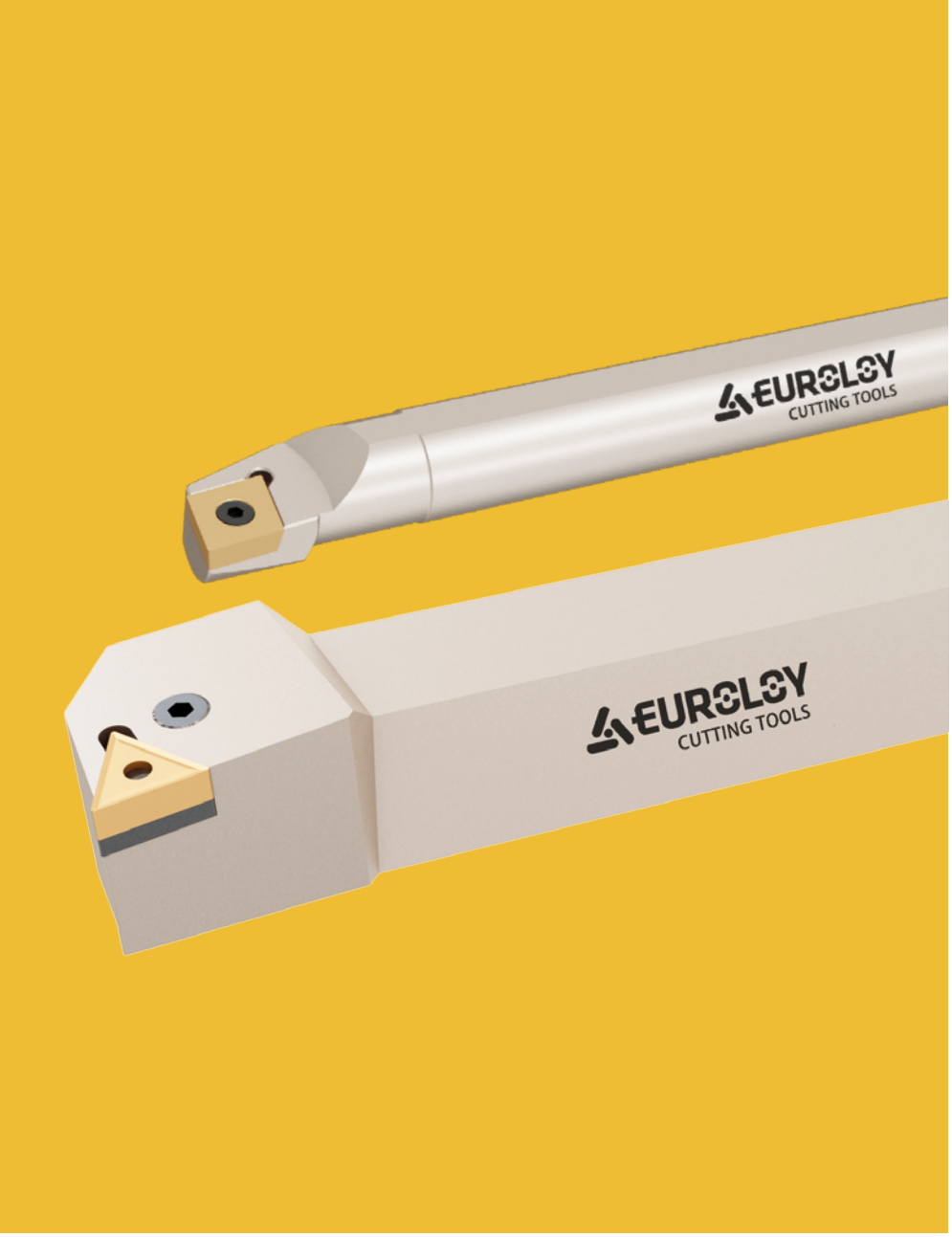
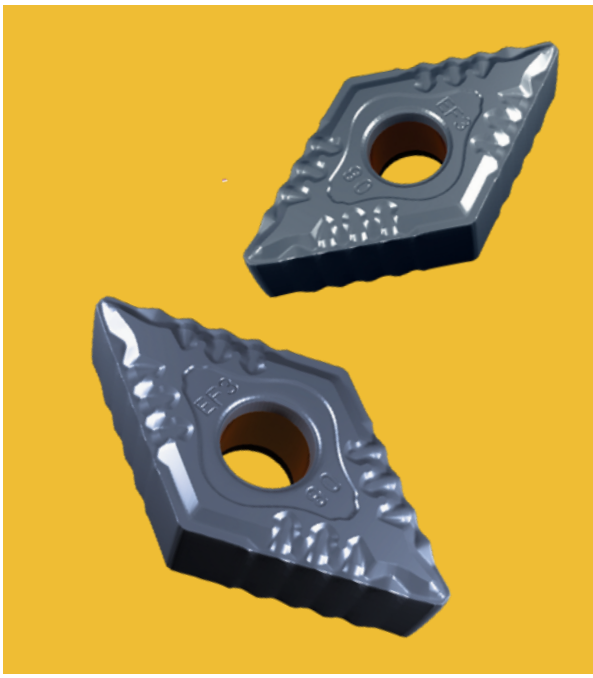




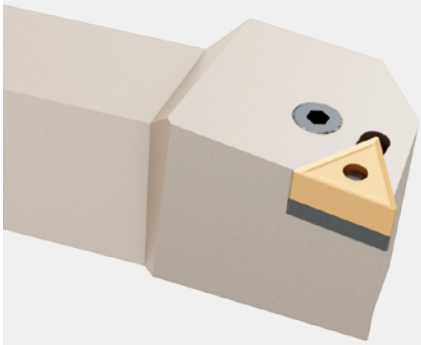


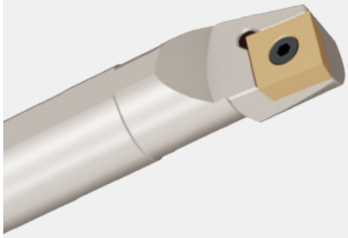
TURNING

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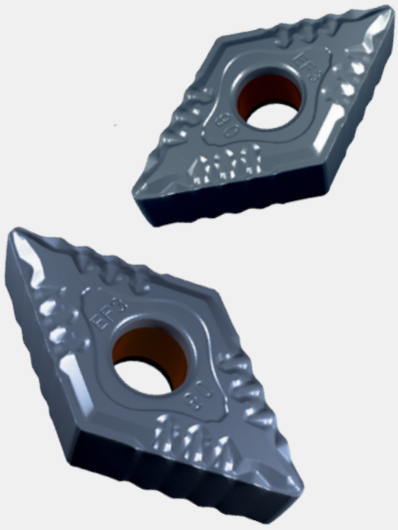
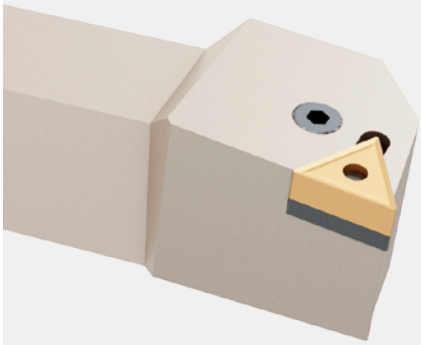
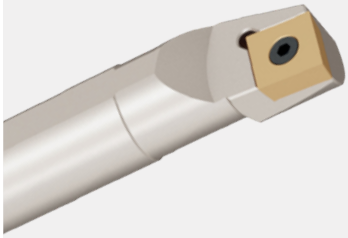


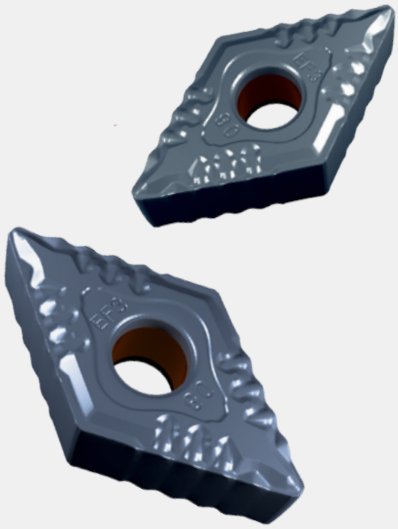
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TURNING INSERT CODE SYSTEM (ISO)

C	N	M	G	12	04	08	PM1
1	2	3	4	5	6	7	8
Insert Shape	*Relief Angle*	*Tolerance*	*Cross Section Type*	*Cutting Edge Length, Diameter Of Inscribed Circle*	*Height of Cutting Edge*	*Nose Radius (Nose R)*	*Chip Breaker for Turning*

1 Insert Shape

C N M G 12 04 08 PM1



C D E K L



R S T V W

2 Relief Angle

C N M G 12 04 08 PM1



B C D E



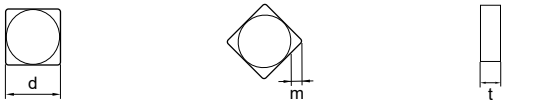
F N P

Special Type

O

3 Tolerance

C N M G 12 04 08 PM1



d m t

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	± 0.013
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)

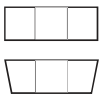
d	*Tolerance d*		*Tolerance m*	
	J,K,L,M,N	U	M,N	U
6.35	± 0.05	± 0.08	± 0.08	± 0.13
9.525	± 0.05	± 0.08	± 0.08	± 0.13
12.7	± 0.08	± 0.13	± 0.13	± 0.20
15.875	± 0.10	± 0.18	± 0.15	± 0.27
19.05	± 0.10	± 0.18	± 0.15	± 0.27
25.4	± 0.13	± 0.25	± 0.18	± 0.38

Tolerance on D Insert Shape (Exceptional Case)

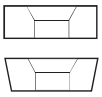
d	*Tolerance d*	*Tolerance m*
6.35	± 0.05	± 0.11
9.525	± 0.05	± 0.11
12.7	± 0.08	± 0.15
15.875	± 0.10	± 0.18
19.05	± 0.10	± 0.18

4 Cross Section Type

C N M G 12 04 08 PM1

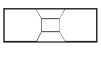


A



Chamfer 70°~90°

B



Chamfer 70°~90°

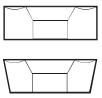
C



F

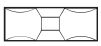


G



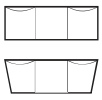
Chamfer 70°~90°

H

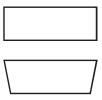


Chamfer 70°~90°

J



M

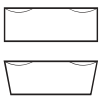


N

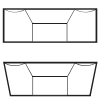


Chamfer 40°~60°

Q

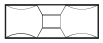


R



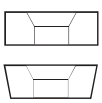
Chamfer 40°~60°

T



Chamfer 40°~60°

U



Chamfer 40°~60°

W

Special Type

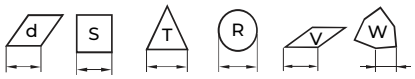
X

TURNING INSERT CODE SYSTEM (ISO)

C	N	M	G	12	04	08	PM1
1	2	3	4	5	6	7	8
Insert Shape	*Relief Angle*	*Tolerance*	*Cross Section Type*	*Cutting Edge Length, Diameter Of Inscribed Circle*	*Height of Cutting Edge*	*Nose Radius (Nose R)*	*Chip Breaker for Turning*

5 *Cutting Edge Length, Diam. of Inscribed Circle*

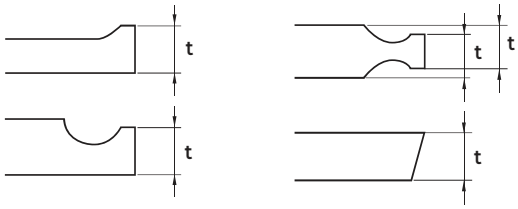
C N M G **12** 04 08 PM1



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

6 *Height of Cutting Edge*

C N M G 12 **04** 08 PM1



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

7 *Nose Radius (Nose R)*

C N M G 12 04 **08** PM1



Symbol		*Corner Radius*	
Metric	*Inch*	*Metric*	*Inch*
003	0.1	0.03	0.001
005	0.13	0.05	0.002
	0.2	0.1	0.004
	0.5	0.2	0.008
	1	004	1/64
	2	0.8	1/32
	3	1.2	3/64
M0	4	1.6	1/16
	5	2.0	5/64
	6	2.4	3/32
	7	2.8	7/64
	8	3.2	1/8
	-		
	-		

8 *Chip Breaker for Turning*

C N M G 12 04 08 **PM1**

ISO Indexable Inserts - Negative







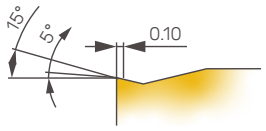
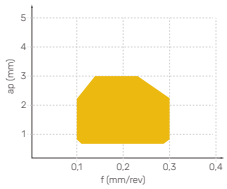
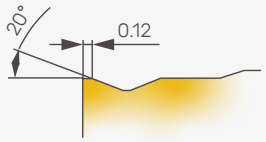
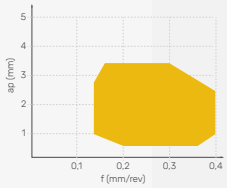
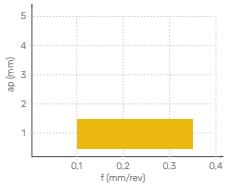
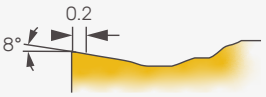
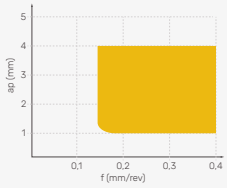
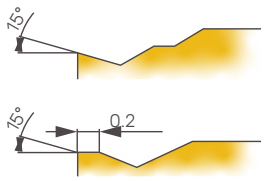
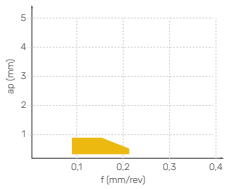
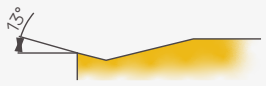
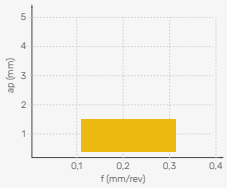
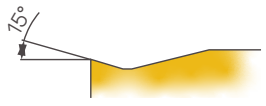
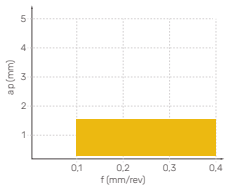
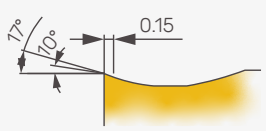
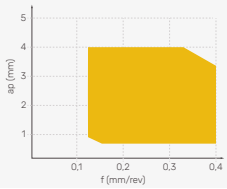


ISO Indexable Inserts - Positive



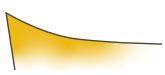
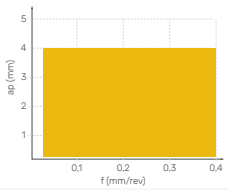
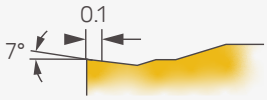
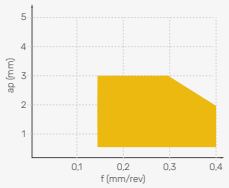
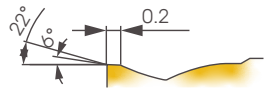
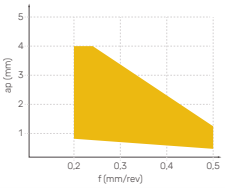
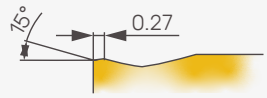
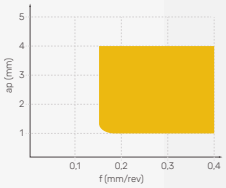
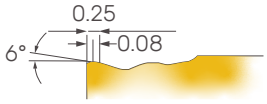
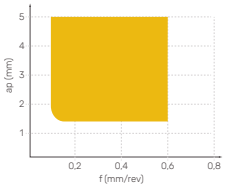
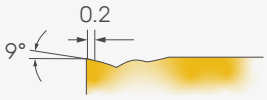
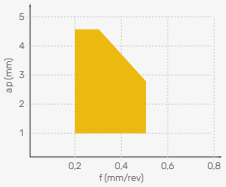
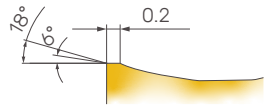
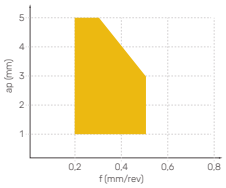
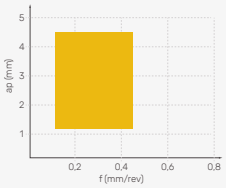


NEGATIVE CHIPBREAKERS

Geometry	Properties	Material Group P	M	K	N	S	H	View of Cutting Edge	Basic cutting data diagram	Available Geometries
PBI	Chipbreaker for steel finishing to semi-finishing. Low cutting forces, ideal for slender or thin-walled parts.	●								CNMG DNMG SNMG TNMG VNMG WNMG
P83	Chipbreaker for steel semi-finishing. Positive rake design reduces cutting forces and provides good chip control in profile and shoulder turning.	●								CNMG DNMG WNMG
EF1	Suitable for finishing of steel, especially forged steel where small workpieces is machined and good chip control is needed.	●								DNMG VNMG
EF2	Suitable for finishing and semi finishing of stainless steel. Provides stable cutting performance and effective chip control.		●							SNMG TNMG VNMG
EF3	First choice for finishing mild steel. Provides effective chip control.	●								DNMG TNMG WNMG
SF1	Sharp cutting edge design reduces built-up edge formation. Ensures stable chip evacuation during machining.		●			●				CNMG DNMG SNMG TNMG VNMG WNMG
MBZ	Chipbreaker for stainless steel finishing. High positive rake prevents cutting force and built-up edge, providing good surface quality.		●			●				CNMG DNMG SNMG VNMG WNMG
SCB	Chipbreaker for medium turning of heat-resistant and titanium alloys. Large rake angle and small land width provide smooth cutting and low cutting forces.		●			●				CNMG DNMG SNMG TNMG VNMG WNMG

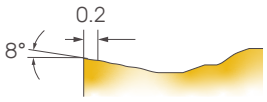
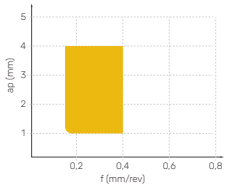
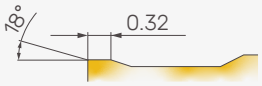
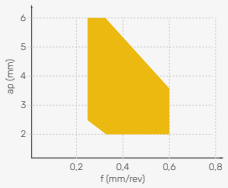
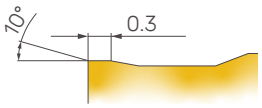
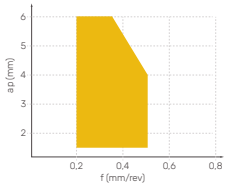
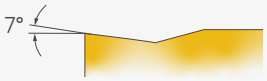
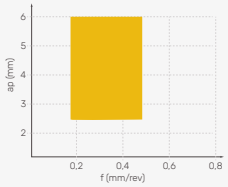
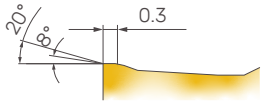
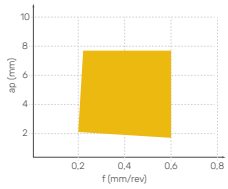
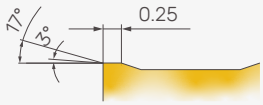
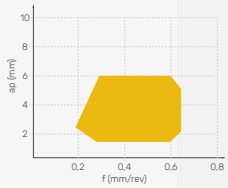
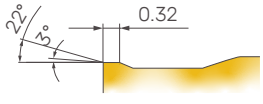
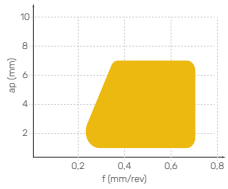
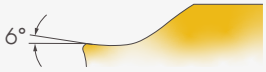
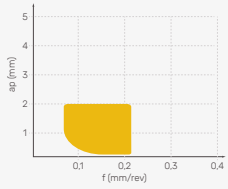
● 1st Choice ○ 2nd Choice

NEGATIVE CHIPBREAKERS

Geometry	Properties	Material Group P	M	K	N	S	H	View of Cutting Edge	Basic cutting data diagram	Available Geometries
AL	Designed for continuous turning of aluminum. High rake angle ensures smooth cutting and long tool life. Suitable for finishing with high feed.	○	○		●					DNMG SNMG TNMG VNMG WNMG
ES1	Good chip control at various depths of cut. Suitable for facing operations.	●								DNMG TNMG WNMG CNMG
MA	First choice for medium machining of carbon and alloy steels. Positive land design ensures sharp and stable cutting.	●	●			○				CNMG TNMG VNMG WNMG
ST	First choice for medium machining of cast iron. Also suitable for medium machining of steel.	○		●						CNMG DNMG SNMG TNMG VNMG WNMG
PM1	Suitable for medium machining of steel and cast iron. Provides stable cutting performance.	●		●						CNMG DNMG SNMG TNMG WNMG
TM	Chipbreaker for medium to rough machining. Designed for stable chip control at medium to high feed rates.	●								CNMG DNMG SNMG TNMG VNMG WNMG
PD	Chipbreaker for steel medium turning. Double rake design provides sharp cutting edges, low cutting forces, and reliable chip control.	●	○							CNMG DNMG SNMG TNMG VNMG WNMG
SM1	Ensures stable chip evacuation. Variable land design improves crater wear resistance and tool life.		●			●				CNMG DNMG SNMG TNMG VNMG WNMG

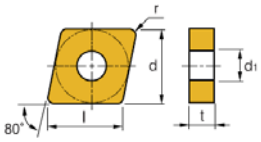
● 1st Choice ○ 2nd Choice

NEGATIVE CHIPBREAKERS

Geometry	Properties	Material Group P	M	K	N	S	H	View of Cutting Edge	Basic cutting data diagram	Available Geometries
EM2	Recommended chipbreaker for semi-finishing of M-type materials. Double-sided design improves chip control and reduces adhesion when machining stainless steel.		●							SNMG TNMG
KR	Alternative chipbreaker for rough machining of carbon steel, alloy steel and cast iron. Suitable for interrupted cutting and high feed rates.	○		●						CNMG DNMG SNMG TNMG VNMG WNMG
KCA	Chipbreaker for cast iron turning. Strong cutting edge ensures stable and reliable machining performance.			●						CNMG DNMG SNMG TNMG VNMG WNMG
SR1	High cutting edge strength for demanding applications. Designed for deep depth-of-cut machining.		●			●				CNMG DNMG SNMG TNMG WNMG
MCA	Alternative chipbreaker for rough turning of stainless steel and heat-resistant alloys. Large chipbreaker geometry ensures good chip evacuation and high metal removal.		●			●				CNMG DNMG SNMG TNMG WNMG
PDS	Alternative chipbreaker for steel rough turning. Strong cutting edge with low cutting force and good chip control.	●								CNMG DNMG WNMG
PR	Chipbreaker for medium to rough machining. Designed for stable cutting at higher feed rates and deeper depths of cut, providing reliable chip control.	●		○						CNMG LNUX SNMG
PF	Positive geometry ensures low cutting forces and stable machining performance. Provides reliable chip control and good surface finish in medium machining applications.	○								LNUX

● 1st Choice ○ 2nd Choice

CNM...

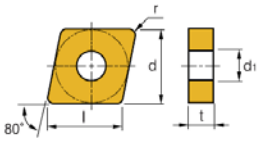


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16	15.875	6.35	6.35
19	19.05	6.35	7.93
25	25.4	9.52	9.12

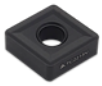
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		CNMA 120408	1.20-6.40	0.20-0.60														●		●	●										
		CNMA 120412	1.80-6.40	0.30-0.90														●		●	●										
		CNMA 160608	1.20-8.10	0.20-0.60														○		○											
		CNMA 160612	1.80-8.10	0.30-0.90														○		●											
		CNMA 160616	2.40-8.10	0.40-1.20														○		○											
		CNMA 190608	1.20-9.70	0.20-0.60														○		○											
		CNMA 190612	1.80-9.70	0.30-0.90														○		○											
		CNMA 190616	2.40-9.70	0.40-1.20														●		●											
	PBI	CNMG 120404	0.26-3.20	0.05-0.15	○			●																							
		CNMG 120408	0.50-3.20	0.10-0.30	○																										
		CNMG 120412	0.80-3.20	0.15-0.45	○																										
	P83	CNMG 120404	0.30-3.50	0.06-0.18				●																							
		CNMG 120408	0.60-3.50	0.12-0.36	●																										
		CNMG 120412	0.90-3.50	0.18-0.54	●			●																							
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	MBZ	CNMG 120404	0.26-3.20	0.05-0.15							●	○			○												●				
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		CNMG 160616	1.60-5.30	0.30-0.88							○	○													○		○				
		CNMG 190612	1.20-6.40	0.23-0.65							○	○													○		○				
		CNMG 190616	1.60-6.40	0.30-0.88							○	○													○		●				
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		CNMG 120404	0.80-3.50	0.05-0.20																		●					○			○	
		CNMG 120408	0.80-3.50	0.10-0.40																		●					○			○	
	ES1	CNMG 120404	0.50-3.00	0.12-0.32		○		●																							
		CNMG 120408	0.50-3.00	0.15-0.40		○		●																							
		CNMG 120412	0.50-3.00	0.17-0.45		○		●																			●			●	○
	MA	CNMG 120404	0,80-3,50	0,05-0,20																							●			●	○
		CNMG 120408	0,80-3,50	0,10-0,40																							○			○	○
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● Stock item ○ Non Stock item △ Special order

CNM...

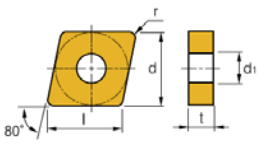


Size			
Dimension	d	t	d1
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16	15.875	6.35	6.35
19	19.05	6.35	7.93
25	25.4	9.52	9.12

Insert Shape	CB	Insert Code	ISO ap (mm)	ISO Vc (m/min) / fn (mm/rev)	P 350(100-600) TC0105	P 300(220-400) TC0115	P 300(220-400) TC2115	P 240(200-320) TC0125	P 240(200-320) TC2125	P 145(45-250) TC2135	M 190(130-250) TC1310	M 180(120-250) TC1320	M 160(120-200) TP4310	M 150(110-200) TP4320	M 130(100-160) TP4330	M 90(70-110) TP4340	K 300(220-360) TC2210	K 300(220-360) TC0210	K 240(180-300) TC2215	K 240(180-300) TC0215	N 600(450-750) TN7501	S 50(30-90) TP2405	S 45(30-60) TP2410	S 45(30-60) TP4410	S 45(30-60) TP2430	U TP2620	U TP3620	U TP2630	U TP3630	U TP4630
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		CNMG 120412	1.20-4.30	0.23-0.65													○		○	○										
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		CNMG 190616	1.60-6.40	0.30-0.65					○	○																				
	SM1	CNMG 120404	0.60-4.50	0.12-0.36									○	●	○							○	●		○					
		CNMG 120408	0.60-4.50	0.12-0.36									○	●	○							○	●		○					
		CNMG 120412	0.60-4.50	0.12-0.45									○	●	○							○	●		○					
		CNMG 120416	0.60-4.50	0.12-0.50										○	○															
		CNMG 160612	2.30-4.50	0.10-0.40										○	○															
	MCB	CNMG 120404	0.32-4.30	0.08-0.22							○	○			●											●				
		CNMG 120408	0.65-4.30	0.15-0.45							●	●			○										●	●				
		CNMG 120412	0.95-4.30	0.23-0.65							●	○														○				
		CNMG 120416	1.28-4.30	0.30-0.88							○	○													○	○				
		CNMG 160608	0.64-5.30	0.15-0.45							○	●		●	●											●				
		CNMG 160612	0.95-5.30	0.23-0.65							○	○														○				
		CNMG 190608	0.64-6.40	0.15-0.45							○	○														○				
		CNMG 190612	0.95-6.40	0.23-0.65							○	○														○				

● Stock item　　○ Non Stock item　　△ Special order

CNM...

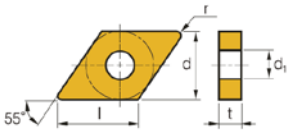


Size			
Dimension	d	t	d_1
12	12.7	4.76	5.16
16	15.875	6.35	6.35
19	19.05	6.35	7.93
25	25.4	9.52	9.12

Insert Shape	CB	Insert Code	ISO ap (mm)	Vc (m/min)	P 350(100-600)	P 300(220-400)	P 300(220-400)	P 240(200-320)	P 240(200-320)	P 145(45-250)	M 190(130-250)	M 180(120-250)	M 160(120-200)	M 150(110-200)	M 130(100-160)	M 90(70-110)	K 300(220-360)	K 300(220-360)	K 240(180-300)	K 240(180-300)	N 600(450-750)	S 50(30-90)	S 45(30-60)	S 45(30-60)	S 45(30-60)	U	U	U	U	U
				fn (mm/rev)	TC0105	TC0115	TC2115	TC0125	TC2125	TC2135	TC1310	TC1320	TP4310	TP4320	TP4330	TP4340	TC2210	TC0210	TC2215	TC0215	TN7501	TP2405	TP2410	TP4410	TP2430	TP2620	TP3620	TP2630	TP3630	TP4630
	KR	CNMG 120404	1.30-6.00	0.20-0.45													○		○	○											
		CNMG 120408	1.50-6.00	0.20-0.60													●		●	●											
		CNMG 120412	1.80-6.00	0.24-0.73													●		●	●											
		CNMG 120416	2.00-6.00	0.28-0.85													○		○	○											
	KCA	CNMG 090308	0.96-3.90	0.18-0.48													●		●												
		CNMG 120404	0.48-5.20	0.09-0.25													○		○												
		CNMG 120408	0.96-5.20	0.18-0.48													○		●												
		CNMG 120412	1.45-5.20	0.26-0.70													●		●												
		CNMG 120416	1.90-5.20	0.35-0.96													●		●												
		CNMG 160608	0.95-6.40	0.18-0.40													○		○												
		CNMG 160612	1.45-6.40	0.26-0.72													○		○												
		CNMG 190608	0.96-7.70	0.18-0.48													○														
		CNMG 190612	1.45-7.70	0.26-0.72													○		○												
		CNMG 190616	1.90-7.70	0.35-0.96													○		●												
	SR1	CNMG 120408	2.40-6.0	0.18-0.48										○	○								●		○						
		CNMG 120412	2.40-6.0	0.18-0.48										○	○								●		○						
		CNMG 120416	2.40-6.0	0.18-0.50										○	○								○		○						
		CNMG 190612	2.40-8.0	0.18-0.45																											
		CNMG 190616	2.40-8.0	0.18-0.55										○	○								○		○						
	MCA	CNMG 120408	1.20-6.40	0.20-0.60							○	○												●	○	●					
		CNMG 120412	1.80-6.40	0.30-0.90							○	○			●									●		●					
		CNMG 160612	1.80-8.10	0.30-0.90							○	○												●	●	○					
		CNMG 160616	2.40-8.10	0.40-1.20							○	○														●					
		CNMG 190612	1.80-9.70	0.30-0.90							○	○			○											○					
		CNMG 190616	2.40-9.70	0.40-1.20							○	○														○					
	PDS	CNMG 120408	1.20-6.40	0.20-0.60	●			●		●																					
		CNMG 120412	1.80-6.40	0.30-0.90	○			○		●																					
		CNMG 160612	1.80-8.10	0.30-0.90	○			●		○																					
		CNMG 160616	2.40-8.10	0.40-1.20	○			○		○																					
		CNMG 190612	1.80-9.70	0.30-0.90	○			○		●																					
		CNMG 190616	2.40-9.70	0.40-1.20						○																					
	PR	CNMG 160608	0.70-8.00	0.20-0.50					○	Δ																					
		CNMG 160612	1.00-8.00	0.25-0.70					○	Δ																					
		CNMG 160616	1.50-8.00	0.30-0.80					○	Δ																					
		CNMG 190608	0.80-10.0	0.20-0.50					○	Δ																					
		CNMG 190612	1.00-10.00	0.25-0.70					○	Δ																					
		CNMG 190616	1.50-10.0	0.30-0.80					○	Δ																					
		CNMG 190624	2.0-10.0	0.32-0.90					○	Δ																					
		CNMM 190612	1.20-12.0	0.25-0.70					○	Δ																					
		CNMM 190616	1.60-12.0	0.32-0.90					○	Δ																					
		CNMM 190624	2.0-12.0	0.35-1.20					○	Δ																					
		CNMM 250924	2.0-12.50	0.20-1.20					○	Δ																					

● Stock item　　○ Non Stock item　　Δ Special order

DNM...

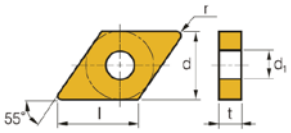


Size			
Dimension	d	t	d1
11	9.525	4.76	3.81
15	12.7	4.76 / 6.35	5.16

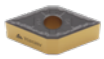
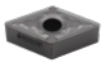
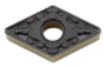
Insert Shape	CB	ISO Insert Code	ap (mm)	Vc (m/min) / fn (mm/rev)	P 350(100-600) TC0105	P 300(220-400) TC0115	P 300(220-400) TC2115	P 240(200-320) TC0125	P 240(200-320) TC2125	P 145(45-250) TC2135	M 190(130-250) TC1310	M 180(120-250) TC1320	M 160(120-200) TP4310	M 150(110-200) TP4320	M 130(100-160) TP4330	M 90(70-110) TP4340	K 300(220-360) TC2210	K 300(220-360) TC0210	K 240(180-300) TC2215	K 240(180-300) TC0215	N 600(450-750) TN7501	S 50(30-90) TP2405	S 45(30-60) TP2410	S 45(30-60) TP4410	S 45(30-60) TP2430	U TP2620	U TP3620	U TP2630	U TP3630	U TP4630
	-	DNMA 150404	0.60-5.40	0.10-0.30													○		●											
		DNMA 150408	1.20-5.40	0.20-0.60													○		●											
		DNMA 150412	1.80-5.40	0.30-0.90													○		○											
		DNMA 150604	0.60-5.40	0.10-0.30													○		●											
		DNMA 150608	1.20-5.40	0.20-0.60													●			●										
		DNMA 150612	1.80-5.40	0.30-0.90																●										
		DNMA 150616	2.0-5.40	0.30-0.95														Δ		Δ										
	EF1	DNMG 150408	0.20-1.50	0.05-0.30		●		●																						
		DNMG 150608	0.20-1.50	0.10-0.35		●		●																						
	EF3	DNMG 150408	0.50-1.50	0.05-0.25		Δ		Δ																						
		DNMG 150608	0.50-1.50	0.05-0.25		●		●																						
	AL	DNMG 150404	0.80-3.50	0.05-0.30																	○									
		DNMG 150408	0.80-3.50	0.10-0.40																	○									
		DNMG 150604	0.80-3.50	0.05-0.30																	●							●	●	
		DNMG 150608	0.80-3.50	0.10-0.40																	●							●	●	
	PBI	DNMG 110404	0.25-2.30	0.05-0.15				●																						
		DNMG 150404	0.25-3.10	0.05-0.15				●																						
		DNMG 150408	0.50-3.10	0.10-0.30	○																									
		DNMG 150608	0.52-3.10	0.10-0.30	○																									
	ES1	DNMG 150604	0.25-3.00	0.05-0.30		○		●																						
		DNMG 150608	0.50-3.00	0.15-0.40		●		●																						
		DNMG 150612	0.50-3.00	0.15-0.45		●		●																						
	P83	DNMG 150408	0.60-3.10	0.12-0.35	○			○																						
		DNMG 150412	0.90-3.10	0.18-0.55	○			○																						
		DNMG 150608	0.60-3.10	0.12-0.35	○			○																						
		DNMG 150612	0.90-3.10	0.18-0.55	○			●																						
	SF1	DNMG 110402	0.12-1.00	0.06-0.24										○									○							
		DNMG 110404	0.12-1.00	0.06-0.24									○										○							
		DNMG 150404	0.12-1.00	0.06-0.24									○	○									○							
		DNMG 150408	0.12-0.12	0.12-0.32										○	○								●							
		DNMG 150604	0.12-0.12	0.06-0.24										●	○								●							
		DNMG 150608	0.12-0.12	0.12-0.32										●									●							
	MBZ	DNMG 150404	0.25-2.90	0.05-0.15							○	○												○		○				
		DNMG 150408	0.50-2.90	0.10-0.30							○	○												○		○				
		DNMG 150604	0.25-2.90	0.05-0.15							○	●			●									●		○				
		DNMG 150608	0.50-2.90	0.10-0.30							○	○			●									●		○				

● Stock item　　○ Non Stock item　　Δ Special order

DNM...

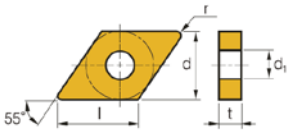


Size			
Dimension	d	t	d_1
11	9.525	4.76	3.81
15	12.7	4.76 / 6.35	5.16

Insert Shape	CB	ISO Insert Code	ap (mm)	Vc (m/min) / fn (mm/rev)	P 350(100-600) TC0105	P 300(220-400) TC0115	P 300(220-400) TC2115	P 240(200-320) TC0125	P 240(200-320) TC2125	P 145(45-250) TC2135	M 190(130-250) TC1310	M 180(120-250) TC1320	M 160(120-200) TP4310	M 150(110-200) TP4320	M 130(100-160) TP4330	M 90(70-110) TP4340	K 300(220-360) TC2210	K 300(220-360) TC0210	K 240(180-300) TC2215	K 240(180-300) TC0215	N 600(450-750) TN7501	S 50(30-90) TP2405	S 45(30-60) TP2410	S 45(30-60) TP4410	S 45(30-60) TP2430	U TP2620	U TP3620	U TP2630	U TP3630	U TP4630
	PM1	DNMG 150604	0.40-1.60	0.10-0.30				●																						
		DNMG 150608	0.50-6.0	0.15-0.50				●																						
		DNMG 150612	0.80-6.0	0.18-0.60				●																						
	TM	DNMG 150404	0.90-5.0	0.20-0.30		●		●		Δ																				
		DNMG 150408	1.0-5.0	0.20-0.50		●		●		Δ																				
		DNMG 150412	1.30-5.0	0.20-0.50		●		●		Δ																				
		DNMG 150604	0.90-5.0	0.20-0.30		●		●		Δ																				
		DNMG 150608	1.0-5.0	0.20-0.50		●		●		Δ																				
		DNMG 150612	1.30-5.0	0.20-0.50		●		●		Δ																				
	ST	DNMG 150404	0.40-3.90	0.08-0.22													○		○											
		DNMG 150408	0.80-3.90	0.15-0.45	○			○									○		○											
		DNMG 150412	1.20-3.90	0.23-0.65	○			○									○		○											
		DNMG 150604	0.40-3.90	0.08-0.22													●			●										
		DNMG 150608	0.80-3.90	0.15-0.45	○			○									○		●											
		DNMG 150612	1.20-3.90	0.23-0.65	○			○									●		●											
	PD	DNMG 110404	0.40-2.9	0.08-0.22				○																						
		DNMG 110408	0.80-2.9	0.15-0.44	○	○		○																						
		DNMG 150404	0.40-3.9	0.08-0.22				○																						
		DNMG 150408	0.80-3.9	0.15-0.44	○	○		○																						
		DNMG 150412	1.20-3.9	0.23-0.66	○																									
		DNMG 150604	0.40-3.9	0.08-0.22				○		○																				
		DNMG 150608	0.80-3.9	0.15-0.44	○			○		○																				
		DNMG 150612	1.20-3.9	0.23-0.66	○			○		○																				
	R/L	DNMG 150404R	0.70-4.50	0.10-0.35		○		●																						
		DNMG 150408R	1.0-4.50	0.12-0.45		○		●																						
		DNMG 150604R	0.70-4.50	0.10-0.35		○		●																				●		●
		DNMG 150608R	1.0-4.50	0.12-0.45		○		●																				●		●
		DNMG 150404L	0.70-4.50	0.10-0.35		○		●																						
		DNMG 150408L	1.0-4.50	0.12-0.45		○		●																						
		DNMG 150604L	0.70-4.50	0.10-0.35		○		●																				●		●
		DNMG 150608L	1.0-4.50	0.12-0.45		○		●																				●		●
	SM1	DNMG 110408	0.60-3.0	0.12-0.40									○	○									○							
		DNMG 150408	0.30-2.0	0.18-0.30									○	○									○							
		DNMG 150412	0.60-4.0	0.12-0.45										○									○							
		DNMG 150608	0.60-4.0	0.12-0.40										●									●							
		DNMG 150612	0.60-4.0	0.12-0.45										●									●							

● Stock item ○ Non Stock item △ Special order

DNM...

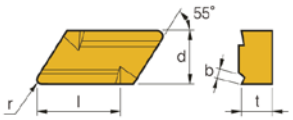


Size			
Dimension	d	t	d_1
11	9.525	4.76	3.81
15	12.7	4.76 / 6.35	5.16

Insert Shape	CB	ISO Insert Code	ap (mm)	Vc (m/min) / fn (mm/rev)	P 350(100-600) TC0105	P 300(220-400) TC0115	P 300(220-400) TC2115	P 240(200-320) TC0125	P 240(200-320) TC2125	P 145(45-250) TC2135	M 190(130-250) TC1310	M 180(120-250) TC1320	M 160(120-200) TP4310	M 150(110-200) TP4320	M 130(100-160) TP4330	M 90(70-110) TP4340	K 300(220-360) TC2210	K 300(220-360) TC0210	K 240(180-300) TC2215	K 240(180-300) TC0215	N 600(450-750) TN7501	S 50(30-90) TP2405	S 45(30-60) TP2410	S 45(30-60) TP4410	S 45(30-60) TP2430	U TP2620	U TP3620	U TP2630	U TP3630	U TP4630
	MCB	DNMG 110404	0.32-2.90	0.08-0.22							○	●													○					
		DNMG 110408	0.65-2.90	0.15-0.45							○	○													○					
		DNMG 150404	0.32-3.90	0.08-0.22							○	○													○					
		DNMG 150408	0.65-2.90	0.15-0.45							○	○													●					
		DNMG 150412	0.95-3.90	0.23-0.65							○	○													○					
		DNMG 150604	0.32-3.90	0.08-0.22							○	○			●										●					
		DNMG 150608	0.64-3.90	0.15-0.45							○	●			○										○					
		DNMG 150612	0.96-3.90	0.23-0.65							○	○													○					
	SCB	DNMG 150404	0.40-3.90	0.08-0.22							○	○												○			○				
		DNMG 150408	0.80-3.90	0.15-0.45							○	○												●			○				
		DNMG 150412	1.20-3.90	0.23-0.65							○	○												○			○				
		DNMG 150604	0.40-3.90	0.08-0.22							○	○												○			○				
		DNMG 150608	0.80-3.90	0.15-0.45							○	●												●			○				
		DNMG 150612	1.20-3.90	0.23-0.65							○	○												●			○				
	PDS	DNMG 150408	1.20-5.40	0.20-0.60		○		○		○																					
		DNMG 150412	1.80-5.40	0.30-0.90		○		●		○																					
		DNMG 150416	2.40-5.40	0.40-1.20		○		○		○																					
		DNMG 150608	1.20-5.40	0.20-0.60		○		○		○																					
		DNMG 150612	1.80-5.40	0.30-0.90		○		○		●																					
		DNMG 150616	2.40-5.40	0.40-1.20		○		○		○																					
	MCA	DNMG 150408	1.20-5.40	0.20-0.60							○	○															○				
		DNMG 150412	1.80-5.40	0.30-0.90							○	○															○				
		DNMG 150608	1.20-5.40	0.20-0.60							○	○													●		●				
		DNMG 150612	1.80-5.40	0.30-0.90							○	○													○		○				
	SR1	DNMG 150408	2.40-4.50	0.18-0.45										○									○		○						
		DNMG 150412	2.40-4.50	0.18-0.45										○									○		○						
		DNMG 150416	2.0-6.0	0.15-0.60										○									○								
		DNMG 150608	2.40-4.50	0.18-0.45										○	○								●								
		DNMG 150612	2.40-4.50	0.18-0.45										○		○							●								
		DNMG 150616	2.0-6.0	0.15-0.60										○								○	○								
	KR	DNMG 150408	1.0-5.0	0.20-0.60													Δ		Δ												
		DNMG 150412	1.30-5.0	0.23-0.70													Δ		Δ												
		DNMG 150608	1.0-5.0	0.20-0.60													●		●												
		DNMG 150612	1.30-5.0	0.23-0.70													●		●												
	KCA	DNMG 110404	0.48-3.50	0.09-0.24																											
		DNMG 110408	0.96-3.50	0.18-0.48													○		○												
		DNMG 150404	0.48-4.60	0.09-0.25													○		○												
		DNMG 150408	0.96-4.60	0.18-0.48													○		○												
		DNMG 150412	1.44-4.60	0.26-0.72													●		○												
		DNMG 150608	0.96-4.60	0.18-0.48													○		●												
		DNMG 150612	1.44-4.60	0.26-0.72													○		●												

● Stock item　　○ Non Stock item　　Δ Special order

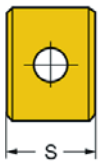
KNUX...

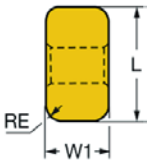


Size		
Dimension	d	t
16	9.525	4.76

Insert Shape	CB	Insert Code	ISO ap (mm)	ISO Vc (m/min)	P 350(100-600)	P 300(220-400)	P 300(220-400)	P 240(200-320)	P 240(200-320)	P 145(45-250)	M 190(130-250)	M 180(120-250)	M 160(120-200)	M 150(110-200)	M 130(100-160)	M 90(70-110)	K 300(220-360)	K 300(220-360)	K 240(180-300)	K 240(180-300)	N 600(450-750)	S 50(30-90)	S 45(30-60)	S 45(30-60)	S 45(30-60)	U	U	U	U	U
				fn (mm/rev)	TC0105	TC0115	TC2115	TC0125	TC2125	TC2135	TC1310	TC1320	TP4310	TP4320	TP4330	TP4340	TC2210	TC0210	TC2215	TC0215	TN7501	TP2405	TP2410	TP4410	TP2430	TP2620	TP3620	TP2630	TP3630	TP4630
	R11/L11	KNUX 160405R11	1.00-6.00	0.20-0.35					●										●									●		●
		KNUX 160410R11	1.50-6.00	0.30-0.60					●										●											
		KNUX 160405L11	1.00-6.00	0.20-0.35					●										●									●		●
		KNUX 160410L11	1.50-6.00	0.30-0.60					●										●											
	R12/L12	KNUX 160405R12	1.50-6.00	0.25-0.35					●																					
		KNUX 160410R12	1.50-6.00	0.40-0.70					●																					
		KNUX 160405L12	1.50-6.00	0.25-0.35					●																					
		KNUX 160410L12	1.50-6.00	0.40-0.70					●																					

LNUX...



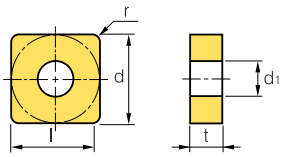


Size					
	L	W1	S	RE	d1
LNUX 19	15.05	10	19.05	4	6.35
LNUX 30	26	12	19.05	4	6.35

Insert Shape	CB	Insert Code	ISO ap (mm)	ISO Vc (m/min)	P 350(100-600)	P 300(220-400)	P 300(220-400)	P 240(200-320)	P 240(200-320)	P 120(45-200)	M 190(130-250)	M 180(120-250)	M 160(120-200)	M 150(110-200)	M 130(100-160)	M 90(70-110)	K 300(220-360)	K 300(220-360)	K 240(180-300)	K 240(180-300)	N 600(450-750)	S 50(30-90)	S 45(30-60)	S 45(30-60)	S 45(30-60)	U	U	U	U	U
				fn (mm/rev)	TC0105	TC0115	TC2115	TC0125	TC2125	TC0140	TC1310	TC1320	TP4310	TP4320	TP4330	TP4340	TC2210	TC0210	TC2215	TC0215	TN7501	TP2405	TP2410	TP4410	TP2430	TP2620	TP3620	TP2630	TP3630	TP4630	TP2630
	PF	LNUX 191940	2.0-10.0	0.70-1.20				○		○																					
	PR	LNUX 301940	2.0-10.0	0.70-1.20				○		○																					

● Stock item ○ Non Stock item △ Special order

SNM...

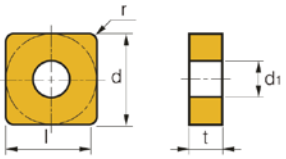


Size			
Dimension	d	t	d1
12	12.7	4.76	5.16
15	15.875	6.35	6.35
19	19.05	4.76 / 6.35	6.35
25	25.4	6.35 / 9.52	9.12

Insert Shape	CB	Insert Code	ISO ap (mm)	ISO Vc (m/min)	ISO fn (mm/rev)	P 350(100-600) TC0105	P 300(220-400) TC0115	P 300(220-400) TC2115	P 240(200-320) TC0125	P 240(200-320) TC2125	P 145(45-250) TC2135	M 190(130-250) TC1310	M 180(120-250) TC1320	M 160(120-200) TP4310	M 150(110-200) TP4320	M 130(100-160) TP4330	M 90(70-110) TP4340	K 300(220-360) TC2210	K 300(220-360) TC0210	K 240(180-300) TC2215	K 240(180-300) TC0215	N 600(450-750) TN7501	S 50(30-90) TP2405	S 45(30-60) TP2410	S 45(30-60) TP4410	S 45(30-60) TP2430	U TP2620	U TP3620	U TP2630	U TP3630	U TP4630
	-	SNMA 120404	1.0-5.0	0.15-0.60														●	○	●											
		SNMA 120408	1.20-6.40	0.20-0.60														●	○	●	○										
		SNMA 120412	1.80-6.40	0.30-0.90														●	○	●	○										
		SNMA 120416	2.40-6.40	0.40-1.20														●	○	●	●										
		SNMA 150612	1.80-7.90	0.30-0.90														○			○										
		SNMA 150616	2.40-7.90	0.40-1.20														○		●	○										
		SNMA 190612	1.80-9.50	0.30-0.90														○			○										
		SNMA 190616	2.40-9.50	0.40-1.20														●	○	●	●										
	PBI	SNMG 120404	0.25-3.20	0.05-0.15	○	○																									
		SNMG 120408	0.50-3.20	0.10-0.30	○	○																									
		SNMG 120412	0.80-3.20	0.15-0.45	○	○																									
	AL	SNMG 120402	0.80-3.0	0.05-0.30																		○									
		SNMG 120404	0.80-3.50	0.10-0.40																		○						○		○	
		SNMG 120408	0.80-3.50	0.13-0.55																		○						○		○	
	EF2	SNMG 120404	0.80-3.0	0.05-0.30																							●			●	
		SNMG 120408	0.80-3.0	0.10-0.40																							●	●			
		SNMG 120412	0.80-3.0	0.15-0.45										○	○									○				●			
	SF1	SNMG 090304	0.10-1.0	0.06-0.20										○	○									○							
		SNMG 120404	0.12-1.2	0.06-0.20										○	○									○							
		SNMG 120408	0.12-1.2	0.12-0.32																											
	MBZ	SNMG 120404	0.26-3.20	0.05-0.15							○	○														○		●				
		SNMG 120408	0.52-3.20	0.10-0.30							○	○														○		○				
	EM2	SNMG 120404	0.50-6.25	0.05-0.30																								○		○	
		SNMG 120408	0.50-6.25	0.20-0.45																								●		○	
		SNMG 120412	0.50-6.25	0.25-0.60																								○		○	
	PM1	SNMG 120404	0.40-6.0	0.10-0.30				●	●																						
		SNMG 120408	0.50-6.0	0.15-0.50					●																						
		SNMG 120412	0.80-6.0	0.18-0.60				●	●	Δ																					
		SNMG 150612	0.80-7.5	0.18-0.60					●	Δ																					
		SNMG 190616	1.0-6.0	0.23-0.65				●	●	Δ																					
	PD	SNMG 120404	0.40-4.2	0.08-0.22				●		○																					
		SNMG 120408	0.80-4.2	0.15-0.45				●		●																					
		SNMG 120412	1.20-4.2	0.23-0.65				○		○																					
		SNMG 190608	0.80-6.3	0.15-0.45				○		○																					
		SNMG 190612	1.60-6.3	0.30-0.65				○		○																					
	TM	SNMG 120404	0.4-4.0	0.20-0.35		○		○																							
		SNMG 120408	0.5-4.5	0.25-0.40		●		●																							
		SNMG 120412	0.8-5.0	0.25-0.45		○		○																							
		SNMG 190612	0.8-8.5	0.25-0.60				Δ		Δ																					

● Stock item　　○ Non Stock item　　Δ Special order

SNM...

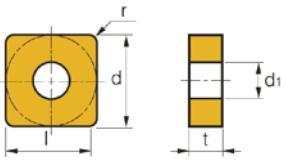


Size			
Dimension	d	t	d_1
12	12.7	4.76	5.16
15	15.875	6.35	6.35
19	19.05	4.76 / 6.35	6.35
25	25.4	6.35 / 9.52	9.12

Insert Shape	CB	Insert Code	ISO ap (mm)	ISO Vc (m/min) / fn (mm/rev)	P 350(100-600) TC0105	P 300(220-400) TC0115	P 300(220-400) TC2115	P 240(200-320) TC0125	P 240(200-320) TC2125	P 145(45-250) TC2135	M 190(130-250) TC1310	M 180(120-250) TC1320	M 160(120-200) TP4310	M 150(110-200) TP4320	M 130(100-160) TP4330	M 90(70-110) TP4340	K 300(220-360) TC2210	K 300(220-360) TC0210	K 240(180-300) TC2215	K 240(180-300) TC0215	N 600(450-750) TN7501	S 50(30-90) TP2405	S 45(30-60) TP2410	S 45(30-60) TP4410	S 45(30-60) TP2430	U TP2620	U TP3620	U TP2630	U TP3630	U TP4630
	MCB	SNMG 120404	0.32-4.20	0.08-0.22							○	○													○					
		SNMG 120408	0.65-4.20	0.15-0.45							○	●			○										●					
		SNMG 120412	0.95-4.2	0.23-0.65							○	●													○					
		SNMG 150612	0.95-5.2	0.23-0.65							○	○													○					
		SNMG 150616	1.28-5.2	0.30-0.88							○	○													○					
		SNMG 190612	0.95-6.3	0.23-0.65							○	○			●										○					
		SNMG 190616	1.28-6.3	0.30-0.88																										
	SCB	SNMG 120408	0.80-4.2	0.15-0.44							○	○												●		○					
		SNMG 120412	1.20-4.2	0.23-0.66							○	○												●		○					
		SNMG 150612	1.20-5.2	0.23-0.66							○	○												●		○					
		SNMG 150616	1.60-5.2	0.30-0.88							○	○												○		○					
		SNMG 190612	1.20-6.3	0.23-0.66							○	○												○		○					
	SM1	SNMG 120408	0.6-5.0	0.12-0.36										●									●		Δ					
		SNMG 120412	0.6-5.0	0.12-0.45										●	●								●		Δ					
		SNMG 120416	0.6-5.0	0.12-0.48										○	○								○		Δ					
		SNMG 190612	0.5-8.0	0.15-0.60										○	○								○							
		SNMG 190616	0.5-8.0	0.15-0.63										○	○								○							
	ST	SNMG 120404	0.40-4.2	0.08-0.22														Δ	●											
		SNMG 120408	0.80-4.2	0.15-0.44														○		●										
		SNMG 120412	1.20-4.20	0.30-0.60														●	●	●										
		SNMG 150612	2.0-6.0	0.30-0.60																●										
		SNMG 190612	3.0-8.0	0.30-0.60														●		●										
		SNMG 190616	3.0-8.0	0.35-0.70																●										
	MCA	SNMG 120408	1.20-6.4	0.20-0.60							○	○		○										○		○					
		SNMG 120412	1.80-6.4	0.30-0.90							○	○		○										●		○					
		SNMG 150612	1.80-7.9	0.30-0.90							○	○		○										○		●					
		SNMG 150616	2.40-7.9	0.40-1.20							○	○		○										○		●					
		SNMG 190612	1.80-9.5	0.30-0.90							○	○		○										○							
		SNMG 190616	2.40-9.5	0.40-1.20							○	○		●										●		●					
	SR1	SNMG 120408	2.4-6.0	0.18-0.44										○	○								○		Δ					
		SNMG 120412	2.5-5.5	0.40-0.60										○	○								○		Δ					
		SNMG 150612	2.0-8.0	0.15-0.60										○	○								○		Δ					
		SNMG 150616	2.0-8.0	0.15-0.70										○	○								○		Δ					
		SNMG 190612	2.4-5.5	0.18-0.48										○	○								○		Δ					
		SNMG 190616	2.4-8.0	0.25-0.55										○	○								○		Δ					
		SNMG 190624	2.5-9.0	0.30-0.90										○	○								○		Δ					
	KR	SNMG 120408	1.50-6.0	0.20-0.60													○		●	○										
		SNMG 120412	1.80-6.0	0.24-0.70													○		●	○										

● Stock item　　○ Non Stock item　　Δ Special order

SNM...

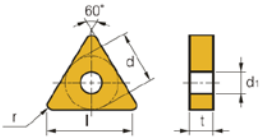


Size			
Dimension	d	t	d_1
9	9525	3.18	3.81
12	12.7	4.76	5.16
15	15.875	6.35	6.35
19	19.05	4.76 / 6.35	6.35
25	25.4	6.35 / 9.52	9.12

Insert Shape	CB	Insert Code	ISO ap (mm)	ISO Vc (m/min) / fn (mm/rev)	P 350(100-600) TC0105	P 300(220-400) TC0115	P 300(220-400) TC2115	P 240(200-320) TC0125	P 240(200-320) TC2125	P 145(45-250) TC2135	M 190(130-250) TC1310	M 180(120-250) TC1320	M 160(120-200) TP4310	M 150(110-200) TP4320	M 130(100-160) TP4330	M 90(70-110) TP4340	K 300(220-360) TC2210	K 300(220-360) TC0210	K 240(180-300) TC2215	K 240(180-300) TC0215	N 600(450-750) TN7501	S 50(30-90) TP2405	S 45(30-60) TP2410	S 45(30-60) TP4410	S 45(30-60) TP2430	U TP2620	U TP3620	U TP2630	U TP3630	U TP4630
	KCA	SNMG 090304	0.45-3.80	0.09-0.25													○		○											
		SNMG 090308	0.45-3.80	0.09-0.25													○		○											
		SNMG 120404	0.45-5.10	0.09-0.25													○		○											
		SNMG 120408	0.95-5.10	0.18-0.50													○		○											
		SNMG 120412	1.45-5.10	0.25-0.72													●		○											
		SNMG 150608	0.95-6.40	0.18-0.48													○		○											
		SNMG 150612	1.45-6.40	0.25-0.72													○		○											
		SNMG 150616	1.90-6.40	0.35-0.95													○		○											
		SNMG 190608	0.95-7.60	0.18-0.48													○		○											
		SNMG 190612	1.45-7.60	0.25-0.72													○		○											
		SNMG 190616	1.92-7.60	0.35-0.95													●		○											
		SNMG 190624	2.85-7.60	0.52-1.45																										
	PR	SNMG 190612	2.0-10	0.32-0.60					Δ	Δ																				
		SNMG 190616	2.0-10	0.32-0.80					Δ	Δ																				
		SNMG 190624	2.0-10	0.32-0.90					Δ	Δ																				
		SNMG 250724	2.80-18.0	0.45-1.40					Δ	Δ																				
		SNMM 190624	2.0-10	0.32-0.90					Δ	Δ																				
		SNMM 250724	2.80-18.0	0.45-1.40					●	●																				
		SNMM 250924	2.80-18.0	0.45-1.40					○	○																				

● Stock item　　○ Non Stock item　　Δ Special order

TNM...

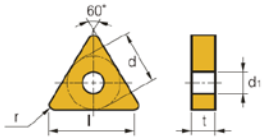


Size			
Dimension	d	t	d_1
16	9.525	4.76	3.81
22	12.7	4.76	5.16

Insert Shape	CB	Insert Code	ISO ap (mm)	ISO Vc (m/min) / fn (mm/rev)	P 350(100-600) TC0105	P 300(220-400) TC0115	P 300(220-400) TC2115	P 240(200-320) TC0125	P 240(200-320) TC2125	P 145(45-250) TC2135	M 190(130-250) TC1310	M 180(120-250) TC1320	M 160(120-200) TP4310	M 150(110-200) TP4320	M 130(100-160) TP4330	M 90(70-110) TP4340	K 300(220-360) TC2210	K 300(220-360) TC0210	K 240(180-300) TC2215	K 240(180-300) TC0215	N 600(450-750) TN7501	S 50(30-90) TP2405	S 45(30-60) TP2410	S 45(30-60) TP4410	S 45(30-60) TP2430	U TP2620	U TP3620	U TP2630	U TP3630	U TP4630	U TP2630
	-	TNMA 160404	1.0-4.0	0.10-0.30													●		●												
		TNMA 160408	1.0-4.0	0.10-0.40													●		●												
		TNMA 160412	1.5-4.5	0.10-0.50															●	●											
		TNMA 160416	1.5-4.5	0.15-0.55															●												
		TNMA 220404	1.0-4.0	0.10-0.35																											
		TNMA 220408	1.5-5.0	0.15-0.40															●												
		TNMA 220412	1.5-5.0	0.20-0.50															●	●											
		TNMA 220416	1.5-5.0	0.25-0.55													●		●	●											
	EF3	TNMG 160404	0.50-1.50	0.07-0.30		○		○																							
		TNMG 160408	0.50-1.50	0.10-0.40		●		●																							
	PBI	TNMG 160404	0.25-3.10	0.05-0.15	○			●																							
		TNMG 160408	0.50-3.10	0.10-0.30	○			○																							
		TNMG 160412	0.75-3.10	0.15-0.45	○			○																							
	AL	TNMG 160402	0.20-4.0	0.05-0.30																	○						○		○		
		TNMG 160404	0.80-3.50	0.05-0.30																	●						○		○		
		TNMG 160408	0.80-3.50	0.10-0.40																	●						○		○		
		TNMG 160412	0.80-3.50	0.13-0.55																							○		○		
		TNMG 220404	0.80-5.30	0.05-0.20																	○						○		○		
		TNMG 220408	0.80-5.30	0.10-0.40																	○						○		○		
	EF2	TNMG 160404	0.10-1.5	0.05-0.30																							●		●		
		TNMG 160408	0.10-1.5	0.10-0.40																							●				
		TNMG 220404	0.5-2.5	0.05-0.25																							●		●		
	SF1	TNMG 160404	0.12-1.20	0.06-0.24										○									○								
		TNMG 160408	0.12-1.20	0.12-0.32										○									○								
	MBZ	TNMG 160404	0.25-3.10	0.05-0.15							○	○	●													●					
		TNMG 160408	0.52-3.10	0.10-0.30							○	○	●													○					
	ES1	TNMG 160404	0.50-3.0	0.15-0.45		●		●																							
		TNMG 160408	0.50-3.0	0.15-0.45		●		●																							
		TNMG 160412	0.50-3.0	0.20-0.55		●		●																							
	SM1	TNMG 160404	0.15-0.35	0.50-3.0																			●								
		TNMG 160408	0.15-0.35	0.50-3.0										○									●								
		TNMG 160412	0.15-0.50	0.60-4.0										○									○								
		TNMG 220412	0.10-0.50	0.50-6.0										○	○								○								
		TNMG 220416	0.10-0.55	0.50-6.0										○	○								○								
	MCB	TNMG 160404	0.32-4.1	0.08-0.22							○	○		○																	
		TNMG 160408	0.65-4.1	0.15-0.45							○	○		●	●																
		TNMG 160412	0.95-4.1	0.23-0.65							○	○		○																	
		TNMG 220408	0.65-4.9	0.15-0.45							○	○		○											●						
		TNMG 220412	0.95-4.9	0.23-0.65							○	○		○													●				

● Stock item　　○ Non Stock item　　△ Special order

TNM...

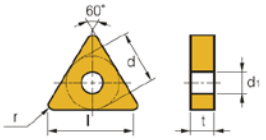


Size			
Dimension	d	t	d_1
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22	12.7	4.76	5.16

Insert Shape	CB	Insert Code	ISO ap (mm)	ISO Vc (m/min) / fn (mm/rev)	P 350(100-600) TC0105	P 300(220-400) TC0115	P 300(220-400) TC2115	P 240(200-320) TC0125	P 240(200-320) TC2125	P 145(45-250) TC2135	M 190(130-250) TC1310	M 180(120-250) TC1320	M 160(120-200) TP4310	M 150(110-200) TP4320	M 130(100-160) TP4330	M 90(70-110) TP4340	K 300(220-360) TC2210	K 300(220-360) TC0210	K 240(180-300) TC2215	K 240(180-300) TC0215	N 600(450-750) TN7501	S 50(30-90) TP2405	S 45(30-60) TP2410	S 45(30-60) TP4410	S 45(30-60) TP2430	U TP2620	U TP3620	U TP2630	U TP3630	U TP4630	U TP2630
	PM1	TNMG 160404	0.4-5.0	0.10-0.30					●																						
		TNMG 160408	0.5-5.0	0.15-0.50				●	●																						
		TNMG 160412	0.8-5.0	0.18-0.60					●																						
		TNMG 220404	0.5-5.8	0.10-0.30					●																						
		TNMG 220412	0.8-6.6	0.18-0.60					●																						
	PD3	TNMG 160404	0.4-4.1	0.08-0.22				○																							
		TNMG 160408	0.8-4.1	0.15-0.45				●																							
		TNMG 160412	1.2-4.1	0.23-0.65				●																							
	TM	TNMG 160404	0.9-5.0	0.20-0.30					●																						
		TNMG 160408	1.0-5.0	0.20-0.50				●	●																						
		TNMG 160412	1.3-5.0	0.20-0.50				●	●																						
	ST	TNMG 160404	0.40-4.1	0.08-0.22																											
		TNMG 160408	0.80-4.1	0.15-0.45													●		●												
		TNMG 160412	1.20-3.1	0.23-0.65															●	●											
	MA	TNMG 160404	1.0-5.0	0.10-0.50															●	●									●		
		TNMG 160408	1.0-5.0	0.18-0.50																										●	
		TNMG 160412	1.0-5.0	0.10-0.50																									●		
	EM2	TNMG 160404	0.5-4.8	0.05-0.30																								●			
		TNMG 160408	0.5-4.8	0.10-0.45																								●			
		TNMG 220404	0.5-5.5	0.05-0.30																									●		
		TNMG 220408	0.5-6.6	0.10-0.45																								●	●		
		TNMG 220412	0.5-6.6	0.1-0.6																								●	●		
	SC3	TNMG 160404	0.40-4.1	0.08-0.22							○	○		○										●		○					
		TNMG 160408	0.80-4.1	0.15-0.45							○	○		○										●		○					
		TNMG 160412	1.20-4.1	0.23-0.65							○	○		○										●		○					
	R/L	TNMG 160404R	1.0-5.0	0.10-0.50					●																						
		TNMG 160408R	1.0-5.0	0.18-0.50		●		●	●																						
		TNMG 160404L	1.0-5.0	0.10-0.50		●		●	●																						
		TNMG 160408L	1.0-5.0	0.18-0.50		●		●	●																						
	MCA	TNMG 160408	1.20-5.8	0.20-0.60							○	●		●													○				
		TNMG 160412	1.80-5.8	0.30-0.90							○	●		●													○				
		TNMG 220408	1.20-6.5	0.20-0.60							○	○		○													○				
		TNMG 220412	1.80-6.5	0.30-0.90							○	○		○													○				
	SR1	TNMG 160408	2.4-4.3	0.18-0.45										○										●							
		TNMG 160412	2.4-4.3	0.18-0.45										○	○									●							
		TNMG 220412	2.0-7.0	0.15-0.50										○	○									○							
		TNMG 220416	2.0-7.0	0.15-0.60										○	○									○							

● Stock item　　○ Non Stock item　　△ Special order

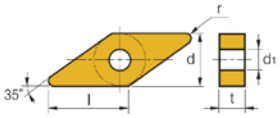
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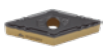
Size			
Dimension	d	t	d1
16	9.525	4.76	3.81
22	12.7	4.76	5.16

Insert Shape	CB	Insert Code	ISO		P						M						K				N	S				U					
			ap (mm)	Vc (m/min)	350(100-600)	300(220-400)	300(220-400)	240(200-320)	240(200-320)	145(45-250)	190(130-250)	180(120-250)	160(120-200)	150(110-200)	130(100-160)	90(70-110)	300(220-360)	300(220-360)	240(180-300)	240(180-300)	600(450-750)	50(30-90)	45(30-60)	45(30-60)	45(30-60)							
				fn (mm/rev)	TC0105	TC0115	TC2115	TC0125	TC2125	TC2135	TC1310	TC1320	TP4310	TP4320	TP4330	TP4340	TC2210	TC0210	TC2215	TC0215	TN7501	TP2405	TP2410	TP4410	TP2430	TP2620	TP3620	TP2630	TP3630	TP4630	TP2630
	KCA	TNMG 160404	0.48-4.9	0.09-0.24													○		○													
		TNMG 160408	0.96-4.9	0.18-0.48													○		●													
		TNMG 160412	1.44-4.9	0.26-0.72													○		●													
		TNMG 160416	1.92-4.9	0.35-0.95													○		○													
		TNMG 220412	1.44-6.0	0.26-0.72													○		●													
		TNMG 220416	1.92-6.0	0.35-0.95													○		○													
	KR	TNMG 160408	1.5-5.0	0.20-0.60													●			△												
		TNMG 160412	1.8-5.0	0.25-0.70													●			△												
		TNMG 220404	1.5-5.8	0.18-0.55													●															
		TNMG 220408	1.5-6.0	0.20-0.60													●			△												
		TNMG 220412	1.8-6.0	0.25-0.70													●			△												
		TNMG 220416	2.0-6.0	0.25-0.73													●			△												

VNM...

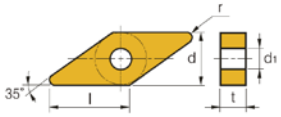


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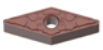
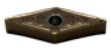
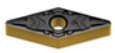
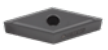
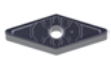
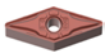
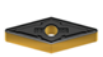
Insert Shape	CB	Insert Code	ISO		P						M						K				N	S				U					
			ap (mm)	Vc (m/min)	350(100-600)	300(220-400)	300(220-400)	240(200-320)	240(200-320)	145(45-250)	190(130-250)	180(120-250)	160(120-200)	150(110-200)	130(100-160)	90(70-110)	300(220-360)	300(220-360)	240(180-300)	240(180-300)	600(450-750)	50(30-90)	45(30-60)	45(30-60)	45(30-60)							
				fn (mm/rev)	TC0105	TC0115	TC2115	TC0125	TC2125	TC2135	TC1310	TC1320	TP4310	TP4320	TP4330	TP4340	TC2210	TC0210	TC2215	TC0215	TN7501	TP2405	TP2410	TP4410	TP2430	TP2620	TP3620	TP2630	TP3630	TP4630		
	-	VNMA 160404	0.3-1.5	0.14-0.28													●		●													
		VNMA 160408	0.5-2.0	0.20-0.40													●		●													
		VNMA 160412	0.8-2.2	0.20-0.50													●		●	●												
	AL	VNMG 160404	0.8-3.5	0.08-0.35																	○											
		VNMG 160408	0.8-3.5	0.10-0.40																	○											
	EF1	VNMG 160404	0.5-2.0	0.10-0.30		△		△																								
		VNMG 160408	0.5-2.0	0.15-0.40		●		●																								

● Stock item　　○ Non Stock item　　△ Special order

VNM...

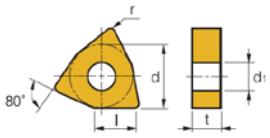


Size			
Dimension	d	t	d1
12T3	7.15	4	3.5
16	9.525	4.76	3.81

Insert Shape	CB	Insert Code	ISO ap (mm)	ISO Vc (m/min)	ISO fn (mm/rev)	P 350(100-600) TC0105	P 300(220-400) TC0115	P 300(220-400) TC2115	P 240(200-320) TC0125	P 240(200-320) TC2125	P 145(45-250) TC2135	M 190(130-250) TC1310	M 180(120-250) TC1320	M 160(120-200) TP4310	M 150(110-200) TP4320	M 130(100-160) TP4330	M 90(70-110) TP4340	K 300(220-360) TC2210	K 300(220-360) TC0210	K 240(180-300) TC2215	K 240(180-300) TC0215	N 600(450-750) TN7501	S 50(30-90) TP2405	S 45(30-60) TP2410	S 45(30-60) TP4410	S 45(30-60) TP2430	U TP2620	U TP3620	U TP2630	U TP3630	U TP4630
	PBI	VNMG 160404	0.26-2.1	0.05-0.15		○	○		○																						
		VNMG 160408	0.52-2.1	0.10-0.30		○	○		○																						
	EF2	VNMG 160404	0.1-1.5	0.05-0.25																								●			
		VNMG 160408	0.2-2.5	0.08-0.35																								●			
	MBZ	VNMG 160404	0.26-2.1	0.05-0.15								○	○												○			○				
		VNMG 160408	0.52-2.1	0.10-0.30								○	○												○			○				
	SF1	VNMG 12T304	0.12-1.20	0.06-0.24										○	○								○	○							
		VNMG 12T308	0.40-3.50	0.18-0.40										○	○								○	○							
		VNMG 160404	0.12-1.20	0.06-0.24										○	○								○	○							
		VNMG 160408	0.40-3.50	0.18-0.40										○	○								○	○							
	TM	VNMG 160404	0.90-5.00	0.20-0.30					●	●																					
		VNMG 160408	1.00-5.00	0.20-0.50			●	●	●	●																					
		VNMG 160412	1.00-5.00	0.20-0.50			●	●	●	●																					
	PD	VNMG 160404	0.40-3.3	0.08-0.22		○	○		○		○																				
		VNMG 160408	0.80-3.3	0.15-0.44		○	○		○		○																				
		VNMG 160412	1.20-3.3	0.23-0.66		○	○		○		○																				
	ST	VNMG 160404	0.40-3.3	0.08-0.22					○									●		●											
		VNMG 160408	0.80-3.3	0.15-0.44					○									●		●											
		VNMG 160412	1.20-3.3	0.23-0.66					○									●		●											
	SM1	VNMG 160404	0.48-3.2	0.12-0.32										○	○									●							
		VNMG 160408	0.60-3.2	0.12-0.36										○	○									●							
	MA	VNMG 160404	0.50-4.0	0.14-0.28																								○		●	
		VNMG 160408	0.50-4.4	0.20-0.50																								○		●	
	MCB	VNMG 160404	0.32-3.3	0.08-0.22								○	○		○													○			
		VNMG 160408	0.64-3.3	0.15-0.44								○	○		○													○			
	SCB	VNMG 160404	0.40-3.3	0.08-0.22								○	○		○																
		VNMG 160408	0.80-3.3	0.15-0.44								○	○		○																
		VNMG 160412	1.20-3.3	0.23-0.66																											
	KR	VNMG 160408	1.0-3.50	0.10-0.50															Δ		Δ										
		VNMG 160412	1.50-4.0	0.20-0.50															Δ		Δ										
	KCA	VNMG 160404	0.48-3.3	0.09-0.24														○		○											
		VNMG 160408	0.96-3.3	0.18-0.48														○		○											
		VNMG 160412	1.44-3.3	0.26-0.72														○		○											

● Stock item　　○ Non Stock item　　Δ Special order

WNM...

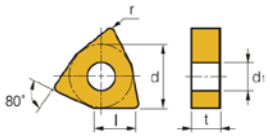


Size			
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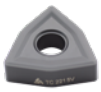
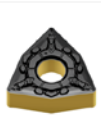
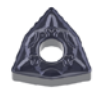
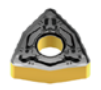
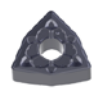
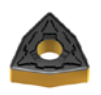
Insert Shape	CB	Insert Code	ISO ap (mm)	ISO Vc (m/min) / fn (mm/rev)	P 350(100-600) TC0105	P 300(220-400) TC0115	P 300(220-400) TC2115	P 240(200-320) TC0125	P 240(200-320) TC2125	P 145(45-250) TC2135	M 190(130-250) TC1310	M 180(120-250) TC1320	M 160(120-200) TP4310	M 150(110-200) TP4320	M 130(100-160) TP4330	M 90(70-110) TP4340	K 300(220-360) TC2210	K 300(220-360) TC0210	K 240(180-300) TC2215	K 240(180-300) TC0215	N 600(450-750) TN7501	S 50(30-90) TP2405	S 45(30-60) TP2410	S 45(30-60) TP4410	S 45(30-60) TP2430	U TP2620	U TP3620	U TP2630	U TP3630	U TP4630
	-	WNMA 080404	0.60-4.30	0.10-0.30													●	●	●	●										
		WNMA 080408	1.20-4.30	0.10-0.30													●	●	●	●										
		WNMA 080412	1.80-4.30	0.30-0.90													●	●	●	●										
		WNMA 080416	2.40-4.30	0.40-1.20													●	●	●	●										
	EF3	WNMG 040404	0.50-1.50	0.07-0.30		Δ		Δ																						
		WNMG 080408	0.50-1.50	0.10-0.40		○		●																						
	AL	WNMG 060404	0.10-3.0	0.05-0.30																	○									
		WNMG 060408	0.80-3.50	0.10-0.40																	○									
		WNMG 080404	0.80-3.50	0.05-0.30																	○									
		WNMG 080408	0.80-3.50	0.10-0.40																	●									
		WNMG 080412	0.80-3.50	0.13-0.55																	○									
	PBI	WNMG 080404	0.25-2.20	0.05-0.15	○	○		○																						
		WNMG 080408	0.50-2.20	0.10-0.30	○	○		○																						
		WNMG 080412	0.75-2.20	0.15-0.45	○	○		○																						
	ES1	WNMG 080404	0.50-2.5	0.15-0.30		●		●																						
		WNMG 080408	0.50-3.0	0.15-0.40		●		●																						
		WNMG 080412	0.50-3.0	0.17-0.44		●		●																						
	P83	WNMG 080404	0.30-2.30	0.06-0.18		○																								
		WNMG 080408	0.60-2.30	0.12-0.35	○	○		○																						
		WNMG 080412	0.90-2.30	0.18-0.55		○		○																						
	SF1	WNMG 060404	0.60-2.0	0.12-0.25										○								○	○								
		WNMG 060408	0.60-2.0	0.18-0.40										○								○	○								
		WNMG 080404	0.60-1.6	0.12-0.25										○								○	○								
		WNMG 080408	0.12-1.20	0.12-0.32										○								○	○								
		WNMG 080412	0.12-1.20	0.12-0.45										○								○	○								
	MA	WNMG 080404	0.30-2.0	0.14-0.28																									●	
		WNMG 080408	0.50-2.90	0.20-0.50																									●	
		WNMG 080412	0.80-3.50	0.24-0.60																										
	SM1	WNMG 060408	0.60-2.50	0.12-0.36																										
		WNMG 060412	0.60-2.50	0.12-0.36																										
		WNMG 080404	0.12-1.20	0.10-0.30																										
		WNMG 080408	0.12-1.20	0.10-0.33																			●		●					
		WNMG 080412	0.60-3.20	0.12-0.45																			●		●					
	MBZ	WNMG 080404	0.25-2.20	0.05-0.15							○													○						
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● Stock item　　○ Non Stock item　　△ Special order

WNM...

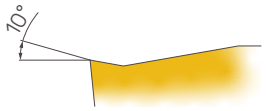
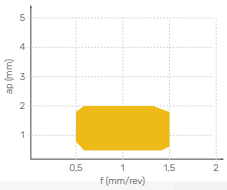
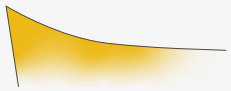
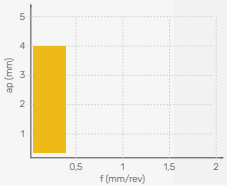
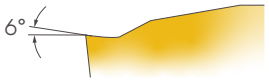
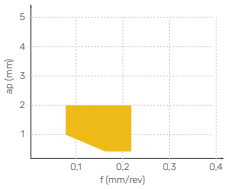
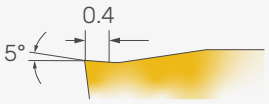
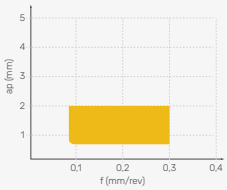
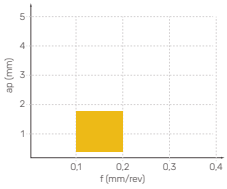
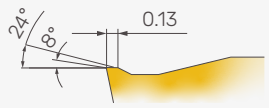
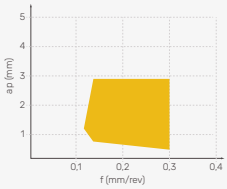
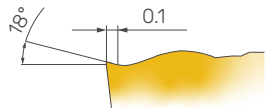
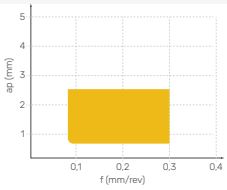
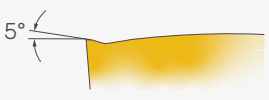
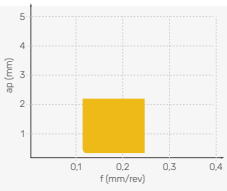
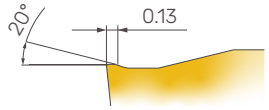
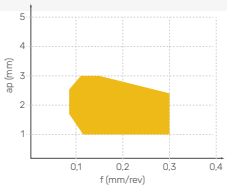


Size			
Dimension	d	t	d_1
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08	12.7	4.76	5.16

Insert Shape	CB	Insert Code	ISO ap (mm)	ISO Vc (m/min) / fn (mm/rev)	P 350(100-600) TC0105	P 300(220-400) TC0115	P 300(220-400) TC2115	P 240(200-320) TC0125	P 240(200-320) TC2125	P 145(45-250) TC2135	M 190(130-250) TC1310	M 180(120-250) TC1320	M 160(120-200) TP4310	M 150(110-200) TP4320	M 130(100-160) TP4330	M 90(70-110) TP4340	K 300(220-360) TC2210	K 300(220-360) TC0210	K 240(180-300) TC2215	K 240(180-300) TC0215	N 600(450-750) TN7501	S 50(30-90) TP2405	S 45(30-60) TP2410	S 45(30-60) TP4410	S 45(30-60) TP2430	U TP2620	U TP3620	U TP2630	U TP3630	U TP4630
	PM1	WNMG 080404	0.25-3.0	0.10-0.25		○		●																						
		WNMG 080408	0.50-4.0	0.15-0.45		○		●																						
		WNMG 080412	0.80-4.0	0.18-0.60		○		●																						
		WNMG 080416	1.20-4.0	0.20-0.70		○		●																						
	TM	WNMG 080404	0.40-3.0	0.20-0.30		○		●																						
		WNMG 080408	0.80-3.0	0.20-0.50		○		●																						
		WNMG 080412	1.20-3.50	0.20-0.50		○		●																						
	ST	WNMG 080404	0.40-2.90	0.08-0.22													●		●											
		WNMG 080408	0.80-2.90	0.15-0.45													●		●											
		WNMG 080412	1.20-2.90	0.23-0.65													●		●											
	PD	WNMG 060408	0.80-2.1	0.15-0.44	○			○																						
		WNMG 080404	0.40-2.9	0.08-0.22	○	○		○		○																				
		WNMG 080408	0.8-2.9	0.15-0.44	○			○		○																				
		WNMG 080412	1.20-2.9	0.23-0.66	○			○		○																				
	MCB	WNMG 060408	0.65-2.10	0.15-0.45							○	○																		
		WNMG 060412	0.95-2.10	0.23-0.65							○	○																		
		WNMG 080404	0.32-2.90	0.08-0.22							○	○																		
		WNMG 080408	0.65-2.90	0.15-0.45							○	○																		
		WNMG 080412	0.95-2.90	0.23-0.65							○	○																		
	SCB	WNMG 080404	0.40-2.90	0.08-0.22							○	○																		
		WNMG 080408	0.80-2.90	0.15-0.44							○	○																		
		WNMG 080412	1.20-2.90	0.23-0.65							○	○																		
	PDS	WNMG 080408	1.20-4.30	0.20-0.60		○																								
		WNMG 080412	1.80-4.30	0.30-0.90		○	○																							
	MCA	WNMG 060412	1.80-3.30	0.30-0.90						○	○	○																		
		WNMG 080408	1.20-4.30	0.20-0.60						○	○	○																		
		WNMG 080412	1.80-4.30	0.30-0.90						○	○	○																		
	SR1	WNMG 080408	2.40-3.20	0.18-0.35										●									●		●						
		WNMG 080412	2.40-3.20	0.18-0.48										●									●		●						
	KR	WNMG 080404	0.50-4.0	0.20-0.40													●		●											
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		WNMG 080412	1.20-4.0	0.30-0.70															●											
	KCA	WNMG 060404	0.48-2.6	0.09-0.24														○		○										
		WNMG 060408	0.96-2.6	0.18-0.48														○		○										
		WNMG 080404	0.48-3.5	0.09-0.24														○		○										
		WNMG 080408	0.96-3.5	0.18-0.48														○		○										
		WNMG 080412	1.44-3.5	0.26-0.72														○		○										
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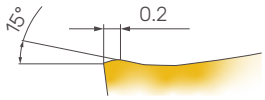
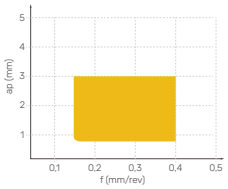
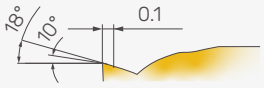
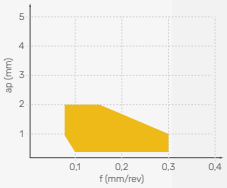
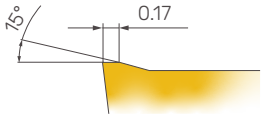
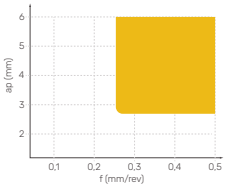
● Stock item　　○ Non Stock item　　△ Special order

POSITIVE CHIPBREAKERS

Geometry	Properties	Material Group P	M	K	N	S	H	View of Cutting Edge	Basic cutting data diagram	Available Geometries
UF	First choice for turning heat-resistant alloys. Ground edges provide precise positioning and high machining accuracy.	○	●			●				CCGT DCGT TCGT VBGT
AL1	Designed for aluminum continuous turning. High rake angle ensures smooth cutting and long tool life. Suitable for finishing with high feed.				●					CCGT DCGT RCGT SCGT TCGT VBGT VCGT
PBI	Ideal for steel finishing. Positive rake reduces cutting forces and built-up edge, improving surface finish and tool life. Also suitable for stainless steel turning.	●	●			●				CCMT DCMT SCMT TCMT VBMT VCMT
EF2	Suitable for finishing operations on stainless steel.		●			○				CCMT DCMT SCMT TCMT VBMT
SF1	Sharp edge design reduces built-up edge and ensures stable chip evacuation.		●			●				CCMT DCMT SCMT TCMT VBMT VCMT
PCZ	First choice for semi-finishing of steel and stainless steel. Sharp geometry ensures low cutting forces and reliable chip control.	●	●			●				CCMT DCMT SCMT TCMT VBMT VCMT
HM	Suitable for medium machining of steel and cast iron.	●		●						CCMT DCMT SCMT TCMT VBMT
SM1	Provides stable chip evacuation. Variable land design improves resistance to crater wear.		●			●				CCMT DCMT SCMT TCMT VBMT
KCZ	General-purpose chipbreaker for turning steel, stainless steel and cast iron. Suitable for medium to rough machining with wide application range.	●	●	●						CCMT DCMT SCMT TCMT VBMT

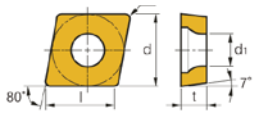
● 1st Choice ○ 2nd Choice

POSITIVE CHIPBREAKERS

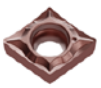
Geometry	Properties	Material Group P	M	K	N	S	H	View of Cutting Edge	Basic cutting data diagram	Available Geometries
ST	First choice for medium turning of cast iron. Provides stable cutting performance and effective chip control.	○		●						CCMT DCMT SCMT TCMT
VM	Alternative chipbreaker for medium machining of steel and stainless steel. Positive geometry ensures sharp cutting and good chip control.	●	●							DCMT
HR	Suitable for rough machining of steel. Provides stable cutting performance in heavy cutting conditions.	●		○						TCMT

● 1st Choice ○ 2nd Choice

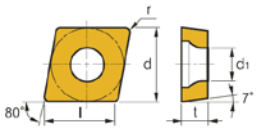
CCGT...



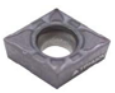
Size			
Dimension	d	t	d1
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09	9.525	3.97	4.4
12	12.7	4.76	5.5

Insert Shape	CB	Insert Code	ISO ap (mm)	Vc (m/min)	P 350(100-600)	P 300(220-400)	P 300(220-400)	P 240(200-320)	P 240(200-320)	P 145(45-250)	M 190(130-250)	M 180(120-250)	M 160(120-200)	M 150(110-200)	M 130(100-160)	M 90(70-110)	K 300(220-360)	K 300(220-360)	K 240(180-300)	K 240(180-300)	N 600(450-750)	S 50(30-90)	S 45(30-60)	S 45(30-60)	S 45(30-60)	U	U	U	U	U
				fn (mm/rev)	TC0105	TC0115	TC2115	TC0125	TC2125	TC2135	TC1310	TC1320	TP4310	TP4320	TP4330	TP4340	TC2210	TC0210	TC2215	TC0215	TN7501	TP2405	TP2410	TP4410	TP2430	TP2620	TP3620	TP2630	TP3630	TP4630
	AL	CCGT 060202	0.15-2.90	0.02-0.10																	●									
		CCGT 060204	0.30-2.90	0.05-0.20																	●									
		CCGT 060208	0.40-3.20	0.10-0.30																	●									
		CCGT 09T302	0.15-4.40	0.02-0.10																	●									
		CCGT 09T304	0.30-4.40	0.05-0.20																	●									
		CCGT 09T308	0.60-4.40	0.10-0.40																	●									
		CCGT 120404	0.30-5.50	0.05-0.20																	●									
		CCGT 120408	0.60-5.50	0.10-0.40																	●									
	AL1	CCGT 060202	0.15-2.90	0.02-0.10																	●									
		CCGT 060204	0.30-2.90	0.05-0.20																	●									
		CCGT 060208	0.40-3.20	0.10-0.30																	●									
		CCGT 09T302	0.15-4.40	0.02-0.10																	●									
		CCGT 09T304	0.30-4.40	0.05-0.20																	●									
		CCGT 09T308	0.60-4.40	0.10-0.40																	●									
		CCGT 120404	0.30-5.50	0.05-0.20																	●									
		CCGT 120408	0.60-5.50	0.10-0.40																	●									
	UF	CCGT 060202	0.10-1.40	0.02-0.15																										Δ
		CCGT 060204	0.10-1.40	0.03-0.20																										Δ
		CCGT 09T302	0.10-2.40	0.02-0.15																										Δ
		CCGT 09T304	0.10-2.40	0.03-0.20																										Δ
		CCGT 09T308	0.10-2.40	0.03-0.25																										Δ

CCMT...

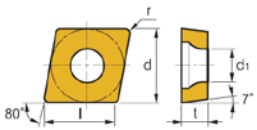


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12	12.7	4.76	5.5

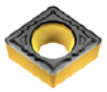
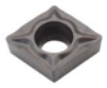
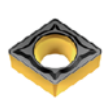
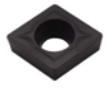
Insert Shape	CB	Insert Code	ISO ap (mm)	Vc (m/min)	P 350(100-600)	P 300(220-400)	P 300(220-400)	P 240(200-320)	P 240(200-320)	P 145(45-250)	M 190(130-250)	M 180(120-250)	M 160(120-200)	M 150(110-200)	M 130(100-160)	M 90(70-110)	K 300(220-360)	K 300(220-360)	K 240(180-300)	K 240(180-300)	N 600(450-750)	S 50(30-90)	S 45(30-60)	S 45(30-60)	S 45(30-60)	U	U	U	U	U
				fn (mm/rev)	TC0105	TC0115	TC2115	TC0125	TC2125	TC2135	TC1310	TC1320	TP4310	TP4320	TP4330	TP4340	TC2210	TC0210	TC2215	TC0215	TN7501	TP2405	TP2410	TP4410	TP2430	TP2620	TP3620	TP2630	TP3630	TP4630
	PBI	CCMT 060202	0.15-1.60	0.02-0.07		○		○			○	○														○				
		CCMT 060204	0.30-1.60	0.04-0.14		○					○	○														○				
		CCMT 060208	0.60-1.60	0.09-0.28							○	○														○				
		CCMT 09T302	0.15-2.40	0.02-0.07		○		○			○	○														○				
		CCMT 09T304	0.30-2.40	0.04-0.14		○					○	○														○				
		CCMT 09T308	0.60-2.40	0.09-0.28		○					○	○														○				
	EF2	CCMT 09T304	0.10-2.0	0.06-0.22																						●	●			
		CCMT 09T308	0.15-2.0	0.08-0.30																						●	●		●	
		CCMT 120404	0.14-2.40	0.07-0.25																						●	●			
		CCMT 120408	0.20-3.0	0.10-0.30																						●	●			

● Stock item ○ Non Stock item Δ Special order

CCMT...

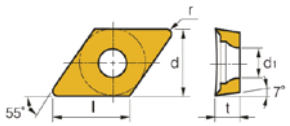


Size			
Dimension	d	t	d1
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09	9.525	3.97	4.4
12	12.7	4.76	5.5

Insert Shape	CB	Insert Code	ISO ap (mm)	ISO Vc (m/min) / fn (mm/rev)	P 350(100-600) TC0105	P 300(220-400) TC0115	P 300(220-400) TC2115	P 240(200-320) TC0125	P 240(200-320) TC2125	P 145(45-250) TC2135	M 190(130-250) TC1310	M 180(120-250) TC1320	M 160(120-200) TP4310	M 150(110-200) TP4320	M 130(100-160) TP4330	M 90(70-110) TP4340	K 300(220-360) TC2210	K 300(220-360) TC0210	K 240(180-300) TC2215	K 240(180-300) TC0215	N 600(450-750) TN7501	S 50(30-90) TP2405	S 45(30-60) TP2410	S 45(30-60) TP4410	S 45(30-60) TP2430	U TP2620	U TP3620	U TP2630	U TP3630	U TP4630
	SF1	CCMT 060202	0.07-1.35	0.05-0.09										○								○								
		CCMT 060204	0.12-1.35	0.06-0.15										○								○								
		CCMT 060208	0.16-1.35	0.08-0.18										○								○								
		CCMT 09T302	0.10-1.60	0.05-0.12										○								○								
		CCMT 09T304	0.13-1.60	0.07-0.18										○								○								
		CCMT 09T308	0.18-1.60	0.10-0.24										○								○								
		CCMT 120402	0.17-1.92	0.06-0.20																										
		CCMT 120404	0.17-1.20	0.08-0.25																										
	PCZ	CCMT 060204	0.35-1.90	0.05-0.16		○		○			○	○														○				
		CCMT 060208	0.70-1.90	0.10-0.32		○		○			○	○														○				
		CCMT 09T304	0.35-2.90	0.05-0.16	○	○		○			○	○														○				
		CCMT 09T308	0.70-1.90	0.10-0.32		○					○	○														○				
		CCMT 09T312	1.05-2.90	0.16-0.48		○					○	○														○				
		CCMT 120404	0.35-3.90	0.05-0.16		○		○			○	○														○				
		CCMT 120408	0.70-3.90	0.10-0.32		○		○			○	○														○				
		CCMT 120412	1.05-3.90	0.16-0.48							○	○														○				
	HM	CCMT 060204	0.20-2.40	0.06-0.17					●										●											
		CCMT 060208	0.20-3.0	0.08-0.20		●		●	●																					
		CCMT 09T304	0.25-3.0	0.08-0.23		●			●										●											
		CCMT 09T308	0.50-3.0	0.10-0.30		●			●										●											
		CCMT 120404	0.30-3.60	0.09-0.25				●	●																					
		CCMT 120408	0.60-3.60	0.12-0.35				●	●																					
	SM1	CCMT 060204	0.24-1.92	0.07-0.15										○								○								
		CCMT 060208	0.28-1.92	0.10-0.18										○								○								
		CCMT 09T304	0.30-2.50	0.10-0.20										●								○								
		CCMT 09T308	0.60-2.05	0.12-0.25										○								○								
		CCMT 09T312	0.60-2.05	0.12-0.25										○								○								
		CCMT 120404	0.35-3.0	0.11-0.22										○								○								
		CCMT 120408	0.50-3.0	0.15-0.30										○								●								
		CCMT 120412	0.50-3.0	0.15-0.30																										
	KCZ	CCMT 060204	0.40-2.10	0.06-0.18		○		○			○	○					○		○					○		○				
		CCMT 060208	0.80-2.10	0.12-0.36		○		○			○	○					○		○							○				
		CCMT 09T304	0.40-3.20	0.06-0.18		○		○			○	○					○		○							○				
		CCMT 09T308	0.80-3.20	0.12-0.36		○					○	○					○		○							○				
		CCMT 120404	0.40-4.30	0.06-0.18							○	○					○		○							○				
		CCMT 120408	0.80-4.30	0.12-0.36		○		○			○	○					○		○							○				
		CCMT 120412	1.20-4.30	0.18-0.54							○	○					○		○							○				
	ST	CCMT 060204	0.40-3.0	0.08-0.30															●								●			
		CCMT 060208	0.40-3.0	0.11-0.40															●											
		CCMT 09T304	0.40-3.0	0.08-0.30															●								●		●	
		CCMT 09T308	0.40-3.0	0.11-0.40															●								●		●	
		CCMT 120404	0.6-3.50	0.08-0.30															●								●		●	
		CCMT 120408	0.6-3.50	0.20-0.50															●								●		●	

● Stock item　　○ Non Stock item　　△ Special order

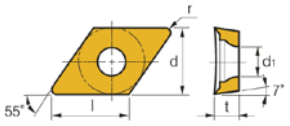
DCGT...



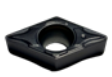
Size			
Dimension	d	t	d1
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11	9.525	3.97	4.4

Insert Shape	CB	Insert Code	ISO ap (mm)	ISO Vc (m/min) / fn (mm/rev)	P 350(100-600) TC0105	P 300(220-400) TC0115	P 300(220-400) TC2115	P 240(200-320) TC0125	P 240(200-320) TC2125	P 145(45-250) TC2135	M 190(130-250) TC1310	M 180(120-250) TC1320	M 160(120-200) TP4310	M 150(110-200) TP4320	M 130(100-160) TP4330	M 90(70-110) TP4340	K 300(220-360) TC2210	K 300(220-360) TC0210	K 240(180-300) TC2215	K 240(180-300) TC0215	N 600(450-750) TN7501	S 50(30-90) TP2405	S 45(30-60) TP2410	S 45(30-60) TP4410	S 45(30-60) TP2430	U TP2620	U TP3620	U TP2630	U TP3630	U TP4630
	AL1	DCGT 070202	0.05-3.0	0.01-0.20																	●									
		DCGT 070204	0.10-4.0	0.02-0.30																	●									
		DCGT 070208	0.10-4.0	0.03-0.40																	●									
		DCGT 11T302	0.05-4.0	0.02-0.30																	●									
		DCGT 11T304	0.10-5.0	0.03-0.50																	●									
		DCGT 11T308	0.10-5.0	0.03-0.50																	●									
	UF	DCGT 070202	0.10-1.40	0.02-0.15																										Δ
		DCGT 070204	0.10-1.40	0.03-0.20																										Δ
		DCGT 11T302	0.10-2.40	0.02-0.15																										Δ
		DCGT 11T304	0.10-2.40	0.03-0.20																										Δ

DCMT...

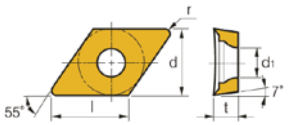


Size			
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11	9.525	3.97	4.4

Insert Shape	CB	Insert Code	ISO ap (mm)	ISO Vc (m/min) / fn (mm/rev)	P 350(100-600) TC0105	P 300(220-400) TC0115	P 300(220-400) TC2115	P 240(200-320) TC0125	P 240(200-320) TC2125	P 145(45-250) TC2135	M 190(130-250) TC1310	M 180(120-250) TC1320	M 160(120-200) TP4310	M 150(110-200) TP4320	M 130(100-160) TP4330	M 90(70-110) TP4340	K 300(220-360) TC2210	K 300(220-360) TC0210	K 240(180-300) TC2215	K 240(180-300) TC0215	N 600(450-750) TN7501	S 50(30-90) TP2405	S 45(30-60) TP2410	S 45(30-60) TP4410	S 45(30-60) TP2430	U TP2620	U TP3620	U TP2630	U TP3630	U TP4630
	PBI	DCMT 070202	0.15-1.5	0.02-0.07				○			○	○														○				
		DCMT 070204	0.15-1.5	0.02-0.07		○		○			○	○														○				
		DCMT 11T302	0.15-2.3	0.02-0.07							○	○														○				
		DCMT 11T304	0.30-2.3	0.04-0.14	○	○		○			○	○														○				
		DCMT 11T308	0.60-2.3	0.09-0.28	○			○			○	○														○				
	EF2	DCMT 070202	0.06-1.50	0.03-0.11																							●			
		DCMT 070204	0.08-1.50	0.05-0.17																										
		DCMT 070208	0.08-2.0	0.04-0.15																							●			
		DCMT 11T304	0.11-2.0	0.06-0.23																							●			
		DCMT 11T308	0.15-2.0	0.08-0.30																										
	SF1	DCMT 070202	0.08-1.2	0.04-0.10										○	○								○		○					
		DCMT 070204	0.10-1.2	0.06-0.15										○	○								○		○					
		DCMT 11T302	0.10-1.6	0.05-0.12										○	○								○		○					
		DCMT 11T304	0.13-1.8	0.10-0.20										○	○								○		○					
		DCMT 11T308	0.18-1.8	0.10-0.24										○	○								○		○					

● Stock item　　○ Non Stock item　　△ Special order

DCMT...

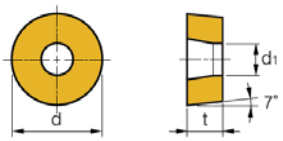


Size			
Dimension	d	t	d1
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11	9.525	3.97	4.4

Insert Shape	CB	Insert Code	ISO ap (mm)	ISO Vc (m/min)	ISO fn (mm/rev)	P 350(100-600) TC0105	P 300(220-400) TC0115	P 300(220-400) TC2115	P 240(200-320) TC0125	P 240(200-320) TC2125	P 145(45-250) TC2135	M 190(130-250) TC1310	M 180(120-250) TC1320	M 160(120-200) TP4310	M 150(110-200) TP4320	M 130(100-160) TP4330	M 90(70-110) TP4340	K 300(220-360) TC2210	K 300(220-360) TC0210	K 240(180-300) TC2215	K 240(180-300) TC0215	N 600(450-750) TN7501	S 50(30-90) TP2405	S 45(30-60) TP2410	S 45(30-60) TP4410	S 45(30-60) TP2430	U TP2620	U TP3620	U TP2630	U TP3630	U TP4630
	PCZ	DCMT 070204	0.35-2.1	0.05-0.16			○					○	○												○		○					
		DCMT 070208	0.70-2.1	0.10-0.32			○		○			○	○												○		○					
		DCMT 11T304	0.35-3.1	0.05-0.16	○	○		○			○	○												○		○					
		DCMT 11T308	0.70-3.1	0.10-0.32		○		○			○	○												○		○					
		DCMT 11T312	1.05-3.1	0.16-0.48		○					○	○												○		○					
	HM	DCMT 070204	0.20-2.25	0.06-0.17					●																			●	●		
		DCMT 070208	0.38-2.25	0.08-0.23					●																			●	●		
		DCMT 11T304	0.25-3.0	0.08-0.23					●											●								●	●		
		DCMT 11T308	0.5-3.0	0.1-0.3					●											●								●	●		
		DCMT 11T312	0.6-3.0	0.12-0.36																												
	SM1	DCMT 070204	0.23-1.2	0.07-0.15											○	○								○								
		DCMT 11T302	0.40-1.2	0.10-0.20											○	○								○								
		DCMT 11T304	0.35-2.2	0.10-0.20											●	●								●								
		DCMT 11T308	0.60-2.5	0.12-0.25											●	●								●								
		DCMT 11T312	0.72-2.2	0.14-0.28											○	○								○		○						
	VM	DCMT 070202	0.6-1.8	0.06-0.11					○																			Δ				
		DCMT 070204	0.8-2.0	0.08-0.30					○																			Δ				
		DCMT 070208	0.8-3.0	0.11-0.40					○																			Δ				
		DCMT 11T304	0.8-2.2	0.14-0.28					●																			Δ				
		DCMT 11T308	0.8-3.0	0.11-0.40					●																			Δ				
	KCZ	DCMT 070204	0.40-2.3	0.06-0.18				○											○		○											
		DCMT 070208	0.80-2.3	0.12-0.35															○		○											
		DCMT 11T304	0.40-3.5	0.06-0.18				○	○										○		○											
		DCMT 11T308	0.80-3.5	0.12-0.35				○	○										○		○											
		DCMT 11T312	1.20-3.5	0.18-0.55				○											○		○											
	ST	DCMT 070204	0.15-2.25	0.06-0.17				○												●								●				
		DCMT 070208	0.35-2.25	0.08-0.23														●		●								●				
		DCMT 11T304	0.25-3.0	0.08-0.23				○	○											●								●				
		DCMT 11T308	0.5-3.0	0.1-0.3				○	○									●		●												

● Stock item ○ Non Stock item △ Special order

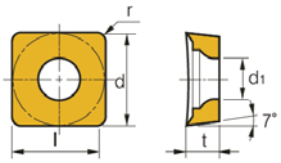
RC...



Size			
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12	12.0	4.76	4.2
16	16.0	6.35	5.2

Insert Shape	CB	Insert Code	ISO ap (mm)	Vc (m/min)	P 350(100-600)	P 300(220-400)	P 300(220-400)	P 240(200-320)	P 240(200-320)	P 145(45-250)	M 190(130-250)	M 180(120-250)	M 160(120-200)	M 150(110-200)	M 130(100-160)	M 90(70-110)	K 300(220-360)	K 300(220-360)	K 240(180-300)	K 240(180-300)	N 600(450-750)	S 50(30-90)	S 45(30-60)	S 45(30-60)	S 45(30-60)	U	U	U	U	U
				fn(mm/rev)	TC0105	TC0115	TC2115	TC0125	TC1125	TC2135	TC1310	TC1320	TP4310	TP4320	TP4330	TP4340	TC2210	TC0210	TC2215	TC0215	TN7501	TP2405	TP2410	TP4410	TP2430	TP2620	TP3620	TP2630	TP3630	TP4630
	AL1	RCGT 0602M0	0.50-2.0	0.05-0.20																	○									
		RCGT 0803M0	0.5-2.5	0.05-0.25																	●									
		RCGT 1003M0	1.0-3.0	0.10-0.30																	●									
		RCGT 1204M0	1.0-3.50	0.10-0.35																	○									
	-	RCMX 0803M0	0.80-3.0	0.05-0.30					●										○		○									
		RCMX 1003M0	1.50-4.0	0.25-0.50					●										○											
		RCMX 1204M0	2.50-5.0	0.30-0.60					○										○											
		RCMX 1606M0	3.00-7.0	0.40-0.75					●										○											
		RCMX 2006M0	3.50-9.0	0.48-0.90				●	●										○											
		RCMX 2507M0	4.0-12.0	0.55-1.20				○	○										●											
		RCMX 3209M0	5.0-15.0	0.65-1.50				○	○										○											

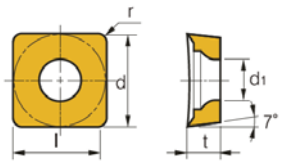
SC...



Size			
Dimension	d	t	d1
09	9.525	3.97	4.4
12	12.7	4.76	5.5

Insert Shape	CB	Insert Code	ISO ap (mm)	Vc (m/min)	P 350(100-600)	P 300(220-400)	P 300(220-400)	P 240(200-320)	P 240(200-320)	P 145(45-250)	M 190(130-250)	M 180(120-250)	M 160(120-200)	M 150(110-200)	M 130(100-160)	M 90(70-110)	K 300(220-360)	K 300(220-360)	K 240(180-300)	K 240(180-300)	N 600(450-750)	S 50(30-90)	S 45(30-60)	S 45(30-60)	S 45(30-60)	U	U	U	U	U
				fn(mm/rev)	TC0105	TC0115	TC2115	TC0125	TC2125	TC2135	TC1310	TC1320	TP4310	TP4320	TP4330	TP4340	TC2210	TC0210	TC2215	TC0215	TN7501	TP2405	TP2410	TP4410	TP2430	TP2620	TP3620	TP2630	TP3630	TP4630
	AL1	SCGT 09T302	0.10-4.00	0.02-0.30																	○									
		SCGT 09T304	0.10-5.00	0.04-0.40																	●									
		SCGT 09T308	0.10-5.00	0.03-0.40																	●									
		SCGT 120404	0.05-3.00	0.01-0.12																	●									
		SCGT 120408	0.10-3.00	0.02-0.15																	●									
	PBI	SCMT 09T304	0.30-2.4	0.04-0.14							○	○														○				
		SCMT 09T308	0.60-2.4	0.09-0.28							○	○														○				
		SCMT 120404	0.30-3.2	0.04-0.14							○	○														○				
	EF2	SCMT 09T304	0.10-2.0	0.06-0.23																										
		SCMT 09T308	0.15-2.0	0.08-0.30																						●			●	
	SF1	SCMT 09T304	0.13-1.6	0.07-0.18									○	○								○	○							
		SCMT 09T308	0.18-1.6	0.10-0.24										○									○							

SC...

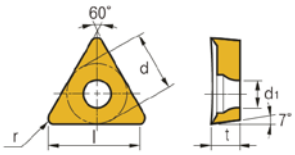


Size			
Dimension	d	t	d1
09	9.525	3.97	4.4
12	12.7	4.76	5.5

Insert Shape	CB	Insert Code	ap (mm)	ISO Vc (m/min) / fn(mm/rev)	P 350(100-600) TC0105	P 300(220-400) TC0115	P 300(220-400) TC2115	P 240(200-320) TC0125	P 240(200-320) TC2125	P 145(45-250) TC2135	M 190(130-250) TC1310	M 180(120-250) TC1320	M 160(120-200) TP4310	M 150(110-200) TP4320	M 130(100-160) TP4330	M 90(70-110) TP4340	K 300(220-360) TC2210	K 300(220-360) TC0210	K 240(180-300) TC2215	K 240(180-300) TC0215	N 600(450-750) TN7501	S 50(30-90) TP2405	S 45(30-60) TP2410	S 45(30-60) TP4410	S 45(30-60) TP2430	U TP2620	U TP3620	U TP2630	U TP3630	U TP4630
	PCZ	SCMT 09T304	0.35-2.9	0.05-0.16							○	○											○			○				
		SCMT 09T308	0.70-2.9	0.10-0.32							○	○											○			○				
		SCMT 120404	0.35-3.8	0.05-0.16							○	○											○			○				
		SCMT 120408	0.70-3.8	0.10-0.32							○	○											○			○				
		SCMT 120412	1.05-3.8	0.16-0.48							○	○											○			○				
	HM	SCMT 09T304	0.25-3.0	0.08-0.23			●		●																		●	●		
		SCMT 09T308	0.5-3.0	0.1-0.3					●																					
		SCMT 120404	0.3-3.6	0.09-0.27				●	●																					
		SCMT 120408	0.6-3.6	0.12-0.36					●																					
	SM1	SCMT 09T304	0.28-2.4	0.10-0.20										○	○								○							
		SCMT 09T308	0.60-2.4	0.12-0.24										○	○								○							
		SCMT 120404	0.4-4.0	0.15-0.30										○	○								○							
		SCMT 120408	0.4-4.0	0.15-0.30										○	○								○							
	KCZ	SCMT 09T304	0.40-3.1	0.06-0.18							○	○					○		○											
		SCMT 09T308	0.80-3.1	0.12-0.36							○	○					○		○											
		SCMT 120404	0.40-4.2	0.06-0.18							○	○					○		○											
		SCMT 120408	0.80-4.2	0.12-0.36							○	○					○		○											
	ST	SCMT 09T304	0.25-3.50	0.08-0.30			●		●								●												●	
		SCMT 09T308	0.5-3.0	0.1-3.0			●		●								●		●									●	●	
		SCMT 120404	0.25-3.50	0.08-0.30			●		●								●		●									●		
		SCMT 120408	0.6-3.8	0.1-3.0					●								●		●										●	

● Stock item　　○ Non Stock item　　△ Special order

TC...

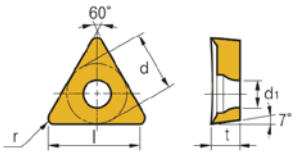


Size			
Dimension	d	t	d1
09	5.56	2.38	2.5
11	6.35	2.38	2.8
16	9.525	3.77	4.4

Insert Shape	CB	Insert Code	ISO ap (mm)	ISO Vc (m/min)	ISO fn (mm/rev)	P 350(100-600) TC0105	P 300(220-400) TC0115	P 300(220-400) TC2115	P 240(200-320) TC0125	P 240(200-320) TC2125	P 145(45-250) TC2135	M 190(130-250) TC1310	M 180(120-250) TC1320	M 160(120-200) TP4310	M 150(110-200) TP4320	M 130(100-160) TP4330	M 90(70-110) TP4340	K 300(220-360) TC2210	K 300(220-360) TC0210	K 240(180-300) TC2215	K 240(180-300) TC0215	N 600(450-750) TN7501	S 50(30-90) TP2405	S 45(30-60) TP2410	S 45(30-60) TP4410	S 45(30-60) TP2430	U TP2620	U TP3620	U TP2630	U TP3630	U TP4630
	AL1	TCGT 090202	0.05-3.0	0.01-0.12																		●									
		TCGT 090204	0.10-4.0	0.02-0.15																		●									
		TCGT 110202	0.05-4.00	0.02-0.20																		●									
		TCGT 110204	0.10-4.00	0.03-0.30																		●									
		TCGT 110208	0.10-5.00	0.03-0.40																		●									
		TCGT 16T302	0.05-3.00	0.02-0.20																		○									
		TCGT 16T304	0.10-5.00	0.02-0.30																		○									
		TCGT 16T308	0.10-5.00	0.03-0.50																		○									
	UF	TCGT 110202	0.20-2.40	0.02-0.15																											Δ
		TCGT 110204	0.20-2.40	0.03-0.20																											Δ
		TCGT 16T304	0.20-2.40	0.03-0.20																											Δ
	PBI	TCMT 090204	0.30-1.9	0.04-0.14								○	○															○				
		TCMT 110202	0.15-2.2	0.02-0.07								○	○															○				
		TCMT 110204	0.30-2.2	0.04-0.14								○	○															○				
		TCMT 110208	0.60-2.2	0.09-0.28								○	○															○				
		TCMT 16T304	0.30-3.3	0.04-0.14								○	○															○				
		TCMT 16T308	0.60-3.3	0.09-0.28								○	○															○				
	EF2	TCMT 110204	0.20-2.0	0.05-0.20																									●			
		TCMT 110208	0.30-3.0	0.05-0.23																									●			
		TCMT 16T304	0.30-3.0	0.05-0.23																									●			
		TCMT 16T308	0.30-3.0	0.10-0.40																											●	
	SF1	TCMT 090202	0.05-0.10	0.12-1.35											○	○							○	○								
		TCMT 090204	0.06-0.15	0.12-1.35											○	○							○	○								
		TCMT 110202	0.06-0.15	0.12-1.35											○	○							○	○								
		TCMT 110204	0.06-0.15	0.12-1.35											○	○							○	○								
		TCMT 16T302	0.05-0.20	0.10-1.80											○	○							○	○								
		TCMT 16T304	0.08-0.18	0.15-1.60											○	○							○	○								
		TCMT 16T308	0.10-0.25	0.50-2.50											○	○							○	○								
	PCZ	TCMT 090204	0.35-2.6	0.05-0.16								○	○													○		○				
		TCMT 090208	0.70-2.6	0.10-0.32								○	○													○		○				
		TCMT 110204	0.35-3.0	0.05-0.16								○	○													○		○				
		TCMT 110208	0.70-3.0	0.10-0.32								○	○													○		○				
		TCMT 16T304	0.35-4.5	0.05-0.16								○	○													○		○				
		TCMT 16T308	0.70-4.5	0.10-0.32								○	○													○		○				
		TCMT 16T312	1.05-4.5	0.16-0.48								○	○													○		○				
	HM	TCMT 090204	0.20-2.25	0.06-0.17						●																						
		TCMT 090208	0.35-2.20	0.08-0.25																												
		TCMT 110204	0.2-2.70	0.07-0.20						●																						
		TCMT 110208	0.5-2.70	0.10-0.30			●		●	●																						
		TCMT 16T304	0.25-3.0	0.08-0.25						●										●												
		TCMT 16T308	0.5-3.0	0.10-0.30					●	●										●												

● Stock item　　○ Non Stock item　　Δ Special order

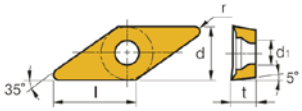
TC...



Size			
Dimension	d	t	d1
09	5.56	2.38	2.5
11	6.35	2.38	2.8
16	9.525	3.77	4.4

Insert Shape	CB	Insert Code	ISO ap (mm)	ISO Vc (m/min)	ISO fn (mm/rev)	P 350(100-600) TC0105	P 300(220-400) TC0115	P 300(220-400) TC2115	P 240(200-320) TC0125	P 240(200-320) TC2125	P 145(45-250) TC2135	M 190(130-250) TC1310	M 180(120-250) TC1320	M 160(120-200) TP4310	M 150(110-200) TP4320	M 130(100-160) TP4330	M 90(70-110) TP4340	K 300(220-360) TC2210	K 300(220-360) TC0210	K 240(180-300) TC2215	K 240(180-300) TC0215	N 600(450-750) TN7501	S 50(30-90) TP2405	S 45(30-60) TP2410	S 45(30-60) TP4410	S 45(30-60) TP2430	U TP2620	U TP3620	U TP2630	U TP3630	U TP4630
	SM1	TCMT 090204	0.23-1.80	0.07-0.15																											
		TCMT 090208	0.45-1.80	0.10-0.18																											
		TCMT 110208	0.45-1.80	0.10-0.18																											
		TCMT 16T304	0.30-2.50	0.10-0.18																											
	KCZ	TCMT 090204	0.40-2.9	0.06-0.18								○	○							○							○				
		TCMT 090208	0.80-2.9	0.12-0.36								○	○							○							○				
		TCMT 110204	0.40-3.3	0.06-0.18								○	○							○							○				
		TCMT 110208	0.80-3.3	0.12-0.36								○	○							○							○				
		TCMT 16T304	0.40-4.9	0.06-0.18								○	○							○							○				
		TCMT 16T308	0.80-4.9	0.12-0.36								○	○							○							○				
	ST	TCMT 110204	0.20-1.50	0.05-0.20														●		●	●									●	
		TCMT 110208	0.25-2.00	0.10-0.28				●										●		●										●	
		TCMT 16T304	0.80-3.00	0.08-0.30														●		●	●								●	●	
		TCMT 16T308	1.00-3.00	0.10-0.42				●										●		●									●		
	HR	TCMT 220408	1.2-4.8	0.14-0.42			●													●								●		●	

VBGT...

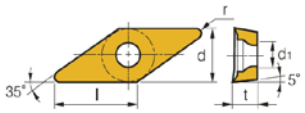


Size			
Dimension	d	t	d1
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16	9.525	4.76	4.4

Insert Shape	CB	Insert Code	ISO ap (mm)	ISO Vc (m/min)	ISO fn (mm/rev)	P 350(100-600) TC0105	P 300(220-400) TC0115	P 300(220-400) TC2115	P 240(200-320) TC0125	P 240(200-320) TC2125	P 145(45-250) TC2135	M 190(130-250) TC1310	M 180(120-250) TC1320	M 160(120-200) TP4310	M 150(110-200) TP4320	M 130(100-160) TP4330	M 90(70-110) TP4340	K 300(220-360) TC2210	K 300(220-360) TC0210	K 240(180-300) TC2215	K 240(180-300) TC0215	N 600(450-750) TN7501	S 50(30-90) TP2405	S 45(30-60) TP2410	S 45(30-60) TP4410	S 45(30-60) TP2430	U TP2620	U TP3620	U TP2630	U TP3630	U TP4630
	AL1	VBGT 110302	0.05-3.0	0.02-0.15																		●									
		VBGT 110304	0.10-4.00	0.02-0.15																		●									
		VBGT 110308	0.10-5.00	0.03-0.18																		○									
		VBGT 160402	0.05-4.00	0.03-0.30																		●									
		VBGT 160404	0.10-5.00	0.03-0.40																		●									
		VBGT 160408	0.10-5.00	0.03-0.50																		○									
	UF	VBGT 110302	0.20-1.40	0.02-0.15																											Δ
		VBGT 110304	0.20-1.40	0.03-0.20																											Δ
		VBGT 160402	0.20-1.40	0.02-0.15																											Δ

● Stock item　　○ Non Stock item　　Δ Special order

VBMT...

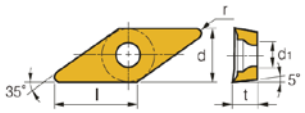


Size			
Dimension	d	t	d1
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16	9.525	4.76	4.4

Insert Shape	CB	Insert Code	ISO ap (mm)	ISO Vc (m/min) / fn (mm/rev)	P 350(100-600) TC0105	P 300(220-400) TC0115	P 300(220-400) TC2115	P 240(200-320) TC0125	P 240(200-320) TC2125	P 145(45-250) TC2135	M 190(130-250) TC1310	M 180(120-250) TC1320	M 160(120-200) TP4310	M 150(110-200) TP4320	M 130(100-160) TP4330	M 90(70-110) TP4340	K 300(220-360) TC2210	K 300(220-360) TC0210	K 240(180-300) TC2215	K 240(180-300) TC0215	N 600(450-750) TN7501	S 50(30-90) TP2405	S 45(30-60) TP2410	S 45(30-60) TP4410	S 45(30-60) TP2430	U TP2620	U TP3620	U TP2630	U TP3630	U TP4630
	PBI	VBMT 110304	0.30-1.4	0.04-0.14							○	○			○											○				
		VBMT 110308	0.60-1.4	0.09-0.28							○	○			○											○				
		VBMT 160402	0.15-2.1	0.02-0.07							○	○			○											○				
		VBMT 160404	0.30-2.1	0.04-0.14							○	○			○											○				
		VBMT 160408	0.60-2.1	0.09-0.28							○	○			○											○				
	EF2	VBMT 160404	0.1-1.8	0.05-0.20																										●
		VBMT 160408	0.14-1.80	0.07-0.27																										●
														○									○							
	SF1	VBMT 110302	0.07-1.35	0.05-0.10										○									○							
		VBMT 110304	0.12-1.35	0.06-0.15										○									○							
		VBMT 110308	0.16-1.35	0.08-0.21										○									○							
		VBMT 160404	0.12-1.45	0.06-0.16										○									○							
		VBMT 160408	0.17-1.45	0.08-0.22										○									○							
	PCZ	VBMT 110304	0.35-2.1	0.05-0.16		○					○	○												○		○				
		VBMT 110308	0.70-2.1	0.10-0.32							○	○												○		○				
		VBMT 160404	0.35-3.1	0.05-0.16	○			○			○	○												○		○				
		VBMT 160408	0.70-3.1	0.10-0.32	○			○			○	○												○		○				
		VBMT 160412	1.05-3.1	0.16-0.48	○						○	○												○		○				
	HM	VBMT 160404	0.35-2.1	0.05-0.16					●								●		●											
		VBMT 160408	0.70-2.1	0.10-0.32					●											●								●		
	SM1	VBMT 110304	0.35~2.00	0.12~0.20									○	○									○							
		VBMT 110308	0.50~2.00	0.15~0.30									○	○									○							
		VBMT 160404	0.28~2.20	0.08~0.16									○	○									○							
		VBMT 160408	0.54~2.20	0.11~0.22									○	○									○							
		VBMT 160412	0.65~2.20	0.13~0.26									○	○									○							
	KCZ	VBMT 160404	0.40-3.3	0.06-0.18							○	○					○		○								○			
		VBMT 160408	0.80-3.3	0.12-0.36							○	○					○		○								○			

● Stock item　　○ Non Stock item　　△ Special order

VC...



Size			
Dimension	d	t	d1
11	6.35	3.18	2.8
16	9.525	4.76	4.4

Insert Shape	CB	Insert Code	ISO ap (mm)	ISO Vc (m/min) / fn (mm/rev)	P 350(100-600) TC0105	P 300(220-400) TC0115	P 300(220-400) TC2115	P 240(200-320) TC0125	P 240(200-320) TC2125	P 145(45-250) TC2135	M 190(130-250) TC1310	M 180(120-250) TC1320	M 160(120-200) TP4310	M 150(110-200) TP4320	M 130(100-160) TP4330	M 90(70-110) TP4340	K 300(220-360) TC2210	K 300(220-360) TC0210	K 240(180-300) TC2215	K 240(180-300) TC0215	N 600(450-750) TN7501	S 50(30-90) TP2405	S 45(30-60) TP2410	S 45(30-60) TP4410	S 45(30-60) TP2430	U TP2620	U TP3620	U TP2630	U TP3630	U TP4630
	AL1	VCGT 110302	0.05-3.0	0.02-0.20																	●									
		VCGT 110304	0.10-4.0	0.02-0.25																	●									
		VCGT 110308	0.10-5.0	0.03-0.30																	●									
		VCGT 160402	0.05-5.0	0.02-0.30																	●									
		VCGT 160404	0.10-5.0	0.03-0.40																	●									
		VCGT 160408	0.10-5.0	0.03-0.50																	○									
	SF1	VCMT 110304	0.12-1.5	0.06-0.15										Δ									Δ							
		VCMT 160404	0.12-1.5	0.06-0.16										Δ									Δ							
		VCMT 160408	0.16-1.6	0.10-0.22										Δ									Δ							
	PBI	VCMT 160404	0.60-2.1	0.09-0.28				○			○	○														○				
		VCMT 160408	0.60-2.1	0.09-0.28				○			○	○														○				
	HM	VCMT 160404	0.30-2.60	0.10-0.25				●																						
		VCMT 160408	0.60-2.60	0.12-0.33				●												●										
	PCZ	VCMT 110304	0.35-2.1	0.05-0.16				○			○	○			○											○				
		VCMT 110308	0.70-2.1	0.10-0.32							○	○														○				
		VCMT 160404	0.35-3.1	0.05-0.16							○	○			○											○				
		VCMT 160408	0.70-3.1	0.10-0.32							○	○			○											○				

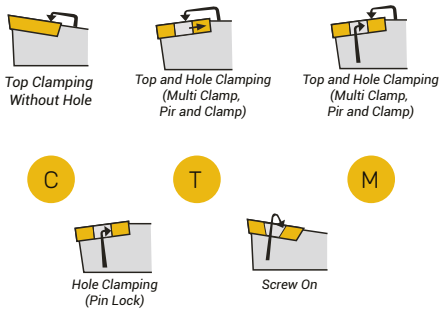
● Stock item　　○ Non Stock item　　Δ Special order

EXTERNAL TURNING TOOL HOLDER CODE SYSTEM

P	C	L	N	R	20	20	K	12
1	2	3	4	5	6	7	8	9
Clamping Method of Inserts	Insert Shape	Holder Style	Clearance Angle of Insert	Hand of Holder	Height of Shank	Width of Shank	Length of Holder	Length of Cutting Edge

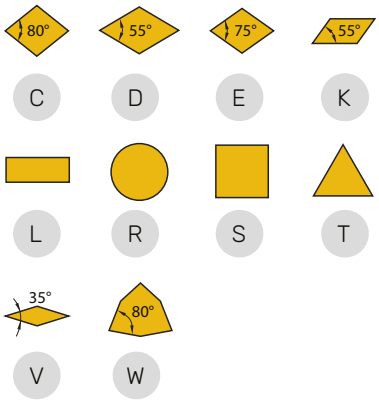
1 Clamping Method of Inserts

P C L N R 20 20 - K 12



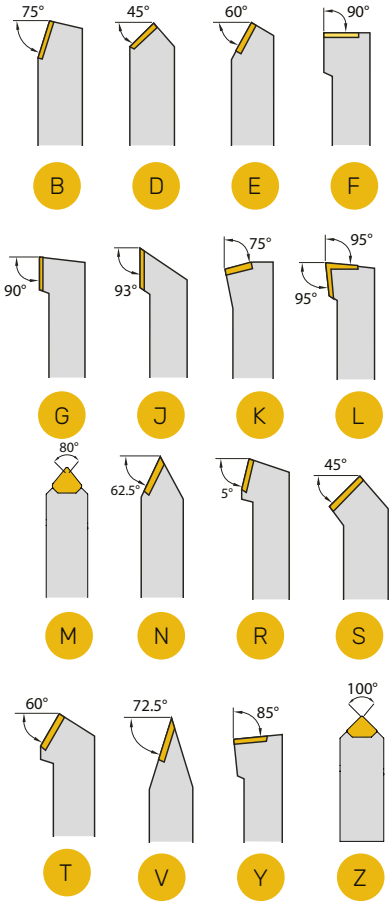
2 Insert Shape

P C L N R 20 20 - K 12



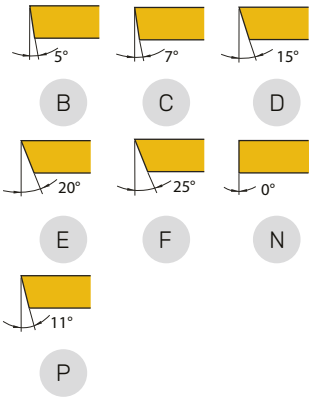
3 Holder Style

P C L N R 20 20 - K 12



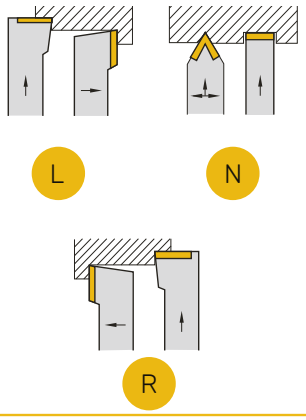
4 Clearance Angle of Insert

P C L N R 20 20 - K 12



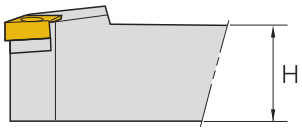
5 Hand of Holder

P C L N R 20 20 - K 12



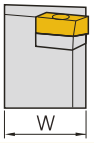
6 Height of Shank

P C L N R 20 20 - K 12



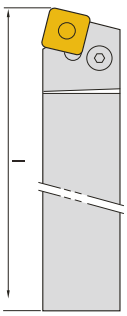
7 Width of Shank

P C L N R 20 20 - K 12



8 Length of Holder

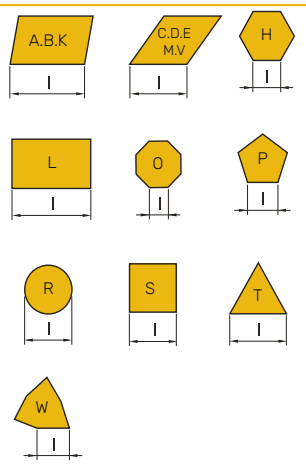
P C L N R 20 20 - K 12



A-32	H-100	Q-180	X-Special Item
B-40	J-110	R-200	
C-50	K-125	S-250	
D-60	L-140	T-300	
E-70	M-150	U-350	
F-80	N-160	V-400	
G-90	P-170	W-450	

9 Length of Insert Cutting Edge

P C L N R 20 20 - K 12



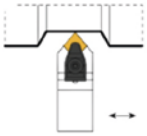
OVERVIEW - EXTERNAL TURNING

TCLNR/L



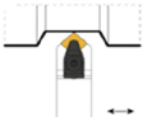
Page:39 95°

TCMNN



Page:39 50°

TCZNN



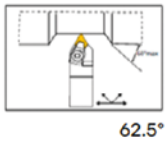
Page:40 40°

TDJNR/L



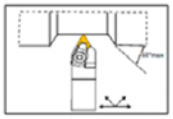
Page:40 93°

TDNNN



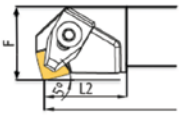
Page:41 62.5°

TSDNN



Page:41 45°

TSLNR/L



Page:42 95°

TSSNR/L



Page:42 45°

TTJNR/L



Page:43 93°

TWLNR/L



Page:43 95°

TVJNR/L



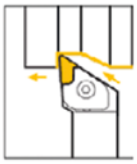
Page:44 93°

TVNNN



Page:44 72.5°

CKJNR/L



Page:45 93°

MTENN



Page:45 60°

MTJNR



Page:46 93°

MWLNR/L



Page:46 95°

MWDNN



Page:47 50°

PCLNR/L



Page:48 95°

PDNNN



Page:48 62.5°

PDJNR/L



Page:49 93°

PTJNR/L



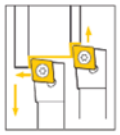
Page:49 93°

PWLNR/L



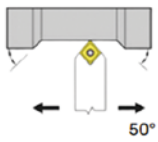
Page:49 95°

SCLCR/L



Page:50 95°

SCNCN



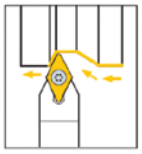
Page:50 50°

SDJCR/L



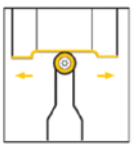
Page:51 93°

SDNCN



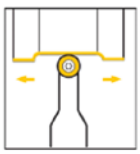
Page:51 62.5°

SRDCN



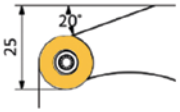
Page:52

SRGCR/L



Page:52

SRHCR/L



Page:53

STFCR/L



Page:53 90°

SVHBR/L



Page:54 93°

SVJBR/L



Page:54 93°

SVVBN



Page:55 72.5°

SVJCR/L



Page:55 93°

SVVCN

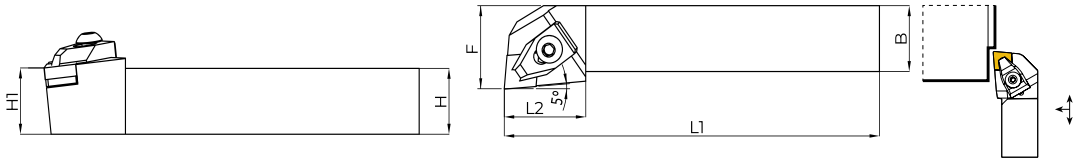


Page:56 72.5°

T TYPE TOOL HOLDER



CN**



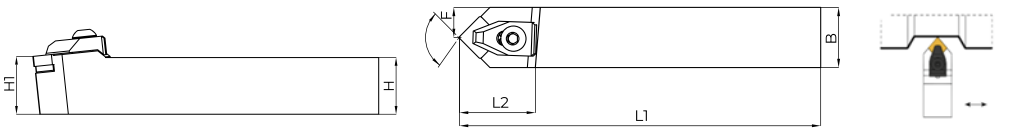
95°

TCLNR/L

Order Code	Stock Availability		Dimensions (mm)					Insert	Spare Parts				
	L	R	H1 H	B	F	L1	L2		Shim	Shim Screw	Clamp	Clamp Screw	Allen Key
TCLNR/L 1616-H12	•	•	16	16	25	100	35	CNM. 1204..	SCN12TM	SS0410M	CT0012M	CS0627M	A3
TCLNR/L 2020-K12	•	•	20	20	25	125	35						
TCLNR/L 2525-M12	•	•	25	25	32	150	40						
TCLNR/L 3232-P12	•	•	32	32	40	170	40						
TCLNR/L 2525-M16	•	•	25	25	32	150	40	CNM. 1606..	SCN16TM	SS0510M	CT0016M	CS0627M	
TCLNR/L 3232-P16	•	•	32	32	40	170	40						
TCLNR/L 3232-P19	•	•	32	32	40	170	40	CNM. 1906..	SCN19TM	SS0510M	CT0019M	CS0825M	A5
TCLNR/L 4040-R19	•	•	40	40	50	200	45						



CN**



50°

TCMNN

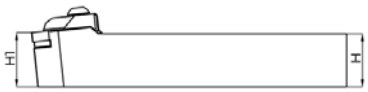
Order Code	Stock Availability	Dimensions (mm)					Insert	Spare Parts				
		H1 H	B	F	L1	L2		Shim	Shim Screw	Clamp	Clamp Screw	Allen Key
TCMNN 2020-K12	•	20	20	10	125	35	CNM. 1204	SCN12TM	SS0410M	CT0012M	CS0627M	A3
TCMNN 2525-M12	•	25	25	12,5	150	40						
TCMNN 3232-P12	•	32	32	16	170	40						
TCMNN 3232-P16	•	32	32	16	170	40	CNM. 1606	SCN16TM	SS0510M	CT0016M		
TCMNN 3232-P19	•	32	32	16	170	40	CNM. 1906	SCN19TM		CT0019M	CS0825M	A5
TCMNN 4040-S19	•	40	40	20	250	40						

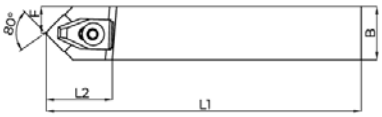
● Stock item ○ Non Stock item △ Special order

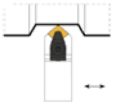
T TYPE TOOL HOLDER



CN**







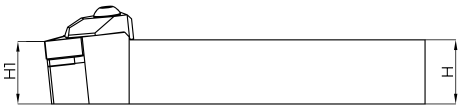
TCZNN

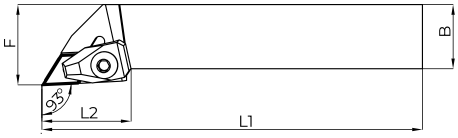
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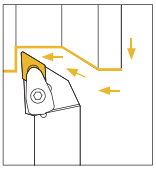
Order Code	Stock Availability	Dimensions (mm)					Insert	Spare Parts				
		H1 H	B	F	L1	L2		Shim	Shim Screw	Clamp	Clamp Screw	Allen Key
TCZNN 2020-K12	•	20	20	10	125	35	CNM. 1204..	SCN12TM	SS0410M	CT0012M	CS0627M	A3
TCZNN 2525-M12	•	25	25	12,5	150	40						
TCZNN 3232-P12	•	32	32	16	170	40						
TCZNN 3232-P16	•	32	32	16	170	40	CNM. 1606	SCN16TM	SS0510M	CT0016TM		
TCZNN 3232-P19	•	32	32	16	170	40	CNM. 1906	SCN19TM		CT0019TM	CS0825M	A5
TCZNN 4040-R19	•	40	40	20	200	40						



DN**







TDJNR/L

93°

Order Code	Stock Availability		Dimensions (mm)					Insert	Spare Parts				
	L	R	H1 H	B	F	L1	L2		Shim	Shim Screw	Clamp	Clamp Screw	Allen Key
TDJNR/L 1616-K11	•	•	16	16	21	125	30	DNM. 1104..	SDN11TM	SS0411M	CT0011M	CS0523M	A3
TDJNR/L 2020-K11	•	•	20	20	25	125	35						
TDJNR/L 2525-M11	•	•	25	25	32	150	40						
TDJNR 1616-K15		•	16	16	21	125	30	DNM. 1506..	SDN15TM	SS0410M	CT0015M	CS0627M	
TDJNR/L 2020-K15	•	•	20	20	25	125	35						
TDJNR/L 2525-M15	•	•	25	25	32	150	40						
TDJNR/L 3232-P15	•	•	32	32	40	170	40						
TDJNR/L 4040-R15	•	•	40	40	50	200	45						

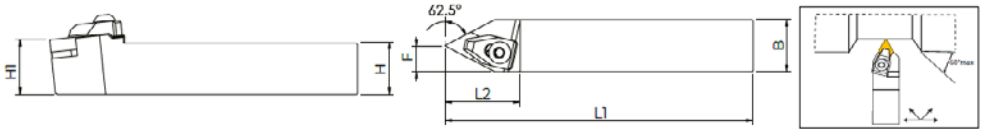
● Stock item ○ Non Stock item △ Special order

T TYPE TOOL HOLDER



DN**

TDNNN



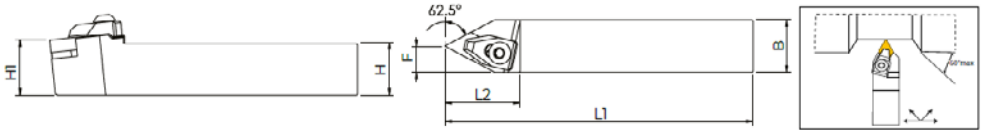
62.5°

Order Code	Stock Availability	Dimensions (mm)					Insert	Spare Parts				
		H1 H	B	F	L1	L2		Shim	Shim Screw	Clamp	Clamp Screw	Allen Key
TDNNN 1616-H11	•	16	16	8	100	30	DNM. 1104..	SDN11TM	SS0411M	CT0011M	CS0523M	A3
TDNNN 2020-K11	•	20	20	10	125	35						
TDNNN 2525-M11	•	25	25	12,5	150	40						
TDNNN 2020-K15	•	20	20	10	125	35	DNM. 1506..	SDN15TM	SS0410M	CT0015M	CS0627M	
TDNNN 2525-M15	•	25	25	12,5	150	40						
TDNNN 3232-P15	•	32	32	16	170	40						
TDNNN 4040-R15	•	40	40	20	200	45						



SN**

TSDNN



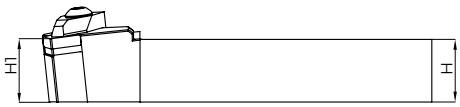
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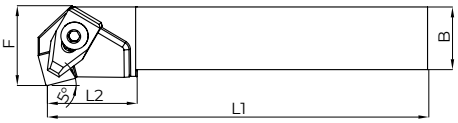
Order Code	Stock Availability	Dimensions (mm)					Insert	Spare Parts				
		H1 H	B	F	L1	L2		Shim	Shim Screw	Clamp	Clamp Screw	Allen Key
TSDNN 2020-K12	•	20	20	10	125	35	SNMG 1204..	SSN12TM	SS0410M	CT0012M	CS0627M	A3
TSDNN 2525-M12	•	25	25	12,5	150	40						
TSDNN 3232-P15	•	32	32	16	170	40	SNMG 1506	SSN15TM	SS0510M	CT0015M	CS0627M	A3
TSDNN 4040-R15	•	40	40	20	200	45						
TSDNN 3232-P19	•	32	32	16	170	40	SNMG 1906	SSN19TM	SS0510M	CT0019M	CS0825M	A5
TSDNN 4040-R19	•	40	40	20	200	45						

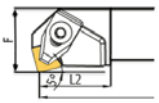
● Stock item ○ Non Stock item △ Special order

T TYPE TOOL HOLDER


SN**



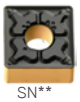


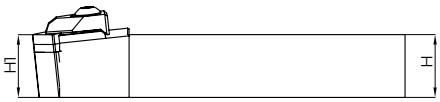


TSLNR/L

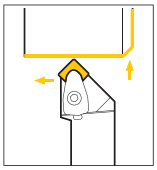
95°

Order Code	Stock Availability		Dimensions (mm)					Insert	Spare Parts				
	L	R	H1 H	B	F	L1	L2		Shim	Shim Screw	Clamp	Clamp Screw	Allen Key
TSLNR/L 2020-K12	•	•	20	20	25	125	35	SNMG 1204	SSN12TM	SS0410M	CT0012M	CS0627M	A3
TSLNR/L 2525-M12	•	•	25	25	32	150	40						
TSLNR/L 3232-P12	•	•	32	32	40	170	40	SNMG 1204	SSN12TM	SS0410M	CT0012M	CS0627M	A3
TSLNR/L 3232-P15	•	•	32	32	40	170	40	SNMG 1506	SSN15TM	SS0510M	CT0015M	CS0627M	A3
TSLNR/L 3232-P19	•	•	32	32	40	170	40	SNMG 1906	SSN19TM	SS0510M	CT0019M	CS0815M	A5
TSLNR/L 4040-P15	•	•	40	40	50	170	40	SNMG 1506	SSN15TM	SS0510M	CT0015M	CS0627M	A3
TSLNR/L 4040-R19	•	•	40	40	50	200	45	SNMG 1906	SSN19TM	SS0510M	CT0019M	CS0825M	A5


SN**







TSSNR/L

45°

Order Code	Stock Availability		Dimensions (mm)					Insert	Spare Parts				
	L	R	H1 H	B	F	L1	L2		Shim	Shim Screw	Clamp	Clamp Screw	Allen Key
TSSNR/L 2020-K12	•	•	20	20	19	125	35	SNMG 1204	SSN12TM	SS0410M	CT0012M	CS0627M	A3
TSSNR/L 2525-M12	•	•	25	25	24	150	40						
TSSNR/L 3232-P12	•	•	32	32	30	170	40						
TSSNR/L 3232-P15	•	•	32	32	30	170	40	SNMG 1506	SSN15TM	SS0410M		CS0627M	A3
TSSNR/L 3232-P19	•	•	32	32	30	170	40	SNMG 1906	SSN19TM	SS0510M	CT0019M	CS0825M	A5
TSSNR/L 4040-R19	•	•	40	40	38	200	45						

● Stock item ○ Non Stock item △ Special order

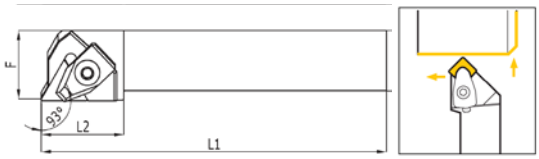
T TYPE TOOL HOLDER



TN**

TTJNR/L





93°

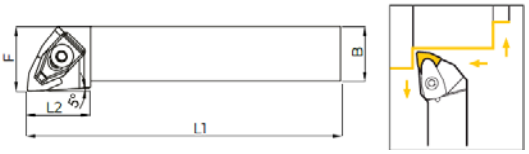
Order Code	Stock Availability		Dimensions (mm)					Insert	Spare Parts				
	L	R	H1 H	B	F	L1	L2		Shim	Shim Screw	Clamp	Clamp Screw	Allen Key
TTJNR/L 1616-H16	•	•	16	16	21	100	30	TNMG 1604	STN16TMM	SS0410M	CT0016M	CS0523M	A3
TTJNR/L 2020-K16	•	•	20	20	25	125	35						
TTJNR/L 2525-M16	•	•	25	25	32	150	40						
TTJNR/L 2020-K22	•	•	20	20	25	125	35	TNMG 2204	STN22TMM		CT0022M	CS0627M	
TTJNR/L 2525-M22	•	•	25	25	32	150	40						
TTJNR/L 3232-P22	•	•	32	32	40	170	40						
TTJNR/L 4040-R22	•	•	40	40	50	200	45	TNMG 2204	STN22TMM	SS0410M	CT0022M	CS0627M	A3



WN**

TWLNR/L





95°

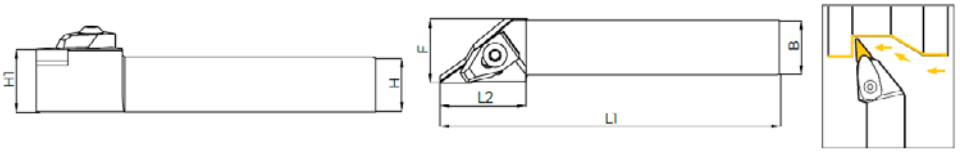
Order Code	Stock Availability		Dimensions (mm)					Insert	Spare Parts				
	L	R	H1 H	B	F	L1	L2		Shim	Shim Screw	Clamp	Clamp Screw	Allen Key
TWLNR/L 1616-K06	•	•	16	16	21	125	30	WNM.0602..	-	-	CT0006M	CS0515M	A3
TWLNR/L 2020-K06	•	•	20	20	25	125	35						
TWLNR/L 2525-M06	•	•	25	25	32	150	40						
TWLNR/L 2020-K08	•	•	20	20	25	125	35	WNM.0804..	SWN08TMM	SS0410M	CT0008M	CS0627M	
TWLNR/L 2525-M08	•	•	25	25	32	150	40						
TWLNR/L 3232-P08	•	•	32	32	40	170	40						
TWLNR/L 4040-R08	•	•	40	40	50	200	45						

● Stock item ○ Non Stock item △ Special order

T TYPE TOOL HOLDER



VN**



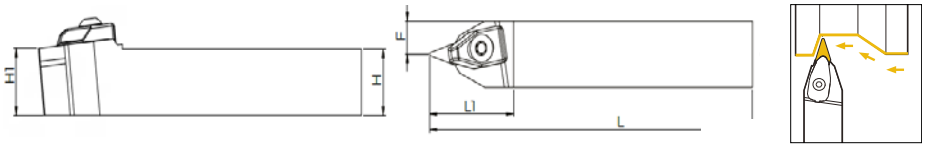
TVJNR/L

93°

Order Code	Stock Availability		Dimensions (mm)					Insert	Spare Parts				
	L	R	H1 H	B	F	L1	L2		Shim	Shim Screw	Clamp	Clamp Screw	Allen Key
TVJNR/L 1616-K16	•	•	16	16	25	125	35	VNMG 1604	SVN16TM	SS0411M	CT0016M	CS0627M	A3
TVJNR/L 2020-K16	•	•	20	20	25	125	35						
TVJNR/L 2525-M16	•	•	25	25	32	150	40						
TVJNR/L 3232-P16	•	•	32	32	40	170	40						
TVJNR/L 4040-R16	•	•	40	40	50	200	45						



VN**



TVNNN

72.5°

Order Code	Stock Availability	Dimensions (mm)					Insert	Spare Parts				
		H1 H	B	F	L1	L2		Shim	Shim Screw	Clamp	Clamp Screw	Allen Key
TVNNN 2020-K16	•	20	20	10	125	30	VNMG 1604	SVN16TM	SS0411M	CT0116M	CS0627M	A3
TVNNN 2525-M16	•	25	25	12,5	150	35						
TVNNN 3232-P16	•	32	32	16	170	40						
TVNNN 4040-P16	•	40	40	16	170	40						

● Stock item ○ Non Stock item △ Special order

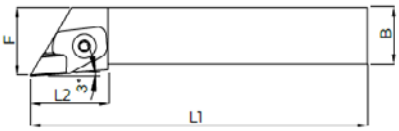
C TYPE TOOL HOLDER

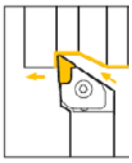


KN**

CKJNR/L







93°

Order Code	Stock Availability		Dimensions (mm)					Insert	Spare Parts				
	L	R	H1 H	B	F	L1	L2		Shim	Screw	Clamp	Screw	Allen Key
CKJNR/L 2020-K16	•	•	20	20	25	125	35	KNUX 1604..	SK16RCM	SS0310M	CC0016M	CS0622M	A5
CKJNR/L 2525-M16	•	•	25	25	32	150	40						
CKJNR/L 3232-P16	•	•	32	32	40	170	40						
CKJNR/L 4040-R16	•	•	40	40	50	200	45						

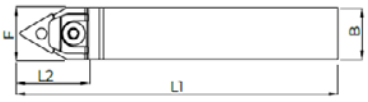
M TYPE TOOL HOLDER



TN**

MTENN







60°

Order Code	Stock Availability	Dimensions (mm)					Insert	Spare Parts				
		H1 H	B	F	L1	L2		Shim	Shim Pin	Clamp	Screw	Allen Key
MTENN 1616-K16	•	16	16	8	125	30	TNMG 1604	STN16TMM	SP053615M	CM0016M	CS0627M	A3
MTENN 2020-K16	•	20	20	10	125	35						
MTENN 2525-M16	•	25	25	12,5	150	40						
MTENN 3232-P16	•	32	32	16	170	35						
MTENN 2525-M22	•	25	25	12,5	150	40	TNMG 2204	STN22TMM	SPTN22M	CM0022M		
MTENN 3232-P22	•	32	32	16	170	40						
MTENN 4040-R22	•	40	40	20	200	45						

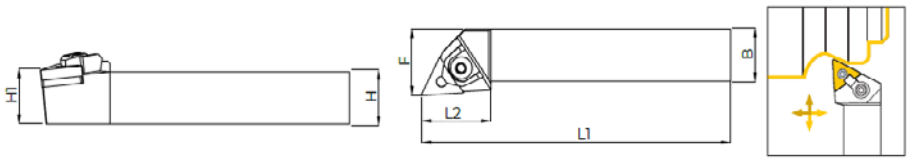
● Stock item ○ Non Stock item △ Special order

M TYPE TOOL HOLDER



TN**

MTJNR/L



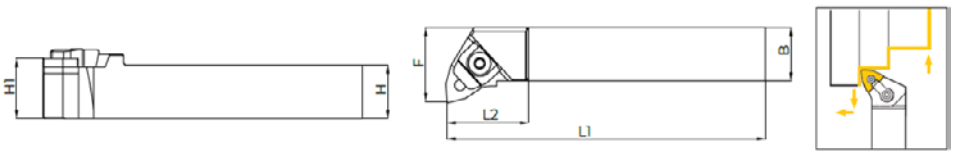
93°

Order Code	Stock Availability		Dimensions (mm)					Insert	Spare Parts				
			H1 H	B	F	L1	L2		Shim	Shim Pin	Clamp	Screw	Allen Key
MTJNR/L 1616-K16	•	•	16	16	20	125	35	TNMG 1604	STN16TMM	SP053615M	CM0016M	CS0627M	A3
MTJNR/L 2020-K16	•	•	20	20	25	125	35						
MTJNR/L 2525-M16	•	•	25	25	32	150	40						
MTJNR/L 3232-P16	•	•	32	32	40	170	40						
MTJNR/L 2525-M22	•	•	25	25	32	150	40	TNMG 2204	STN22TMM	SPTN22M	CM022M		
MTJNR/L 3232-P22	•	•	32	32	40	170	40						
MTJNR/L 4040-R22	•	•	40	40	50	200	45						



WN**

MWLNR/L



95°

Order Code	Stock Availability		Dimensions (mm)					Insert	Spare Parts				
			H1 H	B	F	L1	L2		Shim	Shim Pin	Clamp	Screw	Allen Key
MWLNR/L 1616-H06	•	•	16	16	30	100	35	WNM.0602..	SWN06MM	SP053615M	CM0006M	CS0523M	A3
MWLNR/L 2020-K06	•	•	20	20	25	125	35						
MWLNR/L 2525-M06	•	•	25	25	32	150	40						
MWLNR/L 2020-K08	•	•	20	20	25	125	35	WNM.0804..	SWN08MM	SPTN22M	CM0008M	CS0627M	
MWLNR/L 2525-M08	•	•	25	25	32	150	40						
MWLNR/L 3232-P08	•	•	32	32	40	170	40						
MWLNR/L 4040-R08	•	•	40	40	50	200	45						

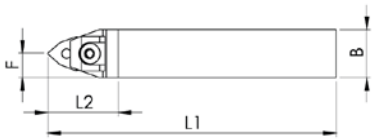
● Stock item ○ Non Stock item △ Special order

M TYPE TOOL HOLDER



WN**







50°

MWDNN

Order Code	Stock Availability	Dimensions (mm)					Insert	Spare Parts				
		H1 H	B	F	L1	L2		Shim	Shim Pin	Clamp	Screw	Allen Key
MWDNN 1616-K06	•	16	16	8	125	35	WNM.0604	SWN06MM	SP053615M	CM0006M	CS0523M	A3
MWDNN 2020-K06	•	20	20	10	125	35						
MWDNN 2020-K08	•	20	20	10	125	40	WNM.0804..	SWN08MM	SP0658M	CM0008M	CS0627M	
MWDNN 2525-M08	•	25	25	12,5	150	40						
MWDNN 3232-P08	•	32	32	16	170	40						
MWDNN 4040-R08	•	40	40	20	200	45						

● Stock item ○ Non Stock item △ Special order

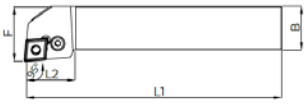
P TYPE TOOL HOLDER



CN**

PCLNR/L







95°

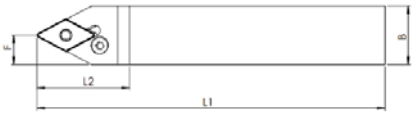
Order Code	Stock Availability		Dimensions (mm)					Insert	Spare Parts				
	L	R	H1 H	B	F	L1	L2		Shim	Shim Screw	Crowbar	Metal Sheet	Allen Key
PCLNR/L 2020-K12	•	•	20	20	25	125	35	CNM. 1204..	SCN12PM	SM8KM	CPL012M	SSP012M	A3
PCLNR/L 2525-M12	•	•	25	25	32	150	35						
PCLNR/L 3232-P12	•	•	32	32	40	170	40						
PCLNR/L 4040-R12	•	•	40	40	50	200	40						
PCLNR/L 2525-M16	•	•	25	25	32	150	40	CNM. 1606..	SCN16PM	SM8UM	CPL016M	SSP016M	A4
PCLNR/L 3232-P16	•	•	32	32	40	170	40						
PCLNR 4040-R16		•	40	40	50	200	45						
PCLNR/L 3232-P19	•	•	32	32	40	170	40	CNM. 1906..	SCN19PM		CPL019M	SSP019M	
PCLNR 4040-R19		•	40	40	50	200	45						

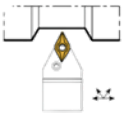


DN**

PDNNN







62.5°

Order Code	Stock Availability		Dimensions (mm)					Insert	Spare Parts				
	L	R	H1 H	B	F	L1	L2		Shim	Shim Screw	Crowbar	Metal Sheet	Allen Key
PDNNN 2020-K16	•		20	20	25	125	35	DNM1606	SDN16PM	SM8KM	CPL015M	SSP015M	A3
PDNNN 2525-M16	•		25	25	32	150	40						
PDNNN 3232-P16	•		32	32	40	170	40			SM8UM			A4
PDNNN 4040-R16	•		40	40	45	200	45						

● Stock item ○ Non Stock item △ Special order

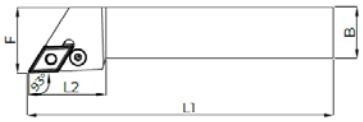
P TYPE TOOL HOLDER



DN**

PDJNR/L







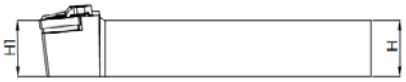
93°

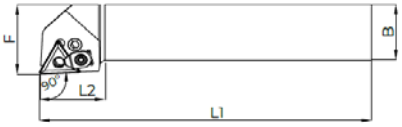
Order Code	Stock Availability		Dimensions (mm)					Insert	Spare Parts				
	L	R	H1 H	B	F	L1	L2		Shim	Shim Screw	Crowbar	Metal Sheet	Allen Key
PDJNR/L 2020-K15	•	•	20	20	25	125	35	DNM. 1506..	SDN15PM	SM8KM	CPL015M	SSP015M	A3
PDJNR/L 2525-M15	•	•	25	25	32	150	40						
PDJNR/L 3232-P15	•	•	32	32	40	170	40			SM8UM			A4
PDJNR/L 4040-R15	•	•	40	40	45	200	45						



TN**

PTJNR/L







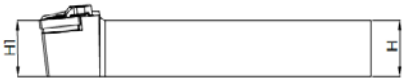
93°

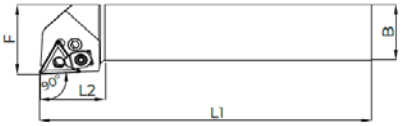
Order Code	Stock Availability		Dimensions (mm)					Insert	Spare Parts				
	L	R	H1 H	B	F	L1	L2		Shim	Shim Screw	Crowbar	Metal Sheet	Allen Key
PTJNR 2020-K16		•	20	20	25	125	35	TNMG 1604	STN16PM	SM8KM	CPL016M	SSP016M	A3
PTJNR 2525-M16		•	25	25	32	150	40			SM8KM			
PTJNR 3232-P16		•	32	32	40	170	40			SM8UM			A4
PTJNR/L 2525-M22	•	•	25	25	32	150	40	TNMG 2204	STN22PM	SM8KM	CPL022M	SSP022M	
PTJNR/L 3232-P22	•	•	32	32	40	170	40						
PTJNR 4040-R22		•	40	40	50	200	45			SM8UM			



WN**

PWLNR/L







95°

Order Code	Stock Availability		Dimensions (mm)					Insert	Spare Parts				
	L	R	H1 H	B	F	L1	L2		Shim	Shim Screw	Crowbar	Metal Sheet	Allen Key
PWLNR/L 2020-K08	•	•	20	20	25	125	35	WNM.0804..	SWN08PM	SM8KM	CPL08M	SSP08M	A3
PWLNR/L 2525-M08	•	•	25	25	32	150	40						
PWLNR/L 3232-P08	•	•	32	32	40	170	40			SM8UM			A4
PWLNR/L 4040-R08	•	•	40	40	50	200	45						

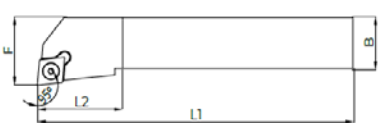
S TYPE TOOL HOLDER



CC**

SCLCR/L





95°

Order Code	Stock Availability		Dimensions (mm)					Insert	Spare Parts				
	L	R	H1 H	B	F	L1	L2		Shim	Shim Screw	Clamp	Screw	Allen Key
SCLCR/L 0808-H06	•	•	8	8	10	100	20	CC.T 0602..	-	-	-	SM2,5X7	T8
SCLCR/L 1010-H06	•	•	10	10	12	100	20						
SCLCR/L 1212-H06	•	•	12	12	15	100	20						
SCLCR/L 1616-H06	•	•	16	16	20	100	25						
SCLCR/L 1212-H09	•	•	12	12	15	100	20	CC.T 09T3..	-	-	-	SM3,5X10	T15
SCLCR/L 1616-H09	•	•	16	16	20	100	25					SM4X16	
SCLCR/L 2020-K09	•	•	20	20	25	125	35					SM3,5X10	
SCLCR/L 2525-M09	•	•	25	25	32	150	35					SM3,5X10	
SCLCR/L 1616-H12	•	•	16	16	20	100	25	CC.T 1204..	SCC12SM	SS0610M	-	SM4X14	
SCLCR/L 2020-K12	•	•	20	20	25	125	35					SM4X16	
SCLCR/L 2525-M12	•	•	25	25	32	150	35					SM4X16	
SCLCR/L 3232-P12	•	•	32	32	40	170	40					SM4X16	



CC**

SCNCN





50°

Order Code	Stock Availability		Dimensions (mm)					Insert	Spare Parts				
	L	R	H1 H	B	F	L1	L2		Shim	Shim Screw	Clamp	Screw	Allen Key
SCNCN 0808-H06	•		8	8	4	100	16	CC.T 0602..	-	-	-	SM2,5X7	T8
SCNCN 1010-H06	•		10	10	5	100	16						
SCNCN 1212-H06	•		12	12	6	100	20						
SCNCN 1212-H09	•		12	12	6	100	20	CC.T 09T3..	-	-	-	SM3,5X10	T15
SCNCN 1616-H09	•		16	16	8	100	25						
SCNCN 2020-K09	•		20	20	10	125	35						
SCNCN 2525-M12	•		25	25	12,5	150	40	CC.T 1204..	SCC12SM	SS0610M	-	SM4X16	

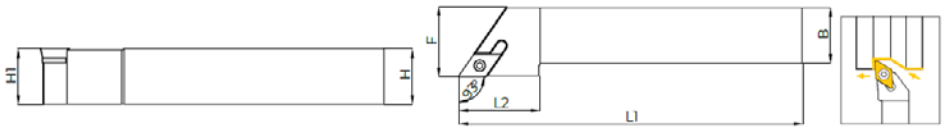
● Stock item ○ Non Stock item △ Special order

S TYPE TOOL HOLDER



DC**

SDJCR/L



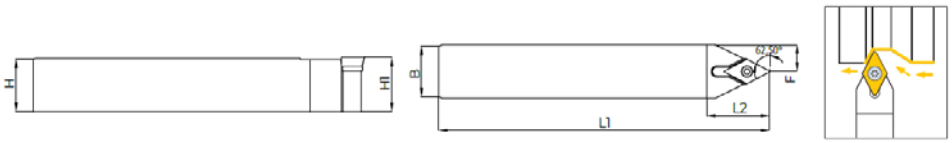
93°

Order Code	Stock Availability		Dimensions (mm)					Insert	Spare Parts				
	L	R	H1 H	B	F	L1	L2		Shim	Shim Screw	Clamp	Screw	Allen Key
SDJCR/L 0808-H07	•	•	8	8	10	100	16	DC.T 0702..	-	-	-	SM2,5X7	T8
SDJCR/L 1010-H07	•	•	10	10	12	100	16						
SDJCR/L 1212-H07	•	•	12	12	16	100	20						
SDJCR/L 1616-H07	•	•	16	16	20	100	25						
SDJCR/L 1616-H11	•	•	16	16	20	100	25	DC.T 11T3..	SDC11SM	SS050535M	-	SM3,5X14	T15
SDJCR/L 2020-K11	•	•	20	20	25	125	35						
SDJCR/L 2525-M11	•	•	25	25	32	150	40						
SDJCR/L 3232-P11	•	•	32	32	40	170	40						



DC**

SDNCN



62.5°

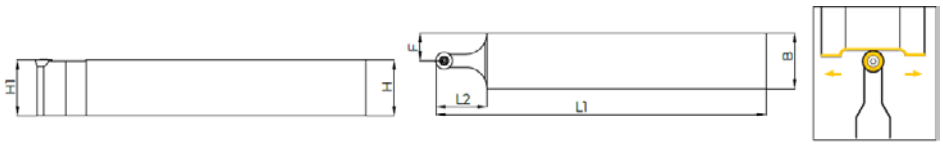
Order Code	Stock Availability		Dimensions (mm)					Insert	Spare Parts				
	L	R	H1 H	B	F	L1	L2		Shim	Shim Screw	Clamp	Screw	Allen Key
SDNCN 0808-H07	•		8	8	4	100	16	DC.T 0702..	-	-	-	SM2,5X7	T8
SDNCN 1010-H07	•		10	10	5	100	16						
SDNCN 1212-H07	•		12	12	6	100	20						
SDNCN 1616-H07	•		16	16	8	100	25						
SDNCN 1212-M11	•		12	12	6	150	20	DC.T 11T3..	SDC11SM	SS050535M	-	SM3,5X14	T15
SDNCN 1616-H11	•		16	16	8	100	25						
SDNCN 2020-K11	•		20	20	10	125	35						
SDNCN 2525-M11	•		25	25	12,5	150	40						
SDNCN 3232-P11	•		32	32	16	170	45						

● Stock item ○ Non Stock item △ Special order

S TYPE TOOL HOLDER



RC**

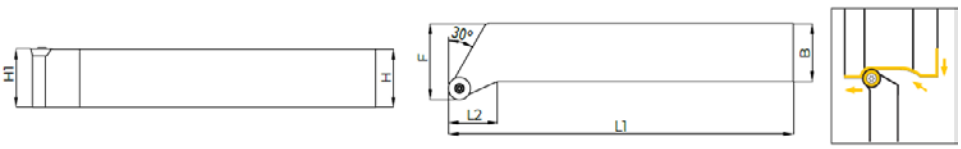


SRDCN

Order Code	Stock Availability		Dimensions (mm)					Insert	Spare Parts				
	L	R	H1 H	B	F	L1	L2		Shim	Shim Screw	Clamp	Screw	Allen Key
SRDCN 1616-H08	•		16	16	8	100	20	RC.T 0803.	-	-	-	SM3X10	T10
SRDCN 2020-K08	•		20	20	10	125	30						
SRDCN 2525-M08	•		25	25	12,5	150	35						
SRDCN 1616-H10	•		16	16	8	100	20	RC.T 10T3..	-	-	-	SM4X12	T15
SRDCN 2020-K10	•		20	20	10	125	30						
SRDCN 2525-M10	•		25	25	12,5	150	35						
SRDCN 3232-P10	•		32	32	16	170	40						
SRDCN 2020-K12	•		20	20	10	125	30	RC.T 1204..	-	-			
SRDCN 2525-M12	•		25	25	12,5	150	35						
SRDCN 3232-P12	•		32	32	16	170	40						
SRDCN 2525-M16	•		25	25	12,5	150	35	RC.T 1604..	-	-	-	SM5X12	T20



RC**



SRGCR/L

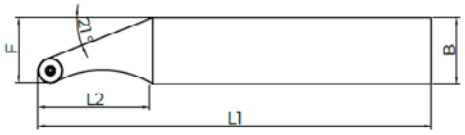
Order Code	Stock Availability		Dimensions (mm)					Insert	Spare Parts				
	L	R	H1 H	B	F	L1	L2		Shim	Shim Screw	Clamp	Screw	Allen Key
SRGCR/L 1616-K08	•	•	16	16	21	125	25	RC.T 0803..				SM3X10	T10
SRGCR/L 1616-H10	•	•	16	16	21	100	25	RC.T 10T3..				SM4X12	T15
SRGCR/L 2525-M08	•	•	20	20	25	125	35	RC.T 0803..	-	-	-	SM3X10	T10
SRGCR/L 2525-M08	•	•	25	25	32	150	40						
SRGCR/L 2020-K10	•	•	20	20	25	125	35	RC.T 10T3..	-	-	-	SM4X12	T15
SRGCR/L 2525-M10	•	•	25	25	32	150	40						
SRGCR/L 2020-K12	•	•	20	20	25	125	35	RC.T 1204..	-	-			
SRGCR/L 2525-M12	•	•	25	25	32	150	40						
SRGCR/L 3232-P10	•	•	32	32	40	170	40	RC.T 10T3..					
SRGCR/L 3232-P12	•	•	32	32	40	170	40	RC.T 1204..					

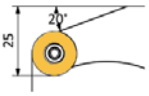
S TYPE TOOL HOLDER



RC**







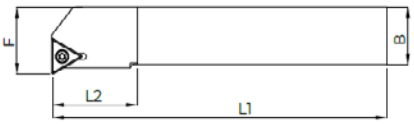
SRHCR/L

Order Code	Stock Availability		Dimensions (mm)					Insert	Spare Parts				
	L	R	H1 H	B	F	L1	L2		Shim	Shim Screw	Clamp	Screw	Allen Key
SRHCR 1616-H08	•	•	16	16	16	100	20	RC.T 0803..	-	-	-	SM3X10	T10
SRHCR/L 2020-K08	•	•	20	20	20	125	35						
SRHCR/L 2525-M08	•	•	25	25	25	150	40						
SRHCR/L 2020-K10	•	•	20	20	20	125	35	RC.T 10T3..	-	-	-	SM4X12	T15
SRHCR/L 2525-M10	•	•	25	25	25	150	40						
SRHCR 1616-K12	•	•	16	16	16	125	25	RC.T 1204..	-	-	-		
SRHCR/L 2020-K12	•	•	20	20	20	125	35						
SRHCR/L 2525-M12	•	•	25	25	25	150	40						
SRHCR/L 3232-K12	•	•	32	32	32	125	35	RC.T 1204..					



TC**







STFCR/L

90°

Order Code	Stock Availability		Dimensions (mm)					Insert	Spare Parts				
	L	R	H1 H	B	F	L1	L2		Shim	Shim Screw	Clamp	Screw	Allen Key
STFCR/L 1212-H11	•	•	12	12	16	100	25	TC.T 11..	-	-	-	SM2,5X7	T8
STFCR/L 1616-H11	•	•	16	16	20	100	25						
STFCR/L 1616-H16	•	•	16	16	20	100	25	TC.T 16T3..	STC16SM	SS050535M	-	SM3,5X14	T15
STFCR/L 2020-K16	•	•	20	20	25	125	35						
STFCR/L 2525-M16	•	•	25	25	32	150	40						

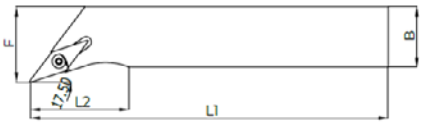
● Stock item ○ Non Stock item △ Special order

S TYPE TOOL HOLDER



VB**







SVHBR/L

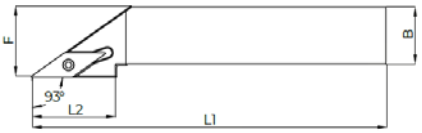
107.5°

Order Code	Stock Availability		Dimensions (mm)					Insert	Spare Parts				
	L	R	H1 H	B	F	L1	L2		Shim	Shim Screw	Clamp	Screw	Allen Key
SVHBR/L 1616-H11	•	•	16	16	20	100	25	VBM. 1103..	-	-	-	SM2,5X7	T08
SVHBR/L 2020-K11	•	•	20	20	25	125	30						
SVHBR/L 2020-K16	•	•	20	20	25	125	35	VBM. 1604..	SVB16SM	SS050535M	-	SM3,5X14	T15
SVHBR/L 2525-M16	•	•	25	25	32	150	40						
SVHBR/L 3232-P16	•	•	32	32	40	170	40						



VB**







SVJBR/L

93°

Order Code	Stock Availability		Dimensions (mm)					Insert	Spare Parts				
	L	R	H1 H	B	F	L1	L2		Shim	Shim Screw	Clamp	Screw	Allen Key
SVJBR 1212-H11		•	12	12	20	100	20	VBM. 1103..	-	-	-	SM2,5X7	T08
SVJBR/L 1616-H11	•	•	16	16	20	100	25						
SVJBR/L 2020-K11	•	•	20	20	25	125	30						
SVJBR 2525-M11		•	25	25	32	150	40						
SVJBR/L 1616-H16	•	•	16	16	20	100	25	VBM. 1604..	SVB16SM	SS050535M	-	SM3,5X14	T15
SVJBR/L 2020-K16	•	•	20	20	25	125	35						
SVJBR/L 2525-M16	•	•	25	25	32	150	40						
SVJBR/L 3232-P16	•	•	32	32	40	170	40						

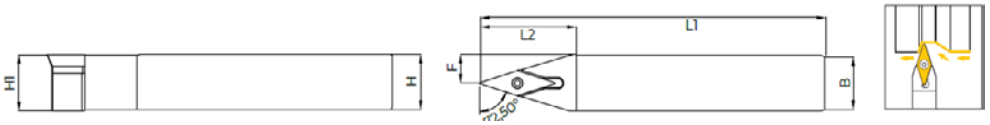
● Stock item ○ Non Stock item △ Special order

S TYPE TOOL HOLDER



VB**

SVVBN

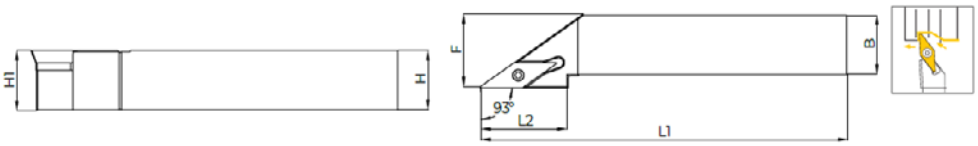


Order Code	Stock Availability		Dimensions (mm)					Insert	Spare Parts				
	L	R	H1 H	B	F	L1	L2		Shim	Shim Screw	Clamp	Screw	Allen Key
SVVBN 1212-H11		•	12	12	6	100	20	VBM. 1103..	-	-	-	SM2,5X7	T08
SVVBN 1616-H11		•	16	16	8	100	25						
SVVBN 2020-K11		•	20	20	12,5	125	35						
SVVBN 1616-H16		•	16	16	8	100	25	VBM. 1604..	SVB16SM	SS050535M	-	SM3,5X14	T15
SVVBN 2020-K16		•	20	20	10	125	35						
SVVBN 2525-M16		•	25	25	12,5	150	40						
SVVBN 3232-P16		•	32	32	16	170	40						



VC**

SVJCR/L



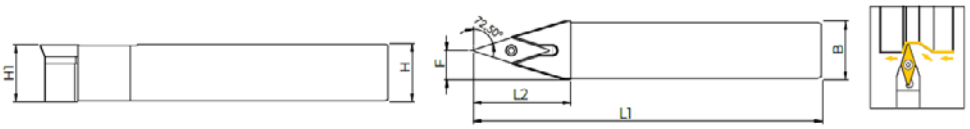
Order Code	Stock Availability		Dimensions (mm)					Insert	Spare Parts				
	L	R	H1 H	B	F	L1	L2		Shim	Shim Screw	Clamp	Screw	Allen Key
SVJCR/L 1212-H11	•	•	12	12	20	100	20	VCM. 1103..	-	-	-	SM2,5X7	T08
SVJCR/L 1616-H11	•	•	16	16	20	100	25						
SVJCR/L 2020-K11	•	•	20	20	25	125	35						
SVJCR/L 1616-H16	•	•	16	16	20	100	25	VCM. 1604..	SVC16SM	SS050535M	-	SM3,5X14	T15
SVJCR/L 2020-K16	•	•	20	20	25	125	35						
SVJCR/L 2525-M16	•	•	25	25	32	150	40						
SVJCR/L 3232-P16	•	•	32	32	40	170	40						

● Stock item ○ Non Stock item △ Special order

S TYPE TOOL HOLDER



VC**



SVVCN

72.5°

Order Code	Stock Availability		Dimensions (mm)					Insert	Spare Parts				
	L	R	H1 H	B	F	L1	L2		Shim	Shim Screw	Clamp	Screw	Allen Key
SVVCN 1212-H11		•	12	12	6	100	20	VCM. 1103..	-	-	-	SM2,5X7	T08
SVVCN 1616-H11		•	16	16	8	100	25						
SVVCN 2020-K11		•	20	20	12,5	125	35						
SVVCN 1616-H16		•	16	16	8	100	25	VCM. 1604..	SVC12SM	SS050535M	-	SM3,5X14	T15
SVVCN 2020-K16		•	20	20	10	125	35						
SVVCN 2525-M16		•	25	25	12,5	150	40						
SVVCN 3232-P16		•	32	32	16	170	40						

● Stock item ○ Non Stock item △ Special order

INTERNAL TURNING TOOL HOLDER CODE SYSTEM

S	12	M	S	C	L	C	R	07
1	2	3	4	5	6	7	8	9
Type of Bar	Bar Diameter	Bar Length	Clamping Method of Inserts	Insert Shape	Lead Angle of Boring Bar	Relief Angle of Insert	Hand of Bar	Length of Cutting Edge

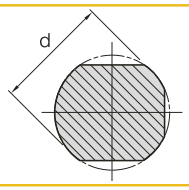
1 Type of Bar

S 12 M - S C L C R - 07

- "A" Steel with coolant hole
- "E" Carbide bar with ficed steel head and coolant hole
- "C" Carbide Shank
- "S" Steel Shank
- "X" Special type

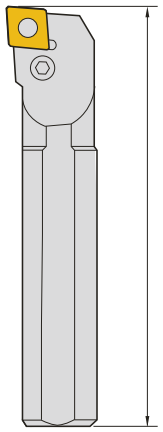
2 Bar Diameter

S 12 M - S C L C R - 07



3 Bar lenght

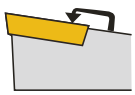
S 12 M - S C L C R - 07



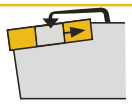
Length (L)	(mm)
H	100
J	110
K	125
M	150
N	160
Q	180
R	200
S	250
T	300
U	350
V	400
W	450
Y	500

4 Clamping Method of Inserts

S 12 M - S C L C R - 07



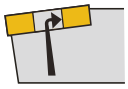
Top Clamping — C



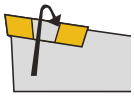
Top and Hole Clamping — D



Top and Hole Clamping — M



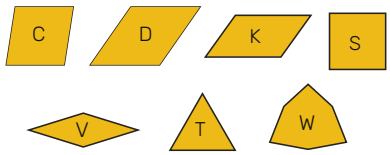
Hole Clamping — P



Screw On — S

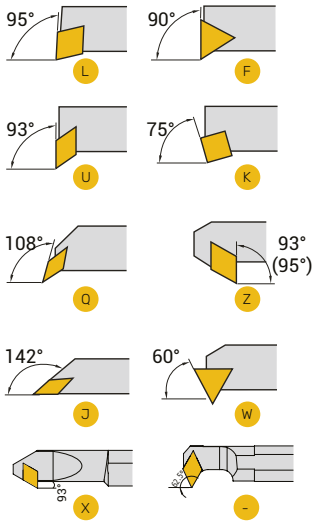
5 Insert Shape

S 12 M - S C L C R - 07



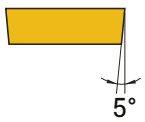
6 Lead Angle of Boring Bar

S 12 M - S C L C R - 07

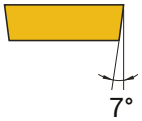


7 Relief Angle of Insert

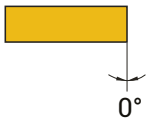
S 12 M - S C L C R - 07



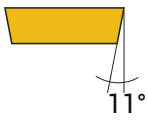
B



C



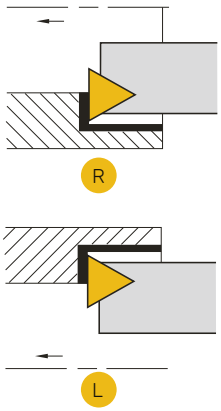
P



N

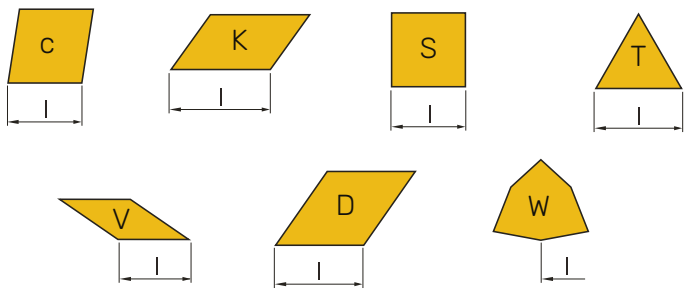
8 Hand of Bar

S 12 M - S C L C R - 07



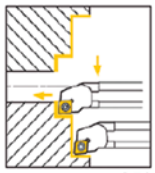
9 Length of Cutting Edge

S 12 M - S C L C R - 07



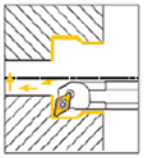
OVERVIEW - INTERNAL TURNING

S.../A...SCLCR/L



Page:59 95°

S.../A...SDUCR/L



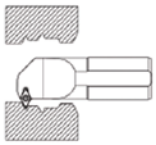
Page:60 93°

S.../A...SDQCR/L



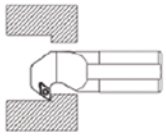
Page:61 107.5°

S...SD-CR/L



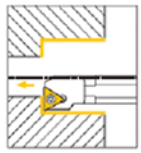
Page:62 62.5°

S... SDXCR/L



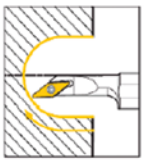
Page:62 62.5°

S...STFCR/L



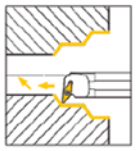
Page:63 90°

S...SVJBR/L



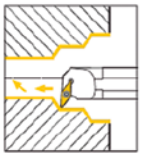
Page:61 93°

S...SVUBR/L



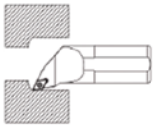
Page:63 93°

S...SVUCR/L



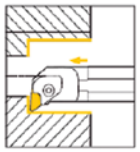
Page:64 93°

S...SDPCR/L



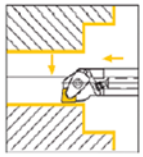
Page:64 117.5°

S...CKUNR/L



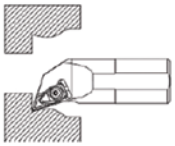
Page:65 93°

S...TCLNR/L



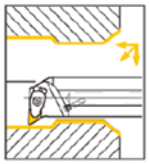
Page:65 95°

S...TDQNR/L



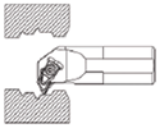
Page:64 107.5°

S...TDUNR/L



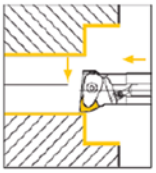
Page:66 93°

S...TD-NR/L



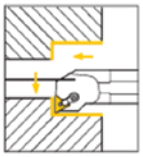
Page:67 62.5°

S...TWLNR/L



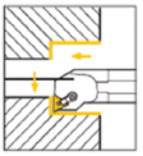
Page:67 95°

S...MTUNR/L



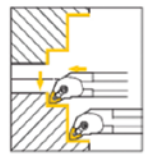
Page:68 93°

S...MT-NR/L



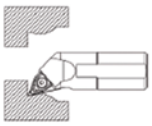
Page:68 60°

S...MWLNR/L



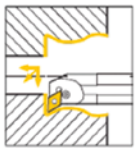
Page:69 95°

S...MTQNR/L



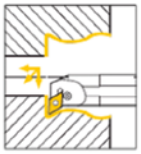
Page:69 107.5°

S...PCLNR/L



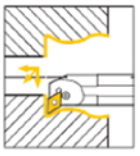
Page:70 95°

S...PDUNR/L



Page:70 93°

S...PTUNR



Page:71 93°

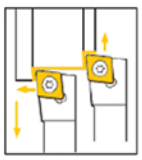
S...PWLNR/L



Page:71 95°

ANTI-VIBRATION

SCLCR/L



Page:72 95°

SDUCR/L

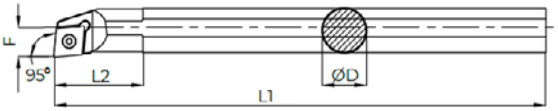


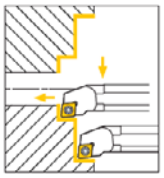
Page:72 93°

S TYPE TOOL HOLDER



CC**





S.../A...SCLCR/L

Order Code	Stock Availability		Dimensions (mm)					Insert	Spare Parts			
	L	R	D	Dmin	F	L1	L2		Shim	Screw	Screw	Allen Key
S06-08H SCLCR/L-06	•	•	8	10	6	100	30	CC.T 0602..	-	-	SM2,5X5	T08
A06-08H SCLCR/L-06	•	•	8	10	6	100	30					
S08H SCLCR/L-06	•	•	8	11	6	100	25					
A08H SCLCR/L-06	•	•	8	11	6	100	25					
S10K SCLCR/L-06	•	•	10	13	7	125	25					
A10K SCLCR/L-06	•	•	10	13	7	125	25					
S12K-SCLCR-06		•	12	12,5	7	125	25					
S12M SCLCR/L-06	•	•	12	16	9	150	30					
A12M SCLCR/L-06	•	•	12	16	9	150	30					
S16Q SCLCR/L-06	•	•	16	20	11	180	35					
A16Q SCLCR/L-06	•	•	16	20	11	180	35					
S12M SCLCR/L-09	•	•	12	16	9	150	30	CC.T 09T3..	-	-	SM3,5X8M	T15
A12M SCLCR/L-09	•	•	12	16	9	150	30					
S16Q SCLCR/L-09	•	•	16	20	11	180	35					
A16Q SCLCR/L-09	•	•	16	20	11	180	35					
S20R SCLCR/L-09	•	•	20	25	13	200	40				SM3,5X11	
A20R SCLCR/L-09	•	•	20	25	13	200	40					
S25S SCLCR/L-09	•	•	25	32	17	250	50					
S32T SCLCR/L-09	•	•	32	40	23	300	60					
S25S SCLCR/L-12	•	•	25	32	17	250	50	CC.T 1204..	SCC125SM	SS060504M	SM4X11	
A25S SCLCR-12		•	25	32	17	250	50					
S32T SCLCR/L-12	•	•	32	40	23	300	60					
S40V SCLCR/L-12	•	•	40	50	27	400	70					

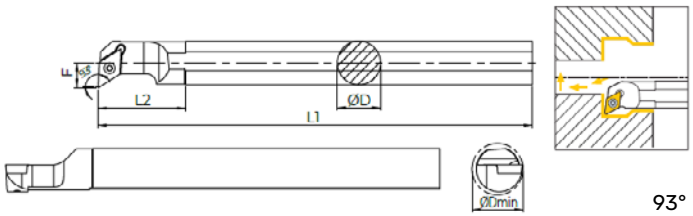
● Stock item ○ Non Stock item △ Special order

S TYPE TOOL HOLDER



DC**

S.../A...SDUCR/L



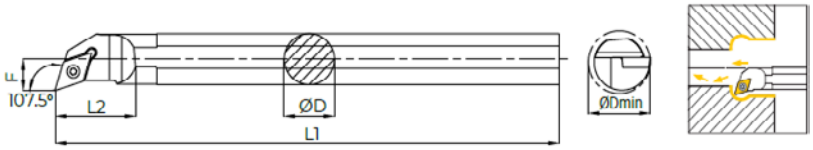
Order Code	Stock Availability		Dimensions (mm)					Insert	Spare Parts			
	L	R	D	Dmin	F	L1	L2		Shim	Screw	Screw	Allen Key
S10K SDUCR/L-07	•	•	10	13	7,5	125	25	DC.T 0702..	-	-	SM2,5X5	T08
A10K SDUCR/L-07	•	•	10	13	7,5	125	25					
S12M SDUCR/L-07	•	•	12	16	9	150	30					
A12M SDUCR/L-07	•	•	12	16	9	150	30					
S16Q SDUCR/L-07	•	•	16	20	11	180	35				SM2,5X7	
S20R SDUCR/L-07	•	•	20	25	13	200	40					
S25S SDUCR/L-07	•	•	25	32	17,5	250	50					
S16Q SDUCR/L-11	•	•	16	20	11	180	35	DC.T 11T3..	-	-	SM3,5X8	T15
A16Q SDUCR/L-11	•	•	16	20	11	180	35				SM3,5X8	
S20R SDUCR/L-11	•	•	20	25	13	200	40				SM3,5X10	
A20R SDUCR/L-11	•	•	20	25	13	200	40				SM3,5X10	
S25S SDUCR/L-11	•	•	25	32	17,5	250	50				SM3,5X14	
A25R SDUCR/L-11	•	•	25	32	17,5	200	50					
S32T SDUCR/L-11	•	•	32	40	23	300	60		SDC11SM	SS050535M		
S40V SDUCR/L-11	•	•	40	50	27	400	60					

● Stock item ○ Non Stock item △ Special order

S TYPE TOOL HOLDER



DC**



S.../A...SDQCR/L

107.5°

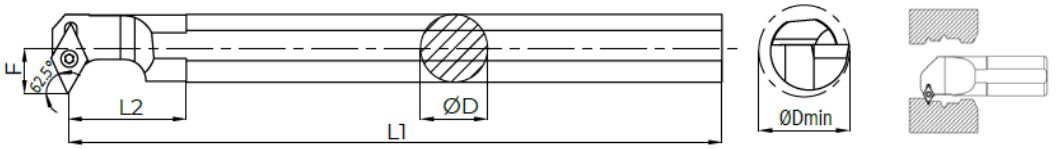
Order Code	Stock Availability		Dimensions (mm)					Insert	Spare Parts			
	L	R	D	Dmin	F	L1	L2		Shim	Screw	Screw	Allen Key
S10K SDQCR/L-07	•	•	10	13	7,5	125	25	DC.T 0702..	-	-	SM2,5X5	T08
A10K SDQCR-07		•	10	12	7,5	125	25					
S12M SDQCR/L-07	•	•	12	16	9	150	30					
A12M SDQCR-07		•	12	16	9	150	30					
S16Q SDQCR/L-07	•	•	16	20	11	180	35				SM2,5X7	
S20R SDQCR/L-07	•	•	20	25	13	200	40					
S25S SDQCR/L-07	•	•	25	32	17,5	250	50					
S16Q SDQCR/L-11	•	•	16	20	11	180	35	DC.T 11T3..	-	-	SM3,5X8	T15
A16Q SDQCR-11		•	16	20	11	180	35					
S20R SDQCR/L-11	•	•	20	25	13	200	40				SM3,5X10	
A20R SDQCR-11		•	20	25	13	200	40					
S25S SDQCR/L-11	•	•	25	32	17,5	250	50		SDC11SM	SS050535M	SM3,5X14	
S32T SDQCR/L-11	•	•	32	40	23	300	60					

● Stock item ○ Non Stock item △ Special order

S TYPE TOOL HOLDER



DC**



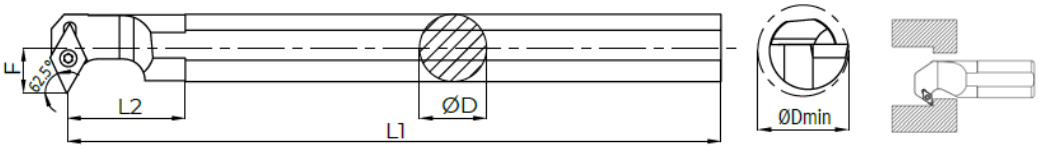
S...SD-CR/L

62.5°

Order Code	Stock Availability		Dimensions (mm)					Insert	Spare Parts			
	L	R	D	Dmin	F	L1	L2		Shim	Screw	Screw	Allen Key
S10K SD-CR/L-07	•	•	10	14	8,5	125	28	DC.T 0702..	-	-	SM2,5X5	T08
S12M SD-CR/L-07	•	•	12	16	9	150	30					
S16Q SD-CR/L-07	•	•	16	23	14	180	40				SM2,5X7	
S16Q SD-CR/L-11	•	•	16	23	14	180	40	DC.T 11T3..	-	-	SM3,5X8	T15
S20R SD-CR/L-11	•	•	20	25	14,5	200	45				SM3,5X10	
S25S SD-CR/L-11	•	•	25	32	19	250	55		SDC11SM	SS050535M	SM3,5X14	
S32T SD-CR/L-11	•	•	32	40	23	300	60					
S40V SD-CR/L-11	•	•	40	50	27	400	70					



DC**



S... SDXCR/L

93°

Order Code	Stock Availability		Dimensions (mm)					Insert	Spare Parts			
	L	R	D	Dmin	F	L1	L2		Shim	Screw	Screw	Allen Key
S12M SDXCR/L-07	•	•	12	16	9	150	30	DC.T 0702..	-	-	M2,5X5	T08
S16Q SDXCR/L-07	•	•	16	22	12,5	180	40				M2,5X7	
S16Q SDXCR/L-11	•	•	16	22	12,5	180	40	DC.T 11T3..	-	-	M3,5X8	T15
S20R SDXCR/L-11	•	•	20	25	14	200	55				M3,5X10	
S25S SDXCR/L-11	•	•	25	32	17,5	250	65		SDC11SM	SS050535M	M3,5X14	
S32T SDXCR/L-11	•	•	32	40	23	300	80					
S40V SDXCR/L-11	•	•	40	50	27	400	80					

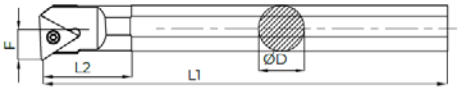
● Stock item ○ Non Stock item △ Special order

S TYPE TOOL HOLDER

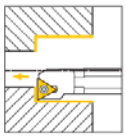


TC**









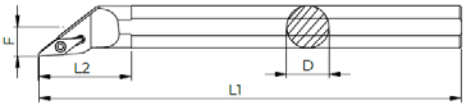
90°

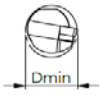
S...STFCR/L

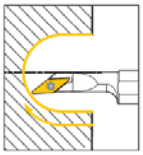
Order Code	Stock Availability		Dimensions (mm)					Insert	Spare Parts			
	L	R	D	Dmin	F	L1	L2		Shim	Screw	Screw	Allen Key
S12M STFCR-11		•	12	15,5	9	150	30	TC.T 11	-	-	M2,5X6	T08
S16Q STFCR/L-16	•	•	16	20	11	180	35	TC.T 16T3..	-	-	SM3,5X8	T15
S20R STFCR/L-16	•	•	20	25	13	200	40		STC165M	SS050535M	SM3,5X11	
S25S STFCR/L-16	•	•	25	32	17,5	250	50					
S32T STFCR/L-16	•	•	32	40	23	300	60					



VB**







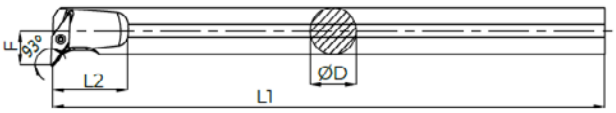
93°

S...SVJBR/L

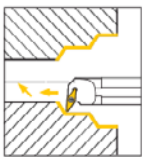
Order Code	Stock Availability		Dimensions (mm)					Insert	Spare Parts			
	L	R	D	Dmin	F	L1	L2		Shim	Screw	Screw	Allen Key
S25S SVJBR/L-16	•	•	25	32	17	250	50	VBM. 1604..	SVC16SM	SS050535M	SM3,5X11	T15
S32T SVJBR/L-16	•	•	32	40	23	300	80					
S40V SVJBR-16		•	40	50	27	400	80					



VB**







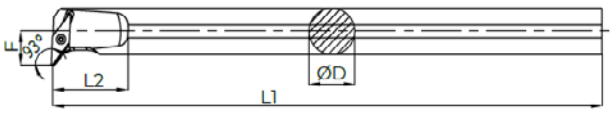
93°

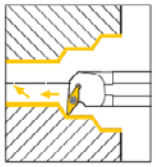
S...SVUBR/L

Order Code	Stock Availability		Dimensions (mm)					Insert	Spare Parts			
	L	R	D	Dmin	F	L1	L2		Shim	Screw	Screw	Allen Key
S16Q SVUBR/L-11	•	•	16	20	11	180	40	VBM. 1103..	-	-	SM2,5X7	T08
S20R SVUBR/L-11	•	•	20	25	13	200	40					
S25S SVUBR/L-16	•	•	25	32	17	250	50	VBM. 1604..	SVB16SM	SS050535M	SM3,5X11	T15
S32T SVUBR/L-16	•	•	32	40	22	300	60					
S40V SVUBR/L-16	•	•	40	50	27	400	70					

S TYPE TOOL HOLDER


VC**



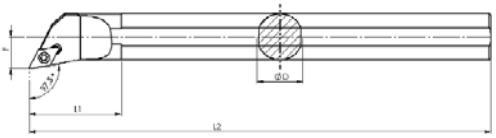


S...SVUCR/L

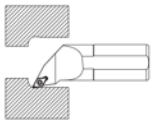
93°

Order Code	Stock Availability		Dimensions (mm)					Insert	Spare Parts			
	L	R	D	Dmin	F	L1	L2		Shim	Screw	Screw	Allen Key
S16Q SVUCR/L-11	•	•	16	20	11	180	40	VCM. 1103..	-	-	SM2,5X7	T08
S20R SVUCR/L-11	•	•	20	25	13	200	40					
S25S SVUCR/L-16	•	•	25	32	17	250	50	VCM. 1604..	SVC16SM	SS050535M	SM3,5X11	T15
S32T SVUCR/L-16	•	•	32	40	22	300	60					
S40V SVUCR/L-16	•	•	40	50	27	400	70					


DC**







S...SDPCR/L

97.5°

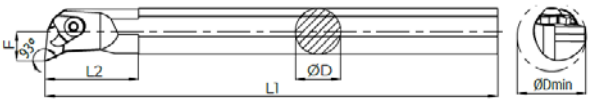
Order Code	Stock Availability		Dimensions (mm)					Insert	Spare Parts			
	L	R	D	Dmin	F	L1	L2		Shim	Screw	Screw	Allen Key
S10K SDPCR/L-07	•	•	10	13	7,5	125	25	DC..T 0702	-	-	M2,5X5	T08
S12M SDPCR/L-07	•	•	12	16	9	150	30		-	-		
S16Q SDPCR/L-11	•	•	16	20	11	180	35	DC..T 11T3	-	-	M3,5X8	T15
S20R SDPCR/L-11	•	•	20	25	13	200	40		-	-		
S25S SDPCR/L-11	•	•	25	32	17,5	250	50		SDC11SM	SS050535M	M3,5X14	
S32T SDPCR/L-11	•	•	32	40	23	300	60					

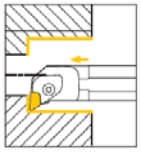
● Stock item ○ Non Stock item △ Special order

C TYPE TOOL HOLDER



KN**





93°

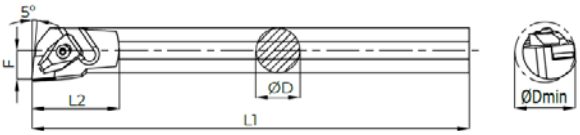
S...CKUNR/L

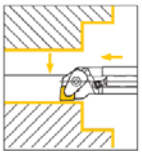
Order Code	Stock Availability		Dimensions (mm)					Insert	Spare Parts				
	L	R	D	Dmin	F	L1	L2		Shim	Screw	Clamp	Screw	Allen Key
S25S CKUNR/L-16	•	•	25	32	17	250	50	KNUX 1604	SKN16RCM SKN16LCM	SS0310M	CC0016M	CS0627M	A3
S32T CKUNR/L-16	•	•	32	40	22	300	60						
S40V CKUNR/L-16	•	•	40	50	27	400	65						
S50W CKUNR-16		•	50	63	35	450	70						
S50W CKUNR-16		•	60	75	40	450	70						

T TYPE TOOL HOLDER



CN**





95°

S...TCLNR/L

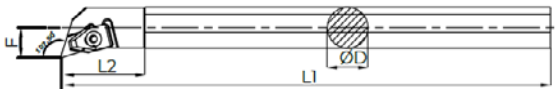
Order Code	Stock Availability		Dimensions (mm)					Insert	Spare Parts				
	L	R	D	Dmin	F	L1	L2		Shim	Screw	Clamp	Screw	Allen Key
S25S TCLNR/L-12	•	•	25	32	17	250	50	CNM. 1204..	SCN12TM	SS0410M	CT120105M	CS0620M	A3
S32T TCLNR/L-12	•	•	32	40	22	300	60					CS0627M	
S40V TCLNR/L-12	•	•	40	50	27	400	70						
S32T TCLNR/L-16	•	•	32	40	22	300	60	CNM. 1606..	SCN16TM	SS0508M	CT160105M		
S40V TCLNR/L-16	•	•	40	40	27	400	70						
S50W TCLNR/L-16	•	•	50	63	35	450	75						
S60W TCLNR/L-16	•	•	60	75	40	450	75						
S40V TCLNR/L-19	•	•	40	40	27	400	70	CNM. 1906..	SCN19TM	SS0508M	CT190105M	CS0825M	A5
S50W TCLNR-19		•	50	63	35	450	75						

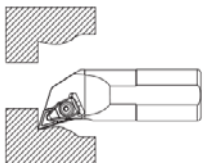
● Stock item ○ Non Stock item △ Special order

T TYPE TOOL HOLDER



DN**





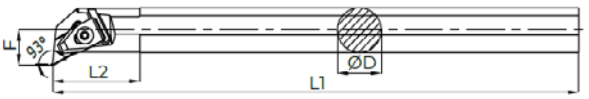
S...TDQNR/L

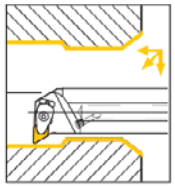
107.5°

Order Code	Stock Availability		Dimensions (mm)					Insert	Spare Parts				
	L	R	D	Dmin	F	L1	L2		Shim	Screw	Clamp	Screw	Allen Key
S25S TDQNR/L-15	•	•	25	32	17	250	50	DNM. 1506..	SDN15TM	SS0410M	CT150105M	CS0627M	A3
S32T TDQNR/L-15	•	•	32	40	22	300	60						
S40V TDQNR/L-15	•	•	40	50	27	400	70						
S50W TDQNR/L-15	•	•	50	63	35	450	75						



DN**





S...TDUNR/L

93°

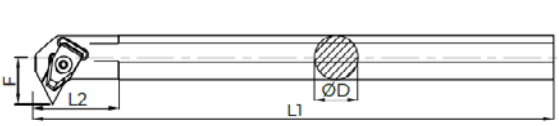
Order Code	Stock Availability		Dimensions (mm)					Insert	Spare Parts				
	L	R	D	Dmin	F	L1	L2		Shim	Screw	Clamp	Screw	Allen Key
S20R TDUNR/L-11	•	•	20	25	13	200	40	DNM. 1104..	-	-	CT110105M	CS0523M	A3
S25S TDUNR/L-15	•	•	25	32	17	250	50	DNM. 1506..	SDN15TM	SS0410M	CT150105M	CS0627M	
S32T TDUNR/L-15	•	•	32	40	22	300	60						
S40V TDUNR/L-15	•	•	40	50	27	400	70						
S50W TDUNR/L-15	•	•	50	63	35	450	75						
S60W TDUNR/L-15	•	•	60	75	40	450	75						

● Stock item ○ Non Stock item △ Special order

T TYPE TOOL HOLDER



DN**



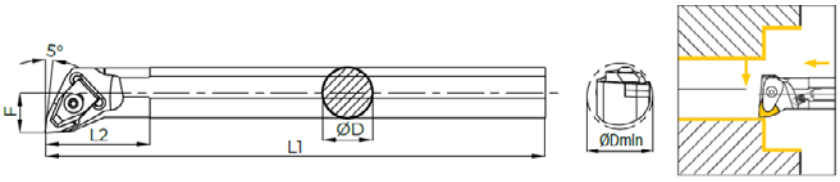
S...TD-NR/L

62.5°

Order Code	Stock Availability		Dimensions (mm)					Insert	Spare Parts				
	L	R	D	Dmin	F	L1	L2		Shim	Screw	Clamp	Screw	Allen Key
S32T TD-NR/L-15	•	•	32	43	26,5	300	60	DNM. 1506	SDN15TM	SS0410M	CT150105M	CS0627M	A3
S40V TD-NR/L-15	•	•	40	50	29,5	400	70						
S50W TD-NR-15		•	50	62	35	450	70						



WN**



S...TWLNR/L

95°

Order Code	Stock Availability		Dimensions (mm)					Insert	Spare Parts				
	L	R	D	Dmin	F	L1	L2		Shim	Screw	Clamp	Screw	Allen Key
S20R TW LNR/L-06	•	•	20	25	13	200	40	W NM. 0602..	-	-	CT06105M	CS0520M	A3
A20R TW LNR/L-06	•	•	20	25	13	200	40						
S25S TW LNR/L-08	•	•	25	32	17	250	50	W NM. 0804..	SW N08TMM	SS0410M	CT080105M	CS0627M	
A25S TW LNR/L-08	•	•	25	32	17	250	50						
S32T TW LNR/L-08	•	•	32	40	22	300	60						
S40V TW LNR/L-08	•	•	40	50	27	400	70						
S50W TW LNR/L-08	•	•	50	63	35	450	75						
S60W TW LNR/L-08	•	•	60	75	40	450	75						

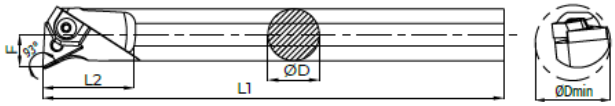
● Stock item ○ Non Stock item △ Special order

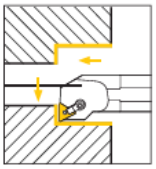
M TYPE TOOL HOLDER



TN**

S...MTUNR/L





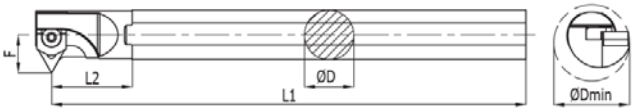
93°

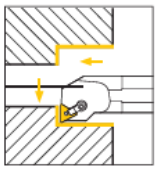
Order Code	Stock Availability		Dimensions (mm)					Insert	Spare Parts				
	L	R	D	Dmin	F	L1	L2		Shim	Shim Pim	Clamp	Screw	Allen Key
S20R MTUNR/L-16	•	•	20	25	13	200	40	TNM. 1604..	-	-	CM0016M	CS0515M	A3
S25S MTUNR/L-16	•	•	25	32	17	250	50		STN16TMM	SP0536125M			
S32T MTUNR/L-16	•	•	32	40	22	300	60			SP053615M		CS0523M	
S40V MTUNR/L-16	•	•	40	50	27	400	70						
S32T MTUNR/L-22	•	•	32	40	22	300	60	TNM. 2204..	STN22TMM	SP060515M	CM0022M	CS0627M	
S40V MTUNR/L-22	•	•	40	50	27	400	70						
S50W MTUNR/L-22	•	•	50	63	35	450	75						



TN**

S...MT-NR/L





60°

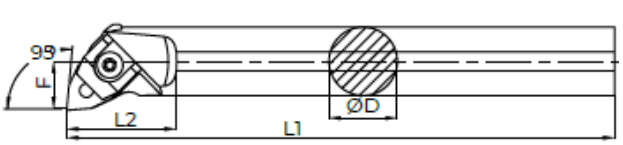
Order Code	Stock Availability		Dimensions (mm)					Insert	Spare Parts				
	L	R	D	Dmin	F	L1	L2		Shim	Shim Pim	Clamp	Screw	Allen Key
S20R MT-NR/L-16	•	•	20	25	16	200	40	TNM. 1604..	-	SP0536125M	CM0016M	CS0515M	A3
S25S MT-NR/L-16	•	•	25	32	19,5	250	50		STN16TMM	SP053615M			
S32T MT-NR/L-16	•	•	32	40	23	300	60					CS0523M	
S40V MT-NR/L-16	•	•	40	50	29,5	400	70						
S32T MT-NR-22		•	32	40	23	300	55	TNM. 2204..	STN22TMM	SPTN22M	CM0022M	CS0627M	
S40V MT-NR-22		•	40	50	29,5	400	70						
S50W MT-NR-22	•	•	50	32	35	450	70						

● Stock item ○ Non Stock item △ Special order

M TYPE TOOL HOLDER



WN**



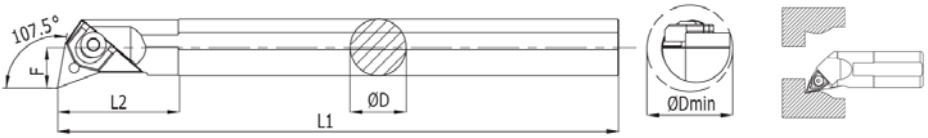
S...MWLNR/L

95°

Order Code	Stock Availability		Dimensions (mm)					Insert	Spare Parts				
	L	R	D	Dmin	F	L1	L2		Shim	Shim Pim	Clamp	Screw	Allen Key
S16Q MWLNR/L-06	•	•	16	20	11	180	-5	WNM. 0604..	-	SP053615M	CM0006M	CS0515M	A3
S20R MWLNR/L-06	•	•	20	25	13	200	-5						
S25S MWLNR/L-08	•	•	25	32	17	250	-5	WNM. 0804..	SWN08TMM	SPWN08M	CM0008M	CS06620M	
S32T MWLNR/L-08	•	•	32	40	22	300	-5					CS0627M	
S40V MWLNR/L-08	•	•	40	50	27	400	-5						
S50W MWLNR/L-08	•	•	50	63	35	450	-5						



TN**



S...MTQNR/L

107.5°

Order Code	Stock Availability		Dimensions (mm)					Insert	Spare Parts				
	L	R	D	Dmin	F	L1	L2		Shim	Shim Pim	Clamp	Screw	Allen Key
S20R MTQNR/L-16	•	•	20	25	13	200	40	TNMG 1604	-	SP0536125M	CM0016M	CS515M	A3
S25S MTQNR/L-16	•	•	25	32	17	250	50		STN16MM	SP053615M		CS523M	
S232T MTQNR/L-16	•	•	32	40	22	300	60					CS523M	
S40V MTQNR/L-16	•	•	40	50	27	400	70					CS523M	
S32T MTQNR/L-22	•	•	32	40	22	300	60	TNMG 2204	STN22MM	SP06515M	CM0022M	CS627M	
S40V MTQNR/L-22	•	•	40	50	27	400	70					CS627M	

● Stock item ○ Non Stock item △ Special order

P TYPE TOOL HOLDER



CN**



S...PCLNR/L

95°

Order Code	Stock Availability		Dimensions (mm)					Insert	Spare Parts				
	L	R	D	Dmin	F	L1	L2		Shim	Metal Sheet	Screw	Lever	Allen Key
S25S PCLNR/L-12	•	•	25	32	17	250	50	CNM. 1204..	SCN12PM	SP012M	S00KM08M	LP012M	A3
S32T PCLNR/L-12	•	•	32	40	22	300	60						
S40V PCLNR/L-12	•	•	40	50	27	400	70						
S32T PCLNR-16		•	32	40	22	300	60	CNM. 1606..	SCN16PM	SP016M		LP016M	
S40V PCLNR-16		•	40	50	27	400	70						
S40V PCLNR-19		•	40	50	27	400	70	CNM. 1906..	SCN19PM	SP019M		LP019M	
S50W PCLNR-19		•	50	63	35	400	75						



DN**



S...PDUNR/L

93°

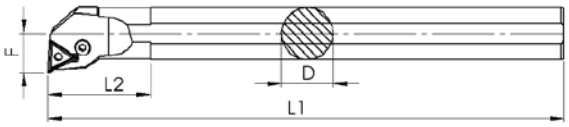
Order Code	Stock Availability		Dimensions (mm)					Insert	Spare Parts				
	L	R	D	Dmin	F	L1	L2		Shim	Metal Sheet	Screw	Lever	Allen Key
S25S PDUNR-15		•	25	32	17	250	50	DNM. 1506..	SDN15PM	SPM012M	S00KM8M	LP012M	A3
S32T PDUNR-15		•	32	40	22	300	60						
S40V PDUNR-15		•	40	50	27	400	70						
S50W PDUNR-15		•	50	63	35	450	75						

● Stock item ○ Non Stock item △ Special order

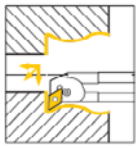
P TYPE TOOL HOLDER



TN**







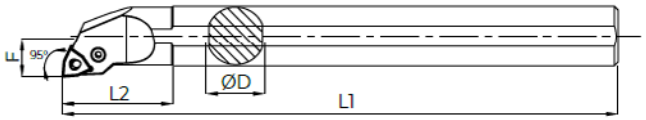
S...PTUNR

93°

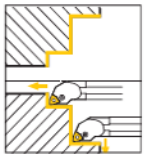
Order Code	Stock Availability		Dimensions (mm)					Insert	Spare Parts				
	L	R	D	Dmin	F	L1	L2		Shim	Metal Sheet	Screw	Lever	Allen Key
S20R-PTUNR-16		•	20	25	13	200	40	TNMG 1604	-	SP016M	S00KM8M	LP016M	A3
S25S PTUNR-16		•	25	32	17	250	50	TNMG 1604	STN16PM				
S32T PTUNR-16		•	32	40	22	300	60						
S32T PTUNR-22		•	32	40	22	300	60	TNM. 2204..	STN22PM	SP022M	S00KM8U	LP022M	
S40V PTUNR-22		•	40	50	27	400	70						
S50W -PTUNR-22		•	50	63	35	450	75						



WN**







S...PWLNR/L

95°

Order Code	Stock Availability		Dimensions (mm)					Insert	Spare Parts				
	L	R	D	Dmin	F	L1	L2		Shim	Metal Sheet	Screw	Lever	Allen Key
S25M PW LNR-08		•	25	32	17	250	50	W NM. 0804..	SW N08PM	SP008M	S00KM8M	LP012M	A3
S32P PW LNR-08		•	32	40	22	300	60						
S40R PW LNR-08		•	40	50	27	400	70						
S50W PW LNR-08		•	50	63	35	450	75						

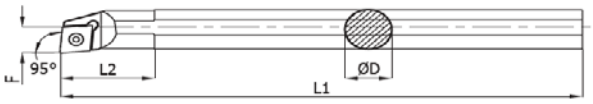
● Stock item ○ Non Stock item △ Special order

ANTI-VIBRATION TOOLS

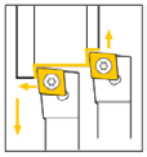


CC**

SCLCR/L







95°

Order Code	Stock Availability		Dimensions (mm)					Insert	Spare Parts		
	L	R	D	Dmin	F	L1	L2		Shim	Screw	Allen Key
C8H SCLCR/L-06	Δ	Δ	8	11	6	100	30	CC.T 0602	-	SM2,5X5	T08
C8K SCLCR/L-06	Δ	Δ	8	11	6	125	25				
C10K SCLCR-06		Δ	10	13	7	125	25				
A10K SCLCR/L-06	Δ	Δ	10	13	7	125	25				
C12K SCLCR-06	Δ	Δ	12	16	9	125	30				
A12K SCLCR/L-06	Δ	Δ	12	16	9	125	30				
C16Q -SCLCR-09		Δ	16	20	11	180	35	CC.T 09T3	-	SM3,5X8	T15
C18Q SCLCR/-09	Δ	Δ	18	20	11	180	35				
C20M SCLCR-09		Δ	20	25	13	150	40				
C20Q SCLCR-09		Δ	20	25	13	180	40				
A20Q SCLCR-09		Δ	20	25	13	180	40				



DC**

SDUCR/L









93°

Order Code	Stock Availability		Dimensions (mm)					Insert	Spare Parts		
	L	R	D	Dmin	F	L1	L2		Shim	Screw	Allen Key
C10K SDUCR-07		Δ	10	13	7,5	125	25	DC.T 0702	-	SM2,5X5	T08
A10K SDUCR/L-07	Δ	Δ	10	13	7,5	125	25				
C12K SDUCR/L-07	Δ	Δ	12	16	9	125	30				
A12K SDUCR/L-07	Δ	Δ	12	16	9	125	30				
C12M SDUCR-07		Δ	12	16	9	150	30			SM2,5X7	
C16K SDUCR-11		Δ	16	20	11	125	35	DC.T 11T3	-	SM3,5X8	T15
A16Q SDUCR/L-11	Δ	Δ	16	20	11	180	35				
C16Q SDUCR-11		Δ	16	20	11	180	35				
C18Q SDUCR-11		Δ	18	20	11	180	35				
C20K SDUCR-11		Δ	20	25	13	125	40				
C20Q SDUCR-11		Δ	20	25	13	180	40				
C20R SDUCR-11		Δ	20	25	13	200	40				

CERMET INSERTS

NEGATIVE INSERTS

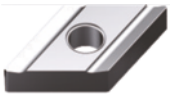
Size			
Dimension	d	t	d_1
12	12.7	4.76	5.16
16	15.875	6.35	6.35
19	19.05	6.35	7.93
25	25.4	9.52	9.12

CNGG

Insert Shape	CB	Insert Code	ISO		Grades					
			ap (mm)	Vc (m/min)	220(150-300)	100(70-200)	250(150-310)	250(150-310)	150(100-280)	150(100-280)
				fn (mm/rev)	CN7610	CN7620	CP1610	CP4610	CP1620	CP4620
	CPM1	CNGG 120402R/L	0.20-2.0	0.08-0.25	Δ	Δ				
		CNGG 120404R/L	0.24-2.4	0.10-0.25	Δ	Δ				
		CNGG 120408R/L	0.26-2.6	0.10-0.28	Δ	Δ				

Size			
Dimension	d	t	d_1
11	9.525	4.76	3.81
15	12.7	4.76 / 6.35	5.16

DNGG

Insert Shape	CB	Insert Code	ISO		Grades					
			ap (mm)	Vc (m/min)	220(150-300)	100(70-200)	250(150-310)	250(150-310)	150(100-280)	150(100-280)
				fn (mm/rev)	CN7610	CN7620	CP1610	CP4610	CP1620	CP4620
		DNGG 110402R/L	0.50-2.5	0.12-0.20	Δ	Δ				
		DNGG 110404R/L	0.80-3.0	0.13-0.30	Δ	Δ				
		DNGG 110408R/L	0.50-2.5	0.12-0.20	Δ	Δ				
		DNGG 150402R/L	0.80-3.0	0.13-0.30	Δ	Δ				
		DNGG 150404R/L	0.50-2.5	0.12-0.20	Δ	Δ				
		DNGG 150408R/L	0.80-3.0	0.13-0.30	Δ	Δ				

● Stock item ○ Non Stock item △ Special order

CERMET INSERTS

NEGATIVE INSERTS

Size			
Dimension	d	t	d_1
9	9.525	3.18	3.81
12	12.7	4.76	5.16
15	15.875	6.35	6.35
19	19.05	4.76 / 6.35	6.35
25	25.4	6.35 / 9.52	9.12

SNGG

Insert Shape	CB	Insert Code	ISO		Grades					
			ap (mm)	Vc (m/min)	220(150-300)	100(70-200)	250(150-310)	250(150-310)	150(100-280)	150(100-280)
				fn (mm/rev)	CN7610	CN7620	CP1610	CP4610	CP1620	CP4620
		SNGG 090302R/L	0.20-2.0	0.08-0.25	Δ	Δ				
		SNGG 090304R/L	0.24-2.4	0.10-0.25	Δ	Δ				
		SNGG 090308R/L	0.26-2.6	0.10-0.28	Δ	Δ				
		SNGG 120402R/L	0.24-2.4	0.10-0.25	Δ	Δ				
		SNGG 120404R/L	0.26-2.6	0.10-0.28	Δ	Δ				
		SNGG 120408R/L	0.24-2.4	0.10-0.25	Δ	Δ				

Size			
Dimension	d	t	d_1
16	9.525	4.76	3.81
22	12.7	4.76	5.16

TNGG

Insert Shape	CB	Insert Code	ISO		Grades					
			ap (mm)	Vc (m/min)	220(150-300)	100(70-200)	250(150-310)	250(150-310)	150(100-280)	150(100-280)
				fn (mm/rev)	CN7610	CN7620	CP1610	CP4610	CP1620	CP4620
		TNGG 160402R/L	0.20-2.0	0.08-0.25	Δ	Δ				
		TNGG 160404R/L	0.24-2.4	0.10-0.25	Δ	Δ				
		TNGG 160408R/L	0.26-2.6	0.10-0.28	Δ	Δ				

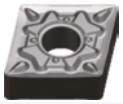
● Stock item ○ Non Stock item △ Special order

CERMET INSERTS

NEGATIVE INSERTS

Size			
Dimension	d	t	d_1
12	12.7	4.76	5.16
16	15.875	6.35	6.35
19	19.05	6.35	7.93
25	25.4	9.52	9.12

CNMG

Insert Shape	CB	Insert Code	ISO		Grades					
			ap (mm)	Vc (m/min)	220(150-300)	100(70-200)	250(150-310)	250(150-310)	150(100-280)	150(100-280)
				fn (mm/rev)	CN7610	CN7620	CP1610	CP4610	CP1620	CP4620
	CES	CNMG 120404	0.50-2.50	0.12-0.25	○		○			
		CNMG 120408	0.50-2.50	0.15-0.30	○		○			

Size			
Dimension	d	t	d_1
15	12.7	4.76 / 6.35	5.16

DNMG

Insert Shape	CB	Insert Code	ISO		Grades					
			ap (mm)	Vc (m/min)	220(150-300)	100(70-200)	250(150-310)	250(150-310)	150(100-280)	150(100-280)
				fn (mm/rev)	CN7610	CN7620	CP1610	CP4610	CP1620	CP4620
	VF	DNMG 150404R/L	0.70-4.20	0.10-0.35	○		○	○		
	CES	DNMG 150404	0.05-0.30	0.80-3.50	○				○	
		DNMG 150408	0.08-0.40	0.80-4.00	○				○	
		DNMG 150604	0.05-0.30	0.80-4.00	○				●	
		DNMG 150608	0.08-0.40	0.80-4.00	○				●	

● Stock item ○ Non Stock item △ Special order

CERMET INSERTS

NEGATIVE INSERTS

Size			
Dimension	d	t	d_1
12	12.7	4.76	5.16

SNMG

Insert Shape	CB	Insert Code	ISO		Grades					
			ap (mm)	Vc (m/min)	220(150-300)	100(70-200)	250(150-310)	250(150-310)	150(100-280)	150(100-280)
				fn (mm/rev)	CN7610	CN7620	CP1610	CP4610	CP1620	CP4620
	CES	SNMG 120404	0.80-4.00	0.05-0.30	○		○	○		
		SNMG 120408	0.80-4.00	0.08-0.40	○		○	○		

Size			
Dimension	d	t	d_1
16	9.525	4.76	3.81

TNMG

Insert Shape	CB	Insert Code	ISO		Grades					
			ap (mm)	Vc (m/min)	220(150-300)	100(70-200)	250(150-310)	250(150-310)	150(100-280)	150(100-280)
				fn (mm/rev)	CN7610	CN7620	CP1610	CP4610	CP1620	CP4620
	VF	TNMG 160404R/L	0.50-3.20	0.10-0.30	●				○	
		TNMG 160408R/L	0.50-4.0	0.10-0.30	○				○	
	CES	TNMG 160404	0.50-2.0	0.08-0.20	○				○	
		TNMG 160408	0.50-2.0	0.10-0.25	●				●	
	CMT	TNMG 160404	1.00-4.00	0.20-0.40	○				○	
		TNMG 160408	1.00-4.00	0.20-0.40	○				○	

● Stock item ○ Non Stock item △ Special order

CERMET INSERTS

NEGATIVE INSERTS

Size			
Dimension	d	t	d_1
16	9.525	4.76	3.81

VNMG

Insert Shape	CB	Insert Code	ISO		Grades					
			ap (mm)	Vc (m/min)	220(150-300)	100(70-200)	250(150-310)	250(150-310)	150(100-280)	150(100-280)
				fn (mm/rev)	CN7610	CN7620	CP1610	CP4610	CP1620	CP4620
	CES	VNMG 160404	0.50-3.50	0.10-0.40	○		○			
		VNMG 160408	0.50-3.50	0.12-0.45	○		○			
	CMT	VNMG 160404	1.00-4.00	0.20-0.40	○		○			

Size			
Dimension	d	t	d_1
08	12.7	4.76	5.16

WNMG

Insert Shape	CB	Insert Code	ISO		Grades					
			ap (mm)	Vc (m/min)	220(150-300)	100(70-200)	250(150-310)	250(150-310)	150(100-280)	150(100-280)
				fn (mm/rev)	CN7610	CN7620	CP1610	CP4610	CP1620	CP4620
	CES	WNMG 080404	0.50-2.50	0.12-0.25	○				○	
		WNMG 080408	0.50-2.50	0.12-0.25	○				○	
	CMT	WNMG 080404	1.00-4.00	0.20-0.40	○				○	
		WNMG 080408	1.00-4.00	0.20-0.40	○				○	

● Stock item ○ Non Stock item △ Special order

CERMET INSERTS

POSITIVE INSERTS

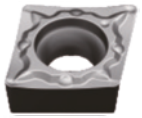
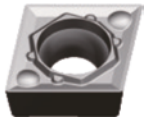
Size			
Dimension	d	t	d_1
06	6.35	2.38	2.8
09	9.525	3.97	4.4

CCGT

Insert Shape	CB	Insert Code	ISO		Grades					
			ap (mm)	Vc (m/min)	220(150-300)	100(70-200)	250(150-310)	250(150-310)	150(100-280)	150(100-280)
				fn (mm/rev)	CN7610	CN7620	CP1610	CP4610	CP1620	CP4620
		CCGT 060202R/L	0.20-1.0	0.05-0.18		○				Δ
		CCGT 060204R/L	0.22-1.2	0.07-0.20		○				Δ
		CCGT 09T302R/L	0.25-1.5	0.10-0.22		○				Δ
		CCGT 09T304R/L	0.22-1.2	0.07-0.20		○				Δ

Size			
Dimension	d	t	d_1
06	6.35	2.38	2.8
09	9.525	3.97	4.4

CCMT

Insert Shape	CB	Insert Code	ISO		Grades					
			ap (mm)	Vc (m/min)	220(150-300)	100(70-200)	250(150-310)	250(150-310)	150(100-280)	150(100-280)
				fn (mm/rev)	CN7610	CN7620	CP1610	CP4610	CP1620	CP4620
	CFG	CCMT 060204	0.30-1.50	0.05-0.15	○			○		
		CCMT 09T304	0.60-1.50	0.10-0.25	○			●		
		CCMT 09T308	0.60-1.50	0.10-0.25	○			○		
	CF1	CCMT 060202	0.50-2.00	0.06-0.15	●			○		
		CCMT 060204	0.50-2.00	0.08-0.20	○			○		
		CCMT 09T302	0.50-2.00	0.06-0.15	○			○		
		CCMT 09T304	0.50-2.00	0.08-0.20	○			○		
		CCMT 09T308	0.50-2.00	0.10-0.25	○			○		

● Stock item ○ Non Stock item △ Special order

CERMET INSERTS

POSITIVE INSERTS

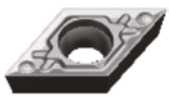
DCGT

Dimension	Size d	t	d1
07	6.35	2.38	2.8
11	9.525	3.97	4.4

Insert Shape	CB	Insert Code	ISO ap (mm)	ISO Vc (m/min) / fn (mm/rev)	Grades 220(150-300) CN7610	100(70-200) CN7620	250(150-310) CP1610	250(150-310) CP4610	150(100-280) CP1620	150(100-280) CP4620
		DCGT 070202R/L	0.40-1.50	0.07-0.20	○			Δ		
		DCGT 070204R/L	0.40-1.50	0.07-0.20	○			Δ		
		DCGT 11T302R/L	0.40-1.50	0.07-0.20	○			Δ		
		DCGT 11T304R/L	0.60-1.50	0.10-0.25	○			Δ		
		DCGT 11T308R/L	0.60-1.50	0.10-0.25	○			Δ		

DCMT

Dimension	Size d	t	d1
07	6.35	2.38	2.8
11	9.525	3.97	4.4

Insert Shape	CB	Insert Code	ISO ap (mm)	ISO Vc (m/min) / fn (mm/rev)	Grades 220(150-300) CN7610	100(70-200) CN7620	250(150-310) CP1610	250(150-310) CP4610	150(100-280) CP1620	150(100-280) CP4620
	CFG	DCMT 070204	0.20-1.6	0.10-0.16	○	○			○	
		DCMT 11T304	0.20-1.6	0.10-0.16	○	○			●	
		DCMT 11T308	0.22-2.0	0.12-0.20	○	○			○	
	CF1	DCMT 070202	0.50-2.00	0.06-0.12	○	○			○	
		DCMT 070204	0.50-2.00	0.08-0.22	○	○			○	
		DCMT 11T302	0.50-2.00	0.06-0.12	○	●			●	
		DCMT 11T304	0.50-2.00	0.08-0.22	○	○			○	
		DCMT 11T308	0.50-2.00	0.10-0.25	●	○			○	

● Stock item ○ Non Stock item Δ Special order

CERMET INSERTS

POSITIVE INSERTS

Size			
Dimension	d	t	d_1
09	9.525	3.97	4.4

SCMT

Insert Shape	CB	Insert Code	ISO		Grades					
			ap (mm)	Vc (m/min)	220(150-300)	100(70-200)	250(150-310)	250(150-310)	150(100-280)	150(100-280)
				fn (mm/rev)	CN7610	CN7620	CP1610	CP4610	CP1620	CP4620
	CMT	SCMT 09T304	0.70-3.50	0.10-0.25	○		●			
		SCMT 09T308	0.70-3.50	0.10-0.25	○		○			

Size			
Dimension	d	t	d_1
06	3.97	1.59	2.16
11	6.35	3.22	3.3

TBGT

Insert Shape	CB	Insert Code	ISO		Grades					
			ap (mm)	Vc (m/min)	220(150-300)	100(70-200)	250(150-310)	250(150-310)	150(100-280)	150(100-280)
				fn (mm/rev)	CN7610	CN7620	CP1610	CP4610	CP1620	CP4620
		TBGT 060102R/L	0.20-1.0	0.05-0.18	Δ					Δ
		TBGT 060104R/L	0.22-1.2	0.07-0.20	Δ					Δ
		TBGH 110302R/L	0.10-1.5	0.08-0.15	Δ					Δ
		TBGH 110304R/L	0.20-1.6	0.10-0.16	Δ					Δ

● Stock item ○ Non Stock item Δ Special order

CERMET INSERTS

POSITIVE INSERTS

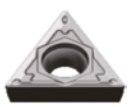
Size			
Dimension	d	t	d_1
11	6.35	2.38	2.8

TCGT

Insert Shape	CB	Insert Code	ISO		Grades					
			ap (mm)	Vc (m/min)	220(150-300)	100(70-200)	250(150-310)	250(150-310)	150(100-280)	150(100-280)
				fn (mm/rev)	CN7610	CN7620	CP1610	CP4610	CP1620	CP4620
		TCGT 110202R/L	0.20-1.0	0.05-0.18	Δ	Δ				
		TCGT 110204R/L	0.22-1.2	0.07-0.20	Δ	Δ				
		TCGT 110302R/L	0.22-1.2	0.07-0.20	Δ	Δ				
		TCGT 110304R/L	0.25-1.5	0.10-0.22	Δ	Δ				

Size			
Dimension	d	t	d_1
09	5.56	2.38	2.5
11	6.35	2.38	2.8
16	9.525	3.77	4.4

TCMT

Insert Shape	CB	Insert Code	ISO		Grades					
			ap (mm)	Vc (m/min)	220(150-300)	100(70-200)	250(150-310)	250(150-310)	150(100-280)	150(100-280)
				fn (mm/rev)	CN7610	CN7620	CP1610	CP4610	CP1620	CP4620
	CF1	TCMT 090202	0.50-2.00	0.08-0.20		○				
		TCMT 090204	0.50-2.00	0.08-0.20		○				
		TCMT 110202	0.50-2.00	0.08-0.20	○		○			
		TCMT 110204	0.50-2.00	0.08-0.20	○		○			
		TCMT 110208	0.50-2.00	0.10-0.25	○		○			
		TCMT 16T304	0.50-2.00	0.10-0.25	○		○			
	CFG	TCMT 110204	0.40-1.50	0.07-0.20	○		○			
		TCMT 16T304	0.60-1.50	0.10-0.25	○		○			

● Stock item ○ Non Stock item △ Special order

CERMET INSERTS

POSITIVE INSERTS

Size			
Dimension	d	t	d_1
09	5.56	2.38	3.0
11	6.35	2.38 / 3.18	3.4

TPGT

Insert Shape	CB	Insert Code	ISO		Grades					
			ap (mm)	Vc (m/min)	220(150-300)	100(70-200)	250(150-310)	250(150-310)	150(100-280)	150(100-280)
				fn (mm/rev)	CN7610	CN7620	CP1610	CP4610	CP1620	CP4620
		TPGT 090202R/L	0.30-1.2	0.10-0.20	Δ		Δ			
		TPGT 090204R/L	0.30-1.2	0.10-0.20	Δ		Δ			
		TPGT 110302R/L	0.30-1.2	0.10-0.20	Δ		Δ			
		TPGT 110304R/L	0.30-1.2	0.10-0.20	Δ		Δ			
		TPGT 110308R/L	0.50-1.2	0.10-0.20	Δ		Δ			

Size			
Dimension	d	t	d_1
11	6.35	2.38 / 3.18	3.4

TPMT

Insert Shape	CB	Insert Code	ISO		Grades					
			ap (mm)	Vc (m/min)	220(150-300)	100(70-200)	250(150-310)	250(150-310)	150(100-280)	150(100-280)
				fn (mm/rev)	CN7610	CN7620	CP1610	CP4610	CP1620	CP4620
	CF1	TPMT 110304	0.20-1.60	0.10-0.16		○			●	
		TPMT 110308	0.22-2.00	0.12-0.20		○			○	

● Stock item ○ Non Stock item Δ Special order

CERMET INSERTS

POSITIVE INSERTS

Size			
Dimension	d	t	d_1
11	6.35	3.18	2.8
16	9.525	4.76	4.4

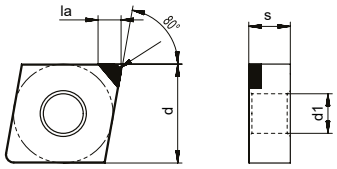
VBMT

Insert Shape	CB	Insert Code	ISO		Grades					
			ap (mm)	Vc (m/min)	220(150-300)	100(70-200)	250(150-310)	250(150-310)	150(100-280)	150(100-280)
				fn (mm/rev)	CN7610	CN7620	CP1610	CP4610	CP1620	CP4620
	CF1	VBMT 110304	0.50-2.00	0.08-0.20		○			○	
		VBMT 160404	0.50-2.00	0.08-0.20		○	●		○	

● Stock item ○ Non Stock item △ Special order

CBN INSERTS

Negative 80°(CN)



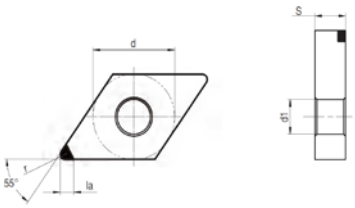
Dimensions (mm)				
Type	d	s	la	d1
CN_1204_	12,7	4,76	3,0	5,16

Inserts	Insert Code	r (mm)	Recommended Cutting Parameters		Grades		
			f (mm/rev)	ap (mm)	BN7405	BN7415	BN7208
	CNGA 120402 S01020	0,2	0.03-0.3	0.05-0.5	○	○	○
	CNGA 120404 S01020	0,4	0.03-0.3	0.05-0.5	●	●	●
	CNGA 120408 S01020	0,8	0.03-0.3	0.05-0.5	●	●	●
	CNGA 120412 S01020	1,2	0.03-0.3	0.05-0.5	●	●	●
	2C-CNGA 120402 S01020	0,2	0.03-0.3	0.05-0.5	○	○	○
	2C-CNGA 120404 S01020	0,4	0.03-0.3	0.05-0.5	●	●	●
	2C-CNGA 120408 S01020	0,8	0.03-0.3	0.05-0.5	●	●	●
	2C-CNGA 120412 S01020	1,2	0.03-0.3	0.05-0.5	●	●	●
	4C-CNGA 120402 S01020	0,2	0.03-0.3	0.05-0.5	○	○	○
	4C-CNGA 120404 S01020	0,4	0.03-0.3	0.05-0.5	○	○	○
	4C-CNGA 120408 S01020	0,8	0.03-0.3	0.05-0.5	○	○	○
	4C-CNGA 120412 S01020	1,2	0.03-0.3	0.05-0.5	○	○	○

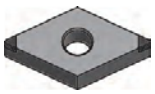
● Stock item ○ Non Stock item △ Special order

CBN INSERTS

Negative 55°(DN)

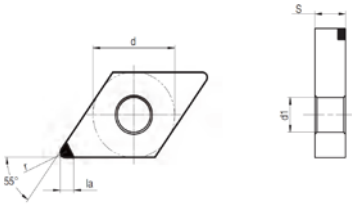


Dimensions (mm)				
Type	d	s	la	d1
DN_1504_	12,7	4,76	3,0	5,16
DN_1506_	12,7	6,35	3,0	5,16

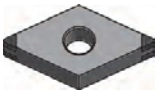
Inserts	Insert Code	r (mm)	Recommended Cutting Parameters		Grades		
			f (mm/rev)	ap (mm)	BN7405	BN7415	BN7208
	DNGA 150402-S01020	0,2	0.03-0.3	0.05-0.5	○	○	○
	DNGA 150404-S01020	0,4	0.03-0.3	0.05-0.5	●	●	●
	DNGA 150408-S01020	0,8	0.03-0.3	0.05-0.5	●	●	●
	DNGA 150412-S01020	1,2	0.03-0.3	0.05-0.5	●	●	●
	DNGA 150602-S01020	0,2	0.03-0.3	0.05-0.5	●	●	●
	DNGA 150604-S01020	0,4	0.03-0.3	0.05-0.5	●	●	●
	DNGA 150608-S01020	0,8	0.03-0.3	0.05-0.5	●	●	●
	DNGA 150612-S01020	1,2	0.03-0.3	0.05-0.5	●	●	●
	2C-DNGA 150402-S01020	0,2	0.03-0.3	0.05-0.5	○	○	○
	2C-DNGA 150404-S01020	0,4	0.03-0.3	0.05-0.5	●	●	●
	2C-DNGA 150408-S01020	0,8	0.03-0.3	0.05-0.5	●	●	●
	2C-DNGA 150412-S01020	1,2	0.03-0.3	0.05-0.5	●	●	●
	2C-DNGA 150602-S01020	0,2	0.03-0.3	0.05-0.5	●	●	●
	2C-DNGA 150604-S01020	0,4	0.03-0.3	0.05-0.5	●	●	●
	2C-DNGA 150608-S01020	0,8	0.03-0.3	0.05-0.5	●	●	●
	2C-DNGA 150612-S01020	1,2	0.03-0.3	0.05-0.5	●	●	●

CBN INSERTS

Negative 55°(DN)



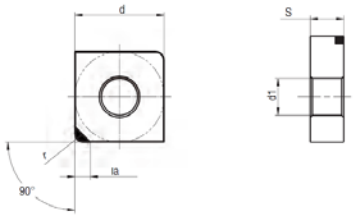
Dimensions (mm)				
Type	d	s	la	d1
DN_1504_	12,7	4,76	3,0	5,16
DN_1506_	12,7	6,35	3,0	5,16

Inserts	Insert Code	r (mm)	Recommended Cutting Parameters		Grades		
			f (mm/rev)	ap (mm)	BN7405	BN7415	BN7208
	4C-DNGA 150402-S01020	0,2	0.03-0.3	0.05-0.5	○	○	○
	4C-DNGA 150404-S01020	0,4	0.03-0.3	0.05-0.5	○	○	○
	4C-DNGA 150408-S01020	0,8	0.03-0.3	0.05-0.5	○	○	○
	4C-DNGA 150412-S01020	1,2	0.03-0.3	0.05-0.5	○	○	○
	4C-DNGA 150602-S01020	0,2	0.03-0.3	0.05-0.5	○	○	○
	4C-DNGA 150604-S01020	0,4	0.03-0.3	0.05-0.5	○	○	○
	4C-DNGA 150608-S01020	0,8	0.03-0.3	0.05-0.5	○	○	○
	4C-DNGA 150612-S01020	1,2	0.03-0.3	0.05-0.5	○	○	○

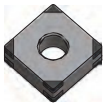
● Stock item ○ Non Stock item △ Special order

CBN INSERTS

Negative 90°(SN)



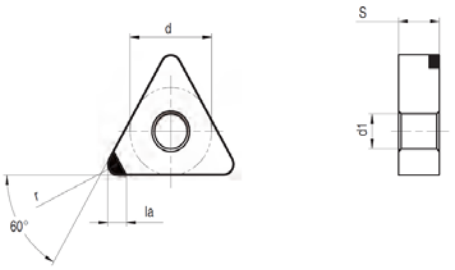
Dimensions (mm)				
Type	d	s	la	d1
SN_1204_	12,7	4,76	3,0	5,16

Inserts	Insert Code	r (mm)	Recommended Cutting Parameters		Grades		
			f (mm/rev)	ap (mm)	BN7405	BN7415	BN7208
	SNGA 120402-S01020	0,2	0.03-0.3	0.05-0.5	○	○	○
	SNGA 120404-S01020	0,4	0.03-0.3	0.05-0.5	○	○	○
	SNGA 120408-S01020	0,8	0.03-0.3	0.05-0.5	●	●	●
	SNGA 120412-S01020	1,2	0.03-0.3	0.05-0.5	●	●	●
	4C-SNGA 120402-S01020	0,2	0.03-0.3	0.05-0.5	○	○	○
	4C-SNGA 120404-S01020	0,4	0.03-0.3	0.05-0.5	●	●	●
	4C-SNGA 120408-S01020	0,8	0.03-0.3	0.05-0.5	●	●	●
	4C-SNGA 120412-S01020	1,2	0.03-0.3	0.05-0.5	●	●	●
	8C-SNGA 120402-S01020	0,2	0.03-0.3	0.05-0.5	○	○	○
	8C-SNGA 120404-S01020	0,4	0.03-0.3	0.05-0.5	●	●	●
	8C-SNGA 120408-S01020	0,8	0.03-0.3	0.05-0.5	●	●	●
	8C-SNGA 120412-S01020	1,2	0.03-0.3	0.05-0.5	○	○	○

● Stock item ○ Non Stock item △ Special order

CBN INSERTS

Negative 60°(TN)



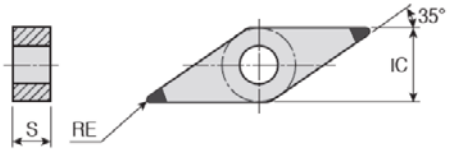
Dimensions (mm)				
Type	d	s	la	d1
TN_1604_	9,52	4,76	3,0	3,81

Inserts	Insert Code	r (mm)	Recommended Cutting Parameters		Grades		
			f (mm/rev)	ap (mm)	BN7405	BN7415	BN7208
	TNGA 160402-S01020	0,2	0.03-0.3	0.05-0.5	○	○	○
	TNGA 160404-S01020	0,4	0.03-0.3	0.05-0.5	●	●	●
	TNGA 160408-S01020	0,8	0.03-0.3	0.05-0.5	●	●	●
	TNGA 160412-S01020	1,2	0.03-0.3	0.05-0.5	●	●	●
	3C-TNGA 160402-S01020	0,2	0.03-0.3	0.05-0.5	○	○	○
	3C-TNGA 160404-S01020	0,4	0.03-0.3	0.05-0.5	●	●	●
	3C-TNGA 160408-S01020	0,8	0.03-0.3	0.05-0.5	●	●	●
	3C-TNGA 160412-S01020	1,2	0.03-0.3	0.05-0.5	●	●	●
	6C-TNGA 160402-S01020	0,2	0.03-0.3	0.05-0.5	○	○	○
	6C-TNGA 160404-S01020	0,4	0.03-0.3	0.05-0.5	○	○	○
	6C-TNGA 160408-S01020	0,8	0.03-0.3	0.05-0.5	○	○	○
	6C-TNGA 160412-S01020	1,2	0.03-0.3	0.05-0.5	○	○	○

● Stock item ○ Non Stock item △ Special order

CBN INSERTS

Negative 35°(VN)



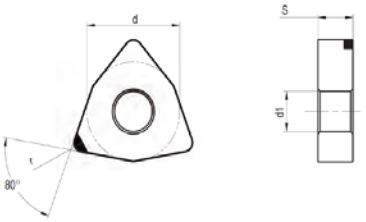
Dimensions (mm)				
Type	d	s	la	d1
VN_1604_	9,525	4,76	3,0	3,81

Inserts	Insert Code	r (mm)	Recommended Cutting Parameters		Grades		
			f (mm/rev)	ap (mm)	BN7405	BN7415	BN7208
	VNGA 160402-S01020	0,2	0.03-0.3	0.05-0.5	○	○	○
	VNGA 160404-S01020	0,4	0.03-0.3	0.05-0.5	●	●	●
	VNGA 160408-S01020	0,8	0.03-0.3	0.05-0.5	●	●	●
	VNGA 160412-S01020	1,2	0.03-0.3	0.05-0.5	●	●	●
	2C-VNGA 160402-S01020	0,2	0.03-0.3	0.05-0.5	●	●	●
	2C-VNGA 160404-S01020	0,4	0.03-0.3	0.05-0.5	●	●	●
	2C-VNGA 160408-S01020	0,8	0.03-0.3	0.05-0.5	●	●	●
	2C-VNGA 160412-S01020	1,2	0.03-0.3	0.05-0.5	○	○	○
	4C-VNGA 160402-S01020	0,2	0.03-0.3	0.05-0.5	○	○	○
	4C-VNGA 160404-S01020	0,4	0.03-0.3	0.05-0.5	●	●	●
	4C-VNGA 160408-S01020	0,8	0.03-0.3	0.05-0.5	○	○	○
	4C-VNGA 160412-S01020	1,2	0.03-0.3	0.05-0.5	○	○	○

● Stock item ○ Non Stock item △ Special order

CBN INSERTS

Negative 80°(WN)



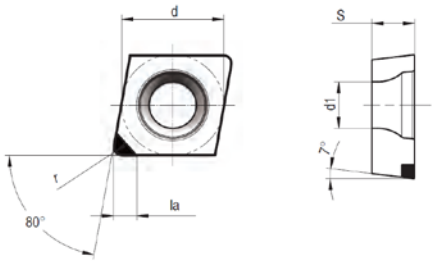
Dimensions (mm)				
Type	d	s	la	d1
VN_1604_	9,525	4,76	3,0	3,81

Inserts	Insert Code	r (mm)	Recommended Cutting Parameters		Grades		
			f (mm/rev)	ap (mm)	BN7405	BN7415	BN7208
	W NGA 080402-S01020	0,2	0.03-0.3	0.05-0.5	●	●	●
	W NGA 080404-S01020	0,4	0.03-0.3	0.05-0.5	●	●	●
	W NGA 080408-S01020	0,8	0.03-0.3	0.05-0.5	●	●	●
	W NGA 080412-S01020	1,2	0.03-0.3	0.05-0.5	●	●	●
	3C-W NGA 080402-S01020	0,2	0.03-0.3	0.05-0.5	○	○	○
	3C-W NGA 080404-S01020	0,4	0.03-0.3	0.05-0.5	●	●	●
	3C-W NGA 080408-S01020	0,8	0.03-0.3	0.05-0.5	●	●	●
	3C-W NGA 080412-S01020	1,2	0.03-0.3	0.05-0.5	○	○	○
	6C-W NGA 080402-S01020	0,2	0.03-0.3	0.05-0.5	○	○	○
	6C-W NGA 080404-S01020	0,4	0.03-0.3	0.05-0.5	○	○	○
	6C-W NGA 080408-S01020	0,8	0.03-0.3	0.05-0.5	○	○	○
	6C-W NGA 080412-S01020	1,2	0.03-0.3	0.05-0.5	○	○	○

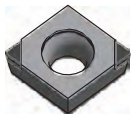
● Stock item ○ Non Stock item △ Special order

CBN INSERTS

Positive 80°(CC)



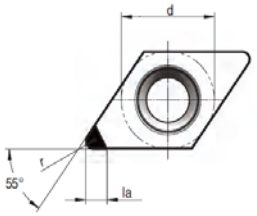
Dimensions (mm)				
Type	d	s	la	d1
CC_0602_	6,35	2,38	3,0	2,80
CC_09T3_	9,52	3,97	3,0	4,40
CC_1204_	12,7	4,76	3,0	5,50

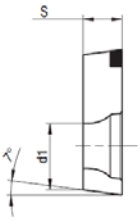
Inserts	Insert Code	r (mm)	Recommended Cutting Parameters		Grades		
			f (mm/rev)	ap (mm)	BN7405	BN7415	BN7208
	CCGW 060202-S01020	0,2	0.03-0.3	0.05-0.5	●	●	●
	CCGW 060204-S01020	0,4	0.03-0.3	0.05-0.5	●	●	●
	CCGW 060208-S01020	0,8	0.03-0.3	0.05-0.5	●	●	●
	CCGW 09T302-S01020	0,2	0.03-0.3	0.05-0.5	●	●	●
	CCGW 09T304-S01020	0,4	0.03-0.3	0.05-0.5	●	●	●
	CCGW 09T308-S01020	0,8	0.03-0.3	0.05-0.5	●	●	●
	CCGW 120402-S01020	0,2	0.03-0.3	0.05-0.5	○	○	○
	CCGW 120404-S01020	0,4	0.03-0.3	0.05-0.5	○	○	○
	CCGW 120408-S01020	0,8	0.03-0.3	0.05-0.5	○	○	○
	CCGW 120412-S01020	1,2	0.03-0.3	0.05-0.5	○	○	○
	2C-CCGW 060202-S01020	0,2	0.03-0.3	0.05-0.5	●	●	●
	2C-CCGW 060204-S01020	0,4	0.03-0.3	0.05-0.5	●	●	●
	2C-CCGW 060208-S01020	0,8	0.03-0.3	0.05-0.5	●	●	●
	2C-CCGW 09T302-S01020	0,2	0.03-0.3	0.05-0.5	●	●	●
	2C-CCGW 09T304-S01020	0,4	0.03-0.3	0.05-0.5	●	●	●
	2C-CCGW 09T308-S01020	0,8	0.03-0.3	0.05-0.5	●	●	●
	2C-CCGW 120402-S01020	0,2	0.03-0.3	0.05-0.5	○	○	○
	2C-CCGW 120404-S01020	0,4	0.03-0.3	0.05-0.5	○	○	○
	2C-CCGW 120408-S01020	0,8	0.03-0.3	0.05-0.5	○	○	○
	2C-CCGW 120412-S01020	1,2	0.03-0.3	0.05-0.5	○	○	○

● Stock item ○ Non Stock item △ Special order

CBN INSERTS

Positive 55°(DC)





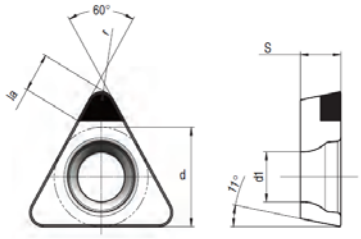
Dimensions (mm)				
Type	d	s	la	d1
DC_0702_	6,35	2,38	3,0	2,80
DC_11T3_	9,52	3,97	3,0	4,40

Inserts	Insert Code	r (mm)	Recommended Cutting Parameters		Grades		
			f (mm/rev)	ap (mm)	BN7405	BN7415	BN7208
	DCGW 070202-S01020	0,2	0.03-0.3	0.05-0.5	●	●	●
	DCGW 070204-S01020	0,4	0.03-0.3	0.05-0.5	●	●	●
	DCGW 070208-S01020	0,8	0.03-0.3	0.05-0.5	●	●	●
	DCGW 11T302-S01020	0,2	0.03-0.3	0.05-0.5	●	●	●
	DCGW 11T304-S01020	0,4	0.03-0.3	0.05-0.5	●	●	●
	DCGW 11T308-S01020	0,8	0.03-0.3	0.05-0.5	●	●	●
	DCGW 11T312-S01020	1,2	0.03-0.3	0.05-0.5	○	○	○
	2C-DCGW 070202-S01020	0,2	0.03-0.3	0.05-0.5	●	●	●
	2C-DCGW 070204-S01020	0,4	0.03-0.3	0.05-0.5	●	●	●
	2C-DCGW 070208-S01020	0,8	0.03-0.3	0.05-0.5	●	●	●
	2C-DCGW 11T302-S01020	0,2	0.03-0.3	0.05-0.5	●	●	●
	2C-DCGW 11T304-S01020	0,4	0.03-0.3	0.05-0.5	●	●	●
	2C-DCGW 11T308-S01020	0,8	0.03-0.3	0.05-0.5	●	●	●
	2C-DCGW 11T312-S01020	1,2	0.03-0.3	0.05-0.5	○	○	○

● Stock item ○ Non Stock item △ Special order

CBN INSERTS

Positive 60°(TP)



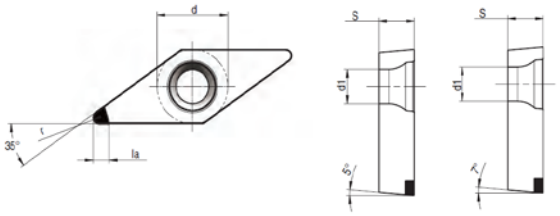
Dimensions (mm)				
Type	d	s	la	d1
TP_0802_	4,76	2,38	3,0	2,40
TP_1102_	6,35	2,38	4,0	2,80
TP_1103_	6,35	3,18	4,0	3,40
TP_1604_	9,52	4,76	3,0	4,40

Inserts	Insert Code	r (mm)	Recommended Cutting Parameters		Grades		
			f (mm/rev)	ap (mm)	BN7405	BN7415	BN7208
	TPGW 080202-S01020	0,2	0.03-0.3	0.05-0.5	○	○	○
	TPGW 080204-S01020	0,4	0.03-0.3	0.05-0.5	○	○	○
	TPGW 090202-S01020	0,2	0.03-0.3	0.05-0.5	○	○	○
	TPGW 090204-S01020	0,4	0.03-0.3	0.05-0.5	●	●	●
	TPGW 090208-S01020	0,8	0.03-0.3	0.05-0.5	○	○	○
	TPGW 110302-S01020	0,2	0.03-0.3	0.05-0.5	●	●	●
	TPGW 110304-S01020	0,4	0.03-0.3	0.05-0.5	●	●	●
	TPGW 160402-S01020	0,2	0.03-0.3	0.05-0.5	○	○	○
	TPGW 160404-S01020	0,4	0.03-0.3	0.05-0.5	○	○	○
	TPGW 160408-S01020	0,8	0.03-0.3	0.05-0.5	○	○	○
	3C-TPGW 080202-S01020	0,2	0.03-0.3	0.05-0.5	●	●	●
	3C-TPGW 080204-S01020	0,4	0.03-0.3	0.05-0.5	●	●	●
	3C-TPGW 090202-S01020	0,2	0.03-0.3	0.05-0.5	●	●	●
	3C-TPGW 090204-S01020	0,4	0.03-0.3	0.05-0.5	●	●	●
	3C-TPGW 090208-S01020	0,8	0.03-0.3	0.05-0.5	●	●	●
	3C-TPGW 110302-S01020	0,2	0.03-0.3	0.05-0.5	●	●	●
	3C-TPGW 110304-S01020	0,4	0.03-0.3	0.05-0.5	●	●	●
	3C-TPGW 160402-S01020	0,2	0.03-0.3	0.05-0.5	○	○	○
	3C-TPGW 160404-S01020	0,4	0.03-0.3	0.05-0.5	○	○	○
	3C-TPGW 160408-S01020	0,8	0.03-0.3	0.05-0.5	○	○	○

● Stock item ○ Non Stock item △ Special order

CBN INSERTS

Positive 35°(V)



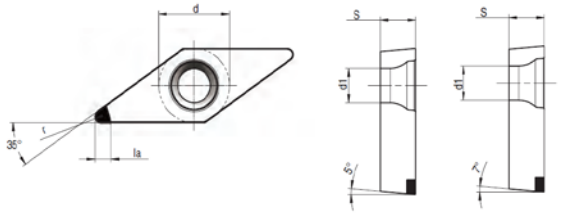
Dimensions (mm)				
Type	d	s	la	d1
VB_1103_	6,35	3,18	3,0	2,80
VB_1604_	9,52	4,76	3,0	4,40
VC_1103_	6,35	3,18	3,0	2,80
VC_1604_	9,52	4,76	3,0	4,40

Inserts	Insert Code	r (mm)	Recommended Cutting Parameters		Grades		
			f (mm/rev)	ap (mm)	BN7405	BN7415	BN7208
	VBGW 110302-S01020	0,2	0.03-0.3	0.05-0.5	●	●	●
	VBGW 110304-S01020	0,4	0.03-0.3	0.05-0.5	●	●	●
	VBGW 110308-S01020	0,8	0.03-0.3	0.05-0.5	●	●	●
	VBGW 160402-S01020	0,2	0.03-0.3	0.05-0.5	●	●	●
	VBGW 160404-S01020	0,4	0.03-0.3	0.05-0.5	●	●	●
	VBGW 160408-S01020	0,8	0.03-0.3	0.05-0.5	●	●	●
	2C-VBGW 110302-S01020	0,2	0.03-0.3	0.05-0.5	○	○	○
	2C-VBGW 110304-S01020	0,4	0.03-0.3	0.05-0.5	○	○	○
	2C-VBGW 110308-S01020	0,8	0.03-0.3	0.05-0.5	○	○	○
	2C-VBGW 160402-S01020	0,2	0.03-0.3	0.05-0.5	○	○	○
	2C-VBGW 160404-S01020	0,4	0.03-0.3	0.05-0.5	○	○	○
	2C-VBGW 160408-S01020	0,8	0.03-0.3	0.05-0.5	○	○	○

● Stock item ○ Non Stock item △ Special order

CBN INSERTS

Positive 35°(V)



Dimensions (mm)				
Type	d	s	la	d1
VB_1103_	6,35	3,18	3,0	2,80
VB_1604_	9,52	4,76	3,0	4,40
VC_1103_	6,35	3,18	3,0	2,80
VC_1604_	9,52	4,76	3,0	4,40

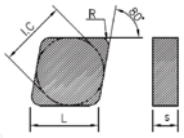
Inserts	Insert Code	r (mm)	Recommended Cutting Parameters		Grades		
			f (mm/rev)	ap (mm)	BN7405	BN7415	BN7208
	VCGW 110302-S01020	0,2	0.03-0.3	0.05-0.5	○	○	○
	VCGW 110304-S01020	0,4	0.03-0.3	0.05-0.5	●	●	●
	VCGW 110308-S01020	0,8	0.03-0.3	0.05-0.5	○	○	○
	VCGW 160402-S01020	0,2	0.03-0.3	0.05-0.5	●	●	●
	VCGW 160404-S01020	0,4	0.03-0.3	0.05-0.5	●	●	●
	VCGW 160408-S01020	0,8	0.03-0.3	0.05-0.5	●	●	●
	2C-VCGW 110302-S01020	0,2	0.03-0.3	0.05-0.5	○	○	○
	2C-VCGW 110304-S01020	0,4	0.03-0.3	0.05-0.5	○	○	○
	2C-VCGW 110308-S01020	0,8	0.03-0.3	0.05-0.5	○	○	○
	2C-VCGW 160402-S01020	0,2	0.03-0.3	0.05-0.5	○	○	○
	2C-VCGW 160404-S01020	0,4	0.03-0.3	0.05-0.5	○	○	○
	2C-VCGW 160408-S01020	0,8	0.03-0.3	0.05-0.5	○	○	○

● Stock item ○ Non Stock item △ Special order

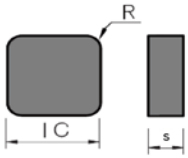
CBN INSERTS

Solid CBN

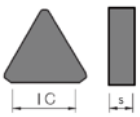
CNGN

Inserts	Insert Code	Dimensions (mm)			Grades	
		I.C.	T	r	BS7204	BP2204
	CNGN 120408	12,70	4,76	0,8	●	○
	CNGN 120412	12,70	4,76	1,2	●	○

SNGN

Inserts	Insert Code	Dimensions (mm)			Grades	
		I.C.	T	r	BS7204	BP2204
	SNGN 090304	9,53	3,18	0,4	○	○
	SNGN 090308	9,53	3,18	0,8	○	○
	SNGN 120404	12,70	4,76	0,4	○	○
	SNGN 120408	12,76	4,76	0,8	●	○
	SNGN 120412	12,76	4,76	1,2	●	○

TNGN

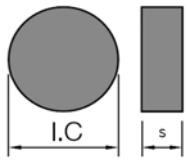
Inserts	Insert Code	Dimensions (mm)			Grades	
		I.C.	T	r	BS7204	BP2204
	TNGN 160408	9,53	4,76	0,8	●	○
	TNGN 160412	9,53	4,76	1,2	●	○

● Stock item ○ Non Stock item △ Special order

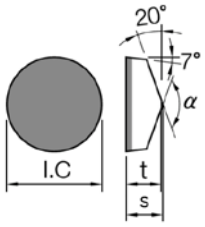
CBN INSERTS

Solid CBN

RNGN

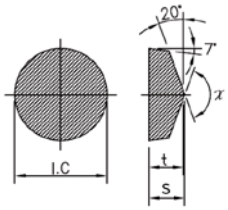
Inserts	Insert Code	Dimensions (mm)			Grades		
		I.C.	s	r	BS7404	BS7204	BP2204
	RNGN 060300	6,35	3,18		○	○	○
	RNGN 090300	9,53	3,18		○	○	○
	RNGN 090400	9,53	4,76		○	○	○
	RNGN 120300	12,70	3,18		○	○	○
	RNGN 120400	12,70	4,76		○	○	○

RCGX

Inserts	Insert Code	Dimensions (mm)				Grades		
		I.C.	t	s	α	BN7405	BN7415	BN7208
	RCGX 060300	6,35	3,18	3,32	140°	●	●	○
	RCGX 090300	9,525	3,18	3,32	140°	●	●	○
	RCGX 090700	9,53	7,7	7,94	120°	○	○	○
	RCGX 120400	12,700	4,76	4,94	140°	●	●	○
	RCGX 120700	12,70	7,7	7,94	140°	○	○	○
	RCGX 191000	19,050	9,77	10	120°	○	○	○

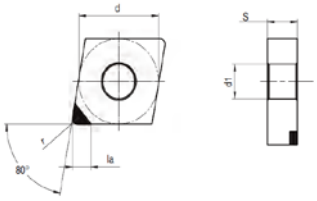
Full Face CBN

RCGX

Inserts	Insert Code	Dimensions (mm)				Grades		
		I.C.	t	T	α	BS7404	BS7204	BP2204
	RCGX 060300	6,35	3,18	3,32	140°	●	●	○
	RCGX 090300	9,525	3,18	3,32	140°	●	●	○
	RCGX 090700	9,53	7,7	7,94	120°	●	○	○
	RCGX 120400	12,700	4,76	4,94	140°	●	●	○
	RCGX 120700	12,70	7,7	7,94	140°	●	○	○
	RCGX 191000	19,050	9,77	10	120°	○	○	○

PCD INSERTS

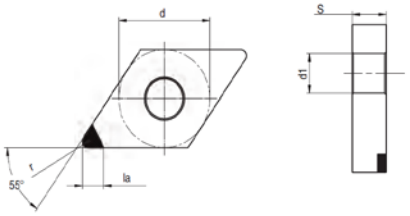
Negative 80°(CN)



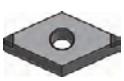
Dimensions (mm)				
Type	d	s	la	d1
CN_1204_	12,7	4,76	3,0	5,16

Inserts	Insert Code	r (mm)	Recommended Cutting Parameters		Grade
			f (mm/rev)	ap (mm)	DN7505
	CNGA 120402	0,2	0.03-0.2	0.05-0.5	○
	CNGA 120404	0,4	0.03-0.2	0.05-0.5	●
	CNGA 120408	0,8	0.03-0.2	0.05-0.5	●
	2C-CNGA 120402	0,2	0.03-0.2	0.05-0.5	○
	2C-CNGA 120404	0,4	0.03-0.2	0.05-0.5	●
	2C-CNGA 120408	0,8	0.03-0.2	0.05-0.5	●

Negative 55°(DN)

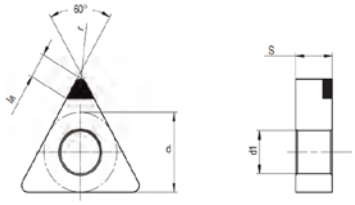


Dimensions (mm)				
Type	d	s	la	d1
DN_1504_	12,7	4,76	3,0	5,16

Inserts	Insert Code	r (mm)	Recommended Cutting Parameters		Grade
			f (mm/rev)	ap (mm)	DN7505
	DNGA 150402	0,2	0.03-0.2	0.05-0.5	●
	DNGA 150404	0,4	0.03-0.2	0.05-0.5	●
	DNGA 150408	0,8	0.03-0.2	0.05-0.5	●
	2C-DNGA 150402	0,2	0.03-0.2	0.05-0.5	○
	2C-DNGA 150404	0,4	0.03-0.2	0.05-0.5	○
	2C-DNGA 150408	0,8	0.03-0.2	0.05-0.5	○

PCD INSERTS

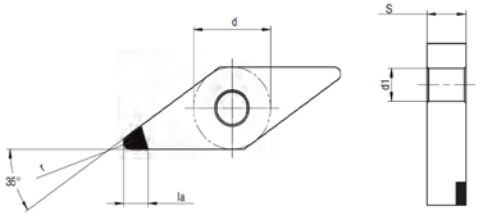
Negative 60°(TN)



Dimensions (mm)				
Type	d	s	la	d1
TN_1604_	9,52	4,76	3,0	3,81

Inserts	Insert Code	r (mm)	Recommended Cutting Parameters		Grade
			f (mm/rev)	ap (mm)	DN7505
	TNGA 160402	0,2	0.03-0.2	0.05-0.5	●
	TNGA 160404	0,4	0.03-0.2	0.05-0.5	●
	TNGA 160408	0,8	0.03-0.2	0.05-0.5	●
	3C-TNGA 160402	0,2	0.03-0.2	0.05-0.5	○
	3C-TNGA 160404	0,4	0.03-0.2	0.05-0.5	○
	3C-TNGA 160408	0,8	0.03-0.2	0.05-0.5	○

Negative 35°(VN)

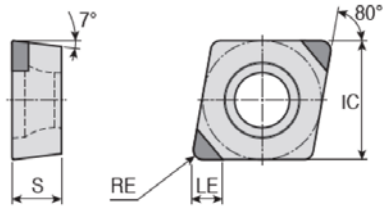


Dimensions (mm)				
Type	d	s	la	d1
VN_1604_	9,525	4,76	3,0	3,81

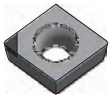
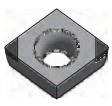
Inserts	Insert Code	r (mm)	Recommended Cutting Parameters		Grade
			f (mm/rev)	ap (mm)	DN7505
	VNGA 160402	0,2	0.03-0.2	0.05-0.5	●
	VNGA 160404	0,4	0.03-0.2	0.05-0.5	●
	VNGA 160408	0,8	0.03-0.2	0.05-0.5	●
	2C-VNGA 160402	0,2	0.03-0.2	0.05-0.5	○
	2C-VNGA 160404	0,4	0.03-0.2	0.05-0.5	○
	2C-VNGA 160408	0,8	0.03-0.2	0.05-0.5	○

PCD INSERTS

Positive 80°(CC)



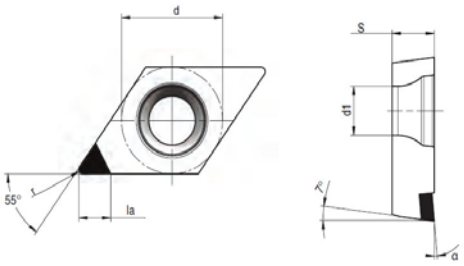
Dimensions (mm)				
Type	d	s	la	d1
CC_0602_	6,35	2,38	3,0	2,80
CC_09T3_	9,52	3,97	3,0	4,40
CC_1204_	12,7	4,76	3,0	5,50

Inserts	Insert Code	r (mm)	α (°)	Recommended Cutting Parameters		Grade
				f (mm/rev)	ap (mm)	DN7505
	CCGW 060202	0,2	7°	0.03-0.2	0.05-0.5	●
	CCGW 060204	0,4	7°	0.03-0.2	0.05-0.5	●
	CCGW 060208	0,8	7°	0.03-0.2	0.05-0.5	●
	CCGW 09T302	0,2	7°	0.03-0.2	0.05-0.5	●
	CCGW 09T304	0,4	7°	0.03-0.2	0.05-0.5	●
	CCGW 09T308	0,8	7°	0.03-0.2	0.05-0.5	●
	CCGW 120402	0,2	7°	0.03-0.2	0.05-0.5	○
	CCGW 120404	0,4	7°	0.03-0.2	0.05-0.5	○
	CCGW 120408	0,8	7°	0.03-0.2	0.05-0.5	○
	2C-CCGW 060202	0,2	7°	0.03-0.2	0.05-0.5	●
	2C-CCGW 060204	0,4	7°	0.03-0.2	0.05-0.5	●
	2C-CCGW 060208	0,8	7°	0.03-0.2	0.05-0.5	●
	2C-CCGW 09T302	0,2	7°	0.03-0.2	0.05-0.5	●
	2C-CCGW 09T304	0,4	7°	0.03-0.2	0.05-0.5	●
	2C-CCGW 09T308	0,8	7°	0.03-0.2	0.05-0.5	●
	2C-CCGW 120402	0,2	7°	0.03-0.2	0.05-0.5	○
	2C-CCGW 120404	0,4	7°	0.03-0.2	0.05-0.5	○
	2C-CCGW 120408	0,8	7°	0.03-0.2	0.05-0.5	○

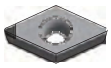
● Stock item ○ Non Stock item △ Special order

PCD INSERTS

Positive 55°(DC)



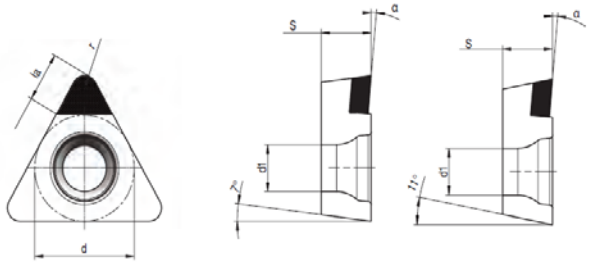
Dimensions (mm)				
Type	d	s	la	d1
DC_0702_	6,35	2,38	3,0	2,80
DC_11T3_	9,52	3,97	3,0	4,40

Inserts	Insert Code	r (mm)	α (°)	Recommended Cutting Parameters		Grade
				f (mm/rev)	ap (mm)	DN7505
	DCGW 070202	0,2	7°	0.03-0.2	0.05-0.5	●
	DCGW 070204	0,4	7°	0.03-0.2	0.05-0.5	●
	DCGW 070208	0,8	7°	0.03-0.2	0.05-0.5	●
	DCGW 11T302	0,2	7°	0.03-0.2	0.05-0.5	●
	DCGW 11T304	0,4	7°	0.03-0.2	0.05-0.5	●
	DCGW 11T308	0,8	7°	0.03-0.2	0.05-0.5	●
	2C-DCGW 070202	0,2	7°	0.03-0.2	0.05-0.5	○
	2C-DCGW 070204	0,4	7°	0.03-0.2	0.05-0.5	○
	2C-DCGW 070208	0,8	7°	0.03-0.2	0.05-0.5	○
	2C-DCGW 11T302	0,2	7°	0.03-0.2	0.05-0.5	○
	2C-DCGW 11T304	0,4	7°	0.03-0.2	0.05-0.5	○
	2C-DCGW 11T308	0,8	7°	0.03-0.2	0.05-0.5	○

● Stock item ○ Non Stock item △ Special order

PCD INSERTS

Positive 60°(T)



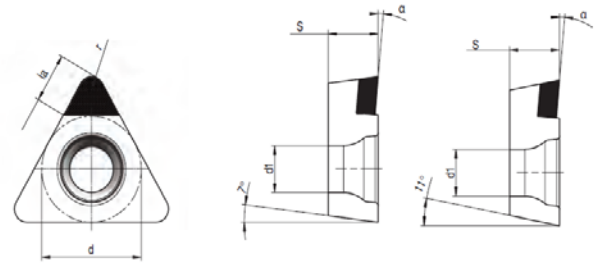
Dimensions (mm)				
Type	d	s	la	d1
TC_0802_	4,76	2,38	3,0	2,40
TC_1103_	6,35	3,18	3,0	2,80
TC_16T3_	9,52	3,97	2,5	4,40
TP_0802_	4,76	2,38	3,0	2,40
TP_1102_	6,35	2,38	4,0	2,80
TP_1103_	6,35	3,18	4,0	3,40
TP_1604_	9,52	4,76	3,0	4,40

Inserts	Insert Code	r (mm)	α (°)	Recommended Cutting Parameters		Grade
				f (mm/rev)	ap (mm)	DN7505
	TCGW 080202	0,2	7°	0.03-0.2	0.05-0.5	○
	TCGW 080204	0,4	7°	0.03-0.2	0.05-0.5	○
	TCGW 080208	0,8	7°	0.03-0.2	0.05-0.5	○
	TCGW 110202	0,2	7°	0.03-0.2	0.05-0.5	●
	TCGW 110204	0,4	7°	0.03-0.2	0.05-0.5	●
	TCGW 110302	0,2	7°	0.03-0.2	0.05-0.5	●
	TCGW 110304	0,4	7°	0.03-0.2	0.05-0.5	●
	TCGW 110308	0,8	7°	0.03-0.2	0.05-0.5	●
	TCGW 16T302	0,2	7°	0.03-0.2	0.05-0.5	●
	TCGW 16T304	0,4	7°	0.03-0.2	0.05-0.5	●
	TCGW 16T308	0,8	7°	0.03-0.2	0.05-0.5	●
	3C-TCGW 080202	0,2	7°	0.03-0.2	0.05-0.5	○
	3C-TCGW 080204	0,4	7°	0.03-0.2	0.05-0.5	○
	3C-TCGW 080208	0,8	7°	0.03-0.2	0.05-0.5	○
	3C-TCGW 110302	0,2	7°	0.03-0.2	0.05-0.5	○
	3C-TCGW 110304	0,4	7°	0.03-0.2	0.05-0.5	○
	3C-TCGW 110308	0,8	7°	0.03-0.2	0.05-0.5	○
	3C-TCGW 16T302	0,2	7°	0.03-0.2	0.05-0.5	○
	3C-TCGW 16T304	0,4	7°	0.03-0.2	0.05-0.5	○
	3C-TCGW 16T308	0,8	7°	0.03-0.2	0.05-0.5	○

● Stock item ○ Non Stock item △ Special order

PCD INSERTS

Positive 60°(T)



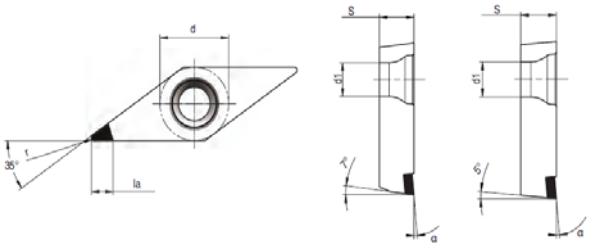
Dimensions (mm)				
Type	d	s	la	d1
TC_0802_	4,76	2,38	3,0	2,40
TC_1103_	6,35	3,18	3,0	2,80
TC_16T3_	9,52	3,97	2,5	4,40
TP_0802_	4,76	2,38	3,0	2,40
TP_1102_	6,35	2,38	4,0	2,80
TP_1103_	6,35	3,18	4,0	3,40
TP_1604_	9,52	4,76	3,0	4,40

Inserts	Insert Code	r (mm)	α (°)	Recommended Cutting Parameters		Grade
				f (mm/rev)	ap (mm)	DN7505
	TPGW 080202	0,2	11°	0.03-0.2	0.05-0.5	●
	TPGW 080204	0,4	11°	0.03-0.2	0.05-0.5	●
	TPGW 110202	0,2	11°	0.03-0.2	0.05-0.5	●
	TPGW 110204	0,4	11°	0.03-0.2	0.05-0.5	●
	TPGW 110304	0,4	11°	0.03-0.2	0.05-0.5	●
	TPGW 110308	0,8	11°	0.03-0.2	0.05-0.5	●
	TPGW 160302	0,2	11°	0.03-0.2	0.05-0.5	●
	TPGW 160304	0,4	11°	0.03-0.2	0.05-0.5	●
	3C-TPGW 080202	0,2	11°	0.03-0.2	0.05-0.5	○
	3C-TPGW 080204	0,4	11°	0.03-0.2	0.05-0.5	○
	3C-TPGW 080208	0,8	11°	0.03-0.2	0.05-0.5	○
	3C-TPGW 160402	0,2	11°	0.03-0.2	0.05-0.5	○
	3C-TPGW 160404	0,4	11°	0.03-0.2	0.05-0.5	○
	3C-TPGW 160408	0,8	11°	0.03-0.2	0.05-0.5	○

● Stock item ○ Non Stock item △ Special order

PCD INSERTS

Positive 35°(V)



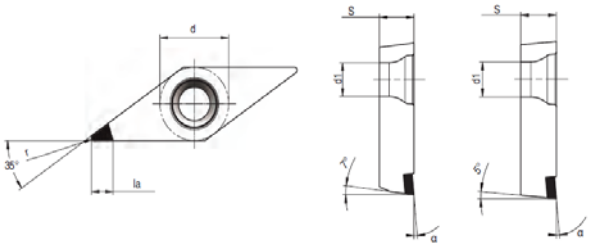
Dimensions (mm)				
Type	d	s	la	d1
VB_1103_	6,35	3,18	3,0	2,80
VB_1604_	9,52	4,76	3,0	4,40
VC_1103_	6,35	3,18	3,0	2,80
VC_1604_	9,52	4,76	3,0	4,40

Inserts	Insert Code	r (mm)	α (°)	Recommended Cutting Parameters		Grade
				f (mm/rev)	ap (mm)	DN7505
	VBGW 110302	0,2	5°	0.03-0.2	0.05-0.5	●
	VBGW 110304	0,4	5°	0.03-0.2	0.05-0.5	●
	VBGW 110308	0,8	5°	0.03-0.2	0.05-0.5	●
	VBGW 160402	0,2	5°	0.03-0.2	0.05-0.5	●
	VBGW 160404	0,4	5°	0.03-0.2	0.05-0.5	●
	VBGW 160408	0,8	5°	0.03-0.2	0.05-0.5	●
	2C-VBGW 110302	0,2	5°	0.03-0.2	0.05-0.5	○
	2C-VBGW 110304	0,4	5°	0.03-0.2	0.05-0.5	○
	2C-VBGW 110308	0,8	5°	0.03-0.2	0.05-0.5	○
	2C-VBGW 160402	0,2	5°	0.03-0.2	0.05-0.5	●
	2C-VBGW 160404	0,4	5°	0.03-0.2	0.05-0.5	●
	2C-VBGW 160408	0,8	5°	0.03-0.2	0.05-0.5	●

● Stock item ○ Non Stock item △ Special order

PCD INSERTS

Positive 35°(V)



Dimensions (mm)				
Type	d	s	la	d1
VB_1103_	6,35	3,18	3,0	2,80
VB_1604_	9,52	4,76	3,0	4,40
VC_1103_	6,35	3,18	3,0	2,80
VC_1604_	9,52	4,76	3,0	4,40

Inserts	Insert Code	r (mm)	α (°)	Recommended Cutting Parameters		Grade
				f (mm/rev)	ap (mm)	DN7505
	VCGW 110302	0,2	7°	0.03-0.2	0.05-0.5	●
	VCGW 110304	0,4	7°	0.03-0.2	0.05-0.5	●
	VCGW 160404	0,4	7°	0.03-0.2	0.05-0.5	●
	VCGW 160408	0,8	7°	0.03-0.2	0.05-0.5	●
	VCGW 160412	1,2	7°	0.03-0.2	0.05-0.5	●
	2C-VCGW 110302	0,2	7°	0.03-0.2	0.05-0.5	●
	2C-VCGW 110304	0,4	7°	0.03-0.2	0.05-0.5	●
	2C-VCGW 110308	0,2	7°	0.03-0.2	0.05-0.5	●
	2C-VCGW 160402	0,2	7°	0.03-0.2	0.05-0.5	●
	2C-VCGW 160404	0,2	7°	0.03-0.2	0.05-0.5	●
	2C-VCGW 160408	0,2	7°	0.03-0.2	0.05-0.5	●
	2C-VCGW 160412	0,4	7°	0.03-0.2	0.05-0.5	●

● Stock item ○ Non Stock item △ Special order

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