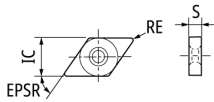


Steel
Stainless Steel
Cast Iron
Non-Ferrous Material
Heat Resistant Alloy
Hardened Material
Others (non-metallic)

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	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	ZC7	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	-	-	-	-	-																									

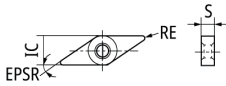
Turning Insert D

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	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			
	DNGG150408Z01030AG	Z01030	55	12.7	4.76	-	0.8	-	-	-	-	-																						
	DNGG150412Z01030AG	Z01030	55	12.7	4.76	-	1.2	-	-	-	-	-																						



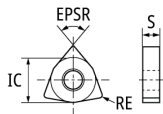
Steel
Stainless Steel
Cast Iron
Non-Ferrous Material
Heat Resistant Alloy
Hardened Material
Others (non-metallic)

Shape	Item Number	CECC	EPSR	IC	S	AN	RE	D1	D2	INSL	S1	W1	BIDEMICS	NTK	Alumina	Silicon Nitride	Whisker
	(ISO)		°	mm	mm	°	mm	mm	mm	mm	mm	mm	PVD	PVD	Ceramics	Ceramics	Ceramics
													120	450	HC1	HC2	HC3
	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	Alumina	Silicon Nitride	Whisker
	(ISO)		°	mm	mm	°	mm	mm	mm	mm	mm	mm	PVD	PVD	Ceramics	Ceramics	Ceramics
													120	450	HC1	HC2	HC3
	WNGA080408T00520	T00520	80	12.7	4.76	-	0.8	-	-	-	-	-	●	●	●	●	○
	WNGA080408T01020	T01020	80	12.7	4.76	-	0.8	-	-	-	-	-	●	●	●	●	○
	WNGA080408T02020	T02020	80	12.7	4.76	-	0.8	-	-	-	-	-	●	●	●	●	○
	WNGA080412T00520	T00520	80	12.7	4.76	-	1.2	-	-	-	-	-	●	●	●	●	○
	WNGA080412T01020	T01020	80	12.7	4.76	-	1.2	-	-	-	-	-	●	●	●	●	○
	WNGA080412T02020	T02020	80	12.7	4.76	-	1.2	-	-	-	-	-	●	●	●	●	○
	WNGA080416T02020	T02020	80	12.7	4.76	-	1.6	-	-	-	-	-	●	●	●	●	○