

T N G A 12 04 08 T 020 20

1 2 3 4 5 6 7 8 9 10

A

Turning

B

Milling

C















Drilling










D

Technical Information

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Insert shape		
A 	B 	C 
D 	E 	H 
K 	L 	M 
P 	S 	T 
V 	W 	Z Special







Clearance angle	
A 	B 
C 	D 
E 	F 
G 	N 
P 	O Special







Tolerance class			
Code	I.C [mm]	m [mm]	S [mm]
A	±0,025	±0,005	±0,025
C	±0,025	±0,013	±0,025
E	±0,025	±0,025	±0,025
F	±0,013	±0,005	±0,025
G	±0,025	±0,025	±0,130
H	±0,013	±0,013	±0,025
J	±0,05-0,15	±0,005	±0,025
K	±0,05-0,15	±0,013	±0,025
L	±0,05-0,15	±0,025	±0,025
M	±0,05-0,15	±0,08-0,20	±0,130
N	±0,05-0,15	±0,08-0,20	±0,025
U	±0,08-0,25	±0,13-0,38	±0,130

1

2

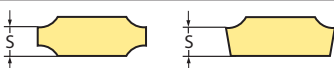
3

Fastening features (metric)	
Insert shape	
A 	B 
C 	N 
Q 	W 
X	Special


Cutting edge length l [mm]						
I.C [mm]	Insert shape					
	C 	D 	S 	T 	V 	W 
3,97				06		
5,0				09		
5,56				09		
6,0				09		
6,35	06	07		11	11	
8,0				09		
9,525	09	11	09	16	16	06
10,0				09		
12,0				09		
12,7	12	15	12	22	22	08
15,875	16		15	27		
16,0		19				
19,05	19		19	33		
20,0				09		
25,0	25	25				
25,4			25			
31,75				09		
32				09		

4





5

Insert thickness S [mm]			
			
Code	S	Code	S
02	2,38	06	6,35
T2	2,58	T6	6,75
03	3,18	07	7,94
T3	3,97	09	9,52
04	4,76	T9	9,72
T4	4,96	11	11,11
05	5,56	12	12,70
T5	5,95		

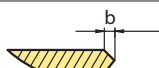
6

Nose radius r [mm]	
	
Code	r
00	–
02	0,2
04	0,4
08	0,8
12	1,2
16	1,6
20	2,0
24	2,4
32	3,2
X	Special
MO	Plaquettes rondes


7

Cutting edge profile		
Code	Cutting edge	Insert shape
E	Rounding	
F	Sharp edge	
T	Chamfer	
S	Chamfer + Rounding	

8

Chamfer width b [mm]	
	
Code	b
010	0,10
015	0,15
020	0,20
025	0,25
030	0,30
035	0,35
040	0,40
045	0,45
050	0,50
100	1,00
200	2,00

9

Angle du chanfrein α	
	
Code	α
05	5°
10	10°
15	15°
20	20°
25	25°
30	30°

10

A

Turning

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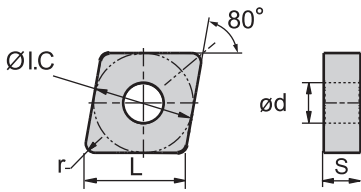
A

Turning

- Ideal machining conditions
- ⊗ Normal machining conditions
- ⊗ Unfavourable machining conditions


CNGA	L	I.C	S	d
12 04	12.9	12.7	4.76	5.16
16 06	16.1	15.875	6.35	6.35

Turning ceramic inserts

CN** negative insert		CM	CN																		
	P	●																			
	K	●	⊗																		
	N																				
	H																				

B

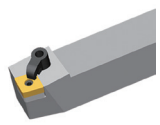
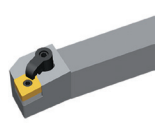
Milling

ISO	r	a _p	f	CA1000	CN1000 CN2000																
							CNGA120404T02020	0.4	0.5-2.0	0.15-0.40		●									
	CNGA120408T02020	0.8	0.5-5.0	0.2-0.6	●	○															
	CNGA120412T02020	1.2	1-4	0.2-0.6		●															
	CNGA120412T03020	1.2	0.5-2.0	0.15-0.40		○															
	CNGA160612T02020	1.2	2-5	0.15-0.40		●															
	CNGA160616T02020	1.6	2-5	0.15-0.40		●															

● Ex stock ○ On demand CM Mixed ceramic
CN Si3N4 Ceramic

C

Drilling

Tool holder	
MCBNR/L	MCLNR/L
Kr: 75°	Kr: 95°
	
A218	A219

D

Technical Information

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CNGN	L	I.C	S
12 04	12.9	12.7	4.76
12 07	12.9	12.7	7.94
16 04	16.1	15.875	4.76
16 06	16.1	15.875	6.35

- Ideal machining conditions
- ⊗ Normal machining conditions
- ⊗ Unfavourable machining conditions

Turning ceramic inserts

CN** negative insert				CM	CN		
	P	●					
	K	●	⊗				
	N	●					
	H						
ISO	r	a _p	f	CA1000	CN1000	CN2000	
CNGN120404T02020	0.4	0.5-4.0	0.15-0.50	○			
CNGN120408T02020	0.8	1-5	0.2-0.6	●	●	●	
CNGN120412T02020	1.2	1-4	0.2-0.6	○	●	●	
CNGN120708T02020	0.8	0.5-2.0	0.2-0.5	○	●	●	
CNGN120712T02020	1.2	1-4	0.2-0.6	●	○	○	
CNGN120716T02020	1.6	0.5-2.0	0.2-0.6	○	○	○	
CNGN160408T02020	0.8	0.5-2.0	0.2-0.5	○			
CNGN160612T02020	1.2	0.5-4.0	0.15-0.60	○	○		
CNGN160616T02020	1.6	2-5	0.2-0.6	○	○		

● Ex stock ○ On demand

CM Mixed ceramic
CN Si3N4 Ceramic

Tool holder
CCLNR/L
Kr: 95°

A258

A

Turning

B

Milling

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Drilling

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General turning Ceramic inserts

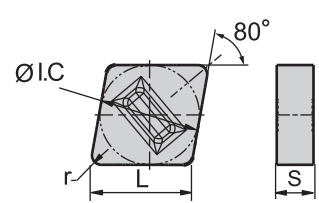
A

Turning

- Ideal machining conditions
- ⊗ Normal machining conditions
- ⊗ Unfavourable machining conditions

CNGX	L	I.C	S
12 07	12.9	12.7	7.94

Turning ceramic inserts

CN** negative insert		CM	CN			
	P	●				
	K	●	⊗			
	N					
	H					

B

Milling

ISO	r	a _p	f	CA1000	CN1000 CN2000
CNGX120712T02020	1.2	1-4	0.2-0.6		●
CNGX120716T02020	1.6	0.5-2.0	0.2-0.6		○



Medium Cut

- Ex stock
- On demand

CM Mixed ceramic
CN Si3N4 Ceramic


C

Drilling

Tool holder

JCLNR/L

Kr: 95°



A266

D

Technical Information

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- Ideal machining conditions
- Normal machining conditions
- Unfavourable machining conditions

DNGA	L	I.C	S	d
15 06	15.5	12.7	6.35	5.16

Turning ceramic inserts

DN** negative insert				CM	CN																	
	P	●																				
	K	●	●	●																		
	N																					
	H																					
ISO	r	a _p	f	CA1000	CN1000	CN2000																
	DNGA150604T02020	0.4	0.5-2.0	0.15-0.40		○																
	DNGA150608T02020	0.8	0.5-2.0	0.2-0.5		●																
	DNGA150612T02020	1.2	1-4	0.2-0.6		○																
	DNGA150616T02020	1.6	2-5	0.2-0.6		○																

● Ex stock ○ On demand

CM Mixed ceramic
CN Si3N4 Ceramic

Tool holder	
MDJNR/L Kr: 93°	MDPNN Kr: 62°30'
A220	A221

A

Turning

B

Milling

C

Drilling

D

Technical Information

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- Ideal machining conditions
- ⊗ Normal machining conditions
- ⊗ Unfavourable machining conditions

DNGX	L	I.C	S
15 07	15.5	12.7	7.94

Turning ceramic inserts

DN** negative insert				CM	CN															
	P	●																		
	K	●	⊗																	
	N																			
	H																			
ISO	r	a _p	f	CA1000	CN1000	CN2000														
 Medium Cut	DNGX150712T02020	1.2	1-4	0.2-0.6		○														
	DNGX150716T02020	1.6	2-5	0.2-0.6		○														

● Ex stock ○ On demand

CM Mixed ceramic
CN Si3N4 Ceramic

Tool holder
JDJNR/L
Kr: 93°

A267

A

Turning

B

Milling

C

Drilling

D

Technical Information

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A

Turning

- Ideal machining conditions
- Normal machining conditions
- Unfavourable machining conditions

SNGA	L	I.C	S	d
12 04	12.7	12.7	4.76	5.16

Turning ceramic inserts

SN** negative insert				CM	CN															
	P	●																		
	K	●	● ● ●																	
	N	●																		
	H	●																		
ISO	r	a _p	f	CAT1000	CN1000	CN2000														
SNGA120408T02020	0.8	0.5-2.0	0.2-0.5		○															
SNGA120412T02020	1.2	1-4	0.2-0.6		○															

● Ex stock ○ On demand

CM Mixed ceramic
CN Si3N4 Ceramic

B

Milling

C

Drilling

D

Technical Information

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Tool holder			
MSBNR/L	MSRNR/L	MSKNR/L	MSDNN
Kr: 75°	Kr: 75°	Kr: 75°	Kr: 45°
A222	A223	A224	A225

System code > A40

Grade selection > A174

Technical info > A447

Cutting data > A324

- Ideal machining conditions
- ⊗ Normal machining conditions
- ⊗ Unfavourable machining conditions

SNGX	L	I.C	S
12 07	12.7	12.7	7.94

Turning ceramic inserts

SN** negative insert				CM	CN															
	P	●																		
	K	●	⊗																	
	N	●																		
	H	●																		
ISO	r	a _p	f	CA1000	CN1000	CN2000														
 Medium Cut	SNGX120712T02020	1.2	1-4	0.2-0.6		○														
	SNGX120716T02020	1.6	0.5-2.0	0.2-0.6		○														

● Ex stock ○ On demand

CM Mixed ceramic
CN Si3N4 Ceramic

Tool holder

JSDNN

Kr: 45°

A268

A

Turning

B

Milling

C

Drilling

D

Technical Information

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A

Turning

B

Milling

C

Drilling

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Technical Information

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SNGN	L	I.C	S
12 04	12.7	12.7	4.76
12 07	12.7	12.7	7.94
15 07	15.875	15.875	7.94
19 07	19.05	19.05	7.94

- Ideal machining conditions
- ⊗ Normal machining conditions
- ⊗ Unfavourable machining conditions

Turning ceramic inserts

SN** negative insert				CM	CN																
	P	○																			
	K	○	⊗																		
	N	○																			
	H	○																			
ISO	r	a _p	f	CA1000	CN1000	CN2000															
SNGN120404T02020	0.4	0.5-2.0	0.15-0.40	○																	
SNGN120408T02020	0.8	0.5-2.0	0.2-0.5	○	●																
SNGN120412T02020	1.2	1-4	0.2-0.6	○	○	○															
SNGN120416T02020	1.6	0.5-5.0	0.2-0.6	○	○	○															
SNGN120704T02020	0.4	0.5-2.0	0.15-0.40	●																	
SNGN120708T02020	0.8	0.5-4.0	0.2-0.6	○	○																
SNGN120712T02020	1.2	1-5	0.2-0.6	○	●																
SNGN120716T02020	1.6	1-5	0.2-0.6	○	○																
SNGN150708T02020	0.8	0.5-2.0	0.2-0.5	○																	
SNGN150712T02020	1.2	1-4	0.2-0.6	●	○	○															
SNGN150716T02020	1.6	0.5-2.0	0.2-0.6	●	○	○															
SNGN190716T03020	1.6	2-5	0.2-0.6	○																	

● Ex stock ○ On demand

CM Mixed ceramic
CN Si3N4 Ceramic

Tool holder

CSKNR/L	CSRNR/L	CSDNN
Kr: 75°	Kr: 75°	Kr: 45°
A262	A263	A265

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System code > A40

Grade selection > A174

Technical info > A447

Cutting data > A324

- Ideal machining conditions
- Normal machining conditions
- Unfavourable machining conditions

TNGA	L	I.C	S	d
16 04	16.5	9.525	4.76	3.86
22 04	22	12.7	4.76	5.16

Turning ceramic inserts

TN** negative insert				CM	CN															
	P	●																		
	K	●	●	●																
	N																			
	H																			
ISO	r	a _p	f	CA1000	CN1000	CN2000														
	TNGA160404T01020	0.4	2-5	0.15-0.40		●														
	TNGA160408T02020	0.8	2-5	0.2-0.5		●														
	TNGA160412T02020	1.2	1-4	0.2-0.6		●														
	TNGA220408T02020	0.8	2-5	0.2-0.5		○														
	TNGA220412T02020	1.2	2-5	0.2-0.6		○														
	TNGA220416T02020	1.6	2-5	0.2-0.6		○														

● Ex stock ○ On demand

CM Mixed ceramic
CN Si3N4 Ceramic

Tool holder			
MTGNR/L	MTJNR/L	MTJNR/L-Z	MTFNR/L
Kr: 90°	Kr: 93°	Kr: 93°	Kr: 91°
A226	A227	A228	A229

System code > A40

Grade selection > A174

Technical info > A447

Cutting data > A324



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TNGN	L	I.C	S
16 04	16.5	9.525	4.76
16 07	16.5	9.525	7.94
22 04	22	12.7	4.76

- Ideal machining conditions
- ⊗ Normal machining conditions
- ⊗ Unfavourable machining conditions

Turning ceramic inserts

TN** negative insert				CM	CN																				
				P	●																				
				K	●	⊗																			
				N	●																				
				H	●																				
ISO	r	a _p	f	CA1000	CN1000 CN2000																				
 Medium Cut	TNGN160404T02020	0.4	0.5-4.0	0.15-0.50	○																				
	TNGN160408T02020	0.8	0.5-5.0	0.2-0.6	○	○																			
	TNGN160412T02020	1.2	1-5	0.2-0.6	○	○ ○																			
	TNGN160708T02020	0.8	0.5-2.0	0.2-0.5	○	○ ○																			
	TNGN160712T02020	1.2	1-4	0.2-0.6	○																				
	TNGN220408T02020	0.8	0.5-2.0	0.2-0.5	○	○																			
	TNGN220412T02020	1.2	1-4	0.2-0.6	○	○																			
	TNGN220416T02020	1.6	2-5	0.2-0.6	○	○																			

- Ex stock
- On demand

CM Mixed ceramic
CN Si3N4 Ceramic

Tool holder	
CTJNR/L	CTUNR/L
Kr: 93°	Kr: 93°
A259	A261



RNGN	I.C	S
09 04	9.53	4.76
12 04	12.7	4.76
12 07	12.7	7.94
15 07	15.875	7.94
19 07	19.05	7.94
25 10	25.4	10.05

- Ideal machining conditions
- ⊗ Normal machining conditions
- ⊗ Unfavourable machining conditions

Turning ceramic inserts

RN** negative insert				CM	CN																
	P	●																			
	K	●	⊗																		
	N																				
	H																				
ISO	a _p	f	CA1000	CN1000	CN2000																
	RNGN090400T02020	0.5-2.0	0.2-0.5	○																	
	RNGN120400T02020	0.5-2.0	0.2-0.5	○	○	●															
	RNGN120700T02020	0.5-2.0	0.2-0.5	●	●	●															
	RNGN150700T02020	0.5-2.0	0.2-0.5	○																	
	RNGN190700T03020	0.5-2.0	0.2-0.5	○		●															
	RNGN251000T05020	0.5-2.0	0.2-0.5	○																	

● Ex stock ○ On demand

CM Mixed ceramic
CN Si3N4 Ceramic

Tool holder
CRDNN

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A

Turning

B

Milling

C

Drilling

D

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A

Turning

- Ideal machining conditions
- Normal machining conditions
- Unfavourable machining conditions

WNGA	L	I.C	S	d
08 04	8.69	12.7	4.76	5.16

Turning ceramic inserts

WN** negative insert				CM	CN															
	P	●																		
	K	●	●	●																
	N	●																		
	H	●																		

B

Milling

ISO	r	a _p	f	CA1000	CN1000 CN2000															
	WNGA080408T02020	0.8	0.5-2.0	0.2-0.5	●															
	WNGA080412T02020	1.2	2-5	0.2-0.6	●															
	WNGA080416T02020	1.6	2-5	0.2-0.6	●															

● Ex stock ○ On demand

CM Mixed ceramic
CN Si3N4 Ceramic

C

Drilling

Tool holder

MWLNR/L

Kr: 95°

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D

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