



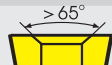
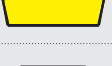
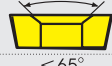
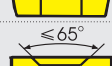
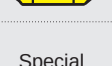
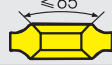
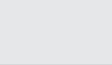
TURNING General Turning Inserts

General turning inserts code key

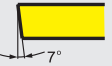
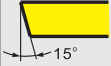
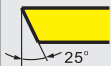
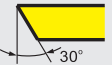
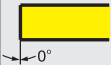
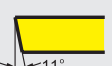
General
turning

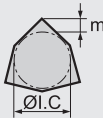
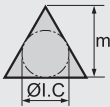
General turning inserts code key

Insert shape/Code		
 A	 B	 C
 D	 E	 H
 K	 L	 M
 O	 P	 R
 S	 T	 T
 V	 W	Others Z
Insert shape		

Metric							
Code	With/Without hole	With/Without chipbreaker	Section plane of insert	Code	With/Without hole	With/Without chipbreaker	Section plane of insert
B	With	Without		N	Without	Without	
H	With	Single-side		R	Without	Single-side	
C	With	Without		F	Without	Double-side	
J	With	Double-side		A	With	Without	
W	With	Without		M	With	Single-side	
T	With	Single-side		G	With	Double-side	
Q	With	Without		X	---	---	Special
U	With	Double-side					
Chipbreaker and clamping system							

T N M G

Clearance angle of main cutting edge			
Code	Clearance angle	Code	Clearance angle
A	 3°	B	 5°
C	 7°	D	 15°
E	 20°	F	 25°
G	 30°	N	 0°
P	 11°	O	Other clearance angles

Tolerance										
										
Code	Nose height m Tolerance(mm)	Inscribed circle ØI.C Tolerance(mm)	Thickness S Tolerance(mm)	(Reference) Details of M-level tolerance (Identified by shape)						
● Nose height tolerance(mm)										
A	±0.005	±0.025	±0.025	Inscribed circle	Regular triangle	Square	Diamond with 80°	Diamond with 55°	Diamond with 35°	Round
F	±0.005	±0.013	±0.025	6.35	±0.08	±0.08	±0.08	±0.11	±0.16	---
C	±0.013	±0.025	±0.025	9.525	±0.08	±0.08	±0.08	±0.11	±0.16	---
H	±0.013	±0.013	±0.025	12.7	±0.13	±0.13	±0.13	±0.15	---	---
E	±0.025	±0.025	±0.025	15.875	±0.15	±0.15	±0.15	±0.18	---	---
G	±0.025	±0.025	±0.13	19.05	±0.15	±0.15	±0.15	±0.18	---	---
J	±0.005	±0.05±0.13	±0.025	25.4	---	±0.18	---	---	---	---
● Tolerance of inscribed circle ØI.C(mm)										
K	±0.013	±0.05±0.13	±0.025	Inscribed circle	Regular triangle	Square	Diamond with 80°	Diamond with 55°	Diamond with 35°	Round
L	±0.025	±0.05±0.13	±0.025	6.35	±0.05	±0.05	±0.05	±0.05	±0.05	---
M	±0.08±0.18	±0.05±0.13	±0.13	9.525	±0.05	±0.05	±0.05	±0.05	±0.05	±0.05
N	±0.08±0.18	±0.05±0.13	±0.025	12.7	±0.08	±0.08	±0.08	±0.08	---	±0.08
U	±0.13±0.38	±0.08±0.25	±0.13	15.875	±0.10	±0.10	±0.10	±0.10	---	±0.10
				19.05	±0.10	±0.10	±0.10	±0.10	---	±0.10
				25.4	---	±0.13	---	---	---	±0.13

Diameter of IC	Insert shape							
	C	D	R	S	T	V	W	K
3.97					06			
5.0			05					
5.56					09			
6.0			06					
6.35	06	07			11	11		
8.0			08					
9.525	09	11	09	09	16	16	06	16
10.0			10					
12.0			12					
12.7	12	15	12	12	22	22	08	
15.875	16		15	15	27			
16.0		19	16					
19.05	19		19	19	33			
20.0			20					
25.0	25	25	25					
25.4			25	25				
31.75			31					
32			32					

Length of cutting edge

Insert thickness

Thickness is defined as the height from the bottom of insert to the highest part of cutting edge

Code	Insert thickness(mm)
00	0.79
T0	0.99
01	1.59
T1	1.98
02	2.38
T2	2.58
03	3.18
T3	3.97
04	4.76
T4	4.96
05	5.96
T5	5.95
06	6.35
T6	6.75
07	7.94
09	9.52
T9	9.72
11	11.11
12	12.70

22 04 08 - DM (ISO)

4 3 2 (inch)

Inscribed circle	
Code	Diameter of IC(mm)
2	6.35
3	9.525
4	12.7
5	15.875
6	19.05
8	25.4

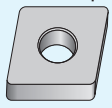
Thickness	
Code	Thickness (mm)
2	3.18
3	4.76
4	6.35
5	7.94
6	9.52

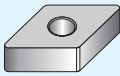
Nose radius	
Code	Nose radius (mm)
0	0.2
1	0.4
2	0.8
3	1.2
4	1.6
5	2.0
6	2.4

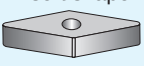
Nose radius code	
Code	Nose radius (mm)
00	No radius
02	0.2
04	0.4
08	0.8
12	1.2
16	1.6
20	2.0
24	2.4
32	3.2
X	Others
Diameter of insert (Metric)	
Round insert	

Chipbreaker code		
DF	DM	DR
		
		
		
		
		
		

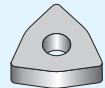
Metric and inch comparison table of negative inserts

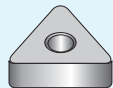
C-type negative angle	(ISO)	(Inch)	Chipbreaker
Insert shape 	090304	321	-DF -WGF -SF -EF -NF -WGM -PM -DM -EM -NM -DR -ER -LR -HPR
	090308	322	
	120404	431	
	120408	432	
	120412	433	
	120416	434	
	160608	542	
	160612	543	
	160616	544	
	190608	642	
	190612	643	
	190616	644	
	190624	646	
	250724	856	
	250732	858	
	250924	866	
	250932	868	

D-type negative angle	(ISO)	(Inch)	Chipbreaker
Insert shape 	110404	331	-EF -DF -WGF -SF -NF -WGM -PM -DM -EM -NM -DR -ER -LR
	110408	332	
	110412	333	
	150404	431	
	150408	432	
	150412	433	
	150604	441	
	150608	442	
	150612	443	
	150616	444	
	190608	542	
	190612	543	

V-type negative angle	(ISO)	(Inch)	Chipbreaker
Insert shape 	160404	331	-DF -EF -SF -NF -PM -DM -EM -NM
	160408	332	
	160412	333	

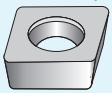
R-type negative angle	(ISO)	(Inch)	Chipbreaker
Insert shape 	0903MO	32	
	1204MO	43	

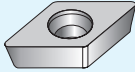
W-type negative angle	(ISO)	(Inch)	Chipbreaker
Insert shape 	06T304	3(2.5)1	-DF
	06T308	3(2.5)2	-WGF
	06T312	3(2.5)3	-SF
	060404	331	-EF
	060408	332	-NF
	060412	333	-WGM
	080404	431	-PM
	080408	432	-DM
	080412	433	-EM
			-NM
			-DR

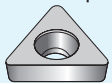
T-type negative angle	(ISO)	(Inch)	Chipbreaker
Insert shape 	110304	221	-DF -WGF -SF -EF -WGM -PM -DM -EM -DR -ER -LR
	110308	222	
	160404	331	
	160408	332	
	160412	333	
	220404	431	
	220408	432	
	220412	433	
	220416	434	
	270608	542	
	270612	543	
	270616	544	

S-type negative angle	(ISO)	(Inch)	Chipbreaker
Insert shape 	090304	321	-DF -SF -EF -PM -DM -EM -NM -DR -ER -LR -HPR
	090308	322	
	090312	323	
	120404	431	
	120408	432	
	120412	433	
	120416	434	
	150608	542	
	150612	543	
	150616	544	
	190412	633	
	190424	636	
	190612	643	
	190616	644	
	250724	856	
	250732	858	
	250924	866	
	250932	868	

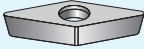
Metric and inch comparison table of positive insert

C-type positive angle	(ISO)	(Inch)	Chipbreaker
Insert shape 	060202	2(1.5)0	-USF
	060204	2(1.5)1	-SF
	060208	2(1.5)2	-HF
	09T302	3(2.5)0	-EF
	09T304	3(2.5)1	-HM
	09T308	3(2.5)2	-EM
	120404	431	-HR
	120408	432	-LH
	120412	433	-LC

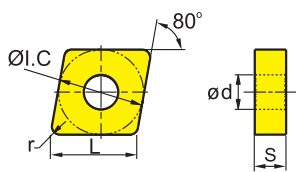
D-type positive angle	(ISO)	(Inch)	Chipbreaker
Insert shape 	070202	2(1.5)0	-USF
	070204	2(1.5)1	-SF
	070208	2(1.5)2	-HF
	11T302	3(2.5)0	-EF
	11T304	3(2.5)1	-HM
	11T308	3(2.5)2	-HR
	11T312	3(2.5)3	-LH
			-LC

T-type positive angle	(ISO)	(Inch)	Chipbreaker
Insert shape 	06T102	1.2(1.2)0	-USF -SF -HF -EF -HM -EM -HR -LH -LC
	06T104	1.2(1.2)1	
	06T108	1.2(1.2)2	
	090202	1.8(1.5)0	
	090204	1.8(1.5)1	
	090208	1.8(1.5)2	
	110202	2(1.5)0	
	110204	2(1.5)1	
	110208	2(1.5)2	
	110302	220	
	110304	221	
	110308	222	
	16T302	3(2.5)0	
	16T304	3(2.5)1	
	16T308	3(2.5)2	
	16T312	3(2.5)3	
	160400	330	
	220408	432	
	220412	433	
	220416	434	
	270408	532	
	270412	533	
	330612	643	
	330616	644	

S-type positive angle	(ISO)	(Inch)	Chipbreaker
Insert shape 	060204	2(1.5)1	-HF -EF -HM -EM -HR -LH -LC
	09T302	3(2.5)0	
	09T304	3(2.5)1	
	09T308	3(2.5)2	
	120404	431	
	120408	432	
	120412	433	
	150404	531	
	150408	532	
	150412	533	
	190408	632	
	190412	633	
	190416	634	

V-type positive angle	(ISO)	(Inch)	Chipbreaker
Insert shape 	110202	2(1.5)0	-USF -SF -HF -NF -LH -LC
	110204	2(1.5)1	
	110208	2(1.5)2	
	110302	220	
	110304	221	
	110308	222	
	160402	330	
	160404	331	
	160408	332	
	160412	333	

CN (Negative inserts)



😊 Good working condition 😐 Normal working condition 😞 Bad working condition

Workpiece material	
P	Steel
M	Stainless steel
K	Cast iron
N	Non-ferrous metal
S	Heat resistant alloy, Ti alloy

A 10x10 grid of empty squares for drawing.

[illegible]

★Recommended grade (always stock available) ●Available grade (always stock available) ○Make-to-order

Applicable tool



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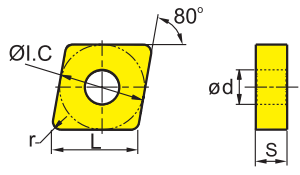


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A214

CN (Negative inserts)



P	Steel
M	Stainless steel
K	Cast iron
N	Non-ferrous metal
S	Heat resistant alloy, Ti alloy

😊 Good working condition 😐 Normal working condition 😞 Bad working condition

Inserts shape	Type	Dimensions(mm)					Coated cemented carbide															Cermet	Coated cermet	Cemented carbide									
		L	ØI.C	S	ød	r	YBC151	YBC152	YBC251	YBC252	YBC351	YBC352	YBG102	YBG105	YBG202	YBG205	YBG302	YBM151	YBM153	YBM251	YBM253	YBD052		YBD102	YBD151	YBD152	YBD252	YNG151	YNG151C	YC10	YC40	YD051	YD101
NF  For finishing	CNEG120404-NF	12.9	12.7	4.76	5.16	0.4						●	★																				○
	CNEG120408-NF	12.9	12.7	4.76	5.16	0.8							○	★																		○	
	CNEG120412-NF	12.9	12.7	4.76	5.16	1.2							○	★																		○	
WGM  For finishing Wiper	CNMG120408-WGM	12.9	12.7	4.76	5.16	0.8				★					★									★									
	CNMG120412-WGM	12.9	12.7	4.76	5.16	1.2				★					★										★								
PM  For semi-finishing	CNMG090304-PM	9.7	9.525	3.18	3.81	0.4	★	●	○																								
	CNMG090308-PM	9.7	9.525	3.18	3.81	0.8		○	●	○															★								
	CNMG120404-PM	12.9	12.7	4.76	5.16	0.4	★	●	★	○														★	★	○							
	CNMG120408-PM	12.9	12.7	4.76	5.16	0.8	●	★	●	★	●													★	★	★							
	CNMG120412-PM	12.9	12.7	4.76	5.16	1.2		○	●	★	●													★	★	★							
	CNMG120416-PM	12.9	12.7	4.76	5.16	1.6	★	●	○	●														★	○								
	CNMG160608-PM	16.1	15.875	6.35	6.35	0.8	●	○	●	○	○													○	○								
	CNMG160612-PM	16.1	15.875	6.35	6.35	1.2	●	○	●	○	●													★	○								
	CNMG160616-PM	16.1	15.875	6.35	6.35	1.6			●	○															○	○							
	CNMG190608-PM	19.3	19.05	6.35	7.94	0.8	★	●	○	○															★								
	CNMG190612-PM	19.3	19.05	6.35	7.94	1.2	★	●	★	●															○	★							
	CNMG190616-PM	19.3	19.05	6.35	7.94	1.6	●	★	●	○	●														○								

★ Recommended grade (always stock available) ● Available grade (always stock available) ○ Make-to-order

Applicable tool

DCLNR/L
Kr:95°

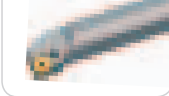
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PCBNR/L
Kr:75°

A171

PCLNR/L
Kr:95°

A172

PCLNR/L
Kr:95°

A214

Insert code key

A48-A49

Grade selection reference

A19/A34-A46

Chipbreaker selection reference

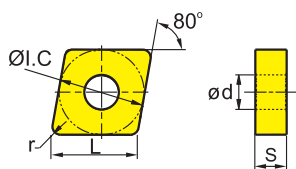
A22-A33

Recommended cutting parameters

A243-A245

CN ☐ ☐ (Negative inserts)

😊 Good working condition 😐 Normal working condition 😞 Bad working condition

[illegible][illegible]

★ Recommended grade (always stock available) ● Available grade (always stock available) ○ Make-to-order

Applicable tool



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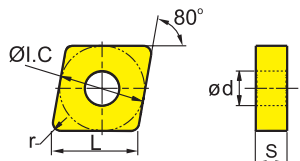
A171



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A214

CN (Negative inserts)

P Steel
M Stainless steel
K Cast iron
N Non-ferrous metal
S Heat resistant alloy, Ti alloy

😊 Good working condition 😐 Normal working condition 😞 Bad working condition

Inserts shape	Type	Dimensions(mm)					Coated cemented carbide																Cermet	Coated cermet	Cemented carbide									
		L	ØI.C	S	ød	r	YBC151	YBC152	YBC251	YBC252	YBC351	YBC352	YBG102	YBG105	YBG202	YBG205	YBG302	YBM151	YBM153	YBM251	YBM253	YBD052	YBD102	YBD151	YBD152	YBD252	YNG151	YNG151C	YC10	YC40	YD051	YD101	YD201	
NM  For semi-finishing	CNMG120404-NM	12.9	12.7	4.76	5.16	0.4							○	★																				○
	CNMG120408-NM	12.9	12.7	4.76	5.16	0.8							●	★																			○	
	CNMG120412-NM	12.9	12.7	4.76	5.16	1.2							○	★																		○		
LR  Light-load roughing	CNMM120408-LR	12.9	12.7	4.76	5.16	0.8					★																							
	CNMM120412-LR	12.9	12.7	4.76	5.16	1.2					★																							
	CNMM120416-LR	12.9	12.7	4.76	5.16	1.6					★																							
	CNMM160608-LR	16.1	15.875	6.35	6.35	0.8					★																							
	CNMM160612-LR	16.1	15.875	6.35	6.35	1.2					★																							
	CNMM160616-LR	16.1	15.875	6.35	6.35	1.6					★																							
	CNMM160624-LR	16.1	15.875	6.35	6.35	2.4					★																							
	CNMM190612-LR	19.3	19.05	6.35	7.94	1.2					★																							
	CNMM190616-LR	19.3	19.05	6.35	7.94	1.6					★																							
	CNMM190624-LR	19.3	19.05	6.35	7.94	2.4					★																							
	CNMM250924-LR	25.79	25.4	9.525	9.12	2.4					★																							

★ Recommended grade (always stock available) ● Available grade (always stock available) ○ Make-to-order

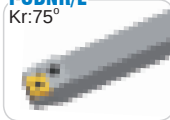
General turning

Cemented carbide and cermet inserts

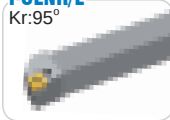
Applicable tool

DCLNR/L
Kr:95°

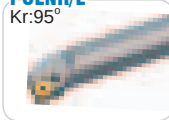
Page A164

PCBNR/L
Kr:75°

A171

PCLNR/L
Kr:95°

A172

PCLNR/L
Kr:95°

A214

Insert code key

A48-A49

Grade selection reference

A19/A34-A46

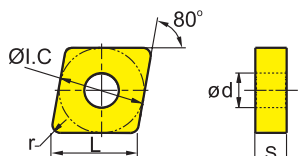
Chipbreaker selection reference

A22-A33

Recommended cutting parameters

A243-A245

CN ☐ ☐ (Negative inserts)



😊 Good working condition 😐 Normal working condition 😞 Bad working condition

Workpiece material	Color
P Steel	Blue
M Stainless steel	Yellow
K Cast iron	Red
N Non-ferrous metal	Green
S Heat resistant alloy, Ti alloy	Orange

Inserts shape	Type	Dimensions(mm)					Coated cemented carbide																	Cermet	Coated cermet	Cemented carbide							
		L	Ø.L.C	S	ød	r	YBC151	YBC152	YBC251	YBC252	YBC351	YBC352	YBG102	YBG105	YBG202	YBG205	YBG302	YBM151	YBM153	YBM251	YBM253	YBD052	YBD102			YBD151	YBD152	YBD252	YNG151	YNG151C	YC10	YC40	YD051
 DR For light roughing	CNMG120408-DR	12.9	12.7	4.76	5.16	0.8	★	●	★	●										●		●											
	CNMG120412-DR	12.9	12.7	4.76	5.16	1.2	○	●	★	○										●		●											
	CNMG120416-DR	12.9	12.7	4.76	5.16	1.6	○		○											●		●											
	CNMG160608-DR	16.1	15.875	6.35	6.35	0.8			○	○											○												
	CNMG160612-DR	16.1	15.875	6.35	6.35	1.2			●	★	○										●		○										
	CNMG160616-DR	16.1	15.875	6.35	6.35	1.6			○	★	●																						
	CNMG190608-DR	19.3	15.875	6.35	7.94	0.8			○	○											●		○										
	CNMG190612-DR	19.3	19.05	6.35	7.94	1.2		○	●	★	●										○		○										
	CNMG190616-DR	19.3	19.05	6.35	7.94	1.6		○	●	★	●													○									
	CNMG190624-DR	19.3	19.05	6.35	7.94	2.4		○	●	○	●																						
 DR For roughing	CNMM120412-DR	12.9	12.7	4.76	5.16	1.2			●		○																						
	CNMM160612-DR	16.1	15.875	6.35	6.35	1.2			●		○																						
	CNMM160616-DR	16.1	15.875	6.35	6.35	1.6					○																						
	CNMM190612-DR	19.3	19.05	6.35	7.94	1.2			●	○	●																						
	CNMM190616-DR	19.3	19.05	6.35	7.94	1.6			●	★	●																						
	CNMM190624-DR	19.3	19.05	6.35	7.94	2.4		○	○		○																						
	CNMM250924-DR	25.79	25.4	9.525	9.12	2.4			○	★	○																						
 ER For roughing	CNMG120408-ER	12.9	12.7	4.76	5.16	0.8											●		★														
	CNMG120412-ER	12.9	12.7	4.76	5.16	1.2											●		★														
	CNMG160612-ER	16.1	15.875	6.35	6.35	1.2											●		★														
	CNMG160616-ER	16.1	15.875	6.35	6.35	1.6															★												
	CNMG190612-ER	19.3	19.05	6.35	7.94	1.2															★												
	CNMG190616-ER	19.3	19.05	6.35	7.94	1.6															★												
 ER For roughing	CNMM250724-ER	25.79	25.4	7.94	9.12	2.4			★											★													
	CNMM250732-ER	25.79	25.4	7.94	9.12	3.2			★												★												
	CNMM250924-ER	25.79	25.4	9.525	9.12	2.4			★												★												
	CNMM250932-ER	25.79	25.4	9.525	9.12	3.2			★												★												

★ Recommended grade (always stock available) ● Available grade (always stock available) ○ Make-to-order

Applicable tool

DCLNR/L
Kr:95°



Page A164

PCBNR/L
Kr:75°

A171

PCLNR/L
Kr:95°



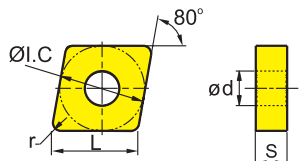
A172

PCLNR/L
Kr:95°



A214

CN (Negative inserts)



P	Steel
M	Stainless steel
K	Cast iron
N	Non-ferrous metal
S	Heat resistant alloy, Ti alloy

😊 Good working condition 😐 Normal working condition 😞 Bad working condition

Inserts shape	Type	Dimensions(mm)					Coated cemented carbide																Cermet	Coated cermet	Cemented carbide								
		L	ØI.C	S	ød	r	YBC151	YBC152	YBC251	YBC252	YBC351	YBC352	YBG102	YBG105	YBG202	YBG205	YBG302	YBM151	YBM153	YBM251	YBM253	YBD052	YBD102	YBD151	YBD152	YBD252	YNG151	YNG151C	YC10	YC40	YD051	YD101	YD201
 For heavy machining	CNMM190616-HPR	19.5	19.05	6.35	7.94	1.6				★	○																						
	CNMM250924-HPR	25.19	25.4	9.525	9.12	2.4				★	○																						
 Without chipbreaker	CNMA120404	12.9	12.7	4.76	5.16	0.4																★	○	○	○								
	CNMA120408	12.9	12.7	4.76	5.16	0.8																★	★	●	★								
	CNMA120412	12.9	12.7	4.76	5.16	1.2																★	★	●	★								
	CNMA120416	12.9	12.7	4.76	5.16	1.6																★	★		○								
	CNMA160608	16.1	15.875	6.35	6.35	0.8																	○	○									
	CNMA160612	16.1	15.875	6.35	6.35	1.2																	★	○									
	CNMA160616	16.1	15.875	6.35	6.35	1.6																○	★		○								
	CNMA160620	16.1	15.875	6.35	6.35	2.0																			●								
	CNMA160630	16.1	15.875	6.35	6.35	3.0																			○								
	CNMA190612	19.3	19.05	6.35	7.94	1.2																★	○		★								
	CNMA190616	19.3	19.05	6.35	7.94	1.6																	○	★		★							

★ Recommended grade (always stock available) ● Available grade (always stock available) ○ Make-to-order

General turning

Cemented carbide and cermet inserts

Applicable tool

DCLNR/L

Kr:95°



Page A164

PCBNR/L

Kr:75°



A171

PCLNR/L

Kr:95°



A172

PCLNR/L

Kr:95°



A214

Insert code key

A48-A49

Grade selection reference

A19/A34-A46

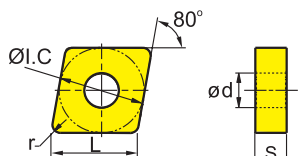
Chipbreaker selection reference

A22-A33

Recommended cutting parameters

A243-A245

CN ☐ ☐ (Negative inserts)



😊 Good working condition 😐 Normal working condition 😞 Bad working condition

Workpiece material	Material
P	Steel
M	Stainless steel
K	Cast iron
N	Non-ferrous metal
S	Heat resistant alloy, Ti alloy

A 10x10 grid of empty squares for drawing.

[illegible]

★ Recommended grade (always stock available) ● Available grade (always stock available) ○ Make-to-order

Applicable tool



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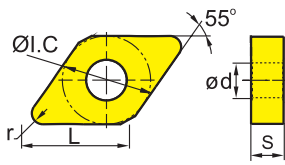


A172



A214

DN (Negative inserts)



P	Steel
M	Stainless steel
K	Cast iron
N	Non-ferrous metal
S	Heat resistant alloy, Ti alloy

😊 Good working condition 😐 Normal working condition 😞 Bad working condition

Inserts shape	Type	Dimensions(mm)					Coated cemented carbide																		Cermet	Coated cermet	Cemented carbide						
		L	ØI.C	S	ød	r	YBC151	YBC152	YBC251	YBC252	YBC351	YBC352	YBG102	YBG105	YBG202	YBG205	YBG302	YBM151	YBM153	YBM251	YBM253	YBD052	YBD102	YBD151	YBD152	YBD252	YNG151	YNG151C	YC10	YC40	YD051	YD101	YD201
DF  For finishing	DNMG110404-DF	11.6	9.525	4.76	3.81	0.4	○	●	○																		●						
	DNMG110408-DF	11.6	9.525	4.76	3.81	0.8	○	○	○																								
	DNMG110412-DF	11.6	9.525	4.76	3.81	1.2	○	○																									
	DNMG150404-DF	15.5	12.7	4.76	5.16	0.4	★	●	★																								
	DNMG150408-DF	15.5	12.7	4.76	5.16	0.8	★	●	★																								
	DNMG150412-DF	15.5	12.7	4.76	5.16	1.2	○		○																								
	DNMG150604-DF	15.5	12.7	6.35	5.16	0.4	●	★	●	★											○												
	DNMG150608-DF	15.5	12.7	6.35	5.16	0.8	★	●	○																								
	DNMG150612-DF	15.5	12.7	6.35	5.16	1.2			○																								
WGF  For finishing Wiper	DNMX110404-WGF	11.6	9.525	4.76	3.81	0.4	★												★		★												
	DNMX110408-WGF	11.6	9.525	4.76	3.81	0.8	★												★		★												
	DNMX150404-WGF	15.5	12.7	4.76	5.16	0.4	★												★		★												
	DNMX150408-WGF	15.5	12.7	4.761	5.16	0.8	★												★		★												
	DNMX150604-WGF	15.5	12.7	6.35	5.16	0.4	★												★		★												
	DNMX150608-WGF	15.5	12.7	6.35	5.16	0.8	★												★		★												

★ Recommended grade (always stock available) ● Available grade (always stock available) ○ Make-to-order

Applicable tool



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A173

A174

A215

A216

Insert code key

A48-A49

Grade selection reference

A19/A34-A46

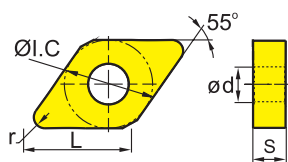
Chipbreaker selection reference

A22-A33

Recommended cutting parameters

A243-A245

DN ☐ ☐ (Negative inserts)



😊 Good working condition 😐 Normal working condition 😞 Bad working condition

Workpiece material	Color
P Steel	Blue
M Stainless steel	Yellow
K Cast iron	Red
N Non-ferrous metal	Green
S Heat resistant alloy, Ti alloy	Orange

The heatmap consists of a 10x10 grid of smiley faces. The sentiment scores are represented by the following faces:

- Row 1:** 10 blue faces (worst sentiment).
- Row 2:** 10 yellow faces (neutral sentiment).
- Row 3:** 10 orange faces (positive sentiment).
- Row 4:** 10 orange faces (positive sentiment).
- Row 5:** 10 orange faces (positive sentiment).
- Row 6:** 10 orange faces (positive sentiment).
- Row 7:** 10 orange faces (positive sentiment).
- Row 8:** 10 orange faces (positive sentiment).
- Row 9:** 10 orange faces (positive sentiment).
- Row 10:** 10 orange faces (positive sentiment).

[illegible]

★Recommended grade (always stock available) ●Available grade (always stock available) ○Make-to-order

Applicable tool



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A174

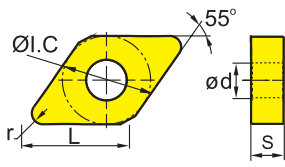


A215



A216

DN (Negative inserts)



P	Steel
M	Stainless steel
K	Cast iron
N	Non-ferrous metal
S	Heat resistant alloy, Ti alloy

😊 Good working condition 😐 Normal working condition 😞 Bad working condition

Inserts shape	Type	Dimensions(mm)					Coated cemented carbide															Cermert	Coated cermert	Cemented carbide									
		L	ØI.C	S	ød	r	YBC151	YBC152	YBC251	YBC252	YBC351	YBC352	YBG102	YBG105	YBG202	YBG205	YBG302	YBM151	YBM153	YBM251	YBM253			YBD052	YBD102	YBD151	YBD152	YBD252	YNG151	YNG151C	YC10	YC40	YD051
WGM  For semi-finishing Wiper	DNMX150408-WGM	15.5	12.7	4.76	5.16	0.8				★					★									★									
	DNMX150412-WGM	15.5	12.7	4.76	5.161	1.2				★					★										★								
	DNMX150608-WGM	15.5	12.7	6.35	5.16	0.8				★					★										★								
	DNMX150612-WGM	15.5	12.7	6.35	5.16	1.2				★					★										★								
PM  For semi-finishing	DNMG110404-PM	11.6	9.525	4.76	3.81	0.4	●	●	○															●									
	DNMG110408-PM	11.6	9.525	4.76	3.81	0.8	●	●	○	○														★	○	○							
	DNMG110412-PM	11.6	9.525	4.76	3.81	1.2			○	○																							
	DNMG150404-PM	15.5	12.7	4.76	5.16	0.4		●	●	○																							
	DNMG150408-PM	15.5	12.7	4.76	5.16	0.8	●	●	●	○	○													★	★	○							
	DNMG150412-PM	15.5	12.7	4.76	5.16	1.2			●	○		○												○	★	○							
	DNMG150416-PM	15.5	12.7	4.76	5.16	1.6			○	○																							
	DNMG150604-PM	15.5	12.7	6.35	5.16	0.4		●	●	○	○													★	★								
	DNMG150608-PM	15.5	12.7	6.35	5.16	0.8	●	○	●	★	●													★	★	○							
	DNMG150612-PM	15.5	12.7	6.35	5.16	1.2		★	●	★	○													★	○								
	DNMG150616-PM	15.5	12.7	6.35	5.16	1.6			○	○																							

★ Recommended grade (always stock available) ● Available grade (always stock available) ○ Make-to-order

Applicable tool

DDJNR/L
Kr:93°

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PDJNR/L
Kr:93°

A173

PDNNR/L
Kr:63°

A174

PDSNR/L
Kr:62°30'

A215

PDUNR/L
Kr:93°

A216

Insert code key

A48-A49

Grade selection reference

A19/A34-A46

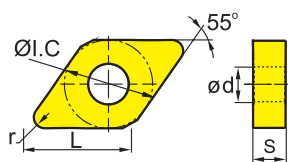
Chipbreaker selection reference

A22-A33

Recommended cutting parameters

A243-A245

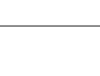
DN ☐ ☐ (Negative inserts)



😊 Good working condition 😐 Normal working condition 😞 Bad working condition

Workpiece material	Color
P Steel	Blue
M Stainless steel	Yellow
K Cast iron	Red
N Non-ferrous metal	Green
S Heat resistant alloy, Ti alloy	Orange

[illegible]

Inserts shape	Type	Dimensions(mm)					Coated cemented carbide																Cermetal	Coated cermet	Cemented carbide									
		L	ØI.C	S	ød	r	YBC151	YBC152	YBC251	YBC252	YBC351	YBC352	YBG102	YBG105	YBG202	YBG205	YBG302	YBM151	YBM153	YBM251	YBM253	YBD052			YBD102	YBD151	YBD152	YBD252	YNG151	YNG151C	YC10	YC40	YD051	YD101
DM  For semi-finishing	DNMG110404-DM	11.6	9.525	4.76	3.81	0.4	●	●	○										○															
	DNMG110408-DM	11.6	9.525	4.76	3.81	0.8	★	●	★	○										●														
	DNMG110412-DM	11.6	9.525	4.76	3.81	1.2	○		○																									
	DNMG150404-DM	15.5	12.7	4.76	5.16	0.4	○	●	★																		○							
	DNMG150408-DM	15.5	12.7	4.76	5.16	0.8	★	●	★																		●							
	DNMG150412-DM	15.5	12.7	4.76	5.16	1.2	★	○	★																									
	DNMG150416-DM	15.5	12.7	4.76	5.16	1.6				○																								
	DNMG150604-DM	15.5	12.7	6.35	5.16	0.4	★	●	★	○										●							●							
	DNMG150608-DM	15.5	12.7	6.35	5.16	0.8	★	●	★	●										●														
	DNMG150612-DM	15.5	12.7	6.35	5.16	1.2	●	●	★	○																								
	DNMG150616-DM	15.5	12.7	6.35	5.16	1.6	○	○	○																									
EM  For semi-finishing	DNMG110404-EM	11.6	9.525	4.76	3.81	0.4								○	★				★															
	DNMG110408-EM	11.6	9.525	4.76	3.81	0.8									○	★				★														
	DNMG110412-EM	11.6	9.525	4.76	3.81	1.2									○	★				★														
	DNMG150404-EM	15.5	12.7	4.76	5.16	0.4									●	★				★														
	DNMG150408-EM	15.5	12.7	4.76	5.16	0.8									●	★				★														
	DNMG150412-EM	15.5	12.7	4.76	5.16	1.2									○	★				★														
	DNMG150604-EM	15.5	12.7	6.35	5.16	0.4						○		●	★					★														
	DNMG150608-EM	15.5	12.7	6.35	5.16	0.8									●	★				★														
	DNMG150612-EM	15.5	12.7	6.35	5.16	1.2									○	★				★														
NM  For semi-finishing	DNMG150412-NM	15.5	12.7	4.76	5.16	1.2						○	★																		○			
	DNMG150612-NM	15.5	12.7	6.35	5.16	1.2							●	★																	○			

★ Recommended grade (always stock available) ● Available grade (always stock available) ○ Make-to-order

Applicable tool



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A173



A174

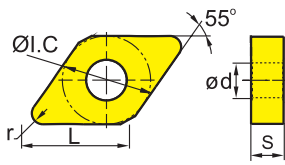


A215



A216

DN (Negative inserts)



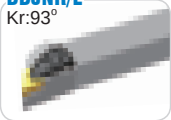
P	Steel
M	Stainless steel
K	Cast iron
N	Non-ferrous metal
S	Heat resistant alloy, Ti alloy

😊 Good working condition 😐 Normal working condition 😞 Bad working condition

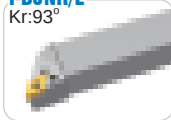
Inserts shape	Type	Dimensions(mm)					Coated cemented carbide															Cermet	Coated cermet	Cemented carbide											
		L	ØI.C	S	ød	r	YBC151	YBC152	YBC251	YBC252	YBC351	YBC352	YBG102	YBG105	YBG202	YBG205	YBG302	YBM151	YBM153	YBM251	YBM253	YBD052	YBD102	YBD151	YBD152	YBD252	YNG151	YNG151C	YC10	YC40	YD051	YD101	YD201		
 Light-load roughing	DNMM150608-LR	15.5	12.7	6.35	5.16	0.8				★																									
	DNMM150612-LR	15.5	12.7	6.35	5.16	1.2				★																									
	DNMM150616-LR	15.5	12.7	6.35	5.16	1.6				★																									
 For light roughing	DNMG150408-DR	15.5	12.7	4.76	5.16	0.8				○																									
	DNMG150412-DR	15.5	12.7	4.76	5.16	1.2				○																									
	DNMG150416-DR	15.5	12.7	4.76	5.16	1.6				○	○																								
	DNMG150608-DR	15.5	12.7	6.35	5.16	0.8		★	○	○	○													●		●									
	DNMG150612-DR	15.5	12.7	6.35	5.16	1.2		○	●	★	○													○		●									
	DNMG150616-DR	15.5	12.7	6.35	5.16	1.6					○															○									
 For roughing	DNMM150608-DR	15.5	12.7	6.35	5.16	0.8		○	○																										
	DNMM150612-DR	15.5	12.7	6.35	5.16	1.2		○	●																										
	DNMM150616-DR	15.5	12.7	6.35	5.16	1.6					○																								
 For roughing	DNMG150608-ER	15.5	12.7	6.35	5.16	0.8																★													
	DNMG150612-ER	15.5	12.7	6.35	5.16	1.2																★													
 For roughing	DNMM150608-ER	15.5	12.7	6.35	5.16	0.8																★													
	DNMM150612-ER	15.5	12.7	6.35	5.16	1.2																★													

★ Recommended grade (always stock available) ● Available grade (always stock available) ○ Make-to-order

Applicable tool

DDJNR/L
Kr:93°

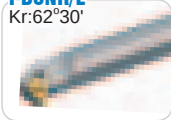
Page A165

PDJNR/L
Kr:93°

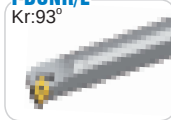
A173

PDNNR/L
Kr:63°

A174

PDSNR/L
Kr:62°30'

A215

PDUNR/L
Kr:93°

A216

Insert code key

A48-A49

Grade selection reference

A19/A34-A46

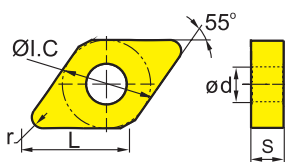
Chipbreaker selection reference

A22-A33

Recommended cutting parameters

A243-A245

DN ☐ ☐ (Negative inserts)



😊 Good working condition 😐 Normal working condition 😞 Bad working condition

Workpiece material	Color
P Steel	Blue
M Stainless steel	Yellow
K Cast iron	Red
N Non-ferrous metal	Green
S Heat resistant alloy, Ti alloy	Orange

A 10x10 grid of empty squares for drawing.

Inserts shape	Type	Dimensions(mm)					Coated cemented carbide																Cermel	Coated cermel	Cemented carbide									
		L	Ø.L.C	S	ød	r	YBC151	YBC152	YBC251	YBC252	YBC351	YBC352	YBG102	YBG105	YBG202	YBG205	YBG302	YBM151	YBM153	YBM251	YBM253	YBD052			YBD102	YBD151	YBD152	YBD252	YNG151	YNG151C	YC10	YC40	YD051	YD101
 All round	DNMG150604	15.5	12.7	6.35	5.16	0.4			○																									
	DNMG150608	15.5	12.7	6.35	5.16	0.8			○																									
	DNMG150612	15.5	12.7	6.35	5.16	1.2			○																									
	DNMG150616	15.5	12.7	6.35	5.16	1.6			○																									
	DNMG190608	19.3	15.875	6.35	7.94	0.8			○																									
	DNMG190612	19.3	15.875	6.35	7.94	1.2			○		○																			○				
 Without chipbreaker	DNMA110416	11.6	9.525	4.76	3.81	1.6																				○								
	DNMA110424	11.6	9.525	4.76	3.81	2.4																				○								
	DNMA150404	15.5	12.7	4.76	5.16	0.4																				○								
	DNMA150408	15.5	12.7	4.76	5.16	0.8																												
	DNMA150604	15.5	12.7	6.35	5.16	0.4																				○	○	○	○					
	DNMA150608	15.5	12.7	6.35	5.16	0.8																				○	★	●	★			○		
	DNMA150612	15.5	12.7	6.35	5.16	1.2																				○	○		○					
	DNMA150616	15.5	12.7	6.35	5.16	1.6																				○	○	○						

★ Recommended grade (always stock available) ● Available grade (always stock available) ○ Make-to-order

Applicable tool



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A173



A174

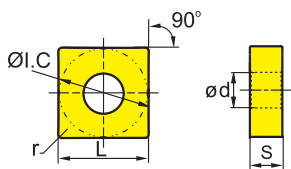


A215



A216

SN ☐ ☐ (Negative inserts)



😊 Good working condition 😐 Normal working condition 😞 Bad working condition

[illegible]

Inserts shape	Type	Dimensions(mm)					Coated cemented carbide																Cermetal	Coated cermet	Cemented carbide								
		L	Ø.I.C	S	ød	r	YBC151	YBC152	YBC251	YBC252	YBC351	YBC352	YBG102	YBG105	YBG202	YBG205	YBG302	YBM151	YBM153	YBM251	YBM253	YBD052			YBD102	YBD151	YBD152	YBD252	YNG151	YNG151C	YC10	YC40	YD051
 For finishing	SNMG090304-DF	9.525	9.525	3.18	3.81	0.4	○																										
	SNMG090308-DF	9.525	9.525	3.18	3.81	0.8	○																										
	SNMG120404-DF	12.7	12.7	4.76	5.16	0.4	○																										
	SNMG120408-DF	12.7	12.7	4.76	5.16	0.8	○	●	○																		○						
	SNMG120412-DF	12.7	12.7	4.76	5.16	1.2	○		○																								
 For finishing	SNMG090304-EF	9.525	9.525	3.18	3.81	0.4								○	★			★															
	SNMG090308-EF	9.525	9.525	3.18	3.81	0.8								○	★			★															
	SNMG090312-EF	9.525	9.525	3.18	3.81	1.2								○	★			★															
	SNMG120404-EF	12.7	12.7	4.76	5.16	0.4								●	★			★															
	SNMG120408-EF	12.7	12.7	4.76	5.16	0.8								●	★			★															
	SNMG120412-EF	12.7	12.7	4.76	5.16	1.2								○	★			★															
	SNMG150608-EF	15.875	15.875	6.35	6.35	0.8								○	★			★															
	SNMG150612-EF	15.875	15.875	6.35	6.35	1.2								○	★			★															
 For finishing	SNMG090304-SF	9.525	9.525	3.18	3.81	0.4							○													○	★						
	SNMG090308-SF	9.525	9.525	3.18	3.81	0.8							○													○	★						
	SNMG120404-SF	12.7	12.7	4.76	5.16	0.4							○													○	★						
	SNMG120408-SF	12.7	12.7	4.76	5.16	0.8							○													○	★						
	SNMG120412-SF	12.7	12.7	4.76	5.16	1.2							○													○							
	SNMG150608-SF	15.875	15.875	6.35	6.35	0.8							○													○							

★ Recommended grade (always stock available) ● Available grade (always stock available) ○ Make-to-order

Applicable tool



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A175



A176



A177



A178



A217

Insert code key

A48–A49

Grade selection reference

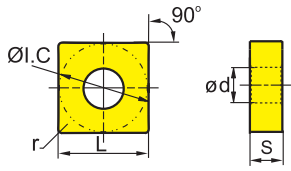
A19/A34–A46

Chipbreaker selection reference

A22-A33

Recommended cutting parameters

A243–A245

SN (Negative inserts)

P Steel
M Stainless steel
K Cast iron
N Non-ferrous metal
S Heat resistant alloy, Ti alloy

😊 Good working condition 😐 Normal working condition 😞 Bad working condition

Inserts shape	Type	Dimensions(mm)					Coated cemented carbide																		Cermet	Coated cermet	Cemented carbide							
		L	ØI.C	S	ød	r	YBC151	YBC152	YBC251	YBC252	YBC351	YBC352	YBG102	YBG105	YBG202	YBG205	YBG302	YBM151	YBM153	YBM251	YBM253	YBD052	YBD102	YBD151	YBD152	YBD252	YNG151	YNG151C	YC10	YC40	YD051	YD101	YD201	
 For semi-finishing	SNMG120404-EM	12.7	12.7	4.76	5.16	0.4									●	★					★													
	SNMG120408-EM	12.7	12.7	4.76	5.16	0.8									●	★					★													
	SNMG120412-EM	12.7	12.7	4.76	5.16	1.2									●	★					★													
	SNMG120416-EM	12.7	12.7	4.76	5.16	1.6									○	★					★													
	SNMG150612-EM	15.875	15.875	6.35	6.35	1.2									●	★					★													
	SNMG150616-EM	15.875	15.875	6.35	6.35	1.6									○	★					★													
 For semi-finishing	SNMG120408-NM	12.7	12.7	4.76	5.16	0.8								●	★																		○	
	SNMG120412-NM	12.7	12.7	4.76	5.16	1.2								○	★																		○	
 Light-load roughing	SNMM120408-LR	12.9	12.7	4.76	5.16	0.8																												
	SNMM120412-LR	12.9	12.7	4.76	5.16	1.2																												
	SNMM120416-LR	12.9	12.7	4.76	5.16	1.6																												
	SNMM150612-LR	15.875	15.875	6.35	6.35	1.2																												
	SNMM150616-LR	15.875	15.875	6.35	6.35	1.6																												
	SNMM190612-LR	19.3	19.05	6.35	7.94	1.2																												
	SNMM190616-LR	19.3	19.05	6.35	7.94	1.6																												
	SNMM190624-LR	19.3	19.05	6.35	7.94	2.4																												
	SNMM250924-LR	25.79	25.4	9.525	9.12	2.4																												

★ Recommended grade (always stock available) ● Available grade (always stock available) ○ Make-to-order

General turning

Cemented carbide and cermet inserts

Applicable tool

DSBNR/L
Kr:75°

Page A166

PSBNR/L
Kr:75°

A175

PSDNN
Kr:45°

A176

PSKNR/L
Kr:75°

A177

PSSNR/L
Kr:45°

A178

PSKNR/L
Kr:75°

A217

Insert code key

A48-A49

Grade selection reference

A19/A34-A46

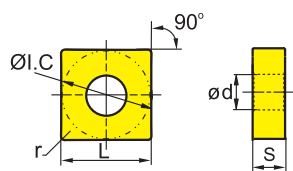
Chipbreaker selection reference

A22-A33

Recommended cutting parameters

A243-A245

SN ☐ ☐ (Negative inserts)



😊 Good working condition 😐 Normal working condition 😞 Bad working condition

Workpiece material	Material
P	Steel
M	Stainless steel
K	Cast iron
N	Non-ferrous metal
S	Heat resistant alloy, Ti alloy

A 10x10 grid of empty squares for drawing.

[illegible]

★ Recommended grade (always stock available) ● Available grade (always stock available) ○ Make-to-order

Applicable tool

DSBNR/L
Kr:75°



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PSBNR/L
Kr:75°



A175

PSDNN
Kr:45°



A176

PSKNR/L
Kr:75°

A177

PSSNR/L
Kr:45°

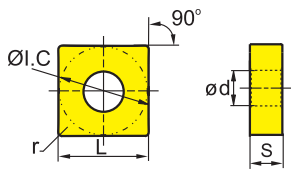


A178

PSKNR/L
Kr:75°

A217

SN ☐ ☐ (Negative inserts)



😊 Good working condition 😐 Normal working condition 😞 Bad working condition

Workpiece material	Material
P	Steel
M	Stainless steel
K	Cast iron
N	Non-ferrous metal
S	Heat resistant alloy, Ti alloy

[illegible][illegible]

★ Recommended grade (always stock available) ● Available grade (always stock available) ○ Make-to-order

Applicable tool



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A175



A176



A177



A178



A217

Insert code key

A48–A49

Grade selection reference

A19/A34–A46

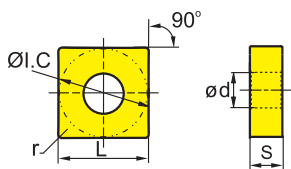
Chipbreaker selection reference

A22-A33

Recommended cutting parameters

A243–A245

SN (Negative inserts)



😊 Good working condition 😐 Normal working condition 😞 Bad working condition

Workpiece material	Color
P Steel	Blue
M Stainless steel	Yellow
K Cast iron	Red
N Non-ferrous metal	Green
S Heat resistant alloy, Ti alloy	Orange

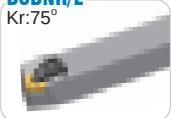
A 10x10 grid of empty squares for drawing.

[illegible]

★ Recommended grade (always stock available) ● Available grade (always stock available) ○ Make-to-order

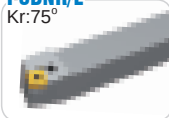
Applicable tool

DSBNR/L
Kr:75°



Page A166

PSBNR/L
Kr:75°

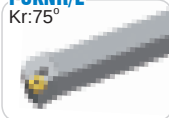


A175

PSDNN
Kr:45°

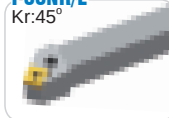


A176

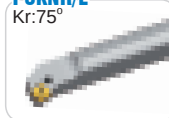
PSKNR/L
Kr:75°

A177

PSSNR/L
Kr:45°

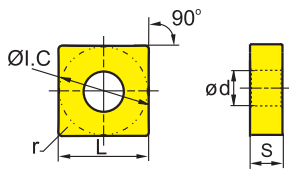


A178

PSKNR/L
Kr:75°

A217

SN ☐ ☐ (Negative inserts)



😊 Good working condition 😐 Normal working condition 😞 Bad working condition

Workpiece material	Material
P	Steel
M	Stainless steel
K	Cast iron
N	Non-ferrous metal
S	Heat resistant alloy, Ti alloy

[illegible]

★ Recommended grade (always stock available) ● Available grade (always stock available) ○ Make-to-order

Applicable tool



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A175



A176



A177



A178



A217

Insert code key

A48–A49

Grade selection reference

A19/A34–A46

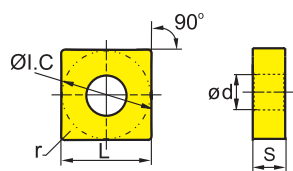
Chipbreaker selection reference

A22-A33

Recommended cutting parameters

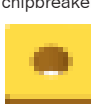
A243–A245

SN ☐ ☐ (Negative inserts)



😊 Good working condition 😐 Normal working condition 😞 Bad working condition

Workpiece material	Color
P Steel	Blue
M Stainless steel	Yellow
K Cast iron	Red
N Non-ferrous metal	Green
S Heat resistant alloy, Ti alloy	Orange

Inserts shape	Type	Dimensions(mm)					Coated cemented carbide																Cermel	Coated Cermel	Cemented carbide								
		L	ØI.C	S	ød	r	YBC151	YBC152	YBC251	YBC252	YBC351	YBC352	YBG102	YBG105	YBG202	YBG205	YBG302	YBM151	YBM153	YBM251	YBM253	YBD052			YBD102	YBD151	YBD152	YBD252	YNG151	YNG151C	YC10	YC40	YD051
All round 	SNMM190608	19.05	19.05	6.35	7.94	0.8			○																								
	SNMM190612	19.05	19.05	6.35	7.94	1.2			○																								
	SNMM190616	19.05	19.05	6.35	7.94	1.6																									●		
	SNMM250724	25.4	25.4	7.94	9.12	2.4			●		●														○								
	SNMM250924	25.4	25.4	9.525	9.12	2.4					○																						
Without chipbreaker 	SNMA090304	9.525	9.525	3.18	3.81	0.4																			○								
	SNMA090308	9.525	9.525	3.18	3.81	0.8																	○	○									
	SNMA120404	12.7	12.7	4.76	5.16	0.4																	○										
	SNMA120408	12.7	12.7	4.76	5.16	0.8																	○	★	●	★				○		●	
	SNMA120416	12.7	12.7	4.76	5.16	1.6																	○	○		★							
	SNMA150608	15.875	15.875	6.35	6.35	0.8																		○									
	SNMA150612	15.875	15.875	6.35	6.35	1.2																		○	★				●				
	SNMA190612	19.05	19.05	6.35	7.94	1.2																	○	○	●	★							
	SNMA190616	19.05	19.05	6.35	7.94	1.6																			★	●	★						

★Recommended grade (always stock available) ●Available grade (always stock available) ○Make-to-order

Applicable tool

DSBNR/L
Kr:75°



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PSBNR/L
Kr:75°

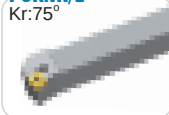


A175

PSDNN
Kr:45°

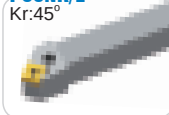


A176

PSKNR/L
Kr:75°

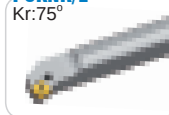
A177

PSSNR/L
Kr:45°



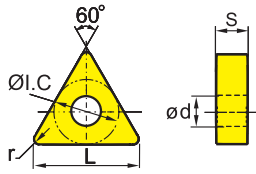
A178

PSKNR/L
Kr:75°



A217

TN (Negative inserts)



P Steel
M Stainless steel
K Cast iron
N Non-ferrous metal
S Heat resistant alloy, Ti alloy

😊 Good working condition 😐 Normal working condition 😞 Bad working condition

Inserts shape	Type	Dimensions(mm)					Coated cemented carbide															Cermet Coated cermet	Cemented carbide										
		L	ØI.C	S	ød	r	YBC151	YBC152	YBC251	YBC252	YBC351	YBC352	YBG102	YBG105	YBG202	YBG205	YBG302	YBM151	YBM153	YBM251	YBM253		YBD052	YBD102	YBD151	YBD152	YBD252	YNG151	YNG151C	YC10	YC40	YD051	YD101
 For finishing	TNMG160404-DF	16.5	9.525	4.76	3.81	0.4	★	●	★											○							●						
	TNMG160408-DF	16.5	9.525	4.76	3.81	0.8	★	○	★																		●						
	TNMG160412-DF	16.5	9.525	4.76	3.81	1.2		○	○	○																							
	TNMG220408-DF	22	12.7	4.76	5.16	0.8	★	○	○																								
	TNMG220412-DF	22	12.7	4.76	5.16	0.8		○																									
 For finishing Wiper	TNMX160404-WGF	16.5	9.525	4.76	3.81	0.4	★												★			★											
	TNMX160408-WGF	16.5	9.525	4.76	3.81	0.8	★												★			★											
 For finishing	TNMG110304-SF	11	6.35	3.18	2.26	0.4							○														○	★					
	TNMG160404-SF	16.5	9.525	4.76	3.81	0.4							○														○	★					
	TNMG160408-SF	16.5	9.525	4.76	3.81	0.8							○														○	★					
	TNMG220408-SF	22	12.7	4.76	5.16	0.8							○														○	★					
	TNMG220412-SF	22	12.7	4.76	5.16	1.2							○														○	★					

★ Recommended grade (always stock available) ● Available grade (always stock available) ○ Make-to-order

Applicable tool

DTGNR/L
Kr:91°

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PTFNR/L
Kr:91°

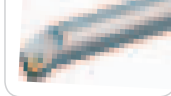
A179

PTTNR/L
Kr:60°

A180

PTGNR/L
Kr:90°

A181

PTFNR/L
Kr:90°

A218

Insert code key

A48-A49

Grade selection reference

A19/A34-A46

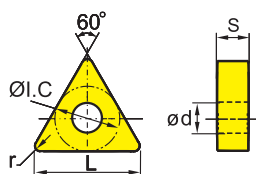
Chipbreaker selection reference

A22-A33

Recommended cutting parameters

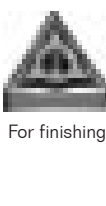
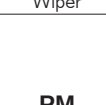
A243-A245

TN (Negative inserts)



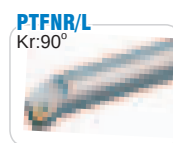
😊 Good working condition 😐 Normal working condition 😞 Bad working condition

Workpiece material	Color
P Steel	Blue
M Stainless steel	Yellow
K Cast iron	Red
N Non-ferrous metal	Green
S Heat resistant alloy, Ti alloy	Orange

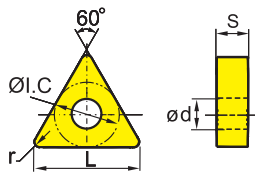
Inserts shape	Type	Dimensions(mm)					Coated cemented carbide																Cermetal	Coated cermet	Cemented carbide								
		L	ØI.C	S	ød	r	YBC151	YBC152	YBC251	YBC252	YBC351	YBC352	YBG102	YBG105	YBG202	YBG205	YBG302	YBM151	YBM153	YBM251	YBM253	YBD052			YBD102	YBD151	YBD152	YBD252	YNG151	YNG151C	YC10	YC40	YD051
 For finishing	TNMG110304-EF	11	6.35	3.18	2.26	0.4									○	★			★														
	TNMG110308-EF	11	6.35	3.18	2.26	0.8									○	★			★														
	TNMG160404-EF	16.5	9.525	4.76	3.81	0.4									●	★			★														
	TNMG160408-EF	16.5	9.525	4.76	3.81	0.8									●	★			★														
	TNMG160412-EF	16.5	9.525	4.76	3.81	1.2									○	★			★														
	TNMG220404-EF	22	12.7	4.76	5.16	0.4									○	★			★														
	TNMG220408-EF	22	12.7	4.76	5.16	0.8									○	★			★														
	TNMG220412-EF	22	12.7	4.76	5.16	1.2									○	★			★														
 For semi-finishing Wiper	TNMX160408-WGM	16.5	9.525	4.76	3.81	0.8				★					★											★							
	TNMX160412-WGM	16.5	9.525	4.76	3.81	1.2				★					★											★							
 For semi-finishing	TNMG110304-PM	11	6.35	3.18	2.26	0.4	★	●	○																								
	TNMG110308-PM	11	6.35	3.18	2.26	0.8	★	○	○																								
	TNMG160404-PM	16.5	9.525	4.76	3.81	0.4	★	●	★														★		★								
	TNMG160408-PM	16.5	9.525	4.76	3.81	0.8	★	●	★	●		○											★		★	★							
	TNMG160412-PM	16.5	9.525	4.76	3.81	1.2	★	●	○	○													★		★	○							
	TNMG220408-PM	22	12.7	4.76	5.16	0.8	★	●	○	●													★		○	○							
	TNMG220412-PM	22	12.7	4.76	5.16	1.2	●	★	●	○	○												○		○								
	TNMG220416-PM	22	12.7	4.76	5.16	1.6			○	○																○							

★ Recommended grade (always stock available) ● Available grade (always stock available) ○ Make-to-order

Applicable tool



TN (Negative inserts)



P	Steel
M	Stainless steel
K	Cast iron
N	Non-ferrous metal
S	Heat resistant alloy, Ti alloy

😊 Good working condition 😐 Normal working condition 😞 Bad working condition

Inserts shape	Type	Dimensions(mm)					Coated cemented carbide																Cermet	Coated cermet	Cemented carbide								
		L	ØI.C	S	ød	r	YBC151	YBC152	YBC251	YBC252	YBC351	YBC352	YBG102	YBG105	YBG202	YBG205	YBG302	YBM151	YBM153	YBM251	YBM253	YBD052	YBD102	YBD151	YBD152	YBD252	YNG151	YNG151C	YC10	YC40	YD051	YD101	YD201
 DM For semi-finishing	TNMG110308-DM	11	6.35	3.18	2.26	0.8	○	○																									
	TNMG160404-DM	16.5	9.525	4.76	3.81	0.4	★	●	★	○				○													●						
	TNMG160408-DM	16.5	9.525	4.76	3.81	0.8	★	●	★	●				●						●							○						
	TNMG160412-DM	16.5	9.525	4.76	3.81	1.2	○	○	★	○																							
	TNMG220404-DM	22	12.7	4.76	5.16	0.4	★	●	★	○										○													
	TNMG220408-DM	22	12.7	4.76	5.16	0.8	★	●	★	●										○							○						
	TNMG220412-DM	22	12.7	4.76	5.16	1.2	○	○	○	○																							
	TNMG220416-DM	22	12.7	4.76	5.16	1.6	○	○	○																								
 EM For semi-finishing	TNMG160404-EM	16.5	9.525	4.76	3.81	0.4								●	★					★													
	TNMG160408-EM	16.5	9.525	4.76	3.81	0.8								●	★						★												
	TNMG160412-EM	16.5	9.525	4.76	3.81	1.2								○	★						★												
	TNMG220408-EM	22	12.7	4.76	5.16	0.8								●	★						★												
	TNMG220412-EM	22	12.7	4.76	5.16	1.2								○	★						★												
	TNMG220416-EM	22	12.7	4.76	5.16	1.6								○	★						★												
 LR Light-load roughing	TNMM160408-LR	16.5	9.525	4.76	3.81	0.8				★																							
	TNMM160412-LR	16.5	9.525	4.76	3.81	1.2				★																							
	TNMM220408-LR	22	12.7	4.76	5.16	0.8				★																							
	TNMM220412-LR	22	12.7	4.76	5.16	1.2				★																							
	TNMM220416-LR	22	12.7	4.76	5.16	1.6				★																							

★ Recommended grade (always stock available) ● Available grade (always stock available) ○ Make-to-order

Applicable tool

DTGNR/L
Kr:91°

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PTFNR/L
Kr:91°

A179

PTTNR/L
Kr:60°

A180

PTGNR/L
Kr:90°

A181

PTFNR/L
Kr:90°

A218

Insert code key

A48-A49

Grade selection reference

A19/A34-A46

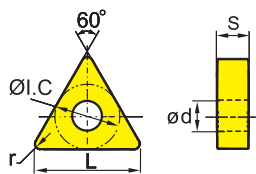
Chipbreaker selection reference

A22-A33

Recommended cutting parameters

A243-A245

TN (Negative inserts)



😊 Good working condition 😐 Normal working condition 😞 Bad working condition

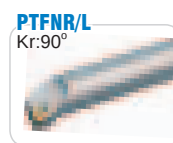
Workpiece material	Color
P Steel	Blue
M Stainless steel	Yellow
K Cast iron	Red
N Non-ferrous metal	Green
S Heat resistant alloy, Ti alloy	Orange

A 10x10 grid of empty squares for drawing.

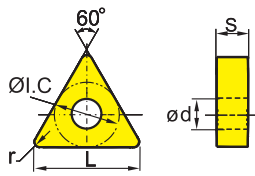
[illegible]

★Recommended grade (always stock available) ●Available grade (always stock available) ○Make-to-order

Applicable tool



TN (Negative inserts)



P Steel
M Stainless steel
K Cast iron
N Non-ferrous metal
S Heat resistant alloy, Ti alloy

😊 Good working condition 😐 Normal working condition 😞 Bad working condition

Inserts shape	Type	Dimensions(mm)					Coated cemented carbide																	Cermet	Coated cermet	Cemented carbide								
		L	ØI.C	S	ød	r	YBC151	YBC152	YBC251	YBC252	YBC351	YBC352	YBG102	YBG105	YBG202	YBG205	YBG302	YBM151	YBM153	YBM251	YBM253	YBD052	YBD102	YBD151	YBD152	YBD252	YNG151	YNG151C	YC10	YC40	YD051	YD101	YD201	
All round 	TNMG110308	11	6.35	3.18	2.26	0.8																		○										
	TNMG160404	16.5	9.525	4.76	3.81	0.4	○		●															●										
	TNMG160408	16.5	9.525	4.76	3.81	0.8	●	○	●															●										
	TNMG160412	16.5	9.525	4.76	3.81	1.2	●		●	○											○				○									
	TNMG220404	22	12.7	4.76	5.16	0.4	○		●		○													●										
	TNMG220408	22	12.7	4.76	5.16	0.8	○		●		○										○				○					○				
	TNMG220412	22	12.7	4.76	5.16	1.2	●		●		○													●						○				
	TNMG220416	22	12.7	4.76	5.16	1.6																			●									
	TNMG270612	27.5	15.875	6.35	6.35	1.2			●		●														○						○			
	TNMG270616	27.5	15.875	6.35	6.35	1.6			○		○																							
	TNMG330916	33	19.05	9.525	7.94	1.6						●																						
	TNMG330924	33	19.05	9.525	7.94	2.4	○	○		●																								

★ Recommended grade (always stock available) ● Available grade (always stock available) ○ Make-to-order

General turning

Cemented carbide and cermet inserts

Applicable tool

DTGNR/L
Kr:91°

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PTFNR/L
Kr:91°

A179

PTTNR/L
Kr:60°

A180

PTGNR/L
Kr:90°

A181

PTFNR/L
Kr:90°

A218

Insert code key

A48-A49

Grade selection reference

A19/A34-A46

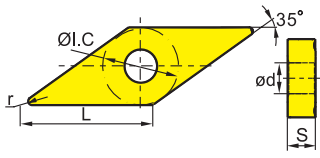
Chipbreaker selection reference

A22-A33

Recommended cutting parameters

A243-A245

VN (Negative inserts)



P	Steel
M	Stainless steel
K	Cast iron
N	Non-ferrous metal
S	Heat resistant alloy, Ti alloy

😊 Good working condition 😐 Normal working condition 😞 Bad working condition

Inserts shape	Type	Dimensions(mm)					Coated cemented carbide																Cermet	Coated cermet	Cemented carbide								
		L	ØI.C	S	ød	r	YBC151	YBC152	YBC251	YBC252	YBC351	YBC352	YBG102	YBG105	YBG202	YBG205	YBG302	YBM151	YBM153	YBM251	YBM253	YBD052	YBD102	YBD151	YBD152	YBD252	YNG151	YNG151C	YC10	YC40	YD051	YD101	YD201
 For finishing	VNMG160404-DF	16.6	9.525	4.76	3.81	0.4	★	●	★											●													
	VNMG160408-DF	16.6	9.525	4.76	3.81	0.8	★	○	○																								
 For finishing	VNMG160404-EF	16.6	9.525	4.76	3.81	0.4									○	★			★														
	VNMG160408-EF	16.6	9.525	4.76	3.81	0.8									○	★			★														
	VNMG160412-EF	16.6	9.525	4.76	3.81	1.2									○	★			★														
 For finishing	VNEG160404-NF	16.6	9.525	4.76	3.81	0.4							○	★																			○
	VNEG160408-NF	16.6	9.525	4.76	3.81	0.8							○	★																			○
 For finishing	VNMG160404-SF	16.6	9.525	4.76	3.81	0.4							○														○	★					
	VNMG160408-SF	16.6	9.525	4.76	3.81	0.8							○														○						

★ Recommended grade (always stock available) ● Available grade (always stock available) ○ Make-to-order

General turning

Cemented carbide and cermet inserts

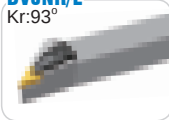
Applicable tool

DVVNN
Kr:72°30'



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DVJNR/L
Kr:93°



A169

Insert code key

A48-A49

Grade selection reference

A19/A34-A46

Chipbreaker selection reference

A22-A33

Recommended cutting parameters

A243-A245