	-	0.4	-	-	-	-	-					●				●		●												
	VNGA160404X01015-10	X01015	35	9.525	4.76	-	0.4	-	-	-	-	-					●																		
	VNGA160404Z02025	Z02025	35	9.525	4.76	-	0.4	-	-	-	-	-									●														
	VNGA160408BQE004	E004	35	9.525	4.76	-	0.8	-	-	-	-	-	●																						
	VNGA160408BQT00520	T00520	35	9.525	4.76	-	0.8	-	-	-	-	-	●																						
	VNGA160408S02025	S02025	35	9.525	4.76	-	0.8	-	-	-	-	-													●										
	VNGA160408T00520	T00520	35	9.525	4.76	-	0.8	-	-	-	-	-																					●		
	VNGA160408T01020	T01020	35	9.525	4.76	-	0.8	-	-	-	-	-																		●	●				
	VNGA160408T01025	T01025	35	9.525	4.76	-	0.8	-	-	-	-	-									●		●		●										
	VNGA160408X01015	X01015	35	9.525	4.76	-	0.8	-	-	-	-	-						●																	
	VNGA160408X01015-10	X01015	35	9.525	4.76	-	0.8	-	-	-	-	-						●																	
	VNGA160408Z02025	Z02025	35	9.525	4.76	-	0.8	-	-	-	-	-										●													
	VNGA160412BQT00520	T00520	35	9.525	4.76	-	1.2	-	-	-	-	-	●																						
	VNGA160412S02025	S02025	35	9.525	4.76	-	1.2	-	-	-	-	-													●										
	VNGA160412T01020	T01020	35	9.525	4.76	-	1.2	-	-	-	-	-																		●	●				
	VNGA160412T01025	T01025	35	9.525	4.76	-	1.2	-	-	-	-	-													●										
	VNGA160412X01015	X01015	35	9.525	4.76	-	1.2	-	-	-	-	-						●																	
	VNGA160412X01015-10	X01015	35	9.525	4.76	-	1.2	-	-	-	-	-						●																	
	VNGA160412Z02025	Z02025	35	9.525	4.76	-	1.2	-	-	-	-	-										●													
	VNGA220424T01020	T01020	35	12.7	4.76	-	2.4	-	-	-	-	-																					●		

Turning Insert
D

WNGA

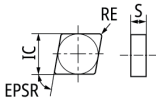


Steel
Stainless Steel
Cast Iron
Non-Ferrous Material
Heat Resistant Alloy
Hardened Material
Others (non-metallic)

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		PVD	HC1	HW2	HC2	HC4	HC6	HC7	PVD	SX3	SX5	SX7	SX9	SX6	SP9	WA1	WA5																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																					
(ISO)	°	mm	mm	°	mm	mm	mm	mm	mm	mm	mm	mm	120	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	-	-	-	-	-	-																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																									</

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

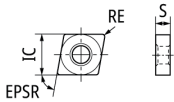
CNGN



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				PVD	HC1	HW2	HC2	HC4	HC6	HC7	PVD	SX3	SX5	SX7	SX9	SX6	CVD	SP9	WA1	WA5
	(ISO)	°	mm	mm	°	mm	mm	mm	mm	mm	mm	mm	mm	120	JP2	JX1	JX3	450	HC1	HW2	HC2	HC4	HC6	HC7	ZC7	SX3	SX5	SX7	SX9	SX6	SP9	WA1	WA5	
	CNGN120404T01025	T01025	80	12.7	4.76	-	0.4	-	-	-	-	-									●		●											
	CNGN120408S02025	S02025	80	12.7	4.76	-	0.8	-	-	-	-	-												●										
	CNGN120408T00520	T00520	80	12.7	4.76	-	0.8	-	-	-	-	-																●			●			
	CNGN120408T00820	T00820	80	12.7	4.76	-	0.8	-	-	-	-	-																				●		
	CNGN120408T01020	T01020	80	12.7	4.76	-	0.8	-	-	-	-	-																		●	●			
	CNGN120408T01025	T01025	80	12.7	4.76	-	0.8	-	-	-	-	-									●		●		●									
	CNGN120408T02020	T02020	80	12.7	4.76	-	0.8	-	-	-	-	-									●		●		●									
	CNGN120408T02025	T02025	80	12.7	4.76	-	0.8	-	-	-	-	-							●									●			●			
	CNGN120408Z02025	Z02025	80	12.7	4.76	-	0.8	-	-	-	-	-										●												
	CNGN120412S02025	S02025	80	12.7	4.76	-	1.2	-	-	-	-	-													●									
	CNGN120412T00520	T00520	80	12.7	4.76	-	1.2	-	-	-	-	-																●			●			
	CNGN120412T00820	T00820	80	12.7	4.76	-	1.2	-	-	-	-	-																					●	
	CNGN120412T01020	T01020	80	12.7	4.76	-	1.2	-	-	-	-	-																		●	●			
	CNGN120412T01025	T01025	80	12.7	4.76	-	1.2	-	-	-	-	-							●		●		●		●						●			
	CNGN120412T02020	T02020	80	12.7	4.76	-	1.2	-	-	-	-	-							●		●		●		●					●		●		
	CNGN120412T02025	T02025	80	12.7	4.76	-	1.2	-	-	-	-	-							●									●			●			
	CNGN120412Z02025	Z02025	80	12.7	4.76	-	1.2	-	-	-	-	-										●												
	CNGN120416T00520	T00520	80	12.7	4.76	-	1.6	-	-	-	-	-											●									●		
	CNGN120416T01020	T01020	80	12.7	4.76	-	1.6	-	-	-	-	-																			●			
	CNGN120416T02020	T02020	80	12.7	4.76	-	1.6	-	-	-	-	-																			●			
	CNGN120416T02025	T02025	80	12.7	4.76	-	1.6	-	-	-	-	-																						
	CNGN120420T01025	T01025	80	12.7	4.76	-	2	-	-	-	-	-												●										
	CNGN120708T00520	T00520	80	12.7	7.94	-	0.8	-	-	-	-	-																					●	
	CNGN120708T02025	T02025	80	12.7	7.94	-	0.8	-	-	-	-	-										●												
	CNGN120712T02025	T02025	80	12.7	7.94	-	1.2	-	-	-	-	-										●												

General Turning
Toolholders

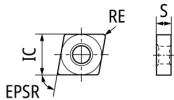


The dot plot displays the distribution of material types for various applications. The categories are Steel, Stainless Steel, Cast Iron, Non-Ferrous Material, Heat Resistant Alloy, and Hardened Material. The plot uses black and white dots to represent different data points across a horizontal axis.

Material Type	Black Dots (Count)	White Dots (Count)
Steel	0	0
Stainless Steel	0	0
Cast Iron	4	6
Non-Ferrous Material	0	0
Heat Resistant Alloy	4	0
Hardened Material	1	1
Others (non-metallic)	0	0

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		PVD	HC1	HW2	HC2	HC4	HC6	HC7	ZC7	SX3	SX5	SX7	SX9	SX6	SP9	WA1	WA5
																	120																
(ISO)	°	mm	mm	°	mm	mm	mm	mm	mm	mm	mm	mm	120	JP2	JX1	JX3	450	HC1	HW2	HC2	HC4	HC6	HC7	ZC7	SX3	SX5	SX7	SX9	SX6	SP9	WA1	WA5	
	CNGA120404BQE004	E004	80	12.7	4.76	-	0.4	-	-	-	-	-	●																				
	CNGA120404BQT00520	T00520	80	12.7	4.76	-	0.4	-	-	-	-	-	●																				
	CNGA120404S02025	S02025	80	12.7	4.76	-	0.4	-	-	-	-	-											●										
	CNGA120404T01025	T01025	80	12.7	4.76	-	0.4	-	-	-	-	-											●										
	CNGA120404X01015	X01015	80	12.7	4.76	-	0.4	-	-	-	-	-					●							●									
	CNGA120404X01015-10	X01015	80	12.7	4.76	-	0.4	-	-	-	-	-					●																
	CNGA120404Z02025	Z02025	80	12.7	4.76	-	0.4	-	-	-	-	-								●													
	CNGA120408BQE004	E004	80	12.7	4.76	-	0.8	-	-	-	-	-	●																				
	CNGA120408BQT00520	T00520	80	12.7	4.76	-	0.8	-	-	-	-	-	●																				
	CNGA120408S02025	S02025	80	12.7	4.76	-	0.8	-	-	-	-	-												●									
	CNGA120408T00520	T00520	80	12.7	4.76	-	0.8	-	-	-	-	-												●					●				
	CNGA120408T01020	T01020	80	12.7	4.76	-	0.8	-	-	-	-	-																		●		●	
	CNGA120408T01025	T01025	80	12.7	4.76	-	0.8	-	-	-	-	-									●		●	●									
	CNGA120408T02020	T02020	80	12.7	4.76	-	0.8	-	-	-	-	-												●					●				
	CNGA120408T02025	T02025	80	12.7	4.76	-	0.8	-	-	-	-	-																					
	CNGA120408X01015	X01015	80	12.7	4.76	-	0.8	-	-	-	-	-						●											●				
	CNGA120408X01015-10	X01015	80	12.7	4.76	-	0.8	-	-	-	-	-						●															
	CNGA120408Z02025	Z02025	80	12.7	4.76	-	0.8	-	-	-	-	-									●												
	CNGA120412BQE004	E004	80	12.7	4.76	-	1.2	-	-	-	-	-	●																				
	CNGA120412BQT00520	T00520	80	12.7	4.76	-	1.2	-	-	-	-	-	●																				
	CNGA120412S02025	S02025	80	12.7	4.76	-	1.2	-	-	-	-	-												●									
	CNGA120412T00520	T00520	80	12.7	4.76	-	1.2	-	-	-	-	-																	●				
	CNGA120412T01020	T01020	80	12.7	4.76	-	1.2	-	-	-	-	-																			●		●
	CNGA120412T01025	T01025	80	12.7	4.76	-	1.2	-	-	-	-	-							●		●		●	●							●		●
	CNGA120412T02020	T02020	80	12.7	4.76	-	1.2	-	-	-	-	-									●												
	CNGA120412T02025	T02025	80	12.7	4.76	-	1.2	-	-	-	-	-																					
	CNGA120412X01015	X01015	80	12.7	4.76	-	1.2	-	-	-	-	-						●															
	CNGA120412X01015-10	X01015	80	12.7	4.76	-	1.2	-	-	-	-	-						●															
	CNGA120416T00520	T00520	80	12.7	4.76	-	1.6	-	-	-	-	-																	●				
	CNGA120416T01020	T01020	80	12.7	4.76	-	1.6	-	-	-	-	-																			●		
	CNGA120416T02020	T02020	80	12.7	4.76	-	1.6	-	-	-	-	-																			●		
	CNGA120416T02025	T02025	80	12.7	4.76	-	1.6	-	-	-	-	-																			●		

■ CNGA-WL with wiper for higher feed

[illegible]

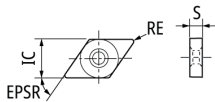
Shape	Item Number	CECC	EPSR	IC	S	AN	RE	D1	D2	INSL	S1	W1	BIDEMICS				NTK CeramiX	Alumina Ceramics							Silicon Nitride Ceramics				Whisker Ceramics							
													PVD	PVD	JX1	JX3		PVD	HC1	HW2	HC2	HC4	HC6	HC7	ZC7	PVD	SX3	SX5	SX7	SX9	SX6	SP9	CVD	WA1	WA5	
	CNGA120408WLT01025	T01025	80	12.7	4.76	-	0.8	-	-	-	-	-	120	PVD	PVD	JX1	JX3	450	PVD	HC1	HW2	HC2	HC4	HC6	HC7	ZC7	PVD	SX3	SX5	SX7	SX9	SX6	SP9	CVD	WA1	WA5
	CNGA120412WLT01025	T01025	80	12.7	4.76	-	1.2	-	-	-	-	-	120	PVD	PVD	JX1	JX3	450	PVD	HC1	HW2	HC2	HC4	HC6	HC7	ZC7	PVD	SX3	SX5	SX7	SX9	SX6	SP9	CVD	WA1	WA5

Wiper Width: R0.4: 0.35mm, R0.8: 0.65mm, R1.2: 0.85mm

Applicable holders: 95° cutting edge angle (C31, CCLN), 75° cutting edge angle (CCBN).

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

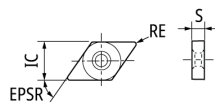
DNGN



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		450 PVD	HC1	HW2	HC2	HC4	HC6	HC7	ZC7 PVD	SX3	SX5	SX7	SX9	SX6	SP9 CVD	WA1	WA5
(ISO)	°	mm	mm	°	mm	mm	mm	mm	mm	mm	mm	120	JP2	JX1	JX3	450	HC1	HW2	HC2	HC4	HC6	HC7	ZC7	SX3	SX5	SX7	SX9	SX6	SP9	WA1	WA5		
	DNGN150404T01025	T01025	55	12.7	4.76	-	0.4	-	-	-	-	-																					
	DNGN150408S02025	S02025	55	12.7	4.76	-	0.8	-	-	-	-	-																					
	DNGN150408T01025	T01025	55	12.7	4.76	-	0.8	-	-	-	-	-																					
	DNGN150408Z02025	Z02025	55	12.7	4.76	-	0.8	-	-	-	-	-																					
	DNGN150412T00520	T00520	55	12.7	4.76	-	1.2	-	-	-	-	-																					
	DNGN150412T02025	T02025	55	12.7	4.76	-	1.2	-	-	-	-	-																					
DNGN150712T02025	T02025	55	12.7	7.94	-	1.2	-	-	-	-	-																						

DNGA

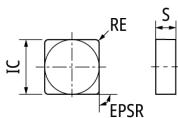


Steel
Stainless Steel
Cast Iron
Non-Ferrous Material
Heat Resistant Alloy
Hardened Material
Others (non-metallic)

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	JP1	JP3		PVD	HC1	HW2	HC2	HC4	HC6	HC7	PVD	SX3	SX5	SX7	SX9	SX6	CVD	SP9	WA1	WA5
(ISO)	°	mm	mm	°	mm	mm	mm	mm	mm	mm	mm	mm	120	JP2	JP1	JP3	450	HC1	HW2	HC2	HC4	HC6	HC7	PVD	SX3	SX5	SX7	SX9	SX6	CVD	SP9	WA1	WA5	
	DNGA150404BQE004	E004	55	12.7	4.76	-	0.4	-	-	-	-	-																						
	DNGA150404BQT00520	T00520	55	12.7	4.76	-	0.4	-	-	-	-	-																						
	DNGA150404S02025	S02025	55	12.7	4.76	-	0.4	-	-	-	-	-																						
	DNGA150404T01025	T01025	55	12.7	4.76	-	0.4	-	-	-	-	-																						
	DNGA150404X01015	X01015	55	12.7	4.76	-	0.4	-	-	-	-	-																						
	DNGA150404X01015-10	X01015	55	12.7	4.76	-	0.4	-	-	-	-	-																						
	DNGA150404Z02025	Z02025	55	12.7	4.76	-	0.4	-	-	-	-	-																						
	DNGA150408BQE004	E004	55	12.7	4.76	-	0.8	-	-	-	-	-																						
	DNGA150408BQT00520	T00520	55	12.7	4.76	-	0.8	-	-	-	-	-																						
	DNGA150408S02025	S02025	55	12.7	4.76	-	0.8	-	-	-	-	-																						
	DNGA150408T00520	T00520	55	12.7	4.76	-	0.8	-	-	-	-	-																						
	DNGA150408T01020	T01020	55	12.7	4.76	-	0.8	-	-	-	-	-																						
	DNGA150408T01025	T01025	55	12.7	4.76	-	0.8	-	-	-	-	-																						
	DNGA150408T02020	T02020	55	12.7	4.76	-	0.8	-	-	-	-	-																						
	DNGA150408T02025	T02025	55	12.7	4.76	-	0.8	-	-	-	-	-																						
	DNGA150408X01015	X01015	55	12.7	4.76	-	0.8	-	-	-	-	-																						
	DNGA150408X01015-10	X01015	55	12.7	4.76	-	0.8	-	-	-	-	-																						
	DNGA150408Z02025	Z02025	55	12.7	4.76	-	0.8	-	-	-	-	-																						
	DNGA150412BQE004	E004	55	12.7	4.76	-	1.2	-	-	-	-	-																						
	DNGA150412BQT00520	T00520	55	12.7	4.76	-	1.2	-	-	-	-	-																						
	DNGA150412S02025	S02025	55	12.7	4.76	-	1.2	-	-	-	-	-																						
	DNGA150412T01020	T01020	55	12.7	4.76	-	1.2	-	-	-	-	-																						
	DNGA150412T01025	T01025	55	12.7	4.76	-	1.2	-	-	-	-	-																						
	DNGA150412T02020	T02020	55	12.7	4.76	-	1.2	-	-	-	-	-																						
	DNGA150412T02025	T02025	55	12.7	4.76	-	1.2	-	-	-	-	-																						
	DNGA150412X01015	X01015	55	12.7	4.76	-	1.2	-	-	-	-	-																						
	DNGA150412X01015-10	X01015	55	12.7	4.76	-	1.2	-	-	-	-	-																						

SN.. series/Inserts BIDEMICS / Ceramics / NTK CeramiX

SNGN



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

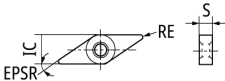
Shape	Item Number	CECC	EPSR	IC	S	AN	RE	D1	D2	INSL	S1	W1	BIDEMICS				NTK CeramiX	Alumina Ceramics							Silicon Nitride Ceramics						Whisker Ceramics			
			(ISO)	°	mm	mm	°	mm	mm	mm	mm	mm	mm	mm	mm	PVD 120	PVD JP2	PVD JX1	PVD JX3	PVD 450	HC1	HW2	HC2	HC4	HC6	HC7	PVD ZC7	SX3	SX5	SX7	SX9	SX6	CVD SP9	WA1
	SNGN120404T01025	T01025	90	12.7	4.76	-	0.4	-	-	-	-	-									●													
	SNGN120408S02025	S02025	90	12.7	4.76	-	0.8	-	-	-	-	-													●									
	SNGN120408T00520	T00520	90	12.7	4.76	-	0.8	-	-	-	-	-																						
	SNGN120408T00820	T00820	90	12.7	4.76	-	0.8	-	-	-	-	-																						
	SNGN120408T01020	T01020	90	12.7	4.76	-	0.8	-	-	-	-	-																						
	SNGN120408T01025	T01025	90	12.7	4.76	-	0.8	-	-	-	-	-							●		●		●		●									
	SNGN120408T02020	T02020	90	12.7	4.76	-	0.8	-	-	-	-	-									●		●											
	SNGN120408T02025	T02025	90	12.7	4.76	-	0.8	-	-	-	-	-																						
	SNGN120408Z02025	Z02025	90	12.7	4.76	-	0.8	-	-	-	-	-																						
	SNGN120412S02025	S02025	90	12.7	4.76	-	1.2	-	-	-	-	-														●								
	SNGN120412T00520	T00520	90	12.7	4.76	-	1.2	-	-	-	-	-																						
	SNGN120412T00820	T00820	90	12.7	4.76	-	1.2	-	-	-	-	-																						
	SNGN120412T01020	T01020	90	12.7	4.76	-	1.2	-	-	-	-	-																						
	SNGN120412T01025	T01025	90	12.7	4.76	-	1.2	-	-	-	-	-								●		●		●		●								
	SNGN120412T02020	T02020	90	12.7	4.76	-	1.2	-	-	-	-	-										●		●										
	SNGN120412T02025	T02025	90	12.7	4.76	-	1.2	-	-	-	-	-																						
	SNGN120412Z02025	Z02025	90	12.7	4.76	-	1.2	-	-	-	-	-																						
	SNGN120416S02025	S02025	90	12.7	4.76	-	1.6	-	-	-	-	-																						
	SNGN120416T00520	T00520	90	12.7	4.76	-	1.6	-	-	-	-	-																						
	SNGN120416T01020	T01020	90	12.7	4.76	-	1.6	-	-	-	-	-																						
	SNGN120416T01025	T01025	90	12.7	4.76	-	1.6	-	-	-	-	-								●		●		●		●								
	SNGN120416T02020	T02020	90	12.7	4.76	-	1.6	-	-	-	-	-																						
	SNGN120416T02025	T02025	90	12.7	4.76	-	1.6	-	-	-	-	-																						
	SNGN120416Z02025	Z02025	90	12.7	4.76	-	1.6	-	-	-	-	-																						
	SNGN120420T01020	T01020	90	12.7	4.76	-	2	-	-	-	-	-																						
	SNGN120420T01025	T01025	90	12.7	4.76	-	2	-	-	-	-	-										●		●										
	SNGN120420T02020	T02020	90	12.7	4.76	-	2	-	-	-	-	-																						
	SNGN120420T02025	T02025	90	12.7	4.76	-	2	-	-	-	-	-								●														
	SNGN120424T01025	T01025	90	12.7	4.76	-	2.4	-	-	-	-	-											●											
	SNGN120424T02020	T02020	90	12.7	4.76	-	2.4	-	-	-	-	-																						
	SNGN120708T02025	T02025	90	12.7	7.94	-	0.8	-	-	-	-	-								●		●												
	SNGN120712S02025	S02025	90	12.7	7.94	-	1.2	-	-	-	-	-										●												
SNGN120712T02025	T02025	90	12.7	7.94	-	1.2	-	-	-	-	-											●												
SNGN120716T02025	T02025	90	12.7	7.94	-	1.6	-	-	-	-	-									●														

General Turning
Toolholders



VN.. series/Inserts BIDEMICS / Ceramics / NTK CeramiX

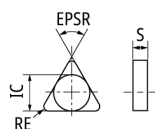
VNGA



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

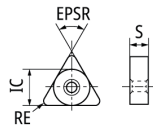
Shape	Item Number	CECC	EPSR	IC	S	AN	RE	D1	D2	INSL	S1	W1	BIDEMICS				NTK CeramiX	Alumina Ceramics							Silicon Nitride Ceramics					Whisker Ceramics			
													PVD	PVD	JX1	JX3		PVD	HC1	HW2	HC2	HC4	HC6	HC7	PVD	SX3	SX5	SX7	SX9	SX6	SP9	WA1	WA5
(ISO)	°	mm	mm	°	mm	mm	mm	mm	mm	mm	mm	120	JP2	JP2	JX1	JX3	450	HC1	HW2	HC2	HC4	HC6	HC7	PVD	SX3	SX5	SX7	SX9	SX6	SP9	WA1	WA5	
	VNGA160404BQE004	E004	35	9.525	4.76	-	0.4	-	-	-	-	-																					
	VNGA160404BQT00520	T00520	35	9.525	4.76	-	0.4	-	-	-	-	-																					
	VNGA160404S02025	S02025	35	9.525	4.76	-	0.4	-	-	-	-	-																					
	VNGA160404T01020	T01020	35	9.525	4.76	-	0.4	-	-	-	-	-																					
	VNGA160404T01025	T01025	35	9.525	4.76	-	0.4	-	-	-	-	-																					
	VNGA160404X01015	X01015	35	9.525	4.76	-	0.4	-	-	-	-	-																					
	VNGA160404X01015-10	X01015	35	9.525	4.76	-	0.4	-	-	-	-	-																					
	VNGA160404Z02025	Z02025	35	9.525	4.76	-	0.4	-	-	-	-	-																					
	VNGA160408BQE004	E004	35	9.525	4.76	-	0.8	-	-	-	-	-																					
	VNGA160408BQT00520	T00520	35	9.525	4.76	-	0.8	-	-	-	-	-																					
	VNGA160408S02025	S02025	35	9.525	4.76	-	0.8	-	-	-	-	-																					
	VNGA160408T00520	T00520	35	9.525	4.76	-	0.8	-	-	-	-	-																					
	VNGA160408T01020	T01020	35	9.525	4.76	-	0.8	-	-	-	-	-																					
	VNGA160408T01025	T01025	35	9.525	4.76	-	0.8	-	-	-	-	-																					
	VNGA160408X01015	X01015	35	9.525	4.76	-	0.8	-	-	-	-	-																					
	VNGA160408X01015-10	X01015	35	9.525	4.76	-	0.8	-	-	-	-	-																					
	VNGA160408Z02025	Z02025	35	9.525	4.76	-	0.8	-	-	-	-	-																					
	VNGA160412BQT00520	T00520	35	9.525	4.76	-	1.2	-	-	-	-	-																					
	VNGA160412S02025	S02025	35	9.525	4.76	-	1.2	-	-	-	-	-																					
	VNGA160412T01020	T01020	35	9.525	4.76	-	1.2	-	-	-	-	-																					
	VNGA160412T01025	T01025	35	9.525	4.76	-	1.2	-	-	-	-	-																					
	VNGA160412X01015	X01015	35	9.525	4.76	-	1.2	-	-	-	-	-																					
	VNGA160412X01015-10	X01015	35	9.525	4.76	-	1.2	-	-	-	-	-																					
	VNGA160412Z02025	Z02025	35	9.525	4.76	-	1.2	-	-	-	-	-																					
	VNGA220424T01020	T01020	35	12.7	4.76	-	2.4	-	-	-	-	-																					

TNGN



	Steel	Stainless Steel	Cast Iron	Non-Ferrous Material	Heat Resistant Alloy	Hardened Material	Others (non-metallic)
Material							
Properties							
Strength							
Toughness							
Corrosion Resistance							
Wear Resistance							
Thermal Stability							
Machinability							
Cost							

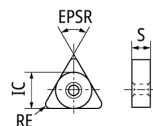
[illegible]



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

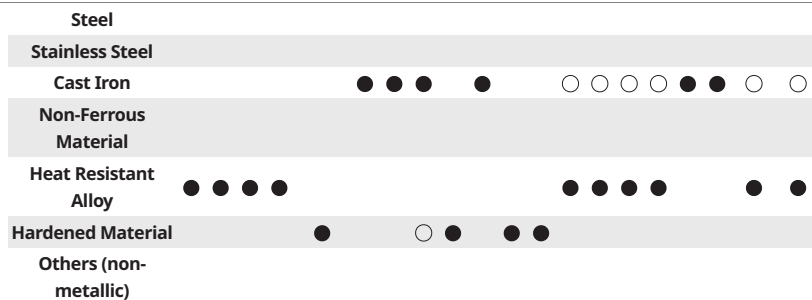
Shape	Item Number	CECC	EPSR	IC	S	AN	RE	D1	D2	INSL	S1	W1	BIDEMICS				NTK CeramIX	Alumina Ceramics							Silicon Nitride Ceramics						Whisker Ceramics	
													(ISO)	°	mm	mm	°	mm	mm	mm	mm	mm	mm	120 PVD	JP2 PVD	JX1	JX3	450 PVD	HC1	HW2	HC2	HC4
	TNGA160404S02025	S02025	60	9.525	4.76	-	0.4	-	-	-	-	-												●								
	TNGA160404T01025	T01025	60	9.525	4.76	-	0.4	-	-	-	-	-											●									
	TNGA160404X01015	X01015	60	9.525	4.76	-	0.4	-	-	-	-	-				●																
	TNGA160404X01015-10	X01015	60	9.525	4.76	-	0.4	-	-	-	-	-				●																
	TNGA160404Z02025	Z02025	60	9.525	4.76	-	0.4	-	-	-	-	-								●												
	TNGA160408S02025	S02025	60	9.525	4.76	-	0.8	-	-	-	-	-												●								
	TNGA160408T01025	T01025	60	9.525	4.76	-	0.8	-	-	-	-	-							●		●		●									
	TNGA160408T02020	T02020	60	9.525	4.76	-	0.8	-	-	-	-	-																	●			
	TNGA160408T02025	T02025	60	9.525	4.76	-	0.8	-	-	-	-	-															●					
	TNGA160408X01015	X01015	60	9.525	4.76	-	0.8	-	-	-	-	-				●																
	TNGA160408X01015-10	X01015	60	9.525	4.76	-	0.8	-	-	-	-	-				●																
	TNGA160408Z02025	Z02025	60	9.525	4.76	-	0.8	-	-	-	-	-									●											
	TNGA160412S02025	S02025	60	9.525	4.76	-	1.2	-	-	-	-	-												●								
	TNGA160412T01025	T01025	60	9.525	4.76	-	1.2	-	-	-	-	-								●		●		●								
	TNGA160412T02020	T02020	60	9.525	4.76	-	1.2	-	-	-	-	-																	●			
	TNGA160412T02025	T02025	60	9.525	4.76	-	1.2	-	-	-	-	-																●				
	TNGA160412X01015	X01015	60	9.525	4.76	-	1.2	-	-	-	-	-				●																
	TNGA160412X01015-10	X01015	60	9.525	4.76	-	1.2	-	-	-	-	-				●																
	TNGA160416T02025	T02025	60	9.525	4.76	-	1.6	-	-	-	-	-																●				

TNGG-AG with chipbreaker



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

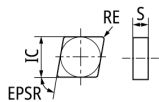
Shape	Item Number	CECC	EPSR	IC	S	AN	RE	D1	D2	INSL	S1	W1	BIDEMICS				NTK CeramIX	Alumina Ceramics							Silicon Nitride Ceramics						Whisker Ceramics		
													PVD	PVD	JX1	JX3	PVD	HC1	HW2	HC2	HC4	HC6	HC7	ZC7	PVD	SX3	SX5	SX7	SX9	SX6	SP9	WA1	WA5
(ISO)	°	mm	mm	°	mm	mm	mm	mm	mm	mm	mm	mm	120	JP2	JX1	JX3	450	HC1	HW2	HC2	HC4	HC6	HC7	ZC7	SX3	SX5	SX7	SX9	SX6	SP9	WA1	WA5	
	TNGG160408Z01030AG	Z01030	60	9.525	4.76	-	0.8	-	-	-	-	-																					
	TNGG160412Z01030AG	Z01030	60	9.525	4.76	-	1.2	-	-	-	-	-																					

RNGN

Shape	Item Number	CECC	EPSPR	IC	S	AN	RE	D1	D2	INSL	S1	W1	BIDEMICS				NTK	CeramiX	Alumina Ceramics							Silicon Nitride Ceramics						Whisker Ceramics						
															PVD	PVD		PVD	HC1	HW2	HC2	HC4	HC6	HC7	PVD	SX3	SX5	SX7	SX9	SX6	SP9	WA1	WA5					
			(ISO)	°	mm	mm	°	mm	mm	mm	mm	mm	mm	mm	mm	120	JP2	JX1	JX3	450	HC1	HW2	HC2	HC4	HC6	HC7	PVD	ZC7	SX3	SX5	SX7	SX9	SX6	SP9	WA1	WA5		
	RNGN120400S02025	S02025	-	12.7	4.76	-	-	-	-	-	-	-													●													
	RNGN120400T00520	T00520	-	12.7	4.76	-	-	-	-	-	-	-														●									●			
	RNGN120400T00525	T00525	-	12.7	4.76	-	-	-	-	-	-	-																							●			
	RNGN120400T00820	T00820	-	12.7	4.76	-	-	-	-	-	-	-																								●		
	RNGN120400T01020	T01020	-	12.7	4.76	-	-	-	-	-	-	-																								●		
	RNGN120400T01025	T01025	-	12.7	4.76	-	-	-	-	-	-	-									●					●										●		
	RNGN120400T02020	T02020	-	12.7	4.76	-	-	-	-	-	-	-										●																
	RNGN120400T02025	T02025	-	12.7	4.76	-	-	-	-	-	-	-																										
	RNGN120400Z02025	Z02025	-	12.7	4.76	-	-	-	-	-	-	-											●															
	RNGN120700E002	E002	-	12.7	7.94	-	-	-	-	-	-	-																								●		
	RNGN120700E004	E004	-	12.7	7.94	-	-	-	-	-	-	-				●	●											●		●								
	RNGN120700E007	E007	-	12.7	7.94	-	-	-	-	-	-	-										●																
	RNGN120700K20015	K20015	-	12.7	7.94	-	-	-	-	-	-	-																									★	
	RNGN120700S02025	S02025	-	12.7	7.94	-	-	-	-	-	-	-														●												
	RNGN120700T00520	T00520	-	12.7	7.94	-	-	-	-	-	-	-															●										●	
	RNGN120700T00525	T00525	-	12.7	7.94	-	-	-	-	-	-	-																●									●	
	RNGN120700T00820	T00820	-	12.7	7.94	-	-	-	-	-	-	-				●	●												●								●	
	RNGN120700T01020	T01020	-	12.7	7.94	-	-	-	-	-	-	-																									●	
	RNGN120700T02025	T02025	-	12.7	7.94	-	-	-	-	-	-	-									●					●												
	RNGN120700Z01520	Z01520	-	12.7	7.94	-	-	-	-	-	-	-																									●	
	RNGN120700Z02025	Z02025	-	12.7	7.94	-	-	-	-	-	-	-											●															
	RNGN150700T00520	T00520	-	15.875	7.94	-	-	-	-	-	-	-																									●	
	RNGN150700T00525	T00525	-	15.875	7.94	-	-	-	-	-	-	-																									●	
	RNGN150700T00820	T00820	-	15.875	7.94	-	-	-	-	-	-	-																										●
	RNGN190700K20015	K20015	-	19.05	7.94	-	-	-	-	-	-	-																										●
	RNGN190700T00520	T00520	-	19.05	7.94	-	-	-	-	-	-	-																										●
	RNGN190700T00525	T00525	-	19.05	7.94	-	-	-	-	-	-	-																										●
	RNGN190700T00820	T00820	-	19.05	7.94	-	-	-	-	-	-	-																										●
	RNGN190700T01020	T01020	-	19.05	7.94	-	-	-	-	-	-	-																										●
	RNGN250700T00520	T00520	-	25.4	7.94	-	-	-	-	-	-	-																										●
	RNGN250700T00820	T00820	-	25.4	7.94	-	-	-	-	-	-	-																										●

CN.. series/Inserts BIDEMICS / Ceramics / NTK CeramiX

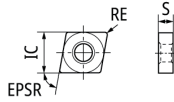
CNGN



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			
			°	mm	mm	°	mm	mm	mm	mm	mm	mm	mm	120 PVD	JP2 PVD	JX1	JX3	450 PVD	HC1	HW2	HC2	HC4	HC6	HC7	ZC7 PVD	SX3	SX5	SX7	SX9	SX6	SP9 CVD	WA1	WA5
	CNGN120404T01025	T01025	80	12.7	4.76	-	0.4	-	-	-	-	-									●		●										
	CNGN120408S02025	S02025	80	12.7	4.76	-	0.8	-	-	-	-	-												●									
	CNGN120408T00520	T00520	80	12.7	4.76	-	0.8	-	-	-	-	-																●					●
	CNGN120408T00820	T00820	80	12.7	4.76	-	0.8	-	-	-	-	-																					●
	CNGN120408T01020	T01020	80	12.7	4.76	-	0.8	-	-	-	-	-																					
	CNGN120408T01025	T01025	80	12.7	4.76	-	0.8	-	-	-	-	-									●		●		●								
	CNGN120408T02020	T02020	80	12.7	4.76	-	0.8	-	-	-	-	-									●		●		●								
	CNGN120408T02025	T02025	80	12.7	4.76	-	0.8	-	-	-	-	-							●									●					●
	CNGN120408Z02025	Z02025	80	12.7	4.76	-	0.8	-	-	-	-	-										●											
	CNGN120412S02025	S02025	80	12.7	4.76	-	1.2	-	-	-	-	-													●								
	CNGN120412T00520	T00520	80	12.7	4.76	-	1.2	-	-	-	-	-																●					●
	CNGN120412T00820	T00820	80	12.7	4.76	-	1.2	-	-	-	-	-																					●
	CNGN120412T01020	T01020	80	12.7	4.76	-	1.2	-	-	-	-	-																					
	CNGN120412T01025	T01025	80	12.7	4.76	-	1.2	-	-	-	-	-							●		●		●		●								●
	CNGN120412T02020	T02020	80	12.7	4.76	-	1.2	-	-	-	-	-																	●				
	CNGN120412T02025	T02025	80	12.7	4.76	-	1.2	-	-	-	-	-							●									●					●
	CNGN120412Z02025	Z02025	80	12.7	4.76	-	1.2	-	-	-	-	-										●											
	CNGN120416T00520	T00520	80	12.7	4.76	-	1.6	-	-	-	-	-																					●
	CNGN120416T01020	T01020	80	12.7	4.76	-	1.6	-	-	-	-	-																					●
	CNGN120416T02020	T02020	80	12.7	4.76	-	1.6	-	-	-	-	-																					●
	CNGN120416T02025	T02025	80	12.7	4.76	-	1.6	-	-	-	-	-																					●
	CNGN120420T01025	T01025	80	12.7	4.76	-	2	-	-	-	-	-												●									
	CNGN120708T00520	T00520	80	12.7	7.94	-	0.8	-	-	-	-	-																					●
	CNGN120708T02025	T02025	80	12.7	7.94	-	0.8	-	-	-	-	-									●												
	CNGN120712T02025	T02025	80	12.7	7.94	-	1.2	-	-	-	-	-									●												

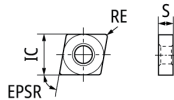
ID Tooling



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	JP1	JP3			PVD	HC1	HW2	HC2	HC4	HC6	HC7	ZC7	SX3	SX5	SX7	SX9	SX6	SP9	WA1	WA5
(ISO)	°	mm	mm	°	mm	mm	mm	mm	mm	mm	mm	mm	120	JP2	JP1	JP3	450	HC1	HW2	HC2	HC4	HC6	HC7	ZC7	SX3	SX5	SX7	SX9	SX6	SP9	WA1	WA5		
	CNGA120404BQE004	E004	80	12.7	4.76	-	0.4	-	-	-	-	-																						
	CNGA120404BQT00520	T00520	80	12.7	4.76	-	0.4	-	-	-	-	-																						
	CNGA120404S02025	S02025	80	12.7	4.76	-	0.4	-	-	-	-	-																						
	CNGA120404T01025	T01025	80	12.7	4.76	-	0.4	-	-	-	-	-																						
	CNGA120404X01015	X01015	80	12.7	4.76	-	0.4	-	-	-	-	-																						
	CNGA120404X01015-10	X01015	80	12.7	4.76	-	0.4	-	-	-	-	-																						
	CNGA120404Z02025	Z02025	80	12.7	4.76	-	0.4	-	-	-	-	-																						
	CNGA120408BQE004	E004	80	12.7	4.76	-	0.8	-	-	-	-	-																						
	CNGA120408BQT00520	T00520	80	12.7	4.76	-	0.8	-	-	-	-	-																						
	CNGA120408S02025	S02025	80	12.7	4.76	-	0.8	-	-	-	-	-																						
	CNGA120408T00520	T00520	80	12.7	4.76	-	0.8	-	-	-	-	-																						
	CNGA120408T01020	T01020	80	12.7	4.76	-	0.8	-	-	-	-	-																						
	CNGA120408T01025	T01025	80	12.7	4.76	-	0.8	-	-	-	-	-																						
	CNGA120408T02020	T02020	80	12.7	4.76	-	0.8	-	-	-	-	-																						
	CNGA120408T02025	T02025	80	12.7	4.76	-	0.8	-	-	-	-	-																						
	CNGA120408X01015	X01015	80	12.7	4.76	-	0.8	-	-	-	-	-																						
	CNGA120408X01015-10	X01015	80	12.7	4.76	-	0.8	-	-	-	-	-																						
	CNGA120408Z02025	Z02025	80	12.7	4.76	-	0.8	-	-	-	-	-																						
	CNGA120412BQE004	E004	80	12.7	4.76	-	1.2	-	-	-	-	-																						
	CNGA120412BQT00520	T00520	80	12.7	4.76	-	1.2	-	-	-	-	-																						
	CNGA120412S02025	S02025	80	12.7	4.76	-	1.2	-	-	-	-	-																						
	CNGA120412T00520	T00520	80	12.7	4.76	-	1.2	-	-	-	-	-																						
	CNGA120412T01020	T01020	80	12.7	4.76	-	1.2	-	-	-	-	-																						
	CNGA120412T01025	T01025	80	12.7	4.76	-	1.2	-	-	-	-	-																						
	CNGA120412T02020	T02020	80	12.7	4.76	-	1.2	-	-	-	-	-																						
	CNGA120412T02025	T02025	80	12.7	4.76	-	1.2	-	-	-	-	-																						
	CNGA120412X01015	X01015	80	12.7	4.76	-	1.2	-	-	-	-	-																						
	CNGA120412X01015-10	X01015	80	12.7	4.76	-	1.2	-	-	-	-	-																						
	CNGA120416T00520	T00520	80	12.7	4.76	-	1.6	-	-	-	-	-																						
	CNGA120416T01020	T01020	80	12.7	4.76	-	1.6	-	-	-	-	-																						
	CNGA120416T02020	T02020	80	12.7	4.76	-	1.6	-	-	-	-	-																						
	CNGA120416T02025	T02025	80	12.7	4.76	-	1.6	-	-	-	-	-																						

CNGA-WL with wiper for higher feed



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

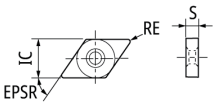
Shape	Item Number	CECC	EPSR	IC	S	AN	RE	D1	D2	INSL	S1	W1	BIDEMICS				NTK	CeramiX	Alumina Ceramics							Silicon Nitride Ceramics					Whisker Ceramics					
													PVD	PVD	JX1	JX3			PVD	HC1	HW2	HC2	HC4	HC6	HC7	ZC7	PVD	SX3	SX5	SX7	SX9	SX6	SP9	CVD	WA1	WA5
(ISO)	°	mm	mm	°	mm	mm	mm	mm	mm	mm	mm	mm	120	JP2	JX1	JX3	450	HC1	HW2	HC2	HC4	HC6	HC7	ZC7	PVD	SX3	SX5	SX7	SX9	SX6	SP9	CVD	WA1	WA5		
	CNGA120408WLT01025	T01025	80	12.7	4.76	-	0.8	-	-	-	-	-																								
	CNGA120412WLT01025	T01025	80	12.7	4.76	-	1.2	-	-	-	-	-																								

Wiper Width: R0.4: 0.35mm, R0.8: 0.65mm, R1.2: 0.85mm

Applicable holders: 95° cutting edge angle (C31, CCLN), 75° cutting edge angle (CCBN).

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

DNGN



Steel

Stainless Steel

Cast Iron

Non-Ferrous Material

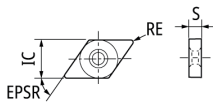
Heat Resistant Alloy

Hardened Material

Others (non-metallic)

Shape	Item Number	CECC	EPSR	IC	S	AN	RE	D1	D2	INSL	S1	W1	BIDE MICS				NTK CeramiX	Alumina Ceramics							Silicon Nitride Ceramics						Whisker Ceramics	
	(ISO)		°	mm	mm	°	mm	mm	mm	mm	mm	mm	120 PVD	JP2 PVD	JX1	JX3	450 PVD	HC1	HW2	HC2	HC4	HC6	HC7	ZC7 PVD	SX3	SX5	SX7	SX9	SX6	SP9 CVD	WA1	WA5
	DNGN150404T01025	T01025	55	12.7	4.76	-	0.4	-	-	-	-	-																				
	DNGN150408S02025	S02025	55	12.7	4.76	-	0.8	-	-	-	-	-																				
	DNGN150408T01025	T01025	55	12.7	4.76	-	0.8	-	-	-	-	-																				
	DNGN150408Z02025	Z02025	55	12.7	4.76	-	0.8	-	-	-	-	-																				
	DNGN150412T00520	T00520	55	12.7	4.76	-	1.2	-	-	-	-	-																				
	DNGN150412T02025	T02025	55	12.7	4.76	-	1.2	-	-	-	-	-																				
	DNGN150712T02025	T02025	55	12.7	7.94	-	1.2	-	-	-	-	-																				

DNGA



Steel

Stainless Steel

Cast Iron

Non-Ferrous Material

Heat Resistant Alloy

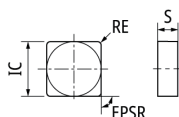
Hardened Material

Others (non-metallic)

Shape	Item Number	CECC	EPSR	IC	S	AN	RE	D1	D2	INSL	S1	W1	BIDE MICS				NTK CeramiX	Alumina Ceramics							Silicon Nitride Ceramics						Whisker Ceramics	
	(ISO)		°	mm	mm	°	mm	mm	mm	mm	mm	mm	120 PVD	JP2 PVD	JX1	JX3	450 PVD	HC1	HW2	HC2	HC4	HC6	HC7	ZC7 PVD	SX3	SX5	SX7	SX9	SX6	SP9 CVD	WA1	WA5
	DNGA150404BQE004	E004	55	12.7	4.76	-	0.4	-	-	-	-	-																				
	DNGA150404BQT00520	T00520	55	12.7	4.76	-	0.4	-	-	-	-	-																				
	DNGA150404S02025	S02025	55	12.7	4.76	-	0.4	-	-	-	-	-																				
	DNGA150404T01025	T01025	55	12.7	4.76	-	0.4	-	-	-	-	-																				
	DNGA150404X01015	X01015	55	12.7	4.76	-	0.4	-	-	-	-	-																				
	DNGA150404X01015-10	X01015	55	12.7	4.76	-	0.4	-	-	-	-	-																				
	DNGA150404Z02025	Z02025	55	12.7	4.76	-	0.4	-	-	-	-	-																				
	DNGA150408BQE004	E004	55	12.7	4.76	-	0.8	-	-	-	-	-																				
	DNGA150408BQT00520	T00520	55	12.7	4.76	-	0.8	-	-	-	-	-																				
	DNGA150408S02025	S02025	55	12.7	4.76	-	0.8	-	-	-	-	-																				
	DNGA150408T00520	T00520	55	12.7	4.76	-	0.8	-	-	-	-	-																				
	DNGA150408T01020	T01020	55	12.7	4.76	-	0.8	-	-	-	-	-																				
	DNGA150408T01025	T01025	55	12.7	4.76	-	0.8	-	-	-	-	-																				
	DNGA150408T02020	T02020	55	12.7	4.76	-	0.8	-	-	-	-	-																				
	DNGA150408T02025	T02025	55	12.7	4.76	-	0.8	-	-	-	-	-																				
	DNGA150408X01015	X01015	55	12.7	4.76	-	0.8	-	-	-	-	-																				
	DNGA150408X01015-10	X01015	55	12.7	4.76	-	0.8	-	-	-	-	-																				
	DNGA150408Z02025	Z02025	55	12.7	4.76	-	0.8	-	-	-	-	-																				
	DNGA150412BQE004	E004	55	12.7	4.76	-	1.2	-	-	-	-	-																				
	DNGA150412BQT00520	T00520	55	12.7	4.76	-	1.2	-	-	-	-	-																				
	DNGA150412S02025	S02025	55	12.7	4.76	-	1.2	-	-	-	-	-																				
	DNGA150412T01020	T01020	55	12.7	4.76	-	1.2	-	-	-	-	-																				
	DNGA150412T01025	T01025	55	12.7	4.76	-	1.2	-	-	-	-	-																				
	DNGA150412T02020	T02020	55	12.7	4.76	-	1.2	-	-	-	-	-																				
	DNGA150412T02025	T02025	55	12.7	4.76	-	1.2	-	-	-	-	-																				
	DNGA150412X01015	X01015	55	12.7	4.76	-	1.2	-	-	-	-	-																				
	DNGA150412X01015-10	X01015	55	12.7	4.76	-	1.2	-	-	-	-	-																				

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

SNGN



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		PVD	HC1	HW2	HC2	HC4	HC6	HC7	PVD	SX3	SX5	SX7	SX9	SX6	CVD	WA1	WA5	
(ISO)	°	mm	mm	°	mm	mm	mm	mm	mm	mm	mm	mm	120	JP2	JX1	JX3	450	HC1	HW2	HC2	HC4	HC6	HC7	ZC7	SX3	SX5	SX7	SX9	SX6	SP9	WA1	WA5		
	SNGN120404T01025	T01025	90	12.7	4.76	-	0.4	-	-	-	-	-																						
	SNGN120408S02025	S02025	90	12.7	4.76	-	0.8	-	-	-	-	-																						
	SNGN120408T00520	T00520	90	12.7	4.76	-	0.8	-	-	-	-	-																						
	SNGN120408T00820	T00820	90	12.7	4.76	-	0.8	-	-	-	-	-																						
	SNGN120408T01020	T01020	90	12.7	4.76	-	0.8	-	-	-	-	-																						
	SNGN120408T01025	T01025	90	12.7	4.76	-	0.8	-	-	-	-	-																						
	SNGN120408T02020	T02020	90	12.7	4.76	-	0.8	-	-	-	-	-																						
	SNGN120408T02025	T02025	90	12.7	4.76	-	0.8	-	-	-	-	-																						
	SNGN120408Z02025	Z02025	90	12.7	4.76	-	0.8	-	-	-	-	-																						
	SNGN120412S02025	S02025	90	12.7	4.76	-	1.2	-	-	-	-	-																						
	SNGN120412T00520	T00520	90	12.7	4.76	-	1.2	-	-	-	-	-																						
	SNGN120412T00820	T00820	90	12.7	4.76	-	1.2	-	-	-	-	-																						
	SNGN120412T01020	T01020	90	12.7	4.76	-	1.2	-	-	-	-	-																						
	SNGN120412T01025	T01025	90	12.7	4.76	-	1.2	-	-	-	-	-																						
	SNGN120412T02020	T02020	90	12.7	4.76	-	1.2	-	-	-	-	-																						
	SNGN120412T02025	T02025	90	12.7	4.76	-	1.2	-	-	-	-	-																						
	SNGN120412Z02025	Z02025	90	12.7	4.76	-	1.2	-	-	-	-	-																						
	SNGN120416S02025	S02025	90	12.7	4.76	-	1.6	-	-	-	-	-																						
	SNGN120416T00520	T00520	90	12.7	4.76	-	1.6	-	-	-	-	-																						
	SNGN120416T01020	T01020	90	12.7	4.76	-	1.6	-	-	-	-	-																						
	SNGN120416T01025	T01025	90	12.7	4.76	-	1.6	-	-	-	-	-																						
	SNGN120416T02020	T02020	90	12.7	4.76	-	1.6	-	-	-	-	-																						
	SNGN120416T02025	T02025	90	12.7	4.76	-	1.6	-	-	-	-	-																						
	SNGN120416Z02025	Z02025	90	12.7	4.76	-	1.6	-	-	-	-	-																						
	SNGN120420T01020	T01020	90	12.7	4.76	-	2	-	-	-	-	-																						
	SNGN120420T01025	T01025	90	12.7	4.76	-	2	-	-	-	-	-																						
	SNGN120420T02020	T02020	90	12.7	4.76	-	2	-	-	-	-	-																						
	SNGN120420T02025	T02025	90	12.7	4.76	-	2	-	-	-	-	-																						
	SNGN120424T01025	T01025	90	12.7	4.76	-	2.4	-	-	-	-	-																						
	SNGN120424T02020	T02020	90	12.7	4.76	-	2.4	-	-	-	-	-																						
	SNGN120708T02025	T02025	90	12.7	7.94	-	0.8	-	-	-	-	-																						
	SNGN120712S02025	S02025	90	12.7	7.94	-	1.2	-	-	-	-	-																						
SNGN120712T02025	T02025	90	12.7	7.94	-	1.2	-	-	-	-	-																							
SNGN120716T02025	T02025	90	12.7	7.94	-	1.6	-	-	-	-	-																							



ID Tooling
G

JFDX.. series / Insert Ceramics

SNGN/SNGF

		Steel																											
		Stainless Steel																											
		Cast Iron																											
		Non-Ferrous Material																											
		Heat Resistant Alloy																											
		Hardened Material																											
		Others (non-metallic)																											
Figure	Shape	Item Number	CECC	EPSR	IC	S	RE	GAN	BIDEMICS				Alumina Ceramics							Silicon Nitride Ceramics			Whisker Ceramics						
									PVD	PVD	JX1	JX3	PVD	HC1	HW2	HC2	HC4	HC6	HC7	PVD	SX3	SX5	SX7	SX9	SX6	CVD	SP9	WA1	WA5
		(ISO)		°	mm	mm	mm	°	120	JP2	JX1	JX3	450	HC1	HW2	HC2	HC4	HC6	HC7	ZC7	SX3	SX5	SX7	SX9	SX6	SP9	WA1	WA5	
1		SNGN120408S02025	S02025	90	12.7	4.76	0.8	-													●								
1		SNGN120408T00520	T00520	90	12.7	4.76	0.8	-																			●		
1		SNGN120408T00820	T00820	90	12.7	4.76	0.8	-																					●
1		SNGN120408T01020	T01020	90	12.7	4.76	0.8	-																		●			
1		SNGN120408T01025	T01025	90	12.7	4.76	0.8	-						●		●		●		●							●		
1		SNGN120408T02020	T02020	90	12.7	4.76	0.8	-																	●				
1		SNGN120408T02025	T02025	90	12.7	4.76	0.8	-																					
1		SNGN120408Z02025	Z02025	90	12.7	4.76	0.8	-									●												
1		SNGN120412S02025	S02025	90	12.7	4.76	1.2	-													●								
1		SNGN120412T00520	T00520	90	12.7	4.76	1.2	-																				●	
1		SNGN120412T00820	T00820	90	12.7	4.76	1.2	-																					●
1		SNGN120412T01020	T01020	90	12.7	4.76	1.2	-																		●	●		
1		SNGN120412T01025	T01025	90	12.7	4.76	1.2	-						●		●		●		●							●		
1		SNGN120412T02020	T02020	90	12.7	4.76	1.2	-																	●	●			
1		SNGN120412T02025	T02025	90	12.7	4.76	1.2	-																●					
1		SNGN120412Z02025	Z02025	90	12.7	4.76	1.2	-									●												
1		SNGN120416S02025	S02025	90	12.7	4.76	1.6	-													●								
1		SNGN120416T00520	T00520	90	12.7	4.76	1.6	-																				●	
1		SNGN120416T01020	T01020	90	12.7	4.76	1.6	-																		●	●		
1		SNGN120416T01025	T01025	90	12.7	4.76	1.6	-						●		●		●		●							●	●	
1		SNGN120416T02020	T02020	90	12.7	4.76	1.6	-																	●				
-		SNGN120416T02025	T02025	90	12.7	4.76	1.6	-																●					
1		SNGN120416Z02025	Z02025	90	12.7	4.76	1.6	-									●												
2		SNGF120412T01025RC	T01025	90	12.7	4.76	1.2	14																		●			
2		SNGF120412T01025RCM	T01025	90	12.7	4.76	1.2	14																		●			

※Recommended Cutting Conditions
Cutting Speed $V_c = - 1000\text{m/min}$
Feed $f = - 0.1\text{mm/t}$

SNGN/SNGF

※Recommended Cutting Conditions
Cutting Speed $V_C = 1000 \text{ m/min}$
Feed $f = 0.1 \text{ mm/t}$

JFDX.. series / Inserts Ceramics

SNGN/SNGF

		Steel																											
		Stainless Steel																											
		Cast Iron																											
		Non-Ferrous Material																											
		Heat Resistant Alloy																											
		Hardened Material																											
		Others (non-metallic)																											
Figure	Shape	Item Number	CECC	EPSR	IC	S	RE	GAN	BIDEMICS				Alumina Ceramics				Silicon Nitride Ceramics				Whisker Ceramics								
									PVD	PVD	JX1	JX3	PVD	HC1	HW2	HC2	HC4	HC6	HC7	PVD	SX3	SX5	SX7	SX9	SX6	CVD	WA1	WA5	
																													120
		(ISO)		°	mm	mm	mm	°																					
1		SNGN120408S02025	S02025	90	12.7	4.76	0.8	-																					
1		SNGN120408T00520	T00520	90	12.7	4.76	0.8	-																					
1		SNGN120408T00820	T00820	90	12.7	4.76	0.8	-																					
1		SNGN120408T01020	T01020	90	12.7	4.76	0.8	-																					
1		SNGN120408T01025	T01025	90	12.7	4.76	0.8	-																					
1		SNGN120408T02020	T02020	90	12.7	4.76	0.8	-																					
1		SNGN120408T02025	T02025	90	12.7	4.76	0.8	-																					
1		SNGN120408Z02025	Z02025	90	12.7	4.76	0.8	-																					
1		SNGN120412S02025	S02025	90	12.7	4.76	1.2	-																					
1		SNGN120412T00520	T00520	90	12.7	4.76	1.2	-																					
1		SNGN120412T00820	T00820	90	12.7	4.76	1.2	-																					
1		SNGN120412T01020	T01020	90	12.7	4.76	1.2	-																					
1		SNGN120412T01025	T01025	90	12.7	4.76	1.2	-																					
1		SNGN120412T02020	T02020	90	12.7	4.76	1.2	-																					
1		SNGN120412T02025	T02025	90	12.7	4.76	1.2	-																					
1		SNGN120412Z02025	Z02025	90	12.7	4.76	1.2	-																					
1		SNGN120416S02025	S02025	90	12.7	4.76	1.6	-																					
1		SNGN120416T00520	T00520	90	12.7	4.76	1.6	-																					
1		SNGN120416T01020	T01020	90	12.7	4.76	1.6	-																					
1		SNGN120416T01025	T01025	90	12.7	4.76	1.6	-																					
1		SNGN120416T02020	T02020	90	12.7	4.76	1.6	-																					
-		SNGN120416T02025	T02025	90	12.7	4.76	1.6	-																					
1		SNGN120416Z02025	Z02025	90	12.7	4.76	1.6	-																					
2		SNGF120412T01025RC	T01025	90	12.7	4.76	1.2	14																					
2		SNGF120412T01025RCM	T01025	90	12.7	4.76	1.2	14																					

※Recommended Cutting Conditions
Cutting Speed $V_c = 1000\text{m/min}$
Feed $f = 0.1\text{mm/t}$