

Part 2

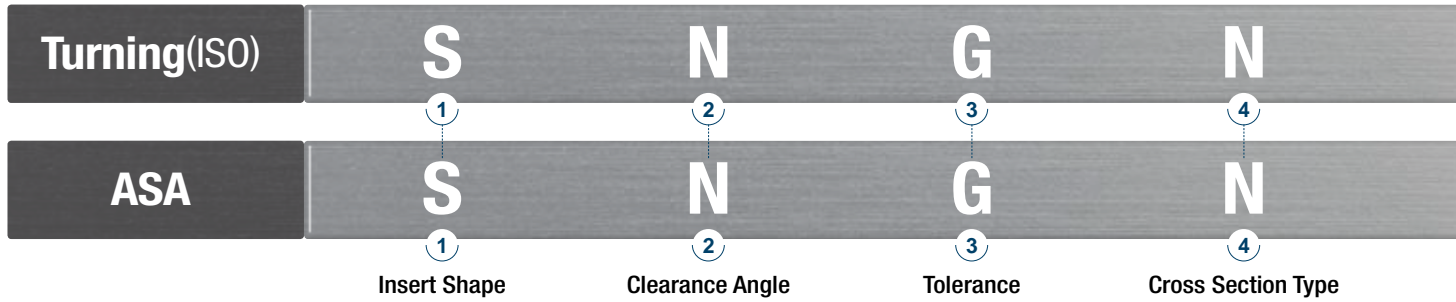
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# Ceramic Inserts

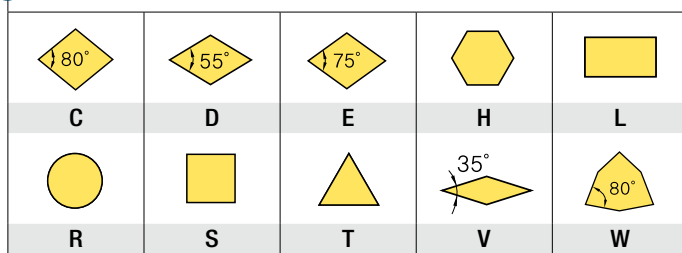
- 01 \_ Code System
- 02 \_ Application Index
- 03 \_ Turning
- 04 \_ Roll Turning



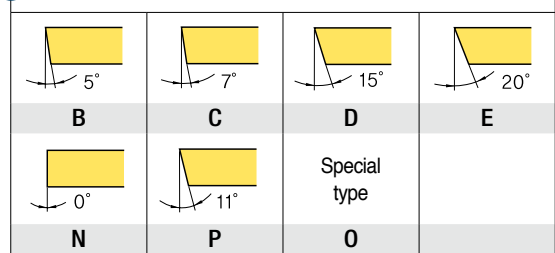
## Code System - Turning



### 1 Insert Shape

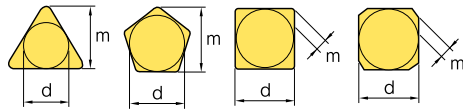


### 2 Clearance Angle



### 3 Tolerance

d : Inscribed circle  
t : Thickness  
m : Refer to figure



Class	d	m	t
A	±0.025	±0.005	±0.025
C	±0.025	±0.013	±0.025
H	±0.013	±0.013	±0.025
E	±0.025	±0.025	±0.025
G	±0.025	±0.025	±0.13
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	±0.13
N*	±0.05 ~ ±0.15	±0.08 ~ ±0.18	±0.025
U*	±0.08 ~ ±0.25	±0.13 ~ ±0.38	±0.13

\* Sides are based on unground insert

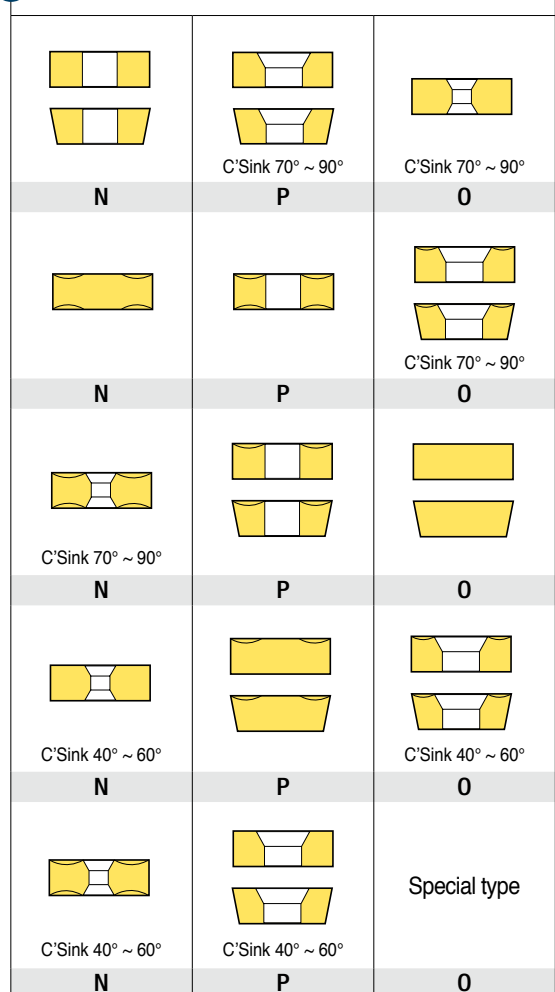
#### Tolerance on C,E,H,M,O,P,R,S,T,W Insert Shape(Exceptional case)

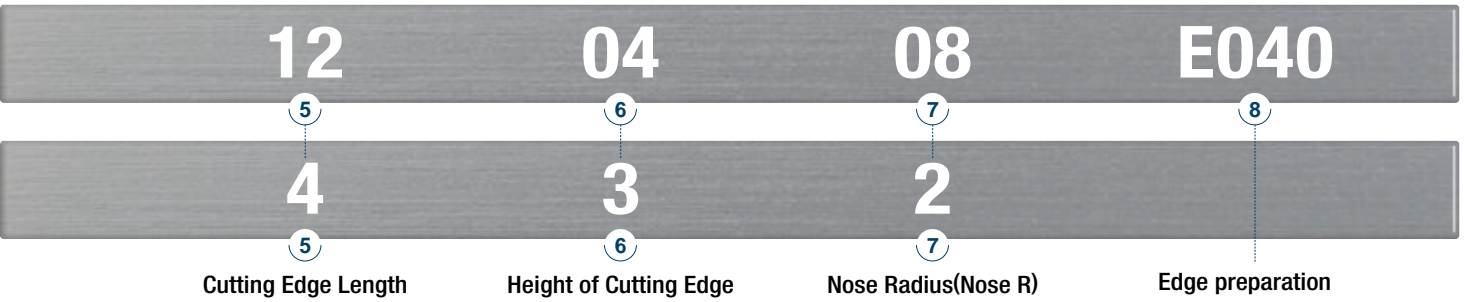
Class	Tolerance on d		Tolerance on m	
	J, K, L, M, N	U	M, N	U
6.35	±0.05	±0.08	±0.08	±0.13
9.525	±0.05	±0.08	±0.08	±0.13
12.7	±0.08	±0.13	±0.13	±0.20
15.875	±0.10	±0.18	±0.15	±0.27
19.05	±0.10	±0.18	±0.15	±0.27
25.4	±0.13	±0.25	±0.18	±0.38

#### Tolerance on D Insert Shape(Exceptional case)

d	Tolerance on d	Tolerance on m
6.35	±0.05	±0.11
9.525	±0.05	±0.11
12.7	±0.08	±0.15
15.875	±0.10	±0.18
19.05	±0.10	±0.18

### 4 Cross Section Type



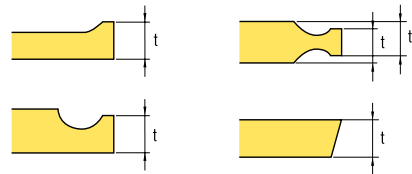


### 5 Cutting Edge Length

Symbol							Inch	IC
C	d	S	T	R	V	W		
Metric							d(mm)	
3	04	03	06	03	-	02	1.2(5)	3.97
04	05	04	08	04	08	S3	1.5(6)	4.76
05	06	05	09	05	09	03	1.8(7)	5.56
-	-	-	-	06	-	-	-	6.00
06	07	06	11	06	11	04	2	6.35
08	09	07	13	07	13	05	2.5	7.94
-	-	-	-	08	-	-	-	8.00
09	11	09	16	09	16	06	3	9.525
-	-	-	-	10	-	-	-	10.00
11	13	11	19	11	19	07	3.5	11.11
-	-	-	-	12	-	-	-	12.00
12	15	12	22	12	22	08	4	12.70
14	17	14	24	14	24	09	4.5	14.29
16	19	15	27	15	27	10	5	15.875
-	-	-	-	16	-	-	-	16.00
17	21	17	30	17	30	11	5.5	17.46
19	23	19	33	19	33	13	6	19.05
-	-	-	-	20	-	-	-	20.00
22	27	22	38	22	38	15	7	22.225
-	-	-	-	25	-	-	-	25.00
25	31	25	44	25	44	17	8	25.40
32	38	31	54	31	54	21	10	31.75
-	-	-	-	32	-	-	-	32.00

( ) Symbol for small size insert

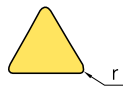
### 6 Height of Cutting Edge



Symbol		Height of Cutting Edge(t)	
Metric	Inch	mm	Inch
01	1(2)	1.59	1/16
T0	1.125	1.79	9/128
T1	1.2	1.98	5/64
02	1.5(3)	2.38	3/32
T2	1.75	2.78	7/64
03	2	3.18	1/8
T3	2.5	3.97	5/32
04	3	4.76	3/16
05	3.5	5.56	7/32
06	4	6.35	1/4
07	5	7.94	5/16
09	6	9.52	3/8
11	7	11.11	7/16
12	8	12.70	1/2

( ) Symbol for small size insert

### 7 Nose Radius(Nose R)



Symbol		Corner Radius	
Metric	Inch	Metric	Inch
01	0	0.1	0.004
02	0.5	0.2	0.008
04	1	0.4	1/64
08	2	0.8	1/32
12	3	1.2	3/64
16	4	1.6	1/16
20	5	2.0	5/64
24	6	2.4	3/32
28	7	2.8	7/64
32	8	3.2	1/8
00	-	Round insert(Inch)	
M0	-	Round insert(Metric)	

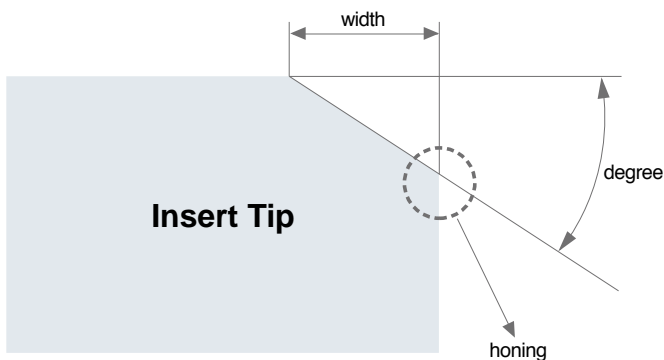
### 8 Edge preparation

Detailed edge preparations refer to the next page.

**Code System - Turning**

**8 Edge preparation**

**1. Mono N/L**

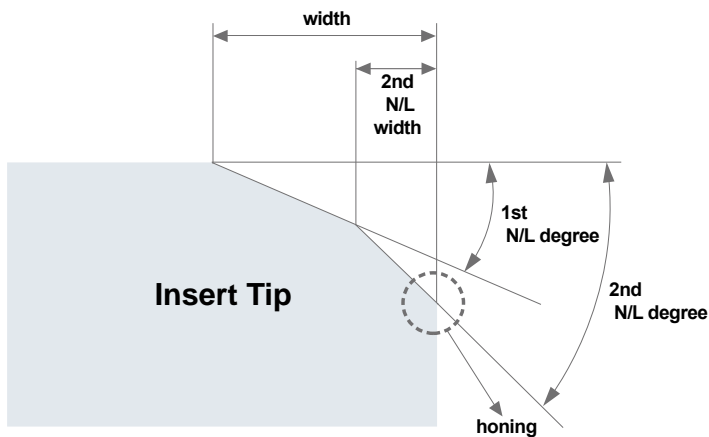


ISO

S N G N 1 2 0 4 0 8 E 0 4 0

N/L Degree ( ° )	N/L Width (mm)		Honing (µm)
E : 20 G : 30	01 : 0.05 02 : 0.10 03 : 0.15 04 : 0.20	20 : 1.00 40 : 2.00	0 : No Honing 1 : 10 2 : 20 3 : 30

**2. Double N/L**



ISO

S N G N 1 9 0 7 1 6 X 5 4 2

1st N/L Degree ( ° )	1st N/L Width(mm)	2nd N/L Width(mm)×Degree		Honing (µm)
W : 10 X : 15	4 : 1.20 5 : 1.50 6 : 2.00	A : 0.75 B : 1.25 D : 2.30	3 : 0.20×25 4 : 0.10×30 5 : 0.20×30 A : 0.15×30 B : 0.45×25	0 : No Honing 1 : 10 2 : 20 3 : 30 5 : 50

## Index




























### Turning

<b>CNGA</b> 15p	<b>CNMA</b> 15p	<b>CNGN</b> 16p	<b>CNMN</b> 16p	<b>CNGX</b> 17p
<b>CNVX</b> 17p	<b>CNMX</b> 18p	<b>CNMX .. RD</b> 18p	<b>CCGX</b> 18p	<b>CCGW</b> 19p
<b>CPGN</b> 19p	<b>DNGA</b> 20p	<b>DNMA</b> 20p	<b>DNGN</b> 21p	<b>DNGX</b> 21p
<b>DNMX</b> 22p	<b>DCGX</b> 22p	<b>ENGN</b> 22p	<b>RNGA</b> 23p	<b>RNGN</b> 23p
<b>RPGA</b> 24p	<b>RPGN</b> 24p	<b>RPGX .. DP</b> 25p	<b>RNGX .. DP</b> 25p	<b>RBGN</b> 26p
<b>RCGN</b> 26p	<b>SNGA</b> 27p	<b>SNMA</b> 27p	<b>SNGN</b> 28p	<b>SNGX</b> 29p
<b>SNMX</b> 29p	<b>SNMX .. RD</b> 29p	<b>SCGN</b> 30p	<b>SCGX</b> 30p	<b>SCGW</b> 30p
<b>SPGN</b> 31p	<b>TNGA</b> 31p	<b>TNGN</b> 32p	<b>TCUN</b> 32p	<b>TPGN</b> 33p



Index

☉ Turning

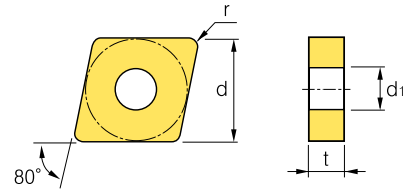
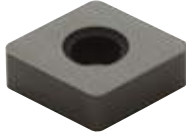
<b>TPUN</b> 33p	<b>VNGA</b> 34p	<b>VNGN</b> 34p	<b>VNGX</b> 35p	<b>WNGA</b> 35p
				
<b>WNGX</b> 35p	<b>CDH</b> 36p	<b>F-Series</b> 36p	<b>F-Series</b> 36p	<b>F-Series</b> 37p
				
<b>F-Series</b> 37p	<b>LNJ</b> 37p	<b>SNGN3812R</b> 38p	<b>RBGX</b> 38p	<b>RCGX</b> 39p
				
<b>RPGX</b> 39p	<b>RXGX</b> 39p	<b>SYBF</b> 40p	<b>SYBR</b> 40p	<b>SGF</b> 41p
				
<b>SGR</b> 41p	<b>SSF</b> 42p	<b>SSR</b> 42p	<b>WFC</b> 43p	<b>WRC</b> 44p
				
<b>WFP</b> 45p	<b>WRP</b> 46p			
				

special

<b>SVW</b> 47p	<b>GVGN</b> 47p	<b>INGN</b> 47p
		

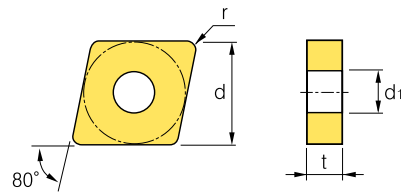
## Turning Inserts

### CNGA



Type		Grades														Dimensions (mm)									
ISO	ASA	CAT10	CAT20	CAT30	CAT50	CAT90	CAT10C	CAT30C	CA20	CA30	CSN20	CSN30	CSN40	CSN50	CSN60	CSN80	CSN100	CSN40C	CW40	CW80	d	t	r	d <sub>1</sub>	
CNGA 120404	CNGA 431	●	○	●	○	○					○											12.70	4.76	0.4	5.16
CNGA 120408	CNGA 432	●	○	●	○	○	○	○	○	○	○	○	○	○	○	○			○	○		12.70	4.76	0.8	5.16
CNGA 120412	CNGA 433	●	○	●					○		○	○	○	○	○	○						12.70	4.76	1.2	5.16
CNGA 120416	CNGA 434	○	○	○							○	○	○			○						12.70	4.76	1.6	5.16
CNGA 120704	CNGA 451																					12.70	7.94	0.4	5.16
CNGA 120708	CNGA 452	○	○								○	○										12.70	7.94	0.8	5.16
CNGA 120712	CNGA 453	○	○	○							○	○				○						12.70	7.94	1.2	5.16
CNGA 120716	CNGA 454	○									○	○				○						12.70	7.94	1.6	5.16
CNGA 160608	CNGA 542										○											15.87	6.35	0.8	6.35
CNGA 160612	CNGA 543										○	○										15.87	6.35	1.2	6.35
CNGA 160616	CNGA 544	○																				15.87	6.35	1.6	6.35
CNGA 160708	CNGA 552	○	○																			15.87	7.94	0.8	6.35
CNGA 160712	CNGA 553	○	○								○											15.87	7.94	1.2	6.35
CNGA 160716	CNGA 554										○											15.87	7.94	1.6	6.35
CNGA 190608	CNGA 642	○									○	○				○						19.05	6.35	0.8	7.93
CNGA 190612	CNGA 643										○											19.05	6.35	1.2	7.93
CNGA 190616	CNGA 644	○	○																			19.05	6.35	1.6	7.93
CNGA 190712	CNGA 653																					19.05	7.94	1.2	7.93
CNGA 190716	CNGA 654	○																				19.05	7.94	1.6	7.93

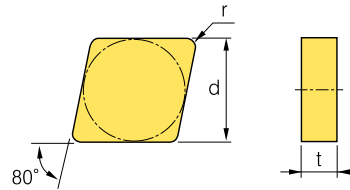
### CNMA



Type		Grades														Dimensions (mm)									
ISO	ASA	CAT10	CAT20	CAT30	CAT50	CAT90	CAT10C	CAT30C	CA20	CA30	CSN20	CSN30	CSN40	CSN50	CSN60	CSN80	CSN100	CSN40C	CW40	CW80	d	t	r	d <sub>1</sub>	
CNMA 120408	CNMA 432											○	○									12.70	4.76	0.8	5.16
CNMA 120412	CNMA 433											○	○	○	○	○						12.70	4.76	1.2	5.16
CNMA 120416	CNMA 434											○	○	○	○	○						12.70	4.76	1.6	5.16
CNMA 160612	CNMA 543																○	○				15.87	6.35	1.2	6.35
CNMA 160616	CNMA 544																○	○				15.87	6.35	1.6	6.35

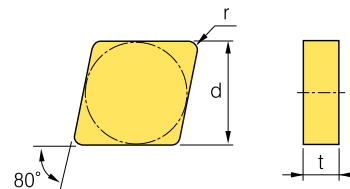
### Turning Inserts

## CNGN



Type		Grades														Dimensions (mm)								
ISO	ASA	CAT10	CAT20	CAT30	CAT50	CAT90	CAT10C	CAT30C	CA20	CA30	CSN20	CSN30	CSN40	CSN50	CSN60	CSN80	CSN100	CSN40C	CW40	CW80	d	t	r	
CNGN 090304	CNGN 321			○																		9.52	3.18	0.4
CNGN 090308	CNGN 322				○											○	○					9.52	3.18	0.8
CNGN 090312	CNGN 323															○	○					9.52	3.18	1.2
CNGN 120304	CNGN 421	○																				12.70	3.18	0.4
CNGN 120308	CNGN 422	○																				12.70	3.18	0.8
CNGN 120312	CNGN 423	○																				12.70	3.18	1.2
CNGN 120404	CNGN 431	●	○	●					○													12.70	4.76	0.4
CNGN 120408	CNGN 432	●	○	●	○	○		○	○	○			●	○		○				○	○	12.70	4.76	0.8
CNGN 120412	CNGN 433	●	○	●	○	○		○	○	○			●	○	○	○				○	○	12.70	4.76	1.2
CNGN 120416	CNGN 434	○	○	○	○					○			○	○	○	○				○	○	12.70	4.76	1.6
CNGN 120704	CNGN 451																			○	○	12.70	7.94	0.4
CNGN 120708	CNGN 452										○	○				○						12.70	7.94	0.8
CNGN 120712	CNGN 453	○	○								○		○	○		○				○	○	12.70	7.94	1.2
CNGN 120716	CNGN 454	○	○								○		○	○		○				○	○	12.70	7.94	1.6
CNGN 160608	CNGN 542																					15.87	6.35	0.8
CNGN 160612	CNGN 543	○												○						○		15.87	6.35	1.2
CNGN 160616	CNGN 544	○																				15.87	6.35	1.6
CNGN 160708	CNGN 552	○												○								15.87	7.94	0.8
CNGN 160712	CNGN 553	○	○	○							○		○	○								15.87	7.94	1.2
CNGN 160716	CNGN 554	○	○	○	○						○	○										15.87	7.94	1.6
CNGN 160720	CNGN 555	○									○	○										15.87	7.94	2.0
CNGN 190612	CNGN 643	○	○																			19.05	6.35	1.2
CNGN 190616	CNGN 644	○	○																			19.05	6.35	1.6
CNGN 190712	CNGN 653	○	○																			19.05	7.94	1.2
CNGN 190716	CNGN 654	○	○																			19.05	7.94	1.6
CNGN 190720	CNGN 655	○																				19.05	7.94	2.0
CNGN 250724	CNGN 856	○																				25.40	7.94	2.4
CNGN 250924	CNGN 866	○	○								○											25.40	9.52	2.4

## CNMN

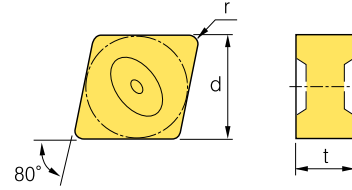


Type		Grades														Dimensions (mm)								
ISO	ASA	CAT10	CAT20	CAT30	CAT50	CAT90	CAT10C	CAT30C	CA20	CA30	CSN20	CSN30	CSN40	CSN50	CSN60	CSN80	CSN100	CSN40C	CW40	CW80	d	t	r	
CNMN 120412	CNMN 433													○		○						12.70	4.76	1.2
CNMN 120416	CNMN 434													○		○						12.70	4.76	1.6



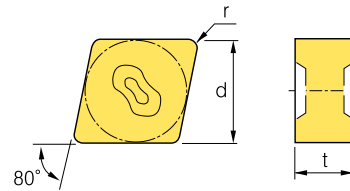
## Turning Inserts

## CNGX



Type		Grades														Dimensions (mm)								
ISO	ASA	CAT10	CAT20	CAT30	CAT50	CAT90	CAT10C	CAT30C	CA20	CA30	CSN20	CSN30	CSN40	CSN50	CSN60	CSN80	CSN100	CSN40C	CW40	CW60	d	t	r	
CNGX 120412	CNGX 433											○	○									12.70	4.76	1.2
CNGX 120416	CNGX 434												○									12.70	4.76	1.6
CNGX 120708	CNGX 452	○		○								○										12.70	7.94	0.8
CNGX 120712	CNGX 453	○		○								○	○	○								12.70	7.94	1.2
CNGX 120716	CNGX 454	○		○								○	○	○	○							12.70	7.94	1.6
CNGX 160708	CNGX 552											○										15.87	7.94	0.8
CNGX 160712	CNGX 553											○	○	○								15.87	7.94	1.2
CNGX 160716	CNGX 554											○	○									15.87	7.94	1.6

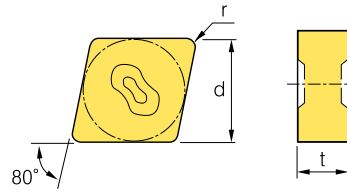
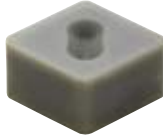
## CNVX



Type		Grades														Dimensions (mm)								
ISO	ASA	CAT10	CAT20	CAT30	CAT50	CAT90	CAT10C	CAT30C	CA20	CA30	CSN20	CSN30	CSN40	CSN50	CSN60	CSN80	CSN100	CSN40C	CW40	CW60	d	t	r	
CNVX 120412	CNVX 433												○									12.70	4.76	1.2
CNVX 120416	CNVX 434												○									12.70	4.76	1.6
CNVX 120708	CNVX 452	○							○			○										12.70	7.94	0.8
CNVX 120712	CNVX 453	○		○					○			○	○	○	○	○						12.70	7.94	1.2
CNVX 120716	CNVX 454			○		○			○			○	○	○	○	○						12.70	7.94	1.6

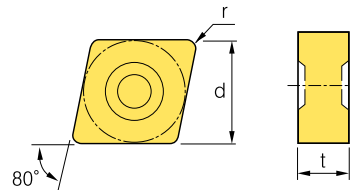
### Turning Inserts

## CNMX



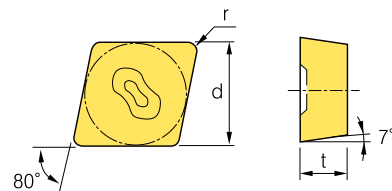
Type		Grades													Dimensions(mm)								
ISO	ASA	CAT10	CAT20	CAT30	CAT50	CAT90	CAT10C	CAT30C	CA20	CA30	CSN20	CSN30	CSN40	CSN50	CSN60	CSN80	CSN100	CSN40C	CW40	CW80	d	t	r
CNMX 120712	CNMX 453												○	○	○						12.70	7.94	1.2
CNMX 120716	CNMX 454												○	○	○	○					12.70	7.94	1.6

## CNMX .. RD



Type		Grades													Dimensions(mm)								
ISO	ASA	CAT10	CAT20	CAT30	CAT50	CAT90	CAT10C	CAT30C	CA20	CA30	CSN20	CSN30	CSN40	CSN50	CSN60	CSN80	CSN100	CSN40C	CW40	CW80	d	t	r
CNMX 120716 RD	CNMX 454 RD												○	○							12.70	7.94	1.2

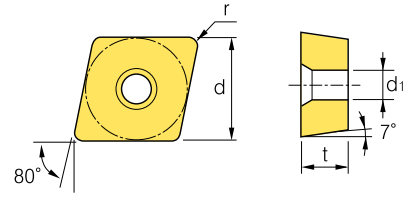
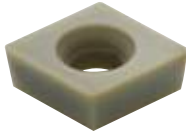
## CCGX



Type		Grades													Dimensions(mm)								
ISO	ASA	CAT10	CAT20	CAT30	CAT50	CAT90	CAT10C	CAT30C	CA20	CA30	CSN20	CSN30	CSN40	CSN50	CSN60	CSN80	CSN100	CSN40C	CW40	CW80	d	t	r
CCGX 120608	CCGX 442												○								12.70	6.35	0.8
CCGX 120612	CCGX 443												○	○	○	○					12.70	6.35	1.2
CCGX 120616	CCGX 444												○								12.70	6.35	1.6

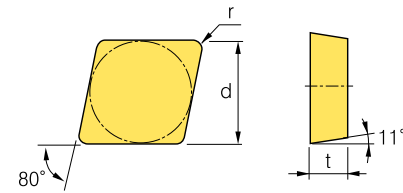
## Turning Inserts

## CCGW



Type		Grades														Dimensions (mm)									
ISO		CAT10	CAT20	CAT30	CAT50	CAT90	CAT10C	CAT30C	CA20	CA30	CSN20	CSN30	CSN40	CSN50	CSN60	CSN80	CSN100	CSN40C	CW40	CW80	d	t	r	d <sub>1</sub>	
CCGW 09T304			○									○	○									9.52	3.97	0.4	4.40
CCGW 09T308			○									○	○		○							9.52	3.97	0.8	4.40
CCGW 09T312												○	○		○							9.52	3.97	1.2	4.40
CCGW 120408													○									12.70	4.76	0.8	5.50
CCGW 120412													○									12.70	4.76	1.2	5.50

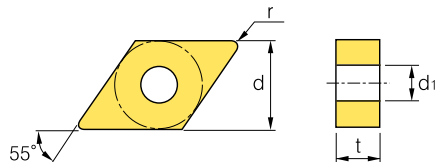
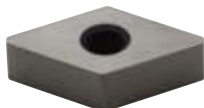
## CPGN



Type		Grades														Dimensions (mm)								
ISO	ASA	CAT10	CAT20	CAT30	CAT50	CAT90	CAT10C	CAT30C	CA20	CA30	CSN20	CSN30	CSN40	CSN50	CSN60	CSN80	CSN100	CSN40C	CW40	CW80	d	t	r	
CPGN 090304	CPGN 321																					9.52	3.18	0.4
CPGN 090308	CPGN 322																					9.52	3.18	0.8
CPGN 120408	CPGN 432	○																				12.70	4.76	0.8
CPGN 120412	CPGN 433																					12.70	4.76	1.2
CPGN 120416	CPGN 434																					12.70	4.76	1.6

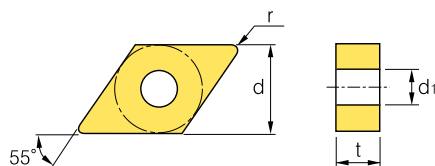
### Turning Inserts

## DNGA



Type		Grades																Dimensions(mm)						
ISO	ASA	CAT10	CAT20	CAT30	CAT50	CAT90	CAT10C	CAT30C	CA20	CA30	CSN20	CSN30	CSN40	CSN50	CSN60	CSN80	CSN100	CSN40C	CW40	CW80	d	t	r	d <sub>1</sub>
DNGA 150404	DNGA 431	●	●	○																	12.70	4.76	0.4	5.16
DNGA 150408	DNGA 432	●	●	○	○		○				○	○	○						○	○	12.70	4.76	0.8	5.16
DNGA 150412	DNGA 433	●	●	○	○							○	○	○			○				12.70	4.76	1.2	5.16
DNGA 150416	DNGA 434	○									○									○	12.70	4.76	1.6	5.16
DNGA 150604	DNGA 441	●	○	●	○	○				○											12.70	6.35	0.4	5.16
DNGA 150608	DNGA 442	●	○	●	○	○					○		●								12.70	6.35	0.8	5.16
DNGA 150612	DNGA 443	●	●	○	○						○		●	○		○					12.70	6.35	1.2	5.16
DNGA 150616	DNGA 444	○	○	○																	12.70	6.35	1.6	5.16
DNGA 150704	DNGA 451	○	○																		12.70	7.94	0.4	5.16
DNGA 150708	DNGA 452	○	○								○	○	○	○							12.70	7.94	0.8	5.16
DNGA 150712	DNGA 453	○	○								○	○	○	○		○					12.70	7.94	1.2	5.16
DNGA 150716	DNGA 454	○	○																		12.70	7.94	1.6	5.16
DNGA 190608	DNGA 542	○	○																		15.87	6.35	0.8	6.35
DNGA 190612	DNGA 543	○	○								○	○	○			○					15.87	6.35	1.2	6.35
DNGA 190616	DNGA 544	○																			15.87	6.35	1.6	6.35

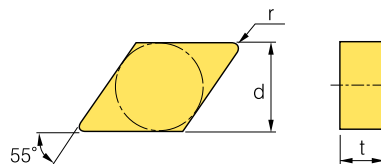
## DNMA



Type		Grades																Dimensions(mm)						
ISO	ASA	CAT10	CAT20	CAT30	CAT50	CAT90	CAT10C	CAT30C	CA20	CA30	CSN20	CSN30	CSN40	CSN50	CSN60	CSN80	CSN100	CSN40C	CW40	CW80	d	t	r	d <sub>1</sub>
DNMA 150612	DNMA 443											○	○								12.70	6.35	1.2	5.16
DNMA 150616	DNMA 444												○								12.70	6.35	1.6	5.16

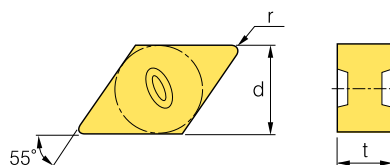
## Turning Inserts

## DNGN



Type		Grades																Dimensions (mm)						
ISO	ASA	CAT10	CAT20	CAT30	CAT50	CAT90	CAT10C	CAT30C	CA20	CA30	CSN20	CSN30	CSN40	CSN50	CSN60	CSN80	CSN100	CSN40C	CW40	CW80	d	t	r	
DNGN 150404	DNGN 431																					12.70	4.76	0.4
DNGN 150408	DNGN 432	●											●						○	○		12.70	4.76	0.8
DNGN 150412	DNGN 433	●	○								○		●						○	○		12.70	4.76	1.2
DNGN 150416	DNGN 434																		○	○		12.70	4.76	1.6
DNGN 150604	DNGN 441																					12.70	6.35	0.4
DNGN 150608	DNGN 442	○				○							○			○						12.70	6.35	0.8
DNGN 150612	DNGN 443	○				○							○			○						12.70	6.35	1.2
DNGN 150616	DNGN 444																					12.70	6.35	1.6
DNGN 150704	DNGN 451	○	○																			12.70	7.94	0.4
DNGN 150708	DNGN 452	○	○	○	○				○	○	○	○				○						12.70	7.94	0.8
DNGN 150712	DNGN 453	○	○	○	○				○	○	○	○	○			○						12.70	7.94	1.2
DNGN 150716	DNGN 454	○	○						○	○	○	○				○						12.70	7.94	1.6

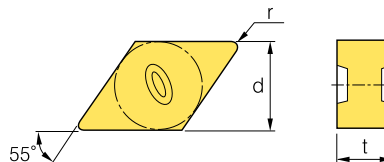
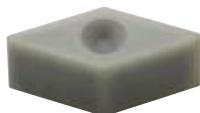
## DNGX



Type		Grades																Dimensions (mm)						
ISO	ASA	CAT10	CAT20	CAT30	CAT50	CAT90	CAT10C	CAT30C	CA20	CA30	CSN20	CSN30	CSN40	CSN50	CSN60	CSN80	CSN100	CSN40C	CW40	CW80	d	t	r	
DNGX 120708	DNGX 352								○				○									10.00	7.94	0.8
DNGX 120712	DNGX 353								○			○	○	○	○	○						10.00	7.94	1.2
DNGX 120716	DNGX 354								○			○	○	○								10.00	7.94	1.6
DNGX 150708	DNGX 452																					12.70	7.94	0.8
DNGX 150712	DNGX 453								○			○	○									12.70	7.94	1.2
DNGX 150716	DNGX 454											○	○	○	○	○						12.70	7.94	1.6

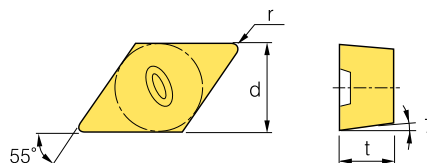
### Turning Inserts

## DNMX



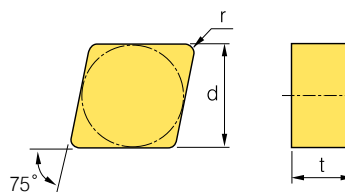
Type		Grades														Dimensions(mm)								
ISO	ASA	CAT10	CAT20	CAT30	CAT50	CAT90	CAT10C	CAT30C	CA20	CA30	CSN20	CSN30	CSN40	CSN50	CSN60	CSN80	CSN100	CSN40C	CW40	CW80	d	t	r	
DNMX 120708	DNMX 352													○								10.00	7.94	0.8
DNMX 120712	DNMX 353													○	○	○	○					10.00	7.94	1.2
DNMX 120716	DNMX 354													○								10.00	7.94	1.6

## DCGX



Type		Grades														Dimensions(mm)								
ISO	ASA	CAT10	CAT20	CAT30	CAT50	CAT90	CAT10C	CAT30C	CA20	CA30	CSN20	CSN30	CSN40	CSN50	CSN60	CSN80	CSN100	CSN40C	CW40	CW80	d	t	r	
DCGX 150612	DCGX 443													○	○	○						12.70	6.35	1.2
DCGX 150616	DCGX 444													○	○	○	○					12.70	6.35	1.6

## ENGN



Type		Grades														Dimensions(mm)								
ISO	ASA	CAT10	CAT20	CAT30	CAT50	CAT90	CAT10C	CAT30C	CA20	CA30	CSN20	CSN30	CSN40	CSN50	CSN60	CSN80	CSN100	CSN40C	CW40	CW80	d	t	r	
ENGN 130404	ENGN 431																					12.70	4.76	0.4
ENGN 130408	ENGN 432			○							○		○									12.70	4.76	0.8
ENGN 130412	ENGN 433			○							○		○									12.70	4.76	1.2
ENGN 130704	ENGN 451	○	○																			12.70	7.94	0.4
ENGN 130708	ENGN 452	○	○	○	○				○	○	○	○	○									12.70	7.94	0.8
ENGN 130712	ENGN 453	○	○	○	○						○	○	○			○			○	○		12.70	7.94	1.2
ENGN 130716	ENGN 454	○	○	○							○	○	○									12.70	7.94	1.6





Grade Information



Ceramic Inserts



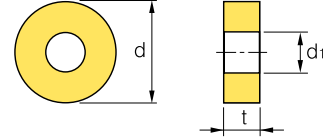
Tool Holders



Technical Information

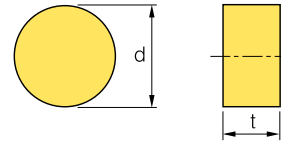
## Turning Inserts

## RNGA



Type		Grades														Dimensions (mm)								
ISO	ASA	CAT10	CAT20	CAT30	CAT50	CAT90	CAT10C	CAT30C	CA20	CA30	CSN20	CSN30	CSN40	CSN50	CSN60	CSN80	CSN100	CSN40C	CW40	CW80	d	t	d <sub>1</sub>	
RNGA 120400	RNGA 430	○	○																			12.70	4.76	5.16
RNGA 120700	RNGA 450	○	○																○	○		12.70	7.94	5.16

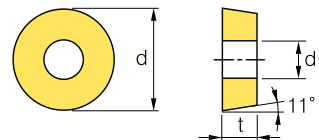
## RNGN



Type		Grades														Dimensions (mm)								
ISO	ASA	CAT10	CAT20	CAT30	CAT50	CAT90	CAT10C	CAT30C	CA20	CA30	CSN20	CSN30	CSN40	CSN50	CSN60	CSN80	CSN100	CSN40C	CW40	CW80	d	t		
RNGN 060300	RNGN 220			○																		6.35	3.18	
RNGN 060400	RNGN 230	○		○																		6.35	4.76	
RNGN 090300	RNGN 320	○		○							○	○										9.52	3.18	
RNGN 090400	RNGN 330	○	○	○	○						○					○					○	○	9.52	4.76
RNGN 120300	RNGN 420										○					○						12.70	3.18	
RNGN 120400	RNGN 430	●	○	●	○			○		○	○	○	●			○					○	○	12.70	4.76
RNGN 120600	RNGN 440																						12.70	6.35
RNGN 120700	RNGN 450	●	●	○	○		○	○	○	○	○	○	●			○					○	○	12.70	7.94
RNGN 150700	RNGN 550	○									○	○											15.87	7.94
RNGN 190600	RNGN 640	○		○							○					○							19.05	6.35
RNGN 190700	RNGN 650	○		○	○			○			○					○					○	○	19.05	7.94
RNGN 250700	RNGN 850	○			○	○		○	○	○	○	○											25.40	7.94
RNGN 250900	RNGN 860																						25.40	9.52
RNGN 320900	RNGN 106	○																					31.75	9.52
RNGN 0807MO	-	○																					8.00	7.94
RNGN 1007MO	-	○																					10.00	7.94
RNGN 1207MO	-	○																					12.00	7.94

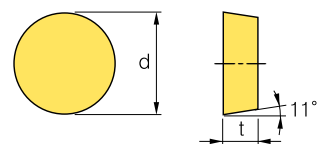
### Turning Inserts

## RPGA



Type		Grades														Dimensions (mm)								
ISO	ASA	CAT10	CAT20	CAT30	CAT50	CAT90	CAT10C	CAT30C	CA20	CA30	CSN20	CSN30	CSN40	CSN50	CSN60	CSN80	CSN100	CSN40C	CW40	CW80	d	t	d <sub>1</sub>	
RPGA 120400	RPGA 430	○																				12.70	4.76	5.16
RPGA 120700	RPGA 450	○																				12.70	7.94	5.16

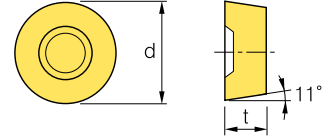
## RPGN



Type		Grades														Dimensions (mm)							
ISO	ASA	CAT10	CAT20	CAT30	CAT50	CAT90	CAT10C	CAT30C	CA20	CA30	CSN20	CSN30	CSN40	CSN50	CSN60	CSN80	CSN100	CSN40C	CW40	CW80	d	t	
RPGN 090300	RPGN 320	○	○														○					9.52	3.18
RPGN 090400	RPGN 330	○	○	○																		9.52	4.76
RPGN 120300	RPGN 420																					12.70	3.18
RPGN 120400	RPGN 430	○	○										○			○				○	○	12.70	4.76
RPGN 120700	RPGN 450	○	○													○						12.70	7.94
RPGN 150700	RPGN 550																					15.87	7.94
RPGN 190700	RPGN 650		○																			19.05	7.94

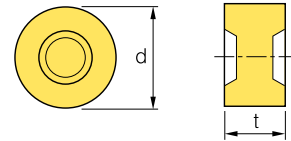
## Turning Inserts

# RPGX .. DP



Type		Grades														Dimensions (mm)						
ISO	ASA	CAT10	CAT20	CAT30	CAT50	CAT90	CAT10C	CAT30C	CA20	CA30	CSN20	CSN30	CSN40	CSN50	CSN60	CSN80	CSN100	CSN40C	CW40	CW80	d	t
RPGX 1204 DP	RPGX 43 DP															○					12.70	4.76
RPGX 1207 DP	RPGX 45 DP															○					12.70	7.94

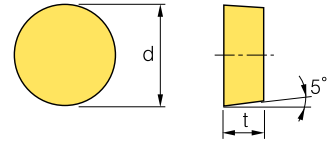
# RNGX .. DP



Type		Grades														Dimensions (mm)						
ISO	ASA	CAT10	CAT20	CAT30	CAT50	CAT90	CAT10C	CAT30C	CA20	CA30	CSN20	CSN30	CSN40	CSN50	CSN60	CSN80	CSN100	CSN40C	CW40	CW80	d	t
RNGX 1207 DP	RNGX 45 DP															○	○				12.00	7.94

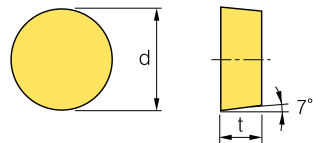
### Turning Inserts

## RBGN



Type		Grades														Dimensions (mm)							
ISO	ASA	CAT10	CAT20	CAT30	CAT50	CAT90	CAT10C	CAT30C	CA20	CA30	CSN20	CSN30	CSN40	CSN50	CSN60	CSN80	CSN100	CSN40C	CW40	CW80	d	t	
RBGN 060300	RBGN 220			○																		6.35	3.18
RBGN 060400	RBGN 230			○																		6.35	4.76
RBGN 090300	RBGN 320	○																				9.52	3.18
RBGN 090400	RBGN 330	○																				9.52	4.76
RBGN 120400	RBGN 430	○	○	○									○									12.70	4.76
RBGN 120600	RBGN 440	○																				12.70	6.35
RBGN 120700	RBGN 450	○	○									○	○			○						12.70	7.94
RBGN 0604MO	-			○																		6.00	4.76
RBGN 0804MO	-			○																		8.00	4.76
RBGN 1007MO	-	○												○								10.00	7.94
RBGN 1207MO	-																					12.00	7.94
RBGN 1607MO	-																					16.00	7.94

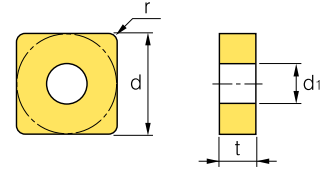
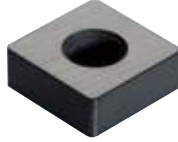
## RCGN



Type		Grades														Dimensions (mm)							
ISO		CAT10	CAT20	CAT30	CAT50	CAT90	CAT10C	CAT30C	CA20	CA30	CSN20	CSN30	CSN40	CSN50	CSN60	CSN80	CSN100	CSN40C	CW40	CW80	d	t	
RCGN 060400		○	○													○						6.35	4.76
RCGN 060600		○	○	○							○					○						6.35	6.35
RCGN 060700		○	○	○					○							○						6.35	7.94
RCGN 070400			○																			7.94	4.76
RCGN 090700		○	○	○							○					○	○					9.52	7.94
RCGN 120700		○	○	○					○		○					○	○					12.70	7.94
RCGN 151000		○	○	○					○		○					○						15.87	10.00
RCGN 191000		○	○	○					○		○					○						19.05	10.00
RCGN 251200		○	○	○					○		○					○						25.40	12.70

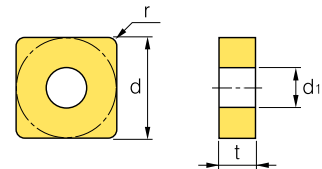
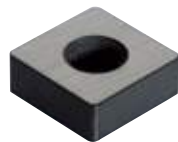
## Turning Inserts

## SNGA



Type		Grades														Dimensions (mm)								
ISO	ASA	CAT10	CAT20	CAT30	CAT50	CAT90	CAT10C	CAT30C	CA20	CA30	CSN20	CSN30	CSN40	CSN50	CSN60	CSN80	CSN100	CSN40C	CW40	CW80	d	t	r	d <sub>1</sub>
SNGA 090304	SNGA 321	○	○																		9.52	3.18	0.4	3.81
SNGA 090308	SNGA 322	○	○																		9.52	3.18	0.8	3.81
SNGA 090312	SNGA 323	○	○																		9.52	3.18	1.2	3.81
SNGA 090404	SNGA 331																				9.52	4.76	0.4	3.81
SNGA 090408	SNGA 332																				9.52	4.76	0.8	3.81
SNGA 090412	SNGA 333																				9.52	4.76	1.2	3.81
SNGA 090416	SNGA 334												○								9.52	4.76	1.6	3.81
SNGA 120404	SNGA 431	●	○	○							○										12.70	4.76	0.4	5.16
SNGA 120408	SNGA 432	●	○	●	○	○					○	○		○		○	○			○	12.70	4.76	0.8	5.16
SNGA 120412	SNGA 433	●	○	●	○	○			○		○	○	○		○	○	○				12.70	4.76	1.2	5.16
SNGA 120416	SNGA 434	○	○								○				○	○					12.70	4.76	1.6	5.16
SNGA 120708	SNGA 452	○																			12.70	7.94	0.8	5.16
SNGA 120712	SNGA 453	○									○	○									12.70	7.94	1.2	5.16
SNGA 120716	SNGA 454	○									○	○				○					12.70	7.94	1.6	5.16
SNGA 150608	SNGA 542		○																		15.87	6.35	0.8	6.35
SNGA 150612	SNGA 543	○	○																		15.87	6.35	1.2	6.35
SNGA 150616	SNGA 544		○																		15.87	6.35	1.6	6.35
SNGA 190612	SNGA 643	○									○	○									19.05	6.35	1.2	7.94
SNGA 190616	SNGA 644																				19.05	6.35	1.6	7.94

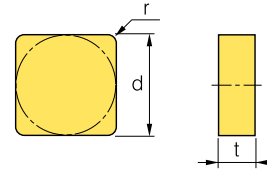
## SNMA



Type		Grades														Dimensions (mm)								
ISO	ASA	CAT10	CAT20	CAT30	CAT50	CAT90	CAT10C	CAT30C	CA20	CA30	CSN20	CSN30	CSN40	CSN50	CSN60	CSN80	CSN100	CSN40C	CW40	CW80	d	t	r	d <sub>1</sub>
SNMA 120408	SNMA 432												○		○						12.70	4.76	0.8	5.16
SNMA 120412	SNMA 433											○	○		○	○					12.70	4.76	1.2	5.16
SNMA 120416	SNMA 434											○	○								12.70	4.76	1.6	5.16
SNMA 150616	SNMA 544											○	○								15.87	6.35	1.6	6.35

## Turning Inserts

# SNGN



Type		Grades														Dimensions (mm)								
ISO	ASA	CAT10	CAT20	CAT30	CAT50	CAT90	CAT10C	CAT30C	CA20	CA30	CSN20	CSN30	CSN40	CSN50	CSN60	CSN80	CSN100	CSN40C	CW40	CW80	d	t	r	
SNGN 090304	SNGN 321	○		○																		9.52	3.18	0.4
SNGN 090308	SNGN 322	○	○	○	○						○		○									9.52	3.18	0.8
SNGN 090312	SNGN 323	○		○																		9.52	3.18	1.2
SNGN 090404	SNGN 331																					9.52	4.76	0.4
SNGN 090408	SNGN 332	○												○								9.52	4.76	0.8
SNGN 090412	SNGN 333													○								9.52	4.76	1.2
SNGN 120404	SNGN 431	○									○											12.70	4.76	0.4
SNGN 120408	SNGN 432	●	○	●	○	○		○			○	○	●			○	○			○	○	12.70	4.76	0.8
SNGN 120412	SNGN 433	●	○	●	○	○		○		○	○	○	●		○	○	○			○	○	12.70	4.76	1.2
SNGN 120416	SNGN 434	○	○	○				○		○	○	○	○	○		○	○			○	○	12.70	4.76	1.6
SNGN 120420	SNGN 435	○									○	○	○	○								12.70	4.76	2.0
SNGN 120604	SNGN 441																					12.70	6.35	0.4
SNGN 120608	SNGN 442	○																				12.70	6.35	0.8
SNGN 120612	SNGN 443	○																				12.70	6.35	1.2
SNGN 120616	SNGN 444	○																				12.70	6.35	1.6
SNGN 120704	SNGN 451			○																		12.70	7.94	0.4
SNGN 120708	SNGN 452	○		○					○		○						○			○	○	12.70	7.94	0.8
SNGN 120712	SNGN 453	○	○	○					○		○	○	○	○	○	○	○	○		○	○	12.70	7.94	1.2
SNGN 120716	SNGN 454	○	○	○					○	○	○	○	○	○	○	○	○			○	○	12.70	7.94	1.6
SNGN 120720	SNGN 455	○	○	○					○		○											12.70	7.94	2.0
SNGN 150404	SNGN 531			○																		15.87	4.76	0.4
SNGN 150408	SNGN 532			○																		15.87	4.76	0.8
SNGN 150412	SNGN 533	○							○													15.87	4.76	1.2
SNGN 150416	SNGN 534	○																				15.87	4.76	1.6
SNGN 150708	SNGN 552	○																				15.87	7.94	0.8
SNGN 150712	SNGN 553	○	○	○					○		○	○	○									15.87	7.94	1.2
SNGN 150716	SNGN 554	○							○	○	○	○	○	○	○							15.87	7.94	1.6
SNGN 190608	SNGN 642																					19.05	6.35	0.8
SNGN 190612	SNGN 643	○									○		○				○					19.05	6.35	1.2
SNGN 190616	SNGN 644	○									○						○			○	○	19.05	6.35	1.6
SNGN 190712	SNGN 653	○																				19.05	7.94	1.2
SNGN 190716	SNGN 654	○	○	○					○		○		○				○					19.05	7.94	1.6
SNGN 190720	SNGN 655	○							○		○											19.05	7.94	2.0
SNGN 250720	SNGN 854	○									○											25.40	7.94	2.0
SNGN 250724	SNGN 856	○		○							○	○										25.40	7.94	2.4
SNGN 250924	SNGN 866	○							○		○	○	○				○					25.40	9.52	2.4





Grade Information



Ceramic Inserts



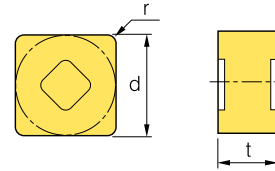
Tool Holders



Technical Information

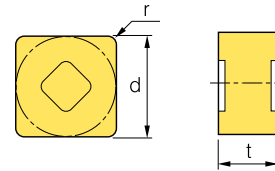
## Turning Inserts

## SNGX



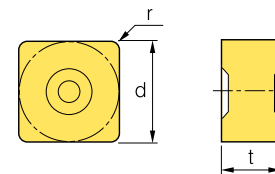
Type		Grades														Dimensions (mm)								
ISO	ASA	CAT10	CAT20	CAT30	CAT50	CAT90	CAT10C	CAT30C	CA20	CA30	CSN20	CSN30	CSN40	CSN50	CSN60	CSN80	CSN100	CSN40C	CW40	CW80	d	t	r	
SNGX 120408	SNGX 432													○								12.70	4.76	0.8
SNGX 120412	SNGX 433													○								12.70	4.76	1.2
SNGX 120416	SNGX 434													○								12.70	4.76	1.6
SNGX 120708	SNGX 452	○										○		○								12.70	7.94	0.8
SNGX 120712	SNGX 453	○	○									○	○	○		○						12.70	7.94	1.2
SNGX 120716	SNGX 454											○	○	○	○	○						12.70	7.94	1.6
SNGX 150708	SNGX 552	○	○									○		○								15.87	7.94	0.8
SNGX 150712	SNGX 553	○	○									○		○		○						15.87	7.94	1.2
SNGX 150716	SNGX 554											○	○	○								15.87	7.94	1.6

## SNMX



Type		Grades														Dimensions (mm)								
ISO	ASA	CAT10	CAT20	CAT30	CAT50	CAT90	CAT10C	CAT30C	CA20	CA30	CSN20	CSN30	CSN40	CSN50	CSN60	CSN80	CSN100	CSN40C	CW40	CW80	d	t	d <sub>1</sub>	
SNMX 120712	SNMX 453											○	○	○	○	○						12.70	7.94	1.2
SNMX 120716	SNMX 454												○									12.70	7.94	1.6

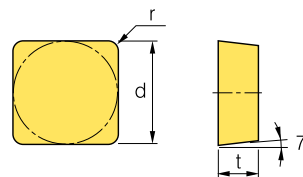
## SNMX .. RD



Type		Grades														Dimensions (mm)								
ISO	ASA	CAT10	CAT20	CAT30	CAT50	CAT90	CAT10C	CAT30C	CA20	CA30	CSN20	CSN30	CSN40	CSN50	CSN60	CSN80	CSN100	CSN40C	CW40	CW80	d	t	d <sub>1</sub>	
SNMX 120716 RD	SNMX 454 RD											○			○							12.70	7.94	1.6

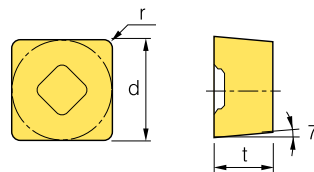
## Turning Inserts

### SCGN



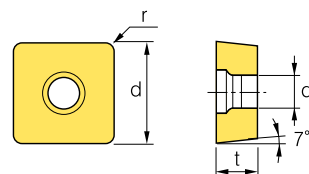
Type		Grades														Dimensions (mm)								
ISO	ASA	CAT10	CAT20	CAT30	CAT50	CAT90	CAT10C	CAT30C	CA20	CA30	CSN20	CSN30	CSN40	CSN50	CSN60	CSN80	CSN100	CSN40C	CW40	CW80	d	t	r	
SCGN 090412	SCGN 333	○											○									9.52	4.76	1.2
SCGN 090416	SCGN 334	○																				9.52	4.76	1.6
SCGN 120404	SCGN 431			○																		12.70	4.76	0.4
SCGN 120408	SCGN 432	○	○																			12.70	4.76	0.8
SCGN 120412	SCGN 433									○		○	○		○	○						12.70	4.76	1.2
SCGN 120416	SCGN 434	○	○																			12.70	4.76	1.6

### SCGX



Type		Grades														Dimensions (mm)								
ISO	ASA	CAT10	CAT20	CAT30	CAT50	CAT90	CAT10C	CAT30C	CA20	CA30	CSN20	CSN30	CSN40	CSN50	CSN60	CSN80	CSN100	CSN40C	CW40	CW80	d	t	r	
SCGX 120408	SCGX 432																					12.70	4.76	0.8
SCGX 120616	SCGX 444														○							12.70	6.35	1.6
SCGX 120716	SCGX 454																					12.70	7.94	1.6

### SCGW



Type		Grades														Dimensions (mm)									
ISO		CAT10	CAT20	CAT30	CAT50	CAT90	CAT10C	CAT30C	CA20	CA30	CSN20	CSN30	CSN40	CSN50	CSN60	CSN80	CSN100	CSN40C	CW40	CW80	d	t	r	d <sub>1</sub>	
SCGW 09T304													○									9.52	3.97	0.4	4.40
SCGW 09T308													○									9.52	3.97	0.8	4.40
SCGW 120408													○									12.70	4.76	0.8	5.50



Grade Information



Ceramic Inserts



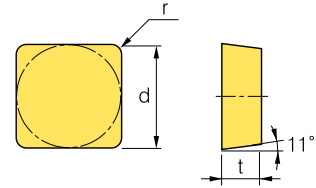
Tool Holders



Technical Information

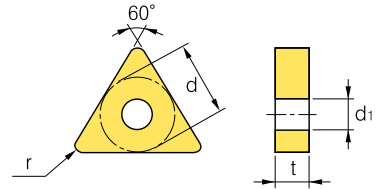
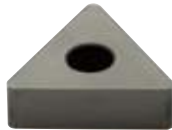
## Turning Inserts

## SPGN



Type		Grades																Dimensions (mm)							
ISO	ASA	CAT10	CAT20	CAT30	CAT50	CAT90	CAT10C	CAT30C	CA20	CA30	CSN20	CSN30	CSN40	CSN50	CSN60	CSN80	CSN100	CSN40C	CW40	CW80	d	t	r		
SPGN 090304	SPGN 321	○		○							○											9.52	3.18	0.4	
SPGN 090308	SPGN 322	○	○	○								○	○	○						○	○	9.52	3.18	0.8	
SPGN 090312	SPGN 323	○																				9.52	3.18	1.2	
SPGN 120304	SPGN 421	○		○																		12.70	3.18	0.4	
SPGN 120308	SPGN 422	○		○					○		○		○									12.70	3.18	0.8	
SPGN 120312	SPGN 423	○	○	○							○		○		○							12.70	3.18	1.2	
SPGN 120404	SPGN 431																					12.70	4.76	0.4	
SPGN 120408	SPGN 432	○		○	○						○										○	○	12.70	4.76	0.8
SPGN 120412	SPGN 433	○	○	○							○	○	○	○	○	○	○			○	○	12.70	4.76	1.2	
SPGN 120416	SPGN 434	○	○	○																○	○	12.70	4.76	1.6	
SPGN 150408	SPGN 532																					15.87	4.76	0.8	
SPGN 150412	SPGN 533				○																	15.87	4.76	1.2	
SPGN 190412	SPGN 633	○																				19.05	4.76	1.2	
SPGN 190416	SPGN 634	○		○									○	○								19.05	4.76	1.6	

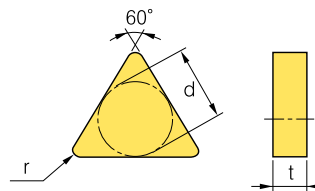
## TNGA



Type		Grades																Dimensions (mm)							
ISO	ASA	CAT10	CAT20	CAT30	CAT50	CAT90	CAT10C	CAT30C	CA20	CA30	CSN20	CSN30	CSN40	CSN50	CSN60	CSN80	CSN100	CSN40C	CW40	CW80	d	t	r	d <sub>1</sub>	
TNGA 110304	TNGA 221	○		○																		6.35	3.18	0.4	2.26
TNGA 110308	TNGA 222	○		○																		6.35	3.18	0.8	2.26
TNGA 160304	TNGA 321	○		○																		9.52	3.18	0.4	3.81
TNGA 160308	TNGA 322	○		○					○		○											9.52	3.18	0.8	3.81
TNGA 160312	TNGA 323	○		○																		9.52	3.18	1.2	3.81
TNGA 160404	TNGA 331	●	○	○	○	○					○	○	○	○		○						9.52	4.76	0.4	3.81
TNGA 160408	TNGA 332	●	○	●	○	○				○	○	○	○	●	○	○				○	○	9.52	4.76	0.8	3.81
TNGA 160412	TNGA 333	○	○	●	○	○				○	○	○	○	○	○	○						9.52	4.76	1.2	3.81
TNGA 160416	TNGA 334	○	○	○	○				○		○	○	○	○	○	○						9.52	4.76	1.6	3.81
TNGA 220404	TNGA 431	○		○							○											12.70	4.76	0.4	5.16
TNGA 220408	TNGA 432	○		○							○		○			○						12.70	4.76	0.8	5.16
TNGA 220412	TNGA 433	○		○							○		○			○						12.70	4.76	1.2	5.16
TNGA 220416	TNGA 434	○		○					○		○		○									12.70	4.76	1.6	5.16
TNGA 220708	TNGA 452	○		○																		12.70	7.94	0.8	5.16
TNGA 220712	TNGA 453	○		○																		12.70	7.94	1.2	5.16
TNGA 270608	TNGA 542				○																	15.87	6.35	0.8	6.35
TNGA 270612	TNGA 543				○																	15.87	6.35	1.2	6.35
TNGA 330924	TNGA 666				○																	19.05	9.52	2.4	7.94

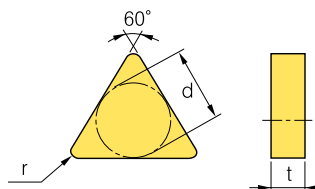
### Turning Inserts

## TNGN



Type		Grades														Dimensions(mm)							
ISO	ASA	CAT10	CAT20	CAT30	CAT50	CAT90	CAT10C	CAT30C	CA20	CA30	CSN20	CSN30	CSN40	CSN50	CSN60	CSN80	CSN100	CSN40C	CW40	CW80	d	t	r
TNGN 110304	TNGN 221	○	○								○										6.35	3.18	0.4
TNGN 110308	TNGN 222	○	○						○		○										6.35	3.18	0.8
TNGN 160404	TNGN 331	●	○	●					○		○										9.52	4.76	0.4
TNGN 160408	TNGN 332	●	○	●	○	○		○	○		○	○	○		○						9.52	4.76	0.8
TNGN 160412	TNGN 333	○		●	○	○		○			○	○	●						○	○	9.52	4.76	1.2
TNGN 160416	TNGN 334	○	○	○	○	○					○	○	○								9.52	4.76	1.6
TNGN 160704	TNGN 351	○																			9.52	7.94	0.4
TNGN 160708	TNGN 352	○	○	○								○									9.52	7.94	0.8
TNGN 160712	TNGN 353	○	○					○			○	○									9.52	7.94	1.2
TNGN 160716	TNGN 354	○	○								○										9.52	7.94	1.6
TNGN 220404	TNGN 431	○																			12.70	4.76	0.4
TNGN 220408	TNGN 432	○	○								○		○						○	○	12.70	4.76	0.8
TNGN 220412	TNGN 433	○	○								○		○				○			○	12.70	4.76	1.2
TNGN 220416	TNGN 434		○								○		○						○	○	12.70	4.76	1.6
TNGN 220708	TNGN 452	○																			12.70	7.94	0.8
TNGN 220712	TNGN 453		○																		12.70	7.94	1.2
TNGN 220716	TNGN 454		○																		12.70	7.94	1.6
TNGN 270608	TNGN 542	○	○																		15.87	6.35	0.8
TNGN 270612	TNGN 543	○	○																		15.87	6.35	1.2
TNGN 270616	TNGN 544		○														○				15.87	6.35	1.6
TNGN 330924	TNGN 666		○																		19.05	9.52	2.4
TNGN 440932	TNGN 868	○	○								○										25.40	9.52	3.2

## TCUN



Type		Grades														Dimensions(mm)							
ISO	ASA	CAT10	CAT20	CAT30	CAT50	CAT90	CAT10C	CAT30C	CA20	CA30	CSN20	CSN30	CSN40	CSN50	CSN60	CSN80	CSN100	CSN40C	CW40	CW80	d	t	r
TCUN 160408	TCUN 332			○									○	○							9.52	4.76	0.8
TCUN 160412	TCUN 333			○									○	○							9.52	4.76	1.2
TCUN 160416	TCUN 334			○									○								9.52	4.76	1.6



Grade Information



Ceramic Inserts



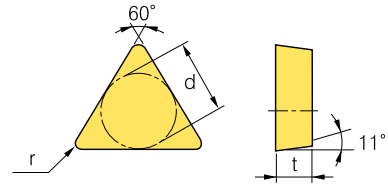
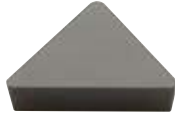
Tool Holders



Technical Information

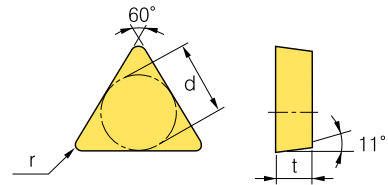
## Turning Inserts

## TPGN



Type		Grades														Dimensions (mm)								
ISO	ASA	CAT10	CAT20	CAT30	CAT50	CAT90	CAT10C	CAT30C	CA20	CA30	CSN20	CSN30	CSN40	CSN50	CSN60	CSN80	CSN100	CSN40C	CW40	CW80	d	t	r	
TPGN 090204	TPGN 731				○																	5.56	2.38	0.4
TPGN 090208	TPGN 732				○																	5.56	2.38	0.8
TPGN 110304	TPGN 221	○	○	○							○		○									6.35	3.18	0.4
TPGN 110308	TPGN 222	○	○	○							○	○	○			○				○	○	6.35	3.18	0.8
TPGN 160304	TPGN 321	○	○	○					○		○		○									9.52	3.18	0.4
TPGN 160308	TPGN 322	○	○	○					○		○	○	○	○		○				○	○	9.52	3.18	0.8
TPGN 160312	TPGN 323	○		○									○	○						○	○	9.52	3.18	1.2
TPGN 160404	TPGN 331	○																				9.52	4.76	0.4
TPGN 160408	TPGN 332	○		○													○					9.52	4.76	0.8
TPGN 160412	TPGN 333	○															○					9.52	4.76	1.2
TPGN 160416	TPGN 334	○																				9.52	4.76	1.6
TPGN 220404	TPGN 431	○		○																		12.70	4.76	0.4
TPGN 220408	TPGN 432	○	○								○									○	○	12.70	4.76	0.8
TPGN 220412	TPGN 433	○	○									○	○									12.70	4.76	1.2
TPGN 220416	TPGN 434	○		○																		12.70	4.76	1.6
TPGN 220712	TPGN 453																					12.70	7.94	1.2
TPGN 220716	TPGN 454																					12.70	7.94	1.6
TPGN 271232	TPGN 588			○																		15.87	12.70	3.2

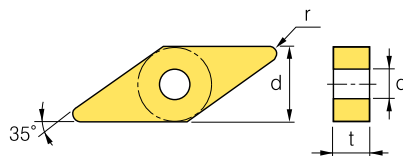
## TPUN



Type		Grades														Dimensions (mm)								
ISO	ASA	CAT10	CAT20	CAT30	CAT50	CAT90	CAT10C	CAT30C	CA20	CA30	CSN20	CSN30	CSN40	CSN50	CSN60	CSN80	CSN100	CSN40C	CW40	CW80	d	t	r	
TPUN 110308	TPUN 222													○								6.35	3.18	0.8
TPUN 110312	TPUN 223													○								6.35	3.18	1.2

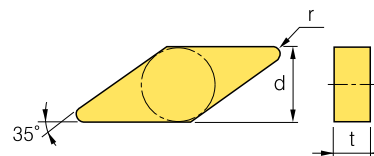
### Turning Inserts

## VNGA



Type		Grades														Dimensions(mm)								
ISO	ASA	CAT10	CAT20	CAT30	CAT50	CAT90	CAT10C	CAT30C	CA20	CA30	CSN20	CSN30	CSN40	CSN50	CSN60	CSN80	CSN100	CSN40C	CW40	CW80	d	t	r	d <sub>1</sub>
VNGA 160404	VNGA 331	○		○	○						○										9.52	4.76	0.4	3.81
VNGA 160408	VNGA 332	○		○	○	○		○		○	○	○	○	○		○					9.52	4.76	0.8	3.81
VNGA 160412	VNGA 333	○		○	○	○				○	○	○	○	○							9.52	4.76	1.2	3.81
VNGA 160604	VNGA 341	○		○																	9.52	6.35	0.4	3.81
VNGA 160608	VNGA 342	○		○																	9.52	6.35	0.8	3.81
VNGA 160612	VNGA 343	○		○																	9.52	6.35	1.2	3.81
VNGA 220404	VNGA 431	○		○																	12.70	4.76	0.4	5.16
VNGA 220408	VNGA 432	○		○										○							12.70	4.76	0.8	5.16
VNGA 220412	VNGA 433	○		○									○								12.70	4.76	1.2	5.16
VNGA 220424	VNGA 436																		○	○	12.70	4.76	2.4	5.16

## VNGN

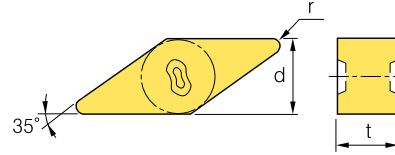


Type		Grades														Dimensions(mm)							
ISO	ASA	CAT10	CAT20	CAT30	CAT50	CAT90	CAT10C	CAT30C	CA20	CA30	CSN20	CSN30	CSN40	CSN50	CSN60	CSN80	CSN100	CSN40C	CW40	CW80	d	t	r
VNGN 160404	VNGN 331			○																	9.52	4.76	0.4
VNGN 160408	VNGN 332			○																	9.52	4.76	0.8
VNGN 160704	VNGN 351			○																	9.52	7.94	0.4
VNGN 160708	VNGN 352			○																	9.52	7.94	0.8
VNGN 160712	VNGN 353																				9.52	7.94	1.2
VNGN 160716	VNGN 354																				9.52	7.94	1.6



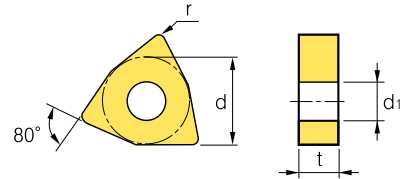
## Turning Inserts

# VNGX



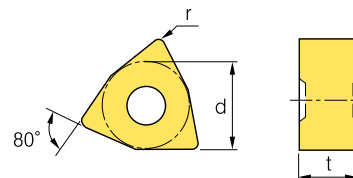
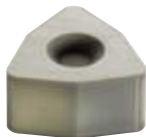
Type		Grades														Dimensions (mm)								
ISO	ASA	CAT10	CAT20	CAT30	CAT50	CAT90	CAT10C	CAT30C	CA20	CA30	CSN20	CSN30	CSN40	CSN50	CSN60	CSN80	CSN100	CSN40C	CW40	CW80	d	t	r	
VNGX 160708	VNGX 352			○					○				○									9.52	7.94	0.8
VNGX 160712	VNGX 353			○					○				○		○							9.52	7.94	1.2
VNGX 160716	VNGX 354												○									9.52	7.94	1.6

# WNGA



Type		Grades														Dimensions (mm)									
ISO	ASA	CAT10	CAT20	CAT30	CAT50	CAT90	CAT10C	CAT30C	CA20	CA30	CSN20	CSN30	CSN40	CSN50	CSN60	CSN80	CSN100	CSN40C	CW40	CW80	d	t	r	d <sub>1</sub>	
WNGA 080404	WNGA 431	●		●	○																	12.70	4.76	0.4	5.16
WNGA 080408	WNGA 432	●		●	○						○	○	○	○	○	○				○	○	12.70	4.76	0.8	5.16
WNGA 080412	WNGA 433	●		●	○						○	○	○	○	○	○						12.70	4.76	1.2	5.16

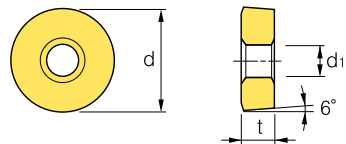
# WNGX



Type		Grades														Dimensions (mm)								
ISO	ASA	CAT10	CAT20	CAT30	CAT50	CAT90	CAT10C	CAT30C	CA20	CA30	CSN20	CSN30	CSN40	CSN50	CSN60	CSN80	CSN100	CSN40C	CW40	CW80	d	t	r	
WNGX 080708	WNGX 452													○								12.70	7.94	0.8
WNGX 080712	WNGX 453										○		○	○	○	○						12.70	7.94	1.2
WNGX 080716	WNGX 454												○									12.70	7.94	1.6

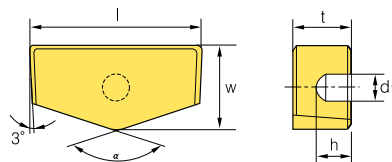
### Roll Turning Insert

## CDH



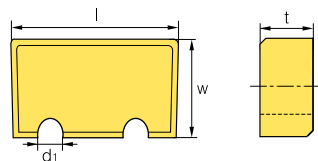
Type		Grades													Dimensions (mm)									
ISO	ASA	CAT10	CAT20	CAT30	CAT50	CAT90	CAT10C	CAT30C	CA20	CA30	CSN20	CSN30	CSN40	CSN50	CSN60	CSN80	CSN100	CSN40C	CW40	CW80	d	t	d <sub>1</sub>	
CDH 120600	CDH 22	○	○	○																		12.70	6.35	3.18
CDH 120900	CDH 23	○																				12.70	9.52	3.18
CDH 190900	CDH 33	○	○	○	○						○											19.05	9.52	6.35
CDH 191200	CDH 34	○																				19.05	12.70	6.35
CDH 251200	CDH 42	○	○	○					○		○											25.40	12.70	6.75
CDH 251900	CDH 43	○							○		○											25.40	19.05	6.75
CDH 320900	CDH 515	○	○						○		○	○										31.75	9.52	10.00
CDH 321900	CDH 53	○	○	○					○		○	○										31.75	19.05	10.00
CDH 381100	-	○																				38.10	11.11	9.93

## F-Series



Type	Grades													Dimensions (mm)												
ISO	CAT10	CAT20	CAT30	CAT50	CAT90	CAT10C	CAT30C	CA20	CA30	CSN20	CSN30	CSN40	CSN50	CSN60	CSN80	CSN100	CSN40C	CW40	CW80	l	w	t	d <sub>1</sub>	h	a	
F 13941	○	○	○					○	○	○											32.00	19.05	12.00	6.50	6.00	120°
F 10537	○	○						○	○	○											44.50	25.40	14.20	6.50	7.00	120°

## F-Series



Type	Grades													Dimensions (mm)										
ISO	CAT10	CAT20	CAT30	CAT50	CAT90	CAT10C	CAT30C	CA20	CA30	CSN20	CSN30	CSN40	CSN50	CSN60	CSN80	CSN100	CSN40C	CW40	CW80	l	w	t	d <sub>1</sub>	
F 10537 V	○	○						○													44.00	26.00	15.00	5.00



Grade Information



Ceramic Inserts



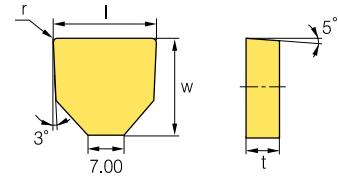
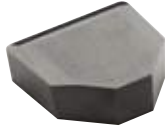
Tool Holders



Technical Information

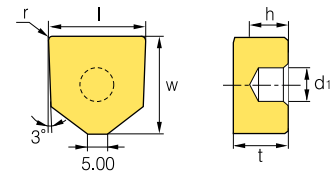
## Roll Turning Insert

## F-Series



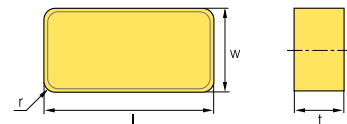
Type	Grades														Dimensions(mm)								
ISO	CAT10	CAT20	CAT30	CAT50	CAT90	CAT10C	CAT30C	CA20	CA30	CSN20	CSN30	CSN40	CSN50	CSN60	CSN80	CSN100	CSN40C	CW40	CW80	l	t	r	w
F 250723			○																	25.00	7.94	1.20	23.00

## F-Series



Type	Grades														Dimensions(mm)										
ISO	CAT10	CAT20	CAT30	CAT50	CAT90	CAT10C	CAT30C	CA20	CA30	CSN20	CSN30	CSN40	CSN50	CSN60	CSN80	CSN100	CSN40C	CW40	CW80	l	t	r	w	d <sub>1</sub>	h
F 251425										○										25.00	14.40	2.40	25.40	9.17	10.00
F 251425 H65										○										25.40	14.40	2.40	25.40	6.50	10.00

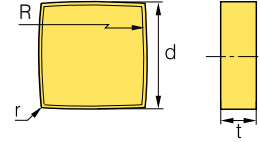
## LNJ



Type	Grades														Dimensions(mm)								
ISO	CAT10	CAT20	CAT30	CAT50	CAT90	CAT10C	CAT30C	CA20	CA30	CSN20	CSN30	CSN40	CSN50	CSN60	CSN80	CSN100	CSN40C	CW40	CW80	l	w	t	r
LNJ 5464	○	○																		25.40	15.87	9.52	1.6
LNJ 5568										○										31.75	15.87	9.52	3.2
LNJ 6588	○	○	○	○				○		○	○									31.75	19.05	12.70	3.2
LNJ 6688	○	○	○	○				○		○	○				○				○	38.10	19.05	12.70	3.2
LNJ 6898										○										48.10	21.05	12.70	3.2

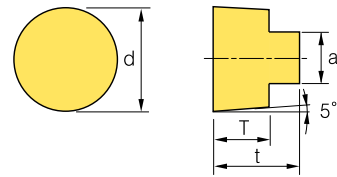
### Roll Turning Insert

## SNGN3812R



Type	Grades														Dimensions (mm)								
ISO	CAT10	CAT20	CAT30	CAT50	CAT90	CAT10C	CAT30C	CA20	CA30	CSN20	CSN30	CSN40	CSN50	CSN60	CSN80	CSN100	CSN40C	CW40	CW80	d	t	r	R
SNGN 3812R	○		○	○																38.10	12.70	0.4	114

## RBGX



Type	Grades														Dimensions (mm)								
ISO	CAT10	CAT20	CAT30	CAT50	CAT90	CAT10C	CAT30C	CA20	CA30	CSN20	CSN30	CSN40	CSN50	CSN60	CSN80	CSN100	CSN40C	CW40	CW80	d	t	T	a
RBGX 06T	○		○																	6.00	5.00	3.00	3.00
RBGX 08T										○										8.00	6.50	4.00	4.00
RBGX 10T	○		○	○	○			○		○	○									10.00	9.00	6.00	6.00
RBGX 12T	○		○	○	○			○		○	○				○					12.00	9.00	6.00	6.00
RBGX 16T																				16.00	13.00	8.00	8.00
RBGX 20T																				20.00	15.00	10.00	10.00
RBGX 26T										○										26.00	15.00	10.00	14.00



Grade Information



Ceramic Inserts



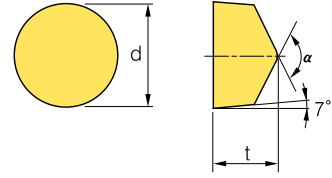
Tool Holders



Technical Information

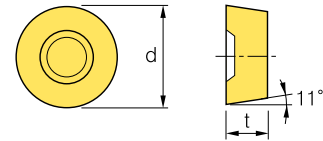
## Roll Turning Insert

## RCGX



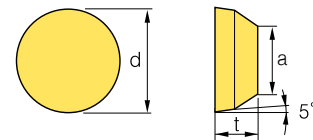
Type		Grades																Dimensions (mm)							
ISO	ASA	CAT10	CAT20	CAT30	CAT50	CAT90	CAT10C	CAT30C	CA20	CA30	CSN20	CSN30	CSN40	CSN50	CSN60	CSN80	CSN100	CSN40C	CW40	CW80	d	t	α		
RCGX 060400	RCGX 102	○		○													○			○	○	6.35	4.76	120°	
RCGX 060600	RCGX 102	○		○	○	○											○					6.35	6.35	120°	
RCGX 060700	RCGX 102	○		○	○	○					○						○					6.35	7.94	120°	
RCGX 090700	RCGX 103	○		○	○	○	○				○						○	○			○	○	9.52	7.94	120°
RCGX 120700	RCGX 104	○		○	○	○	○	○			○						○	○			○	○	12.70	7.94	120°
RCGX 151000	RCGX 105	○		○	○	○	○				○						○	○					15.87	10.00	120°
RCGX 191000	RCGX 106	○		○	○	○	○				○						○						19.05	10.00	120°
RCGX 251200	RCGX 108	○		○	○	○	○				○						○						25.40	12.00	140°

## RPGX



Type		Grades																Dimensions (mm)							
ISO	ASA	CAT10	CAT20	CAT30	CAT50	CAT90	CAT10C	CAT30C	CA20	CA30	CSN20	CSN30	CSN40	CSN50	CSN60	CSN80	CSN100	CSN40C	CW40	CW80	d	t	α		
RPGX 060400																				○	○	6.35	4.76	120°	
RPGX 090700																	○	○			○	○	9.52	7.94	120°
RPGX 120700																	○	○			○	○	12.70	7.94	120°

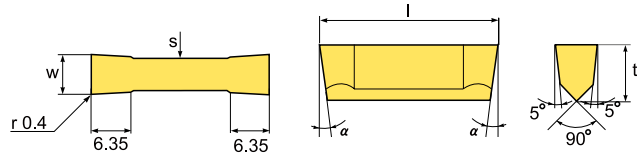
## RXGX



Type		Grades																Dimensions (mm)							
ISO	ASA	CAT10	CAT20	CAT30	CAT50	CAT90	CAT10C	CAT30C	CA20	CA30	CSN20	CSN30	CSN40	CSN50	CSN60	CSN80	CSN100	CSN40C	CW40	CW80	d	t	α		
RXGX 1207MO		○	○																				12.00	7.94	6.90
RXGX 1608MO			○						○														16.00	8.00	9.50
RXGX 2508MO		○							○														25.00	8.00	18.20

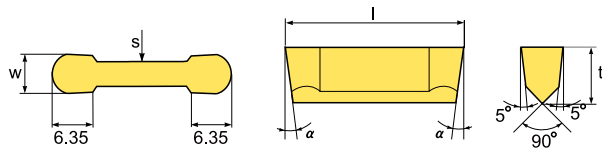
### Roll Turning Insert

## SYBF



Type	Grades														Dimensions (mm)									
ISO	CAT10	CAT20	CAT30	CAT50	CAT90	CAT10C	CAT30C	CA20	CA30	CSN20	CSN30	CSN40	CSN50	CSN60	CSN80	CSN100	CSN40C	CW40	CW80	t	w	t	s	a
SYBF 3228	○	○																		28.58	3.18	6.35	2.69	5.0°
SYBF 4828	○	○																		28.58	4.78	6.35	3.66	5.0°
SYBF 5528																				28.58	5.54	6.35	3.66	5.0°
SYBF 6428	○	○																		28.58	6.35	8.56	5.13	7.0°
SYBF 7928	○	○																		28.58	7.93	8.56	5.13	7.0°
SYBF 9528																				28.58	9.53	8.56	6.99	7.0°

## SYBR



Type	Grades														Dimensions (mm)									
ISO	CAT10	CAT20	CAT30	CAT50	CAT90	CAT10C	CAT30C	CA20	CA30	CSN20	CSN30	CSN40	CSN50	CSN60	CSN80	CSN100	CSN40C	CW40	CW80	t	w	t	s	a
SYBR 3228	○	○																		28.58	3.18	6.35	2.69	5.0°
SYBR 4828	○	○																		28.58	4.78	6.35	3.66	5.0°
SYBR 5528																				28.58	5.54	6.35	3.66	5.0°
SYBR 6428	○	○																		28.58	6.35	8.56	5.13	7.0°
SYBR 7928	○	○																		28.58	7.93	8.56	5.13	7.0°
SYBR 9528																				28.58	9.53	8.56	6.99	7.0°



Grade Information



Ceramic Inserts



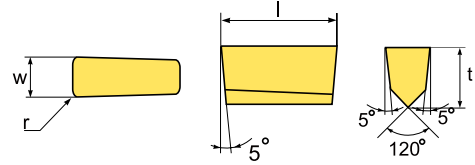
Tool Holders



Technical Information

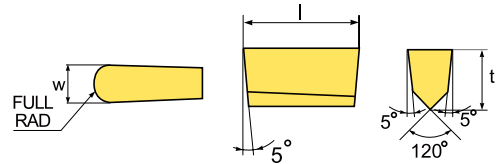
## Roll Turning Insert

## SGF



Type	Grades														Dimensions(mm)								
ISO	CAT10	CAT20	CAT30	CAT50	CAT90	CAT10C	CAT30C	CA20	CA30	CSN20	CSN30	CSN40	CSN50	CSN60	CSN80	CSN100	CSN40C	CW40	CW80	l	w	t	r
SGF 4012	○	○								○										12.00	4.00	5.00	0.50
SGF 5012	○	○								○										12.00	5.00	5.00	0.80
SGF 6015	○	○								○										15.00	6.00	7.50	0.80
SGF 7015	○	○																		15.00	7.00	7.50	0.80
SGF 8015	○	○																		15.00	8.00	7.50	0.80
SGF 1015	○	○																		15.00	10.00	7.50	0.80

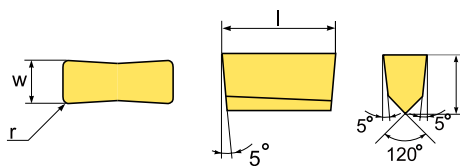
## SGR



Type	Grades														Dimensions(mm)							
ISO	CAT10	CAT20	CAT30	CAT50	CAT90	CAT10C	CAT30C	CA20	CA30	CSN20	CSN30	CSN40	CSN50	CSN60	CSN80	CSN100	CSN40C	CW40	CW80	l	w	t
SGR 4012	○	○						○				○					○			12.00	4.00	5.00
SGR 5012	○	○						○				○					○			12.00	5.00	5.00
SGR 6015	○	○						○												15.00	6.00	7.50
SGR 7015	○	○						○												15.00	7.00	7.50
SGR 8015	○	○						○												15.00	8.00	7.50
SGR 1015	○	○						○												15.00	10.00	7.50

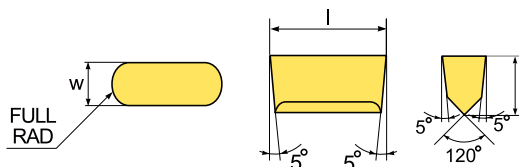
### Roll Turning Insert

## SSF



Type	Grades														Dimensions (mm)								
ISO	CAT10	CAT20	CAT30	CAT50	CAT90	CAT10C	CAT30C	CA20	CA30	CSN20	CSN30	CSN40	CSN50	CSN60	CSN80	CSN100	CSN40C	CW40	CW80	l	w	t	r
SSF 4012	○	○								○										12.00	4.00	5.00	0.80
SSF 5012	○	○								○										12.00	5.00	5.00	0.80
SSF 6015	○	○								○										15.00	6.00	7.50	0.80
SSF 7015	○	○																		15.00	7.00	7.50	0.80
SSF 8015	○	○																		15.00	8.00	7.50	0.80
SSF 1015	○	○																		15.00	10.00	7.50	0.80

## SSR



Type	Grades														Dimensions (mm)							
ISO	CAT10	CAT20	CAT30	CAT50	CAT90	CAT10C	CAT30C	CA20	CA30	CSN20	CSN30	CSN40	CSN50	CSN60	CSN80	CSN100	CSN40C	CW40	CW80	l	w	t
SSR 4012	○	○						○				○					○			12.00	4.00	5.00
SSR 5012	○	○						○				○					○			12.00	5.00	5.00
SSR 6015	○	○						○												15.00	6.00	7.50
SSR 7015	○	○						○												15.00	7.00	7.50
SSR 8015	○	○						○												15.00	8.00	7.50
SSR 1015	○	○						○												15.00	10.00	7.50





Grade Information



Ceramic Inserts

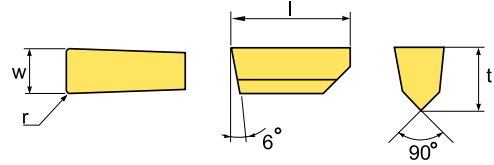


Tool Holders



Technical Information

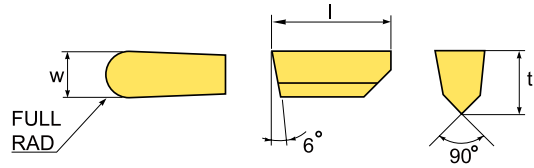
## Roll Turning Insert

**WFC**

Type	Grades													Dimensions(mm)										
ISO	CAT10	CAT20	CAT30	CAT50	CAT90	CAT10C	CAT30C	CA20	CA30	CSN20	CSN30	CSN40	CSN50	CSN60	CSN80	CSN100	CSN40C	CW40	CW60	l	w	t	r	
WFC 094050-A																				12.70	2.388	4.75	0.40	
WFC 094050-B																					12.70	2.388	4.75	0.80
WFC 125050-A																					12.70	3.175	4.75	0.40
WFC 125050-B																					12.70	3.175	4.75	0.80
WFC 156050-A																					12.70	3.962	4.75	0.40
WFC 156050-B																					12.70	3.962	4.75	0.80
WFC 187050-A																					12.70	4.750	4.75	0.40
WFC 187050-B																					12.70	4.750	4.75	0.80
WFC 218075-A																					19.05	5.537	6.35	0.40
WFC 218075-B																					19.05	5.537	6.35	0.80
WFC 250075-A																					19.05	6.350	6.35	0.40
WFC 250075-B																					19.05	6.350	6.35	0.80
WFC 250075-C																					19.05	6.350	6.35	1.20
WFC 281075-A																					19.05	7.137	6.35	0.40
WFC 281075-B																					19.05	7.137	6.35	0.80
WFC 281075-C																					19.05	7.137	6.35	1.20
WFC 312100-A																					25.40	7.925	8.56	0.40
WFC 312100-B																					25.40	7.925	8.56	0.80
WFC 312100-C																					25.40	7.925	8.56	1.20
WFC 312100-D																					25.40	7.925	8.56	1.60
WFC 344100-A																					25.40	8.738	8.56	0.40
WFC 344100-B																					25.40	8.738	8.56	0.80
WFC 344100-C																					25.40	8.738	8.56	1.20
WFC 344100-D																					25.40	8.738	8.56	1.60
WFC 375100-A																					25.40	9.525	8.56	0.40
WFC 375100-B																					25.40	9.525	8.56	0.80
WFC 375100-C																					25.40	9.525	8.56	1.20
WFC 375100-D																					25.40	9.525	8.56	1.60

### Roll Turning Insert

**WRC**



Type	Grades														Dimensions (mm)							
ISO	CAT10	CAT20	CAT30	CAT50	CAT90	CAT10C	CAT30C	CA20	CA30	CAN20	CAN30	CAN40	CAN50	CAN60	CAN80	CAN100	CAN40C	CW40	CW80	l	w	t
WRC 094050																				12.70	2.388	4.75
WRC 125050																			○	12.70	3.175	4.75
WRC 156050																				12.70	3.962	4.75
WRC 187050																				12.70	4.750	4.75
WRC 218075																				19.05	5.537	6.35
WRC 250075																				19.05	6.350	6.35
WRC 281075																				19.05	7.137	6.35
WRC 312100																				25.40	7.925	8.56
WRC 344100																				25.40	8.738	8.56
WRC 375100																				25.40	9.525	8.56



Grade Information



Ceramic Inserts

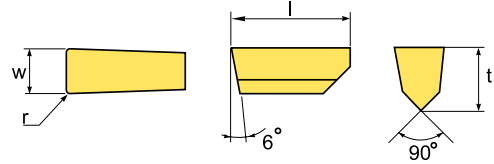


Tool Holders



Technical Information

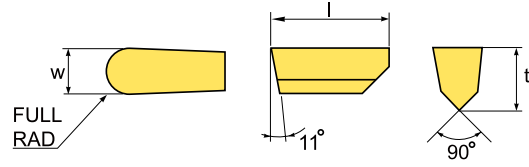
## Roll Turning Insert

**WFP**

Type	Grades														Dimensions(mm)									
ISO	CAT10	CAT20	CAT30	CAT50	CAT90	CAT10C	CAT30C	CA20	CA30	CSN20	CSN30	CSN40	CSN50	CSN60	CSN80	CSN100	CSN40C	CW40	CW60	l	w	t	r	
WFP 094050-A																					12.70	2.388	4.75	0.40
WFP 094050-B																					12.70	2.388	4.75	0.80
WFP 125050-A																					12.70	3.175	4.75	0.40
WFP 125050-B																					12.70	3.175	4.75	0.80
WFP 156050-A																					12.70	3.962	4.75	0.40
WFP 156050-B																					12.70	3.962	4.75	0.80
WFP 187050-A																					12.70	4.750	4.75	0.40
WFP 187050-B																					12.70	4.750	4.75	0.80
WFP 218075-A																					19.05	5.537	6.35	0.40
WFP 218075-B																					19.05	5.537	6.35	0.80
WFP 250075-A																					19.05	6.350	6.35	0.40
WFP 250075-B																					19.05	6.350	6.35	0.80
WFP 250075-C																					19.05	6.350	6.35	1.20
WFP 281075-A																					19.05	7.137	6.35	0.40
WFP 281075-B																					19.05	7.137	6.35	0.80
WFP 281075-C																					19.05	7.137	6.35	1.20
WFP 312100-A																					25.40	7.925	8.56	0.40
WFP 312100-B																					25.40	7.925	8.56	0.80
WFP 312100-C																					25.40	7.925	8.56	1.20
WFP 312100-D																					25.40	7.925	8.56	1.60
WFP 344100-A																					25.40	8.738	8.56	0.40
WFP 344100-B																					25.40	8.738	8.56	0.80
WFP 344100-C																					25.40	8.738	8.56	1.20
WFP 344100-D																					25.40	8.738	8.56	1.60
WFP 375100-A																					25.40	9.525	8.56	0.40
WFP 375100-B																					25.40	9.525	8.56	0.80
WFP 375100-C																					25.40	9.525	8.56	1.20
WFP 375100-D																					25.40	9.525	8.56	1.60

Roll Turning Insert

**WRP**



Type	Grades																Dimensions (mm)						
ISO	CAT10	CAT20	CAT30	CAT50	CAT90	CAT10C	CAT30C	CA20	CA30	CSN20	CSN30	CSN40	CSN50	CSN60	CSN80	CSN100	CSN40C	CW40	CW80	l	w	t	
WRP 094050																					12.70	2.388	4.75
WRP 125050																			○	12.70	3.175	4.75	
WRP 156050																			○	12.70	3.962	4.75	
WRP 187050																			○	12.70	4.750	4.75	
WRP 218075																			○ ○	19.05	5.537	6.35	
WRP 250075																			○ ○	19.05	6.350	6.35	
WRP 281075																			○ ○	19.05	7.137	6.35	
WRP 312100																			○ ○	25.40	7.925	8.56	
WRP 344100																			○ ○	25.40	8.738	8.56	
WRP 375100																			○	25.40	9.525	8.56	



Grade Information



Ceramic Inserts



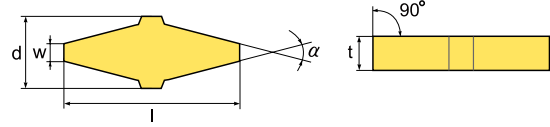
Tool Holders



Technical Information

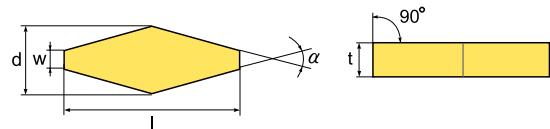
## SPECIAL INSERT

## SVW



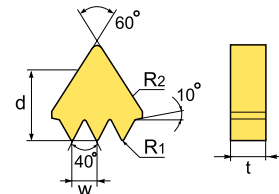
Type	Grades													Dimensions(mm)										
ISO	CAT10	CAT20	CAT30	CAT50	CAT90	CAT10C	CAT30C	CA20	CA30	CSN20	CSN30	CSN40	CSN50	CSN60	CSN80	CSN100	CSN40C	CW40	CW80	l	a	d	t	w
SVW 38260								○												26.00	38°	11.5	7.94	2.23
SVW 38320								○												32.00	38°	14.5	7.94	3.22
SVW 34400								○												40.00	34°	18.5	7.94	5.07

## GVGN



Type	Grades													Dimensions(mm)										
ISO	CAT10	CAT20	CAT30	CAT50	CAT90	CAT10C	CAT30C	CA20	CA30	CSN20	CSN30	CSN40	CSN50	CSN60	CSN80	CSN100	CSN40C	CW40	CW80	l	a	d	t	w
GVGN 38320								○												32.00	38°	13.46	7.94	3.22
GVGN 38335								○												33.50	38°	13.28	8.00	3.06
GVGN 36340								○												34.00	36°	13.59	7.94	3.25
GVGN 38360								○												36.00	38°	17.38	7.94	5.98
GVGN 34360								○												36.00	34°	17.42	7.94	7.22

## INGN



Type	Grades													Dimensions(mm)										
ISO	CAT10	CAT20	CAT30	CAT50	CAT90	CAT10C	CAT30C	CA20	CA30	CSN20	CSN30	CSN40	CSN50	CSN60	CSN80	CSN100	CSN40C	CW40	CW80	d	t	w	R <sub>1</sub>	R <sub>2</sub>
INGN 160435 F303								○												9.52	4.76	3.56	0.5	0.3
INGN 160435 F304								○												9.52	4.76	3.56	0.5	0.4
INGN 220435 F403								○												12.70	4.76	3.56	0.5	0.3
INGN 220435 F404								○												12.70	4.76	3.56	0.5	0.4