

# Lathe Tools: ISO Turning Inserts >



# LATHE TOOLS

# ZCC-CT Insert Grade Guide

ISO		General Turning										Threading		Parting & Grooving		
		Coating														
		CVD					PVD									
P	STEEL	P01	YB6315	YBC152								PVD	CVD	PVD	CVD	PVD
P10			YEC251	YBC252												
P20			YBC351	YBC352												
P30																
P40																
HARDENED MATERIAL	NONE FERROUS MATERIALS	M01	YB1153				YBG105									
	HEAT RESISTANCE STEEL	M10					YBG202	YBG205	YB9302	YB9315						
		M20														
		M30														
		M40														
CAST IRON	K01	K01	YBD052	YBD102												
	K10	K10	YBD152	YBD152C	YB7315	YB7305										
	K20	K20														
	K30	K30														
STAINLESS STEEL	N01	N01	YBG102													
	N10	N10														
	N20	N20	YBG105	YBG202	YBG205	YBG205										
	N30	N30														
None Ferrous Materials	S01	S01	YBG200	YBG102			YNT251									
	S10	S10														
	S20	S20	YBG202													
	S30	S30	YBG205													

## LATHE TOOLS



# ZCC-CT Turning Inserts Overview

MILLING

INDEXABLE MILLING

HOLE MAKING

LATHE TOOLS

THREAD MAKING

TOOL HOLDING

WORK HOLDING

METROLOGY

LUBRICANTS

MISCELLANEOUS

**- NEGATIVE INSERT**

&gt; Finishing

**DF****- NEGATIVE INSERT**

Chip breaker for finishing and semi-finishing of steel and stainless steel.



&gt; Finishing

**ADF****- NEGATIVE INSERT**

Optimised geometry for finishing and semi-finishing of steel and stainless steel.



&gt; Finishing

**EF****- NEGATIVE INSERT**

Sharp and positive cutting edge for finishing and semi-finishing of austenitic stainless steel, soft steel, low carbon steel and heat resistant super alloy. Suitable for continuous to light interrupted cut.



&gt; Wiper

**WG****- NEGATIVE INSERT**

Good surface finishing and high feed rate due to wiper technology. For finishing and semi-finishing of steel, stainless steel or cast iron.



&gt; Medium

**DM****- NEGATIVE INSERT**

Main chip breaker for medium machining with continuous or interrupted cut of steel and stainless steel.



&gt; Medium

**PM****- NEGATIVE INSERT**

Universal chip breaker with stable cutting edge. Suitable for medium machining also with interrupted cut especially for cast iron and steel.



&gt; Medium

**TC****- NEGATIVE INSERT**

Stable cutting edge and middle field for high performance cutting of cast iron and alloy steel. Optimised rake angle and T-Land reduce cutting force and strengthen the wear resistance.





## - NEGATIVE INSERT

> Medium



**NM**

### - NEGATIVE INSERT



Sharp cutting edge with positive multi-rakeangle. Special for the semi finishing of heat resistant super alloys.



> Medium



**EM**

### - NEGATIVE INSERT



Sharp and stable cutting edge for semi finishing of sticky material and austenitic stainless steel. Suitable also for interrupted cut.



> Medium



**EG**

### - NEGATIVE INSERT



Universal chip breaker with deep rounded chip groove and sharp cutting edge. Finishing to medium cutting with very good chip control over a wide range of applications.



> Medium



**XM**

### - NEGATIVE INSERT



Double-sided chip breaker for semi-roughing in the P application range. Excellent chip control at high and low feed



> Medium



**TK**

### - NEGATIVE INSERT (Single sided)



Double-sided chip breaker for semi-roughing in the K application range. Outstanding combination of cutting edge sharpness and impact resistance.



> Roughing



**SNR**

### - NEGATIVE INSERT



Double sided chip breaker for roughing. Wide range of application due to excellent balance of sharpness and cutting edge stability.



> Roughing



**DR**

### - NEGATIVE INSERT (Double sided)



Positive chip breaker with strong cutting edge for light to medium rough machining of steel and cast iron.



> Roughing



**ER**

### - NEGATIVE INSERT (Double sided)



Chip breaker with positive geometry for low cutting force. Suitable for roughing operation of stainless steel and steel.



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# ZCC-CT Turning Inserts Overview

**- NEGATIVE INSERTS**

&gt; Roughing

**FLAT****-- NEGATIVE INSERT****K**

Flat insert without chip breaker. Stable insert with high edge strength for roughing operation in cast iron materials.



&gt; CBN &amp; PKD

**FLAT****- NEGATIVE INSERT****N**

For machining of hardened materials and cast iron (CBN). Special grades: For machining of non-ferrous metals (e.g. Aluminium) and non-metal materials (PCD)

**- POSITIVE INSERTS**

&gt; Fine Finishing

**USF****- POSITIVE INSERT****P****M**

For super finishing: Insert in G tolerance with sharp cutting edge. Suitable for super finishing of small components.



&gt; Fine Finishing

**SF****- POSITIVE INSERT****P****M****K**

Special chip breaker in combination with cermet grades. Sharp cutting edge with excellent chip control. For high surface finishing and precision machining.



&gt; Finishing

**HF****- POSITIVE INSERT****P****M****K**

Chip breaker for finishing and semi-finishing of steel and cast iron. Especially for internal machining.



&gt; Finishing

**AHF****- POSITIVE INSERT****P****M**

Optimized geometry series for finishing and semi-finishing of steel and stainless steel.



&gt; Finishing

**EF****- POSITIVE INSERT****M****S**

Sharp, positive cutting edge for finishing and semi-finishing of austenitic stainless steel, soft steel and low carbon steel.





## - POSITIVE INSERTS

> Finishing

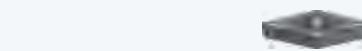


**NF**

### - POSITIVE INSERT



Chip breaker with sharp and positive cutting edge. NF combined with Grade YBG102/YBG105 is the best solution for finishing of heat resistance super alloys (Ni-based, Fe-based and Co based material).



> Medium



**HM**

### - POSITIVE INSERT



Chip breaker for medium machining of steel or cast iron. Suitable for internal and external turning.



> Medium



**EM**

### - POSITIVE INSERT



Sharp & strong cutting edge for semi finishing of sticky steel and austentic stainless steel.



> Roughing



**HR**

### - POSITIVE INSERT



Chip breaker with strong cutting edge for light to medium rough machining of steel stainless steel and cast iron. Suitable for internal and external machining.



> Aluminium Machining



**LC**

### - POSITIVE INSERT



Unique chip breaker design, with sharp cutting edge and positive rake angle. Special edge preparation and surface treatment for better chip control, less friction, less vibration and good surface quality. G-Tolerance inserts for better repeatability.



> Aluminium Machining



**LH**

### - POSITIVE INSERT



Chip breaker for aluminum alloy and non ferrous metal machining G tolerance insert with large rake angle, surface polishing treatment, effectively preventing build up edge and getting high quality machining surface and long tool life.



> CBN & PKD



**FLAT**

### - POSITIVE INSERT



Special inserts G tolerance with brazed CBN or PCD Tip. CBN suitable for finishing of hardened component and cast iron. PCD suitable for finishing of non ferrous metal and non metal materials.



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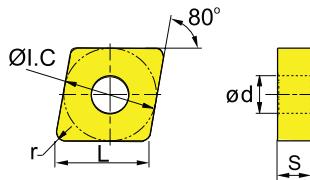
WORK HOLDING

METROLOGY

LUBRICANTS

MISCELLANEOUS

**CN\*\*****-NEGATIVE INSERT**



Legend:

- Ideal Machining Condition (Open circle)
- Normal Machining Condition (Crossed circle)
- Unfavourable Machining Condition (Solid circle)

**Insert Types and Coatings:**

Insert	Type	£	Dimensions (mm)					CVD Coating						PVD Coating			Cermet	Cermet Coated	Uncoated	Carbide				
			L	I.C.	S	d	r	YB6315	YBC152	YBC103	YBC252	YBC251	YBC352	YBC351	YBM153	YBM253					YBD052	YBD102	YBT7305	YBT7315
<b>DF</b> 	CNMG090304-DF	3.28	9.7	9.525	3.18	3.81	0.4	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●		
	CNMG090308-DF	3.28	9.7	9.525	3.18	3.81	0.8	●	○	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
	CNMG120404-DF	5.11	12.9	12.7	4.76	5.16	0.4	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
	CNMG120408-DF	5.11	12.9	12.7	4.76	5.16	0.8	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
	CNMG120412-DF	5.11	12.9	12.7	4.76	5.16	1.2	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
<b>Finishing</b>	ADF	CNMG120404-ADF	5.11	12.9	12.7	4.76	5.16	0.4	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
	Finishing	CNMG120408-ADF	5.11	12.9	12.7	4.76	5.16	0.8	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
	Finishing	CNMG120412-ADF	5.11	12.9	12.7	4.76	5.16	1.2	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
	<b>EF</b> 	CNMG090304-EF	3.28	9.7	9.525	3.18	3.81	0.4	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
		CNMG090308-EF	3.28	9.7	9.525	3.18	3.81	0.8	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
CNMG120404-EF		5.11	12.9	12.7	4.76	5.16	0.4	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	
CNMG120408-EF		5.11	12.9	12.7	4.76	5.16	0.8	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	
CNMG120412-EF		5.11	12.9	12.7	4.76	5.16	1.2	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	
<b>WG</b> 	WG	CNMG120404-WG	5.11	12.9	12.7	4.76	5.16	0.4	○	○	○	○	○	○	○	○	○	○	○	○	○	○		
	Wiper	CNMG120408-WG	5.11	12.9	12.7	4.76	5.16	0.8	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
	Wiper	CNMG120412-WG	5.11	12.9	12.7	4.76	5.16	1.2	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
	<b>DM</b> 	DM	CNMG090304-DM	3.28	9.7	9.525	3.18	3.81	0.4	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
		Medium Cutting	CNMG090308-DM	3.28	9.7	9.525	3.18	3.81	0.8	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Medium Cutting		CNMG090312-DM	3.28	9.7	9.525	3.18	3.81	1.2	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	
Medium Cutting		CNMG120404-DM	5.11	12.9	12.7	4.76	5.16	0.4	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
Medium Cutting		CNMG120408-DM	5.11	12.9	12.7	4.76	5.16	0.8	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	
Medium Cutting		CNMG120412-DM	5.11	12.9	12.7	4.76	5.16	1.2	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	
Medium Cutting		CNMG160608-DM	8.31	16.1	15.875	6.35	6.35	0.8	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	
Medium Cutting		CNMG160612-DM	8.31	16.1	15.875	6.35	6.35	1.2	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
Medium Cutting		CNMG160616-DM	8.31	16.1	15.875	6.35	6.35	1.6	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
Medium Cutting		CNMG190608-DM	10.37	19.3	19.05	6.35	7.94	0.8	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
Medium Cutting	CNMG190612-DM	10.37	19.3	19.05	6.35	7.94	1.2	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●		
Medium Cutting	CNMG190616-DM	10.37	19.3	19.05	6.35	7.94	1.6	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○		

**Holder**

Page	281	286	285	303	304	314
DCLNR/L 95°						



## CN\*\*

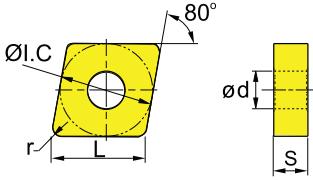
## - NEGATIVE INSERT

Insert	Type	f	Dimensions (mm)					CVD Coating					PVD Coating					
PM Medium Cutting	CNMG090304-PM	3.28	9.7	9.525	3.18	3.81	0.4	YB6315 YBC152 YBC103 YBC252 YBC352 YBC351	● ●	● ●	● ●	● ●	YBM153 YBM253 YBD052 YBD102 YB7305 YB7315 YBD152 YBD152C	● ●	● ●	● ●	● ●	● ●
	CNMG090308-PM	3.28	9.7	9.525	3.18	3.81	0.8		● ●	● ●	● ●	● ●						
	CNMG120404-PM	5.11	12.9	12.7	4.76	5.16	0.4		● ● ●	○	● ●	● ●						
	CNMG120408-PM	5.11	12.9	12.7	4.76	5.16	0.8		● ● ●	● ○	● ●	● ●						
	CNMG120412-PM	5.11	12.9	12.7	4.76	5.16	1.2		● ● ○	○ ○	● ●	● ●						
	CNMG120416-PM	5.11	12.9	12.7	4.76	5.16	1.6		● ● ○ ○	○ ○	● ●	● ●						
	CNMG160608-PM	8.31	16.1	15.875	6.35	6.35	0.8		● ● ●	● ●	○ ○ ○	○ ○ ○						
	CNMG160612-PM	8.31	16.1	15.875	6.35	6.35	1.2		● ● ●	● ●	○ ○ ○	● ●						
	CNMG160616-PM	8.31	16.1	15.875	6.35	6.35	1.6		● ● ●	● ●	● ○ ○	○ ○ ○						
	CNMG190608-PM	10.37	19.3	19.05	6.35	7.94	0.8		● ● ●	● ●								
TC Medium Cutting	CNMG190612-PM	10.37	19.3	19.05	6.35	7.94	1.2		● ● ○	○ ○	○ ○ ○	● ●						
	CNMG190616-PM	10.37	19.3	19.05	6.35	7.94	1.6		○ ○ ○	○ ○ ○	○ ○ ○	○ ○ ○						
	CNMG120404-TC	5.11	12.9	12.7	4.76	5.16	0.4				● ●	● ●						
	CNMG120408-TC	5.11	12.9	12.7	4.76	5.16	0.8				● ●	● ●						
	CNMG120412-TC	5.11	12.9	12.7	4.76	5.16	1.2				● ●	● ●						
	CNMG120416-TC	5.11	12.9	12.7	4.76	5.16	1.6				● ●	● ●						
	CNMG160608-TC	8.31	16.1	15.875	6.35	6.35	0.8				● ●	● ●						
NM Medium Cutting	CNMG160612-TC	8.31	16.1	15.875	6.35	6.35	1.2				● ●	● ●						
	CNMG160616-TC	8.31	16.1	15.875	6.35	6.35	1.6				● ●	● ●						
	CNMG120404-NM	5.11	12.9	12.7	4.76	5.16	0.4				○ ○	● ●						
	CNMG120408-NM	5.11	12.9	12.7	4.76	5.16	0.8				○ ○	● ●	● ○ ○	○ ○ ○				
EM Medium Cutting	CNMG120412-NM	5.11	12.9	12.7	4.76	5.16	1.2				○ ○	● ●						
	CNMG120404-EM	5.11	12.9	12.7	4.76	5.16	0.4				● ●	● ●				● ○ ○		
	CNMG120408-EM	5.11	12.9	12.7	4.76	5.16	0.8				● ●	● ●				● ○ ○		
	CNMG120412-EM	5.11	12.9	12.7	4.76	5.16	1.2				● ●	● ●				● ○ ○		
	CNMG160608-EM	8.31	16.1	15.875	6.35	6.35	0.8				● ●	● ●				● ○ ○		
EG Medium Cutting	CNMG160612-EM	8.31	16.1	15.875	6.35	6.35	1.2				● ●	● ●				● ○ ○		
	CNMG120404-EG	5.11	12.9	12.7	4.76	5.16	0.4				● ●	● ●				● ○ ○		
	CNMG120408-EG	5.11	12.9	12.7	4.76	5.16	0.8				● ●	● ●				● ○ ○		
	CNMG120412-EG	5.11	12.9	12.7	4.76	5.16	1.2				○ ○	● ●				● ○ ○		

# ZCC-CT

# ISO Turning Inserts

**CN\*\*****- NEGATIVE INSERT**



Legend: Ideal Machining Condition Normal Machining Condition Unfavourable Machining Condition

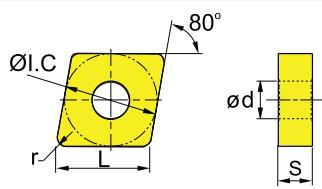
Insert	Type	£	Dimensions (mm)					CVD Coating						PVD Coating						Cermet	Cermet Coated	Uncoated	Carbide											
			L	I.C.	S	d	r	YB6315	YBC152	YBC103	YBC252	YBC251	YBC352	YBC351	YBM153	YBM253	YBD052	YBD102	YB7305	YB7315	YBD152	YBD152C	YBG101	YBG102	YBS103	YBG105	YPD201	YB9315	YB9320	YBG205	YBG202	YNG151	YNT251	YNG151C
XM  Medium Cutting	CNMG120404-XM	5.11	12,9	12,7	4,76	5,16	0,4	●																										
	CNMG120408-XM	5.11	12,9	12,7	4,76	5,16	0,8		●																									
	CNMG120412-XM	5.11	12,9	12,7	4,76	5,16	1,2		●																									
	CNMG120416-XM	5.11	12,9	12,7	4,76	5,16	1,6	○																										
	CNMG160608-XM	8,31	16,1	15,875	6,35	6,35	0,8		●																									
	CNMG160612-XM	8,31	16,1	15,875	6,35	6,35	1,2		●																									
	CNMG160616-XM	8,31	16,1	15,875	6,35	6,35	1,6	○																										
	CNMG190608-XM	10,37	19,3	19,05	6,35	7,94	0,8	○																										
	CNMG190612-XM	10,37	19,3	19,05	6,35	7,94	1,2	○																										
	CNMG190616-XM	10,37	19,3	19,05	6,35	7,94	1,6	○																										
TK  Medium Cutting	CNMG120408-TK	5.11	12,9	12,7	4,76	5,16	0,8			○	○																							
	CNMG120412-TK	5.11	12,9	12,7	4,76	5,16	1,2			●	●																							
	CNMG120416-TK	5.11	12,9	12,7	4,76	5,16	1,6			○	●																							
SNR  Roughing	CNMG120408-SNR	5.11	12,9	12,7	4,76	5,16	0,8																											
	CNMG120412-SNR	5.11	12,9	12,7	4,76	5,16	1,2																											
	CNMG160608-SNR	8,31	16,1	15,875	6,35	6,35	0,8																											
	CNMG190616-SNR	10,37	19,3	19,05	6,35	7,94	1,6																											
DR  Roughing	CNMG120408-DR	5.11	12,9	12,7	4,76	5,16	0,8	●	●	●	●	●	●	○	●	●																		
	CNMG120412-DR	5.11	12,9	12,7	4,76	5,16	1,2	●	●	●	○	●	○	○	●	●	●	●	●															
	CNMG120416-DR	5.11	12,9	12,7	4,76	5,16	1,6	○	●	●	●	●	●	●	●	●	●	●	●															
	CNMG160608-DR	8,31	16,1	15,875	6,35	6,35	0,8	●	●	●	●	●	●	○	●	●	●	●	●															
	CNMG160612-DR	8,31	16,1	15,875	6,35	6,35	1,2	●	●	●	●	●	●	○	●	●	●	●	●															
	CNMG160616-DR	8,31	16,1	15,875	6,35	6,35	1,6	●	●	●	●	●	●	○	●	●	●	●	●															
	CNMG190608-DR	10,37	19,3	15,875	6,35	7,94	0,8	●	●	○					●	●	●	●	●															
	CNMG190612-DR	10,37	19,3	19,05	6,35	7,94	1,2	●	●	●	●	●	●	●	○	●	●	●	●															
	CNMG190616-DR	10,37	19,3	19,05	6,35	7,94	1,6	●	●	●	●	●	●	○	●	●	●	●	●															
DR  Roughing	CNMM120412-DR	4,95	12,9	12,7	4,76	5,16	1,2	●	●	●	○	●	○	○	○	○	○	○	○															
	CNMM160612-DR	7,56	16,1	15,875	6,35	6,35	1,2	●	●	●	●	●	●	●	●	●	●	●	●															
	CNMM160616-DR	7,56	16,1	15,875	6,35	6,35	1,6	●	●	●	●	●	●	●	●	●	●	●	●															
	CNMM190612-DR	10,46	19,3	19,05	6,35	7,94	1,2	●	●	●	●	●	●	●	●	●	●	●	●															
	CNMM190616-DR	10,46	19,3	19,05	6,35	7,94	1,6	●	●	●	●	●	●	●	●	●	●	●	●															
	CNMM190624-DR	10,46	19,3	19,05	6,35	7,94	2,4	●	●	●	●	●	●	●	●	●	●	●	●															
ER  Roughing	CNMG120408-ER	5.11	12,9	12,7	4,76	5,16	0,8																											
	CNMG120412-ER	5.11	12,9	12,7	4,76	5,16	1,2																											
	CNMG160612-ER	8,31	16,1	15,875	6,35	6,35	1,2																											
	CNMG160616-ER	8,31	16,1	15,875	6,35	6,35	1,6																											
	CNMG190612-ER	10,37	19,3	19,05	6,35	7,94	1,2	○																										
	CNMG190616-ER	10,37	19,3	19,05	6,35	7,94	1,6	●																										



## CN\*\*

## - NEGATIVE INSERT

Ideal Machining Condition  Normal Machining Condition  Unfavourable Machining Condition



- P Steel
- M Stainless Steel
- K Cast Iron
- N Non-ferrite material
- S Heat-resistant alloy

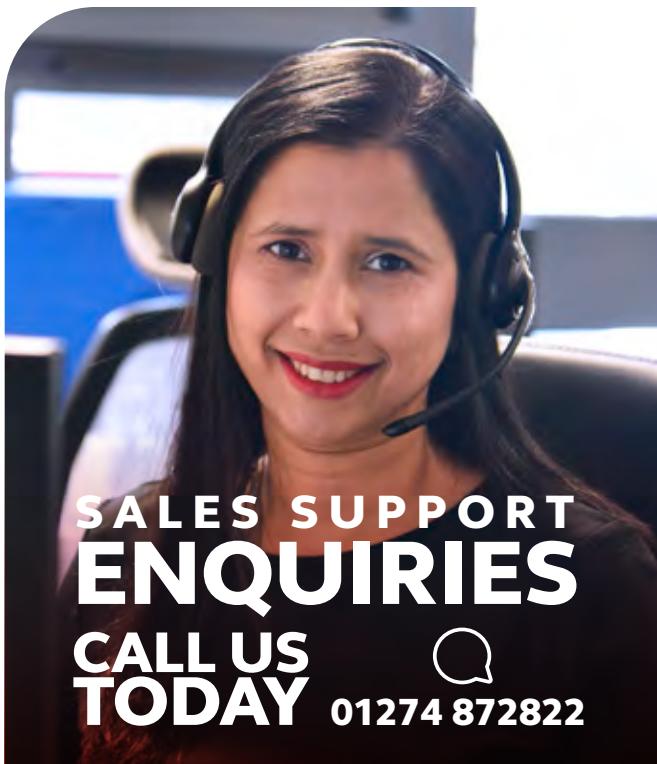
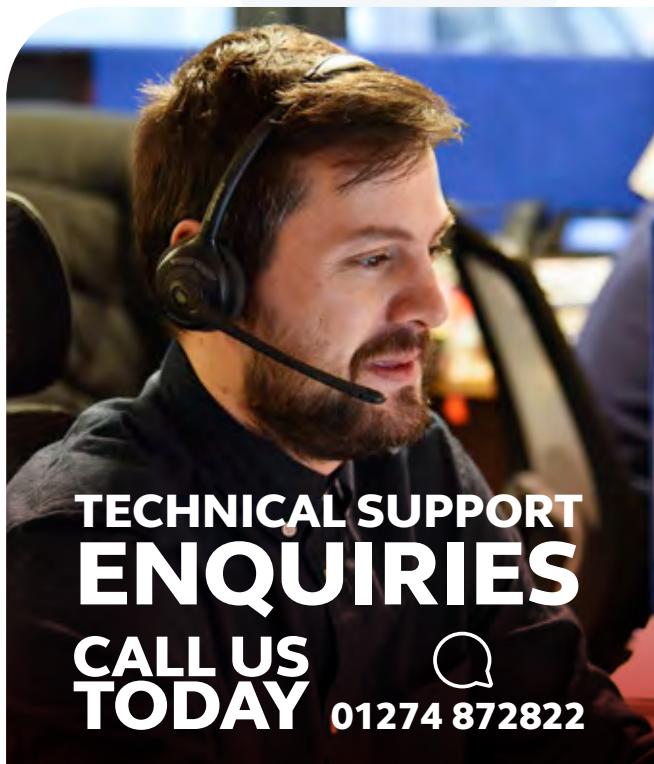
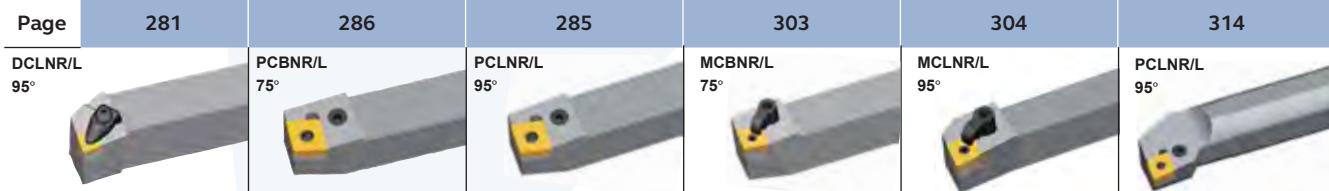
Unfavourable Machining Condition

Ideal Machining Condition

Normal Machining Condition

Insert	Type	$\text{f}$	Dimensions (mm)					CVD Coating										PVD Coating										Cermet Coated	Cermet Uncoated	Carbide						
			L	I.C.	S	d	r	YB6315	YBC152	YBC103	YBC252	YBC251	YBC352	YBC351	YBM153	YBM253	YBD052	YBD102	YB305	YB315	YBD152	YBD152C	YBG101	YBG102	YBS103	YBG105	YPD201	YB9315	YB9320	YBG205	YBG202	YNG151	YNT251	YD101	YD201	
Flat	CNMA120404	4.74	12.9	12.7	4.76	5.16	0.4								● ○																					
	CNMA120408	4.74	12.9	12.7	4.76	5.16	0.8								● ●																					
	CNMA120412	4.74	12.9	12.7	4.76	5.16	1.2								● ●	● ●	● ●	● ●																		○
	CNMA120416	4.74	12.9	12.7	4.76	5.16	1.6								○ ●			●																		
	CNMA160608	7.53	16.1	15.875	6.35	6.35	0.8								○			●																		
	CNMA160612	7.53	16.1	15.875	6.35	6.35	1.2								●			●																		
	CNMA160616	7.53	16.1	15.875	6.35	6.35	1.6								○ ●			●																		
	CNMA190612	9.85	19.3	19.05	6.35	7.94	1.2								○ ●			●																		
	CNMA190616	9.85	19.3	19.05	6.35	7.94	1.6								○ ●			●																		

## Holder

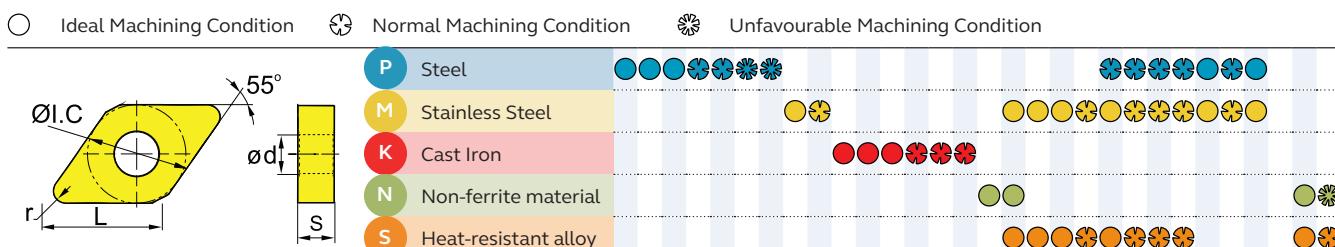


# ZCC-CT

# ISO Turning Inserts

DN\*\*

- NEGATIVE INSERT



Insert	Type	$\text{f}$	Dimensions (mm)					CVD Coating						PVD Coating			Cermet	Cermet Coated	Uncoated	Carbide			
			L	I.C	S	d	r	YB6315	YBC152	YBC103	YBC252	YBC251	YBC352	YBC351	YBM153	YBM253	YBD052	YBD102	YB7305	YB7315	YBD152	YBD152C	
DF	DNMG110404-DF	5,22	11,6	9,525	4,76	3,81	0,4	● ● ○										YBG101	YBG102	YBS103	YBG105		
	DNMG110408-DF	5,22	11,6	9,525	4,76	3,81	0,8		● ●									YN1T251	YN1G151C				
Finishing	DNMG110412-DF	5,22	11,6	9,525	4,76	3,81	1,2		○ ○									YNG151					
	DNMG150404-DF	6,22	15,5	12,7	4,76	5,16	0,4		● ● ○									YD101	YD201				
ADF	DNMG150408-DF	6,22	15,5	12,7	4,76	5,16	0,8		● ● ○														
	DNMG150412-DF	6,22	15,5	12,7	4,76	5,16	1,2		○														
Finishing	DNMG150604-DF	7,07	15,5	12,7	6,35	5,16	0,4		● ● ○														
	DNMG150608-DF	7,07	15,5	12,7	6,35	5,16	0,8		● ● ●														
EF	DNMG150612-DF	7,07	15,5	12,7	6,35	5,16	1,2		● ○														
	DNMG110404-ADF	5,22	11,6	9,525	4,76	3,81	0,4			○								● ○					
Finishing	DNMG110408-ADF	5,22	11,6	9,525	4,76	3,81	0,8				● ●							● ●					
	DNMG150604-ADF	7,07	15,5	12,7	6,35	5,16	0,4	○				● ●						○					
Finishing	DNMG150608-ADF	7,07	15,5	12,7	6,35	5,16	0,8	○			● ● ●						○						
	DNMG150612-ADF	7,07	15,5	12,7	6,35	5,16	1,2	○			○ ●						○ ●						
Finishing	DNMG110404-EF	5,22	11,6	9,525	4,76	3,81	0,4				○							● ○					
	DNMG110408-EF	5,22	11,6	9,525	4,76	3,81	0,8			○							● ○						
Finishing	DNMG150404-EF	6,22	15,5	12,7	4,76	5,16	0,4					●						●					
	DNMG150408-EF	6,22	15,5	12,7	4,76	5,16	0,8					●						●					
Finishing	DNMG150604-EF	7,07	15,5	12,7	4,76	5,16	0,4			○	●						● ○						
	DNMG150608-EF	7,07	15,5	12,7	6,35	5,16	0,8		○	●							●						
Finishing	DNMG150612-EF	7,07	15,5	12,7	6,35	5,16	1,2											●					

## Holder





DN\*\*

## - NEGATIVE INSERT

○ Ideal Machining Condition    Ⓜ Normal Machining Condition    Ⓛ Unfavourable Machining Condition

**Material Legend:**

- P Steel
- M Stainless Steel
- K Cast Iron
- N Non-ferrite material
- S Heat-resistant alloy

Insert	Type	£	Dimensions (mm)					CVD Coating					PVD Coating					Cermet	Cermet Coated	Uncoated Carbide															
			L	I.C.	S	d	r	YB6315	YBC152	YBC103	YBC252	YBC251	YBC352	YBC351	YBM153	YBM253	YBD052	YBD102	YB7305	YB7315	YBD152	YBD152C	YBG101	YBG102	YBS103	YBG105	YPD201	YB9315	YB9320	YBG205	YBG202	YNG151	YNT251	YNG151C	YD101
<b>DM</b> 	DNMG110404-DM	5.22	11.6	9.525	4.76	3.81	0.4	● ● ●																											
	DNMG110408-DM	5.22	11.6	9.525	4.76	3.81	0.8	● ● ●																											
	DNMG110412-DM	5.22	11.6	9.525	4.76	3.81	1.2	● ●																											
	DNMG150404-DM	6.22	15.5	12.7	4.76	5.16	0.4	● ● ●																											
	DNMG150408-DM	6.22	15.5	12.7	4.76	5.16	0.8	● ● ○																											
	DNMG150412-DM	6.22	15.5	12.7	4.76	5.16	1.2	○ ○																											
	DNMG150604-DM	7.07	15.5	12.7	6.35	5.16	0.4	● ● ●																											
	DNMG150608-DM	7.07	15.5	12.7	6.35	5.16	0.8	○ ○ ○ ○																											
	DNMG150612-DM	7.07	15.5	12.7	6.35	5.16	1.2	● ● ●																											
	DNMG150616-DM	7.07	15.5	12.7	6.35	5.16	1.6	○ ○ ○ ○																											
<b>PM</b> 	DNMG110404-PM	5.22	11.6	9.525	4.76	3.81	0.4	● ●																											
	DNMG110408-PM	5.22	11.6	9.525	4.76	3.81	0.8	○ ○ ○																											
	DNMG110412-PM	5.22	11.6	9.525	4.76	3.81	1.2	○ ○																											
	DNMG150404-PM	6.22	15.5	12.7	4.76	5.16	0.4	○ ○ ○																											
	DNMG150408-PM	6.22	15.5	12.7	4.76	5.16	0.8	● ● ●																											
	DNMG150412-PM	6.22	15.5	12.7	4.76	5.16	1.2	● ○																											
	DNMG150416-PM	6.22	15.5	12.7	4.76	5.16	1.6	○ ○																											
	DNMG150604-PM	7.07	15.5	12.7	6.35	5.16	0.4	○ ○ ○ ○																											
	DNMG150608-PM	7.07	15.5	12.7	6.35	5.16	0.8	● ● ● ○ ○ ○ ○																											
	DNMG150612-PM	7.07	15.5	12.7	6.35	5.16	1.2	○ ○ ○ ○ ○ ○ ○ ○																											
	DNMG150616-PM	7.07	15.5	12.7	6.35	5.16	1.6	● ● ○ ○ ○ ○ ○ ○																											
<b>NM</b> 	DNMG150412-NM	6.22	15.5	12.7	4.76	5.16	1.2																												
	DNMG150608-NM	7.07	15.5	12.7	6.35	5.16	0.8																												
	DNMG150612-NM	7.07	15.5	12.7	6.35	5.16	1.2																												
<b>EM</b> 	DNMG110404-EM	5.22	11.6	9.525	4.76	3.81	0.4												●																
	DNMG110408-EM	5.22	11.6	9.525	4.76	3.81	0.8												●																
	DNMG150404-EM	6.22	15.5	12.7	4.76	5.16	0.4												○																
	DNMG150408-EM	6.22	15.5	12.7	4.76	5.16	0.8												○																
	DNMG150412-EM	6.22	15.5	12.7	4.76	5.16	1.2												○																
	DNMG150408-EM	7.07	15.5	12.7	4.76	5.16	0.8												● ●																
	DNMG150412-EM	7.07	15.5	12.7	4.76	5.16	1.2												● ●																
	DNMG150612-EM	7.07	15.5	12.7	6.35	5.16	1.2												● ●																

MILLING

INDEXABLE MILLING

LATHE TOOLS

THREAD MAKING

TOOLHOLDING

LUBRICANTS

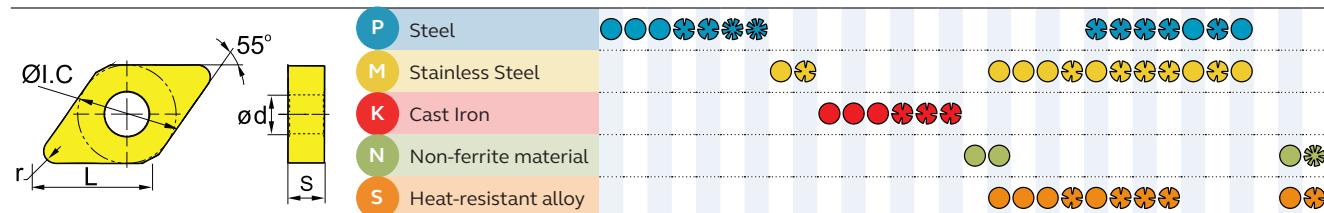
MISCELLANEOUS

# ZCC-CT ISO Turning Inserts

DN\*\*

## **- NEGATIVE INSERT**

 Ideal Machining Condition     Normal Machining Condition     Unfavourable Machining Condition



## Holder

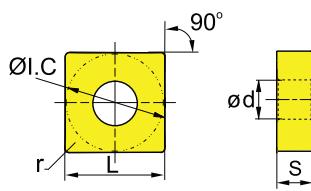
Page	282	287	315
DDJNR/L 93°			



## SN\*\*

## - NEGATIVE INSERT

Ideal Machining Condition Normal Machining Condition Unfavourable Machining Condition



<b>P</b>	Steel
<b>M</b>	Stainless Steel
<b>K</b>	Cast Iron
<b>N</b>	Non-ferrite material
<b>S</b>	Heat-resistant alloy

Insert	Type	$\text{f}$	Dimensions (mm)					CVD Coating	PVD Coating	Cermet	Cermet Coated	Uncoated	Carbide
			L	I.C.	S	d	r						
<b>Finishing</b>	ADF	SNMG120404-ADF	4.95	12.7	12.7	4.76	5.16	0.4	●				
		SNMG120408-ADF	4.95	12.7	12.7	4.76	5.16	0.8	●				
		SNMG120412-ADF	4.95	12.7	12.7	4.76	5.16	1.2	●				
<b>Finishing</b>	EF	SNMG090304-EF	3.30	9.525	9.525	3.18	3.81	0.4		●	● ○		
		SNMG090308-EF	3.30	9.525	9.525	3.18	3.81	0.8		●	●		
		SNMG090312-EF	3.30	9.525	9.525	3.18	3.81	1.2		○			
<b>Finishing</b>		SNMG120404-EF	4.95	12.7	12.7	4.76	5.16	0.4		●	● ○		
		SNMG120408-EF	4.95	12.7	12.7	4.76	5.16	0.8		●	● ○		
		SNMG120412-EF	4.95	12.7	12.7	4.76	5.16	1.2		○	● ○		
<b>Medium Cutting</b>	DM	SNMG090304-DM	3.30	9.525	9.525	3.18	3.81	0.4	● ●				
		SNMG090308-DM	3.30	9.525	9.525	3.18	3.81	0.8	● ● ● ○				
		SNMG120404-DM	4.95	12.7	12.7	4.76	5.16	0.4	● ● ●				
<b>Medium Cutting</b>		SNMG120408-DM	4.95	12.7	12.7	4.76	5.16	0.8	● ● ● ● ●				
		SNMG120412-DM	4.95	12.7	12.7	4.76	5.16	1.2	● ● ● ○				
		SNMG120416-DM	4.95	12.7	12.7	4.76	5.16	1.6	○ ○ ○ ○				
<b>Medium Cutting</b>		SNMG150608-DM	8.08	15.875	15.875	6.35	6.35	0.8	● ● ●				
		SNMG150612-DM	8.08	15.875	15.875	6.35	6.35	1.2	● ● ●				
		SNMG190612-DM	9.85	19.05	19.05	6.35	7.94	1.2	● ● ○ ○				
<b>Medium Cutting</b>	PM	SNMG190616-DM	9.85	19.05	19.05	6.35	7.94	1.6	● ● ● ●				
		SNMG090304-PM	3.30	9.525	9.525	3.18	3.81	0.4	○ ●				
		SNMG090308-PM	3.30	9.525	9.525	3.18	3.81	0.8	○ ● ● ○ ● ○ ● ●				
<b>Medium Cutting</b>		SNMG090312-PM	3.30	9.525	9.525	3.18	3.81	1.2	○				
		SNMG120404-PM	4.95	12.7	12.7	4.76	5.16	0.4	● ○ ● ○ ○ ○				
		SNMG120408-PM	4.95	12.7	12.7	4.76	5.16	0.8	● ● ● ○ ○ ○ ●				
<b>Medium Cutting</b>		SNMG120412-PM	4.95	12.7	12.7	4.76	5.16	1.2	● ● ● ○ ○ ○				
		SNMG120416-PM	4.95	12.7	12.7	4.76	5.16	1.6	○ ○ ○ ○ ○ ○				
		SNMG150608-PM	8.08	15.875	15.875	6.35	6.35	0.8	○ ○ ○ ○				
<b>Medium Cutting</b>		SNMG150612-PM	8.08	15.875	15.875	6.35	6.35	1.2	○ ○ ○ ○ ○ ○				
		SNMG150612-PM	8.08	15.875	15.875	6.35	6.35	1.2	○ ○ ○ ○ ○ ○				
		SNMG190612-PM	9.85	19.05	19.05	6.35	7.94	1.2	○ ○ ○ ○ ○ ○				
<b>Medium Cutting</b>		SNMG190616-PM	9.85	19.05	19.05	6.35	7.94	1.6	○ ○ ○ ○ ○ ○				

## Holder

Page	288	289	290	292	305	306
PSBNR/L 75°						

# ZCC-CT

# ISO Turning Inserts

MILLING

INDEXABLE MILLING

HOLE MAKING

LATHE TOOLS

THREAD MAKING

TOOL HOLDING

WORK HOLDING

METROLOGY

LUBRICANTS

MISCELLANEOUS

**SN\*\*****- NEGATIVE INSERT**

Insert	Type	£	Dimensions (mm)					CVD Coating					PVD Coating					Cermet	Cermet Coated	Uncoated	Carbide									
			L	I.C.	S	d	r	YB6315	YBC152	YBC103	YBC252	YBC251	YBC352	YBC351	YBM153	YBM253	YBD052	YBD102	YBD152	YBD152C	YBG101	YBG102	YBS103	YBG105	YPD201	YB9315	YB9320	YBG205	YBG202	YNG151
<b>TC</b>  Medium Cutting	SNMG120404-TC	4.95	12.7	12.7	4.76	5.16	0.4																							
	SNMG120408-TC	4.95	12.7	12.7	4.76	5.16	0.8																							
	SNMG120412-TC	4.95	12.7	12.7	4.76	5.16	1.2																							
	SNMG150616-TC	8.08	15.875	15.875	6.35	6.35	1.6																							
<b>NM</b>  Medium Cutting	SNMG120408-NM	4.95	12.7	12.7	4.76	5.16	0.8																				O			
	SNMG120412-NM	4.95	12.7	12.7	4.76	5.16	1.2																							
<b>EM</b>  Medium Cutting	SNMG120404-EM	4.95	12.7	12.7	4.76	5.16	0.4																							
	SNMG120408-EM	4.95	12.7	12.7	4.76	5.16	0.8																							
	SNMG120412-EM	4.95	12.7	12.7	4.76	5.16	1.2																							
	SNMG120416-EM	4.95	12.7	12.7	4.76	5.16	1.6																							
<b>EG</b>  Medium Cutting	SNMG120404-EG	4.95	12.7	12.7	4.76	5.16	0.4																							
	SNMG120408-EG	4.95	12.7	12.7	4.76	5.16	0.8																							
	SNMG120412-EG	4.95	12.7	12.7	4.76	5.16	1.2																							
<b>XM</b>  Medium Cutting	SNMG120404-XM	4.95	12.7	12.7	4.76	5.16	0.4																							
	SNMG120408-XM	4.95	12.7	12.7	4.76	5.16	0.8																							
	SNMG120412-XM	4.95	12.7	12.7	4.76	5.16	1.2																							
	SNMG120416-XM	4.95	12.7	12.7	4.76	5.16	1.6																							
<b>SNR</b>  Roughing	SNMG120408-SNR	4.95	12.7	12.7	4.76	5.16	0.8																			O				



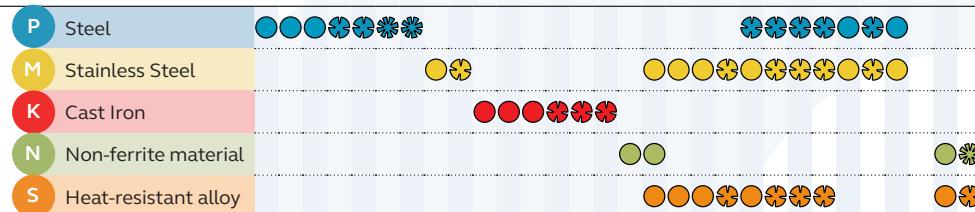
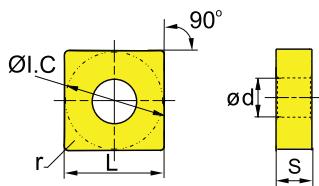
SN\*\*

## **- NEGATIVE INSERT**

## Ideal Machining Condition

## Normal Machining Condition

#### Unfavourable Machining Condition



Insert	Type	£	Dimensions (mm)					CVD Coating					PVD Coating					Cermet										
			L	I.C	S	d	r	YB6315	YBC152	YBC103	YBC252	YBC251	YBC352	YBC351	YBM153	YBM253	YBD052	YBD102	YB7305	YB7315	YBD152	YBD152C	YBG101	YBG102	YBS103	YBG105	YPD201	YB9315
DR	SNMG120408-DR	4.95	12.7	12.7	4.76	5.16	0.8	○	●	●	●	○	○	○	○	●	●	●	●	●	●	●	●	YNG151	YNT251	YNG151C	Cermet	
	SNMG120412-DR	4.95	12.7	12.7	4.76	5.16	1.2	●	●	●	●	○	●	●	●	●	●	●	●	●	●	●	●	YD101	YD201	Uncoated	Carbide	
	SNMG120416-DR	4.95	12.7	12.7	4.76	5.16	1.6	○	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	YD101	YD201	Coated	Carbide	
	SNMG150612-DR	8.08	15.875	15.875	6.35	6.35	1.2	●	●	○	●	●	●	●	●	●	●	●	●	●	●	●	●	YD101	YD201	Coated	Carbide	
	SNMG150616-DR	8.08	15.875	15.875	6.35	6.35	1.6	○	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	YD101	YD201	Coated	Carbide	
	SNMG190612-DR	9.85	19.05	19.05	6.35	7.94	1.2	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	YD101	YD201	Coated	Carbide	
	SNMG190616-DR	9.85	19.05	19.05	6.35	7.94	1.6	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	YD101	YD201	Coated	Carbide	
	SNMG190624-DR	9.85	19.05	19.05	6.35	7.94	2.4	●	●	●	●	○	●	●	●	●	●	●	●	●	●	●	●	YD101	YD201	Coated	Carbide	
	SNMG250924-DR	23.39	25.4	25.4	9.525	9.12	2.4	●	●	○	○	●	●	●	●	●	●	●	●	●	●	●	●	YD101	YD201	Coated	Carbide	
ER	SNMG120408-ER	4.95	12.7	12.7	4.76	5.16	0.8	○	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	YD101	YD201	Coated	Carbide	
	SNMG120412-ER	4.95	12.7	12.7	4.76	5.16	1.2	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	YD101	YD201	Coated	Carbide	
	SNMG150612-ER	8.08	15.875	15.875	6.35	6.35	1.2	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	YD101	YD201	Coated	Carbide	
	SNMG190612-ER	9.85	19.05	19.05	6.35	7.94	1.2	○	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	YD101	YD201	Coated	Carbide	
	SNMG190616-ER	9.85	19.05	19.05	6.35	7.94	1.6	○	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	YD101	YD201	Coated	Carbide	
DR	SNMM150612-DR	7.56	15.875	15.875	6.35	6.35	1.2	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	YD101	YD201	Coated	Carbide	
	SNMM150616-DR	7.56	15.875	15.875	6.35	6.35	1.6	○	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	YD101	YD201	Coated	Carbide	
	SNMM190608-DR	9.85	19.05	19.05	6.35	7.94	0.8	○	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	YD101	YD201	Coated	Carbide	
	SNMM190612-DR	9.85	19.05	19.05	6.35	7.94	1.2	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	YD101	YD201	Coated	Carbide	
	SNMM190616-DR	9.85	19.05	19.05	6.35	7.94	1.6	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	YD101	YD201	Coated	Carbide	
	SNMM190624-DR	9.85	19.05	19.05	6.35	7.94	2.4	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	YD101	YD201	Coated	Carbide	
	SNMM250716-DR	20.54	25.4	25.4	7.94	9.12	1.6	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	YD101	YD201	Coated	Carbide	
	SNMM250724-DR	20.54	25.4	25.4	7.94	9.12	2.4	○	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	YD101	YD201	Coated	Carbide	
	SNMM250924-DR	23.39	25.4	25.4	9.525	9.12	2.4	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	YD101	YD201	Coated	Carbide	

## Holder

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# ZCC-CT

# ISO Turning Inserts

MILLING

INDEXABLE MILLING

HOLE MAKING

LATHE TOOLS

THREAD MAKING

TOOL HOLDING

WORK HOLDING

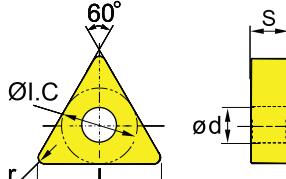
METROLOGY

LUBRICANTS

MISCELLANEOUS

**TN\*\*****- NEGATIVE INSERT**

Ideal Machining Condition     Normal Machining Condition     Unfavourable Machining Condition



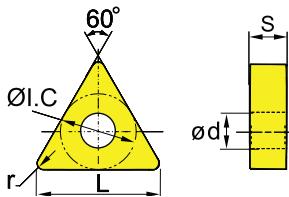
Insert	Type	£	Dimensions (mm)					CVD Coating						PVD Coating			Cermet										
			L	I.C.	S	d	r	YB6315	YBC152	YBC103	YBC252	YBC251	YBC352	YBC351	YBM153	YBM253		YBD052	YBD102	YB7305	YB7315	YBD152	YBD152C				
	TNMG160404-DF	4.42	16.5	9.525	4.76	3.81	0.4	●	●	○																	
	TNMG160408-DF	4.42	16.5	9.525	4.76	3.81	0.8	●	●	○																	
	TNMG160412-DF	4.42	16.5	9.525	4.76	3.81	1.2	●	●																		
	TNMG220408-DF	6.16	22	12.7	4.76	5.16	0.8	●	●	○																	
	TNMG220412-DF	6.16	22	12.7	4.76	5.16	0.8	●	●	●																	
	TNMG160404-ADF	4.42	16.5	9.525	4.76	3.81	0.4	●																			
	TNMG160408-ADF	4.42	16.5	9.525	4.76	3.81	0.8	●																			
	TNMG160412-ADF	4.42	16.5	9.525	4.76	3.81	1.2	●																			
	TNMG220408-ADF	6.16	22	12.7	4.76	5.16	0.8																				
	TNMG220412-ADF	6.16	22	12.7	4.76	5.16	0.8																				
	TNMG110304-EF	2.71	11	6.35	3.18	2.26	0.4																				
	TNMG110308-EF	2.71	11	6.35	3.18	2.26	0.8																				
	TNMG160404-EF	4.42	16.5	9.525	4.76	3.81	0.4				●																
	TNMG160408-EF	4.42	16.5	9.525	4.76	3.81	0.8				●																
	TNMG160412-EF	4.42	16.5	9.525	4.76	3.81	1.2				○																
	TNMG220404-EF	6.16	22	12.7	4.76	5.16	0.4				○																
	TNMG220408-EF	6.16	22	12.7	4.76	5.16	0.8				○																
	TNMG220412-EF	6.16	22	12.7	4.76	5.16	1.2				○																
	TNMG110308-DM	2.71	11	6.35	3.18	2.26	0.8		○	●																	
	TNMG160404-DM	4.42	16.5	9.525	4.76	3.81	0.4		●	●	●	○	●														
	TNMG160408-DM	4.42	16.5	9.525	4.76	3.81	0.8		●	●	●	●	○														
	TNMG160412-DM	4.42	16.5	9.525	4.76	3.81	1.2		●	●	○	○															
	TNMG220404-DM	6.16	22	12.7	4.76	5.16	0.4		●	●	●	○															
	TNMG220408-DM	6.16	22	12.7	4.76	5.16	0.8		●	●	●	●	●														
	TNMG220412-DM	6.16	22	12.7	4.76	5.16	1.2		●	●	●	●	●	●													
	TNMG110304-PM	2.71	11	6.35	3.18	2.26	0.4		●	●																	
	TNMG110308-PM	2.71	11	6.35	3.18	2.26	0.8		●	●																	
	TNMG160404-PM	4.42	16.5	9.525	4.76	3.81	0.4		●	●	●	●	●	●													
	TNMG160408-PM	4.42	16.5	9.525	4.76	3.81	0.8		●	●	●	●	●	●	○	●	●	●	●	●	●	●	●	●			
	TNMG160412-PM	4.42	16.5	9.525	4.76	3.81	1.2		●	●	○	○	●	●	○	●	●	●	●	●	●	●	●				
	TNMG220408-PM	6.16	22	12.7	4.76	5.16	0.8		●	●	●	○															
	TNMG220412-PM	6.16	22	12.7	4.76	5.16	1.2		○	●	●	○	○	●	●	●	●	●	●	●	●	●					
	TNMG220416-PM	6.16	22	12.7	4.76	5.16	1.6		○	●	●	○	○	○	○	○	○	○	○	○	○	○					



TN\*\*

## - NEGATIVE INSERT

○ Ideal Machining Condition    ⚡ Normal Machining Condition    ⚡ Unfavourable Machining Condition



P	Steel
M	Stainless Steel
K	Cast Iron
N	Non-ferrite material
S	Heat-resistant alloy

Insert	Type	£	Dimensions (mm)					CVD Coating						PVD Coating						Cermet Coated	Cermet Uncoated	Carbide
			L	I.C.	S	d	r	YB6315	YBC152	YBC103	YBC252	YBC251	YBC352	YBC351	YBM153	YBM253	YBD052	YBD102	YBT305	YBT315	YBD152	YBD15C
TC	TNMG160404-TC	4.42	16.5	9.525	4.76	3.81	0.4	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
	TNMG160408-TC	4.42	16.5	9.525	4.76	3.81	0.8															
	TNMG160412-TC	4.42	16.5	9.525	4.76	3.81	1.2															
	TNMG220412-TC	6.16	22	12.7	4.76	5.16	1.2															
	TNMG220416-TC	6.16	22	12.7	4.76	5.16	1.6															
EM	TNMG160404-EM	4.42	16.5	9.525	4.76	3.81	0.4		●	○											●	○
	TNMG160408-EM	4.42	16.5	9.525	4.76	3.81	0.8		●	●											●	○
	TNMG160412-EM	4.42	16.5	9.525	4.76	3.81	1.2		●	●											●	○
	TNMG220408-EM	6.16	22	12.7	4.76	5.16	0.8		●	●											●	○
	TNMG220412-EM	6.16	22	12.7	4.76	5.16	1.2			○	●										●	○
	TNMG220416-EM	6.16	22	12.7	4.76	5.16	1.6			●											●	
EG	TNMG160404-EG	4.42	16.5	9.525	4.76	3.81	0.4			●											●	●
	TNMG160408-EG	4.42	16.5	9.525	4.76	3.81	0.8			●											●	●
	TNMG160412-EG	4.42	16.5	9.525	4.76	3.81	1.2			●	●										●	●
XM	TNMG160404-XM	4.42	16.5	9.525	4.76	3.81	0.4			○												
	TNMG160408-XM	4.42	16.5	9.525	4.76	3.81	0.8			●												
	TNMG160412-XM	4.42	16.5	9.525	4.76	3.81	1.2			●												
	TNMG160416-XM	4.42	16.5	9.525	4.76	3.81	1.6			○												
	TNMG220408-XM	6.16	22	12.7	4.76	5.16	0.8			○												
	TNMG220412-XM	6.16	22	12.7	4.76	5.16	1.2			○												
SNR	TNMG160408-SNR	4.42	16.5	9.525	4.76	3.81	0.8															○
DR	TNMG160408-DR	4.42	16.5	9.525	4.76	3.81	0.8	●	●	●					●	●						
	TNMG160412-DR	4.42	16.5	9.525	4.76	3.81	1.2	●	●	●	○				○	●						
	TNMG220408-DR	6.16	22	12.7	4.76	5.16	0.8	●	●	●	○				○	○						
	TNMG220412-DR	6.16	22	12.7	4.76	5.16	1.2	●	○	●	●	●			○	●						
	TNMG270608-DR	9.08	27.5	15.875	6.35	6.35	0.8			○					○							
	TNMG270612-DR	9.08	27.5	15.875	6.35	6.35	1.2			●												
ER	TNMG160408-ER	4.42	16.5	9.525	4.76	3.81	0.8				○											
	TNMG160412-ER	4.42	16.5	9.525	4.76	3.81	1.2				○											
	TNMG220408-ER	6.16	22	12.7	4.76	5.16	0.8				○											
	TNMG220412-ER	6.16	22	12.7	4.76	5.16	1.2				○											
DR	TNMM160408-DR	4.34	16.5	9.525	4.76	3.81	0.8	○	●	●	○											
	TNMM160412-DR	4.34	16.5	9.525	4.76	3.81	1.2	○	○	●												
	TNMM220408-DR	5.93	22	12.7	4.76	5.16	0.8	○	○	●	○											
	TNMM220412-DR	5.93	22	12.7	4.76	5.16	1.2	●	●	○												
	TNMM220416-DR	5.93	22	12.7	4.76	5.16	1.6	○	○	○	○											
	TNMM270612-DR	10.04	27.5	15.875	4.76	5.16	1.2	○														
	TNMM270616-DR	10.04	27.5	15.875	4.76	5.16	1.6	○														

## Holder

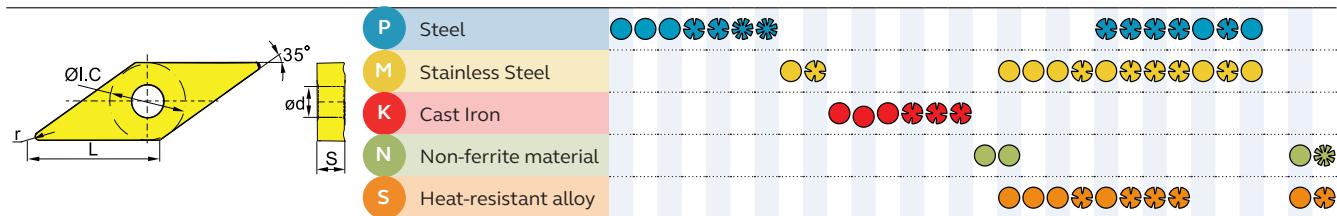


# ZCC-CT ISO Turning Inserts

VN\*\*

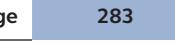
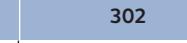
#### **- NEGATIVE INSERT**

 Ideal Machining Condition     Normal Machining Condition     Unfavourable Machining Condition



Insert	Type	£	Dimensions (mm)					CVD Coating					PVD Coating			Cermet Coated	Cermet 151C	Uncoated Carbide		
			L	I.C	S	d	r	YB6315	YBC152	YBC103	YBC251	YBC352	YBC351	YBM153	YBM253	YBD052	YBD102	YB7305	YB7315	YBD152
 DF Finishing	VNMG160404-DF	8.81	16.6	9.525	4.76	3.81	0.4	○	●	●										
	VNMG160408-DF	8.81	16.6	9.525	4.76	3.81	0.8	●	●	●										
 ADF Finishing	VNMG160404-ADF	8.81	16.6	9.525	4.76	3.81	0.4	●											●	
	VNMG160408-ADF	8.81	16.6	9.525	4.76	3.81	0.8	●											●	
 EF Finishing	VNMG160404-EF	8.81	16.6	9.525	4.76	3.81	0.4				●								●	
	VNMG160408-EF	8.81	16.6	9.525	4.76	3.81	0.8				●								●	○
 DM Medium Cutting	VNMG160408-DM	8.81	16.6	9.525	4.76	3.81	0.8		●	●	●									
	VNMG160412-DM	8.81	16.6	9.525	4.76	3.81	1.2		●	●	●									
 PM Medium Cutting	VNMG160404-PM	8.81	16.6	9.525	4.76	3.81	0.4		●	●	●						●	○		
	VNMG160408-PM	8.81	16.6	9.525	4.76	3.81	0.8		●	●	●	○					●	●	●	
 NM Medium Cutting	VNMG160412-NM	8.81	16.6	9.525	4.76	3.81	1.2		●	●	●		○	●				●		
 EM Medium Cutting	VNMG160404-EM	8.81	16.6	9.525	4.76	3.81	0.4				●								●	○
	VNMG160408-EM	8.81	16.6	9.525	4.76	3.81	0.8				●								●	○
 XM Medium Cutting	VNMG160404-XM	8.81	16.6	9.525	4.76	3.81	0.4		●											
	VNMG160408-XM	8.81	16.6	9.525	4.76	3.81	0.8		●											
 SNR Roughing	VNMG160408-SNR	8.81	16.6	9.525	4.76	3.81	0.8									●	○	○		○
	VNMG160412-SNR	8.81	16.6	9.525	4.76	3.81	1.2									●	○	○		○

## Holder

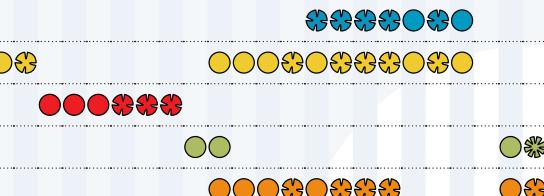
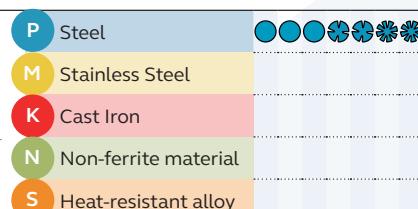
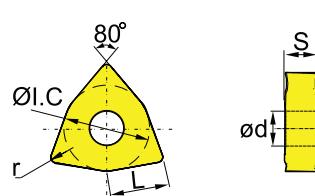
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## WN\*\*

## - NEGATIVE INSERT

(○) Ideal Machining Condition (◎) Normal Machining Condition (✖) Unfavourable Machining Condition



Insert	Type	£	Dimensions (mm)					CVD Coating						PVD Coating						Cermet	Cermet Coated	Uncoated Carbide								
			L	I.C	S	d	r	YB6315	YBC152	YBC103	YBC252	YBC251	YBC352	YBC351	YBM153	YBM253	YBD052	YBD102	YB7305	YB7315	YBD152	YBD152C	YBG101	YBS102	YBG105	YPD201	YB9315	YB9320	YBG205	YBG202
<b>Finishing</b>	<b>DF</b>	WNMG060404-DF	4.11	6.5	9.525	4.76	3.81	0.4	● ● ●																					
		WNMG060408-DF	4.11	6.5	9.525	4.76	3.81	0.8	● ● ●																					
		WNMG060412-DF	5.41	6.5	9.525	4.76	3.81	1.2	●																					
	<b>ADF</b>	WNMG060404-ADF	4.11	6.5	9.525	4.76	3.81	0.4																						
		WNMG060408-ADF	4.11	6.5	9.525	4.76	3.81	0.8		●																				
<b>Finishing</b>	<b>EF</b>	WNMG060404-EF	4.11	6.5	9.525	4.76	3.81	0.4																						
		WNMG060408-EF	4.11	6.5	9.525	4.76	3.81	0.8																						
		WNMG080404-EF	5.41	8.7	12.7	4.76	5.16	0.4		○																				
		WNMG080408-EF	5.41	8.7	12.7	4.76	5.16	0.8		○																				
	<b>WG</b>	WNMG080408-WG	5.41	8.7	12.7	4.76	5.16	0.8	● ●																					
<b>Finishing</b>		WNMG080412-WG	5.41	8.7	12.7	4.76	5.16	1.2	● ○																					
	<b>DM</b>	WNMG06T308-DM	4.11	6.5	9.525	3.97	3.81	0.8	● ● ● ○																					
		WNMG060408-DM	4.11	6.5	9.525	4.76	3.81	0.8	○ ● ● ● ○																					
		WNMG060412-DM	4.11	6.5	9.525	4.76	3.81	1.2	○ ○ ●																					
		WNMG080404-DM	5.41	8.7	12.7	4.76	5.16	0.4	● ● ● ○ ○																					
<b>Medium Cutting</b>	<b>DM</b>	WNMG080408-DM	5.41	8.7	12.7	4.76	5.16	0.8	○ ● ● ● ○ ○																					
		WNMG080412-DM	5.41	8.7	12.7	4.76	5.16	1.2	○ ● ● ● ○ ○																					
	<b>PM</b>	WNMG060408-PM	4.11	6.5	9.525	4.76	3.81	0.8	● ● ● ○ ○ ○																					
		WNMG060412-PM	4.11	6.5	9.525	4.76	3.81	1.2	● ○ ○ ○ ○ ○																					
		WNMG080404-PM	5.41	8.7	12.7	4.76	5.16	0.4	● ● ● ○ ○ ○																					
<b>Medium Cutting</b>	<b>PM</b>	WNMG080408-PM	5.41	8.7	12.7	4.76	5.16	0.8	● ● ● ○ ○ ○																					
		WNMG080412-PM	5.41	8.7	12.7	4.76	5.16	1.2	● ● ● ○ ○ ○																					
		WNMG080416-PM	5.41	8.7	12.7	4.76	5.16	1.6	● ● ○ ○ ○ ○ ○																					

## Holder

Page	284	291	295
DWLNR/L 95°			

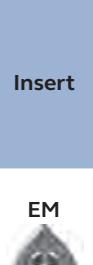
WN\*\*

#### **- NEGATIVE INSERT**

The chart illustrates the machinability of various materials under different conditions. The Y-axis lists materials: Steel (P), Stainless Steel (M), Cast Iron (K), Non-ferrite material (N), and Heat-resistant alloy (S). The X-axis shows three conditions: Ideal Machining Condition (green circle), Normal Machining Condition (yellow circle), and Unfavourable Machining Condition (red circle).

Material	Ideal Machining Condition	Normal Machining Condition	Unfavourable Machining Condition
P Steel	Green (●)	Yellow (●)	Red (●)
M Stainless Steel	Green (●)	Yellow (●)	Yellow (●)
K Cast Iron	Green (●)	Red (●)	Red (●)
N Non-ferrite material	Green (●)	Green (●)	Green (●)
S Heat-resistant alloy	Green (●)	Orange (●)	Orange (●)

Annotations on the left show a workpiece with a semi-circular slot of radius  $r$ , depth  $L$ , and width  $\phi d$ . A dimension  $80^\circ$  is also indicated.

Insert	Type	£	Dimensions (mm)					CVD Coating					PVD Coating					Cermet Coated	Cermet Uncoated	Carbide			
			L	I.C.	S	d	r	YB6315	YBC152	YBC103	YBC252	YBC251	YBC352	YBC351	YBM153	YBM253	YBD052	YBD102	YB7305	YB7315	YBD152	YBD152C	
EM 	WNMG06T304-EM	4.11	6.5	9.525	3.97	3.81	0.4							○									
	WNMG06T308-EM	4.11	6.5	9.525	3.97	3.81	0.8							●	●								
	WNMG06T312-EM	4.11	6.5	9.525	3.97	3.81	1.2							●									
	WNMG060404-EM	4.11	6.5	9.525	4.76	3.81	0.4							●									
	WNMG060408-EM	4.11	6.5	9.525	4.76	3.81	0.8							○									
	WNMG080404-EM	5.41	8.7	12.7	4.76	5.16	0.4							●	●								
	WNMG080408-EM	5.41	8.7	12.7	4.76	5.16	0.8							●	●								
	WNMG080412-EM	5.41	8.7	12.7	4.76	5.16	1.2							●	●								
EG 	WNMG080404-EG	5.41	8.7	12.7	4.76	5.16	0.4																
	WNMG080408-EG	5.41	8.7	12.7	4.76	5.16	0.4							●	●								
	WNMG080412-EG	5.41	8.7	12.7	4.76	5.16	0.8							●	●								
XM 	WNMG060404-XM	4.11	6,5	9.525	4,76	3,81	0,4							●									
	WNMG060408-XM	4.11	6,5	9.525	4,76	3,81	0,8							●									
	WNMG060412-XM	4.11	6,5	9.525	4,76	3,81	1,2							○									
	WNMG080404-XM	5.41	8,7	12,7	4,76	5,16	0,4							●									
	WNMG080408-XM	5.41	8,7	12,7	4,76	5,16	0,8							●									
	WNMG080412-XM	5.41	8,7	12,7	4,76	5,16	1,2							●									
	WNMG080416-XM	5.41	8,7	12,7	4,76	5,16	1,6							●									
TK 	WNMG080408-TK	5.41	8,7	12,7	4,76	5,16	0,8																
	WNMG080412-TK	5.41	8,7	12,7	4,76	5,16	1,2								○	●							
	WNMG080416-TK	5.41	8,7	12,7	4,76	5,16	1,6								○	●							
SNR 	WNMG080408-SNR	5.41	8,7	12,7	4,76	5,16	0,8																○
	WNMG080412-SNR	5.41	8,7	12,7	4,76	5,16	1,2																○
Roughing 	WNMG060408-DR	4.11	6,5	9.525	4,76	3,81	0,8							●	●	●	○	●	●				
	WNMG060412-DR	4.11	6,5	9.525	4,76	3,81	1,2							●	●	●	○	○	○				
	WNMG080408-DR	5.41	8,7	12,7	4,76	5,16	0,8							●	●	●	●	●	●				
	WNMG080412-DR	5.41	8,7	12,7	4,76	5,16	1,2	○						●	●	●	●	●	●				
	WNMG080416-DR	5.41	8,7	12,7	4,76	5,16	1,6	○						●	●	●	●	●	●				

## Holder

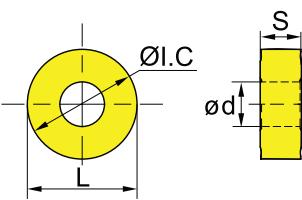
Page	284	291	295
DWLNR/L 95°			



## RN\*\*

## - NEGATIVE INSERT

Ideal Machining Condition  Normal Machining Condition  Unfavourable Machining Condition



P	Steel	● ● ● ● ● ● ● ●
M	Stainless Steel	● ● ● ● ● ● ● ●
K	Cast Iron	● ● ● ● ● ● ● ●
N	Non-ferrite material	● ● ● ● ● ● ● ●
S	Heat-resistant alloy	● ● ● ● ● ● ● ●

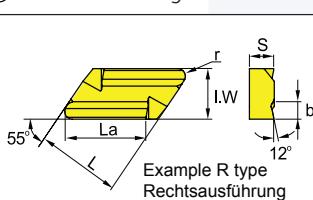
Insert	Type	£	Dimensions (mm)					CVD Coating						PVD Coating						Cermet	Cermet Coated	Uncoated Carbide											
			L	I.C.	S	d	r	YB6315	YBC152	YBC103	YBC252	YBC251	YBC352	YBC351	YBM153	YBM253	YBD052	YBD102	YB7305	YB7315	YBD152	YBD152C	O	O									
Basic Roughing	RNMG120400	5.01	12.7	12.7	4.76	5.16						●									YBG101	YBG102	YBS103	YBG105	YPD201	YB9315	YB9320	YBG205	YBG202	YN151	YN151C	YD101	YD201

\* Toolholders available on request

## KN\*\*

## - NEGATIVE INSERT

Ideal Machining Condition  Normal Machining Condition  Unfavourable Machining Condition



P	Steel	● ● ● ● ● ● ● ●
M	Stainless Steel	● ● ● ● ● ● ● ●
K	Cast Iron	● ● ● ● ● ● ● ●
N	Non-ferrite material	● ● ● ● ● ● ● ●
S	Heat-resistant steel	● ● ● ● ● ● ● ●

Insert	Type	£	Dimensions (mm)						CVD Coating						PVD Coating						Cermet	Cermet Coated	Uncoated Carbide												
			La	L	I.W	S	brn	r	YB6315	YBC152	YBC103	YBC252	YBC251	YBC352	YBC351	YBM153	YBM253	YBD052	YBD102	YB7305	YB7315	YBD152	YBD152C	O	O										
KNUX Finishing	KNUX160405L11	5.43	16	16.15	9.525	4.76	2.2	0.5				● ● ○										YBG101	YBG102	YBS103	YBG105	YPD201	YB9315	YB9320	YBG205	YBG202	YNG151	YNT251	YNG151C	YD101	YD201
	KNUX160410L11	5.43	16	16.15	9.525	4.76	2.2	1.0				● ●										YBG101	YBG102	YBS103	YBG105	YPD201	YB9315	YB9320	YBG205	YBG202	YNG151	YNT251	YNG151C	YD101	YD201
	KNUX160405L12	5.43	16	16.15	9.525	4.76	2.2	0.5				● ●										YBG101	YBG102	YBS103	YBG105	YPD201	YB9315	YB9320	YBG205	YBG202	YNG151	YNT251	YNG151C	YD101	YD201
	KNUX160410L12	5.43	16	16.15	9.525	4.76	2.2	1.0				○ ●										YBG101	YBG102	YBS103	YBG105	YPD201	YB9315	YB9320	YBG205	YBG202	YNG151	YNT251	YNG151C	YD101	YD201
	KNUX160405R11	5.43	16	16.15	9.525	4.76	2.2	0.5				● ● ○										YBG101	YBG102	YBS103	YBG105	YPD201	YB9315	YB9320	YBG205	YBG202	YNG151	YNT251	YNG151C	YD101	YD201
	KNUX160410R11	5.43	16	16.15	9.525	4.76	2.2	1.0				● ●										YBG101	YBG102	YBS103	YBG105	YPD201	YB9315	YB9320	YBG205	YBG202	YNG151	YNT251	YNG151C	YD101	YD201
	KNUX160405R12	5.43	16	16.15	9.525	4.76	2.2	0.5				● ●										YBG101	YBG102	YBS103	YBG105	YPD201	YB9315	YB9320	YBG205	YBG202	YNG151	YNT251	YNG151C	YD101	YD201
	KNUX160410R12	5.43	16	16.15	9.525	4.76	2.2	0.5				○ ●										YBG101	YBG102	YBS103	YBG105	YPD201	YB9315	YB9320	YBG205	YBG202	YNG151	YNT251	YNG151C	YD101	YD201

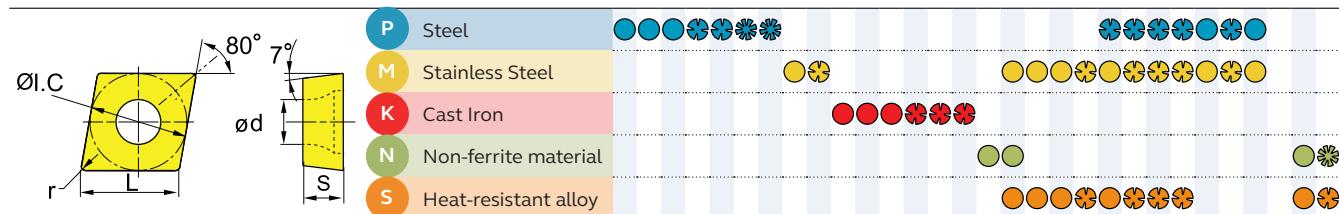
\* Toolholders available on request

# ZCC-CT ISO Turning Inserts

## CC\*\*

### - POSITIVE INSERT

Ideal Machining Condition   Normal Machining Condition   Unfavourable Machining Condition



Insert	Type	$\text{f}$	Dimensions (mm)					CVD Coating	PVD Coating	Cermet	Carbide	
			L	I.C.	S	d	r					
	CCMT060204-AHF	3.46	6.4	6.35	2.38	2.8	0.4	YB6315 YBC152 YBC103 YBC252 YBC251 YBC352 YBC351 YBM153 YBM253 YBD052 YBD102 YB7305 YB7315 YBD152 YBD152C	● ● ● ● ● ●	● ● ● ● ● ●	● ●	YD101
	CCMT060208-AHF	3.46	6.4	6.35	2.38	2.8	0.8		● ●	YNT251		
	CCMT09T304-AHF	3.99	9.7	9.525	3.97	4.4	0.4		● ●			
	CCMT09T308-AHF	3.99	9.7	9.525	3.97	4.4	0.8		● ●			
	CCMT120404-AHF	5.24	12.9	12.7	4.76	5.56	0.4		● ●			
	CCMT120408-AHF	5.24	12.9	12.7	4.76	5.56	0.8		● ●			
	CCMT060204-EM	3.46	6.4	6.35	2.38	2.8	0.4	● ●	● ○			
	CCMT060208-EM	3.46	6.4	6.35	2.38	2.8	0.8	● ○	●			
	CCMT09T304-EM	3.99	9.7	9.525	3.97	4.4	0.4	● ●	● ○			
	CCMT09T308-EM	3.99	9.7	9.525	3.97	4.4	0.8	● ●	● ○			
	CCMT120404-EM	5.24	12.9	12.7	4.76	5.56	0.4	● ●	● ○			
	CCMT120408-EM	5.24	12.9	12.7	4.76	5.56	0.8	○	●			
	CCMT060204-HR	3.46	6.4	6.35	2.38	2.8	0.4	● ● ● ○				
	CCMT060208-HR	3.46	6.4	6.35	2.38	2.8	0.8	● ○ ●				
	CCMT09T304-HR	3.99	9.7	9.525	3.97	4.4	0.4	● ● ○	●			
	CCMT09T308-HR	3.99	9.7	9.525	3.97	4.4	0.8	● ● ○	●			
	CCMT120404-HR	5.24	12.9	12.7	4.76	5.56	0.8	● ● ○	○ ● ●			
	CCMT120412-HR	5.24	12.9	12.7	4.76	5.56	1.2	○	○ ○			

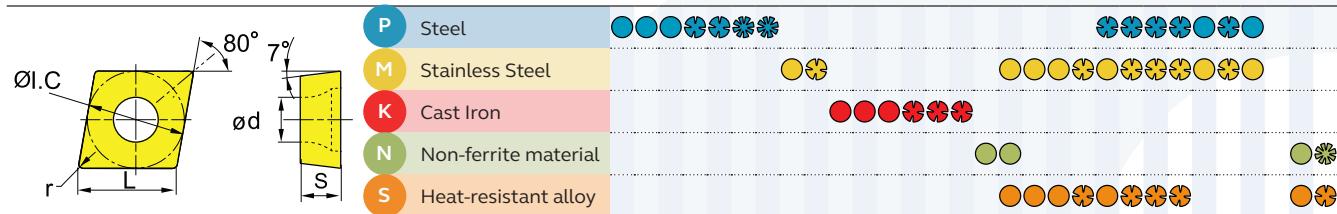
## Holder



CC\*\*

**- POSITIVE INSERT**

Ideal Machining Condition  Normal Machining Condition  Unfavourable Machining Condition



Insert	Type	£	Dimensions (mm)					CVD Coating					PVD Coating					Cermet	Cermet Coated	Uncoated	Carbide													
			L	I.C	S	d	r	YB6315	YBC152	YBC103	YBC252	YBC251	YBC352	YBC351	YBM153	YBM253	YBD052	YBD102	YB7305	YB7315	YBD152	YBD152C	YBG101	YBG102	YBS103	YBG105	YPD201	YB9315	YB9320	YBG205	YBG202	YNG151	YNT251	YNG151C
LC 	CCGX060202-LC	5.26	6.4	6.35	2.38	2.8	0.2												●															
	CCGX060204-LC	5.26	6.4	6.35	2.38	2.8	0.4												●															
	CCGX09T302-LC	5.45	9.7	9.525	3.97	4.4	0.2												●															
	CCGX09T304-LC	5.45	9.7	9.525	3.97	4.4	0.4												●															
	CCGX09T308-LC	5.45	9.7	9.525	3.97	4.4	0.8												●															
	CCGX120404-LC	6.03	12.9	12.7	4.76	5.56	0.4												●															
	CCGX120408-LC	6.03	12.9	12.7	4.76	5.56	0.8												●															
LH 	CCGX060202-LH	5.26	6.4	6.35	2.38	2.8	0.2												●															
	CCGX060204-LH	5.26	6.4	6.35	2.38	2.8	0.4												●															
	CCGX060208-LH	5.26	6.4	6.35	2.38	2.8	0.8													●														
	CCGX09T302-LH	5.45	9.7	9.525	3.97	4.4	0.2													●														
	CCGX09T304-LH	5.45	9.7	9.525	3.97	4.4	0.4												●															
	CCGX09T308-LH	5.45	9.7	9.525	3.97	4.4	0.8												●															
	CCGX120402-LH	6.03	12.9	12.7	4.76	5.56	0.2												○															
	CCGX120404-LH	6.03	12.9	12.7	4.76	5.56	0.4												●															
	CCGX120408-LH	6.03	12.9	12.7	4.76	5.56	0.8												●					○										
	CCGX120412-LH	6.03	12.9	12.7	4.76	5.56	1.2												○											●				

# ZCC-CT ISO Turning Inserts

MILLING

INDEXABLE MILLING

HOLE MAKING

LATHE TOOLS

THREAD MAKING

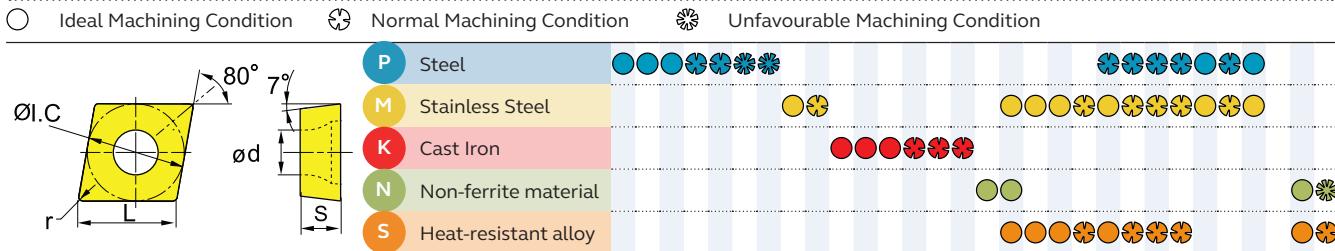
TOOL HOLDING

WORK HOLDING

METROLOGY

LUBRICANTS

MISCELLANEOUS

**DC\*\*****- POSITIVE INSERT**

Insert	Type	£	Dimensions (mm)					CVD Coating						PVD Coating			Cermet Coated	Carbide Coated	Uncoated			
			L	I.C.	S	d	r	YB6315	YBC103	YBC252	YBC251	YBC352	YBC351	YBM153	YBM253	YBD052	YBD102	YB7305	YB7315	YBD152	YBD152C	
Finishing	HF	DCMT070202-HF	3.38	7.8	6.35	2.38	2.8	0.2	●	●	●	●	●	●	●	●	●	●	●	●	●	●
		DCMT070204-HF	3.38	7.8	6.35	2.38	2.8	0.4	●	●	●	●	●	●	●	●	●	●	●	●	●	●
		DCMT070208-HF	3.38	7.8	6.35	2.38	2.8	0.8	●	○	●	●	●	●	●	●	●	●	●	●	●	●
	AHF	DCMT070204-AHF	3.38	7.8	6.35	2.38	2.8	0.4	○	●	●	●	●	●	●	●	●	●	●	●	●	●
		DCMT070208-AHF	3.38	7.8	6.35	2.38	2.8	0.8	●	●	●	●	●	●	●	●	●	●	●	●	●	●
	Finishing	DCMT11T302-HF	4.57	11.6	9.525	3.97	4.4	0.2	○	●	●	●	●	●	●	●	●	●	●	●	●	●
Finishing	DCMT11T304-HF	4.57	11.6	9.525	3.97	4.4	0.4	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
		DCMT11T308-HF	4.57	11.6	9.525	3.97	4.4	0.8	●	●	●	●	●	●	●	●	●	●	●	●	●	●
	AHF	DCMT11T302-AHF	4.57	11.6	9.525	3.97	4.4	0.2	○	●	●	●	●	●	●	●	●	●	●	●	●	●
		DCMT11T304-AHF	4.57	11.6	9.525	3.97	4.4	0.4	●	●	●	●	●	●	●	●	●	●	●	●	●	●
	EF	DCMT070204-EF	3.38	7.8	6.35	2.38	2.8	0.4	○	●	●	●	●	●	●	●	●	●	●	●	●	●
		DCMT070204-EF	3.38	7.8	6.35	2.38	2.8	0.4	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Finishing	DCMT11T302-EF	4.57	11.6	9.525	3.97	4.4	0.2	○	●	●	●	●	●	●	●	●	●	●	●	●	●	●
		DCMT11T304-EF	4.57	11.6	9.525	3.97	4.4	0.4	●	●	●	●	●	●	●	●	●	●	●	●	●	●
	EF	DCMT11T308-EF	4.57	11.6	9.525	3.97	4.4	0.8	●	●	●	●	●	●	●	●	●	●	●	●	●	●
	HM	DCMT070204-HM	3.38	7.8	6.35	2.38	2.8	0.4	●	●	●	●	●	●	●	●	●	●	●	●	●	●
		DCMT070208-HM	3.38	7.8	6.35	2.38	2.8	0.8	●	●	●	●	●	●	●	●	●	●	●	●	●	●
	Medium Cutting	DCMT11T304-HM	4.57	11.6	9.525	3.97	4.4	0.4	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Medium Cutting	DCMT11T308-HM	4.57	11.6	9.525	3.97	4.4	0.8	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
		DCMT11T312-HM	4.57	11.6	9.525	3.97	4.4	1.2	○	○	●	○	○	○	○	○	○	○	○	○	○	○
	EM	DCMT070204-EM	3.38	7.8	6.35	2.38	2.8	0.4	●	●	●	●	●	●	●	●	●	●	●	●	●	●
		DCMT070208-EM	3.38	7.8	6.35	2.38	2.8	0.8	●	●	●	●	●	●	●	●	●	●	●	●	●	●
	Medium Cutting	DCMT11T304-EM	4.57	11.6	9.525	3.97	4.4	0.4	●	●	●	●	●	●	●	●	●	●	●	●	●	●
		DCMT11T308-EM	4.57	11.6	9.525	3.97	4.4	0.8	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Roughing	DCMT11T304-HR	4.57	11.6	9.525	3.97	4.4	0.4	○	●	○	○	●	●	●	●	●	●	●	●	●	●	●
		DCMT11T308-HR	4.57	11.6	9.525	3.97	4.4	0.8	●	●	●	●	●	●	●	●	●	●	●	●	●	●
		DCMT11T312-HR	4.57	11.6	9.525	3.97	4.4	1.2	○	●	○	○	●	●	●	●	●	●	●	●	●	●

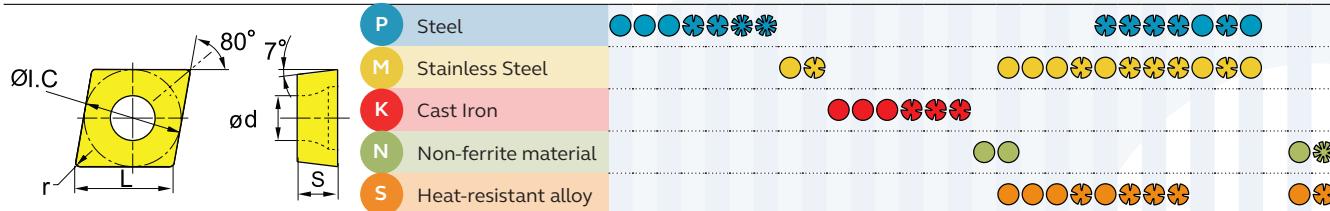
**Holder**



## DC\*\*

## - POSITIVE INSERT

Ideal Machining Condition  Normal Machining Condition  Unfavourable Machining Condition

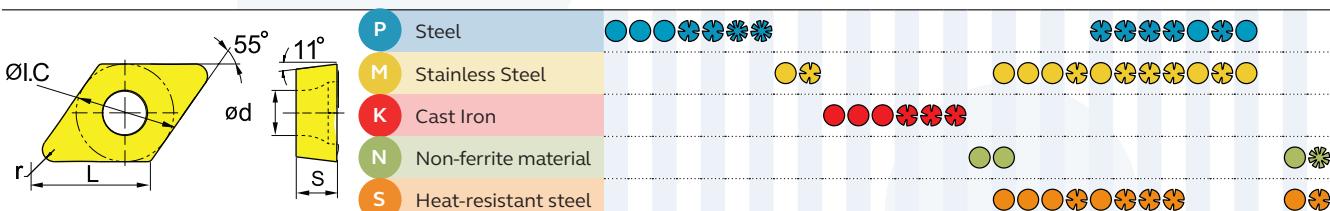


Insert	Type	$\text{f}$	Dimensions (mm)					CVD Coating	PVD Coating	Cermet	Cermet Coated	Uncoated Carbide		
			L	I.C	S	d	r							
LC  Aluminium Machining	DCGX070201-LC	5.26	7.8	6.35	2.38	2.8	0.1	YB6315 YBC152 YBC153 YBC252 YBC251 YBC352 YBC351 YBM153 YBM253 YBD052 YBD102 YB7305 YB7315 YBD152 YBD152C	YB6315 YBC152 YBC153 YBC252 YBC251 YBC352 YBC351 YBM153 YBM253 YBD052 YBD102 YB7305 YB7315 YBD152 YBD152C	YBG101 YBG102 YBS103 YBG105 YPD201 YB9315 YB9320 YBG205 YBG202	YNG151 YNT251	●	●	●
	DCGX070202-LC	5.26	7.8	6.35	2.38	2.8	0.2			●	●	●		
	DCGX070204-LC	5.26	7.8	6.35	2.38	2.8	0.4			●	●	●		
	DCGX11T302-LC	5.59	11.6	9.525	3.97	4.4	0.2			●	●	●		
	DCGX11T304-LC	5.59	11.6	9.525	3.97	4.4	0.4			●	●	●		
	DCGX11T308-LC	5.59	11.6	9.525	3.97	4.4	0.8			●	●	●		
LH  Aluminium Aluminium	DCGX070202-LH	5.26	7.8	6.35	2.38	2.8	0.2			●	○	●		
	DCGX070204-LH	5.26	7.8	6.35	2.38	2.8	0.4			●	○	●		
	DCGX070208-LH	5.26	7.8	6.35	2.38	2.8	0.8			○	●	●		
	DCGX11T302-LH	5.59	11.6	9.525	3.97	4.4	0.2			●	●	●		
	DCGX11T304-LH	5.59	11.6	9.525	3.97	4.4	0.4			●	●	●		
	DCGX11T308-LH	5.59	11.6	9.525	3.97	4.4	0.8			●	○	●		

## DP\*\*

## - POSITIVE INSERT

Ideal Machining Condition  Normal Machining Condition  Unfavourable Machining Condition



Insert	Type	$\text{f}$	Dimensions (mm)					CVD Coating	PVD Coating	Cermet	Cermet Coated	Uncoated Carbide		
			L	I.C	S	d	r							
SF  Finishing	DPGT070202-SF	3.99	7.8	6.35	2.38	2.8	0.2	YB6315 YBC152 YBC153 YBC252 YBC251 YBC352 YBC351 YBM153 YBM253 YBD052 YBD102 YB7305 YB7315 YBD152 YBD152C	YB6315 YBC152 YBC153 YBC252 YBC251 YBC352 YBC351 YBM153 YBM253 YBD052 YBD102 YB7305 YB7315 YBD152 YBD152C	YBG101 YBG102 YBS103 YBG105 YPD201 YB9315 YB9320 YBG205 YBG202	○	●	●	●
	DPGT070204-SF	3.99	7.8	6.35	2.38	2.8	0.4			●	●	●		
	DPGT11T304-SF	4.67	11.6	9.525	3.97	4.4	0.4			●	●	●		
	DPGT11T308-SF	4.67	11.6	9.525	3.97	4.4	0.8			○	○	○		

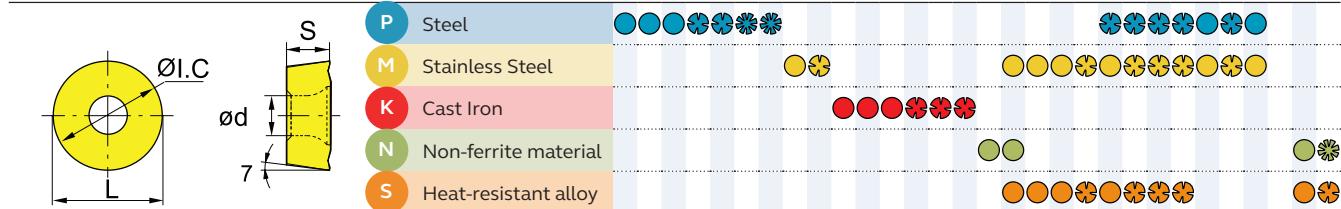
\* Toolholders available on request

# ZCC-CT ISO Turning Inserts

RC\*\*

## **- POSITIVE INSERT**

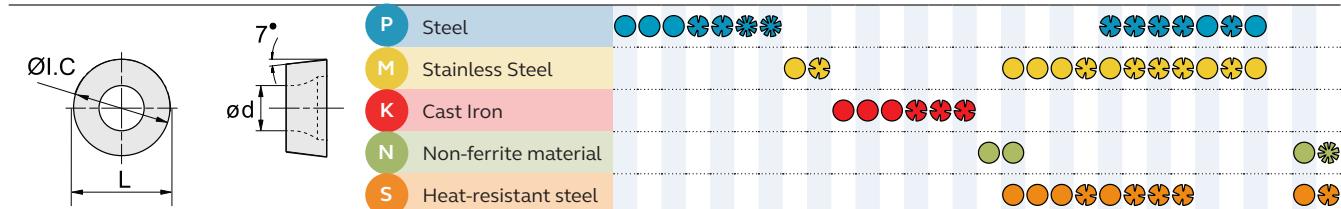
 Ideal Machining Condition     Normal Machining Condition     Unfavourable Machining Condition



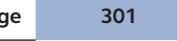
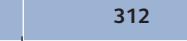
RC\*\*

## **- POSITIVE INSERT**

 Ideal Machining Condition     Normal Machining Condition     Unfavourable Machining Condition



## Holder

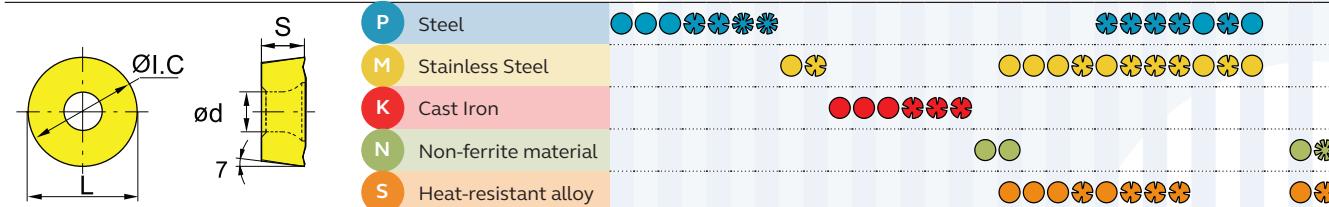
Page	301	312
SRDCN		



RC\*\*

**- POSITIVE INSERT**

(○) Ideal Machining Condition (◎) Normal Machining Condition (✖) Unfavourable Machining Condition



Insert	Type	£	Dimensions (mm)					CVD Coating						PVD Coating						Cermet	Cermet Coated	Uncoated Carbide														
			L	I.C.	S	d	r	YB6315	YBC152	YBC103	YBC252	YBC251	YBC352	YBC351	YBM153	YBM253	YBD052	YBD102	YB7305	YB7315	YBD152	YBD152C	YBG101	YBG102	YBS103	YBG105	YPD201	YB9315	YB9320	YBG205	YBG202	YNG151	YNT251	YNG151C	YD101	YD201
Basic  Light Roughing	RCMX0803MO	3.07	8	8	3.18	3.36	\								● ●																					
	RCMX1003MO	3.07	10	10	3.18	3.6	\								○ ● ●																					
	RCMX1204MO	4.15	12	12	4.76	4.4	\								○ ● ● ○																					
	RCMX1606MO	7.33	16	16	6.35	5.5	\								○ ● ○ ● ○																					
	RCMX2006MO	10.21	20	20	6.35	6.5	\								● ● ● ● ●																					
	RCMX2507MO	17.74	25	25	7.94	7.2	\								○ ● ●																					
	RCMX2507MO-1	17.74	25	25	7.94	7.2	\								○ ○ ○																					
	RCMX3209MO	25.90	32	32	9.52	10.2	\								○ ● ● ○																					
	RCMX3209MO-PV	25.90	32	32	9.52	10	\								○ ● ●																					

## ISO TURNING & BORING TOOLHOLDERS



To view our full range of ISO turning & boring toolholders see pages 279 - 327



MILLING

INDEXABLE MILLING

HOLE MAKING

LATHE TOOLS

THREAD MAKING

TOOLHOLDING

WORK HOLDING

METROLOGY

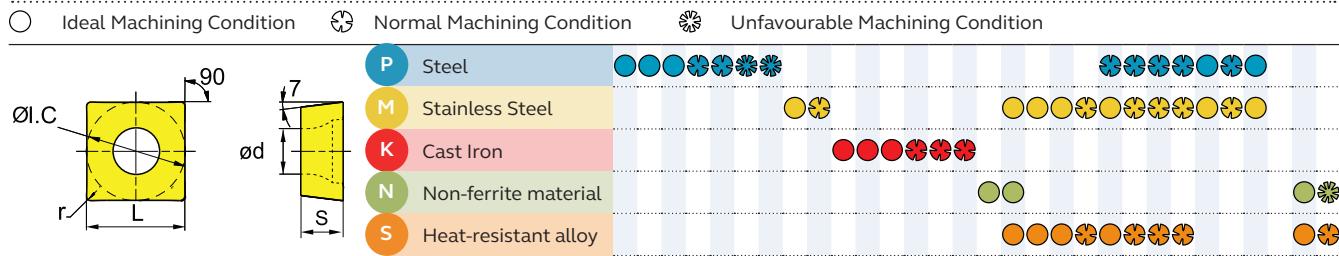
LUBRICANTS

MISCELLANEOUS

# ZCC-CT ISO Turning Inserts

SC\*\*

## **- POSITIVE INSERT**



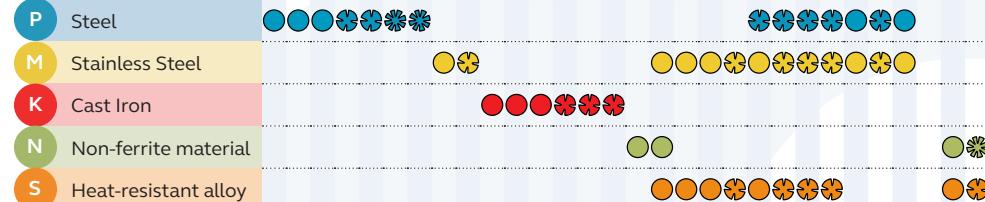
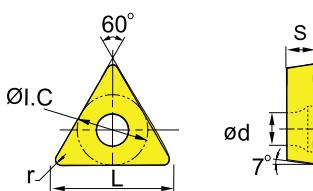
For toolholders, please see pages 309 (SSBCR/L), 310 (SSKCR/L), 311 (SSSCR/L)  
For boring bars, please see page 325 (SSKCR/L)



## TC\*\*

## - POSITIVE INSERT

○ Ideal Machining Condition    Ⓜ Normal Machining Condition    Ⓛ Unfavourable Machining Condition



Insert	Type	£	Dimensions (mm)					CVD Coating							PVD Coating																																
			L	I.C	S	d	r	YB6315	YBC103	YBC152	YBC252	YBC251	YBC352	YBC351	YBM153	YBM253	YBD052	YBD102	YB7305	YB7315	YBD152	YBD152C	YBG101	YBG102	YBS103	YBG105	YPD201	YB9315	YB9320	YBG205	YBG202	YNG151	YNT251	YNG151C	Cermet	Cermet Coated	Uncoated Carbide										
<b>HF</b> 	TCMT090202-HF	3.21	9.6	5.56	2.38	2.5	0.2	○	●	●																																					
	TCMT090204-HF	3.21	9.6	5.56	2.38	2.5	0.4	○	●																																						
<b>Finishing</b> 	TCMT090208-HF	3.21	9.6	5.56	2.38	2.5	0.8	○	●																																						
	TCMT110202-HF	3.48	11	6.35	2.38	2.8	0.2		●	●																																					
<b>Finishing</b> 	TCMT110204-HF	3.48	11	6.35	2.38	2.8	0.4		●	●	●	○																																			
	TCMT110208-HF	3.48	11	6.35	2.38	2.8	0.8		●	●	○	○																																			
<b>AHF</b> 	TCMT110204-AHF	3.48	11	6.35	2.38	2.8	0.4	●																																							
	TCMT110208-AHF	3.48	11	6.35	2.38	2.8	0.8	●																																							
<b>EF</b> 	TCMT16T304-AHF	4.80	16.5	9.525	3.97	4.4	0.4	●																																							
	TCMT16T308-AHF	4.80	16.5	9.525	3.97	4.4	0.8	●																																							
<b>Finishing</b> 	TCMT090202-EF	3.21	9.6	5.56	2.38	2.5	0.2																																								
	TCMT090204-EF	3.21	9.6	5.56	2.38	2.5	0.4																																								
<b>EF</b> 	TCMT110202-EF	3.48	11	6.35	2.38	2.8	0.2																																								
	TCMT110204-EF	3.48	11	6.35	2.38	2.8	0.4																																								
<b>Finishing</b> 	TCMT110208-EF	3.48	11	6.35	2.38	2.8	0.8																																								
	TCMT16T304-EF	4.80	16.5	9.525	3.97	4.4	0.4																																								
<b>HM</b> 	TCMT090204 HM	3.21	9.6	5.56	2.38	2.5	0.4		●	●	●																																				
	TCMT090208-HM	3.21	9.6	5.56	2.38	2.5	0.8		○	○	●																																				
<b>Medium Cutting</b> 	TCMT110204-HM	3.48	11	6.35	2.38	2.8	0.4		●	●	●	○																																			
	TCMT110208-HM	3.48	11	6.35	2.38	2.8	0.8		●	○	●																																				
<b>EM</b> 	TCMT16T304-HM	4.80	16.5	9.525	3.97	4.4	0.4		●	●	●	●																																			
	TCMT16T308-HM	4.80	16.5	9.525	3.97	4.4	0.8		●	●	●	●																																			
<b>Medium Cutting</b> 	TCMT16T312-HM	4.80	16.5	9.525	3.97	4.4	1.2		○	●	●	○																																			
	TCMT16T304-EM	4.80	16.5	9.525	3.97	4.4	0.4																																								
<b>EM</b> 	TCMT16T308-EM	4.80	16.5	9.525	3.97	4.4	0.8																																								
	TCMT16T308-EM	4.80	16.5	9.525	3.97	4.4	0.8																																								

## Holder

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STFCR/L 90°		

# ZCC-CT ISO Turning Inserts

MILLING

INDEXABLE MILLING

HOLE MAKING

LATHE TOOLS

THREAD MAKING

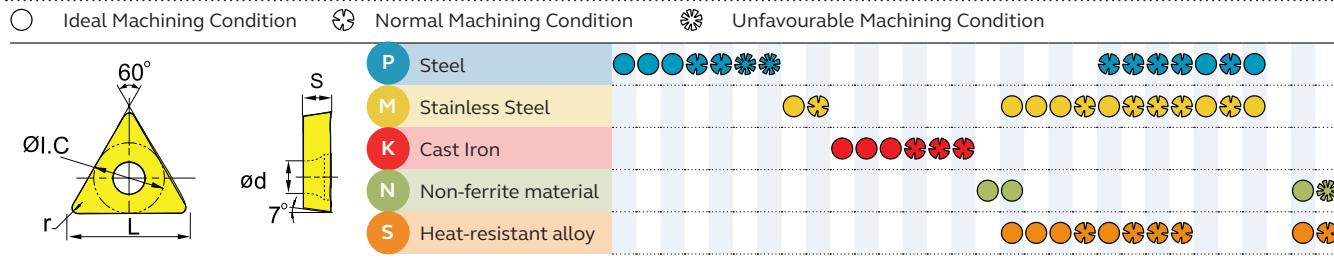
TOOL HOLDING

WORK HOLDING

METROLOGY

LUBRICANTS

MISCELLANEOUS

**TC\*\*****- POSITIVE INSERT**

Insert	Type	£	Dimensions (mm)					CVD Coating					PVD Coating			Carbide					
			L	I.C.	S	d	r	YB6315	YBC103	YBC152	YBC252	YBC251	YBC352	YBC351	YBM153	YBM253	YBD052	YBD102	YBD152	YBD152C	
<b>HR</b> 	TCMT090204-HR	3.21	9.6	5.56	2.38	2.5	0.4	○	●												
	TCMT090208-HR	3.21	9.6	5.56	2.38	2.5	0.8	○	○												
	TCMT110204-HR	3.48	11	6.35	2.38	2.8	0.4	●	●												
	TCMT110208-HR	3.48	11	6.35	2.38	2.8	0.8	●	●												
	TCMT16T304-HR	4.80	16.5	9.525	3.97	4.4	0.4	●	●								●				
	TCMT16T308-HR	4.80	16.5	9.525	3.97	4.4	0.8	●	●	●							●				
	TCMT16T312-HR	4.80	16.5	9.525	3.97	4.4	1.2	○	●							○	○	●			
	TCMT220408-HR	5.61	22	12.7	4.76	5.5	0.8	●	●	●							●				
<b>LC</b> 	TCGX090202-LC	5.38	9.6	5.56	2.38	2.5	0.2										●			●	
	TCGX090204-LC	5.38	9.6	5.56	2.38	2.5	0.4										●			●	
	TCGX110202-LC	5.55	11	6.35	2.38	2.8	0.2										●			●	
	TCGX110204-LC	5.55	11	6.35	2.38	2.8	0.4										●			●	
	TCGX110208-LC	5.55	11	6.35	2.38	2.8	0.8										●			●	
	TCGX16T304-LC	6.28	16.5	9.525	3.97	4.4	0.4										●			●	
	TCGX16T308-LC	6.28	16.5	9.525	3.97	4.4	0.8										●			●	
	TCGX16T308-LH	6.28	16.5	9.525	3.97	4.4	0.2										○			●	
<b>LH</b> 	TCGX090202-LH	5.38	9.6	5.56	2.38	2.5	0.2										○			●	
	TCGX090204-LH	5.38	9.6	5.56	2.38	2.5	0.4												●		
	TCGX110202-LH	5.55	11	6.35	2.38	2.8	0.2										○			●	
	TCGX110204-LH	5.55	11	6.35	2.38	2.8	0.4										●			●	
	TCGX110208-LH	5.55	11	6.35	2.38	2.8	0.8													●	
	TCGX16T302-LH	6.28	16.5	9.525	3.97	4.4	0.2													●	
	TCGX16T304-LH	6.28	16.5	9.525	3.97	4.4	0.4										○			●	
	TCGX16T308-LH	6.28	16.5	9.525	3.97	4.4	0.8										○			●	

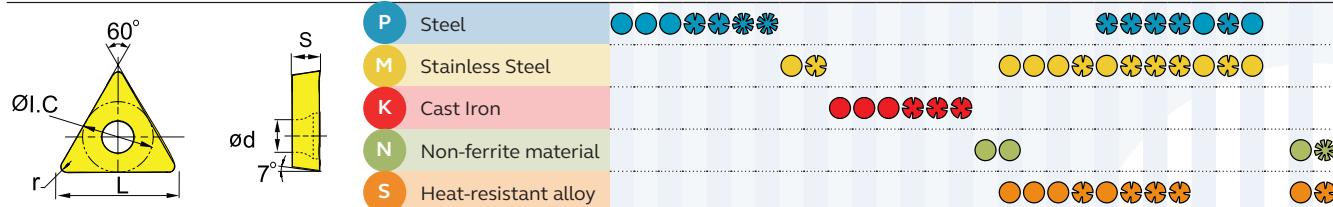
**Holder**



TP\*\*

## **- POSITIVE INSERT**

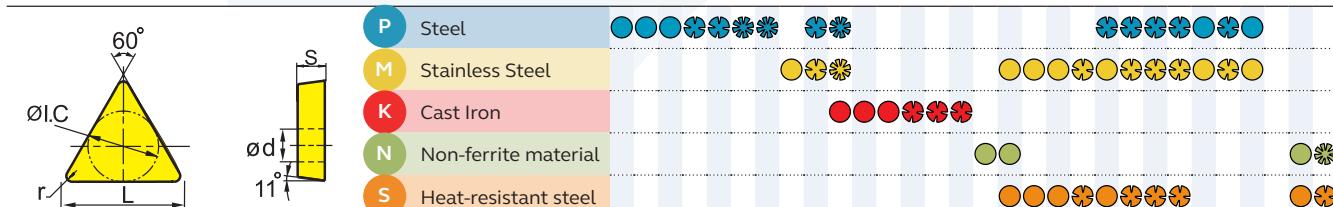
 Ideal Machining Condition     Normal Machining Condition     Unfavourable Machining Condition



TP\*\*

## **-POSITIVE INSERT**

## Ideal Machining Condition      Normal Machining Condition      Unfavourable Machining Condition



## Holder

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STUPR/L  
93°



# ZCC-CT ISO Turning Inserts

VC\*\*

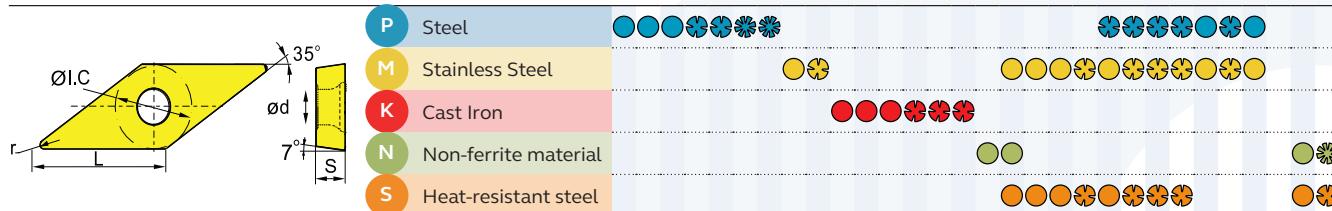
**- POSITIVE INSERT**

Insert		Type	E	Dimensions (mm)					CVD Coating					PVD Coating			Carbide																	
				L	I.C	S	d	r	YB6315	YBC103	YBC152	YBC252	YBC251	YBC352	YBC351	YBM153	YBM253	YBD052	YBD102	YBD152C	YBG101	YBG102	YBS103	YBG105	YPD201	YB9315	YB9320	YBG205	YBG202	YNG151	YNT251	Cermet	Cermet Coated	Uncoated
<b>USF</b> 	VCGT110301R-USF	7.30	11	6.35	3.18	2.8	0.1																											
	VCGT110302R-USF	7.30	11	6.35	3.18	2.8	0.2																											
<b>Finishing</b>																																		
	<b>USF</b> 	VCGT110301L-USF	7.30	11	6.35	3.18	2.8	0.1																										
<b>Finishing</b>	VCGT110302L-USF	7.30	11	6.35	3.18	2.8	0.2																											
<b>SF</b> 	VCGT110302-SF	7.30	11	6.35	3.18	2.8	0.2																											
	VCGT110304-SF	7.30	11	6.35	3.18	2.8	0.4																											
<b>Finishing</b>	VCGT160404-SF	8.41	16.5	9.525	4.8	4.4	0.4																											
<b>HF</b> 	VCGT110304-HF	7.30	11	6.35	3.18	2.8	0.4											●																
<b>Finishing</b>																																		
<b>NF</b> 	VCGT160408-NF	8.41	16.5	9.525	4.76	4.4	0.8																											
<b>Finishing</b>																																		
<b>VF</b> 	VCGT130304	7.05	13.8	7.94	3.3	3.4	0.4											●																

**Holder**



VC\*\*

**- POSITIVE INSERT**
(○) Ideal Machining Condition
(◐) Normal Machining Condition
(◑) Unfavourable Machining Condition


Insert	Type	f	Dimensions (mm)					CVD Coating										PVD Coating				Cermet	Cermet Coated	Uncoated Carbide											
			L	I.C.	S	d	r	YB6315	YBC103	YBC132	YBC252	YBC251	YBC352	YBC351	YBM153	YBM253	YBD052	YBD102	YB7305	YB7315	YBD152	YBD152C	YBG101	YBG102	YBS103	YBG105	YPD201	YB9315	YB9320	YBG205	YBG202	YNG151	YNT251	YNG151C	YD101
Aluminium Cutting	VCGX110301-LC	6.72	11	6.35	3.18	2.8	0.1																	●											
	VCGX110302-LC	6.72	11	6.35	3.18	2.8	0.2																	●											
	VCGX110304-LC	6.72	11	6.35	3.18	2.8	0.4																	●											
	VCGX110308-LC	6.72	11	6.35	3.18	2.8	0.8																	●											
	VCGX160404-LC	7.24	16.6	9.525	4.76	4.4	0.4																	●											
Aluminium Cutting	VCGX160408-LC	7.24	16.6	9.525	4.76	4.4	0.8																	●											
	VCGX160412-LC	7.24	16.6	9.525	4.76	4.4	1.2																○												
	VCGX220530-LC	10.25	22	12.7	5.56	5.5	3																●												
	VCGX110204-LH	6.72	11	6.35	2.38	2.8	0.4																●												
	VCGX110301-LH	6.72	11	6.35	3.18	2.8	0.1																○												
Aluminium Cutting	VCGX110302-LH	6.72	11	6.35	3.18	2.8	0.2																●												
	VCGX110304-LH	6.72	11	6.35	3.18	2.8	0.4															●													
	VCGX110308-LH	6.72	11	6.35	3.18	2.8	0.8															○													
	VCGX160402-LH	7.24	16.6	9.525	4.76	4.4	0.2															●													
	VCGX160404-LH	7.24	16.6	9.525	4.76	4.4	0.4															●													
Finishing	VCGX160408-LH	7.24	16.6	9.525	4.76	4.4	0.8															●													
	VCGX160412-LH	7.24	16.6	9.525	4.76	4.4	1.2															○													
	VCGX220530-LH	10.25	22	12.7	5.56	5.5	3															○													
	VCMT160404-AHF	6.22	16	9.525	4.76	4.4	0.4															●													
	VCMT160408-AHF	6.22	16	9.525	4.76	4.4	0.8															●													
Medium Cutting	VCMT160404-EF	6.22	16	9.525	4.76	4.4	0.4															●													
	VCMT160408-EM	6.22	16	9.525	4.76	4.4	0.4														○														
	VCMT160408-EM	6.22	16	9.525	4.76	4.4	0.8														○														
	VCMT160408-EM	6.22	16	9.525	4.76	4.4	0.8														●														
	VCMT160408-EM	6.22	16	9.525	4.76	4.4	0.8														●														

# ZCC-CT

# ISO Turning Inserts

MILLING

INDEXABLE MILLING

HOLE MAKING

LATHE TOOLS

THREAD MAKING

TOOL HOLDING

WORK HOLDING

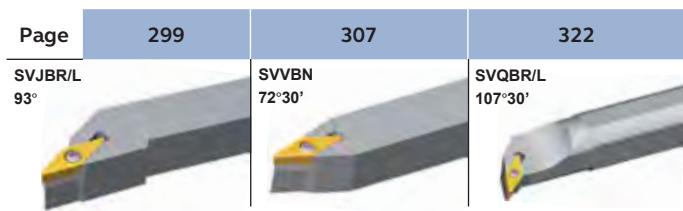
METROLOGY

LUBRICANTS

MISCELLANEOUS

**VB\*\*****- POSITIVE INSERT**

		f	Dimensions (mm)					CVD Coating					PVD Coating					Carbide Coated																	
Insert	Type		L	I.C	S	d	r	YB6315	YBC103	YBC152	YBC252	YBC251	YBC352	YBC351	YBM153	YBM253	YBD052	YBD102	YB7305	YB7315	YBD152	YBD152C	YBG101	YBG102	YBS103	YBG105	YPD201	YB9315	YB9320	YBG205	YBG202	YNG151	YNT251	Cermet	Cermet Coated
<b>SF</b>	VBGT110302-SF	5.80	11	6.35	3.18	2.8	0.2																												
	VBGT110304-SF	5.80	11	6.35	3.18	2.8	0.4																												
<b>Finishing</b>																																			
<b>HF</b>	VBMT110202-HF	5.41	11	6.35	2.38	2.8	0.2								●																●				
	VBMT110204-HF	5.41	11	6.35	2.38	2.8	0.4								●																●	○			
	VBMT110208-HF	5.41	11	6.35	2.38	2.8	0.8								●																●				
<b>Finishing</b>																																			
<b>AHF</b>	VBMT160402-AHF	6.34	16,5	9,525	4,76	4,4	0,2																								●	●			
	VBMT160404-AHF	6.34	16,5	9,525	4,76	4,4	0,4	●																						●	●				
	VBMT160408-AHF	6.34	16,5	9,525	4,76	4,4	0,8	●																						●	●				
<b>Finishing</b>																																			
<b>EF</b>	VBMT110302-EF	5.61	11	6.35	3.18	2.8	0.2																						●	○					
	VBMT110304-EF	5.61	11	6.35	3.18	2.8	0.4									●													●	○					
	VBMT110308-EF	5.61	11	6.35	3.18	2.8	0.8								●													○	●						
	VBMT160404-EF	6.24	16,5	9,525	4,76	4,4	0,4								●													●							
<b>Finishing</b>																																●			

**Holder**



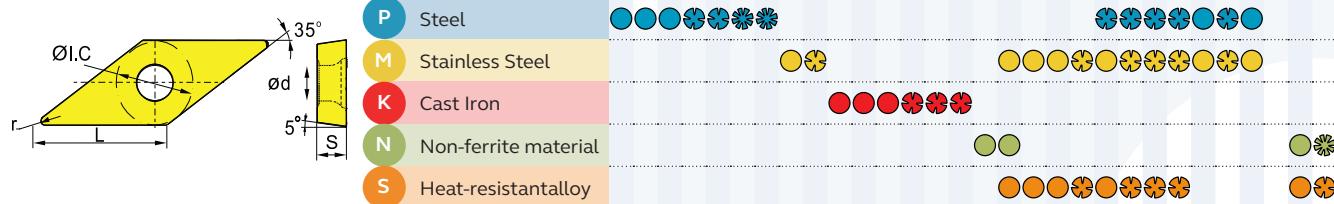
VB\*\*

## **- POSITIVE INSERT**

Ideal Machining Condition

## Normal Machining Condition

## Unfavourable Machining Condition



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