

THE NEW VALUE FRONTIER



**CERATIP®**

KYOCERA Cutting Tools

CP185-E

# Small Negative Tools for Automatic Lathe

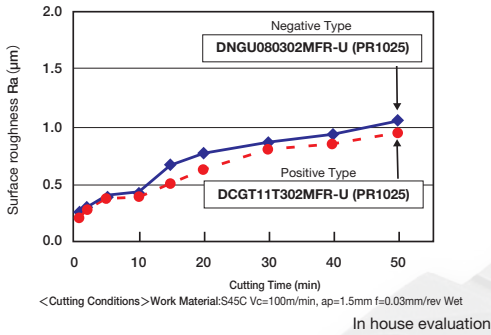
- New negative insertenables high cost efficiency and stability with double-sided design
- Sharpness even equal to the conventional positive insert
- For small tool machining, PR1005 (for Free Cutting Steel) and PR1025 (for General Use) are available



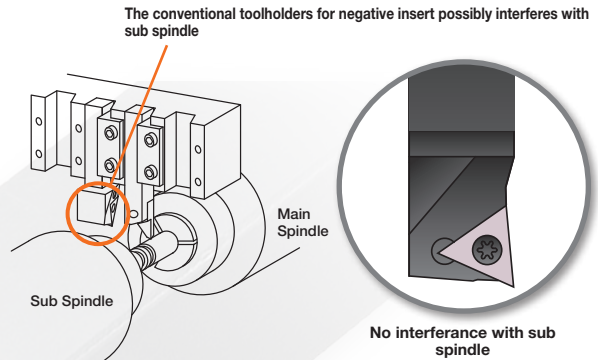
**Both Edge Usable**

Both edge Usable by Double-sided Design  
Compared to the Positive type, the double-sided design is cheaper and more stable.

■ Surface roughness comparison (sharp edge)



No constraint of tool position against tool post into the newly designed small negative insert

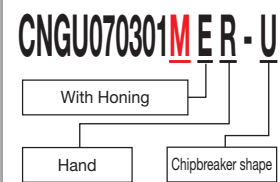
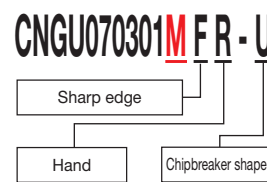


**Minus tolerance** for Corner-R of G class (ground)

M: indicates minus tolerance for corner-R

**Corner-R (minus tolerance) = Corner-R on the drawing**

Example



**Both Edge Usable**

● Case Studies

**SCM415**

- Pin
- Vc=120m/min
- ap=1.5mm
- f=0.08mm/rev
- Wet

CNMU070304E-GK PR1025	4800pcs/insert
Comp. A (DCMT type)	2400pcs/insert

The machined amount per one corner were same level between PR1025 and Comp. A (DCMT type). Because PR1025 is negative type and double-sided design, it machined 2 times more workpieces per one insert compared with Comp. A.

Evaluation from the user












● Recommended Cutting Conditions

Grade	Work material	Cutting speed (m/min)
PR1005	Free-cutting steel	100 (60~150)
PR1025	Steel, Stainless Steel	100 (60~150)

● Application range

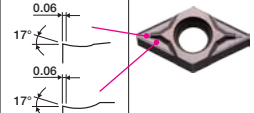

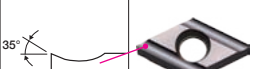
Cutting range	Usage classification	Application range		
		Continuous	Light interruption	Heavy interruption
Finishing ↑ ↓ Roughing	01	PR1005		
	10			
	20	PR930		PR1025
	30			
		Continuous	Light interruption	Heavy interruption

## Stock Items

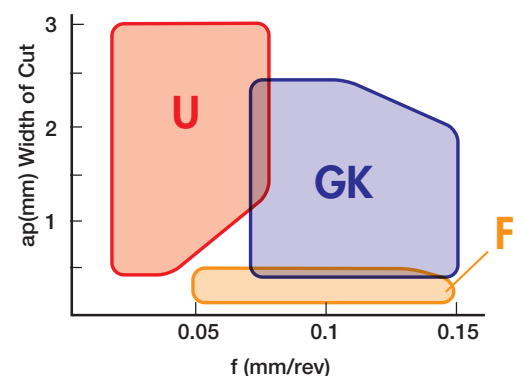
Shape Right-hand Shown	Description	Dimension(mm)				Stock Grades	
		I.C.	Thickness	Hole	Corner-R (r ε)	PVD Coated	
						PR1005	PR1025
 Finishing-Medium / With Honing	CNMU 070304E-GK	7.5	3.18	3.6	0.4	●	●
 Finishing / Sharp Edge	CNGU 0703005MFR-F 070301MFR-F 070302MFR-F 070304MFR-F	7.5	3.18	3.6	< 0.05 < 0.1 < 0.2 < 0.4	●●●●	●●●●
 Low Feed / Sharp Edge	CNGU 0703005MFR-U 070301MFR-U 070302MFR-U 070304MFR-U	7.5	3.18	3.6	< 0.05 < 0.1 < 0.2 < 0.4	●●●●	●●●●
 Low Feed / With Honing	CNGU 070301MER-U 070302MER-U 070304MER-U	7.5	3.18	3.6	< 0.1 < 0.2 < 0.4	●●●●	●●●●
 Finishing-Medium	DNMU 080304E-GK	7.0	3.18	3.6	0.4	●	●
 Finishing / Sharp Edge	DNGU 0803005MFR-F 080301MFR-F 080302MFR-F 080304MFR-F	7.0	3.18	3.6	< 0.05 < 0.1 < 0.2 < 0.4	●●●●	●●●●
 Low Feed / Sharp Edge	DNGU 0803005MFR-U 080301MFR-U 080302MFR-U 080304MFR-U	7.0	3.18	3.6	< 0.05 < 0.1 < 0.2 < 0.4	●●●●	●●●●
 Low Feed / With Honing	DNGU 080301MER-U 080302MER-U 080304MER-U	7.0	3.18	3.6	< 0.1 < 0.2 < 0.4	●●●●	●●●●
 Finishing / Sharp Edge	TNGU 0903005MFR-F 090301MFR-F 090302MFR-F 090304MFR-F	5.56	3.18	3.0	< 0.05 < 0.1 < 0.2 < 0.4	●●●●	●●●●
 Low Feed / Sharp Edge	TNGU 0903005MFR-U 090301MFR-U 090302MFR-U 090304MFR-U	5.56	3.18	3.0	< 0.05 < 0.1 < 0.2 < 0.4	●●●●	●●●●
 Low Feed / With Honing	TNGU 090301MER-U 090302MER-U 090304MER-U	5.56	3.18	3.0	< 0.1 < 0.2 < 0.4	●●●●	●●●●

\*Inserts whose corner R(r ε) dimension is expressed with less than sign (e.g.: <0.05, <0.1, <0.2, etc.) indicate models with minus tolerance for corner R(r ε).

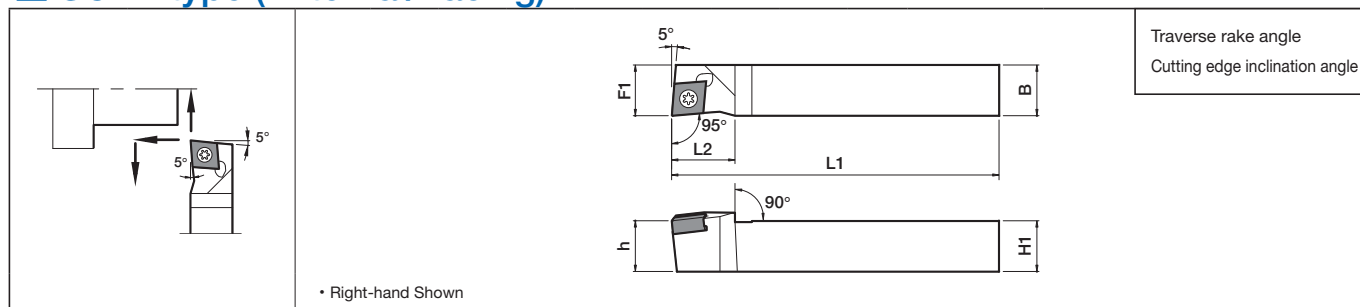
● : Standard Stock

Cutting Range	Name	Design	Advantages
Finishing-Medium	GK		Good chip evacuation at wide range by breaker dot and wide chip pocket.
Finishing	F		Good chip control for finishing to light cutting with low cutting force.
Low Feed	U		Good chip control at low feed rate and varied ap with low cutting force.

(S45C)



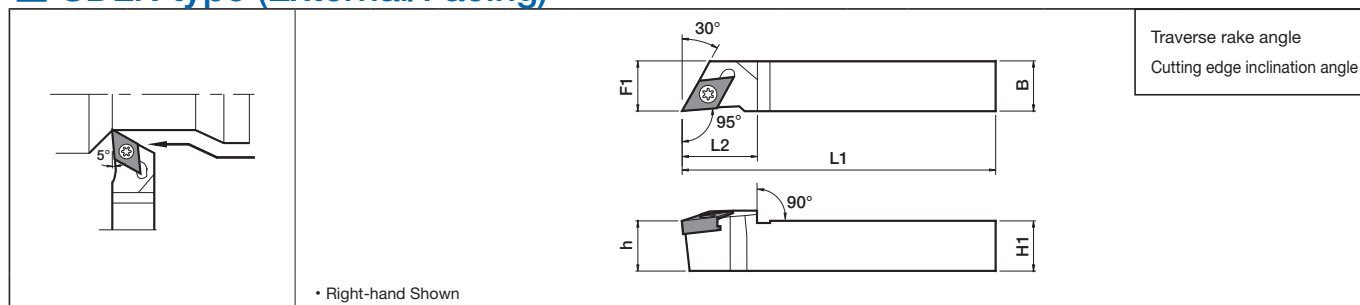
## SCLN type (External/Facing)



### Toolholder Dimension

Description	Stock	Dimension(mm)						Std.Corner-R(r $\epsilon$ )	Spare Parts		Applicable Insert
		H1=h	B	L1	L2	F1	Clamp Screw		Wrench		
SCLNR 1212F-07FF	●	12	12	85	15	12		0.2	SB-3080TR	LTW-10SS	CNGU0703.. CNMU0703..
1212K-07FF	●			120							
1616K-07FF	●	16	16			16					

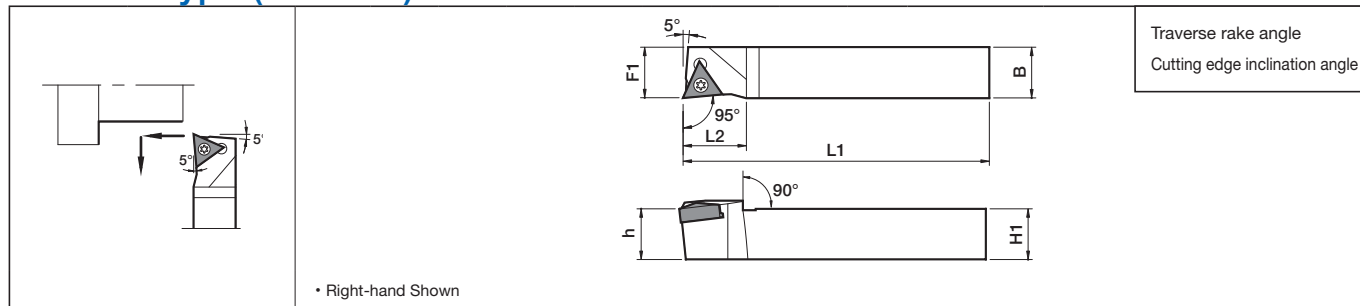
## SDLN type (External/Facing)



### Toolholder Dimension

Description	Stock	Dimension(mm)						Std.Corner-R(r $\epsilon$ )	Spare Parts		Applicable Insert
		H1=h	B	L1	L2	F1	Clamp Screw		Wrench		
SDLNR 1212F-08FF	●	12	12	85	18	12		0.2	SB-3080TR	LTW-10SS	DNGU0803.. DNMU0803..
1212K-08FF	●			120							
1616K-08FF	●	16	16			16					

## STLN type (External)



### Toolholder Dimension

Description	Stock	Dimension(mm)						Std.Corner-R(r $\epsilon$ )	Spare Parts		Applicable Insert
		H1=h	B	L1	L2	F1	Clamp Screw		Wrench		
STLNR 1212F-09FF	●	12	12	85	15	12		0.2	SB-2570TR	LTW-8SS	TNGU0903..
1212K-09FF	●			120							
1616K-09FF	●	16	16			16					

● : Standard Stock