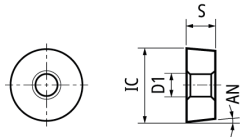


BIDEMICS / Ceramics / NTK CeramiX

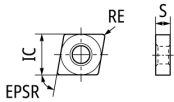
CDH



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

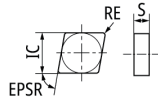
Shape	Item Number	CECC	EPSR	IC	S	AN	RE	D1	D2	INSL	S1	W1	BIDEMICS			NTK CeramiX	Alumina Ceramics			Silicon Nitride Ceramics			Whisker Ceramics										
													PVD	PVD			PVD			PVD													
													120	JP2	JX1		JX3	450	HC1	HW2	HC2	HC4	HC6	HC7	ZC7	SX3	SX5	SX7	SX9	SX6	SP9	WA1	WA5
	CDH1207P07010	P07010	-	12.7	6.35	6	-	3.18	-	-	-	-																					
	CDH1909P15015	P15015	-	19.05	9.52	6	-	6.35	-	-	-	-																					

CNGA



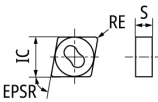
Steel																
Stainless Steel																
Cast Iron																
Non-Ferrous Material																
Heat Resistant Alloy																
Hardened Material																
Others (non-metallic)																

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	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	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	-	-	-	-	-																						
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	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	-	-	-	-	-																						



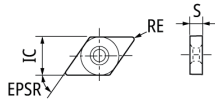
Steel																
Stainless Steel																
Cast Iron																
Non-Ferrous Material																
Heat Resistant Alloy																
Hardened Material																
Others (non-metallic)																

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	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	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	-	-	-	-	-										●											
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	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	-	-	-	-	-																					●



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																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
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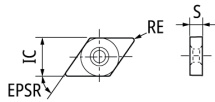


Steel															
Stainless Steel															
Cast Iron															
Non-Ferrous Material															
Heat Resistant Alloy															
Hardened Material															
Others (non-metallic)															

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	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	-	-	-	-	-	-					●																	

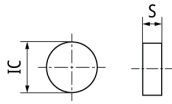
Turning Insert D

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	PVD	JX1		JX3	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	120	JP2	JP1	JP3	450																	
	DNGG150408Z01030AG	Z01030	55	12.7	4.76	-	0.8	-	-	-	-	-																						
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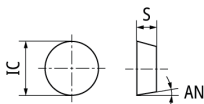
Steel
Stainless Steel
Cast Iron
Non-Ferrous Material
Heat Resistant Alloy
Hardened Material
Others (non-metallic)

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

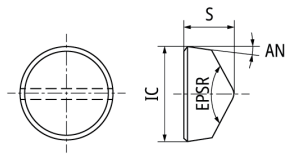
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RPGN



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

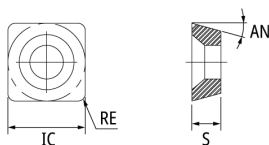
Shape	Item Number	EPSR	IC	S	AN	RE	D1	D2	INSL	S1	W1	BIDEMICS	NTK Ceramix	Alumina Ceramics	Silicon Nitride Ceramics	Whisker Ceramics
	CECC															
	(ISO)	°	mm	mm	°	mm	mm	mm	mm	mm	mm	120 PVD	450 PVD	HC1	SX3	SP9
	RPGN060200T00520	T00520	-	6.35	2.38	11	-	-	-	-	-	JP2	450	HC1	SX3	SP9
	RPGN090300T00520	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

RPGX

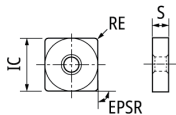
Material	Steel	Stainless Steel	Cast Iron	Non-Ferrous	Heat Resistant Alloy	Hardened Material	Others (non-metallic)
Steel	●	●	●	●	○	○	○
Stainless Steel	○	○	○	○	●	●	○
Cast Iron	○	○	○	○	●	●	○
Non-Ferrous	○	○	○	○	●	●	○
Heat Resistant Alloy	○	○	○	○	●	●	○
Hardened Material	○	○	○	○	●	●	○
Others (non-metallic)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

[illegible]

SDCW

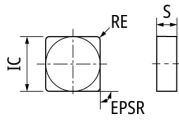


Material	Steel	Stainless Steel	Cast Iron	Non-Ferrous	Heat Resistant Alloy	Hardened Material	Others (non-metallic)
Steel	●	●	●	●	○	○	○
Stainless Steel	○	○	○	○	●	●	○
Cast Iron	○	○	○	○	●	●	○
Non-Ferrous	○	○	○	○	●	●	○
Heat Resistant Alloy	○	○	○	○	●	●	○
Hardened Material	○	○	○	○	●	●	○
Others (non-metallic)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

[illegible]**SNGA**

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

[illegible]

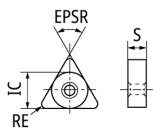


Steel														
Stainless Steel														
Cast Iron														
Non-Ferrous Material														
Heat Resistant Alloy														
Hardened Material														
Others (non-metallic)														

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	JP2	JP1	JP3		PVD	HC1	HW2	HC2	HC4	HC6	HC7	PVD	SX3	SX5	SX7	SX9	SX6	SP9	WA1	WA5	
																	°																	mm
	(ISO)																																	
	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	-	-	-	-	-																							

Turning Insert

D



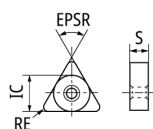
Steel																
Stainless Steel																
Cast Iron																
Non-Ferrous Material																
Heat Resistant Alloy																
Hardened Material																
Others (non-metallic)																

[illegible]

Turning Insert

D

■ TNGG-AG with chipbreaker



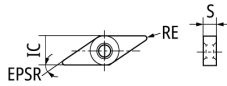
	Steel	Stainless Steel	Cast Iron	Non-Ferrous Material	Heat Resistant Alloy	Hardened Material	Others (non-metallic)
Material							

[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	SX3	SX5	SX7	SX9	SX6	SP9	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			
	TNGN110308T00525	T00525	60	6.35	3.18	-	0.8	-	-	-	-	-	-	-	-	-	-	-	●	-	-	-	-	-	-	-	-	-	-	-	-	-	
	TNGN160304T01025	T01025	60	9.525	3.18	-	0.4	-	-	-	-	-	-	-	-	-	-	-	●	-	-	-	-	-	-	-	-	-	-	-	-	-	
	TNGN160404T01025	T01025	60	9.525	4.76	-	0.4	-	-	-	-	-	-	-	-	-	-	-	●	-	-	-	-	-	-	-	-	-	-	-	-	-	
	TNGN160404Z02025	Z02025	60	9.525	4.76	-	0.4	-	-	-	-	-	-	-	-	-	-	-	-	●	-	-	-	-	-	-	-	-	-	-	-	-	
	TNGN160408S02025	S02025	60	9.525	4.76	-	0.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	●	-	-	-	-	-	-	-	-	-	
	TNGN160408T00820	T00820	60	9.525	4.76	-	0.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	●	
	TNGN160408T01020	T01020	60	9.525	4.76	-	0.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	●	●	-	-	
	TNGN160408T01025	T01025	60	9.525	4.76	-	0.8	-	-	-	-	-	-	-	-	-	●	-	●	-	●	-	●	-	-	-	-	-	-	●	●	-	-
	TNGN160408T02020	T02020	60	9.525	4.76	-	0.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	●	-	-	-	-
	TNGN160408T02025	T02025	60	9.525	4.76	-	0.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	●	-	-	-	-	-
	TNGN160408Z02025	Z02025	60	9.525	4.76	-	0.8	-	-	-	-	-	-	-	-	-	-	-	-	-	●	-	-	-	-	-	-	●	-	-	-	-	-
	TNGN160412S02025	S02025	60	9.525	4.76	-	1.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	●	-	-	-	-	-	-	-	-	-	-
	TNGN160412T00820	T00820	60	9.525	4.76	-	1.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	●
	TNGN160412T01020	T01020	60	9.525	4.76	-	1.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	●	-	-	-
	TNGN160412T01025	T01025	60	9.525	4.76	-	1.2	-	-	-	-	-	-	-	-	-	●	-	●	-	●	-	●	-	-	-	-	-	-	-	●	-	-
	TNGN160412T02020	T02020	60	9.525	4.76	-	1.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	●	-	-	-	-
	TNGN160412T02025	T02025	60	9.525	4.76	-	1.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	●	-	-	-	-	-
	TNGN160412Z02025	Z02025	60	9.525	4.76	-	1.2	-	-	-	-	-	-	-	-	-	-	-	-	-	●	-	-	-	-	-	-	-	-	-	-	-	-
	TNGN160416T01020	T01020	60	9.525	4.76	-	1.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	●	-	-	-
	TNGN160416T01025	T01025	60	9.525	4.76	-	1.6	-	-	-	-	-	-	-	-	-	●	●	●	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TNGN160416T02020	T02020	60	9.525	4.76	-	1.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	●	-	-	-	
TNGN160416T02025	T02025	60	9.525	4.76	-	1.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	●	-	-	
TNGN160420T01025	T01025	60	9.525	4.76	-	2	-	-	-	-	-	-	-	-	-	●	-	●	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
TNGN160420T02020	T02020	60	9.525	4.76	-	2	-	-	-	-	-	-	-	-	-	-	-	-	●	-	-	-	-	-	-	-	-	-	-	●	-	-	
TNGN160708T02025	T02025	60	9.525	7.94	-	0.8	-	-	-	-	-	-	-	-	-	-	-	-	●	-	-	-	-	-	-	-	-	-	-	-	-	-	
TNGN160712T02025	T02025	60	9.525	7.94	-	1.2	-	-	-	-	-	-	-	-	-	-	-	-	●	-	-	-	-	-	-	-	-	-	-	-	-	-	
TNGN220416T00520	T00520	60	12.7	4.76	-	1.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	●	-	
TNGN220716T00520	T00520	60	12.7	7.94	-	1.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	●	-	

[illegible]

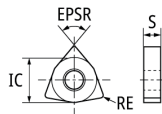


Steel														
Stainless Steel														
Cast Iron														
Non-Ferrous Material														
Heat Resistant Alloy														
Hardened Material														
Others (non-metallic)														

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	mm	120	PVD	PVD	JX1	JX3	450	PVD	HC1	HW2	HC2
	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)														

	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	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	-	-	-	-	-	-																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																							