

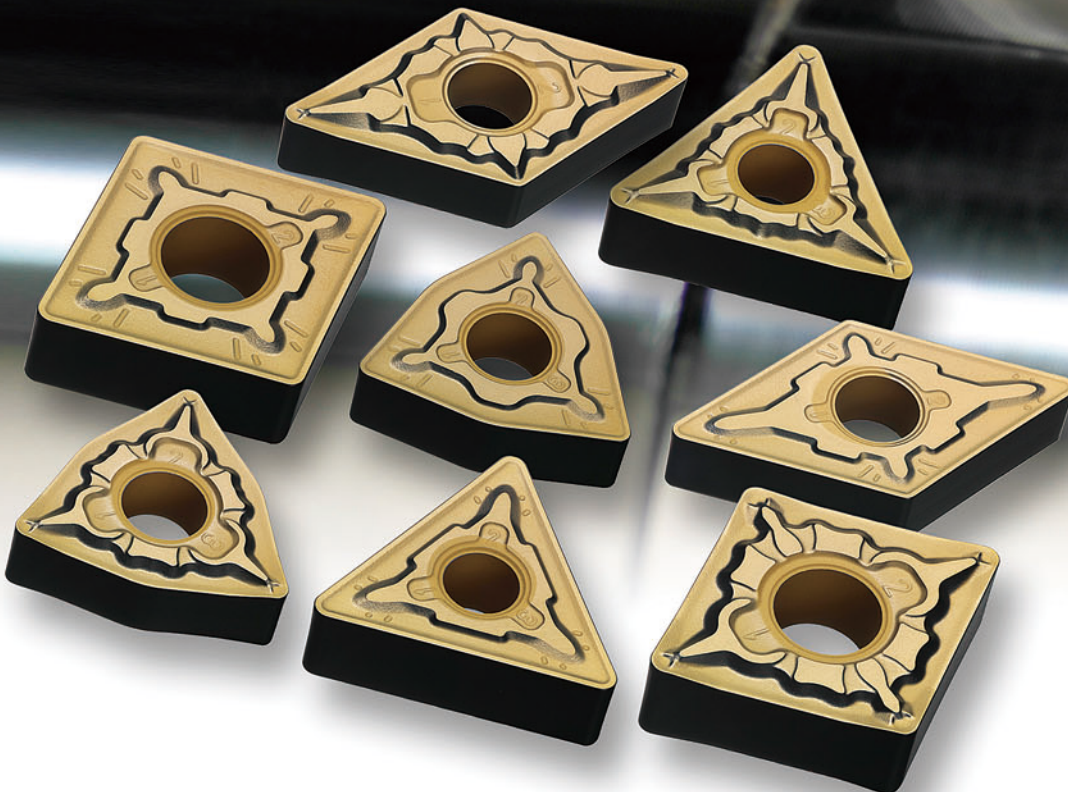
New CVD Coated Grade for High Speed Steel Turning

# **UE6105**

**LP/RP  
Breaker  
Expansion**

## **Leading edge technology for high efficiency steel turning**

2 in 1 technology ensures longer tool life.



**2  
IN** **1**  
TECHNOLOGY

# New CVD Coated Grade for High Speed Steel Turning

# UE6105

## Features

Superior machining performance achieved using 2 in 1 technology

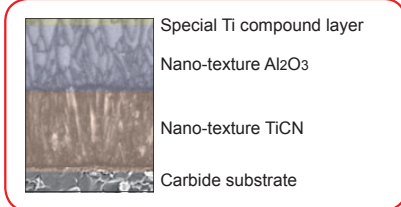
### High Crater Wear Resistance

The gold Ti compound coating on the rake face exhibits high crater wear resistance. It also enhances the crater wear resistance of the nano-texture Al<sub>2</sub>O<sub>3</sub>.

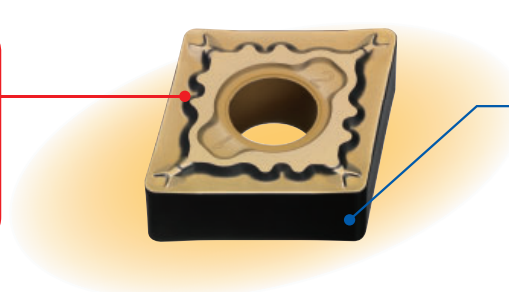
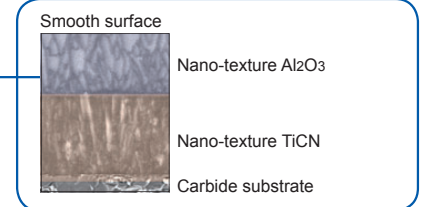
### High Flank Wear Resistance

The black coating on the flank face has an extremely smooth surface, this prevents abnormal wear and weld chipping, leading to improved surface finishes and stable tool life.

#### Coating structure on the rake face



#### Coating structure on the flank face



Superior wear resistance when dry high-speed machining.

UE6105-MA breaker	Competitor's
Cutting Speed : 350m/min	Cutting Speed : 300m/min
Cutting Time : 4min	Cutting Time : 4min
	<p>Large crater wear</p> <p>Large flank wear</p>

<Cutting Conditions>

- Insert : CNMG120408-○○○
- Tool : PCLNL2525M12
- Feed : 0.3mm/rev
- Depth of cut : 1.5mm
- Coolant : Dry cutting
- External continuous cutting
- indicates types of general-purpose chipbreakers from respective companies.

## State-of-the-art coating featuring 2 in 1 technology

### 1 Wear resistant nano-texture Al<sub>2</sub>O<sub>3</sub>

High speed and high efficiency machining can be achieved due to the thickened Al<sub>2</sub>O<sub>3</sub> layer.

### 2 Black super-smooth coating

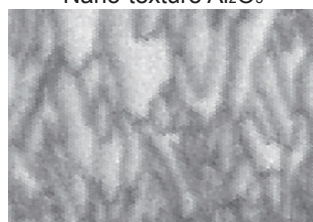
Improved surface finishes and stable tool life can be obtained due to the use of the black super smooth coating. This coating limits wear development and weld chipping.

#### Comparison of Al<sub>2</sub>O<sub>3</sub> structure

Conventional Al<sub>2</sub>O<sub>3</sub>

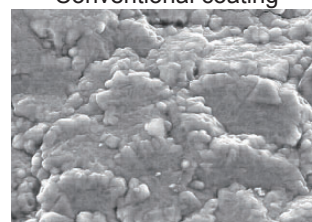


Nano-texture Al<sub>2</sub>O<sub>3</sub>

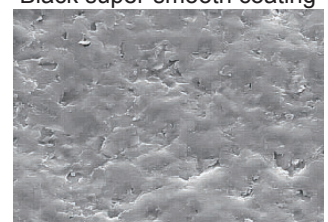


#### Comparison of coating surface

Conventional coating



Black super-smooth coating



# Application Range and Recommended Cutting Conditions

**UE6105** is the first recommendation for high speed steel turning. Suitable for turning mild, carbon and alloy steels.

Application Range	
ISO	Steel
P01	UE6105
P10	UE6110
P20	MC6025
P30	UE6020
P40	UE6035, UE6400

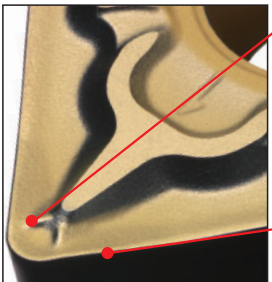
## RECOMMENDED CUTTING CONDITIONS

### Negative Inserts (External turning tools)

Work Material	Hardness	Cutting Mode		Breaker	Cutting Speed (m/min)	Feed (mm/rev)	Depth of Cut (mm)
P Carbon Steel, Alloy Steel (S45C, SCM440 etc.)	180—280HB	Stable Cutting	Light Cutting	LP	220—405	0.10—0.40	0.30—2.00
		Stable Cutting	Medium Cutting	MP	200—370	0.16—0.50	0.30—4.00
		Stable Cutting	Rough Cutting	RP	190—350	0.25—0.60	1.50—6.00

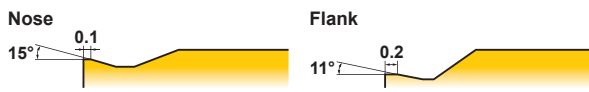
## Addition of New Chip Breakers

**NEW LP breaker** for light cutting

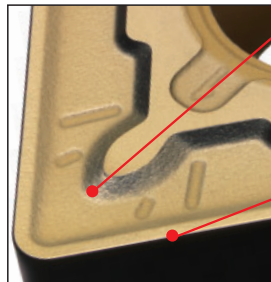


**Butterfly protrusions are optimized for different cutting conditions.**  
Chips curl upwards to reduce cutting resistance for improved surface finishes. The breaker protrusion is highly resistant to wear even during high-speed machining, delivering stable chip breaking for long periods of time.

**Excels in copy machining**  
A sharp edge delivers excellent chip breaking during copy machining and reverse face machining.



**NEW RP breaker** for rough cutting



**Peninsular protrusion optimised for rough cutting.**  
For efficient chip breaking over a wide range of rough turning applications. The gradually sloped cutting face prevents chip clogging and reduces crater wear.

**High fracture resistance**  
The edge has a strong flat land and broad chip pocket to reduce clogging and fracturing during chamfering.



## Optimum Selection of Insert

### P Carbon Steel • Alloy Steel NEGATIVE INSERTS

	Finish Cutting	Light Cutting	Medium Cutting	Rough Cutting	Heavy Cutting
●	<b>FH</b> AP25N	<b>LP</b> UE6105	<b>MP</b> UE6105	<b>RP</b> UE6105	<b>HX</b> UE6110
◐	<b>FH</b> MP3025	<b>LP</b> UE6110	<b>MP</b> UE6110	<b>RP</b> UE6110	<b>HX</b> UE6020
⊕	<b>FH</b> UE6110	<b>LP</b> MC6025	<b>MP</b> MC6025	<b>RP</b> MC6025	<b>HX</b> UH6400

### CUTTING CONDITIONS

●	<b>Stable Cutting</b> Continuous Cutting Constant Depth of Cut Pre-Machined Securely Clamped Component Cutting
◐	<b>General Cutting</b>
⊕	<b>Unstable Cutting</b> Heavy Interrupted Cutting Irregular Depth of Cut Low Clamping Rigidity Cutting

### CUTTING AREA


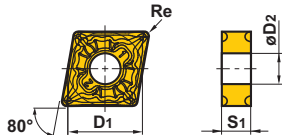

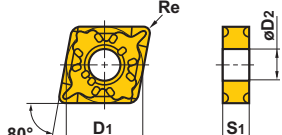

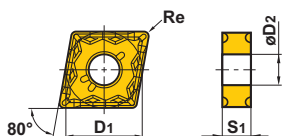

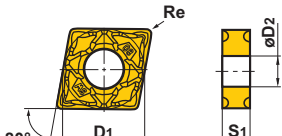

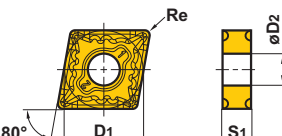

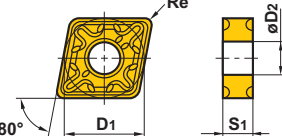
<b>F</b>	Finish Cutting
<b>L</b>	Light Cutting
<b>M</b>	Medium Cutting
<b>R</b>	Rough Cutting
<b>H</b>	Heavy Cutting




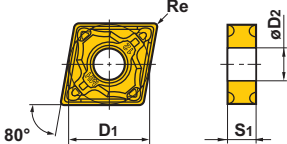

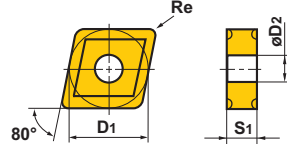

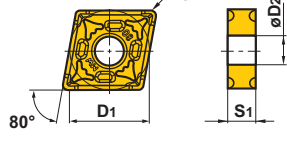

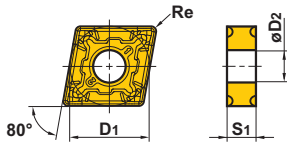

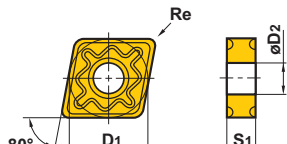

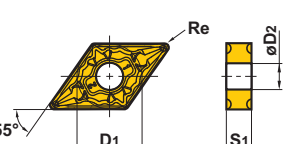
# UE6105

## Inserts

### ● Negative Inserts (With hole)

Shape	Order Number	Stock	Dimensions (mm)				Geometry
		UE6105	D1	S1	Re	D2	
 Light Cutting	<b>CNMG120404-LP</b>	●	12.7	4.76	0.4	5.16	
	120408-LP	●	12.7	4.76	0.8	5.16	
	120412-LP	●	12.7	4.76	1.2	5.16	
 Light Cutting	<b>CNMG120404-SH</b>	●	12.7	4.76	0.4	5.16	
	120408-SH	●	12.7	4.76	0.8	5.16	
	120412-SH	●	12.7	4.76	1.2	5.16	
 Light Cutting	<b>CNMG120404-SA</b>	●	12.7	4.76	0.4	5.16	
	120408-SA	●	12.7	4.76	0.8	5.16	
	120412-SA	●	12.7	4.76	1.2	5.16	
 Light Cutting (Wiper)	<b>CNMG120404-SW</b>	●	12.7	4.76	0.4	5.16	
	120408-SW	●	12.7	4.76	0.8	5.16	
	120412-SW	●	12.7	4.76	1.2	5.16	
 Medium Cutting	<b>CNMG120404-MP</b>	●	12.7	4.76	0.4	5.16	
	120408-MP	●	12.7	4.76	0.8	5.16	
	120412-MP	●	12.7	4.76	1.2	5.16	
	120416-MP	●	12.7	4.76	1.6	5.16	
	160608-MP	●	15.875	6.35	0.8	6.35	
	160612-MP	●	15.875	6.35	1.2	6.35	
160616-MP	●	15.875	6.35	1.6	6.35		
 Medium Cutting	<b>CNMG120404-MA</b>	●	12.7	4.76	0.4	5.16	
	120408-MA	●	12.7	4.76	0.8	5.16	
	120412-MA	●	12.7	4.76	1.2	5.16	
	120416-MA	●	12.7	4.76	1.6	5.16	
	160608-MA	●	15.875	6.35	0.8	6.35	
	160612-MA	●	15.875	6.35	1.2	6.35	
	160616-MA	●	15.875	6.35	1.6	6.35	
190612-MA	●	19.05	6.35	1.2	7.93		


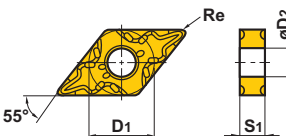

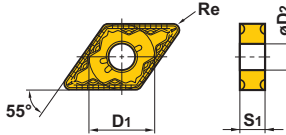
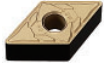
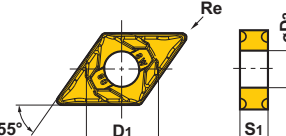

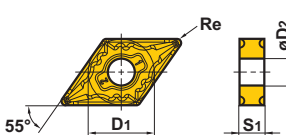
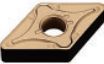
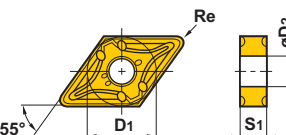
● : Inventory maintained.

Shape	Order Number	Stock	Dimensions (mm)				Geometry
		<i>UE6105</i>	D <sub>1</sub>	S <sub>1</sub>	Re	D <sub>2</sub>	
<b>MH</b>    Medium Cutting	<b>CNMG120404-MH</b>	●	12.7	4.76	0.4	5.16	
	120408-MH	●	12.7	4.76	0.8	5.16	
	120412-MH	●	12.7	4.76	1.2	5.16	
	120416-MH	●	12.7	4.76	1.6	5.16	
	160608-MH	●	15.875	6.35	0.8	6.35	
	160612-MH	●	15.875	6.35	1.2	6.35	
	160616-MH	●	15.875	6.35	1.6	6.35	
	190612-MH	●	19.05	6.35	1.2	7.93	
	190616-MH	●	19.05	6.35	1.6	7.93	
<b>Standard</b>    Medium Cutting	<b>CNMG120404</b>	●	12.7	4.76	0.4	5.16	
	120408	●	12.7	4.76	0.8	5.16	
	120412	●	12.7	4.76	1.2	5.16	
	120416	●	12.7	4.76	1.6	5.16	
	160608	●	15.875	6.35	0.8	6.35	
	160612	●	15.875	6.35	1.2	6.35	
	160616	●	15.875	6.35	1.6	6.35	
	190608	●	19.05	6.35	0.8	7.93	
	190612	●	19.05	6.35	1.2	7.93	
190616	●	19.05	6.35	1.6	7.93		
<b>MW</b>    Medium Cutting (Wiper)	<b>CNMG120408-MW</b>	●	12.7	4.76	0.8	5.16	
	120412-MW	●	12.7	4.76	1.2	5.16	
<b>NEW RP</b>    Rough Cutting	<b>CNMG120408-RP</b>	●	12.7	4.76	0.8	5.16	
	120412-RP	●	12.7	4.76	1.2	5.16	
	120416-RP	●	12.7	4.76	1.6	5.16	
	160612-RP	●	15.875	6.35	1.2	6.35	
	160616-RP	●	15.875	6.35	1.6	6.35	
	190612-RP	●	19.05	6.35	1.2	7.93	
	190616-RP	●	19.05	6.35	1.6	7.93	
<b>GH</b>    Rough Cutting	<b>CNMG120408-GH</b>	●	12.7	4.76	0.8	5.16	
	120412-GH	●	12.7	4.76	1.2	5.16	
	120416-GH	●	12.7	4.76	1.6	5.16	
	160612-GH	●	15.875	6.35	1.2	6.35	
	160616-GH	●	15.875	6.35	1.6	6.35	
	190612-GH	●	19.05	6.35	1.2	7.93	
190616-GH	●	19.05	6.35	1.6	7.93		
<b>NEW LP</b>    Light Cutting	<b>DNMG110404-LP</b>	●	9.525	4.76	0.4	3.81	
	110408-LP	●	9.525	4.76	0.8	3.81	
	150404-LP	●	12.7	4.76	0.4	5.16	
	150408-LP	●	12.7	4.76	0.8	5.16	
	150412-LP	●	12.7	4.76	1.2	5.16	
	150604-LP	●	12.7	6.35	0.4	5.16	
	150608-LP	●	12.7	6.35	0.8	5.16	
	150612-LP	●	12.7	6.35	1.2	5.16	

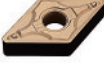
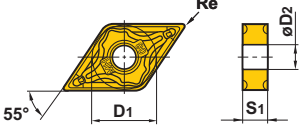
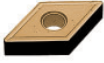
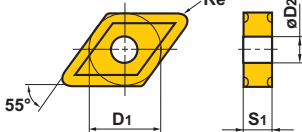

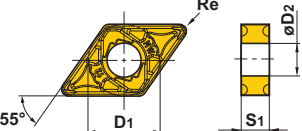

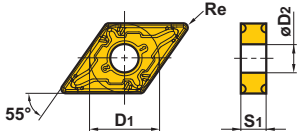

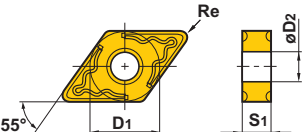

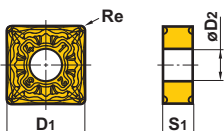
# UE6105

## Inserts

### ● Negative Inserts (With hole)

Shape	Order Number	Stock	Dimensions (mm)				Geometry
		UE6105	D1	S1	Re	D2	
	DNMG110404-SH	●	9.525	4.76	0.4	3.81	
	110408-SH	●	9.525	4.76	0.8	3.81	
	150404-SH	●	12.7	4.76	0.4	5.16	
	150408-SH	●	12.7	4.76	0.8	5.16	
	150412-SH	●	12.7	4.76	1.2	5.16	
	150604-SH	●	12.7	6.35	0.4	5.16	
	150608-SH	●	12.7	6.35	0.8	5.16	
	Light Cutting	150612-SH	●	12.7	6.35	1.2	
	DNMG150404-SA	●	12.7	4.76	0.4	5.16	
	150408-SA	●	12.7	4.76	0.8	5.16	
	150412-SA	●	12.7	4.76	1.2	5.16	
	150604-SA	●	12.7	6.35	0.4	5.16	
	150608-SA	●	12.7	6.35	0.8	5.16	
	Light Cutting	150612-SA	●	12.7	6.35	1.2	
	DNMX110404-SW	●	9.525	4.76	0.4	3.81	
	110408-SW	●	9.525	4.76	0.8	3.81	
	150404-SW	●	12.7	4.76	0.4	5.16	
	150408-SW	●	12.7	4.76	0.8	5.16	
	150412-SW	●	12.7	4.76	1.2	5.16	
	150604-SW	●	12.7	6.35	0.4	5.16	
	Light Cutting (Wiper)	150608-SW	●	12.7	6.35	0.8	
	150612-SW	●	12.7	6.35	1.2	5.16	
	DNMG150404-MP	●	12.7	4.76	0.4	5.16	
	150408-MP	●	12.7	4.76	0.8	5.16	
	150412-MP	●	12.7	4.76	1.2	5.16	
	150416-MP	●	12.7	4.76	1.6	5.16	
	150604-MP	●	12.7	6.35	0.4	5.16	
	150608-MP	●	12.7	6.35	0.8	5.16	
	150612-MP	●	12.7	6.35	1.2	5.16	
	Medium Cutting	150616-MP	●	12.7	6.35	1.6	
	DNMG110404-MA	●	9.525	4.76	0.4	3.81	
	110408-MA	●	9.525	4.76	0.8	3.81	
	110412-MA	●	9.525	4.76	1.2	3.81	
	150404-MA	●	12.7	4.76	0.4	5.16	
	150408-MA	●	12.7	4.76	0.8	5.16	
	150412-MA	●	12.7	4.76	1.2	5.16	
	150604-MA	●	12.7	6.35	0.4	5.16	
	150608-MA	●	12.7	6.35	0.8	5.16	
	Medium Cutting	150612-MA	●	12.7	6.35	1.2	


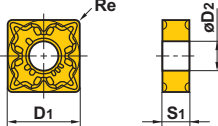

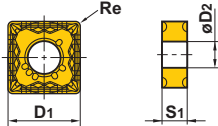

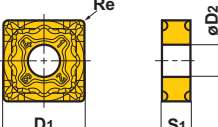

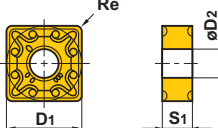

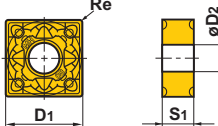

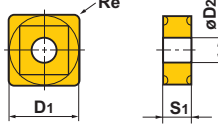
● : Inventory maintained.

Shape	Order Number	Stock	Dimensions (mm)				Geometry
		<i>UE6105</i>	D <sub>1</sub>	S <sub>1</sub>	Re	D <sub>2</sub>	
<b>MH</b>  Medium Cutting	<b>DNMG150404-MH</b>	●	12.7	4.76	0.4	5.16	
	<b>150408-MH</b>	●	12.7	4.76	0.8	5.16	
	<b>150412-MH</b>	●	12.7	4.76	1.2	5.16	
	<b>150604-MH</b>	●	12.7	6.35	0.4	5.16	
	<b>150608-MH</b>	●	12.7	6.35	0.8	5.16	
	<b>150612-MH</b>	●	12.7	6.35	1.2	5.16	
<b>Standard</b>  Medium Cutting	<b>DNMG150404</b>	●	12.7	4.76	0.4	5.16	
	<b>150408</b>	●	12.7	4.76	0.8	5.16	
	<b>150412</b>	●	12.7	4.76	1.2	5.16	
	<b>150604</b>	●	12.7	6.35	0.4	5.16	
	<b>150608</b>	●	12.7	6.35	0.8	5.16	
	<b>150612</b>	●	12.7	6.35	1.2	5.16	
<b>MW</b>  Medium Cutting (Wiper)	<b>DNMX150408-MW</b>	●	12.7	4.76	0.8	5.16	
	<b>150412-MW</b>	●	12.7	4.76	1.2	5.16	
	<b>150608-MW</b>	●	12.7	6.35	0.8	5.16	
	<b>150612-MW</b>	●	12.7	6.35	1.2	5.16	
<b>NEW RP</b>  Rough Cutting	<b>DNMG150408-RP</b>	●	12.7	4.76	0.8	5.16	
	<b>150412-RP</b>	●	12.7	4.76	1.2	5.16	
	<b>150416-RP</b>	●	12.7	4.76	1.6	5.16	
	<b>150608-RP</b>	●	12.7	6.35	0.8	5.16	
	<b>150612-RP</b>	●	12.7	6.35	1.2	5.16	
	<b>150616-RP</b>	●	12.7	6.35	1.6	5.16	
<b>GH</b>  Rough Cutting	<b>DNMG150408-GH</b>	●	12.7	4.76	0.8	5.16	
	<b>150412-GH</b>	●	12.7	4.76	1.2	5.16	
	<b>150608-GH</b>	●	12.7	6.35	0.8	5.16	
	<b>150612-GH</b>	●	12.7	6.35	1.2	5.16	
<b>NEW LP</b>  Light Cutting	<b>SNMG120404-LP</b>	●	12.7	4.76	0.4	5.16	
	<b>120408-LP</b>	●	12.7	4.76	0.8	5.16	
	<b>120412-LP</b>	●	12.7	4.76	1.2	5.16	

# UE6105


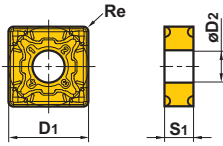

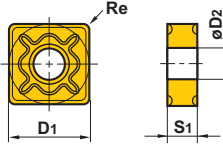

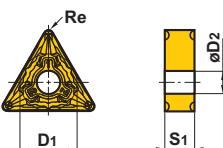

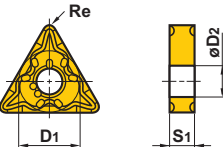

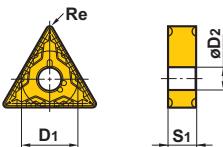

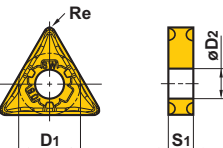

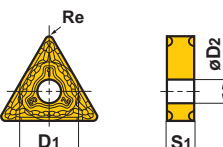
## Inserts

### ● Negative Inserts (With hole)

Shape	Order Number	Stock	Dimensions (mm)				Geometry
		UE6105	D1	S1	Re	D2	
SH  Light Cutting	SNMG120408-SH	●	12.7	4.76	0.8	5.16	
SA  Light Cutting	SNMG120408-SA	●	12.7	4.76	0.8	5.16	
MP  Medium Cutting	SNMG120404-MP	●	12.7	4.76	0.4	5.16	
	120408-MP	●	12.7	4.76	0.8	5.16	
	120412-MP	●	12.7	4.76	1.2	5.16	
MA  Medium Cutting	SNMG120404-MA	●	12.7	4.76	0.4	5.16	
	120408-MA	●	12.7	4.76	0.8	5.16	
	120412-MA	●	12.7	4.76	1.2	5.16	
	150608-MA	●	15.875	6.35	0.8	6.35	
	150612-MA	●	15.875	6.35	1.2	6.35	
	190612-MA	●	19.05	6.35	1.2	7.93	
	190616-MA	●	19.05	6.35	1.6	7.93	
MH  Medium Cutting	SNMG120408-MH	●	12.7	4.76	0.8	5.16	
	120412-MH	●	12.7	4.76	1.2	5.16	
	190612-MH	●	19.05	6.35	1.2	7.93	
	190616-MH	●	19.05	6.35	1.6	7.93	
Standard  Medium Cutting	SNMG090304	●	9.525	3.18	0.4	3.81	
	090308	●	9.525	3.18	0.8	3.81	
	120404	●	12.7	4.76	0.4	5.16	
	120408	●	12.7	4.76	0.8	5.16	
	120412	●	12.7	4.76	1.2	5.16	
	150612	●	15.875	6.35	1.2	6.35	
	190612	●	19.05	6.35	1.2	7.93	
	190616	●	19.05	6.35	1.6	7.93	

● : Inventory maintained.


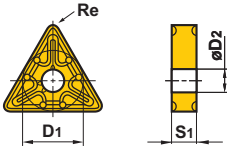

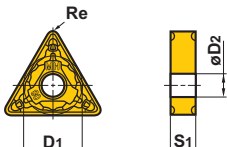

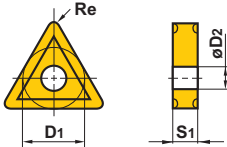

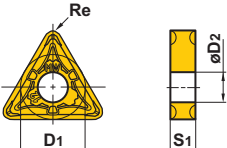

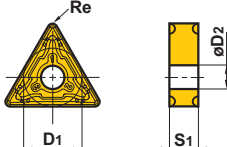

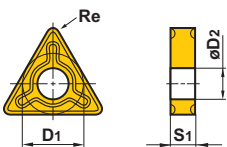


Shape	Order Number	Stock	Dimensions (mm)				Geometry
		<i>UE6105</i>	D1	S1	Re	D2	
<b>NEW</b> <b>RP</b> 	<b>SNMG120408-RP</b>	●	12.7	4.76	0.8	5.16	
	120412-RP	●	12.7	4.76	1.2	5.16	
	120416-RP	●	12.7	4.76	1.6	5.16	
	150612-RP	●	15.875	6.35	1.2	6.35	
	150616-RP	●	15.875	6.35	1.6	6.35	
	190612-RP	●	19.05	6.35	1.2	7.93	
	190616-RP	●	19.05	6.35	1.6	7.93	
Rough Cutting							
<b>GH</b> 	<b>SNMG120408-GH</b>	●	12.7	4.76	0.8	5.16	
	120412-GH	●	12.7	4.76	1.2	5.16	
	120416-GH	●	12.7	4.76	1.6	5.16	
	150612-GH	●	15.875	6.35	1.2	6.35	
	190612-GH	●	19.05	6.35	1.2	7.93	
	190616-GH	●	19.05	6.35	1.6	7.93	
	Rough Cutting						
<b>NEW</b> <b>LP</b> 	<b>TNMG160404-LP</b>	●	9.525	4.76	0.4	3.81	
	160408-LP	●	9.525	4.76	0.8	3.81	
	160412-LP	●	9.525	4.76	1.2	3.81	
	220408-LP	●	12.7	4.76	0.8	5.16	
	220412-LP	●	12.7	4.76	1.2	5.16	
	Light Cutting						
<b>SH</b> 	<b>TNMG160404-SH</b>	●	9.525	4.76	0.4	3.81	
	160408-SH	●	9.525	4.76	0.8	3.81	
	220408-SH	●	12.7	4.76	0.8	5.16	
	Light Cutting						
<b>SA</b> 	<b>TNMG160404-SA</b>	●	9.525	4.76	0.4	3.81	
	160408-SA	●	9.525	4.76	0.8	3.81	
	160412-SA	●	9.525	4.76	1.2	3.81	
	220408-SA	●	12.7	4.76	0.8	5.16	
Light Cutting							
<b>SW</b> 	<b>TNMX160404-SW</b>	●	9.525	4.76	0.4	3.81	
	160408-SW	●	9.525	4.76	0.8	3.81	
Light Cutting (Wiper)							
<b>MP</b> 	<b>TNMG160404-MP</b>	●	9.525	4.76	0.4	3.81	
	160408-MP	●	9.525	4.76	0.8	3.81	
	160412-MP	●	9.525	4.76	1.2	3.81	
	220408-MP	●	12.7	4.76	0.8	5.16	
	220412-MP	●	12.7	4.76	1.2	5.16	
Medium Cutting							

# UE6105

## Inserts

### ● Negative Inserts (With hole)

Shape	Order Number	Stock	Dimensions (mm)				Geometry
		UE6105	D1	S1	Re	D2	
 Medium Cutting	TNMG160404-MA	●	9.525	4.76	0.4	3.81	
	160408-MA	●	9.525	4.76	0.8	3.81	
	160412-MA	●	9.525	4.76	1.2	3.81	
	220408-MA	●	12.7	4.76	0.8	5.16	
	220412-MA	●	12.7	4.76	1.2	5.16	
	270608-MA	●	15.875	6.35	0.8	6.35	
	270612-MA	●	15.875	6.35	1.2	6.35	
 Medium Cutting	TNMG160404-MH	●	9.525	4.76	0.4	3.81	
	160408-MH	●	9.525	4.76	0.8	3.81	
	160412-MH	●	9.525	4.76	1.2	3.81	
	220408-MH	●	12.7	4.76	0.8	5.16	
	220412-MH	●	12.7	4.76	1.2	5.16	
 Medium Cutting	TNMG160404	●	9.525	4.76	0.4	3.81	
	160408	●	9.525	4.76	0.8	3.81	
	160412	●	9.525	4.76	1.2	3.81	
	220404	●	12.7	4.76	0.4	5.16	
	220408	●	12.7	4.76	0.8	5.16	
	220412	●	12.7	4.76	1.2	5.16	
 Medium Cutting (Wiper)	TNMX160408-MW	●	9.525	4.76	0.8	3.81	
	160412-MW	●	9.525	4.76	1.2	3.81	
 Rough Cutting	TNMG160408-RP	●	9.525	4.76	0.8	3.81	
	160412-RP	●	9.525	4.76	1.2	3.81	
	220408-RP	●	12.7	4.76	0.8	5.16	
	220412-RP	●	12.7	4.76	1.2	5.16	
	220416-RP	●	12.7	4.76	1.6	5.16	
	270612-RP	●	15.875	6.35	1.2	6.35	
	270616-RP	●	15.875	6.35	1.6	6.35	
 Rough Cutting	TNMG160408-GH	●	9.525	4.76	0.8	3.81	
	160412-GH	●	9.525	4.76	1.2	3.81	
	220408-GH	●	12.7	4.76	0.8	5.16	
	220412-GH	●	12.7	4.76	1.2	5.16	
	220416-GH	●	12.7	4.76	1.6	5.16	
	270612-GH	●	15.875	6.35	1.2	6.35	
	270616-GH	●	15.875	6.35	1.6	6.35	


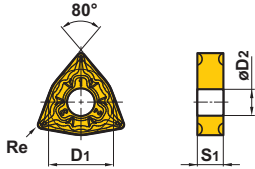

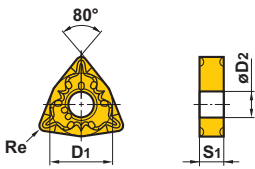

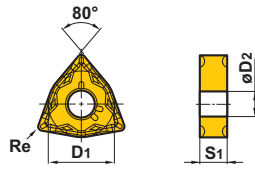

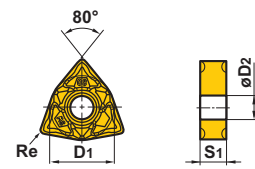

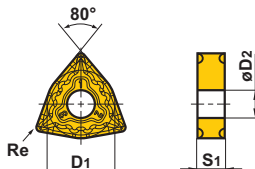
● : Inventory maintained.

Shape	Order Number	Stock	Dimensions (mm)				Geometry
		<i>UE6105</i>	D <sub>1</sub>	S <sub>1</sub>	Re	D <sub>2</sub>	
<b>NEW</b> LP	VNMG160404-LP	●	9.525	4.76	0.4	3.81	
	160408-LP	●	9.525	4.76	0.8	3.81	
Light Cutting							
SH	VNMG160404-SH	●	9.525	4.76	0.4	3.81	
	160408-SH	●	9.525	4.76	0.8	3.81	
Light Cutting							
MP	VNMG160404-MP	●	9.525	4.76	0.4	3.81	
	160408-MP	●	9.525	4.76	0.8	3.81	
	160412-MP	●	9.525	4.76	1.2	3.81	
Medium Cutting							
MA	VNMG160404-MA	●	9.525	4.76	0.4	3.81	
	160408-MA	●	9.525	4.76	0.8	3.81	
Medium Cutting							
MH	VNMG160404-MH	●	9.525	4.76	0.4	3.81	
	160408-MH	●	9.525	4.76	0.8	3.81	
Medium Cutting							
Standard	VNMG160404	●	9.525	4.76	0.4	3.81	
	160408	●	9.525	4.76	0.8	3.81	
	160412	●	9.525	4.76	1.2	3.81	
Medium Cutting							

# UE6105


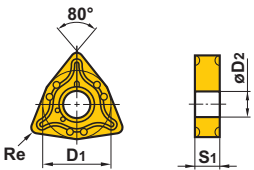

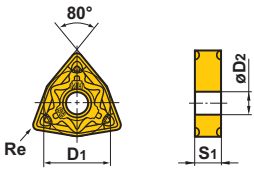

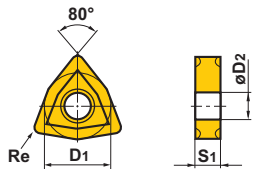

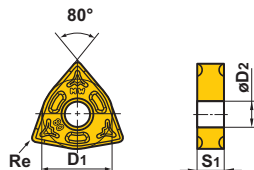

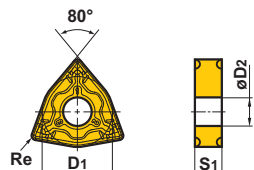

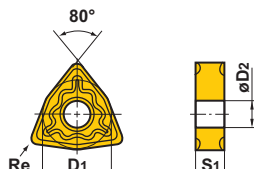
## Inserts

### ● Negative Inserts (With hole)

Shape	Order Number	Stock	Dimensions (mm)				Geometry
		UE6105	D1	S1	Re	D2	
 Light Cutting	<b>WNUMG06T304-LP</b>	●	9.525	3.97	0.4	3.81	
	06T308-LP	●	9.525	3.97	0.8	3.81	
	060404-LP	●	9.525	4.76	0.4	3.81	
	060408-LP	●	9.525	4.76	0.8	3.81	
	080404-LP	●	12.7	4.76	0.4	5.16	
	080408-LP	●	12.7	4.76	0.8	5.16	
	080412-LP	●	12.7	4.76	1.2	5.16	
 Light Cutting	<b>WNUMG06T304-SH</b>	●	9.525	3.97	0.4	3.81	
	06T308-SH	●	9.525	3.97	0.8	3.81	
	060404-SH	●	9.525	4.76	0.4	3.81	
	060408-SH	●	9.525	4.76	0.8	3.81	
	080404-SH	●	12.7	4.76	0.4	5.16	
	080408-SH	●	12.7	4.76	0.8	5.16	
	080412-SH	●	12.7	4.76	1.2	5.16	
 Light Cutting	<b>WNUMG080404-SA</b>	●	12.7	4.76	0.4	5.16	
	080408-SA	●	12.7	4.76	0.8	5.16	
	080412-SA	●	12.7	4.76	1.2	5.16	
 Light Cutting (Wiper)	<b>WNUMG060404-SW</b>	●	9.525	4.76	0.4	3.81	
	060408-SW	●	9.525	4.76	0.8	3.81	
	080404-SW	●	12.7	4.76	0.4	5.16	
	080408-SW	●	12.7	4.76	0.8	5.16	
	080412-SW	●	12.7	4.76	1.2	5.16	
 Medium Cutting	<b>WNUMG06T304-MP</b>	●	9.525	3.97	0.4	3.81	
	06T308-MP	●	9.525	3.97	0.8	3.81	
	06T312-MP	●	9.525	3.97	1.2	3.81	
	060404-MP	●	9.525	4.76	0.4	3.81	
	060408-MP	●	9.525	4.76	0.8	3.81	
	060412-MP	●	9.525	4.76	1.2	3.81	
	080404-MP	●	12.7	4.76	0.4	5.16	
	080408-MP	●	12.7	4.76	0.8	5.16	
	080412-MP	●	12.7	4.76	1.2	5.16	
	080416-MP	●	12.7	4.76	1.6	5.16	

● : Inventory maintained.


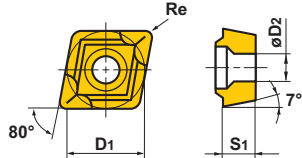
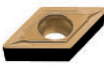
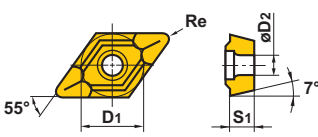

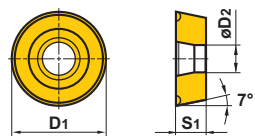

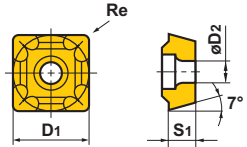

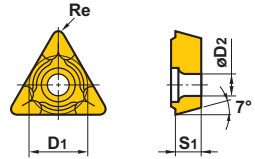

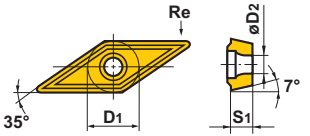


Shape	Order Number	Stock	Dimensions (mm)				Geometry
		<i>UE6105</i>	D <sub>1</sub>	S <sub>1</sub>	Re	D <sub>2</sub>	
 Medium Cutting	<b>WNMG06T304-MA</b>	●	9.525	3.97	0.4	3.81	
	<b>06T308-MA</b>	●	9.525	3.97	0.8	3.81	
	<b>06T312-MA</b>	●	9.525	3.97	1.2	3.81	
	<b>060404-MA</b>	●	9.525	4.76	0.4	3.81	
	<b>060408-MA</b>	●	9.525	4.76	0.8	3.81	
	<b>060412-MA</b>	●	9.525	4.76	1.2	3.81	
	<b>080404-MA</b>	●	12.7	4.76	0.4	5.16	
	<b>080408-MA</b>	●	12.7	4.76	0.8	5.16	
	<b>080412-MA</b>	●	12.7	4.76	1.2	5.16	
	<b>080416-MA</b>	●	12.7	4.76	1.6	5.16	
 Medium Cutting	<b>WNMG080404-MH</b>	●	12.7	4.76	0.4	5.16	
	<b>080408-MH</b>	●	12.7	4.76	0.8	5.16	
	<b>080412-MH</b>	●	12.7	4.76	1.2	5.16	
 Medium Cutting	<b>WNMG080404</b>	●	12.7	4.76	0.4	5.16	
	<b>080408</b>	●	12.7	4.76	0.8	5.16	
	<b>080412</b>	●	12.7	4.76	1.2	5.16	
 Medium Cutting (Wiper)	<b>WNMG060408-MW</b>	●	9.525	4.76	0.8	3.81	
	<b>060412-MW</b>	●	9.525	4.76	1.2	3.81	
	<b>080408-MW</b>	●	12.7	4.76	0.8	5.16	
	<b>080412-MW</b>	●	12.7	4.76	1.2	5.16	
 Rough Cutting	<b>WNMG080408-RP</b>	●	12.7	4.76	0.8	5.16	
	<b>080412-RP</b>	●	12.7	4.76	1.2	5.16	
 Rough Cutting	<b>WNMG080408-GH</b>	●	12.7	4.76	0.8	5.16	
	<b>080412-GH</b>	●	12.7	4.76	1.2	5.16	

# UE6105

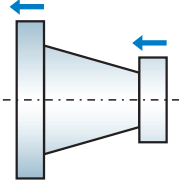
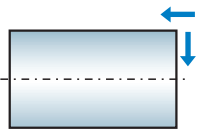
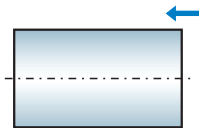
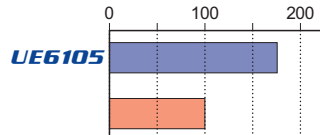
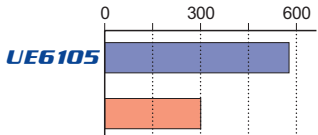
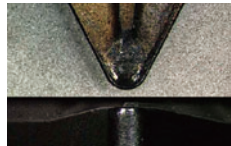
## Inserts

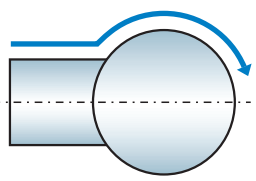
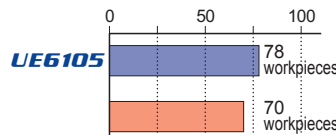
### ● 7° Positive inserts (With hole)

Shape	Order Number	Stock	Dimensions (mm)				Geometry	
		UE6105	D1	S1	Re	D2		
	Standard	CCMT060204	●	6.35	2.38	0.4	2.8	
		09T304	●	9.525	3.97	0.4	4.4	
		09T308	●	9.525	3.97	0.8	4.4	
		120404	●	12.7	4.76	0.4	5.5	
		120408	●	12.7	4.76	0.8	5.5	
Medium Cutting								
	Standard	DCMT070204	●	6.35	2.38	0.4	2.8	
		11T304	●	9.525	3.97	0.4	4.4	
		11T308	●	9.525	3.97	0.8	4.4	
Medium Cutting								
	Standard	RCMX1204M0	●	12	4.76	—	4.2	
		1606M0	●	16	6.35	—	5.2	
		2006M0	●	20	6.35	—	6.5	
		2507M0	●	25	7.94	—	7.2	
		3209M0	●	32	9.52	—	9.5	
Medium Cutting								
	Standard	SCMT09T304	●	9.525	3.97	0.4	4.4	
		09T308	●	9.525	3.97	0.8	4.4	
		120404	●	12.7	4.76	0.4	5.5	
		120408	●	12.7	4.76	0.8	5.5	
Medium Cutting								
	Standard	TCMT110204	●	6.35	2.38	0.4	2.8	
		110208	●	6.35	2.38	0.8	2.8	
		16T304	●	9.525	3.97	0.4	4.4	
		16T308	●	9.525	3.97	0.8	4.4	
Medium Cutting								
	Standard	VCMT160404	●	9.525	4.76	0.4	4.4	
		160408	●	9.525	4.76	0.8	4.4	
Medium Cutting								

● : Inventory maintained.

## Application Examples

Insert		CNMG160612-GH	CNMG120408-SW	DNMG150404-LP
Work material		JIS SNCM220H(Cone) 	JIS SUJ2(Bar) 	JIS SCM420(Input Shaft) 
Cutting conditions	Cutting speed (m/min)	270	400	240
	Feed (mm/rev)	0.5	0.2 – 0.25	0.2
	Depth of cut (mm)	3.0	1.0 – 1.5	0.5
Coolant		Wet	Wet	Wet
Result		 <p>UE6105 displays excellent wear resistance and achieved 1.5 times longer tool life than the competitors grade.</p>	 <p>UE6105 displays excellent chipping resistance and achieved 1.5 times longer tool life than the competitors grade.</p>	 <p>UE6105 displayed no abnormal damage and produced less wear than competitors tools after a long, constant machining cycle.</p>

Insert		DNMG150612-RP
Work material		S53C(Ball joint) 
Cutting conditions	Cutting speed (m/min)	280
	Feed (mm/rev)	0.6
	Depth of cut (mm)	2.0
Coolant		Wet
Result		 <p>UE6105 RP breaker extended tool life compared to a competitors' tool due to the excellent chip control.</p>

For Your Safety

●Don't handle inserts and chips without gloves. ●Please machine within the recommended application range and exchange expired tools with new ones in advance of breakage. ●Please use safety covers and wear safety glasses. ●When using compounded cutting oils, please take fire precautions. ●When attaching inserts or spare parts, please use only the correct wrench or driver. ●When using rotating tools, please make a trial run to check run-out, vibration and abnormal sounds etc.

## **MITSUBISHI MATERIALS CORPORATION**

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**MITSUBISHI MATERIALS CORPORATION**

**Area Marketing & Operations Dept.**

KFC bldg., 8F, 1-6-1, Yokoami, Sumida-ku, Tokyo 130-0015, Japan

TEL +81-3-5819-8772 FAX +81-3-5819-8774

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**URL : <http://www.mitsubishicarbide.com>**  
(Tools specifications subject to change without notice.)