
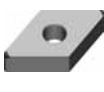


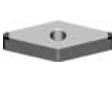



Turning · Drehen

Turning Inserts Overview · WSP Übersicht


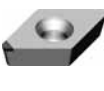


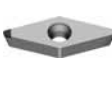
Negative Inserts
Negative WSP

PCBN & PCD


					
CNGA	DNGA	SNGA	TNGA	VNGA	WNGA
12	15	12	16	16	08 16
A118	A119	A120	A121	A122	A122

Edge length ·
Kantelänge
Page ·
Seite






Positive Inserts
Positive WSP

				
CCGW	DCGW	TCGW	VBGW	VCGW
06,09,12	07,11	11,16	16	16
A123	A124	A125	A126	A126

Edge length ·
Kantelänge
Page ·
Seite

				
CCMT	CCMW	DCMT	DCMW	TCMT
06,09,12	06,09,12	07,11	07,11	11,16
A127	A128	A129	A130	A131









Edge length ·
Kantelänge
Page ·
Seite

				
TCMW	VBMT	VBMW	VCMT	VCMW
11,16	16	16	16	16
A132	A133	A133	A134	A134






Edge length ·
Kantelänge
Page ·
Seite

Ceramic Inserts · Keramik Wendeschneidplatten

Negative Inserts
Negative WSP

							
CNGA	CNGN	CNGX	DNGA	DNGN	DNGX	SNGA	SNGX
12,16	12,16	12	15	15	15	12	12
A138	A139	A140	A140	A141	A141	A142	A142

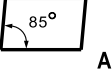
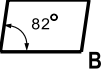
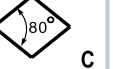
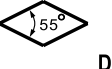
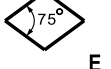
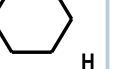
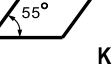

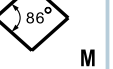
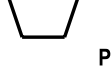

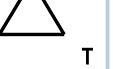

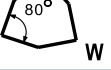
Edge length ·
Kantelänge
Page ·
Seite

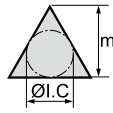

				
SNGN	TNGA	TNGN	WNGA	RNGN
09,12,15,19,25	16,22	16,22	08	09,12,15,19,25
A143	A144	A145	A146	A146

Edge length ·
Kantelänge
Page ·
Seite

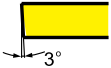




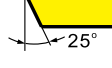
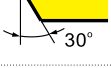
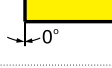

Turning · Drehen

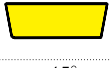
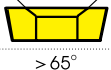

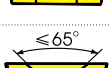
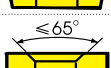
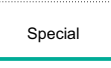
Ceramic Inserts Code Key · ISO Kennzeichnung für Keramikschnidplatten

Insert Shape / Schneidplattenform		
 A	 B	 C
 D	 E	 H
 K	 L	 M
 P	 S	 T
 V	 W	Others Z

Tolerance / Toleranzklasse							
							
Code	Tolerance	Incircle Tolerance ØI.C	Thickness S	Code	Tolerance	Tolerance ØI.C	Thickness S
A	±0.005	±0.025	±0.025	J	±0.005	±0.05-±0.13	±0.025
F	±0.005	±0.013	±0.025	K	±0.013	±0.05-±0.13	±0.025
C	±0.013	±0.025	±0.025	L	±0.025	±0.05-±0.13	±0.025
H	±0.013	±0.013	±0.025	M	±0.08-±0.18	±0.05-±0.13	±0.13
E	±0.025	±0.025	±0.025	N	±0.08-±0.18	±0.05-±0.13	±0.025
G	±0.025	±0.025	±0.13	U	±0.13-±0.38	±0.08-±0.25	±0.13

T N G A

Clearance angle of main cutting edge Freiwinkel der Hauptschneide			
code	angle / Winkel	code	angle / Winkel
A	 3°	B	 5°
C	 7°	D	 15°
E	 20°	F	 25°
G	 30°	N	 0°
P	 11°	O	Others

Insert type / Plattentyp		
Code	hole	Insert Section
N	No	
B	Yes	
C	Yes	
A	Yes	
W	Yes	
Q	Yes	
X	---	Special

Cutting edge length / Schneidenlänge (mm)						
Diameter of incircle (mm)	insert shape					
	C	D	S	T	V	W
3.97				06		
5.0				09		
5.56						
6.0						
6.35	06	07		11	11	
8.0						
9.525	09	11	09	16	16	06
10.0						
12.0						
12.7	12	15	12	22	22	08
15.875	16		15	27		
16.0		19				
19.05	19		19	33		
20.0						
25.0	25	25				
25.4			25			
31.75						
32						

Insert thickness / Dicke (mm)			
<p>the thickness means the distance, which between the highest part of cutting edge and insert bottom</p>			
code	Insert thickness	code	Insert thickness
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		

Nose radius Eckenradius	
code	Radius (mm)
00	no Radius
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	Others
Insert diameter Mo (metric)	Runde insert

12 04 08 T 020 20

Profile of cutting edges Schneidkantenausführung		
code		diagram
E	Honing Verrundung	
T	Chamfering Fase	
S	Chamfering Fase + Honing Verrundung	
F	Sharp edges Scharfe Kante	

width of chamfer Breite der Fase			
010	0.10	040	0.40
015	0.15	045	0.45
020	0.20	050	0.50
025	0.25	100	1.00
030	0.30	200	2.00
035	0.35		




angle of chamfer Winkel der Fase	
05	5°
10	10°
15	15°
20	20°
25	25°
30	30°

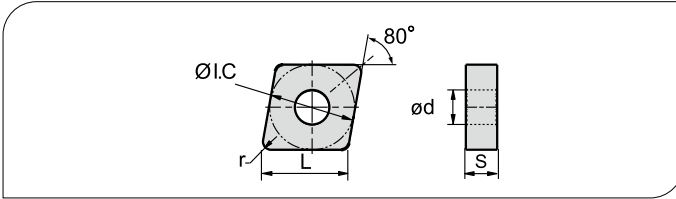
Turning · Drehen






Ceramic Inserts · Keramik WSP


A

General Turning · Allgemeine Drehbearbeitung

-  Unfavorable Machining Condition
Ungünstige Bearbeitungsbedingungen
-  Ideal Machining Condition
Gute Bearbeitungsbedingungen
-  Normal Machining Condition
Normale Bearbeitungsbedingungen



Workpiece Material Werkstoffe	P Steel / Stahl				
	K Cast iron / Gusseisen				




Insert Shape Schneid- plattenform	Type · Typ	Dimension (mm) Abmessung					Grade · Sorte		
		L	I.C	S	d	r	CA1000	CN1000	CN2000
	CNGA120404T02020	12.9	12.7	4.76	5.16	0.4		●	
	CNGA120408T02020	12.9	12.7	4.76	5.16	0.8		●	
	CNGA120412T02020	12.9	12.7	4.76	5.16	1.2		●	
	CNGA120412T03020	12.9	12.7	4.76	5.16	1.2		○	
	CNGA160608T02020	16.1	15.875	6.35	6.35	0.8		○	
	CNGA160612T02020	16.1	15.875	6.35	6.35	1.2		●	
	CNGA160616T02020	16.1	15.875	6.35	6.35	1.6		●	

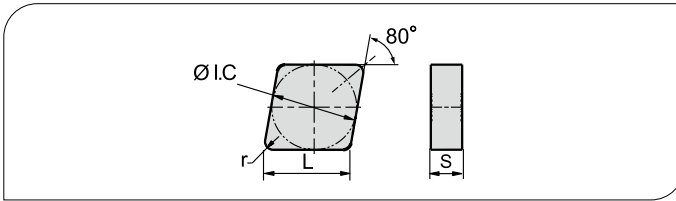
Tool Holder · Klemmhalter







































Page · Seite A158 A159 A170 A171 A216

● Ex Stock / ab Lager ○ On demand / auf Anfrage

-  Unfavorable Machining Condition
Ungünstige Bearbeitungsbedingungen
-  Ideal Machining Condition
Gute Bearbeitungsbedingungen
-  Normal Machining Condition
Normale Bearbeitungsbedingungen



Workpiece Material Werkstoffe	P Steel / Stahl				
	K Cast iron / Gusseisen				

Insert Shape Schneid- plattenform	Type · Typ	Dimension (mm) Abmessung					Grade · Sorte		
		L	I.C	S	d	r	CA1000	CN1000	CN2000
	CNGN120404T02020	12.9	12.7	4.76	-	0.4			
	CNGN120408T02020	12.9	12.7	4.76	-	0.8			
	CNGN120412T02020	12.9	12.7	4.76	-	1.2			
	CNGN120708T02020	12.9	12.7	7.94	-	0.8			
	CNGN120712T02020	12.9	12.7	7.94	-	1.2			
	CNGN120716T02020	12.9	12.7	7.94	-	1.6			
	CNGN160408T02020	16.1	15.875	4.76	-	0.8			
	CNGN160412T02020	16.1	15.875	4.76	-	1.2			
	CNGN160416T02020	16.1	15.875	4.76	-	1.6			
	CNGN160612T02020	16.1	15.875	6.35	-	1.2			
	CNGN160616T02020	16.1	15.875	6.35	-	1.6			

Tool Holder · Klemmhalter



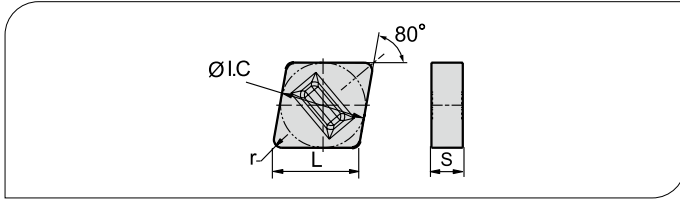
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● Ex Stock / ab Lager ○ On demand / auf Anfrage

Turning · Drehen

Ceramic Inserts · Keramik WSP

- Unfavorable Machining Condition
Ungünstige Bearbeitungsbedingungen
- Ideal Machining Condition
Gute Bearbeitungsbedingungen
- Normal Machining Condition
Normale Bearbeitungsbedingungen



Workpiece Material Werkstoffe	P Steel / Stahl				
	K Cast iron / Gusseisen				

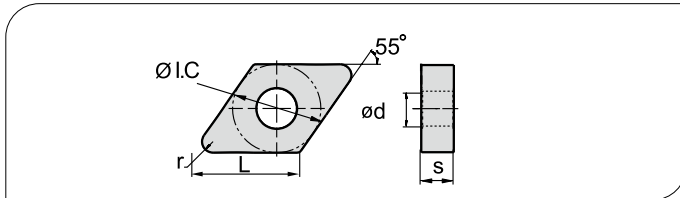
Insert Shape Schneid- plattenform	Type · Typ	Dimension (mm) Abmessung					Grade · Sorte		
		L	I.C	S	d	r	CA1000	CN1000	CN2000
	CNGX120712T02020	12.9	12.7	7.94	-	1.2			
	CNGX120716T02020	12.9	12.7	7.94	-	1.6			

Tool Holder · Klemmhalter



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- Unfavorable Machining Condition
Ungünstige Bearbeitungsbedingungen
- Ideal Machining Condition
Gute Bearbeitungsbedingungen
- Normal Machining Condition
Normale Bearbeitungsbedingungen



Workpiece Material Werkstoffe	P Steel / Stahl				
	K Cast iron / Gusseisen				

Insert Shape Schneid- plattenform	Type · Typ	Dimension (mm) Abmessung					Grade · Sorte		
		L	I.C	S	d	r	CA1000	CN1000	CN2000
	DNGA150604T02020	15.5	12.7	6.35	5.16	0.4			
	DNGA150608T02020	15.5	12.7	6.35	5.16	0.8			
	DNGA150612T02020	15.5	12.7	6.35	5.16	1.2			
	DNGA150616T02020	15.5	12.7	6.35	5.16	1.6			

Tool Holder · Klemmhalter



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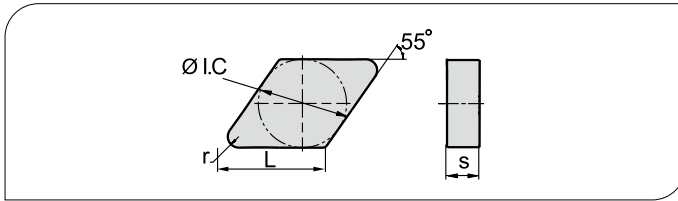
A173

A218

A219

- Ex Stock / ab Lager
- On demand / auf Anfrage

- Unfavorable Machining Condition
Ungünstige Bearbeitungsbedingungen
- Ideal Machining Condition
Gute Bearbeitungsbedingungen
- Normal Machining Condition
Normale Bearbeitungsbedingungen



Workpiece Material Werkstoffe	P Steel / Stahl				
	K Cast iron / Gusseisen				

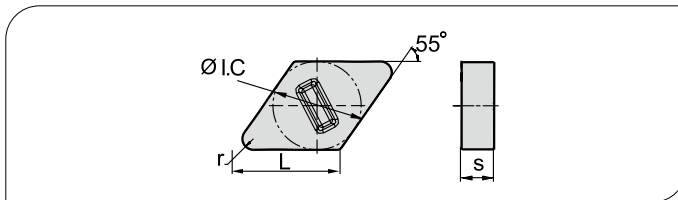
Insert Shape Schneid- plattenform	Type · Typ	Dimension (mm) Abmessung					Grade · Sorte		
		L	I.C	S	d	r	CA1000	CN1000	CNZ000
	DNGN150408T02020	15.5	12.7	4.76	-	0.8			
	DNGN150412T02020	15.5	12.7	4.76	-	1.2			
	DNGN150704T02020	15.5	12.7	7.94	-	0.4			
	DNGN150708T02020	15.5	12.7	7.94	-	0.8			
	DNGN150712T02020	15.5	12.7	7.94	-	1.2			
	DNGN150716T02020	15.5	12.7	7.94	-	1.6			

Tool Holder · Klemmhalter



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- Unfavorable Machining Condition
Ungünstige Bearbeitungsbedingungen
- Ideal Machining Condition
Gute Bearbeitungsbedingungen
- Normal Machining Condition
Normale Bearbeitungsbedingungen



Workpiece Material Werkstoffe	P Steel / Stahl				
	K Cast iron / Gusseisen				

Insert Shape Schneid- plattenform	Type · Typ	Dimension (mm) Abmessung					Grade · Sorte		
		L	I.C	S	d	r	CA1000	CN1000	CNZ000
	DNGX150712T02020	15.5	12.7	7.94	-	1.2			
	DNGX150716T02020	15.5	12.7	7.94	-	1.6			

Tool Holder · Klemmhalter



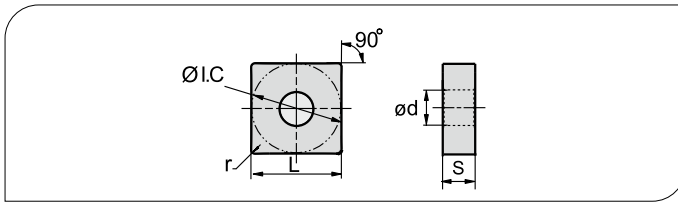
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● Ex Stock / ab Lager ○ On demand / auf Anfrage

Turning · Drehen

Ceramic Inserts · Keramik WSP

- Unfavorable Machining Condition
Ungünstige Bearbeitungsbedingungen
- Ideal Machining Condition
Gute Bearbeitungsbedingungen
- Normal Machining Condition
Normale Bearbeitungsbedingungen



Workpiece Material Werkstoffe	P Steel / Stahl				
	K Cast iron / Gusseisen				

Insert Shape Schneid- plattenform	Type · Typ	Dimension (mm) Abmessung					Grade · Sorte		
		L	I.C	S	d	r	CA1000	CN1000	CN2000
	SNGA120404T02020	12.7	12.7	4.76	5.16	0.4		○	
	SNGA120408T02020	12.7	12.7	4.76	5.16	0.8		●	
	SNGA120412T02020	12.7	12.7	4.76	5.16	1.2		●	
	SNGA120412T03020	12.7	12.7	4.76	5.16	1.2		○	
	SNGA120416T02020	12.7	12.7	4.76	5.16	1.6		○	
	SNGA120416T03020	12.7	12.7	4.76	5.16	1.6		○	

Tool Holder · Klemmhalter

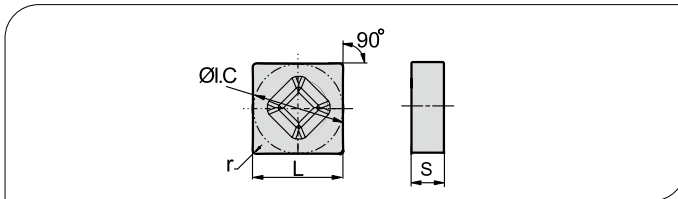


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- Unfavorable Machining Condition
Ungünstige Bearbeitungsbedingungen
- Ideal Machining Condition
Gute Bearbeitungsbedingungen
- Normal Machining Condition
Normale Bearbeitungsbedingungen



Workpiece Material Werkstoffe	P Steel / Stahl				
	K Cast iron / Gusseisen				




Insert Shape Schneid- plattenform	Type · Typ	Dimension (mm) Abmessung					Grade · Sorte		
		L	I.C	S	d	r	CA1000	CN1000	CN2000
	SNGX120708T02020	12.7	12.7	7.94	-	0.8		○	
	SNGX120712T02020	12.7	12.7	7.94	-	1.2		○	
	SNGX120716T02020	12.7	12.7	7.94	-	1.6		●	

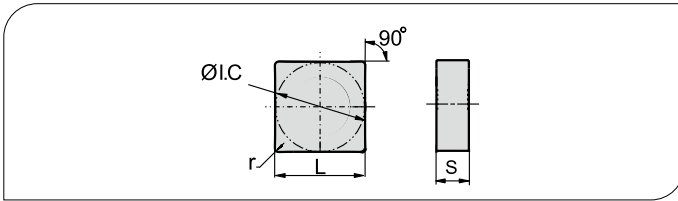
Tool Holder · Klemmhalter








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● Ex Stock / ab Lager ○ On demand / auf Anfrage

-  Unfavorable Machining Condition
Ungünstige Bearbeitungsbedingungen
-  Ideal Machining Condition
Gute Bearbeitungsbedingungen
-  Normal Machining Condition
Normale Bearbeitungsbedingungen



Workpiece Material Werkstoffe	P Steel / Stahl				
	K Cast iron / Gusseisen				

Insert Shape Schneid- plattenform	Type · Typ	Dimension (mm) Abmessung					Grade · Sorte		
		L	I.C	S	d	r	CA1000	CN1000	CN2000
	SNGN090308T01020	9.525	9.525	3.18	-	0.8	○		
	SNGN090312T01020	9.525	9.525	3.18	-	1.2	○		
	SNGN120404T02020	12.7	12.7	4.76	-	0.4	○		
	SNGN120408T02020	12.7	12.7	4.76	-	0.8	●	●	○
	SNGN120412T02020	12.7	12.7	4.76	-	1.2	●	●	●
	SNGN120412T03020	12.7	12.7	4.76	-	1.2		○	
	SNGN120416T02020	12.7	12.7	4.76	-	1.6	○	○	○
	SNGN120704T02020	12.7	12.7	7.94	-	0.4	●		
	SNGN120708T02020	12.7	12.7	7.94	-	0.8	○	○	●
	SNGN120712T02020	12.7	12.7	7.94	-	1.2	●	●	○
	SNGN120716T02020	12.7	12.7	7.94	-	1.6	●		●
	SNGN150708T02020	15.875	15.875	7.94	-	0.8	○		
	SNGN150712T02020	15.875	15.875	7.94	-	1.2	●	○	○
	SNGN150716T02020	15.875	15.875	7.94	-	1.6	●	○	○
	SNGN190708T03020	19.05	19.05	7.94	-	0.8	○		
	SNGN190712T03020	19.05	19.05	7.94	-	1.2	○		
	SNGN190716T03020	19.05	19.05	7.94	-	1.6	○		
	SNGN190724T03020	19.05	19.05	7.94	-	2.4	○		
	SNGN191024T04020	19.05	19.05	10.05	-	2.4	○		
	SNGN251024T10015	25.4	25.4	10.05	-	2.4	○		

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● Ex Stock / ab Lager ○ On demand / auf Anfrage

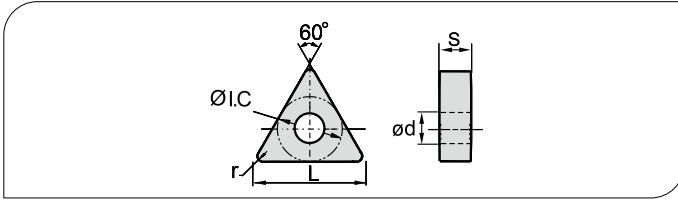
Turning · Drehen






Ceramic Inserts · Keramik WSP


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General Turning · Allgemeine Drehbearbeitung

-  Unfavorable Machining Condition
Ungünstige Bearbeitungsbedingungen
-  Ideal Machining Condition
Gute Bearbeitungsbedingungen
-  Normal Machining Condition
Normale Bearbeitungsbedingungen



Workpiece Material Werkstoffe	P Steel / Stahl				
	K Cast iron / Gusseisen				

Insert Shape Schneid- plattenform	Type · Typ	Dimension (mm) Abmessung					Grade · Sorte		
		L	I.C	S	d	r	CA1000	CN1000	CN2000
	TNGA160404T01020	16.50	9.525	4.76	3.86	0.4		●	
	TNGA160408T02020	16.50	9.525	4.76	3.86	0.8		●	
	TNGA160412T02020	16.50	9.525	4.76	3.86	1.2		●	
	TNGA220408T02020	22.00	12.7	4.76	5.16	0.8		○	
	TNGA220412T02020	22.00	12.7	4.76	5.16	1.2		○	
	TNGA220416T02020	22.00	12.7	4.76	5.16	1.6		○	
	TNGA220416T03020	22.00	12.7	4.76	5.16	1.6		○	

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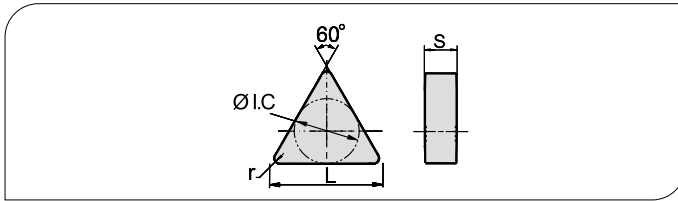
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● Ex Stock / ab Lager ○ On demand / auf Anfrage

- Unfavorable Machining Condition
Ungünstige Bearbeitungsbedingungen
- Ideal Machining Condition
Gute Bearbeitungsbedingungen
- Normal Machining Condition
Normale Bearbeitungsbedingungen



Workpiece Material Werkstoffe	P Steel / Stahl				
	K Cast iron / Gusseisen				

Insert Shape Schneid- plattenform	Type · Typ	Dimension (mm) Abmessung					Grade · Sorte		
		L	I.C	S	d	r	CA1000	CN1000	CN2000
	TNGN160404T02020	16.50	9.525	4.76	-	0.4			
	TNGN160408T02020	16.50	9.525	4.76	-	0.8			
	TNGN160412T02020	16.50	9.525	4.76	-	1.2			
	TNGN160708T02020	16.50	9.525	7.94	-	0.8			
	TNGN160712T02020	16.50	9.525	7.94	-	1.2			
	TNGN160716T02020	16.50	9.525	7.94	-	1.6			
	TNGN220408T02020	22.00	12.7	4.76	-	0.8			
	TNGN220412T02020	22.00	12.7	4.76	-	1.2			
	TNGN220416T02020	22.00	12.7	4.76	-	1.6			
	TNGN220712T02020	22.00	12.7	7.94	-	1.2			
	TNGN220716T02020	22.00	12.7	7.94	-	1.6			

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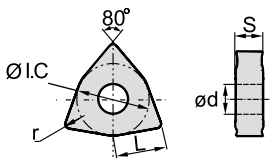


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Turning · Drehen

Ceramic Inserts · Keramik WSP

- Unfavorable Machining Condition
Ungünstige Bearbeitungsbedingungen
- Ideal Machining Condition
Gute Bearbeitungsbedingungen
- Normal Machining Condition
Normale Bearbeitungsbedingungen



Workpiece Material Werkstoffe	P Steel / Stahl	●			
	K Cast iron / Gusseisen	●	●	☀	☀

Insert Shape Schneid- plattenform	Type · Typ	Dimension (mm) Abmessung					Grade · Sorte		
		L	I.C	S	d	r	CA1000	CN1000	CN2000
	WNGA080408T02020	8.69	12.7	4.76	5.16	0.8		●	
	WNGA080412T02020	8.69	12.7	4.76	5.16	1.2		●	
	WNGA080416T02020	8.69	12.7	4.76	5.16	1.6		●	

Tool Holder · Klemmhalter

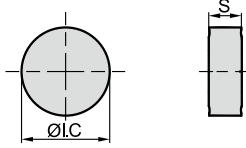


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- Unfavorable Machining Condition
Ungünstige Bearbeitungsbedingungen
- Ideal Machining Condition
Gute Bearbeitungsbedingungen
- Normal Machining Condition
Normale Bearbeitungsbedingungen



Workpiece Material Werkstoffe	P Steel / Stahl	●			
	K Cast iron / Gusseisen	●	●	☀	☀

Insert Shape Schneid- plattenform	Type · Typ	Dimension (mm) Abmessung					Grade · Sorte		
		L	I.C	S	d	r	CA1000	CN1000	CN2000
	RNGN090400T02020	---	9.53	4.76	---	---	○		
	RNGN120400T02020	---	12.7	4.76	---	---	○	○	●
	RNGN120700T02020	---	12.7	7.94	---	---	●	○	●
	RNGN150700T02020	---	15.875	7.94	---	---	●	○	
	RNGN190700T03020	---	19.05	7.94	---	---	○	○	○
	RNGN251000T05020	---	25.40	10.05	---	---	○	○	

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